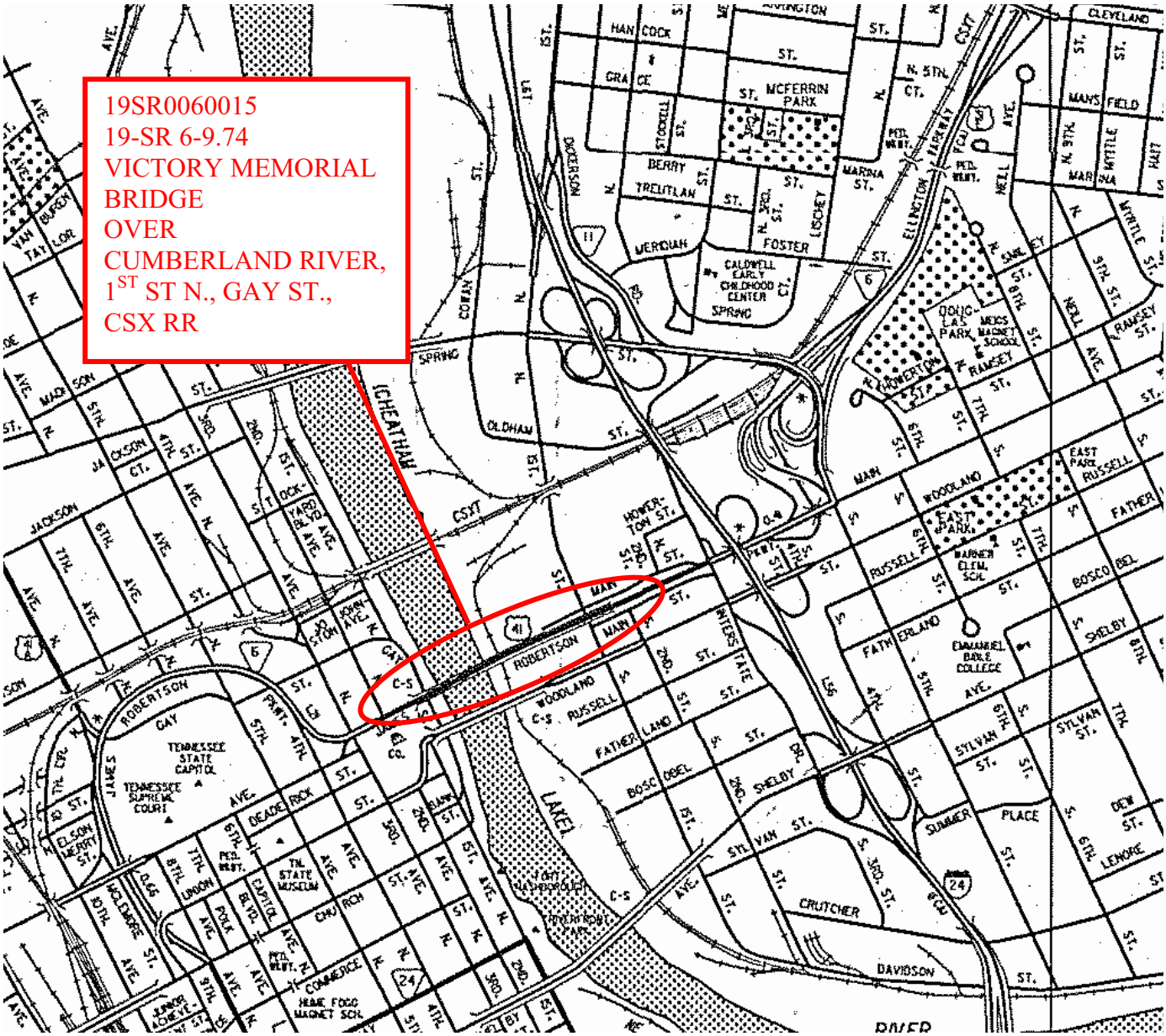
DAVIDSON COUNTY



Bridge Maintenance Recommendations

Bridge Location No.: 19 - SR006 - 9.74
Co. Route Log Mile

Bridge Number: 19SR0060015

Crossing: SR 6 / CUMBERLAND RIVER *

County: Davidson

Region: 03

District: 31

Bridge Rating: POOR

Maint.Resp.: 02

Inspection Cycle: 14

Spec.Case: 0

Inspection Date: 1/11/01

Co.Seq: 01

Comments: REPAIR TILT IN ABUT #2 & BENT#6, #10 #15. TIGHTEN MANHOLE COVERS OVER PIERS. ALSO REPAIR CURBS SPANS #'S 5-7-10-11&15.

Maintenance Recommendations:

Maintenance Completed By / Date

043	**CLEAN DRAINS IN SPAN NO. 7, 9, 11, 13, 15, AND 16** \
071	**CLEAN AND PAINT STRUCTURAL STEEL IN SPAN NO. ____**
130	**REPAIR COLUMN NO. 'B'_ BENT NO. 0015____** \
167	**REPAIR _____ BREASTWALL AT ABUTMENT NO. 0002**
038	**PATCH SIDEWALK IN SPAN NO. 0007____**

COMPLETION NOTIFICATION: RETURN WITHIN 6 MONTHS OF INSPECTION DATE.

INITIAL AND DATE RECOMMENDATIONS WHEN COMPLETED.

MAINTENANCE ACTIVITIES ARE COMPLETED (DATE) _____ BY_____

MAINTENANCE ACTIVITIES ARE PARTIALLY COMPLETED (DATE) _____ BY_____

MAINTENANCE ACTIVITIES ARE INCOMPLETE, SCHEDULED FOR (DATE) _____

EXPLANATIONS AND COMMENTS:

CONTACT:

SD
40.7

DATE ADDED: 02/03/99
REVISED: 02/03/99

BRIDGE REPAIR RECOMMENDATIONS
BRIDGE NO. 19-SR006-0974-
OVER: SR 6 / CUMBERLAND RIVER

FED. BRIDGE NO. 19SR0060015

ROUTE CARRIED: FAU 6
SKEW: 90
NUMBER OF MAIN SPANS: 003
BRIDGE WIDTH (CURB-CURB): 056
BRIDGE WIDTH (OUT-OUT): 074

COUNTY: DAVIDSON
HIGHWAY SYSTEM: 14
TOTAL BRIDGE LENGTH: 001845
MAXIMUM SPAN LENGTH: 0320
APPROACH ROADWAY WIDTH: 056

TYPE STRUCTURE (MAIN SPANS): Welded Plate Girder (continuous spans)
TYPE STRUCTURE (APPROACHES):

INSPECTION DATE: 12/15/98
H TRUCK @ INV. 20
H TRUCK @ INV. AFTER REPAIRS: 19

BRIDGE RATING: POOR
EVALUATION DATE: 02/02/99

**** RECOMMENDED MINIMUM REPAIRS BY: EVALUATION SECTION ****

1. CLEAN AND PAINT STRUCTURAL STEEL
2. REPAIR CONCRETE BREASTWALL AT ABUTMENT NO. 1
3. REPAIR CONCRETE COLUMN "B" AT BENT NOS. 9 AND 15
4. PATCH SIDEWALK IN SPAN NOS. 7 AND 16
5. PATCH CONCRETE CURBS IN SPAN NOS. 5-7-10-11 & 15
6. REALIGN AND STABILIZE BENT 15 AND ABUTMENT 2
7. RESET BEARINGS AT BENT NOS. 10,11,12,13 AND 14.
8. REPAIR SPALLED CONCRETE AT EXPANSION JOINTS IN SPANS 1, 3, AND 7
9. REPAIR SPALLED CONCRETE AT EXPANSION JOINTS IN SPANS 11,16 AND 19
10. REPAIR CONCRETE BREASTWALL AT ABUTMENT NO. 2
11. REPAIR AREAS OF DETERIORATED CONCRETE ON THE BOTTOM OF THE DECK

COMMENTS: THE TILT AT ABUTMENT 2 HAS INCREASED 3/8" FOR A TOTAL OF 4". THE ROLLER BEARING AT BENTS 10 THROUGH 14 ARE FULLY ROTATED BACKSTATION.

**** PROPOSED REPAIRS BY: REPAIR SECTION ****

1.

REPAIR LIST NUMBER: 2
TENTATIVE LETTING SCHEDULE:
ESTIMATED COST:

REPAIR CONTRACT PLANS TO BE PREPARED BY:
REPAIR DRAWING LAYOUT SHEET:
FED. BRIDGE NO. 19SR0060015

Deck Bridge
Under Consider
9/10/02

BRIDGE MAINTENANCE RECOMMENDATIONS

RIDGE SEQ. NO. : 19SR0060015 BRIDGE NO. : 19 - SR006 - 0974 - N
[redacted] OVER : SR 6 / CUMBERLAND RIVER *

ATE : 12/15/98 BRIDGE RATING : POOR COUNTY : Davidson
O. SEQ. : 01 INSPECTION CYCLE : 13 MAINT DIST : 31
PEC. CASE : 1 INSPECTION DATE : 12/15/98 REGION : 03

07 - FACILITY CARRIED BY STRUCT : FAU 6 340984B
21 - MAINTENANCE RESPONSIBILITY : 02
22 - OWNER : 01
42 - TYPE OF STRUCTURE : 15
43 - STRUCTURE TYPE, MAIN : 402
44 - STRUCTURE TYPE, APPROACH : 000
45 - SPANS, MAIN UNIT : 016
46 - SPANS, APPROACH : 0000
49 - STRUCTURE LENGTH : 001845
32 - APPROACH ROADWAY WIDTH : 054
34 - SKEW : 90
51 - BRDG RDWY WID, CRB-TO-CRB : 0560
52 - DECK WIDTH, OUT-TO-OUT : 0740
00 - HWY OF THE INVENTORY ROUTE : 06

MAINTENANCE & REPAIR RECOMMENDATIONS :	: MAINTENANCE COMPLETED :
1 CLEAN AND PAINT STRUCTURAL STEEL IN SPAN NO. _____	
1 BY _____ DATE _____	
[redacted] REPAIR _____ BREASTWALL AT ABUTMENT NO. 0002	
2 BY _____ DATE _____	
3 REPAIR COLUMN NO. 'B'_ BENT NO. 0015____	
3 BY _____ DATE _____	
4 PATCH SIDEWALK IN SPAN NO. 0007____	
4 BY _____ DATE _____	
5 PATCH SIDEWALK IN SPAN NO. 0016____	
5 BY _____ DATE _____	
6 REPAIR _____ BRIDGERAIL IN SPAN NO. 0014	
6 BY _____ DATE _____	

COMMENTS FOR BRIDGE SEQ. NO. : 19SR0060015 :

REPAIR TILT IN ABUT #2 & BENT #15. TIGHTEN MANHOLE COVERS OVER PIERS. ALSO REPAIR CURBS SPANS #'S 5-7-10-11&15.

OMPLETION NOTIFICATION : RETURN WITHIN 6 MONTHS OF INSPECTION DATE

MAINTENANCE ACTIVITIES ARE
--- COMPLETED (DATE) --------
--- PARTIALLY COMPLETE (DATE) --------
--- INCOMPLETE SCHEDULED FOR (DATE) --------

EXPLANATIONS AND COMMENTS:

[redacted]

BRIDGE MAINTENANCE RECOMMENDATIONS

BRIDGE SEQ. NO. : 19SR0060015 BRIDGE NO. : 19 - SR006 - 0974 - N
OVER : SR 6 / CUMBERLAND RIVER *

DATE : 07/21/97 BRIDGE RATING : FAIR COUNTY : Davidson
CO. SEQ. : 01 INSPECTION CYCLE : 12 MAINT DIST : 31
SPEC. CASE : 1 INSPECTION DATE : 07/21/97 REGION : 03

007 - FACILITY CARRIED BY STRUCT : FAU 6 340984B
021 - MAINTENANCE RESPONSIBILITY : 02
022 - OWNER : 01
042 - TYPE OF STRUCTURE : 15
043 - STRUCTURE TYPE, MAIN : 402
044 - STRUCTURE TYPE, APPROACH : 000
045 - SPANS, MAIN UNIT : 019
046 - SPANS, APPROACH : 0000
049 - STRUCTURE LENGTH : 001845
032 - APPROACH ROADWAY WIDTH : 056
034 - SKEW : 90
051 - BRDG RDWY WID, CRB-TO-CRB : 0560
052 - DECK WIDTH, OUT-TO-OUT : 0740
500 - HWY OF THE INVENTORY ROUTE : 06

: MAINTENANCE & REPAIR RECOMMENDATIONS :	: MAINTENANCE COMPLETED :
1 CLEAN AND PAINT STRUCTURAL STEEL IN SPAN NO. _____	1 BY _____ DATE _____
2 PATCH SIDEWALK IN SPAN NO. 0016___	2 BY _____ DATE _____
3 REPAIR _____ BREASTWALL AT ABUTMENT NO. 0002	3 BY _____ DATE _____
4 REPAIR COLUMN NO. 'B'_ BENT NO. 0015___	4 BY _____ DATE _____
5 PATCH SIDEWALK IN SPAN NO. 0007___	5 BY _____ DATE _____
6 REPAIR _____ BRIDGERAIL IN SPAN NO. 0014	6 BY _____ DATE _____

: COMMENTS FOR BRIDGE SEQ. NO. : 19SR0060015 :

REPAIR TILT IN ABUT #2 & BENT #15. TIGHTEN MANHOLE COVERS OVER PIERS. ALSO REPAIR CURBS SPANS #'S 5-7-10-11&15.

COMPLETION NOTIFICATION : RETURN WITHIN 6 MONTHS OF INSPECTION DATE

MAINTENANCE ACTIVITIES ARE
--- COMPLETED (DATE) --------
--- PARTIALLY COMPLETE (DATE) --------
--- INCOMPLETE SCHEDULED FOR (DATE) --------

EXPLANATIONS AND COMMENTS:

BRIDGE MAINTENANCE RECOMMENDATIONS

BRIDGE NO 19-SR006-09.74-
OVER: CUMBERLAND RIVER

[redacted] 03/16/95 | BRIDGE RATING FAIR | COUNTY DAVIDSON
CO. SEQ 01 | INSPECTION CYCLE 11 | MAIN. DISTRICT 31
SPEC. CASE 0 | INSPECTION DATE 09/13/94 | REGION 03

MAINTENANCE RECOMMENDATIONS:

1. CLEAN AND PAINT STRUCTURAL STEEL
2. REPAIR BREASTWALL, ABUTMENT 0002
3. REPAIR COLUMN B BENT 015

MAINTENANCE COMPLETED

1. BY------DATE--------
2. BY------DATE--------
3. BY------DATE--------

COMMENTS: REPAIR TILT IN ABUT #2 & BENT #15. TIGHTEN MANHOLE COVERS OVER PIERS.

COMPLETION NOTIFICATION: RETURN WITHIN 6 MONTHS OF INSPECTION DATE

MAINTENANCE ACTIVITIES ARE:
--- COMPLETED (DATE) ---------
--- PARTIALLY COMPLETE (DATE) --------- (EXPLAIN BELOW)
--- INCOMPLETE SCHEDULED FOR (DATE) ---------

EXPLANATIONS AND COMMENTS: ----------

BRIDGE MAINTENANCE RECOMMENDATIONS

BRIDGE NO 19-SR006-09.74-
OVER: CUMBERLAND RIVER

E 08/04/93
SEQ 01
SPEC. CASE 0

BRIDGE RATING FAIR
INSPECTION CYCLE 10
INSPECTION DATE 02/05/93

COUNTY DAVIDSON
MAIN. DISTRICT 31
REGION 03

MAINTENANCE RECOMMENDATIONS:

1. REPAIR BREASTWALL, ABUTMENT 0002
2. REPAIR COLUMN B BENT 015

MAINTENANCE COMPLETED

1. BY------DATE--------
2. BY------DATE--------

COMMENTS: REPAIR TILT IN ABUT # 2
& BENT # 15

COMPLETION NOTIFICATION: RETURN WITHIN 6 MONTHS OF INSPECTION DATE

MAINTENANCE ACTIVITIES ARE:
--- COMPLETED (DATE) ---------
--- PARTIALLY COMPLETE (DATE) --------- (EXPLAIN BELOW)
--- INCOMPLETE SCHEDULED FOR (DATE) ---------

EXPLANATIONS AND COMMENTS: ----------

Nail Alammori

From: Mason Pitt
Sent: Wednesday, August 6, 2025 10:04 AM
To: TDOT BridgeEval
Cc: Rebecca Hayworth; Bryan Liner; Brandon Wheeley
Subject: RE: TDOT - Bridge Fed.ID. # 19SR0060015 Encampment under Span 3

Na'il,

This was removed prior to 7/30/25 and a fence is being installed to prevent issues in the future. Photos below.

Mason Pitt | Regional Bridge Engineer
Region 3 Field Operations
6601 Centennial Blvd, Nashville, TN 37243
p. 615-350-4496 c. 615-445-9040
mason.pitt@tn.gov

From: TDOT BridgeEval <TDOT.BridgeEval@tn.gov>
Sent: Wednesday, August 6, 2025 9:51 AM
To: Mason Pitt <Mason.Pitt@tn.gov>
Cc: Rebecca Hayworth <Rebecca.Hayworth@tn.gov>; Bryan Liner <Bryan.Liner@tn.gov>; TDOT BridgeEval <TDOT.BridgeEval@tn.gov>

Subject: TDOT - Bridge Fed.ID. # 19SR0060015 Encampment under Span 3
Importance: High

Mason,

While evaluating the subject bridge 2025 inspection report I noticed a recommendation item to remove encampment under span 3. Do you have a plan to get this encampment removed?

Thank you,

TN TDOT Department of Transportation

Na'il Alammori | Transp. Project Spec. Sr.
Structures Division - Bridge Inspection
James K. Polk Bldg. 12th Floor
505 Deaderick St., Nashville, TN 37243
p. (615) 741- 7315
Nail.Alammori@tn.gov
tn.gov/tdot

Nail Alammori

From: Mason Pitt
Sent: Thursday, May 22, 2025 11:08 AM
To: TDOT BridgeEval
Cc: Rebecca Hayworth; Steven Paulson; Brandon Wheeley; Geremy Billingsley
Subject: 19SR0060015 Missing Weight limit and Vertical clearance signage

Good morning all,

The subject bridge was inspected May 15 and the following deficiencies were noted in regards to signage:

1. Approach 1 has a load posting sign 'Weight Limit 40 Tons'. HOWEVER, Approach 2 is missing the load posting sign for the same.
2. Under Span 1 for Gay Street, there is a vertical clearance sign on the right side of the bridge on Gay St. for 14'-3" which is a correct signage per our field measurements. HOWEVER, the left side of the bridge does not have this same signage.

These were corrected May 21, 2025. See photos below.

WEIGHT
LIMIT
40
TONS
SPEED
LIMIT
35

14'-3"

Mason

Mason Pitt | Regional Bridge Engineer
Region 3 Field Operations
6601 Centennial Blvd, Nashville, TN 37243
p. 615-350-4496 c. 615-445-9040
mason.pitt@tn.gov

From: Michael.Morales@bargedesign.com <Michael.Morales@bargedesign.com>
Sent: Thursday, May 15, 2025 8:00 AM
To: Mason Pitt <Mason.Pitt@tn.gov>

Cc: Rebecca Hayworth <Rebecca.Hayworth@tn.gov>; Brandon Wheeley <Brandon.Wheeley@tn.gov>; Kevin McAlister <Kevin.Mcalister@bargedesign.com>; Marris.Jones@bargedesign.com; blayne.carroll <blayne.carroll@bargedesign.com>; Marcial.Valladares@bargedesign.com; aaron.immel <aaron.immel@volkert.com>; Stephen Dossett <stephen.dossett@volkert.com>
Subject: [EXTERNAL] Victory Memorial Bridge over the Cumberland River

This Message Is From an External Sender

This message came from outside your organization.

Please exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email - STS-Security

Good morning Mason

Good talking with you this morning.

For the subject bridge, Asset #19SR0060015, for Mile log 9.720, as mentioned, there are two critical findings as it relates to signage.

1. Approach 1 has a load posting sign 'Weight Limit 40 Tons'. HOWEVER, Approach 2 is missing the load posting sign for the same.
2. Under Span 1 for Gay Street, there is a vertical clearance sign on the right side of the bridge on Gay St. for 14'-3" which is a correct signage per our field measurements. HOWEVER, the left side of the bridge does not have this same signage.

As mentioned, you did not require photos attached to this email but please let me know if you require in a follow up email. The report will have these photos.

We will be completing the inspection today by early afternoon.

Please call if you have any questions.

Thanks

Michael S Morales

BRIDGE INSPECTION PRACTICE LEAD
BRIDGE INSPECTION TEAM LEADER

D (615) 252-4389
M (609) 335-6306

615 3rd Avenue South, Suite 700
Nashville, Tennessee 37210

michael.morales@bargedesign.com

Nail Alammori

From: Mason Pitt
Sent: Wednesday, July 22, 2020 9:17 AM
To: TDOT BridgeEval
Cc: Eric Edd; Brandon Wheeley
Subject: FW: Weight Posting Required - Bridge Fed.ID. # 19SR0060015 (19 - SR006 - 9.72)
Attachments: 19SR0060015_WEIGHT_POSTING_LETTER.pdf; 20200721_.JPG; 20200721_.JPG

Posting photos attached.

Thank you,

Mason Pitt | Region 3 Bridge Manager
Bridge Inspection & Repair
Region 3 Headquarters Bldg. 'A'
6601 Centennial Blvd., Nashville, TN 37243-0360
p. 615-350-4496 c. 615-445-9040
Mason.Pitt@tn.gov

From: Mason Pitt
Sent: Wednesday, July 1, 2020 9:05 AM
To: Eric Lawson <Eric.Lawson@tn.gov>
Cc: Brandon Wheeley <Brandon.Wheeley@tn.gov>; Jordan Burress <Jordan.Burress@tn.gov>
Subject: Weight Posting Required - Bridge Fed.ID. # 19SR0060015 (19 - SR006 - 9.72)

Good morning Eric,

Bridge 19 - SR006 - 9.72 James Robertson Pkwy over Cumberland river now requires weight limit posting for **40 tons gross**.

Please send me photos of the signs once installed so we can update our records. Per the weight posting letter, ***"The new weight limit posting signs shall be installed by July 30, 2020."***

See attached posting letter for more information. Let me know if you have any questions or comments.

Thanks for your help!
Mason

Mason Pitt | Region 3 Bridge Manager
Bridge Inspection & Repair
Region 3 Headquarters Bldg. 'A'
6601 Centennial Blvd., Nashville, TN 37243-0360
p. 615-350-4496 c. 615-445-9040
Mason.Pitt@tn.gov

From: TDOT BridgeEval <TDOT.BridgeEval@tn.gov>
Sent: Wednesday, July 1, 2020 8:31 AM
To: Mason Pitt <Mason.Pitt@tn.gov>
Cc: Rebecca Hayworth <Rebecca.Hayworth@tn.gov>; Steven Paulson <Steven.Paulson@tn.gov>; TDOT BridgeEval <TDOT.BridgeEval@tn.gov>
Subject: Bridge Fed.ID. # 19SR0060015 (19 - SR006 - 9.72)

Mason,

The subject bridge is in need for 40 tons weight limit posting Please see attached letter for more details.

Thank you,

Nail Alammari | Transp. Project Spec. Sr.
Structures Division - Bridge Inspection
James K. Polk Bldg. 12th Floor
505 Deaderick St., Nashville, TN 37243
p. (615) 741- 7315
Nail.Alammori@tn.gov
tn.gov/tdot

WEIGHT
LIMIT
40
TONS
BIKE ROUTE

WEIGHT
LIMIT
40
TONS

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STRUCTURES DIVISION
BRIDGE INSPECTION AND REPAIR OFFICE
SUITE 1200, JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TN 37243-1403
(615) 741-0776

CLAY BRIGHT
COMMISIONER

BILL LEE
GOVERNOR

June 30, 2020

To: Mason Pitt
Tennessee Department Of Transportation
Regional Bridge Engineer

Subject: New Weight Limit Posting Requirements
Bridge Federal ID No. 19SR0060015
Bridge Location No. 19 - SR006 - 9.72
James Robertson Pkwy. over Sr 6 / C' River-1rr-2sts
Davidson County - City Of Nashville

The subject bridge was inspected by TDOT field personnel on May 28, 2019. We have completed our evaluation of the bridge and have determined that the bridge is now required to be posted for a gross weight limit of 40 tons for all vehicles.

The new weight limit posting signs shall be installed by July 30, 2020. Compliance with the weight limit posting requirements can be confirmed taking photographs of each sign at both approaches to the bridge and submitting these photographs to the HQ Bridge Inspection Office in Nashville. This can be done by replying to the email that distributed this letter and attaching the photographs as digital files.

Each photograph must show the face of the sign clearly so that the weight limit values can be confirmed. Photographs shall be taken at both approaches to the bridge even if it was only required to replace one sign.

If any additional work is done on the bridge, the TDOT Regional office should be notified so that they can perform an inspection.

Please scan and email any Repair Plans in case of any repairs; or As-Built Drawings or Design Plans in case of a structure replacement to the email address that distributed this letter.

Should you have any questions, please advise.

Sincerely,

Ted A Kniazewycz

Ted Kniazewycz, PE
Director of Structures

Davidson County **SR-1** **US-70**

MURFREESBORO RD, INTERCHANGE AT SR-155 (BRILEY PKWY) IN NASHVILLE

Contract #:	**1436**
Let To Contract:	**10/27/2000**
Contractor:	**Jones Brothers, Inc.**
Bid Price:	**$ 12,978,270.00**
Est. Completion Date:	**10/1/2003**

Davidson County **SR-1** **US-70S**

From Broadway to Glengarry Drive in Nashville

Contract #:	**CNB226**
Let To Contract:	**6/20/2003**
Contractor:	**Lojac Enterprises, Inc.**
Bid Price:	**$ 888,500.00**
Est. Completion Date:	**10/31/2003**

Davidson County **SR-6** **US-31E**

BRIDGE OVER CUMBERLAND RIVER AND GAY STREET @ LM 9.74 IN NASHVILLE

Contract #:	**CNB031**
Let To Contract:	**2/14/2003**
Contractor:	**Seminole Equipment, Inc & 3D's Bridge**
Bid Price:	**$ 2,217,532.95**
Est. Completion Date:	**10/1/2003**

2/4/03

Deleted from RL #2 on 9/10/03

PIN 102001.00

ASSESSMENT FORM
BRIDGES OVER WATER THAT HAVE NOT BEEN ANALYZED FOR SCOUR

3-15-00

Bridge No. 19- 6 -9.74 over Cumberland River

Design Plans? (yes) / no date (year)= 1952
Do plans contain foundation data? (yes) / no ground/rock elevation probe _____
Soil strata boring information _____

Hydraulic Data: Drainage area=_____ sq. mi.
Bridge Description: total length = 1845 no. of spans 19 skew_____
Bridge type(simple/continuous, concrete/steel) _____
Has underwater inspection been performed at site? Yes No insp. Date ___-___-___

Foundation of the Substructures

Ex. Abut. = stub on concrete piles
Abut. = vertical on spread footing on rock
Bent #1 = 2 post bent on steel pile supported footings
Bent #2 = concrete pile bent

Abutment #1 (south/west) = On Rock
Is abutment embankment armored? ___No
___sacked sand placed and stable
___sacked sand placed and unstable
___rip-rap placed and stable
___rip-rap placed and unstable
___does not apply
___other_____

Abutment #2 (north/east)= On Piles
Is abutment embankment armored? ___No
___sacked sand placed and stable
___sacked sand placed and unstable
___rip-rap placed and stable
___rip-rap placed and unstable
___does not apply
___other Concrete

Bent/Pier #1= Conc. encased in Masonry 24" into Rock
Is construction field book information available? Yes No
X Plans show footing on rock
___ Piles are assumed to be on rock due to pile type and rock elevation
___ Pile length is taken from total pile length divided by No. of piles
pile length= ___ft.
___ Pile length is unknown due to lack of information on plans Concrete

Bent/Pier #2= Conc encased in Masonry 29" into Rock
Is construction field book information available? Yes No
X Plans show footing on rock
___ Piles are assumed to be on rock due to pile type and rock elevation
___ Pile length is taken from total pile length divided by No. of piles
pile length= ___ft.
___ Pile length is unknown due to lack of information on plans

Bent /Pier #3= Solid Shaft on Steel Piles

Is construction field book information available? Yes No

___ Plans show footing on rock
___ Piles are assumed to be on rock due to pile type and rock elevation
___ Pile length is taken from total pile length divided by No. of piles
pile length= ___ft.
___ Pile length is unknown due to lack of information on plans

All Bents

Bent /Pier #4= Three Columns on Steel Piles

Is construction field book information available? Yes No

___ Plans show footing on rock
___ Piles are assumed to be on rock due to pile type and rock elevation
___ Pile length is taken from total pile length divided by No. of piles
pile length= ___ft.
___ Pile length is unknown due to lack of information on plans

Bent /Pier #5=_____

Is construction field book information available? Yes No

___ Plans show footing on rock
___ Piles are assumed to be on rock due to pile type and rock elevation
___ Pile length is taken from total pile length divided by No. of piles
pile length= ___ft.
___ Pile length is unknown due to lack of information on plans

Bent /Pier #6=_____

Is construction field book information available? Yes No

___ Plans show footing on rock
___ Piles are assumed to be on rock due to pile type and rock elevation
___ Pile length is taken from total pile length divided by No. of piles
pile length= ___ft.
___ Pile length is unknown due to lack of information on plans

Bent /Pier #7=_____

Is construction field book information available? Yes No

___ Plans show footing on rock
___ Piles are assumed to be on rock due to pile type and rock elevation
___ Pile length is taken from total pile length divided by No. of piles
pile length= ___ft.
___ Pile length is unknown due to lack of information on plans

Bent /Pier #8=_____

Is construction field book information available? Yes No

___ Plans show footing on rock
___ Piles are assumed to be on rock due to pile type and rock elevation
___ Pile length is taken from total pile length divided by No. of piles
pile length= ___ft.
___ Pile length is unknown due to lack of information on plans

Bent /Pier #8=_____

Is construction field book information available? Yes No

___ Plans show footing on rock
___ Piles are assumed to be on rock due to pile type and rock elevation
___ Pile length is taken from total pile length divided by No. of piles
pile length= ___ft.
___ Pile length is unknown due to lack of information on plans

Stream Information

Streambed material: solid rock - cobble rocks - round brown rocks - coarse gravel – small gravel
Sand – clay - silt – can't see - other _____ (circle all that apply)

According to photos and general stream information, is stream channel stable? Yes no

- x Channel and bank conditions are very stable
- ___ Channel and bank conditions are generally stable (minor erosion of bank)
- ___ Channel and bank conditions are slightly unstable (moderate bank erosion)
- ___ Channel and bank conditions are generally unstable (scalped banks/sloughing trees)
- ___ Channel and bank conditions are severely unstable (steep banks/visible degradation)
- ___ other _____

Has channel shifted?

Laterally			Vertically	
No movement	(x)	not apparent ( )	No movement (x)	not apparent ( )
Slight(<=1')	( )	moderate ( )	moderate ( )	moderate ( )
Severe(> 5')	( )		severe(> 5') ( )	

Any prior observed scour noted in Bridge Inspection report or U.W. Inspection report? yes (no)

Is there an observed history of drift at this location? yes (no)

Does bridge constrict the channel? Yes____ No x
Does bridge constrict the floodplain? Yes____ No x

Is stream flow controlled by a dam or reservoir? Yes x (name it) Cheatham
No____

Is stream in a Flood Insurance Study (yes / no) or Area (yes / no)

Should this structure be hydraulically analyzed using HEC-RAS and HEC18? YES (NO)
Why?

In the opinion of this committee, is this assessment acceptable for identifying this structure as being stable (not prone to failure due to scour) in the event of a major flood? (YES) NO

Recommend Item 113-A/B = B / R

Review Committee:

Paul Hing Hydraulics Section

Wayne J. Sieg Br. Insp. And Repair Section

Harold L. Hewitt Structural Design Section

_____ Geotech (as needed)

5-12-00 Date of Review

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BRIDGE INSPECTION AND REPAIR OFFICE
NASHVILLE, TENNESSEE 37243-0338

August 12, 2002

Mr. R. Darrell James, P.E.
James & Associates
One Vantage Way
Suite E-220
Nashville, TN 37228-1503

Re: Contract Maintenance
P. E. No. 19023-4213-04
Const No. 19023-4213-04
Bridge No. 19-SR 6-9.74
SR 6 (Victory Memorial Bridge)
over Cumberland River & Gay St
Davidson County

Dear Mr. James:

We are assigning the above bridge to your firm to provide the structural design and detailing services for contract bridge repairs.

Please provide us with your engineering estimate and estimated completion time for the bridge listed so that we may proceed with the work order for this assignment. Please note that the plans will be in English units.

A copy of the inspection report for the bridge is enclosed.

If you have any questions, please contact us.

Sincerely,

Terry D. Mackie

(for)
Wayne Seger
Civil Engineering Manager II
Bridge Inspection and Repair

WJS:tdm

enclosure

xc: Mr. Terry Leatherwood ✓
Mr. Paul Degges
File

State of Tennessee
Department of Transportation
Nashville Bridge Inspection
6601 Centennial Blvd.
Nashville, Tennessee 37243-0360

Mr. Terry Leatherwood
C. E. Manager I
Suite 1200, James K. Polk Bldg.
505 Deaderick Street
Nashville, TN. 37243-0338

Re: Bridge Inspection
Br. No. 19-SR6-9.74
Advance In Tilt - Poor Bridge
Davidson County

Dear Mr. Leatherwood:

On 12-14-98 the Nashville's Bridge Inspection 'A' Team checked Bridge No. 19-SR6-9.74 for it's 2-year cycle inspection. The prior rating of this bridge was fair, but has now been downgraded to poor due to further tilt in substructure elements and bearing devices. We are sending you a copy of the report in advance so you may properly evaluate these latest conditions.

If you have any questions, please call our office at (615) 350-4470.

Very truly yours,

Ray Furlough

for Ray McClelland
Operations Specialist Supervisor II
Bridge Division

RKF:cl

Enclosures

cc: Mr. Ray K. Furlough

State of Tennessee
Department of Transportation
Nashville Bridge Inspection
6601 Centennial Blvd.
Nashville, Tennessee 37243-0360

Mr. Terry Leatherwood
C. E. Manager I
Suite 1200, James K. Polk Bldg.
505 Deaderick Street
Nashville, TN. 37243-0338

Re: Bridge Inspection
Br. No. 19-SR6-9.74
Advance In Tilt - Poor Bridge
Davidson County

Dear Mr. Leatherwood:

On 12-14-98 the Nashville's Bridge Inspection 'A' Team checked Bridge No. 19-SR6-9.74 for it's 2-year cycle inspection. The prior rating of this bridge was fair, but has now been downgraded to poor due to further tilt in substructure elements and bearing devices. We are sending you a copy of the report in advance so you may properly evaluate these latest conditions.

If you have any questions, please call our office at (615) 350-4470.

Very truly yours,

for Ray McClelland
Operations Specialist Supervisor II
Bridge Division

RKF:cl

Enclosures

cc: Mr. Ray K. Furlough

State of Tennessee
DEPARTMENT OF TRANSPORTATION
Nashville, Tennessee 37243-0338

September 03, 1992

Mr. Jack Srouji
Tennessee Department of Transporation
6601 Cenntennial Blvd.
Nashville, Tennessee 37209

RE: Acoustic Velocity Meter
installation on SR 06
Bridge Number 19-SR006-09.74
Davidson County

Dear Mr. Srouji:

We are enclosing one copy of the plans of the installation of a velocity meter on the subject bridge. These drawings are marked "APPROVED".

Yours Very Truly,

Larry E. Hinds
Civil Engineering Manager 2
Bridge Inspection and Repair Office

CEH:jcs

Enclosure

cc: Mr. Lewis Evans
Mr. Alvin Zager
Mr. Charles E. Hunter
Mr. J. C. Scott

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
NASHVILLE, TENNESSEE 37209
REGION 3 UTILITIES OFFICE

RECEIVED
AUG 31 1992
D.O.T.
BRIDGE INSPECTION & REPAIR

August 28, 1992

Mr. Charles Hunter
Bridge Inspector
C. E. Manager
1200 James K. Polk Building
Nashville, TN

19-SR6-9.74

Re: Installation Of Acoustic
Velocity Meter
Victory Memorial Bridge
Davidson Co.

Dear Sir:

As per our telephone conversation on August 26, 1992, I am enclosing the material sent to me by the U. S. Department of the Interior regarding the above referenced permit request.

Please check the information provided and advise if it meets your approval so that my office can issue the permit needed.

Thank you.

Yours truly,

Jack Srouji
Civil Engineering Specialist 2
Right-of-Way Office, Utilities

gw

Encl.

Details are not in yet. Advise Srouji

LE	DM	LEH	GAP	CEH	HIT	JCS	RBG	WJS	WEM	TSQ	MGL
				CEH							

United States Department of the Interior

GEOLOGICAL SURVEY

WATER RESOURCES DIVISION
TENNESSEE DISTRICT
810 Broadway, Suite 500
Nashville, Tennessee 37203

TAKE PRIDE IN AMERICA

August 21, 1992

Mr. Jack Sourji, Utilities Engineer
Tennessee Department of Transportation, Region III
6601 Centennial Boulevard
Nashville, Tennessee 37209

Dear Mr. Srouji:

About a year ago we requested approval to install equipment (an Acoustic Velocity Meter) to monitor flow of the Cumberland River on the Victory Memorial Bridge in Nashville (see copy of attached letter dated August 15, 1991). You, Mr. Larry Hinds, and Mr. Charles Hunter asked for additional information on details of the installation on at least two different occasions, which we provided. After telephone conversations, I visited Mr. Hunter on October 4, 1991 to pick up a set of bridge plans on which to document the installation. On that date you and Mr. Hunter gave verbal permission to proceed with the installation and submit as-built plans after installation (see copy of attached Memorandum To The Record dated October 7, 1991 which documents this). We have completed the installation and drawn plans of it on the bridge plans which are enclosed. We hereby request approval of and a permit for the installation.

This installation is providing valuable flow data for the Cumberland River in Nashville to several County, State, and Federal Agencies. This data has not been available until now. Therefore, this installation serves a vital purpose in providing important river flow data on which to base environmental decisions to protect this valuable resource and the City of Nashville.

Cordially,

Charles R. Gamble
Assistant District Chief
for Data Management
Tennessee District

#212

UNITED STATES GOVERNMENT

DATE: October 7, 1991
TO: The Record
FROM: Charles R. Gamble
SUBJECT: Discussions with Tennessee Department of Transportation

On August 15, 1991, we sent to Mr. Jack ~~Sourji~~ Srouji, Utilities Engineer, a request for mounting Accoustic Transducers, cables, etc. on the Victory Memorial Bridge in Nashville. The request contained hand sketches showing what we wanted to do. Mr. Sourji passed this request on to Mr. Larry Hinds in the Structures Division, who in turn passed it on to Mr. Charles Hunter. At least two request for additional information, which we supplied, were received from the Structures Division people (exact dates unavailable).

On October 3, 1991, I called Mr. ~~Sourji~~ Srouji to try to determine the status of the request. He wasn't sure and said he would have to check with Structures people on October 4, 1991 (they were not in the office on the 3rd). Mr. Sourji called be back on October 4 and said additional information was needed. I called Mr. Larry Hinds to see what was needed. Mr. Charles Hunter was in Mr. Hinds office at the time and I talked to both on their speaker phone. Mr. Hunter said he needed detailed drawings of our installation showing where it would be mounted on their bridge. I told him we did not have draftsmen to prepare such drawings and ask if we could get a copy of their bridge plans on which to show our installation. He said he would get me set of plans and call me back so I could pick them up. I went up about 2:00 o'clock on October 4 to pick up the plans.

Mr. hunter discussed the project at length. I ask if there was any doubt that approval for the project would be given, and he said he didn't think so as long as we mounted the cables, etc. where TDOT wanted them mounted (they want the cable mounted underneath the sidewalk). I ask for verbal permission to go ahead with the project and then give them as-built drawings after the work is finsihed. He consulted Mr. ~~Sourji~~ Srouji by phone about this. Mr. ~~Sourji~~ Srouji agreed to issue the permit after the fact. So Mr. Hunter said OK.

Charles R. Gamble

United States Department of the Interior
GEOLOGICAL SURVEY
Water Resources Division
810 Broadway, Suite 500
Nashville, Tennessee 37203

August 15, 1991

Mr. Jack Sourji, Utilities Engineer
Tennessee Department of Transportation, Region III
6601 Centennial Blvd.
Nashville, Tennessee 37209

Dear Mr. ~~Sourji:~~ Srouji

We are working with Mr. Jim Tarpey of the Metro Water and Services Department to install a gaging station to monitor the flow of the Cumberland River. The instrumentation for this gage will be unique, at least for us, in that an Acoustic Velocity Meter will be used. This requires that transducers be mounted on some structure so that an acoustic path can be obtained under water. We are proposing a double-path system in which the paths cross at about a 90 degree angle to each other. The velocity indicated by these separate paths is averaged for use in calculating flow.

Contingent upon some further site testing, we have tentatively selected the Woodland Street Bridge and the Victory Memorial Street Bridge on which to mount the transducers. We understand that the Woodland Street Bridge is a Metro bridge and that the Victory Memorial Bridge is a State bridge. The purpose of this letter is to request approval to mount a transducer on the upstream end of each of the piers of the Victory Memorial Bridge. Similar approval will be sought from Metro to mount transducers on the downstream end of piers of the Woodland Street Bridge. Sketches of the proposed installation are enclosed for your information.

The transducers are about 4-6 inches in diameter and will be mounted at the bottom of a 2-inch pipe which will be bolted to a channel-iron backing plate fastened to the pier. Coaxial cable from the transducer will be run up the pier to the bridge deck and along the outside of the guardrail in about 1-inch conduit to a shelter on the bank of the river.

The flow information that will be provided by this installation is very critical to the needs of the Water and Sewer Services Department. Other agencies, such as the Corps of Engineers who are working very closely with us on this project, are also very interested in the data that will be obtained. I have enclosed a copy of the General Agreement between our Agencies for this purpose. Please give consideration to approving this installation. If additional information is needed, please call (615) 736-5424.

Cordially,

Charles R. Gamble
Assistant District Chief
for Data Management
Tennessee District

Enclosure

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
NASHVILLE, TENNESSEE 37243-0337

January 07, 1991

Mr. Ferdinand Quinones
District Chief
United States Geological Survey
A-413 Federal Building
Nashville, TN 37203

Attn: Mr. Charley Gamble

Re: Agreement for Installation and
Maintenance of Gaging Stations
On State Highway Rights-of-Way

Dear Sir:

Reference is made to the subject agreement for U.S.G.S. gaging stations. Please make application and furnish drawings to the appropriate Regional Utilities Office. The attached page shows the counties located in each region and lists the address and telephone number of each Regional Utilities Engineer.

Please contact me if you have any questions concerning this matter.

Very truly yours,

Alvin M. Zager

Alvin M. Zager
Civil Engineering Specialist III
Right-of-Way Office
Utilities Section

w/enclosure

AMZ|cfb

cc: Regional Utilities Engineers - w/enclosure
Mr. Billy Burke

1990 DEC 17

AGREEMENT FOR INSTALLATION AND MAINTENANCE OF GAGING STATIONS ON STATE HIGHWAY RIGHTS-OF-WAY

THIS AGREEMENT is entered into this 25th day of October, 1990, by and between the State of Tennessee, Department of Transportation, hereinafter called "Licensor", and the United States of America, by and through the Geological Survey, U.S. Department of the Interior, hereinafter called "Licensee", pursuant to the Act of December 24, 1942, as amended (43 U.S.C.sec.36 b).

WITNESSETH:

1. Licensor, for and in consideration of the faithful performance by Licensee of all covenants and conditions herein contained and payment of the amount hereinafter provided, hereby consents and agrees to the installation, maintenance, and use of gaging stations on rights-of-way on the system of state highways hereinafter referred to as "Structures", by the Licensee upon and over the property of the Licensor as described in individual applications therefor, each of which shall be considered granted unless denied by Licensor in writing written thirty (30) calendar days following receipt, and the Licensor grants the right of ingress to and egress from the said Structures and property.

2. The said structures shall be located on the property of Licensor as shown on a drawing attached to such application.

3. The said Structures and appurtenances thereof shall be maintained in a good, safe and workmanlike manner.

4. The said Structures and appurtenances and all equipment and tools for the maintenance and use thereof placed in or upon said rights-of-way shall remain the property of the Licensee and may be removed by the Licensee at its own cost and expense at any time during the life of this agreement or any renewal thereof, or within 90 days after the expiration of this agreement or any renewal thereof, or within a reasonable time from date of receiving written notice from the Licensor to change the location of any Structure and appurtenances or any part thereof upon the right-of-way. Upon removal or relocation of any Structure and appurtenances the Licensee shall restore said described property to as nearly as possible the same state and condition existing prior to the installation of the Structure and its appurtenances.

5. The Licensee agrees to cooperate to the extent allowed by law, in the submittal of all claims for alleged loss, injuries, or damages, to persons or property arising from the acts of Licensee's employees, acting within the scope of their employment, in the installation, use, maintenance, removal or relocation of any Structure, appurtenances, equipment and tools pursuant to the Federal Tort Claims Act (28 U.S.C.,sec. 2671 et seq.)

6. As consideration for the rights and privileges granted herein, the Licensee shall pay to the Licensor the sum of $0 upon presentation of bill therefor, subject to the availability of appropriations by the Congress.

7. This agreement shall become effective on the day and year first above written, and shall continue in full force and effect until terminated by either Licensor or Licensee at any time on 30 days written notice.

8. No Member of or Delegate to Congress or Resident Commissioner after his election or appointment, either before or after he has qualified and during his continuance in office, and no officer, agent or employee of the Government, shall be admitted to any share of this agreement, or to any benefit arising therefrom, but this provision shall not be constructed to extend to this agreement if made within a corporation for its general benefit.

9. The Licensor warrants that it has not employed any person to solicit or secure this contract upon any agreement for a commission, percentage, brokerage, or contingent fee. Breach of this warranty shall give the Licensee the right to terminate the license, or, in its discretion to deduct from the license amount or consideration the amount of such commission, percentage, brokerage, or contingent fees. This warranty shall not apply to commissions payable by Licensor upon licenses secured or made through bona fide established commercial or selling agencies maintained by the Licensor for the purpose of securing business.

10. This agreement shall inure to the benefit of and be binding upon the successors, assigns, and transferees of the parties hereto, including successors of the Licensee in control of Structures, appurtenances, equipment and tools or the portion thereof affected by this agreement.

IN WITNESS WHEREOF, the parties have caused these presents to be executed the day and year first above written.

LICENSOR:

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

By _____
Jimmy M. Evans
Commissioner

APPROVED:

By _____
Henry K. Buckner, Jr.
Department Attorney

ADDRESS: 700 James K. Polk Building
Nashville, TN 37243-0349

LICENSEE:

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY:

By _____

Title asst. Dist. Chief

APPROVED:

By _____
James L. Cook
Regional Hydrologist, SR, WRD
Atlanta, Georgia

The Applicant in applying for this agreement agrees to the following:

1. Applicant shall design, install and maintain its facilities in accordance with RULES AND REGULATIONS FOR ACCOMMODATING UTILITIES WITHIN HIGHWAY RIGHTS-OF-WAY heretofore issued by the Department of Transportation.

2. Applicant, before commencing any work or installing any facilities shall submit to the Department of Transportation's regional office plans showing the location, type and scope of all work to be done or appliances to be installed in order that the Regional Utilities Engineer may recommend approval of the proposed work.

3. Applicant agrees that it will be responsible for any damages caused by any negligence on its part, including but not limited to the improper placing of or failure to display construction signs, danger signs, and other required signing and will bear any expense proximately caused by its operation on the right-of-way.

4. Applicant shall pay the salary and expenses of any Inspector(s) that the Department of Transportation may see fit to place upon the work while such Inspector(s) is/are assigned to this work. The Department of Transportation before incurring any expenses expected to be charged to the Applicant shall advise the Applicant in writing of this fact.

5. Applicant shall replace or repair any portion of the pavement, shoulders, bridges, private driveways or any part of said highway which may be disturbed or damaged. Replacements and repairs shall be made in accordance with the Department of Transportation's Standard Specifications For Road and Bridge Construction and any additional instructions which may be issued. Applicant agrees that the Department of Transportation may accomplish further replacements or repairs in the event those made by the applicant are not satisfactory, in which event the Applicant will reimburse Department of Transportation for the cost of such other replacements or repairs. Except in cases of emergency the Department of Transportation shall notify the Applicant of the nature and extent of such further replacements or repairs to be accomplished prior to undertaking the work.

6. If, at any future time, it should become necessary in the maintenance, construction or reconstruction of said highway to have Applicant's appliances and facilities removed in order that said highway may be properly maintained, constructed or reconstructed or in the event said appliances and facilities should, at any time, interfere with the use of said highway, the Applicant agrees upon being requested so to do by Department of Transportation to remove said appliances and facilities as promptly as the magnitude of the work to be accomplished will permit, at its own expense and without cost to the Department of Transportation, unless any requested removal should be contrary to a law of the State.

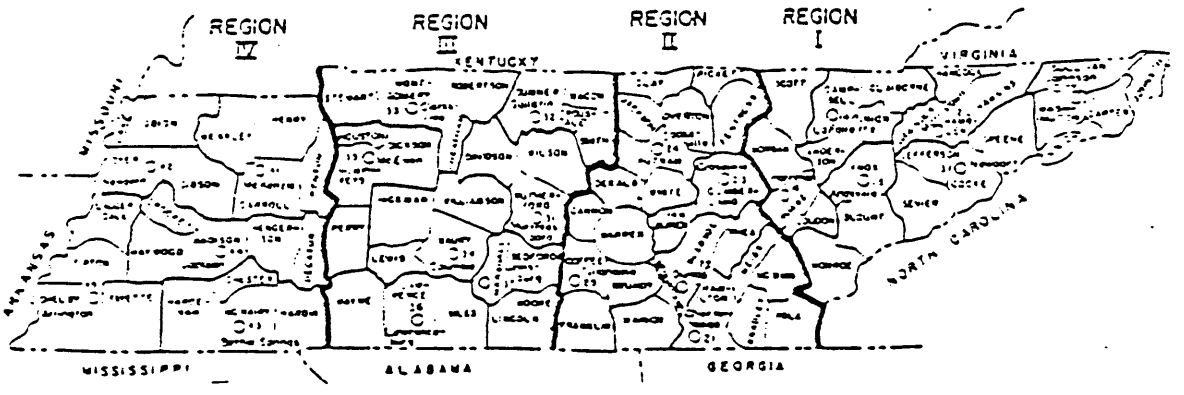
7. Applicant shall be responsible for any conflicts with other utilities or appurtenances that are on the highway right-of-way and shall notify the respective owner(s) of any conflicts and secure the owners permission for any alterations.

8. The Department of Transportation does not grant the Applicant any right, title or claim on any highway right-of-way and in granting this permission to go upon the right-of-way does not, in any way, assume the maintenance of the Applicant's facility.

9. This agreement shall become void if work is not commenced within a year from date of execution of this Agreement.

Mail to appropriate Region Office c/o Regional Utilities Engineer

REGION IV	REGION III	REGION II	REGION I
P. O. Box 429 Jackson, TN 38302 Tel. ~~421-1110~~ 424-2245	6601 CENTENIAL BLVD. ~~2200 Charlotte Ave.~~ Nashville, TN ~~37203~~ 37209 Tel. ~~320-5285~~ 350-4233	P. O. Box 22368 Chattanooga, TN 37422-2368 Tel. ~~892-3430~~ 892-9243	P. O. Box 58 Knoxville, TN 37901 Tel. 594-6262



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BRIDGE INSPECTION AND REPAIR OFFICE
NASHVILLE, TENNESSEE 37243-0338

September 26, 1991

Mr. Jack Srouji
Civil Engineering Specialist 2
ROW Office - Utilities
6601 Centennial Blvd.
Nashville, TN 37209

RE: Gaging Station
Victory Memorial Bridge (SR 6)
Davidson County

Dear Mr. Srouji:

We have reviewed the sketches provided for the review of the proposed gaging station and associated attachments as requested by your letter of September 4, 1991.

In order for us to complete this review we need additional information in the form of a drawing or drawings showing details of the attachment of the transducers, the conduit attachment details to both the substructure and the superstructure, along with details of the gaging station if it is to be located by the Victory Memorial Bridge.

It should be kept in mind that the conduit located on the superstructure must be underneath and inside the exterior beams according to our accommodation manual.

If you have any questions, please contact us.

Yours very truly,

Charles E. Hunter

(for)
Larry E. Hinds
Civil Engineering Manager 2
Bridge Inspection and Repair Office

CEH:gap

cc: Mr. Charles E. Hunter

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
NASHVILLE, TENNESSEE 37209
REGION 3 UTILITIES OFFICE

RECEIVED
SEP 6 1991
D.O.T.
BRIDGE INSPECTION & REPAIR

September 4, 1991

Mr. Larry Hinds
C. E. Manager II
Structures Division
12th Floor
James K. Polk Building
Nashville, TN

Re: Gaging Station
Woodland Street Bridge
Victory Memorial Bridge
Davidson County

Dear Sir:

Enclosed are five copies of plans and a copy of a letter from Mr. Charles R. Gamble of the U. S. Department of Interior.

Mr. Gamble is requesting a permit to mount transducers at the Victory Memorial Bridge as indicated on the plans.

Please review and advise if this meets the specifications required by the Structures Division.

Thank you.

Yours truly,

Jack Srouji

Jack Srouji
Civil Engineering Specialist 2
Right-of-Way Office, Utilities

gw

Encl.

LE	DM	LEH	GRP	CEH	HLT	JCS	RRG	WJS	WMM	TEQ	MGL
		LH									

United States Department of the Interior
GEOLOGICAL SURVEY
Water Resources Division
810 Broadway, Suite 500
Nashville, Tennessee 37203

TAKE PRIDE IN AMERICA

August 15, 1991

Mr. Jack Sourji, Utilities Engineer
Tennessee Department of Transportation, Region III
6601 Centennial Blvd.
Nashville, Tennessee 37209

Dear Mr. ~~Sourji:~~ Srouji

We are working with Mr. Jim Tarpey of the Metro Water and Services Department to install a gaging station to monitor the flow of the Cumberland River. The instrumentation for this gage will be unique, at least for us, in that an Acoustic Velocity Meter will be used. This requires that transducers be mounted on some structure so that an acoustic path can be obtained under water. We are proposing a double-path system in which the paths cross at about a 90 degree angle to each other. The velocity indicated by these separate paths is averaged for use in calculating flow.

Contingent upon some further site testing, we have tentatively selected the Woodland Street Bridge and the Victory Memorial Street Bridge on which to mount the transducers. We understand that the Woodland Street Bridge is a Metro bridge and that the Victory Memorial Bridge is a State bridge. The purpose of this letter is to request approval to mount a transducer on the upstream end of each of the piers of the Victory Memorial Bridge. Similar approval will be sought from Metro to mount transducers on the downstream end of piers of the Woodland Street Bridge. Sketches of the proposed installation are enclosed for your information.

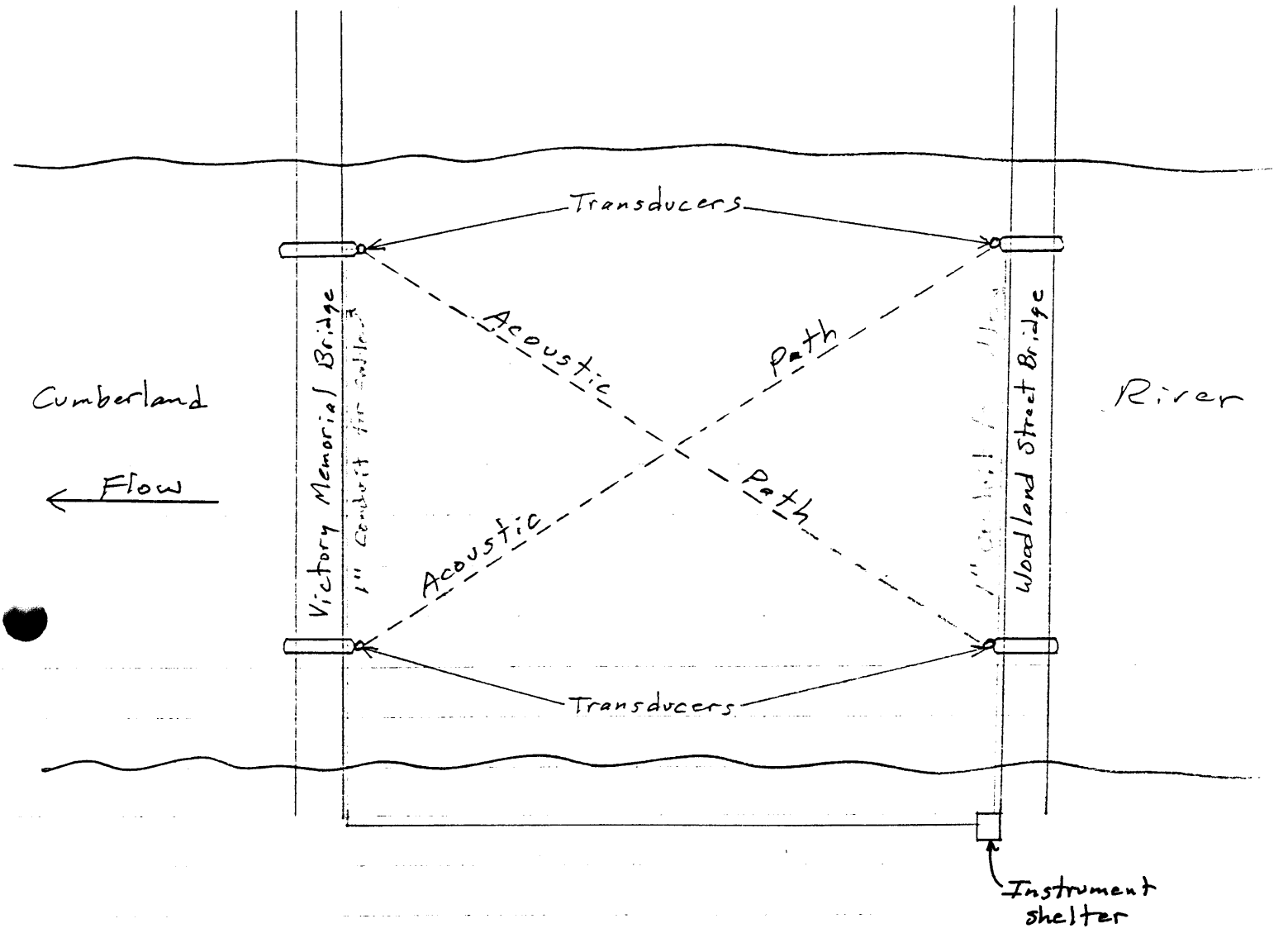
The transducers are about 4-6 inches in diameter and will be mounted at the bottom of a 2-inch pipe which will be bolted to a channel-iron backing plate fastened to the pier. Coaxial cable from the transducer will be run up the pier to the bridge deck and along the outside of the guardrail in about 1-inch conduit to a shelter on the bank of the river.

The flow information that will be provided by this installation is very critical to the needs of the Water and Sewer Services Department. Other agencies, such as the Corps of Engineers who are working very closely with us on this project, are also very interested in the data that will be obtained. I have enclosed a copy of the General Agreement between our Agencies for this purpose. Please give consideration to approving this installation. If additional information is needed, please call (615) 736-5424.

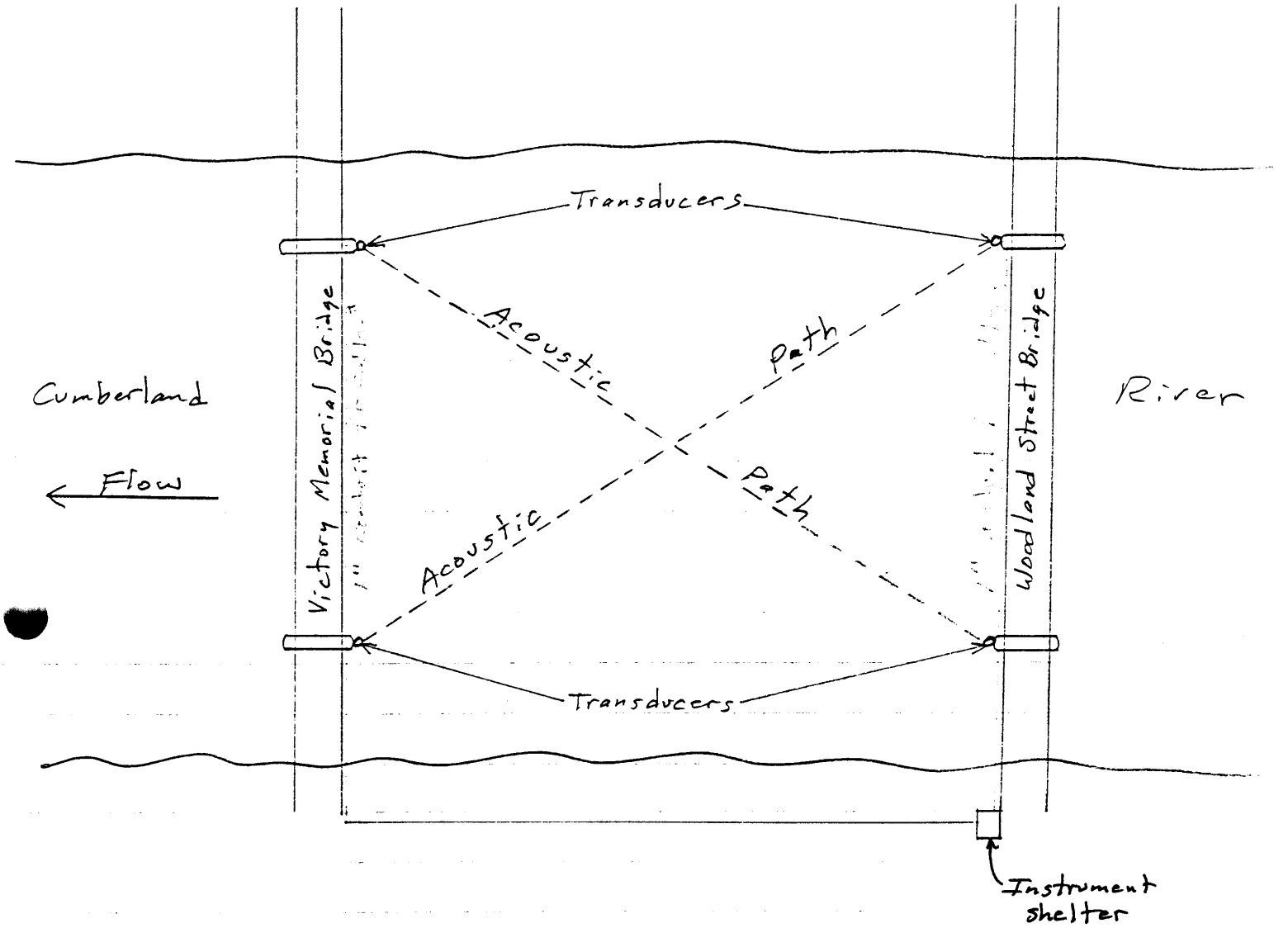
Cordially,

Charles R. Gamble
Assistant District Chief
for Data Management
Tennessee District

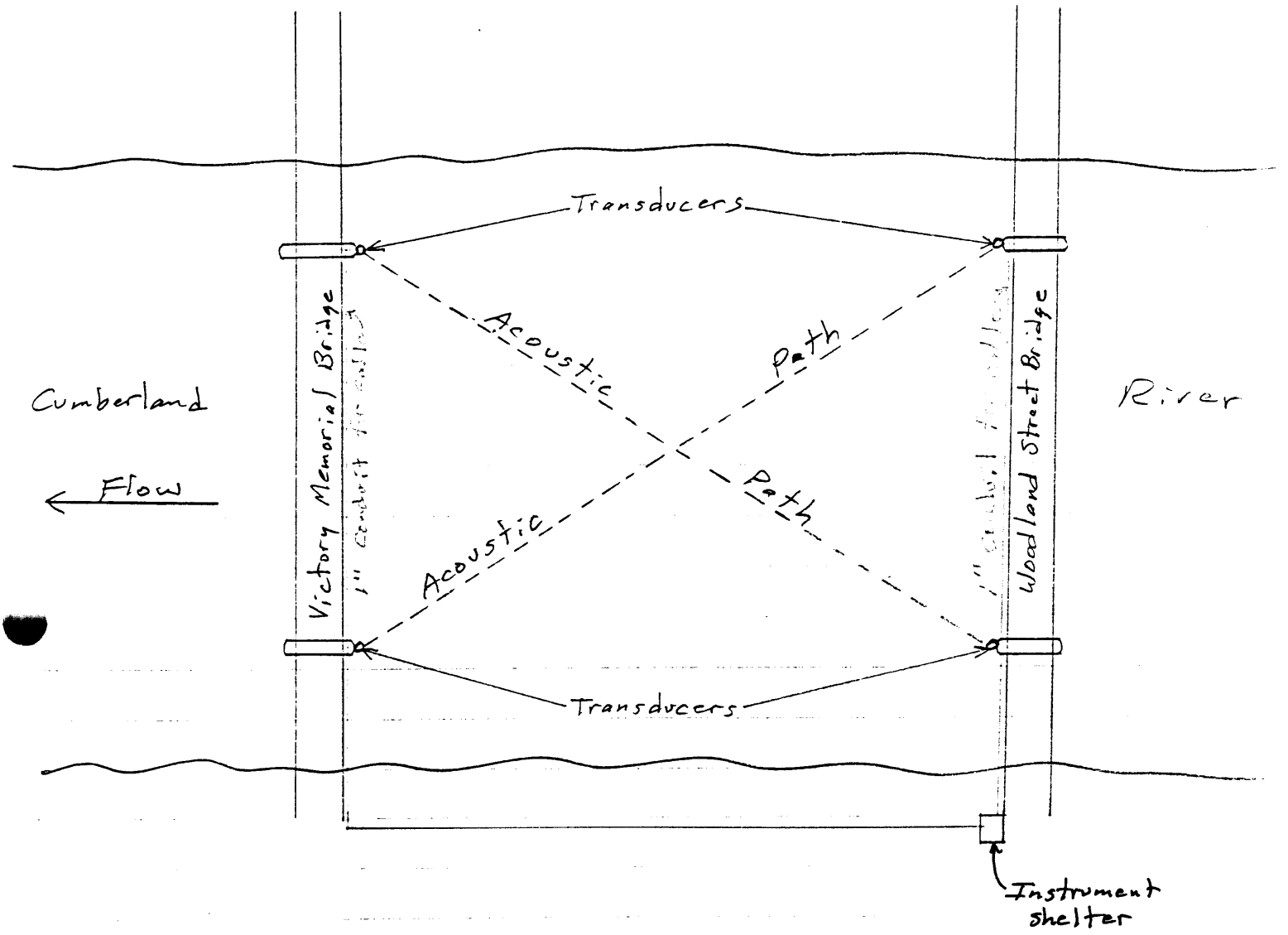
Enclosure



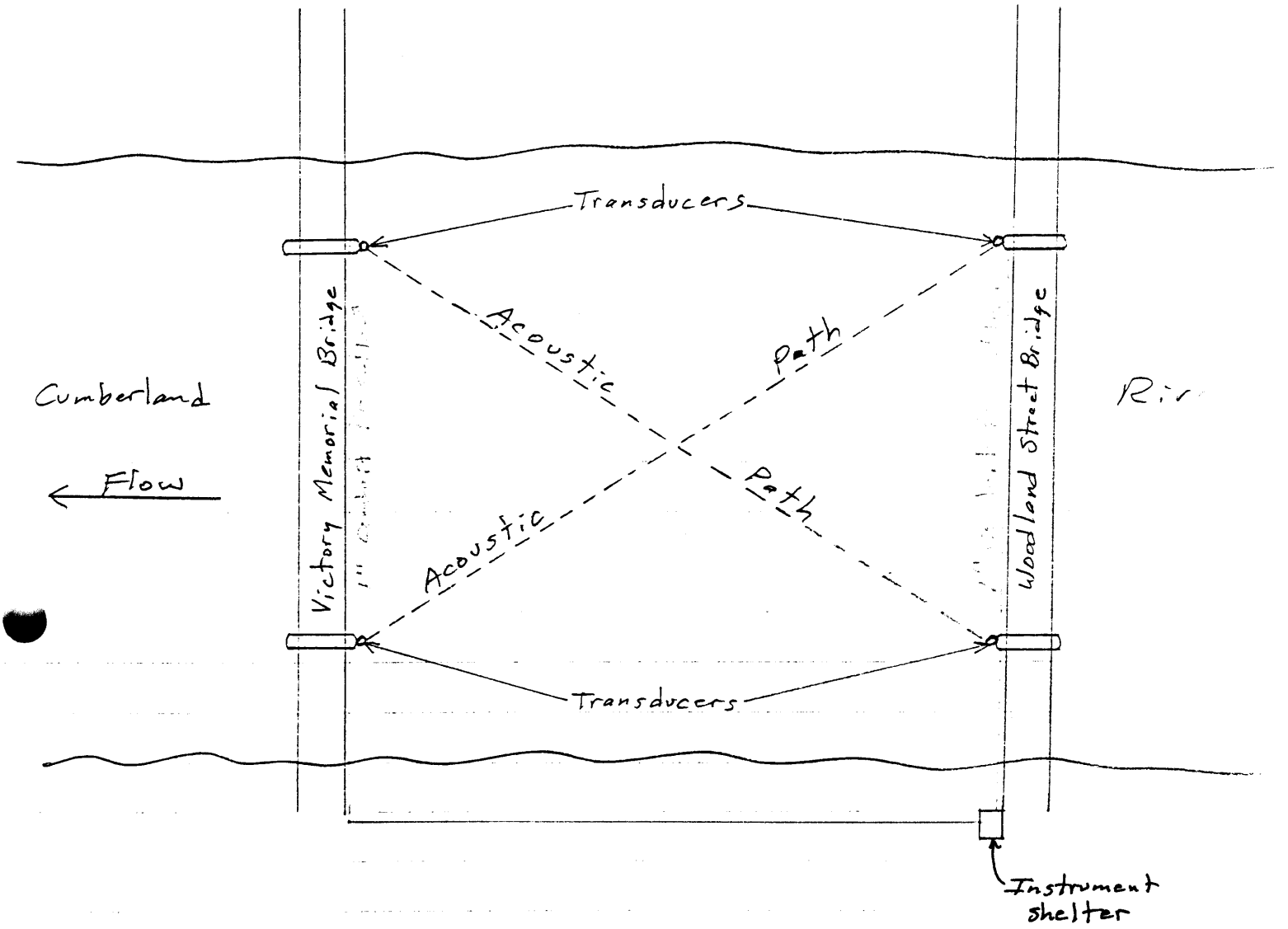
Downtown Nashville



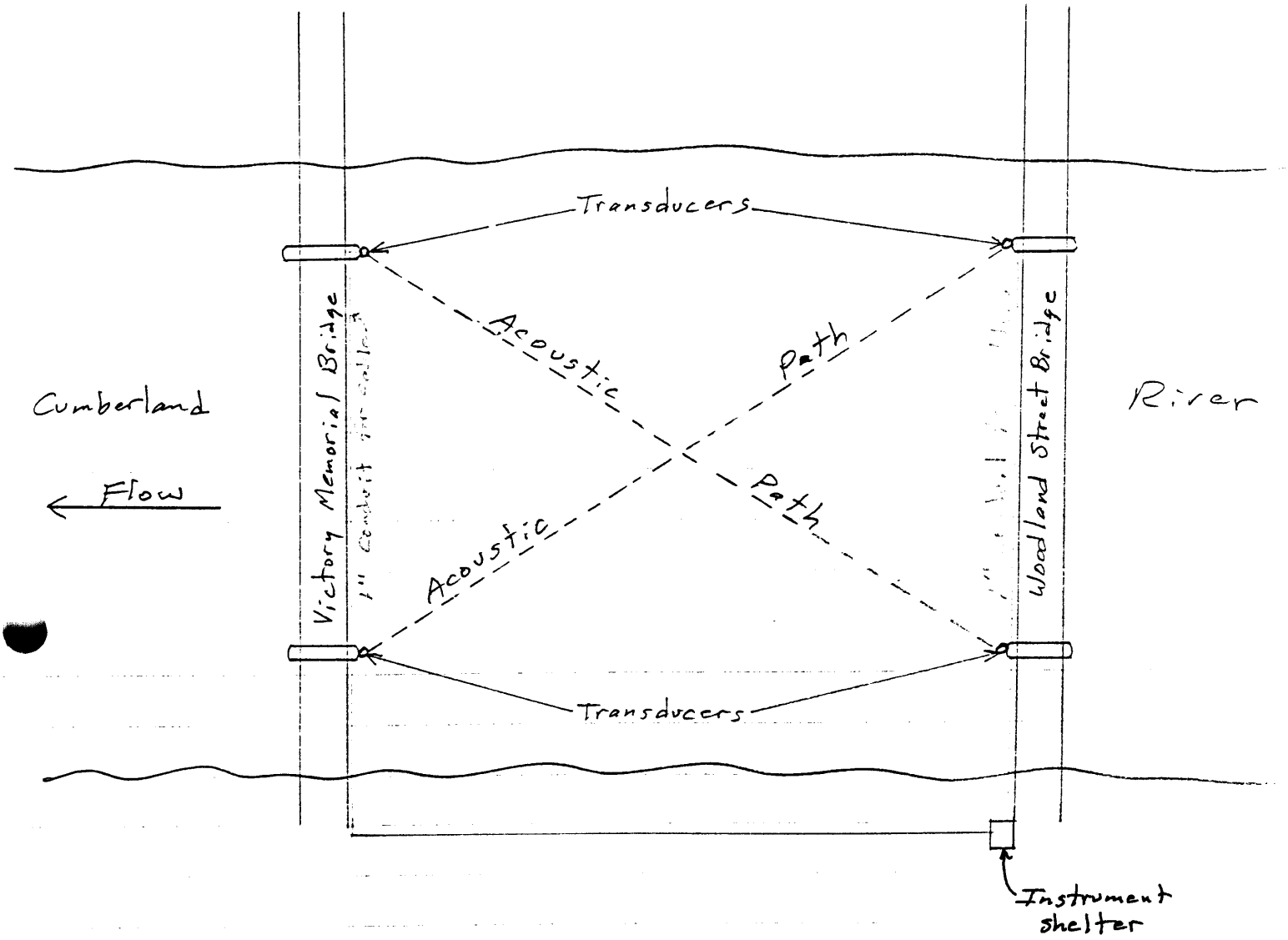
Downtown Nashville



Downtown Nashville

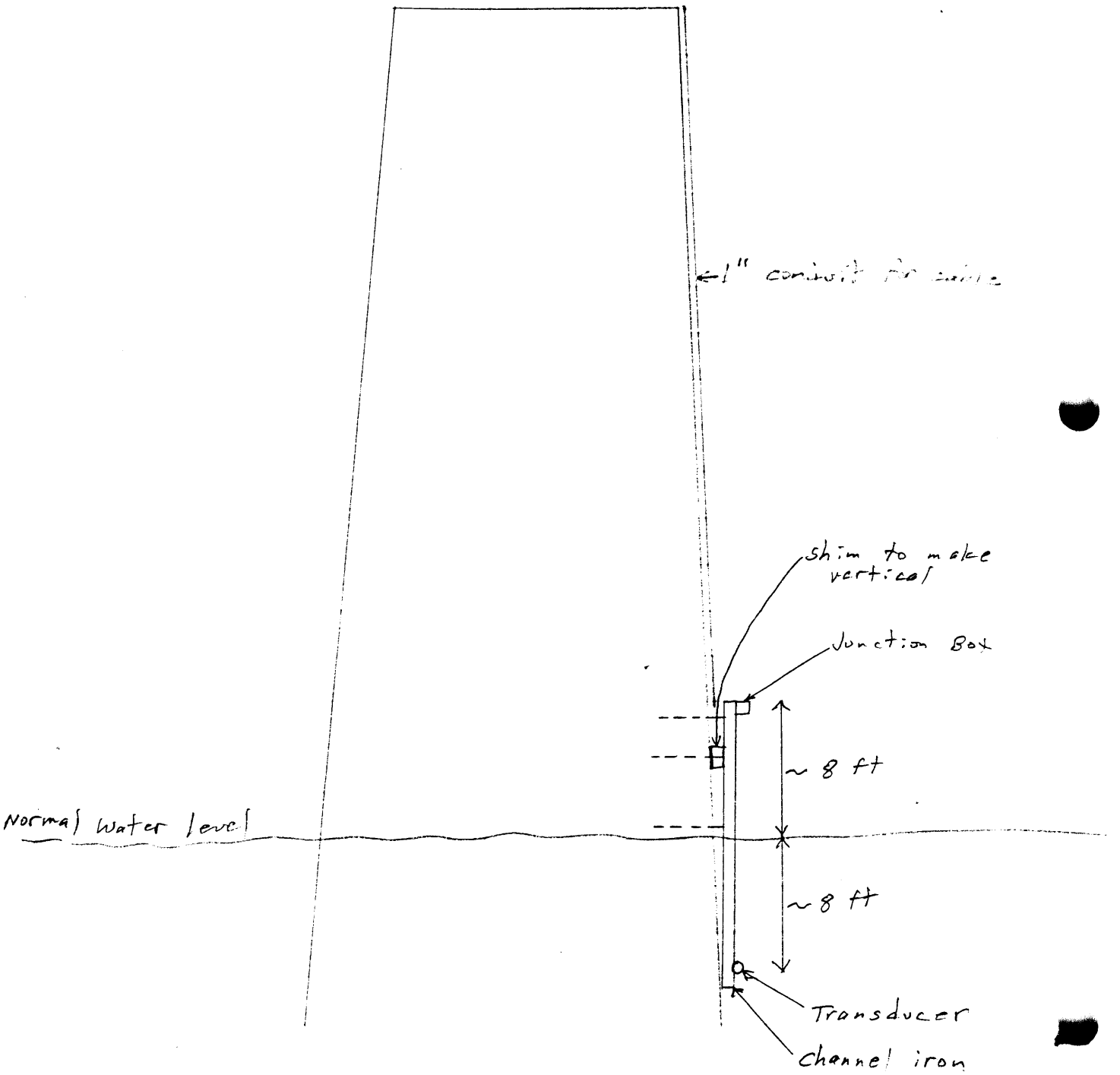


Downtown Nashville



Downtown Nashville

Victory Memorial Bridge Pier



United States Department of the Interior
GEOLOGICAL SURVEY
Water Resources Division
810 Broadway, Suite 500
Nashville, Tennessee 37203
(615) 736-5424 or FTS 852-5424
FAX (615) 736-2066 or FTS 852-2066

TAKE PRIDE IN AMERICA

COVER SHEET

Date 9-12-91

To: Name Billy Burke / CHAS HUNTER

Office TDOT

Telephone 741-0834 FAX 741-2508

From: Name C. R. Gamble Title

Message: Billy: This ~~is~~ sketch somewhat represents what will be installed. As the note says, the installation may look slightly ~~slightly~~ different by having 3 shims instead of one. But 3/8 in. bolts will be used to secure our ~~not~~ installation to the pier.

We would appreciate early consideration of this request. Metro is anxious to get this gage installed. If more information is needed, or approval is granted, when I'm not here please contact Jerry Lowery at 736-5853.

CRG

Number of pages including this one ____

#212

United States Department of the Interior

GEOLOGICAL SURVEY

Water Resources Division
810 Broadway, Suite 500
Nashville, Tennessee 37203
(615) 736-5424 or FTS 852-5424
FAX (615) 736-2066 or FTS 852-2066

COVER SHEET

Date 9-18-91

To: **Name** Billy Burke

Office TDOT

Telephone _____ **FAX** 741-2508

From: **Name** Jerry Lowery **Title** USGS

Message: 736-5853

Number of pages including this one 11

#212

United States Department of the Interior

GEOLOGICAL SURVEY

Water Resources Division
1025 Elm Hill Pike
Nashville, Tennessee 37210

September 18, 1991

Mr. Billy Burke
Department of Transportation
Division of Structures
Suite 1200 - J. K. Polk Building
Nashville, Tennessee 37219

Dear Billy:

Enclosed is the detailed information on the Cumberland River at Nashville installation on Victory Memorial Bridge as requested from Charles Gamble. We have listed three options for your review. Option "A" is our first choice primarily because of the safety factor. Please consider these options and let us know at your earliest convenience. If more information is needed please contact me at 736-5853.

Sincerely,

Jerry F. Lowery
Nashville Subdistrict Chief

Enclosures

OPTION A - PICTURE # 1

Right pier:

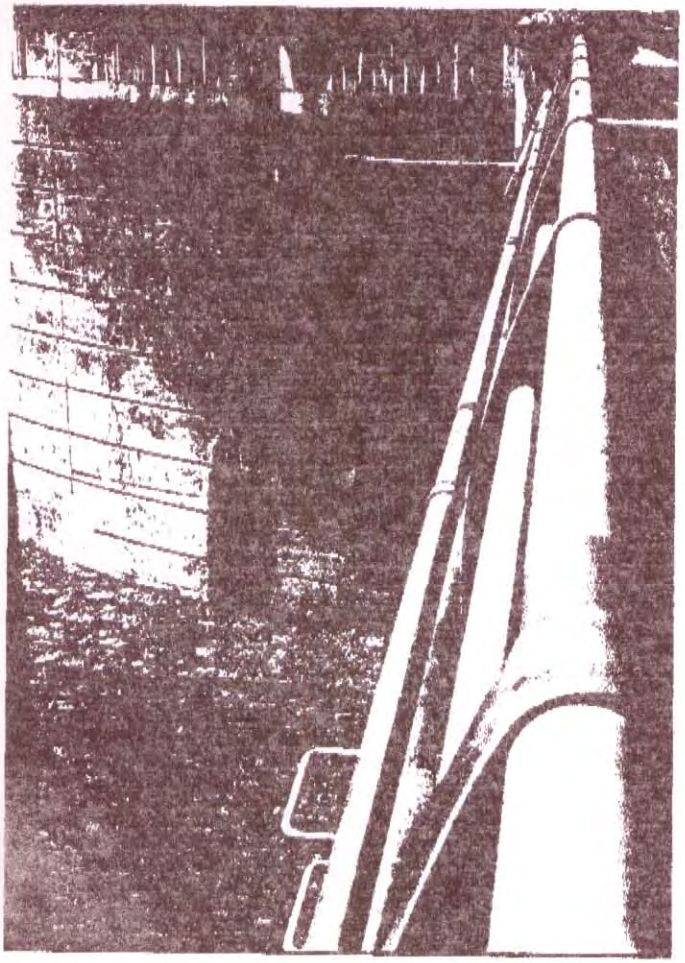
a. Six inch channel 16 feet long, eight feet under water and eight feet above water.

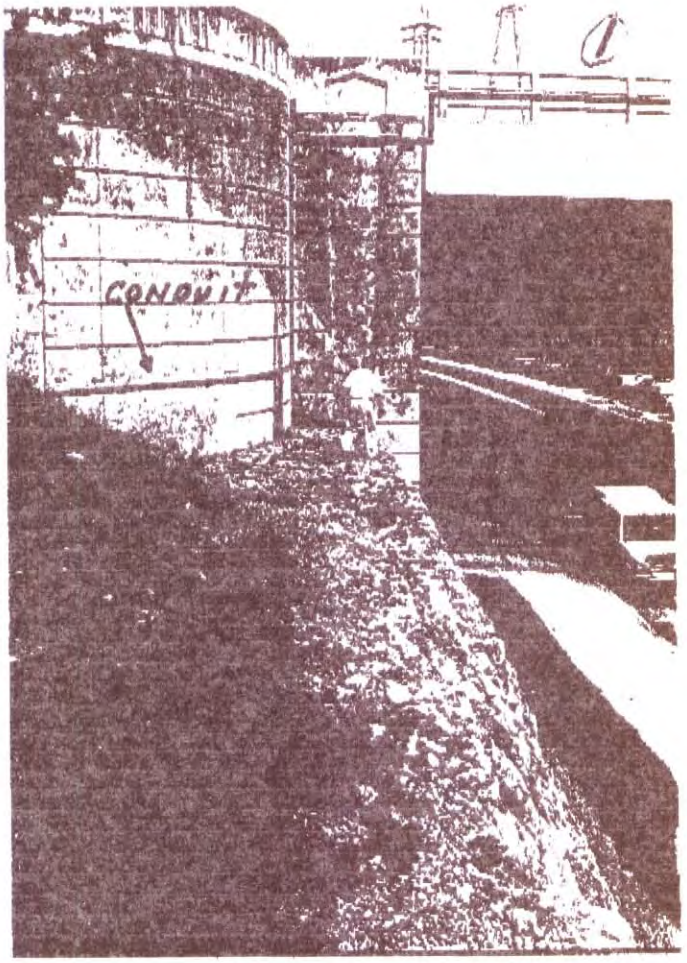
b. Attach channel to pier with 1/2 inch flush shells to a depth of two inches.

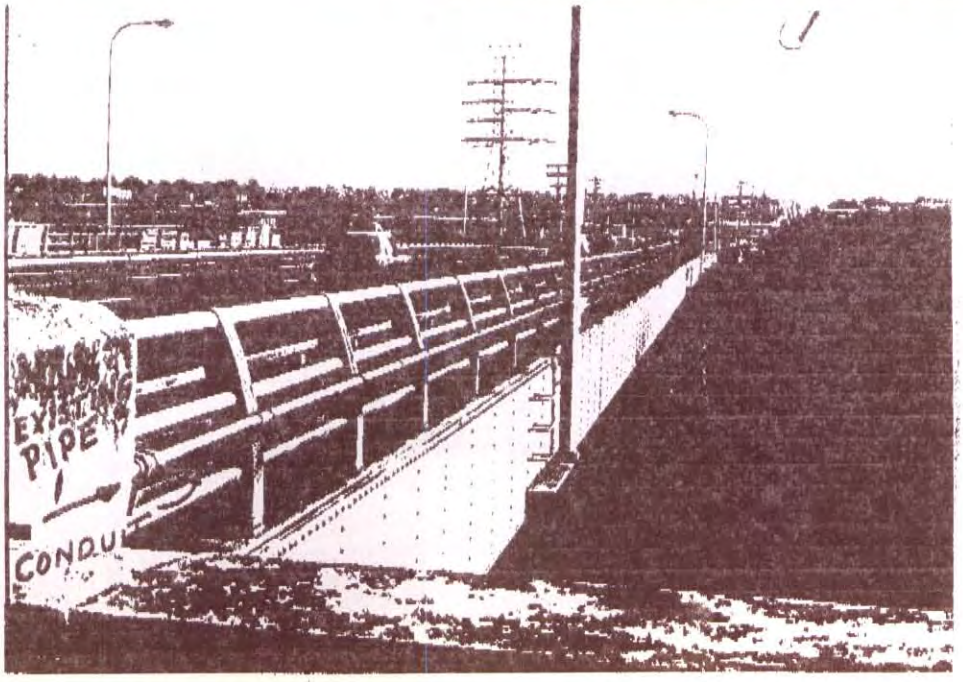
c. 1/2 inch aluminum conduit attached to pier with 1/4 inch flush shells and standard pipe brackets to top of pier. From this point conduit will be bent to conform to bridge contours up to existing pipe on outside of handrail. The conduit will be attached to guardrail supports under the existing two inch pipe from right pier to the top of the left bank pier.

Left bank pier:

d. The same channel and pipe, as described in (a.) will be attached to pier and up to handrail. The conduit will increase to 3/4 inch to carry two small wire cables to the end of the handrail (see picture 1). From there the existing conduit to the corner then down an existing depression where it enters ground.

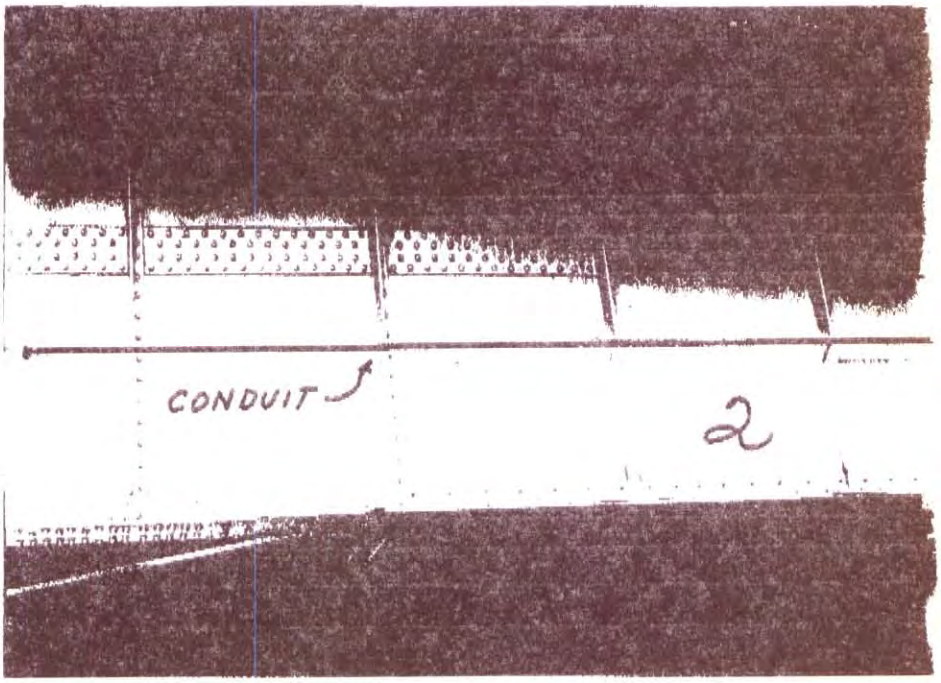


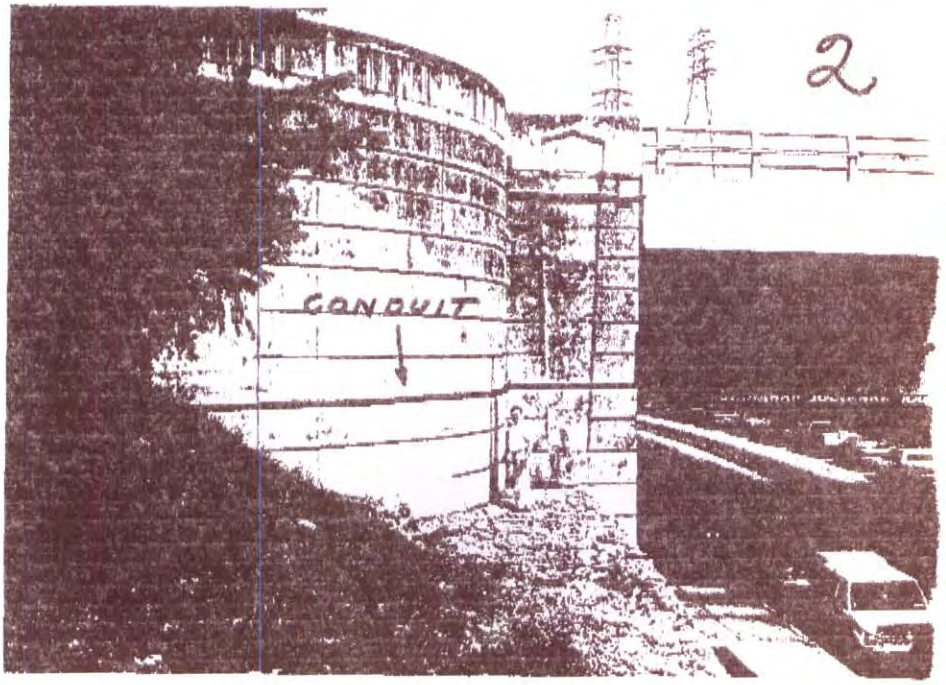

CONDUIT

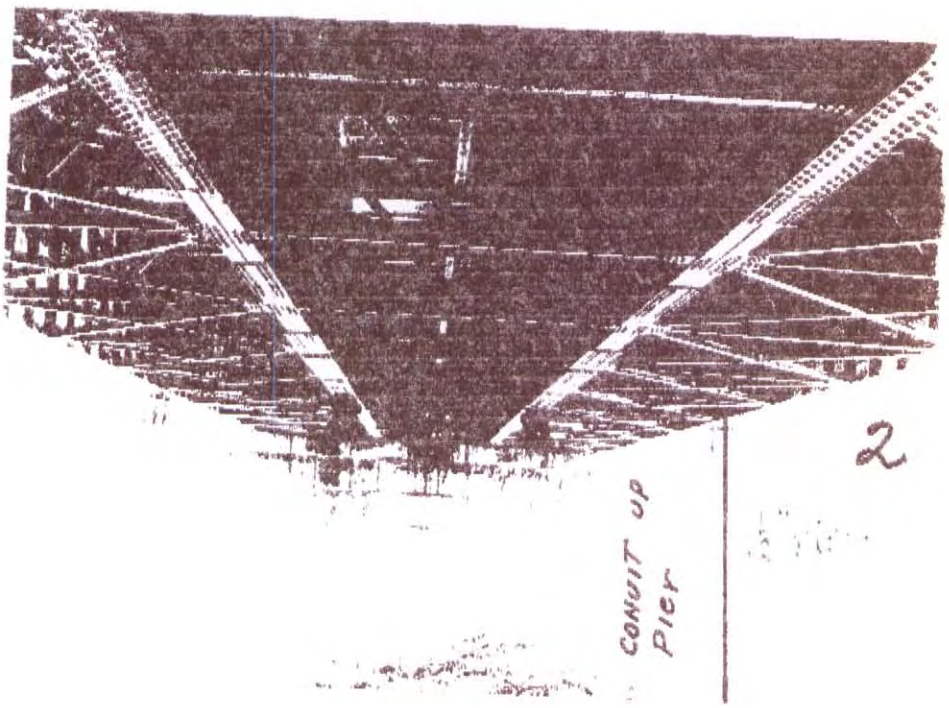

EXISTING
PIPE
CONDUIT

OPTION B - PICTURE # 2

A: Option B is the same as option A except the conduit will confirm to bridge girder contours and then will be clamped to the 1 inch steel bar about four feet up from low steel. Standard clamps with no drilling will be used on steel. Pipe will be attached to concrete with epoxy or 1/4 inch flush shells and clamps.


CONDUIT
2

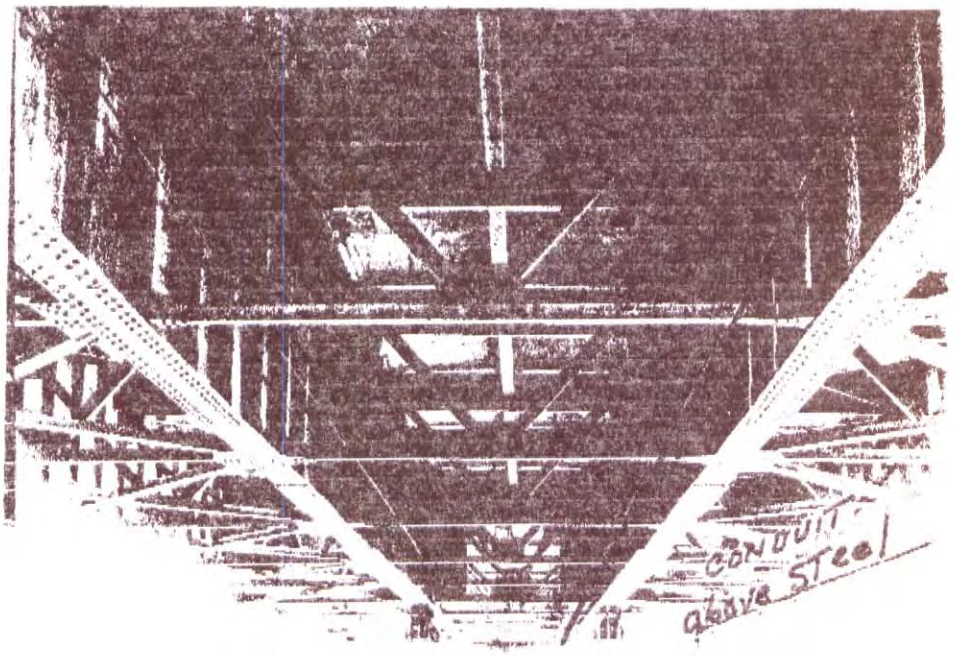

2
CONDUIT



2

OPTION C - PICTURE # 3

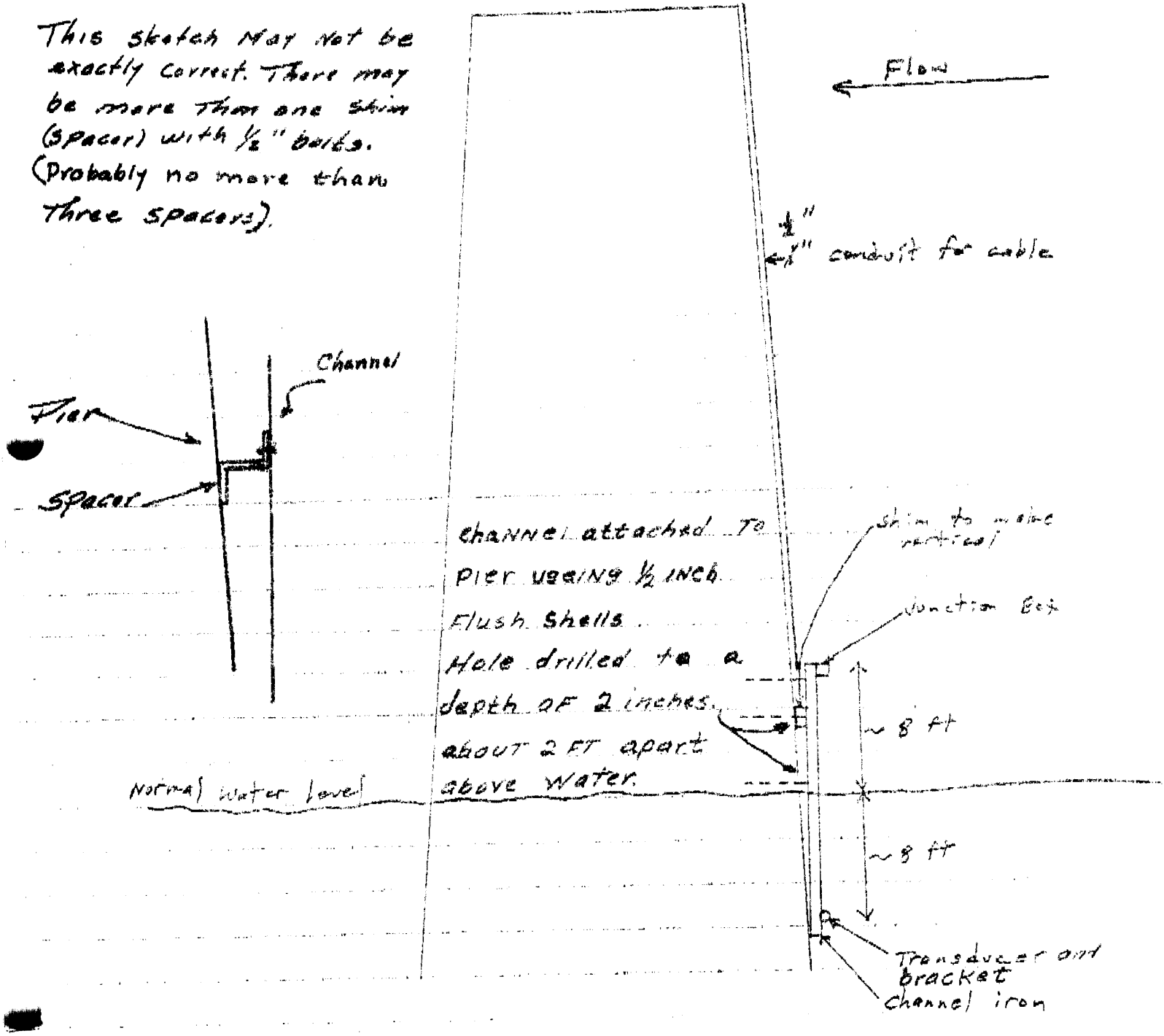
A: Option C is the same as option A & B to top of pier. From this point the conduit will be run above low steel, between bridge girders. Standard clamps will be used with no drilling in steel. Conduit will be anchored same as option B at abutment.

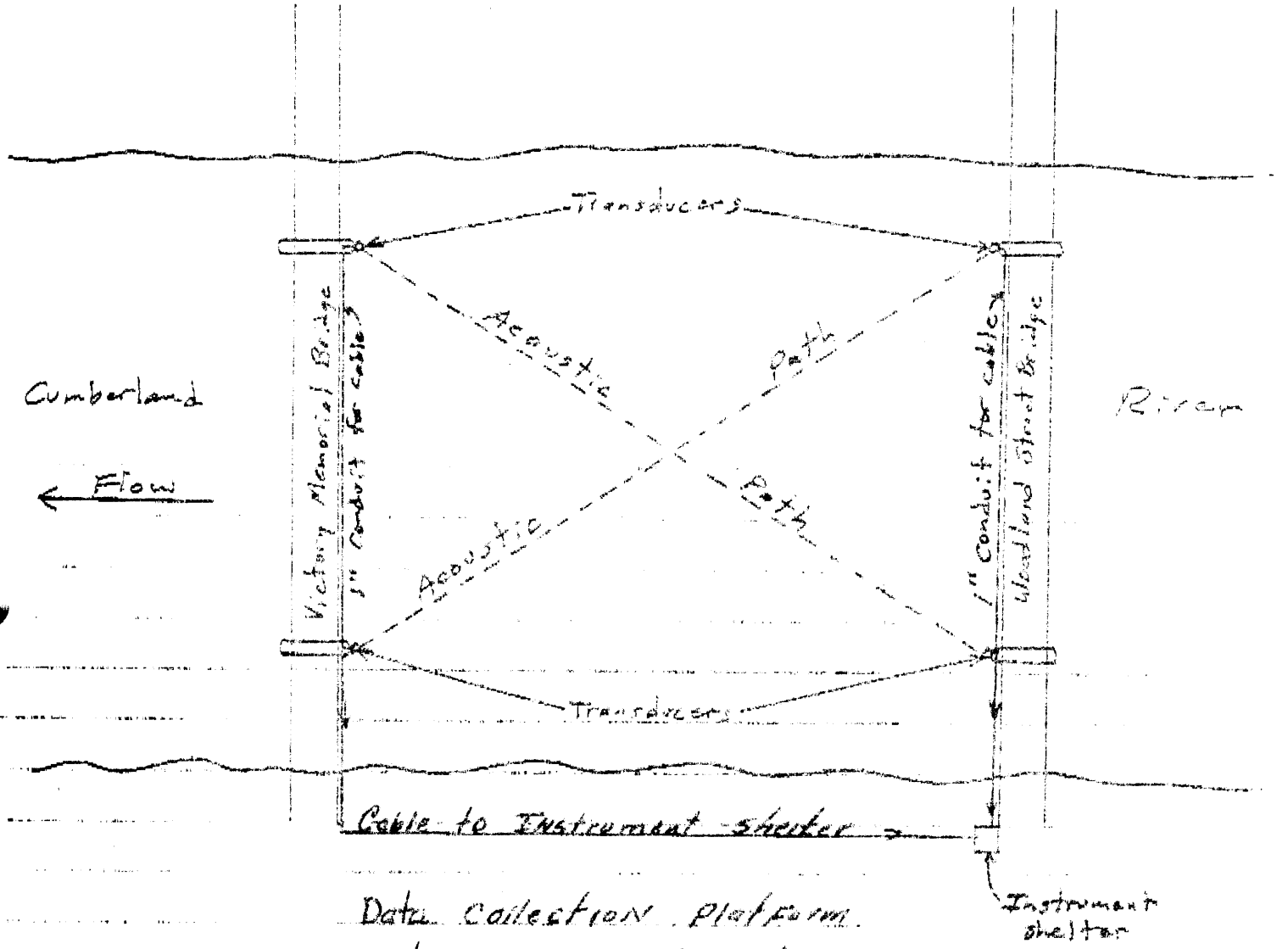

CONDUIT
above Steel

741-2508

Victory Memorial Bridge Pier

This sketch may not be exactly correct. There may be more than one shim (spacer) with ½" bolts. (Probably no more than three spacers).





Data Collection Platform.
Data Transmitted Through
Satellite to Nashville Computers.

Downtown Nashville

Transducer Mounting Bracket

Bracket mounted on Pier to Channel.

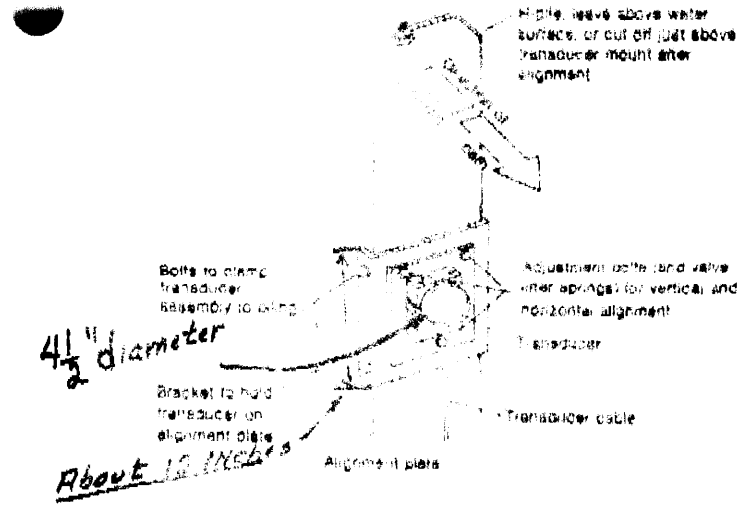
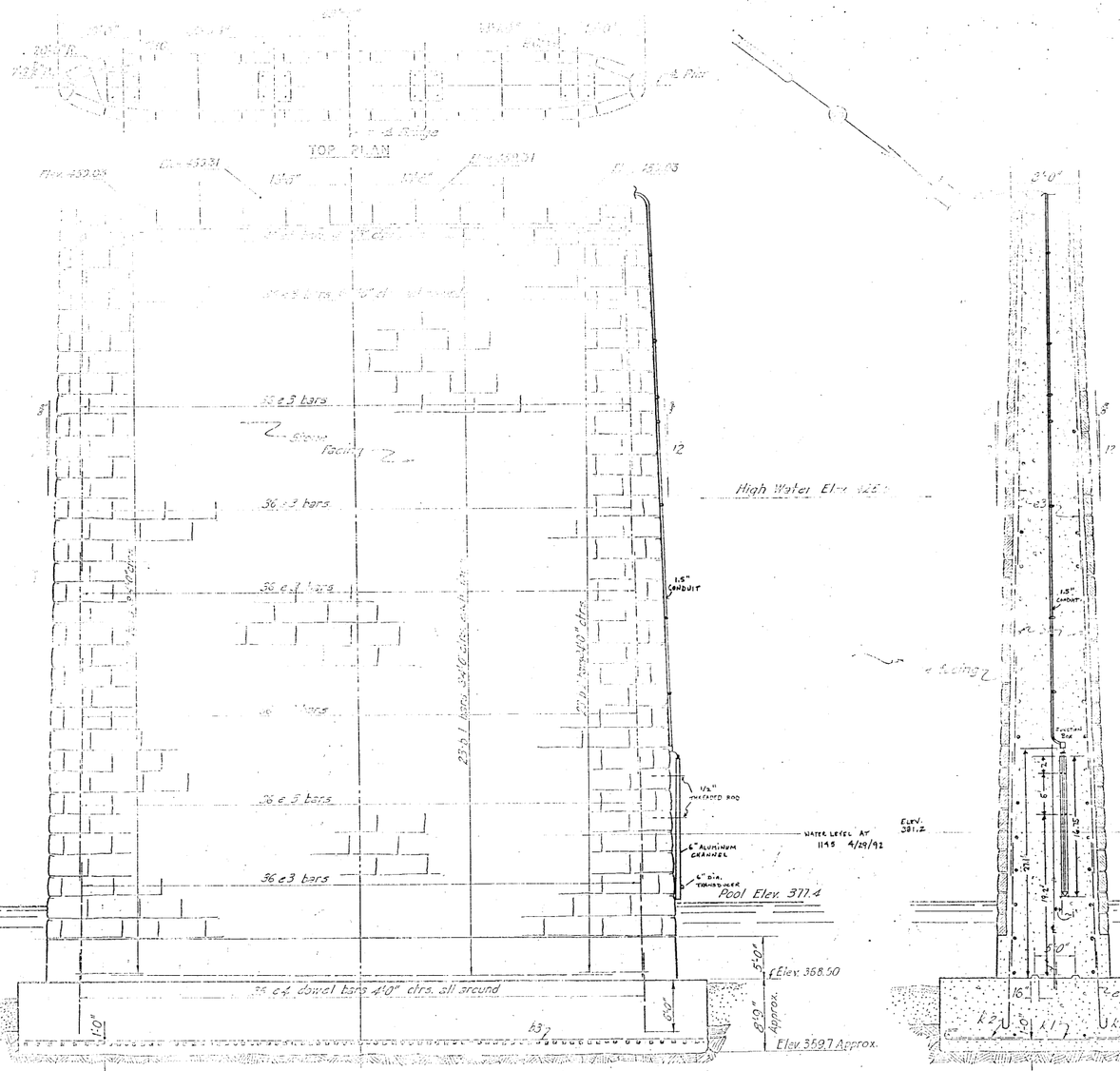
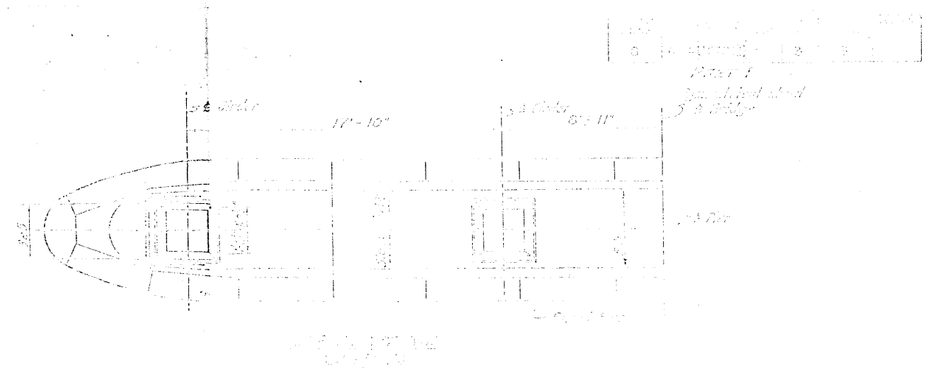


Figure 20.—Sketches of typical transducer mounts.





Notes:

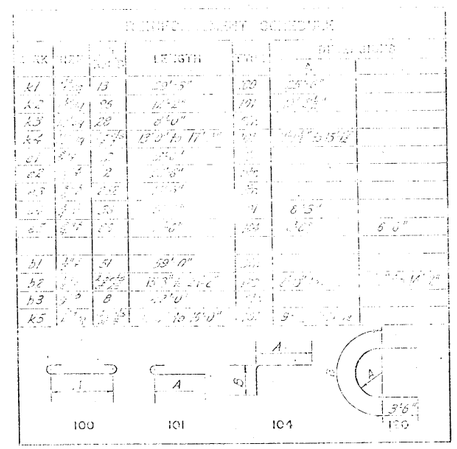
Length of vertical bars [illegible] be changed by the [illegible] to suit [illegible] to [illegible] of other [illegible]

Sheet 205

[illegible] of each bar [illegible] permissible height of pours. Especially [illegible] ALSO, SEE SPECIAL PROVISIONS RIVER PIERS.

ESTIMATED QUANTITIES

17-3	Y.M. Excavation (Bridges)	2,770 C.Y.
17-4	Rock Excavation (Bridges)	25 C.Y.
132-1	Structural Steel	9000 L
135-5	Class "B" Concrete	277 C.Y.
135-12	Steel Bar Reinforcement	25,500 Lbs.
430	Granite Masonry	29 C.F.



GENERAL NOTES ON CONCRETE

All concrete shall be Class "B", air entrained concrete placed in the dry. All cement shall be Type II or IIA.

For requirements on proportioning, mixing, placing and curing concrete see specifications.

Reinforcing steel shall be structural or intermediate grade.

Minimum lap for reinforcing bars shall be 40 bar diameters.

Minimum cover for reinforcing bars shall be 2" except as otherwise shown.

All bar bends shall be in accordance with AASHO specifications for Highway Bridges, 1949, paragraph 2.5.4.

All dimensions for reinforcing bars are given to the center of the bar.

Typical Hook

A - 16 bar diameters for bars up to 1".
B - 7 bar diameters for bars up to 1".
A - 18 bar diameters for bars over 1".
B - 9 bar diameters for bars over 1".

APPROVED

SEP 3 1992

[illegible]
CIVIL ENG. MGR.
BRIDGE INSPECTION & REPAIR

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

PIER 1

SCALE ½", 1"=1'-0" | MADE C.R.H. DATE 6-16-50 | TRCD. G.W.F. DATE 6-26-50 | CKD. J.L. DATE 9-15-50

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

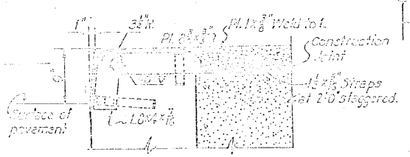
811 SHEET 2.03

E-9-2

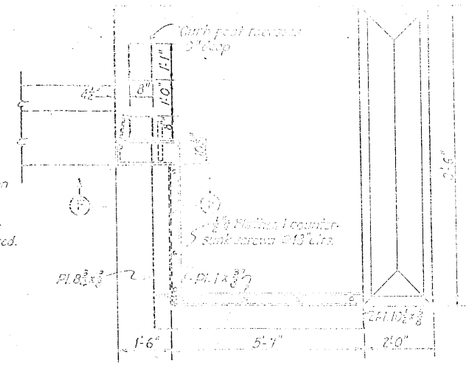
Revised 7-17-51
Revised 3-27-51

MICROFILMED

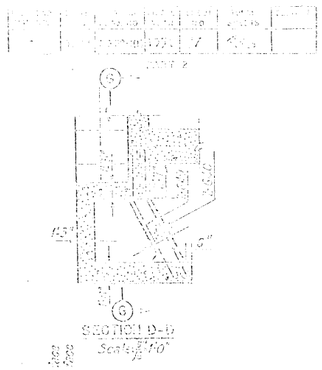
ELEVATION
Scale: 3/16" = 1'-0"



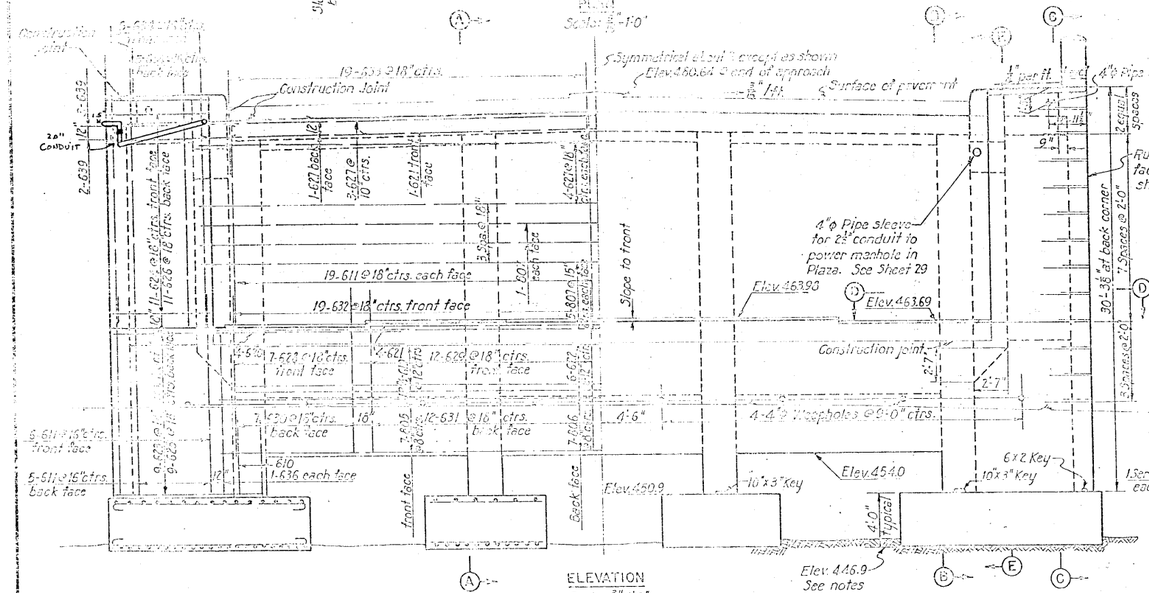
SECTION F - F
Scale: 1" = 1'-0"

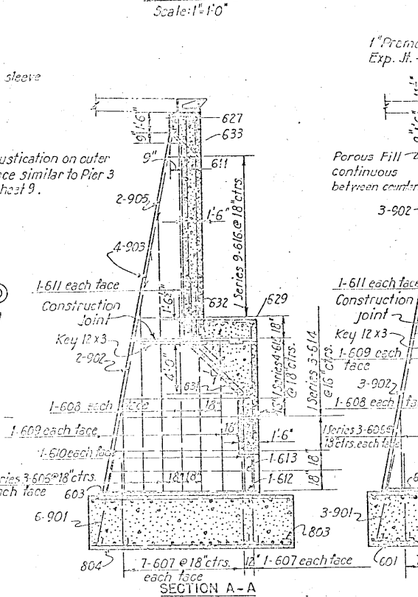


PAINT PLAN AT SLOPE WALK
Scale: 3/16" = 1'-0"

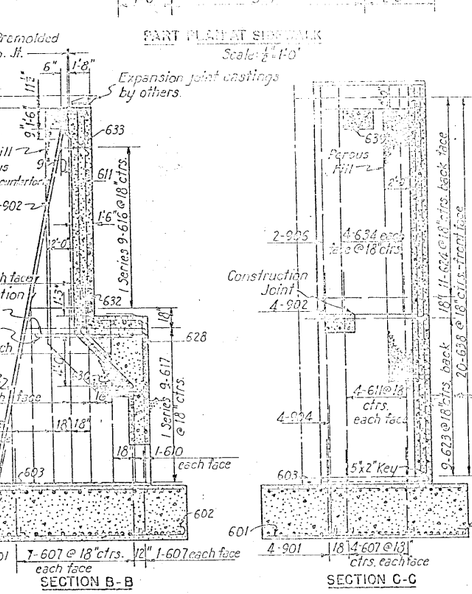


SECTION D-D
Scale: 3/16" = 1'-0"



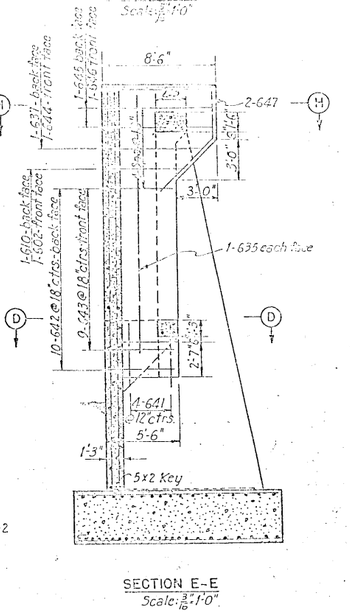


SECTION A-A

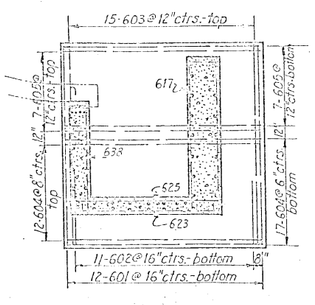


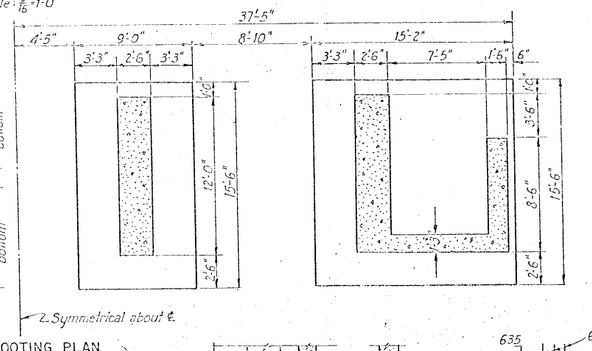
SECTION B-B

SECTION C-C

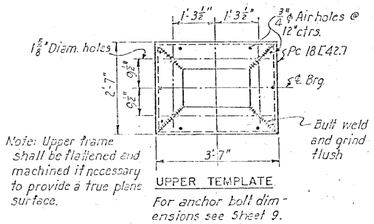


SECTION E-E
Scale: 3/16" = 1'-0"





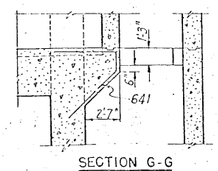
FOOTING PLAN
Scale: 3/16" = 1'-0"



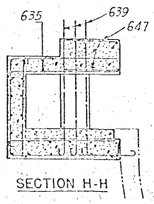
Note: Upper frame shall be flattened and machined if necessary to provide a true plane surface.

UPPER TEMPLATE

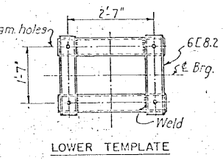
For anchor bolt dimensions see Sheet 9.



SECTION G-G

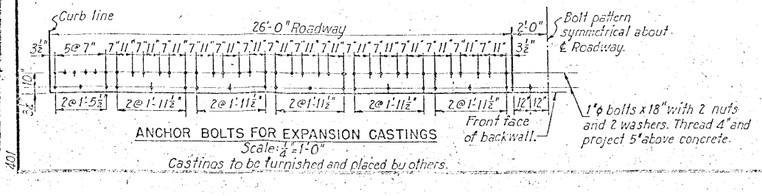


SECTION H-H



LOWER TEMPLATE

TEMPLATE-SCREED FRAMES
Scale: 1/2" = 1'-0"



ANCHOR BOLTS FOR EXPANSION CASTINGS
Scale: 1/4" = 1'-0"
Castings to be furnished and placed by others.

Notes:
Elevation of bottom of footings is subject to change when excavations reveal actual top of solid rock. All footings shall extend at least 3" into sound rock.
For downspout details, see Sheet 24.
For Reinforcing Steel schedule, see Sheet 8.
Back face of abutment shall have Type "A" waterproofing except at joints which shall have 2' wide strip of Type 'C' waterproofing.

ESTIMATED QUANTITIES

Item No.	Description	Quantity
17-2	Dry Excavation (Bridges)	135 Cu.Yds.
17-4	Rock Excavation (Bridges)	50 Cu.Yds.
132-1	Structural Steel	590 Lbs.
132-12	6" Wrought Iron Pipe	70 Lin.Ft.
135-4	Class "A" Concrete	340 Cu.Yds.
135-12	Steel Bar Reinforcement	30,140 Lbs.
137-1	Waterproofing, Type "A"	210 Sq.Yds.
137-3	Waterproofing, Type "C"	25 Sq.Yds.
	Cut Limestone Masonry	123 Cu.Ft.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

WEST ABUTMENT

SCALE 3/16, 1/4, 1/2, 1" = 1'-0"
MADE B.M.R. DATE 3-1-51
TRCD J.H.G. DATE 3-28-51
CKD C.R. DATE 4-12-51

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

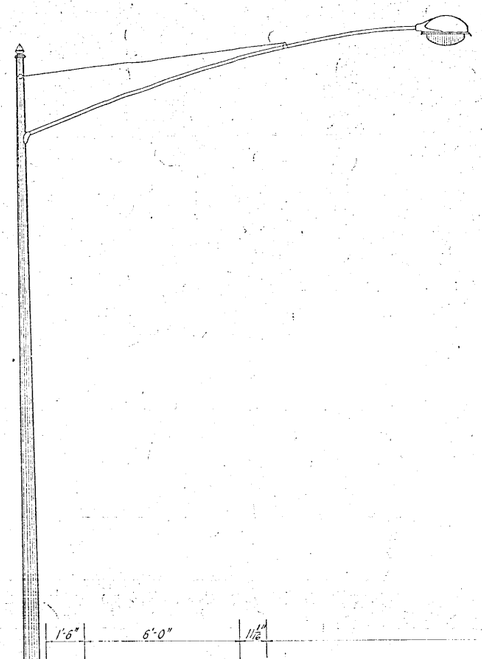
811 SHEET 7

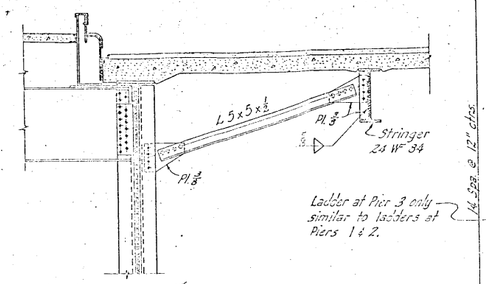
File E-14-7

MICROFILMED

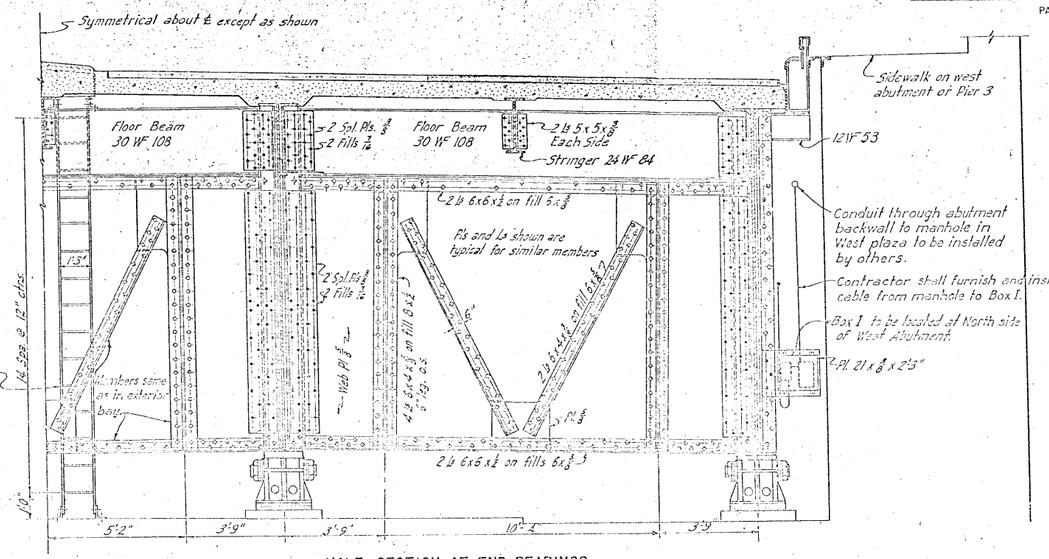
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	SECTION
8	TENN.	U-063-1(1)				

PART 3

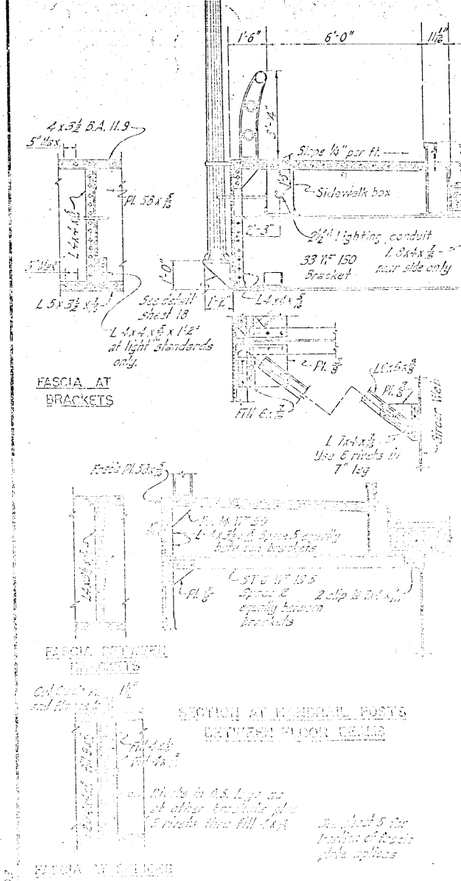




END SIDEWALK BRACKET



HALF SECTION AT END BEARINGS



SECTION AT INTERMEDIATE POSTS
EXPANSION FLOOR BEARING

1'-6"
6'-0"
1½"
26'-0"
Slope ½" per ft.
Sidewalk box
2½" ℄ lighting conduit
33 WF 150 Bracket
L 3 x 3 x ½ one side only
See detail Sheet 18
L 4 x 4 x ½
Pl. ⅜
L 7 x 4 x ½ Use 5 rivets in 7" leg
Fill ⅞
Steel Hand Rail
Tie pl. 17 x ⅜ where there are no cover pls.
Slope ½" per ft.
2 L's 5 x 5 x ⅝ each ℄ side
Floor Beam 30 WF 108
Stringer 24 WF 84
2 L's 4 x 4 x ⅝
Pl ⅜
L 6 x 6 x ½
Pl ⅜
Pl ⅜
Pl ⅜

REVISION NO.	REMARKS	FED. AID PROJ. NO.	STATE NO.	SHEET NO.	TOTAL SHEETS	CERT.
8	REVISED U-1038-(8)	1972	6	4-G		

PLANS

1 Series 30 - 671 @ about 10" ctrs. - front face
1 Series 26 - 671 @ about 10" ctrs. - back face

Elev. 466.0

Construction joint

3-670 @ 15" ctrs.

1-670 each face

3-670 @ 8" ctrs.

1-671 each face

Expansion joint

4"ø Weep holes spaced as shown 3 per ft.

Ground line

1 Series 7-671 @ 8" ctrs.

1-679

1-681

1-684

1-665

1-661

1-660

1-663 front face

1-663 back face

1-662

1 Series 18-676 @ about 10" ctrs. - front face
1 Series 18-682 @ about 10" ctrs. - back face

Front face

Back face

Front and back faces

Elev. 456.3

Elev. 452.0

Elev. 451.4

Elev. 450.9

Base to rest on abutment footing

6"x2" Key-Typical

Elev. 461.5

Elev. 458.0

Elev. 455.8

Elev. 453.3

Elev. 451.0

Type "C" waterproofing full height of wall

Waterstop-see detail

½" Premolded Fibre Expansion Joint filler.

EXPANSION JOINT DETAIL
Scale: ½" = 1'-0"

24 oz. copper flashing

WATERSTOP
No Scale

Note: Construction joint to be similar to expansion joint except omit fibre joint filler and omit crimp in copper waterstop.

ELEVATION
(Developed view)
Scale: ⅜" = 1'-0"

SECTION B-B
Scale: ⅜" = 1'-0"

SECTION A-A
Scale: ⅜" = 1'-0"

TYPICAL COUNTERFORT ELEVATION
Scale: ⅜" = 1'-0"

Top of wall to be notched to fit sidewalk

Abutment

Wall outline

PT Sta. 62+76.50 & Project

R = 36.50' to Base line

35°-08" to Project ℄

21°00'

22°00'

22°00'

3°00'

15'-0"

15'-7"

15'-3"

Base Line

Sta. 5+90.76 (edge of sidewalk)

17'-10⅞"

18'-0"

18'-0"

18'-0"

12'-1"

83'-11⅜"

FOOTING PLAN
Scale: ⅛" = 1'-0"

COUNTERFORT REINFORCING STEEL LOCATION

Vocable Mark	Mark	No. Req'd.	Mark	No. Req'd.	Mark	No. Req'd.	Mark	No. Req'd.	Mark	No. Req'd.	Mark	No. Req'd.
	Counterfort ④		Counterfort ⑦		Counterfort ⑥		Counterfort ⑤		Counterfort ⑦		Counterfort ⑪	
A	635	1 Series of 15	638	1 Series of 16	640	1 Series of 15	643	1 Series of 13	646	1 Series of 11	649	1 Series of 9
B	633	2 Series of 6	636	2 Series of 6	641	2 Series of 6	644	2 Series of 5	647	2 Series of 5	650	2 Series of 5
C	631	12	631	12	631	12	631	10	631	10	632	10
D	629	2	629	2	628	2	623	2	600	2	626	2
E	623	2	624	2	609	2	625	2	626	2	606	2
F	634	1 Series of 4	637	1 Series of 3	639	1 Series of 4	642	1 Series of 5	645	1 Series of 6	648	1 Series of 7
G	910	2	911	2	912	2	913	2	914	2	915	2
H	902	2	902	2	904	2						
J	901	2	901	2	903	1	905	2	906	2	907	1
K	619	9	619	9	621	8	621	8	621	7	621	7
L	619	5	619	5	621	4	621	4	621	3	621	3
M	620	4	620	4	622	4	622	4	622	3	622	3
N	601	5	602	5	603	4	604	4	605	4	606	4
O	610	5	611	5	612	4	613	4	614	4	615	4
P	620	4	620	4	622	4	622	3	622	3	622	3
R	619	7	619	7	621	7	621	7	621	7	621	7
S	908	6	908	6	908	5	908	4	908	4	909	3
	Counterfort ⑫		Counterfort ⑬		Counterfort ⑭							
A	652	1 Series of 6	655	1 Series of 4	658	1 Series of 2						
B	653	2 Series of 4	656	2 Series of 3	659	2 Series of 2						
C	632	8	632	6	632	4						
D	607	2	630	2	604	2						
E	604	2	602	2	627	2						
F	651	1 Series of 8	654	1 Series of 9	657	1 Series of 10						
G	803	2	804	2	805	2						
H												
J	861	2										
K	621	6	621	5	621	5						
L	621	2										
M	622	2	622	2	622	2						
N	607	4	608	4	609	4						
O	616	4	617	4	618	4						
P	622	2	622	3	622	3						
R	621	6	621	4	621	4						
S	802	4	802	2	802	2						

SPACING FOR BOTTOM FOOTING BARS

	K' Bars	L' Bars	M' Bars	T' Dim.	W' Dim.
(6)	6" ctrs.	12" ctrs.	18" ctrs.	18"	6"
(7)	6" ctrs.	12" ctrs.	18" ctrs.	18"	6"
(8)	8" ctrs.	16" ctrs.	16" ctrs.	16"	8"
(9)	8" ctrs.	16" ctrs.	16" ctrs.	16"	8"
(10)	10" ctrs.	18" ctrs.	18" ctrs.	18"	18"
(11)	9" ctrs.	18" ctrs.	18" ctrs.	18"	18"
(12)	12" ctrs.	18" ctrs.	18" ctrs.	18"	18"
(13)	18" ctrs.	13" ctrs.	18" ctrs.	18"	18"
(14)	18" ctrs.	13" ctrs.	18" ctrs.	18"	18"

TYPICAL FOOTING
Scale: ⅛" = 1'-0"

ESTIMATED QUANTITIES

Item No.	Description	Quantity
17-4	Rock Excavation (Bridges)	50 Cu. Yds.
135-4	Class "A" Concrete	250 Cu. Yds.
135-12	Steel Bar Reinforcement	29,290 Lbs.
137-1	Waterproofing, Type "A"	230 Sq. Yds.
137-3	Waterproofing, Type "C"	15 Sq. Yds.
-	Cut Limestone Masonry	451 Cu. Ft.

Notes:
Backface of wall shall have type "A" waterproofing full height of wall except at joints which shall have 2' wide strip of type "C" waterproofing.
Rustication to be a continuation of rustication on the abutment and is to run parallel to wall top.
For details of rustication, see Sheet 9.
For details of end post, see Sheet 9.
Elevations at bottom of footings subject to change.
See notes Sheet 7.
For handrail details see Sheet 29.
For reinforcing steel schedule see Sheet 8.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

WEST PLAZA
SOUTH RETAINING WALL

SCALE As Shown
MADE B.H.R. DATE 1-23-51
TRCD. G.D. DATE 4-4-51
CKD. D.L.J. DATE 4-18-51

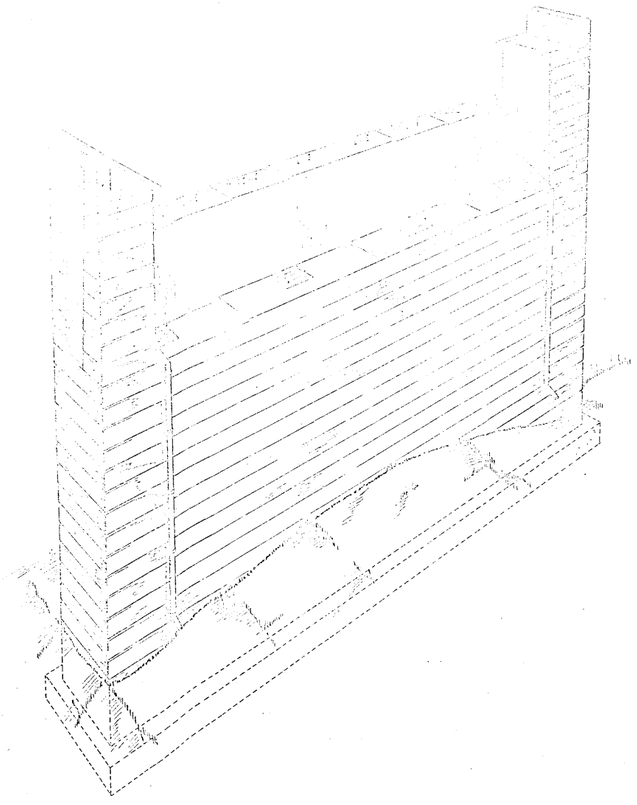
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

SHEET 6

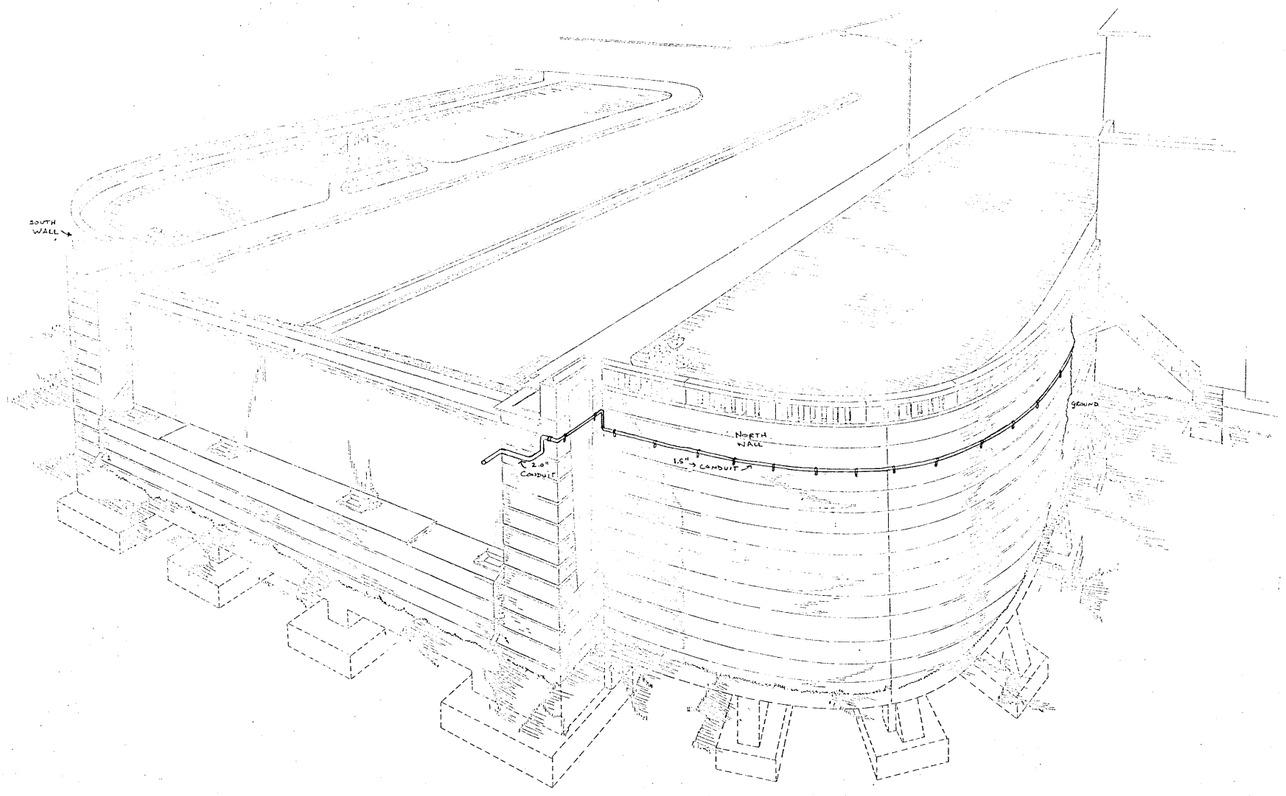
SEE DWG E-14-78 For Revised Retainingwall File E-14-6

RECORD FILED

432



PERSPECTIVE OF PIER 3



PERSPECTIVE OF WEST ABUTMENT

* CLOSE REPRESENTATION, CONDUIT IS ACTUALLY ON SOUTH WALL.

MICROFILMED

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

PERSPECTIVES

SCALE
MADE S.W.F. DATE 2-5-51
TRCD S.W.F. DATE 2-7-51
CKD J.T. DATE 4-25-51

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

811 SHEET 30

File E-14-5

19-526-5.24

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BRIDGE INSPECTION AND REPAIR OFFICE
NASHVILLE, TENNESSEE 37243-0338

September 26, 1991

Mr. Jack Srouji
Civil Engineering Specialist 2
ROW Office - Utilities
6601 Centennial Blvd.
Nashville, TN 37209

RE: Gaging Station
Victory Memorial Bridge (SR 6)
Davidson County

Dear Mr. Srouji:

We have reviewed the sketches provided for the review of the proposed gaging station and associated attachments as requested by your letter of September 4, 1991.

In order for us to complete this review we need additional information in the form of a drawing or drawings showing details of the attachment of the transducers, the conduit attachment details to both the substructure and the superstructure, along with details of the gaging station if it is to be located by the Victory Memorial Bridge.

It should be kept in mind that the conduit located on the superstructure must be underneath and inside the exterior beams according to our accommodation manual.

If you have any questions, please contact us.

Yours very truly,

Charles E Hunter

(for)
Larry E. Hinds
Civil Engineering Manager 2
Bridge Inspection and Repair Office

CEH:gap

cc: Mr. Charles E. Hunter
Mr Joseph C Scott, Jr.

Centy

DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

MAILING ADDRESS
COMMANDER(obr)
SECOND COAST GUARD DISTRICT
1430 OLIVE STREET
ST. LOUIS, MO 63103
Tel. 314-425-4607
FTS 279-4607

16593.2/190.6 CumbR

22 NOV 1982

Mr. Clellon L. Loveall
Engineer of Structures
Tennessee Department of Transportation
351 Highway Building
Nashville, TN 37219

Re: Victory Memorial Highway Bridge, Mile 190.6, Cumberland River at Nashville, Tennessee

Dear Mr. Loveall:

We are again updating our records of owners and maintainers of bridges crossing navigable streams within the Second Coast Guard District. Would you please complete the form below and return it promptly?

Thank you for your cooperation.

Sincerely,

S. W. THOROUGHMAN
Chief, Bridge Branch
By direction of the District Commander

Date 12-1-82

1. Name of bridge Victory Memorial Hwy Bridge
   Your bridge No. 19-6-9.76 River Cumberland Mile 190.6
   Telephone No. at bridge None

2. Name of bridge owner TENN D.O.T.
   Address 2200 Charlotte Ave Nashville 37203
   Telephone No. (area code) 615-320-8330

3. Name of person responsible for bridge R.H. Mitchell
   Address Same as above

4. Person(s) to contact to report deficiencies in lighting:
   (a) During Office hours William Harris
   Address 6630 Centennial Blvd. Nashville 37209
   Telephone No. (area code) 615-741-4688

   (b) Outside Office hours R.C. Tidwell
   Address Nashville
   Telephone No. (area code) 615-352-1366

R A Mitchell
(Signature)

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
NASHVILLE, TENNESSEE 37219

19 February 1982

See Details of abutment 2 in plans section. Detail is dated 2-19-1982

Mr. Clellon L. Loveall
Department of Structures
James K. Polk State Office Building
Nashville, TN. 37219

Attention: Mr. Hollis Tackitt

Dear Mr. Loveall:

Enclosed you will find a sketch of the present observed cracks in Abutment #2 on the Victory Memoral Bridge over the Cumberland River. As per telephone conversation with Mr. Hollis Tackitt, our Nashville Bridge Inspection Team visited this site and took detailed information on these cracks.

I also noticed that this abutment is failing in the westerly direction, allowing no expansion joint on this abutment, the armor plates are now touching. It was approximately 50 degrees F. Close observation also showed cracks in the last pier columns, on the abutment side and the pier is slightly out of plumb, more than the normal deflection due to temperature.

This situation will be closely and frequently monitored by the Nashville Bridge Inspection Crew.

Very Truly Yours,

Ben J. Teague
Engr. Sup.
Bridge Inspection

Enclosure

cc: Mr. Hollis Tackitt
MR. Don Greer
File

CONSOER, TOWNSEND & ASSOCIATES
CONSULTING ENGINEERS
404 JAMES ROBERTSON PARKWAY
1907 PARKWAY TOWERS • NASHVILLE, TENN. 37219
PHONE 244-8864

19-6

August 28, 1979

Mr. Gerald Gregory
Regional Utilities Engineer
2200 Charlotte
Nashville, Tennessee 37203

Re: Project No. 76-ST-001
Browns Creek Force Main
(79037)

Dear Mr. Gregory:

Enclosed herewith is a copy of a letter from Shawnee Construction, Inc. concerning the existing condition of the abutment and retaining walls on the east side of the Victory Memorial Bridge. This Contractor and their subcontractor are presently conducting tunnel operations at this location.

Based on the existing field conditions and utilities, this tunnel will be extended beyond the bridge abutment. However, this letter is to call your attention to this condition for your investigation of possible further deterioration.

If we can provide additional information in this regard, please feel free to contact us.

Sincerely yours,

CONSOER, TOWNSEND & ASSOCIATES

Tim W. Graves

Tim W. Graves

TWG:nm

cc: Mr. Clellon Lovall, Engineer
Tenneseee Dept. of Transportation

Mr. K. R. Harrington, Director
Dept. of Water & Sewerage Services

Mr. Sam L. McIllwain
CT&A

RECEIVED
AUG 31 1979
TENN. DEPT. OF TRANSPORTATION
BUREAU OF HIGHWAYS
DIVISION OF STRUCTURES

Aug. 20, 1979

Mr. Tim Graves
Chief of Construction
Consoer, Townsend & Assoc.
404 Parkway Towers
Nashville, Tn. 37219

Re: Brown Creek Force Main
Project 76-ST-ool

Mr. Graves,

The Shawnee Const. Inc. is requesting a 25' extension of the 96" tunnel that now begins at station 102+29.49 and ends at 103+55.99, to terminate now at station 103+80.99, on the above referenced project.

After our meeting friday, Aug. 17, 1979 with you and Mr. Paul Stonecipher, we felt our request was well in line due to the following problems.

1. The proposed end of tunnel is at a point ten (10) feet from being past the end of an existing concrete bridge abutment that is only twelve (12) feet to our right.
2. The existing concrete abutment wall that ties into the retaining wall directly right of the end of tunnel is cracked in three (3) places which all are opened up from ½" to 1½".
3. At this same point is a vertical key-way type joint that has opened & pulled apart from 1" at the bottom to 4" at the top, exposing the rubber-plastic type joint material & in 2 or 3 areas has torn the joint material apart.
4. There is an old existing building to the left of the proposed end of the tunnel that no one knows the condition

of its foundation and the extension of the tunnel would provide added insurance to all concerned.

5. Probably the most important of all these problems is the fact that the tunnel is twenty-one (21) feet deep where we open-cut up against it, which puts us approximately 12' to 15' below the existing concrete abutment and retaining wall elevation. Even with shoring and bracing we feel there is still a substantial safety factor to be considered for the men down that deep and confined within the shoring.

Even by extending the tunnel only 25' the trench areas will have to have additional protection from the remainder of the bridge pier footings, existing 42" brick sewer, telephone conduits & water & gas lines, but at least we feel we will have added an important safety factor to the existing conditions which should be considered by all involved in this project.

We hope that the evidence submitted will be carefully reviewed and taken into consideration for approval of this matter.

Our sub-contractor is prepared to begin construction of their tunnel shaft at the end of tunnel in reference of & your earliest responce will be appreciated.

Respectfully,

Gene Summers

Gene Summers
Project Manager
Shawnee Const. Inc.

cc: Mr. Lloyd Jones

GS:ps

TENNESSEE DEPARTMENT OF TRANSPORTATION
NASHVILLE 37219

RAY BLANTON
GOVERNOR

EDDIE SHAW
COMMISSIONER

W. A. GOODWIN
DEPUTY COMMISSIONER

March 3, 1977

DEPT. OF TRANSPORTATION
STATE OF TENNESSEE
RECEIVED
MAR 4 1977
DEVELOPMENT
ENGINEER

MEMORANDUM

TO: Mr. John H. Burke, Regional Engineer

FROM: G. R. Champion, Operations Engineer

SUBJECT: Victory Memorial Bridge

I am enclosing a copy of a letter from Mr. Chip Ames, Assistant Attorney General, to Mr. R. C. Odle in connection with a recent lawsuit in which the original property owner of a narrow strip of land on the west approach and the south side of the Victory Memorial Bridge has endeavored to reclaim this property based on the fact the State has abandoned and has no further use for this strip.

This is the second time a lawsuit has been filed on this property, and in each case the judge has ruled in our favor. There are some "gray" matters in connection with this property, and Mr. Ames is of the opinion sometime in the future we can expect another suit to be brought.

I suggest you issue instructions to the Maintenance Department to check this location at regular intervals as to whether any outside activities are taking place on the property. A picture should be taken showing our personnel performing any maintenance work required. Equipment such as a truck or mower should also be included in this picture with our men at work. Show the date and activity on the back. I think five or six times a year would be sufficient unless some unusual activity is observed.

Please designate one person in your Department to be responsible to see this is followed through for, as you know, general instructions work for a time and then become overlooked.

These pictures should be sent directly to Mr. Odle as he is keeping a current file on this location. Your cooperation in this matter will be appreciated.

GRC:br
Enclosure
cc: Mr. R. C. Odle
Mr. L. E. Brockman

BUREAU OF HIGHWAYS ★ BUREAU OF PLANNING ★ BUREAU OF BUSINESS MANAGEMENT ★ BUREAU OF AERONAUTICS
★ BUREAU OF AREA MASS TRANSIT ★ BUREAU OF INDUSTRIAL MARINE & WATERCRAFT TRANSPORTATION

STATE OF TENNESSEE
OFFICE OF THE
ATTORNEY GENERAL
NASHVILLE, TENNESSEE 37219

February 28, 1977

Mr. Robert C. Odle
Development Engineer
Department of Transportation
State of Tennessee
Highway Building
Nashville, Tennessee 37219

RE: Victory Memorial Bridge

Dear Bob:

This is to advise you that time has expired with regard to the case in the above styled matter in which the attorneys on the other side can file to appeal this matter to the Supreme Court. In light of such, I feel that I can safely tell you that this matter has once again been temporarily put to rest, and I emphasize temporarily.

Due to the propensity of this case to rear its ugly head from time to time, I would like to suggest that your office maintain a file with regard to this particular property. I think that it would be a good idea to keep a record of all activities which the Department pursues dealing with the property. I have in mind perhaps the Department's taking pictures of the property from time to time, especially with regard to any new activity which occurs on the property. Obviously, someone needs to moniter the property from time to time to make sure nothing unusual or unauthorized happens on the property.

Since it worked in one case with regard to whether or not we had abandoned this property, I would even suggest that pictures be

DEPT. OF TRANSPORTATION
STATE OF TENNESSEE
RECEIVED
MAR 3 1977
DEVELOPMENT
ENGINEER

taken of the Department actually performing certain maintenance and other functions on the property itself. This would be very cogent proof that the Department does not in any way contemplate abandoning the 26 foot strip or any part of the property in question.

With kindest regards.

Very truly yours,

CHIP AMES
Assistant Attorney General

CA:mea
cc: Mr. Lewis Evans
Mr. R. D. Minnigan

RECEIVED
MAR 7 1977
TENN. DEPT. OF TRANSPORTATION
BUREAU OF HIGHWAYS
DIVISION OF STRUCTURES

June 20, 1989

Summary of Victory Memorial Bridge

Bridge No. - 19SR0060015

Location No. - 19-SR006-0974

Crossing - Cumberland River, North First Street, Gay Street, and CSX Railroad.

Year built - 1956.

Length - 1845.0'.

Roadway width - 51.0'

Type structure - This structure consists of nineteen (19) continuous spans. The three (3) spans which cross the river channel are welded plate girders. The other spans are steel -I- beams with cover plates. The deck and the substructure are concrete.

Repair history - Repair plans in 1983 indicate that the structural steel was blast cleaned and painted and repairs to the concrete deck were made.

Deficiencies pertaining to the bridge based on the inspection report of December 15, 1986 are as follows:

The structure is rated in poor condition.

THE DECK

1. There are transverse cracks, longitudinal cracks, and patched areas in the asphalt wearing surface.

2. Most of the expansion joints have been paved over with asphalt. In addition, there is moderate joint leakage onto the substructure at the piers.

3. The sidewalks have random transverse cracks in the concrete.

4. The underside of the deck in each span has transverse hairline cracks, efflorescence, and pattern cracks on the bottom of the curbs over the outside girders. In addition, spans 7, 11, 13, and 16 have spalled areas of concrete on the fascia side of girder H at the finger joint. The spalled areas range in size from 1'L x 1'W x 1"D to 6'L x 1'W x 1"D.

THE STEEL GIRDERS

5. The girders listed below have varying amounts of corrosion.

SPAN	GIRDER	PROBLEM
1	A & G	Moderate corrosion on the top flange.

2	A & D	" " " " " "
3	A & D	" " " " " "
4	A	Light corrosion on the top flange.
5	A,D,E & F	Heavy corrosion on the top flange ranging from 12' to 16' long.
6	A	Heavy corrosion on the top flange 16' long.
8	F	Moderate corrosion on the top flange 2'long.
11	H	Moderate corrosion on the joint details.
13	H	Heavy corrosion on the top flange 1' long.
14	ALL	Light corrosion on the top flange at the finger joint.
19	H	Moderate corrosion on the top flange.

THE SUBSTRUCTURE

6. The bearings have light corrosion.

7. The breastwall and backwall of abutment 1 have vertical and diagonal cracks up to 1/8" wide.

8. The front and back face of the pier 3 pierwall have vertical cracks up to 1/2" wide and an area of fire damage 7'H x 3.5'W x 1/4"-1"D on the back face of the pier.

9. Column A of bent 1 has numerous steel popouts and column B has surface hairline cracks.

10. Each column of bent 2 has small surface hairline cracks. Column C has an area of fire damage 3'H x 3'L x 1"D.

11. Each of the columns of bents 3 through 10 have surface hairline cracks.

12. Column A of bents 11 and 12 have a spalled area of concrete. The areas are 11"H x 14"W x 2"D and 3'H x 6"W x 1/2"- 1"D respectively.

13. Each of the columns of bent 15 is tilted backstation. The rate of tilt for columns A through C respectively is 1.75" in 12'-7", 2.5" in 12'-3", and 2.625" in 11'-9". In addition, each of the columns has horizontal cracks up to 1/8" wide near the groundline.

14. Each end of the abutment is tilted backstation. The left end is tilted 3.5" in 12'-3" and the right end is tilted 2.875" in 11'-9". In addition, the backwall has some diagonal cracks.

15. The existing bridgerail and absence of an approved approach guardrail system violates current federal and state acceptance standards.

RECOMMENDATIONS

Maintenance

1. Make appropriate repairs to correct the tilt problems mentioned in items 13 1nd 14 of the commentary.

2. All of the expansion joint and drainage details at the roadway median will have to be revised because of the removal of the

median..

3. Blast clean and paint all the structural steel. This includes all the bearings.

4. Repair all the cracked and/or spalled areas of concrete.

5. Install " Paddleboard " warning signs at appropriate locations.

6. Install an approved bridgerail and approach guardrail system which meets current federal and state acceptance standards as sufficient funds become available.

C > ED 196974

DATE: JAN 26, 1988

BRIDGE NO. 19 - SR6 - 9.74

BRIDGE DESCRIPTION:

LENGTH - 1845.0'
ROADWAY WIDTH - 51.0'

COMMENTARY: During the inspection and evaluation of this structure, we have determined it to be in poor condition and have noted the following deficiencies:

THE DECK

1. There are transverse cracks, longitudinal cracks, and patched areas in the asphalt wearing surface.

2. Most of the expansion joints have been paved over with asphalt. In addition, there is moderate joint leakage onto the substructure at the piers.

3. The sidewalks have random transverse cracks in the concrete.

4. The underside of the deck in each span has transverse hairline cracks, efflorescence, and pattern cracks on the bottom of the curbs over the outside girders. In addition, spans 7, 11, 13, and 16 have spalled areas of concrete on the fascia side of girder H at the finger joint. The spalled areas range in size from 1'L x 1'W x 1"D to 6'L x 1'W x 1"D.

THE STEEL GIRDERS

5. The girders listed below have varying amounts of corrosion.

SPAN	GIRDER	PROBLEM
1	A & G	Moderate corrosion on the top flange.
2	A & D	" " " " " " .
3	A & D	" " " " " " .
4	A	Light corrosion on the top flange.
5	A,D,E & F	Heavy corrosion on the top flange ranging from 12' to 16' long.
6	A	Heavy corrosion on the top flange 16' long.
8	F	Moderate corrosion on the top flange 2'long.
11	H	Moderate corrosion on the joint details.
13	H	Heavy corrosion on the top flange 1' long.
14	ALL	Light corrosion on the top flange at the finger joint.
19	H	Moderate corrosion on the top flange.

THE SUBSTRUCTURE

6. The bearings have light corrosion.

7. The breastwall and backwall of abutment 1 have vertical and diagonal cracks up to 1/8" wide.

8. The front and back face of the pier 3 pierwall have vertical cracks up to 1/2" wide and an area of fire damage 7'H x 3.5'W x 1/4"-1"D on the back face of the pier.

9. Column A of bent 1 has numerous steel popouts and column B has surface hairline cracks.

10. Each column of bent 2 has small surface hairline cracks. Column C has an area of fire damage 3'H x 3'L x 1"D.

11. Each of the columns of bents 3 through 10 have surface hairline cracks.

12. Column A of bents 11 and 12 have a spalled area of concrete. The areas are 11"H x 14"W x 2"D and 3'H x 6"W x 1/2"- 1"D respectively.

13. Each of the columns of bent 15 is tilted backstation. The rate of tilt for columns A through C respectively is 1.75" in 12'-7", 2.5" in 12'-3", and 2.625" in 11'-9". In addition, each of the columns has horizontal cracks up to 1/8" wide near the groundline.

14. Each end of the abutment is tilted backstation. The left end is tilted 3.5" in 12'-3" and the right end is tilted 2.875" in 11'-9". In addition, the backwall has some diagonal cracks.

15. The existing bridgerail and absence of an approved approach guardrail system violates current federal and state acceptance standards.

RECOMMENDATIONS

Maintenance

1. Make appropriate repairs to correct the tilt problems mentioned in items 13 1nd 14 of the commentary.

2. All of the expansion joint, inspection manhole and drainage details at the roadway median will have to be revised because of the removal of the median..

3. Blast clean and paint all the structural steel. This includes all the bearings.

4. Repair all the cracked and/or spalled areas of concrete.

5. Install " Paddleboard " warning signs at appropriate locations.

6. Install an approved bridgerail and approach guardrail system which meets current federal and state acceptance standards as sufficient funds become available.

TENNESSEE BRIDGE INSPECTION PROGRAM
SUMMARY OF EVALUATION

REV. 03-05-2003

BRIDGE ID NO: 19SR0060015 LOCATION NO: 19 - SR006 - 9.72

(6A) CROSSING: SR 6 / C' RIVER-1RR-2STS

(505) METHOD OF ANALYSIS: LOAD RESISTANCE FACTOR METHOD - RF

(548) RATING BASED ON: AASHTOWare BrR

LOAD RATINGS IN TONS

INVENTORY (503)	H	47	(518B) HS	26
OPERATING (504)	H	60	(519) HS	34
REQ. POSTING:		40		40

(549) EVALUATOR: NFA

(522) EVAL. DATE: 8/15/2019

LAST UPDATED BY: DREXLER

(29) ADT: 30,580 (30) ADT YR: 2019

(100) STRAHNET ROUTE: NO

(19) DETOUR LENGTH: 6 KM

(520) VC OVER RDWY: 99.99 METERS

CONDITION RATINGS

(58) DECK RATING:	5
(59) SUPERSTRUCTURE RATING:	5
(60) SUBSTRUCTURE RATING:	5
(61) CHANNEL PROTECTION:	6
(62) CULVERT RATING:	N
(113A) NBIS SCOUR CODE:	5
(113B) TDOT SCOUR CODE:	R

APPRAISAL RATINGS

(67) STRUCTURAL EVALUATION:	5
(68) DECK GEOMETRY:	5
(69) UNDER CLEARANCE:	5
(70) BRIDGE POSTING:	5
(71) WATERWAY ADEQUACY:	8
(72) APPROACH RDWY ALIGNMENT:	8

CODE VALUES

N - NOT APPLICABLE
9 - EXCELLENT CONDITION
8 - VERY GOOD CONDITION
7 - GOOD CONDITION
6 - SATISFACTORY
5 - FAIR CONDITION
4 - POOR CONDITION
3 - SERIOUS CONDITION
2 - CRITICAL CONDITION
1 - FAILURE IS IMMINENT
0 - FAILED CONDITION

OTHER RATING ITEMS

(521) OVERALL CONDITION: F

(513) TEXTURE COAT RATING: N

(514) PAINT CONDITION RATING: 2 15 1983

(41) WEIGHT POSTING CODE: B

(36) TRAFFIC SAFETY FEATURES: 0 N 0 N

(525) REPAIR LIST NO: N

COMMENTS

(502) SUFF. RATING: 47.2

(528) STR. DEFICIENT: NO

(529) FUNC. OBSOLETE: NO

TENNESSEE BRIDGE INSPECTION PROGRAM
SUMMARY OF EVALUATION

REV. 03-05-2003

BRIDGE ID NO: 19SR0060015 *LOCATION NO:* 19 - SR006 - 9.74

(6A) CROSSING: SR 6 / C' RIVER-1RR-2STS

(505) METHOD OF ANALYSIS: ALLOWABLE STRESS METHOD *(548) RATING BASED ON:* APPROACH SPAN SIB

LOAD RATINGS IN TONS

INVENTORY (503) H	19	*(518B) HS*	35
OPERATING (504) H	38	*(519) HS*	66

(549) EVALUATOR: NFA
(522) EVAL. DATE: 5/12/2011
LAST UPDATED BY: ALAMMORI
(29) ADT: 23,760 *(30) ADT YR:* 2010
(100) STRAHNET ROUTE: NO
(19) DETOUR LENGTH: 6 *KM*
(520) VC OVER RDWY: 99.99 *METERS*

CONDITION RATINGS

(58) DECK RATING:	6
(59) SUPERSTRUCTURE RATING:	6
(60) SUBSTRUCTURE RATING:	6
(61) CHANNEL PROTECTION:	6
(62) CULVERT RATING:	N
(113A) NBIS SCOUR CODE:	8
(113B) TDOT SCOUR CODE:	R

APPRAISAL RATINGS

(67) STRUCTURAL EVALUATION:	6
(68) DECK GEOMETRY:	5
(69) UNDER CLEARANCE:	5
(70) BRIDGE POSTING:	5
(71) WATERWAY ADEQUACY:	8
(72) APPROACH RDWY ALIGNMENT:	8

CODE VALUES

N - NOT APPLICABLE
9 - EXCELLENT CONDITION
8 - VERY GOOD CONDITION
7 - GOOD CONDITION
6 - SATISFACTORY
5 - FAIR CONDITION
4 - POOR CONDITION
3 - SERIOUS CONDITION
2 - CRITICAL CONDITION
1 - FAILURE IS IMMINENT
0 - FAILED CONDITION

OTHER RATING ITEMS

(521) OVERALL CONDITION:	F		
(513) TEXTURE COAT RATING:	N		
(514) PAINT CONDITION RATING:	2	15	1983
(41) WEIGHT POSTING CODE:	A		

(36) TRAFFIC SAFETY FEATURES: 0 0 0 0
(525) REPAIR LIST NO: N

COMMENTS

(502) SUFF. RATING:	71.3
(528) STR. DEFICIENT:	NO
(529) FUNC. OBSOLETE:	NO

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

Bridge Condition Coding Form

Revised 06/15/2000

County:	19
Route:	SR006
Special Case:	0
County Sequence:	01
Log Mile:	9.74

Bridge Number: (Includes Item 5A) 19SR00600151

Feature Intersected: SR 6 / CUMBERLAND RIVER

CODE ONLY THOSE VALUES WHICH HAVE CHANGED

ITEM #	DESCRIPTION	VALUE
90	INSPECTION DATE	01/11/2001
		2/11/03
10	MINIMUM V.C. OVER DECK (ROADWAY + SHOULDERS)	99 FT. 99 IN.
		____ FT. ____ IN.
520	MINIMUM V.C. OVER DECK (EXCLUDES SHOULDERS)	99 FT. 99 IN.
		____ FT. ____ IN.
36	TRAFFIC SAFETY FEATURES	
	Br. Rail / Trans. / Appr. Rail / Appr. Rail Ends	0 / 0 / 0 / 0
		___ / ___ / ___ / ___
41	STRC OPEN/CLOSED/POSTED (A K P)	A
		___
58	DECK	6
		___
59	SUPERSTRUCTURE	5
		___
60	SUBSTRUCTURE	4
		___
61	CHANL/CHANL PROTECTION	6
		___
62	CULVERT AND RETAIN WALL	N
		___
71	WATERWAY ADEQUACY	8
		___
72	APPROACH RDWY ALIGNMENT (USE VALUES OF 3, 6, OR 8)	8
		___
521	OVERALL CONDITION (Circle One)	
	GOOD FAIR (POOR) CRITICAL	

Gilbert Wayne Hunter — TEAM LEADER SIGNATURE

2/11/03 — REVIEW DATE

CONDITION CODING GUIDELINES
(Values for Coding Items 58, 59, 60 and 62)

- N NOT APPLICABLE
- 9 EXCELLENT CONDITION
- 8 VERY GOOD CONDITION - NO PROBLEMS NOTED.
- 7 GOOD CONDITION - SOME MINOR PROBLEMS.
- 6 SATISFACTORY CONDITION - MINOR DETERIORATION OF STRUCTURAL ELEMENTS.
- 5 FAIR CONDITION - ALL PRIMARY STRUCTURAL ELEMENTS ARE SOUND BUT MAY HAVE MINOR SECTION LOSS, CRACKING, SPALLING OR SCOUR.
- 4 POOR CONDITION - ADVANCED SECTION LOSS, DETERIORATION, SPALLING OR SCOUR.
- 3 SERIOUS CONDITION - LOSS OF SECTION, DETERIORATION, SPALLING OR SCOUR HAVE SERIOURSLY AFFECTED PRIMARY STRUCTURAL COMPONENTS. LOCAL FAILURES ARE POSSIBLE. FATIGUE CRACKS IN STEEL OR SHEAR CRACKS IN CONCRETE MAY BE PRESENT.
- 2 CRITICAL CONDITION - ADVANCED DETERIORATION OF PRIMARY STRUCTURAL ELEMENTS. FATIGUE CRACKS IN STEEL OR SHEAR CRACKS IN CONCRETE MAY BE PRESENT OR SCOUR MAY HAVE REMOVED SUBSTRUCTURE SUPPORT. UNLESS CLOSELY MONITORED IT MAY BE NECESSARY TO CLOSE THE BRIDGE UNTIL CORRECTIVE ACTION IS TAKEN.
- 1 "IMMINENT" FAILURE CONDITION - MAJOR DETERIORATION OR SECTION LOSS PRESENT IN CRITICAL STRUCTURAL COMPONENTS OR OBVIOUS VERTICAL OR HORIZONTAL MOVEMENT AFFECTING STRUCTURAL STABILITY. BRIDGE IS CLOSED TO TRAFFIC BUT CORRECTIVE ACTION MAY PUT BACK IN LIGHT SERVICE.
- 0 FAILED CONDITION - OUT OF SERVICE AND BEYOND CORRECTIVE ACTION.

Revised 06/15/2000

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

Underpass Condition Coding Form

County:	19
Route:	03266
Special Case:	0
County Sequence:	01
Log Mile:	0.80

Bridge Number: (Includes Item 5A) 19SR0060015A

Feature Intersected: SR 6 / CUMBERLAND RIVER

CODE ONLY THOSE VALUES WHICH HAVE CHANGED

ITEM #	DESCRIPTION	VALUE
90	INSPECTION DATE	01/11/2001 2 1 11 103
10	MINIMUM V.C. OVER DECK (ROADWAY + SHOULDERS)	19 FT. ~~7~~ IN. 19 FT. 4 IN.
520	MINIMUM V.C. OVER DECK (EXCLUDES SHOULDERS)	19 FT. 7 IN. 19 FT. 4 IN.
47	TOTAL HORIZONTAL UNDERCLEARANCE	64 FT. 3 IN. ____ FT. ____ IN.
54	MINIMUM VERTICAL UNDERCLEARANCE (EXCLUDES SHOULDERS) Circle One: (H) R	19 FT. 4 IN.
55	MINIMUM LATERAL UNDERCLEARANCE ON RIGHT SIDE Circle One: (H) R	7 FT. 0 IN.
56	MINIMUM LATERAL UNDERCLEARANCE ON LEFT SIDE	0 FT. 0 IN.

UNDERPASS SAFETY FEATURES

515 (A) TYPE UNDERPASS BARRIER
None Needed or N/A

Revised Barrier Type

(B) ADEQUACY OF BARRIER OR RAIL N

(C) ADEQUACY OF TRANSITIONS N

(D) ADEQUACY OF TERMINALS N

554 VERTICAL CLEARANCE LISTED ON HEIGHT POSTING
99 FT. 99 IN.
____ FT. ____ IN.

521 OVERALL CONDITION (Circle One)
GOOD FAIR (POOR) CRITICAL

HEIGHT POSTED AT BOTH APPROACHES? YES [ ] NO [✓] N/A [ ]

555 COMMENTS

Hilbert Wayne Hunter
TEAM LEADER SIGNATURE

2 / 11 / 03
REVIEW DATE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

Underpass Condition Coding Form

Revised 06/15/2000

County: 19
Route: 0E255
Special Case: 0
County Sequence: 01
Log Mile: 0.73

Bridge Number: (Includes Item 5A) 19SR0060015B
Feature Intersected: SR 6 / CUMBERLAND RIVER

CODE ONLY THOSE VALUES WHICH HAVE CHANGED

ITEM #	DESCRIPTION	VALUE
90	INSPECTION DATE	01/11/2001 2 / 11 / 03
10	MINIMUM V.C. OVER DECK (ROADWAY + SHOULDERS)	~~14 FT. 7 IN.~~ 14 FT. 5 IN.
520	MINIMUM V.C. OVER DECK (EXCLUDES SHOULDERS)	~~14~~ FT. ~~7~~ IN. 14 FT. 5 IN.
47	TOTAL HORIZONTAL UNDERCLEARANCE	99 FT. 99 IN. ____ FT. ____ IN.
54	MINIMUM VERTICAL UNDERCLEARANCE (EXCLUDES SHOULDERS) Circle One: (H) R	14 FT. 5 IN.
55	MINIMUM LATERAL UNDERCLEARANCE ON RIGHT SIDE Circle One: (H) R	14 FT. 5 IN.
56	MINIMUM LATERAL UNDERCLEARANCE ON LEFT SIDE	0 FT. 0 IN.

UNDERPASS SAFETY FEATURES

515 (A) TYPE UNDERPASS BARRIER
None Needed or N/A

Revised Barrier Type

(B) ADEQUACY OF BARRIER OR RAIL N

(C) ADEQUACY OF TRANSITIONS N

(D) ADEQUACY OF TERMINALS N

554 VERTICAL CLEARANCE LISTED ON HEIGHT POSTING
99 FT. 99 IN.
____ FT. ____ IN.

521 OVERALL CONDITION (Circle One)
GOOD FAIR (POOR) CRITICAL

HEIGHT POSTED AT BOTH APPROACHES? YES [ ] NO [✓] N/A [ ]

555 COMMENTS

Gilbert Wayne Hunter
TEAM LEADER SIGNATURE

2 / 11 / 03
REVIEW DATE

3266 = 19.582 = 5.97 m.

DT-1449

TENNESSEE BRIDGE INSPECTION PROGRAM
SUMMARY OF EVALUATION

REV. 05-22-00

(548) RATING BASED ON: APPROACH SPAN SIB

(505) METHOD OF ANALYSIS: _____

INVENTORY 503 H 19 Tons 518B HS 35 Tons

OPERATING 504 H 38 Tons 519 HS 66 Tons

Bridge No.: 19 - 6 - 9.74

(549) Evaluator: Alan Johnson

(522) Eval. Date: 06 / 06 /2001

(29) ADT: 30210 (2000) Yr(30)

(100) Strahnet Route Yes( ) No(X)

(19) Detour 6 km

(53) Vert. Clearance Over Deck _____ m(XX.XX) (X) NA

CONDITION RATING (Structural)

		Culverts	
58	Deck	N	6
59	Superstructure	N	5
60	Substructure	N	4
61	Chl & Chl Protection		6
62	Culv & Ret Walls		N
113A	Scour Condition		4
113B	Scour Condition		M

APPRAISAL RATING (Relation to System)

		Culverts	
67	Structural Evaluation		4
68	Deck Geometry		5
69	Under Clearance	N	5
70	Bridge Posting		5
71	Waterway Adequacy		8
72	Approach Rdwy Alignment		8

Overall Condition (521): G F (P) C

Texture Coat (513) N

Paint (514 A, B, & C) 2 1 5 1 9 8 3

Traffic Safety Features (36): 0 0 0 0

Repair List No. (525): 2

Comments and Recommendations:

ORIGINAL PLANS HAD 2.5" ASPHALT.
ADD 5" ASPHALT FROM 1998 REPORT.
TOTAL ASPHALT = 7.5".

I92C = YOG
I93C = 01-2003

* * Article 5.1.2 of Maint. Man. For Conc. Br. with unknown reinf.
* * * Des. Std. or Des. Plans For H15 or HS20 Loading.

COMMENTARY (Condition)

N NOT APPLICABLE
9 EXCELLENT CONDITION
8 VERY GOOD CONDITION - no problems noted
7 GOOD CONDITION - some minor problems
6 SATISFACTORY CONDITION - structural elements show some minor deterioration
5 FAIR CONDITION - all primary structural elements are sound, but may have minor section loss, deterioration, spalling, or scour.
4 POOR CONDITION - advanced section loss, deterioration, spalling, or scour
3 SERIOUS CONDITION - loss of section, deterioration, spalling, or scour have affected primary structural components - local failures are possible - fatigue cracks in steel or shear cracks in concrete may be present
2 CRITICAL CONDITION - advanced deterioration of primary structural elements. Fatigue cracks in steel or shear cracks in concrete may be present or scour may have removed substructure support. Unless closely monitored, it may be necessary to close the bridge until corrective action is taken.
1 "IMMINENT" FAILURE CONDITION - Major deterioration or section loss present in critical structural components or obvious vertical or horizontal movement affecting structure stability. Bridge is closed to traffic, but corrective action may put it back in light service.
0 FAILED CODITION - Out of service, beyond corrective action.

COMMENTARY (Appraisal)

N - Not Applicable
9 - Superior to present desirable criteria
8 - Equal to present desirable criteria 7 - Better than present minimum criteria
6 - Equal to present minimum criteria
5 - Somewhat better than minimum adequacy to tolerate being left in place as is
4 - Meets minimum tolerable limits to be left in place as is
3 - Basically intolerable, requiring high priority of corrective action
2 - Basically intolerable, requiring high priority of replacement.
1 - This value of rating code not used.
0 - Bridge closed.

GOOD ------ 7, 8, & 9
FAIR ------ 5 & 6
POOR ------ 3 & 4
CRITICAL -- 0, 1, & 2

SUFFICIENCY RATING : _____.

DATE OF SUFF. RATING : ___/___/___.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

Bridge Condition Coding Form

Revised 06/15/2000

County:	19
Route:	SR006
Special Case:	0
County Sequence:	01
Log Mile:	9.74

Bridge Number: (Includes Item 5A) 19SR00600151

Feature Intersected: SR 6 / CUMBERLAND RIVER

CODE ONLY THOSE VALUES WHICH HAVE CHANGED

ITEM #	DESCRIPTION	VALUE
90	INSPECTION DATE	12/14/1998 1/11/01
10	MINIMUM V.C. OVER DECK (ROADWAY + SHOULDERS)	99 FT. 99 IN. ___ FT. ___ IN.
520	MINIMUM V.C. OVER DECK (EXCLUDES SHOULDERS)	99 FT. 99 IN. ___ FT. ___ IN.
36	TRAFFIC SAFETY FEATURES	
	Br. Rail / Trans. / Appr. Rail / Appr. Rail Ends	1 / 0 / 0 / 0
		0 / ___ / ___ / ___
41	STRC OPEN/CLOSED/POSTED (A / K / P)	A ___
58	DECK	6 ___
59	SUPERSTRUCTURE	5 ___
60	SUBSTRUCTURE	4 ___
61	CHANL/CHANL PROTECTION	6 ___
62	CULVERT AND RETAIN WALL	N ___
71	WATERWAY ADEQUACY	6 ___
72	APPROACH RDWY ALIGNMENT (USE VALUES OF 3, 6, OR 8)	6 8
521	OVERALL CONDITION (Circle One)	

GOOD FAIR (POOR) CRITICAL

Frank Heggie Clark 1/11/01

TEAM LEADER SIGNATURE REVIEW DATE

CONDITION CODING GUIDELINES
(Values for Coding Items 58, 59, 60 and 62)

- N NOT APPLICABLE
- 9 EXCELLENT CONDITION
- 8 VERY GOOD CONDITION - NO PROBLEMS NOTED.
- 7 GOOD CONDITION - SOME MINOR PROBLEMS.
- 6 SATISFACTORY CONDITION - MINOR DETERIORATION OF STRUCTURAL ELEMENTS.
- 5 FAIR CONDITION - ALL PRIMARY STRUCTURAL ELEMENTS ARE SOUND BUT MAY HAVE MINOR SECTION LOSS, CRACKING, SPALLING OR SCOUR.
- 4 POOR CONDITION - ADVANCED SECTION LOSS, DETERIORATION, SPALLING OR SCOUR.
- 3 SERIOUS CONDITION - LOSS OF SECTION, DETERIORATION, SPALLING OR SCOUR HAVE SERIOURSLY AFFECTED PRIMARY STRUCTURAL COMPONENTS. LOCAL FAILURES ARE POSSIBLE. FATIGUE CRACKS IN STEEL OR SHEAR CRACKS IN CONCRETE MAY BE PRESENT.
- 2 CRITICAL CONDITION - ADVANCED DETERIORATION OF PRIMARY STRUCTURAL ELEMENTS. FATIGUE CRACKS IN STEEL OR SHEAR CRACKS IN CONCRETE MAY BE PRESENT OR SCOUR MAY HAVE REMOVED SUBSTRUCTURE SUPPORT. UNLESS CLOSELY MONITORED IT MAY BE NECESSARY TO CLOSE THE BRIDGE UNTIL CORRECTIVE ACTION IS TAKEN.
- 1 "IMMINENT" FAILURE CONDITION - MAJOR DETERIORATION OR SECTION LOSS PRESENT IN CRITICAL STRUCTURAL COMPONENTS OR OBVIOUS VERTICAL OR HORIZONTAL MOVEMENT AFFECTING STRUCTURAL STABILITY. BRIDGE IS CLOSED TO TRAFFIC BUT CORRECTIVE ACTION MAY PUT BACK IN LIGHT SERVICE.
- 0 FAILED CONDITION - OUT OF SERVICE AND BEYOND CORRECTIVE ACTION.

Revised 06/15/2000

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

Underpass Condition Coding Form

County:	19
Route:	03266
Special Case:	0
County Sequence:	01
Log Mile:	0.80

Bridge Number: (Includes Item 5A) 19SR0060015A

Feature Intersected: SR 6 / CUMBERLAND RIVER

CODE ONLY THOSE VALUES WHICH HAVE CHANGED

ITEM #	DESCRIPTION	VALUE
90	INSPECTION DATE	12/14/1998 1/11/01
10	MINIMUM V.C. OVER DECK (ROADWAY + SHOULDERS)	19 FT. 7 IN. ____ FT. ____ IN.
520	MINIMUM V.C. OVER DECK (EXCLUDES SHOULDERS)	19 FT. 7 IN. ____ FT. ____ IN.
47	TOTAL HORIZONTAL UNDERCLEARANCE	64 FT. 3 IN. ____ FT. ____ IN.
54	MINIMUM VERTICAL UNDERCLEARANCE (EXCLUDES SHOULDERS) Circle One: (H) R	19 FT. 7 (8) IN.
55	MINIMUM LATERAL UNDERCLEARANCE ON RIGHT SIDE Circle One: H R	9 FT. 0 IN.
56	MINIMUM LATERAL UNDERCLEARANCE ON LEFT SIDE	— FT. — IN.

UNDERPASS SAFETY FEATURES

515 (A) TYPE UNDERPASS BARRIER
None Needed or N/A

Revised Barrier Type

(B) ADEQUACY OF BARRIER OR RAIL N

(C) ADEQUACY OF TRANSITIONS N

(D) ADEQUACY OF TERMINALS N

554 VERTICAL CLEARANCE LISTED ON HEIGHT POSTING
99 FT. 99 IN.
____ FT. ____ IN.

521 OVERALL CONDITION (Circle One)
GOOD FAIR (POOR) CRITICAL

HEIGHT POSTED AT BOTH APPROACHES? YES [ ] NO [X] N/A [ ]

555 COMMENTS

TEAM LEADER SIGNATURE

1/11/01
REVIEW DATE

Revised 06/15/2000

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

Underpass Condition Coding Form

County:	19
Route:	0E255
Special Case:	0
County Sequence:	01
Log Mile:	0.73

Bridge Number: (Includes Item 5A) 19SR0060015B

Feature Intersected: SR 6 / CUMBERLAND RIVER

CODE ONLY THOSE VALUES WHICH HAVE CHANGED

ITEM #	DESCRIPTION	VALUE
90	INSPECTION DATE	12/14/1998 1/11/01
10	MINIMUM V.C. OVER DECK (ROADWAY + SHOULDERS)	14 FT. 6 IN. ____ FT. ____ IN.
520	MINIMUM V.C. OVER DECK (EXCLUDES SHOULDERS)	14 FT. 7 IN. ____ FT. ____ IN.
47	TOTAL HORIZONTAL UNDERCLEARANCE	99 FT. 99 IN. ____ FT. ____ IN.
54	MINIMUM VERTICAL UNDERCLEARANCE (EXCLUDES SHOULDERS) Circle One: (H) R	14 FT. 7 IN.
55	MINIMUM LATERAL UNDERCLEARANCE ON RIGHT SIDE Circle One: (H) R	13 FT. 5 IN.
56	MINIMUM LATERAL UNDERCLEARANCE ON LEFT SIDE	— FT. — IN.

UNDERPASS SAFETY FEATURES

515 (A) TYPE UNDERPASS BARRIER: None Needed or N/A

Revised Barrier Type: ____

(B) ADEQUACY OF BARRIER OR RAIL: N

(C) ADEQUACY OF TRANSITIONS: N

(D) ADEQUACY OF TERMINALS: N

554 VERTICAL CLEARANCE LISTED ON HEIGHT POSTING
99 FT. 99 IN.
____ FT. ____ IN.

521 OVERALL CONDITION (Circle One)

GOOD FAIR (POOR) CRITICAL

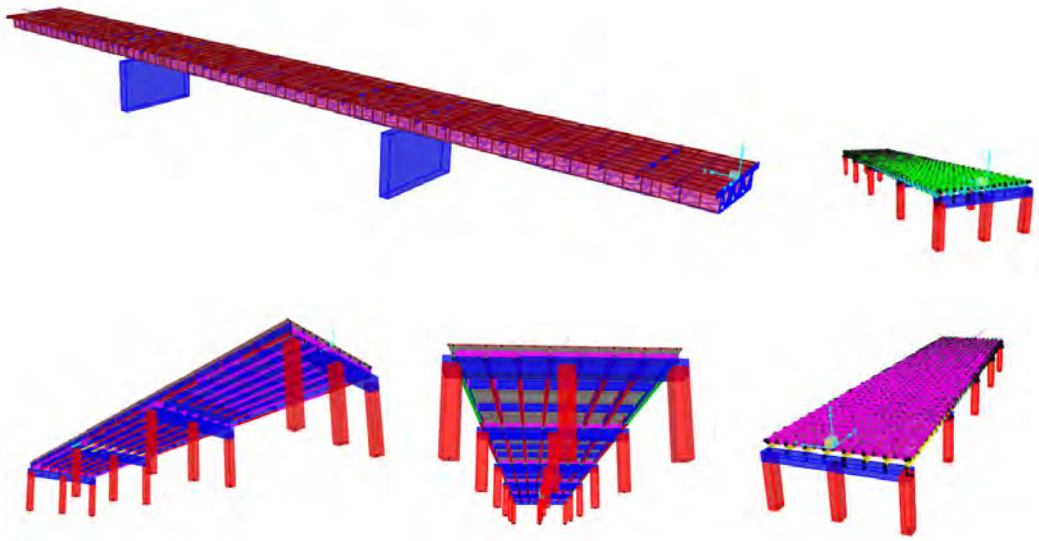
HEIGHT POSTED AT BOTH APPROACHES? YES [ ] NO [X] N/A [ ]

555 COMMENTS _____

Kevin R Heggie Clark — TEAM LEADER SIGNATURE

1/11/01 — REVIEW DATE

TN TDOT Department of Transportation



2020 Superstructure Load Rating Report

Victory Memorial Bridge over Cumberland River

Federal ID Number: 19SR0060015

Bridge Number: 19-SR006-09.72

State Project Number: 99111-1248-94

PIN Number: 040086.04

Agreement Number. E2149 Work Order 15

Davidson County

6/28/20

Gresham Smith

Genuine Ingenuity

222 Second Avenue South / Suite 1400

Nashville, Tennessee 37201 / Phone 615.770.8100

June 30th, 2020

Bridge #	TDOT Bridge Load Rating Summary Form	Form Date
19SR0060015		1/1/2014

LRFR using Part A

Rating Level	Vehicle	Weight (tons)	LLDF per Lane (M)	LLDF per Lane (V)	Rating Factor	Tons	Controlling Span and Member	Controlling Location		Controlling Force		Bridge Management Value (Tons)	
								Distance (ft)	Percent (%)	Limit State	Type		
Design Operating	HL-93	36.0	--	--	0.94	33.7	Main Span 1, Interior Girder 1	168.25	74.8	Strength	Flexure	Operating Rating (64)	**33.7**
Design Inventory			--	--	0.72	26.0	Main Span 1, Interior Girder 1	168.25	74.8	Strength	Flexure	Inventory Rating (66)	**26.0**
Design Operating	HS-20-44	36.0	--	--	1.46	52.6	Span 17, Interior Girder 3	36.22	54.0	Strength	Flexure	Operating Rating (64)	**52.6**
Design Inventory			--	--	1.13	40.5	Span 17, Interior Girder 3	36.22	54.0	Strength	Flexure	Inventory Rating (66)	**40.5**
Design Operating	HS-15-44	31.0	--	--	1.95	60.3	Span 17, Interior Girder 3	36.22	54.0	Strength	Flexure	Operating Rating (64)	**60.3**
Design Inventory			--	--	1.50	46.6	Span 17, Interior Girder 3	36.22	54.0	Strength	Flexure	Inventory Rating (66)	**46.6**
Design Operating	Lane Load	0.32	--	--	1.65	0.5	Main Span 1, Interior Girder 1	168.25	74.8	Strength	Flexure	Operating Rating (64)	**0.5**
Design Inventory			--	--	1.27	0.4	Main Span 1, Interior Girder 1	168.25	74.8	Strength	Flexure	Inventory Rating (66)	**0.4**
Legal/SHV	SU4	27.0	--	--	1.63	44.0	Main Span, Stringer	11.25	50.0	Strength	Flexure	Single Unit Truck 4 Axles	**44.0**
	SU5	31.0	--	--	1.52	47.0	Main Span, Stringer	11.25	50.0	Strength	Flexure	Single Unit Truck 5 Axles	**47.0**
	SU6	34.8	--	--	1.41	49.2	Main Span, Stringer	11.25	50.0	Strength	Flexure	Single Unit Truck 6 Axles	**49.2**
	SU7	35.8	--	--	1.36	48.6	Span 17, Interior Girder 3	36.22	54.0	Strength	Flexure	Single Unit Truck 7 Axles	**48.6**
	Type 3	25.0	--	--	1.91	47.9	Main Span, Stringer	11.25	50.0	Strength	Flexure	Single Unit Truck 3 Axles	**47.9**
	Type 3S2	36.0	--	--	1.84	66.4	Span 18, Interior Girder 3	57.50	100.0	Strength	Flexure	Double Unit Truck 5 Axles	**66.4**
	Type 3-3	40.0	--	--	1.81	72.2	Span 16, Interior Girder 3	56.60	100.0	Strength	Flexure	Double Unit Truck 6 Axles	**72.2**
	EV2	28.8	--	--	1.56	44.8	Main Span, Stringer	11.25	50.0	Strength	Flexure	Single Unit Truck 2 Axles	**44.8**
	EV3	43.0	--	--	1.05	45.2	Main Span, Stringer	11.25	50.0	Strength	Flexure	Single Unit Truck 3 Axles	**45.2**
	EV3-Neg	--	--	--	0.94	--	Span 18, Interior Girder 3	57.50	100.0	Strength	Flexure	Double Unit Truck 3 Axles	--
	Gravel Truck	37.0	--	--	1.32	48.8	Main Span, Stringer	11.25	50.0	Strength	Flexure	Single Unit Truck 4 Axles	**48.8**
	Type 3-3+Lane	40.0	--	--	1.81	72.3	Main Span 1, Interior Girder 1	168.25	74.8	Strength	Flexure	Double Unit Truck 6 Axles	**72.3**
Permit	Annual Permit 1	82.5	--	--	0.86	70.6	Span 18, Interior Girder 3	57.50	100.0	Strength	Flexure	Double Unit Truck 8 Axles	**70.6**
	Annual Permit 2	82.5	--	--	0.87	71.7	Span 18, Interior Girder 3	57.50	100.0	Strength	Flexure	Double Unit Truck 8 Axles	**71.7**
	Overweight Permit	127.5	--	--	0.94	119.8	Span 17, Interior Girder 3	67.08	100.0	Strength	Flexure	Double Unit Truck 13 Axles	**119.8**

Notes:

1. This table is based on the requirements established in the 2018 AASHTO Manual for Bridge Evaluation.
2. Controlling location is given both by the distance from the left support on that span and the fraction of that span. Ex: 28.5' - 50%
3. Controlling force is provided as flexure, shear, or stress together wih the corresponding limit state. Ex: Strength I - Flexure

Bridge Management Information	
Load Rating Date	6/28/20
Reason for L.R.	Final or As-Built
Program Used & Version No.	CsiBride v21.0.2
Load Rating Origination	(A) Design Plans
Design Method	(C) Load Resistance Factor
Method of Calculation for LLDF	(5) Refined analysis
LLDF (per lane)	--
Impact Factor	33.0
Design Load (31)	(A) HL93
Operating Type (63)	(3) Load and Resistance Factor (LRFR)
Inventory Type (65)	(3) Load and Resistance Factor (LRFR)
Main Type Material (43A)	(4) Steel continuous
Main Type Design (43B)	(03) Girder-Floorbeam (GF) or Girder-Floorbeam-Stringer
Approach Type Material (44A)	(3) Steel
Approach Type Design (44B)	(02) Muilt-beam or multi-girder
Open/Posted/Closed (41)	(A) Open, no restriction
Posting (70)	
Spans in Main Unit (45)	3
Approach Spans (46)	16
Length of Max Span (ft) (48)	320.0
Structure Length (ft) (49)	1850.0

Comments/Assumptions

LLF for Legal and Routine Permit Load is modifed according to a ADTT of 1224 (one way).

P.E. Information

Performed by:	YL	Date:	6/20/2020
Checked by:	DLM	Date:	6/22/2020
Reviewed by:	ASD	Date:	6/28/2020
Responsible Engineer:	Donald McCrary	P.E. License #:	110730
Telephone:	615.770.8495		

P.E. Seal

Bridge # 19SR0060015	TDOT Bridge Load Rating Summary Detail (Main Span)

LRFR using Part A

Description			Main Girder									Stringer			Floorbeam					
			Span 1			Span 2			Span 3			Typical Span			Top Chord		Diagonal Chord		Bottom Chord	
Span Length (ft)			225.0			320.0			225.0			23.0			N/A		N/A		N/A	
			Controlling Factor			Controlling Factor			Controlling Factor			Controlling Factor			Controlling Factor		Controlling Factor		Controlling Factor	
Rating Level	Vehicle	Weight (Tons)	Flexure (Strength)	Shear/ Torsion (Strength)	Stress (Service)	Flexure (Strength)	Shear/ Torsion (Strength)	Stress (Service)	Flexure (Strength)	Shear/ Torsion (Strength)	Stress (Service)	Flexure (Strength)	Shear/ Torsion (Strength)	Stress (Service)	Flexure/Axial (Strength)	Flexure/Axial (Service)	Flexure/Axial (Strength)	Flexure/Axial (Service)	Flexure/Axial (Strength)	Flexure/Axial (Service)
Design Operating	HL-93	36.0	0.94	11.89	1.53	1.38	10.47	1.49	0.94	11.89	1.53	1.39	2.35	3.04	1.56	1.68	1.72	1.86	1.31	1.42
Design Inventory			0.72	9.17	1.18	1.06	8.08	1.14	0.72	9.17	1.18	1.07	1.82	2.34	1.20	1.30	1.33	1.43	1.01	1.09
Design Operating	HS-20-44	36.0	2.16	17.38	2.41	2.32	17.51	2.51	2.16	17.38	2.41	1.58	2.59	3.46	1.73	1.87	2.84	3.07	2.13	2.30
Design Inventory			1.66	13.41	1.85	1.79	13.51	1.93	1.67	13.41	1.85	1.22	2.00	2.66	1.34	1.44	2.19	2.36	1.64	1.77
Design Operating	HS-15-44	31.0	2.88	23.17	3.21	3.10	23.35	3.34	2.88	23.17	3.21	2.11	3.45	4.61	2.31	2.49	3.78	4.08	2.83	3.06
Design Inventory			2.22	17.87	2.47	2.39	18.01	2.57	2.22	17.87	2.47	1.62	2.66	3.55	1.78	1.92	2.92	3.14	2.18	2.35
Design Operating	Lane Load	0.32	1.65	33.79	3.22	3.36	25.20	3.66	1.65	33.78	3.23	11.17	25.81	24.66	15.43	16.66	4.36	4.71	3.42	3.69
Design Inventory			1.27	26.06	2.48	2.60	19.44	2.82	1.28	26.06	2.48	8.62	19.91	18.97	11.90	12.82	3.36	3.62	2.64	2.84
Legal/SHV	SU4	27.0	2.93	22.88	2.62	3.06	23.48	2.73	2.93	22.88	2.62	1.63	3.05	2.95	2.04	1.82	3.80	3.39	2.82	2.51
	SU5	31.0	2.58	20.39	2.31	2.71	20.76	2.42	2.59	20.39	2.31	1.52	2.94	2.77	1.96	1.75	3.35	2.99	2.50	2.23
	SU6	34.8	2.30	18.74	2.08	2.44	19.02	2.17	2.31	18.74	2.08	1.41	2.94	2.58	1.95	1.74	2.99	2.67	2.23	1.99
	SU7	35.8	2.07	17.42	1.89	2.21	17.50	1.97	2.07	17.42	1.89	1.41	2.94	2.57	1.94	1.73	2.70	2.41	2.01	1.80
	Type 3	25.0	3.20	25.06	2.87	3.37	25.59	3.01	3.21	25.06	2.87	1.91	3.45	3.46	2.31	2.06	4.16	3.71	3.09	2.76
	Type 3S2	36.0	2.24	20.57	2.28	2.61	19.98	2.33	2.24	20.57	2.28	2.06	3.66	3.73	2.43	2.17	3.11	2.77	2.36	2.11
	Type 3-3	40.0	2.03	19.92	2.22	2.52	18.97	2.25	2.03	19.92	2.22	2.33	4.24	4.21	2.81	2.51	2.90	2.58	2.22	1.98
	EV2	28.8	2.75	21.41	2.45	2.90	21.92	2.58	2.75	21.41	2.45	1.56	2.75	2.82	1.85	1.65	3.62	3.23	2.70	2.41
	EV3	43	1.84	14.30	1.64	1.93	14.69	1.72	1.84	14.30	1.64	1.05	1.86	1.90	1.25	1.11	2.39	2.13	1.77	1.58
	EV3-Neg	43	1.03	--	1.65	1.70	--	2.11	1.03	--	1.66	--	--	--	--	--	--	--	--	--
	Gravel Truck	37	2.16	17.11	1.94	2.27	17.41	2.02	2.17	17.11	1.94	1.32	2.52	2.40	1.68	1.95	2.80	2.50	2.08	1.86
	Type 3-3+Lane	40.0	1.81	21.88	2.36	2.58	19.54	2.31	1.81	21.88	2.36	--	--	--	3.49	4.05	3.04	2.72	2.35	2.10
Permit	Annual Permit 1	82.5	1.24	12.62	1.65	1.58	11.29	1.84	1.23	12.62	1.65	1.19	2.37	2.81	1.56	1.81	1.60	1.86	1.14	1.33
	Annual Permit 2	82.5	1.22	11.71	1.55	1.47	10.95	1.70	1.21	11.71	1.55	1.19	2.37	2.81	1.55	1.80	1.47	1.70	1.04	1.21
	Overweight Permit	82.5	1.44	13.86	1.54	1.89	11.47	1.82	1.44	13.86	1.54	1.51	2.89	2.94	1.91	1.83	2.14	2.05	1.51	1.45

LLF for Legal and Permit Load is modifed according to a ADTT of 1224 (one way).

Bridge # 19SR0060015	TDOT Bridge Load Rating Summary Detail (Approach Spans)

LRFR using Part A

| Description | | | Approach Spans | | |

BARS UPDATE RATING FOR ADDITIONAL DEAD LOAD

BRIDGE NUMBER: 19 - SR6 - 9.74

NAME: ALAN JOHNSON

DATE: 07-02-1997

INPUT DATA

CHECK POINT BEING RATED : 2.0

RATING BASED ON : APPROACH SPAN GIRDER.
ADD 1.5" OF ASPHALT. SEE REFERENCE BARS PROGRAM.

THIS IS A WORKING STRESS ANALYSIS.....		
EFFECTIVE BEAM SPACING.....(FEET)..	8	
THICKNESS OF ADDITIONAL ASPHALT.....(INCHES)..	1.5	
MOMENT CAPACITY AVAILABLE AT INVENTORY LEVEL.....(K-FT)..	773.8	
MOMENT CAPACITY AVAILABLE AT OPERATING LEVEL.....(K-FT)..	1387.3	
H LIVELOAD MOMENT.....(K-FT)..	527.1	
HS LIVELOAD MOMENT.....(K-FT)..	702.8	
TOTAL POSITIVE AREA.....(SQ-FT)..	83.4	
TOTAL NEGATIVE AREA.....(SQ-FT)..	769.2	

OUTPUT DATA - DUE TO MOMENT

DLW/FT	MCAP-INV	MCAP-OPER	DEAD LOAD MOMENT
.144	773.8	1387.3	98.76

MOMENT AVAIL - INV	MOMENT AVAIL - OPER
675.04	1288.54

H-LLM+I	HS-LLM+I
527.1	702.8

H AND HS RATINGS - DUE TO MOMENT

H@ INV	H @ OPER	HS @ INV	HS @ OPER
19.21	36.67	34.58	66

STEEL -I- BEAM RATING

BRIDGE NUMBER: 19 - SR6 - 9.74

NAME: ALAN JOHNSON

DATE: 07-02-1997

INPUT DATA

SPAN NUMBER BEING RATED : SIB OF MAIN RIVER SPAN
BEAM NUMBER BEING RATED : INTERIOR

RATING BASED ON : A 24" @ 84 #/ft SIB IN FAIR CONDITION.

SPAN LENGTH	(FEET)	22.85
BEAM SPACING	(FEET)	8.916701
DISTRIBUTION FACTOR	(WH LINES/BM)	1.6212
SECTION MODULUS OF SIB	(CU. INCHES)	196.3
PERCENT OF SEC MOD EFFECTIVE FOR MOMENT	(WHOLE NUMBER)	100
YIELD STRENGTH	(KSI)	33
BEAM WEIGHT	(LBS./FT.)	84
THICKNESS OF ASPHALT	(INCHES)	7.5
THICKNESS OF CONCRETE DECK	(INCHES)	7

OUTPUT DATA - DUE TO MOMENT

DLW/FT	MCAP-INV	MCAP-OPER	DLM(H)	DLM(HS)
1.667	296.904	404.869	108.779	108.779

MAVAIL(H)-INV	MAVAIL(H)-OPER	MAVAIL(HS)-INV	MAVAIL(HS)-OPER
188.125	296.09	188.125	296.09

H-LLM+I	HS-LLM+I
144.473	192.631

H AND HS RATINGS - DUE TO MOMENT

H@ INV	H @ OPER	HS @ INV	HS @ OPER
19.53	30.74	35.16	55.33

STEEL FLOORBEAM ANALYSIS

BRIDGE NUMBER: 19 - SR6 - 9.74 NAME: ALAN JOHNSON

DATE: 07-02-1997

INPUT DATA

LOCATION OF THIS MEMBER : MAIN RIVER SPAN

RATING BASED ON: A 30" @ 108 #/ft STEEL BEAM IN FAIR CONDITION.

ASPHALT THICKNESS	(INCHES)..	7.5
CONCRETE DECK THICKNESS	(INCHES)..	7
CURB TO CURB ROADWAY WIDTH	(FEET)..	19.167
OUT TO OUT DECK WIDTH	(FEET)..	19.2
STRINGER SPACING	(FEET)..	8.916701
STRINGER SPACING	(FEET)..	8.916701
AVERAGE STRINGER WEIGHT PER FOOT	(LB/FT)..	84
DISTANCE FROM LF. SIDE OF DECK TO FIRST STRINGER	(FEET)..	1.3666
DISTANCE FROM RT. SIDE OF DECK TO LAST STRINGER	(FEET)..	0
STRINGER SPAN LENGTH	(FEET)..	22.85
DISTANCE FROM LF. END OF FLOORBM TO 1ST. STRINGER	(FEET)..	0
FLOORBEAM LENGTH	(FEET)..	17.833
SECTION MODULUS	(CU. IN)..	299.2
FLOORBEAM WEIGHT / FT	(LBS/FT)..	108
PERCENT EFFECTIVE FOR MOMENT	(WHOLE NUMBER)..	100
YIELD STRENGTH	(KSI)..	33
IS THIS AN ABUTMENT CAPBEAM ?	(Y OR N)..	N
DO YOU HAVE IMPACT ?	(Y OR N)..	Y
DO YOU HAVE ONE OR TWO TRUCKS ?	(1 OR 2)..	1

SEE THE NEXT PAGE FOR OUTPUT DATA

STEEL FLOORBEAM ANALYSIS

BRIDGE NUMBER : 19 - SR6 - 9.74 NAME: ALAN JOHNSON

DATE: 07-02-1997

OUTPUT DATA

THE MAXIMUM LIVE LOAD MOMENT OCCURS UNDER STRINGER NO. 2 WITH THE FIRST WHEELLINE 10 FEET FROM THE LEFT EDGE OF THE DECK.

OUTPUT DUE TO MOMENT

MCAP-INV	MCAP-OPER	DLM
452.54	617.1	174.083

MAVAIL(H)-INV	MAVAIL(H)-OPER	MAVAIL(HS)-INV	MAVAIL(HS)-OPER
278.46	443.02	278.46	443.02

H-LLM	HS-LLM
101.24	182.64

H AND HS RATINGS - DUE TO MOMENT

H @ INV	H @ OPER	HS @ INV	HS @ OPER
41.26	65.64	54.89	87.32

TENNESSEE DEPARTMENT OF TRANSPORTATION DIVISION OF STRUCTURES 1200 J.K POLK OFFICE B. NASHVILLE, TENNESSEE 3

PROPOSED : 5 LANE ROWY @ 56 FT.

LIVE LOAD DIST. FACTOR {HWD} = $\frac{(56/10)(.75)(2)}{7}$ (6/5.5) = 1.309

LIVE LOAD DIST. FACTOR {AASHTO} = 8.9167/[4 + 0.25 (8.9167)] = 1.431

FOR RIVER SPANS USE 1.308

LIVE LOAD DIST. FACTOR {HWD} = $\frac{(56/10)(.75)(2)}{8}$ (6/5.5) = 1.145

LIVE LOAD DIST. FACTOR = 8.0 / [4 + 0.25 (8.0)] = 1.333

FOR APPROACH SPANS USE 1.333

EXISTING :

FOR RIVER SPAN = 7.12 C-7

FOR APPROACH SPANS = 6.75 BII - 2

L.L. D.F. = $\frac{(52/10)(.75)(2)}{7}$ (6/5.5) = 1.215 RIVER SPANS

L.L. D.F. = $\frac{(52/10)(.75)(2)}{8}$ (6/5.5) = 1.063 APPROACH SPANS

STRUCTURE I.D. = 319-029

CPU = $20.20

DATA PROCESSING CENTER

TENNESSEE DEPARTMENT OF TRANSPORTATION

STRUCTURE HEADER AND DESCRIPTION

100-- 2 C. A. JOHNSON EA/I/O/P = FILE REQUESTS AND OUTPUT DATA EXCEPTIONS
TYPE = CDSIB YEAR = 50 LEN = 251.000FT. WIDTH = 26.000FT. 4 SPANS SP.LOAD =
INV.LL.TRK.= H 15 OP.LL.TRK.= HS

STRUCTURE LOCATION AND PERMANENT IDENTIFICATION FACTORS

200-- 5 BRIDGE=LOG 9.78 DIST./CO.= 3 19 CONST. ROUTE = S.R. 6 CONST. SECT.= CONST. STA.=, 0+ .
MICROFILM REEL NO. DESIGN PLANS= COMPUTATIONS= CORRESPONDENCE=
ROUTE I.D.= MARKED ROUTE =

COMMENTS

300-- 6 1 ASPHALT IS 6 INCHES THICK. THE DECK IS 6.5 INCHES THICK. G01 IS A
400-- 6 2 TYPICAL INTERIOR GIRDER.

SPECIFICATIONS GENERALLY APPLICABLE TO STRUCTURE MEMBERS

500-- 7 FY=33000. * FY= 0. * FC'= 3000.FY=, 0. * FC'= 0. * FY= 0. * FC''= 0. * FY= 0. * FC''= 0. *
MAXIMUM IMPACT FACTOR I = .0 O = .0 P = .0 S = .0
MINIMUM IMPACT FACTOR I = .0 O = .0 P = .0 S = .0

MEMBER SPECIFICATIONS AND REQUIRED ANALYSIS-GIRDER,STRINGER AND FLOOR BEAM

	MEMBER ID	SPANS SYMM.	SPAN 1 (SPAN 4)	SPAN 2 (SPAN 5)	SPAN 3 (SPAN 6)	MATL CODE	ALLOWABLE STRESS FY	FB	FC*	FC**	LL DIST. FACTOR	END FL.BM	THRU DECK	MAX INV	IMPACT FACTOR OP.	POST	SPEC
600-- 8	G 1	4	80.000	80.000	80.000	SS	0.0		0.0		1.455	8.0/5.5 = 1.4545		.0	.0	.0	.0
700-- 8	G 1	4	11.000	0.0	0.0	SS	0.0		0.0		1.455			.0	.0	.0	.0

$\frac{26 \times 2}{5} \times 1.0907 / 4 = 1.5757$

SUPERIMPOSED DEAD LOADS-GIRDERS, STRINGERS AND FLOOR BEAMS

concrete deck = 6.5" x 29' x 150/4 = 589.
asphalt = 6" x 26' x 144/4 = 468.
median = 2'x5" x 150/4 = 32
diaphragms = 11 x 3 x 8' x 65%/4 x 251 = 17

MEMBER ID	SYMM.	SPAN NO.	DISTANCE FR. LEFT SUPP.	LOAD TYPE	LOAD P OR W(L)	LOAD W(R)	LENGTH
800--10	G 1	1	0.0 FT.	W	1106.0	0.0	80.000FT.
900--10	G 1	2	0.0 FT.	W	1106.0	0.0	80.000FT.
1000--10	G 1	3	0.0 FT.	W	1106.0	0.0	80.000FT.
1100--10	G 1	4	0.0 FT.	W	1106.0	0.0	11.000FT.

SECTION RANGE SPECIFICATIONS

MEMBER ID	SYMM.	SPAN NO.	RANGE NO.	RANGE LENGTH	SECTION NO. LEFT	SECTION NO. RIGHT	SEC. VAR.	HINGE CODE	HINGE 1 DIST.	HINGE 2 DIST.
1300--11	G 1	1	1	69.000FT.	1	0			0.0 FT.	0.0 FT.
1200--11	G 1	1	2	11.000FT.	2	0			0.0 FT.	0.0 FT.
1400--11	G 1	2	1	11.000FT.	2	0			0.0 FT.	0.0 FT.
1600--11	G 1	2	2	59.000FT.	3	0			0.0 FT.	0.0 FT.
1500--11	G 1	2	3	10.000FT.	4	0			0.0 FT.	0.0 FT.
1800--11	G 1	3	1	10.000FT.	4	0			0.0 FT.	0.0 FT.
1700--11	G 1	3	2	70.000FT.	5	0			0.0 FT.	0.0 FT.
1900--11	G 1	4	1	11.000FT.	5	0			0.0 FT.	0.0 FT.

SECTION PROPERTIES (STEEL) - GIRDERS, STRINGERS, FLOOR BEAMS

MEMBER ID	SEC.	A	I	S	SEC.	SAME	ADR H	I	A	IX	DY	DX
2200--12	G 1	0	0.0	0.0	0.0	1	0	36.50	1	82.32	18819.0	18.3	0.0
2000--12	G 1	0	0.0	0.0	0.0	2	0	38.41	2	49.98	10470.0	19.2	0.0
2100--12	G 1	0	0.0	0.0	0.0	2	0	38.41	1	15.75	1.7	37.8	0.0
2800--12	G 1	0	0.0	0.0	0.0	2	0	38.41	3	15.75	1.7	0.6	0.0
2700--12	G 1	0	0.0	0.0	0.0	3	0	36.16	1	49.98	10470.0	18.1	0.0
2400--12	G 1	0	0.0	0.0	0.0	4	0	38.16	3	14.00	1.2	0.5	0.0
2500--12	G 1	0	0.0	0.0	0.0	4	0	38.16	2	49.98	10470.0	19.1	0.0
2600--12	G 1	0	0.0	0.0	0.0	4	0	38.16	1	14.00	1.2	37.7	0.0
2300--12	G 1	0	0.0	0.0	0.0	5	0	36.24	1	76.56	17234.0	18.1	0.0

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TENNESSEE DEPARTMENT OF TRANSPORTATION

SUMMARY OF RATING CALCULATIONS------STRUCTURE MEMBER
INVENTORY AND/OR OPERATING ANALYSIS

INPUT CODING --

STRUCTURE LOG 9.78

D/P STR. I.D.-- 319-029

DATE 2/ 6/76
BY C. A. JOHNSON

	INVENTORY LIVE LOAD	INVENTORY RATING	OPERATING LIVE LOAD	OPERATING RATING
	H 15	H 22.02	HS20	HS33.14

STRUCTURE DESCRIPTION --

IDENTIFICATION	319-029
TYPE	CDSIB
YEAR OF CONSTR.	1950
LENGTH	251.00 FEET
ROADWAY WIDTH	26.00 FEET
NUMBER OF SPANS	4

LOCATION --

DISTRICT	3
COUNTY	19
CONSTR. RTE.	S.R. 6
CONSTR. SEC.	
CONSTR. STA.	0+ .
KEY RTE.	
MARKED RTE.	

MICROFILM REEL NUMBERS --

DESIGN PLANS
COMPUTATIONS
CORRESPONDENCE

ANALYST REMARKS --

ASPHALT IS 6 INCHES THICK. THE DECK IS 6.5 INCHES THICK. G01 IS A TYPICAL INTERIOR GIRDER.

INVENTORY RATING SUMMARY --

MEMBER ID.	G 1
SPAN	2
CRITICAL C.P. DIST.	0.0 FEET
LIVE LOAD DESIGNATION	H 15

	MOMENT (FT. KIPS)
MEMBER CAPACITY	-1687.0
DL EFFECT	-913.3
CAPACITY FOR (LL+I)	-773.8
ACTUAL (LL+I)	-527.1

INVENTORY RATING H 22.02

OPERATING RATING SUMMARY --

MEMBER ID.	G 1
SPAN	1
CRITICAL C.P. DIST.	32.0 FEET
LIVE LOAD DESIGNATION	HS20

	MOMENT (FT. KIPS)
MEMBER CAPACITY	2126.8
DL EFFECT	699.2
CAPACITY FOR (LL+I)	1427.6
ACTUAL (LL+I)	861.6

OPERATING RATING HS33.14

DATA PROCESSING CENTER

TENNESSEE DEPARTMENT OF TRANSPORTATION

SUMMARY OF RATING CALCULATIONS----------STRUCTURE
INVENTORY AND/OR OPERATING ANALYSIS

STRUCTURE LOG 9.78

D/P STR. ID-- 319-029

INPUT CODING--

DATE 2/ 6/76

BY C. A. JOHNSON

	INVENTORY	OPERATING
LIVE LOAD	H 15	HS20
RATING	H 22.0	HS33.1

STRUCTURE DESCRIPTION--

IDENTIFICATION	LOG 9.78
TYPE	CDSIB
YEAR OF CONSTR.	1950
LENGTH	251.000 FEET
ROADWAY WIDTH	26.000 FEET
NUMBER OF SPANS	4

LOCATION--

DISTRICT	3
COUNTY	19
CONSTR. RTE.	S.R. 6
CONSTR. SEC.	
CONSTR. STA.	0+ .
KEY RTE.	
MARKED RTE.	

MICROFILM REEL NUMBERS--

DESIGN PLANS
COMPUTATIONS
CORRESPONDENCE

ANALYST REMARKS--

ASPHALT IS 6 INCHES THICK. THE DECK IS 6.5 INCHES THICK. G01 IS A TYPICAL INTERIOR GIRDER.

INVENTORY RATING SUMMARY

MEMBER I.D.	G 1
SPAN	2
CRITICAL C.P. DIST.	0.0 FEET
LIVE LOAD DESIGNATION	H 15

	MOMENT (FOOT-KIPS)
MEMBER CAPACITY	-1687.0
DL EFFECT	-913.3
CAPACITY FOR (LL+I)	-773.8
ACTUAL (LL+I)	-527.1

INVENTORY RATING H 22.02

OPERATING RATING SUMMARY

MEMBER I.D.	G 1
SPAN	1
CRITICAL C.P. DIST.	32.0 FEET
LIVE LOAD DESIGNATION	HS20

	MOMENT (FOOT-KIPS)
MEMBER CAPACITY	2126.8
DL EFFECT	699.2
CAPACITY FOR (LL+I)	1427.6
ACTUAL (LL+I)	861.6

OPERATING RATING HS33.14

DATA PROCESSING CENTER

TENNESSEE DEPARTMENT OF TRANSPORTATION

DETAIL DATA FOR FLEXURAL MEMBER

DATE 06/02/76

D/P STRUCTURE I.D. 319-029
MEMBER I.D.--G01
MATERIAL--SS
LL DIST. FACT. = 1.455

NO. SPANS = 4
NOT SYMMETRICAL

SPAN NO.	LENGTH FT.	RNG. NO.	LENGTH FT.	SEC.NO. LT	SEC.NO. RT	VAR CODE S T P	VAR CODE T B	DL DUE TO MEM. WEIGHT W(LT) LBS/FT	DL DUE TO MEM. WEIGHT W(RT) LBS/FT
1	80.000	1	69.000	01	01			280.1	280.1
		2	11.000	02	02			277.3	277.3
2	80.000	1	11.000	02	02			277.3	277.3
		2	59.000	03	03			170.1	170.1
		3	10.000	04	04			265.3	265.3
3	80.000	1	10.000	04	04			265.3	265.3
		2	70.000	05	05			260.5	260.5
4	11.000	1	11.000	05	05			260.5	260.5

SUPERIMPOSED DISTRIBUTED DL(S)
LENGTH DISTRIBUTED**********
DIST. FROM LT SUPPORT***

SPAN NO.	W(LT) LBS/FT	W(RT) LBS/FT	* FT.	* FT.
1	1106.0	1106.0	0.000	80.000
2	1106.0	1106.0	80.000	80.000
3	1106.0	1106.0	160.000	80.000
4	1106.0	1106.0	240.000	11.000

SUPERIMPOSED CONCENTRATED DL(S)
DIST. FROM LT SUPPORT****

SPAN NO.	P KIPS	* FT.

CHECK POINTS RATED--

SPAN NO.	DIS FRM LT SPRT FT.	FUNC M	FUNC VL	FUNC VR
1	0.000			X
1	32.000	X		
2	0.000	X	X	X
2	40.000	X		
3	0.000	X	X	X
3	40.000	X		
4	0.000	X	X	X
4	6.600	X		
4	11.000		X	

DATA PROCESSING CENTER

TENNESSEE DEPARTMENT OF TRANSPORTATION

DETAIL DATA AT MOMENT CHECK POINT FOR
STRUCTURAL STEEL FLEXURAL MEMBER

DATE 02/06/76

D/P STRUCTURE I.D. 319-029
MEMBER I.D.--G01
C.P. LOCATION 1.4

***** SECTION PROPERTIES IN RANGE 1 OF SPAN 1

H IN.	GROSS AREA SQ.IN.	NET AREA + BEND SQ.IN.	NET AREA - BEND SQ.IN.	IX + BEND IN**4	IX - BEND IN**4	C (BOT) IN.	SECTION MODULUS TOP + BEND IN**3	SECTION MODULUS TOP - BEND IN**3	SECTION MODULUS BOTTOM + BEND IN**3	SECTION MODULUS BOTTOM - BEND IN**3
36.50	82.32	82.32	82.32	18819.0	18819.0	18.25	1031.2	1031.2	1031.2	1031.2

***** INFLUENCE LINE (SIMPLE SPAN)

X-DIST (FT.)
Y-ORDINATE

POS AREA =

***** ORDINATES OF AND AREAS UNDER INFLUENCE LINE (CONTINUOUS SPAN)

	SPAN 1	SPAN 2	SPAN 3	SPAN 4	SPAN 5	SPAN 6
T 0	0.000	0.000	0.000	0.000	0.000	0.000
E 1	4.061	- 1.570	0.374	- 0.004	0.000	0.000
N 2	8.166	- 2.711	0.608	- 0.007	0.000	0.000
T 3	12.362	- 3.271	0.713	- 0.009	0.000	0.000
H 4	16.693	- 3.355	0.713	- 0.010	0.000	0.000
5	13.204	- 3.074	0.635	- 0.009	0.000	0.000
P 6	9.941	- 2.539	0.506	- 0.008	0.000	0.000
O 7	6.947	- 1.861	0.352	- 0.007	0.000	0.000
I 8	4.269	- 1.150	0.198	- 0.005	0.000	0.000
N 9	1.950	- 0.517	0.072	- 0.002	0.000	0.000
T 0	0.000	0.000	0.000	0.000	0.000	0.000
AREA TOTALS						
POS AREA	620.8	0.0	33.4	0.0	0.0	0.0
NEG AREA	0.0	160.4	0.0	0.1	0.0	0.0

***** ALLOWABLE STRESS

	PSI
INVENTORY	18150.
OPERATING	24750.
POST VEH1	0.
POST VEH2	0.
POST VEH3	0.
POST SPEC	0.

***** MOMENT CAPACITY

	TOP + BEND FT-KIPS	TOP - BEND FT-KIPS	BOTTOM + BEND FT-KIPS	BOTTOM - BEND FT-KIPS
INVENTORY	1559.7	1559.7	1559.7	1559.7
OPERATING	2126.8	2126.8	2126.8	2126.8
POST VEH1	0.0	0.0	0.0	0.0
POST VEH2	0.0	0.0	0.0	0.0
POST VEH3	0.0	0.0	0.0	0.0
POST SPEC	0.0	0.0	0.0	0.0

***** TOTAL DL MOMENT EFFECT

FT-KIPS
699.2

***** AVAIL.CAPAC.FOR LL+IMPACT

	TOP +BEND F-KPS	TOP -BEND F-KPS	BOT +BEND F-KPS	BOT -BEND F-KPS
INVENTORY	860.5	2258.8	860.5	2258.8
OPERATING	1427.6	2826.0	1427.6	2826.0
VEH. 1	0.0	0.0	0.0	0.0
VEH. 2	0.0	0.0	0.0	0.0
VEH. 3	0.0	0.0	0.0	0.0
SPECIAL	0.0	0.0	0.0	0.0

***** LIVE LOAD AND RATING CALCULATIONS (IMPACT FACTOR = .244 FOR +BEND AND = .244 FOR -BEND)

LIVE LOAD		TRUCK LOAD LL+IMP FT-KIPS	TRUCK LOAD LL FT-KIPS	LOC.NO. 1 WHEEL FT.	DIR	LANE LOAD LL+IMP FT-KIPS	LANE LOAD LL FT-KIPS	LOC.CONC LOAD FT.	LOC.CONC LOAD 2 FT.	RATING FACT.	SAFE LOAD CAPACITY TONS	RATING VALUE
INV H 15	+BEND	421.0	338.4	46.000	R	487.6	392.0	32.000		1.765		H 26.5
	-BEND	88.3	71.0	98.000	L	111.3	89.5	112.000	0.000			
OPER HS20	+BEND	861.6	692.7	18.000	L	650.1	522.6	32.000		1.657		HS 33.1
	-BEND	201.7	162.2	132.000	R	148.4	119.3	112.000	0.000			
POST VEH1	+BEND	0.0	0.0	0.000						0.000	0.0	
	-BEND	0.0	0.0	0.000								
POST VEH2	+BEND	0.0	0.0	0.000						0.000	0.0	
	-BEND	0.0	0.0	0.000								
POST VEH3	+BEND	0.0	0.0	0.000						0.000	0.0	
	-BEND	0.0	0.0	0.000								
POST SPEC	+BEND	0.0	0.0	0.000						0.000	0.0	
	-BEND	0.0	0.0	0.000								

DATA PROCESSING CENTER

TENNESSEE DEPARTMENT OF TRANSPORTATION

DETAIL DATA AT MOMENT CHECK POINT FOR
STRUCTURAL STEEL FLEXURAL MEMBER

DATE 02/06/76

D/P STRUCTURE I.D. 319-029
MEMBER I.D.--G01
C.P. LOCATION 2.0

***** SECTION PROPERTIES IN RANGE 1 OF SPAN 2

H IN.	GROSS AREA SQ.IN.	NET AREA + BEND SQ.IN.	NET AREA - BEND SQ.IN.	IX + BEND IN**4	IX - BEND IN**4	C (BOT) IN.	SECTION MODULUS TOP + BEND IN**3	SECTION MODULUS TOP - BEND IN**3	SECTION MODULUS BOTTOM + BEND IN**3	SECTION MODULUS BOTTOM - BEND IN**3
38.41	81.48	81.48	81.48	21421.2	21421.2	19.21	1115.4	1115.4	1115.4	1115.4

***** INFLUENCE LINE (SIMPLE SPAN)

X-DIST (FT.)
Y-ORDINATE

POS AREA =

***** ORDINATES OF AND AREAS UNDER INFLUENCE LINE (CONTINUOUS SPAN)

	SPAN 1	SPAN 2	SPAN 3	SPAN 4	SPAN 5	SPAN 6
T 0	0.000	0.000	0.000	0.000	0.000	0.000
E 1 -	1.848 -	3.926	0.935 -	0.011	0.000	0.000
N 2 -	3.584 -	6.777	1.521 -	0.018	0.000	0.000
T 3 -	5.094 -	8.178	1.781 -	0.022	0.000	0.000
H 4 -	6.267 -	8.388	1.782 -	0.024	0.000	0.000
5 -	6.989 -	7.685	1.588 -	0.024	0.000	0.000
P 6 -	7.148 -	6.347	1.265 -	0.021	0.000	0.000
O 7 -	6.631 -	4.651	0.879 -	0.017	0.000	0.000
I 8 -	5.327 -	2.876	0.495 -	0.012	0.000	0.000
N 9 -	3.124 -	1.293	0.181 -	0.006	0.000	0.000
T 0	0.000	0.000	0.000	0.000	0.000	0.000
POS AREA	0.0	0.0	83.4	0.0	0.0	0.0
NEG AREA	368.1	401.0	0.0	0.2	0.0	0.0

AREA TOTALS: POS AREA 83.4; NEG AREA 769.2

***** ALLOWABLE STRESS

	PSI
INVENTORY	18150.
OPERATING	24750.
POST VEH1	0.
POST VEH2	0.
POST VEH3	0.
POST SPEC	0.

***** MOMENT CAPACITY

	TOP + BEND FT-KIPS	TOP - BEND FT-KIPS	BOTTOM + BEND FT-KIPS	BOTTOM - BEND FT-KIPS
	1687.0	1687.0	1687.0	1687.0
	2300.5	2300.5	2300.5	2300.5
	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0

***** TOTAL DL MOMENT EFFECT

FT-KIPS
- 913.3

***** AVAIL.CAPAC.FOR LL+IMPACT

	TOP +BEND F-KPS	TOP -BEND F-KPS	BOT +BEND F-KPS	BOT -BEND F-KPS
INVENTORY	2600.3	773.8	2600.3	773.8
OPERATING	3213.8	1387.3	3213.8	1387.2
VEH. 1	0.0	0.0	0.0	0.0
VEH. 2	0.0	0.0	0.0	0.0
VEH. 3	0.0	0.0	0.0	0.0
SPECIAL	0.0	0.0	0.0	0.0

***** LIVE LOAD AND RATING CALCULATIONS (IMPACT FACTOR = .244 FOR +BEND AND = .244 FOR -BEND)

LIVE LOAD		TRUCK LOAD LL+IMP FT-KIPS	TRUCK LOAD LL FT-KIPS	TRUCK LOAD LOC.NO. 1 WHEEL FT.	DIR	LANE LOAD LL+IMP FT-KIPS	LANE LOAD LL FT-KIPS	LOC.CONC LOAD FT.	LOC.CONC LOAD 2 FT.	RATING FACT.	SAFE LOAD CAPACITY TONS	RATING VALUE
INV H 15	+BEND	47.6	38.2	198.007	R	58.3	46.9	192.000				
	-BEND	220.9	177.6	98.000	L	527.1	423.7	112.000	48.000	1.468		H 22.0
OPER HS20	+BEND	107.3	86.2	206.000	R	77.8	62.5	192.000				
	-BEND	504.3	405.4	132.000	R	702.8	565.0	112.000	48.000	1.974		HS 39.5
POST VEH1	+BEND	0.0	0.0	0.000						0.000	0.0	
	-BEND	0.0	0.0	0.000								
POST VEH2	+BEND	0.0	0.0	0.000		$\frac{773.8}{527.1} \times 15 = 22.02^T$			$\frac{773.8}{702.8} \times 36 = 39.64^T$	0.000	0.0	
	-BEND	0.0	0.0	0.000								
POST VEH3	+BEND	0.0	0.0	0.000						0.000	0.0	
	-BEND	0.0	0.0	0.000								
POST SPEC	+BEND	0.0	0.0	0.000		$\frac{1387.2}{527.1} \times 15 = 39.48^T$			$\frac{1387.2}{702.8} \times 36 = 71.06^T$	0.000	0.0	
	-BEND	0.0	0.0	0.000								

DATA PROCESSING CENTER

TENNESSEE DEPARTMENT OF TRANSPORTATION

DETAIL DATA AT MOMENT CHECK POINT FOR
STRUCTURAL STEEL FLEXURAL MEMBER

DATE 02/06/76

D/P STRUCTURE I.D. 319-029
MEMBER I.D.--G01
C.P. LOCATION 2.5

***** SECTION PROPERTIES IN RANGE 2 OF SPAN 2

H IN.	GROSS AREA SQ.IN.	NET AREA + BEND SQ.IN.	NET AREA - BEND SQ.IN.	IX + BEND IN**4	IX - BEND IN**4	C (BOT) IN.	SECTION MODULUS TOP + BEND IN**3	SECTION MODULUS TOP - BEND IN**3	SECTION MODULUS BOTTOM + BEND IN**3	SECTION MODULUS BOTTOM - BEND IN**3
36.16	49.98	49.98	49.98	10470.0	10470.0	18.08	579.1	579.1	579.1	579.1

***** INFLUENCE LINE (SIMPLE SPAN)

X-DIST (FT.)
Y-ORDINATE

POS AREA =

***** ORDINATES OF AND AREAS UNDER INFLUENCE LINE (CONTINUOUS SPAN)

	SPAN 1	SPAN 2	SPAN 3	SPAN 4	SPAN 5	SPAN 6
T 0	0.000	0.000	0.000	0.000	0.000	0.000
E 1	- 0.580	1.287	- 0.864	0.010	0.000	0.000
N 2	- 1.125	2.976	- 1.405	0.017	0.000	0.000
T 3	- 1.599	5.306	- 1.646	0.021	0.000	0.000
H 4	- 1.967	8.290	- 1.647	0.022	0.000	0.000
5	- 2.194	11.933	- 1.467	0.022	0.000	0.000
P 6	- 2.244	8.242	- 1.169	0.020	0.000	0.000
O 7	- 2.082	5.223	- 0.812	0.016	0.000	0.000
I 8	- 1.672	2.881	- 0.458	0.011	0.000	0.000
N 9	- 0.981	1.217	- 0.167	0.006	0.000	0.000
T 0	0.000	0.000	0.000	0.000	0.000	0.000

							AREA TOTALS
POS AREA	0.0	378.8	0.0	0.2	0.0	0.0	379.0
NEG AREA	115.6	0.0	77.1	0.0	0.0	0.0	192.6

***** ALLOWABLE STRESS

	PSI
INVENTORY	18150.
OPERATING	24750.
POST VEH1	0.
POST VEH2	0.
POST VEH3	0.
POST SPEC	0.

***** MOMENT CAPACITY

	TOP + BEND FT-KIPS	TOP - BEND FT-KIPS	BOTTOM + BEND FT-KIPS	BOTTOM - BEND FT-KIPS
INVENTORY	875.9	875.9	875.9	875.9
OPERATING	1194.4	1194.4	1194.4	1194.4
POST VEH1	0.0	0.0	0.0	0.0
POST VEH2	0.0	0.0	0.0	0.0
POST VEH3	0.0	0.0	0.0	0.0
POST SPEC	0.0	0.0	0.0	0.0

***** TOTAL DL MOMENT EFFECT

FT-KIPS
218.4

***** AVAIL.CAPAC.FOR LL+IMPACT

	TOP +BEND F-KPS	TOP -BEND F-KPS	BOT +BEND F-KPS	BOT -BEND F-KPS
INVENTORY	657.5	1094.3	657.5	1094.3
OPERATING	976.0	1412.8	976.0	1412.8
VEH. 1	0.0	0.0	0.0	0.0
VEH. 2	0.0	0.0	0.0	0.0
VEH. 3	0.0	0.0	0.0	0.0
SPECIAL	0.0	0.0	0.0	0.0

***** LIVE LOAD AND RATING CALCULATIONS (IMPACT FACTOR = .244 FOR +BEND AND = .244 FOR -BEND)

LIVE LOAD		TRUCK LOAD LL+IMP FT-KIPS	TRUCK LOAD LL FT-KIPS	LOC.NO. 1 WHEEL FT.	DIR	LANE LOAD LL+IMP FT-KIPS	LANE LOAD LL FT-KIPS	LOC.CONC LOAD FT.	LOC.CONC LOAD 2 FT.	RATING FACT.	SAFE LOAD CAPACITY TONS	RATING VALUE
INV H 15	+BEND	292.0	234.8	106.000	L	313.4	251.9	120.000		2.098		H 31.5
	-BEND	59.7	48.0	34.000	L	111.9	90.0	48.000	0.000			
OPER HS20	+BEND	564.1	453.5	133.999	R	417.9	335.9	120.000		1.730		HS 34.6
	-BEND	137.2	110.3	26.001	L	149.2	120.0	48.000	0.000			
POST VEH1	+BEND	0.0	0.0	0.000						0.000	0.0	
	-BEND	0.0	0.0	0.000								
POST VEH2	+BEND	0.0	0.0	0.000						0.000	0.0	
	-BEND	0.0	0.0	0.000								
POST VEH3	+BEND	0.0	0.0	0.000						0.000	0.0	
	-BEND	0.0	0.0	0.000								
POST SPEC	+BEND	0.0	0.0	0.000						0.000	0.0	
	-BEND	0.0	0.0	0.000								

DATA PROCESSING CENTER

TENNESSEE DEPARTMENT OF TRANSPORTATION

DETAIL DATA AT MOMENT CHECK POINT FOR
STRUCTURAL STEEL FLEXURAL MEMBER

DATE 02/06/76

D/P STRUCTURE I.D. 319-029
MEMBER I.D.--G01
C.P. LOCATION 3.0

***** SECTION PROPERTIES IN RANGE 1 OF SPAN 3

H IN.	GROSS AREA SQ.IN.	NET AREA + BEND SQ.IN.	NET AREA - BEND SQ.IN.	IX + BEND IN**4	IX - BEND IN**4	C (BOT) IN.	SECTION MODULUS TOP + BEND IN**3	SECTION MODULUS TOP - BEND IN**3	SECTION MODULUS BOTTOM + BEND IN**3	SECTION MODULUS BOTTOM - BEND IN**3
38.16	77.98	77.98	77.98	20138.4	20138.4	19.08	1055.5	1055.5	1055.5	1055.5

***** INFLUENCE LINE (SIMPLE SPAN)

X-DIST (FT.)
Y-ORDINATE

POS AREA =

***** ORDINATES OF AND AREAS UNDER INFLUENCE LINE (CONTINUOUS SPAN)

	SPAN 1	SPAN 2	SPAN 3	SPAN 4	SPAN 5	SPAN 6
T 0	0.000	0.000	0.000	0.000	0.000	0.000
E 1	0.688	- 1.501	- 2.663	0.031	0.000	0.000
N 2	1.334	- 3.271	- 4.331	0.052	0.000	0.000
T 3	1.896	- 5.210	- 5.074	0.064	0.000	0.000
H 4	2.332	- 7.032	- 5.075	0.069	0.000	0.000
5	2.601	- 8.449	- 4.522	0.067	0.000	0.000
P 6	2.660	- 9.169	- 3.602	0.060	0.000	0.000
O 7	2.468	- 8.903	- 2.503	0.049	0.000	0.000
I 8	1.982	- 7.362	- 1.411	0.034	0.000	0.000
N 9	1.163	- 4.274	- 0.514	0.018	0.000	0.000
T 0	0.000	0.000	0.000	0.000	0.000	0.000
POS AREA	137.0	0.0	0.0	0.5	0.0	0.0
NEG AREA	0.0	441.4	237.6	0.0	0.0	0.0

AREA TOTALS: 137.5 / 678.9

***** ALLOWABLE STRESS

	PSI
INVENTORY	18150.
OPERATING	24750.
POST VEH1	0.
POST VEH2	0.
POST VEH3	0.
POST SPEC	0.

***** MOMENT CAPACITY

	TOP + BEND FT-KIPS	TOP - BEND FT-KIPS	BOTTOM + BEND FT-KIPS	BOTTOM - BEND FT-KIPS
INVENTORY	1596.4	1596.4	1596.4	1596.4
OPERATING	2176.9	2176.9	2176.9	2176.9
POST VEH1	0.0	0.0	0.0	0.0
POST VEH2	0.0	0.0	0.0	0.0
POST VEH3	0.0	0.0	0.0	0.0
POST SPEC	0.0	0.0	0.0	0.0

***** TOTAL DL MOMENT EFFECT

FT-KIPS
- 702.2

***** AVAIL.CAPAC.FOR LL+IMPACT

	TOP +BEND F-KPS	TOP -BEND F-KPS	BOT +BEND F-KPS	BOT -BEND F-KPS
INVENTORY	2298.6	894.2	2298.6	894.2
OPERATING	2879.1	1474.7	2879.1	1474.7
VEH. 1	0.0	0.0	0.0	0.0
VEH. 2	0.0	0.0	0.0	0.0
VEH. 3	0.0	0.0	0.0	0.0
SPECIAL	0.0	0.0	0.0	0.0

***** LIVE LOAD AND RATING CALCULATIONS (IMPACT FACTOR = .244 FOR +BEND AND = .244 FOR -BEND)

LIVE LOAD		TRUCK LOAD LL+IMP FT-KIPS	TRUCK LOAD LL FT-KIPS	TRUCK LOAD LOC.NO. 1 WHEEL FT.	DIR	LANE LOAD LL+IMP FT-KIPS	LANE LOAD LL FT-KIPS	LOC.CONC LOAD FT.	LOC.CONC LOAD 2 FT.	RATING FACT.	SAFE LOAD CAPACITY TONS	RATING VALUE
INV H 15	+BEND	70.8	56.9	34.000	L	92.8	74.6	48.000				
	-BEND	241.2	193.9	142.000	R	471.7	379.2	128.000	192.000	1.896		H 28.4
OPER HS20	+BEND	162.7	130.8	26.001	L	123.7	99.5	48.000				
	-BEND	552.0	443.8	108.004	L	628.9	505.6	128.000	192.000	2.345		HS 46.9
POST VEH1	+BEND	0.0	0.0	0.000						0.000	0.0	
	-BEND	0.0	0.0	0.000								
POST VEH2	+BEND	0.0	0.0	0.000						0.000	0.0	
	-BEND	0.0	0.0	0.000								
POST VEH3	+BEND	0.0	0.0	0.000						0.000	0.0	
	-BEND	0.0	0.0	0.000								
POST SPEC	+BEND	0.0	0.0	0.000						0.000	0.0	
	-BEND	0.0	0.0	0.000								

DATA PROCESSING CENTER

TENNESSEE DEPARTMENT OF TRANSPORTATION

DETAIL DATA AT MOMENT CHECK POINT FOR
STRUCTURAL STEEL FLEXURAL MEMBER

DATE 02/06/76

D/P STRUCTURE I.D. 319-029
MEMBER I.D.--G01
C.P. LOCATION 3.5

***** SECTION PROPERTIES IN RANGE 2 OF SPAN 3

H IN.	GROSS AREA SQ.IN.	NET AREA + BEND SQ.IN.	NET AREA - BEND SQ.IN.	IX + BEND IN**4	IX - BEND IN**4	C (BOT) IN.	SECTION MODULUS TOP + BEND IN**3	SECTION MODULUS TOP - BEND IN**3	SECTION MODULUS BOTTOM + BEND IN**3	SECTION MODULUS BOTTOM - BEND IN**3
36.24	76.56	76.56	76.56	17234.0	17234.0	18.12	951.1	951.1	951.1	951.1

***** INFLUENCE LINE (SIMPLE SPAN)

X-DIST (FT.)
Y-ORDINATE

POS AREA =

***** ORDINATES OF AND AREAS UNDER INFLUENCE LINE (CONTINUOUS SPAN)

	SPAN 1	SPAN 2	SPAN 3	SPAN 4	SPAN 5	SPAN 6
T 0	0.000	0.000	0.000	0.000	0.000	0.000
E 1	0.194	- 0.423	1.517	- 0.048	0.000	0.000
N 2	0.375	- 0.921	3.412	- 0.081	0.000	0.000
T 3	0.534	- 1.467	5.777	- 0.101	0.000	0.000
H 4	0.657	- 1.980	8.668	- 0.108	0.000	0.000
5	0.732	- 2.378	12.137	- 0.106	0.000	0.000
P 6	0.749	- 2.581	8.236	- 0.095	0.000	0.000
O 7	0.695	- 2.506	5.020	- 0.077	0.000	0.000
I 8	0.558	- 2.072	2.540	- 0.054	0.000	0.000
N 9	0.327	- 1.203	0.849	- 0.028	0.000	0.000
T 0	0.000	0.000	0.000	0.000	0.000	0.000
AREA TOTALS						
POS AREA	38.6	0.0	385.2	0.0	0.0	0.0	423.8
NEG AREA	0.0	124.3	0.0	0.8	0.0	0.0	125.0

***** ALLOWABLE STRESS

	PSI
INVENTORY	18150.
OPERATING	24750.
POST VEH1	0.
POST VEH2	0.
POST VEH3	0.
POST SPEC	0.

***** MOMENT CAPACITY

	TOP + BEND FT-KIPS	TOP - BEND FT-KIPS	BOTTOM + BEND FT-KIPS	BOTTOM - BEND FT-KIPS
INVENTORY	1438.5	1438.5	1438.5	1438.5
OPERATING	1961.6	1961.6	1961.7	1961.7
POST VEH1	0.0	0.0	0.0	0.0
POST VEH2	0.0	0.0	0.0	0.0
POST VEH3	0.0	0.0	0.0	0.0
POST SPEC	0.0	0.0	0.0	0.0

***** TOTAL DL MOMENT EFFECT

FT-KIPS
417.9

***** AVAIL.CAPAC.FOR LL+IMPACT

	TOP +BEND F-KPS	TOP -BEND F-KPS	BOT +BEND F-KPS	BOT -BEND F-KPS
INVENTORY	1020.6	1356.5	1020.6	1856.5
OPERATING	1543.7	2379.6	1543.7	2379.6
VEH. 1	0.0	0.0	0.0	0.0
VEH. 2	0.0	0.0	0.0	0.0
VEH. 3	0.0	0.0	0.0	0.0
SPECIAL	0.0	0.0	0.0	0.0

***** LIVE LOAD AND RATING CALCULATIONS (IMPACT FACTOR = .244 FOR +BEND AND = .244 FOR -BEND)

LIVE LOAD		TRUCK LOAD LL+IMP FT-KIPS	TRUCK LOAD LL FT-KIPS	TRUCK LOAD LOC.NO. 1 WHEEL FT.	DIR	LANE LOAD LL+IMP FT-KIPS	LANE LOAD LL FT-KIPS	LOC.CONC LOAD FT.	LOC.CONC LOAD 2 FT.	RATING FACT.	SAFE LOAD CAPACITY TONS	RATING VALUE
INV H 15	+BEND	298.9	240.3	186.000	L	335.4	269.6	200.000		3.043		H 45.7
	-BEND	67.9	54.6	142.000	R	86.3	69.4	128.000	0.000			
OPER HS20	+BEND	581.8	467.7	214.000	R	447.1	359.5	200.000		2.653		HS 53.1
	-BEND	155.4	124.9	108.004	L	115.1	92.5	128.000	0.000			
POST VEH1	+BEND	0.0	0.0	0.000						0.000	0.0	
	-BEND	0.0	0.0	0.000								
POST VEH2	+BEND	0.0	0.0	0.000						0.000	0.0	
	-BEND	0.0	0.0	0.000								
POST VEH3	+BEND	0.0	0.0	0.000						0.000	0.0	
	-BEND	0.0	0.0	0.000								
POST SPEC	+BEND	0.0	0.0	0.000						0.000	0.0	
	-BEND	0.0	0.0	0.000								

DATA PROCESSING CENTER

TENNESSEE DEPARTMENT OF TRANSPORTATION

DETAIL DATA AT MOMENT CHECK POINT FOR
STRUCTURAL STEEL FLEXURAL MEMBER

DATE 02/06/76

D/P STRUCTURE I.D. 319-029
MEMBER I.D.--G01
C.P. LOCATION 4.0

***** SECTION PROPERTIES IN RANGE 1 OF SPAN 4

H IN.	GROSS AREA SQ.IN.	NET AREA + BEND SQ.IN.	NET AREA - BEND SQ.IN.	IX + BEND IN**4	IX - BEND IN**4	C (BOT) IN.	SECTION MODULUS TOP + BEND IN**3	SECTION MODULUS TOP - BEND IN**3	SECTION MODULUS BOTTOM + BEND IN**3	SECTION MODULUS BOTTOM - BEND IN**3
36.24	76.56	76.56	76.56	17234.0	17234.0	18.12	951.1	951.1	951.1	951.1

***** INFLUENCE LINE (SIMPLE SPAN)

X-DIST (FT.)
Y-ORDINATE

POS AREA =

***** ORDINATES OF AND AREAS UNDER INFLUENCE LINE (CONTINUOUS SPAN)

	SPAN 1	SPAN 2	SPAN 3	SPAN 4	SPAN 5	SPAN 6
T 0	0.000	0.000	0.000	0.000	0.000	0.000
E 1 -	0.301	0.656 -	2.302 -	0.127	0.000	0.000
N 2 -	0.583	1.429 -	4.846 -	0.214	0.000	0.000
T 3 -	0.828	2.277 -	7.372 -	0.265	0.000	0.000
H 4 -	1.019	3.073 -	9.589 -	0.285	0.000	0.000
5 -	1.136	3.692 -	11.205 -	0.279	0.000	0.000
P 6 -	1.162	4.006 -	11.925 -	0.250	0.000	0.000
O 7 -	1.078	3.890 -	11.457 -	0.203	0.000	0.000
I 8 -	0.866	3.217 -	9.509 -	0.143	0.000	0.000
N 9 -	0.508	1.867 -	5.788 -	0.074	0.000	0.000
T 0	0.000	0.000	0.000	0.000	0.000	0.000
AREA TOTALS						
POS AREA	0.0	192.9	0.0	0.0	0.0	0.0
NEG AREA	59.9	0.0	591.9	2.0	0.0	0.0

AREA TOTALS
192.9
653.8

***** ALLOWABLE STRESS

	PSI
INVENTORY	18150.
OPERATING	24750.
POST VEH1	0.
POST VEH2	0.
POST VEH3	0.
POST SPEC	0.

***** TOTAL DL MOMENT EFFECT

FT-KIPS
- 648.6

***** MOMENT CAPACITY

	TOP + BEND FT-KIPS	TOP - BEND FT-KIPS	BOTTOM + BEND FT-KIPS	BOTTOM - BEND FT-KIPS
INVENTORY	1438.5	1438.5	1438.5	1438.5
OPERATING	1961.6	1961.6	1961.7	1961.7
POST VEH1	0.0	0.0	0.0	0.0
POST VEH2	0.0	0.0	0.0	0.0
POST VEH3	0.0	0.0	0.0	0.0
POST SPEC	0.0	0.0	0.0	0.0

***** AVAIL.CAPAC.FOR LL+IMPACT

	TOP +BEND F-KPS	TOP -BEND F-KPS	BOT +BEND F-KPS	BOT -BEND F-KPS
INVENTORY	2087.2	789.9	2087.2	789.9
OPERATING	2610.3	1313.0	2610.3	1313.0
VEH. 1	0.0	0.0	0.0	0.0
VEH. 2	0.0	0.0	0.0	0.0
VEH. 3	0.0	0.0	0.0	0.0
SPECIAL	0.0	0.0	0.0	0.0

***** LIVE LOAD AND RATING CALCULATIONS (IMPACT FACTOR = .244 FOR +BEND AND = .293 FOR -BEND)

LIVE LOAD		TRUCK LOAD LL+IMP FT-KIPS	TRUCK LOAD LL FT-KIPS	LOC.NO. 1 WHEEL FT.	DIR	LANE LOAD LL+IMP FT-KIPS	LANE LOAD LL FT-KIPS	LOC.CONC LOAD FT.	LOC.CONC LOAD 2 FT.	RATING FACT.	SAFE LOAD CAPACITY TONS	RATING VALUE
INV H 15	+BEND	105.4	84.7	142.000	R	133.5	107.3	128.000				
	-BEND	325.7	251.8	222.000	R	453.4	350.6	208.000	244.400	1.742		H 26.1
OPER HS20	+BEND	241.2	193.9	108.004	L	178.0	143.1	128.000				
	-BEND	751.5	581.1	188.000	L	604.5	467.4	208.000	244.400	1.747		HS 34.9
POST VEH1	+BEND	0.0	0.0	0.000						0.000	0.0	
	-BEND	0.0	0.0	0.000								
POST VEH2	+BEND	0.0	0.0	0.000						0.000	0.0	
	-BEND	0.0	0.0	0.000								
POST VEH3	+BEND	0.0	0.0	0.000						0.000	0.0	
	-BEND	0.0	0.0	0.000								
POST SPEC	+BEND	0.0	0.0	0.000						0.000	0.0	
	-BEND	0.0	0.0	0.000								

DATA PROCESSING CENTER

TENNESSEE DEPARTMENT OF TRANSPORTATION

DETAIL DATA AT MOMENT CHECK POINT FOR
STRUCTURAL STEEL FLEXURAL MEMBER

DATE 02/06/76

D/P STRUCTURE I.D. 319-029
MEMBER I.D.--G01
C.P. LOCATION 4.6

***** SECTION PROPERTIES IN RANGE 1 OF SPAN 4

H IN.	GROSS AREA SQ.IN.	NET AREA + BEND SQ.IN.	NET AREA - BEND SQ.IN.	IX + BEND IN**4	IX - BEND IN**4	C (BOT) IN.	SECTION MODULUS TOP + BEND IN**3	SECTION MODULUS TOP - BEND IN**3	SECTION MODULUS BOTTOM + BEND IN**3	SECTION MODULUS BOTTOM - BEND IN**3
36.24	76.56	76.56	76.56	17234.0	17234.0	18.12	951.1	951.1	951.1	951.1

***** INFLUENCE LINE (SIMPLE SPAN)

X-DIST (FT.)
Y-ORDINATE

POS AREA =

***** ORDINATES OF AND AREAS UNDER INFLUENCE LINE (CONTINUOUS SPAN)

	SPAN 1	SPAN 2	SPAN 3	SPAN 4	SPAN 5	SPAN 6
T 0	0.000	0.000	0.000	0.000	0.000	0.000
E 1 -	0.120	0.262 -	0.921	0.389	0.000	0.000
N 2 -	0.233	0.572 -	1.938	0.794	0.000	0.000
T 3 -	0.331	0.911 -	2.949	1.214	0.000	0.000
H 4 -	0.408	1.229 -	3.836	1.646	0.000	0.000
5 -	0.455	1.477 -	4.482	2.088	0.000	0.000
P 6 -	0.465	1.603 -	4.770	2.540	0.000	0.000
O 7 -	0.431	1.556 -	4.583	1.899	0.000	0.000
I 8 -	0.346	1.287 -	3.804	1.263	0.000	0.000
N 9 -	0.203	0.747 -	2.315	0.631	0.000	0.000
T 0	0.000	0.000	0.000	0.000	0.000	0.000

	SPAN 1	SPAN 2	SPAN 3	SPAN 4	SPAN 5	SPAN 6	AREA TOTALS
POS AREA	0.0	77.1	0.0	13.7	0.0	0.0	90.9
NEG AREA	23.9	0.0	236.8	0.0	0.0	0.0	260.7

***** ALLOWABLE STRESS

	PSI
INVENTORY	18150.
OPERATING	24750.
POST VEH1	0.
POST VEH2	0.
POST VEH3	0.
POST SPEC	0.

***** MOMENT CAPACITY

	TOP + BEND FT-KIPS	TOP - BEND FT-KIPS	BOTTOM + BEND FT-KIPS	BOTTOM - BEND FT-KIPS
INVENTORY	1438.5	1438.5	1438.5	1438.5
OPERATING	1961.6	1961.6	1961.7	1961.7
POST VEH1	0.0	0.0	0.0	0.0
POST VEH2	0.0	0.0	0.0	0.0
POST VEH3	0.0	0.0	0.0	0.0
POST SPEC	0.0	0.0	0.0	0.0

***** TOTAL DL MOMENT EFFECT

FT-KIPS
- 239.6

***** AVAIL.CAPAC.FOR LL+IMPACT

	TOP +BEND F-KPS	TOP -BEND F-KPS	BOT +BEND F-KPS	BOT -BEND F-KPS
INVENTORY	1678.1	1198.9	1678.1	1198.9
OPERATING	2201.3	1722.0	2201.3	1722.0
VEH. 1	0.0	0.0	0.0	0.0
VEH. 2	0.0	0.0	0.0	0.0
VEH. 3	0.0	0.0	0.0	0.0
SPECIAL	0.0	0.0	0.0	0.0

***** LIVE LOAD AND RATING CALCULATIONS (IMPACT FACTOR = .300 FOR +BEND AND = .244 FOR -BEND)

LIVE LOAD		TRUCK LOAD LL+IMP FT-KIPS	TRUCK LOAD LL FT-KIPS	TRUCK LOAD LOC.NO. 1 WHEEL FT.	DIR	LANE LOAD LL+IMP FT-KIPS	LANE LOAD LL FT-KIPS	LOC.CONC LOAD FT.	LOC.CONC LOAD 2 FT.	RATING FACT.	SAFE LOAD CAPACITY TONS	RATING VALUE
INV H 15	+BEND	57.7	44.3	260.600	R	74.0	56.9	246.600				
	-BEND	125.3	100.7	222.000	R	172.7	138.8	208.000	0.000	6.944		H 4.2
OPER HS20	+BEND	100.8	77.6	108.004	L	98.7	75.9	246.600				
	-BEND	289.1	232.4	188.003	L	230.2	185.1	208.000	0.000	5.956		HS 19.1
POST VEH1	+BEND	0.0	0.0	0.000						0.000	0.0	
	-BEND	0.0	0.0	0.000								
POST VEH2	+BEND	0.0	0.0	0.000						0.000	0.0	
	-BEND	0.0	0.0	0.000								
POST VEH3	+BEND	0.0	0.0	0.000						0.000	0.0	
	-BEND	0.0	0.0	0.000								
POST SPEC	+BEND	0.0	0.0	0.000						0.000	0.0	
	-BEND	0.0	0.0	0.000								

DATA PROCESSING CENTER

TENNESSEE DEPARTMENT OF TRANSPORTATION

SUMMARY OF SHEAR ANALYSIS

DATE 02/06/76

D/P STRUCTURE I.D. 319-029

MEMB. ID	MATL	SPAN NO.	DIS FRM L LT SPRT R FT.	DL SHEAR KIPS	SDL SHEAR KIPS	---INVENTORY--- LL+I MAX.V KIPS	T L	LL+I MIN.V KIPS	T L	---OPERATING--- LL+I MAX.V KIPS	T L	LL+I MIN.V KIPS	T L	--VEH. 1 -- LL+I MAX.V KIPS	LL+I MIN.V KIPS	--VEH. 2 -- LL+I MAX.V KIPS	LL+I MIN.V KIPS	--VEH. 3 -- LL+I MAX.V KIPS	LL+I MIN.V KIPS	--SPECIAL-- LL+I MAX.V KIPS	LL+I MIN.V KIPS
G01	SS	1	0.000 R	9.3	34.8	33.5	L	4.0	L	55.9	T	5.4	L								
		2	0.000 L	13.1	53.7	0.8	L	39.2	L	1.1	L	59.9	T								
		2	0.000 R	8.5	46.2	34.2	L	3.3	L	58.9	T	4.4	L								
		3	0.000 L	7.1	42.2	4.9	L	36.9	L	6.6	L	59.4	T								
		3	0.000 R	10.0	45.4	33.2	L	1.9	L	57.1	T	2.6	L								
		4	0.000 L	10.9	43.1	6.4	L	38.1	L	8.5	L	61.0	T								
		4	0.000 R	14.0	52.4	49.2	L	14.7	L	68.7	T	19.7	L								
		4	11.000 L	11.2	40.3	47.2	L	28.9	L	62.9	L	38.5	L								

DATA PROCESSING CENTER

TENNESSEE DEPARTMENT OF TRANSPORTATION

BRIDGE DECK EVALUATION

County DAVIDSON Route S.R. #6 Date 7-14-88

Bridge Number 19-06-9.74 VICTORY MEM. DR. Over CUMBERLAND RIVER.

Bridge Length 1847 Bridge Width 56.0'

Total Deck Area Evaluated 103,432 sq. ft.

CORROSION

Over 0.35v

N/A ASP. sq. ft.

OVERLAY %

VISUAL

Spalls

N/A ASP sq. ft.

OVERLAY %

Scalling

N/A ASP sq. ft.

OVERLAY %

DELAMINATIONS

Chain Drag

N/A ASP sq.ft.

OVERLAY %

CHLORIDES

No. Tests Over 2 lbs/yd^3 3

Total No. of Tests 10

% Tests Over 2 lbs/yd^3 .30

CALCULATIONS

Total Sq. Ft. > 0.35v Corrosion Potential N/A sq. ft.

Sq. Ft. Spalls Outside > 0.35v N/A sq. ft.

Sq. Ft. Delamination Outside > 0.35v N/A sq. ft.

Total Contaminated Deck Sq. Ft. (-Chloride) N/A sq. ft.

Total Deck Area 103,432 sq. ft.

Total Contaminated Deck Area (-Chloride) N/A sq. ft.

Total Deck Not > 0.35v, Spalled, Delaminated 103,432 sq. ft.

$$\frac{\text{\% Chloride Tests Over 2 lbs per yd}^3}{100} \times \text{Total Deck Area Not} > 0.35\text{v, Spalled Delaminated} = \text{Dack Area Contaminated}$$

$$\frac{.30}{100} \times 103,432 = 31,029.6 \text{ sq. ft.}$$

Total Contaminated Deck Area (-Chloride) N/A sq. ft.

Total Contaminated Deck Area 31,029.6 sq. ft.

Total Contaminated Deck Area ÷ Total Area = 30 %

BASED OF CORES ALONG

L53

75

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
DIVISION OF MATERIALS AND TESTS

Form DT-0044
Re: Form T-2

ORIGINAL OR CHECK SAMPLE OF Bridge Deck Cores

Project Reference No. BRFN-515(18) County Davidson

Project No. 93102-5302-94-436 Contract No. _____ Region 3

Ord. No. _____ Req. No. _____ Heat No. _____ Size _____

Date Sampled 6-13 1988 Date Received at Lab. 6-16 1988

Identification _____

Submitted by Christianson Sampled by J. Hill - R. Wallace

Sampled from Bridge Decks Amount Represented 10 cores

Producer _____ Location _____

Manufacturer _____ Location _____

Serial No. C 14731 Report No. _____

FOR LAB USE ONLY

19-86

Core	ft. Chloride	lbs/yd³
1	.08	3.13
2	.09	3.52
3	.02	0.78
4	.04	1.57
5	.05	1.96
6	.02	0.78
7	.06	2.35
8	.03	1.17
9	.03	1.17
10	.02	0.78

FIELD USE

9.74

Cumberland Area

REMARKS:

This material information the requirements of the specifications for Bridge Deck Cores Tested by _____

_____ Approved _____

Chief Chemist

Engineer of Materials and Tests

January 13, 2003

Mr. Terry Leatherwood
C.E. Manager I
Suite 1200 James K. Polk Bldg.
Nashville, TN 37243-0349

Re: Cursory Inspection
19-SR6-9.74
Davidson County

Dear Mr. Leatherwood;

On December 27, 2002, Nashville Bridge Inspection Team "B" conducted a six month Cursory Inspection on the above referenced bridge. I have enclosed the findings of this inspection.

If you have any questions, please call at (615) 350-4475.

Very Truly Yours,

Wayne Hunter
Oper. Spec II
Bridge Inspection

WH/ar
Enclosure
Cc: file

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
NASHVILLE, TENNESSEE 37243-0360

December 6, 2001

Mr. Terry Leatherwood
C.E. Manager I
Suite 1200, James K. Polk Blgd.
Nashville, Tn. 37243-0349

Re: Cursory Inspection
19-SR6-9.74
Davidson County

Dear Mr. Leatherwood:

On December 1, 2001, Nashville Bridge Inspection Team "A" conducted an Interim Inspection on above referenced bridge. I have enclosed the findings of this inspection.

If you have any questions, please call at (615) 350-4470.

Very Truly Yours,

Jim Watts
Opns. Spec. II
Bridge Inspection

JW/jm

Enclosure

Cc: File

State of Tennessee
Department of Transportation
Nashville Bridge Inspection
6601 Centennial Blvd.
Nashville, Tennessee 37243-0360

November 27, 2000

Mr. Hollis Tackett
C.E. Manager II
Suite 1200, James K. Polk Bldg.
Nashville, Tn. 37243

Re: Bridge Inspection
Cursory Inspection
Brg. No. 19-SR06-9.74
Davidson County

Dear Mr. Tackett:

On 27, November 2000, Nashville Bridge Inspection Team "A" conducted a (6) month Cursory Inspection on structure number 19-SR06-9.74. I have enclosed copies of the results of this inspection.

If you have any questions please call (615) 350-4470.

Very Truly Yours,

Jim Watts
Trans. Spec. II
Bridge Inspection

JW/jm

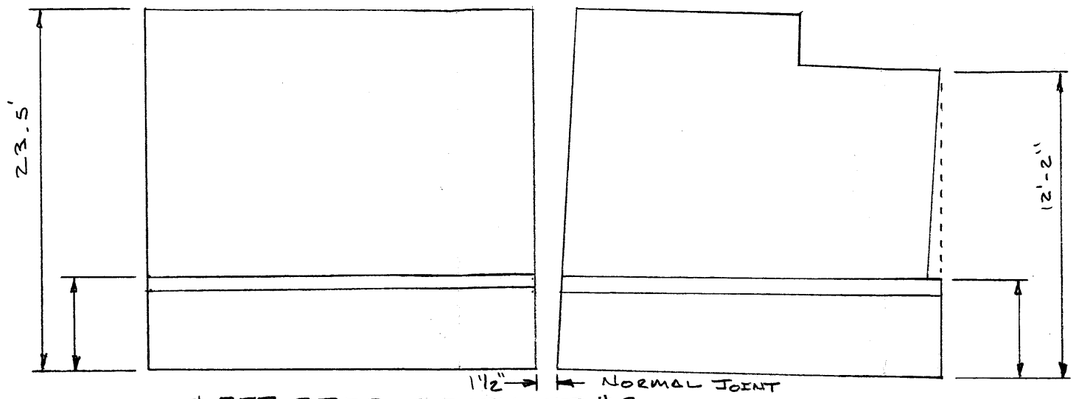
Enclosures

Cc: File

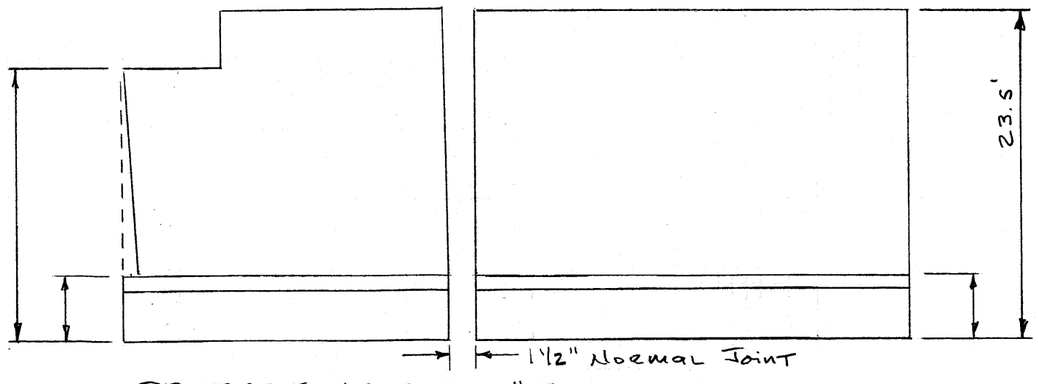
PAGE NO. _____

SHEET 2 OF 2

NOTES: (1)
(2)
(3)



LEFT SIDE ABUTMENT #2
NORTH SIDE



RIGHT SIDE ABUTMENT #2
SOUTH SIDE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
OFFICE OF BRIDGE INSPECTION
AND REPAIR

Cursory Insp.
Telt

BRIDGE NO. 19-SR6-9.74
CROSSING: Cumberland River

COUNTY: Davidson Co.

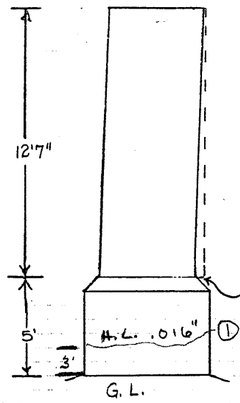
DRAWN JMW
DATE 11-27-01

REVISION JMW
DATE

PAGE NO. _____

SHEET ____ OF ____

FRONT VIEW



1¾" TILT (1986)

2⅛" (1989) ①

1¾" (1991) (94)

COLUMN "A"

17⅛" (98) @ 50° ± F. Temp.

2 1/16" (7-99) 80° F

2⅜" (4-27-2000) 63° F

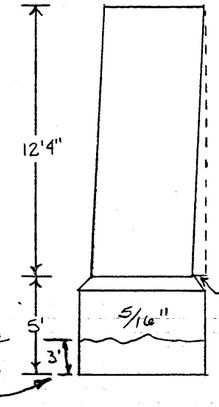
2½" (11-27-00) 43° F

2½ (5.22.01) 60° F

2 3/8" (12-6-01) 64° F

2½" (6-7-02) 78° F

2 7/16 (1-2-03) 40° F



2½" TILT (1986)

3" (1989)

2¾" (1991) (94)

COLUMN "B"

2 7/8" (98) @ 50° ± F. Temp.

3 5/8" (7-99) 80° F

3¼" (4-00) 63° F

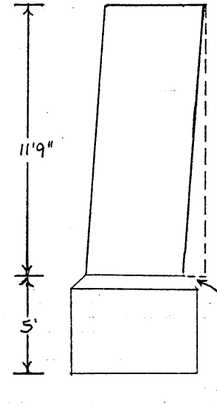
3⅛" (11-00) 43° F

3 1/4 (5.01) 60° F

3¼" (12-6-01) 64° F

3½" (6-7-02) 78° F

3⅝ (1-2-03) 40° F



2⅝" TILT (1986)

2⅞" (1989)

2⅝" (1991) (94)

COLUMN "C"

2 3/4" (1998) 50° ± F. Temp.

2⅞" (7-99) 80° F

3¼" (4-2000) 63° F

3⅛" (11-00) 43° F

3 1/4 (5-01) 60° F

3⅛" (12-6-01) 64° F

3¼" (6-7-02) 78° F

3¼ (1-2-03) 40° F

BENT 15

5/16" (6-7-02)

②~~¼"~~ open Shear Crack on Back Side Column #2 Aveg 3' From GL up. Temp 60° F

① BACKSIDE - H.L. CRACK .016"

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
DIVISION OF STRUCTURES

BRIDGE NO. 19-SR6-9.74
CROSSING: CUMBERLAND RIVER

COUNTY: DAVIDSON COUNTY

DRAWN RESA S.
DATE 12-17-86

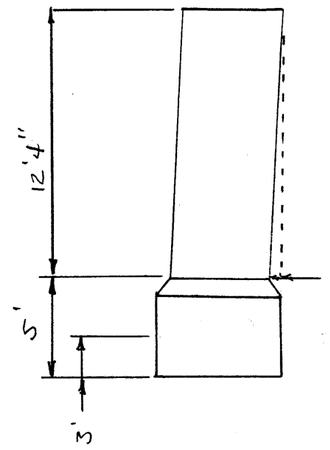
REVISION
DATE

PAGE NO. _____

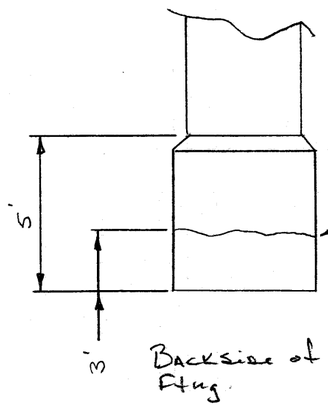
SHEET ____ OF ____

Column 'B'
Bent # ~~8~~ 10

Columns A & B Do Not Have Any Measured Tilt @ This Insp



2'18"
2" (12-6-01) 64°F
2 3/8" (6-7-02) 78°F
2" (12-30-02) 55°F



.060" (6-7-02) 78°F
.040" (12-6-01)
~~2"-2 7/8~~ Open Shear Crack @ (60°F) 5.22.01
(Error?)

Backside of Column Ftg.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
OFFICE OF BRIDGE INSPECTION
AND REPAIR

19-SRC-9.74
Cuesday Insp.

BRIDGE NO. 19-SRC-9.74
CROSSING: Cumberland River

COUNTY: Davidson

DRAWN JMH
DATE

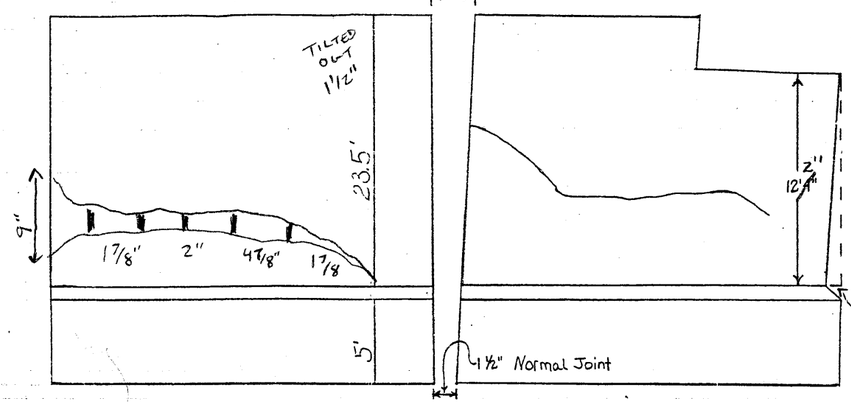
REVISION
DATE 5-22-01

MAR 13 1990

PAGE NO. _____

SHEET 1 OF 2

7¼" @ 40° F Temp. (SAME 12-6-01)
7" (1986 + 1989) (1991) ('94)



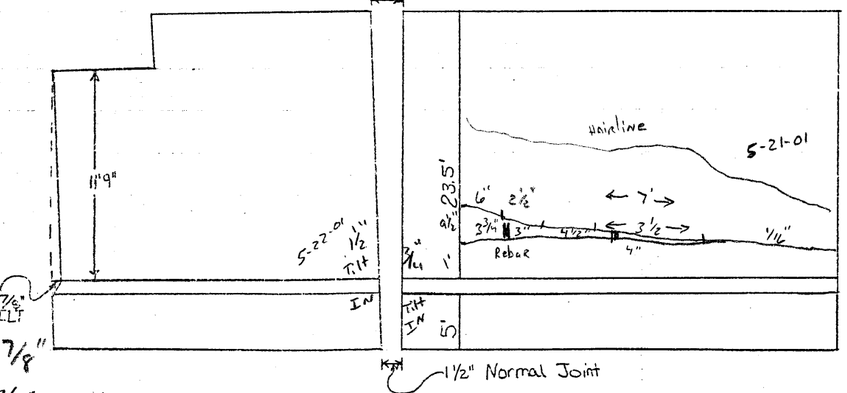
3½" TILT (1986)
3 5/8" (1989)
3 5/8" (1991)
3 5/8" (1997)
4" (1998)

NOTE: HORIZONAL CRACK HAS BEEN PATCHED AND NOW HAS MAP CRACKS WITH LEACHING

LEFT SIDE ABUTMENT #2

NORTH SIDE

7¼" (05-01) 60° (SAME 12-6-01)
7" (1998) 44° F. Temp.
6⅜ (1994)
(1986 + 1989) (1991)



(1986) 2⅞" TILT
(1989) 2⅞"
(1991) 2⅞"
(1998) 3¼" 50° F.

RIGHT SIDE ABUTMENT #2

SOUTH SIDE

(7-99) 3½" 80° F
(4-2000) 3½" 63° F
(11-27-00) 3½" 43° F
S 22.01 3½ 60° F
12-6-01 3½" 64° F

(7-99) 80° F
(4-27-2000) 63° F
(11-27-00) 43° F
(5.22.01) 60° F
(12-6-01) 64° F

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
DIVISION OF STRUCTURES

BRIDGE NO. 19-SR6-9.74
CROSSING: CUMBERLAND RIVER

COUNTY: DAVIDSON COUNTY

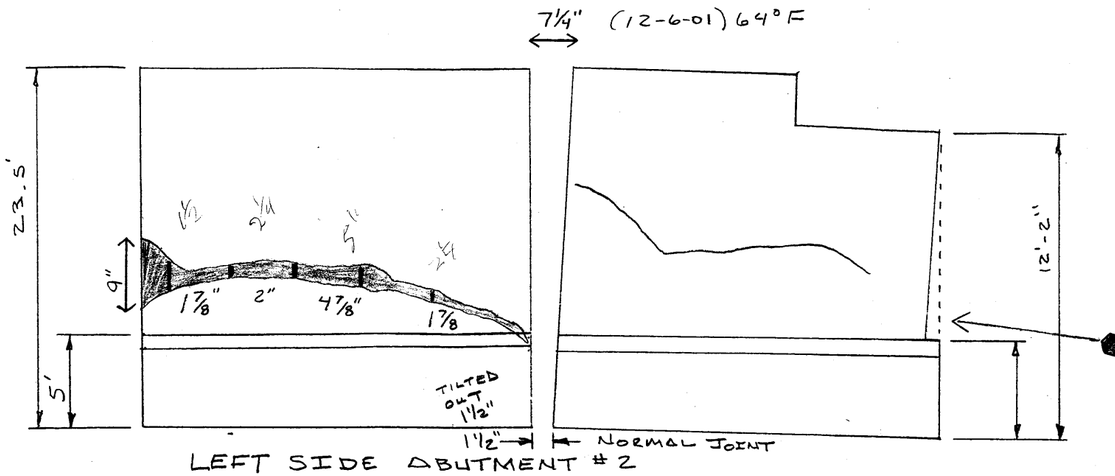
DRAWN RESA S.
DATE 12-17-86

REVISION
DATE _____

PAGE NO. _____

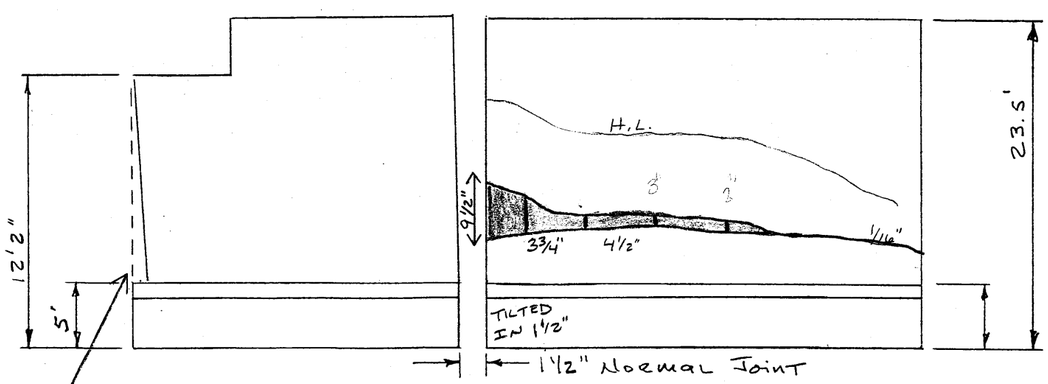
SHEET 2 OF 2

NOTES: (1)
(2)
(3)



LEFT SIDE ABUTMENT #2
NORTH SIDE

TILT 4" (12-6-01) 64°F
4⅛" (6-7-02) 78°F
4" (12-27-02) 50°F
4" (2-11-03) 35°F



RIGHT SIDE ABUTMENT #2
SOUTH SIDE

TILT 3½" (12-6-01) 64°F
3½" (6-7-02) 78°F
3½" (2-11-03) 35°F

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
OFFICE OF BRIDGE INSPECTION AND REPAIR

Cursory Insp.
TILT ABUT #2

BRIDGE NO. 19-SR6-9.74
CROSSING: CUMBERLAND RIVER

COUNTY: DAVIDSON Co.

DRAWN JMW
DATE 11-27-01

REVISION JMW
DATE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
NASHVILLE, TENNESSEE 37243-0360

January 13, 2003

Mr. Terry Leatherwood
C.E. Manager I
Suite 1200 James K. Polk Bldg.
Nashville, TN 37243-0349

Re: Cursory Inspection
19-SR6-9.74
Davidson County

Dear Mr. Leatherwood; (See DATE ON CURSORY INSPECTION PLANS.)
Jan. 2, 2003

On December 27, 2002, Nashville Bridge Inspection Team "B" conducted a six month Cursory Inspection on the above referenced bridge. I have enclosed the findings of this inspection.

If you have any questions, please call at (615) 350-4475.

Very Truly Yours,

Wayne Hunter

Wayne Hunter
Oper. Spec II
Bridge Inspection

WH/ar
Enclosure
Cc: file

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
NASHVILLE, TENNESSEE 37243-0360

December 6, 2001

Mr. Terry Leatherwood
C.E. Manager I
Suite 1200, James K. Polk Blgd.
Nashville, Tn. 37243-0349

Re: Cursory Inspection
19-SR6-9.74
Davidson County

Dear Mr. Leatherwood:

On December 1, 2001, Nashville Bridge Inspection Team "A" conducted an Interim Inspection on above referenced bridge. I have enclosed the findings of this inspection.

If you have any questions, please call at (615) 350-4470.

Very Truly Yours,

Jim Watts
Opns. Spec. II
Bridge Inspection

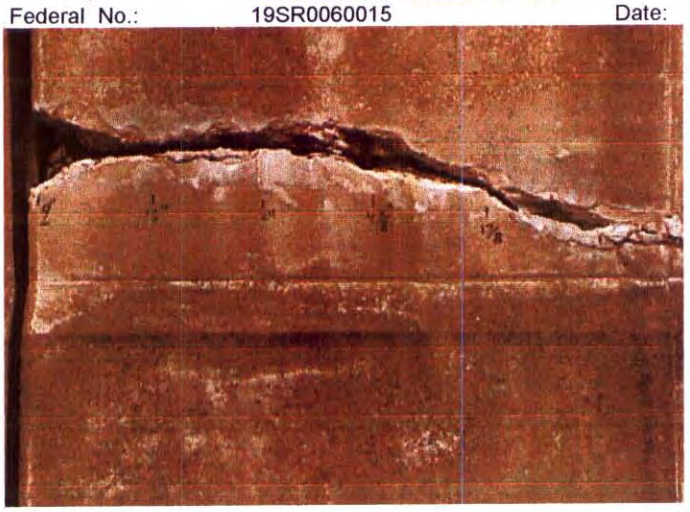
JW/jm

Enclosure

Cc: File

Bridge No.: 00019 — SR6 — 9.74
Crossing:: SR 6 / CUMBERLAND RIVER *
Federal No.: 19SR0060015 Date: December 6, 2001

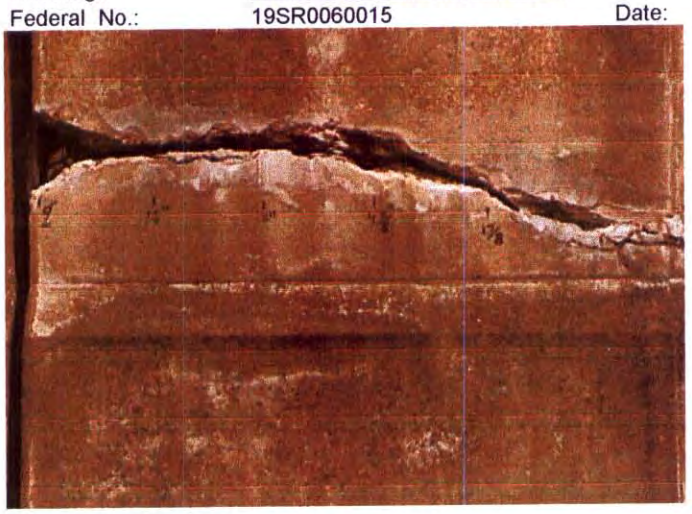
PIC1



OPEN CRACK AT LT WING AT ABUTMENT #2

Bridge No.: 00019 — SR6 — 9.74
Crossing:: SR 6 / CUMBERLAND RIVER *
Federal No.: 19SR0060015 Date: December 6, 2001

PIC1

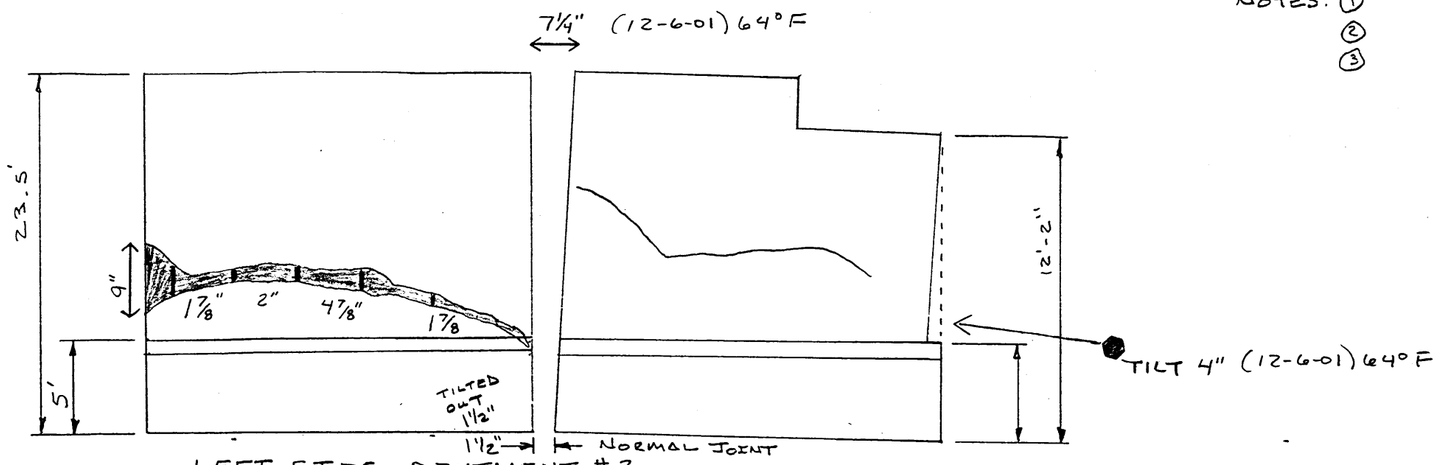


OPEN CRACK AT LT WING AT ABUTMENT #2

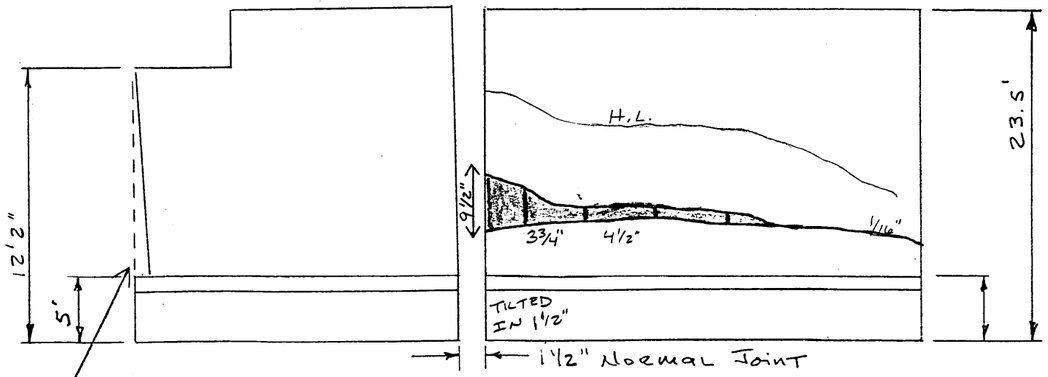
PAGE NO. _____

SHEET 2 OF 2

NOTES: ①
②
③



LEFT SIDE ABUTMENT # 2
NORTH SIDE



RIGHT SIDE ABUTMENT # 2
SOUTH SIDE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
OFFICE OF BRIDGE INSPECTION
AND REPAIR

Cursory Insp.
TILT ABUT # 2

BRIDGE NO. 19-SR6-9.74
CROSSING: CUMBERLAND RIVER

COUNTY: DAVIDSON Co.

DRAWN JMW
DATE 11-27-01

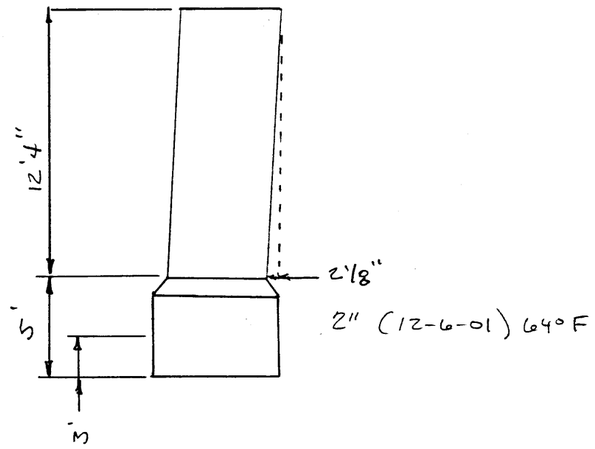
REVISION JMW
DATE _____

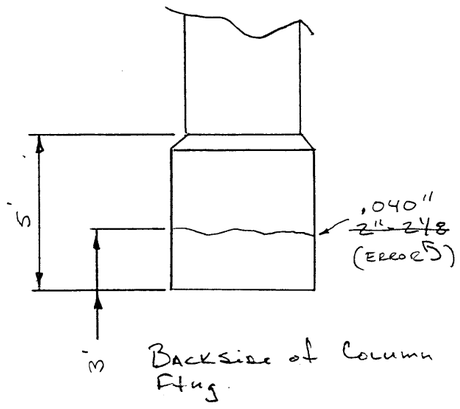
PAGE NO. _____

SHEET ____ OF ____

Column 'B'
Bent # ~~8~~ 10

Columns A & B Do Not Have Any Measured Tilt @ This Insp





STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
OFFICE OF BRIDGE INSPECTION AND REPAIR

19-SR0C-9.74
Cressoty Insp.

BRIDGE NO. 19-SRC-9.74
CROSSING: Cumberland River

COUNTY: Davidson

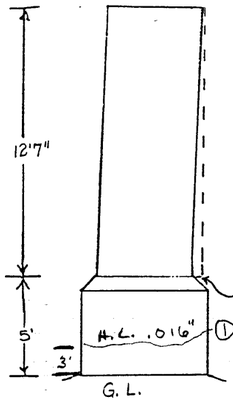
DRAWN JMH
DATE _____

REVISION _____
DATE 5-22-01

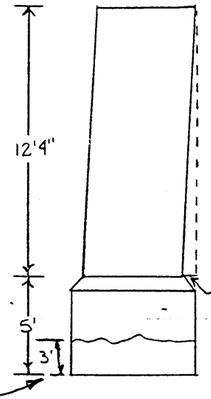
PAGE NO. _____

SHEET ____ OF ____

FRONT VIEW

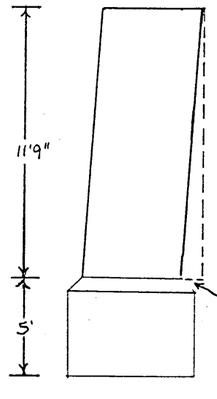


1¾" TILT (1986)
① 2⅛" (1989)
1¾" (1991)
(94)



* ② 1/4" open

2½" TILT (1986)
3" (1989)
2¾" (1991)
(94)



2⅝" TILT (1986)
2⅞" (1989)
2⅝" (1991)
(94)

COLUMN "A"

1⅞" (98) @ 50° ± F. Temp.
2 1/16" (7-99) 80° F
2⅜" (4-27-2000) 63° F
2½" (11-27-00) 43° F
2½ (5.22.01) 60° F
2⅜" (12-6-01) 64° F

COLUMN "B"

(97)
2⅞" (98) @ 50° ± F. Temp.
3⅝" (7-99) 80° F
3¼" (4-00) 63° F
3⅛" (11-00) 43° F
3¼ (5.01) 60° F
3¼" (12-6-01) 64° F

COLUMN "C"

2¾" (1998) 50° ± F. Temp.
2⅞" (7-99) 80° F
3¼" (4-2000) 63° F
3⅛" (11-00) 43° F
3¼ (5-01) 60° F
3⅛" (12-6-01) 64° F

BENT 15

② * 1/4" open Shear Crack on Back Side Column #2 Away 3' From GL up. Temp 60° F

① BACKSIDE - H.L. CRACK .016"

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
DIVISION OF STRUCTURES

BRIDGE NO. 19-SR6-9.74
CROSSING: CUMBERLAND RIVER

COUNTY: DAVIDSON COUNTY

DRAWN RESA S.
DATE 12-17-86

REVISION
DATE _____

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
NASHVILLE, TENNESSEE 37243-0360

RECEIVED
MAY 2[illegible]
D.O.T.
BRIDGE INSPECTION & [illegible]

May 22, 2001

Mr. Terry Leatherwood
C.E. Manager II
Suite 1200, James K. Polk Bldg.
Nashville, Tn. 37243

Re: Davidson County
Cursory Insp.
19-SR6-9.74

Dear Mr. Leatherwood:

Nashville Bridge Inspection "A" Team conducted a Cursory Inspection on above referenced bridge. I have enclosed the findings of this inspection.

If you have any questions, please call at (615) 350-4470 or (615) 350-4496.

Very Truly Yours

Jim Watts

Jim Watts
Opns. Spec. II
Bridge Inspection

JW/jm

Enclosure

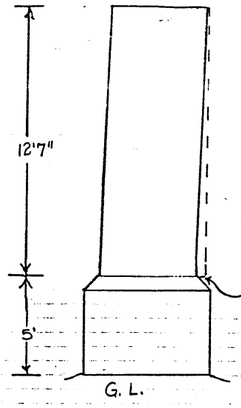
Cc: File

	GAW	PJS	TDL	JCS	WJS	TEQ	MGL	TBC
			TDL					

MAR 1 5 1989

PAGE NO. _____

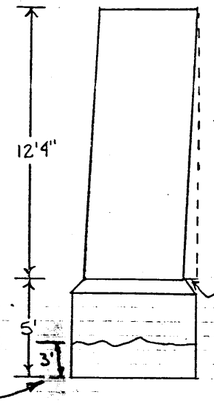
SHEET ____ OF ____



1¾" TILT (1986)
2⅛" (1989)
1¾" (1991)
(94)

COLUMN "A"

17⅛" (98) @ 50± F. Temp.
2 1/16" (7-99) 80° F
2⅜" (4-27-2000) 63° F
2½" (11-27-00) 43° F
2½ (5.22.01) 60° F

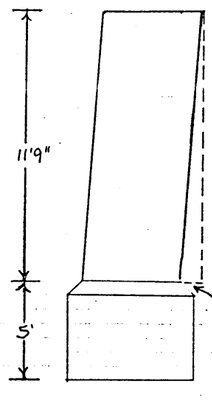


¼" open

2½" TILT (1986)
3" (1989)
2¾" (1991)
(94)

COLUMN "B"

27⅞" (98) @ 50± F. Temp.
3 5/8" (7-99) 80° F
3¼" (4-00) 63° F
3⅛" (11-00) 43° F
3¼ (5.01) 60° F



2⅝" TILT (1986)
2⅞" (1989)
2⅝" (1991) (94)

COLUMN "C"

2¾" (1998) 50± F. Temp.
2⅞" (7-99) 80° F
3¼" (4-2000) 63° F
3⅛" (11-00) 43° F
[redacted]

BENT 15

* ¼" open Shear Crack on Back Side Column #2 Aprox 3' From GL up. Temp 60° F

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
DIVISION OF STRUCTURES

BRIDGE NO. 19-SR6-9.74
CROSSING: CUMBERLAND RIVER

COUNTY: DAVIDSON COUNTY

DRAWN RESA S.
DATE 12-17-86

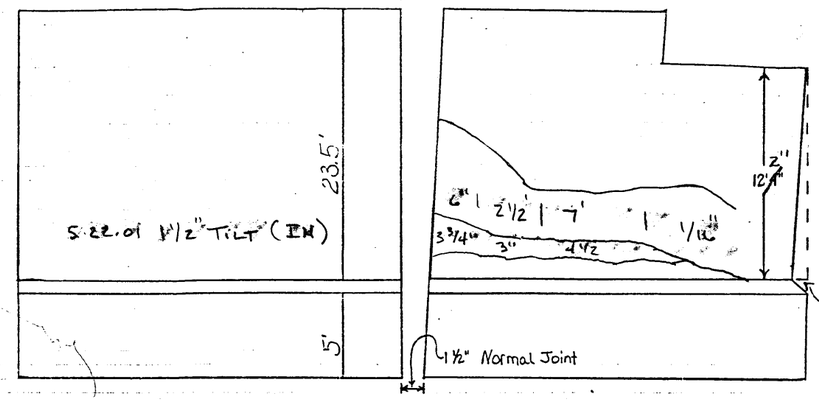
REVISION
DATE

MAR 13 [illegible]

PAGE NO. _____

SHEET _____ OF _____

7¼" @ 40° F Temp.
7" (1986 + 1989) (1991) ('94)

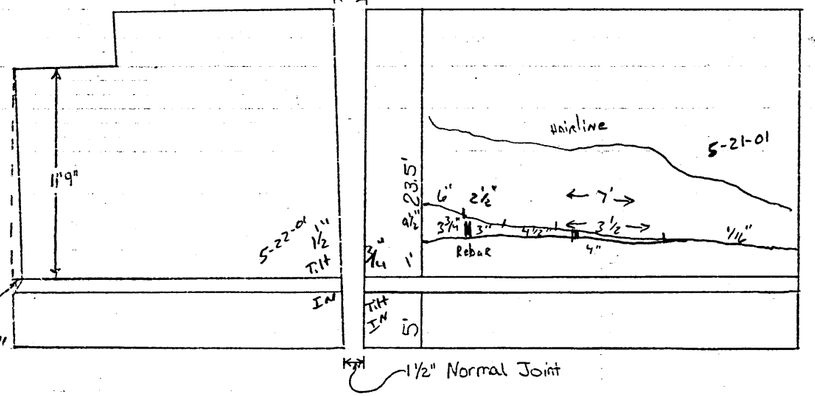


3½" TILT (1986)
3 5/8" (1989)
3 5/8" (1991)
3 5/8" (1997)
4" (1998) 50° F.
4⅛" (7-99) 80° F
4⅛" (4-27-2000) 63° F
4¼" (11-27-00) 43° F

NOTE: HORIZONAL CRACK HAS BEEN PATCHED AND NOW HAS MAP CRACKS WITH LEACHING

LEFT SIDE ABUTMENT #2
NORTH SIDE

7¼" (05-01) 60°
7" (1998) 44° F. Temp.
6⅝" (1994)
6⅛" (1986 + 1989) (1991)



(1986) 2 7/8" TILT
(1989) 2 7/8"
(1991) 2 7/8"
(1998) 3¼" 50° F.
(7-99) 3½" 80° F
(4-2000) 3½" 63° F
(11-27-00) 3½" 43° F

RIGHT SIDE ABUTMENT #2
SOUTH SIDE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
DIVISION OF STRUCTURES

BRIDGE NO. 19-SBG-9.74
CROSSING: CUMBERLAND RIVER

COUNTY: DAVIDSON COUNTY

DRAWN RESA S.
DATE 12-17-86

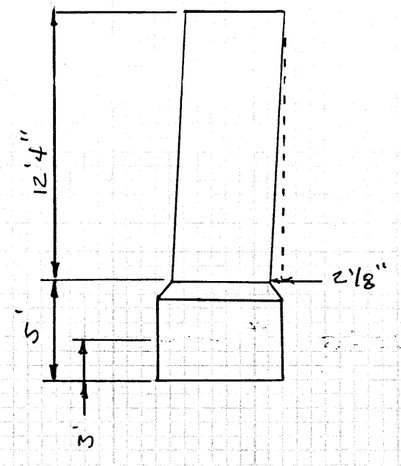
REVISION
DATE _____

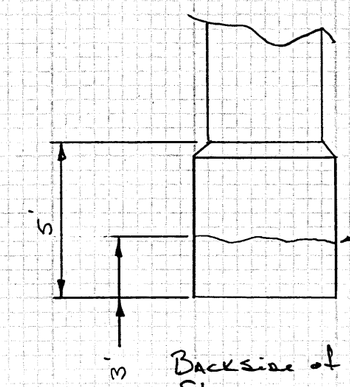
PAGE NO. _____

SHEET _____ OF _____

Column 'B'
Bent # 9

Columns A & B Do Not Have Any Measured Tilt @ This Insp





STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
OFFICE OF BRIDGE INSPECTION AND REPAIR

19-SROC-9.74
Cressaey Insp.

BRIDGE NO. 19-SRC-9.74
CROSSING: Cumberland River

COUNTY: Davidson

DRAWN JMH
DATE

REVISION
DATE 5-22-01

State of Tennessee
Department of Transportation
Nashville Bridge Inspection
6601 Centennial Blvd.
Nashville, Tennessee 37243-0360

RECEIVED
DEC 4 2000
TENN. DEPT. OF TRANSPORTATION
BRIDGE INSPECTION & REPAIR

November 27, 2000

Mr. Hollis Tackett
C.E. Manager II
Suite 1200, James K. Polk Bldg.
Nashville, Tn. 37243

Re: Bridge Inspection
Cursory Inspection
Brg. No. 19-SR06-9.74
Davidson County

Dear Mr. Tackett:

On 27, November 2000, Nashville Bridge Inspection Team "A" conducted a (6) month Cursory Inspection on structure number 19-SR06-9.74. I have enclosed copies of the results of this inspection.

If you have any questions please call (615) 350-4470.

Very Truly Yours,

Jim Watts
Trans. Spec. II
Bridge Inspection

JW/jm

Enclosures

Cc: File

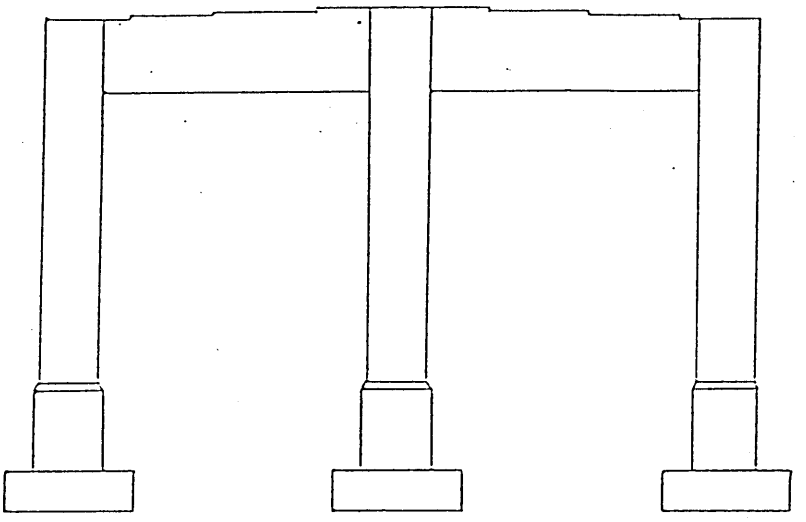
HIT	GAW	PLS	PJS	TDL	JCS	WJS	TEQ	MGL	TBC

Bridge No.: 19 — SR006 — 0974
Crossing:: SR 6 / CUMBERLAND RIVER *
Federal No.: 19SR0060015 Date: November 27, 2000

PIC1

TILT AT LT. WING ABUTMENT #2

12-14-98
KHC

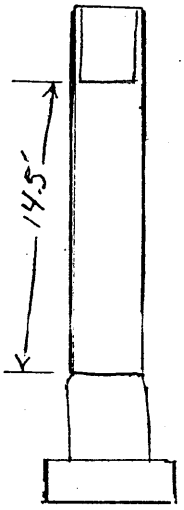


FRONT

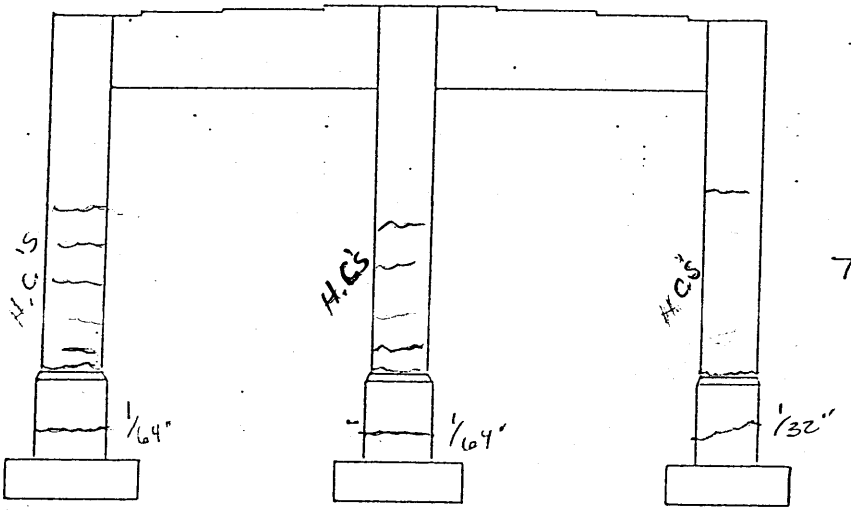
TILT NOTED 7-99

4-27-2000
tilt less than 1" inch

11-27-00
½" TILT 43°



END View



BACK

7-19-99 KHC

BENT #6 Br. # 19-6-9.74

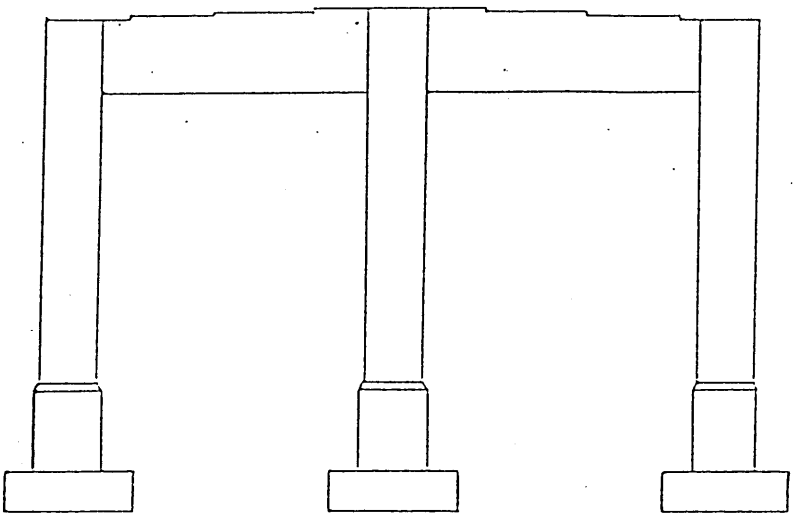
Cap	G	
Columns	G	"B" TILTED BACKSTATION 1" IN 14.5' — 7/99 @ 80° F "B" not measurable w/ plumb bob 4-27-00 MKO @ 63°F
Fooing	N/V	
Bearing	G	Fixed

12-14-98
KHC

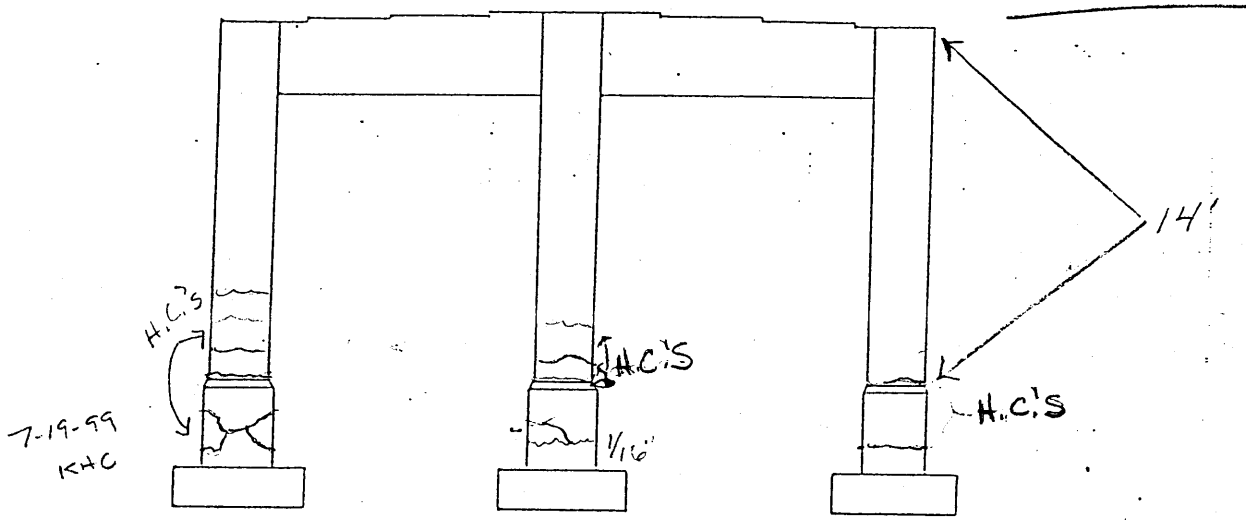
Updated
Tilt
7-99
KH

4-27-2000
tilted 2" in 14'
63 °F MKD

11-27-00
1 3/4" TILT
@ 43° F



FRONT



BACK

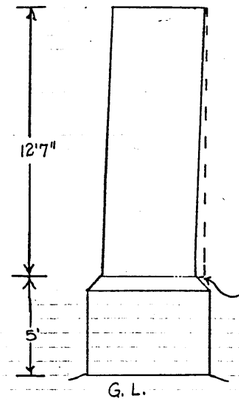
BENT #~~X~~10 Br. # 19-6-9.74

Cap	G	
Columns	F	Column 'B' Tilted 1 3/4" Backstation Most Noted Than 'A & C' w/ Horiz. Crack Backside 1/16" Open
		NOTE: TILTED 2 1/2" IN 14' — COL. "B" — 7-19-99
Fo[illegible]ing	N/V	("B" TILTED 1 3/4" 11-27-00)
Bearing	G	Fixed

MAR 13 1989

PAGE NO. _____

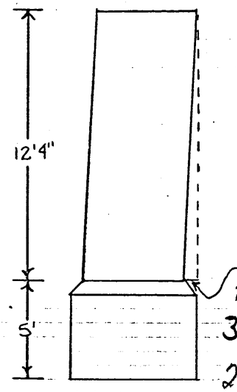
SHEET ____ OF ____



1¾" TILT (1986)
2⅛" (1989)
1¾" (1991)
(94)

COLUMN "A"

1⅞" (98) @ 50° ± F. Temp.
2 1/16" (7-99) 80° F
2⅜" (4-27-2000) 63° F
2½" (11-27-00) 43° F

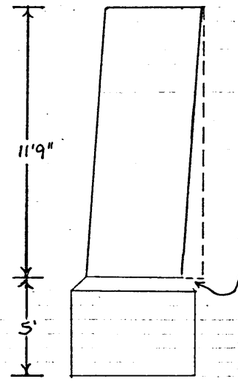


2½" TILT (1986)
3" (1989)
2¾" (1991)
(94)

COLUMN "B" (97)

2⅞" (98) @ 50° ± F. Temp.
3 5/8" (7-99) 80° F
3¼" (4-00) 63° F
3⅛" (11-00) 43° F

BENT 15



2⅝" TILT (1986)
2⅞" (1989)
2⅝" (1991) (94)

COLUMN "C"

2¾" (1998) 50° ± F. Temp.
2⅞" (7-99) 80° F
3¼" (4-2000) 63° F
3⅛" (11-00) 43° F

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
DIVISION OF STRUCTURES

BRIDGE NO. 19-SR6-9.79
CROSSING: CUMBERLAND RIVER

COUNTY: DAVIDSON COUNTY

DRAWN RESA S.
DATE 12-17-86

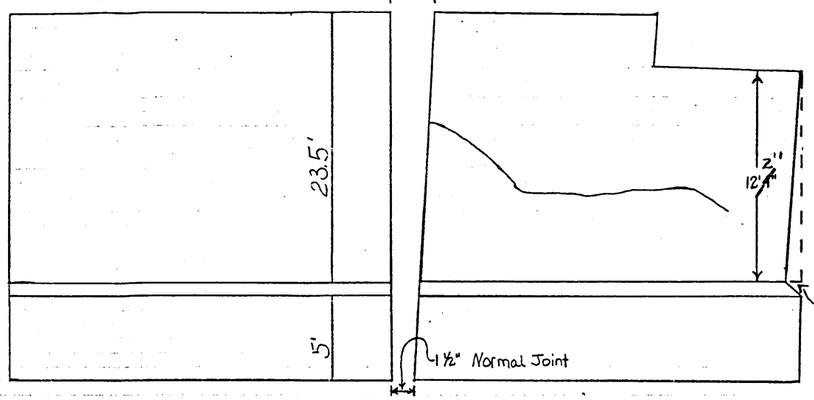
REVISION
DATE

MAR 13 1989

PAGE NO. _____

SHEET _____ OF _____

7¼" @ 40° F Temp.
7" (1986 + 1989) (1991) ('94)



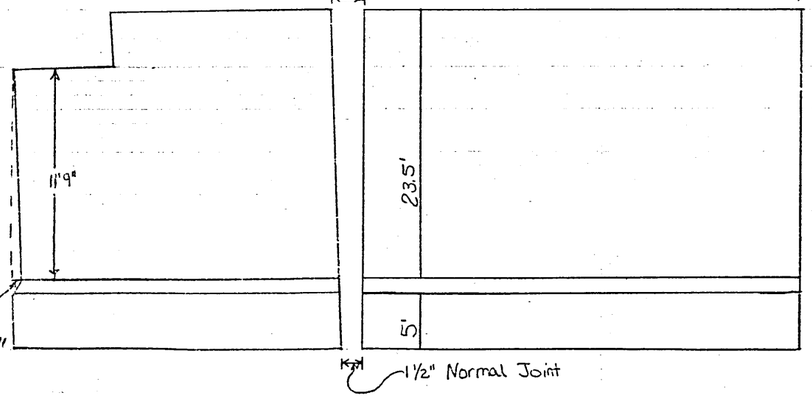
LEFT SIDE ABUTMENT #2
NORTH SIDE

3½" TILT (1986)
3 5/8" (1989)
3 5/8" (1991)
3 5/8" (1997)
4" (1998)
4⅛" (7-99)
4⅛" (4-27-2000)
4¼" (11-27-00)

NOTE: 50° F. HORIZONAL CRACK HAS BEEN PATCHED AND NOW HAS MAP CRACKS WITH LEACHING

80° F
63° F
43° F

7" (1998) 44° F. Temp.
(1994)
6 5/8
(1986 + 1989) (1991)



(1986) 2⅞" TILT
(1989) 2 7/8"
(1991) 2 7/8"
(1998) 3¼" 50° F.
(7-99) 3½" 80° F
(4-2000) 3½" 63° F
(11-27-00) 3½" 43° F

RIGHT SIDE ABUTMENT #2
SOUTH SIDE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
DIVISION OF STRUCTURES

BRIDGE NO. 19-SR6-9.74
CROSSING: CUMBERLAND RIVER

COUNTY: DAVIDSON COUNTY

DRAWN RESA S.
DATE 12-17-86

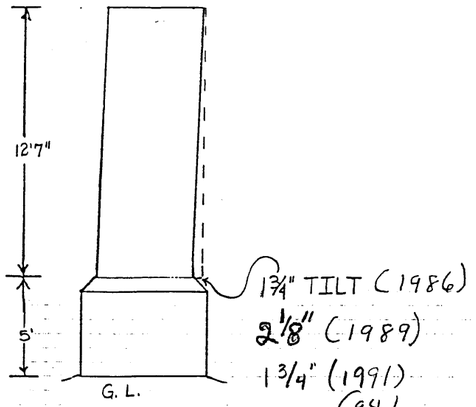
REVISION
DATE

116

MAR 1 ? 19?

PAGE NO._____

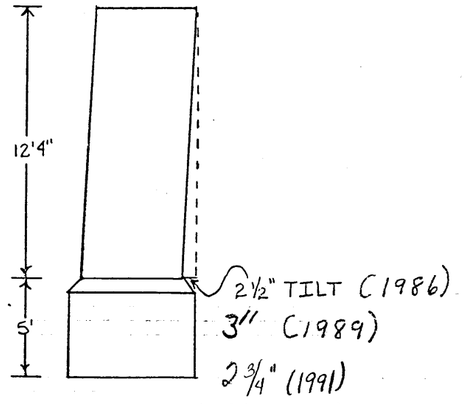
SHEET ____ OF ____



1¾" TILT (1986)
2⅛" (1989)
1¾" (1991)
(94)

COLUMN "A"

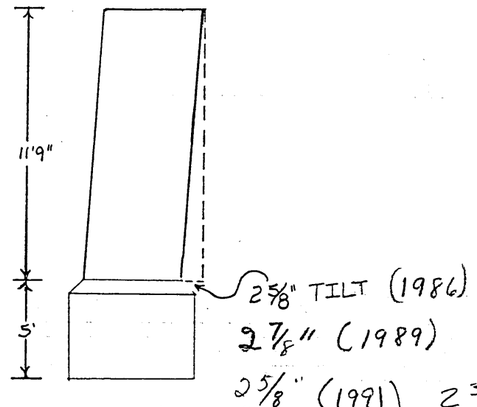
17⅞" (98) @ 50° ± F. Temp.
2 1/16" (7-99) 80° F
2⅜" (4-27-2000) 63° F



2½" TILT (1986)
3" (1989)
2¾" (1991)
(94)

COLUMN "B"

27⅞" (98) @ 50° ± F. Temp.
3⅝" (7-99) 80° F
3¼" (4-00) 63° F



2⅝" TILT (1986)
2⅞" (1989)
2⅝" (1991)
(94)

COLUMN "C"

2¾" [(1998) 50° ± F. Temp.
2⅞" (7-99) 80° F
3¼" (4-2000) 63° F]

BENT 15

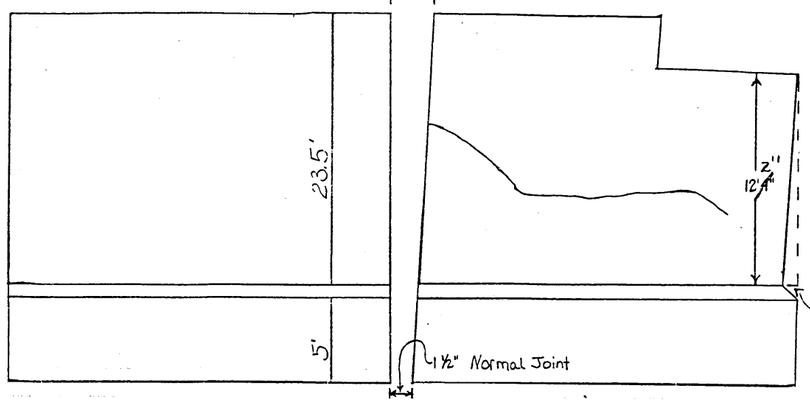
STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION DIVISION OF STRUCTURES	
BRIDGE NO. 19-SR6-9.74 CROSSING: CUMBERLAND RIVER	
COUNTY: DAVIDSON COUNTY	
DRAWN RESA S. DATE 12-17-86	REVISION DATE

MAR 13 [illegible]

PAGE NO. _____

SHEET ____ OF ____

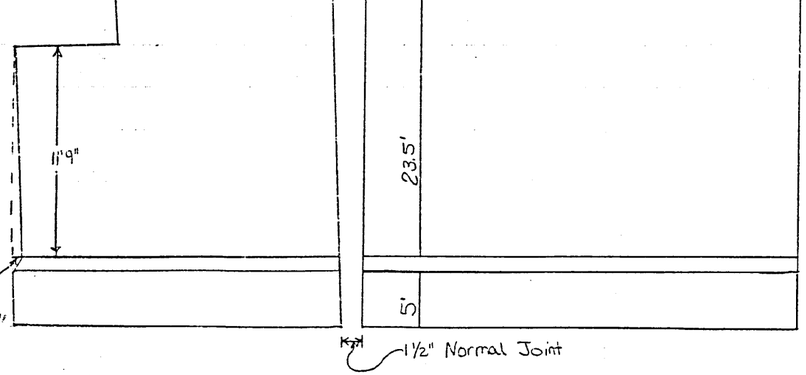
7¼" @ 40° F Temp.
7" (1986 + 1989) (1991) ('94)



3½" TILT (1986)
3 5/8" (1989)
3 5/8" (1991)
3 5/8" (1997)
4" (1998) NOTE: HORIZONAL CRACK HAS BEEN PATCHED AND NOW HAS MAP CRACKS WITH LEACHING
4 1/8" (7-99) 80° F
4 1/8" (4-27-2000) 63° F

LEFT SIDE ABUTMENT #2
NORTH SIDE

7" (1998) 44° F. Temp.
6 5/8 (1994)
6½" (1986 + 1989) (1991)



(1986) 2 7/8" TILT
(1989) 2 7/8"
(1991) 2 7/8"
(1998) 3¼" 50° F
(7-99) 3½" 80° F
(4-2000) 3½" 63° F

RIGHT SIDE ABUTMENT #2
SOUTH SIDE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
DIVISION OF STRUCTURES

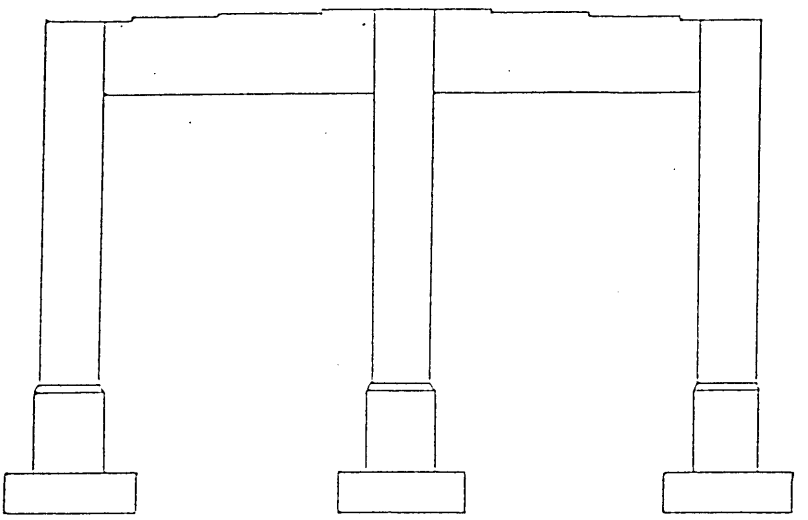
BRIDGE NO. 19-SR6-9.74
CROSSING: CUMBERLAND RIVER

COUNTY: DAVIDSON COUNTY

DRAWN RESA S.
DATE 12-17-86

REVISION
DATE _____

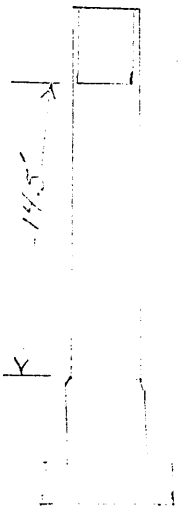
12-14-98
KHC



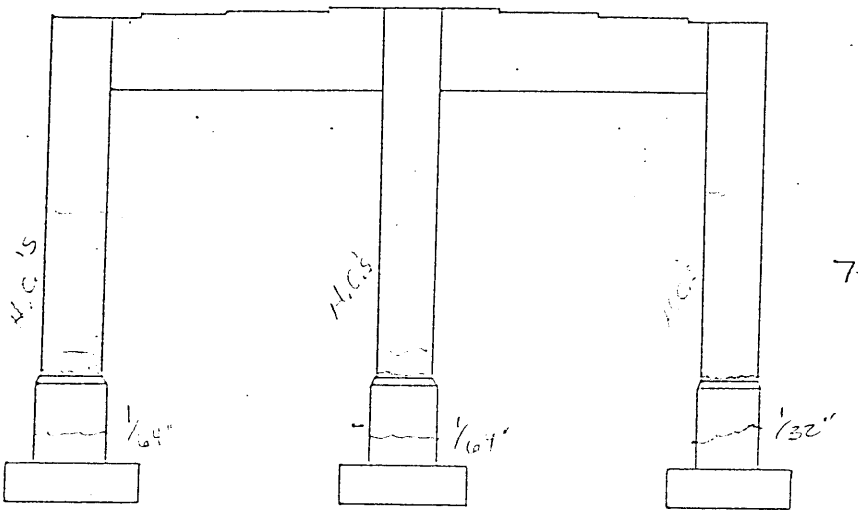
FRONT

TILT
NOTED
7-99

4-27-2000
tilt less than
1" each



END
VIEW



BACK

7-19-99 KHC

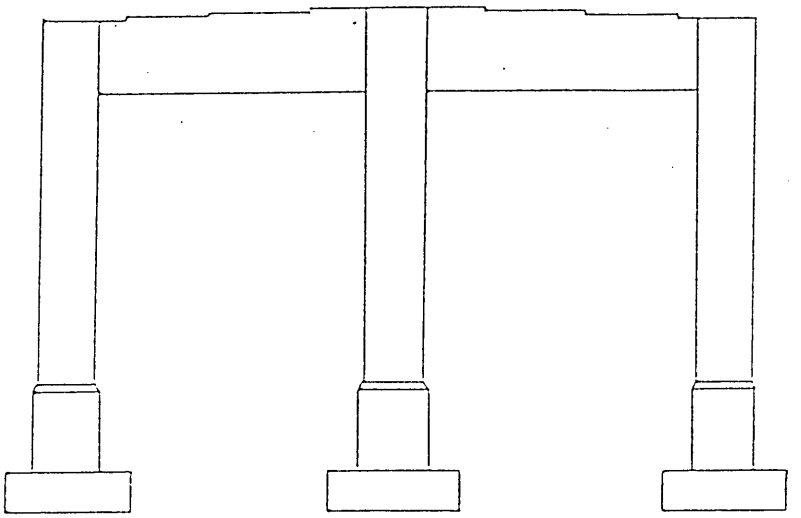
BENT #6 Br. # 19-6-9.74

Cap	6	
Columns	6	"R" TILTED BACKSTATION 1" IN 14.5' — 7/99 @ 90° E "6" out plumb w/ plumb bob 4-27-00 MLD @ 63°F
Footing	N/A	
Bearing	6	Fixed

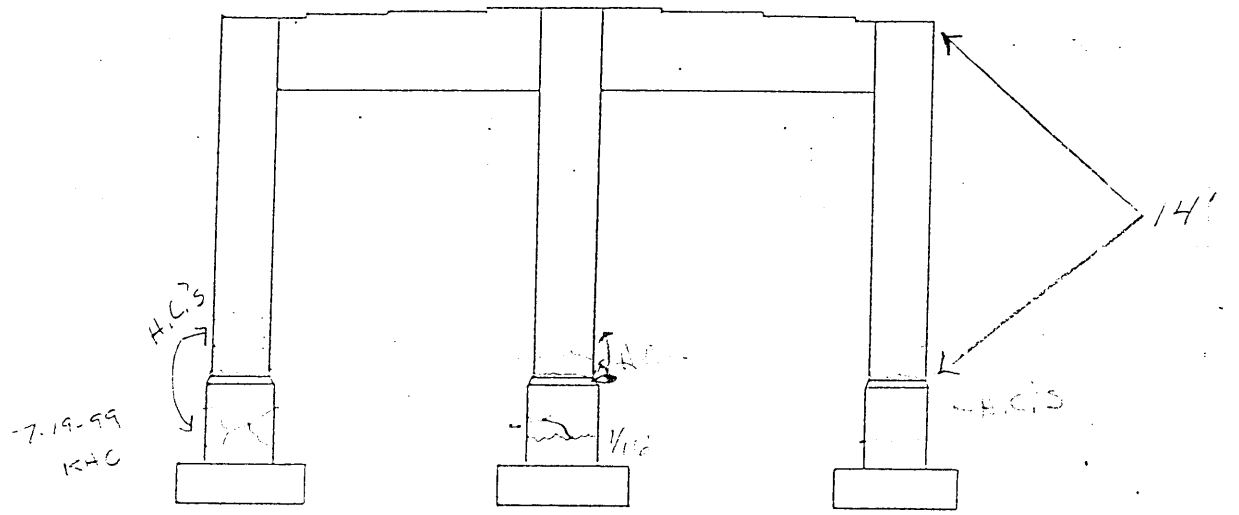
12-14-98
KHC

Update
Tilt
7-99
KH

4-27-2000
tilted 2" in 14'
63 °F MKD



FRONT



BACK

BENT #10 Br. # 19-6-9.74

Cap	G	
Columns	F	Cracks "E" Thick 1 3/4" Between Bent Notes From [illegible] Back Side Vert.
		NOTE: Tilted Out 2" in 14' - Col. 6' - No Cracks
Footing	D'r	
Bearing	B	Exp.

RECEIVED
JUL 22 1999
D.O.T.
BRIDGE INSPECTION & REPAIR

State of Tennessee
Department of Transportation
Nashville Bridge Inspection
6601 Centennial Blvd.
Nashville, Tennessee 37243

July 20, 1999

Mr. Terry Leatherwood
C. E. Manager I
Suite 1200, James K. Polk Bldg.
Nashville, TN 37243-0338

Re: Bridge Inspection
Cursory Inspection
Bridge No. 19-SR6-9.74
Davidson County

Dear Mr. Leatherwood:

On July 20, 1999, our Nashville "A" Bridge Inspection Team performed a six (6) month cursory inspection on Bridge No.19-SR6-9.74.

If you have any questions, please contact us at (615) 350-4365.

Very Truly Yours,

Rayburn Furlough
Op. Spec. I

RF/jm

cc: File

LEH	GAW	HIT	PLS	TDL	JCS	MJS	TEO	MGL	TBC
				TDL					

SUMMARY
19-6-9.74
7-20-99

Cursory Inspection

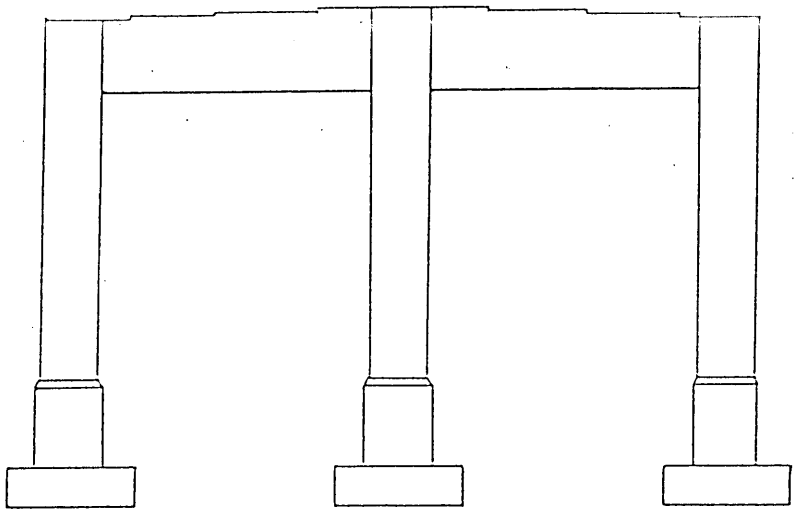
SR6/ Cumberland River
3 span SPG w/16 span W.P.G. approach

On this date a Cursory inspection was done on the above mentioned bridge to note changes in the tilt of the sub-structure elements. Additional cracks were found and also an increase in the tilt of the previously noted members, Abutment #2, Bent #15 and Bent #10. There were also cracks and a tilt noted in Bent #6. All of these sub-structure elements have fixed bearing. See enclosed sketches for changes noted.

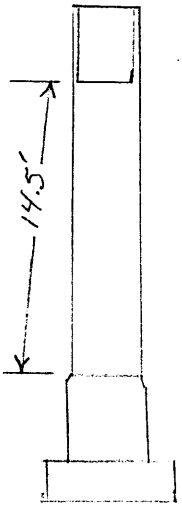
Ray Furlough

12-14-98
KHC

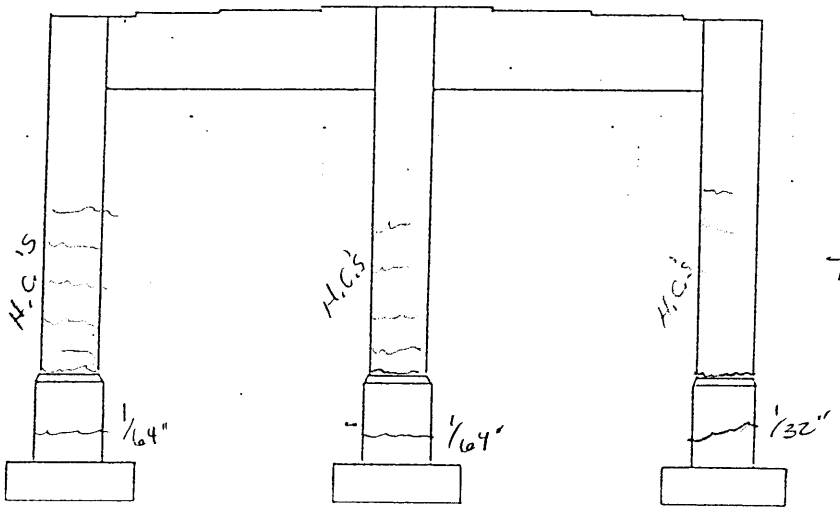
TILT
NOTED
7-99



FRONT



END
view



BACK

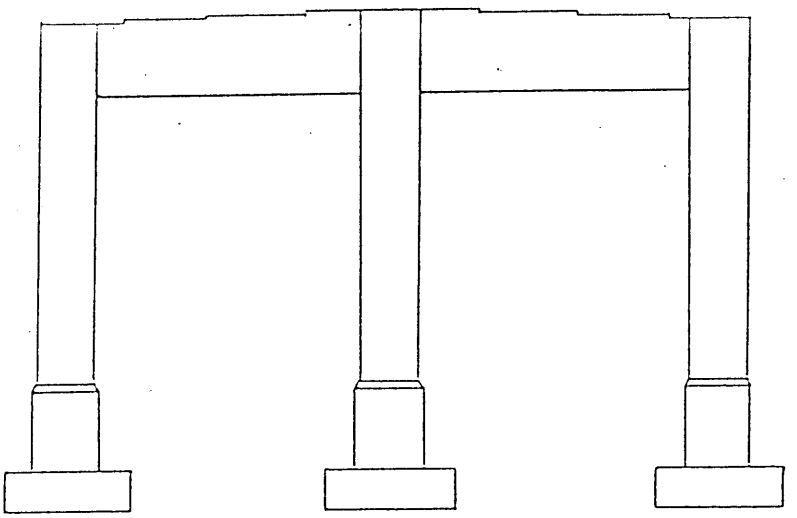
7-19-99 KAC

BENT # 6 Br. # 19-6-9.74

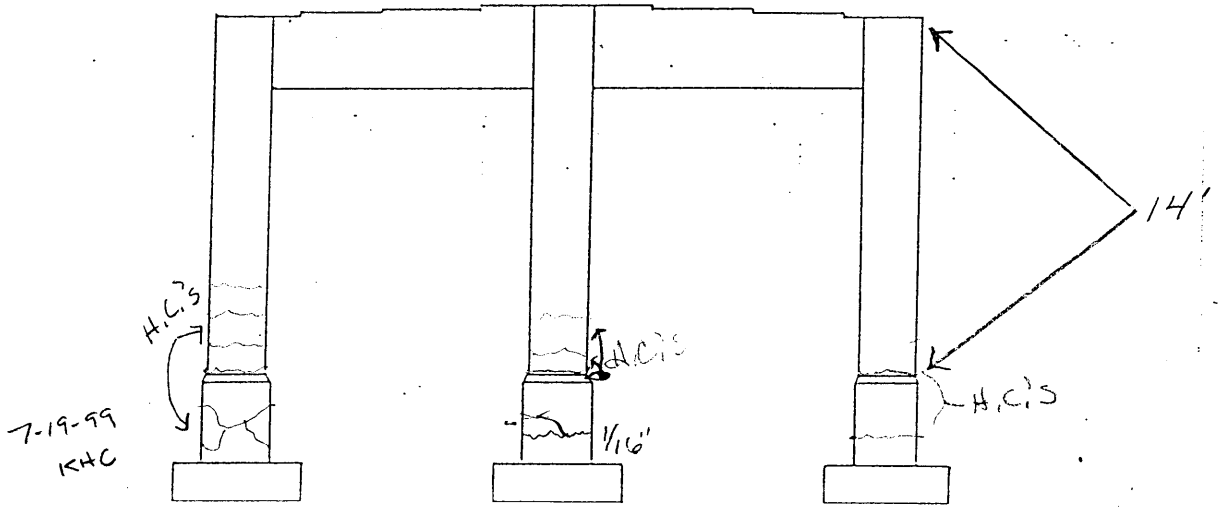
Cap	G	
Columns	G	"B" TILTED BACKSTATION 1" IN 14.5' — 7/99 @ 80° F
FOOTING	N/V	
Bearing	G	Fixed

12-14-98
KHC

updated
TILT
7-99



FRONT



BACK

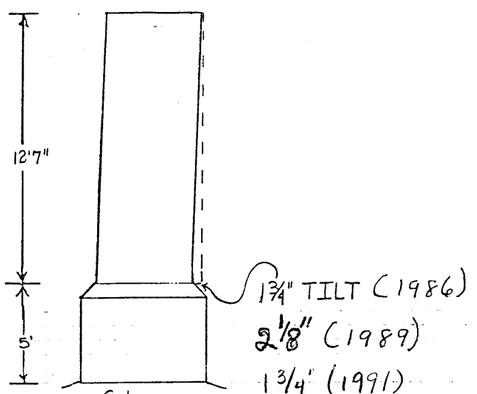
BENT #~~X~~10 Br. # 19-6-9.74

Cap	G	
Columns	F	Column 'B' Tilted 1 3/4" Backstation Most Noted Than 'A & C' w/ Horiz. Crack Backside 1/16" Open
		NOTE: TILTED 2 1/2" IN 14' – COL. "B" – 7-19-99
FOOTING	N/V	
Bearing	G	Fixed

MAR

PAGE NO._____

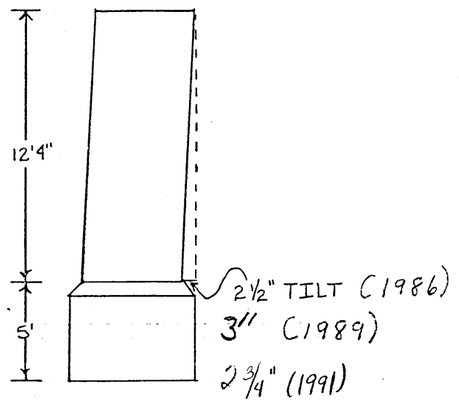
SHEET ____ OF ____



1¾" TILT (1986)
2⅛" (1989)
1¾" (1991)
(94)

COLUMN "A"

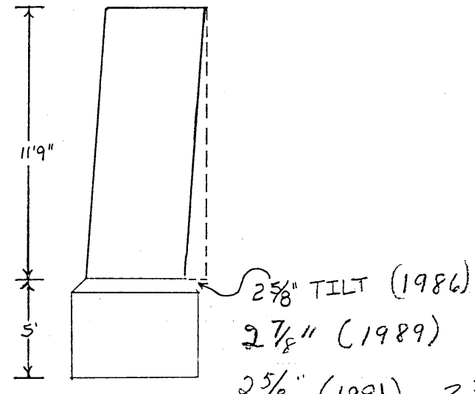
1⅞" (98) @ 50° ± F. Temp.
2 1/16" (7-99) 80° F



2½" TILT (1986)
3" (1989)
2¾" (1991)
(94)

COLUMN "B"

2⅞" (98) @ 50° ± F. Temp.
3⅝" (7-99) 80° F



2⅝" TILT (1986)
2⅞" (1989)
2⅝" (1991)
(94)

COLUMN "C"

2¾" (1998) 50° ± F. Temp.
2⅞" (7-99) 80° F

(97)

BENT 15

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
DIVISION OF STRUCTURES

BRIDGE NO. 19-SR6-9.79
CROSSING: CUMBERLAND RIVER

COUNTY: DAVIDSON COUNTY

DRAWN RESA S.
DATE 12-17-86

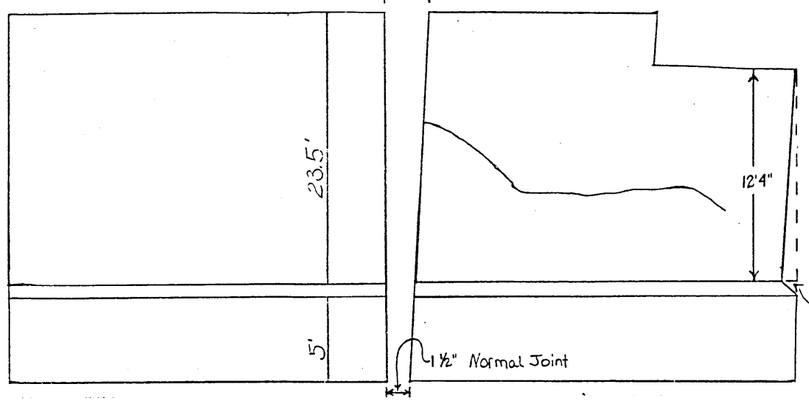
REVISION
DATE

MAR 13

PAGE NO. _____

SHEET _____ OF _____

7¼" @ 40° F Temp.
7" (1986 + 1989) (1991) (94)

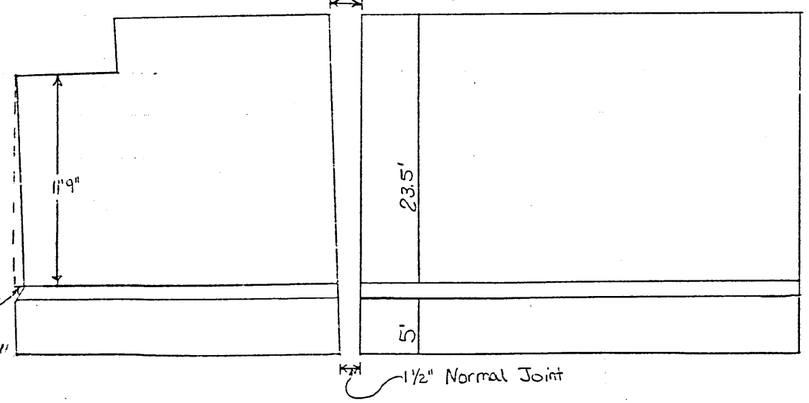


3½" TILT (1986)
3 5/8" (1989)
3 5/8" (1991)
3 5/8" (1997)
4" (1998)
4 1/8" (7-99)

NOTE: HORIZONAL CRACK HAS BEEN PATCHED AND NOW HAS 50° F. MAP CRACKS WITH LEACHING

LEFT SIDE ABUTMENT #2
NORTH SIDE

7" (1998) 44° F. Temp.
6 5/8 (1994)
6½" (1986 + 1989) (1991)



(1986) 2 7/8" TILT
(1989) 2 7/8"
(1991) 2 7/8"
(1998) 3¼" 50° F
(7-99) 3½" 80° F

RIGHT SIDE ABUTMENT #2
SOUTH SIDE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
DIVISION OF STRUCTURES

BRIDGE NO. 19-SR6-9.74
CROSSING: CUMBERLAND RIVER

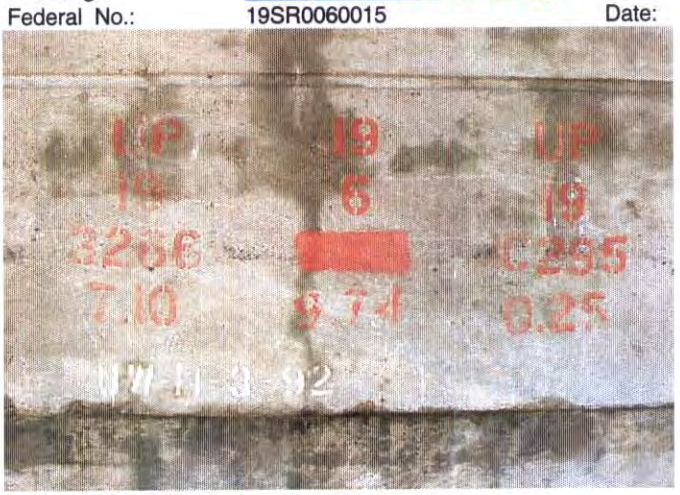
COUNTY: DAVIDSON COUNTY

DRAWN RESA S.
DATE 12-17-86

REVISION
DATE _____

Bridge No.: 19 — SR006 — 0974
Crossing:: SR 6 / CUMBERLAND RIVER *
Federal No.: 19SR0060015 Date: February 11, 2003

PIC1



BRIDGE NO. AT ABUTMENT # 1

Bridge No.: 19 —SR006 — 0974
Crossing:: SR 6 / CUMBERLAND RIVER *
Federal Nc 19SR0060015 Date: February 11, 2003

PIC2

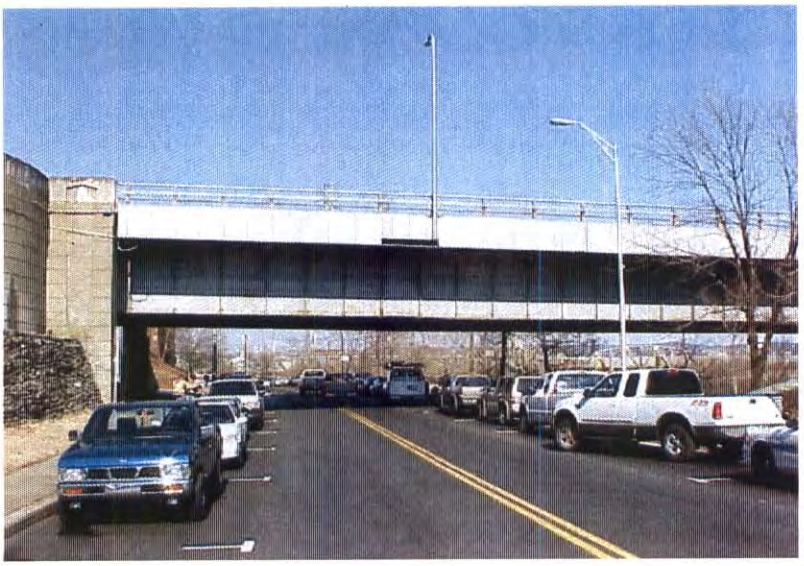
ABUT-1

PIC3

BOTTOM DECK VIEW SPAN-1 TYP THRU SPAN-3

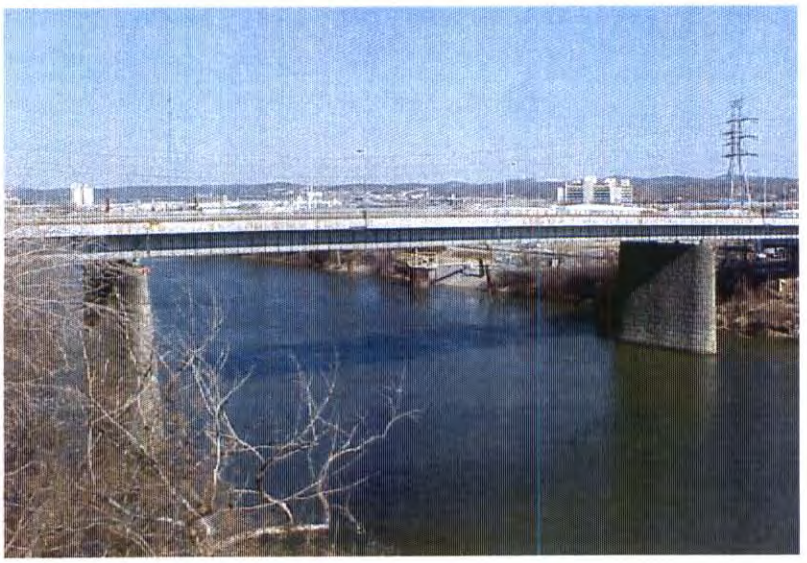
Bridge No.: 19 — SR006 — 0974
Crossing:: SR 6 / CUMBERLAND RIVER *
Federal No.: 19SR0060015 Date: February 11, 2003

PIC4



R.S. VIEW @ U.P.

PIC5



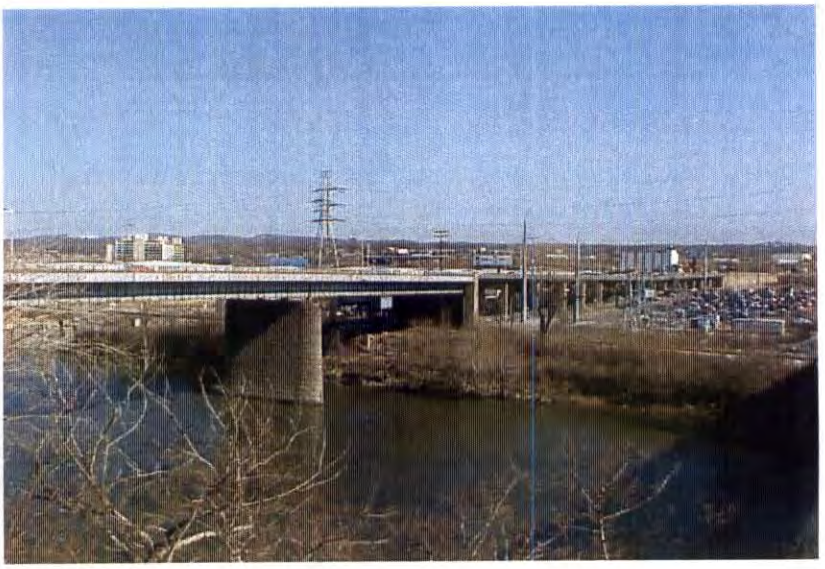
INLET-ELEV

Bridge No.: 19 — SR006 — 0974
Crossing:: SR 6 / CUMBERLAND RIVER *
Federal No.: 19SR0060015 Date: February 11, 2003

PIC6

PIER-2 TYP.

PIC7



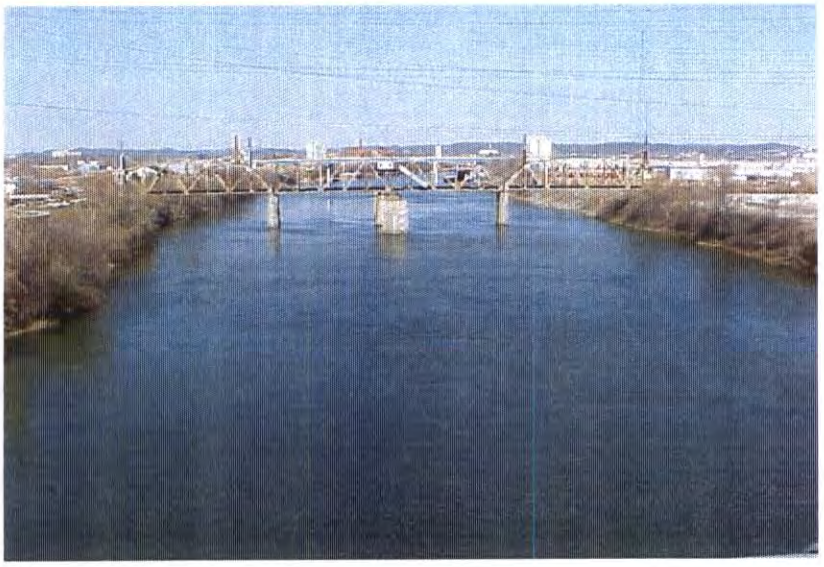
R.S. VIEW TWORD B-APPR

Bridge No.: 19 —SR006 —— 0974
Crossing:: SR 6 / CUMBERLAND RIVER *
Federal No.: 19SR0060015 Date: February 11, 2003

PIC8

VIEW ACROSS DECK FROM A-APPR

PIC9



DOWNSTREAM

Bridge No.: 19 — SR006 — 0974
Crossing:: SR 6 / CUMBERLAND RIVER *
Federal No.: 19SR0060015 Date: February 11, 2003

PIC10

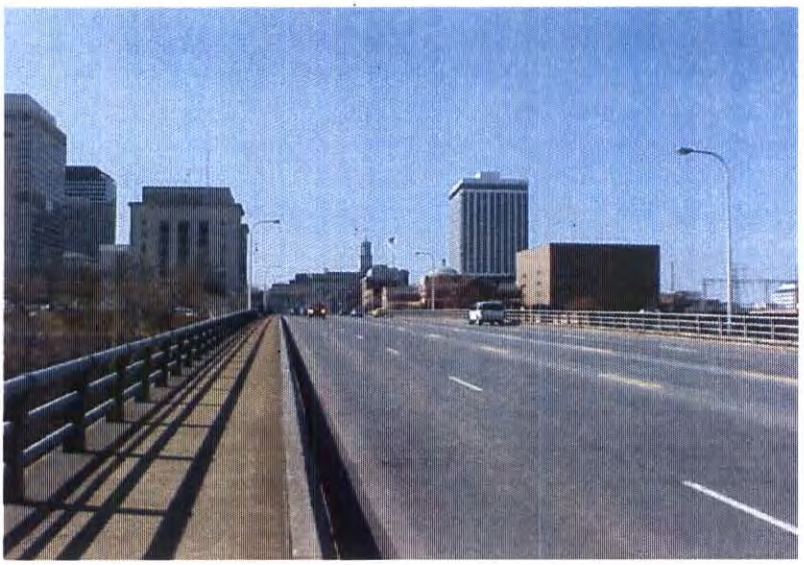
LATCH ATOP PIER-2 ON TOP DECK

PIC11

UPSTREAM

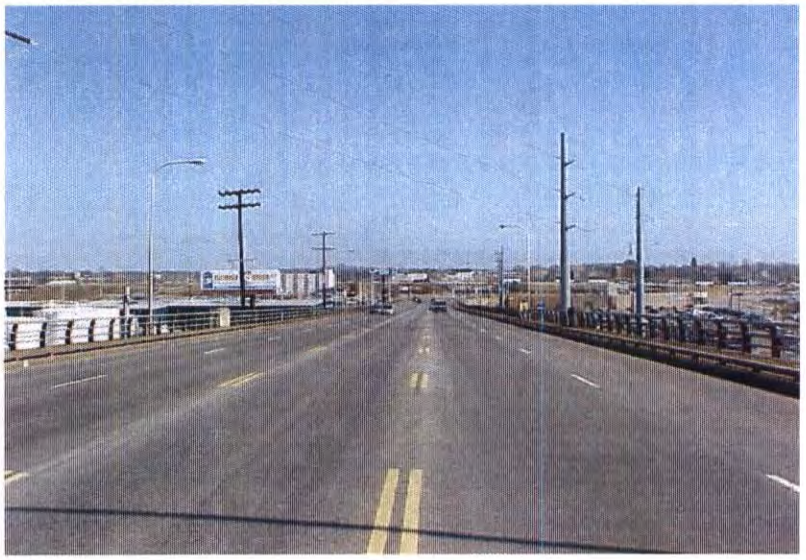
Bridge No.: 19 — SR006 — 0974
Crossing:: SR 6 / CUMBERLAND RIVER *
Federal No.: 19SR0060015 Date: February 11, 2003

PIC12



A-APPR

PIC13



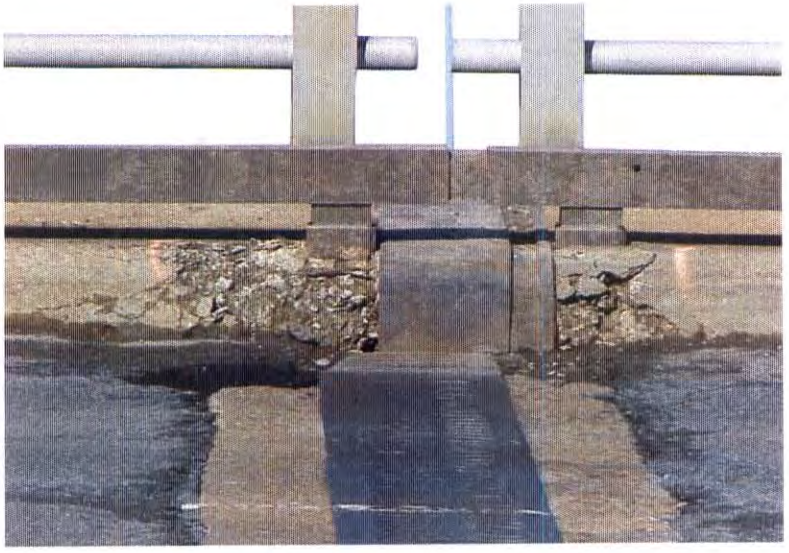
B-APPR

Bridge No.: 19 —SR006 — 0974
Crossing:: SR 6 / CUMBERLAND RIVER *
Federal No.: 19SR0060015 Date: February 11, 2003

PIC14

SCALE @ CURB L.S. SPAN-5

PIC15



SCALE @ CURB @ JOINT SPAN-6 & 7 L.S.

Bridge No.: 19 —SR006 — 0974
Crossing:: SR 6 / CUMBERLAND RIVER *
Federal No.: 19SR0060015 Date: February 11, 2003

PIC16

JOINT ON SIDEWALK R.S. @ SPAN 6 & 7

,"PIC17",""

HAND RAIL POST BROKEN (COLLISION DAMAGE) R.S. @
STAIR ACCESS @ SPAN 14

Bridge No.: 19 —SR006 — 0974 0 0
Crossing:: SR 6 / CUMBERLAND RIVER *
Federal No.: 19SR0060015 Date: February 11, 2003

"PIC18","")

2ND HAND RAIL POSR BROKEN (COLLISION DAMAGE) R.S.
FROM STAIR ACCESS @ SPAN 14

PIC19

BENT TYP

Bridge No.: 19 —SR006 — 0974
Crossing:: SR 6 / CUMBERLAND RIVER *
Federal No.: 19SR0060015 Date: February 11, 2003

PIC20

BOTTOM DECK VIEW TYP SPAN 4 THRU 19

PIC21

ABUT-2

Bridge No.: 19 — SR006 — 0974
Crossing:: SR 6 / CUMBERLAND RIVER *
Federal No.: 19SR0060015 Date: February 11, 2003

PIC22

CRACK @ BENT 15 CENTER COUMN

PIC23

CRACK @ L.S. ABUT-2

Bridge No.: 19 —— SR006 ——0974
Crossing:: SR 6 / CUMBERLAND RIVER *
Federal No.: 19SR0060015 Date: February 11, 2003

PIC24

JOINT @ L.S. ABUT-2

PIC25

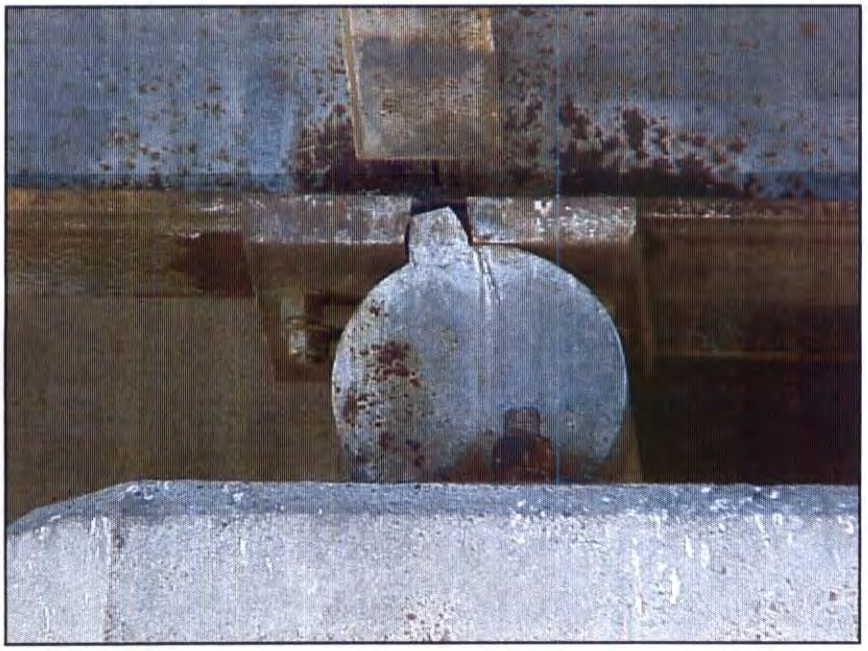
CRACK @ R.S. ABUT-2

Bridge No.: 19 —— SR006 — 0974
Crossing:: SR 6 / CUMBERLAND RIVER *
Federal No.: 19SR0060015 Date: February 11, 2003

PIC26

JOINT @ R.S. ABUT-2

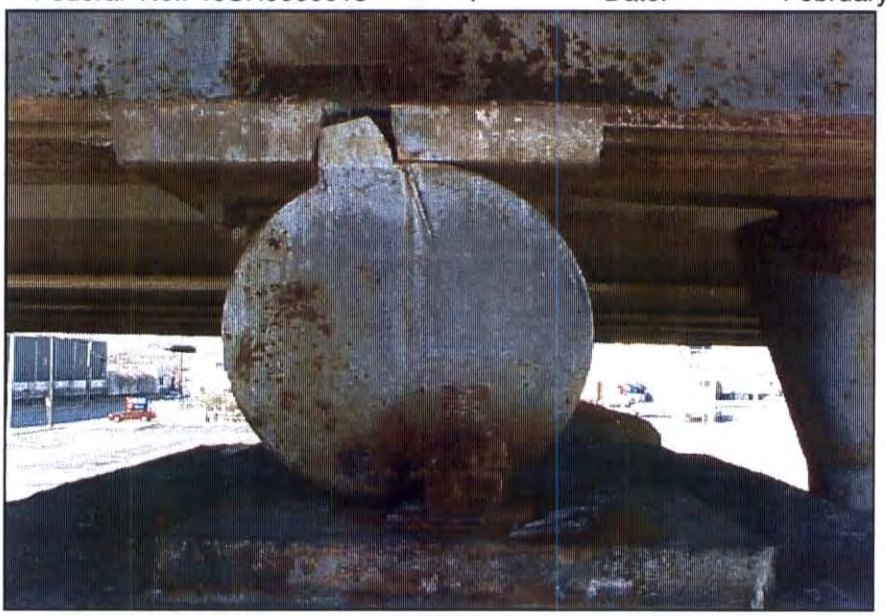
PIC27



BEARING @ R.S. BENT - 14

Bridge No.: 19 — SR006 — 0974
Crossing:: SR 6 / CUMBERLAND RIVER *
Federal No.: 19SR0060015 Date: February 11, 2003

PIC28



BEARING @ R.S. BENT - 14

PIC29

BEARING @ R.S. BENT - 14

BRIDGE INSPECTION REPORT

FORM BIR 3.0
Rev. 09/24/98
DT-0069

FIELD REPORT NO. 15 DATE 2-11-03
REVIOUS REPORT NO. 14 DATE 1-11-01
PLANS ---- YES [ ] NO [ ]

BRIDGE NO. 19SR0060015 (ELEVEN DIGIT NO.)
BRIDGE LOC. NO. 19 - SR6 - 9.74 (CO. ROUTE LOG MILE)

SR6 (ROAD NAME) OVER CUMBERLAND RIVER (FEATURE INTERSECTED)
(STRUCTURE NAME (IF NAMED))

YEAR CONSTRUCTED 1956 (ESTIMATED OR ACTUAL) [ ] [X]
COUNTY DAVIDSON
MAINTENANCE DISTRICT NO. 31

YEAR WIDENED ____ ESTIMATED OR ACTUAL [ ] [ ]
YEAR REHABILITATED ____ ESTIMATED OR ACTUAL [ ] [ ]

FEATURES

WEARING SURFACE-- CONCRETE [ ] TIMBER [ ] ASPHALT [X] (DEPTH= 2½)
FLARED WIDTH --------- YES [ ] NO [X]
NAVIGATIONAL CONTROL-- YES [X] NO [ ]
MEDIAN WIDTH -------- OPEN [ ] NONE [X] CLOSED [ ]

BRIDGE SKEW 90° LT [ ] RT [ ]

STRUCTURE TYPE WPG (Main Span) NO. SPANS 3 (Main Span)
STRUCTURE TYPE WPG (Approach Spans) NO. SPANS 16 (Approach Spans)
MAXIMUM SPAN LENGTH 320' TOTAL LENGTH 1845'

INSPECTORS

1. Hunter
2. Daniel
3. Crutcher
4. Waller
5. Thompson
6. Trotter
7. ____
8. ____
9. ____

WIDTHS

DECK OUT-TO-OUT 74'
ROADWAY CURB/CURB 56'
SIDEWALK 5' RT 5' LT
*APPROACH ROADWAY 27' LT & RT
APPR. SHLD. — RT — LT
*DOES NOT INCLUDE SHOULDER

CLEARANCES

MIN. VERTICAL OVER DECK —
MIN. VERTICAL UNDER CL 14' 7"
MIN. LATERAL UNDER CL 9 RT
— LT

(<25')
NBIS BRIDGE LENGTH 725' (ft) (in)

UNDERWATER INSPECTION

INSPECTION PERFORMED BY:
DOT FIELD TEAM [ ] DATE ____
CONTRACT DIVERS [X] DATE 9-18-2000
NONE REQUIRED [ ]

FRACTURE CRITICAL DETAILS: YES [ ] NO [X]
IF YES, INCLUDE BIR 3.9

CHANGE IN STRUCTURAL CONDITION YES [ ] NO [X]
MAJOR REPAIRS MADE YES [ ] NO [X]

COMMENTS: ____

Gilbert Wayne Hunter
SUPERVISING BRIDGE INSPECTOR

BRIDGE RATING [ ] [ ] [X] [ ]
GOOD FAIR POOR CRITICAL

FORM BIR 3.1
Rev. 09/24/98
DT-0080

BRIDGE LOC. NO. 19 - SR6 - 9.74
CO. ROUTE L.M.

DATE: 2-11-03

PERFORMANCE EVALUATION

Time of day inspected 11:00 Weather conditions Sunny 35°

Vehicles observed All types

LIVE LOAD BEHAVIOR	*YES*	*NO*	*COMMENTS*
Substructure			
Horiz. & Vert. Defl.	[ ]	[X]	
Vibration	[ ]	[X]	
Superstructure			
Horiz. & Vert. Defl.	[ ]	[X]	
Vibration	[X]	[ ]	

APPROACH

Alignment	(G)	F	P	C	
Slab	(G)	F	P	C	
Joints	(G)	F	P	C	
Pavement	(G)	F	P	C	
Embankment	(G)	F	P	C	
Drains	(G)	F	P	C	

TRAFFIC SAFETY FEATURES

					STANDARD	SUB-STANDARD	
Bridgerailing	G	(F)	P	C	[ ]	[X]	
Transitions	G	F	P	C	[ ]	[ ]	None
Guardrail	G	F	P	C	[ ]	[ ]	"
Guardrail Terminal	G	F	P	C	[ ]	[ ]	"

SIGNING

	YES	NO	NEEDED	
Paddleboard	[ ]	[ ]	[ ]	WEIGHT LIMIT POSTED YES [ ] NO [X]
Vertical Clearance (< 14')	[ ]	[ ]	[ ]	
Narrow [ ] One Lane Bridge [ ]	[ ]	[ ]	[ ]	GROSS _____ TONS 2 AXLE _____ TONS 3 OR MORE AXLES _____ TONS

Other Signs or Plaques ~

Comments Regarding Any Problems With Signing ~

Other Recommendations

FORM BIR 3.2
Rev. 09/24/98
DT-0081

BRIDGE LOC. NO. 19 - SR6 - 9.74 (CO. - ROUTE - L.M.)

DATE: 2-11-03

DECK

					COMMENTS
WEARING SURFACE	(G)	F	P	C	
DECK - STRUCTURAL CONDITION	G	(F)	P	C	Random cracks w. eff. w. spalls
CURBS	G	F	(P)	C	3" deep scale spans 5-6-7-11-15-16
MEDIAN	G	F	P	C	NA
SIDEWALKS	G	F	(P)	C	random cracks w. eff 1"-w hole in sidewalk at span joint 6-7
PARAPET	G	F	P	C	NA
RAILING	G	F	(P)	C	span #14 Rt side 2 broken post
PAINT	G	F	P	C	
DRAINS	G	(F)	P	C	partially clogged
LIGHTING STD'S	(G)	F	P	C	
UTILITIES	G	(F)	P	C	SAGGS & loose connections IN conduit
JOINT LEAKAGE	G	(F)	P	C	Moderate staining
EXPANSION JOINTS	G	(F)	P	C	potholes in pavement

SUPERSTRUCTURE

					COMMENTS
BEARING DEVICES	G	(F)	P	C	light to moderate corrosion
GIRDERS OR BEAMS	G	(F)	P	C	light to moderate corrosion
FLOOR BEAMS	G	(F)	P	C	light to moderate corrosion
STRINGERS	G	(F)	P	C	light to moderate corrosion
DIAPHRAGMS	G	(F)	P	C	light to moderate corrosion
BRACING	G	(F)	P	C	light to moderate corrosion
TRUSSES - ~~GENERAL~~	G	F	~~P~~	~~C~~	
- PORTALS	G	F	P	C	
- ~~BRACING~~	G	F	~~P~~	~~C~~	
PAINT	G	F	(P)	C	heavy corrosion and paint loss on connector plates
ALIGNMENT OF MEMBERS	(G)	F	P	C	

TEXTURE COAT

CONDITION RATING	G	F	P	C	
OVERALL APPEARANCE	G	F	P	C	NEEDS SPOT PAINTING? YES [ ] NO [ ]
STAINING	G	F	P	C	NEEDS REPAINTING? YES [ ] NO [ ]
SCALING	G	F	P	C	
FADING	G	F	P	C	

COMMENTS: _____

RECOMMENDATIONS _____

FORM BIR 3.3
Rev. 09/24/98
DT-0082

BRIDGE LOC. NO. 19 - SR6 - 9.74 (CO. ROUTE L.M.)

DATE: 2-1-03

SUBSTRUCTURE

ABUTMENTS					COMMENTS
CAPS	G	F	P	C	NA
BREASTWALL	G	F	(P)	C	Sides of Breastwall Abut #2 have up to 5" open cracks w. D.Q
WINGS	G	F	(P)	C	
BACKWALL	G	(F)	P	C	
PLUMB	G	F	(P)	C	
FOOTING	G	F	P	C	NV
PILES	G	F	P	C	NV
EMBANKMENT	(G)	F	P	C	
BEARING SURFACE	(G)	F	P	C	
SLOPE PAVING	G	F	P	C	NA

PIERS					
CAPS	(G)	F	P	C	
COLUMNS	(G)	F	P	C	
PLUMB	(G)	F	P	C	
FOOTINGS	G	F	P	C	NV
PILES	G	F	P	C	NV
BEARING SURFACE	(G)	F	P	C	

BENTS					
CAPS	G	(F)	P	C	breakout w. exp. rebar
COLUMNS	G	F	(P)	C	hori. cracks & 1/4" open horizonal crack w. 3 1/4" tilt Bent #13
PLUMB	G	F	(P)	C	tilted back station
FOOTINGS	G	F	P	C	NV
PILES	G	F	P	C	NV
BEARING SURFACE	(G)	F	P	C	

SCOUR CONDITION NONE [ ] DEEP WATER - SEE UNDERWATER REPORT

RECOMMENDATIONS:

INSPECTION REPORT FOR UNDERPASS ROUTE

Form BIR 3.0A
(Rev. 9-22-98)
DT-1443

Field Report No. 15 Date 2-11-03
Previous Report No. 14 Date 1-11-01

Bridge No. 19SR0060015 (Eleven Digit No.)

Underpass Location No. 19 - 3266 - 0.80 (Co. - Route - Log Mile)

____ (Railroad/Walkway) or 19 - SR6 - 9,74 (Co. - Route - Log Mile) over 19 - 3266 - 0.80 (Co. - Route - Log Mile)

County DAVIDSON Structure Name (If Named) _____

Year Constructed 1956

Year Widened _____ Year Rehabilitated _____

GEOMETRIC FEATURES UNDER BRIDGE

(.* ft. unless otherwise noted)*

Divided Highway _____ Type of Wearing Surface _____

Width of Approach Traveled Roadway 45 ft. (Does Not Include Shoulders)

Width of Median if Divided Highway — ft.

Approach Shoulder Width — ft. Right — ft. Left

*Horizontal Clearance Under Bridge 64'6" ft.

*Distance Between Pier Protection Guardrail and Substructure — ft. Right — ft. Left

*Width of Sidewalk Under Bridge 6,5 ft. Right 8 ft. Left

*Minimum Vertical Clearance: 19 ft. 4 in. (ft.-in.)

*Show on Sketch

TRAFFIC SAFETY FEATURES

	Rating	Standard/ SubStandard Non Exist
Pier Protection Railing or Parapet	NONE	NE
Approach Guardrail Terminals	11	NE
Approach Guardrail	11	NE
Approach Guardrail Terminal	11	NE

INSPECTORS

1. Hunter
2. Daniel
3. Crutcher
4. Waller
5. Thompson
6. Trotter

SIGNING

	Yes/ No/ Needed
Paddleboards	NO
Vertical Clearance (<14'-6")	NO
Narrow Passage	NO
One Lane Passage	NO

Other Underpass Signs Needed

Page No.____

Form BIR 3.0A (Continued)
(Rev. 9-22-98)
DT-1443

Date 2-11-03

Underpass Location No. 19 - 3266 - 0,80
Co. Route Log Mile

Other Signs or Plaques:

Comments Regarding any
Problems with Signing:

BRIDGE FEATURES *(*.* ft.)*

Bridge Skew 90 °

Number of Lanes/Tracks on Bridge 4

Structure Type (Main Span) WPG

No. Main Spans 3

Structure Type (Appr.Spans) WPG

No. Appr. Spans 16

Maximum Span Length 320 (ft.)

Total Length 1845 (ft.)

Width of Bridge Out-to-Out 74 (ft.) Right Angle to Centerline of Bridge)

Width of Bridge Along Skew — (ft.) (If Unable to Measure at Right Angle to Centerline of Bridge)

BRIDGE CONDITION: Poor

Does Potential Exist for Elements from Bridge Falling on Roadway Beneath? NO

Does Potential Exist Because of Deteriorated Condition or Failure of Major Members? NO

Comment on any Conditions of Bridge that would Effect Roadway Beneath:

Note: If Underpass Route is Divided Highway, Use Two of These Forms, One for Each Roadway.

MINIMUM PICTURES REQUIRED

1. Elevation View of Bridge on Both Sides Showing Underpass
2. View Showing Both Approaches to Bridge
3. View Showing Safety Features
4. View Showing Any Problems

INSPECTION REPORT FOR UNDERPASS ROUTE

Page No.____

Form BIR 3.0A
(Rev. 9-22-98)
DT-1443

Field Report No. 15 Date 2-11-03
Previous Report No. 14 Date 1-11-01

Bridge No. 19SR0060015 (Eleven Digit No.)

Underpass Location No. 19 - E255 - 0.73 (Co. Route Log Mile)

— (Railroad/Walkway) or 19 - SR6 - 9.74 (Co. Route Log Mile) over 19 - E255 - 0.73 (Co. Route Log Mile)

County DAVIDSON Structure Name (If Named) _____

Year Constructed 1956

Year Widened _____ Year Rehabilitated _____

GEOMETRIC FEATURES UNDER BRIDGE

(.* ft. unless otherwise noted)*

Divided Highway _____ Type of Wearing Surface _____

Width of Approach Traveled Roadway 44 ft. (Does Not Include Shoulders)

Width of Median if Divided Highway — ft.

Approach Shoulder Width — ft. Right — ft. Left

*Horizontal Clearance Under Bridge — ft.

*Distance Between Pier Protection Guardrail and Substructure — ft. Right — ft. Left

*Width of Sidewalk Under Bridge 14 ft. Right 14 ft. Left

*Minimum Vertical Clearance: 14 ft. 5 in. (ft.-in.)

*Show on Sketch

TRAFFIC SAFETY FEATURES

	Rating	Standard/ SubStandard Non Exist
Pier Protection Railing or Parapet	NONE	NE
Approach Guardrail Terminals	〃	NE
Approach Guardrail	〃	NE
Approach Guardrail Terminal	〃	NE

INSPECTORS

1. Hunter
2. Daniel
3. Crutcher
4. Waller
5. Thompson
6. Trotter

SIGNING

	Yes/ No/ Needed
Paddleboards	NO
Vertical Clearance (<14'-6")	No
Narrow Passage	No
One Lane Passage	NO

Other Underpass Signs Needed

Form BIR 3.0A (Continued)
(Rev. 9-22-98)
DT-1443

Page No.____
Date 2-11-03
Underpass Location No. 19 - E255 - 0.73
Co. Route Log Mile

Other Signs or Plaques:

Comments Regarding any Problems with Signing:

BRIDGE FEATURES *(*.* ft.)*

Bridge Skew 90 °
Number of Lanes/Tracks on Bridge ____
Structure Type (Main Span) WPG
No. Main Spans 3
Structure Type (Appr.Spans) WPG
No. Appr. Spans 16
Maximum Span Length 320 (ft.) Total Length 1845 (ft.)
Width of Bridge Out-to-Out 74 (ft.) Right Angle to Centerline of Bridge)
Width of Bridge Along Skew — (ft.) (If Unable to Measure at Right Angle to Centerline of Bridge)

BRIDGE CONDITION: Poor

Does Potential Exist for Elements from Bridge Falling on Roadway Beneath? NO
Does Potential Exist Because of Deteriorated Condition or Failure of Major Members? NO

Comment on any Conditions of Bridge that would Effect Roadway Beneath:

Note: If Underpass Route is Divided Highway, Use Two of These Forms, One for Each Roadway.

MINIMUM PICTURES REQUIRED

1. Elevation View of Bridge on Both Sides Showing Underpass
2. View Showing Both Approaches to Bridge
3. View Showing Safety Features
4. View Showing Any Problems

DT-1508 BRIDGE LOC. NO. 17 - 5K6 - 9.74 ( ) DATE: 2-11-03
CO. ROUTE L.M. (LOG km)

STREAM CHANNEL DATA AND CONDITIONS

STREAM CROSSING: CUMBERLAND RIVER

I. 1. Type of bed material? SILT
2. Has the channel shifted? YES [ ] NO [X] NOT APPARENT [
3. Condition of rip-rap? G F P C Est. % failed ____ N/A [
4. Overall condition of channel? (G) F P C
5. Item 61 - Code values 0 thru 9 according to the recording and coding guide currently in effect: 6
6. Underwater diver inspection recommended? YES [X] NO [ ]
If yes, why? DEEP WATER

II. Channel and bank stability conditions: (check if applicable)
1. Steep bank - Failures upstream [ ] downstream [ ] condition
2. Moderate bank erosion [ ]
3. Bank Vegetation (a) low growth [X] (b) large timber [X] (c) dead trees [ ] (d) clear banks [ ]
4. Sediment or gravel accumulation: YES [ ] NO [ ] UNKNOWN [
5. Channel altered or straightened: YES [ ] NO [X] UNKNOWN [
6. Stable conditions: (a) live growth [X] (b) bedrock [ ] (c) boulders [ ] (d) flat slopes [ ] (<=2:1)

III. Waterway adequacy and debris characteristics: (check if applicable)
1. Bridge deck elevations:
(a) level with approach roadway . . . . . [X]
(b) higher than approach roadway. . . . . [ ]
(c) roadway approach >=0.6 m above natural ground line. . [ ]
2. Abutment encroaches into channel . . . . . [ ]
3. Large scour (blowhole) under bridge. . . . . [ ]
4. Indications that flood waters overtop bridge:
NO [X] YES [ ] OCCASIONALLY [ ] FREQUENTLY [ ] UNKNOWN [
5. Debris characteristics:
(a) debris present YES [ ] NO [X]
(b) debris likely to accumulate: YES [ ] NO [X]
(c) dead trees upstream: [ ] or downstream: [ ]

IV. Comments: _____

* *

SPECIAL INSPECTION DATA - FOR REASONS OTHER THAN FC OR SCOUR

I. Does this bridge need a special inspection? YES [ ] NO [X]
II. Reason for special inspection: _____

NOTE: UNLESS OTHERWISE NOTED, MEASUREMENTS ARE TO BE TAKEN TO TWO (2) DECIMAL PLACES IN METERS.

SUMMARY
19-SR6-9.74
2/11/2003

SR 6 / Cumberland River
3 Span / S.P.G. w/ 16 Span W.P.G. Approach Spans

This bridge was inspected and found to be in poor condition. Alignment and the approach is good, along with pavement and embankment. Bridge rail is good, but substandard. There is no approach guardrail on the "A" end.

Wearing surface is good with 2 ½" of new asphalt. Curbs are fair with small areas of spall at the joints with exposed steel. Sidewalks have been repaired since last inspection they are still rated fair due to transverse cracks 1/16"" open. Drains are poor with most being clogged on right. Expansion joints are good. Joint leakage is fair. Bearing devices have light to moderate corrosion. Beams show moderate to heavy corrosion on flanges. Diaphragms are fair. Bracing shows moderate corrosion on the plates. Alignment of members is good. Paint shows moderate corrosion and flaking. Bottom deck is fair with heavy delimitation and spalls with exposed steel 2" deep.

Abutment #1 is fair with cracks up to 1/8" open and breakouts up to 1 ½" deep. Abutment #2 is poor with large separated cracks on ends. Plumb is poor due to a tilt back station up to 4 ¼". This was noted at last inspection, and shows approximately ¼" increase at this time. Piers are fair. The bent caps are good. Bent columns are rated fair due to horizontal cracks up to ¼" open and numerous haircracks. Bent #15 is tilted back station 3 1/8". This has increased ¼" since last inspection. Bent #10 is rated fair with horizontal cracks up to 1/16" open and column "B" tilted back station up to 1 ¾". These two bents have fixed bearing devices. The roller type rocker bearings on bents #11, and #12 are extended back station. Bearing devices on bents #13 and #14 are fully extended back station. Finger type expansion joints are located in the superstructure between bent caps, and have rocker type bearing devices at these joints. The ones located on span #16- between bents #12 and #13 are fully extended back station.

Gilbert Wayne Hunter

APR 18 1991

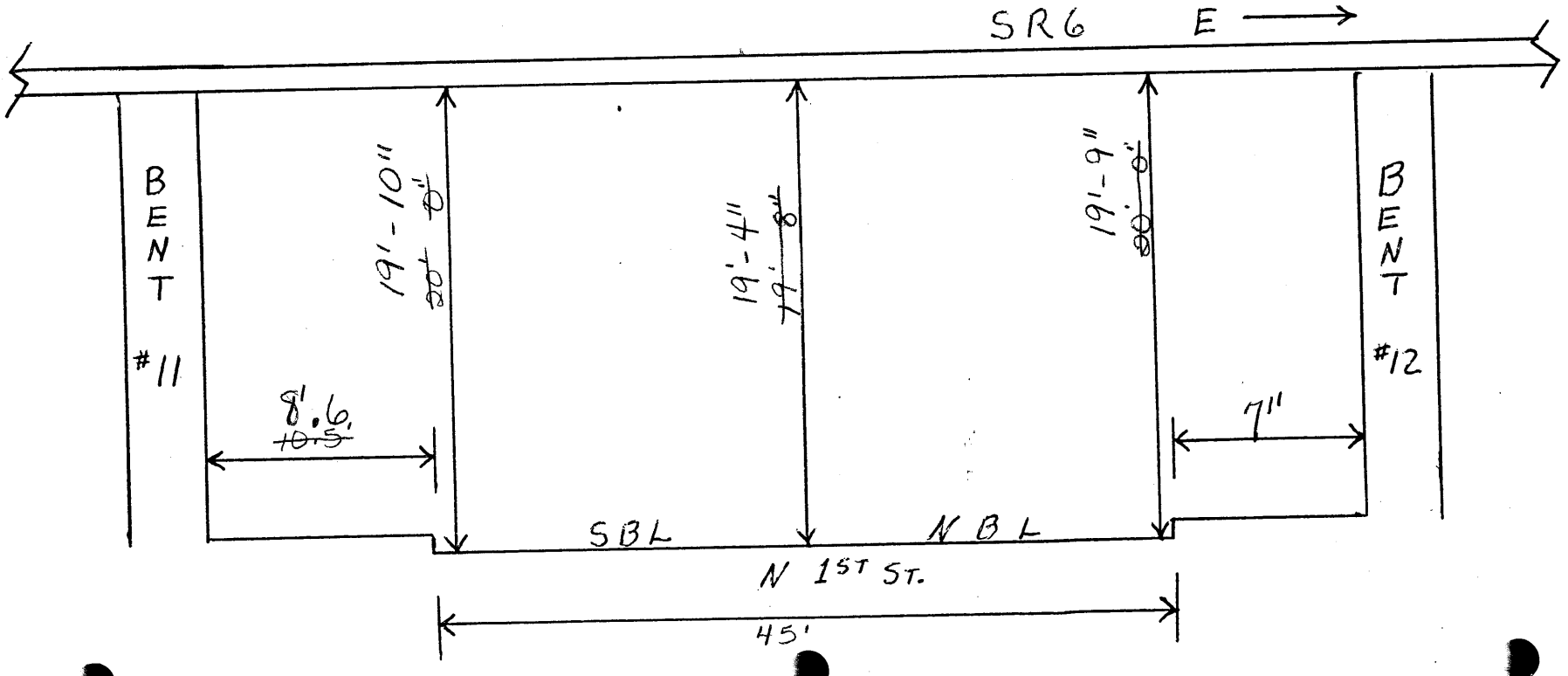
9-13-94MD

7-21-97MD

Z-11-03MD

Clearance Sketch

19-6-9.74 / 3266-0.80



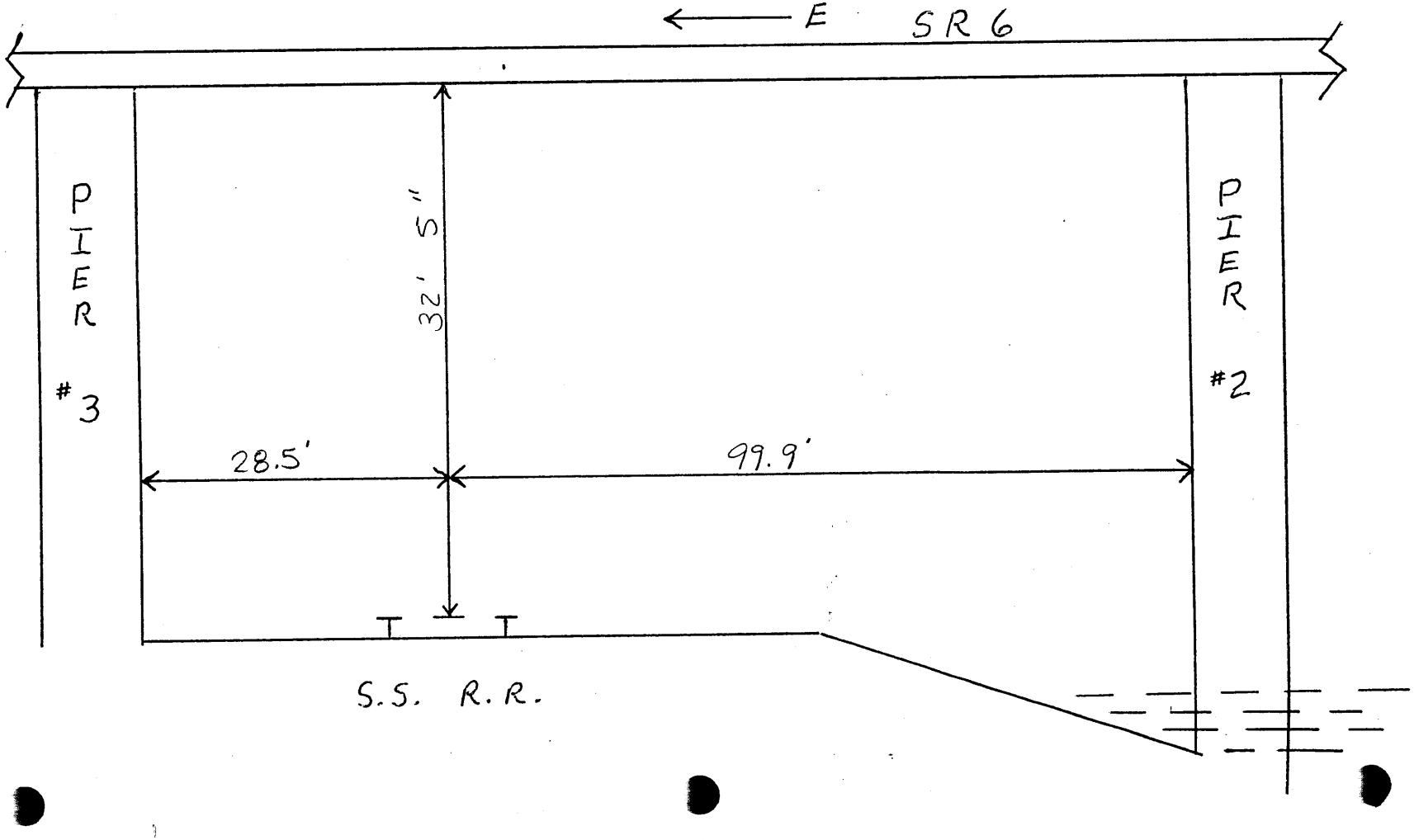
APR 18 1991

7-21-97mll
2-11-03MD

46

Clearance Sketch

19-6-9.74 / S.S. R.R.

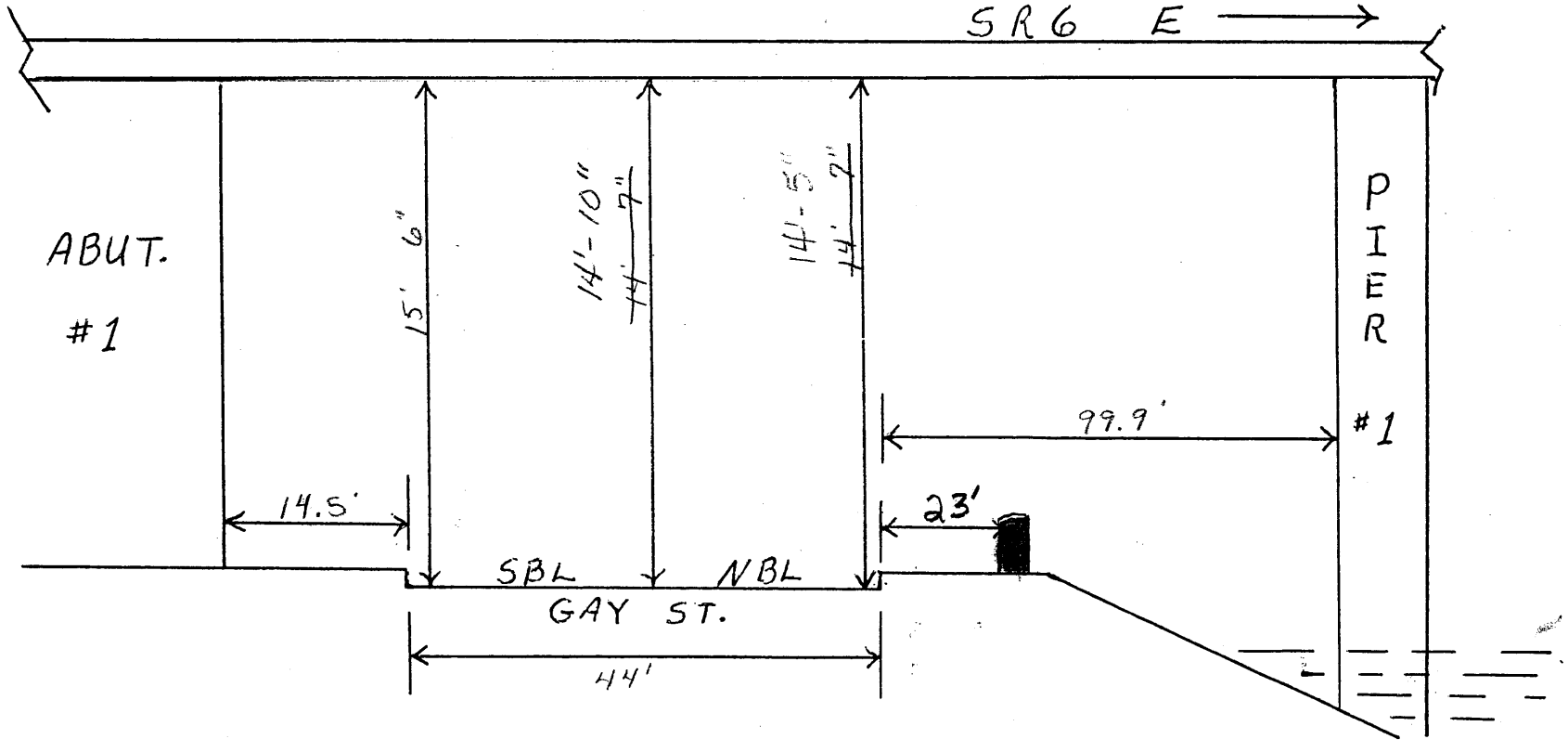


APR 18 1991
7-21-97mm
2-11-03MD

45

Clearance Sketch

19-6-9.74 / ~~E291 - 0.25~~
~~4498 - 0.24~~
E255 - 0.73

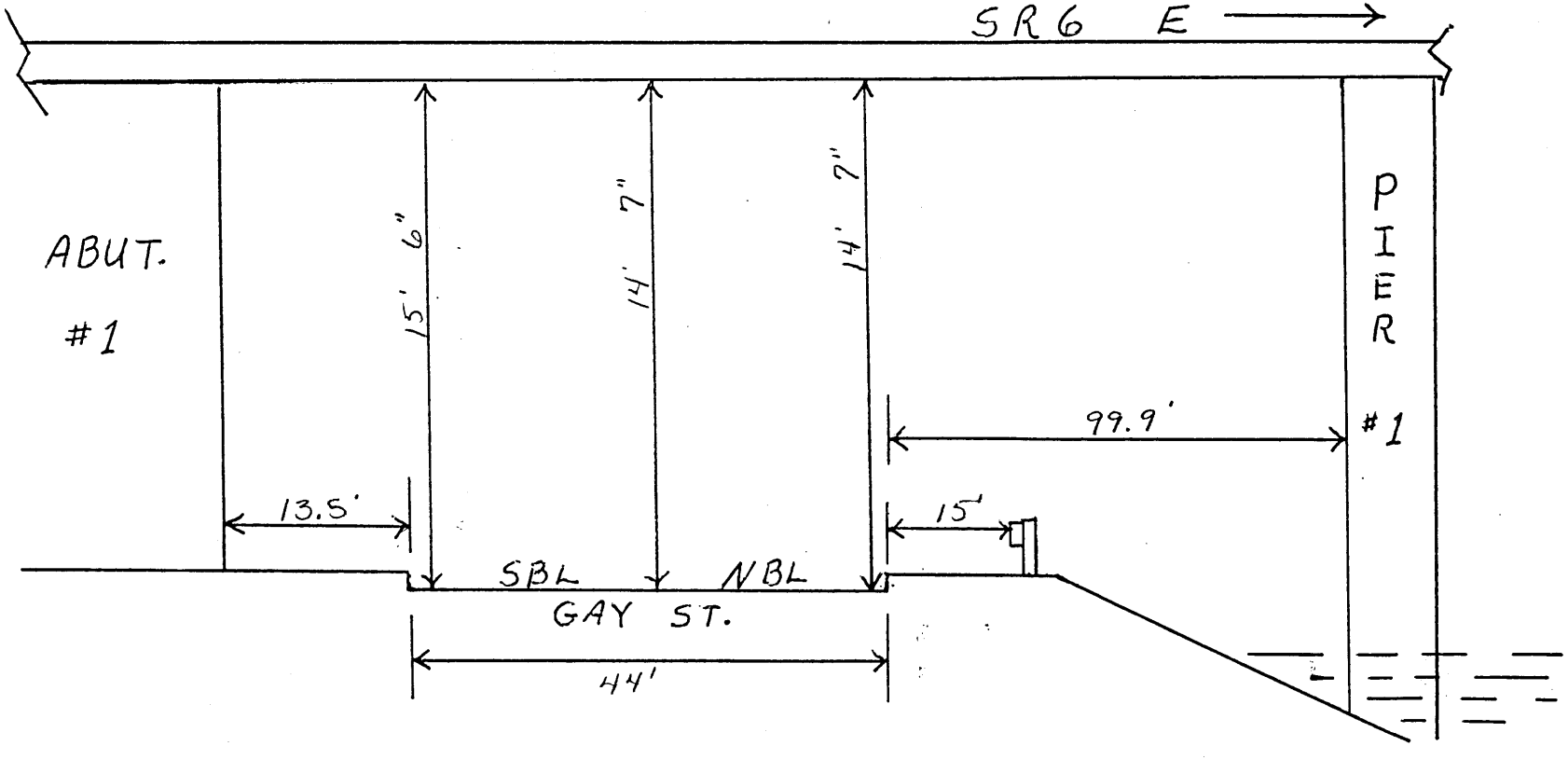


APR 18 1991
7-21-97 mm

45

Clearance Sketch

19-6-9.74 / ~~E291 - 0.25~~
~~4498 - 0.24~~
E255 - 0.73

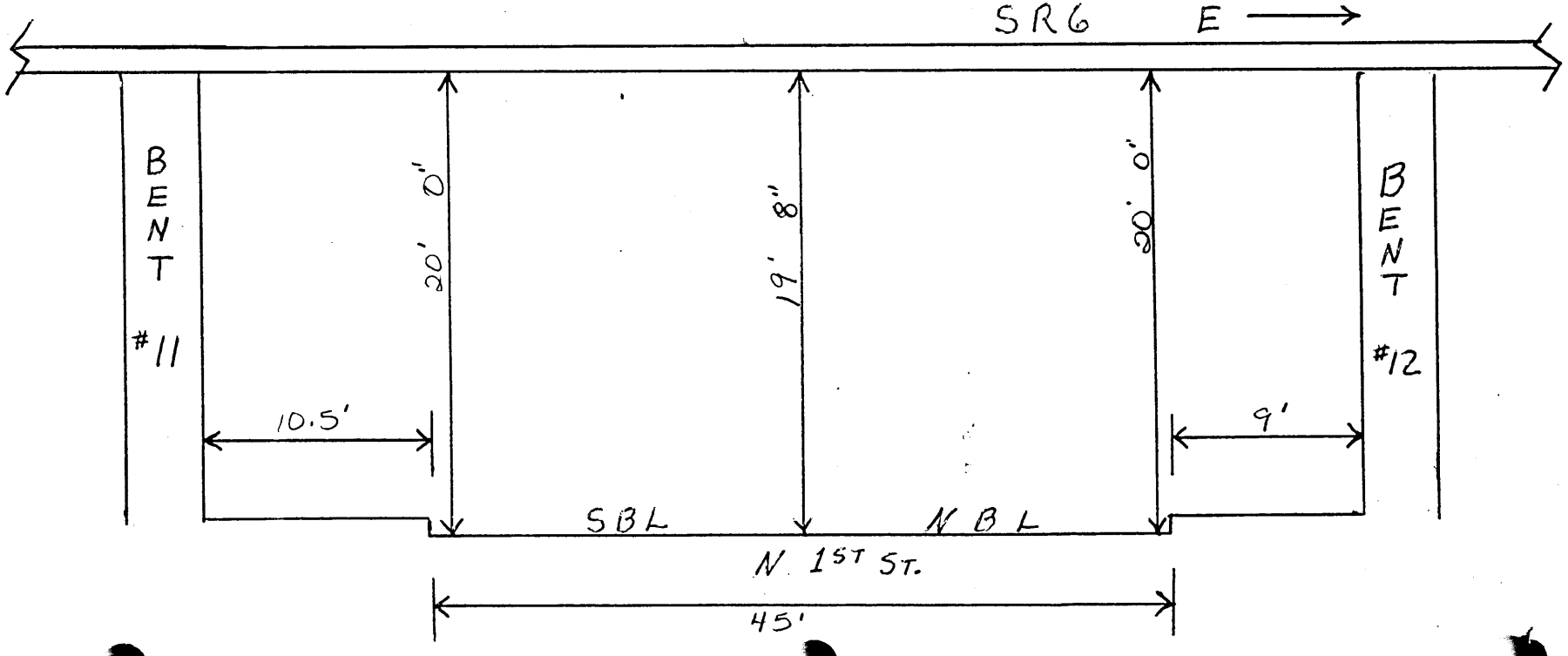


APR 18 1991
9-13-94MD
7-21-97MD

47

Clearance Sketch

19-6-9.74 / 3266-0.80



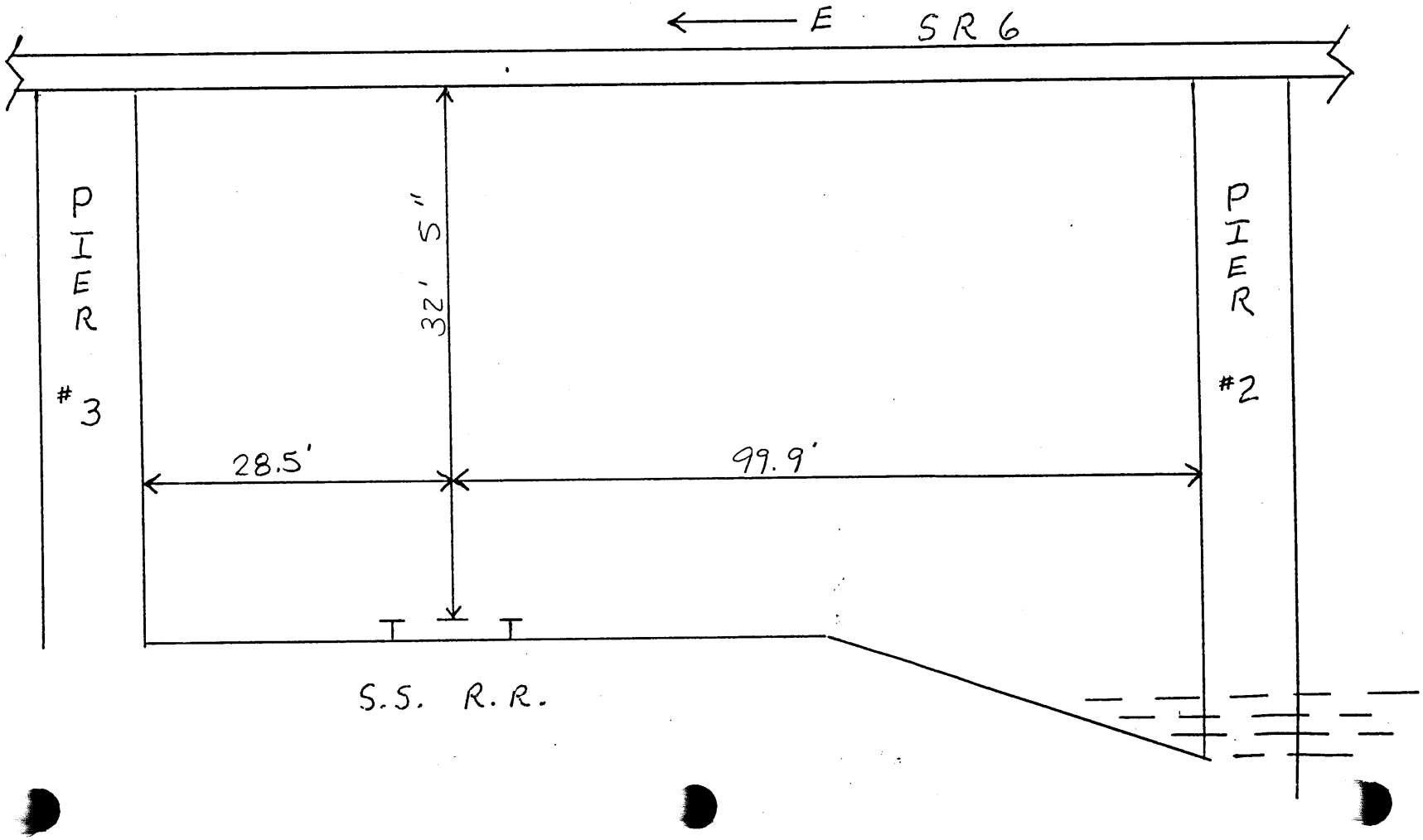
APR 18 1991

7-21-97mlt

46

Clearance Sketch

19-6-9.74 / S.S. R.R.



APR 18 1991

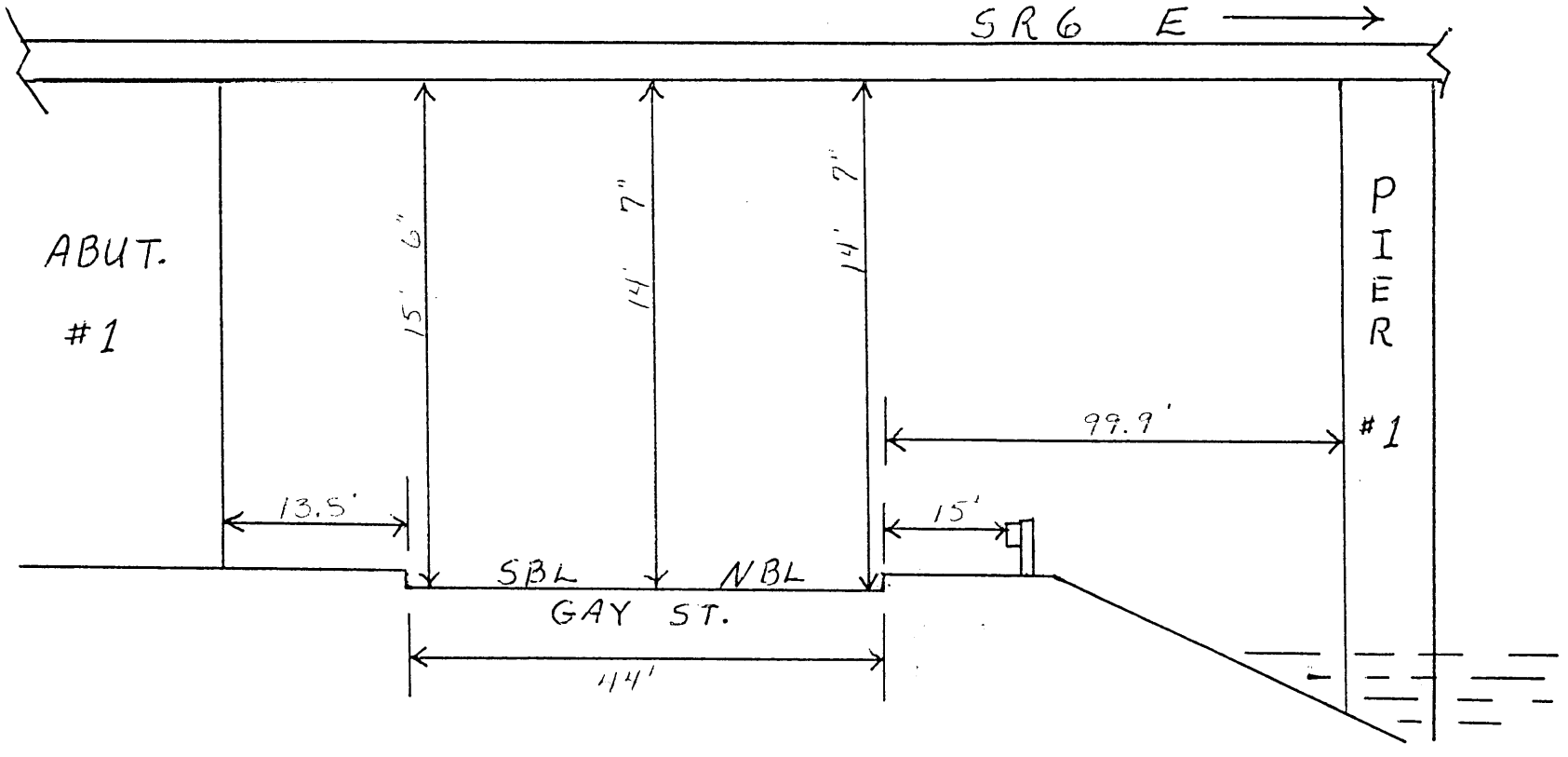
1-21-91

Clearance Sketch

19-6-9.74 / ~~E291 - 0.25~~

~~4498 - 0.24~~

~~5255 - 0.73~~



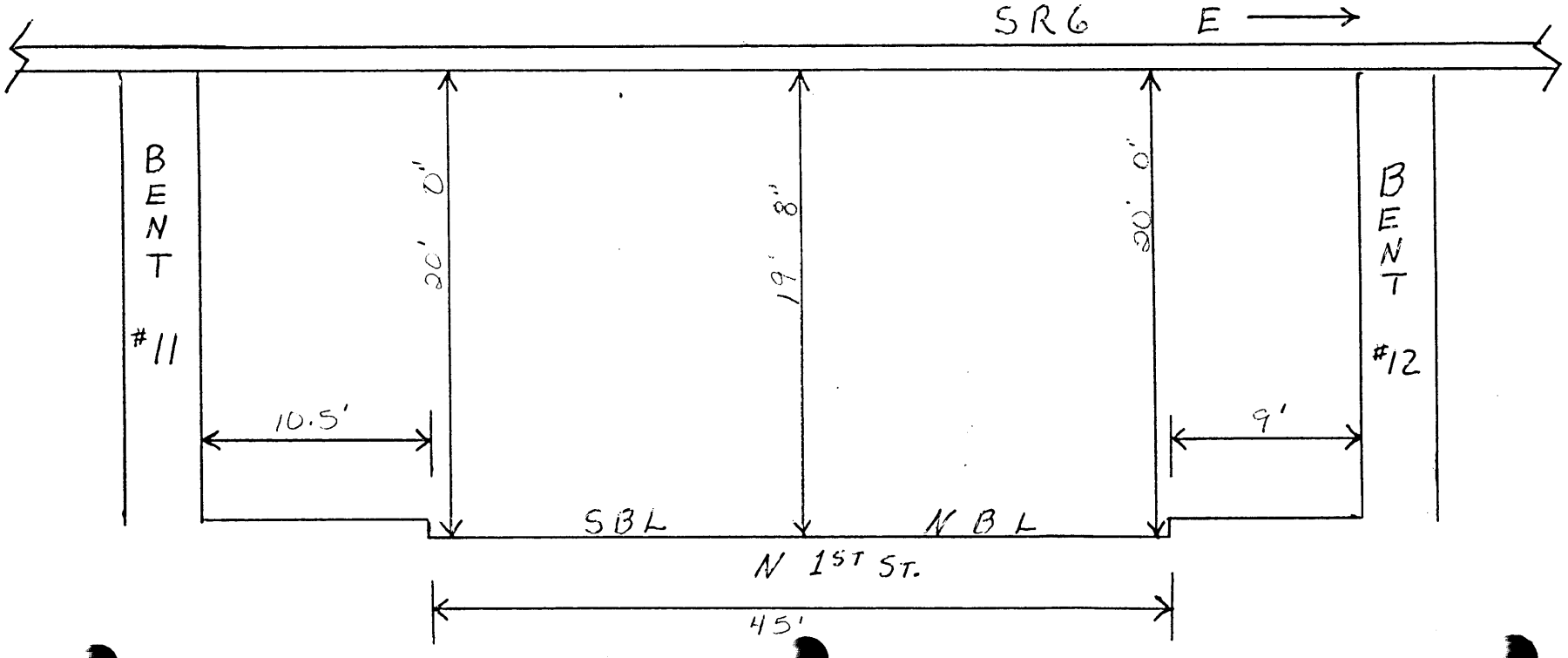
APR 18 1991

9-13-94mm

7-21-17 mm

Clearance Sketch

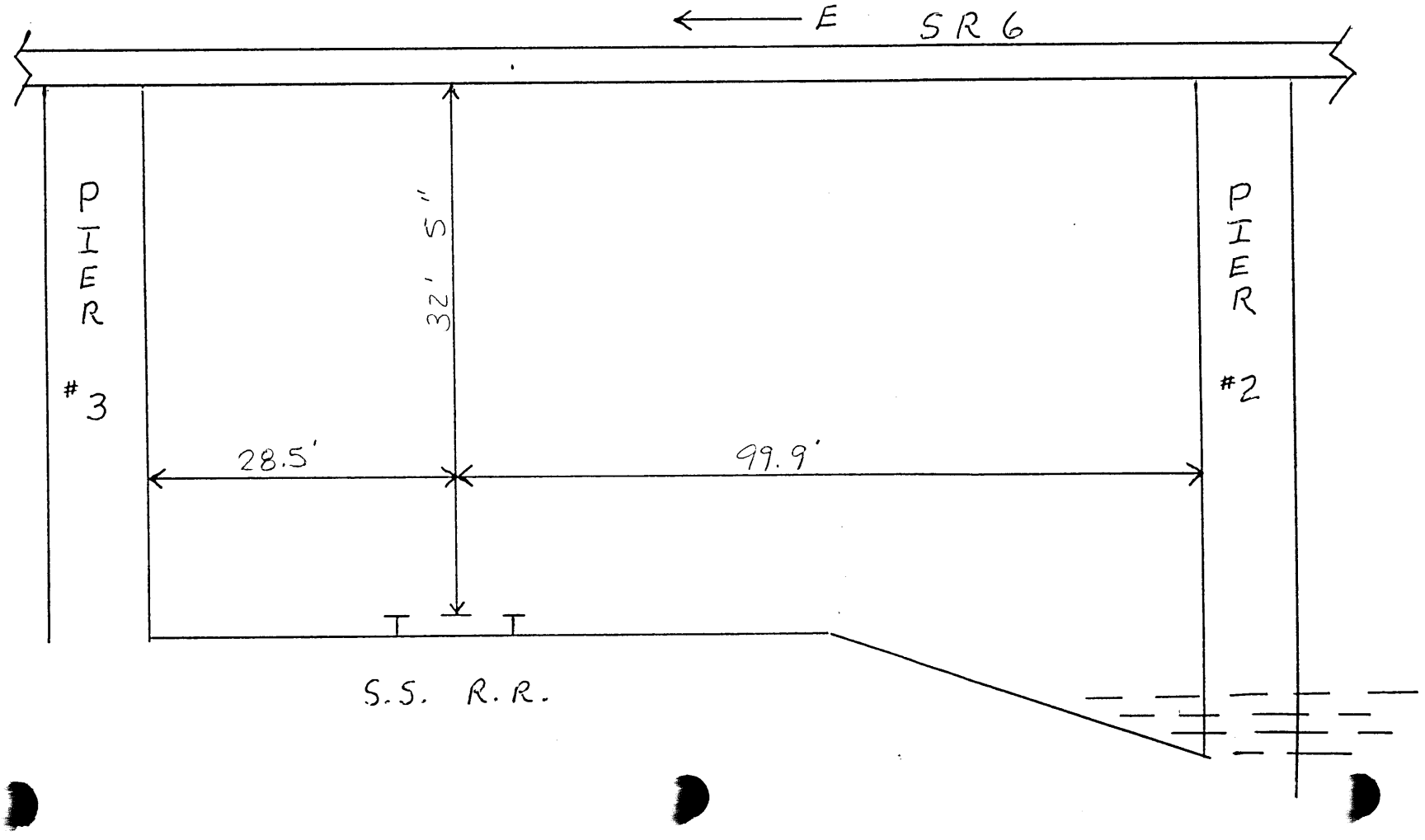
19-6-9.74 / 3266-0.80



APR 18 1991

Clearance Sketch

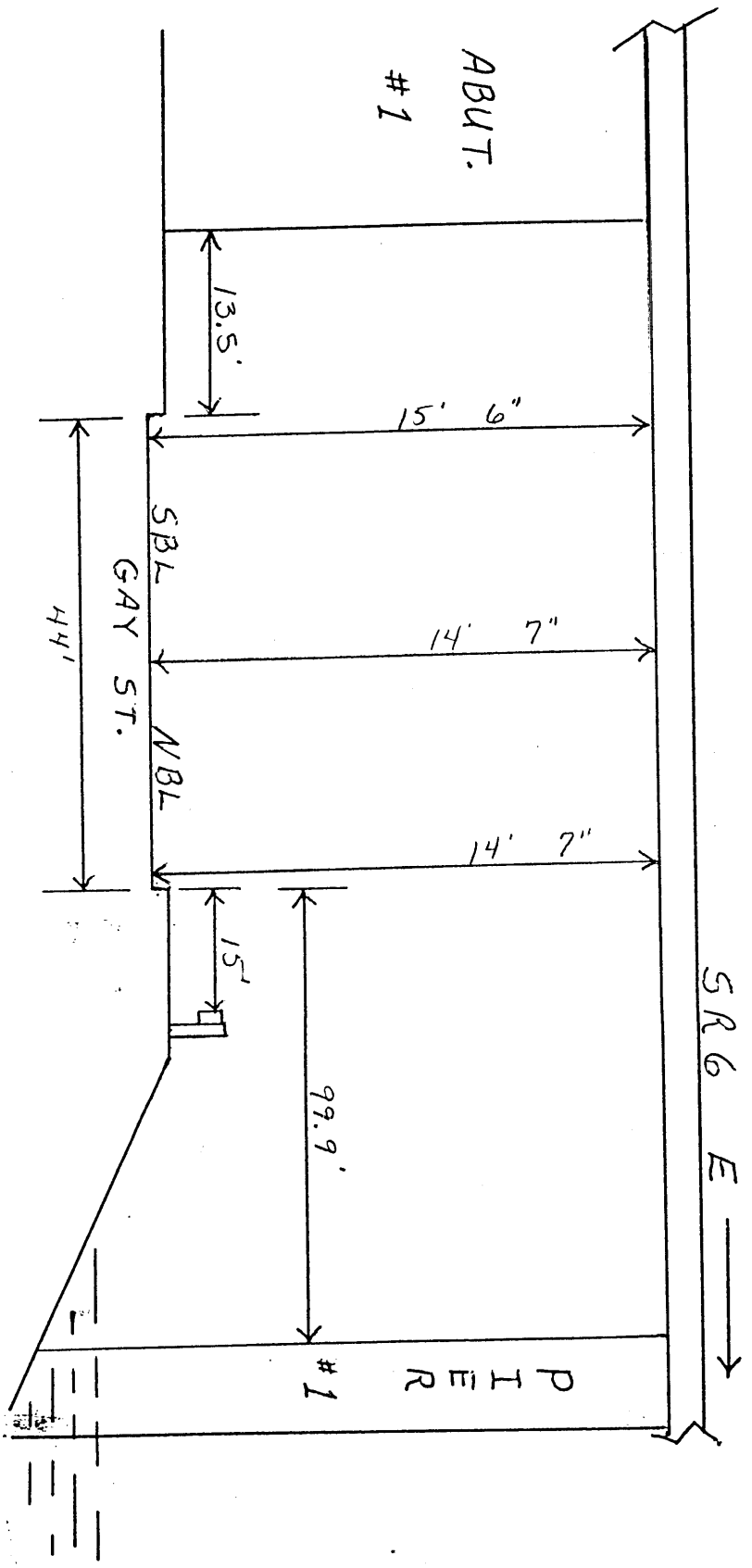
19-6-9.74 / S.S. R.R.



APR 18 1991

19-6-9.74 / ~~C-291-0.25~~
44998-0.24

Clearance Sketch

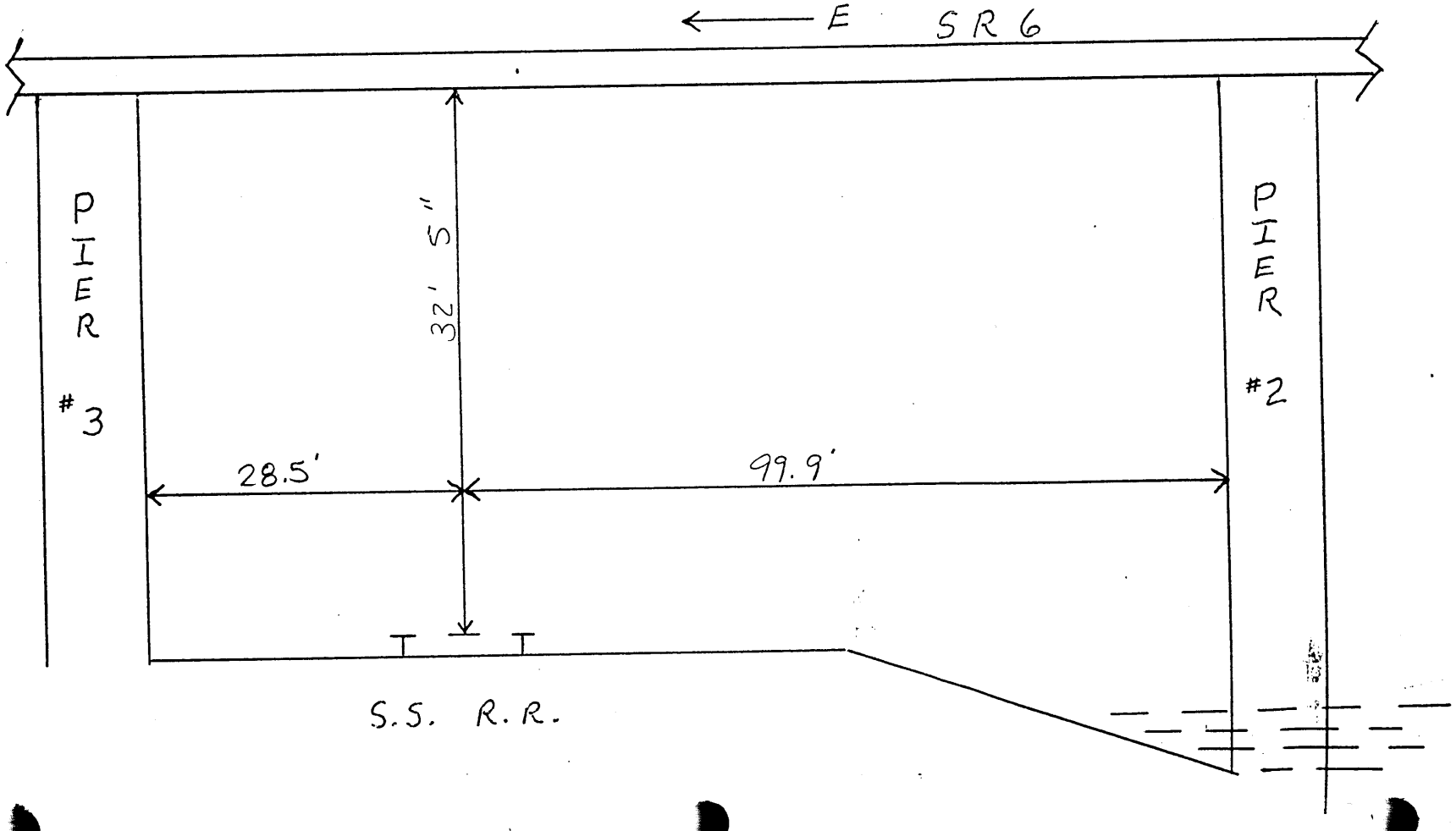


45

APR 18 1991

Clearance Sketch

19-6-9.74 / S.S. R.R.



APR 18 1991

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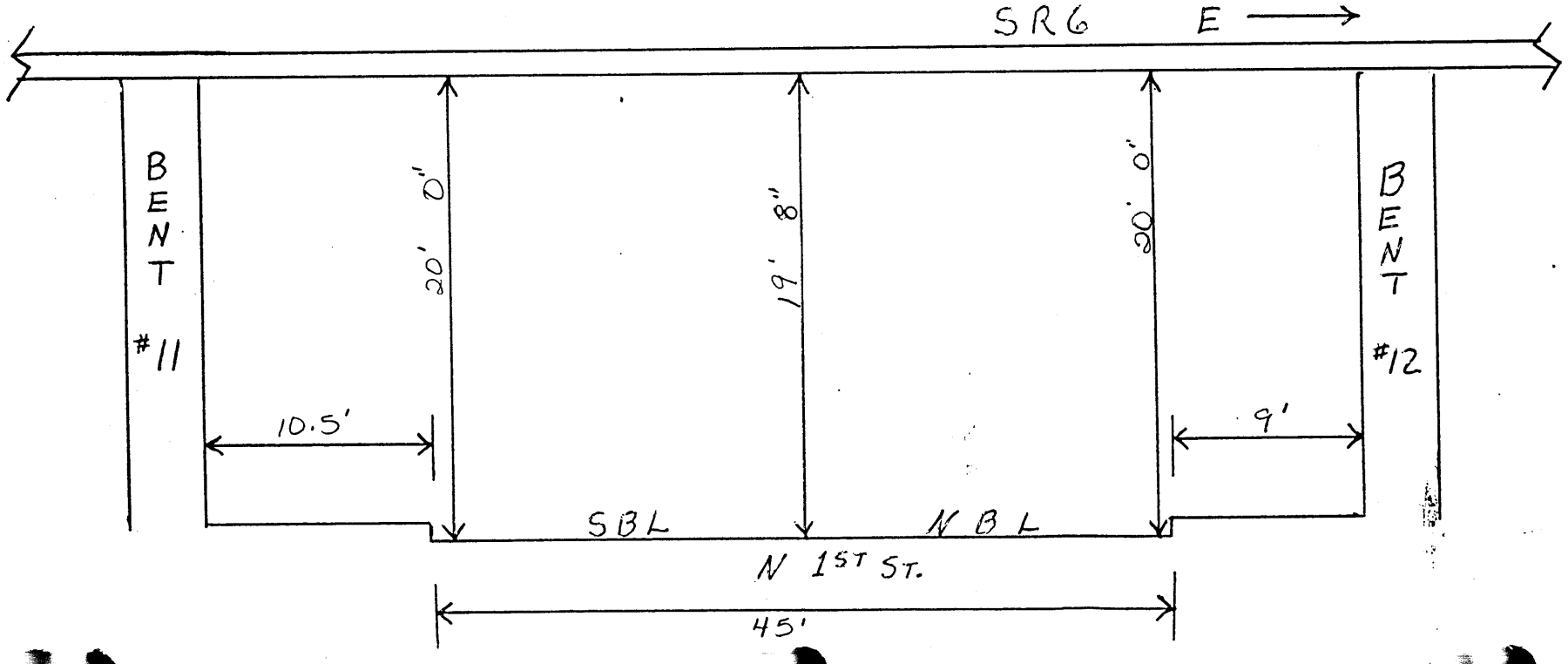
Clearance Sketch

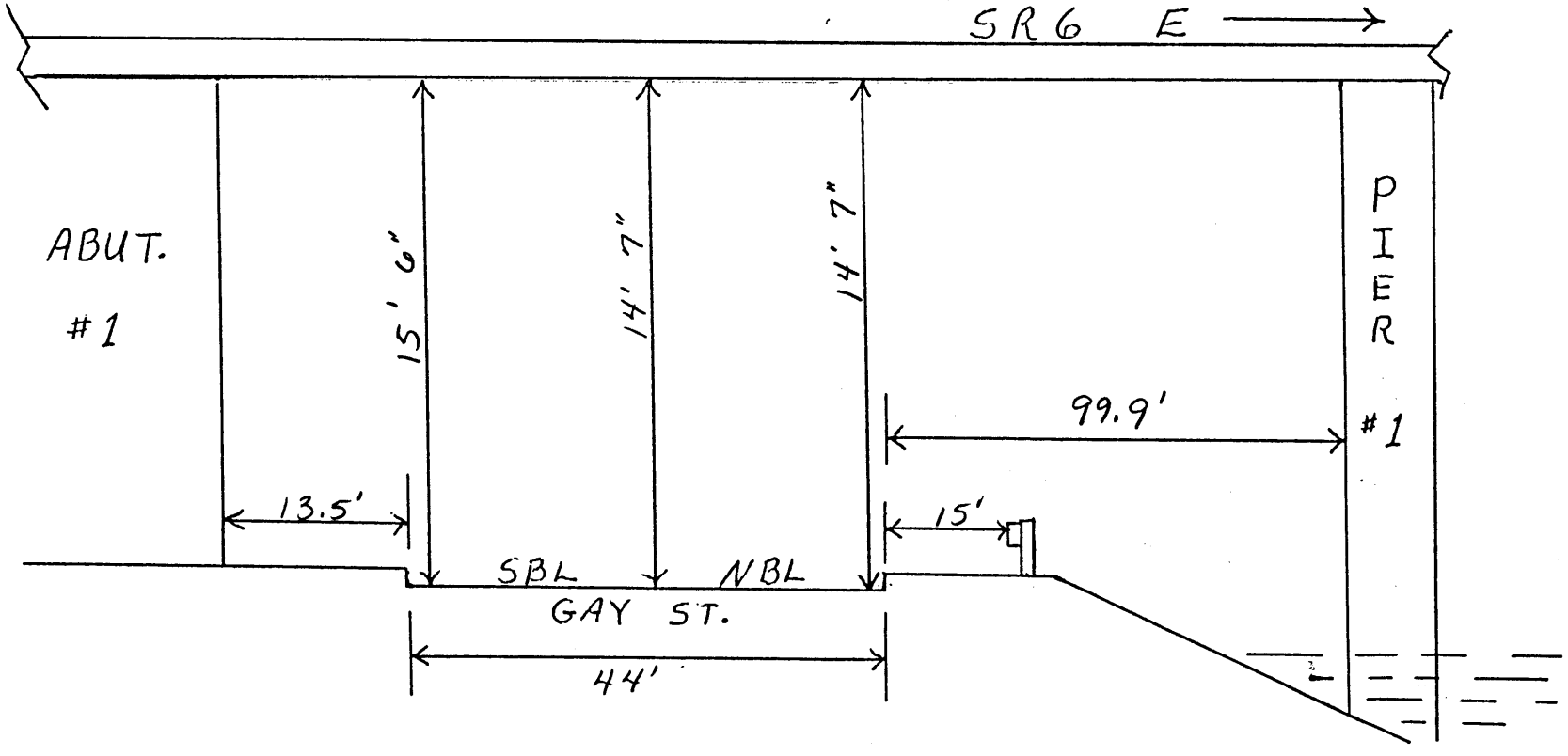
19-6-9.74 / 3266-0.71



MAR 13 1989

Clearance Sketch

19-6-9.74 / C291-0.25

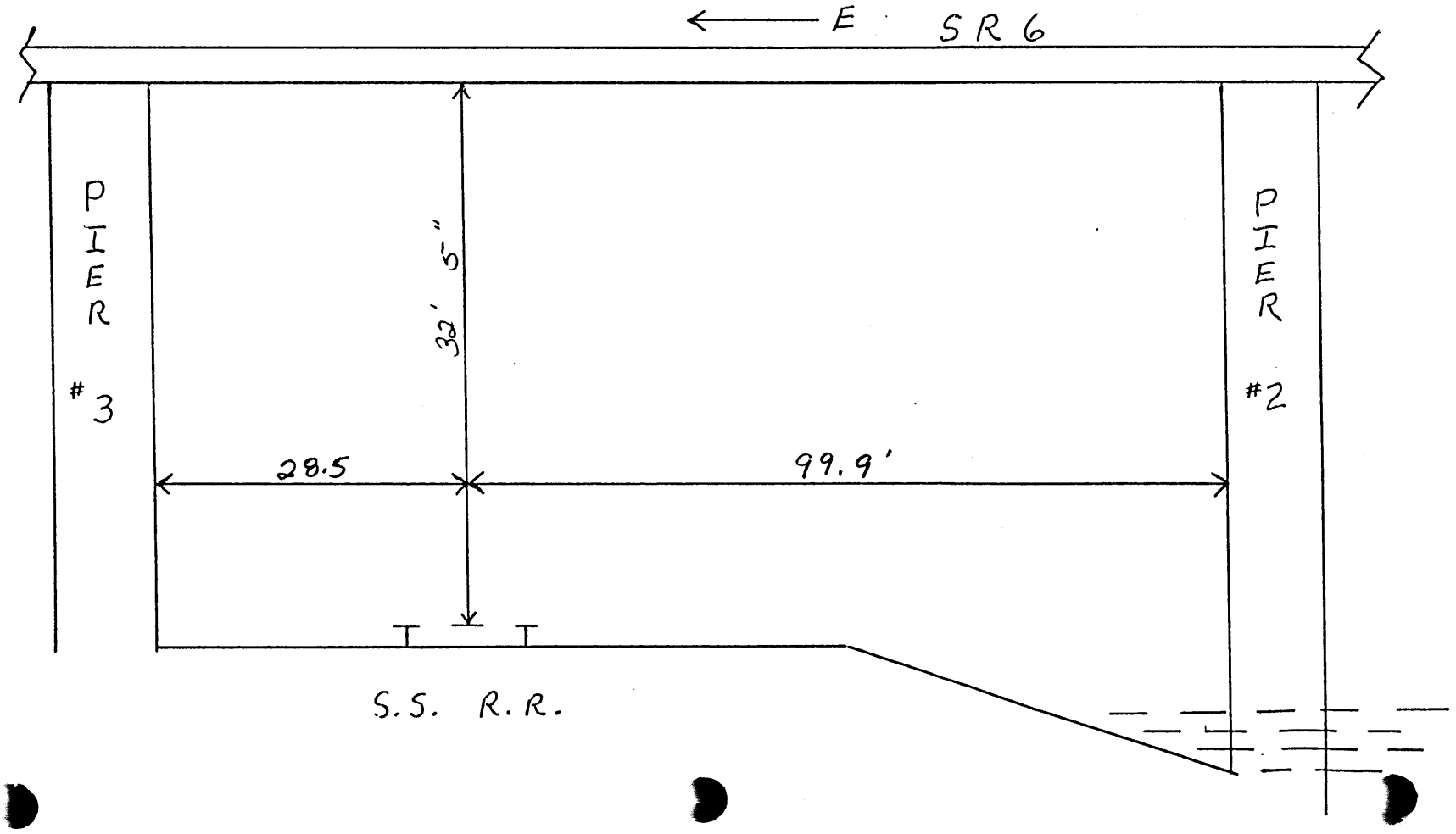


MAR 13 1989

64

Clearance Sketch

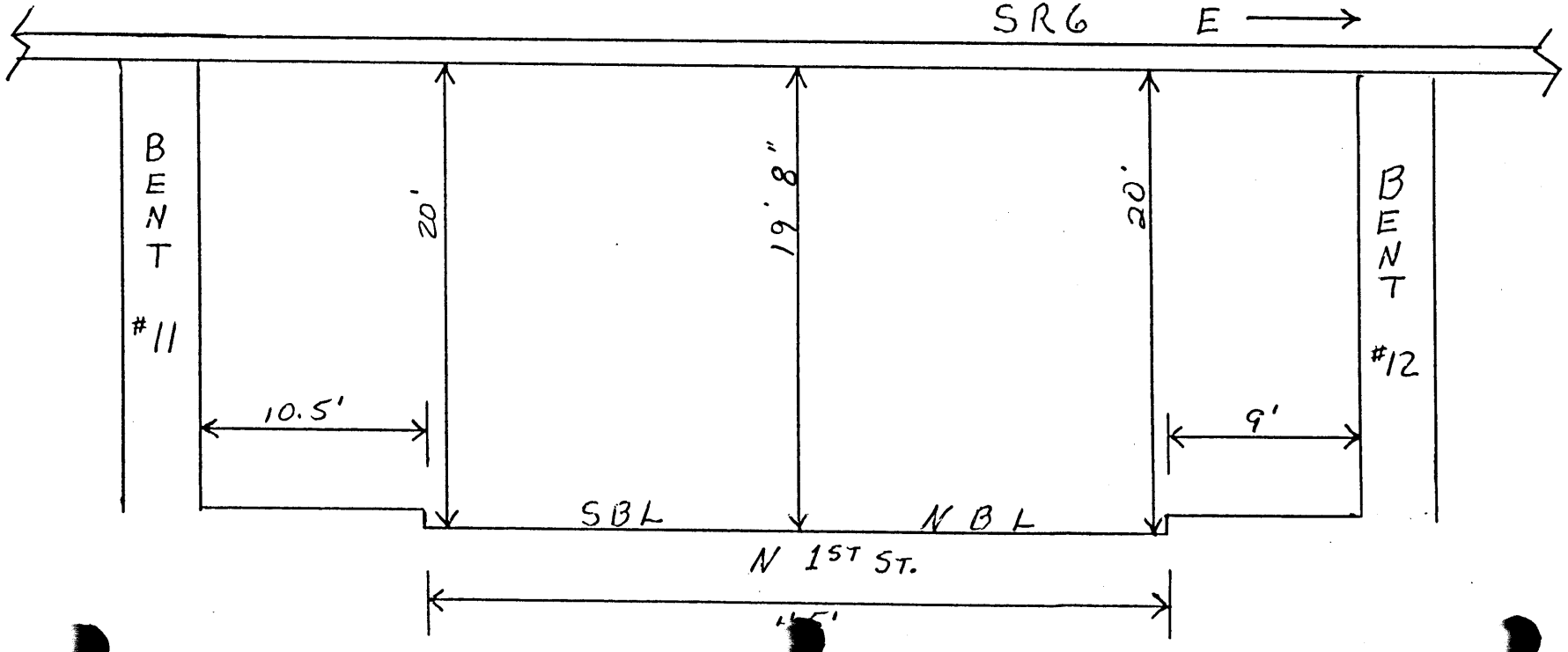
19-6-9.74 / S.S. R.R.



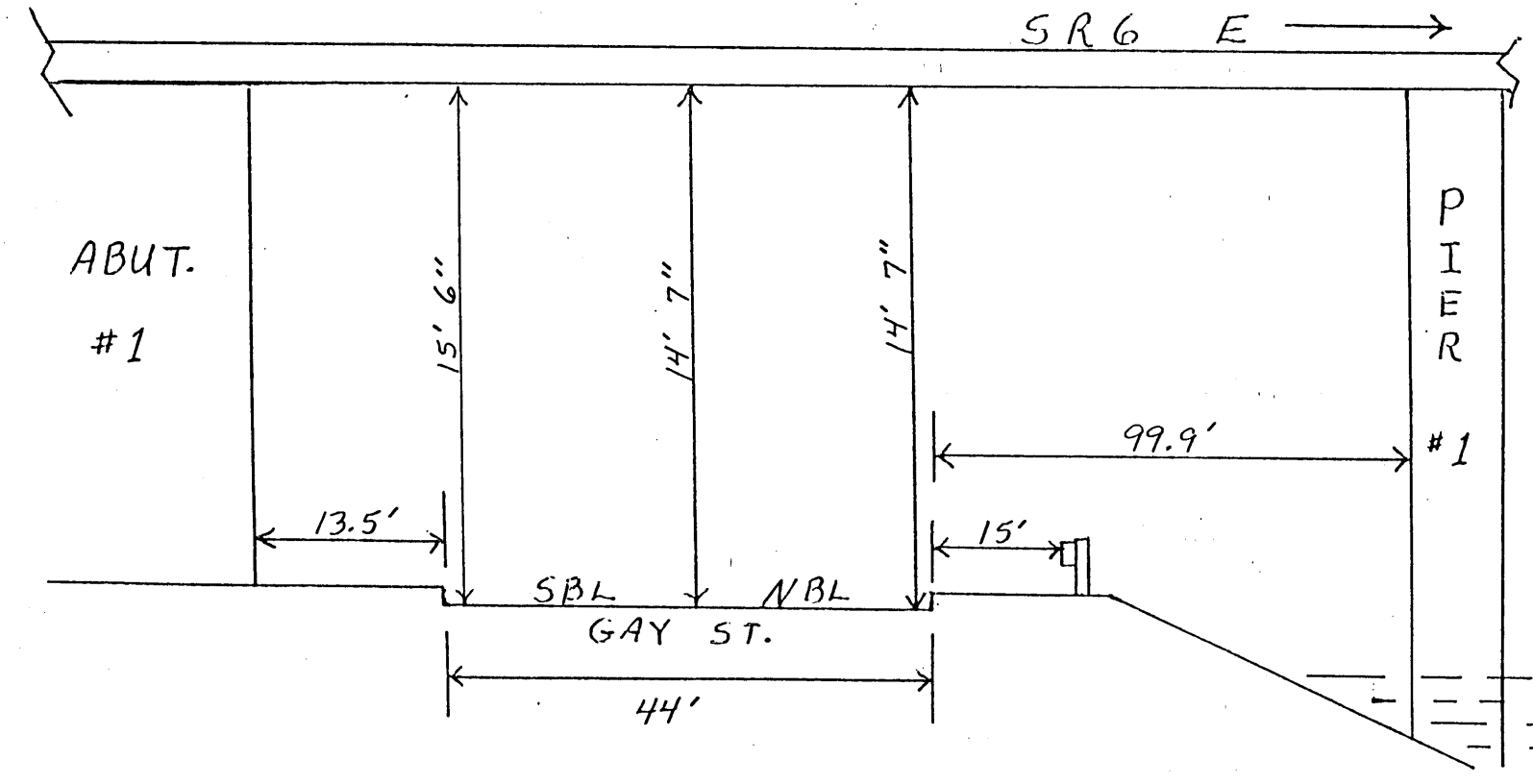
MAR 13 1989

Clearance Sketch

19-6-9.74 / 3266-0.71

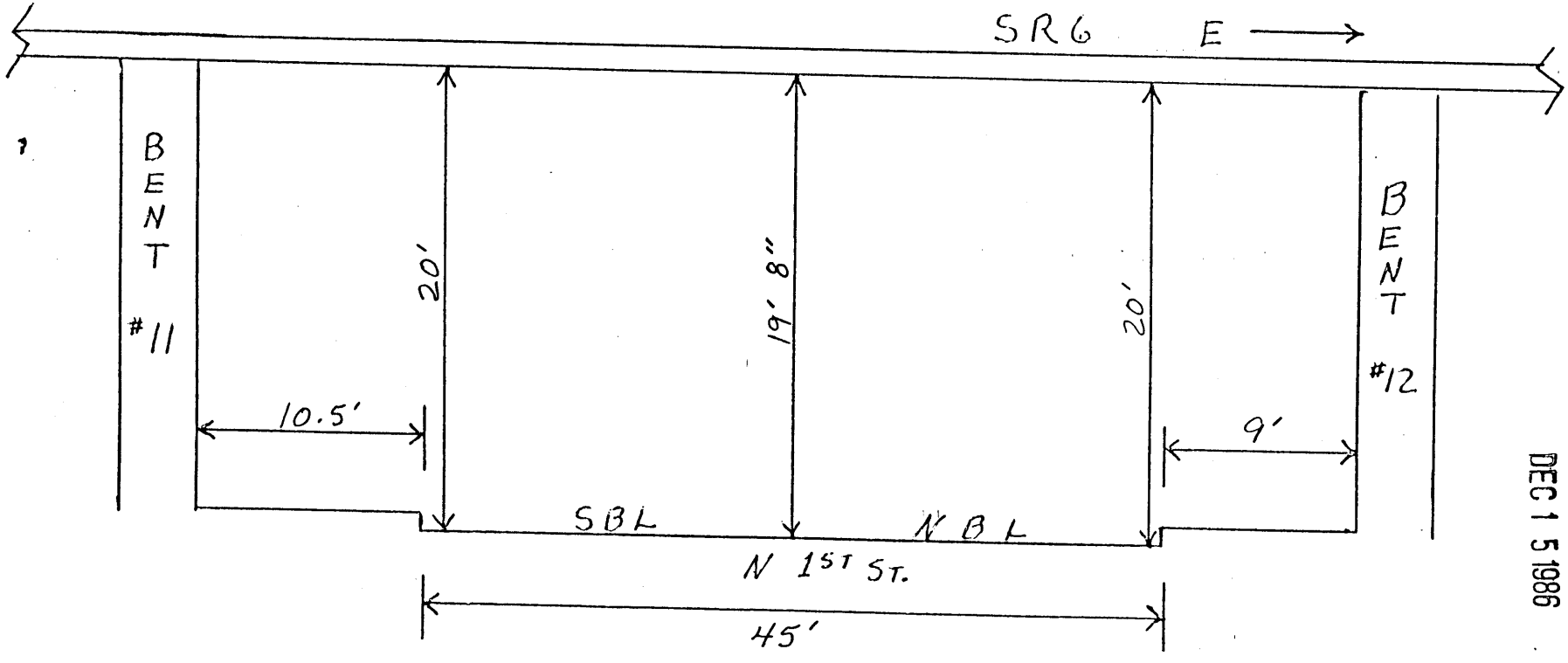


19-6-9.74 / C291-0.25



DEC 1 5 1986

19-6-9.74 / 3266-~~710~~ 0.71



37

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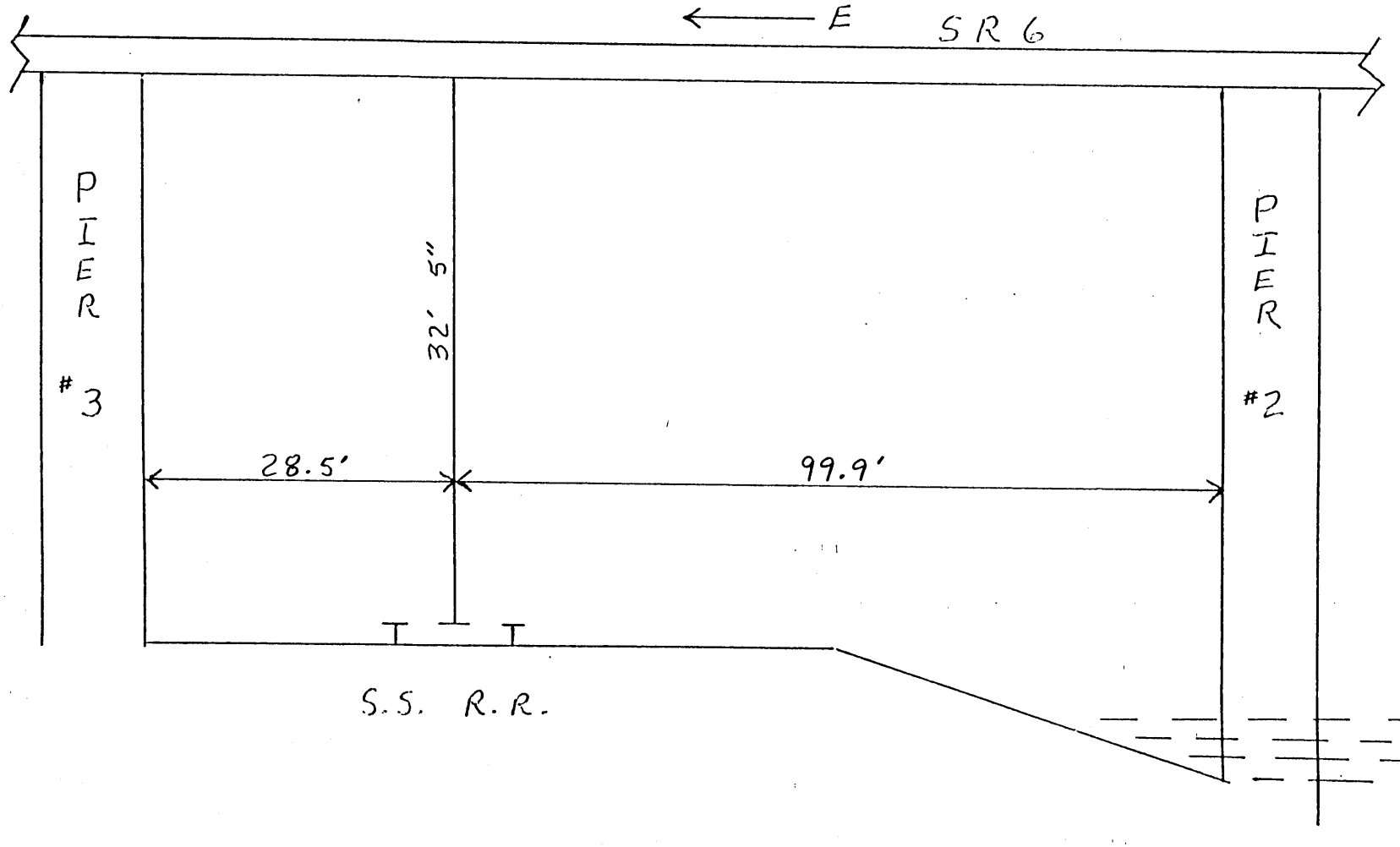
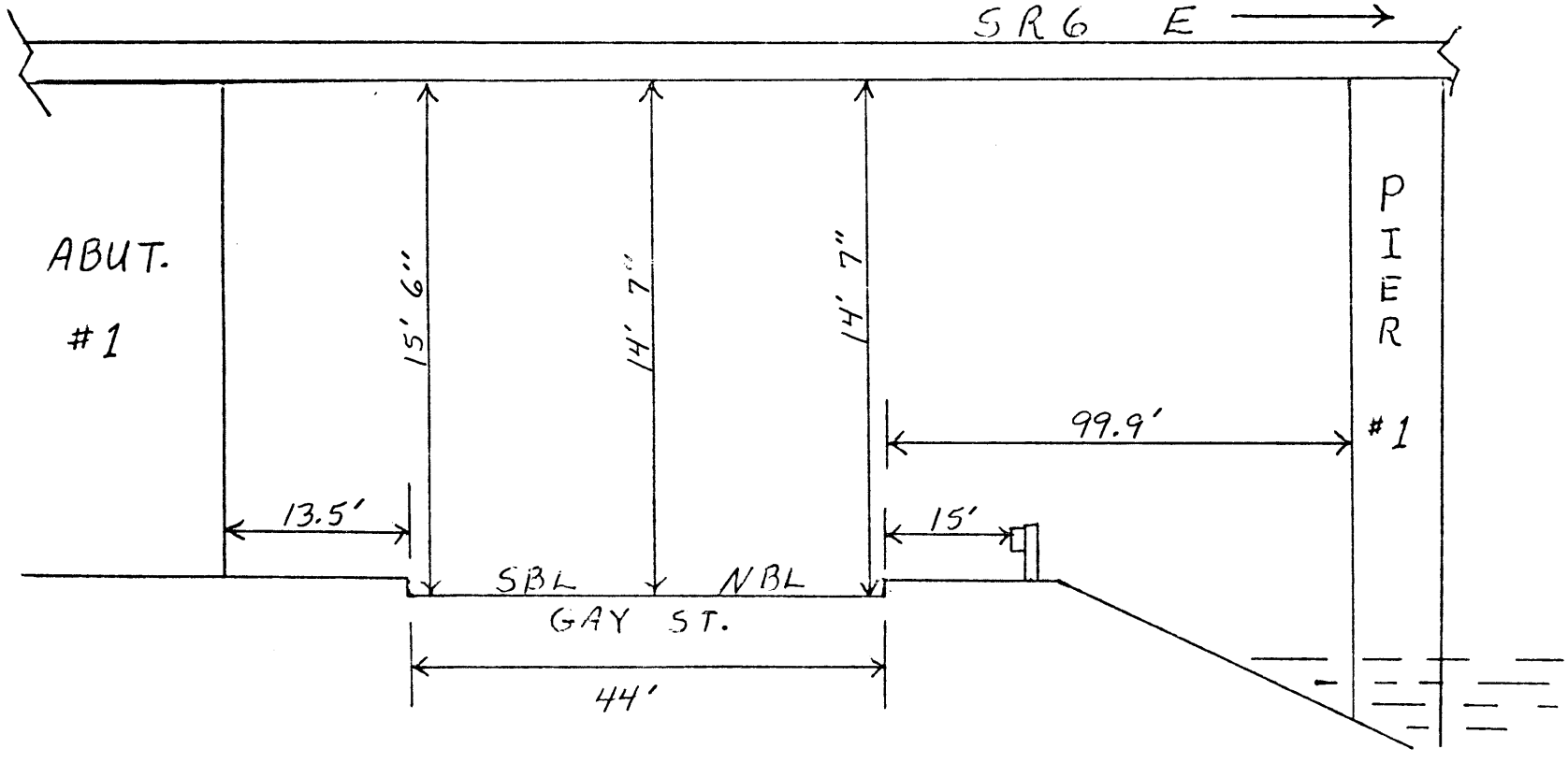
19-6-9.74 / S.S. R.R.



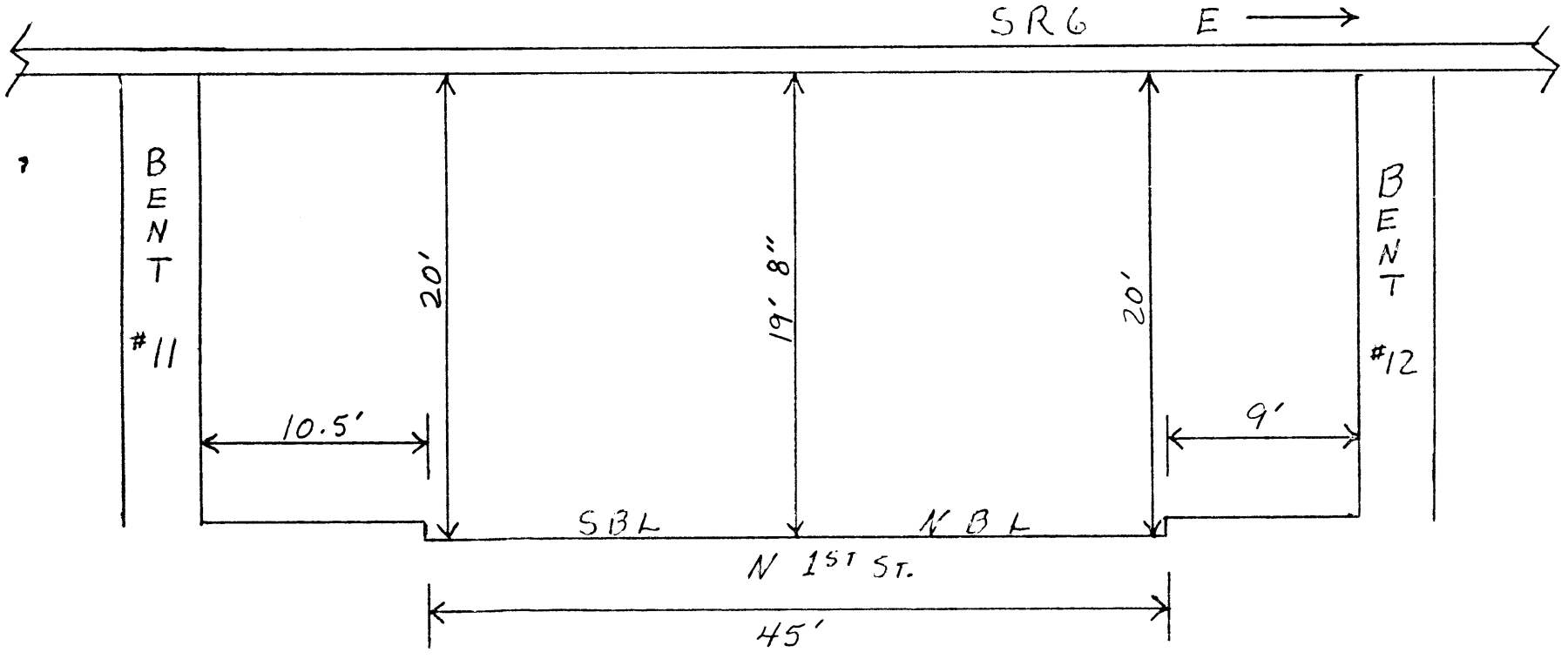
38

DEC 1 5 1986

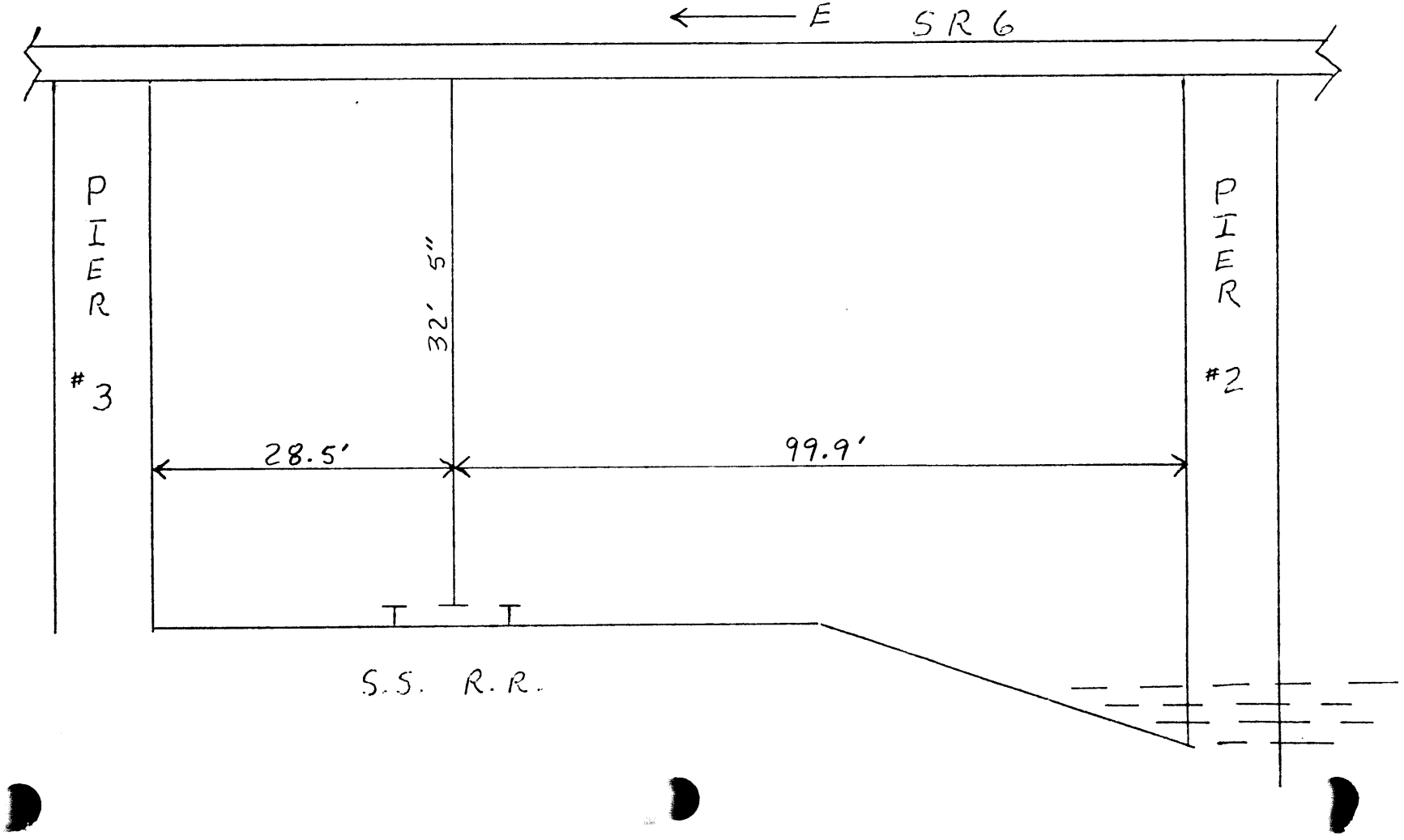
19-6-9.74 / C291-0.25



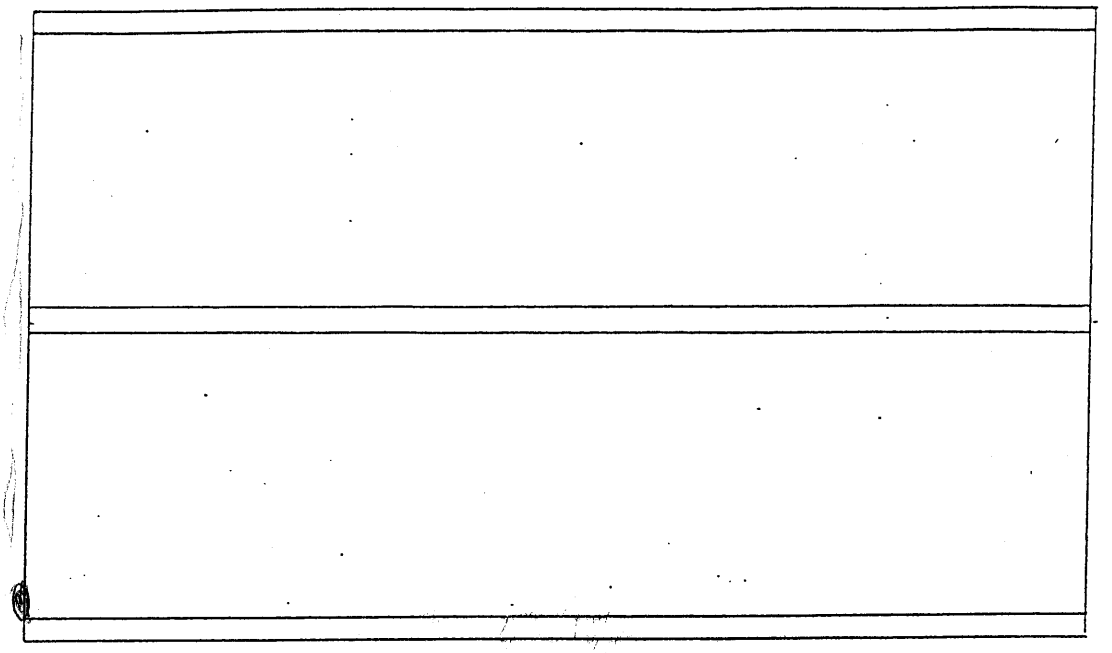
19-6-9.74 / 3266-7.10



19-6-9.74 / S.S. R.R.



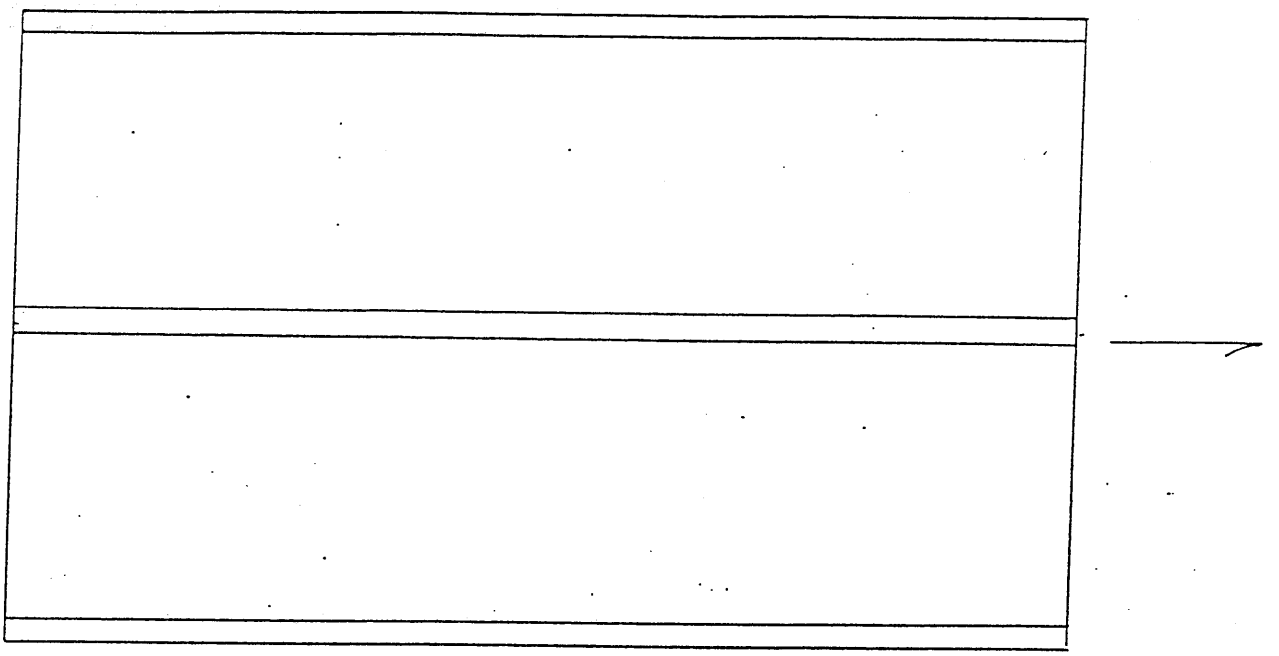
1-11-01 JW
2-11-03 VT



TOP SLab # 1 Br. # 19-6-9.74

		A C overlay (2'14" Dp ~~X~~ New A/C Overlay
Deck	NV	~~Small 2" deep B.O. @ insp. cover in center Lane~~
		~~& (2) 1" deep depressed areas in LT. Lane~~
Curbs	G	
Rail	G	
Sidewalk	F	Trans Cracks up to ~~1/16~~ 1/8" open
Drains	G	
~~X~~Joints	G	Finger Type - ~~2" deep B.O. in Top of backwall w/ small patches~~ Repaired
		pothole 1'x8"x2" Pavement ravelling
		~~X~~

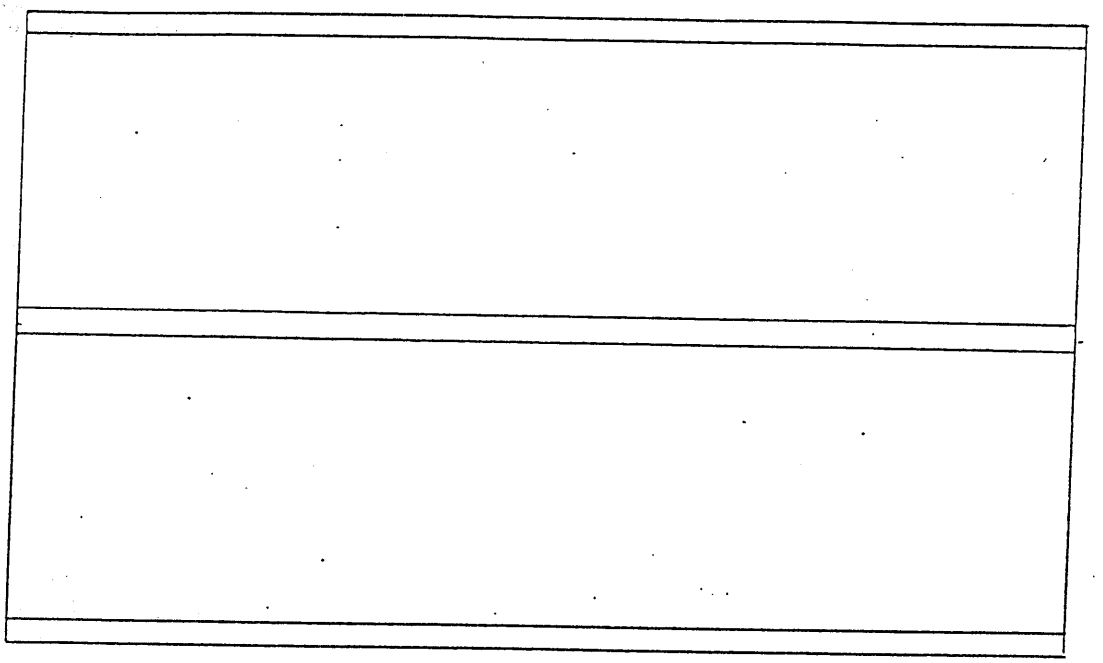
1-11-01 JW
2-11-03 VT



TOP Slab # 2 Br. # 19-6-9.74

Deck	NV	A C overlay Good
Curbs	G	
Rail	G	
Sidewalk	F	sec slab 1
Drains	G	
Joints	NA	

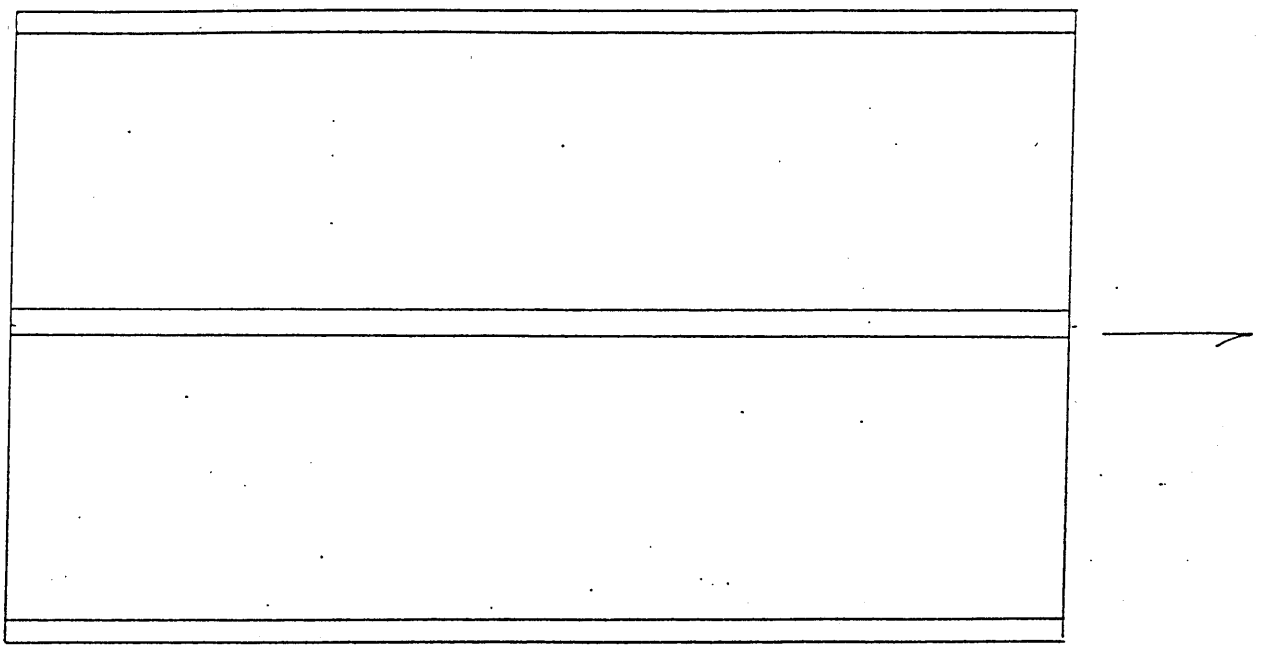
1-11-01 W
2-11-03 VT



TOP Slab #3 Br. # 19-6-9.74

		2" deep BD around insp cover-pin broke on latch
* Deck	NV	~~A C overlay - 2" deep B.D. @ insp. cover cover Lid loose in center beam~~ New A/C overlay
Curbs	G	
Rail	G	
Sidewalk	F	see slab 1
Drains	G	
Joints	G	Finger Type - see slab 1

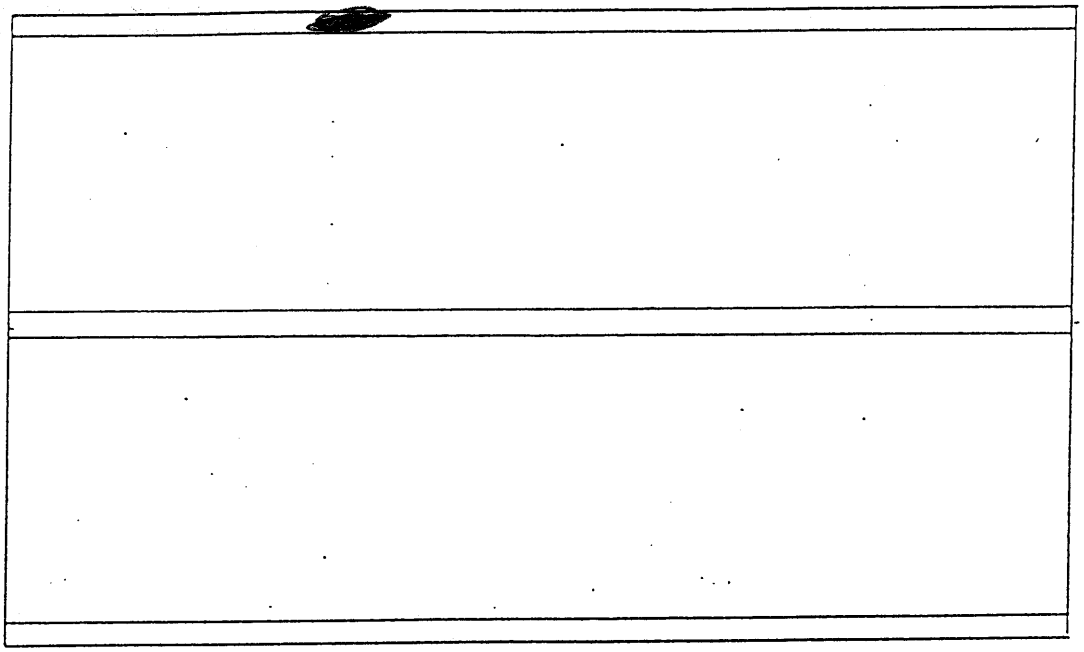
1.11.03 JW
2-11-03 VT



TOP Slab # 4 Br. # 19-6-9.74

Deck	NV	A C overlay Good
Curbs	G	
Rail	G	
Sidewalk	F	see slab 1
Drains	G	
Joints	NA	

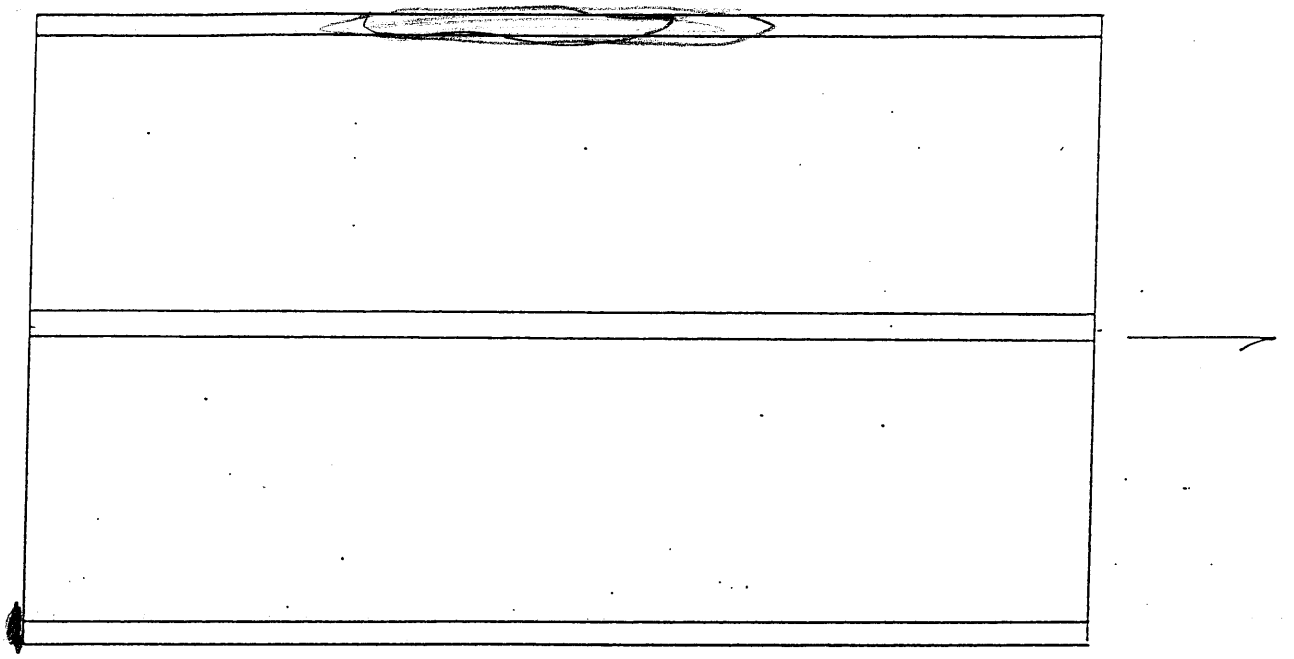
1-11-00 JW
2-11-03 VT



TOP Slab # 5 Br. # 19-6-9.74

Deck	NV	A C overlay Good
Curbs	~~C~~ F	Scale 2'x8"x1" deep
Rail	G	
Sidewalk	F	scc slab 1
Drains	NA	
Joints	NA	

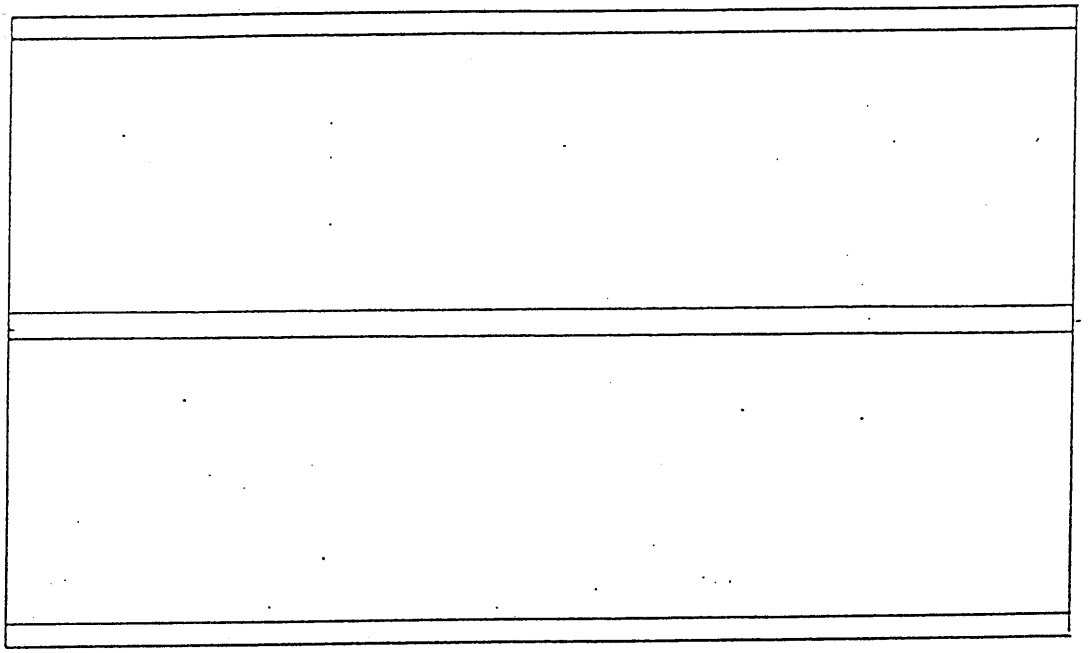
1-11-01 JW
2-11-03 VT



TOP Slab # 6 Br. # 19-6-9.74

Deck	NV	A C overlay Good
curbs	F	12' x 8" x 1" scale
Rail	G	
Sidewalk	F	see slab 1 12" x 4" x 2" hole
Drains	NA	
Joints	NA	

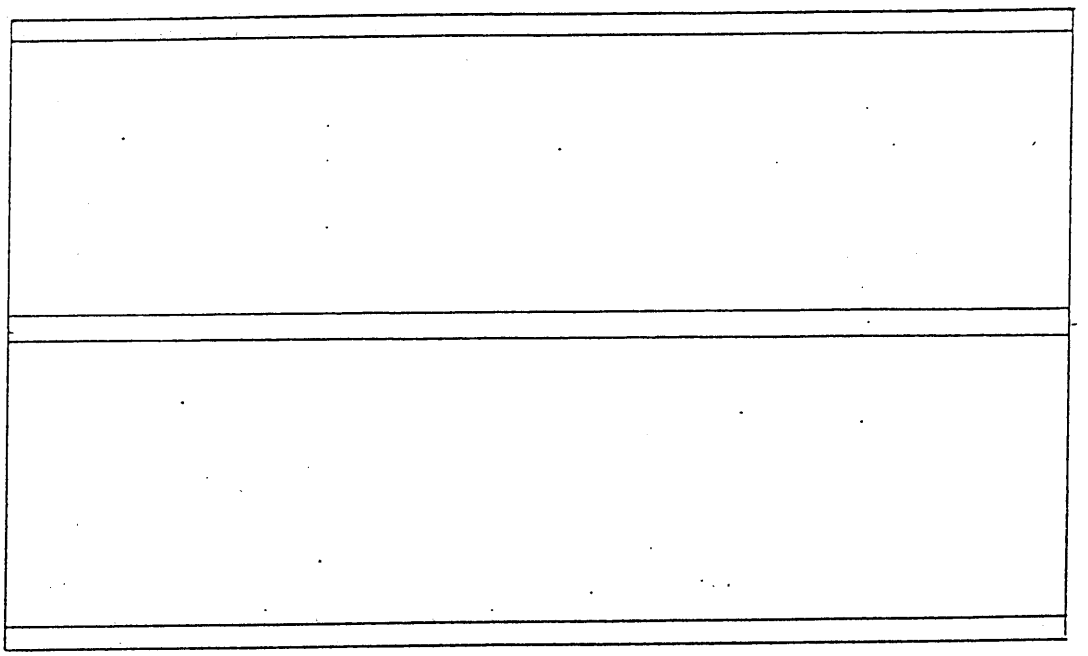
1.11.01 JW
2-11-03 VT



TOP Slab #7 Br. # 19-6-9.74

Deck	NV	~~A C overlay Fair patches & depressions around drain LT. side & 3" Dp Potholes @ Joint~~
Curbs	F	2 1/2" deep scale @ Joint
Rail	G	
(2) Sidewalk	~~P~~ G P	~~Cracks & Breakouts Through depth of S.W w/exp steel on RT. side @ Joint~~ Repaired
Drains	P	Clogged on RT. open on LT.
Joints	G	see slab 1
Deck	NV	New A/C Overlay Good
(2) S/W	G	Patched

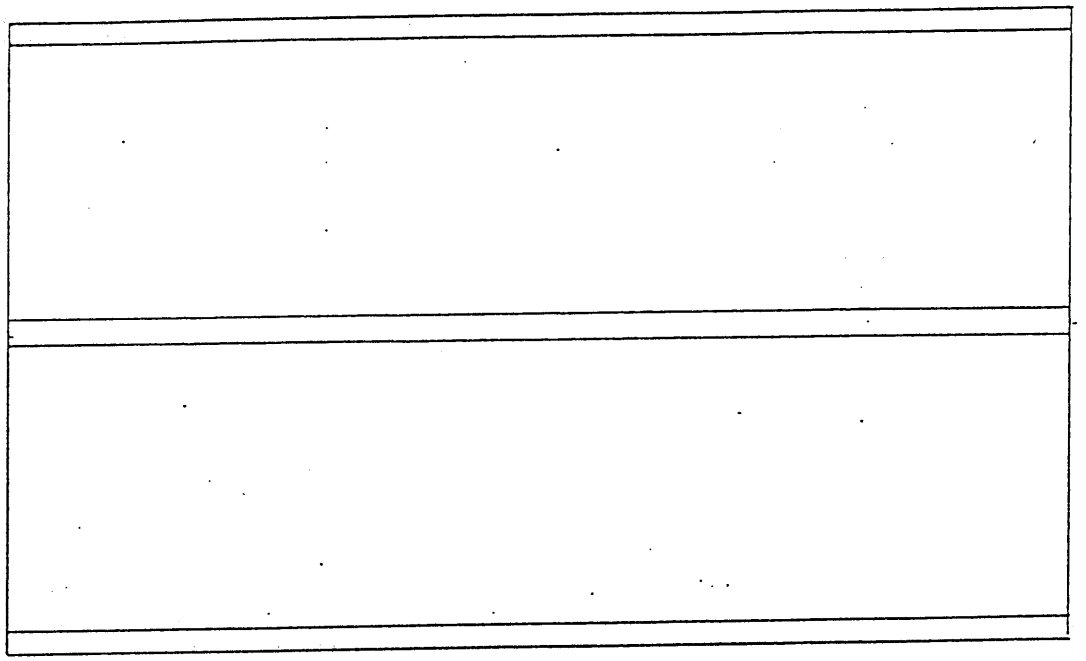
1-11-01 JW
2-11-03 VT



TOP SLab #8 Br. # 19-6-9.74

Deck	NV	A C overlay Good
Curbs	G	
Rail	G	
Sidewalk	F	see slab 1
Drains	NA	
Joints	NA	

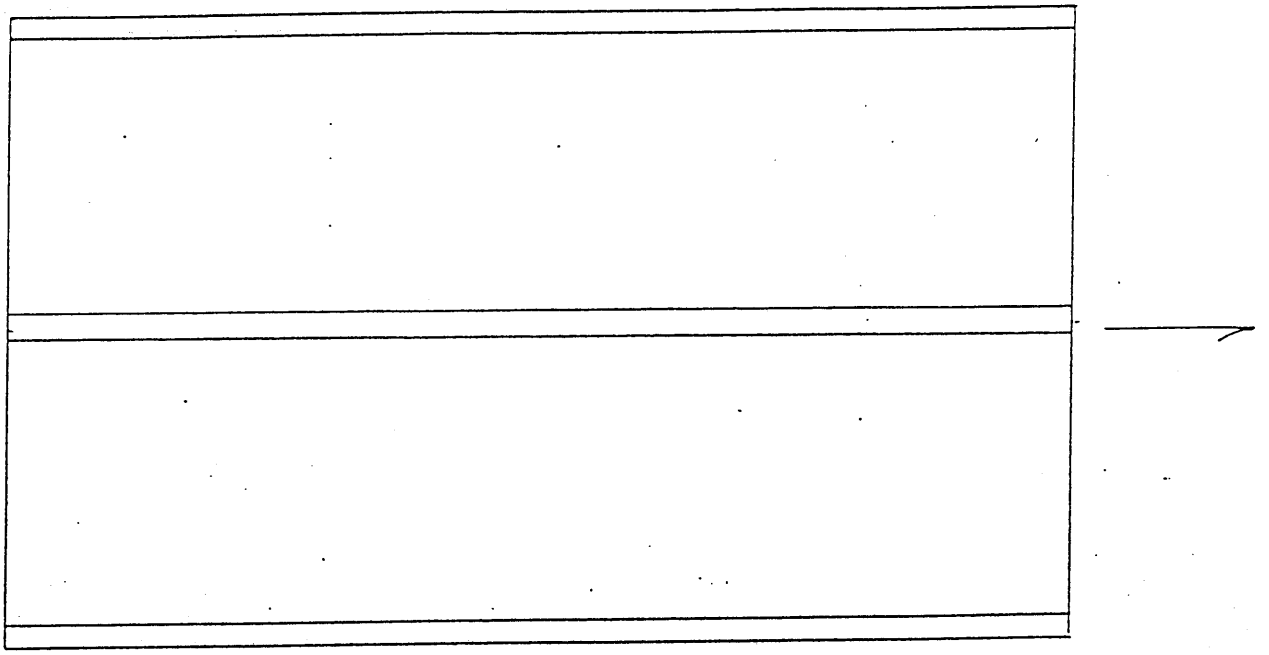
1.11.01 JW
2-11-03 VT



TOP Slab # 9 Br. # 19-6-9.74

*Deck	NV	~~A C overlay Fair - rough A.C w/ 1½" deep potholes & small patches LT side~~
Curbs	G	
Rail	G	
Sidewalk	F	see slab 1
Drains	P.	Clogged on RT. open on LT.
Joints	NA	
*Deck	G	New A/C Overlay

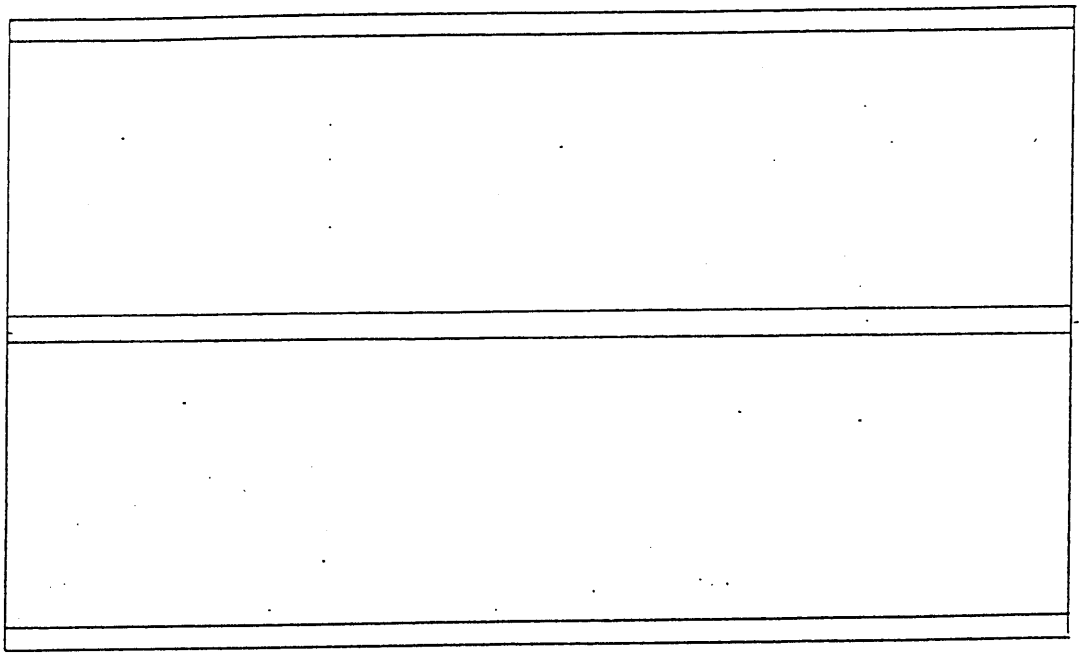
1.11.01 JW
2-11-03 VT



TOP Slab #10 Br. # 19-6-9.74

Deck	NA	A C overlay Good
Curbs	G	
Rail	G	
Sidewalk	F	see slab 1
Drains	NA	
Joints	NA	

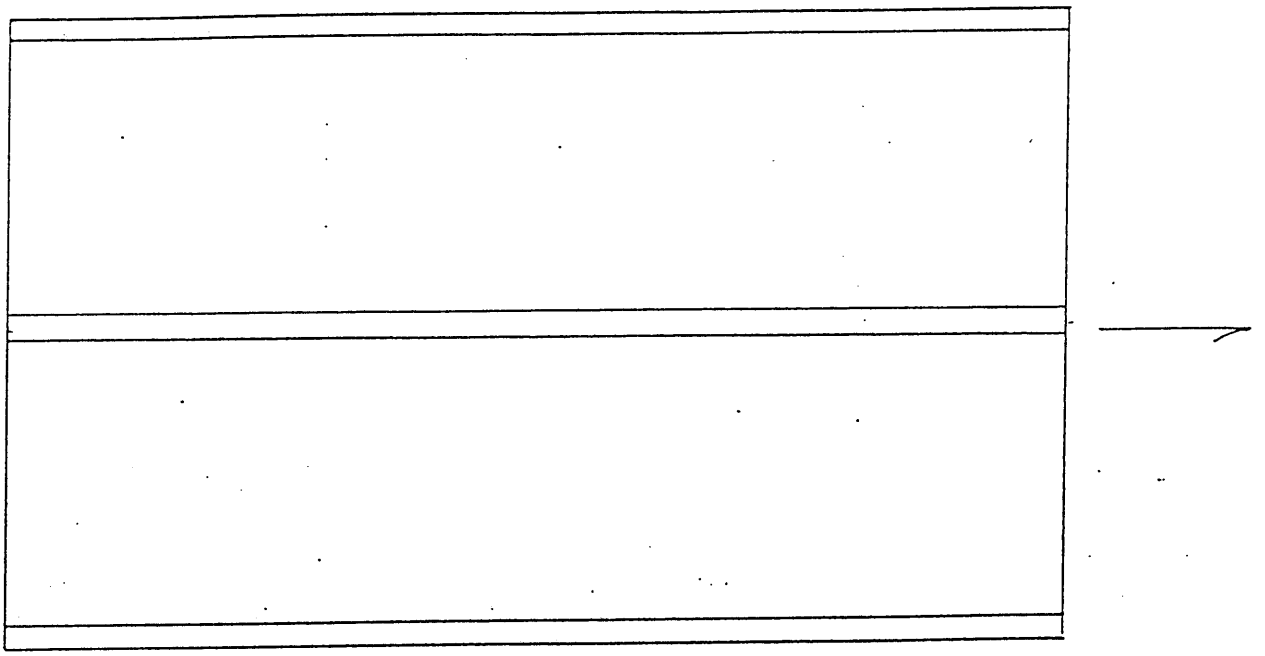
1-11-01 JW
2-11-03 VT



TOP SLAB #11 Br. # 19-6-9.74

*Deck	NV	A/C New Road
Curbs	F	6" deep scaled area @ joint w/exp steel
Rail	G	
Sidewalk	F	see slab 1
Drains	P	Clogged on RT.
Joints	G	see slab 1

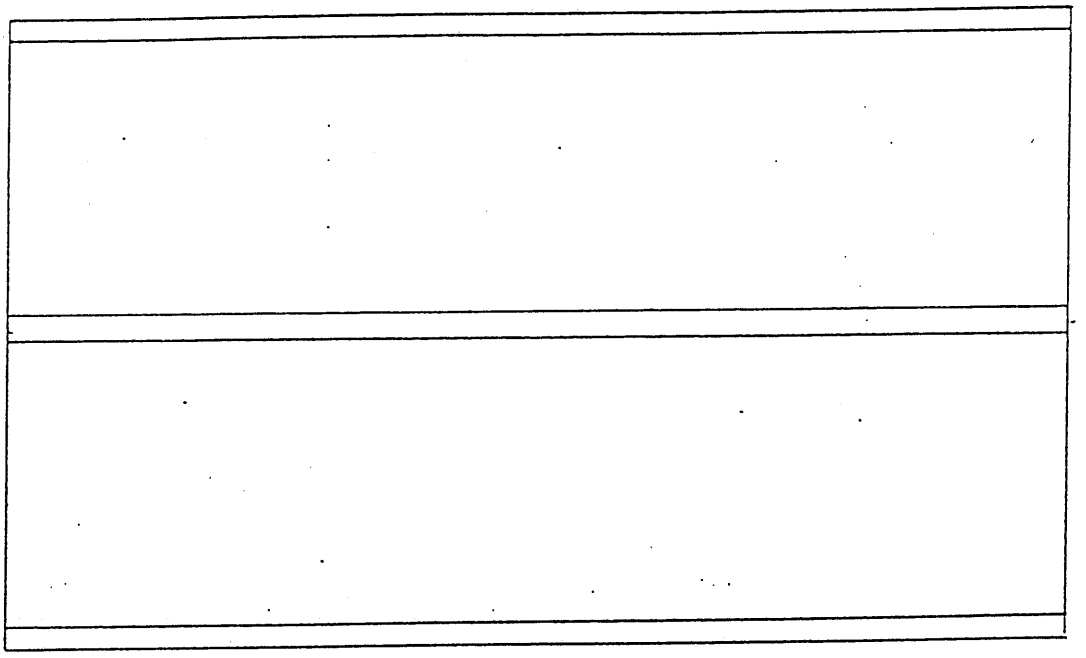
1-11-01 JW
2-11-03 VT



TOP Slab #12 Br. # 19-6-9.74

*Deck	FG	~~A C overlay raveling in center lane~~ A/C Replaced 2 1/2" Dp
Curbs	G	
Rail	G	
Sidewalk	F	see slab 1
Drains	NA	
Joints	NA	

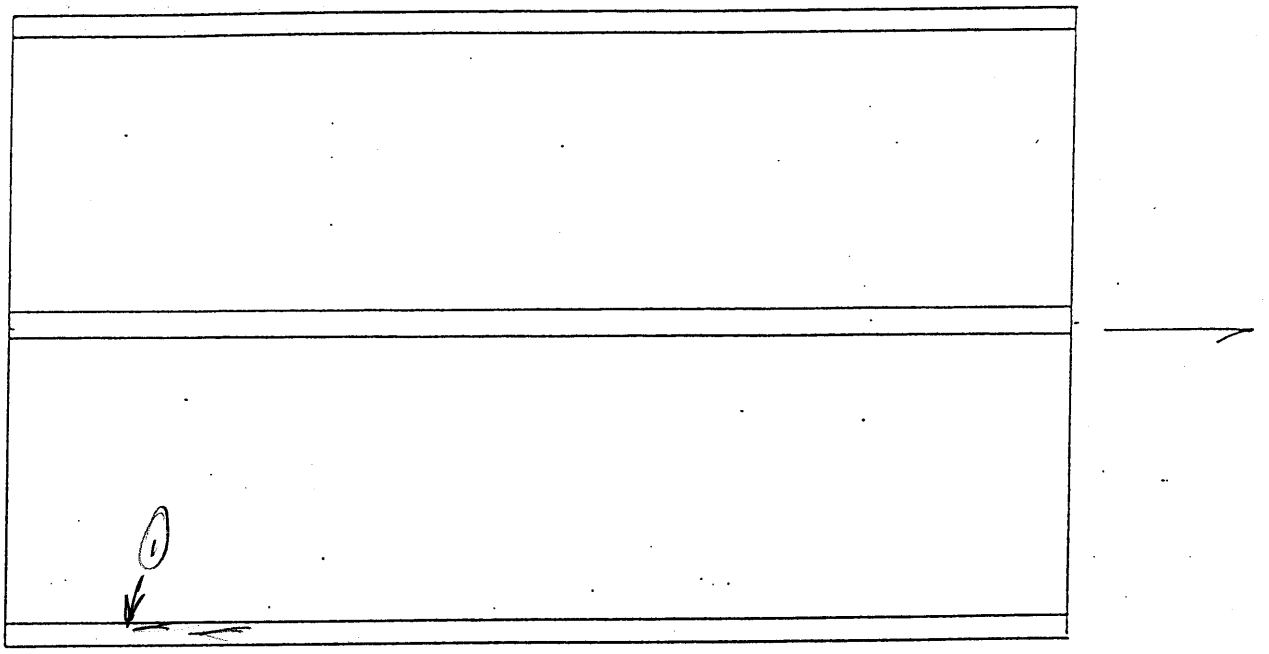
7.11.01 JW
2-11-03 VT



TOP Slab # 13 Br. # 19-6-9.74

* Deck	NV	~~A C overlay Fair - pothole @ drain 1½' x 4" deep - raveling in center lane Rpaved~~
Curbs	G	
Rail	G	
Sidewalk	F	see slab 1
Drains	P	Clogged on RT. side
Joints	NA	
Deck	G	New A/C Overlay

1-11-01 JW
2-11-03 VT



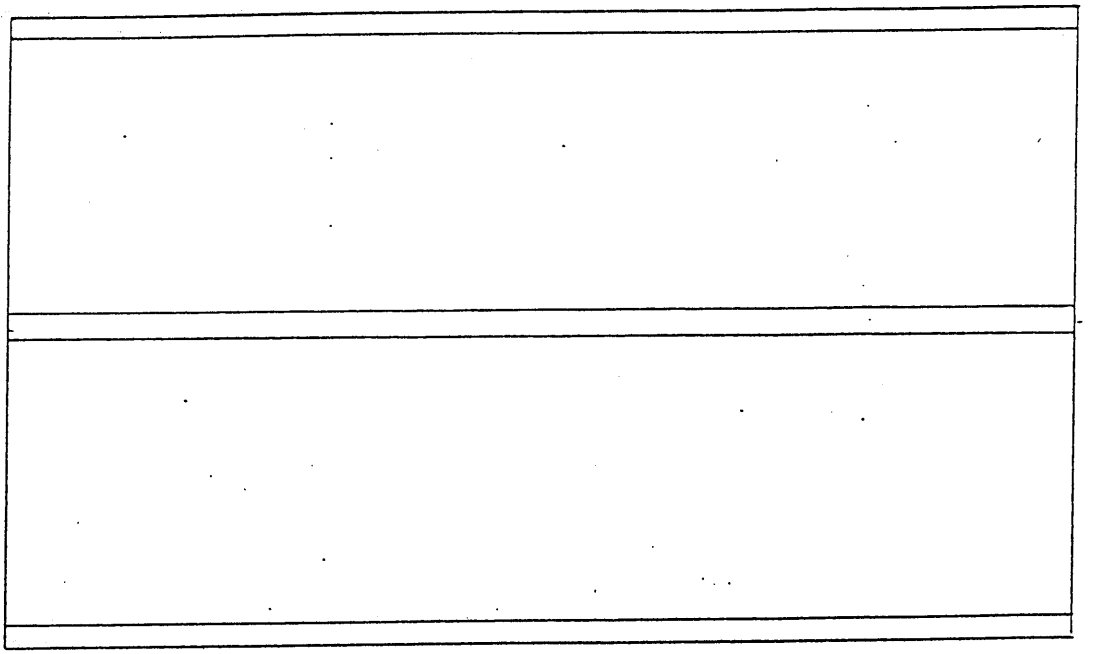
TOP Slab #14 Br. # 19-6-9.74

*Deck	G	~~see slab 1~~
curbs	G	
Rail	~~F~~ P	~~Coll dam. w/ 2 broken post on Rt.~~ Repaired ① collision dam. w/2 broken post on Rt
Sidewalk	F	see slab 1
Drains	NA	
Joints	NA	

*

*

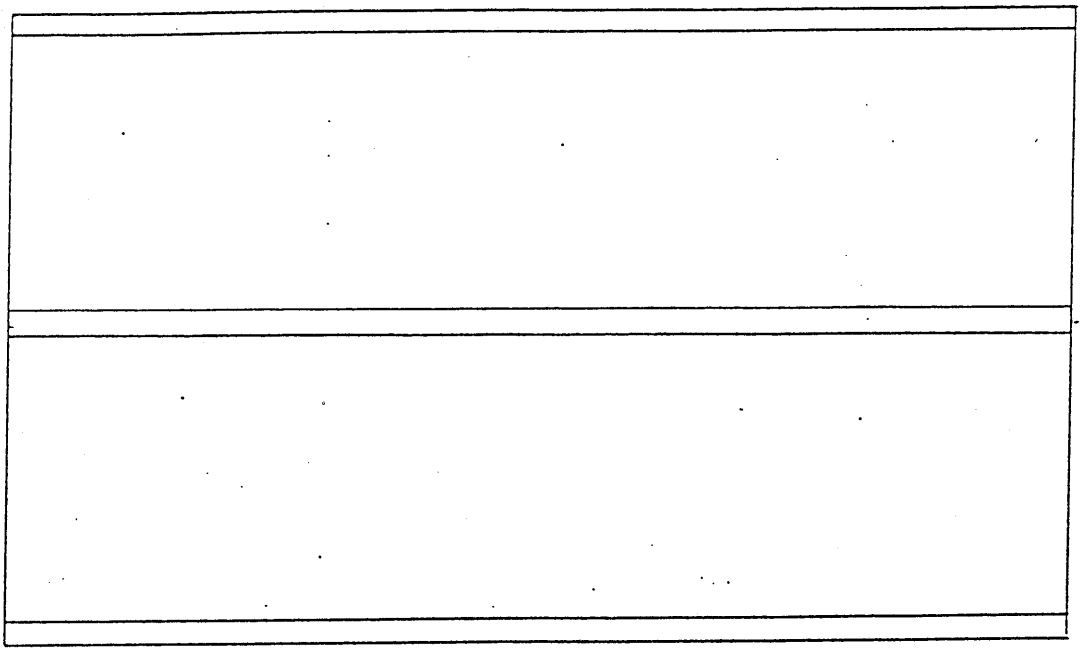
1-11-01 JW
2-11-03 VT



TOP Slab #15 Br. # 19-6-9.74

Deck	NV	~~See Slab 1~~ Good Resurfaced.
Curbs	F	scale up to 2" deep on rt.
Rail	G	
*Sidewalk	~~F~~ G	~~Trans & pattern cracks scale & pitting up to 1"~~
	F	~~deep on all rt side~~
Drains	P	100% clogged rt. side
Joints	NA	

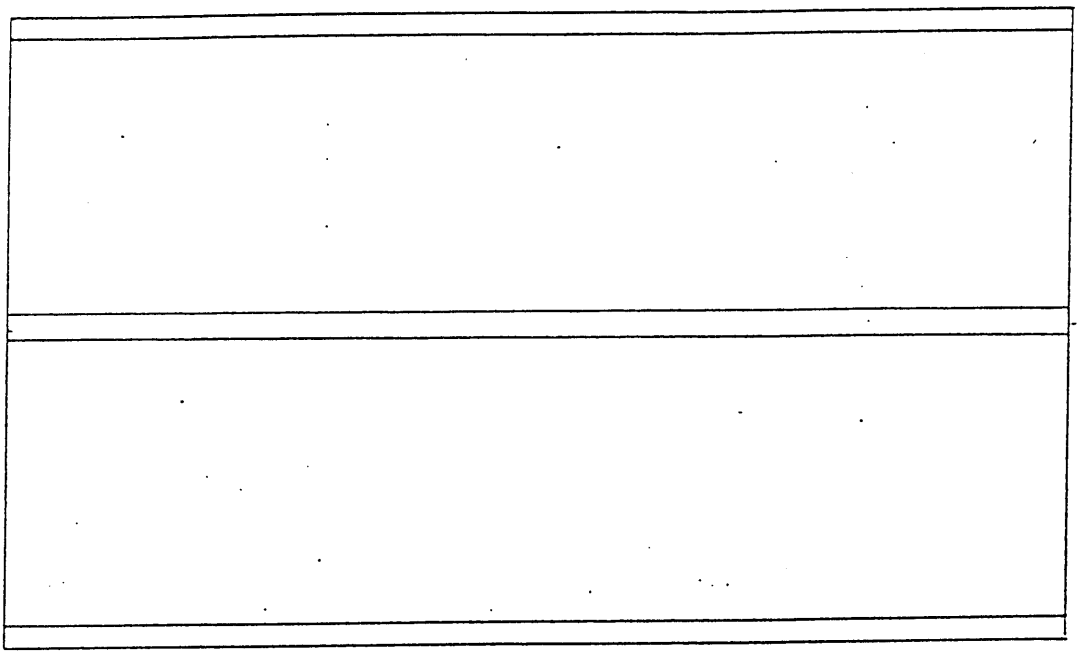
1-11-01 JW
2-11-03 VT



TOP Slab #16 Br. # 19-6-9.74

*Deck	NV	A C overlay ~~Fair 1½' x 3" deep pothole @ Joint~~ Repaired GOOD
Curbs	F	scale area @ Joint RT. side 3' x 6" deep w/exp steel
Rail	G	
Sidewalk	~~P~~ F	~~Large cracks & Breakouts through entire depth w/exp steel @ Joint area~~ Repaired.
Drains	P	clogged on RT.
Joints	G	see slab 1 up 1" @ 30° F.

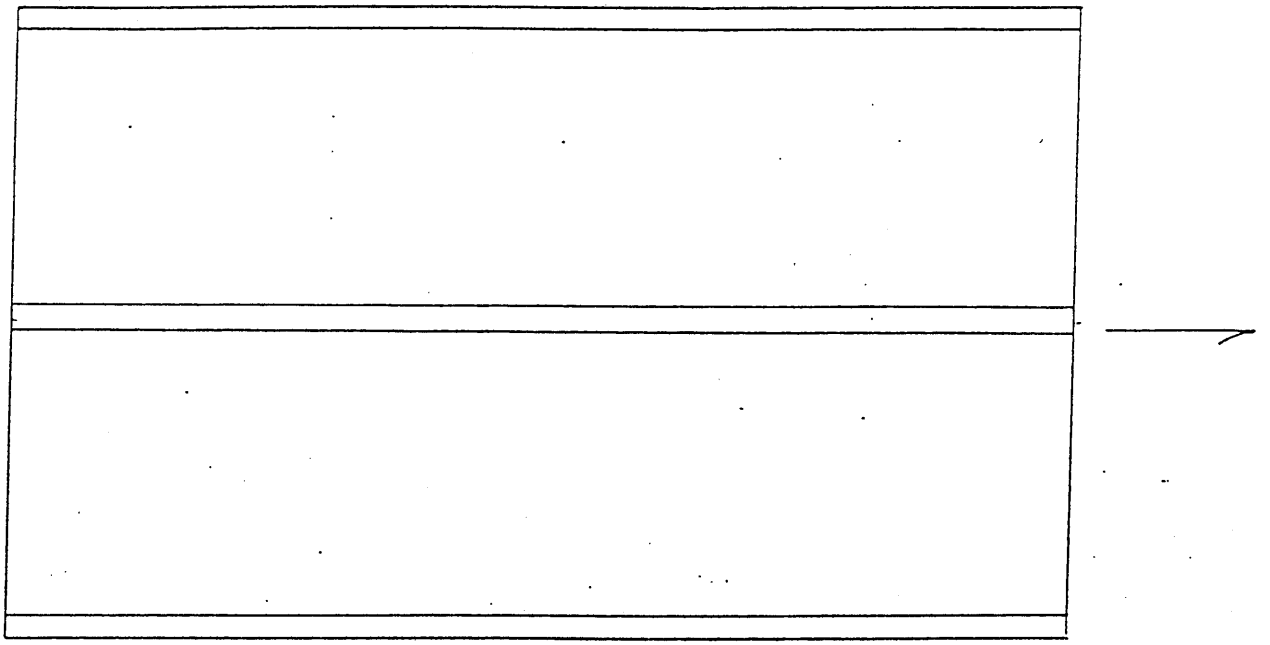
1-11-01 JW
2-11-03 VT



TOP SLab # 17 Br. # 19-6-9.74

Deck	NV	A C overlay Good
Curbs	G	
Rail	G	
Sidewalk	F	
Drains	NA	
Joints	NA	

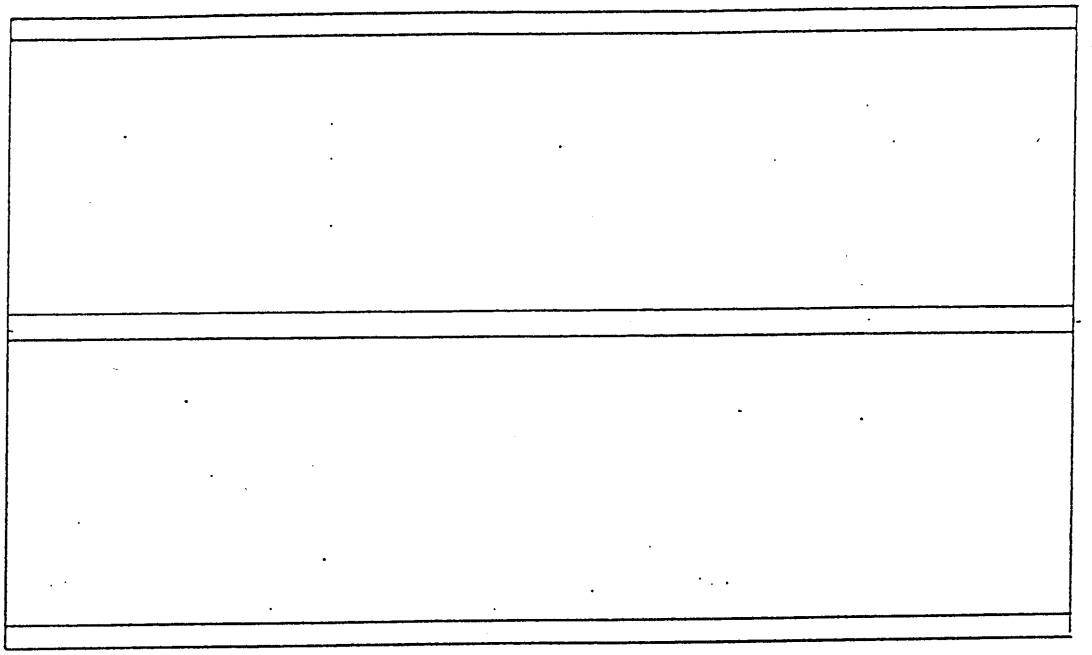
1-11-01 JW
2-11-03 VT



TOP SLab # 18 Br. # 19-6-9.74

Deck	NV	A C overlay Good
Curbs	G	
Rail	G	
Sidewalk	F	see slab 1
Drains	NA	
Joints	NA	

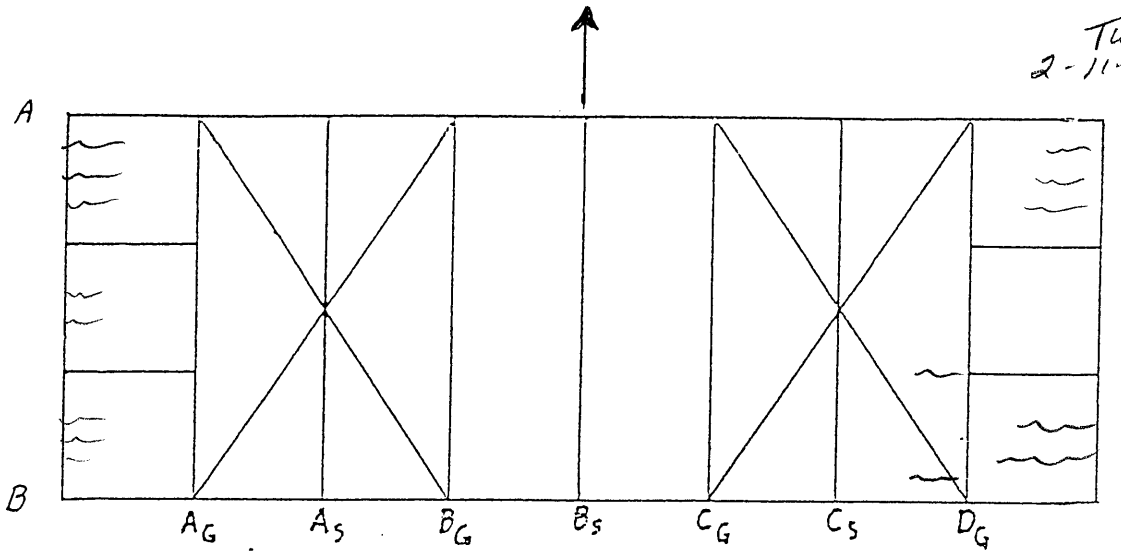
1-11-01 JW
2-11-03 VT



TOP Slab #19 Br. # 19-6-9.74

Deck	NV	~~A C overlay Fair 2" deep depression + patch @ Joint~~ Resurfaced Good
Curbs	F	map cracks + 2" deep scale @ Joints
Rail	G	appr. rail disconnected on RT. + LT.
Sidewalk	F	see slab 1
Drains	G	
Joints	G	side x side metal plates - no opening Closed @ 1/4" Open @ Min.

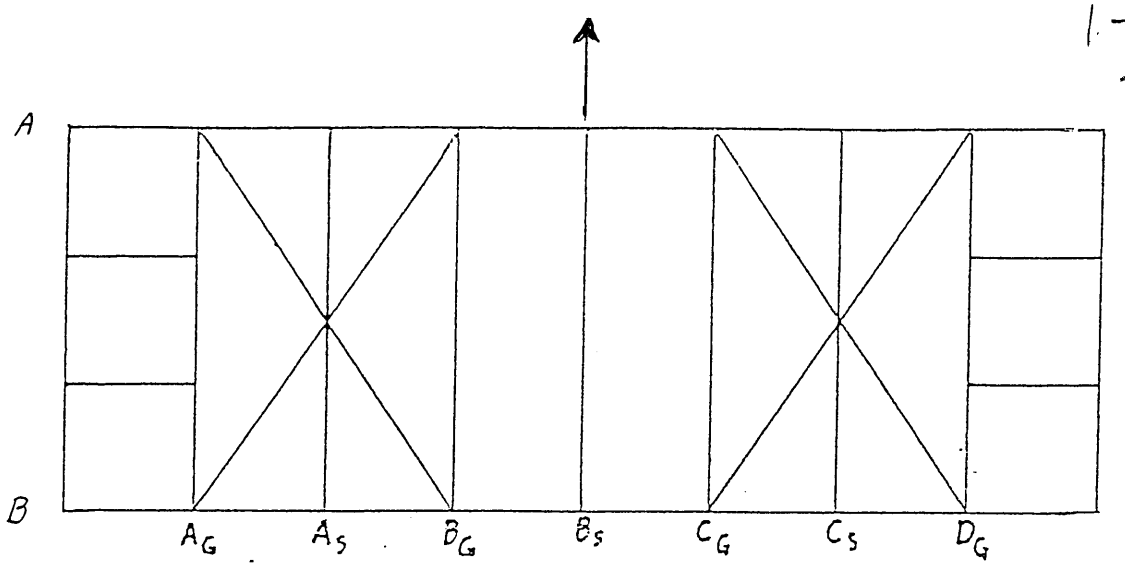
1-11-TOMP
1-11-01
TWC.
2-11-03 R



Bottom Span #1 panel 1 Br. # 19-6-9.74

Deck	Fair	random transverse hair cracks w/ efflor.
Floor Beams	Fair	mod. corr
Girders	Fair	mod. corr
Stringers	Fair	lgt. to mod. corrosion on top & bottom flange
Lateral Bracing	Good	lgt. corrosion & paint loss
Sidewalk Brackets	Fair	mod. corrosion mainly @ connection plates

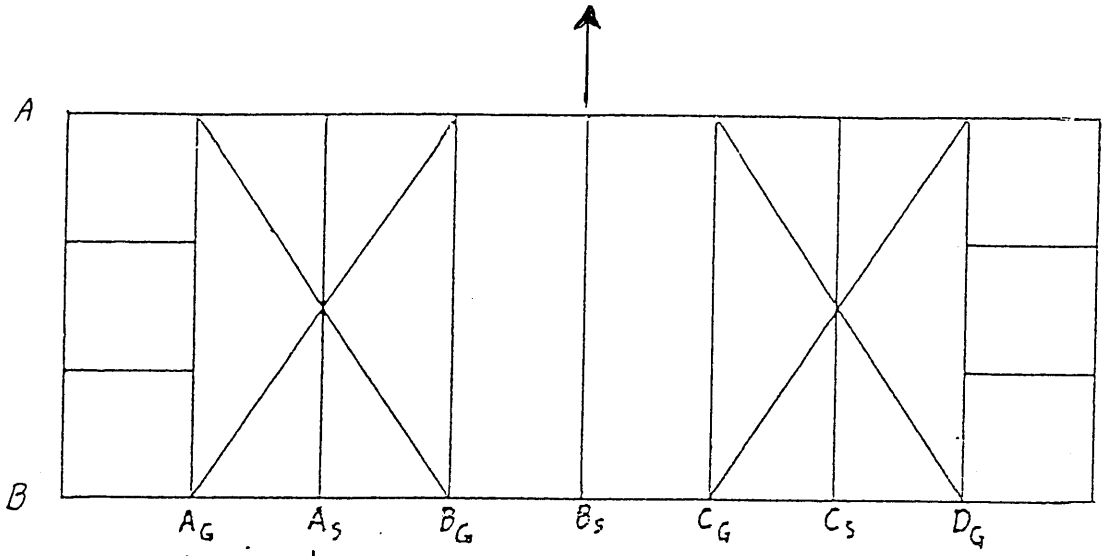
IC II IIND
2-11-03 R
1-11-01
TWC.



Bottom Span #1 panel 2 Br. # 19-6-9.74

Deck	Fair	see span #1
Floor Beams	Fair	
Girders	Fair	
Stringers	Fair	lgt. to mod. corrosion on top & bottom flange
Lateral Bracing	Good	
Sidewalk Brackets	Fair	

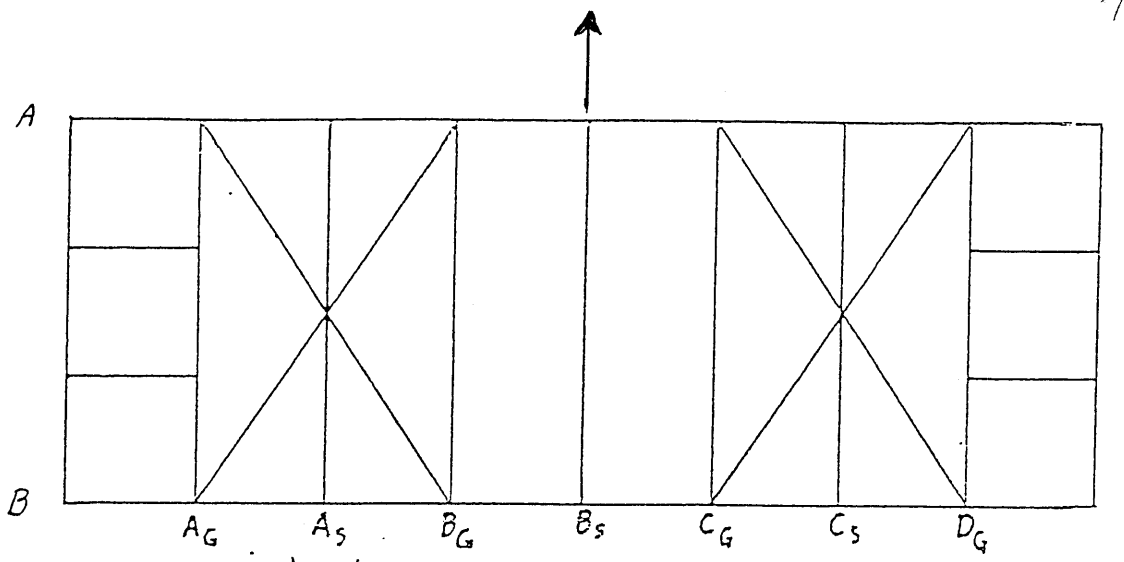
2-11-03 R
1-11-01
TWC



Bottom Span # 1 panel 3 Br. # 19-6-9.74

Deck	Fair	see span # 1
Floor Beams	Fair	"
Girders	Fair	"
Stringers	Fair	"
Lateral Bracing	Fair	"
Sidewalk Brackets	Fair	"

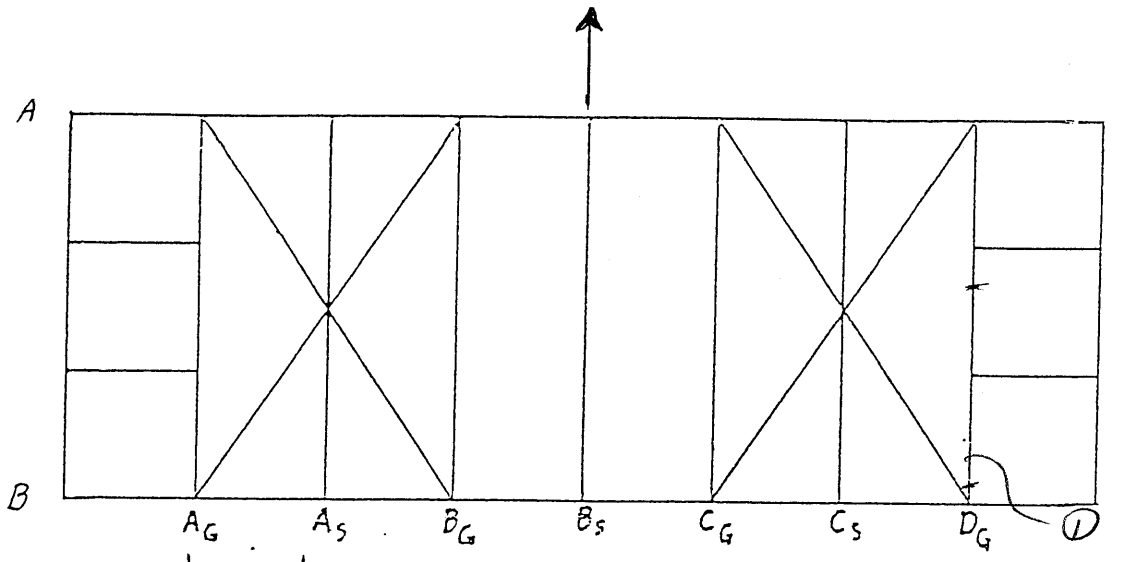
1-11-0
Twc.



Bottom Span #1 panel 4 Br. # 19-6-9.74

Deck	Fair	see span # 1
Floor Beams	Fair	"
Girders	Fair	"
Stringers	Fair	"
Lateral Bracing	Fair	"
Sidewalk Brackets	Fair	"

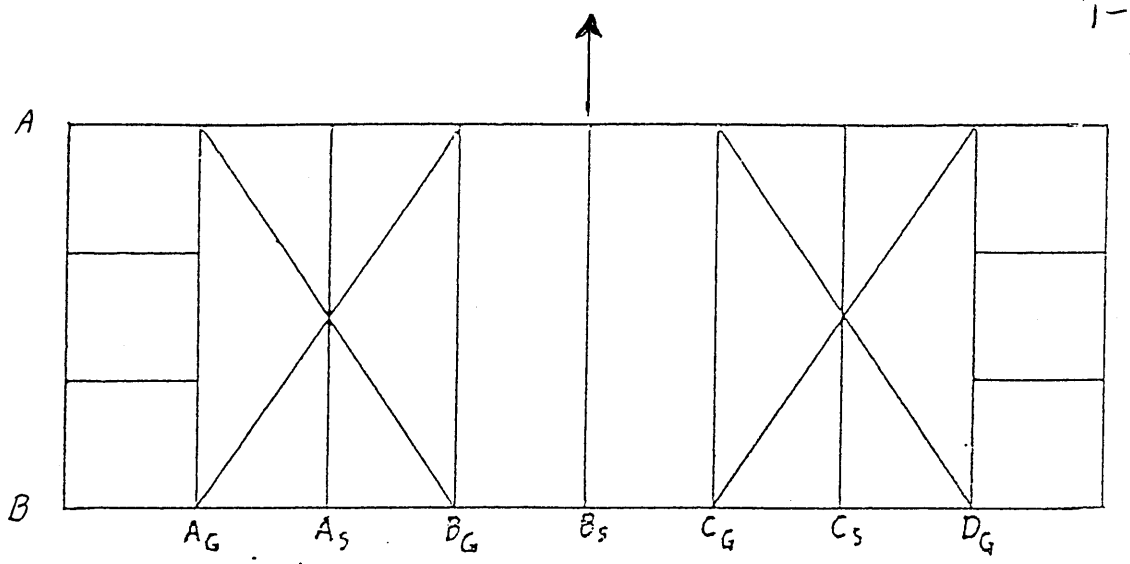
2-11-03 +
9-11-01
TWC.



Bottom Span #1 panel 5 Br. # 19-6-9.74

Deck	Fair	See span # 1
Floor Beams	FAIR	
Girders	Fair	① heavy corrosion on bottom flange
Stringers	Fair	
Lateral Bracing	Fair	
Sidewalk Brackets	Fair	

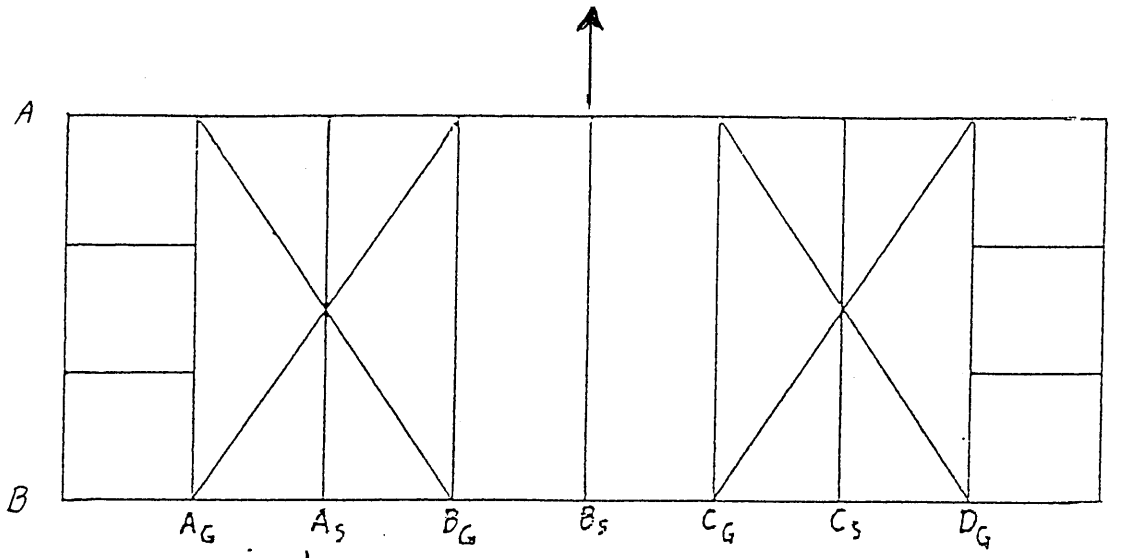
12-14-98 mp
2-11-03 R
1-11-01
Twc.



Bottom Span # 1 panel 6 Br. # 19-6-9.74

Deck	Fair	See span # 1
Floor Beams	Fair	"
Girders	Fair	"
Stringers	Fair	"
Lateral Bracing	Fair	"
Sidewalk Brackets	Fair	"

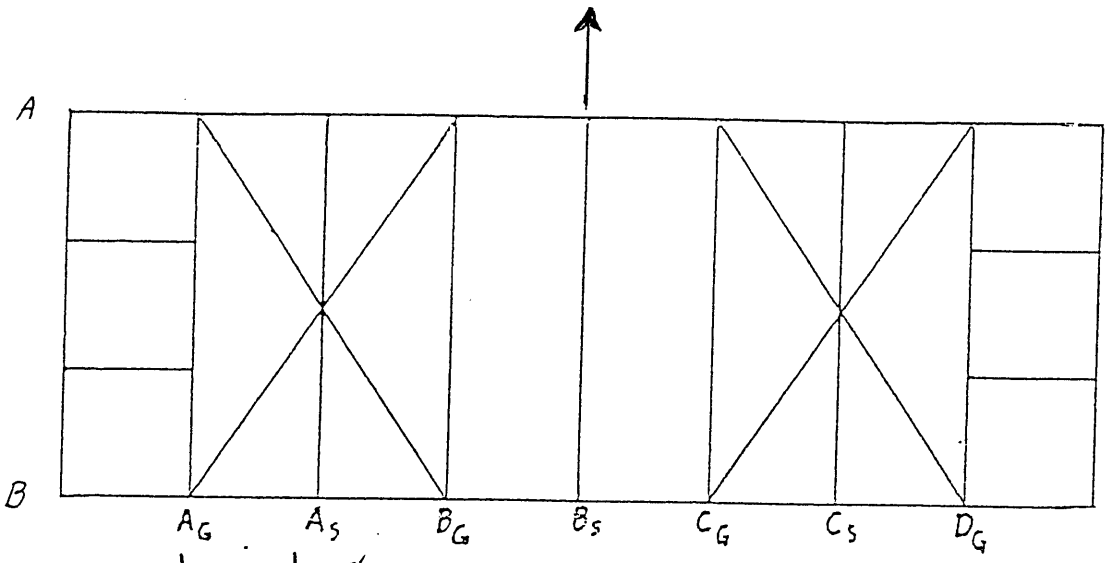
2-11-03
1-11-01
TWC.



Bottom Span #1-panel 7 Br. # 19-6-9.74

Deck	Fair	see span #1
Floor Beams	F	"
Girders	F	"
Stringers	F	"
Lateral Bracing	F	"
Sidewalk Brackets	F	"

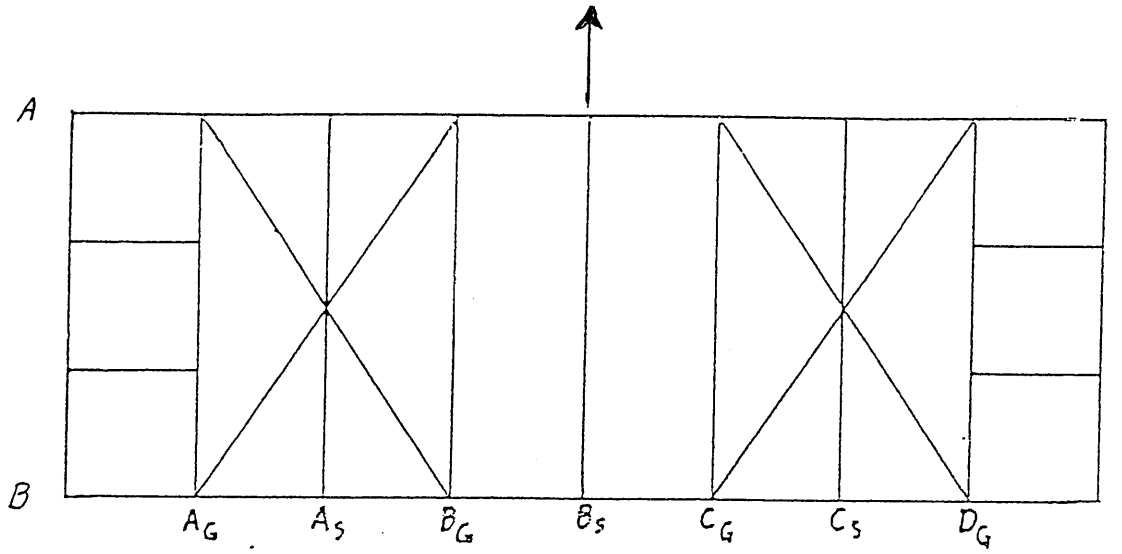
241-03R
1-11-01
TWC.



Bottom Span #1 panel 8 Br. # 19-6-9.74

Deck	Fair
Floor Beams	F
Girders	F
Stringers	F
Lateral Bracing	F
Sidewalk Brackets	F

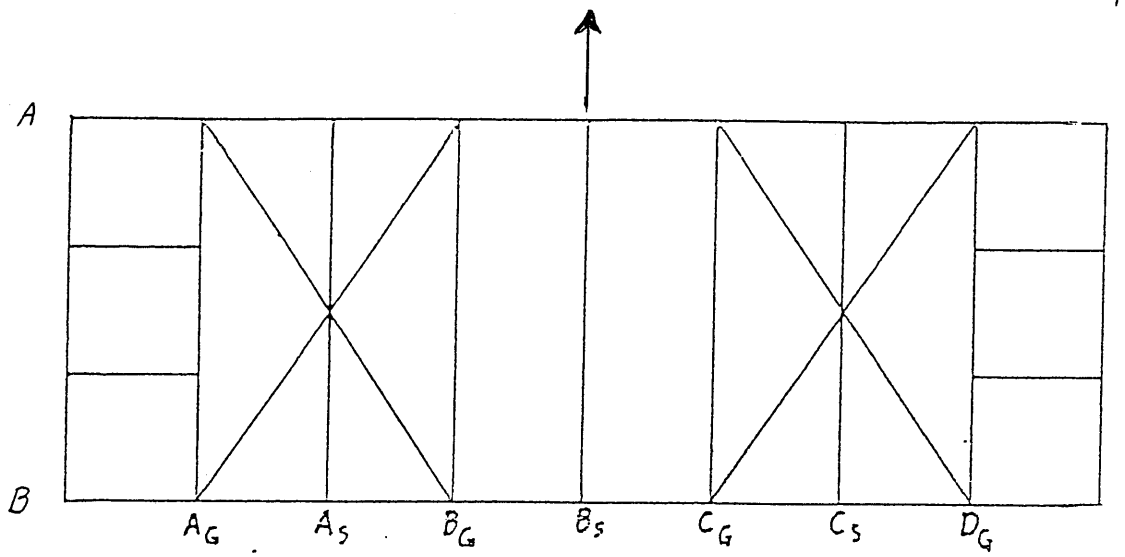
2-11-03
1-11-01
TWC.



Bottom Span # 1 panel 9 Br. # 19-6-9.74

Deck	Fair	See span # 1
Floor Beams	Fair	
Girders	F	"
Stringers	F	"
Lateral Bracing	F	
Sidewalk Brackets	F	

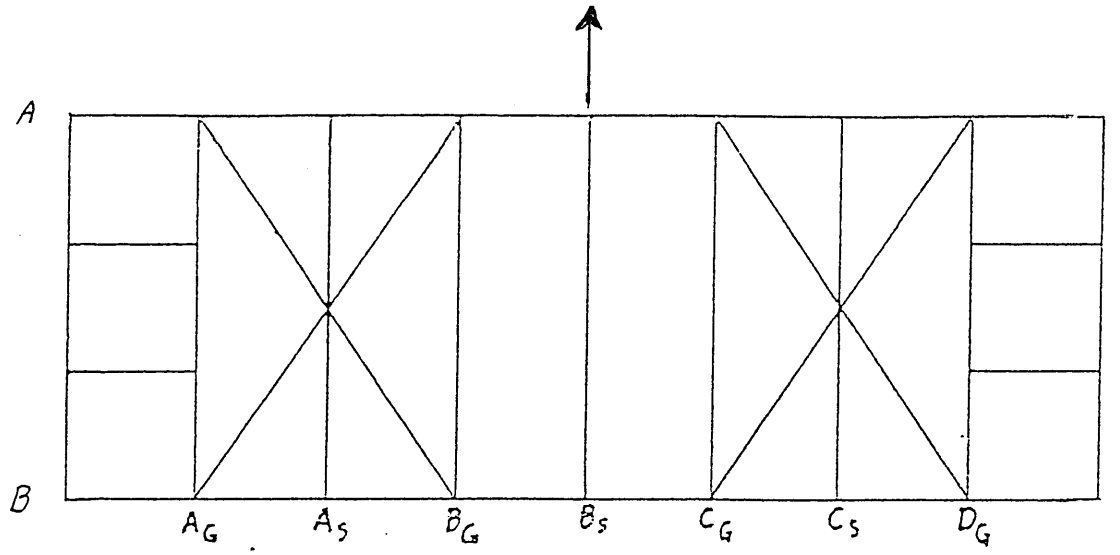
2-11-03 R
1-11-01
Twc.



Bottom Span # 1 panel 10 Br. # 19-6-9.74

Deck	Fair	See Span # 1
Floor Beams	Fair	"
Girders	F	"
Stringers	F	"
Lateral Bracing	F	"
Sidewalk Brackets	F	"

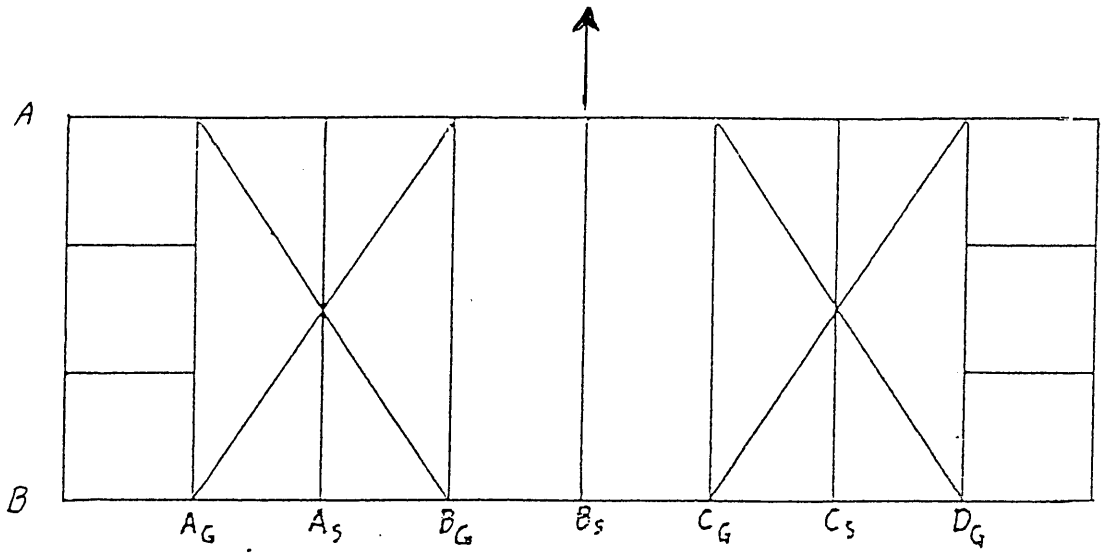
2-11-03K
1-11-01
Two.



Bottom Span # 2 panel 1 Br. # 19-6-9.74

Deck	Fair	
Floor Beams	Fair	
Girders	Fair	
Stringers	Fair	
Lateral Bracing	Fair	
Sidewalk Brackets	Fair	

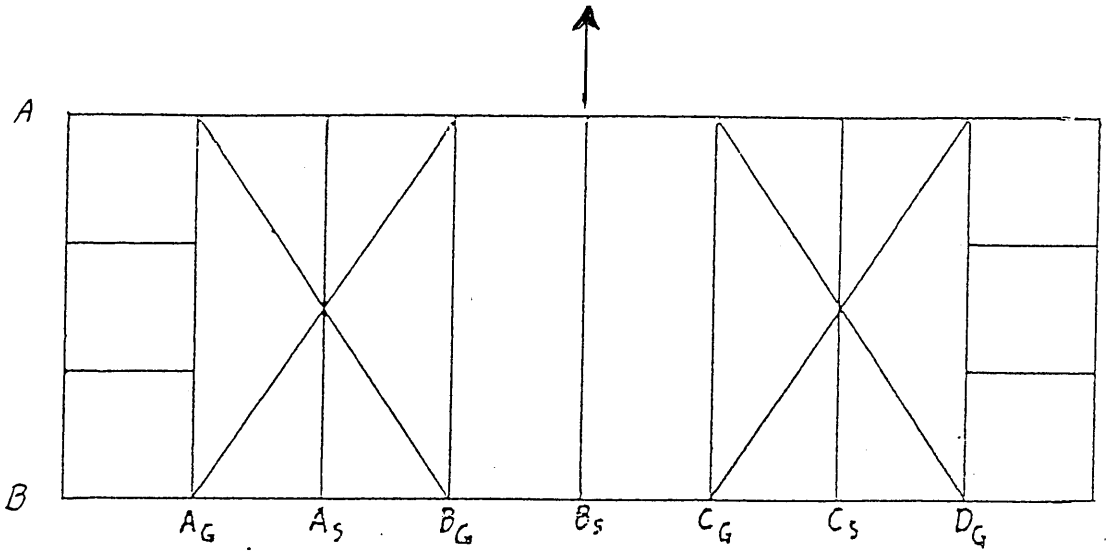
1-11-01
TWC.



Bottom Span #2 panel 2 Br. # 19-6-9.74

Deck	Fair	See span #1
Floor Beams	Fair	
Girders	Fair	"
Stringers	Fair	
Lateral Bracing	Fair	"
Sidewalk Brackets	F	

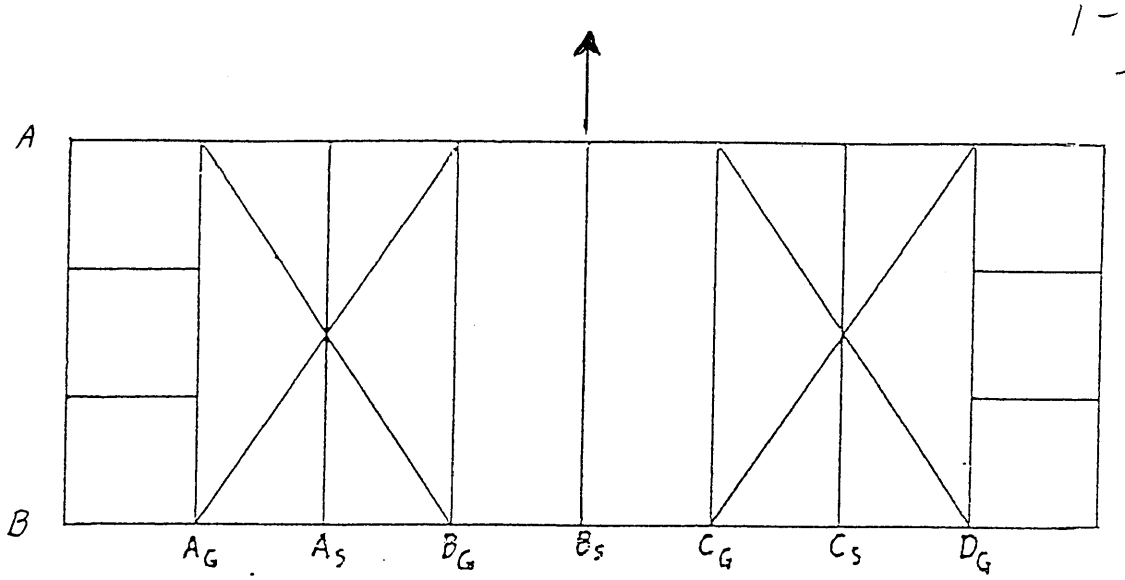
2-11-03R
1-11-01
TWC.



Bottom Span #2 P.3 Br. # 19-6-9.74

Deck	Fair	
Floor Beams	Fair	
Girders	Fair	
Stringers	Fair	
Lateral Bracing	Fair	
Sidewalk Brackets	Fair	

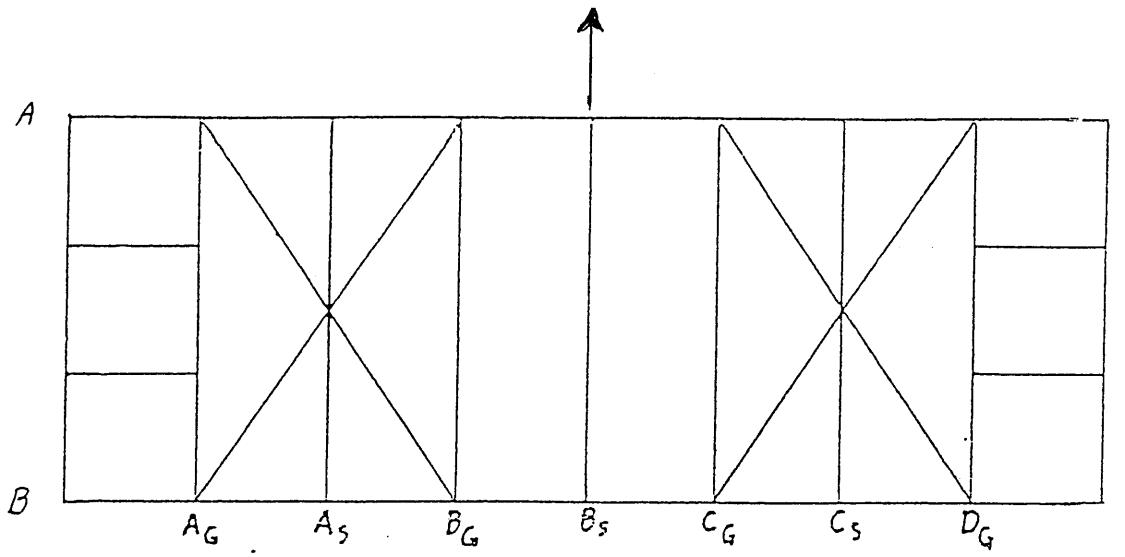
12-17-10
2-11-03R
1-11-01
TWC.



Bottom Span #2 panel 4 Br. # 19-6-9.74

Deck	Fair	See Span # 1
Floor Beams	F	
Girders	F	
Stringers	F	
Lateral Bracing	F	
Sidewalk Brackets	F	

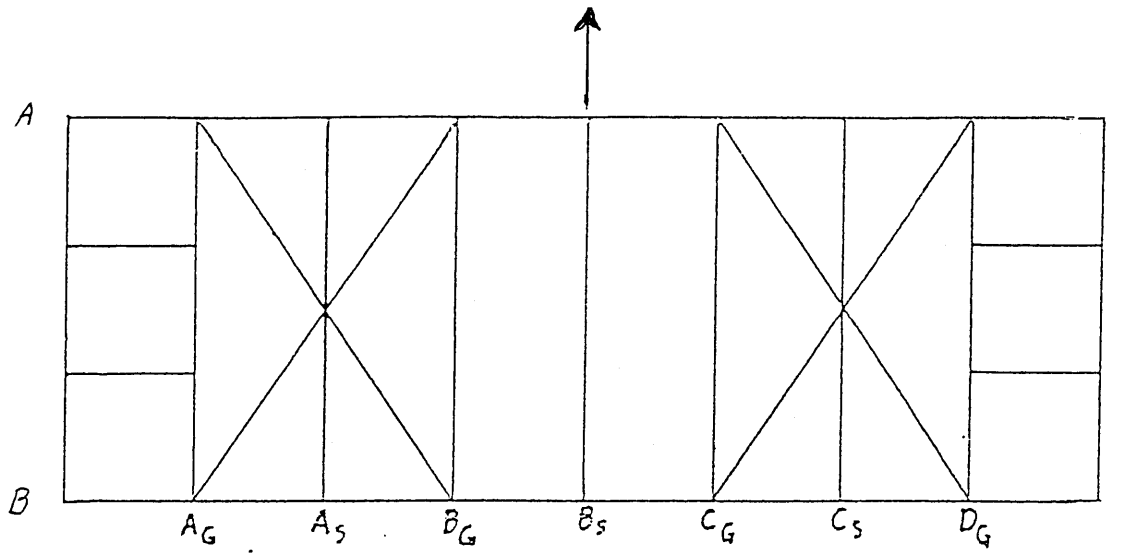
1-11-01
TWC



Bottom Span #2 p. 5 Br. # 19-6-9.74

Deck	Fair	
Floor Beams	Fair	
Girders	Fair	
Stringers	Fair	
Lateral Bracing	Fair	
Sidewalk Brackets	Fair	

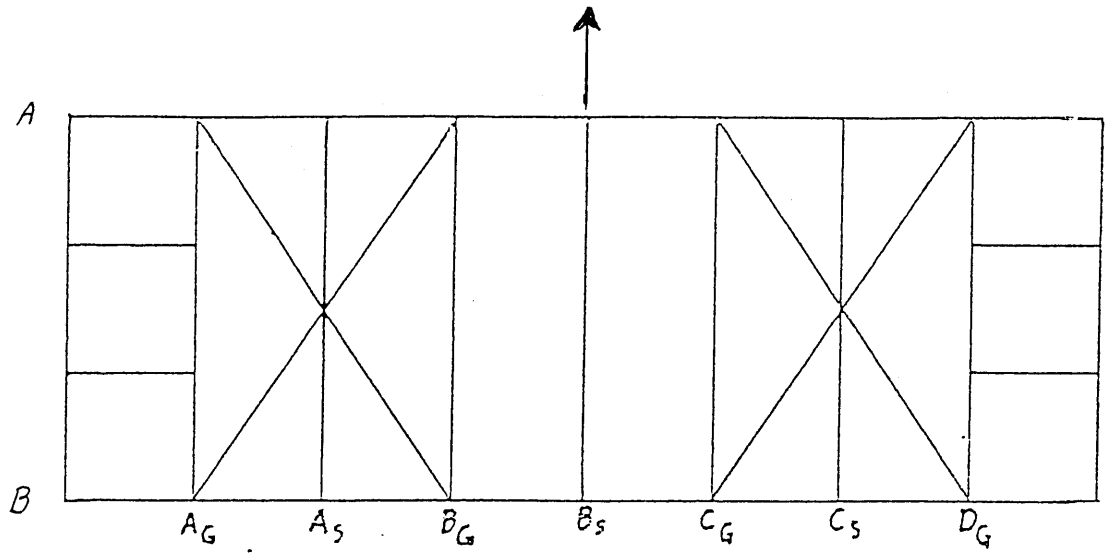
241.03
1-11-01
TWC



Bottom Span #2 panel 6 Br. # 19-6-9.74

Deck	Fair	
Floor Beams	F	
Girders	F	
Stringers	F	
Lateral Bracing	F	
Sidewalk Brackets	F	

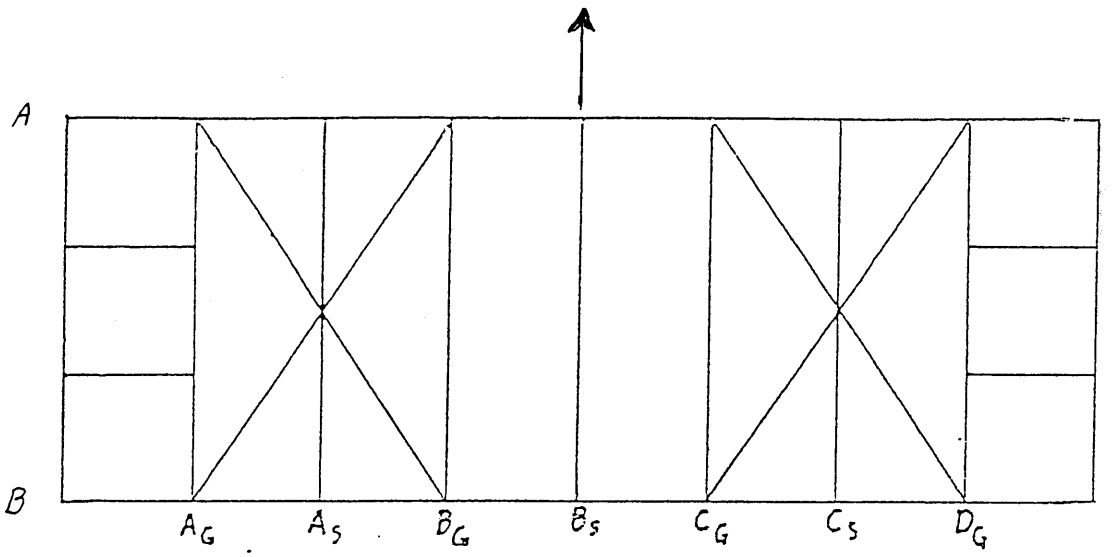
1-11-01
TWL



Bottom Span #2 panel 7 Br. # 19-6-9.74

Deck	Fair	See span # 1
Floor Beams	F	
Girders	F	"
Stringers	F	
Lateral Bracing	F	"
Sidewalk Brackets	F	

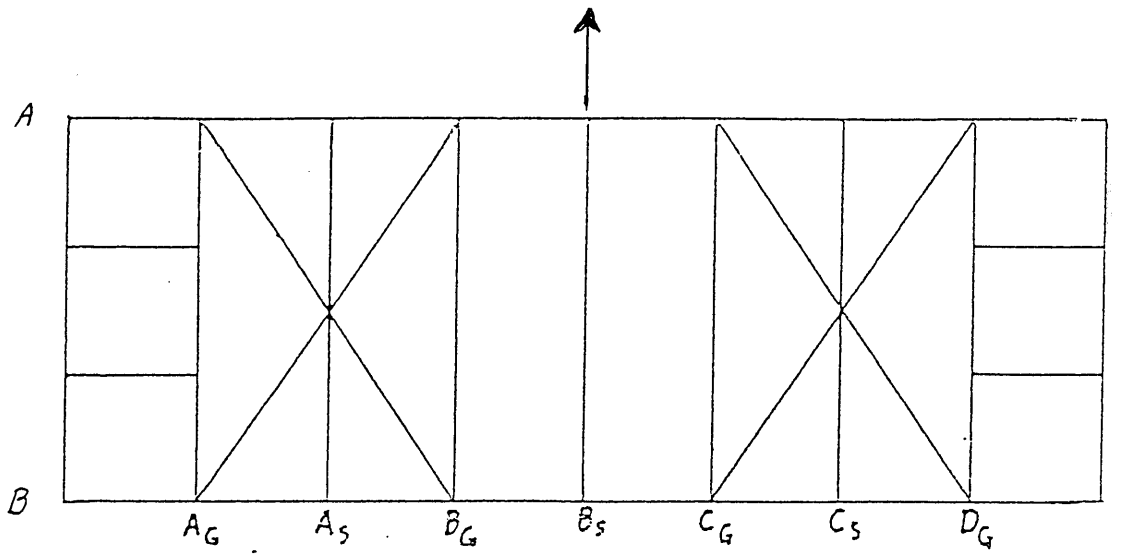
1-11-01
TWC



Bottom Span #2 p. 8 Br. # 19-6-9.74

Deck	Fair	
Floor Beams	Fair	
Girders	F	
Stringers	F	
Lateral Bracing	F	
Sidewalk Brackets	F	

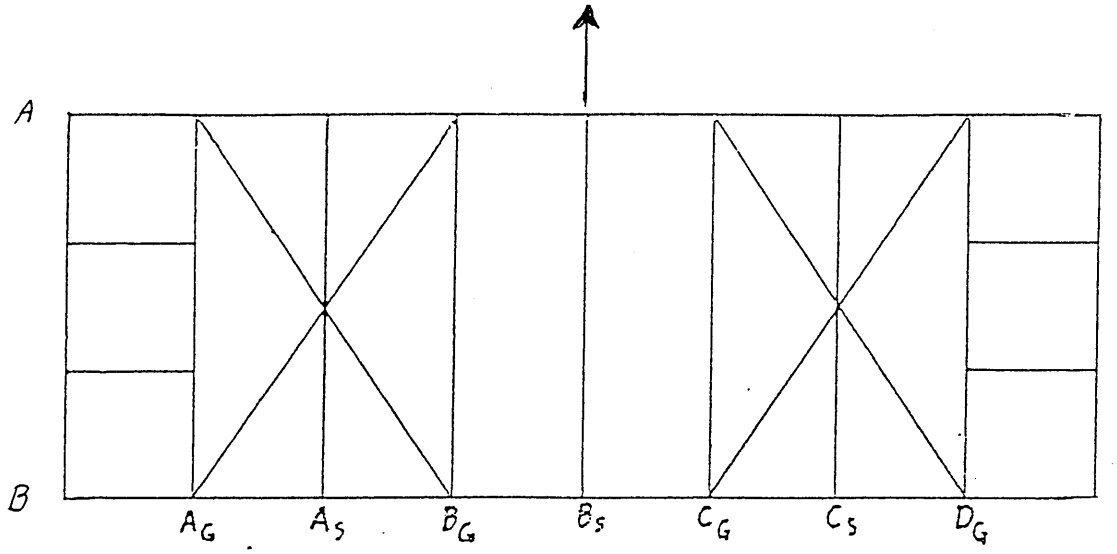
2-11-03
1-11-01
Twc.



Bottom Span # 2 panel 9 Br. # 19-6-9.74

Deck	Fair
Floor Beams	F
Girders	F
Stringers	F
Lateral Bracing	F
Sidewalk Brackets	F

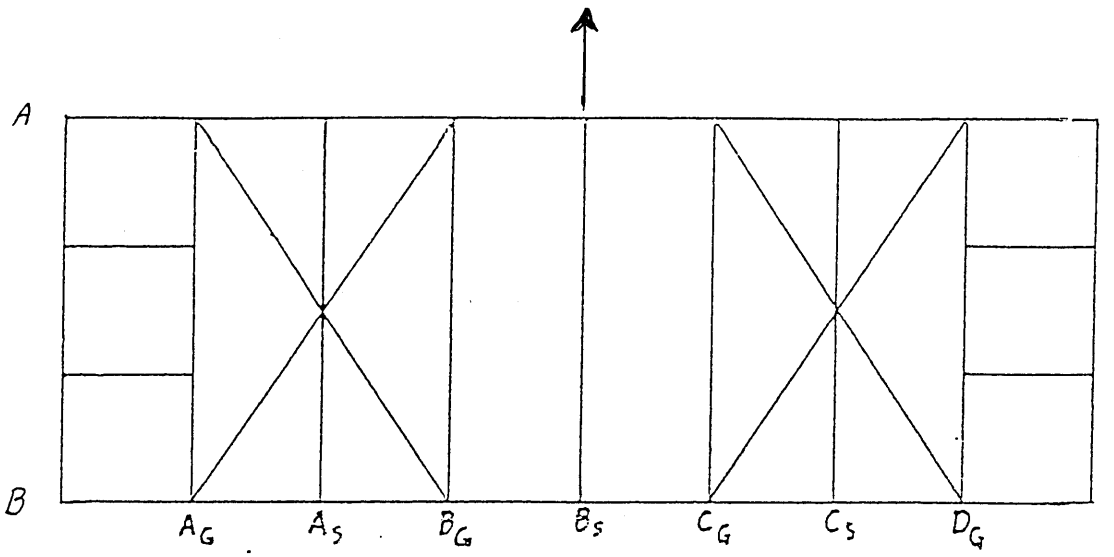
1-11-01
Two.



Bottom Span #2 p. 10 Br. # 19-6-9.74

Deck	Fair	
Floor Beams	F	
Girders	F	
Stringers	F	
Lateral Bracing	F	
Sidewalk Brackets	F	

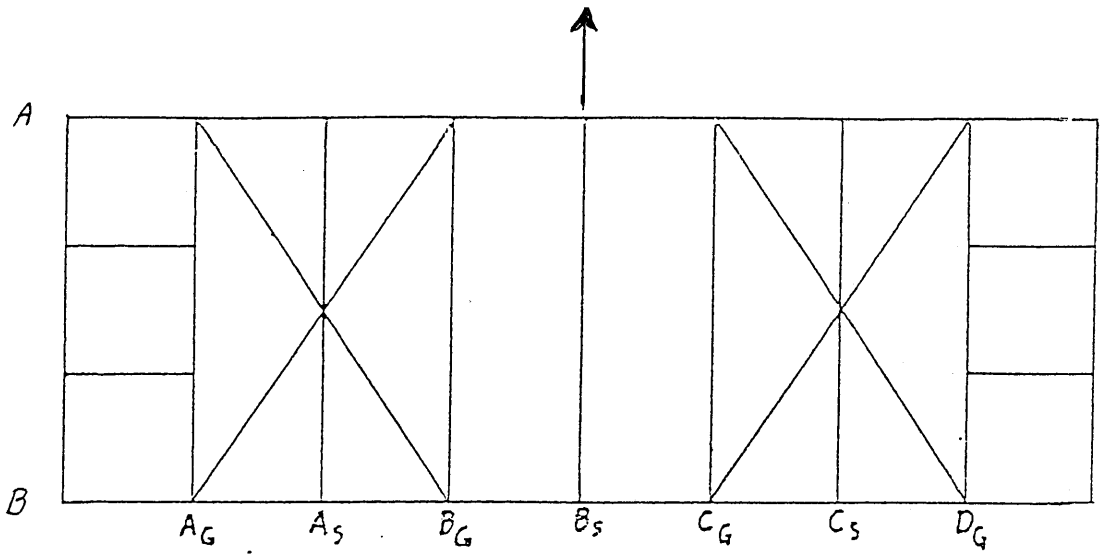
2-11-03
1-11-01
Two.



Bottom Span #3 panel 1 Br. # 19-6-9.74

Deck	Fair	trans. cracks w/ leaching on bottom of curb
Floor Beams	Good	
Girders	Fair	mod. to heavy corr. on top flange
Stringers	G	
Lateral Bracing	G	
Sidewalk Brackets	G	

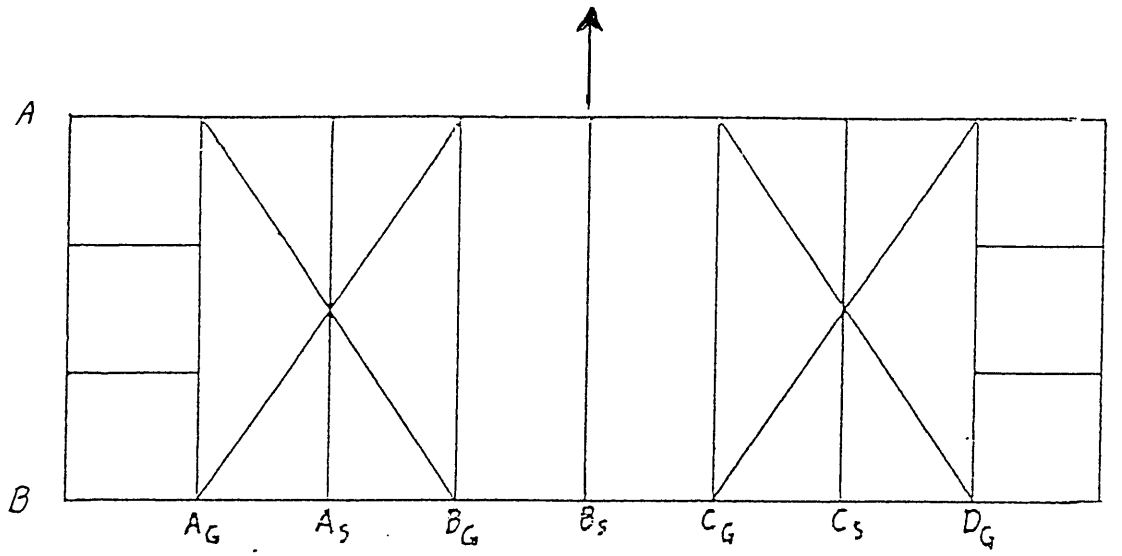
1-11-01
TWC.



Bottom Span #3 p.2 Br. # 19-6-9.74

Deck	Fair	
Floor Beams	Fair	
Girders	Fair	
Stringers	Fair	
Lateral Bracing	Fair	
Sidewalk Brackets	Fair	

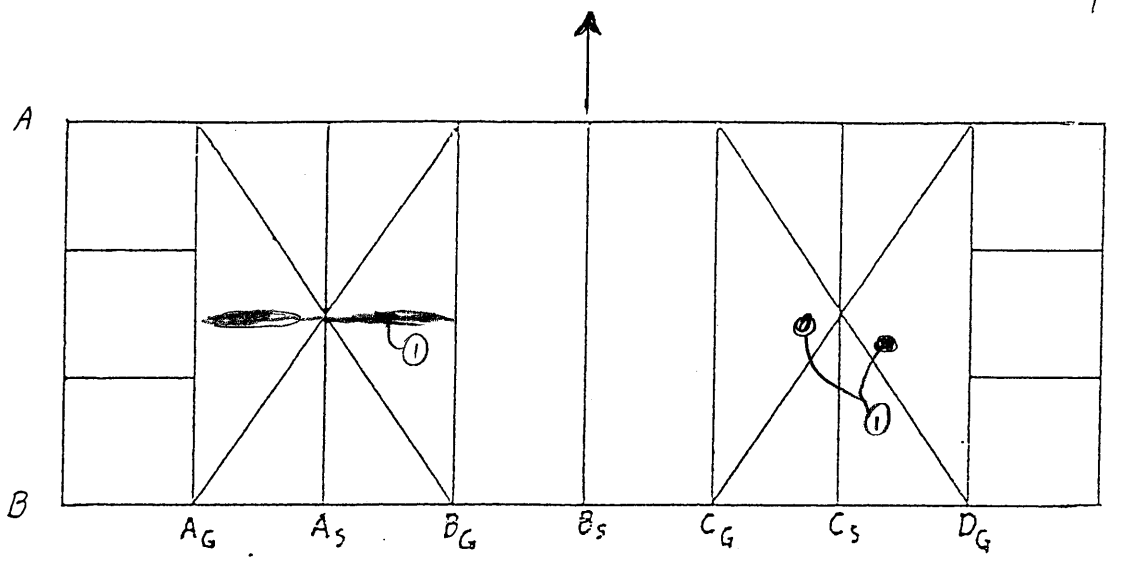
2-11-03R
1-11-01
TWC.



Bottom Span #3 page 13 Br. # 19-6-9.74

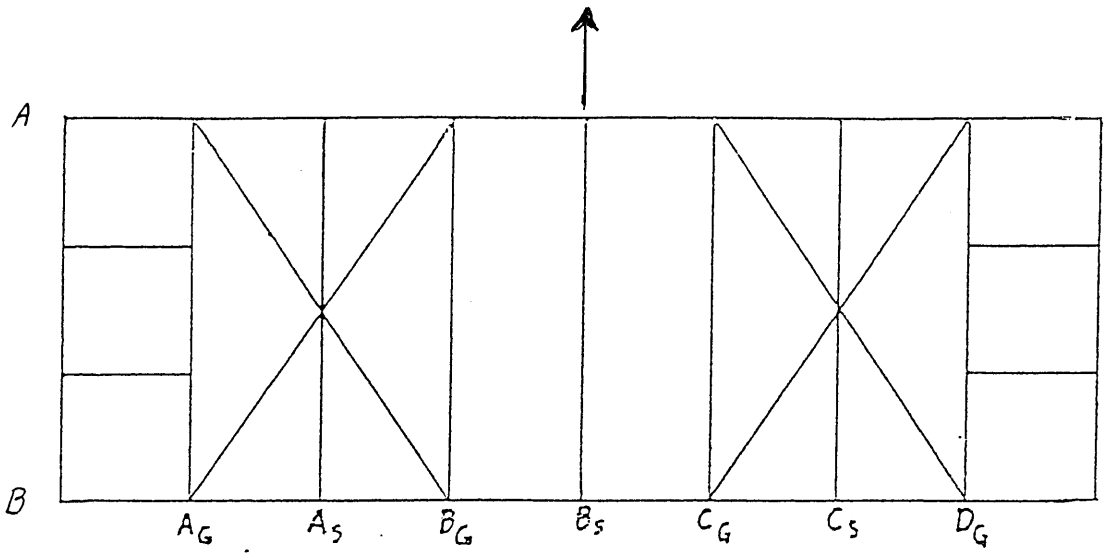
Deck	Fair	See Span # 1
Floor Beams	Fair	
Girders	Fair	
Stringers	Fair	
Lateral Bracing	F	
Sidewalk Brackets	F	

2-11-03 R
-11-01
TWC.



Bottom Span #3 p. 4 Br. # 19-6-9.74

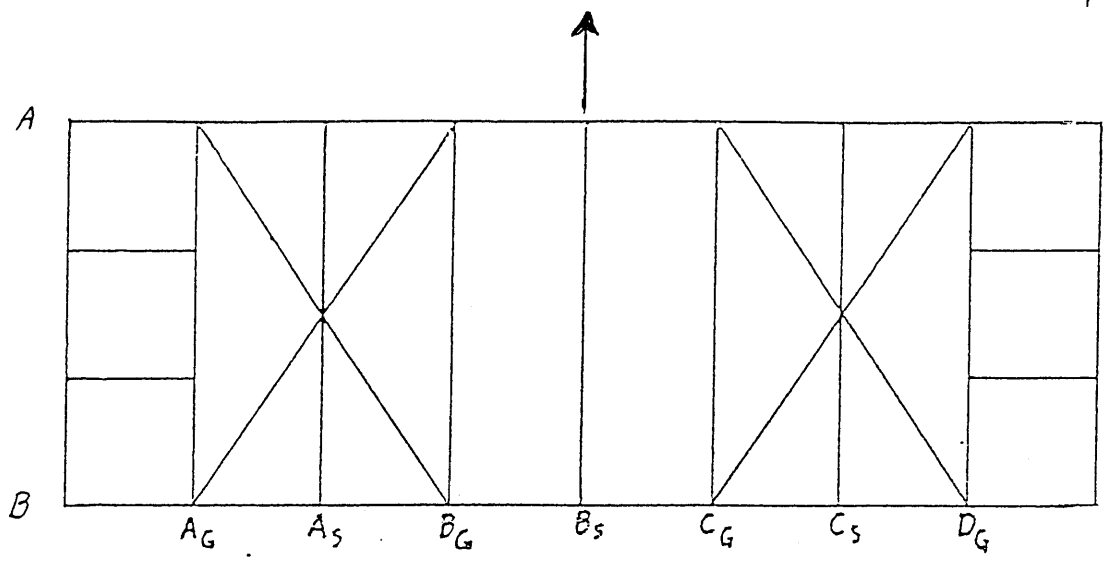
Deck	Fair	① spalls w/ exp. steel up to 2" dp along construction joint
Floor Beams	Fair	
Girders	Fair	
Stringers	Fair	
Lateral Bracing	Good	
Sidewalk Brackets	Fair	



Bottom Span #3 panel 5 Br. # 19-6-9.74

Deck	F	
Floor Beams	F	
Girders	F	
Stringers	F	
Lateral Bracing	F	
Sidewalk Brackets	F	

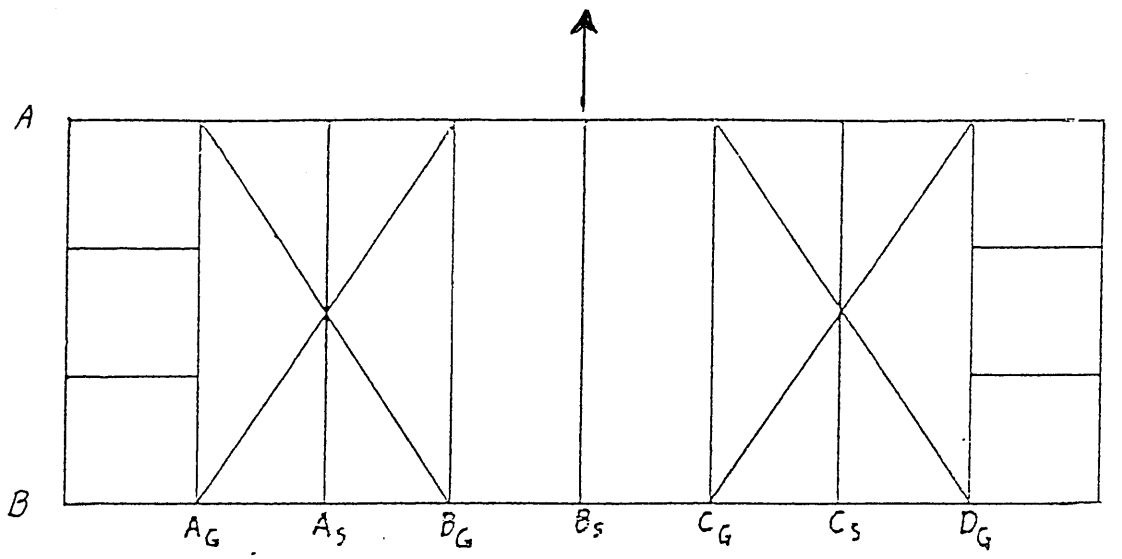
12-11-03 R
1-11-01
Two



Bottom Span #3 panel 6 Br. # 19-6-9.74

Deck	Fair	
Floor Beams	F	
Girders	F	
Stringers	F	
Lateral Bracing	F	
Sidewalk Brackets	F	

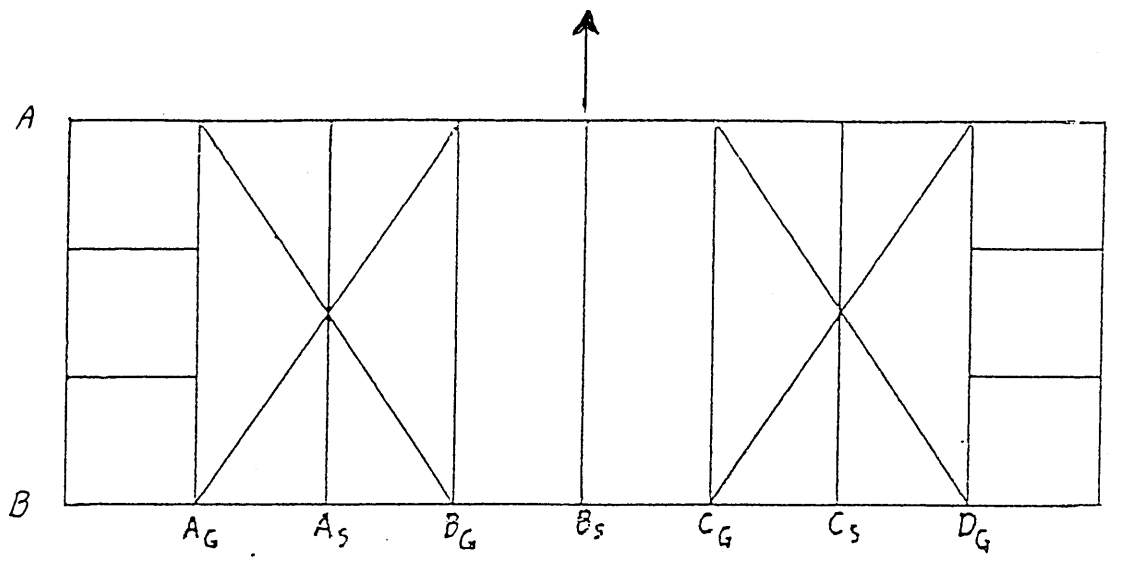
2-11-03
1-11-01
TWC



Bottom Span #3 p.7 Br. # 19-6-9.74

Deck	Fair	See Span # 1
Floor Beams	Fair	
Girders	Fair	
Stringers	Fair	
Lateral Bracing	Fair	
Sidewalk Brackets	Fair	

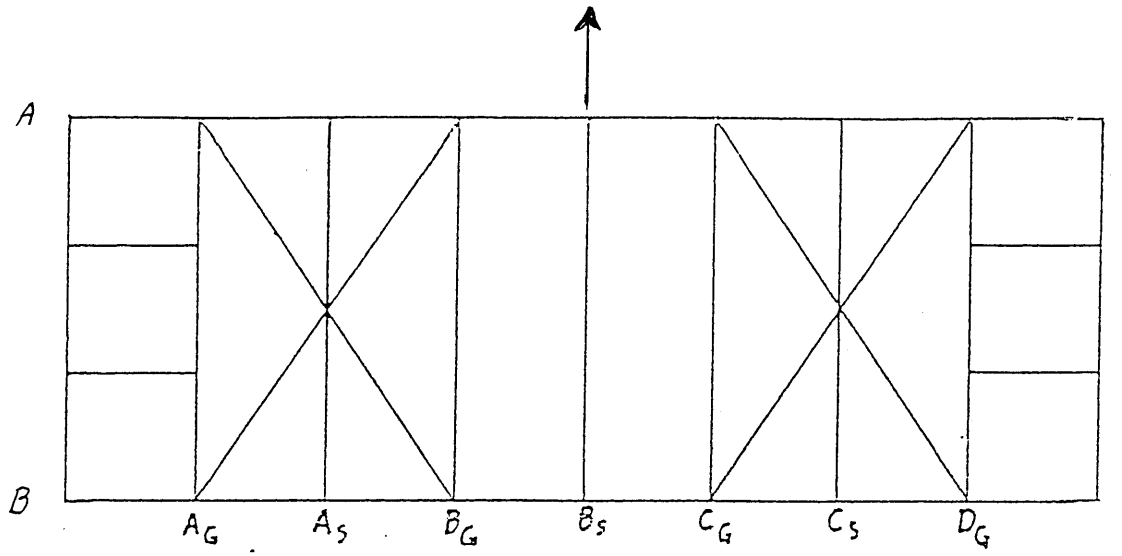
1-11-01
Twc.



Bottom Span #3 panel 8 Br. # 19-6-9.74

Deck	Fair
Floor Beams	F
Girders	F
Stringers	F
Lateral Bracing	F
Sidewalk Brackets	F

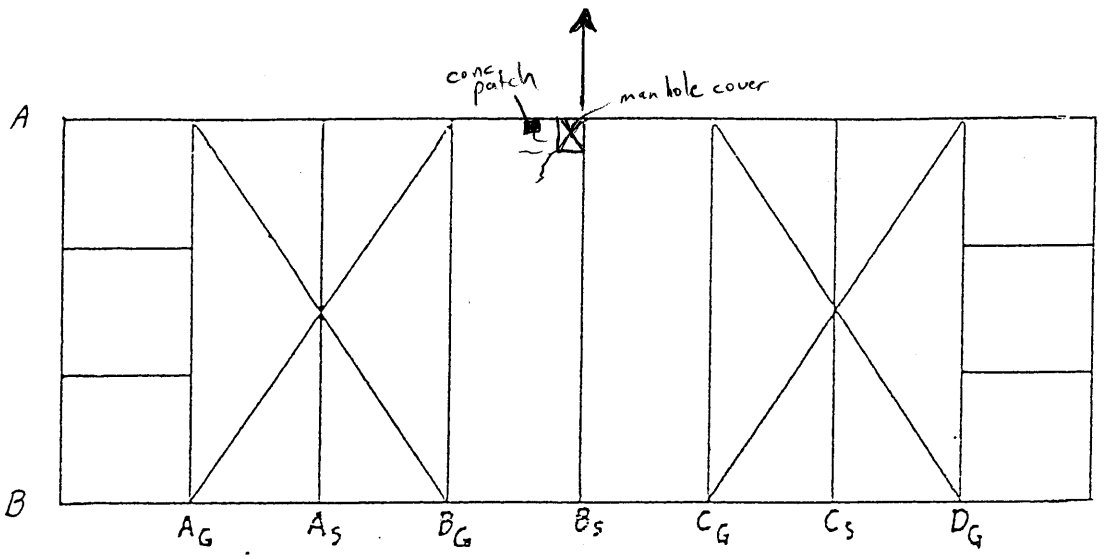
2-11-03
1-11-01
TWC.



Bottom Span #3 p. 9 Br. # 19-6-9.74

Deck	F	See Span # 1
Floor Beams	F	
Girders	F	
Stringers	F	
Lateral Bracing	F	
Sidewalk Brackets	F	

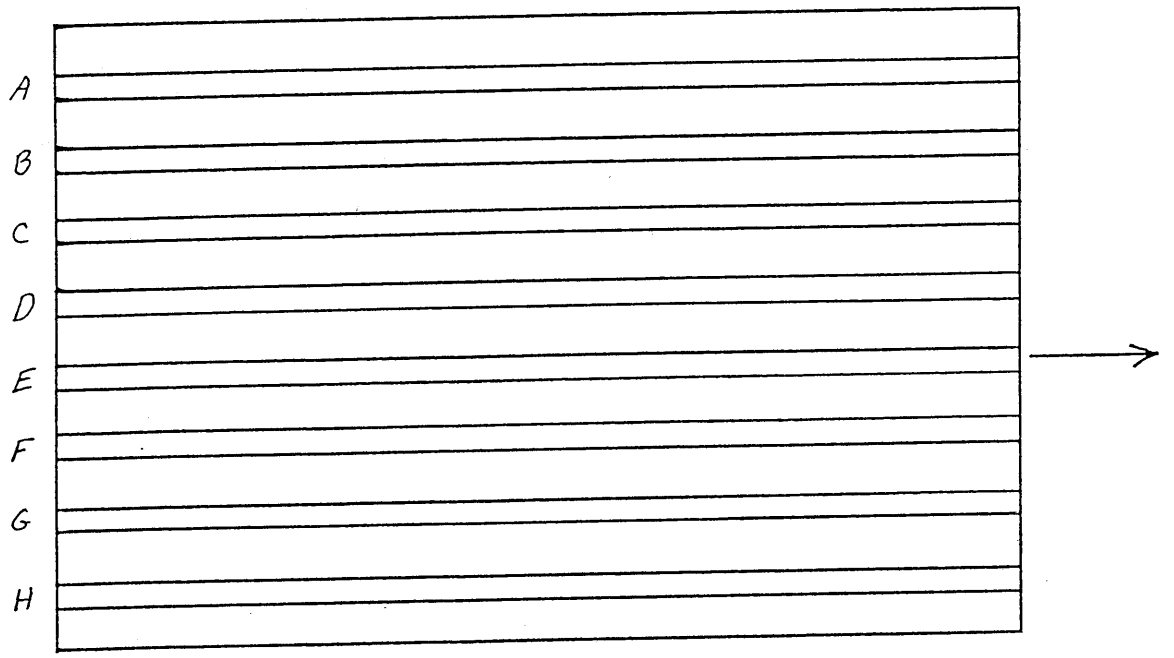
1-11-01
TWC.



Bottom Span #3 page 10 Br. # 19-6-9.74

Deck	Fair	random cracks w/ eff.
Floor Beams	F	
Girders	F	
Stringers	F	
Lateral Bracing	F	
Sidewalk Brackets	F	

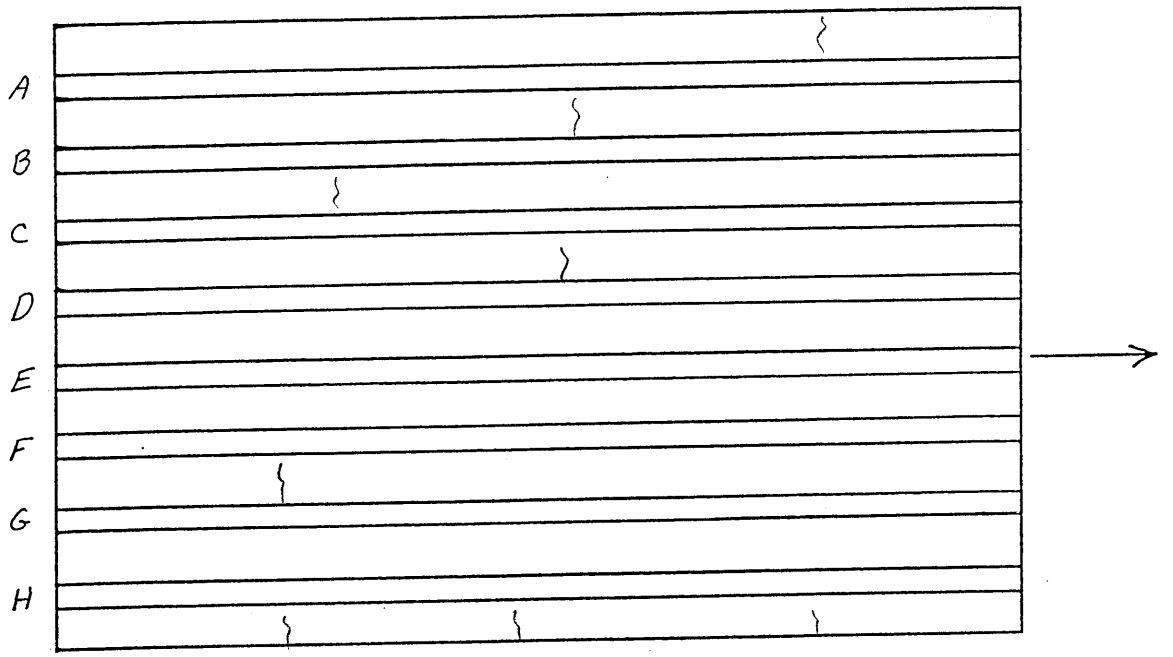
2-11-03 R
1-11-01
TWC.



Bottom Slab = 4 Br. # 19-6-9.74

Deck	Fair	transverse hair cracks w/ eff.
Diaph.	Good	
Beams	Fair	lgt. to mod corrosion on flanges

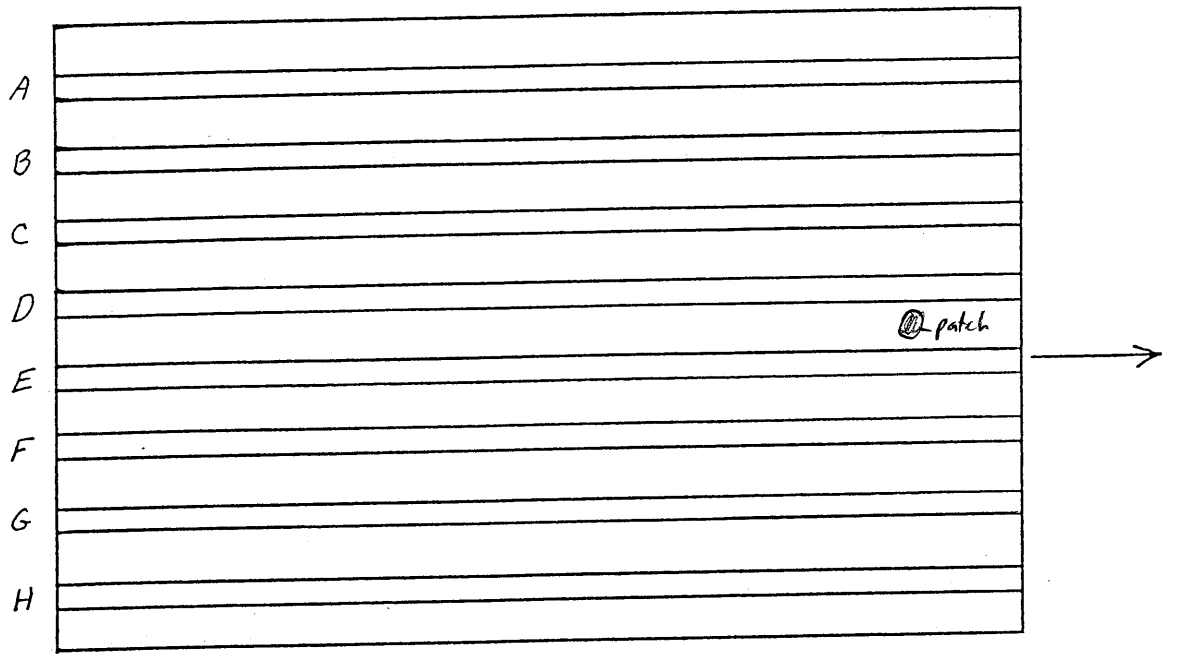
2-11-03 R
1-11-01
TWC.



Bottom Slab #5 Br. # 19-6-9.74

Deck	Fair	trans. hair cracks w/ leaching
Diaph.	Good	
Beams	Fair	mod./Hy corrosion on flanges esp. Top Flanges

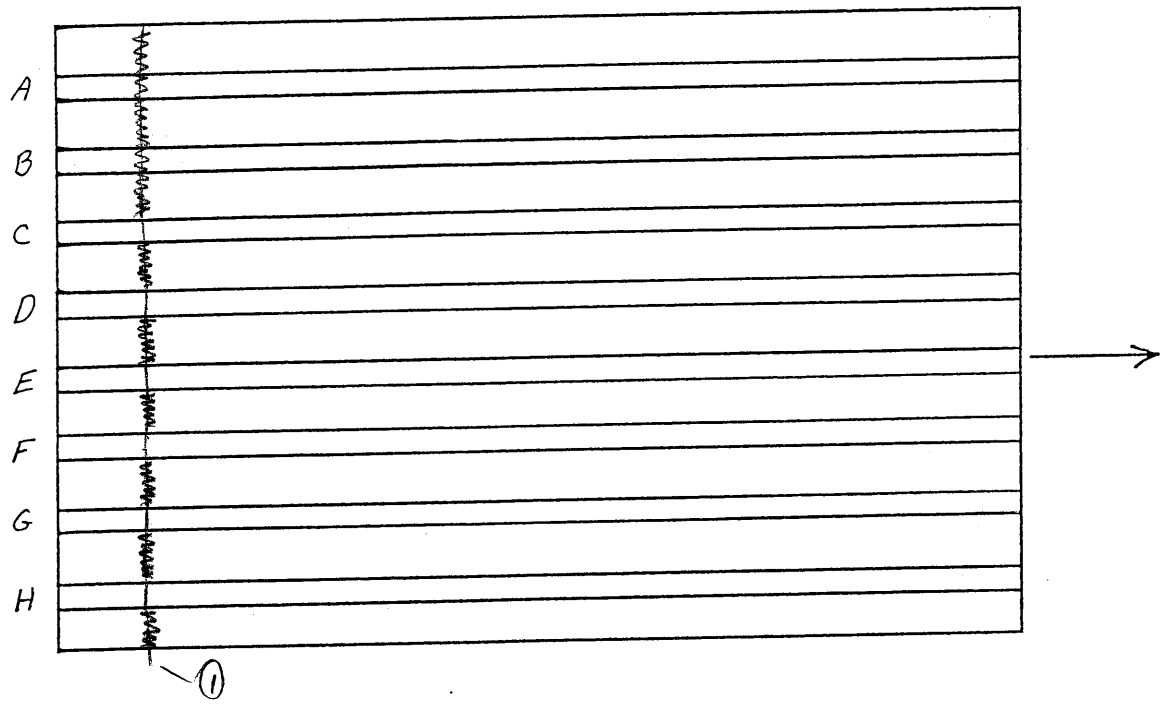
2-11-03
1-11-01
TWC.



Bottom Slab #6 Br. # 19-6-9.74

Deck	Fair	
Diaph.	Good	lgt. corr.
Beams	Fair	mod. corr.

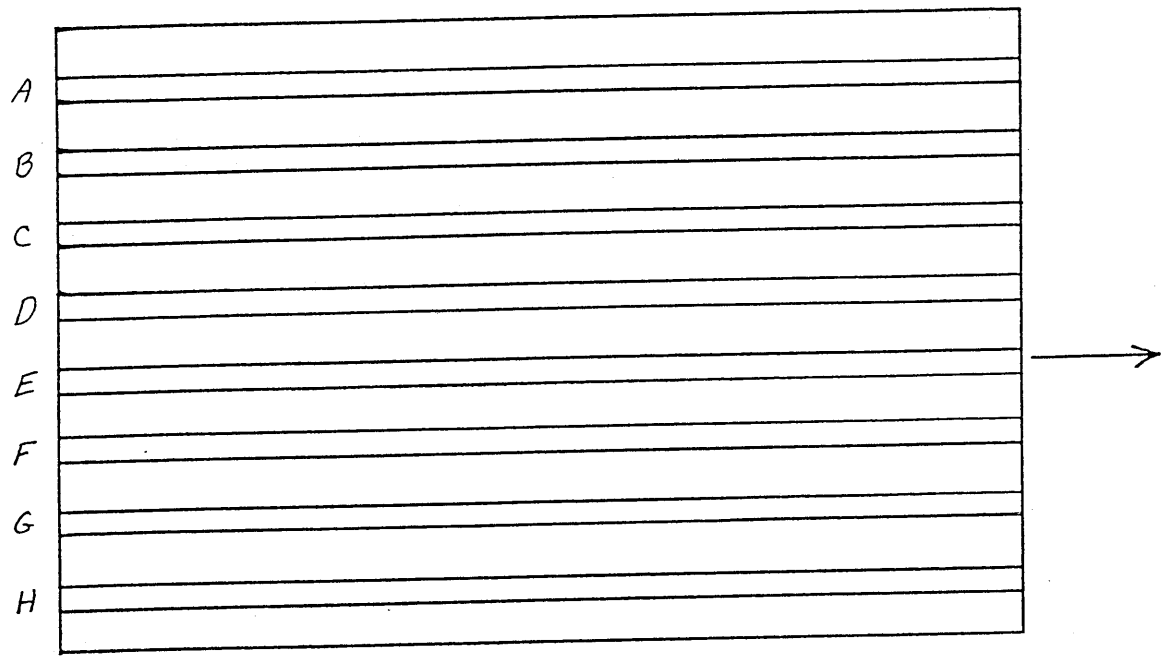
2-11-03 K
1-11-01
TWC.



Bottom Slab = 7 Br. # 19-6-9.74

Deck	Fair	① finger type expansion joint / numerous concrete patches & cracks w/ effl. / spalls @ joint up to 2.5" dp
Diaph.	Fair	mod. corr.
Beams	Fair	mod. corr. on flanges
Bearings	G	Light corr.

2-11-032
1-11-01
TWC.

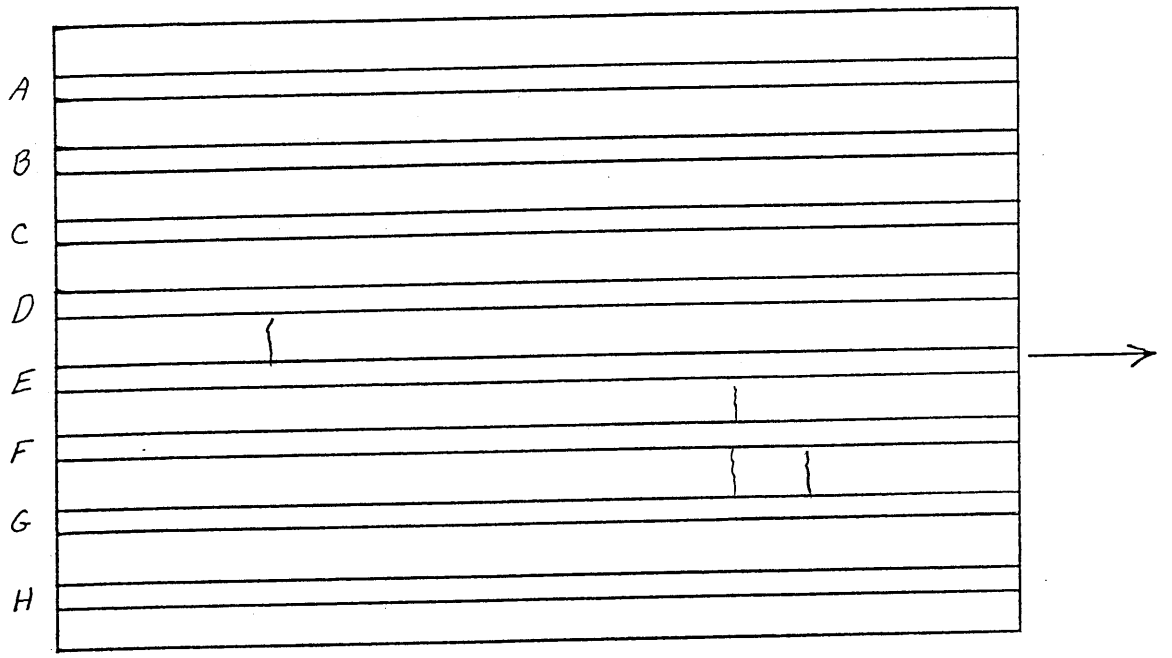


Bottom Slab = 8 Br. # 19-6-9.74

Deck	Fair	concrete patches along constr. joint / trans. crack on overhangs
Diaph.	Good	
Beams	Fair	

1-11-01

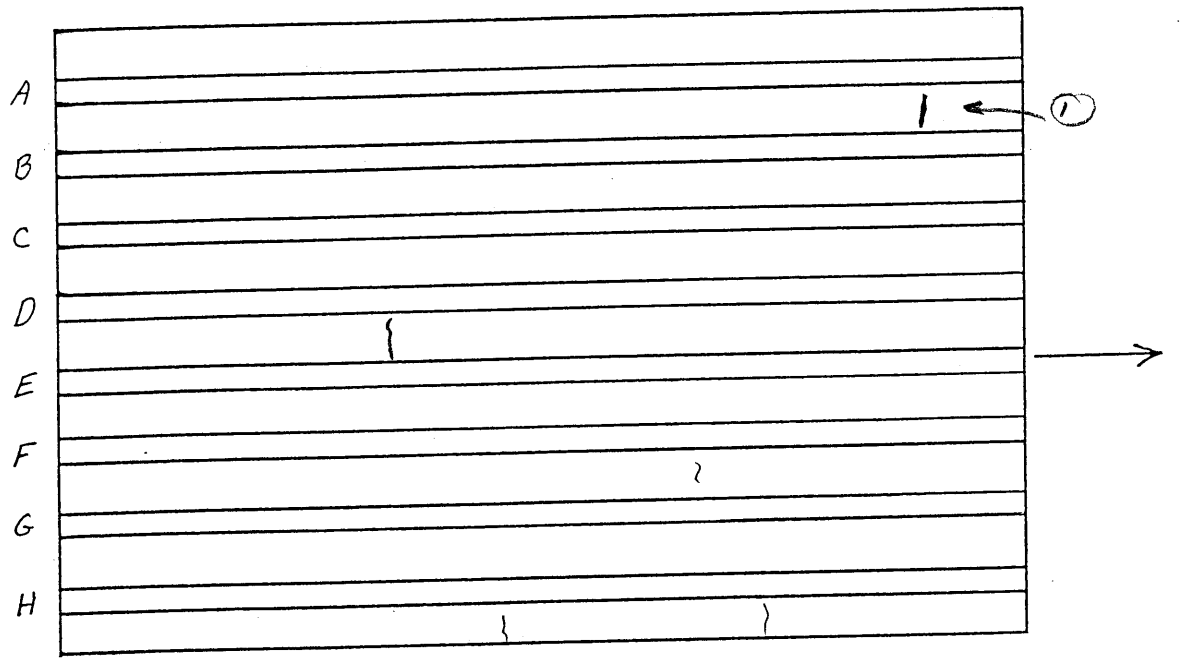
TWC.



Bottom Slab = 9 Br. # 19-6-9.74

Deck	Fair	
Diaph.	Good	
Beams	Fair	

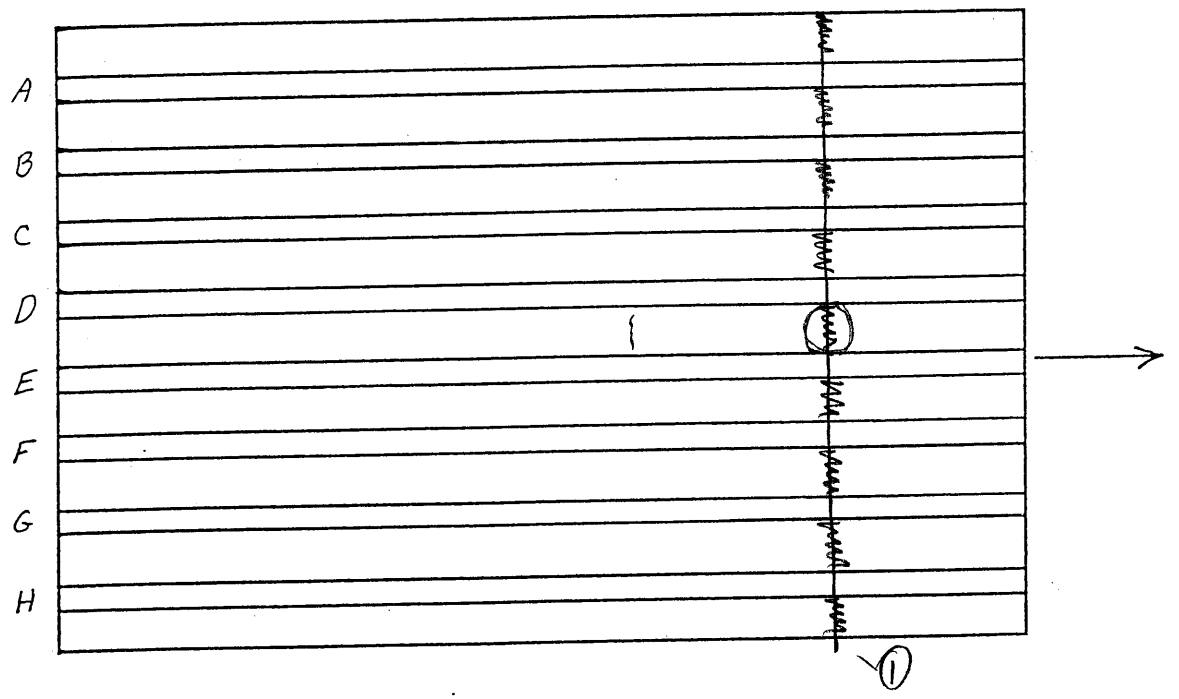
1-11-01
TWC.



Bottom Slab #10 Br. # 19-6-9.74

Deck	Fair	EXP. STEEL
Diaph.	Good	
Beams	Fair	

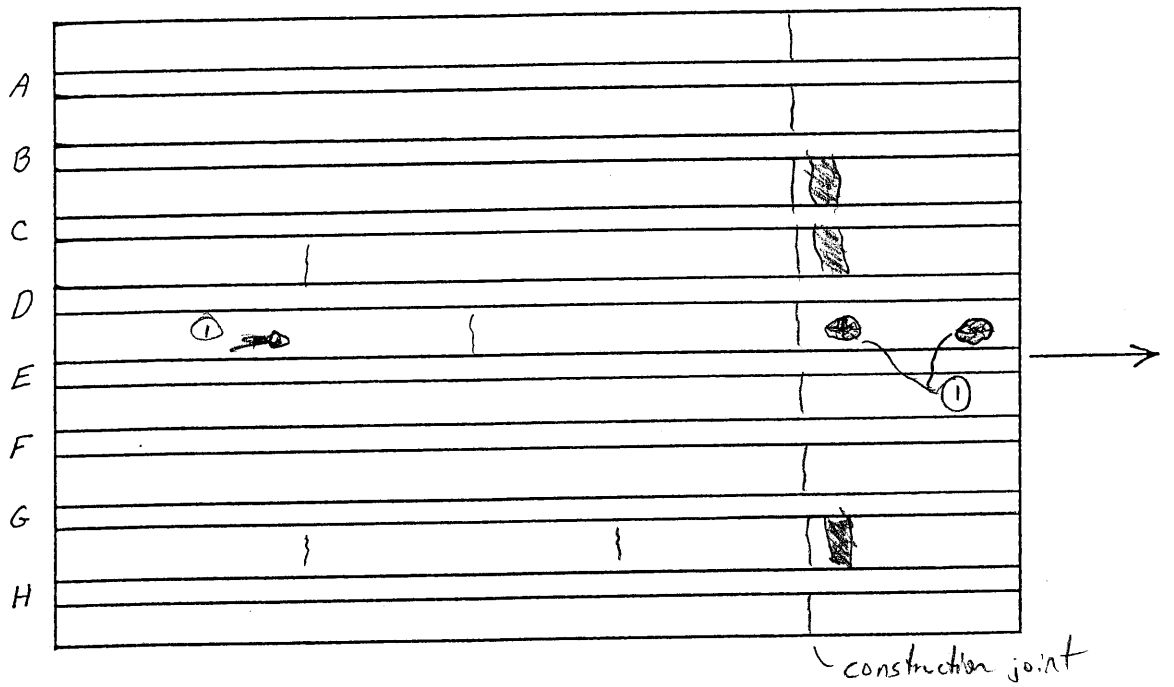
21-03R
1-11-01
Two.



Bottom Slab = 11 Br. # 19-6-9.74

Deck	Fair	① finger type expansion joint / random transverse hair cracks
Diaph.	Good	
Beams	Fair	
Bearing	Good.	Lgh. Core.

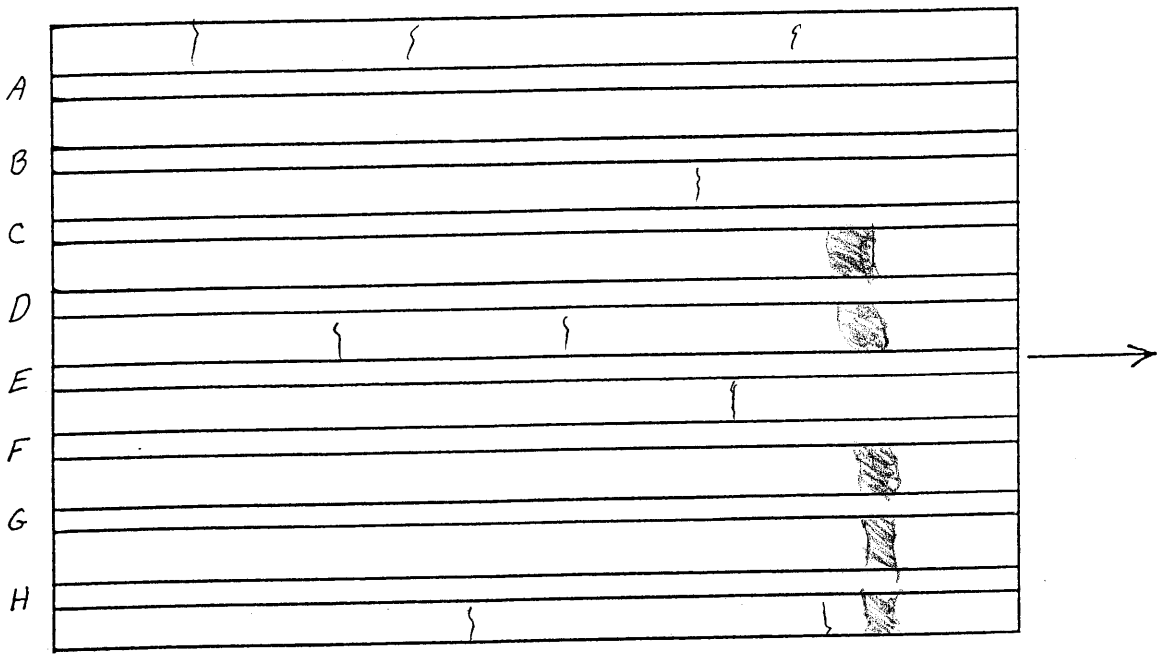
2-11-03R
1-11-01
TWC.



Bottom Slab #12 Br. # 19-6-9.74

Deck	Fair	random transverse hair cracks w/ eff. ① areas 3' in diameter w/ heavy cracks and eff. ready to chip out
Diaph.	Good	
Beams	Fair	lgt. to mod. corrosion on top & bottom flange

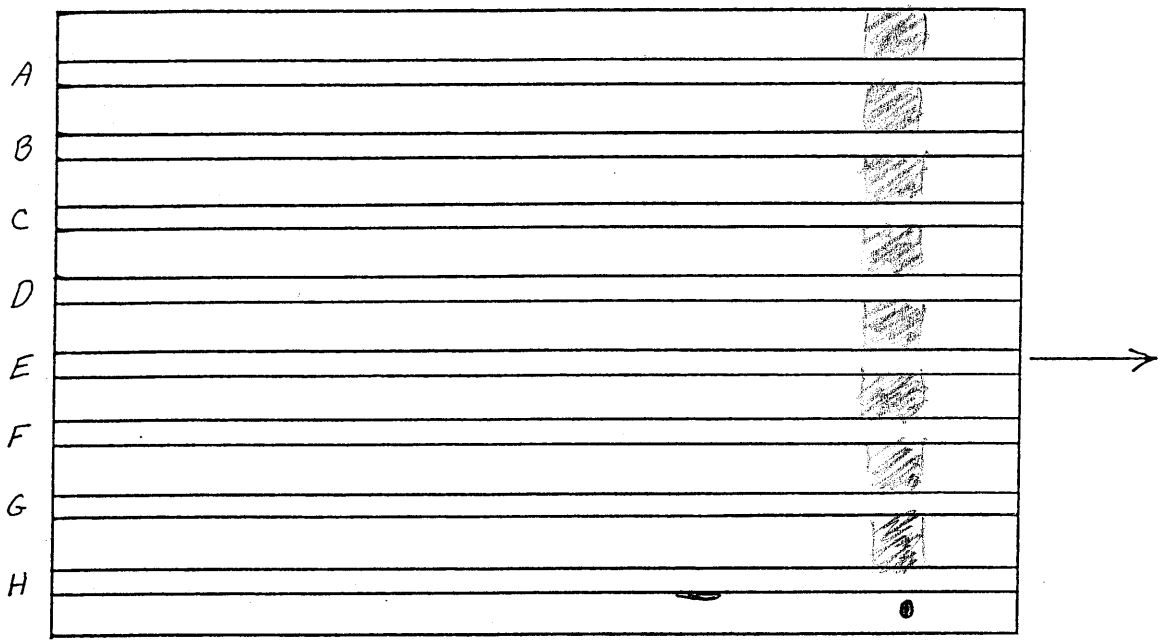
12-14-98 KMW
2-11-03 R
1-11-01
TWC.



Bottom Slab #13 Br. # 19-6-9.74

Deck	Fair
Diaph.	Good
Beams	Fair

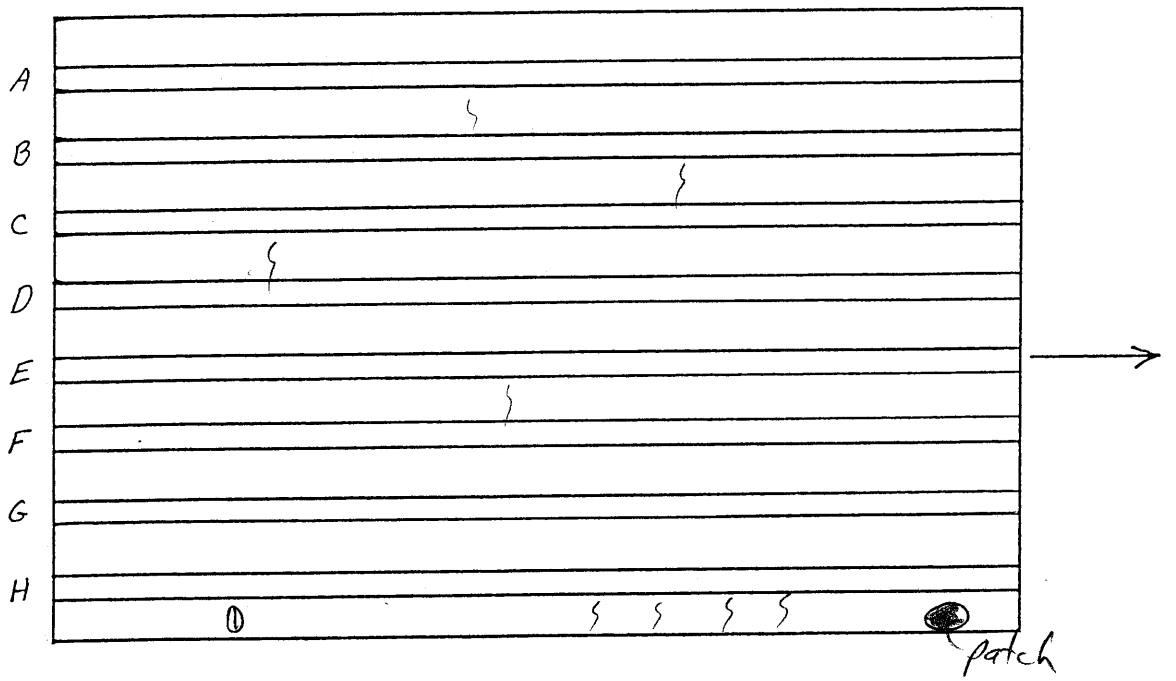
24103R
1-11-01
TWC.



Bottom Slab = 14 Br. # 19-6-9.74

Deck	Fair	random transverse hair cracks w/ eff. / numerous small spalls up to 2" dp w/ exp. steel
Diaph.	Good	
Beams	Fair	

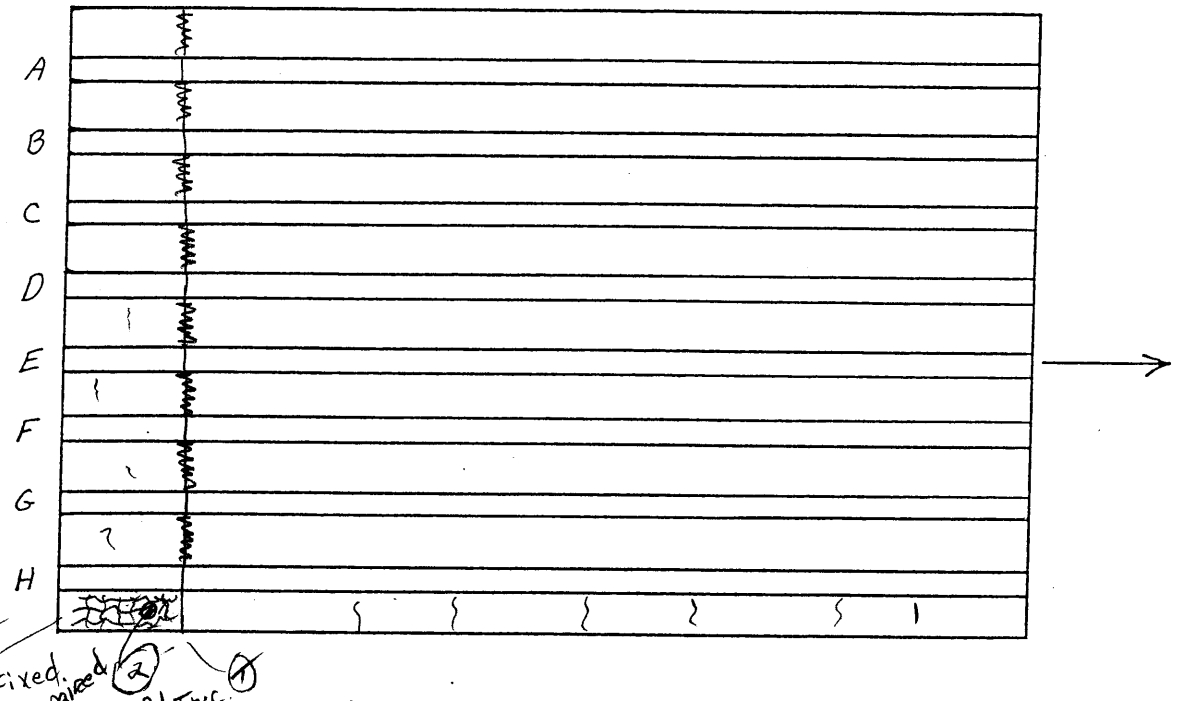
12-14-98 MD
2-11-03 R
1-11-01
TWC



Bottom Slab = 15 over North 1st St. Br. # 19-6-9.74

Deck	Fair	spalls w/ exp. steel up to 2" dp / numerous transverse hair cracks w/ eff.
Diaph.	Good	lgt. corr.
Beams	Fair	lgt. to mod. corrosion

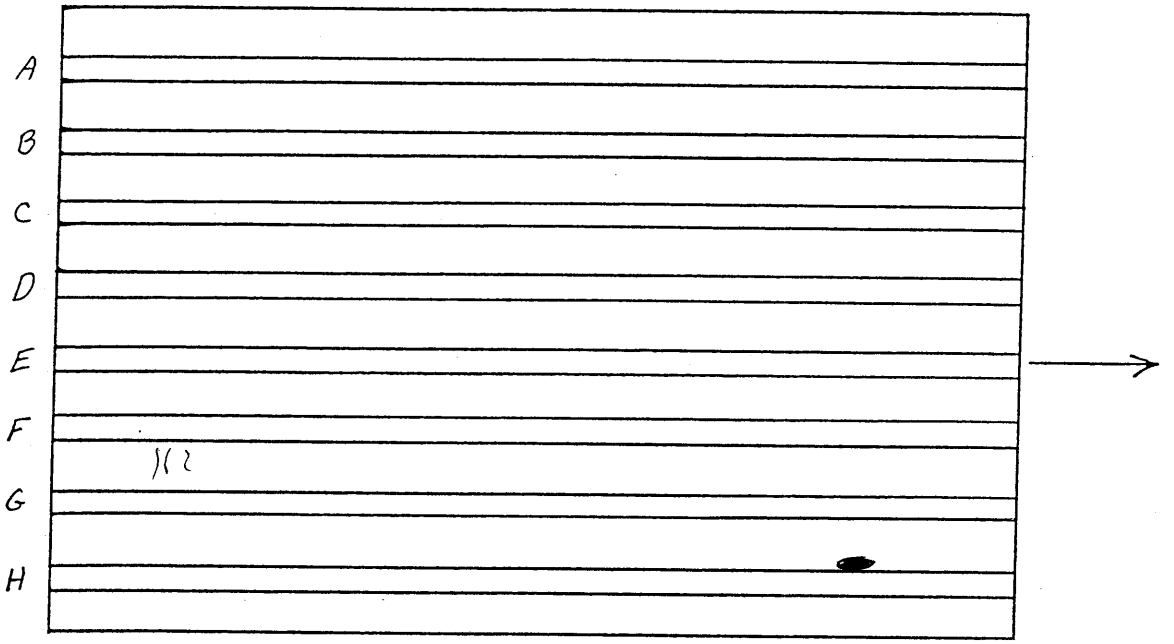
2-11-03 R
1-11-01
TWC.



BOTTOM SLAB = 16 Br. # 19-6-9.74

Deck	Fair	① expansion joint ~~② hole thru sidewalk~~ ③ heavily delaminated ~~concrete~~ ② EXP STRIP
Diaph.	Good	
Beams	Fair	mod. corrosion
Bearing	Fair	MOD. TO HVY CORR. FULL TILT ON BACKSTATION

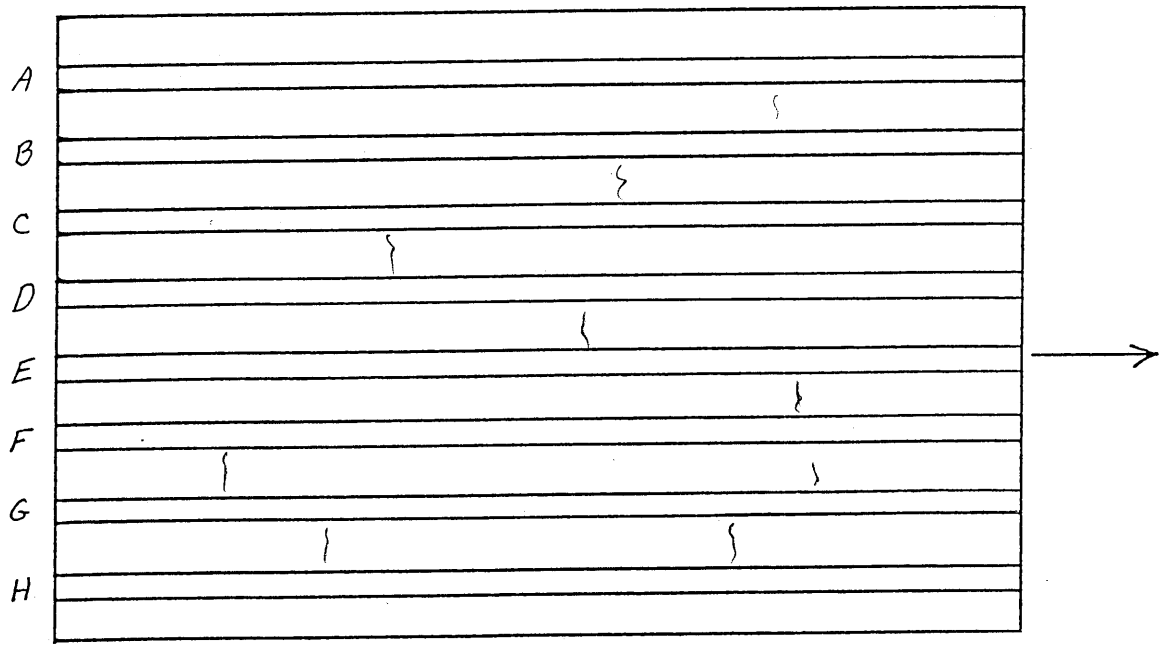
12-14-98mm
24-03R
1-11-01
TWC.



Bottom Slab #17 Br. # 19-6-9.74

Deck	Fair	concrete patches / random cracks w/ eff.
Diaph.	Good	lgt. corr.
Beams	Good	" "

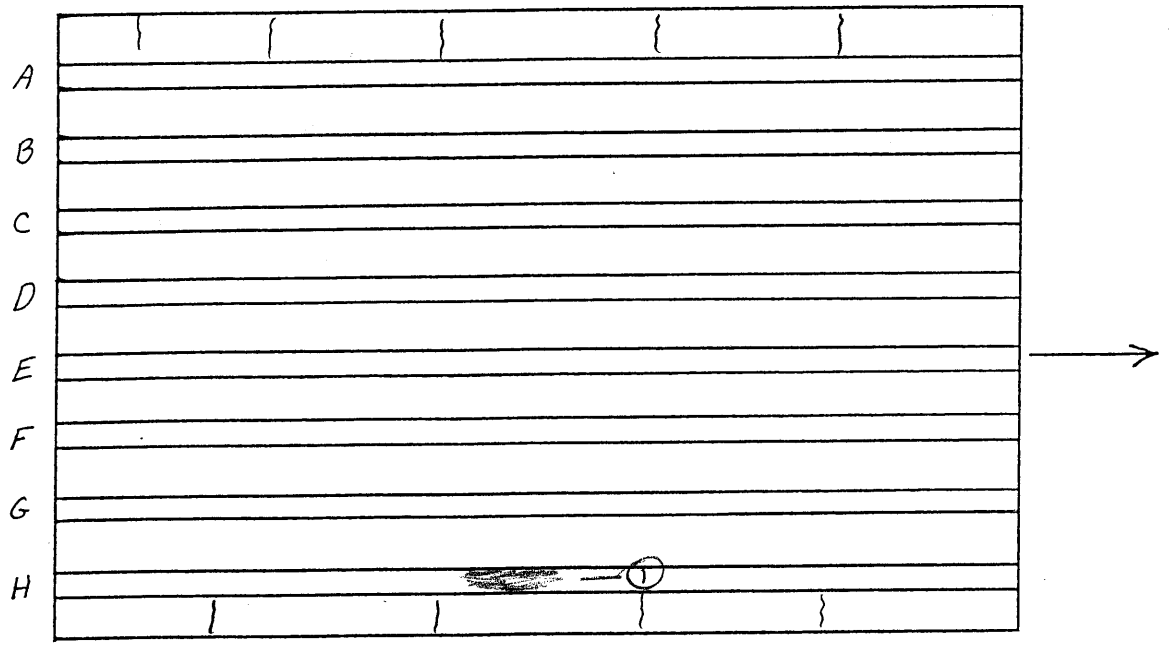
2-11-03R
1-11-01
Twc.



Bottom Slab = 18 Br. # 19-6-9.74

Deck	Fair	transverse hair cracks w/ efflor.
Diaph.	Good	
Beams	Fair	lgt.-mod. corrosion on flanges

12-14-98 MJ
2-11-03 R
1-11-01
TWC.



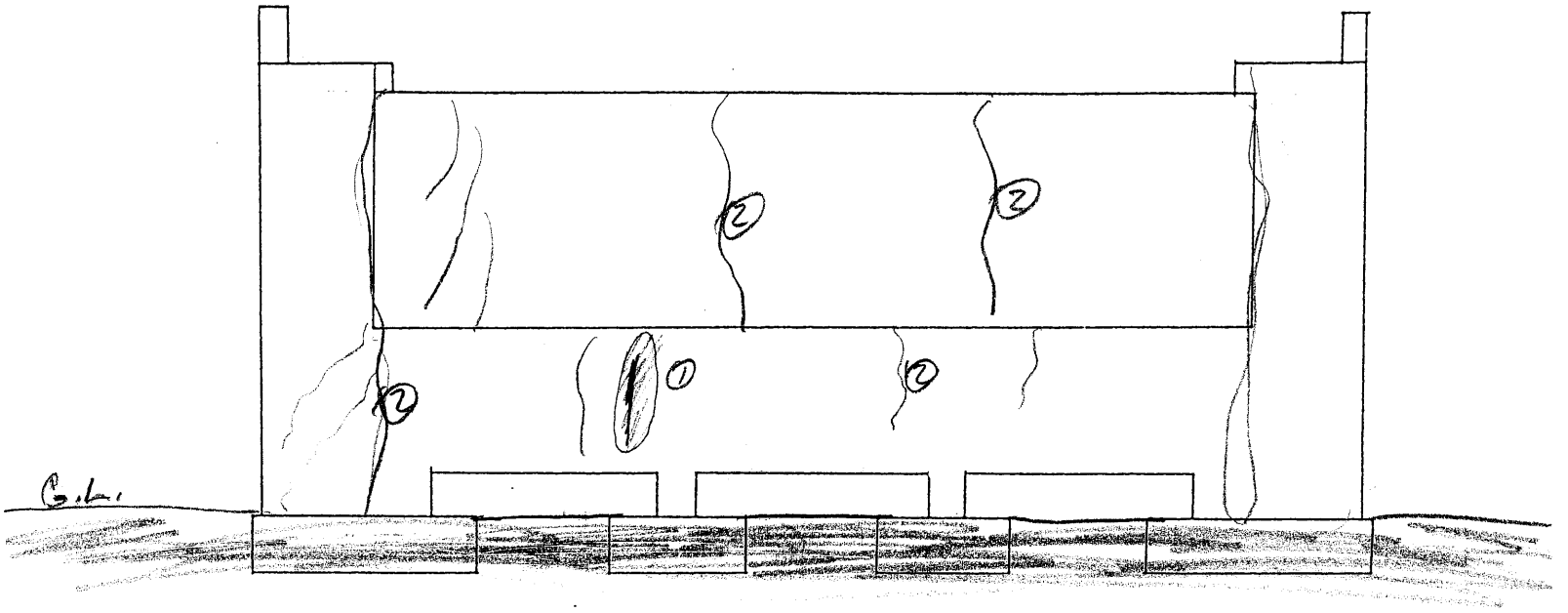
Bottom Slab = 19 Br. # 19-6-9.74

Deck	Fair	random transverse hair cracks w/ efflor.
Diaph.	Good	
Beams	Fair	① 1/16" section loss on bottom flange mod corr.

12-14-98
KHC

01-11-01 BL

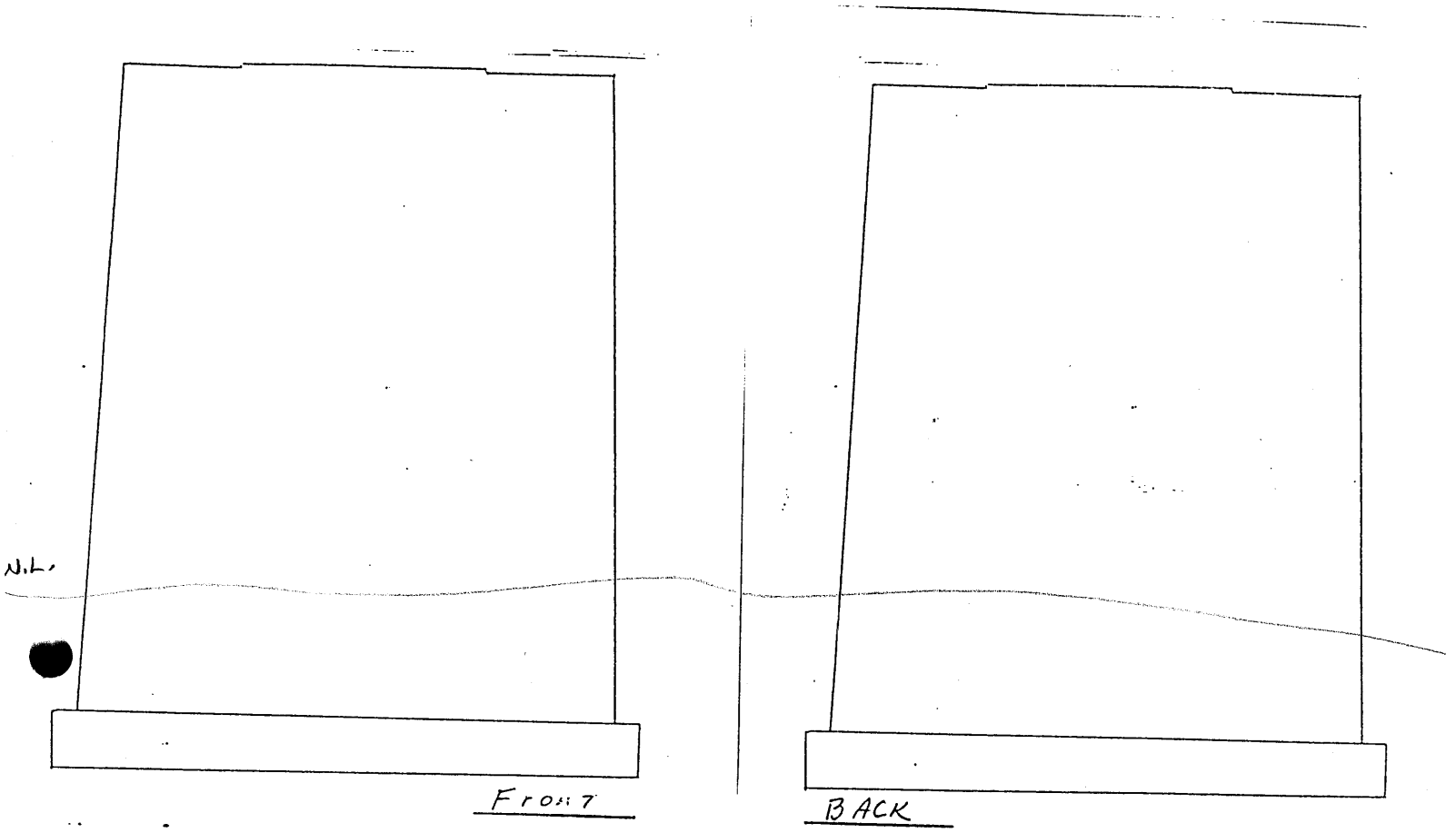
2-11-03 AT



ABUT #1 Br. # 19-6-9.74

CAP	F	(1) B.O. W/EXP STEEL 1½" Dp X 2'10" H X 1'W (2) VERT. CRACKS ⅛" OPEN W/LEACH.
wall	N/A	
Backwall	F	(2)
wings	G	VERT. CRACKS W/LEACH.
Footing	N/V	
Bearings	G	LGT. CORR.

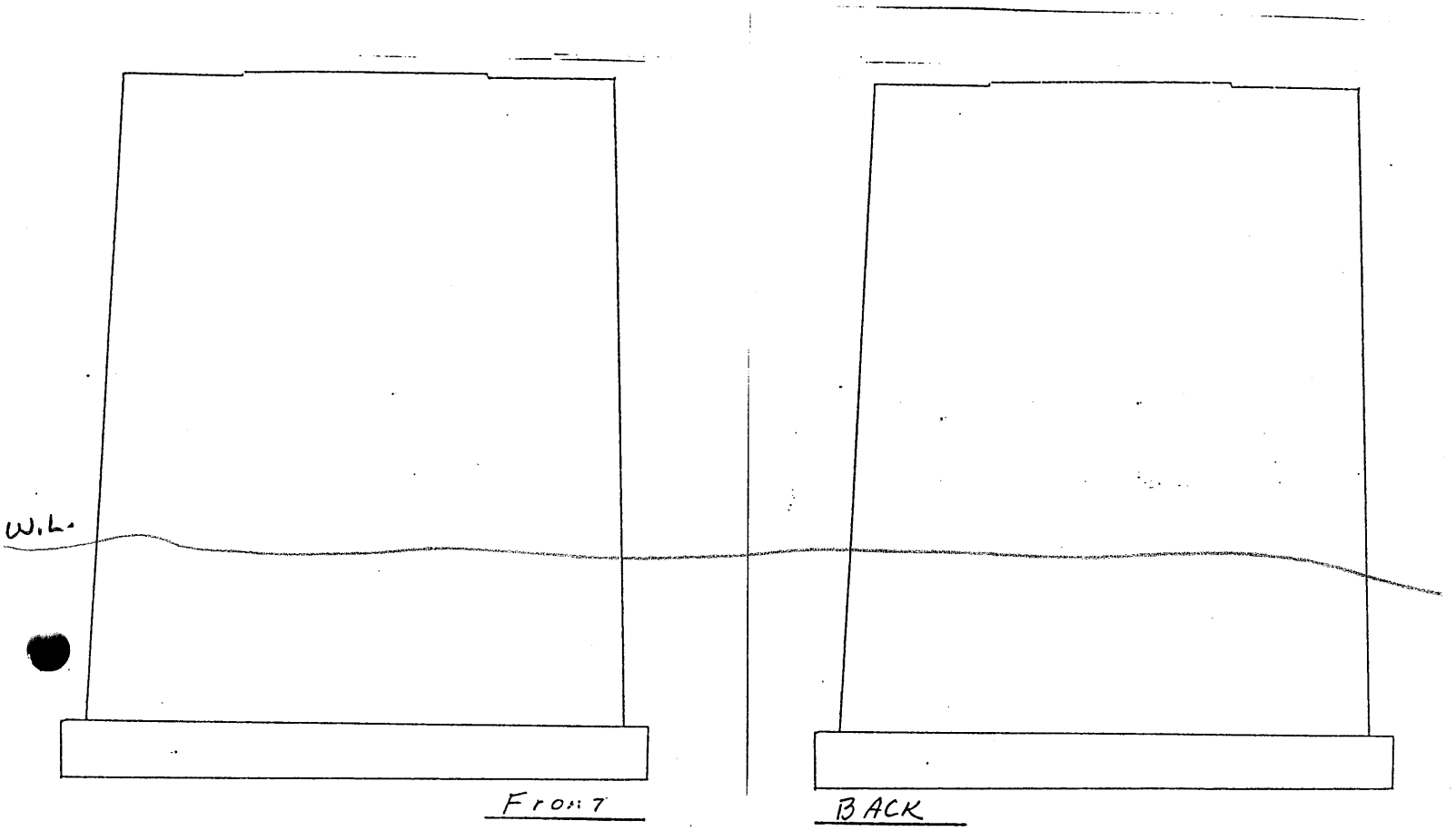
12-14-98 KHC
01-11-01 BP
2-11-03 AT



PIER # 1 Br. # 19-6-9.74

WALL	G	
FOOTING	N/V	
BEARINGS	G	

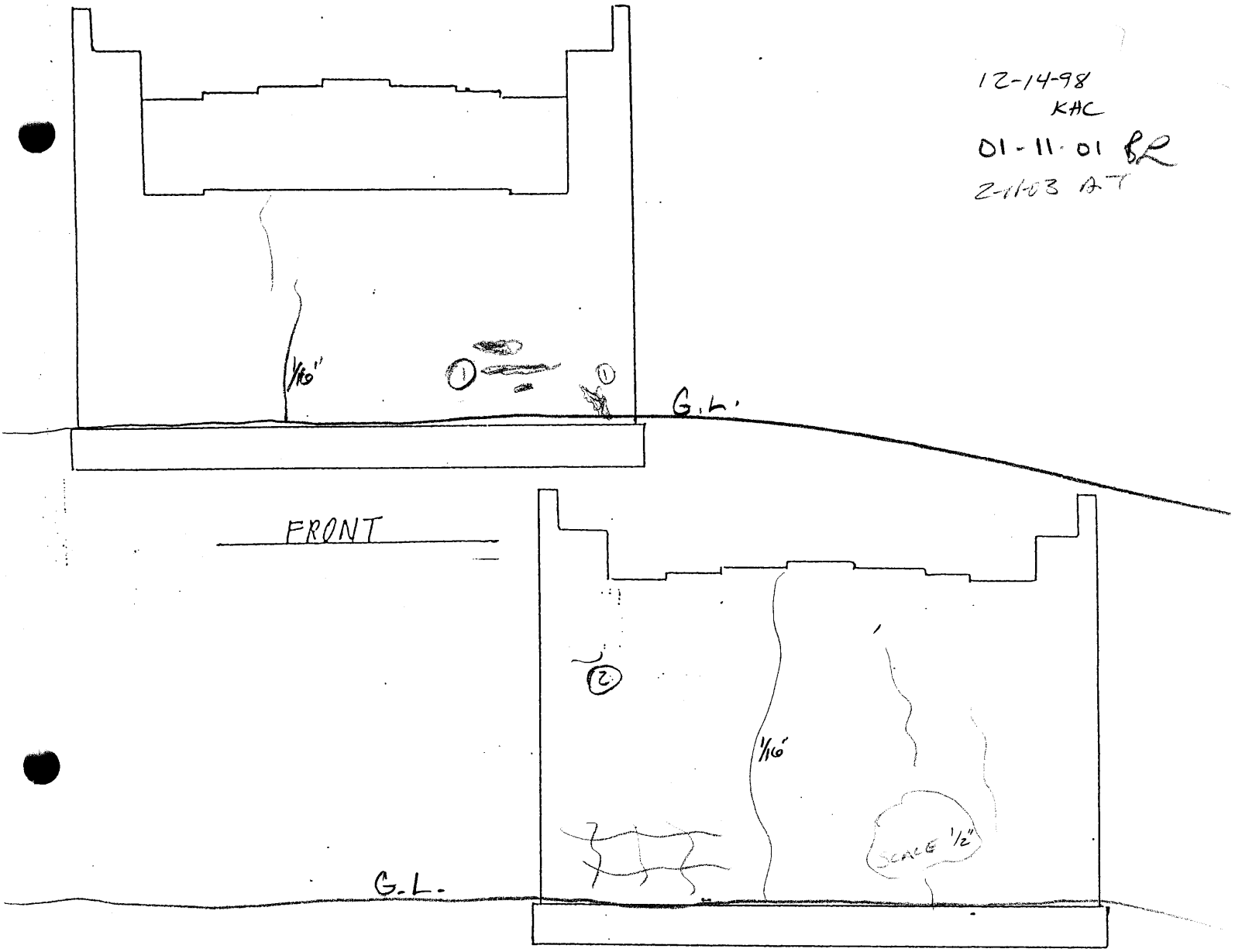
12-14-98 KHC
01-11-01 [illegible]
2-11-03 AT



PIER # 2 Br. # 19-6-9.74

WALL	C	
FOOTING	N/V	
BEARING	C	

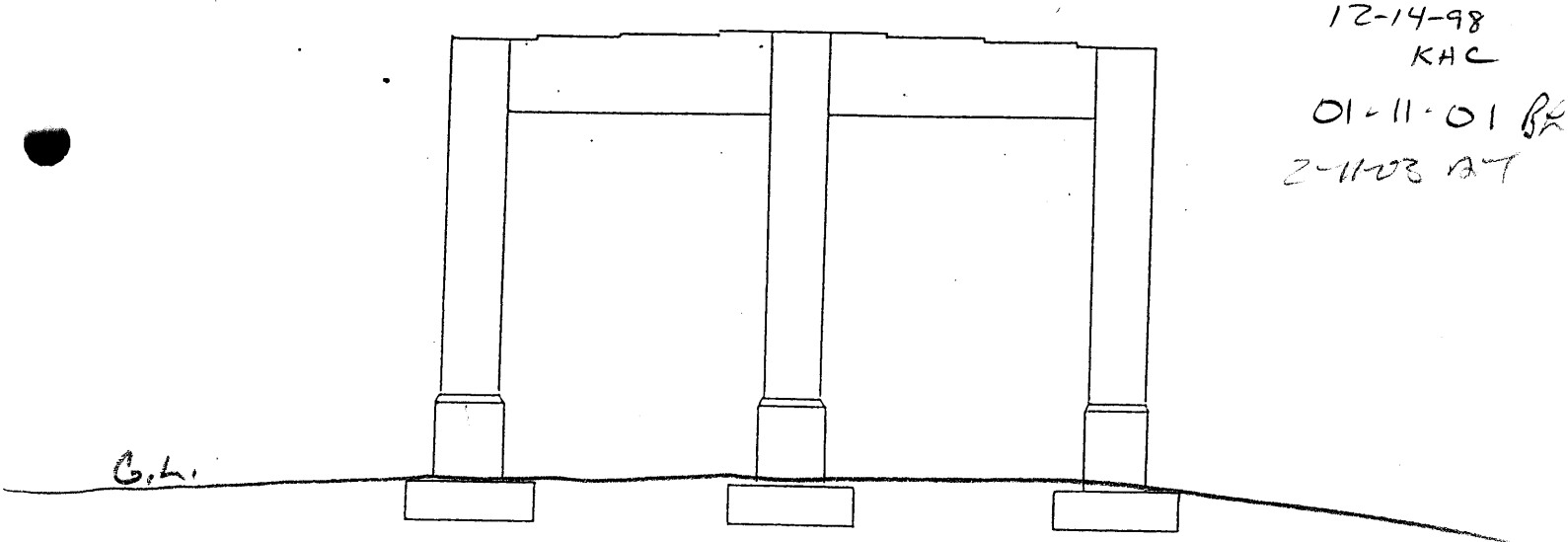
12-14-98
KAC
01-11-01 RR
2-11-03 AT



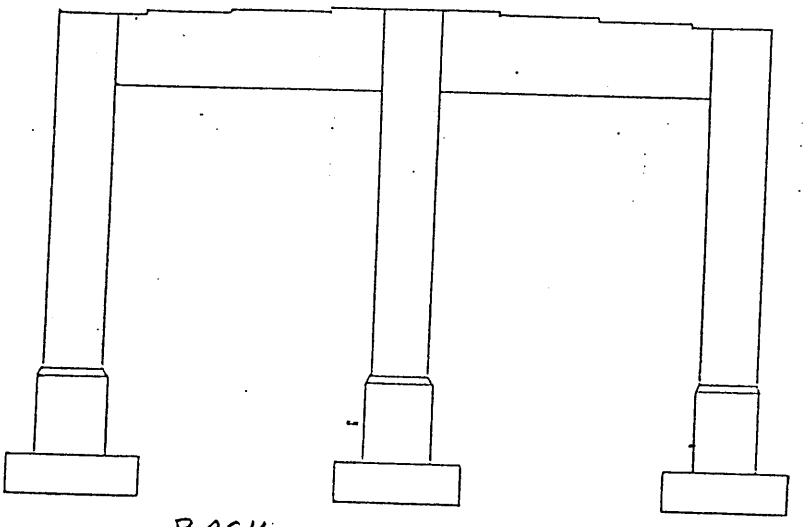
PIER #3 Br. # 19-6-9.74

Cap	N/A	
Wall	F	①B.O.'s 1" Dp x 1½' w. VERT CRACKS 1/16" OPEN, PATTERN CRACKS LGT. SCALE ½" Dp ②IN-PLACE B.O. ½" OPEN
FOOTING	N/V	
[redacted]INGS	G	

12-14-98
KHC
01-11-01 BK
2-11-03 AT



FRONT

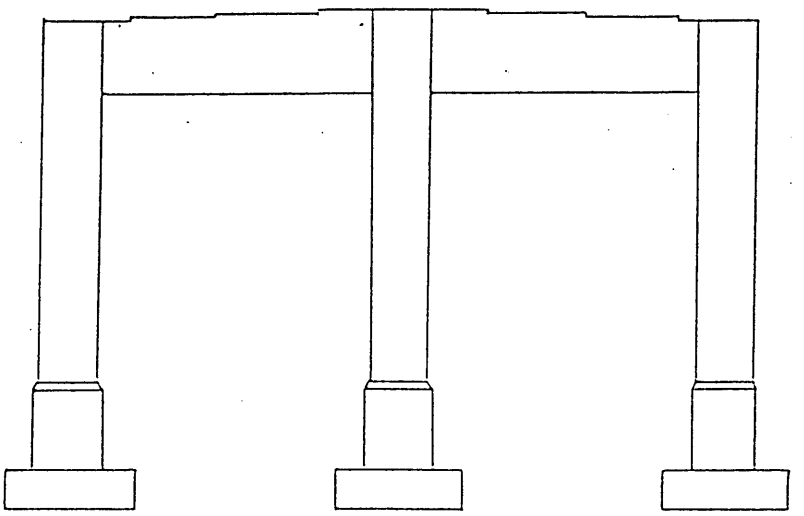


BACK

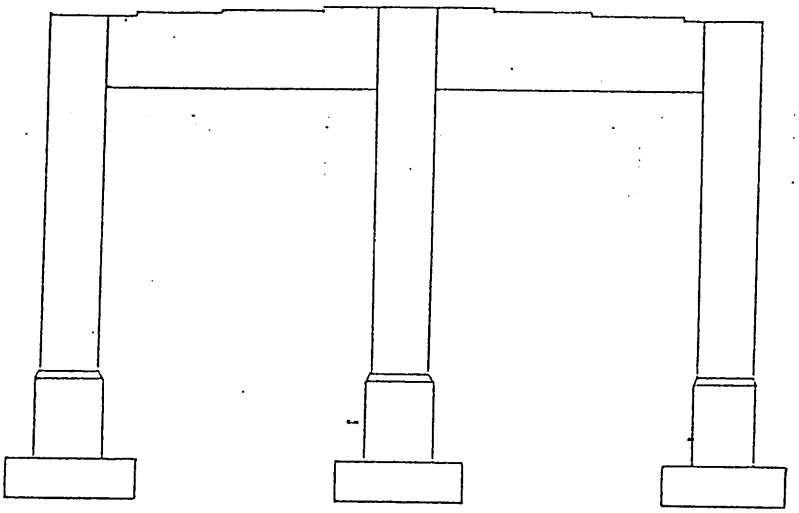
BENT # 1 Br. # 19-6-9.74

Cap	G	
Columns	G	LGT. CHIPS
Ext. No	N/V	
Bearing	G	(ROLLERS)

12-14-98
KAC
01-11-01 BC
2-11-03 VBT



FRONT

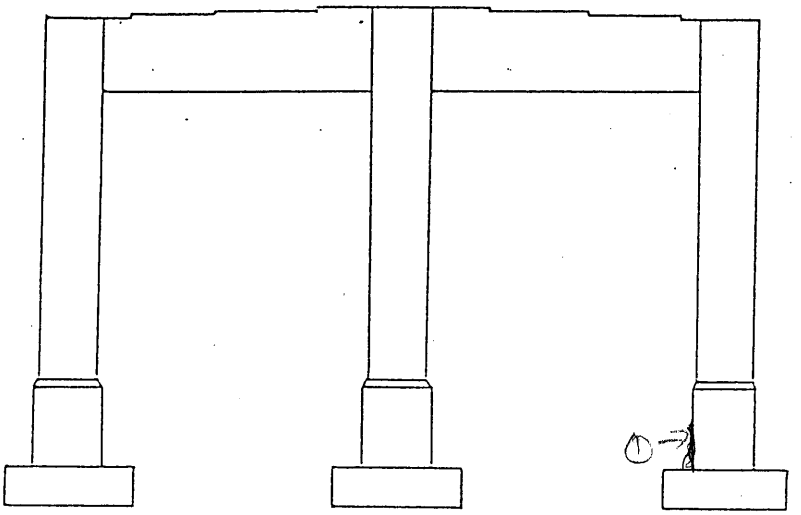


BACK

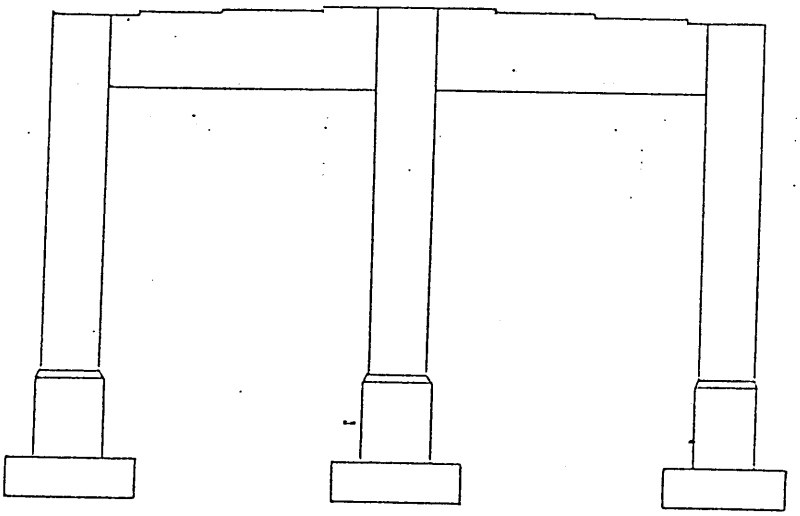
BENT # 2 Br. # 19-6-9.74

Cap	G	
Columns	G	
Footing	N/V	
Bearing	G	

12-14-98
KHC
01-11-01 BL
2-11-03 AT



FRONT

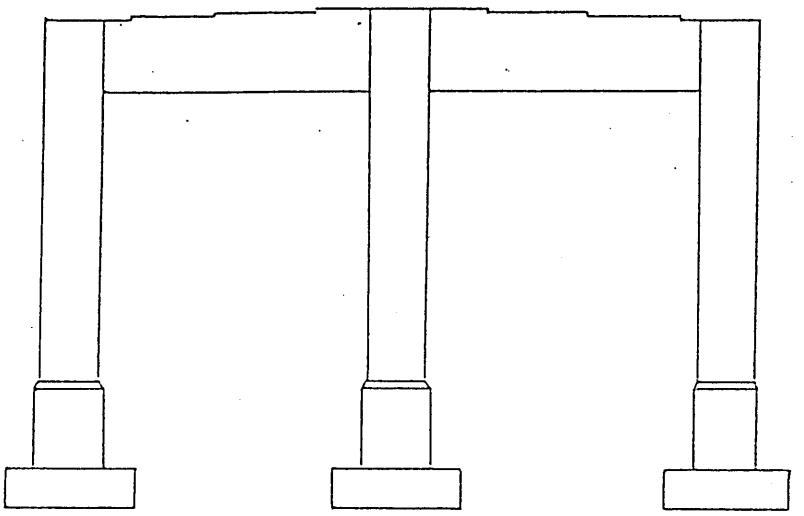


BACK

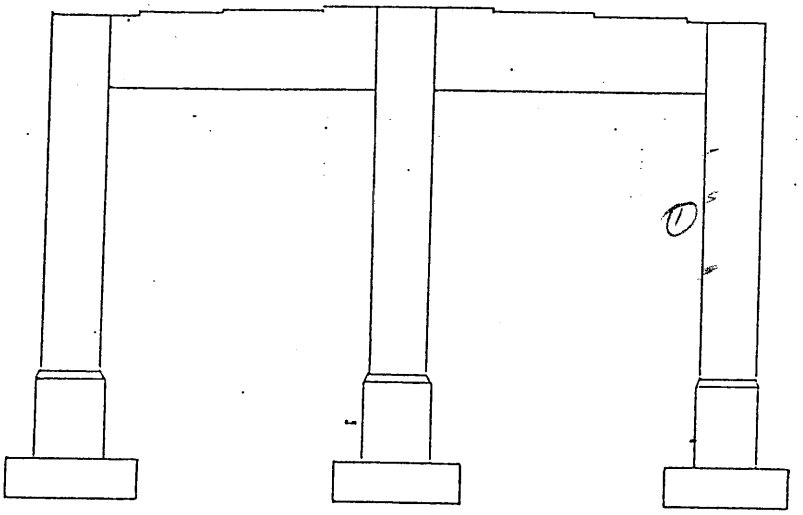
BENT #3 Br. # 19-6-9.74

Cap	G	
Columns	G	O Minor collision damage
Footing	U/V	
Bearing	G	

12-14-98
KHC
01-11-01 BP
2-6-03 AT



FRONT



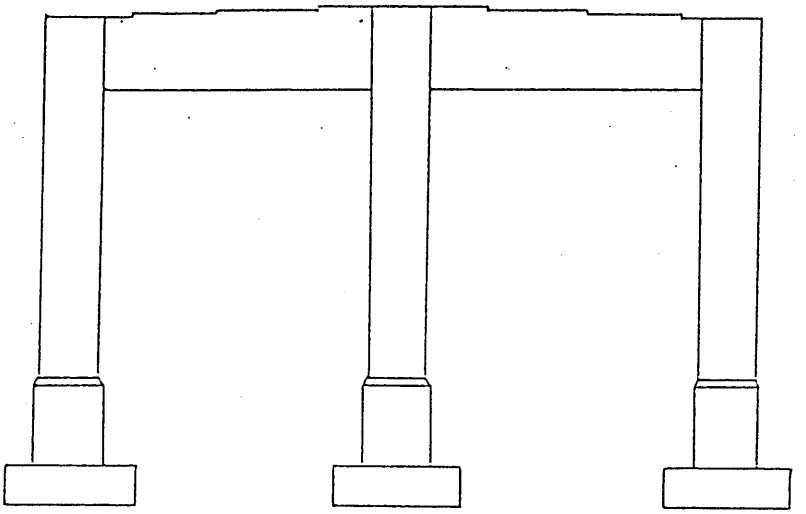
BACK

BENT #4 Br. # 19-6-9.74

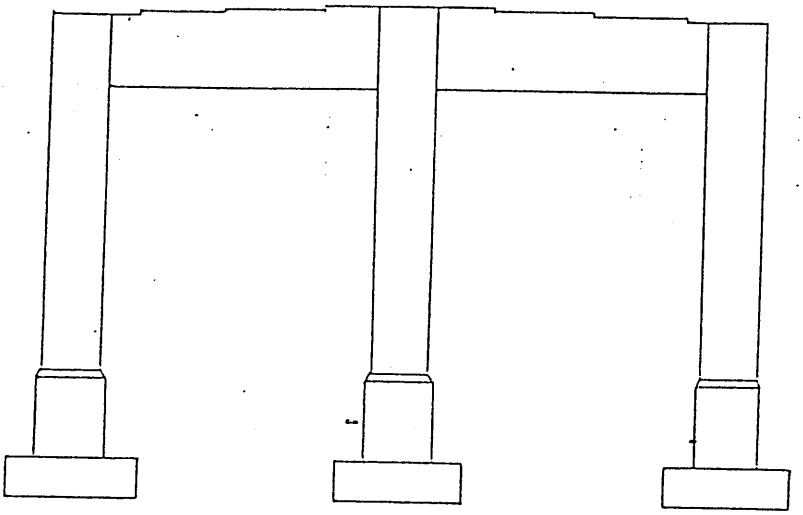
Cap	G	
Columns	G	① HS. POP-OUTS
Footing	N/V	
Bearing	G	

12-14-98
KHC

01-11-01 BL
2-1103 AT



FRONT



BACK

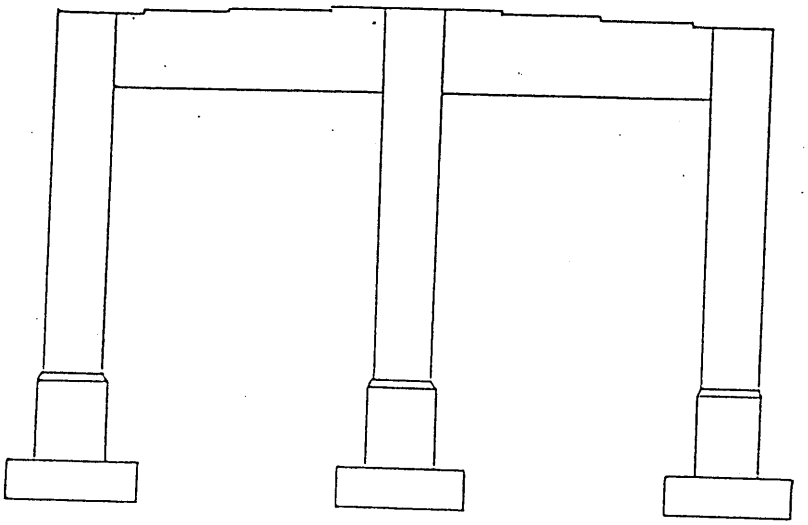
BENT #5 Br. # 19-6-9.74

Cap	G	
Columns	G	
Footing	N/V	
Bearing	G	

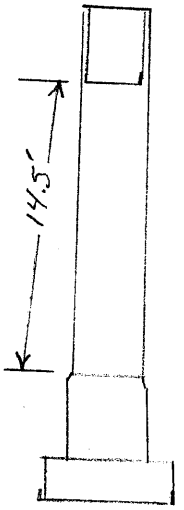
12-14-98
KHC
01-11-01 BC
2-1/03 DT
TILT
NOTED
7-99
M

4-27-2000
tilt less than
1"

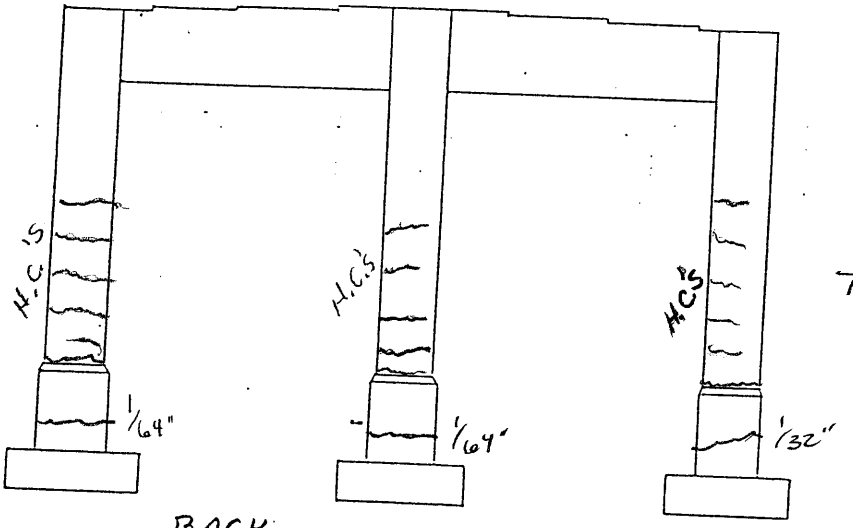
11-27-00
½ TILT 43°



FRONT



END
view



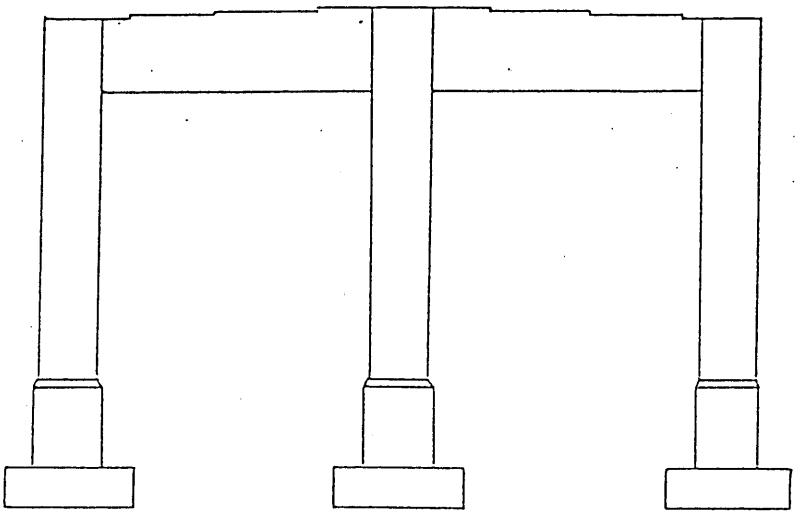
BACK

7-19-99 KAC

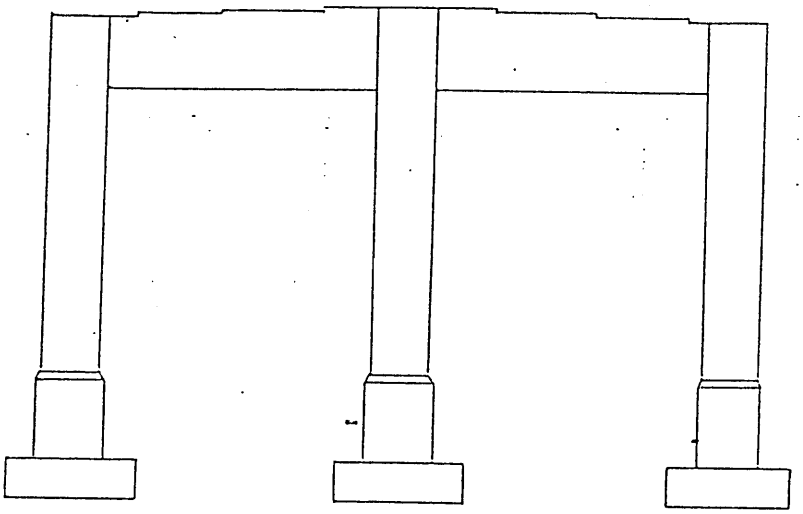
BENT # 6 Br. # 19-6-9.74

Cap	C	
Columns	C/F	"B" TILTED BACKSTATION 1" IN 14.5' — 7/99 @ 80° F "B" not measurable w/ plumb bob 4-27-00 MKD @ 63°F
BOTTOMS	N/V	
Bearing	C	Fixed

12-14-98
KHC
01-11-01 BL
2-11-03 AT



FRONT

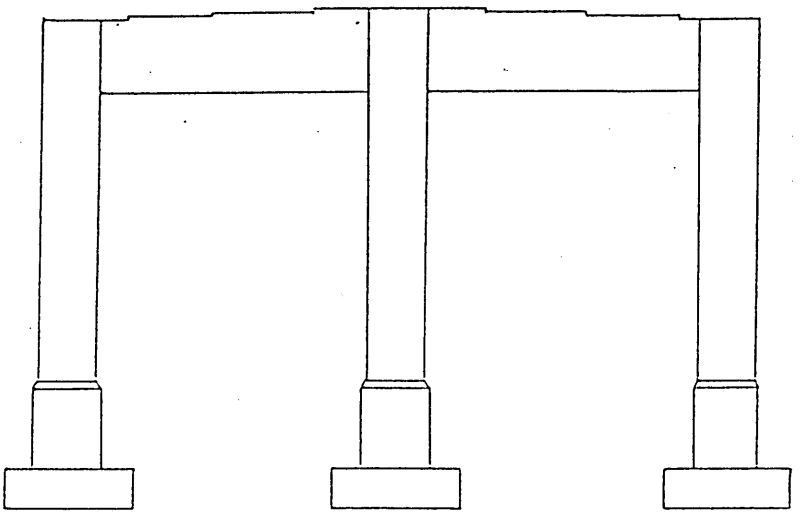


BACK

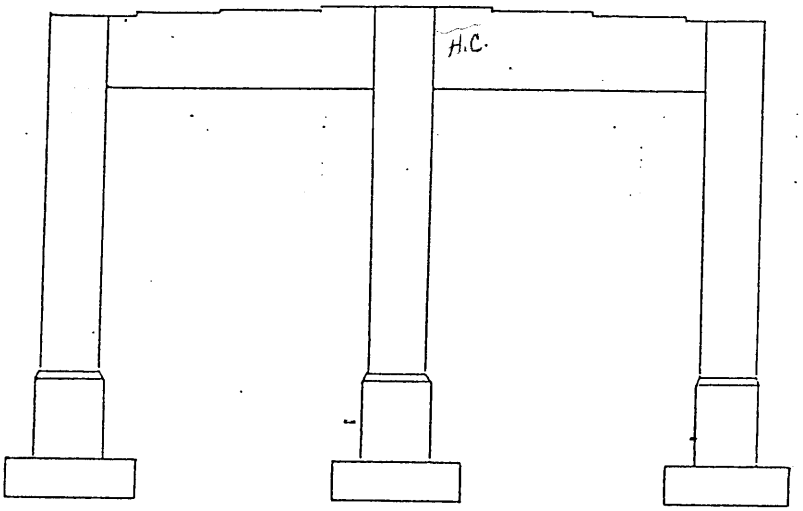
BENT # 7 Br. # 19-6-9.74

Cap	G	
Columns	G	
Footing	NV	
Bearing	G	

12-14-98
KHC
01-11-01 BE
2-11-03 AT



FRONT

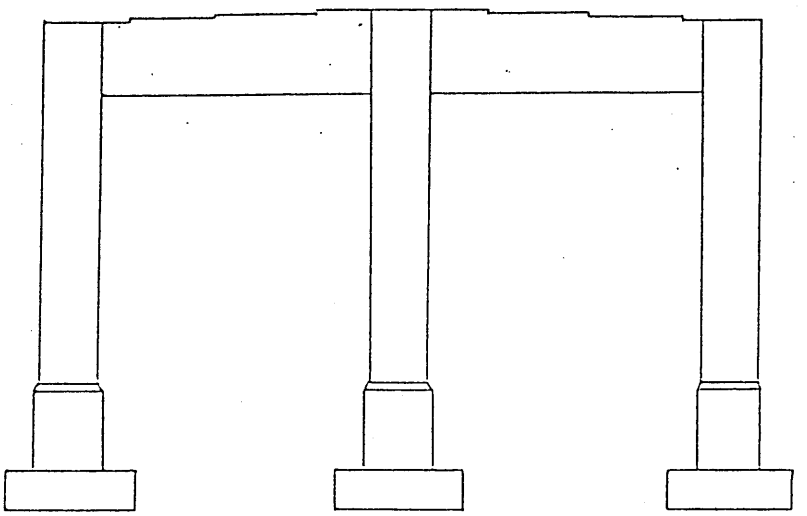


BACK

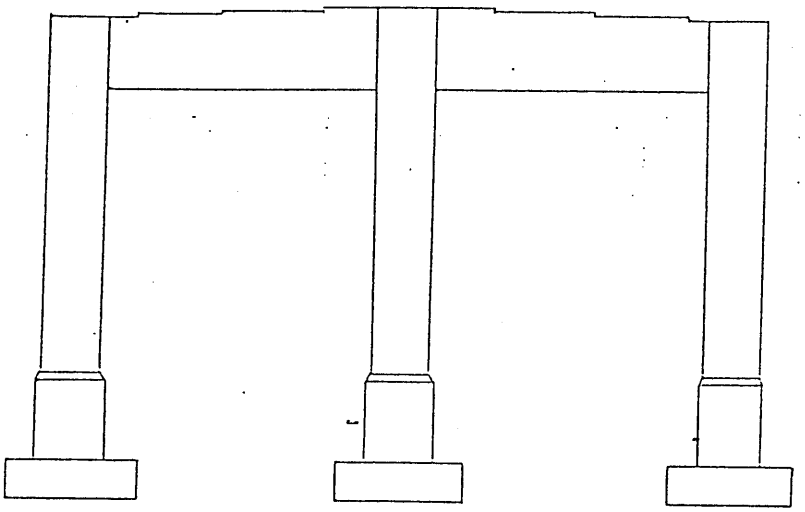
BENT #8 Br. # 19-6-9.74

Cap	G	
Columns	G	
Footing	MV	
Bearing	G	

12-14-98
KHC
01-11-01 BL
2-11-03 AT



FRONT



BACK

BENT # 9 Br. # 19-6-9.74

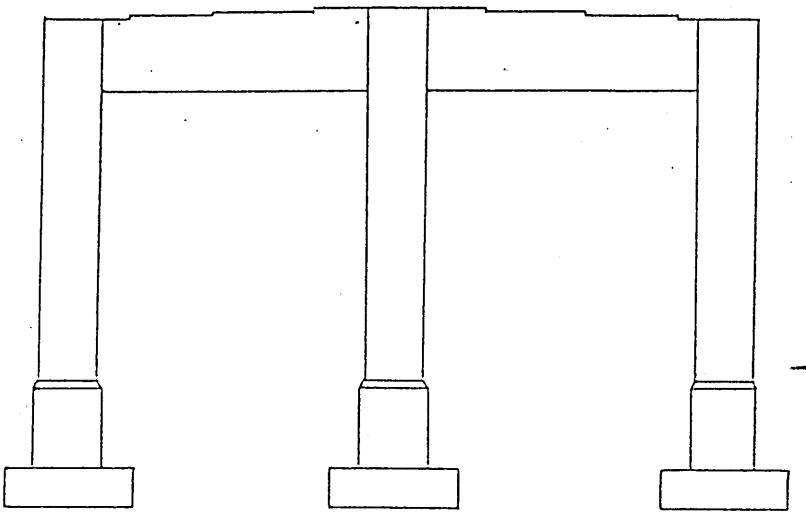
Cap	G	
Columns	G	
Footing	NV	
Bearing	F	Light - mod. corr. Tilted back station

12-14-98
KHC
01-11-01 BD
updated
TILT 2 7/16

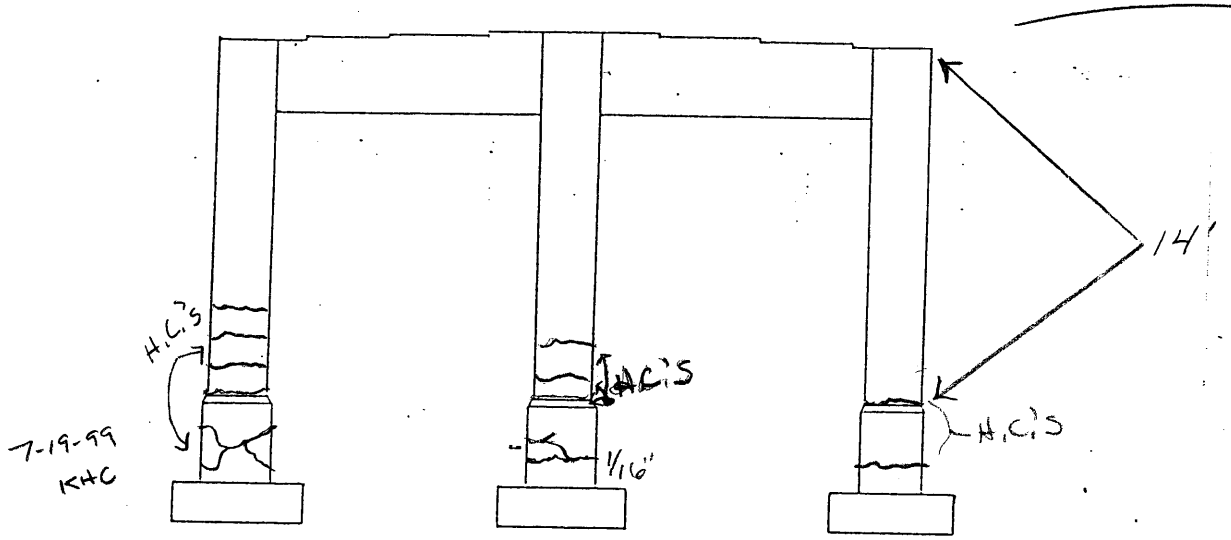
7-99

4-27-2000
tilted 2" in 14'
@ 63°F mkd

11-27-00
1 3/4" TILT
@ 43°F



FRONT

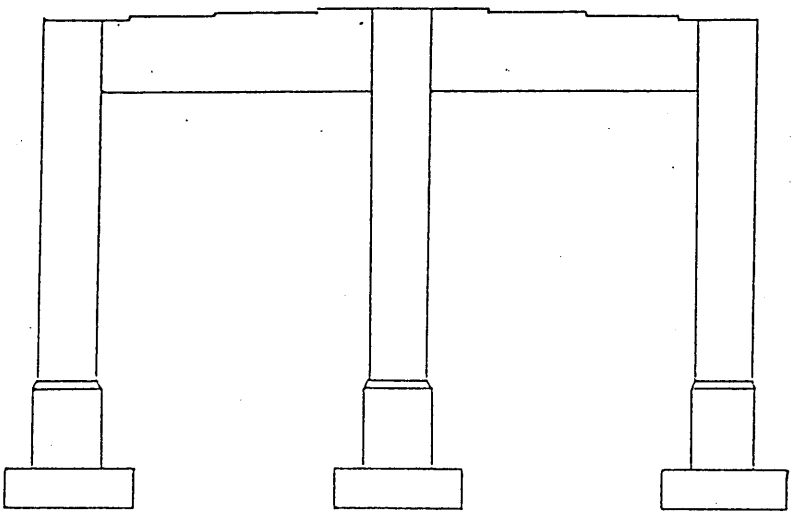


BACK

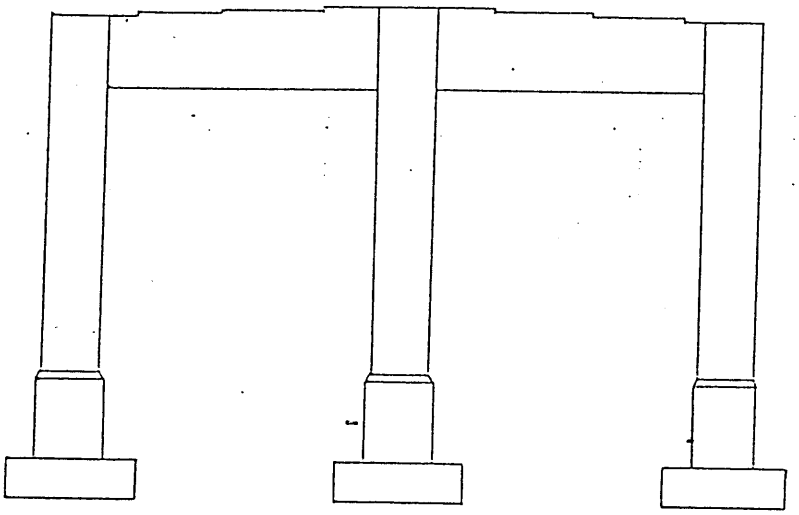
BENT #~~X~~10 Br. # 19-6-9.74

Cap	G	
Columns	F	Column 'B' Tilted 1 3/4" Backstation Most Noted Than 'A & C' w/ Horiz. Crack Backside 1/16" Open
		+ NOTE: Tilted 2 1/2" IN 14' – Col. "B" – 7-19-99
Footing	N/V	("B" Tilted 1 3/4" 11-27-00)
Bearing	G	Fixed

12-14-98
KHC
01-11-01 BR
2-11-03 MT



FRONT

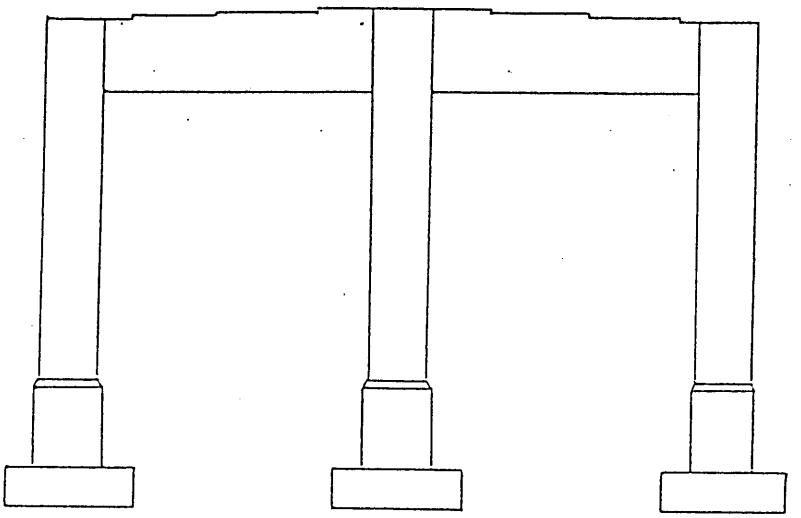


BACK

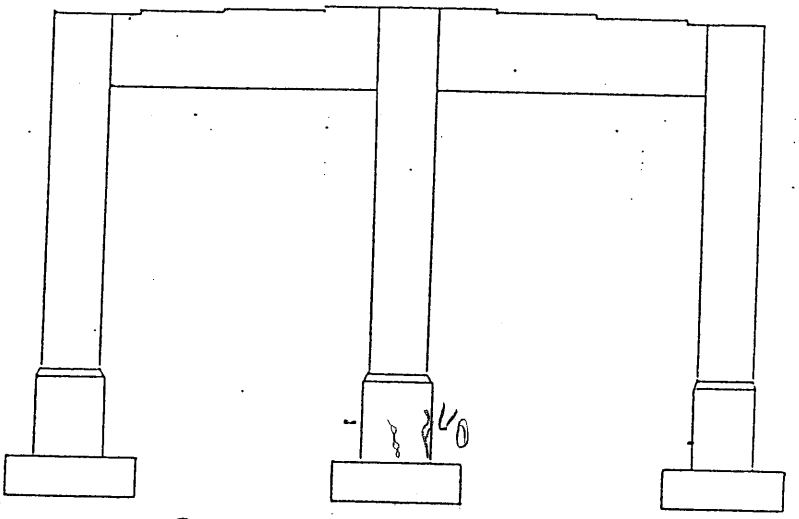
BENT # 11 Br. # 19-6-9.74

Cap	G	
Columns	G	
Footing	N/V	
Bearing	F	Lgh. To Mod. Corr. & Tilted Backstation

12-14-98
KHC
01-11-01 BL
2-21-03 MT



FRONT

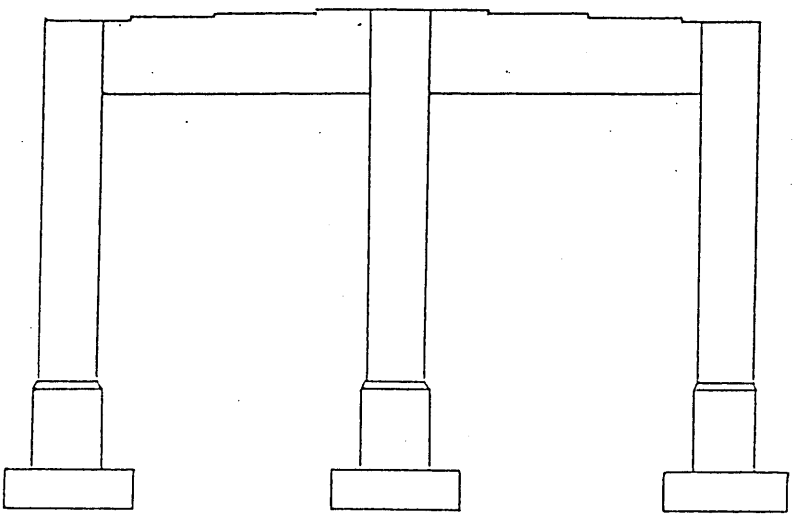


BACK

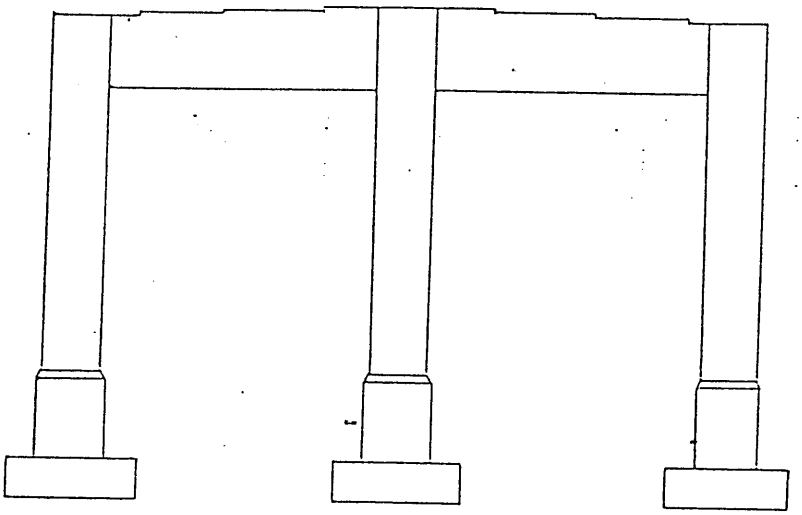
BENT #12 Br. # 19-6-9.74

Cap	G	
Columns	G	Minor collision damage
Footing	N/V	
Bearing	F	See Bent # 11

12-14-98
KHC
01-11-01 BG
2-1-03 KT



FRONT

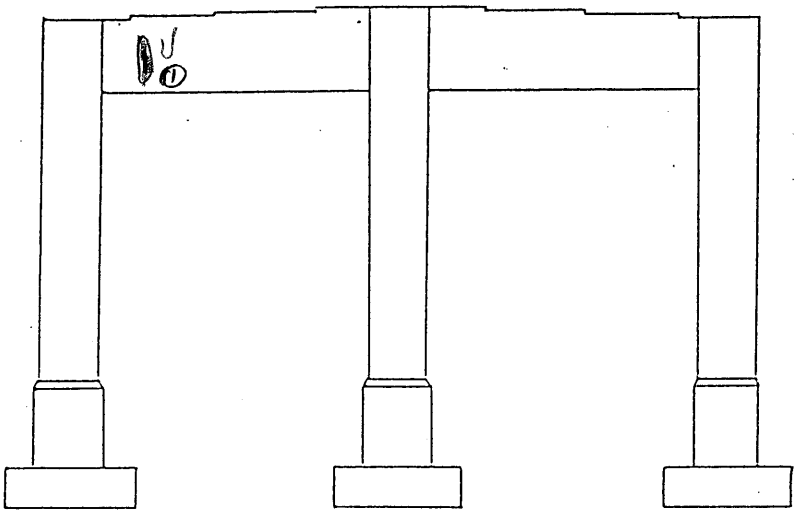


BACK

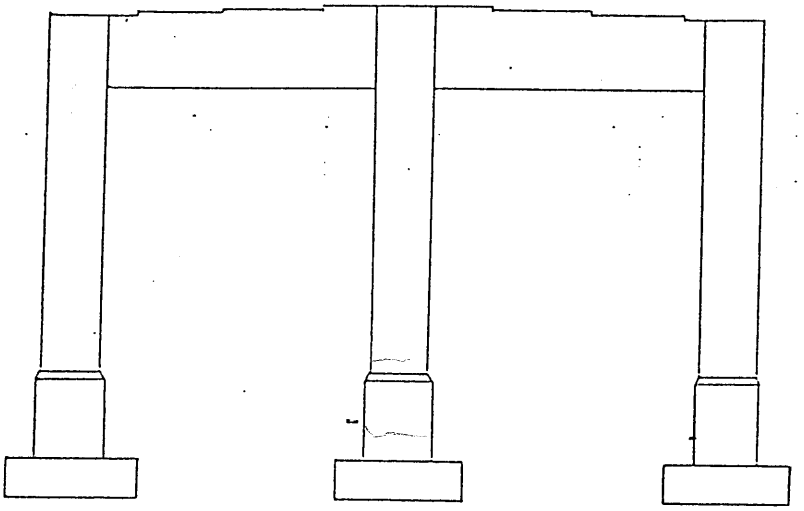
BENT # 13 Br. # 19-6-9.74

Cap	G	
Columns	G	
Footing	N/V	
Bearing	F	Lgh. To Mod Corr. Full Tilt Toward Backstation

12-14-98
KHC
01-11-01 BR
2-11-03 AT



FRONT

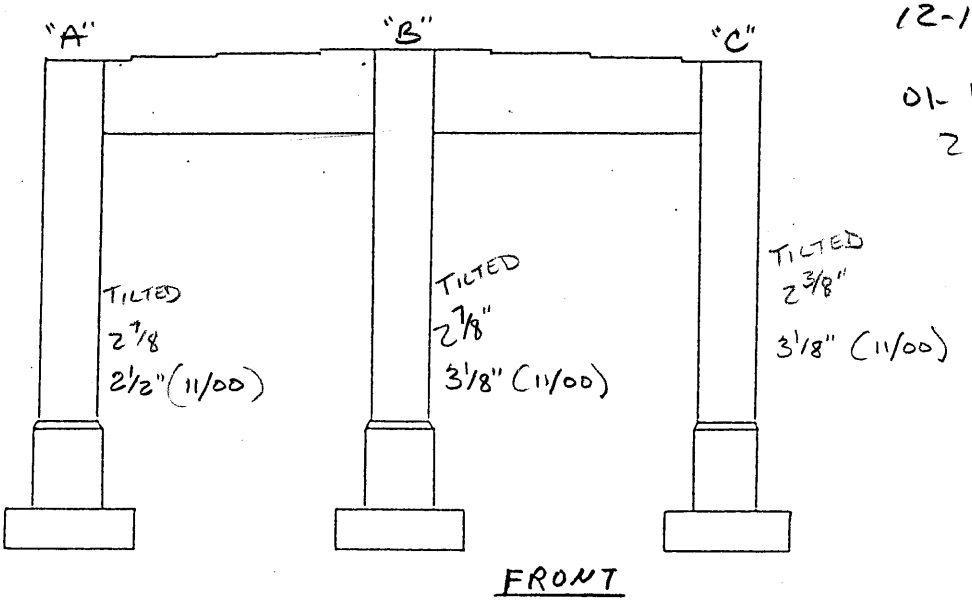


BACK

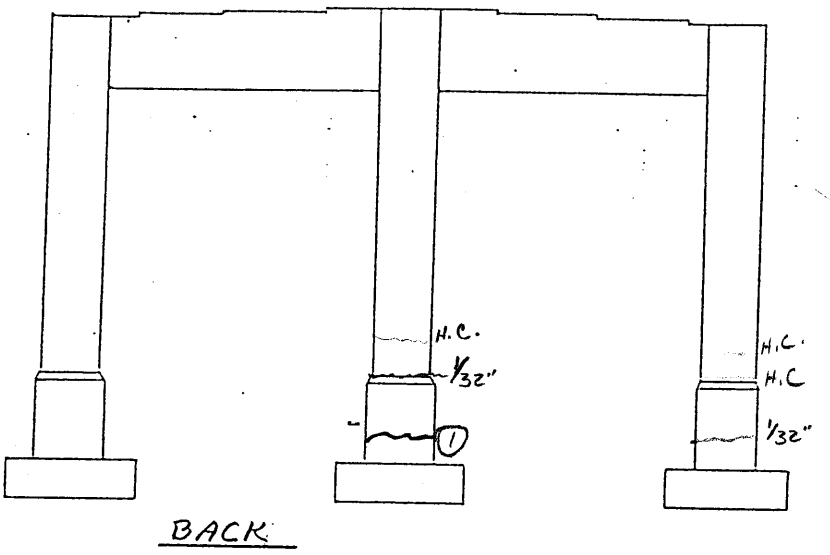
BENT #14 Br. # 19-6-9.74

Cap	G	① HS. Pop-out ½" Dp
Columns	G	
Footing	N/V	
Bearing	F	Lgh To Mod. Corr. Full Tilt To Backstation

12-14-98
KHC
01-11-01 BO
2-7-03 HT



See Sketch for updated Changes in Tilt

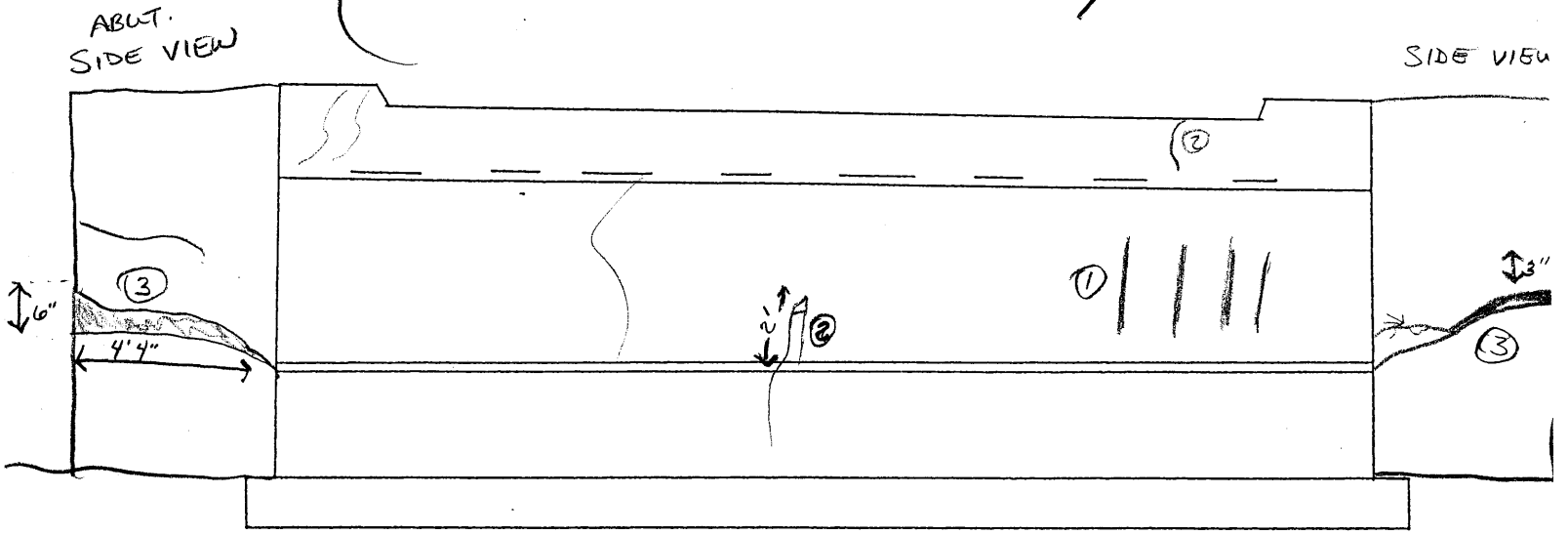


BENT #15 Br. # 19-6-9.74

Cap	G	BENT TILTED 2 7/8"
Columns	F	① HORIZ. CRACK UP TO 1/4" OPEN
Footing	N/V	
Bearing	F	Lgh To Mod. Corr. Fixed Bearing

12-14-98
KHC
01-11-01 RL
2-11-03 MM

(see updated sketch for changes in Tilt)

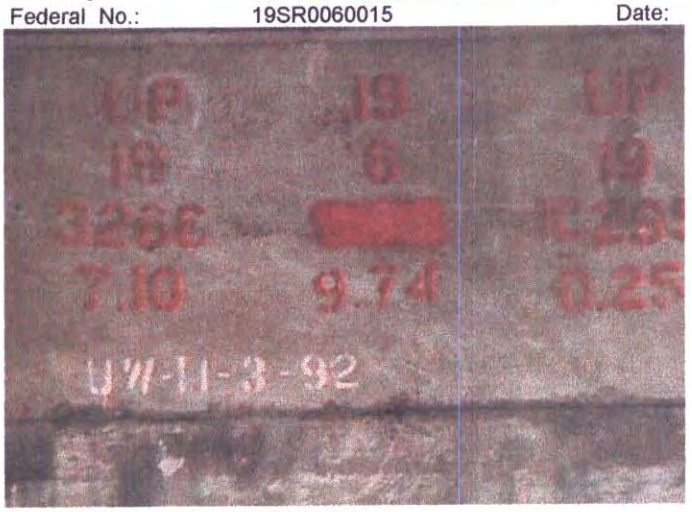


ABUT # 2 Br. # 19-6-9.74

CAP	N/A	
Wall	P	① H.S. POP-OUTS 1/2" Dp ② ABUT. TILTED ~~¼~~ 4¼" (1-11-01)
Backwall	G	② IN-PLACE B.D.
WingS	~~N/A~~ P	③ BROKEN OUT & CRACKED DUE TO TILT
Footing	N/V	
Bearings	G	

Bridge No.: 00019 — SR6 — 9.74
Crossing:: SR 6 / CUMBERLAND RIVER *
Federal No.: 19SR0060015 Date: January 11, 2001

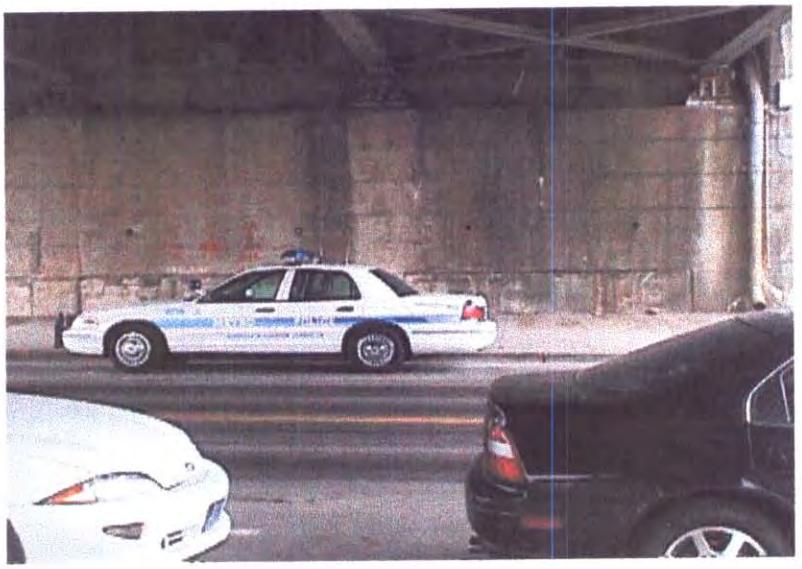
PIC1



BRIDGE NO. AT ABUTMENT # 1

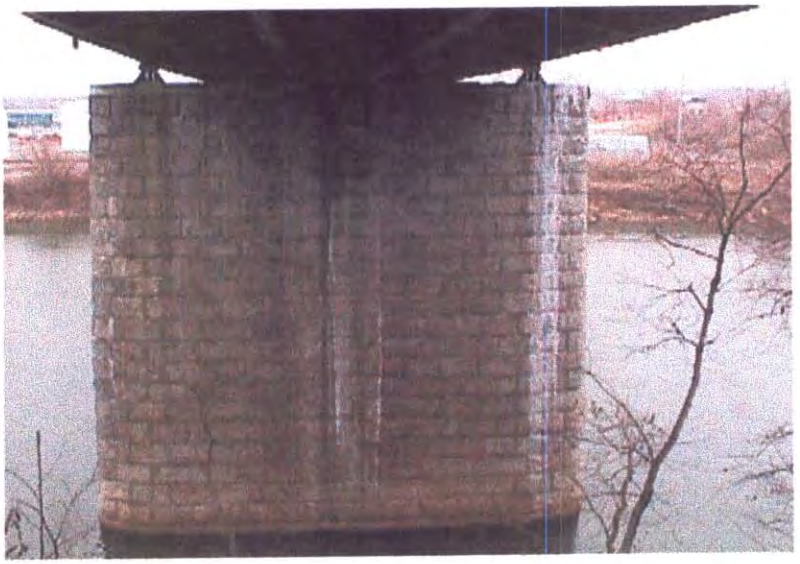
Bridge No.: 19 — SR6 — 9.74
Crossing:: SR 6 / CUMBERLAND RIVER *
Federal No 19SR0060015 Date: January 11, 2001

PIC2



ABUTMENT

PIC3



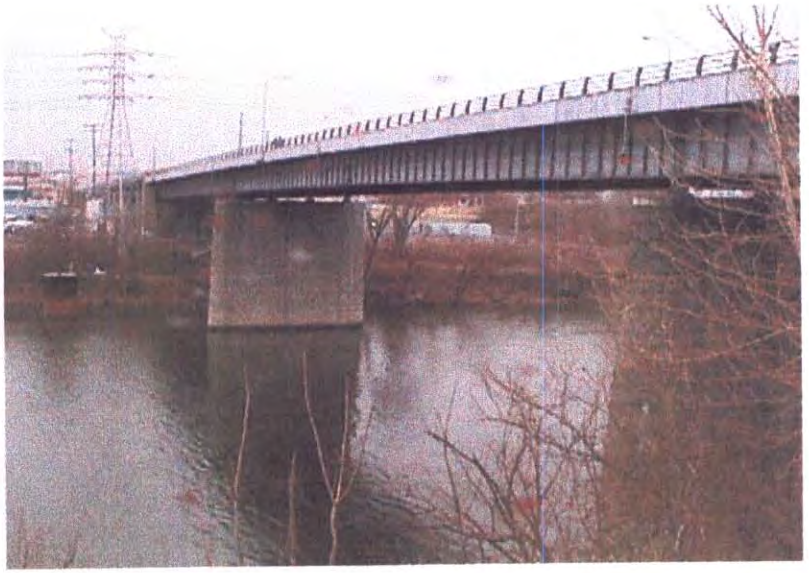
PIER TYPICAL

Bridge No.: 19 — SR6 — 9.74
Crossing:: SR 6 / CUMBERLAND RIVER *
Federal No.: 19SR0060015 Date: January 11, 2001

PIC4

BOTTOM DECK VIEW UP STATION

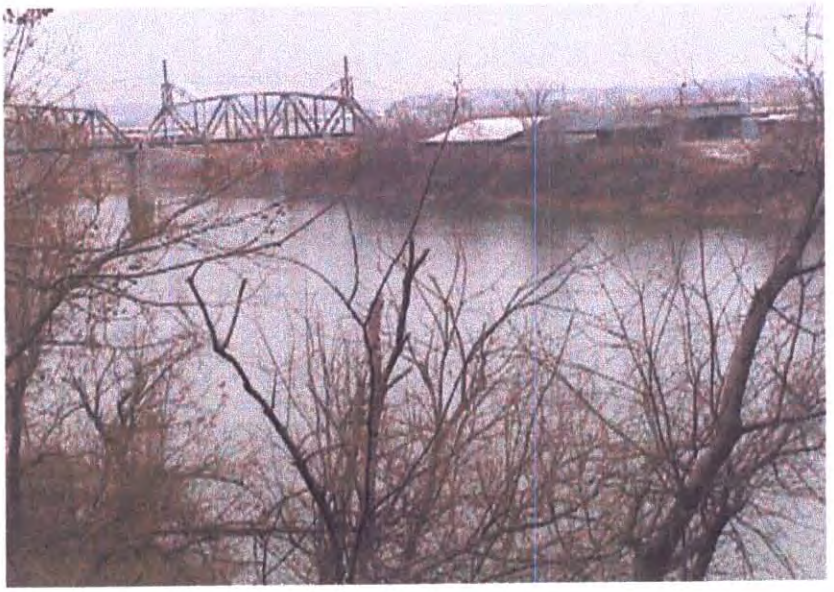
PIC5



ELEVATION LT VIEW

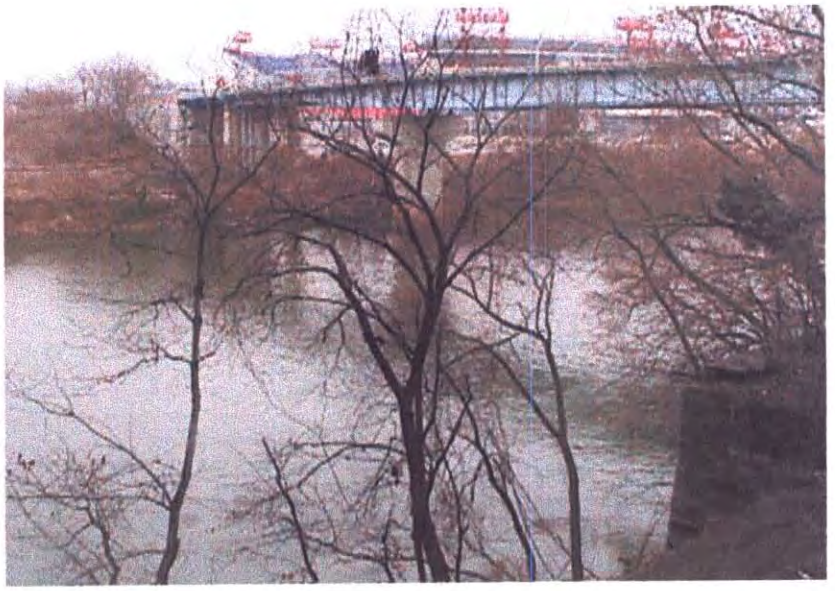
Bridge No.: 19 — SR6 — 9.74
Crossing:: SR 6 / CUMBERLAND RIVER *
Federal No.: 19SR0060015 Date: January 11, 2001

PIC6



DOWNSTREAM

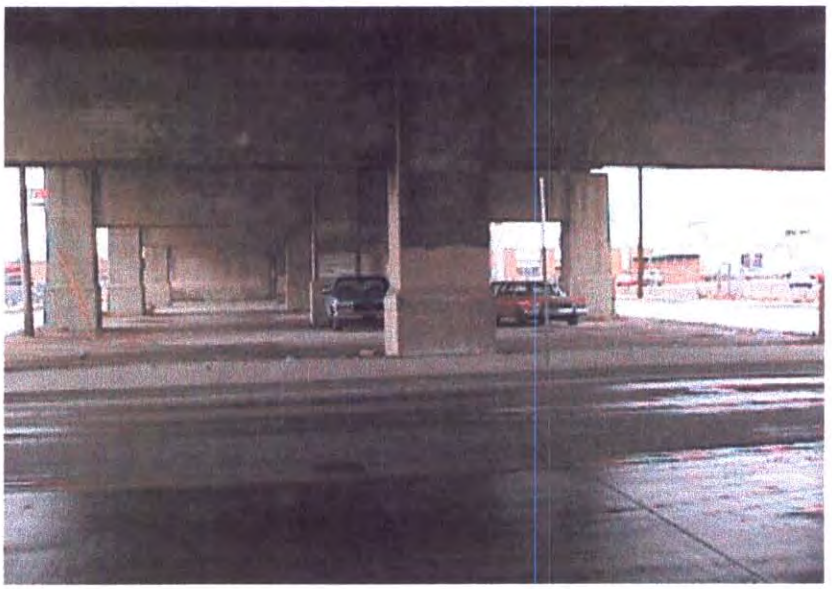
PIC7



UPSTREAM

Bridge No.: 19 — SR6 — 9.74
Crossing:: SR 6 / CUMBERLAND RIVER *
Federal No.: 19SR0060015 Date: January 11, 2001

PIC8



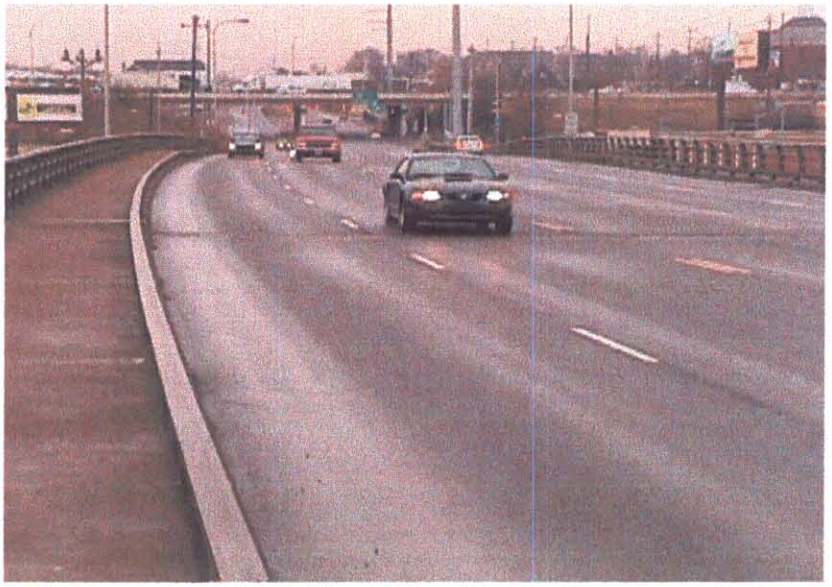
BENT TYPICAL

PIC9

"A" APPROACH

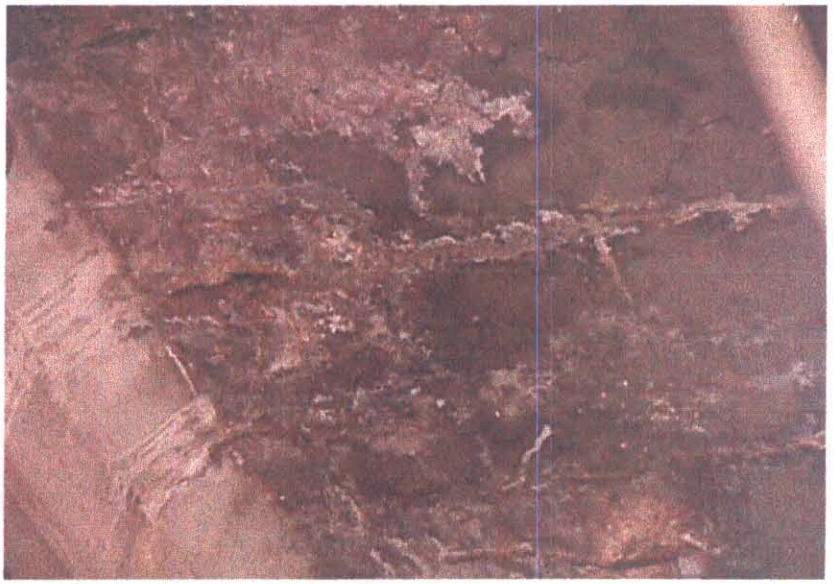
Bridge No.: 19 — SR6 — 9.74
Crossing:: SR 6 / CUMBERLAND RIVER *
Federal No.: 19SR0060015 Date: January 11, 2001

PIC10



"B" APPROACH

PIC11



SCALE WITH EXPOSED REBAR AND EFF. AT OVERHANG RT.

BRIDGE INSPECTION REPORT

FORM BIR 3.0
Rev. 09/24/98
DT-0069

FIELD REPORT NO. 14 DATE 1-11-01
REVIOUS REPORT NO. 13 DATE 12-14-98
PLANS ---- YES [X] NO [ ]

BRIDGE NO. 19SR0060015 (ELEVEN DIGIT NO.)
BRIDGE LOC. NO. 19 - SR6 - 9.74 (CO. ROUTE LOG MILE)

SR6 (ROAD NAME) OVER CUMBERLAND RIVER (FEATURE INTERSECTED) _____ (STRUCTURE NAME (IF NAMED))

YEAR CONSTRUCTED 1956 (ESTIMATED OR ACTUAL) [ ] [X] COUNTY DAVIDSON MAINTENANCE DISTRICT NO. 31

YEAR WIDENED _____ (ESTIMATED OR ACTUAL) [ ] [ ]
YEAR REHABILITATED _____ (ESTIMATED OR ACTUAL) [ ] [ ]

FEATURES

WEARING SURFACE-- CONCRETE [ ] TIMBER [ ] ASPHALT [X] (DEPTH= 2½")
FLARED WIDTH --------- YES [ ] NO [X]
NAVIGATIONAL CONTROL-- YES [X] NO [ ]
MEDIAN WIDTH -------- OPEN [ ] NONE [X] CLOSED [ ]

BRIDGE SKEW 90° LT [ ] RT [ ]

STRUCTURE TYPE WPG (Main Span) NO. SPANS 3 (Main Span)

STRUCTURE TYPE WPG (Approach Spans) NO. SPANS 16 (Approach Spans)

MAXIMUM SPAN LENGTH 320' TOTAL LENGTH 1845'

INSPECTORS

1. WATTS
2. HEGGIE CLARK
3. CARVER
4. LOVE
5.
6.
7.
8.
9.

WIDTHS

DECK OUT-TO-OUT 74'
ROADWAY CURB/CURB 56'
SIDEWALK 5' RT 5' LT
*APPROACH ROADWAY 27' LT & RT
APPR. SHLD. — RT — LT
*DOES NOT INCLUDE SHOULDER

CLEARANCES

MIN. VERTICAL OVER DECK —
MIN. VERTICAL UNDER CL 14'7"
MIN. LATERAL UNDER CL 9 RT
— LT

(<25') NBIS BRIDGE LENGTH — (ft) (in)

UNDERWATER INSPECTION

INSPECTION PERFORMED BY:
DOT FIELD TEAM [ ] DATE _____
CONTRACT DIVERS [X] DATE 9-18-2000
NONE REQUIRED [ ]

FRACTURE CRITICAL DETAILS: YES [ ] NO [X]
IF YES, INCLUDE BIR 3.9

CHANGE IN STRUCTURAL CONDITION YES [ ] NO [X]
MAJOR REPAIRS MADE YES [ ] NO [X]

COMMENTS: TILT IN BENT #15 AND ABUT #2 HAS INCREASED 1/4" SINCE LAST INSPECTION.

Kam R Heggie Clark
SUPERVISING BRIDGE INSPECTOR

BRIDGE RATING [ ] [ ] [X] [ ]
GOOD FAIR POOR CRITICAL

FORM BIR 3.1
Rev. 09/24/98
DT-0080

BRIDGE LOC. NO. 19 (CO.) - SR16 (ROUTE) - 9.74 (L.M.)

DATE: 1-11-01

PERFORMANCE EVALUATION

Time of day inspected 10:00 AM Weather conditions 35° DRIZZLE

Vehicles observed ALL TYPES

LIVE LOAD BEHAVIOR	*YES*	*NO*	*COMMENTS*
Substructure			
Horiz. & Vert. Defl.	[ ]	[X]	
Vibration	[ ]	[X]	
Superstructure			
Horiz. & Vert. Defl.	[ ]	[X]	
Vibration	[ ]	[X]	

APPROACH

Alignment	(G)	F	P	C	
Slab	G	F	P	C	N/A
Joints	G	F	P	C	N/A
Pavement	(G)	F	P	C	
Embankment	(G)	F	P	C	
Drains	G	F	P	C	N/A

TRAFFIC SAFETY FEATURES

					STANDARD	SUB-STANDARD	
Bridgerailing	(G)	F	P	C	[ ]	[✓]	
Transitions	(G)	F	P	C	[ ]	[✓]	"B" END RT SIDE ONLY
Guardrail	(G)	F	P	C	[ ]	[✓]	
Guardrail Terminal	(G)	F	P	C	[ ]	[✓]	

SIGNING

	YES	NO	NEEDED
Paddleboard	[ ]	[X]	[ ]
Vertical Clearance (< 14')	[ ]	[X]	[ ]
Narrow [ ] One Lane Bridge [ ]	[ ]	[X]	[ ]

WEIGHT LIMIT POSTED
YES [ ] NO [X]

GROSS _____ TONS
2 AXLE _____ TONS
3 OR MORE AXLES _____ TONS

Other Signs or Plaques _____

Comments Regarding Any Problems With Signing _____

Other Recommendations _____

FORM BIR 3.2
Rev. 09/24/98
DT-0081

BRIDGE LOC. NO. 19 - SR6 - 9.74 (CO. - ROUTE - L.M.)

DATE: 1-11-01

DECK

					COMMENTS
WEARING SURFACE	(G)	F	P	C	
DECK - STRUCTURAL CONDITION	G	(F)	P	C	TRANSV CRACKS, SPALLS 2" DP, DELAMIN
CURBS	G	(F)	P	C	MAP CRACKS & 2" DP SCALE @ JOINTS
MEDIAN	G	F	P	C	N/A
SIDEWALKS	G	(F)	P	C	TRANSV CRACKS 1/16" OPEN
PARAPET	G	F	P	C	N/A
RAILING	(G)	F	P	C	
PAINT	G	F	P	C	N/A
DRAINS	G	F	(P)	C	UP TO 100% CLOGGED
LIGHTING STD'S	(G)	F	P	C	
UTILITIES	(G)	F	P	C	
JOINT LEAKAGE	G	(F)	P	C	MOD OVER BEARING DEVICES
EXPANSION JOINTS	(G)	F	P	C	

SUPERSTRUCTURE

					COMMENTS
BEARING DEVICES	G	(F)	P	C	LGT-MOD CORR - SOME TILTED BACKSTATION
GIRDERS OR BEAMS	G	(F)	P	C	MOD CORR ON FLANGES, 1/16" SECT LOSS Bm "H" SP #19
FLOOR BEAMS	G	(F)	P	C	MOD CORR
STRINGERS	G	(F)	P	C	" "
DIAPHRAGMS	G	(F)	P	C	LGT-MOD CORR
BRACING	G	(F)	P	C	CORR @ CONNECTION PLATES
TRUSSES - GENERAL	G	F	P	C	N/A
- PORTALS	G	F	P	C	
- BRACING	G	F	P	C	
PAINT	G	(F)	P	C	MOD FLAKING
ALIGNMENT OF MEMBERS	(G)	F	P	C	

TEXTURE COAT N/A

CONDITION RATING	G	F	P	C
OVERALL APPEARANCE	G	F	P	C
STAINING	G	F	P	C
SCALING	G	F	P	C
FADING	G	F	P	C

NEEDS SPOT PAINTING? YES [ ] NO [ ]

NEEDS REPAINTING? YES [ ] NO [ ]

COMMENTS: _____

RECOMMENDATIONS _____

FORM BIR 3.3
Rev. 09/24/98
DT-0082

BRIDGE LOC. NO. 19 - SR16 - 9.74
CO. ROUTE L.M.

DATE: 1-11-01

SUBSTRUCTURE

ABUTMENTS					COMMENTS
CAPS	G	(F)	P	C	ABUT #1 B.O.W/EXP ST 1 1/2" DP, VERT CRACKS 1/8" OPEN
BREASTWALL	G	F	(P)	C	SEP CRACKS UP TO 6" OPEN DUE TO TILT ABUT #2
WINGS	(G)	F	P	C	
BACKWALL	G	(F)	P	C	VERT CRACKS 1/8" OPEN
PLUMB	G	F	(P)	C	ABUT #2 TILTED BACKSTATION 4 1/4"
FOOTING	G	F	P	C	N/V
PILES	G	F	P	C	N/V
EMBANKMENT	G	F	P	C	N/A
BEARING SURFACE	(G)	F	P	C	
SLOPE PAVING	G	F	P	C	N/A

PIERS					
CAPS	G	F	P	C	N/A
COLUMNS	G	(F)	P	C	B.O.'S 1" DP, VERT CRACKS 1/16" OPEN, PATTERN CRACKS
PLUMB	(G)	F	P	C	
FOOTINGS	G	F	P	C	N/V
PILES	G	F	P	C	N/V
BEARING SURFACE	(G)	F	P	C	

BENTS					
CAPS	(G)	F	P	C	
COLUMNS	G	(F)	P	C	HORIZ CRACKS UP TO 1/4" OPEN, NUM H.C.'S
PLUMB	G	F	(P)	C	#6, #10 & #15 TILTED BACKSTATION UP TO 3 1/8" - SEE SKETCH
FOOTINGS	G	F	P	C	N/V
PILES	G	F	P	C	N/V
BEARING SURFACE	(G)	F	P	C	

SCOUR CONDITION NONE [ ] DEEP WATER - SEE UNDERWATER REPORT

RECOMMENDATIONS:

FORM BIR 3.0A
Rev. 6-9-92
DT-1443

CURRENT FIELD REPORT NO. 14 DATE 1-11-01
PREVIOUS FIELD REPORT NO. 13 DATE 12-14-98

INSPECTION REPORT FOR UNDERPASS ROUTE

BRIDGE NO. 19SR0060015 (ELEVEN DIGIT NUMBER)
UNDERPASS LOC. NO. 19 (CO.) - 3266 (RTE.) - 0.81 (L.M.)

19 (CO.) - SR6 (RTE.) - 9.74 (L.M.) OVER 19 (CO.) - 3266 (RTE.) - 0.80 (L.M.)
STRUCTURE NAME (IF NAMED)

COUNTY DAVIDSON

YEAR CONSTRUCTED 1956 YEAR WIDENED ____ YEAR REHABILITATED ____
ESTIMATED [ ] ACTUAL [X]

GEOMETRIC FEATURES UNDER BRIDGE

DIVIDED HIGHWAY - - - - LEFT RDWY [ ] RIGHT RDWY [ ] N.A. [X]
TYPE OF WEARING SURFACE - - - - CONCRETE [ ] ASPHALT [X] GRAVEL [ ]
WIDTH OF APPROACH TRAVELED ROADWAY 45 FT. (DOES NOT INCLUDE SHOULDERS)
WIDTH OF MEDIAN IF DIVIDED HIGHWAY — FT.
APPROACH SHOULDER WIDTH — FT. (RT.) — FT. (LT.)
*HORIZONTAL CLEARANCE UNDER BRIDGE 64 FT. 6 IN.
*DISTANCE BETWEEN PIER PROTECTION GUARDRAIL AND SUBSTRUCTURE — FT. (RT.) — FT. (LT.)
*WIDTH OF SIDEWALK UNDER BRIDGE 6.5 FT. (RT.) 8 FT. (LT.)
*MINIMUM VERTICAL CLEARANCE 19 FT. 8 IN.

*SHOW ON SKETCH

TRAFFIC SAFETY FEATURES FOR UNDERPASS ROUTE		STANDARD	SUB-STANDARD	
PIER PROTECTION RAILING OR PARAPET	G F P C	[ ]	[ ]	NON EXIST [X]
APPROACH GUARDRAIL TRANSITIONS	G F P C	[ ]	[ ]	NON EXIST [X]
APPROACH GUARDRAIL	G F P C	[ ]	[ ]	NON EXIST [X]
APPROACH GUARDRAIL TERMINAL	G F P C	[ ]	[ ]	NON EXIST [X]

SIGNING FOR UNDERPASS ROUTE

PADDLEBOARD	YES [ ]	NO [X]	NEEDED [ ]
VERTICAL CLEARANCE (< 14'6")	YES [ ]	NO [X]	NEEDED [ ]
NARROW PASSAGE	YES [ ]	NO [X]	NEEDED [ ]
ONE LANE PASSAGE	YES [ ]	NO [X]	NEEDED [ ]
CURVE	YES [ ]	NO [X]	NEEDED [ ]
SPEED LIMIT	YES [X]	NO [ ]	NEEDED [ ]

INSPECTORS

1. WATTS
2. HEGGIE CLARK
3. CARVER
4. LOVE
5. ____
6. ____

FORM BIR 3.0A (CONTINUED)
Rev. 6-9-92
DT-1443

UNDERPASS LOC. NO. 19 (CO.) - 3266 (RTE.) - 0.80 (L.M.)

OTHER SIGNS OR PLAQUES _____

COMMENTS REGARDING ANY PROBLEM WITH SIGNING _____

BRIDGE FEATURES

BRIDGE SKEW 90°
STRUCTURE TYPE WPG (MAIN SPAN) NO. SPANS 3 (MAIN TYPE)
STRUCTURE TYPE WPG (APPROACH SPAN) NO. SPANS 16 (APPROACH TYPE)
MAXIMUM SPAN LENGTH 320 FT. TOTAL LENGTH 1845 FT.
WIDTH OF BRIDGE OUT-TO-OUT 74 FT. (RT. < TO L OF BRIDGE)
WIDTH OF BRIDGE ALONG SKEW — FT. (IF UNABLE TO MEASURE AT RT. ∢ TO L OF BRIDGE)
NUMBER OF LANES/TRACKS ON BRIDGE 4

BRIDGE CONDITION G F (P) C

DOES POTENTIAL EXIST FOR ELEMENTS FROM BRIDGE FALLING ON ROADWAY BENEATH? YES [ ] NO [✓]

DOES POTENTIAL EXIST BECAUSE OF DETERIORATED CONDITION FOR FAILURE OF MAJOR MEMBERS? YES [ ] NO [✓]

COMMENT ON ANY CONDITIONS OF BRIDGE THAT WOULD EFFECT ROADWAY BENEATH _____

NOTE: IF UNDERPASS ROUTE IS DIVIDED HIGHWAY, USE TWO (2) OF THESE FORMS, ONE FOR EACH ROADWAY.

MINIMUM PICTURES REQUIRED

1. ELEVATION VIEW OF BRIDGE ON BOTH SIDES SHOWING UNDERPASS
2. VIEW SHOWING BOTH APPROACHES TO BRIDGE
3. VIEW SHOWING SAFETY FEATURES
4. VIEW SHOWING ANY PROBLEMS

CURRENT FIELD REPORT NO. 14 DATE 1-11-01
PREVIOUS FIELD REPORT NO. 13 DATE 12-14-98

FORM BIR 3.0A
Rev. 6-9-92
DT-1443

INSPECTION REPORT FOR UNDERPASS ROUTE

BRIDGE NO. 19SR0060015 (ELEVEN DIGIT NUMBER) UNDERPASS LOC. NO. 19 (CO.) - E255 (RTE.) - 0.73 (L.M.)

19 (CO.) - SR6 (RTE.) - 9.74 (L.M.) OVER 19 (CO.) - E255 (RTE.) - 0.73 (L.M.) STRUCTURE NAME (IF NAMED)

COUNTY DAVIDSON

YEAR CONSTRUCTED 1956 YEAR WIDENED ____ YEAR REHABILITATED ____
ESTIMATED [ ] ACTUAL [X]

GEOMETRIC FEATURES UNDER BRIDGE

DIVIDED HIGHWAY - - - - LEFT RDWY [ ] RIGHT RDWY [ ] N.A. [X]
TYPE OF WEARING SURFACE - - - - CONCRETE [ ] ASPHALT [X] GRAVEL [ ]
WIDTH OF APPROACH TRAVELED ROADWAY 44 FT. (DOES NOT INCLUDE SHOULDERS)
WIDTH OF MEDIAN IF DIVIDED HIGHWAY — FT.
APPROACH SHOULDER WIDTH — FT. (RT.) — FT. (LT.)
*HORIZONTAL CLEARANCE UNDER BRIDGE — FT. — IN.
*DISTANCE BETWEEN PIER PROTECTION GUARDRAIL AND SUBSTRUCTURE — FT. (RT.) — FT. (LT.)
*WIDTH OF SIDEWALK UNDER BRIDGE 14 FT. (RT.) 14 FT. (LT.)
*MINIMUM VERTICAL CLEARANCE 14 FT. 7 IN.

*SHOW ON SKETCH

TRAFFIC SAFETY FEATURES FOR UNDERPASS ROUTE		STANDARD	SUB-STANDARD	
PIER PROTECTION RAILING OR PARAPET	G F P C	[ ]	[ ]	NON EXIST [X]
APPROACH GUARDRAIL TRANSITIONS	G F P C	[ ]	[ ]	NON EXIST [X]
APPROACH GUARDRAIL	G F P C	[ ]	[ ]	NON EXIST [X]
APPROACH GUARDRAIL TERMINAL	G F P C	[ ]	[ ]	NON EXIST [ ]

SIGNING FOR UNDERPASS ROUTE

PADDLEBOARD	YES [ ]	NO [X]	NEEDED [ ]
VERTICAL CLEARANCE (< 14'6")	YES [ ]	NO [X]	NEEDED [ ]
NARROW PASSAGE	YES [ ]	NO [X]	NEEDED [ ]
ONE LANE PASSAGE	YES [ ]	NO [X]	NEEDED [ ]
CURVE	YES [ ]	NO [X]	NEEDED [ ]
SPEED LIMIT	YES [X]	NO [ ]	NEEDED [ ]

INSPECTORS

1. WATTS
2. HEGGIE CLARK
3. CAGLE
4. LOVE
5. ____
6. ____

FORM BIR 3.0A (CONTINUED)
Rev. 6-9-92
DT-1443

UNDERPASS LOC. NO. 19 (CO.) - E255 (RTE.) - 0.73 (L.M.)

OTHER SIGNS OR PLAQUES _____

COMMENTS REGARDING ANY PROBLEM WITH SIGNING _____

BRIDGE FEATURES

BRIDGE SKEW 90°
STRUCTURE TYPE WPG (MAIN SPAN) NO. SPANS 3 (MAIN TYPE)
STRUCTURE TYPE WPG (APPROACH SPAN) NO. SPANS 16 (APPROACH TYPE)
MAXIMUM SPAN LENGTH 320 FT. TOTAL LENGTH 1845 FT.
WIDTH OF BRIDGE OUT-TO-OUT 74 FT. (RT. < TO L OF BRIDGE)
WIDTH OF BRIDGE ALONG SKEW — FT. (IF UNABLE TO MEASURE AT RT. ∢ TO L OF BRIDGE)
NUMBER OF LANES/TRACKS ON BRIDGE 4

BRIDGE CONDITION G F (P) C

DOES POTENTIAL EXIST FOR ELEMENTS FROM BRIDGE FALLING ON ROADWAY BENEATH? YES [ ] NO [✓]

DOES POTENTIAL EXIST BECAUSE OF DETERIORATED CONDITION FOR FAILURE OF MAJOR MEMBERS? YES [ ] NO [✓]

COMMENT ON ANY CONDITIONS OF BRIDGE THAT WOULD EFFECT ROADWAY BENEATH _____

NOTE: IF UNDERPASS ROUTE IS DIVIDED HIGHWAY, USE TWO (2) OF THESE FORMS, ONE FOR EACH ROADWAY.

MINIMUM PICTURES REQUIRED

1. ELEVATION VIEW OF BRIDGE ON BOTH SIDES SHOWING UNDERPASS
2. VIEW SHOWING BOTH APPROACHES TO BRIDGE
3. VIEW SHOWING SAFETY FEATURES
4. VIEW SHOWING ANY PROBLEMS

BIR 3.8
Rev. 6-9-92
DT-1508

BRIDGE LOC. NO.: 19 (CO.) - SR6 (RTE.) - 9.74 (L.M.) DATE: 1-11-01

STREAM CHANNEL DATA AND CONDITIONS

STREAM CROSSING: CUMBERLAND RIVER

I. 1. Type of bed material? SILT
2. Has the channel shifted? YES [ ] NO [X] NOT APPARENT [ ]
3. Condition of rip-rap? G F P C Est. % failed N/A [X]
4. Overall condition of channel? (G) F P C
5. Item 61 - Code values 0 thru 9 according to the recording and coding guide currently in effect: 6
6. Underwater diver inspection recommended? YES [X] NO [ ]
If yes, why? DEEP WATER

II. Channel and bank stability conditions: (check if applicable)
1. Steep bank - Failures upstream [ ] downstream [ ] conditions
2. Moderate bank erosion [ ]
3. Bank Vegetation (a) low growth [X] (b) large timber [X] (c) dead trees [ ] (d) clear banks [ ]
4. Sediment or gravel accumulation: YES [ ] NO [ ] UNKNOWN [X]
5. Channel altered or straightened: YES [ ] NO [X] UNKNOWN [ ]
6. Stable conditions: (a) live growth [X] (b) bedrock [ ] (c) boulders [ ] (d) flat slopes [X] (<=2:1)

III. Waterway adequacy and debris characteristics: (check if applicable)
1. Bridge deck elevations:
(a) level with approach roadway . . . . . [X]
(b) higher than approach roadway. . . . . [ ]
(c) roadway approach >=2' above natural ground line . . [ ]
2. Abutment encroaches into channel . . . . . [ ]
3. Large scour (blowhole) under bridge. . . . . [ ]
4. Indications that flood waters overtop bridge:
NO [X] YES [ ] OCCASIONALLY [ ] FREQUENTLY [ ] UNKNOWN [ ]
5. Debris characteristics:
(a) debris present: YES [ ] NO [X]
(b) debris likely to accumulate: YES [ ] NO [X]
(c) dead trees upstream: [ ] or downstream: [ ]

IV. Comments: _____

* *

SPECIAL INSPECTION DATA - FOR REASONS OTHER THAN FC OR SCOUR

I. Does this bridge need a special inspection? YES [ ] NO [X]
II. Reason for special inspection: _____

SUMMARY
19-SR6-9.74
1/11/01

SR 6 / Cumberland River
3 Span / S.P.G. w/ 16 Span W.P.G. Approach Spans

This bridge was inspected and found to be in poor condition. Alignment and the approach is good, along with pavement and embankment. Bridge rail is good, but substandard. There is no approach guardrail on the "A" end.

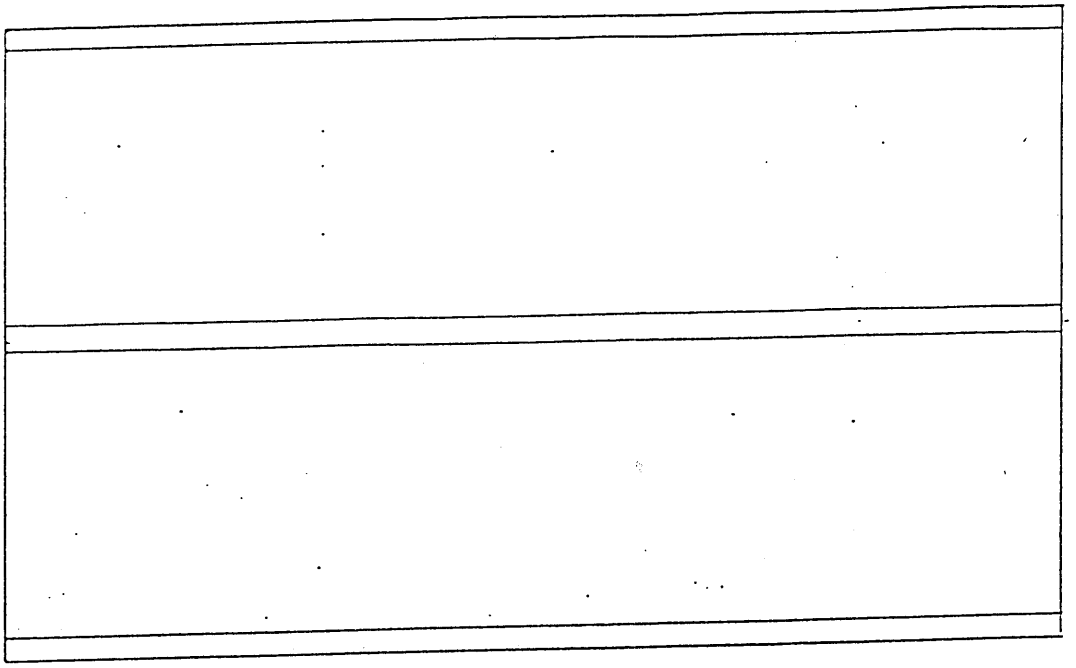
Wearing surface is good with 2 ½" of new asphalt. Curbs are fair with small areas of spall at the joints with exposed steel. Sidewalks have been repaired since last inspection they are still rated fair due to transverse cracks 1/16"" open. Drains are poor with most being clogged on right. Expansion joints are good. Joint leakage is fair. Bearing devices have light to moderate corrosion. Beams show moderate to heavy corrosion on flanges. Diaphragms are fair. Bracing shows moderate corrosion on the plates. Alignment of members is good. Paint shows moderate corrosion and flaking. Bottom deck is fair with heavy delimitation and spalls with exposed steel 2" deep.

Abutment #1 is fair with cracks up to 1/8" open and breakouts up to 1 ½" deep. Abutment #2 is poor with large separated cracks on ends. Plumb is poor due to a tilt back station up to 4 ¼". This was noted at last inspection, and shows approximately ¼" increase at this time. Piers are fair. The bent caps are good. Bent columns are rated fair due to horizontal cracks up to ¼" open and numerous haircracks. Bent #15 is tilted back station 3 1/8". This has increased ¼" since last inspection. Bent #10 is rated fair with horizontal cracks up to 1/16" open and column "B" tilted back station up to 1 ¾". These two bents have fixed bearing devices. The roller type rocker bearings on bents #11, and #12 are extended back station. Bearing devices on bents #13 and #14 are fully extended back station. Finger type expansion joints are located in the superstructure between bent caps, and have rocker type bearing devices at these joints. The ones located on span #16- between bents #12 and #13 are fully extended back station.

Reset BEARINGS ON BENTS 11-14

Karen Heggie Clark

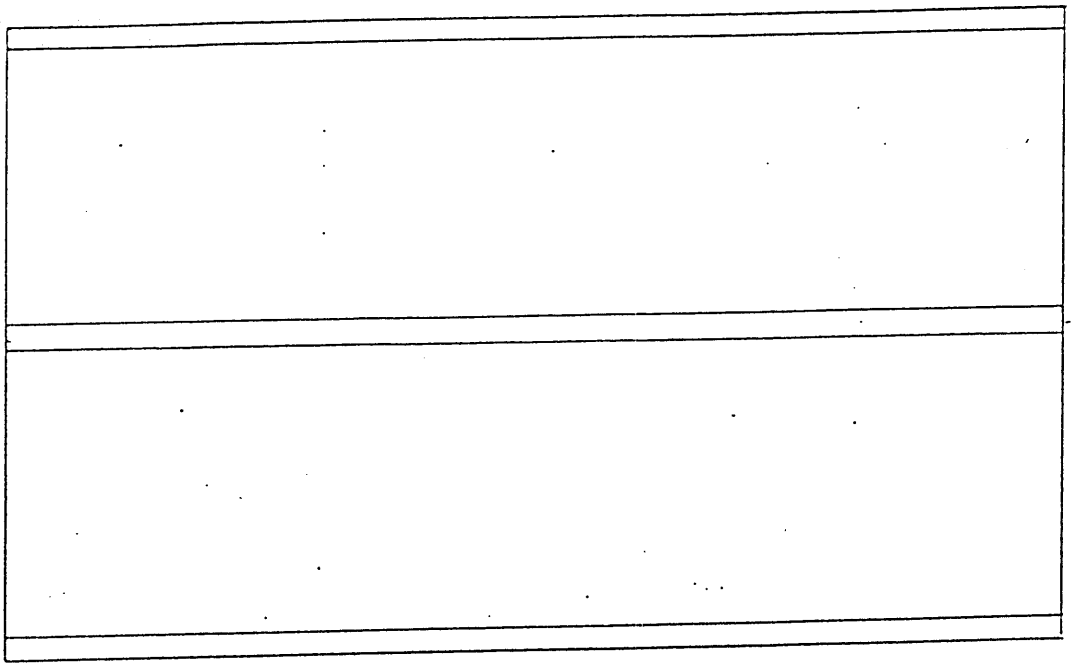
1.11.01 JW



TOP Slab # 1 Br. # 19-6-9.74

		A C overlay (2 1/4" Dp ~~X~~ New A/C Overlay
Deck	NV	~~small 2" deep B.O. @ insp. cover in center lane~~
		~~& (2) 1" deep depressed areas in L.T. Lane~~
Curbs	G	
Rail	G	
Sidewalk	F	Trans cracks up to 1/16" open
Drains	G	
~~X~~Joints	G	Finger Type - ~~2" deep B.O. in top of backwall w/ small patches~~ Repaired

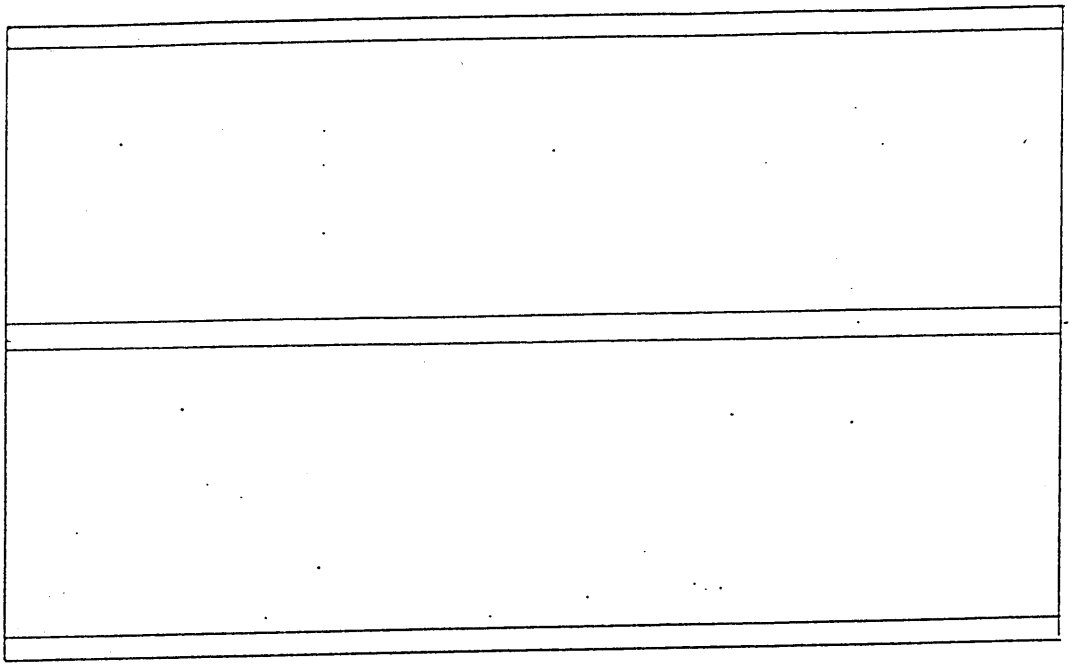
1-11-01 JW



TOP Slab # 2 Br. # 19-6-9.74

Deck	NV	A C overlay Good
Curbs	G	
Rail	G	
Sidewalk	F	sec slab 1
Drains	G	
Joints	NA	

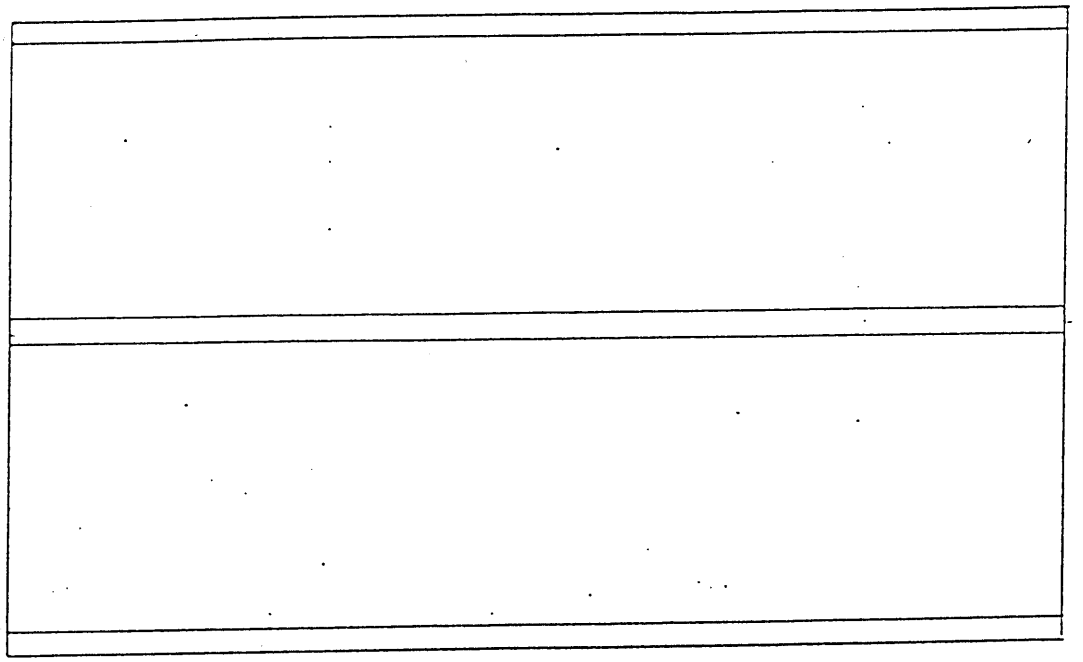
1.11.01 JW



TOP SLAB #3 Br. # 19-6-9.74

* DECK	NV	~~A C overlay - 2" deep V.O. @ insp. cover over Lid loose in center bent~~ New A/C Overlay
Curbs	G	
RAIL	G	
Sidewalk	F	see slab 1
Drains	G	
Joints	G	Finger Type - see slab 1

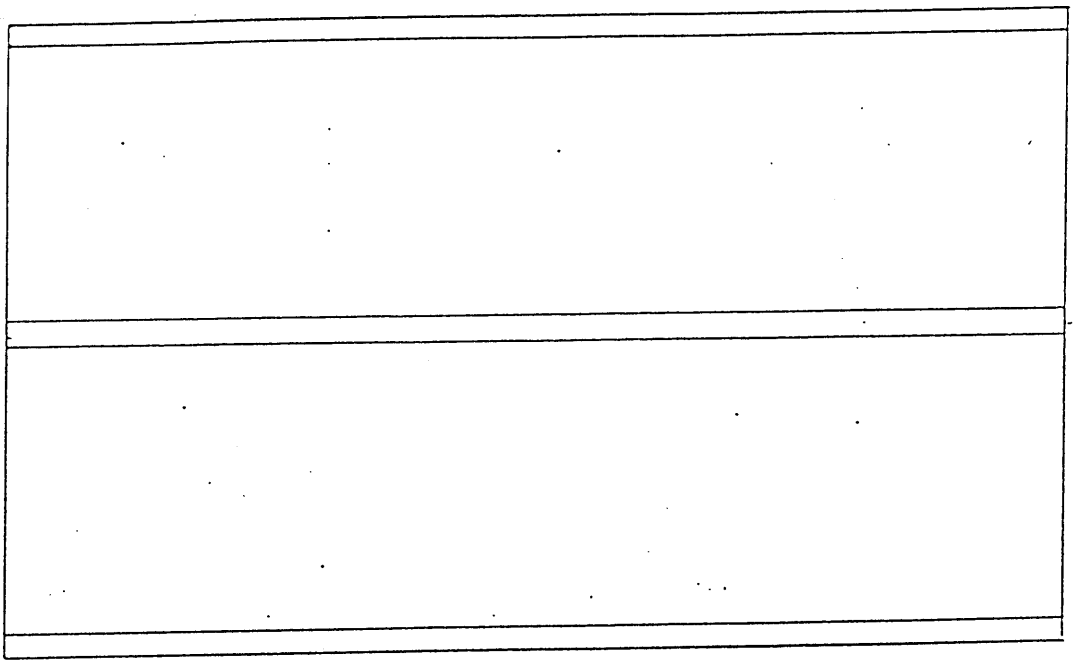
7.11.08 JW



TOP Slab # 4 Br. # 19-6-9.74

Deck	NV	A C overlay Good
Curbs	G	
Rail	G	
Sidewalk	F	see slab 1
Drains	G	
Joints	NA	

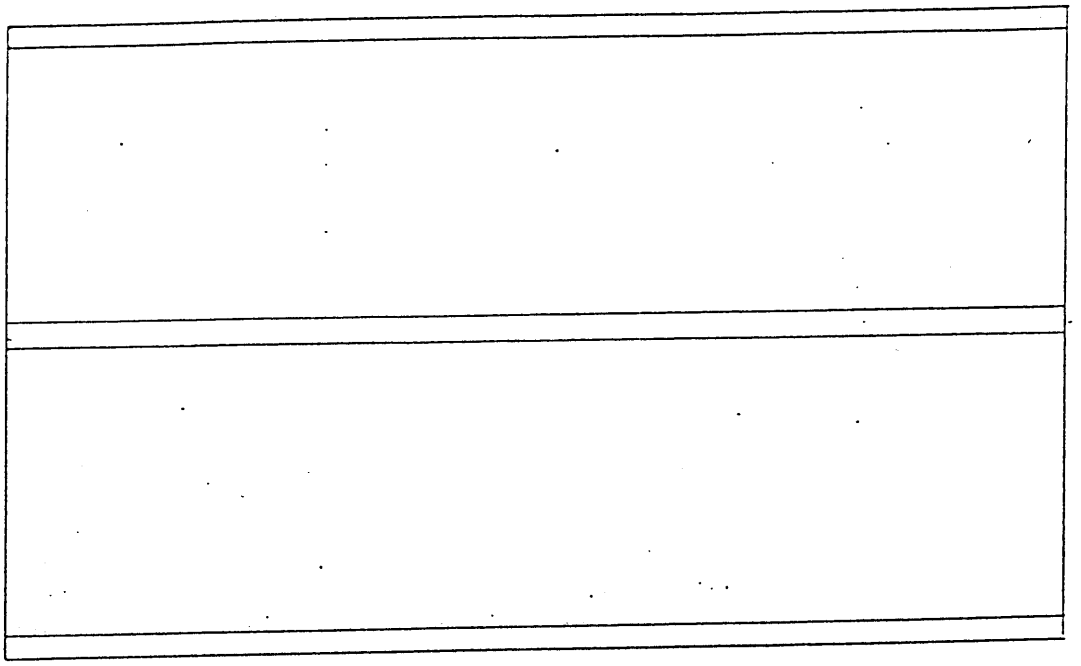
1.11.00 jw



TOP Slab # 5 Br. # 19-6-9.74

Deck	NV	A C overlay Good
Curbs	G	
Rail	G	
Sidewalk	F	scc slab 1
Drains	NA	
Joints	NA	

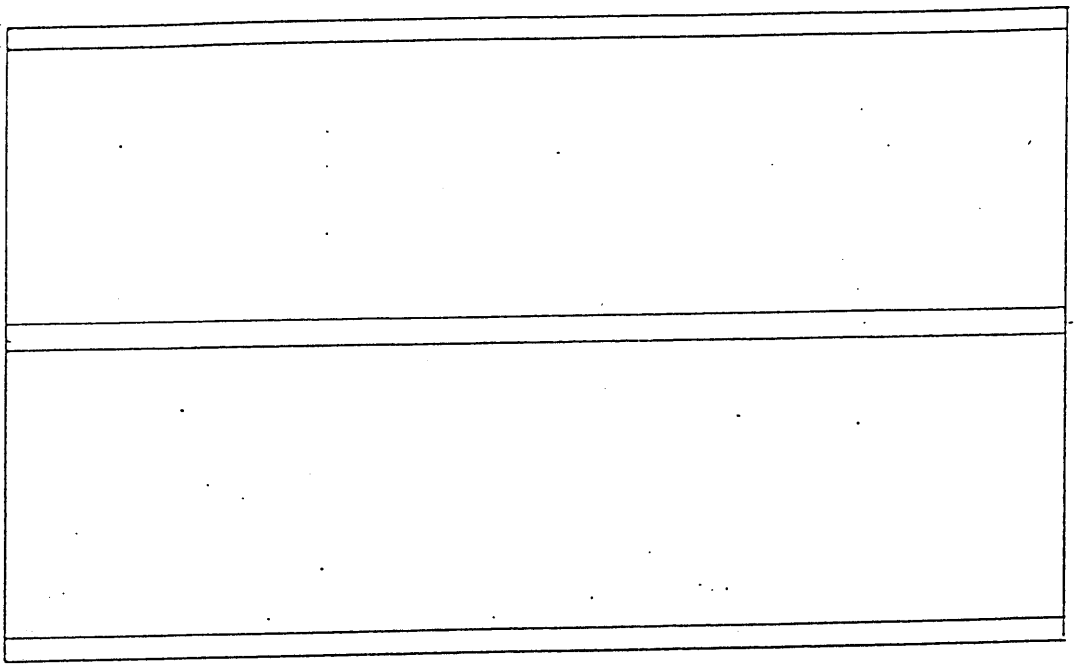
1.11.01 JW



TOP Slab #6 Br. # 19-6-9.74

Deck	NV	A C overlay Good
Curbs	G	
Rail	G	
Sidewalk	F	see slab 1
Drains	NA	
Joints	NA	

1.11.01 JW

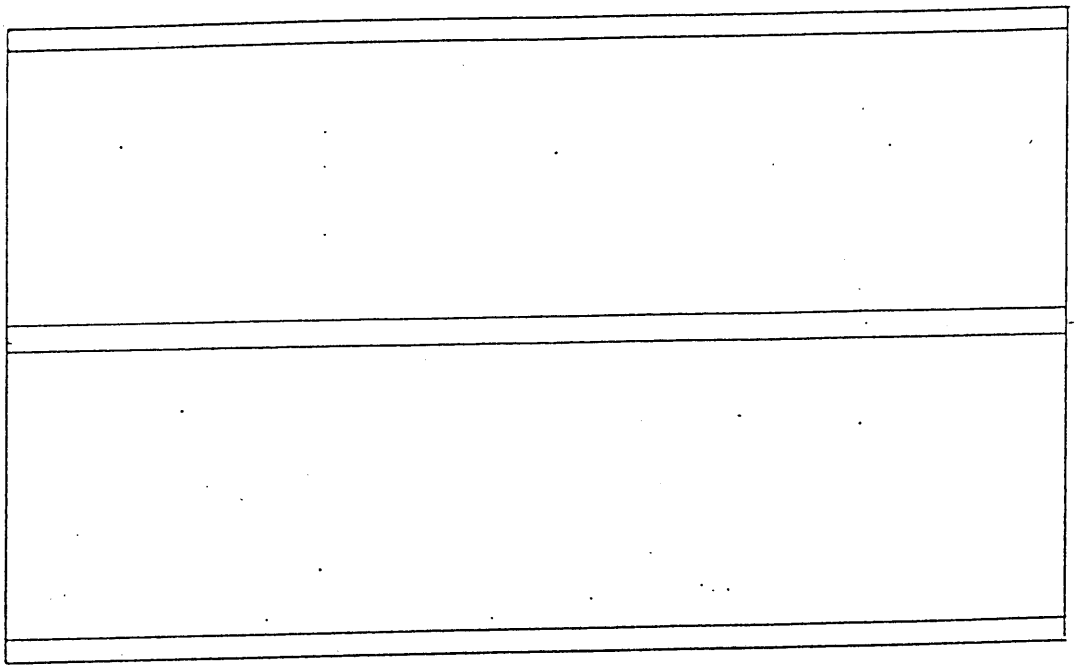


TOP Slab #7 Br. # 19-6-9.74

Deck	NV	~~A C overlay Fair - patches & depressions~~ around drain LT. side & 3" Dp Potholes @ ~~Joint~~
Curbs	F	2 1/2" deep scale @ Joint
Rail	G	
② Sidewalk	~~P~~ G	~~Cracks & Breakouts through depth of S.W w/exp steel on RT. side @ Joint~~ Repaired
Drains	P	Clogged on RT. open on LT.
Joints	G	see slab 1
~~D~~eck	NV	New A/C Overlay Good
④ S/W	G	Patched

*

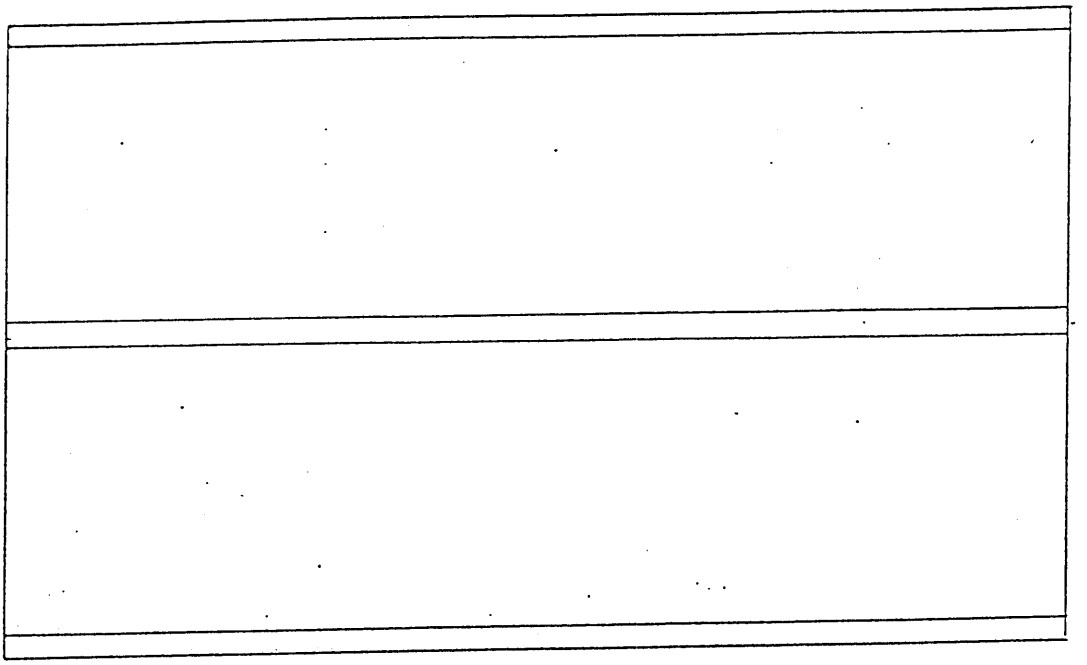
1.11.01 JW



TOP Slab #8 Br. # 19-6-9.74

Deck	NV	A C overlay Good
Curbs	G	
Rail	G	
Sidewalk	F	see slab 1
Drains	NA	
Joints	NA	

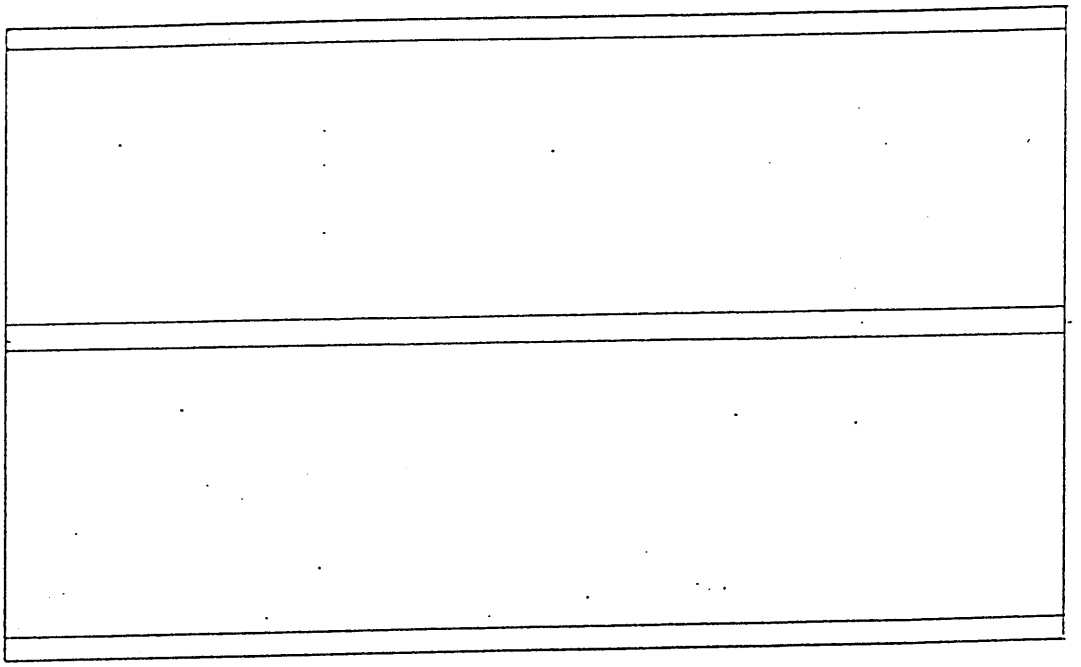
1.11.01 JW



TOP Slab # 9 Br. # 19-6-9.74

*Deck	NV	~~A C overlay Fair - rough A. C. w/ 1½" deep potholes & small patches LT side~~
curbs	G	
Rail	G	
Sidewalk	F	see slab 1
Drains	P	Clogged on RT. open on LT.
Joints	NA	
*Deck	G	New A/C Overlay

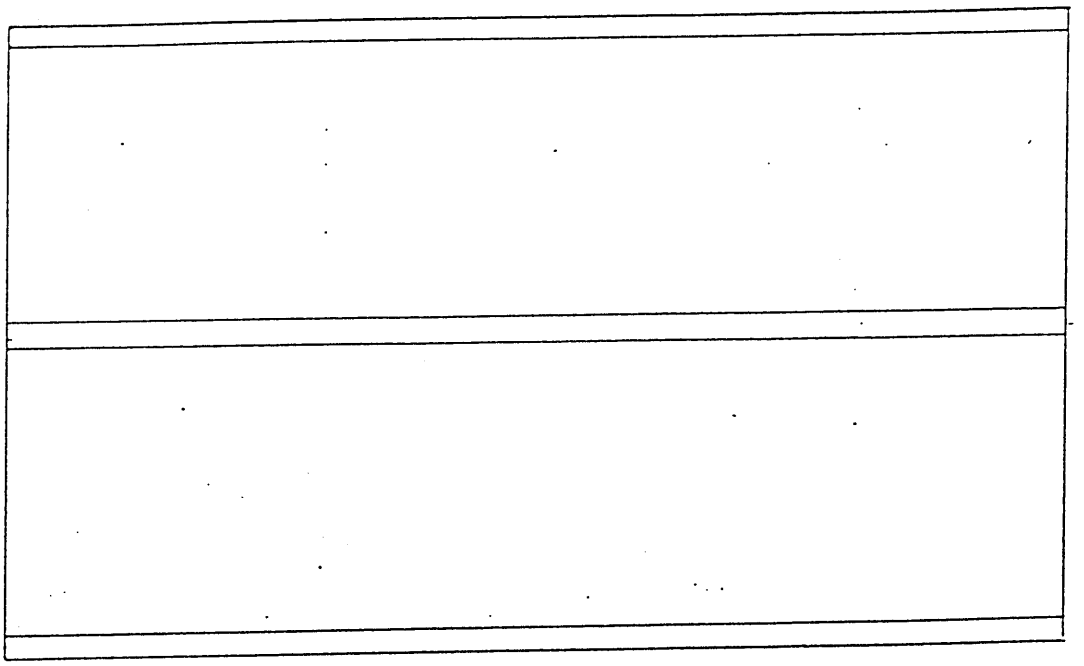
1.11.01 JW



TOP SLAB #10 Br. # 19-6-9.74

Deck	NA	A C overlay Good
Curbs	G	
Rail	G	
Sidewalk	F	see slab 1
Drains	NA	
Joints	NA	

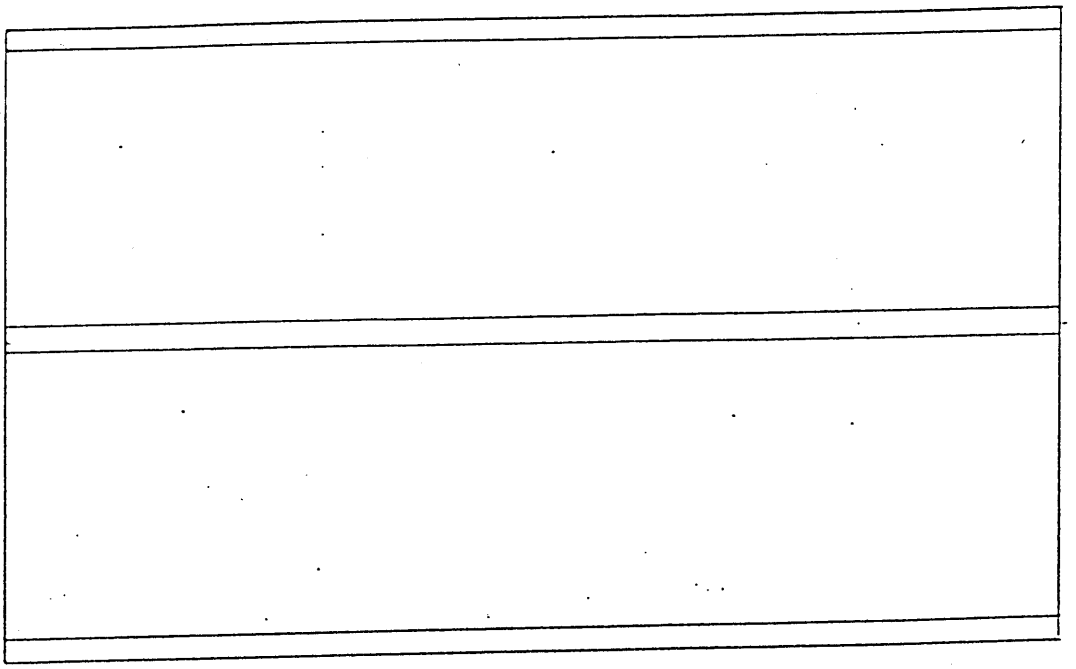
1·11·01 JW



TOP SLAB #11 Br. # 19-6-9.74

*Deck	NV	A/C New Road
Curbs	F	6" deep scaled area @ joint w/exp steel
Rail	G	
Sidewalk	F	see slab 1
Drains	P	Clogged on RT.
Joints	G	see slab 1

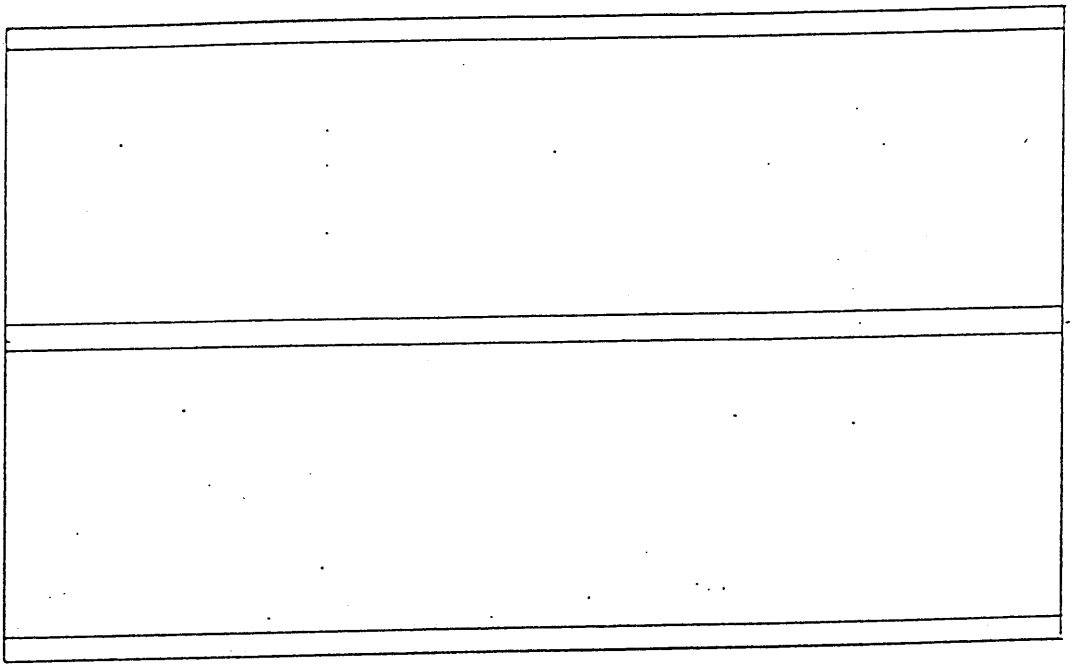
1.11.01 JW



TOP Slab #12 Br. # 19-6-9.74

*Deck	FG	~~A C overlay raveling in center lane~~ A/C Repaved 2½" Dp
Curbs	G	
Rail	G	
Sidewalk	F	see slab 1
Drains	NA	
Joints	NA	

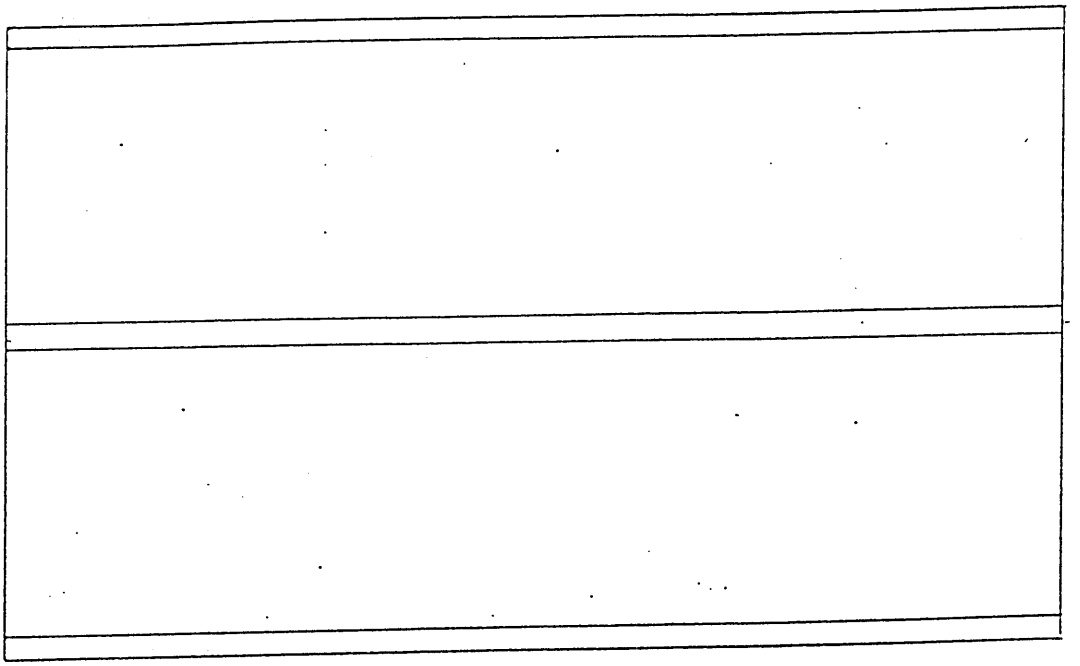
7.11.01 JW



TOP SLab # 13 Br. # 19-6-9.74

* Deck	NV	~~A C overlay, Fair - pothole @ drain 1½' x 4" deep - raveling in center lane~~ Repaved
Curbs	G	
Rail	G	
Sidewalk	F	see slab 1
Drains	P	Clogged on RT. side
Joints	NA	
Deck	G	New A/C Overlay

1-11-01 JW



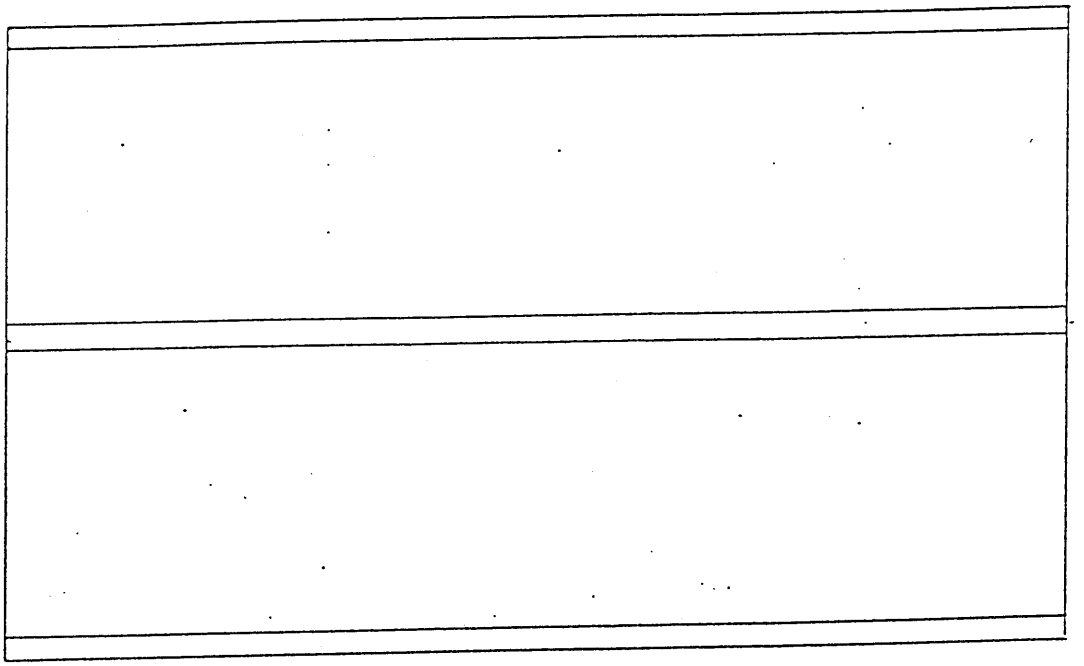
TOP Slab #14 Br. # 19-6-9.74

*Deck	G	~~see slab 1~~
curbs	G	
Rail	~~FG~~	~~Coll dam. w/ 2 broken post on Rt.~~ Repaired
Sidewalk	F	see slab 1
Drains	NA	
Joints	NA	

*

*

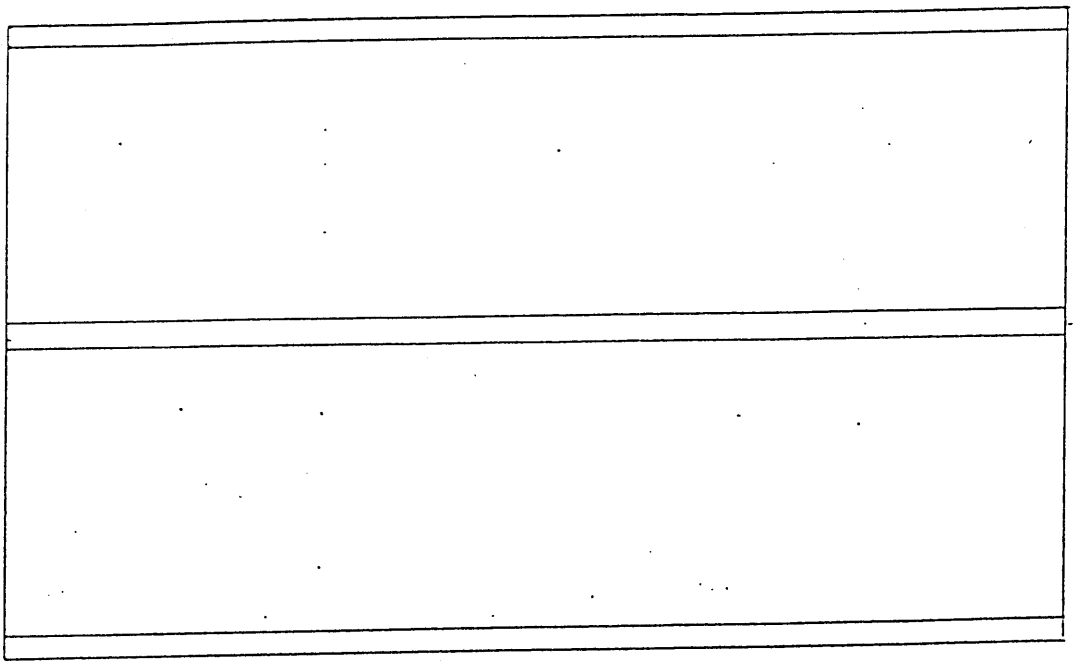
1·11·01 JW



TOP SLab #15 Br. # 19-6-9.74

Deck	NV	~~See Slab +~~ Good Resurfaced.
Curbs	F	scale up to 2" deep on rt.
Rail	G	
*Sidewalk	~~F~~ G	~~Trans & pattern cracks - scale & pitting up to 1" deep on all rt side~~
Drains	P	100% clogged rt. side
Joints	NA	

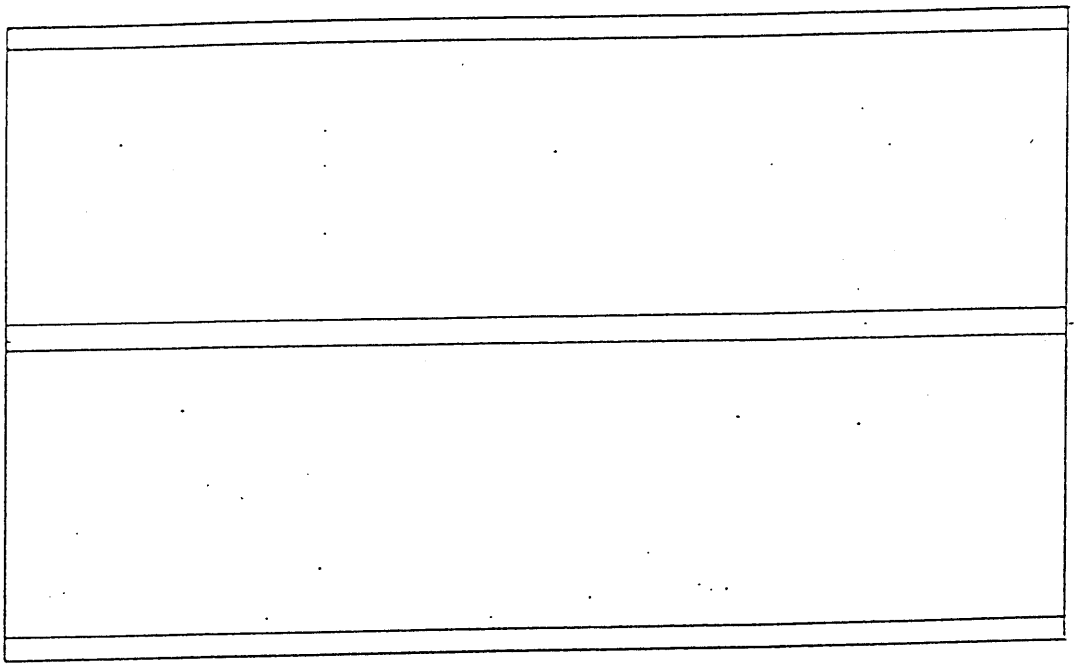
1.11.01 JW



TOP Slab #16 Br. # 19-6-9.74

*Deck	NV	A C overlay ~~Fair 1½' x 3" deep pothole @ Joint~~ Repaired GOOD
Curbs	F	scale area @ Joint RT. side 3' x 6" deep w/exp steel
Rail	G	
Sidewalk	~~P~~ G	~~Large cracks & breakouts through entire depth w/exp steel @ Joint area~~ Repaired.
Drains	P	clogged on RT.
Joints	G	see slab 1 up 1" @ 30° F.

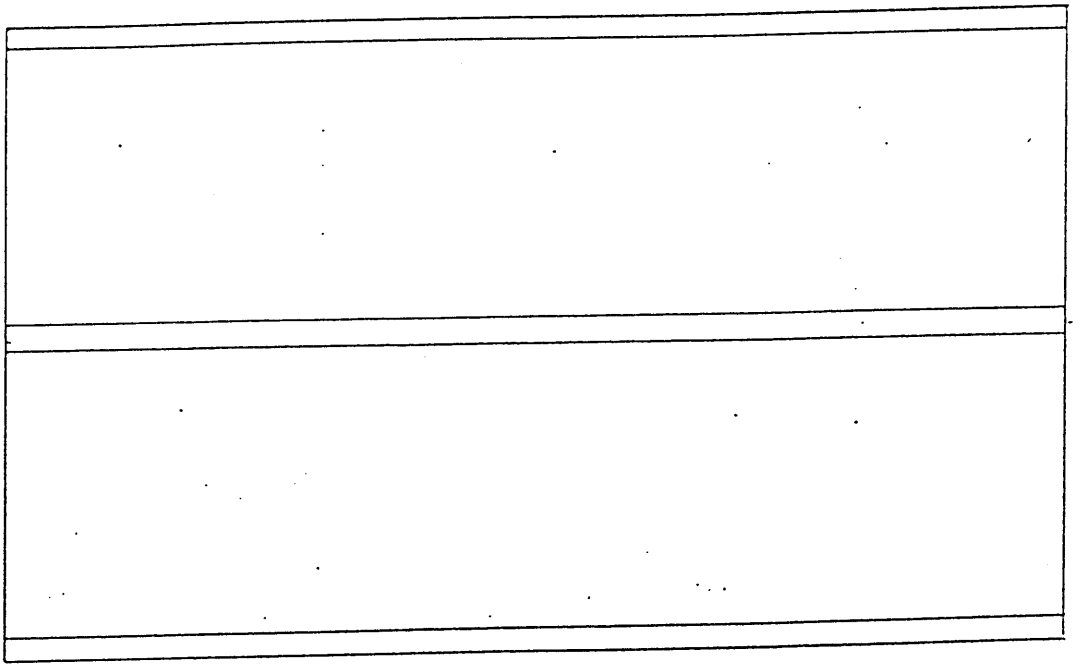
1-11-01 JW



TOP SLab # 17 Br. # 19-6-9.74

Deck	NV	A C overlay Good
Curbs	G	
Rail	G	
Sidewalk	F	
Drains	NA	
Joints	NA	

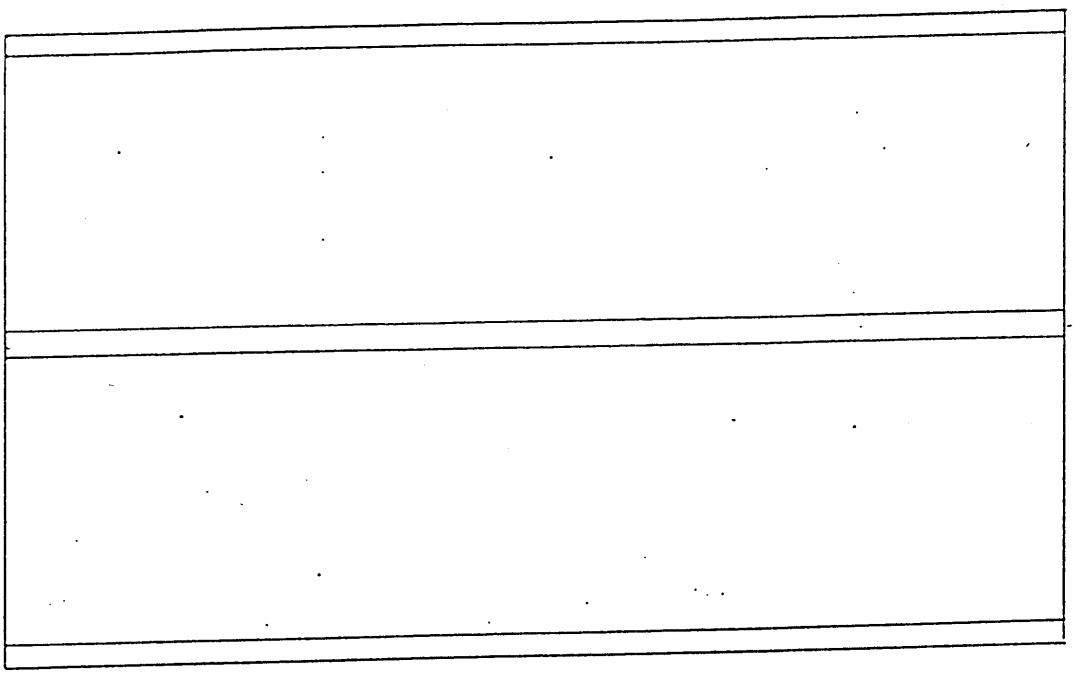
1.11.01 JW



TOP Slab # 18 Br. # 19-6-9.74

Deck	NV	A C overlay Good
Curbs	G	
Rail	G	
Sidewalk	F	see slab 1
Drains	NA	
Joints	NA	

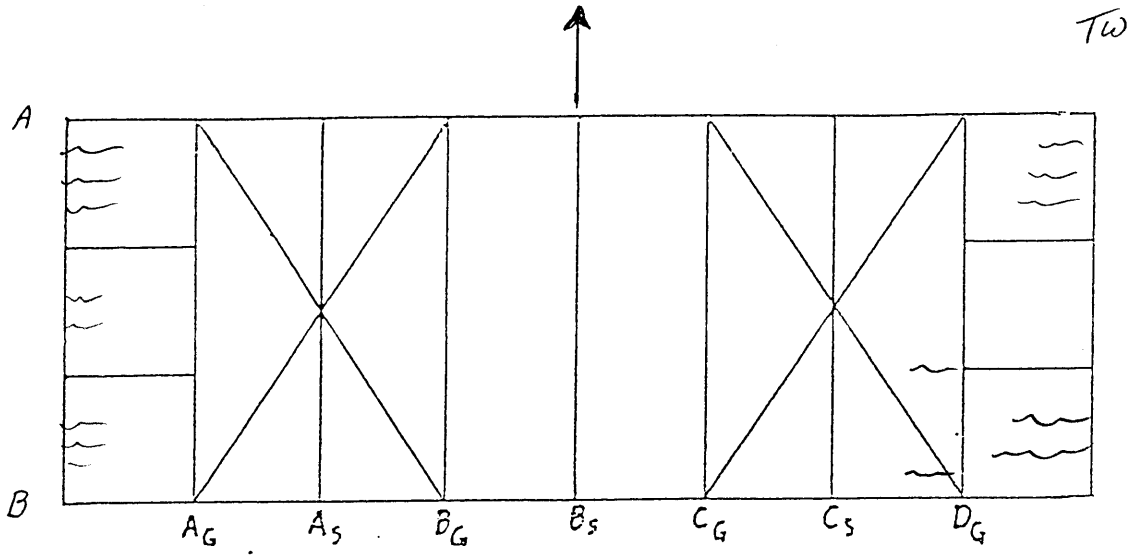
1:11:01 dw



TOP Slab #19 Br. # 19-6-9.74

Deck	NV	~~A C overlay Fair 2" deep depression + patch @ Joint~~ Resurfaced Good
Curbs	F	map cracks & 2" deep scale @ joints
Rail	G	appr. rail disconnected on RT. & LT.
Sidewalk	F	see slab 1
Drains	G	
Joints	G	side x side metal plates - no opening Closed & 1/4" Open @ Main.

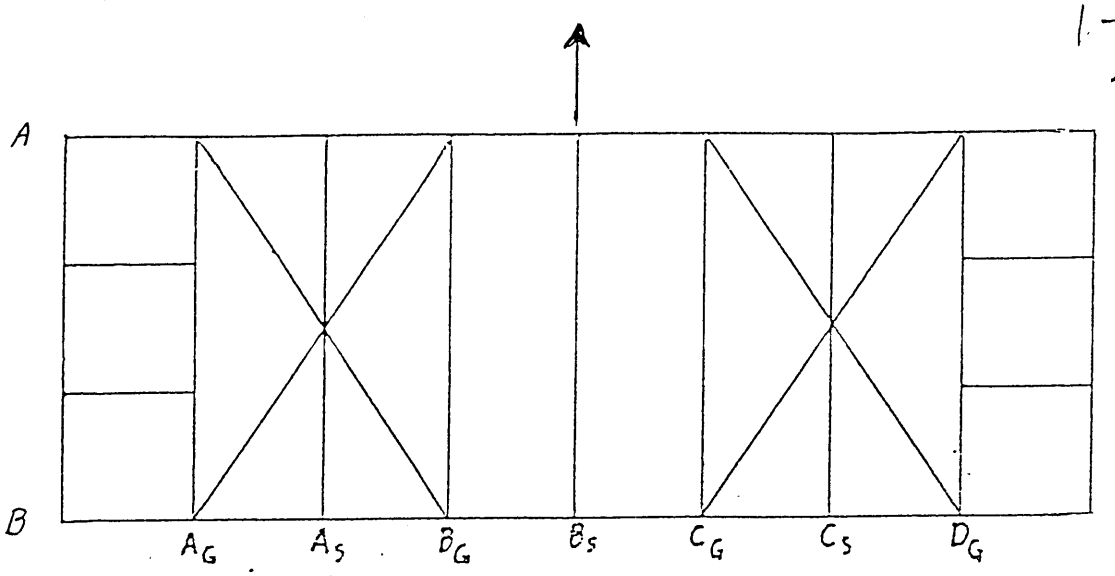
1274-40mp
1-11-01
TWC.



Bottom Span #1 panel 1 Br. # 19-6-9.74

Deck	Fair	random transverse hair cracks w/ efflor.
Floor Beams	Fair	mod. corr
Girders	Fair	mod. corr
Stringers	Fair	lgt. to mod. corrosion on top & bottom flange
Lateral Bracing	Good	lgt. corrosion & paint loss
Sidewalk Brackets	Fair	mod. corrosion mainly @ connection plates

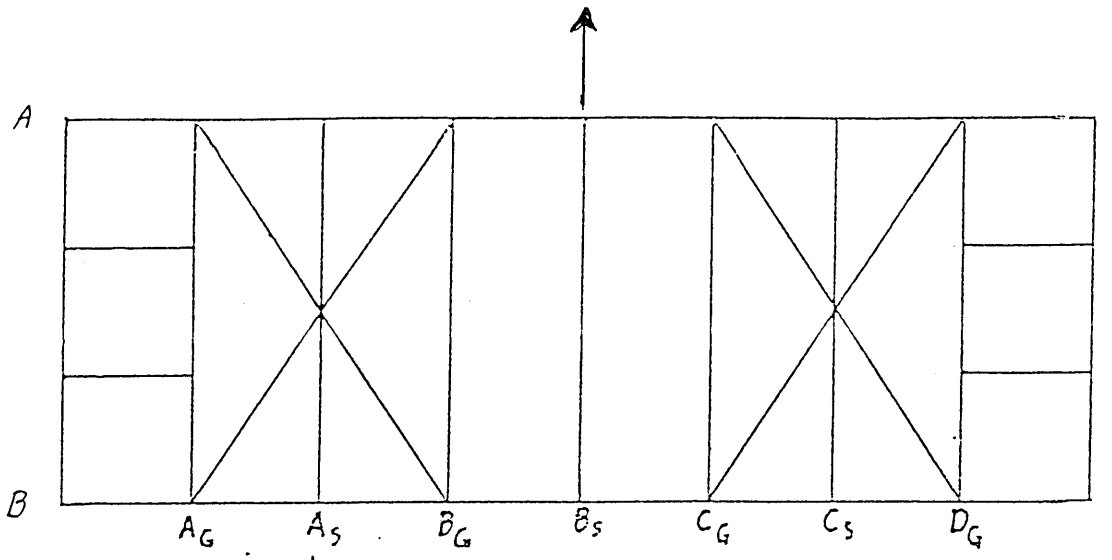
1-11-01
TWC.



Bottom Span #1 panel 2 Br. # 19-6-9.74

Deck	Fair	see span #1
Floor Beams	Fair	
Girders	Fair	
Stringers	Fair	lgt. to mod. corrosion on top & bottom flange
Lateral Bracing	Good	
Sidewalk	Fair	
Brackets		

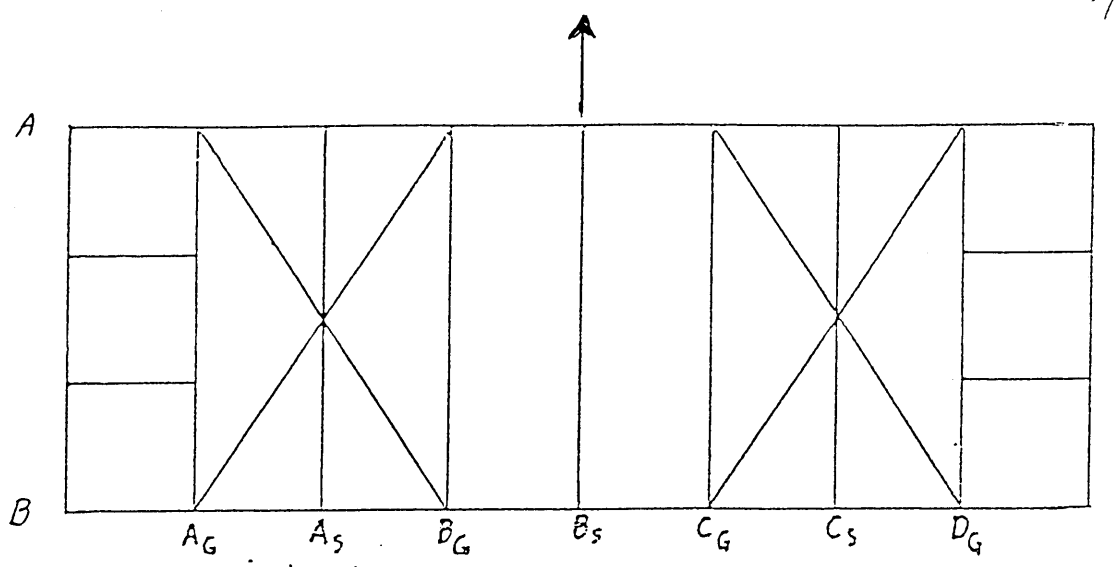
1-11-04
TWC



Bottom Span # 1 panel 3 Br. # 19-6-9.74

Deck	Fair	see span # 1
Floor Beams	Fair	"
Girders	Fair	"
Stringers	Fair	"
Lateral Bracing	Fair	"
Sidewalk Brackets	Fair	"

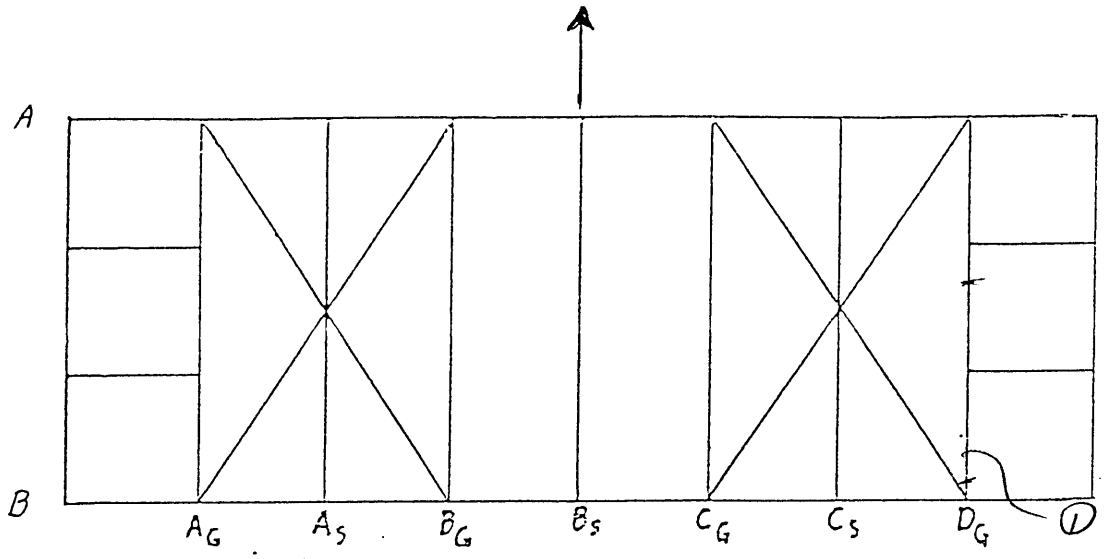
1-11-04
TWC.



Bottom Span #1 panel 4 Br. # 19-6-9.74

Deck	Fair	see span #1
Floor Beams	Fair	"
Girders	Fair	"
Stringers	Fair	"
Lateral Bracing	Fair	"
Sidewalk	Fair	"
Brackets		

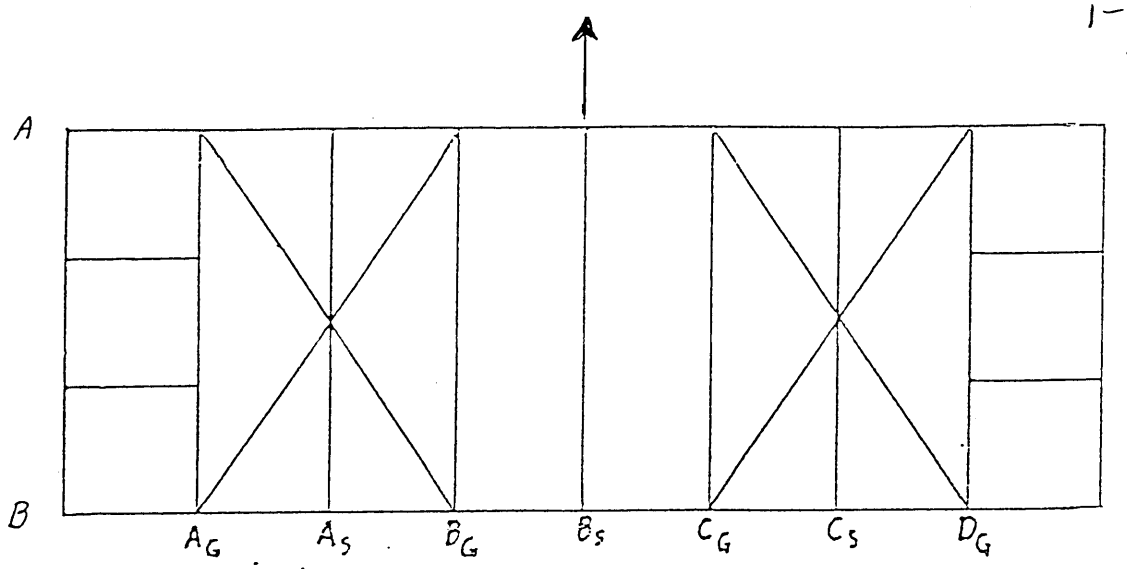
12-14-98 MD
1-11-01
TWC.



Bottom Span # 1 panel 5 Br. # 19-6-9.74

Deck	Fair	See span # 1
Floor Beams		
Girders	Fair	① heavy corrosion on bottom flange
Stringers	Fair	
Lateral Bracing	Fair	
Sidewalk	Fair	
[redacted]ckets		

12-14-98mp
1-11-01
Twc.

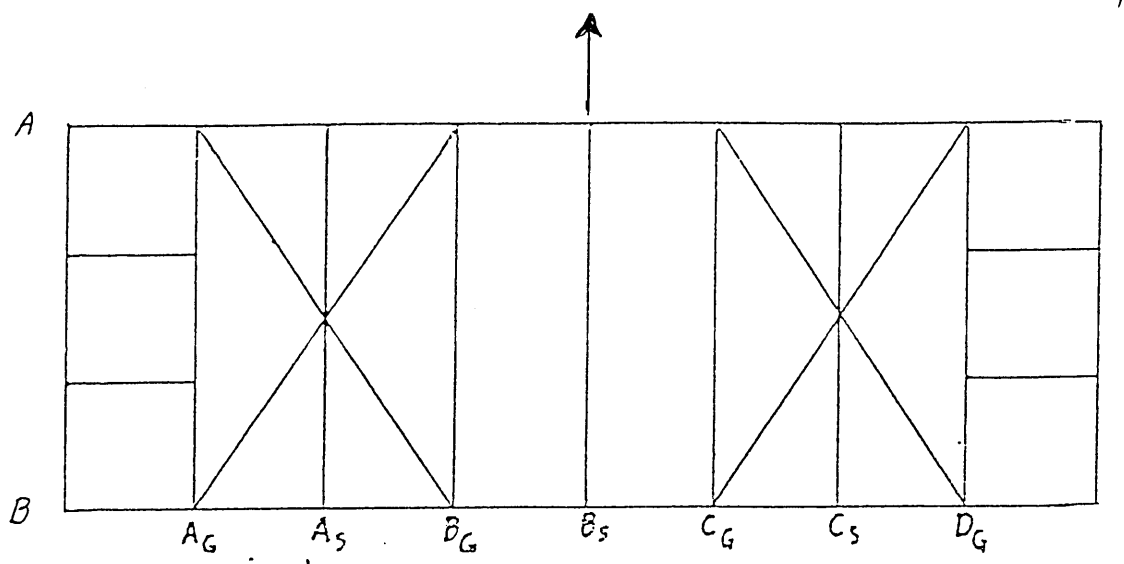


Bottom Span #1 panel 6 Br. # 19-6-9.74

Deck	Fair	See span #1
Floor Beams	Fair	"
Girders	Fair	"
Stringers	Fair	"
Lateral Bracing	Fair	"
Sidewalk Brackets	Fair	"

IC 19-1149

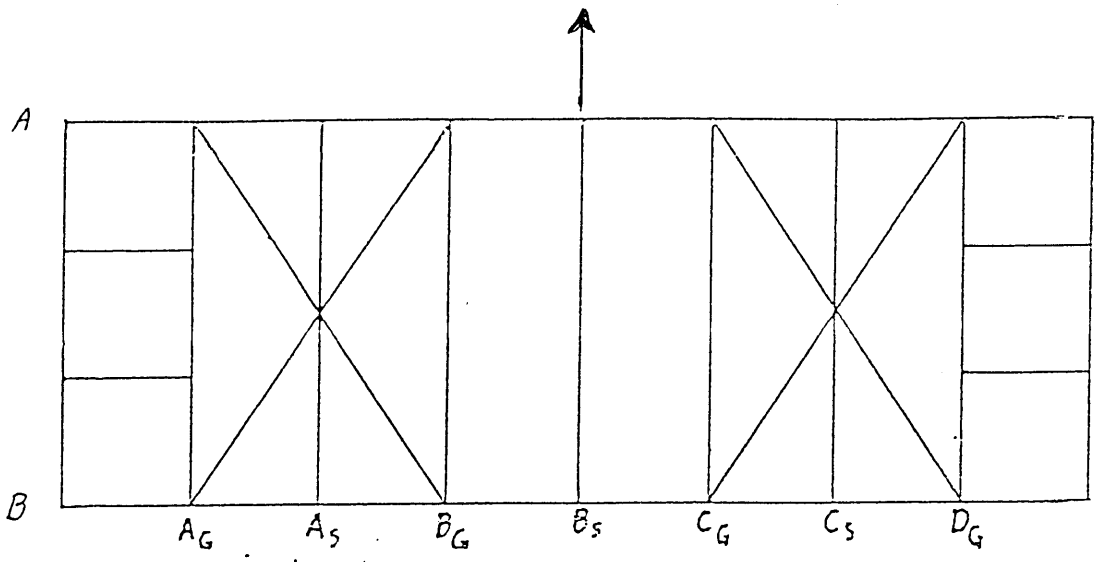
1-11-01
TWC.



Bottom Span #1-panel 7 Br. # 19-6-9.74

Deck	Fair	see span #1
Floor Beams	F	"
Girders	F	"
Stringers	F	"
Lateral Bracing	F	"
Sidewalk	F	"
[redacted]ckets		

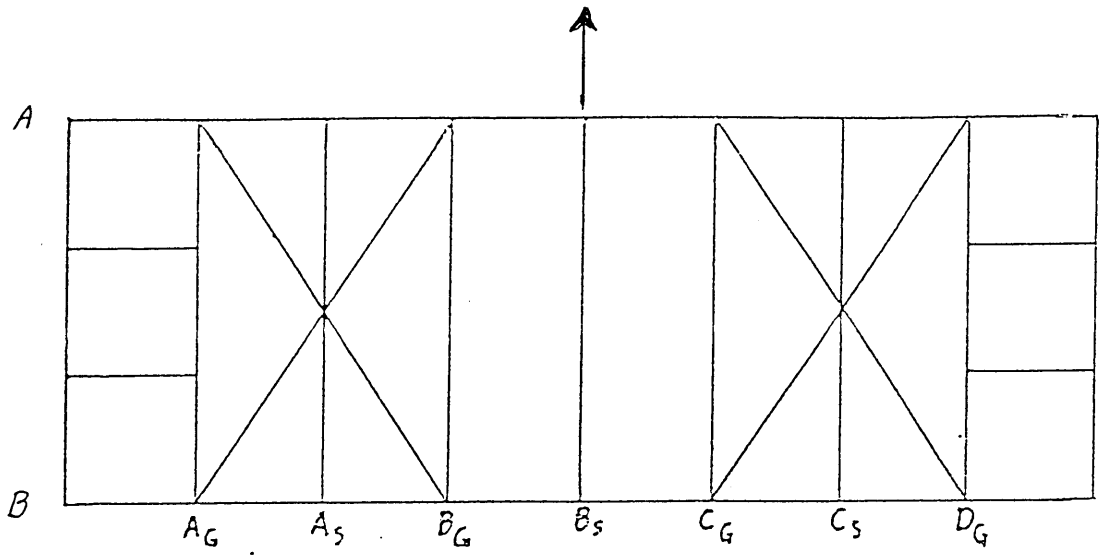
1-11-01
TWC.



Bottom Span #1 panel 8 Br. # 19-6-9.74

Deck	Fair
Floor Beams	F
Girders	F
Stringers	F
Lateral Bracing	F
Sidewalk	F
[redacted]ckets	

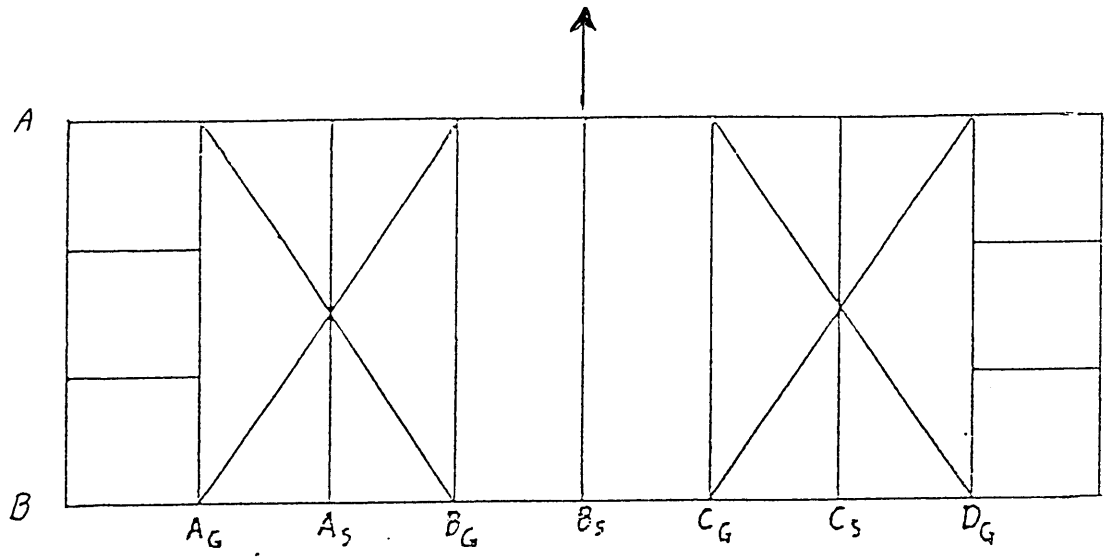
1-11-01
TWC.



Bottom Span # 1 panel 9 Br. # 19-6-9.74

Deck	Fair	See span # 1
Floor Beams	Fair	
Girders	F	"
Stringers	F	
Lateral Bracing	F	"
Sidewalk	F	
[redacted]ckets		

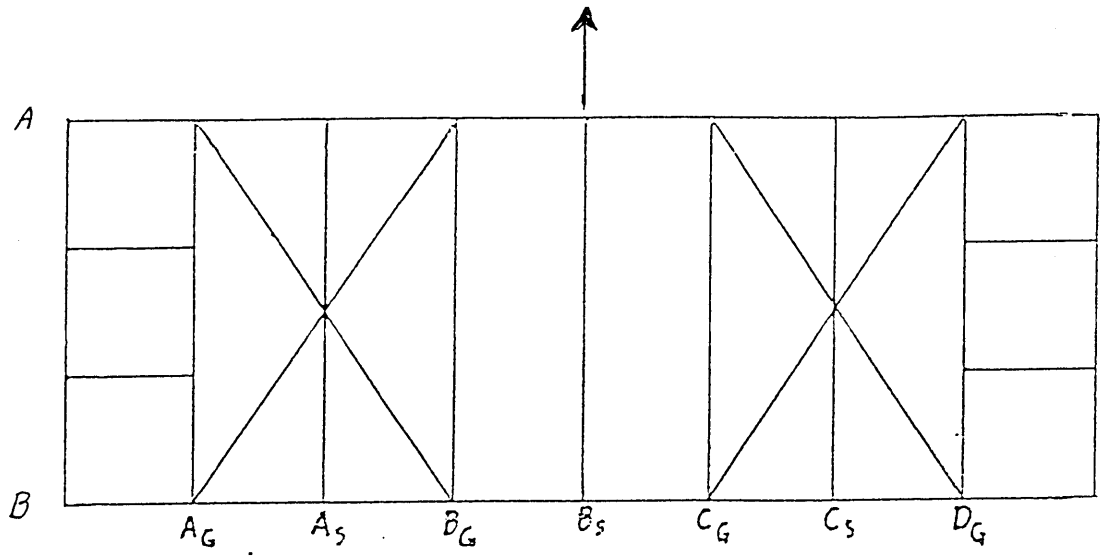
1-11-01
Two.



Bottom Span #1 panel 10 Br. # 19-6-9.74

Deck	Fair	See Span #1
Floor Beams	Fair	
Girders	F	"
Stringers	F	
Lateral Bracing	F	"
Sidewalk	F	
[redacted]ckets		

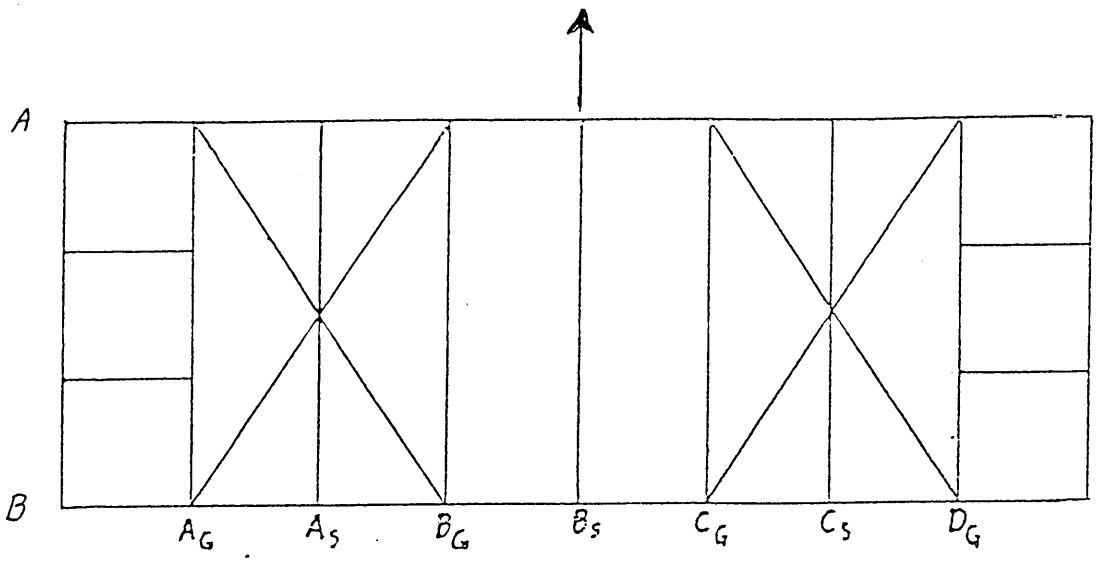
1-11-01
Twc.



Bottom Span # 2 panel 1 Br. # 19-6-9.74

Deck	Fair	
Floor Beams	Fair	
Girders	Fair	
Stringers	Fair	
Lateral Bracing	Fair	
Sidewalk Brackets	Fair	

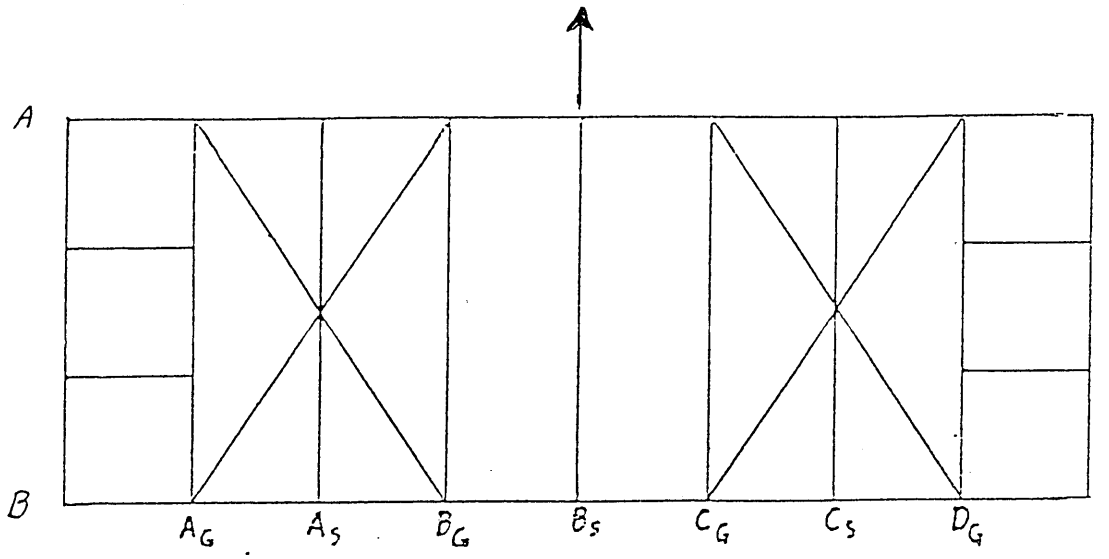
1-11-01
TWC.



Bottom Span #2 panel 2 Br. # 19-6-9.74

Deck	Fair	See span #1
Floor Beams	Fair	"
Girders	Fair	"
Stringers	Fair	"
Lateral Bracing	Fair	"
Sidewalk	F	
[redacted]ckets		

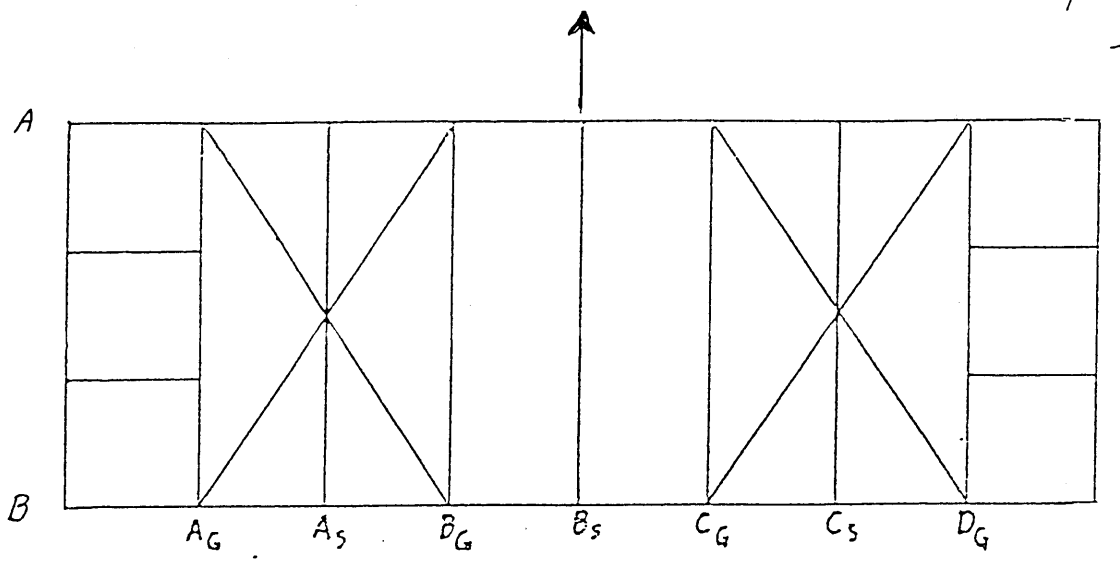
1-11-01
TWC.



Bottom Span #2 P.3 Br. # 19-6-9.74

Deck	Fair
Floor Beams	Fair
Girders	Fair
Stringers	Fair
Lateral Bracing	Fair
Sidewalk	Fair
Brackets	

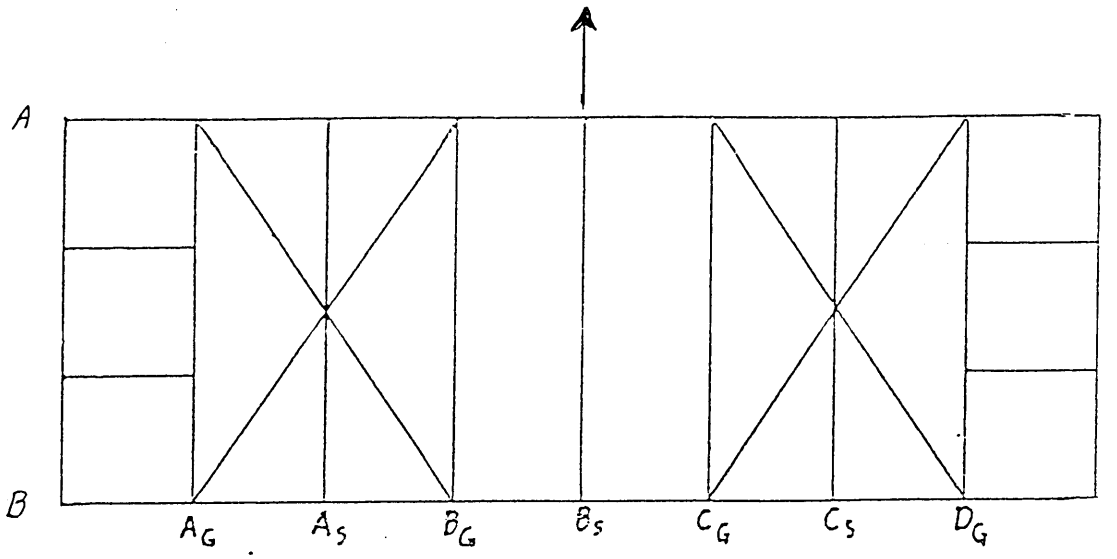
12-14-98
1-11-01
TWC.



Bottom Span #2 panel 4 Br. # 19-6-9.74

Deck	Fair	See Span # 1
Floor Beams	F	
Girders	F	
Stringers	F	
Lateral Bracing	F	
Sidewalk	F	
[redacted]ckets		

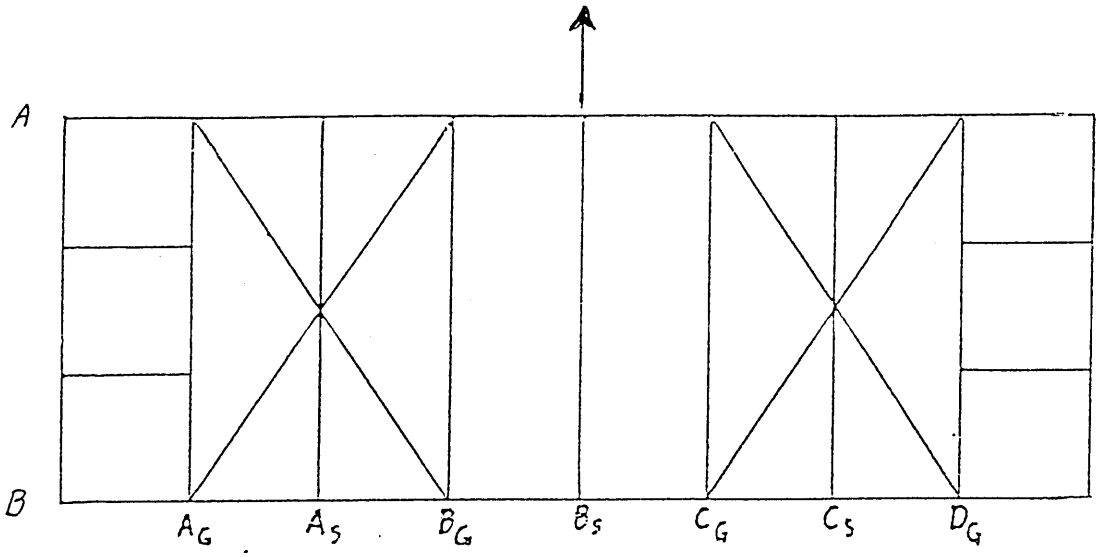
1-11-01
TWC



Bottom Span #2 p.5 Br. # 19-6-9.74

Deck	Fair	
Floor Beams	Fair	
Girders	Fair	
Stringers	Fair	
Lateral Bracing	Fair	
Sidewalk Brackets	Fair	

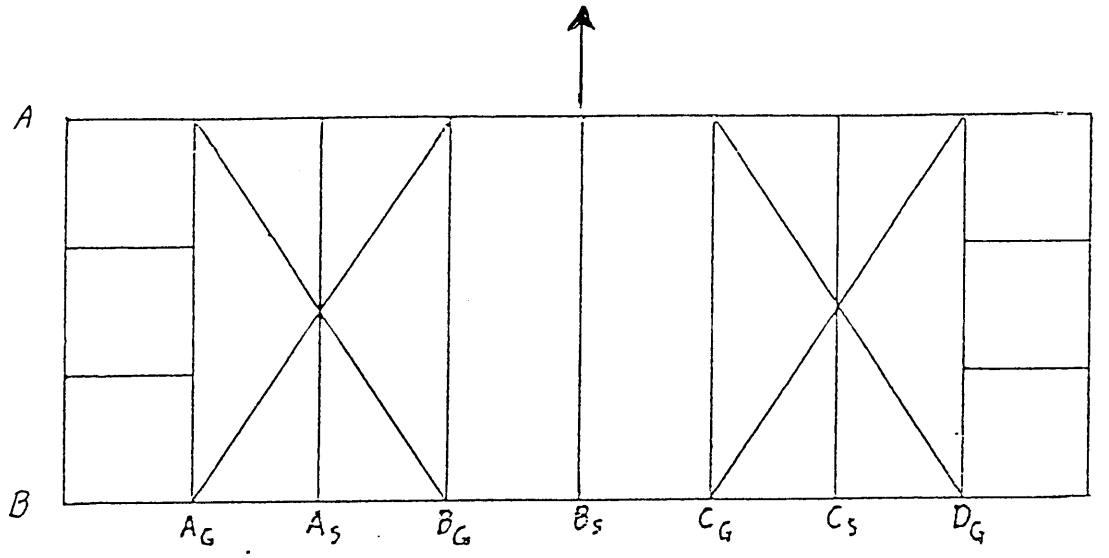
1-11-01
TWC



Bottom Span #2 panel 6 Br. # 19-6-9.74

Deck	Fair
Floor Beams	F
Girders	F
Stringers	F
Lateral Bracing	F
Sidewalk	F
[redacted]ckets	

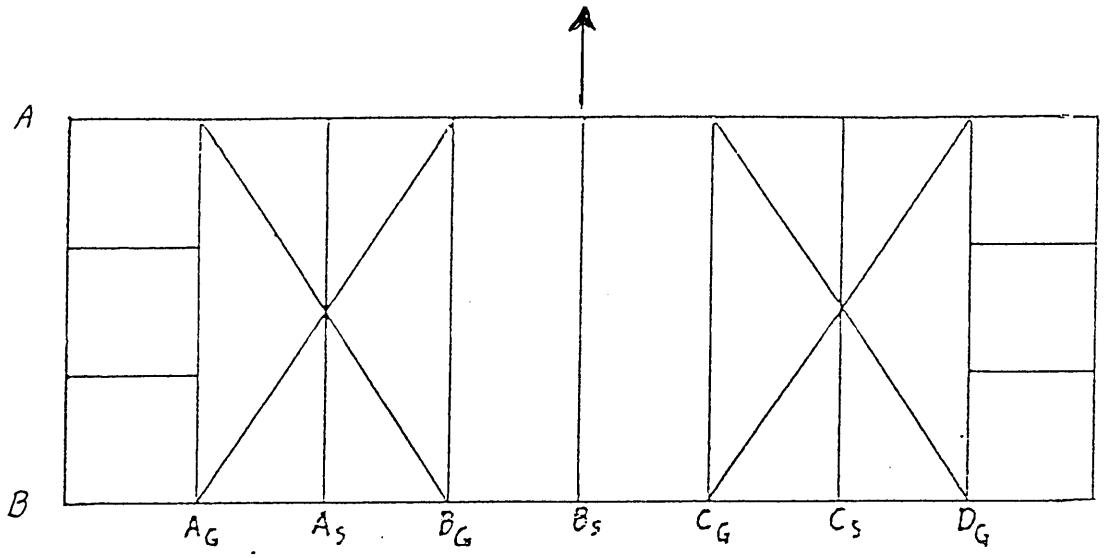
1-11-01
TWC



Bottom Span #2 panel 7 Br. # 19-6-9.74

Deck	Fair	See span # 1
Floor Beams	F	"
Girders	F	"
Stringers	F	"
Lateral Bracing	F	"
Sidewalk	F	
[redacted]ckets		

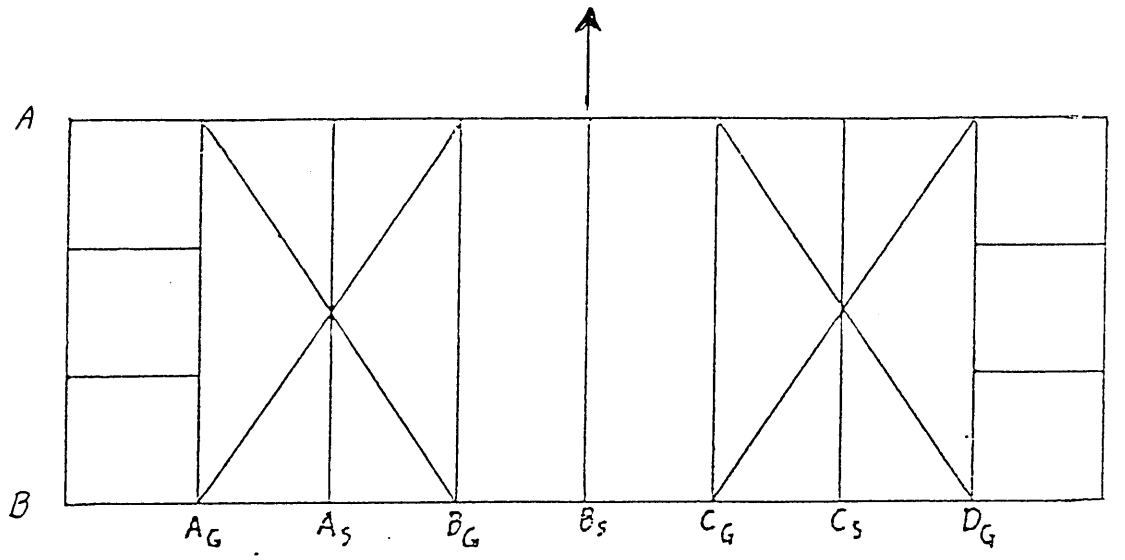
1-11-01
TWC



Bottom Span #2 p. 8 Br. # 19-6-9.74

Deck	Fair
Floor Beams	Fair
Girders	F
Stringers	F
Lateral Bracing	F
Sidewalk	F
Brackets	

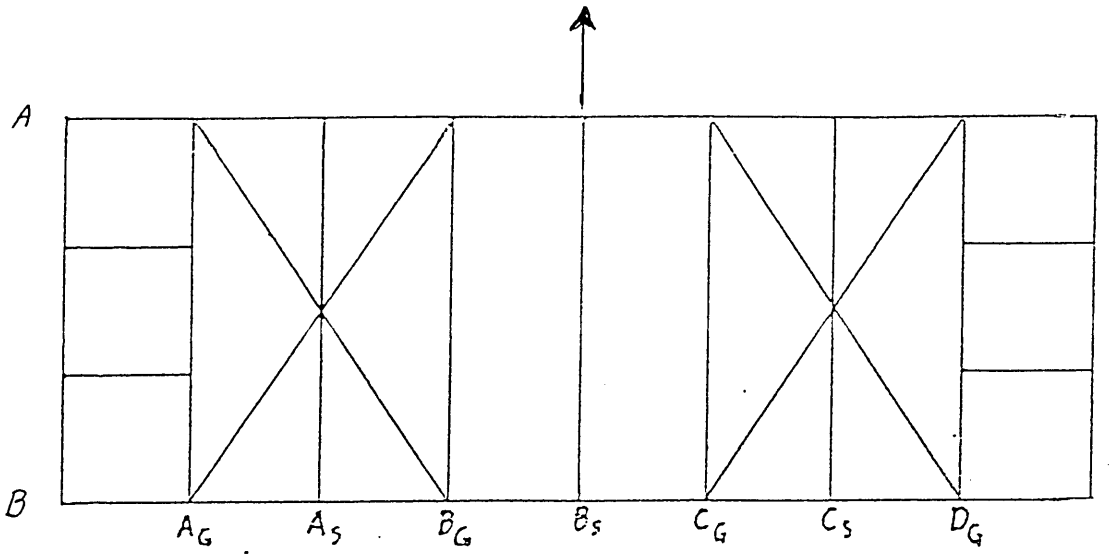
1-11-01
TWC.



Bottom Span # 2 panel 9 Br. # 19-6-9.74

Deck	Fair
Floor Beams	F
Girders	F
Stringers	F
Lateral Bracing	F
Sidewalk Brackets	F

1-11-01
Two.

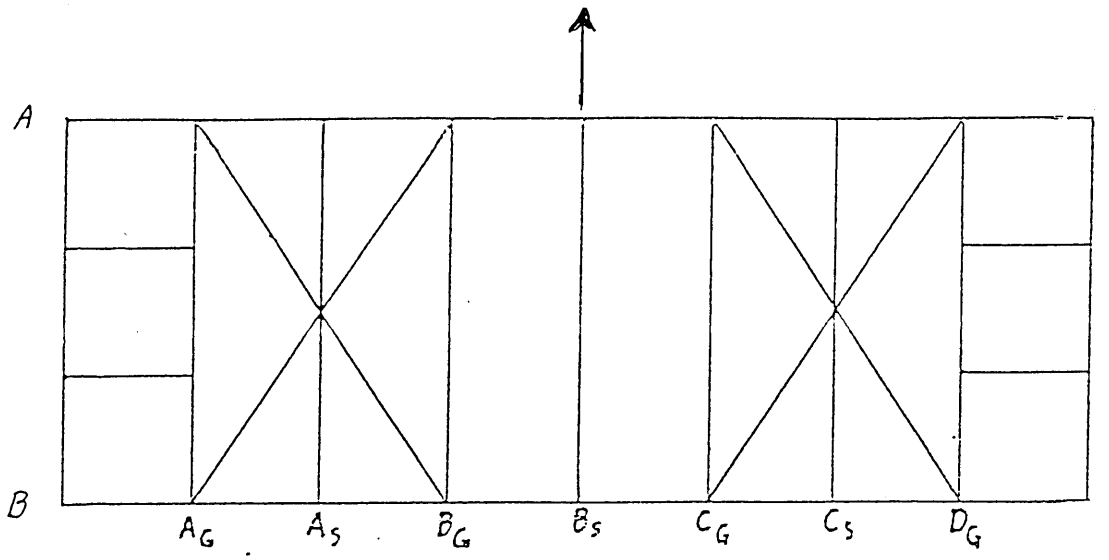


Bottom Span #2 p. 10 Br. # 19-6-9.74

Deck	Fair	
Floor Beams	F	
Girders	F	
Stringers	F	
Lateral Bracing	F	
Sidewalk Brackets	F	

1-11-01

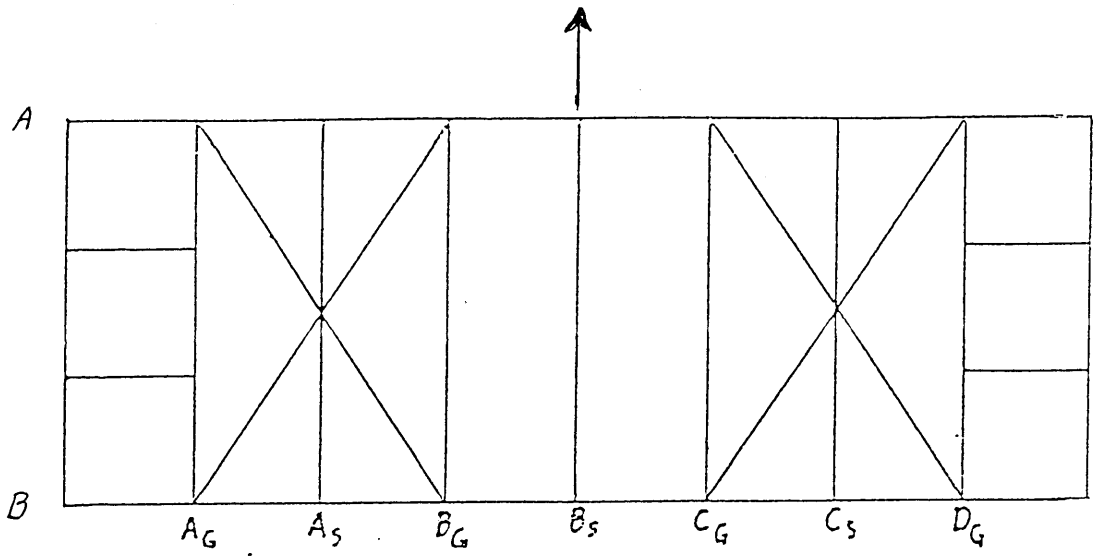
TWC.



Bottom Span #3 panel 1 Br. # 19-6-9.74

Deck	Fair	trans. cracks w/ leaching on bottom of curb
Floor Beams	Good	
Girders	Fair	mod. to heavy corr. on top flange
Stringers	G	
Lateral Bracing	G	
Sidewalk	G	
[redacted]ckets		

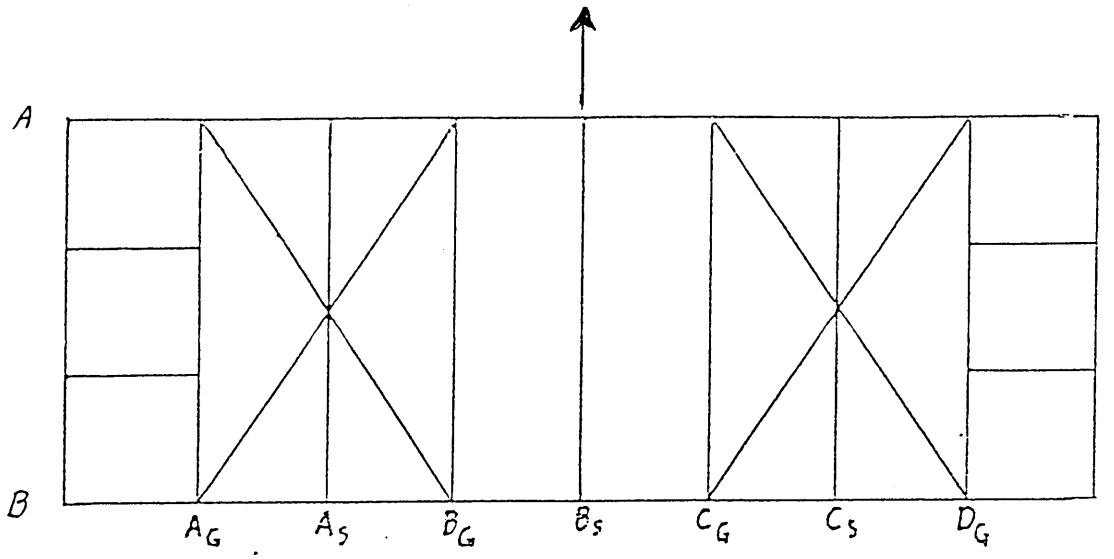
1-11-01
TWC.



Bottom Span #3 p.2 Br. # 19-6-9.74

Deck	Fair	
Floor Beams	Fair	
Girders	Fair	
Stringers	Fair	
Lateral Bracing	Fair	
Sidewalk Brackets	Fair	

12-14.7 OMP
1-11-01
TWC.



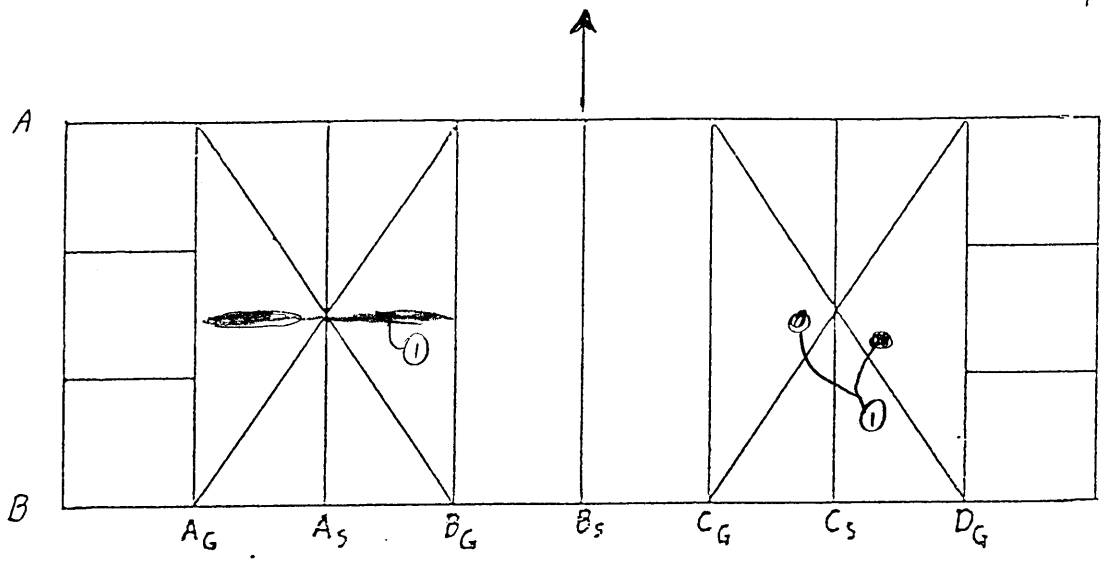
Bottom Span #3 panel 3 Br. # 19-6-9.74

Deck	Fair	See Span # 1
Floor Beams	Fair	
Girders	Fair	
Stringers	Fair	
Lateral Bracing	F	
Sidewalk Brackets	F	

12-17 YOMP

1-11-01

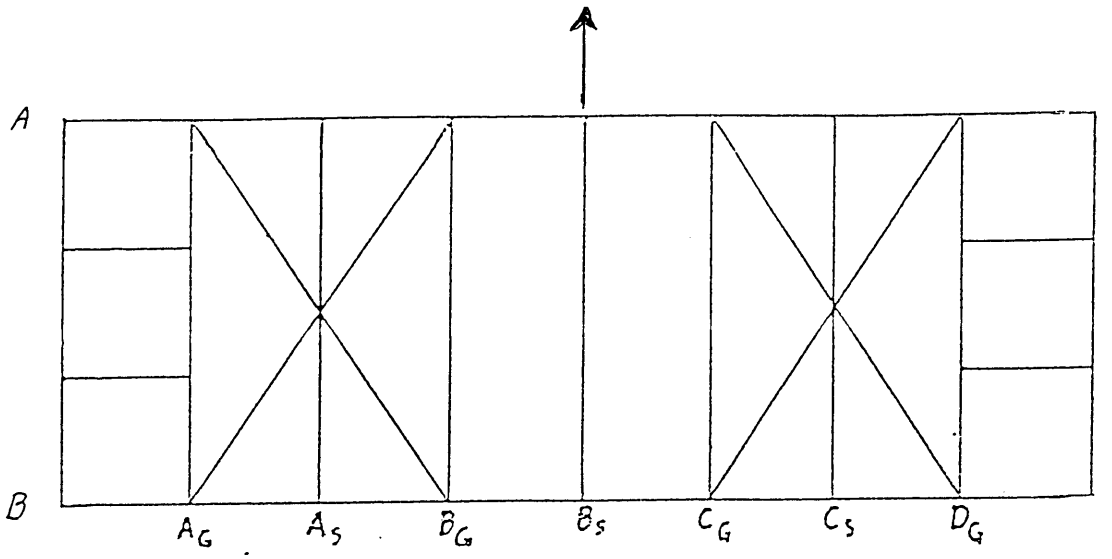
TWC.



Bottom Span #3 p. 4 Br. # 19-6-9.74

Deck	Fair	① spalls w/ exp. steel up to 2" dp along construction joint
Floor Beams	Fair	
Girders	Fair	
Stringers	Fair	
Lateral Bracing	Good	
Sidewalk	Fair	
[redacted]ckets		

1-11-01
TWC.



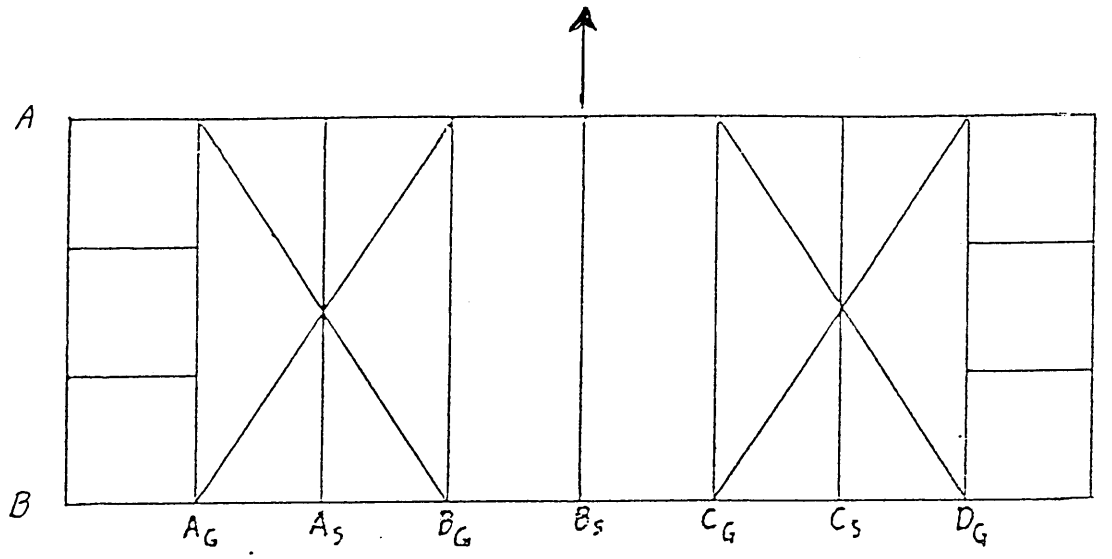
Bottom Span #3 panel 5 Br. # 19-6-9.74

Deck	F	
Floor Beams	F	
Girders	F	
Stringers	F	
Lateral Bracing	F	
Sidewalk Brackets	F	

12-14-10 MW

1-11-01

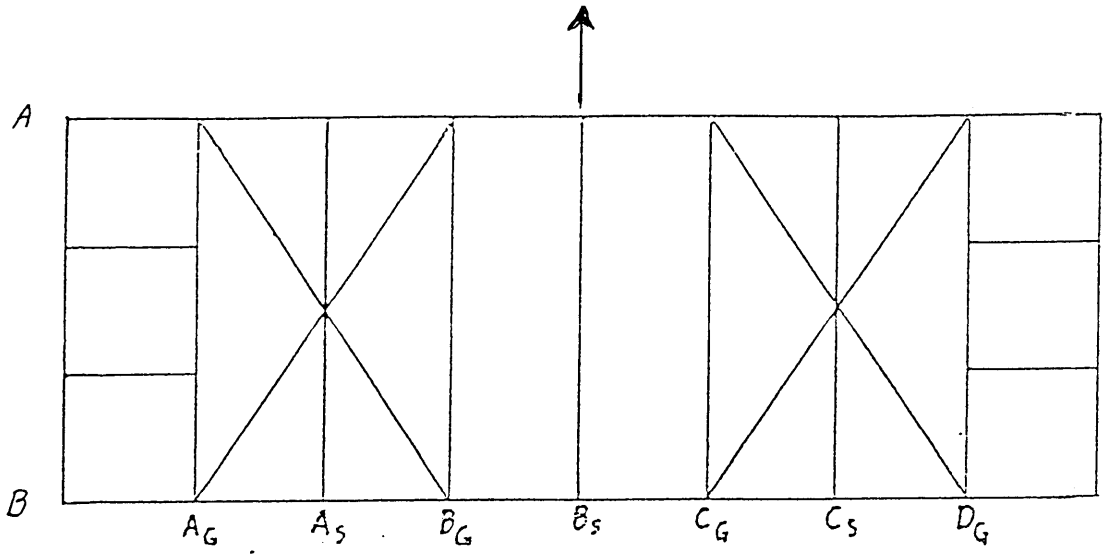
Two.



Bottom Span #3 panel 6 Br. # 19-6-9.74

Deck	Fair	
Floor	F	
Beams		
[redacted]		
Girders	F	
Stringers	F	
Lateral	F	
Bracing		
Sidewalk	F	
[redacted]ckets		

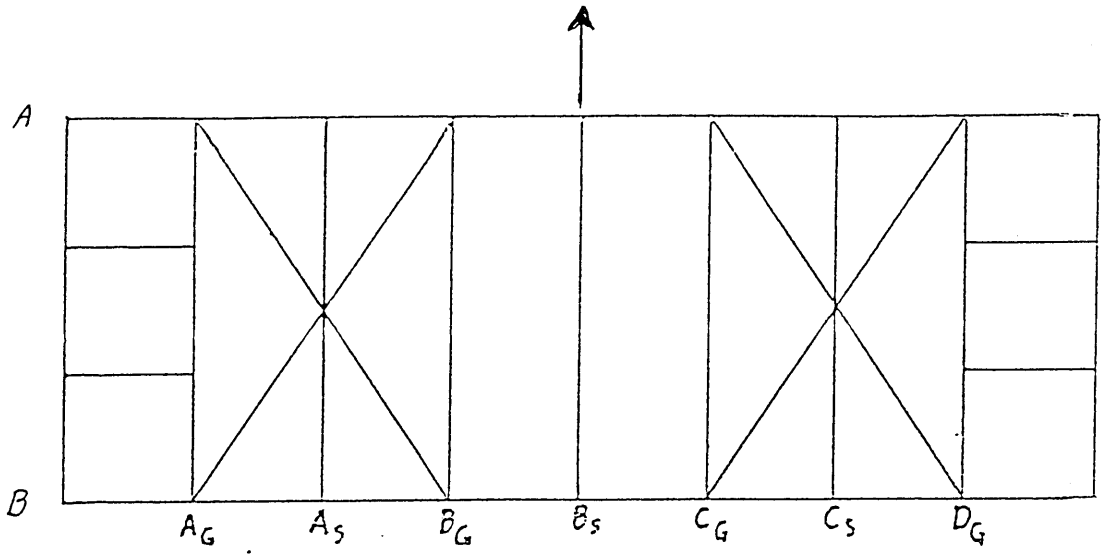
1-11-01
TWC.



Bottom Span #3 p.7 Br. # 19-6-9.74

Deck	Fair	See Span # 1
Floor Beams	Fair	
Girders	Fair	
Stringers	Fair	
Lateral Bracing	Fair	
Sidewalk Brackets	Fair	

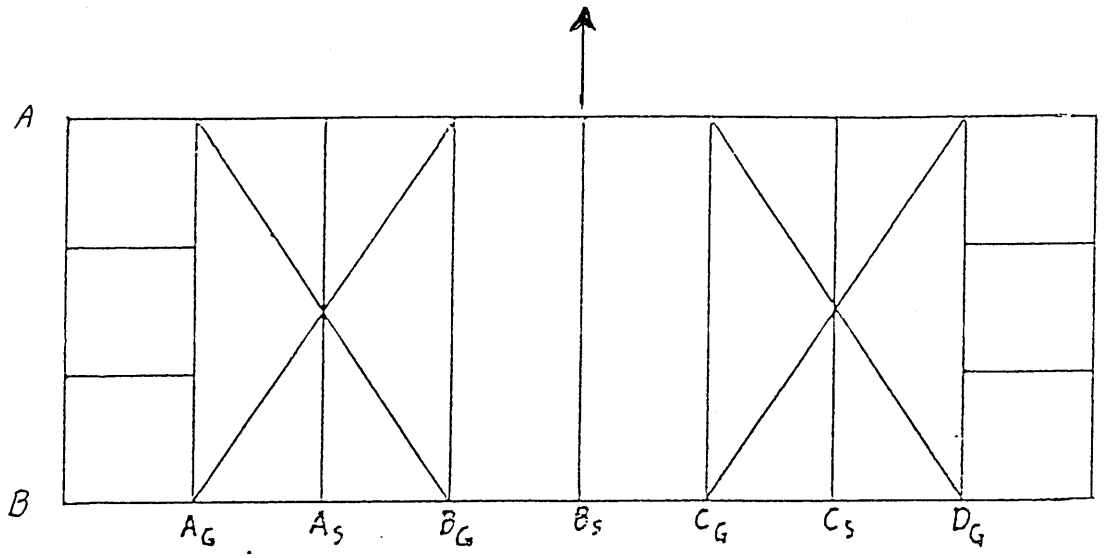
1-11-01
Twc.



Bottom Span #3 panel 8 Br. # 19-6-9.74

Deck	Fair
Floor Beams	F
Girders	F
Stringers	F
Lateral Bracing	F
Sidewalk Brackets	F

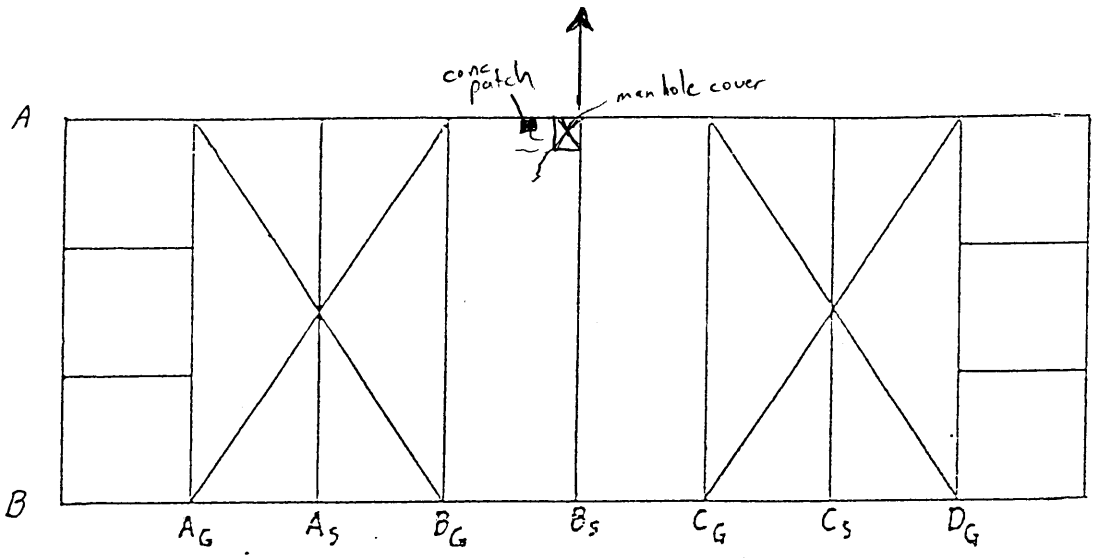
1-11-01
TWC.



Bottom Span #3 p. 9 Br. # 19-6-9.74

Deck	F	See Span # 1
Floor Beams	F	
Girders	F	
Stringers	F	
Lateral Bracing	F	
Sidewalk Brackets	F	

1-11-01
TWC.



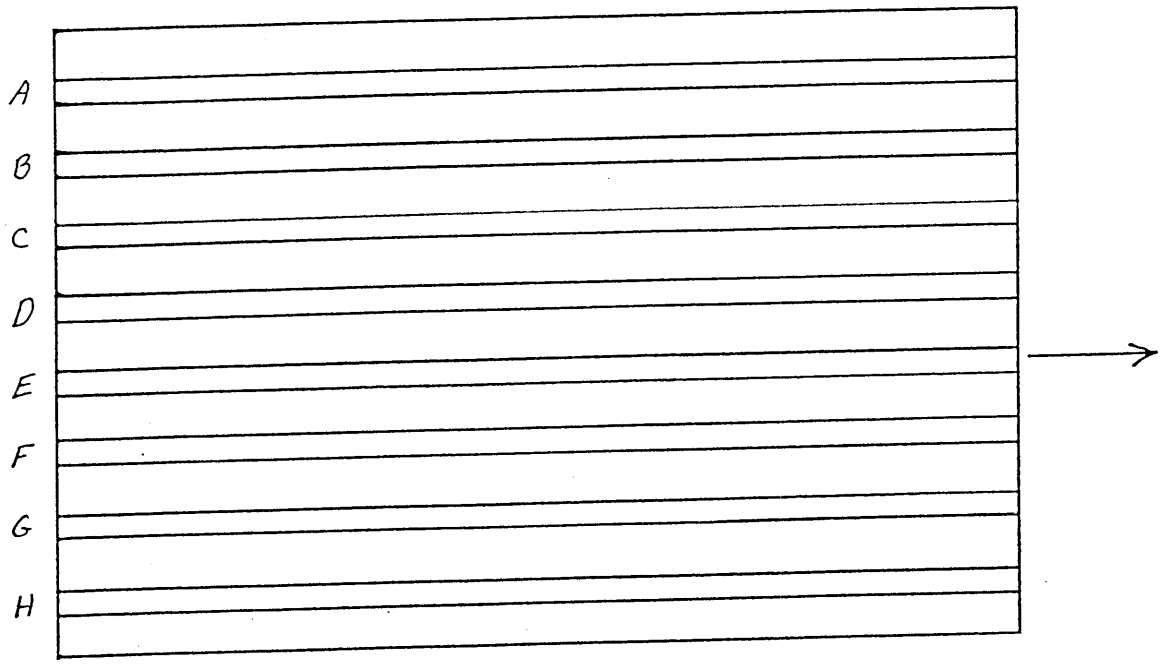
Bottom Span #3 panel 10 Br. # 19-6-9.74

Deck	Fair	random cracks w/ eff.
Floor Beams	F	
Girders	F	
Stringers	F	
Lateral Bracing	F	
Sidewalk [redacted]ckets	F	

12 17 10MJ

1-11-01

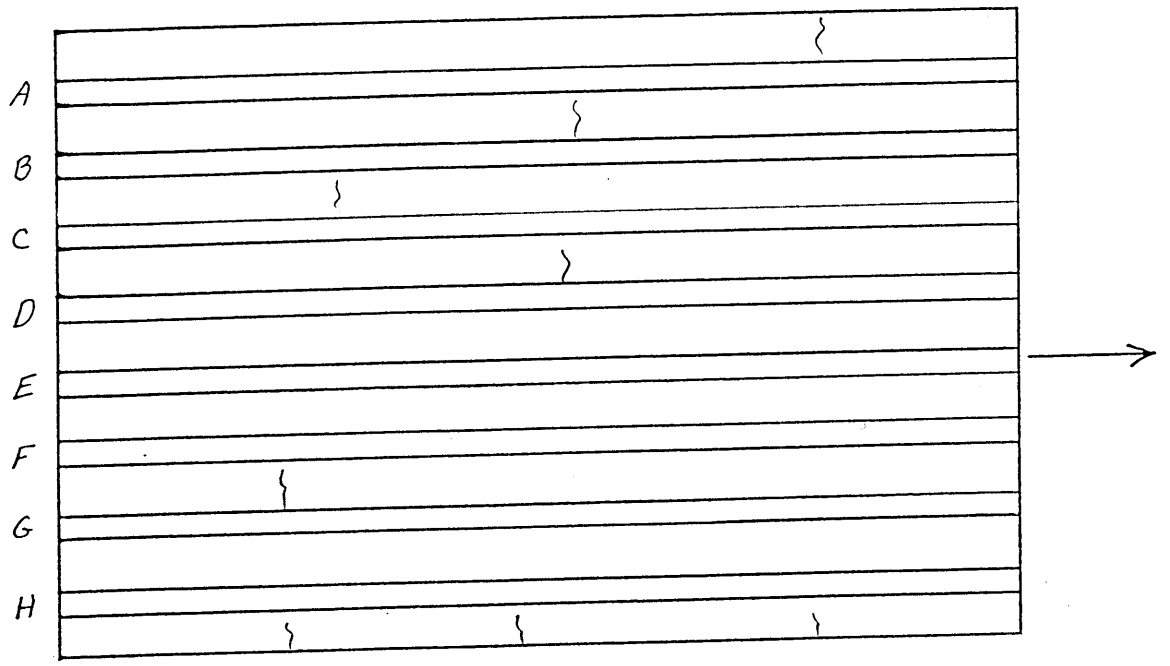
TWC.



Bottom Slab = 4 Br. # 19-6-9.74

Deck	Fair	transverse hair cracks w/ eff.
Diaph.	Good	
Beams	Fair	lgt. to mod corrosion on flanges

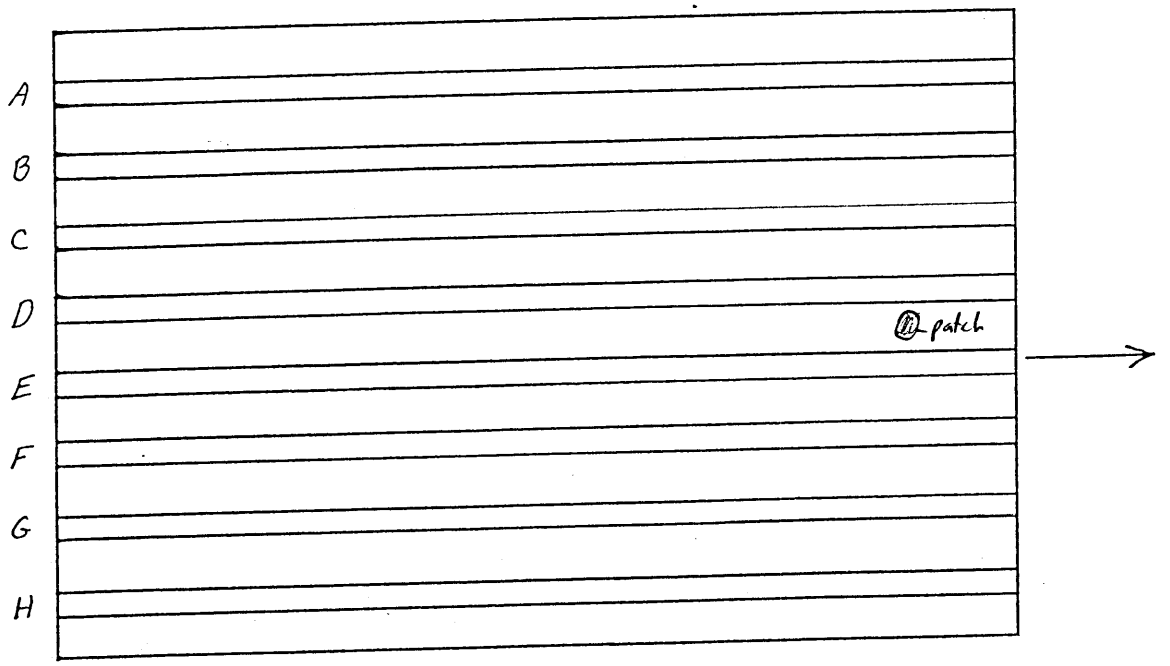
1-11-01
TWC.



Bottom Slab = 5 Br. # 19-6-9.74

Deck	Fair	trans. hair cracks w/ leaching
Diaph.	Good	
Beams	Fair	mod./Hy corrosion on flanges esp. Top Flanges

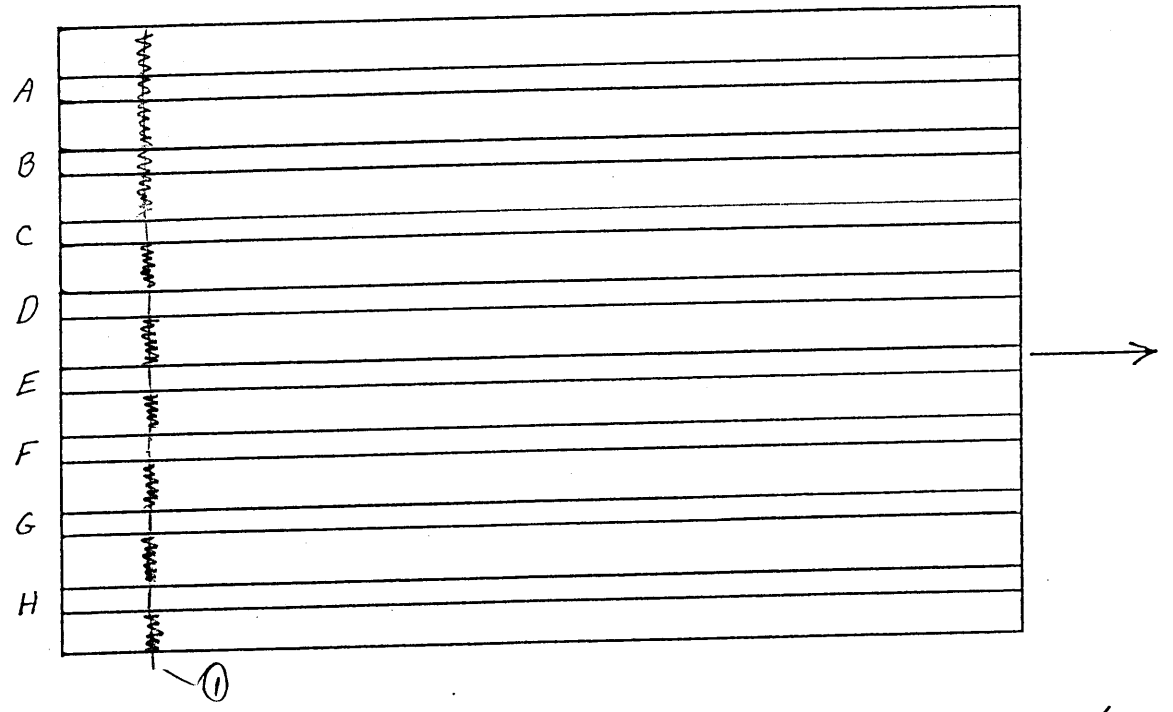
1-11-01
TWC.



Bottom Slab = 6 Br. # 19-6-9.74

Deck	Fair	
Diaph.	Good	lgt. corr.
Beams	Fair	mod. corr.

1-11-01
TWC.

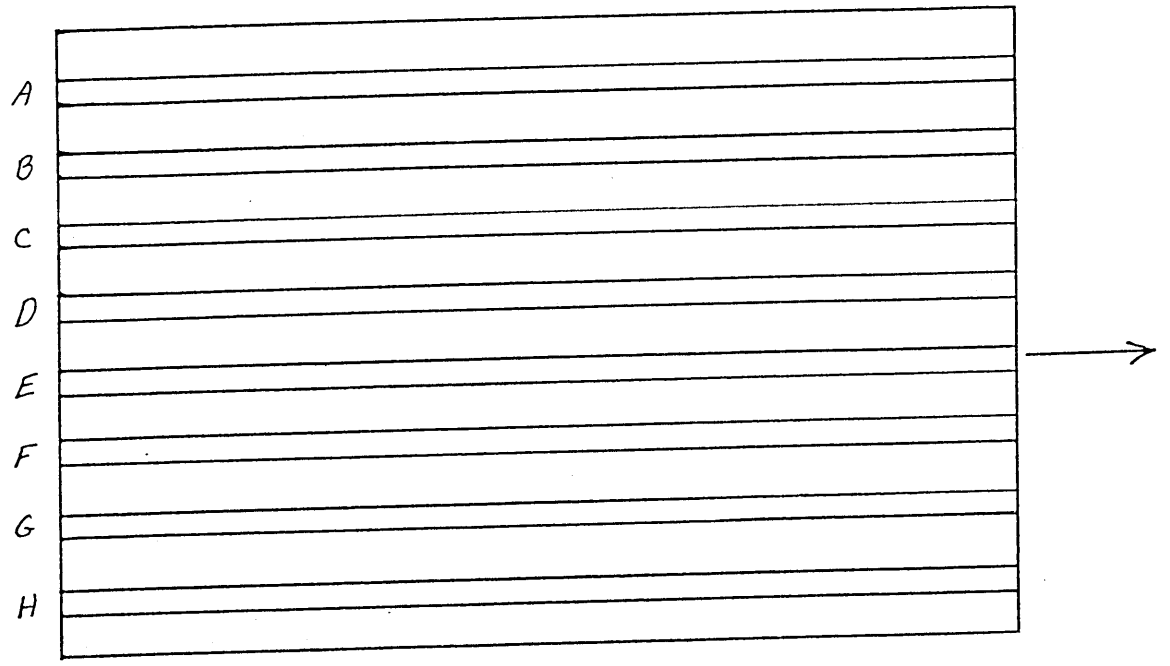


Bottom Slab = 7 Br. # 19-6-9.74

Deck	Fair	① finger type expansion joint / numerous concrete patches & cracks w/ eff. / spalls @ joint up to 2.5" dp
Diaph.	Fair	mod. corr.
Beams	Fair	mod. corr. on flanges
Bearings	G	Light corr.

1-11-01

TWC.

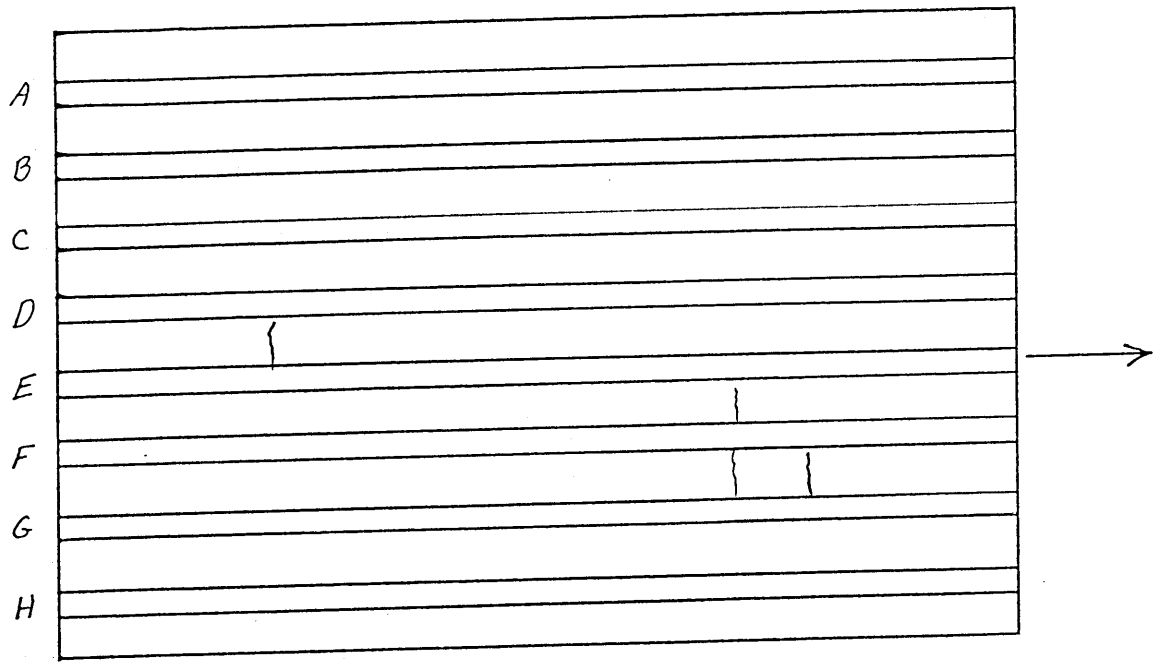


Bottom Slab = 8 Br. # 19-6-9.74

Deck	Fair	concrete patches along constr. joint / trans. crack on overhangs
Diaph.	Good	
Beams	Fair	

1-11-01

TWC.

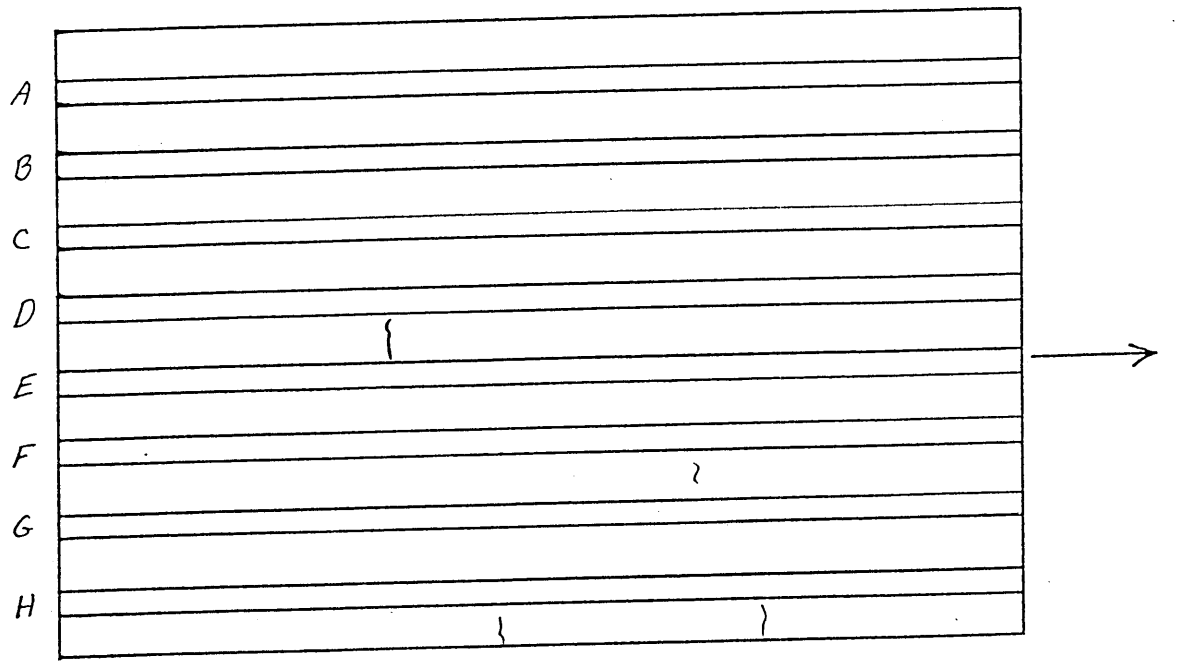


Bottom Slab = 9

Br. # 19-6-9.74

Deck	Fair	
Diaph.	Good	
Beams	Fair	

1-11-01
TWC.



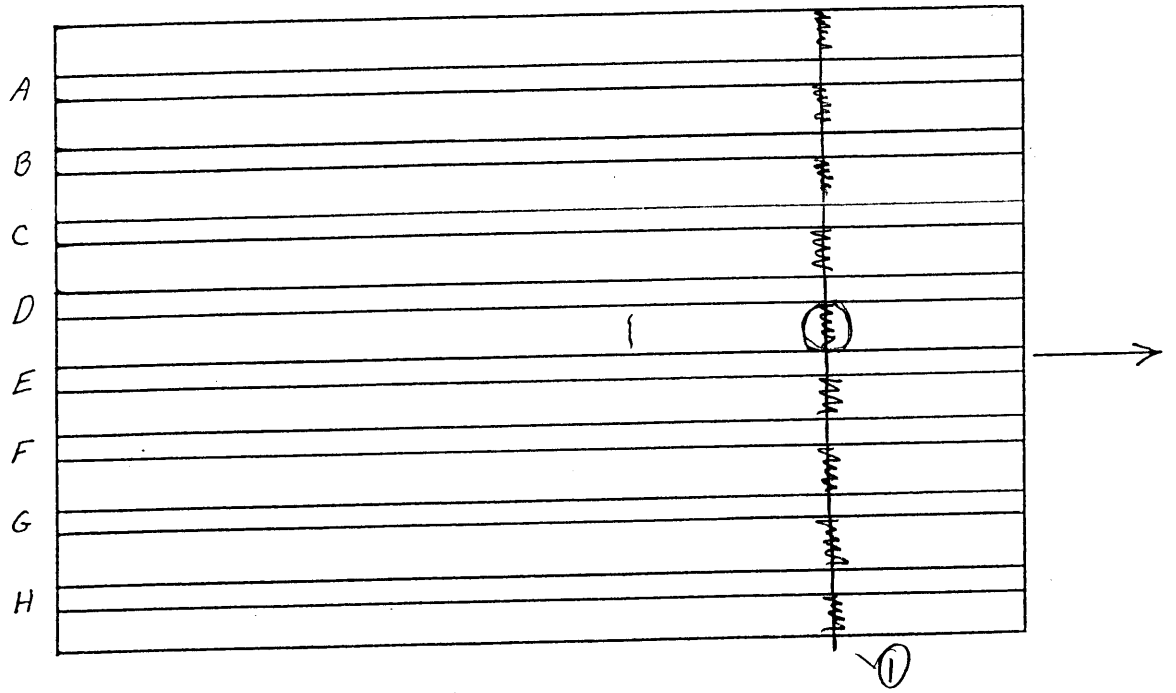
Bottom Slab = 10 Br. # 19-6-9.74

Deck	Fair	
Diaph.	Good	
Beams	Fair	

12-14-78 M//

1-11-01

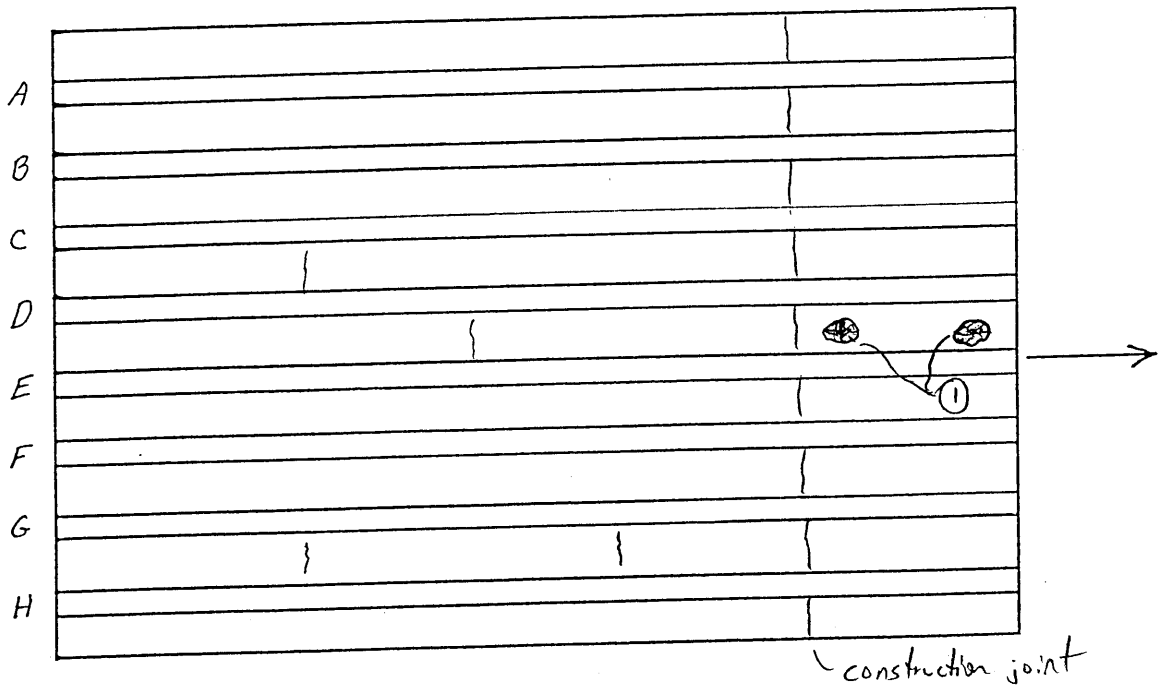
Two.



Bottom Slab = 11 Br. # 19-6-9.74

Deck	Fair	① finger type expansion joint / random transverse hair cracks
Diaph.	Good	
Beams	Fair	
Bearing	Good	Lgh. Core.

1-11-01
TWC.

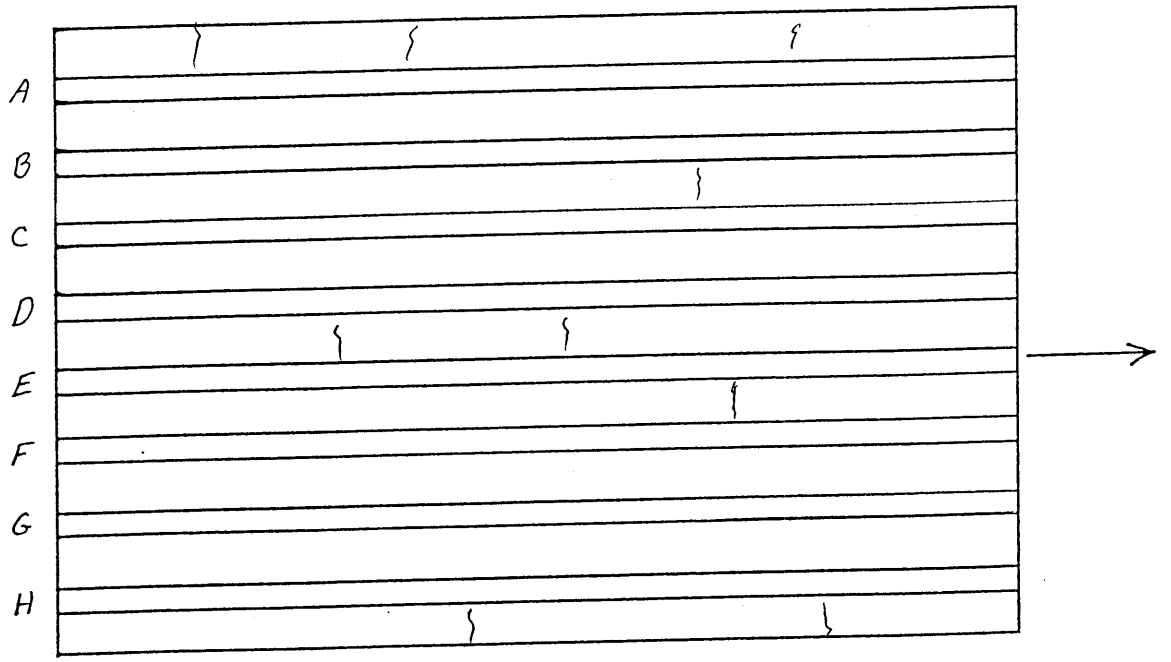


Bottom Slab = 12 Br. # 19-6-9.74

Deck	Fair	random transverse hair cracks w/ eff. ① areas 3' in diameter w/ heavy cracks and eff. ready to chip out
Diaph.	Good	
Beams	Fair	lgt. to mod. corrosion on top & bottom flange

12-14-70"

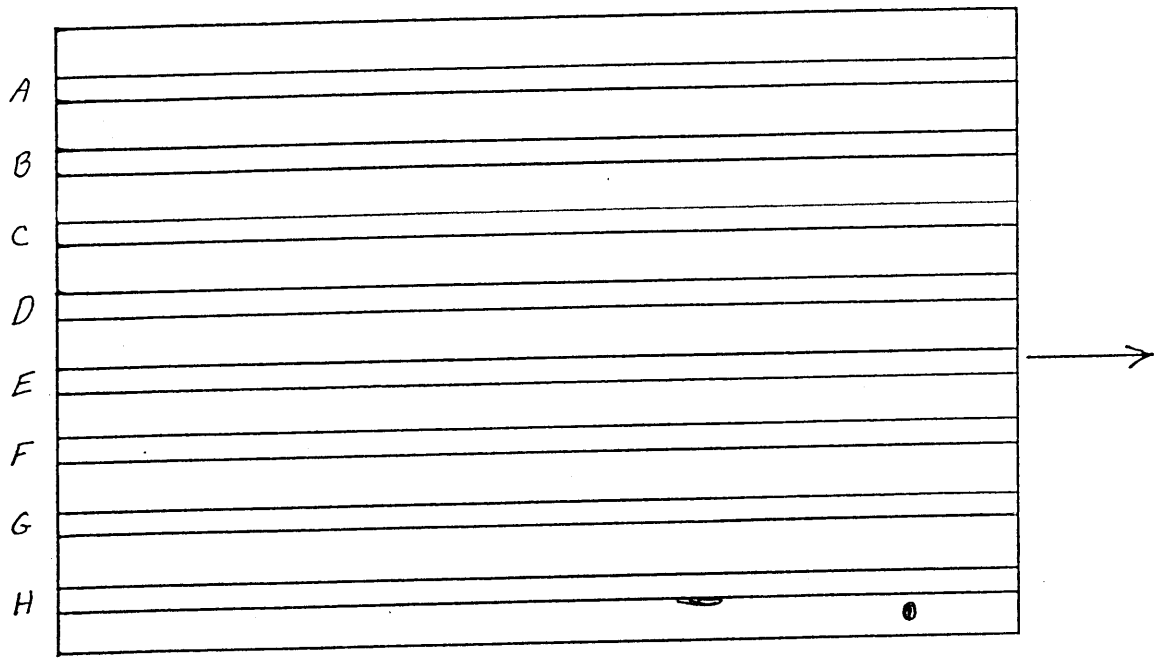
1-11-01
TWC.



Bottom Slab #13 Br. # 19-6-9.74

Deck	Fair	
Diaph.	Good	
Beams	Fair	

1-11-01
TWC.



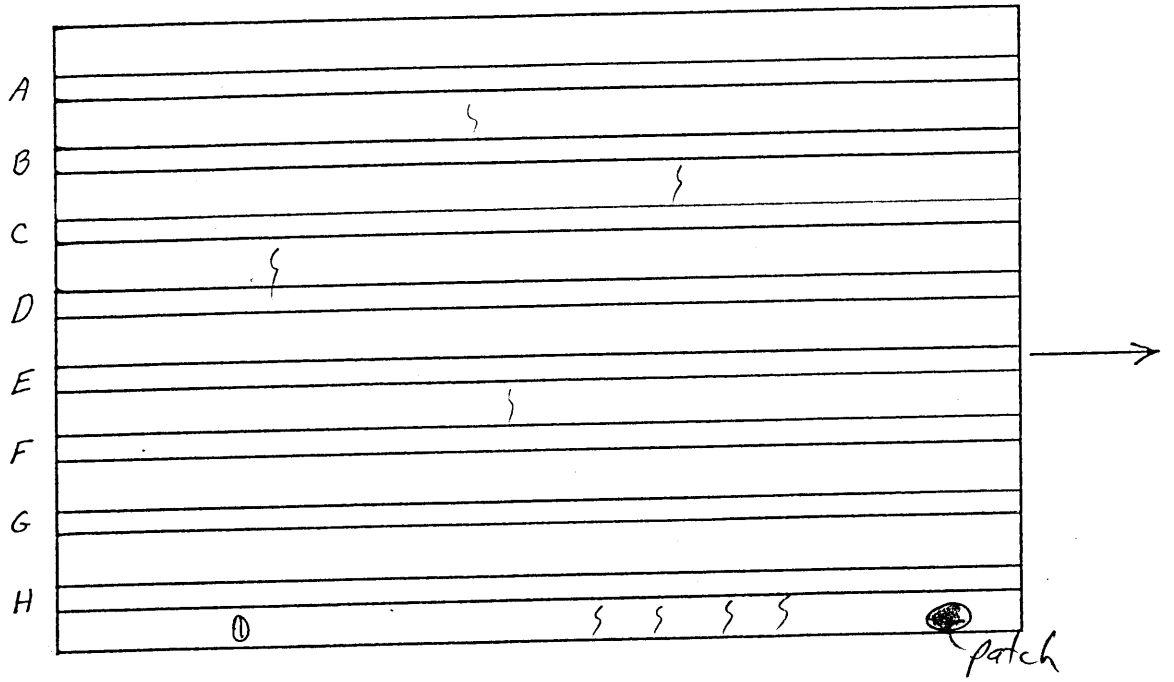
Bottom Slab = 14 Br. # 19-6-9.74

Deck	Fair	random transverse hair cracks w/ eff. / numerous small spalls up to 2" dp w/ exp. steel
Diaph.	Good	
Beams	Fair	

12-14 10PM

1-11-01

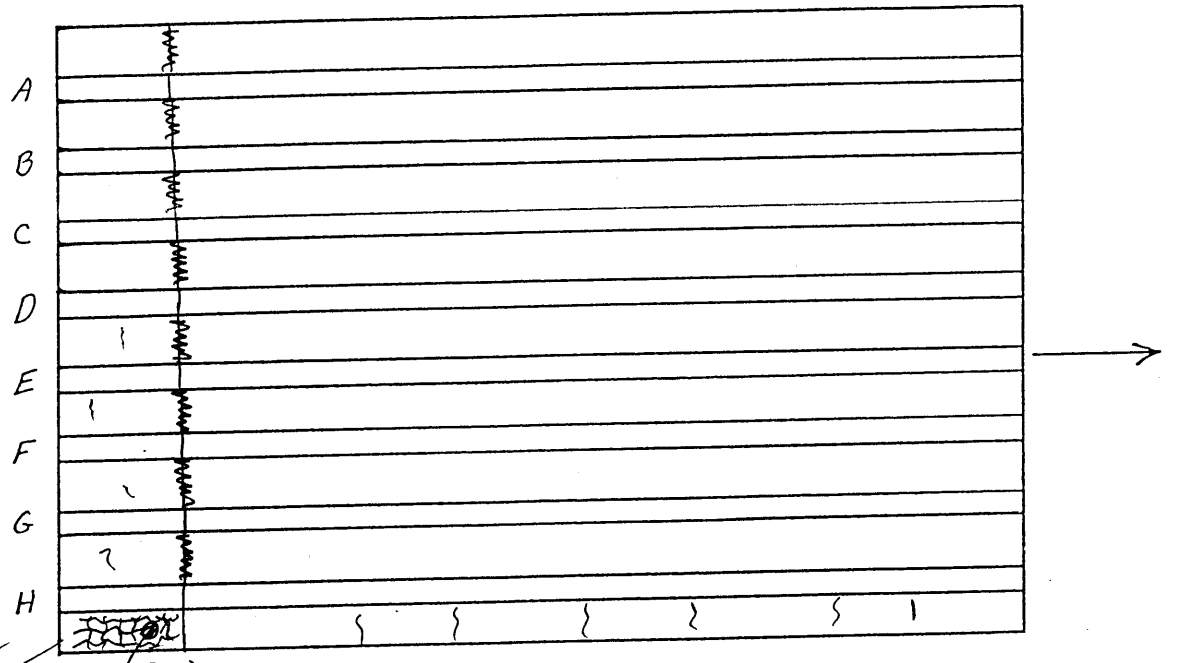
TWC



Bottom Slab = 15 over North 1st St. Br. # 19-6-9.74

Deck	Fair	spalls w/ exp. steel up to 2" dp / numerous transverse hair cracks w/ eff.
Diaph.	Good	lgt. corr.
Beams	Fair	lgt. to mod. corrosion

1-11-01
TWC.

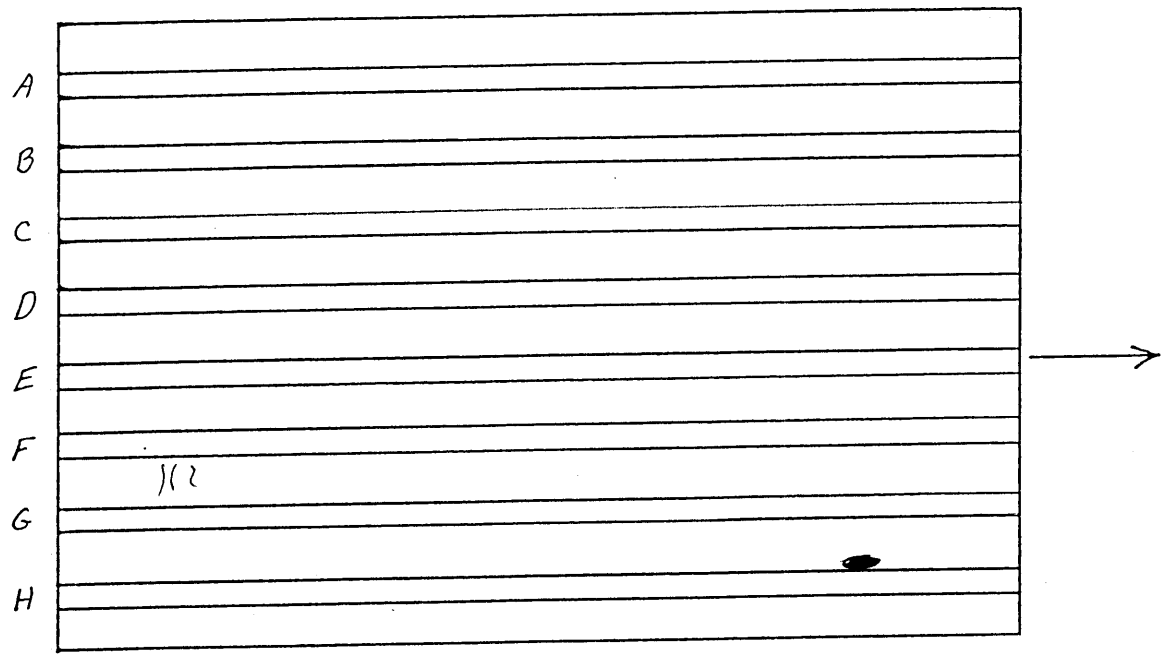


BOTTOM SLAB = 16 Br. # 19-6-9.74

~~D~~eck	Fair	① expansion joint ~~② hole thru sidewalk~~ ③ heavily delaminated ~~concrete~~
Diaph.	Good	
Beams	Fair	mod, corrosion
Bearing	Fair	MOD. TO HVY CORR. FULL TILT ON BACKSTATION

12-14-98 (MJ)

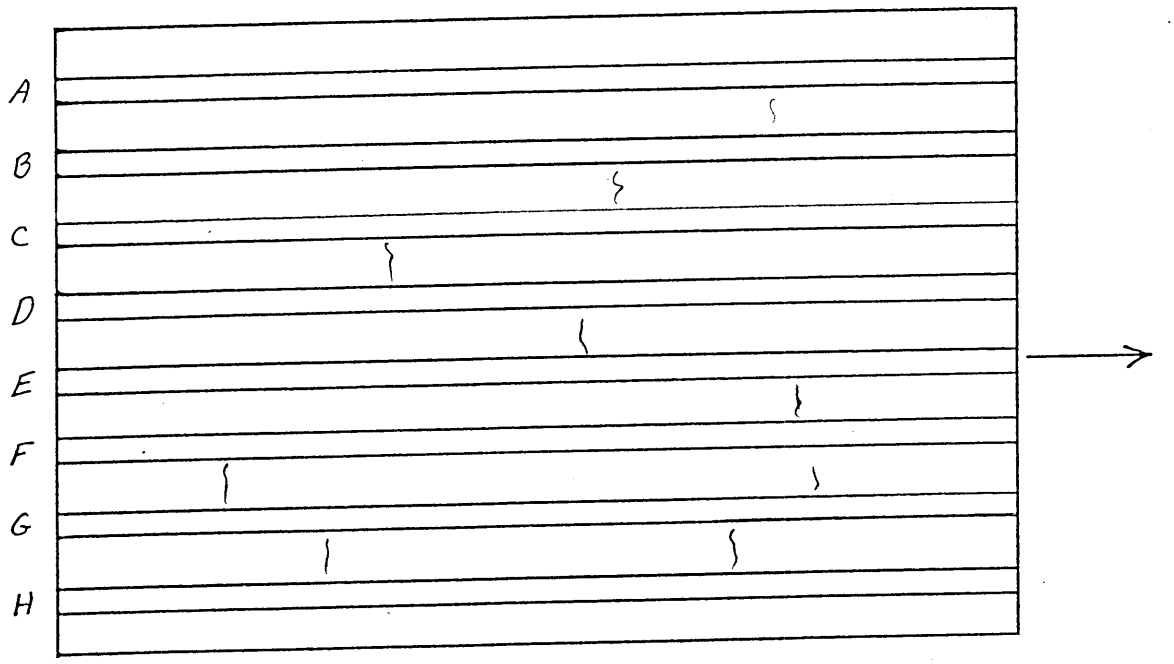
1-11-01
TWC.



Bottom Slab = 17 Br. # 19-6-9.74

[redacted]ck	Fair	concrete patches / random cracks w/ eff.
Diaph.	Good	lgt. corr.
Beams	Good	" "

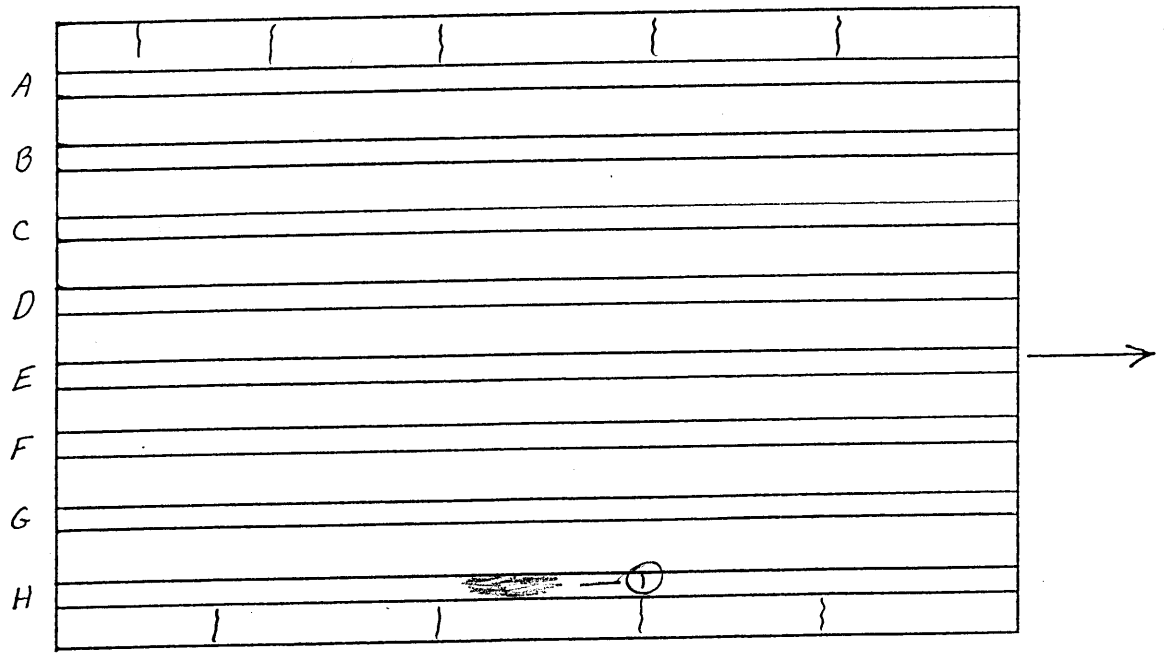
1-11-01
Twc.



Bottom Slab = 18 Br. # 19-6-9.74

Deck	Fair	transverse hair cracks w/ efflor.
Diaph.	Good	
Beams	Fair	lgt.-mod. corrosion on flanges

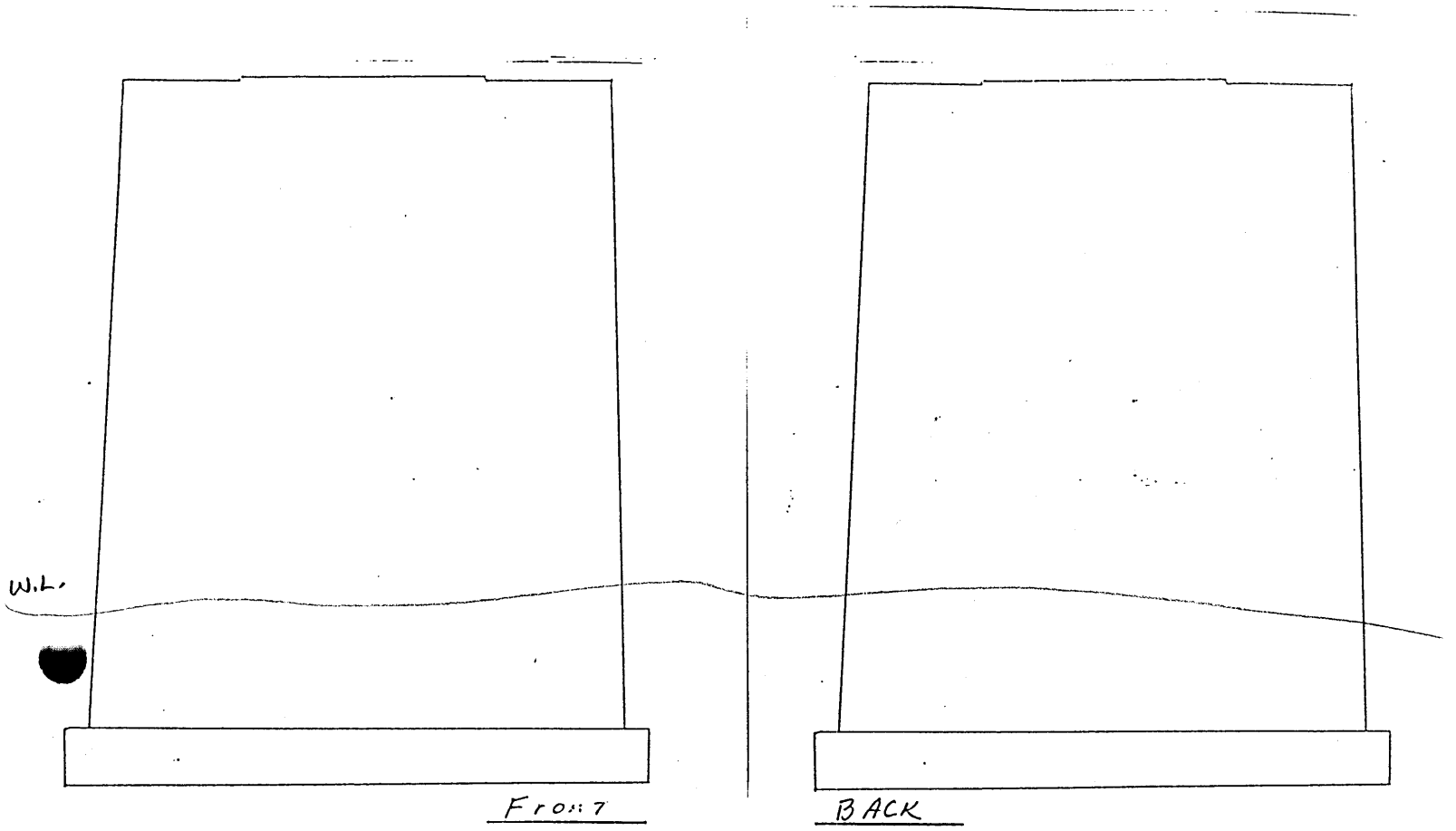
12-17-90 MH
1-11-01
TWC.



Bottom Slab = 19 Br. # 19-6-9.74

Deck	Fair	random transverse hair cracks w/ efflor.
Diaph.	Good	
Beams	Fair	① 1/16" section loss on bottom flange mod corr.

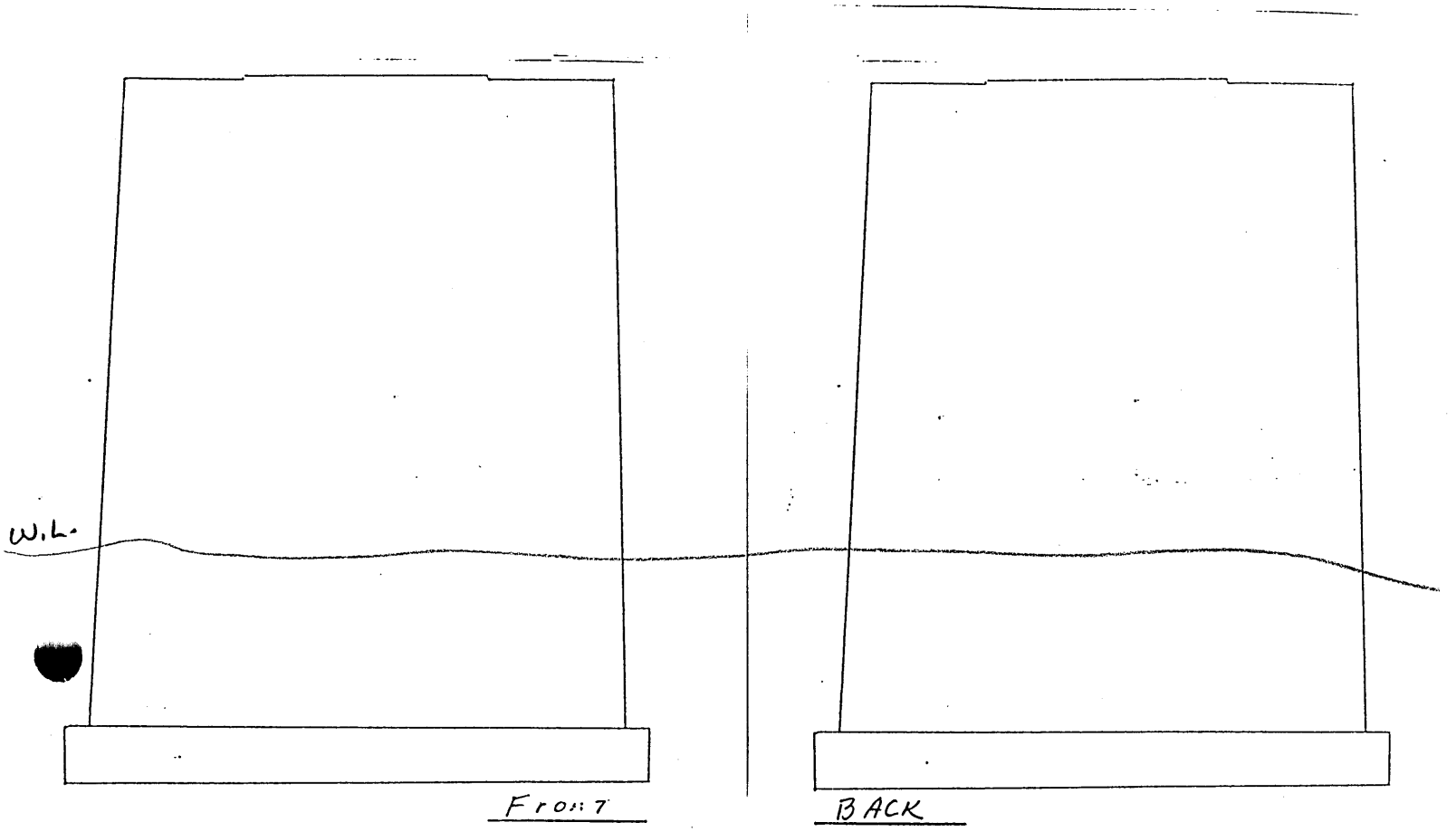
12-14-98 KHC
01-11-01 BP



PIER # 1 Br. # 19-6-9.74

WALL	G	
FOOTING	N/V	
BEARING	G	

12-14-98 KHC
01-11-01 BR

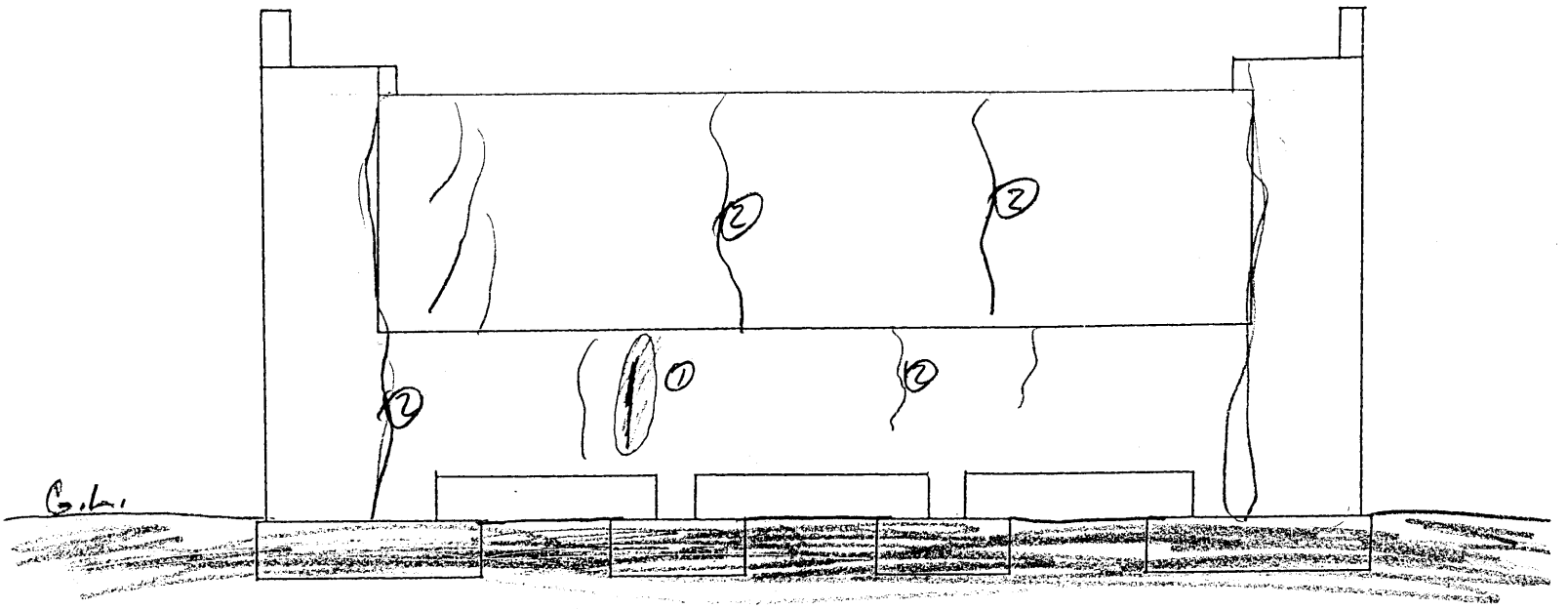


PIER #2 Br. # 19-6-9.74

WALL	G	
FOOTING	N/V	
BEARING	G	

12-14-98
KHC

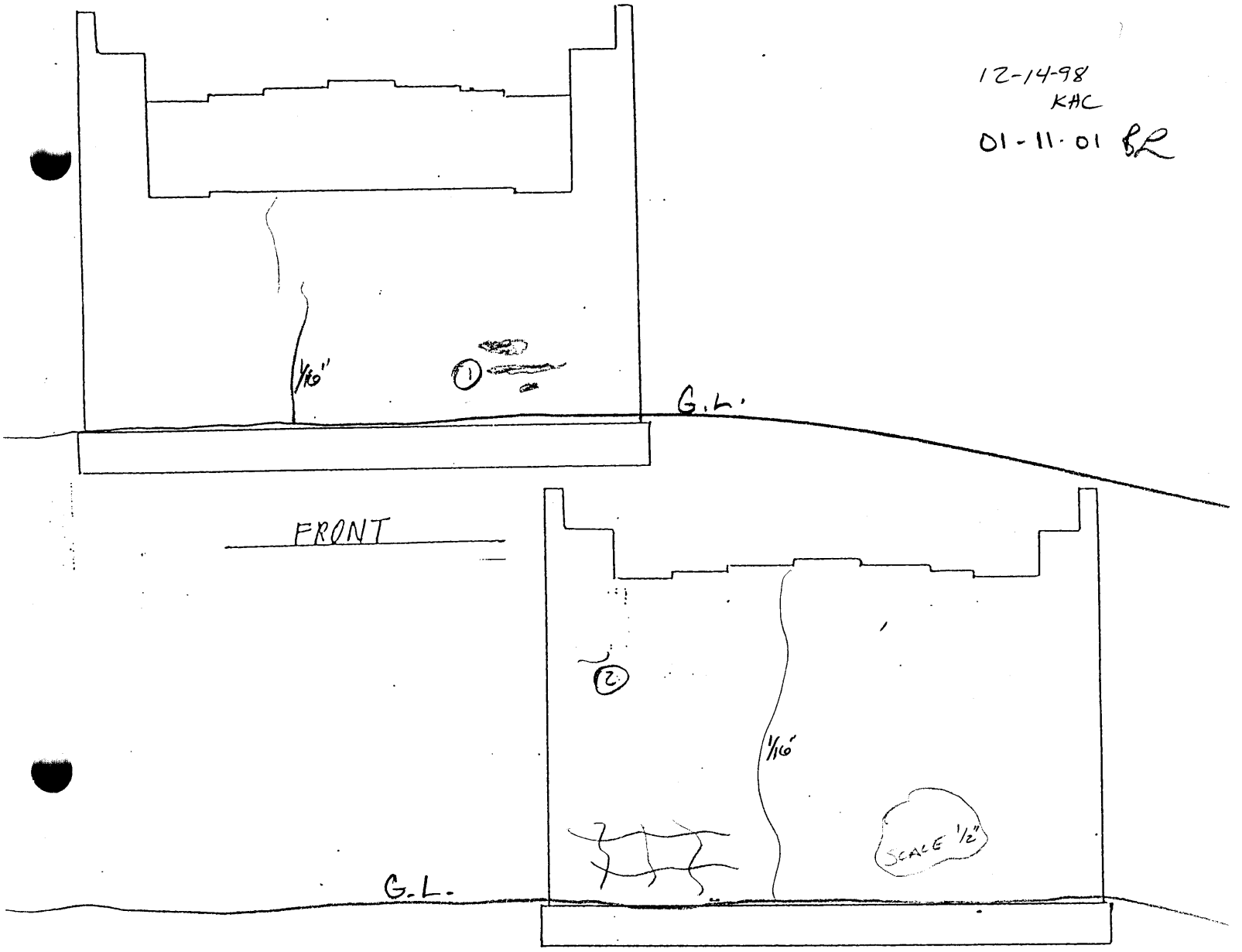
01-11-01 BL



ABUT #1 Br. # 19-6-9.74

CAP	F	(1) B.O. w/EXP STEEL 1½" Dp X 2'10" H X 1'W. (2) VERT. CRACKS ⅛" OPEN w/LEACH.
wall	N/A	
Backwall	F	(2)
wings	G	VERT. CRACKS w/LEACH.
Footing	N/V	
Bearings	G	LGT. CORR.

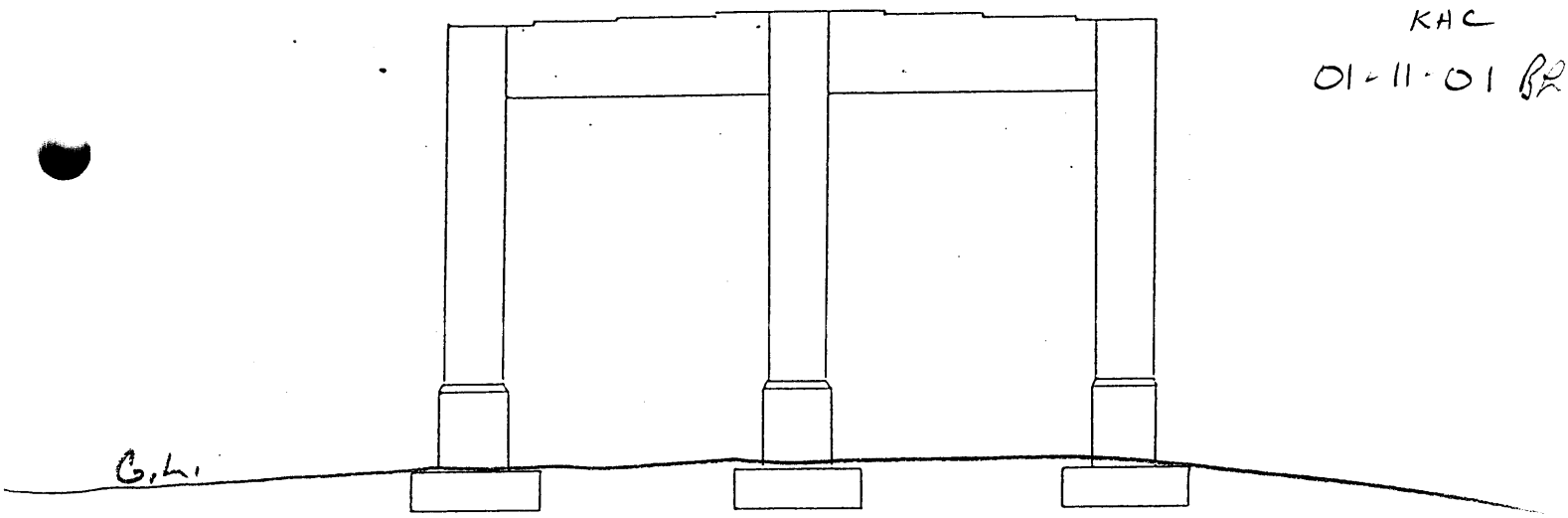
12-14-98
KAC
01-11-01 BR



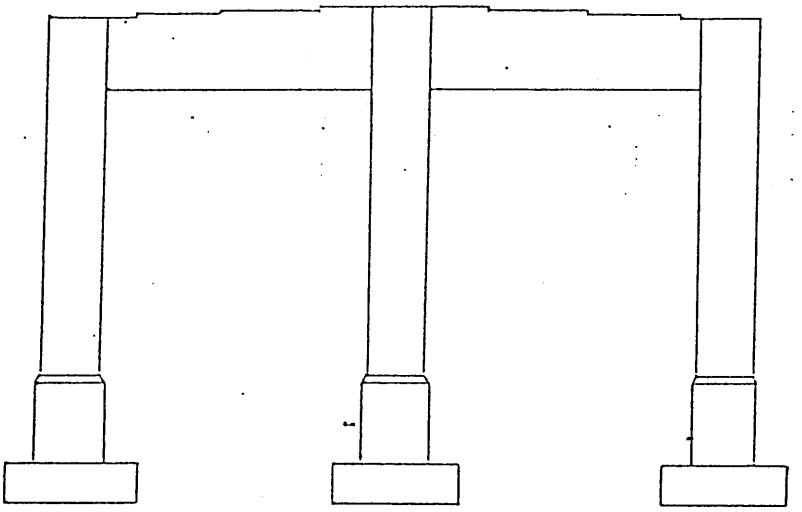
PIER #3 Br. # 19-6-9.74

Cap	N/A	
Wall	F	①B.O.'s 1" Dp x 1½' W. VERT CRACKS 1/16" OPEN, PATTERN CRACK LGT. SCALE ½" Dp ②IN-PLACE B.O. ½" OPEN
FOOTING	N/V	
BEARINGS	G	

12-14-98
KHC
01-11-01 BR



FRONT

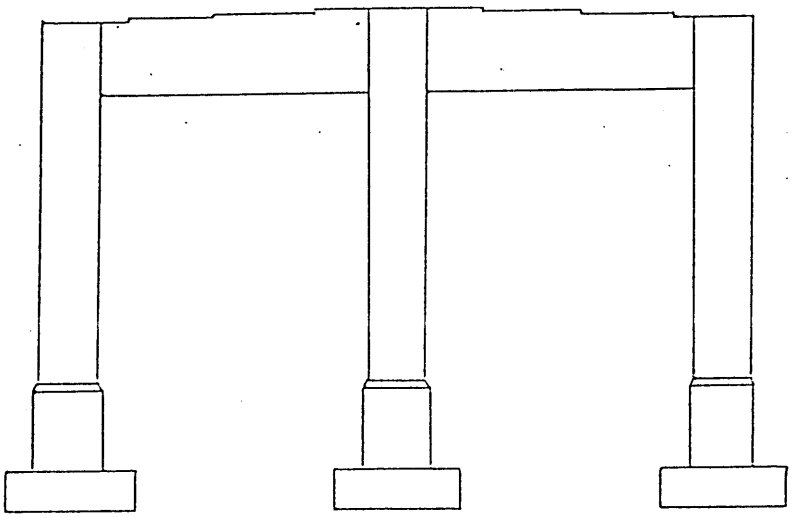


BACK

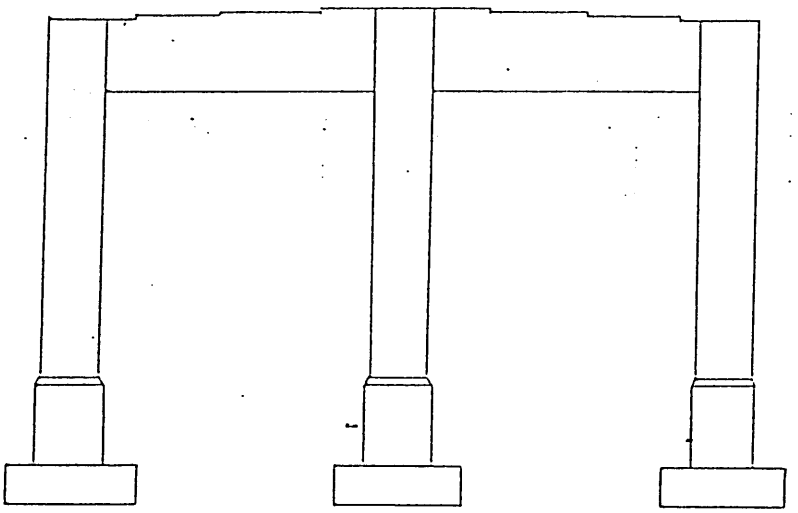
BENT # 1 Br. # 19-6-9.74

Cap	G	
Columns	G	LGT. CHIPS
F[redacted]ING	N/V	
Bearing	G	(ROLLERS)

12-14-98
KHC
01-11-01 BR



FRONT

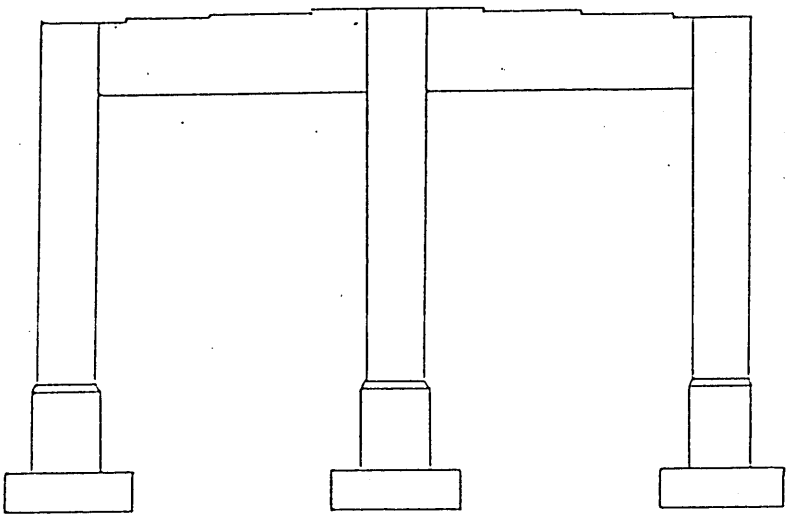


BACK

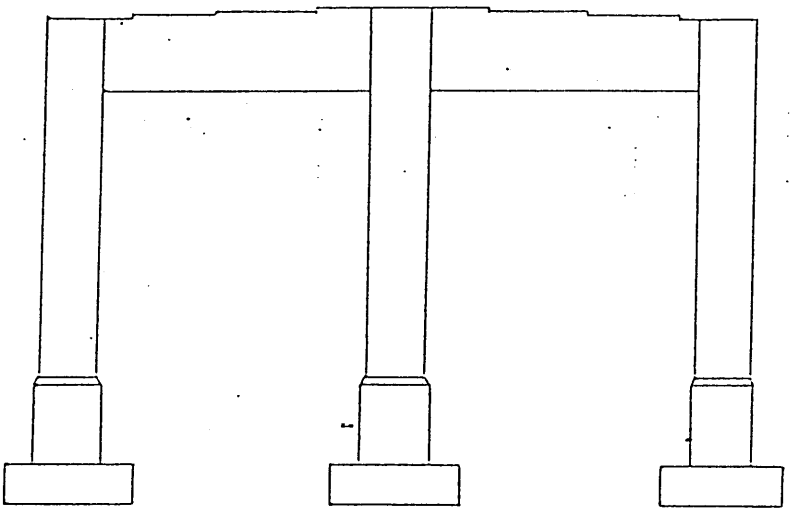
BENT # 2 Br. # 19-6-9.74

Cap	C
Columns	C
Footing	N/A
Bearing	C

12-14-98
KHC
01-11-01 BR



FRONT

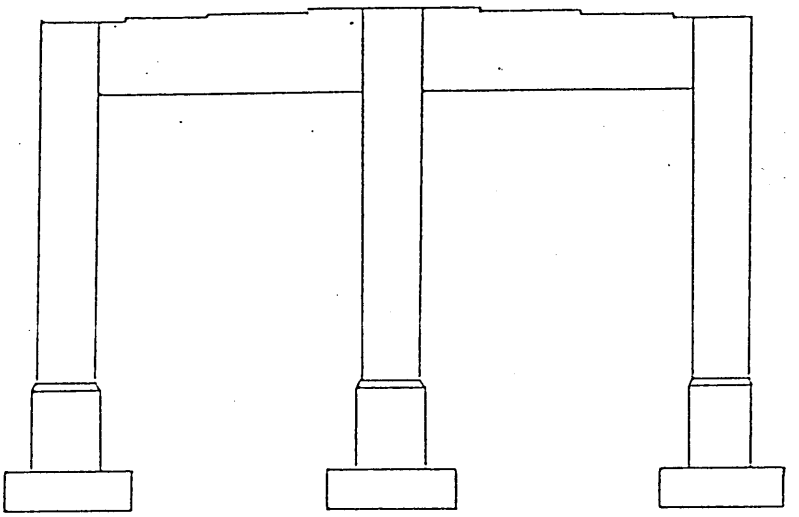


BACK

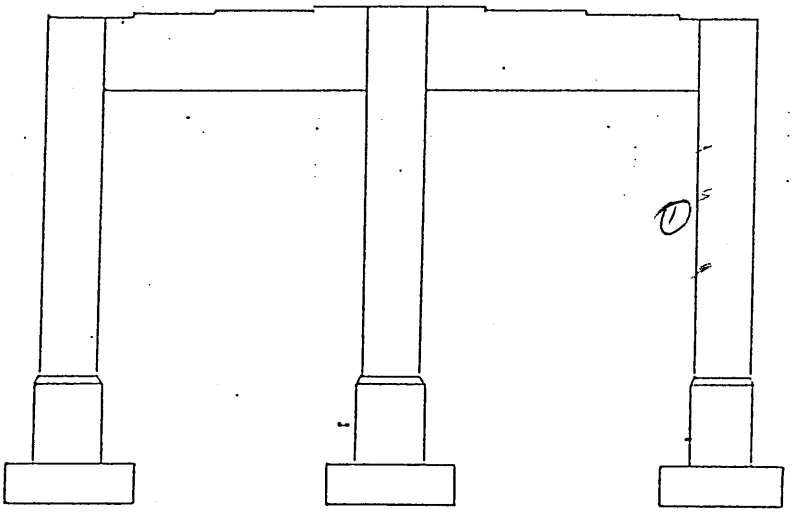
BENT #3 Br. # 19-6-9.74

Cap	G	
Columns	G	
Footing	U/V	
Bearing	G	

12-14-98
KHC
01-11-01 BE



FRONT



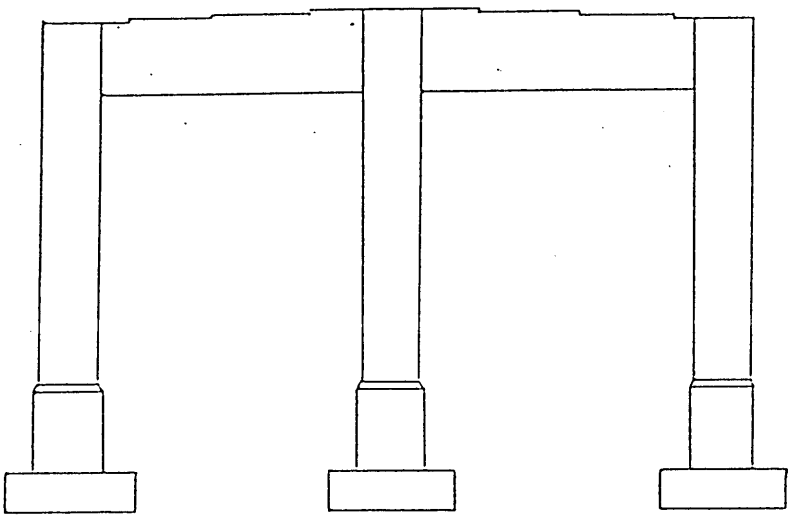
BACK

BENT #4 Br. # 19-6-9.74

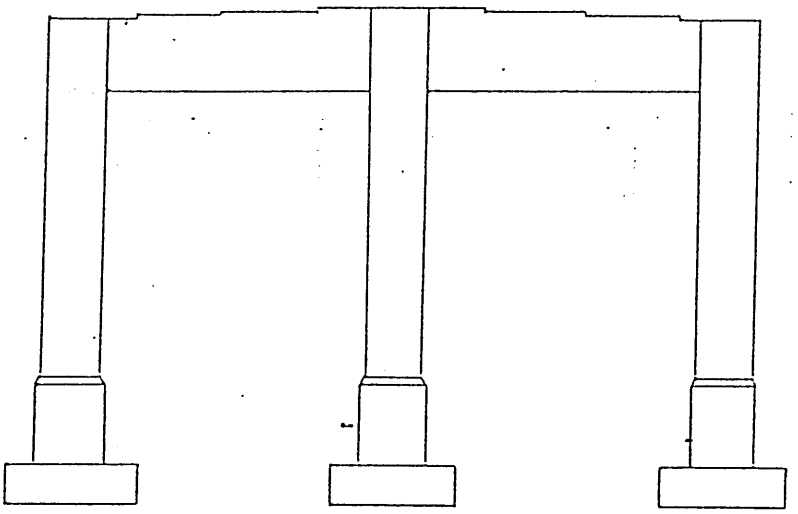
Cap	G	
Columns	G	① HS. POP-OUTS
F[redacted]NG	N/V	
Bearing	G	

12-14-98
KHC

01-11-01 BL



FRONT



BACK

BENT #5 Br. # 19-6-9.74

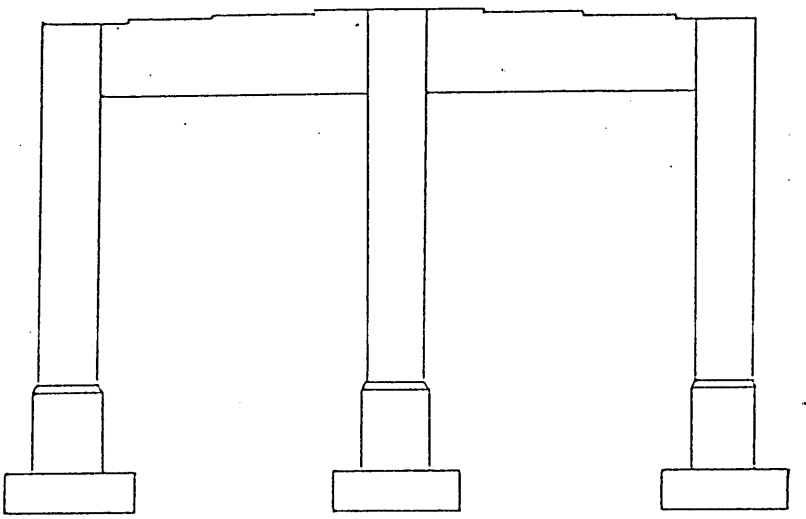
Cap	G	
Columns	G	
[redacted]ING	N/V	
Bearing	G	

12-14-98
KHC
01-11-01 BC

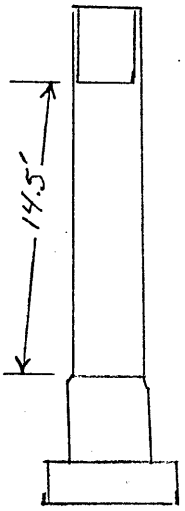
TILT
NOTED
7-99
[signature]

4-27-2000
tilt less than
1"

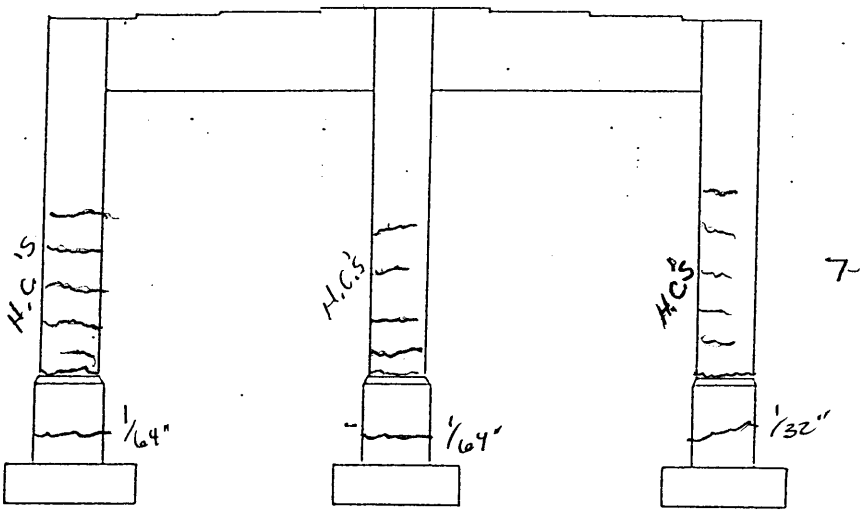
11-27-00
½ TILT 43°



FRONT



END
view



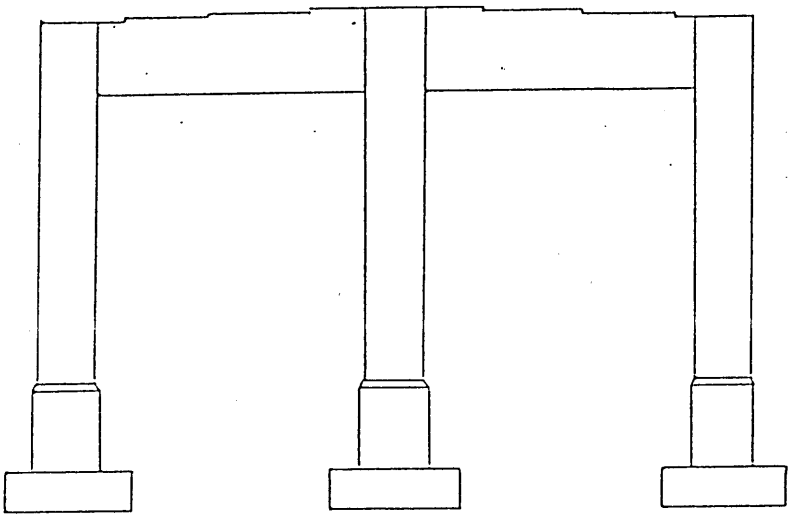
BACK

7-19-99 KAC

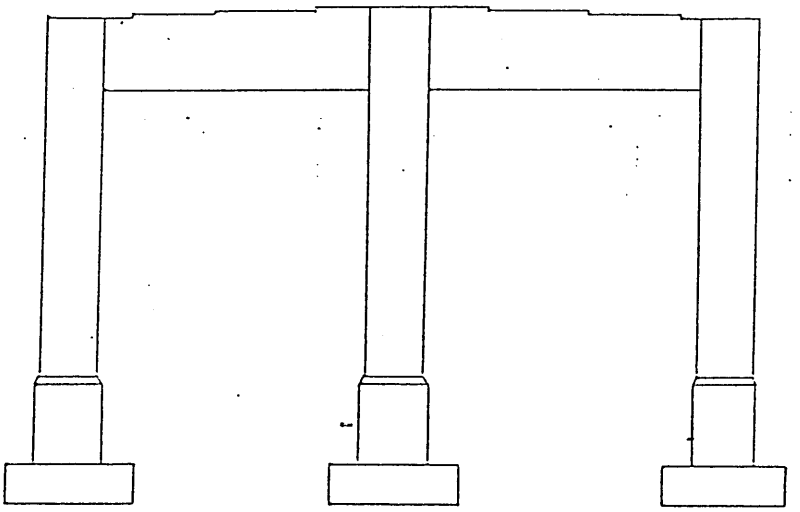
BENT # 6 Br. # 19-6-9.74

Cap	G	
Columns	G F	"B" TILTED BACKSTATION 1" IN 14.5' — 7/99 @ 80° F "B" not measurable w/plumb bob 4-27-00 MKD @ 63°F
F[redacted]NG	N/V	
Bearing	G	Fixed

12-14-98
KHC
01-11-01 BL



FRONT

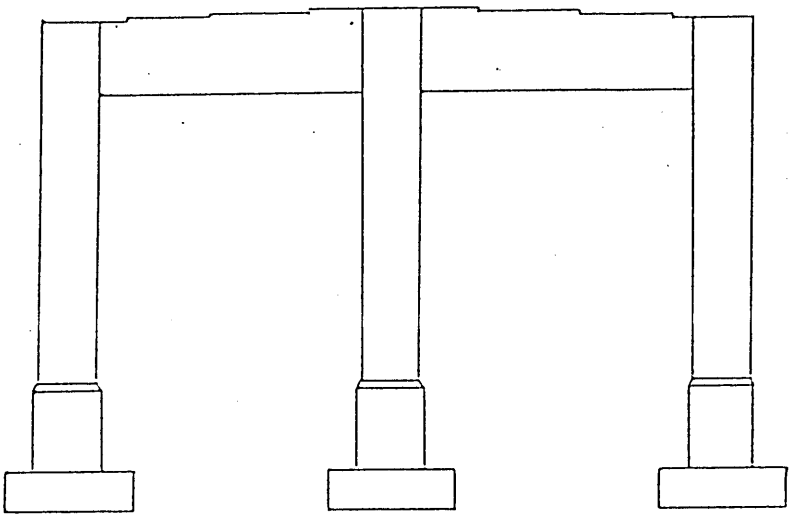


BACK

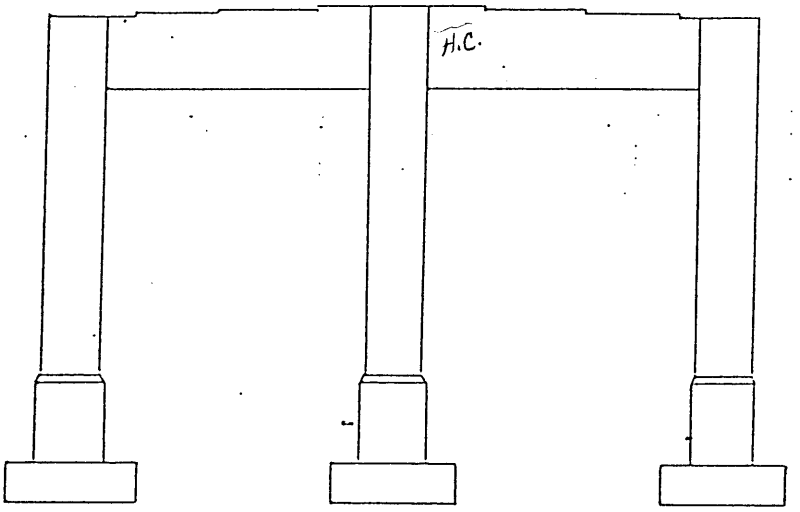
BENT # 7 Br. # 19-6-9.74

Cap	G	
Columns	G	
[redacted]ING	N/V	
Bearing	G	

12-14-98
KHC
01-11-01 BO



FRONT

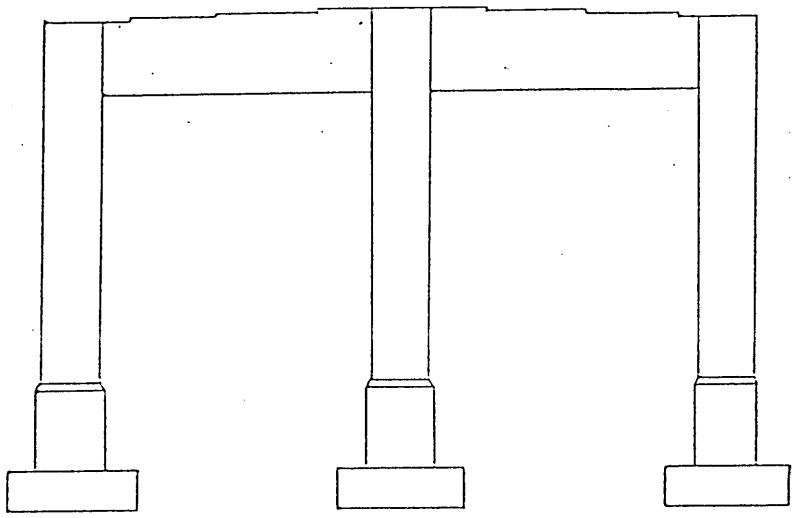


BACK

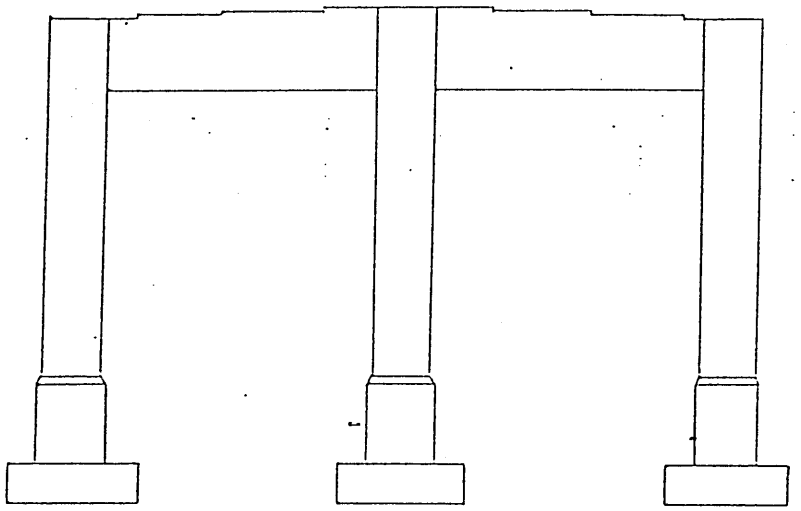
BENT #8 Br. # 19-6-9.74

Cap	G	
Columns	G	
Footing	MV	
Bearing	G	

12-14-98
KHC
01-11-01 BL



FRONT



BACK

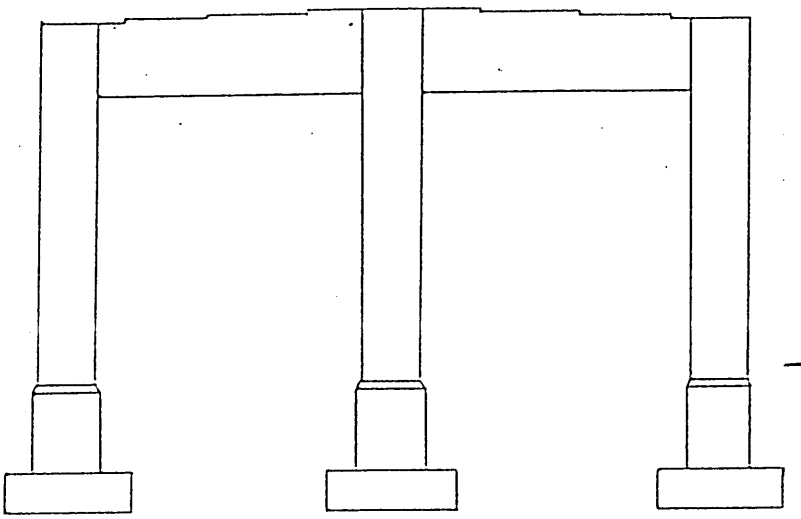
BENT # 9 Br. # 19-6-9.74

Cap	G	
Columns	G	
[illegible]TING	NV	
Bearing	F	Light - mod. corr. Tilted back station

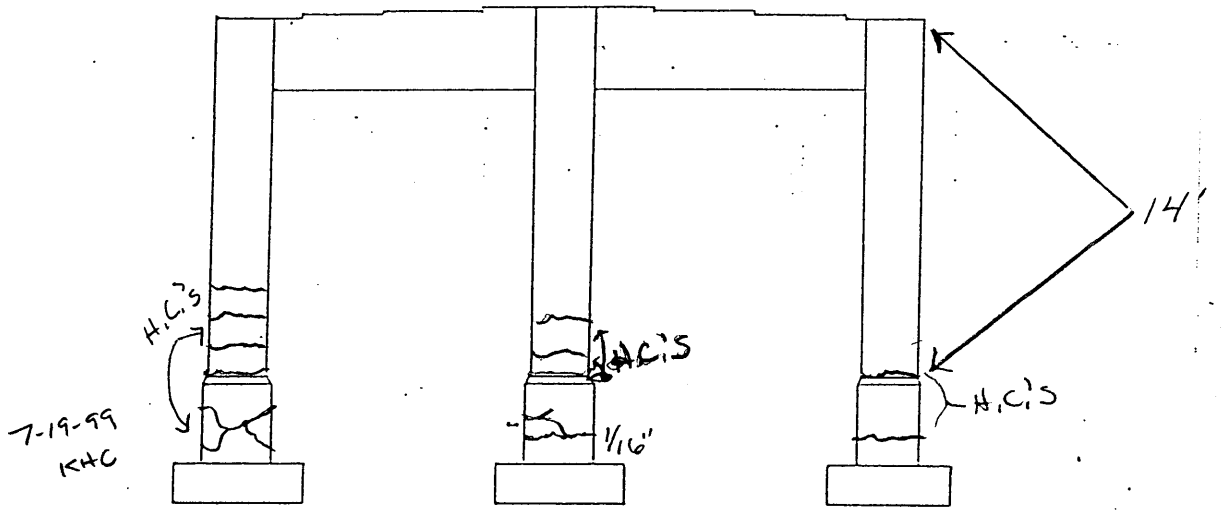
12-14-98
KHC
01-11-01 BE
updated
TILT
7-99

4-27-2000
tilted 2" in 14'
@ 63°F mkd

11-27-00
1 3/4" TILT
@ 43°F



FRONT

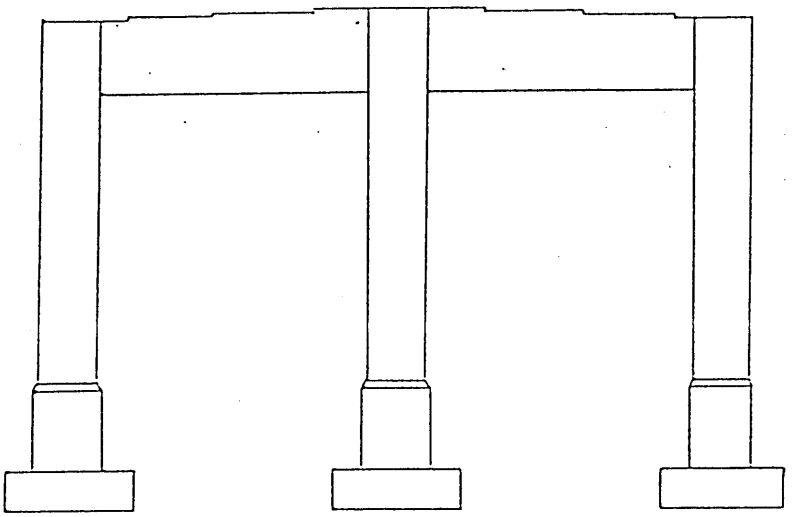


BACK

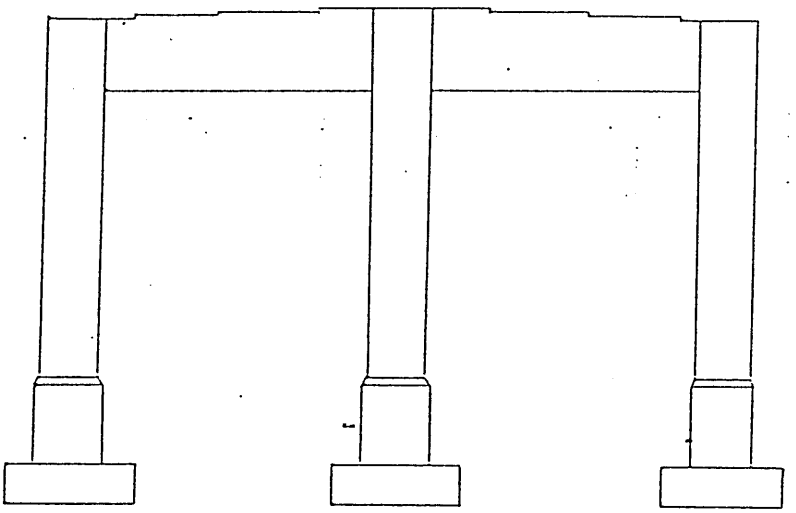
BENT #~~X~~10 Br. # 19-6-9.74

Cap	G	
Columns	F	Column 'B' Tilted 1 3/4" Backstation Most Noted Than 'A & 'C' w/ Horiz. Crack Backside 1/16" Open NOTE: Tilted 2 1/2" in 14' – Col. "B" – 7-19-99 ("B" Tilted 1 3/4" 11-27-00)
F[redacted]ING	N/V	
Bearing	G	Fixed

12-14-98
KHC
01-11-01 BO



FRONT

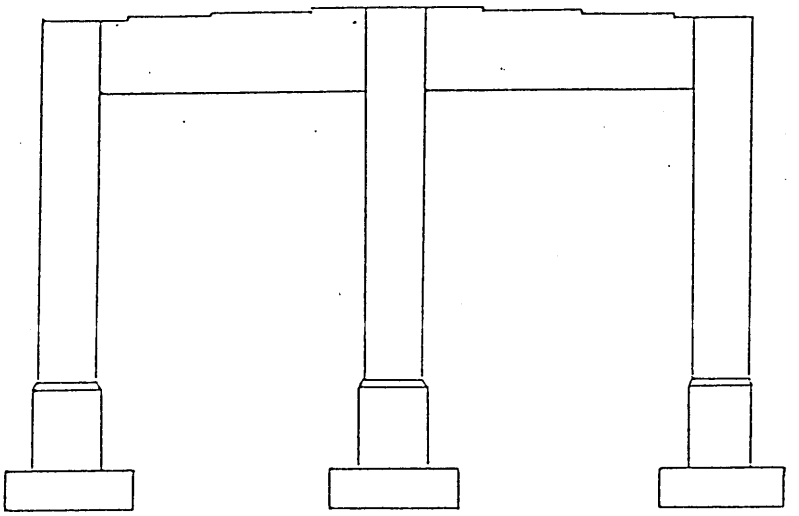


BACK

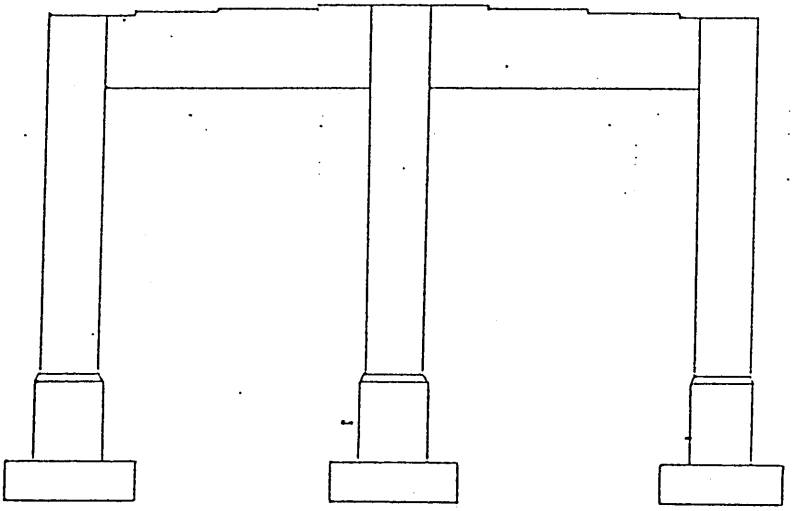
BENT # 11 Br. # 19-6-9.74

Cap	G	
Columns	G	
F[redacted]ING	N/V	
Bearing	F	Lgh. To Mod. Corr. & Tilted Backstation

12-14-98
KHC
01-11-01 BL



FRONT

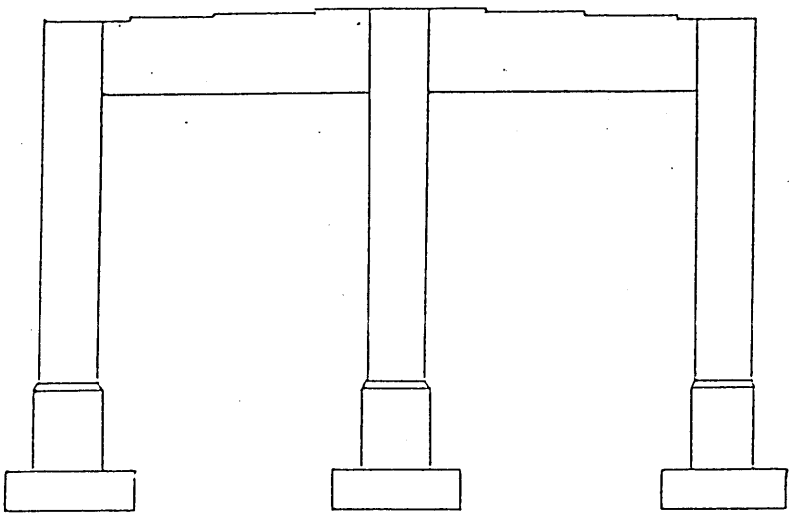


BACK

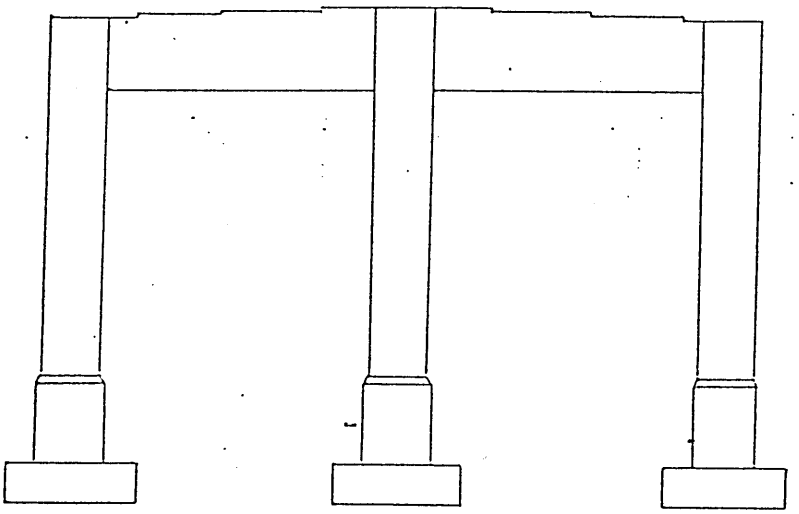
BENT #12 Br. # 19-6-9.74

Cap	G	
Columns	G	
F[redacted]ING	N/V	
Bearing	F	See Bent # 11

12-14-98
KHC
01-11-01 BE



FRONT



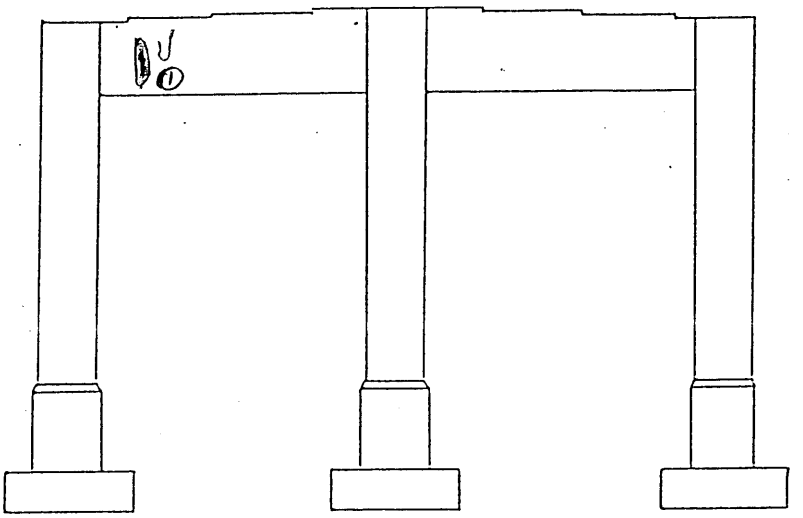
BACK

BENT # 13 Br. # 19-6-9.74

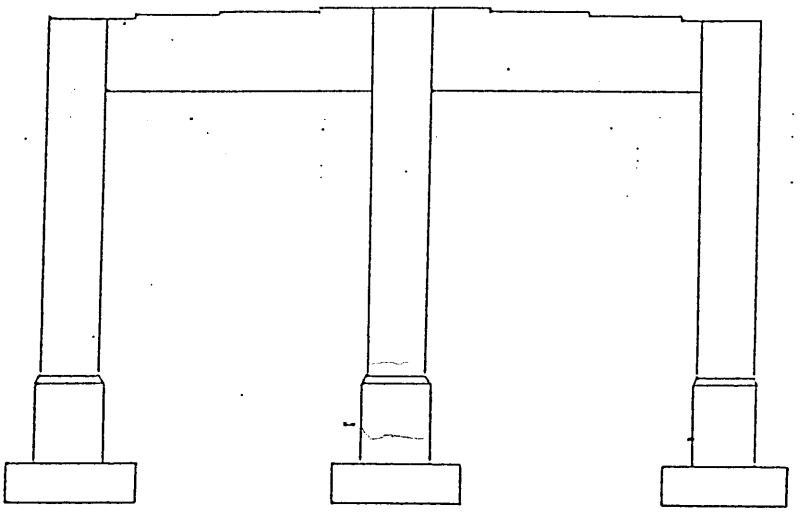
Cap	G	
Columns	G	
[redacted]ING	N/V	
Bearing	F	Lgh. To Mod Corr. Full Tilt Toward Backstation

12-14-98
KHC

01-11-01 BR



FRONT

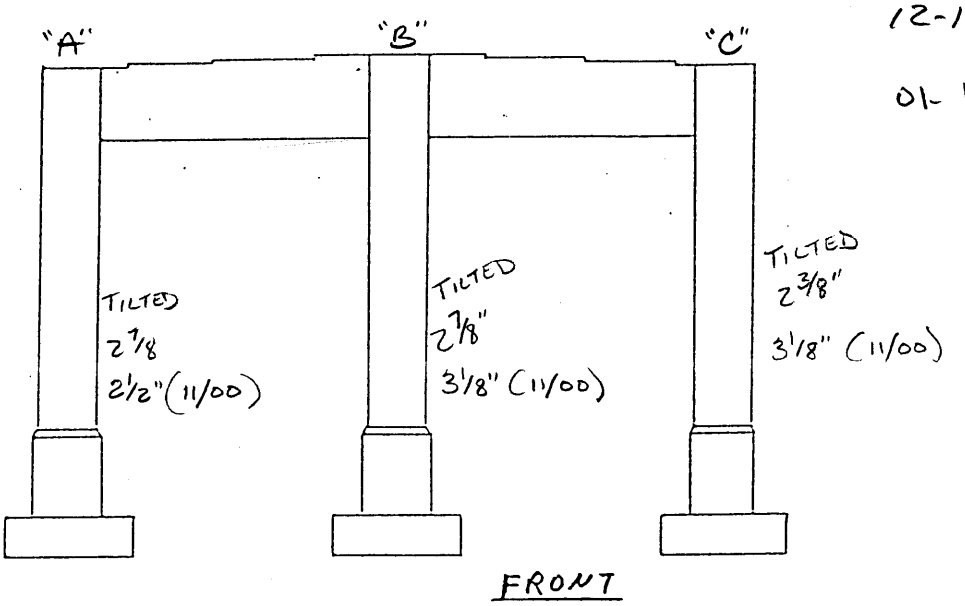


BACK

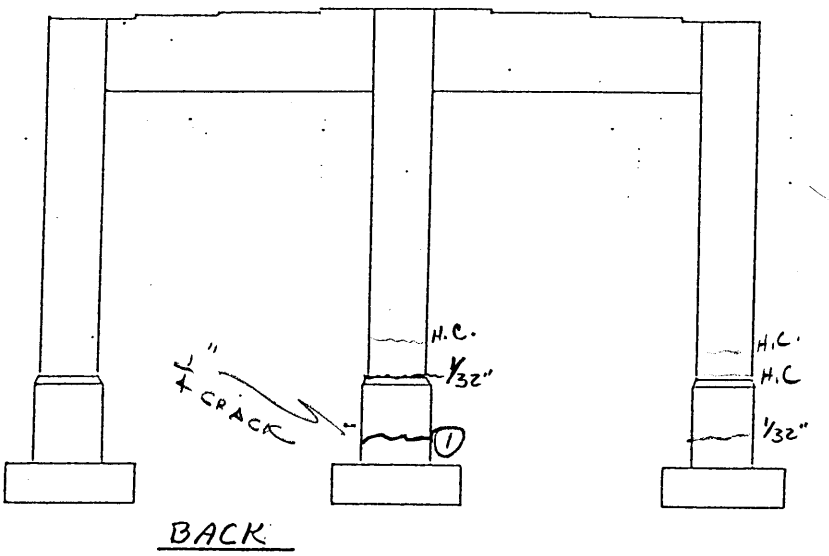
BENT #14 Br. # 19-6-9.74

Cap	G	① H.S. Pop-out ½" Dp
Columns	G	
[redacted]ING	N/V	
Bearing	F	Lgh To Mod. Coer. Full Tilt To Backstation

12-14-98
KHC
01-11-01 BP



See Sketch for updated Changes in Tilt

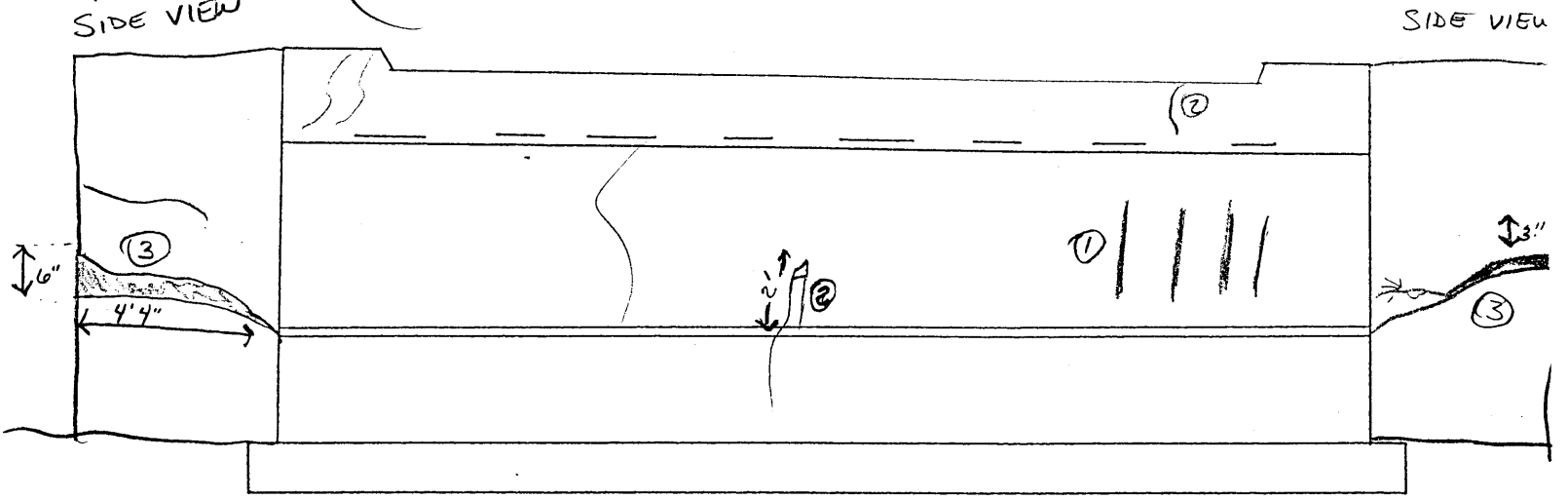


BENT #15 Br. # 19-6-9.74

Cap	G	BENT TILTED 2 7/8"
Columns	F	(1) HORIZ. CRACK UP TO 1/4" OPEN
[redacted]ING	N/V	
Bearing	F	Lgh To Mod. Corr. Fixed Bearing

12-14-98
KHC
01-11-01 BE

(see updated sketch for changes in Tilt)



ABUT # 2 Br. # 19-6-9.74

CAP	N/A	
Wall	P	① H.S. POP-OUTS 1/2" Dp ② ABUT. TILTED ~~¼~~ 4¼" (1-11-01)
Backwall	G	② IN-PLACE B.D.
WingS	~~N/A~~ P	③ BROKEN OUT & CRACKED DUE TO TILT
Footing	N/V	
Bearings	G	

Nail Alammori

From: Wayne Seger
Sent: Wednesday, April 01, 2015 10:19 AM
To: Nail Alammori
Cc: Mel Marcella
Subject: FW: Security Camera
Attachments: Bent_CCTV_CameraMount.pdf

Nail,
Please include the attached drawing in the INFO document for the Davidson County, Victory Memorial bridge inspection record (Br ID 19SR0060015). TDOT will be placing a security camera on one of the bents in the motorpool area as a safety/security measure. Placing the sketch and the email in the INFO document will let the inspection folks know that the attachment was placed by "us" and what the function of it is.
Thanks,

Wayne

Wayne J. Seger, P.E.
Director, Division of Structures
Tennessee Department of Transportation
Suite 1100, James K. Polk Building
Nashville, TN 37243
Phone:615-741-3351
Email: wayne.seger@tn.gov

From: Mel Marcella
Sent: Monday, March 30, 2015 2:32 PM
To: Bob Alwine; Wayne Seger
Cc: Gary L. Bryant; Roger Miller
Subject: RE: Security Camera

Wayne,

Please see the attached drawing. Only one camera will be mounted on the bent. Based on your description, it should be the bent 14 (if it is the one closest to the gates). We will run the conduit underneath the wall pack lighting. Please note that we are using no bends to accommodate the rather large connector heads of the wiring; otherwise we would have to use oversized pipes (1 ¼ or 1 ½) to allow the connectors to bake the bends. I also indicated that we have two options for attaching to the trailer. Depending on the distance of the trailer from the bent, we may just convert to flexible conduit from the last j-box and attach the wiring to the trailer from overhead. If we make any modifications on the fly, we will send you an updated drawing.

Thank you for all your help.

Mel Marcella
615.741.4002

From: Bob Alwine
Sent: Monday, March 30, 2015 1:16 PM
To: Mel Marcella; Wayne Seger
Cc: Gary L. Bryant; Roger Miller
Subject: RE: Security Camera

Excellent guys

Thank you all for help on this.

ba

From: Mel Marcella
Sent: Monday, March 30, 2015 12:19 PM
To: Wayne Seger
Cc: Bob Alwine; Gary L. Bryant; Roger Miller
Subject: RE: Security Camera

Thank you Wayne, I will have it back to you shortly.

Mel Marcella
615.741.4002

From: Wayne Seger
Sent: Monday, March 30, 2015 11:56 AM
To: Mel Marcella
Cc: Bob Alwine; Gary L. Bryant; Roger Miller
Subject: RE: Security Camera

Good Morning Mel,
I wanted to get back with you on the attachment of the cameras at the motorpool. I am attaching a sketch of a typical bent with the lighting detail shown on the bent as an example. I have also included another pdf of a typical bent on the Victory Memorial Bridge for your use in sketching your proposed camera placement. Please sketch on the typical view where you plan to place the camera(s) and any conduit that may be running from the attachment. It can be done "longhand" with a pencil as long as it is legible. If you are planning to place cameras on more than one bent/support, please let us know that as well. To give you an idea of the what number each bent is, the bent on the west side of north 1st street is Bent 14 and the one on the east side of North 1st Street is Bent 15. They are in assending order up to Bent 18 and the far east/north end toward the abutment 2 near the truckstop.
Thanks,
Wayne

Wayne J. Seger, P.E.
Director, Division of Structures
Tennessee Department of Transportation
Suite 1100, James K. Polk Building
Nashville, TN 37243
Phone:615-741-3351
Email: wayne.seger@tn.gov

From: Mel Marcella
Sent: Thursday, March 26, 2015 4:08 PM
To: Wayne Seger
Cc: Bob Alwine; Gary L. Bryant; Roger Miller
Subject: RE: Security Camera

I will be mounting the camera. I'll send you my best rendition but it will not be scaled. If someone can give me the measurements of the beams and the pillars, I could draw it close to scale. Thanks!

Mel

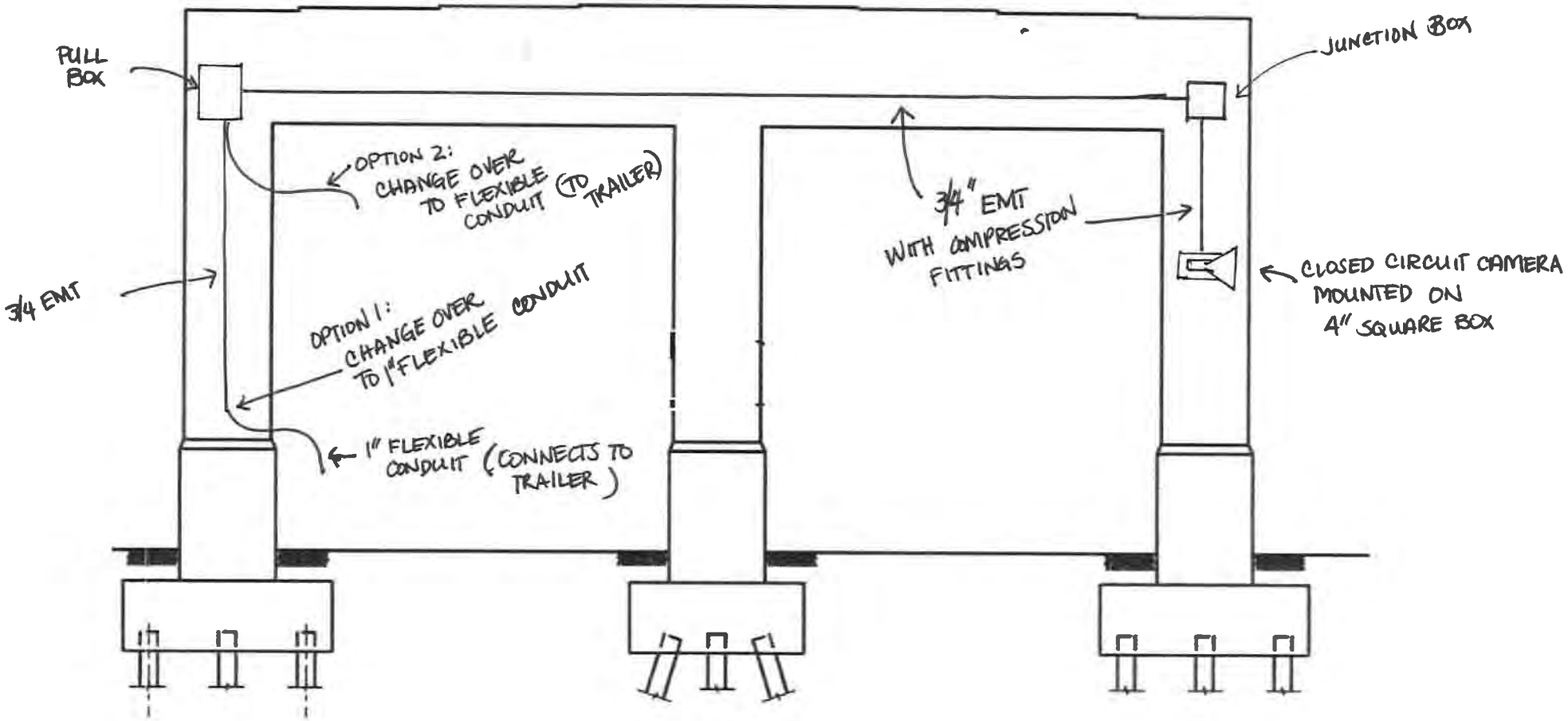
From: Wayne Seger
Sent: Thursday, March 26, 2015 3:53 PM
To: Mel Marcella
Cc: Bob Alwine; Gary L. Bryant; Roger Miller
Subject: Re: Security Camera

Mel
Mounting the camera should be ok as described. If whoever is doing the work could send me or my evaluation guy, Terry leatherwood a sketch of what is planned, we can formally approve the mounting plan and have a record of it for our bridge inspection reporting. Our inspectors would also be informed what the "new object" is on the bridge.
Thanks
Wayne

Sent from my iPhone

On Mar 26, 2015, at 3:21 PM, "Mel Marcella" <Mel.Marcella@tn.gov> wrote:

> Wayne,
>
> I was informed that we had to notify you that we will be installing a security camera on the bridge pillar for the motor pool. I'm not sure about the approval process but I wanted to run this by you and get your first-hand opinion. We are planning to drill the concrete to allow us to mount a junction box, conduit, and straps for the conduit. The camera will mount on a hexagon or four-square box so it will not be directly mounted to the structure. Let me know if this plan is feasible. Thank you.
>
> Kind regards,
>
> **Mel Marcella, CPA, CMA, CIA, CISA, CFE**
> Director of Internal Audit
> **Tennessee Department of Transportation**
> Suite 1800 James K. Polk Building
> 505 Deaderick Street
> Nashville, TN 37243
> 615.741.4002
> <image002.png>
>
> <image004.jpg>
>
> *The information contained in this e-mail message is intended only for the use of the individual(s) or entity named above. If the reader is not the intended recipient, or the employee or agent responsible to deliver it to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this communication is strictly prohibited. If you have received this communication in error, please immediately notify me by telephone at 615.741.4002 and permanently delete the message from your system. Receipt by anyone other than the intended recipient is not a waiver of any investigative privilege, attorney-client privilege, work product immunity or any other privilege or immunity.*



NOTE: WE MAY GO WITH OPTION 2 AND ATTACH TO THE TRAILER FROM THE CEILING.

TYPICAL BENT ELEVATION

RECEIVED
MAR 24 2003
TENN. DEPT. OF TRANSPORTATION
BRIDGE INSPECTION & REPAIR

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
NASHVILLE, TENNESSEE 37243-0337

March 21, 2003

Mr. Paul C. Carine
Principal Engineer – Public Improvements
CSX Transportation, Inc.
4901 Belfort Rd., Suite 130, J350
Jacksonville, FL 32256

19-SR6-9.74

Re: **Project No.:** **19023-4213-04**
TDOT Pin No.: **102001.00**
State Contract No.: **CNB031**
Description: **Nashville, TN - Bridge repair SR-6/US-31E (James Robertson Parkway) over CSXT @ R/R MP 185.18 (AARDOT#340-984B)**
Reference File: **OP#TN0113**
County: **Davidson**
Agreement No.: **0566**

Dear Sir,

Enclosed please find copies of the **Final Repair/Construction Plans** and an original confirmed counterpart of the agreement dated **March 7, 2003** , between the State and your company for work required to accommodate repair/construction for the above project.

The contractor's jointly awarded this project are:

Seminole Equipment, Inc., 204 Tarpon Industrial Drive, Suite A, Tarpon Springs, FL 34689
Phone: (727) 944-4481; FAX: (727) 945-0882

and: **3-D's Bridge Painting Corporation, 206 Tarpon Industrial Drive, Tarpon Springs, FL 34689**
Phone: (727) 943-8401; Fax: (727) 943-8451

Please consider this the authority for the railroad to proceed with terms of our agreement at a time acceptable to both you and the State's Project Supervisor.

The Regional Construction Manager for the Department in charge of construction supervision for the highway project is:
Mr. Jerry Cato, 6601 Centennial Blvd., Nashville, TN, 37243-0360, Phone: (615) 350-4382; Fax: (615) 350-4387; E-mail: Jerry.Cato@state.tn.us.
and by copy of this letter is being furnished two copies of the crossing/force account agreement for his and the Project Supervisor's use. Please contact him, in writing, by fax, or by e-mail **ten (10)** days prior to doing any work so that proper inspection and record keeping may be arranged. Any charges billed which cannot be verified by the State Project Supervisor's records will not be reimbursed.

3/25/03 FS

If you have any questions regarding this matter, please contact me at **(615) 253-1119 (E-mail = int:Jim.Byrd@state.tn.us)**.

Sincerely,

Jim Byrd
Roadway Specialist -2
Right-of-Way Division, Utilities Section

Enclosure

cc: Mr. Jerry Cato - w/encl (Contract & Estimate).(2-cy)
Mr. Ron McDermitt - w/encl. (Contract & Estimate)
Mr. Ronnie Porter – w/encl. (Contract & Estimate)
Mr. Wayne Seger – w/encl. (Contract & Estimate)
File – w/encl.

Bridge over CSX -Repair

Agreement No. 0566

Project No. 19023-4213-04

County Davidson
Appr. Code 488.00

CONTRACT

THIS CONTRACT is made and entered into on the 7th day of March, 2003, by and between the **State of Tennessee** acting through its Department of Transportation, hereinafter called the "State", and **CSX Transportation, Inc.**, hereinafter referred to as the "Railroad".

WITNESSETH:

WHEREAS, the above-captioned Project Number **19023-4213-04** provides for the **repair construction** of a highway bridge structure and approaches to carry **SR-6 (US-31E) James Robertson Parkway** over the tracks of the Railroad at Mile Post **185.18 (DOT#340-984B)** in **Nashville, Davidson** County, Tennessee, (hereinafter referred to as the "Project"); and

WHEREAS, the State has agreed to cooperate in repair construction of the Project, and to assume ownership and the responsibility to maintain the Project; and

WHEREAS, the Railroad agrees to cooperate with the State in the repair construction and maintenance of the Project;

NOW, THEREFORE, in consideration of these premises and the mutual promises contained herein, the parties agree to provide for the construction and maintenance of the Project under the following terms and conditions.

1. The State agrees to repair/construct the Project in accord with: (a) the Special Provisions Relative to Protection of Railroad Property, Railroad Flagging, and Insurance Requirements (hereinafter referred to as the "Special Provisions"), which are attached hereto and incorporated herein as Appendix 1; and (b) the preliminary bridge repair plans for the Project (hereinafter referred to as the "Preliminary Plans"), as prepared by the State and accepted by the Railroad and which are incorporated herein by reference, except insofar as the Preliminary Plans may be supplemented or modified by the State's final bridge repair plans. The State agrees to forward the final bridge repair plans to the Railroad by certified or registered mail upon their completion. The Railroad agrees to notify the State in writing by certified or registered mail within thirty (30) days after receipt of the final bridge repair plans if it has any objections to these plans. Otherwise, the Railroad shall be deemed to have waived any objections to the final bridge repair plans. The Railroad agrees that repair

construction of the Project in accord with the Preliminary Plans, or in accord with the final bridge repair plans if the Railroad has not made any timely written objection thereto, shall not be construed as creating any conflict with or causing any damage to the Railroad's facilities or operations.

2. The State or its contractor shall notify the Railroad in writing at least ten (10) days in advance of beginning repair construction of the Project on any part of the Railroad's rights-of-way, as provided in the Special Provisions.

3. The State shall require its contractor to carry a performance bond in the full amount of the contract price, guaranteeing the satisfactory completion of the work covered by the contract. In addition, the State shall require the contractor to carry: (a) contractor's public liability and property damage insurance, (b) contractor's protective public liability and property damage liability insurance, (c) railroad's protective public liability and property damage liability insurance, and (d) workmen's compensation and employers liability insurance, as may be required by Title 23, Part 646A, of the Code of Federal Regulations and as may be further specific in the Special Provisions.

4. The Railroad shall have the right during repair construction to inspect the Project for inconsistencies with the Preliminary Plans, or the final bridge repair plans if applicable, and such further rights to inspect as may be specified in the Special Provisions. The Railroad shall immediately notify the State of any such inconsistencies.

5. Legal title and ownership in the bridge and approaches and any other structure erected as a part of the Project shall be held by the State, and the State agrees that it shall have the sole legal and financial responsibility for maintaining the Project upon its completion.

6. The parties agree that repair construction of the Project will require the Railroad to perform certain work so as to avoid conflict between the Project and the Railroad's facilities and operations (hereinafter referred to as the "Force Account Work"). The Railroad has prepared plans for the Force Account Work, and it has estimated that this work will cost **$74,903.00**. These plans and estimates are attached hereto and incorporated herein as Appendix 2. The Force Account work performed by the Railroad in accord with these plans and estimates is subject to reimbursement by or through the State as provided in Title 23, Parts 140I and 646B, of the Code of Federal Regulations, which are incorporated herein by reference, and in accord with the following additional terms and conditions:

   (a) The Railroad shall provide one complete and final billing of all costs incurred within one year following completion of the Railroad's work under this Contract. Otherwise, any previous payments to the Railroad shall be considered final, and the Railroad shall be deemed to have waived any claim for additional payments, except as the state and the Railroad may have agreed otherwise in writing before the end of that year.

   (b) The Railroad shall maintain all cost records made or received during the course of performing the Force Account Work for a period of three (3) years after the Railroad receives final payment from or through the State for the Force Account Work. The Railroad shall make these records available for inspection during normal business

hours or at other reasonable times at the request of the State or the Federal Highway Administration.

7. The Railroad agrees to comply with all applicable federal and state laws and regulations in performing any of its obligations under this Contract, and the parties agree that any failure to do so shall be deemed a material breach of this Contract. In the event any such breach occurs, the State shall be entitled to recover all reimbursement funds received by the Railroad and any other costs incurred by the State to the extent that the State can substantiate actual financial loss resulting from the Railroad's breach of this provision.

IN WITNESS WHEREOF, the parties have executed this Contract.

CSX Transportation, Inc.

BY: Dale W Ophardt

Dale W. Ophardt, Chief Engineer-
Design & Construction

DATE: February 26th 2003

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BY: Gina Hiley

Gerald F. Nicely, Commissioner

DATE: 3/7/03

APPROVED AS TO FORM:

BY:

Attorney
Department of Transportation

STATE OF TENNESSEE

SPECIAL PROVISIONS RELATIVE TO PROTECTION OF RAILROAD PROPERTY RAILROAD FLAGGING AND INSURANCE REQUIREMENTS

Kind of Project: **Repair of SR-6 (US-31E) James Robertson Parkway (Victory Memorial Bridge#19-SR6-9.74) over the Cumberland River and the CSX Railroad @ Milepost 000-184.83 (DOT#340-984B) in Nashville, Tennessee**

Tennessee Project Number: **Construction No. 19023-4213-04**
ROW No. Not Applicable

County: **Davidson**

Railroad Company: CSX Transportation, Inc.
P.O. Box 45052
Jacksonville, FL 32232-5052

AUTHORITY OF RAILROAD's CHIEF REGIONAL ENGINEER

The authorized representative of the railroad, hereinafter referred to as Chief Regional Engineer, shall have final authority in all questions affecting his railroad operations, and the contractor must be governed accordingly.

All engineering correspondence, construction scheduling, and request for pre-construction representation shall be addressed to the CSX Transportation, Inc. **Principle Engineer contact (See sheet number 5 for name and address).**

Interference with Railroad Operations:

The contractor shall so arrange and conduct his work that there will be no interference with railroad operations, including train, signal, telephone and telegraphic services, or damage to the property of the railroad, or to wires or other facilities of the tenants on the rights-of-way of the railroad.

The use of any scaffolding or other temporary framework that effects horizontal or vertical clearance must first be approved by the railroad chief engineer and in no case exceed the approved clearances.

Damage to Railroad Property:

Should any damage occur to railroad property, as a result of the contractor's unauthorized or negligent operations, and the railroad superintendent deems it necessary to repair such damage or perform any work for the protection of its property, the required materials, labor and equipment shall be furnished by the railroad and the contractor shall reimburse it for the costs incurred.

Temporary Grade Crossings:

If the contractor desires access across railroad's right-of-way and tracks at other than an existing and open public road crossing in or incident to construction of the project, the railroad will permit such contractor access across said right-of-way and tracks at such location as shall be mutually agreed upon by the railroad superintendent and contractor, provided contractor first executes a license agreement satisfactory to the railroad and agrees to reimburse the railroad for the flagmen expenses, cost of providing and removing any temporary grade crossing, or other costs which the railroad superintendent deems necessary for protection of its property and operations. Contractor shall at no time cross the railroad's right-of-way or tracks with vehicles or equipment of any kind or character, except at such crossing or crossings as may be established pursuant to this subsection.

Watchmen:

The railroad shall have the right to assign a watchman to the site of the project to perform inspection services for protection of its railroad operations, whenever, in the opinion of the railroad superintendent, such inspection may be necessary to prevent interference with railroad operations, such as but not necessarily limited to obstruction of track clearances and roadbed drainage, foreign substances on or adjacent to the rails and disturbance of surface and alignment of track, but such inspection shall not relieve the contractor from liability. The cost incurred by the railroad for furnishing a watchman to perform such inspection services will be reimbursed by the contractor.

Flagging Services:

Any flagging service required, when in the opinion of the railroad superintendent that such service is necessary for the safety of its operations because of work being performed by the contractor or in connection therewith, will be provided by the railroad. The requirements of the railroad are as follows:

The services of two flagmen whenever the contractor's men or equipment are, or are liable to be, working within the specified track clearances, or over the tracks, or when his work has disturbed the surface and alignment of any operated track to such extent that movement of trains should be controlled by flagging.

The Department will reimburse the Railroad directly for all costs incurred for flagging services by railroad personnel. The estimate supporting the force account agreement includes 30 flagging days. In the event that flagging services are required in excess of the allotted days, the Department will reimburse the Railroad for the additional cost of flagging services and such costs deducted from monies due the Contractor. No adjustments will be made to costs of flagging services that are required in excess of the allotted days. These additional flagging costs assessed against the Contractor will be made under the following item:

105-03	Railroad Flagging	Dollar

The payment of flagging services will be based on invoices received from the Railroad. The Engineer shall sign the invoice in order to verify the flagging service performed by the Railroad.

Estimated flagging rate for this contract is **$220.00** per day per flagman based on an eight hour work day.

Overtime rate over eight hours = 1.5 x regular hourly rate and over 16 hours = 2.0 x regular hourly rate.

Holiday rate = 1.5 x regular hourly rate up to 16 hours and = 2.0 x regular hourly rate over 16 hours.

In addition to the above rate there will be an additive of **105.91%** of direct labor for vacation, holiday, sickness, pension, administration, etc. and **$ 72.00** per day for travel, meals, lodging, equipment and others.

Minimum hours per call out is eight (8) hours and notification to terminate flagman must be given at least five (5) days in advance or else contractor might be billed for flagman whether he is working or not working.

The Contractor and Department will review and sign the Railroad flagman's time sheet attesting that the flagman was present during the time recorded. Flagmen may be removed by Railroad if form is not signed. If flagman is removed, the Contractor will not be allowed to re-enter the Railroad right-of-way until the issue is resolved. Any complaints concerning flagman or flagmen must be resolved in a timely manner. If need for flagman or flagmen is questioned, please contact CSX Transportation, Inc. **Flag Request Contact. (See sheet number 5 for name and address).** All verbal complaints must be confirmed in writing by the Contractor within 5 working days with copy to the Highway Engineer. All written correspondence should be addressed to CSX Transportation, Inc. **Principle Engineer contact (See sheet number 5 for name and address).**

The Railroad flagman assigned to the project will be responsible for notifying the Project Engineer upon arrival at the job site on the first day (or as soon thereafter as possible) that flagging services begin and on the last day that he performs such services for each separate period that services are provided. The Project Engineer will document such notification in the project records. When requested, the Project Engineer will also sign the flagman's diary showing daily time spent and activity at the project site.

Upon completion of all work within the Railroad right-of-way, the Engineer shall notify the Railroad for final inspection of this work. The Department shall give the Railroad sixty calendar days from the date of the on-site final inspection, in which the work is accepted by the Department and the Railroad, to submit all invoices for which flagging services are to be reimbursed. Department will not be liable for any payment of flagging charges received after the sixty calendar days.

Use of Explosives:

Explosives shall not be used adjacent to any track or other railroad property without the approval of the railroad superintendent, but such approval will not relieve the contractor from any liability. If the use of the explosives are permitted, the blasting shall be done with light charges under experienced supervision, and every precaution shall be taken to avoid damage to property, injury to persons and interruption of railroad operations. Blasting shall be discontinued immediately on notice from the railroad superintendent that it is too hazardous.

Storage of Materials:

The contractor shall not store or pile materials or equipment on the right-of-way of the railroad without having first obtained permission from the railroad superintendent, and in no case shall they be stored closer than 13' 0" from the centerline on any railroad track measured at right angles thereto. Such permission will be with the understanding that the railroad will not be liable for any damage to such materials or equipment from any cause and that the railroad superintendent may move, or require the contractor to move, at the contractor's expense, such materials and equipment.

Cleaning Up:

The contractor will be required upon completion of the work, to remove from within the limits of the railroad's right-of-way, all machinery equipment, surplus materials, falsework, rubbish or temporary buildings of said contractor, and to leave the right-of-way in a neat condition, satisfactory to the railroad superintendent. The contractor will be required to provide the project engineer with a letter of release from the railroad superintendent before final acceptance of the project by the State.

Notice of Starting Work:

The contractor shall notify the superintendent of the railroad in writing at least 10 days in advance, when he expects to start work on railroad's right-of-way.

Cooperation and Delays:

The contractor shall cooperate with others participating in the construction of the project, to the end that all work may be carried on to the best advantage. No charge or claim of the contractor against either the State or the railroad will be allowed for hindrance or delay on account of railroad traffic or any work done by the railroad or others, incident to or necessary for safe maintenance of railroad traffic or completion of the project, but due consideration of any such delay will be taken into account in counting the working days to be charged against the project.

During the construction of the footings of piers or other supports or structures adjacent to any track of the railroad, the contractor shall make adequate provisions against sliding, shifting, sinking, or in any way disturbing the railroad embankment and track operations, by driving temporary sheeting, and/or providing temporary shoring in a manner satisfactory to the engineer and railroad engineer.

Before commencing work on any pier or structure adjacent to any track, the contractor shall submit prints of the proposed shoring and bracing details for the protection of the railroad company's track to the engineer for his approval. This submittal shall include the proposed method of installation and be accompanied by supporting data, including design computations, soil descriptions, and other pertinent information.

After approval by the engineer, four prints of the proposed shoring and bracing details bearing the seal of a registered structural or professional engineer, together with supporting documents, shall be forwarded to the railroad engineer for review and approval.

The contractor shall notify the railroad engineer (in writing) not less than one (1) week in advance of the proposed time of the beginning of the construction of the piers, supports or structures adjacent to the track.

Insurance:

In addition to any other forms of insurance or bonds required under the terms of the contract and specifications, the contractor will be required to carry insurance of the following kinds and minimum amounts:

Railroad's Protective Public Liability and Property Damage Liability Insurance

The contractor will be required to furnish Railroad Protective Insurance to protect CSX Transportation, Inc. in connection with operations to be performed on or adjacent to CSX Transportation's right-of-way. Questions concerning CSX Transportation Insurance requirements shall be addressed to **CSXT Risk Management contact (See sheet number 5 for name and address).** These are CSXT specifications for proper evidence of insurance:

A. The insurer must be financially stable and rated B+ or better in Best's Insurance Reports.

B. The policy must be written using the ISO/RIMA Form of Railroad Protective Insurance - Insurance Services Office (ISO) Form CG 00 35.

C. Named Insured and Address:
CSX Transportation, Inc.
Risk Management (J-907)
500 Water Street
Jacksonville, FL 32202
Overnight/Express mail should be sent to:
CSX Transportation, Inc.
Risk Management (J-907)
301 West Bay Street
BellSouth Tower
Jacksonville, FL 32202

D. Limits of Liability:

$2,000,000 per occurrence combined single limit for bodily injury and property damage, subject to a $6,000,000 annual aggregate limit.

$5,000,000/$10,000,000 is required if passenger trains or hazardous materials trains are in the area of construction.

E. Name and address of the contractor must be shown on the Declarations page.

F. Name and address of the Project Sponsor, being the State of Tennessee, Department of Transportation must be shown on the Declarations page.

G. Description of operations must appear on the Declarations page and must match the project description, including project or contract identification numbers.

H. Authorized Endorsements:

1. Must Include:

   a) Pollution Exclusion Amendment – CG 28 31
   (Not necessary with Form CG 00 35 version 96 and later)
   b) Delete Common Policy Conditions – CL/CG 99 01
   If policy jacket does not include Common Policy Conditions this endorsement is not necessary.

2. Acceptable:

   a) Broad Form Nuclear Exclusion – IL 00 21
   b) 30-Day Advance Notice of Non-renewal or cancellation
   c) Required State Cancellation Endorsement
   d) Quick Reference or Index – CL/IL 240

3. Unacceptable:

   a) Any Pollution Exclusion Endorsement except CG 28 31
   b) Any Punitive or Exemplary Damages Exclusion
   c) Any endorsement not named in A or B

Before operations are commenced on the project, the contractor shall furnish to the State for transmittal to the railroad named below, an original insurance policy, which with respect to the operations he or any of his sub-contractors perform, he has provided for and in behalf of CSX Transportation, Inc.

GENERAL

All insurance herein-before specified shall be carried until all work required to be performed under the terms of the contract has been satisfactorily completed within the limits of the right-of-way of the railroad, as evidenced by the formal acceptance by the State.

Insuring companies may not cancel insurance except by permission of the State and railroad insured, or on thirty (30) days written notice to the State and the railroad.

RAILROAD CONTACTS NAME AND ADDRESS

Principal Engineer
Public Improvements
Mr. Paul C. Carine, J350
CSX Transportation, Inc.
Liberty Business Park
4901 Belfort Rd., Suite 130
Jacksonville, FL 32256
Phone (904) 245 - 1045

Chief Enginer
Design & Construction:
Mr. Dale W. Ophardt
CSX Transportation, Inc.
Liberty Business Park
4901 Belfort Rd., Suite 130
Jacksonville, FL 32256
Phone (904) 245-1114

Insurance
Risk Management
Mr. Walter D. Tyler
CSX Transportation, Inc
Risk Management
500 Water Street, J907
Jacksonville, FL 32202
Phone: 904-633-5090
Fax: 904-633-5096
Walter_Tyler@csx.com

Flagging Request
Chief Regional Engineer:

Mr. Ken Johnson
11492 Bluegrass Pkwy.
Louisville, KY 40299
Phone: (502) 815-1832
E-mail:Ken_Johnson@csx.com
CSX OP# **TN0113**

Tennessee Department of Transportation

Date: **2/12/03**
Milepost: **000-184.83**
Average Trains/Day: **2**
Maximum Train Speed **10 mph**

SPECIAL NOTES

The contractor shall provide the Railroad Protective Insurance Policy and Certificates of Insurance within (20) calendar days of Notification of Award.

Failure to provide the above within the specified time may subject the award to annulment and forfeiture of the bid guarantee, not as a penalty, but as liquidated damages.

RECEIVED
FEB 11 2003
RIGHT OF WAY

MEMORANDUM

DATE: 2/11/2003

TO: Utility Engineer, Jim Byrd

FROM: External Audit, RF

RE: Railroad/Utility

This memorandum acknowledges receipt of the estimate submitted by:

COMPANY: CSX Transportation

STATE PROJECT # : 19023-4213-04

FED. PROJECT # : N/A

COUNTY: Davidson

_____ A review of our files and an examination of the preliminary estimate submitted by the company indicate that a preliminary audit is not necessary. Your office may proceed with contract negotiations. The estimate is approved in the amount of $ _____ / state portion _____
Please forward a copy of the contract once it is executed.
(Disregard if a Master Agreement exists.)

XXX A review of our files and an examination of the preliminary estimate submitted by the company indicate that a preliminary audit is not necessary. Your office may proceed with contract negotiations. The estimate is approved in the amount of $ 74,903.00 / state portion 74,903.00
Attached is a copy of this memo to notate the contract number and return to external audit.
Contract # _____
(Disregard if a Master Agreement exists.)

_____ Please note revisions.

Appendix-2

ESTIMATE DESK REVIEW PROCEDURES CHECKLIST

STATE #:	19023-4213-04
FEDERAL #:	N/A
RR/UTILITY:	CSX Transportation
COUNTY:	Davidson
CONTRACT $:	74,903.00
STATE $:	74,903.00
CONSULTANT $:	

	Auditor's Initials	Date Performed
1. Verify that the amounts listed in the estimates calculate, foot, and cross-foot correctly.	RJ	02/11/03
2. Check the wage amounts for reasonableness.	RJ	02/11/03
3. Check "Engineering Only" Database, to determine if consultant engineer prepared proposal and cost estimate and that this amount has been included in the contract amount.	RJ	02/11/03
4. Complete the first column of the variance schedule (Ignore if less than $90,000)	N/A	02/11/03
5. On railroad estimates, the materials handling charge applies only to stores materials and does not exceed 5%. Compare RR additive rates when applicable.	RJ	02/11/03
6. On railroad estimates, check the Railroad Additives file to determine if the railroad is using the correct rates.	RJ	02/11/03
7. Travel expenses are in compliance with TN Comprehensive Travel Regulations.	RJ	02/11/03
8. CADD rates and contingencies have been disallowed.	RJ	02/11/03
9. Complete the written approval of estimate.	RJ	02/11/03

10. Tick marks used in this estimate:

F,CF		Footed/Cross Footed
¢	=	Calculated
	=	
	=	

11. Input estimate into appropriate database.	RJ	2/11/03
12. File one copy of the approval memo	RJ	2/11/03
13. Forward approval memo and estimate to appropriate engineer.	RJ	2/11/03

Comments:

CA
Reviewer Initials

2/11/03
Date

MEMORANDUM

To: Ms. Julie Burton
Asst. Chief for Audit

From: Jim Byrd JB
Central Utilities Office

Date: February 11, 2003

Subject: Railroad Force Account Estimate

Enclosed is an estimate of cost which will serve as a basis for the proposed Letter Agreement between the Department of Transportation and the railroad.:

CSX Transportation, Inc.

Amount: **$74,903.00**

For Work: **Nashville, TN – SR-6, Victory Memorial Bridge Repair over the CSX Railroad @ R/R Milepost 000-184.83 (DOT#340-984B)**
Project No.: 19023-4213-04
TDOT PIN No.: 102001.00

County: **Davidson**

Approval or any comments you wish to offer with respect to the estimate is requested at this time. If the External Audit Section is not familiar with this Railroad's accounting system, then a preliminary review of same is requested in order that the Railroad may be fully informed of the records and procedure required to insure reimbursement.

Enclosure

CSX TRANSPORTATION, INC.
FORCE ACCOUNT ESTIMATE

ACCT. CODE : 709 - TN 0113

ESTIMATE SUBJECT TO REVISION AFTER: 07/07/2003 **DOT NO.:** 340 984B
CITY: Nashville **COUNTY:** Davidson **STATE:** TN
DESCRIPTION: Proposed bridge repairs to SR 6 (Victory Memorial Br.) over CSXT Upper River Lead track.

DIVISION: Nashville **SUB-DIV:** Radnor Terminal **MILE POST:** off 000 - 184.83
REGION: Midwest
AGENCY PROJECT NUMBER: 19023-4213-04

PRELIMINARY ENGINEERING:			
Labor (Non Contract)		$	1,250
Surcharge	32.78%	$	410
Expenses		$	235
Contracted & Administrative Engineering Services		$	5,500
Subtotal		$	7,395
CONSTRUCTION ENGINEERING/INSPECTION:			
Labor (Non Contract)		$	1,250
Surcharge	32.78%	$	410
Expenses		$	235
Contracted & Administrative Engineering Services		$	15,000
Subtotal		$	16,895
FLAGGING SERVICE: (Contract Labor)			
Labor (Conductor-Flagman)		$	-
Labor (Foreman/Inspector)		$	17,600
Surcharge	111.66% (Transportation Department)	$	-
Surcharge	105.91% (Engineering Department)	$	18,640
Per Diem	(Engineering Department)	$	-
Expenses		$	5,760
Subtotal		$	42,000
SIGNAL & COMMUNICATIONS WORK:	(Details Attached)	$	-
TRACK WORK: (Details Attached)		$	-
ACCOUNTING & BILLING:			
Labor		$	900
Surcharge	85.49%	$	769
Expenses		$	135
Subtotal		$	1,804
PROJECT SUBTOTAL		$	68,094
MISC. MATERIAL:	10.00% (Excludes Signal)	$	6,809
GRAND TOTAL	**********	$	74,903

NOTE: Estimate is based on FULL CROSSING CLOSURE during work by Railroad Forces.

This estimate has been prepared based on site conditions, anticipated work duration periods, material prices, labor rates, manpower and resource availability, and other factors known as of the date prepared. The actual cost for CSXT work may differ based upon the agency's requirements, their contractor's work procedures, and/or other conditions that become apparent once construction commences or during the progress of the work.

Office of Assistant Chief Engineer Public Improvements--Jacksonville, Florida

Estimated prepared by: Estimate reviewed by:
DATE: 01/08/2003 REVISED:

Form Last Revised: November 05, 2002 D.C.C.

Form Last Revised: November 05, 2002 D.C.C

CSX TRANSPORTATION, INC.
FORCE ACCOUNT ESTIMATE

ACCT. CODE : 709 - TN 0113
Pub EB - TN EB3

ESTIMATE SUBJECT TO REVISION AFTER: 7/7/2003 **DOT NO.:** 340 984B
CITY: Nashville **COUNTY:** Davidson **STATE:** TN
DESCRIPTION: Proposed bridge repairs to SR 6 (Victory Memorial Br.) over CSXT Upper River Lead track.

DIVISION: Nashville **SUB-DIV:** Radnor Terminal **MILEPOST:** off 000 - 184.83
DRAWING NO.: N/A **DRAWING DATE:** N/A **REGION:** Midwest
AGENCY PROJECT NUMBER: 19023-4213-04

PRELIMINARY ENGINEERING:					
Labor (Non Contract)	5	Days @	$ 250.00	$	1,250
Surcharge 32.78%				$	410
Expenses				$	235
Contracted & Administrative Engineering Services				$	5,500
Subtotal				$	7,395 F
CONSTRUCTION ENGINEERING/INSPECTION:					
Labor (Non Contract)	5	Days @	$ 250.00	$	1,250
Surcharge 32.78%				$	410
Expenses				$	235
Contracted & Administrative Engineering Services				$	15,000
Subtotal				$	16,895 F
FLAGGING SERVICE: (Contract Labor)					
Labor (Conductor-Flagman)	0	Days @	$ -	$	-
Labor (Foreman/Inspector)	80	Days @	$ 220.00	$	17,600
Insurance 21.00%				$	3,696
Surcharge 90.66% (Transportation Department)				$	-
Surcharge 84.91% (Engineering Department)				$	14,944
Per Diem (Engineering Department)	0	Weeks @	$ 360.00	$	-
Expenses	80	Days @	$ 72.00	$	5,760
Subtotal				$	42,000 F
SIGNAL WORK:					
Temporary (Details Attached)				$	-
Permanent (Details Attached)				$	-
Subtotal				$	-
COMMUNICATIONS WORK:					
Temporary (Details Attached)				$	-
Permanent (Details Attached)				$	-
Subtotal				$	-

CSX TRANSPORTATION, INC.
FORCE ACCOUNT ESTIMATE

ACCT. CODE : 709 - TN 0113
Pub EB - **TN** EB3

TRACK: LABOR						
Traffic Control		0	MAN-HRS	$ 19.75	$	-
Remove Existing Crossing		0	MAN-HRS	$ 19.75	$	-
Renew Cross Ties		0	MAN-HRS	$ 19.75	$	-
Renew Rail		0	MAN-HRS	$ 19.75	$	-
Install OTM		0	MAN-HRS	$ 19.75	$	-
Install Field Welds		0	MAN-HRS	$ 19.75	$	-
Install Geo-Textile Fabric		0	MAN-HRS	$ 19.75	$	-
Install Sub-Drains		0	MAN-HRS	$ 19.75	$	-
Install Ballast		0	MAN-HRS	$ 19.75	$	-
Line and Surface		0	MAN-HRS	$ 19.75	$	-
Install Crossing Materials		0	MAN-HRS	$ 19.75	$	-
Install Bituminous Pavement		0	MAN-HRS	$ 19.75	$	-
_____		0	MAN-HRS	$ 19.75	$	-
_____		0	MAN-HRS	$ 19.75	$	-
_____		0	MAN-HRS	$ 19.75	$	-
Clean-Up					$	-
Insurance	21.00%				$	-
Surcharge	84.91%				$	-
Subsistence		0	MAN-DAY	$ 90.00	$	-
Subtotal					$	-
TRACK: MATERIAL						
Cross Ties, Main Line		0	EA	$ 25.50	$	-
Rail, 136RE, New		0	LF	$ 12.06	$	-
Misc. OTM		1	LOT	$ -	$	-
Geo-Textile Fabric		0	RL	$ 250.00	$	-
Sub-Drains		0	LF	$ 6.00	$	-
Ballast		0	NT	$ 5.50	$	-
Field Welds		0	EA	$ 55.25	$	-
_____		0	___	$ -	$	-
_____		0	___	$ -	$	-
Concrete Full Width		0	TF	$ 225.00	$	-
Concrete/Rubber Xing (CSX)		0	TF	$ 135.00	$	-
Rubber Crossing, Full Depth		0	TF	$ 280.00	$	-
Rubber/Asphalt Crossing (CSX Standard)		0	TF	$ 87.00	$	-
Crossties, 10' Length		0	EA	$ 38.66	$	-
Bituminous Material		0	NT	$ 80.00	$	-
Material Handling	5.00%				$	-
Subtotal					$	-
CONTRACT:						
Asphalt Paving (In Place)		0	NT	$ 110.00	$	-
Disposal of Waste Materials		0	TF	$ 10.00	$	-
Maintenance of Traffic		0	DAY	$ 300.00	$	-
Subtotal					$	-

CSX TRANSPORTATION, INC.
FORCE ACCOUNT ESTIMATE

ACCT. CODE : 709 - TN 0113
Pub EB - **TN** EB3

EQUIPMENT RENTAL:						
Gang Truck	0	DAY	$	180.40	$	-
Boom Truck	0	DAY	$	304.16	$	-
Dump Truck	0	DAY	$	283.04	$	-
Backhoe	0	DAY	$	141.84	$	-
Compressor	0	DAY	$	113.52	$	-
Air Drill/Wrench	0	DAY	$	11.52	$	-
Tie Tamper (CAT)	0	DAY	$	1,580.16	$	-
Tie Tamper (Production)	0	DAY	$	785.60	$	-
Tie Tamper (Utility)	0	DAY	$	785.60	$	-
Ballast Regulator	0	DAY	$	285.60	$	-
Roller	0	DAY	$	39.12	$	-
Barricades	0	DAY	$	-	$	-
Subtotal					$	-
TRANSPORTATION:	0	CAR/MI	$	0.92	$	-
(All on Line Miles)						
Subtotal					$	-
WORK TRAIN:	0	DAY	$	2,060.10	$	-
Subtotal					$	-
SALVAGE:						
Rail	0	NT	$	65.00	$	-
OTM	0	NT	$	75.00	$	-
Subtotal					$	-
ACCOUNTING & BILLING:						
Labor	4.5	Days @	$	200.00	$	900
Surcharge 85.49%					$	769
Expenses					$	135
Subtotal					$	1,804 F
PROJECT SUBTOTAL:					$	68,094 F
MISC. MATERIAL: 10.00% (Excludes Sig. & Comm.)					$	6,809
GRAND TOTAL **********					$	74,903 F

DIVISION OF COST:

Agency	100.00%	$	74,903
Railroad	0.00%	$	-
TOTAL **********		$	74,903

NOTE: Estimate is based on FULL CROSSING CLOSURE during work by Railroad Forces.

This estimate has been prepared based on site conditions, anticipated work duration periods, material prices, labor rates, manpower and resource availability, and other factors known as of the date prepared. The actual cost for CSXT work may differ based upon the agency's requirements, their contractor's work procedures, and/or other conditions that become apparent once construction commences or during the progress of the work

Office of Assistant Chief Engineer Public Improvements--Jacksonville, Florida

Estimated prepared by: Stephen G. Van Slyke
URS Corporation
DATE: 1/8/2003

Estimate reviewed by:
CSXT D&C
REVISED:

Form Last Revised: November 05, 2002 D.C.C.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SUITE 1200, JAMES K. POLK BUILDING
NASHVILLE, TENNESSEE 37243-0349

J. BRUCE SALTSMAN, SR
COMMISSIONER

DON SUNDQUIST
GOVERNOR

March 6, 2003

Mr. Terry Leatherwood
Bridge Inv. & Repair Office
Suite 1200
J. K. Polk Bldg.

RE: Contract Maintenance
February 14, 2003 Letting

Mr. Leatherwood;

Enclosed are two (2) 1/2 size sets of repair details of in house and/or consultant repair projects for the February 14, 2003 Letting.

COUNTY	BRIDGE NO.	DESCRIPTION	DONE BY & CONTRACT NO.
SHELBY	79-I40-0.00	I-40 / MISSISSIPPI RIVER	CONSULTANT NO. CNB070
	(WORKING DAYS - ON OR BEFORE AUGUST 01, 2003)		
DAVIDSON	19-SR6-9.74 SR6	/ CUMBERLAND RIVER & GAY ST.	CONSULTANT NO. CNB031
	(WORKING DAYS - SEE PROPOSAL)		
HAMILTON	33-SR24-2.91	SR24 / SR2	IN HOUSE NO. CNB101
	(WORKING DAYS - SEE PROPOSAL)		
LOUDON	53-I40-0.57	I-40 / SR95 & SR73	CONSULTANT NO. CNB017
	(WORKING DAYS - ON OR BEFORE JUNE 01, 2003)		
RUTHERFORD	75-A358-3.10	A358 (GUM RD.) / I-24	
" "	75-2015-4.41	2015 (BAKER RD.) / I-24	CONSULTANT NO. CNB040
	(WORKING DAYS - SEE PROPOSAL)		
RUTHERFORD	75-SR102-9.24	SR102 / STEWART CREEK	
" "	75-SR102-9.32	SR102 / NASHVILLE PK.	
" "	75-SR102-9.34	SR102 / SR1	
" "	75-SR102-10.48	SR102 / SR1 (RAMP C)	
" "	75-SR001-7.29	SR001 / SR1 (RAMP D)	CONSULTANT NO. CNB039
	(WORKING DAYS - SEE PROPOSAL)		

If we can be of any further assistance, please contact us.

Yours very truly,

(for)
Wayne J. Seger
Civil Engineering Manager 2
Bridge Inspection and Repair

WJS:hl
Enclosure
cc: file

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BRIDGE INSPECTION AND REPAIR OFFICE
NASHVILLE, TENNESSEE 37243-0338

March 20, 2003

Mr. Jerry Cato
Region 3 Construction Engineer
6601 Centennial Boulevard
Nashville, TN. 37243-0360

Re: Contract Maintenance
P. E. No. 19023-4213-04
Bridge No. 19-SR 6-9.74
SR 6 over Cumberland River
and Gay Street
Davidson County

Dear Mr. Cato:

Enclosed are eight (8) large-size and five (5) half-size copies of revised drawings sheet no. 1, 2 (BR-64-92), 2M, 2N, 2P, 2Q, and BR-64-91.

The revision consists of changing the color of the paint for the structural steel, adding lighting item numbers, revising lighting quantities and lighting details. Please furnish the Contractor and Resident Engineer with the necessary copies.

Yours very truly,

Terry D. Mackie

(for)
Wayne Seger
Civil Engineering Manager 2
Bridge Inspection and Repair

Enclosure

CC: Terry Leatherwood
Files

3/24/03

TENNESSEE D.O.T. DESIGN DIVISION

FILE NO.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF PLANNING AND DEVELOPMENT

TENN.	YEAR	SHEET NO.
	2003	1
FED. AID PROJ. NO.		
STATE PROJ. NO.	19023-4213-04	

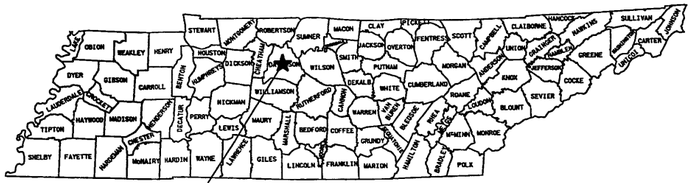
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	1-31-03	JAW	GEN. REVISIONS
2	2-06-03	JAW	ADDED TEXT. COATING & DATES
3	3-19-03	JAW	ADDED LIGHTING SHEETS

DAVIDSON COUNTY

STATE ROUTE 6 (VICTORY MEMORIAL BRIDGE)
OVER CUMBERLAND RIVER AND GAY STREET

BRIDGE NO: 19-SR6-9.74

BRIDGE REPAIR

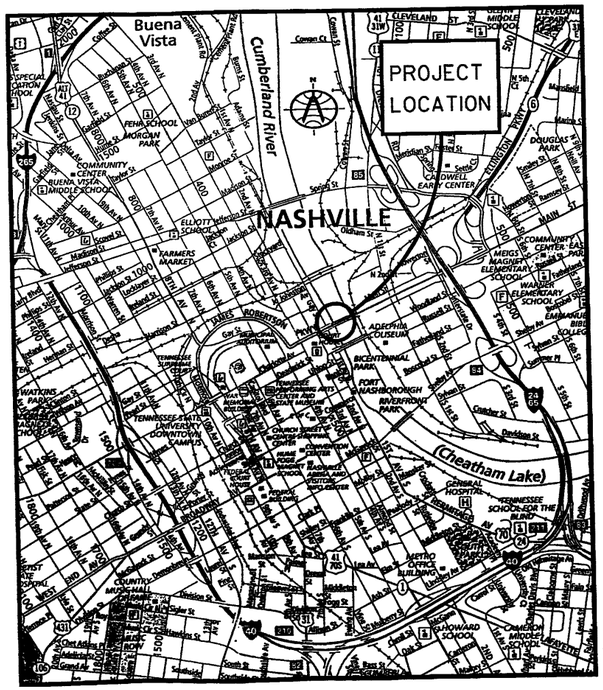


INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
1A	STANDARD DRAWINGS
2	ESTIMATED BRIDGE QUANTITIES & GENERAL NOTES
2A	ESTIMATED ROADWAY QUANTITIES & GENERAL NOTES
2B	TRAFFIC CONTROL WEST PHASE 1
2C	TRAFFIC CONTROL WEST PHASE 2
2D	ADVANCED WARNING EAST
2E	TRAFFIC CONTROL EAST PHASE 2
2F	TRAFFIC CONTROL EAST PHASE 1
2G	APPROACH REPAVING
2H	UTILITIES
2J	UTILITIES
2K	UTILITIES
2L	NEW FENCED PARKING AREA DETAIL
2M	LIGHTING DETAIL
2P	CONTROL POINT DETAILS
2Q	PRESENT AND PROPOSED LAYOUT

LIST OF BRIDGE DRAWINGS

DWG. NO.	CURR. REV. DATE	TITLE
BR-64-90	2-06-03	LAYOUT OF BRIDGE TO BE REPAIRED (BRIDGE NO. 19-SR6-9.74)
BR-64-91	3-19-03	BRIDGE REFERENCE DRAWINGS
BR-64-92	3-19-03	ESTIMATED BRIDGE QUANTITIES & GENERAL NOTES
BR-64-93	1-31-03	SIDEWALK REPAIR AND EXPANSION JOINT REPAIRS
BR-64-94	1-31-03	SIDEWALK REPAIR AND EXPANSION JOINT REPAIRS
BR-64-95	1-31-03	SIDEWALK REPAIR AND EXPANSION JOINT REPAIRS
BR-64-96	1-31-03	BENT DRAINAGE DETAILS
BR-64-97	1-31-03	BENT & ABUTMENT DRAINAGE DETAILS
BR-64-98		EXPANSION JOINT REPAIR
BR-64-99	1-31-03	SIDEWALK EXPANSION JOINT REPAIR DETAILS
BR-64-100	1-31-03	ABUTMENT #2
BR-64-101	1-31-03	ABUTMENT #2 DETAILS
BR-64-102		BENT & ABUTMENT REPAIR DETAILS
BR-64-103		EXPANSION JOINT DRAIN DETAILS
BR-64-104	2-06-03	BRIDGE REPAIR DETAILS
BR-64-105		BILL OF STEEL



0 0.5 1.0 1.5
MILES

POSTED SPEED = 40 M.P.H.
ADT = 30,188
YEAR = 2003

SPECIAL NOTES

PROPOSALS MAY BE REJECTED BY THE COMMISSIONER IF ANY OF THE UNIT PRICES CONTAINED THEREIN ARE OBVIOUSLY UNBALANCED, EITHER EXCESSIVE OR BELOW THE REASONABLE COST ANALYSIS VALUE.
THIS PROJECT TO BE CONSTRUCTED UNDER THE STANDARD SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION DATED MARCH 1, 1995 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT

DESIGNED BY JAMES + ASSOCIATES, INC.

DESIGNER SCOTT SCHRIVER, E.I. CHECKED BY JAKE WILLIAMS, P.E.

P.E. NO. 19023-4213-04

JACOB A. WILLIAMS — REGISTERED ENGINEER — 3-19-03 — No. 107623 — STATE OF TENNESSEE

APPROVED: _____ DIRECTOR, DESIGN DIVISION

DATE:

1 APPROVED: _____ COMMISSIONER

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED: _____ DIVISION ADMINISTRATOR DATE

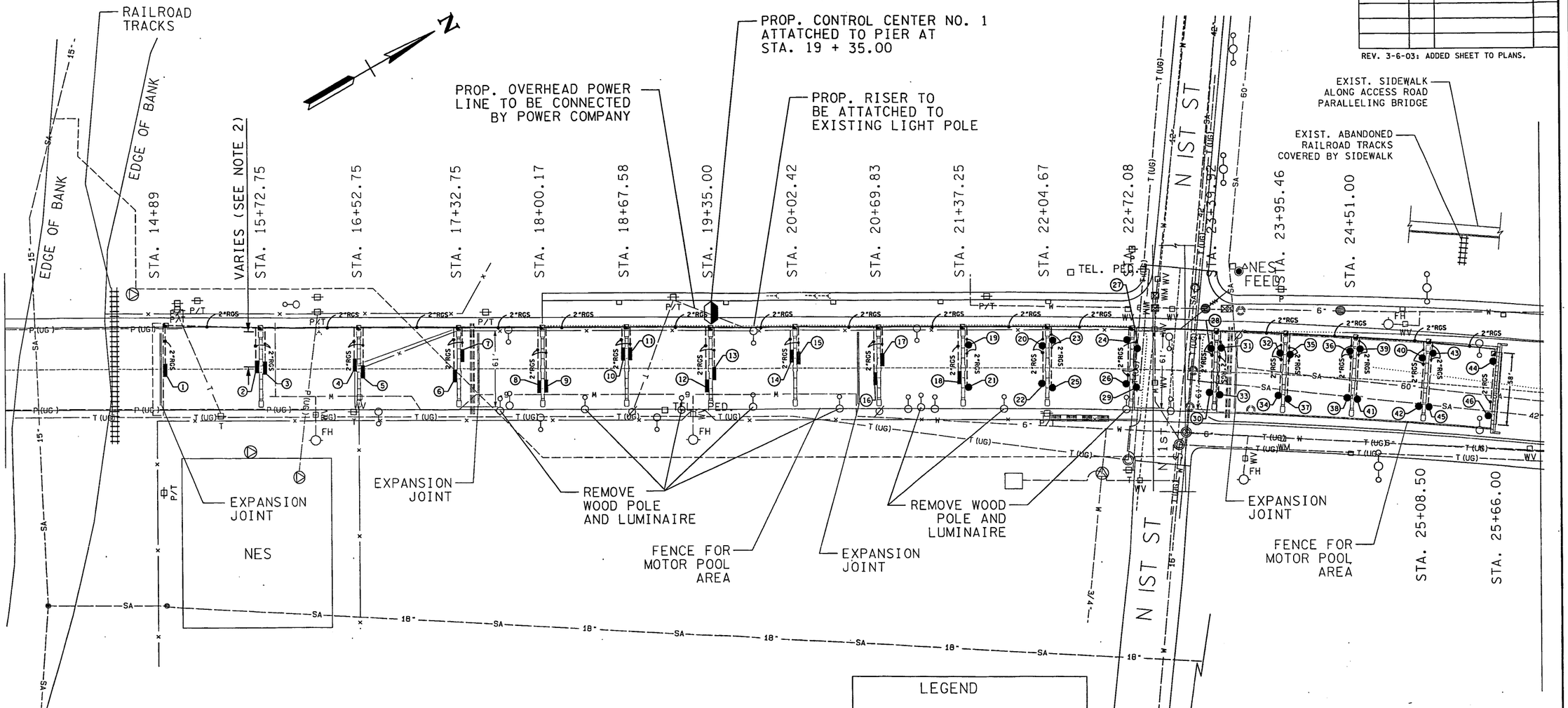
Survey & Design Bureau

@@@@DGNSPEC@@@@

TENNESSEE D.O.T. | GN DIVISION | FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2003	19023-4213-04	2Q

REV. 3-6-03: ADDED SHEET TO PLANS.



NOTES

1) BRIDGE NO. 19-SR6-9.74
SR-6 (VICTORY MEMORIAL BRIDGE)
OVER CUMBERLAND RIVER

2) SEE SHEET 2B FOR PROP. LOCATION OF LUMINAIRES.

3) 2" RGS CONDUIT TO BE STRAPPED TO BRIDGE.

4.) RISER TO BE ATTATCHED TO EXISTING LIGHT POLE ON TOP OF BRIDGE AT THE LOCATION SHOWN IN THE PLAN.

5.) ELECTRICAL FEED FROM NES TO THE RISER ON THE LIGHT POLE ON TOP OF BRIDGE SHALL BE USED TO CONNECT CONTROL CENTER NO. 1 ATTACTHED TO THE PIER AT STATION 19+35.00.

6.) 2" FLEXIBLE PVC CONDUIT MAY BE USED FOR THE DROPOFF FROM THE RISER TO THE RGS CONDUIIT STRAPPED TO THE BRIDGE DECK.

LEGEND

- WATER LINE
- COLONIAL GAS PIPELINE
- AT & T LINE
- SANITARY SEWER LINE
- EX. STORM WATER DRAIN
- EX. TELEPHONE MANHOLE
- EX. TELEPHONE POLE
- EX. LIGHT POLE
- EX. N.E.S. TOWER
- EX. FIRE HYDRANT
- PROP. 100 WATT WALL PACK LUMINAIRE
- PROP. 150 WATT UNDER-PASS LUMINAIRE
- PROP. JUNCTION BOX

BRENDA K. BOOKER REGISTERED ENGINEER No. 19004 STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT AND PROPOSED LAYOUT

S.R. 6
VICTORY MEMORIAL BRIDGE
SCALE: 1"= 40'

03/07/2003
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TENNESSEE D.O.T.
IGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2003	19023-4213-04	2M

REV. 3-6-03: ADDED SHEET TO PLANS.

ESTIMATED LIGHTING QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
(1)	714-01.10	STRUCTURAL LIGHTING (BRIDGE NO. 19-SR6-9.74)	LS	1
	714-04.02	CONDUIT (STRUCTURES - 2" RGS)	L.F.	2528
(2)	714-04.03	CONDUIT (2" FLEXIBLE PVC)	L.F.	500
	714-05.05	PULL BOXES (8" X 10" JUNCTION BOX)	EACH	1
	714-05.06	PULL BOXES (6" X 6" JUNCTION BOX)	EACH	17
	714-06.04	CABLE (1/C # 8 AWG)	L.F.	4208
	714-06.05	CABLE (1/C # 6 AWG)	L.F.	11773
	714-08.50	REMOVE WOOD POLE & ROADWAY LUMINARE	EACH	8
(3)	714-09.09	LUMINAIRES (150 WATT WALL PACK)	EACH	18
(4)	714-09.10	LUMINAIRES (100 WATT UNDERPASS)	EACH	28
(5)	714-12.01	CONTROL CENTER (NO. 1)	LS	1
(6)	730-11.01	STEEL CONDUIT RISER ASSEMBLY	EACH	1

FOOTNOTES

(1) INCLUDED FOR REMOVAL OF EXISTING CONTROL POINT.

(2) INCLUDED FOR CONNECTION OF 2" RGS CONDUIT FROM BRIDGE DECK TO BRIDGE PIER.

(3) USE HOLOPHANE WLK150P00 WALL PACK LUMINAIRES OR APPROVED EQUAL.

(4) USE HOLOPHANE WL2K100P00-U UNDERPASS LUMINAIRES OR APPROVED EQUAL.

(5) INCLUDES THE COST OF THE 100 AMP DISCONNECT.

(6) TO BE INSTALLED ON LIGHT POLE ON TOP OF THE BRIDGE AT +/-STA. 19 + 69

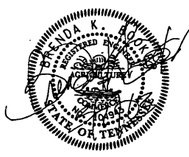
LIGHTING NOTES

LIGHTING

(1) INSTALLATION AND MATERIALS SHALL COMPLY WITH SECTIONS 714 AND 917 OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION DATED MARCH 1, 1995 AND WITH THE LATEST REVISIONS TO THE NATIONAL ELECTRIC CODE, NFPA 70.

(2) ALL INCIDENTAL EQUIPMENT AND MATERIAL REQUIRED FOR THE SUCCESSFUL EXECUTION OF THIS WORK SHALL BE FURNISHED IN 714 ITEMS WHETHER SPECIFICALLY NOTED OR NOT.

(3) DISTURBED AREAS AROUND REMOVED POLES SHALL BE RESTORED TO EXISTING GRADE.



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

LIGHTING QUANTITIES AND NOTES

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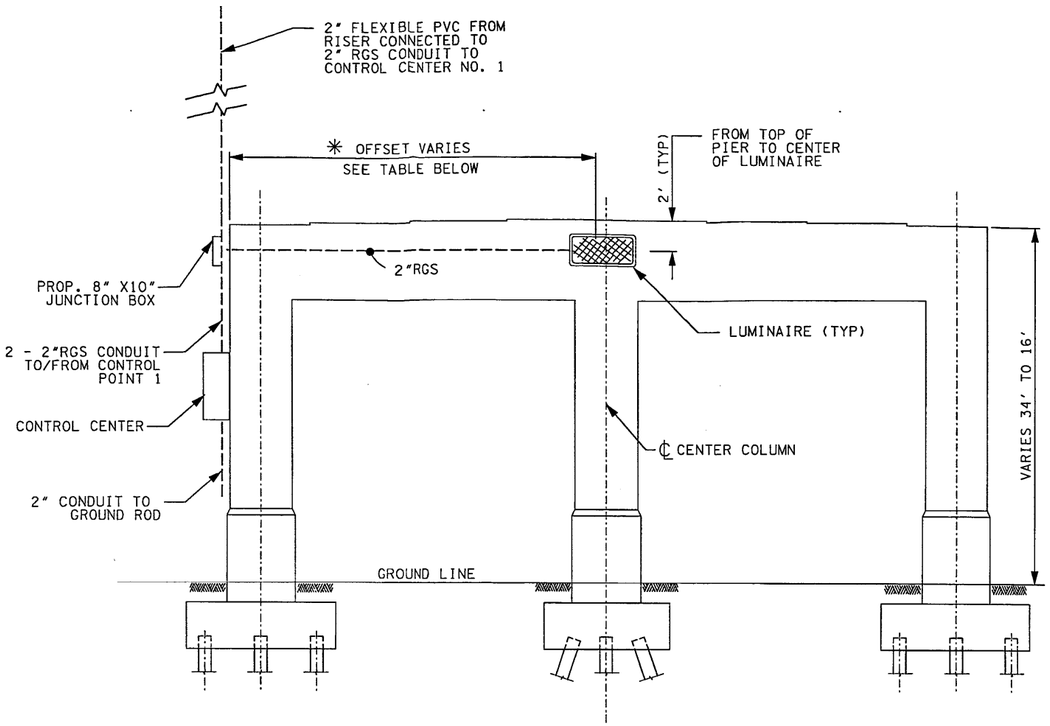
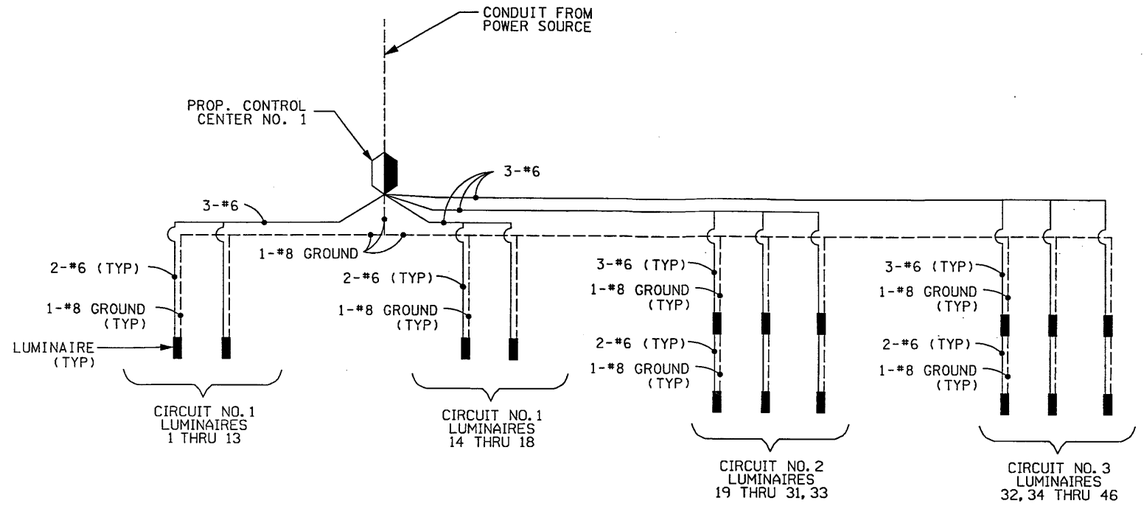
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2003	19023-4213-04	2N

REV. 3-6-03: ADDED SHEET TO PLANS.



UNDER BRIDGE
LIGHTING DETAIL (TYP)



LUMINAIRE WIRING
SCHEMATIC

LOCATION OF LUMINAIRES

LIGHT NO.	OFFSET (FT)	CIRCUIT NO.	CABLE	LIGHT NO.	OFFSET (FT)	CIRCUIT NO.	CABLE	LIGHT NO.	OFFSET (FT)	CIRCUIT NO.	CABLE
1	38	1	2 - #6 1 - #8 GROUND	16	39	1	2 - #6 1 - #8 GROUND	31	11	2	3 - #6 1 - #8 GROUND
2	29	1		17	24	1		32	13	3	
3	30	1		18	38	1		33	49	2	2 - #6 1 - #8 GROUND
4	27	1		19	12	2	3 - #6 1 - #8 GROUND	34	47	3	
5	33	1		20	13	2		35	14	3	3 - #6 1 - #8 GROUND
6	36	1		21	46	2	2 - #6 1 - #8 GROUND	36	9	3	
7	20	1		22	43	2		37	50	3	2 - #6 1 - #8 GROUND
8	45	1		23	8	2	3 - #6 1 - #8 GROUND	38	46	3	
9	44	1		24	7	2		39	7	3	3 - #6 1 - #8 GROUND
10	19	1		25	46	2	2 - #6 1 - #8 GROUND	40	11	3	
11	19	1		26	42	2		41	47	3	2 - #6 1 - #8 GROUND
12	44	1		27	14	2	3 - #6 1 - #8 GROUND	42	50	3	
13	34	1		28	12	2		43	6	3	3 - #6 1 - #8 GROUND
14	21	1		29	45	2	2 - #6 1 - #8 GROUND	44	15	3	
15	22	1		30	47	2		45	49	3	2 - #6 1 - #8 GROUND
								46	59	3	

*OFFSET TAKEN FROM NORTH SIDE OF BENT TO MIDPOINT OF LIGHT FIXTURE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

LIGHTING DETAIL

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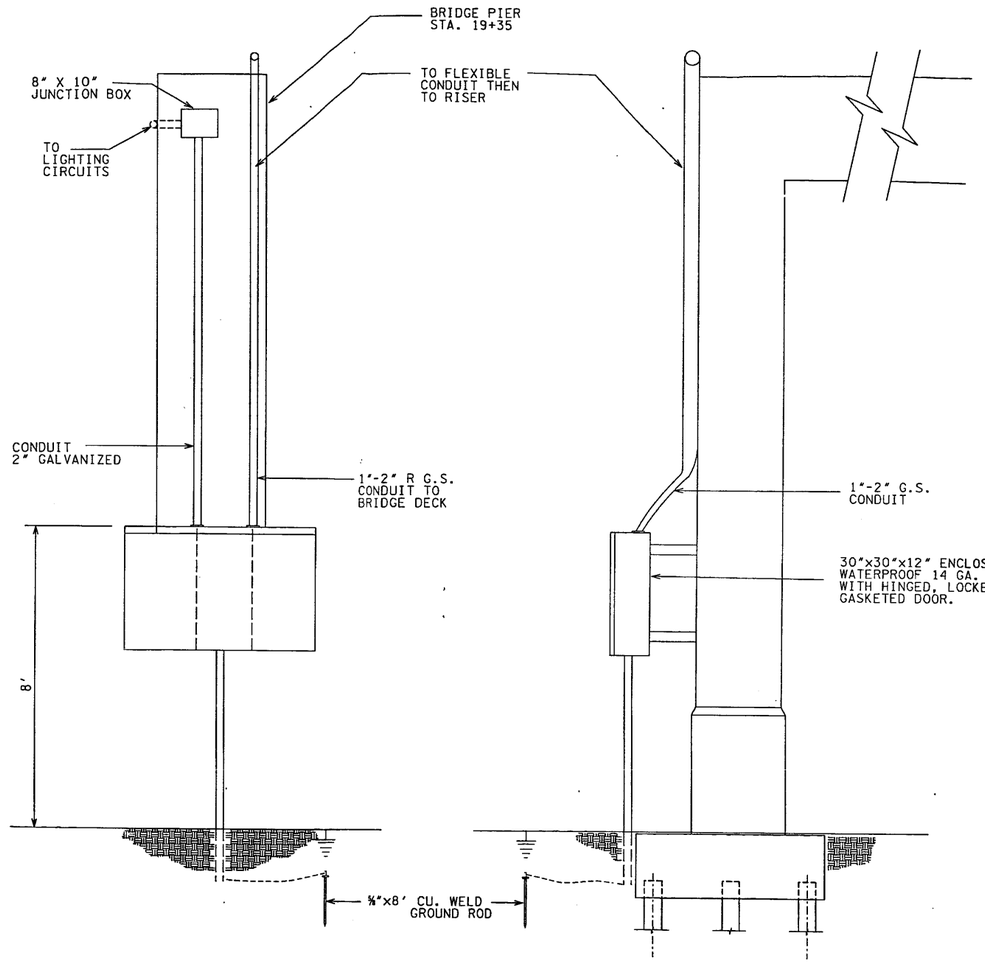
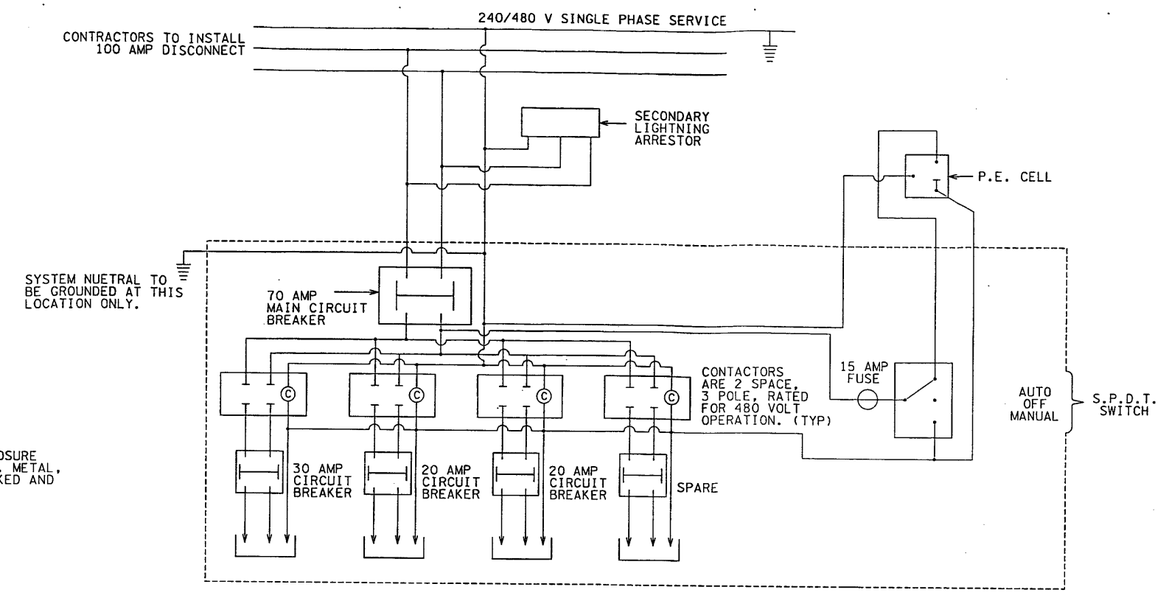
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2003	19023-3198-04	2P

REV. 3-6-03: ADDED SHEET TO PLANS.



CONSTRUCTION DETAIL



WIRING SCHEMATIC
LIGHTING CONTROL POINT
CONTROL POINT 1

NOTES

1. CONTRACTOR IS RESPONSIBLE FOR ALL MATERIAL AND INSTALLATION UP TO AND INCLUDING WEATHERHEAD.
2. CONTRACTOR SHALL INSTALL A 100 AMP DISCONNECT AT EACH CONTROL CENTER AS DIRECTED BY THE ENGINEER AND NES.
3. CONTRACTOR TO COORDINATE FINAL LOCATION OF CONTROL POINTS WITH THE ELECTRIC COMPANY.
4. RGS CONDUIT SHALL BE GROUNDED AT BOTH ENDS OF THE PROJECT.
5. LIGHTING SYSTEM SHALL HAVE 240/480 VOLT OPERATION
6. LIGHT FIXTURES TO BE BALLASTED FOR 240 VOLT OPERATION.
7. CIRCUIT WIRING TO BE COLOR CODED.
8. USE GREEN COLORED WIRE FOR GROUND WIRE. USE WHITE COLORED WIRE FOR NEUTRAL. DO NOT USE GREEN OR WHITE WIRE FOR CIRCUIT CONDUCTORS.
9. CONTRACTOR TO COORDINATE LOCATION OF METER AND PHOTO CELL WITH ENGINEER AND NES.
10. CONTRACTOR SHALL INSTALL CONDUCTORS IN SUCH A MANNER AS TO BALANCE THE CIRCUITS.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CONTROL POINT DETAILS

SCALE: NONE

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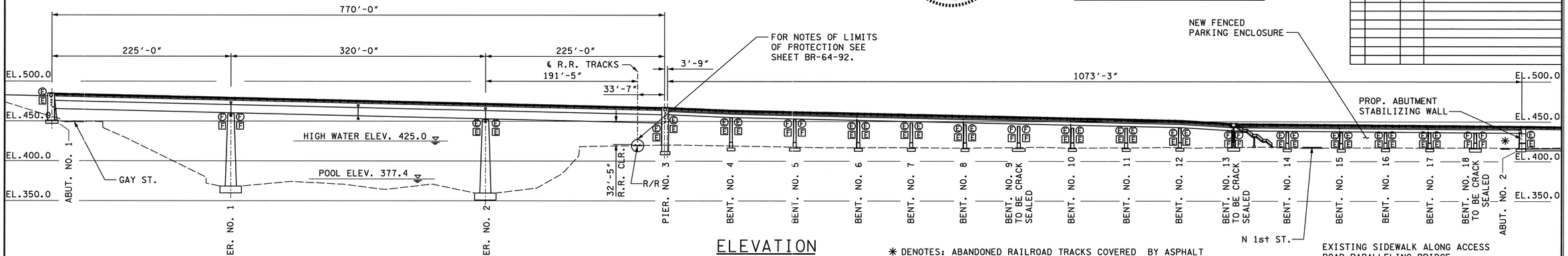
PROJECT NO.	YEAR	SHEET NO.
19023-4213-04	2003	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	1-31-03	CM	UPDATED NOTES
2	2-06-03	JAW	REVISED NOTE

JACOB A. WILLIAMS — REGISTERED ENGINEER — 2-6-03 — NO. 107628 — STATE OF TENNESSEE

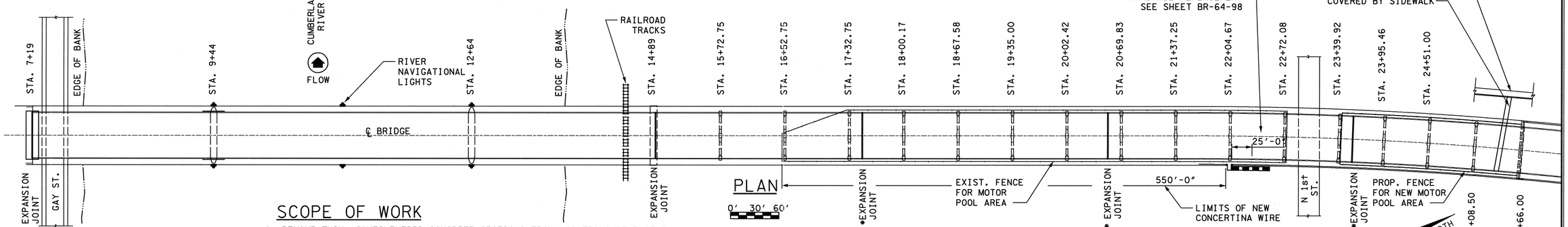
E DENOTES EXPANSION
F DENOTES FIXED
○ DENOTES EXISTING SUPPORT CONDITION
□ DENOTES PROPOSED SUPPORT CONDITION



ELEVATION

0' 30' 60'

✱ DENOTES: ABANDONED RAILROAD TRACKS COVERED BY ASPHALT UNDER BRIDGE.
VERTICAL CLEARANCE = 19'-4"
DISTANCE TO BENT 18 = 37'-11"
DISTANCE TO ABUTMENT 2 = 17'-7"



PLAN

0' 30' 60'

SCOPE OF WORK

1. REMOVE THIN, CANTILEVERED CONCRETE SECTIONS FROM LOCATIONS OF PAST FULL DEPTH REPAIR LOCATIONS WHERE LEAKAGE OCCURRED DURING PLACEMENT. SEE DETAIL ON DRAWING NO. BR-64-92.
2. BLAST CLEAN AND REPAINT ALL STEEL ELEMENTS INCLUDING WELDED PLATE GIRDERS, STEEL BEAMS ON APPROACH SPANS, CROSS BRACING, DIAPHRAGMS, SUPPORTS, STAIR ASSEMBLIES, EXPANSION JOINTS, SLAB EDGE CHANNELS, ASPHALT EDGE ANGLES AND CURB SIDE RAILS.
3. REPLACE SECTIONS OF EXISTING BRIDGE DRAINAGE SYSTEMS AT BENTS, PIERS, AND ABUTMENTS. REPLACE ABOVE GROUND ELEMENTS ONLY. TIE NEW DRAINAGE SYSTEM INTO EXISTING BELOW GROUND ELEMENTS WHERE OCCURRING.
4. (1) MAINTAIN RIVER NAVIGATIONAL LIGHTING DURING ALL PHASES OF WORK. INSTALL NEW STRUCTURAL LIGHTING UNDER SUPERSTRUCTURE BETWEEN PIER 3 AND ABUTMENT 2.
5. REPLACE APPROACH SIDEWALK SECTIONS AT SPECIFIED LOCATIONS. SEE SHEETS BR-64-93 & BR-64-95.
6. REPAIR CRACKS WITH METHACRYLATE OCCURRING IN SECTIONS OF SIDEWALKS AND AROUND PERIMETER OF FULL-DEPTH REPAIR AREAS. SEE SHEET BR-64-93, 94 & 95.
7. REPLACE SECTIONS OF SIDEWALK ON BRIDGE AT LOCATIONS REQUIRING FULL-DEPTH REPAIR. SEE SHEETS BR-64-93, BR-64-94 & BR-64-95.
8. PERFORM REPAIR OF EXPANSION JOINT HEADERS ON MAIN BRIDGE SLAB SECTIONS AND AROUND SIDEWALK SECTIONS. FOR DETAIL SEE BR-64-99.
9. APPLY PENETRATING CONCRETE SEALANT TO SECTIONS OF BENTS THAT PROTRUDE BEYOND THE LIMITS OF COVER OF THE SUPERSTRUCTURE AND SURFACE OF SIDEWALKS WITH LIMITS SHOWN. (SIDEWALKS SHALL BE PRESSURE WASHED AND ALLOWED TO DRY BEFORE APPLYING SEAL).
10. PROVIDE TRAFFIC CONTROL ON SR-6 DURING REPAIR OF SIDEWALK SECTIONS AND DURING EXPANSION JOINT REPAIRS. MAINTAIN TWO (2) LANES OF TRAFFIC DURING PHASE 1 OF EXPANSION JOINT REPAIRS AND TWO (2) LANES OF TRAFFIC DURING PHASE 2 OF EXPANSION JOINT REPAIRS. (1)
11. PROVIDE TRAFFIC CONTROL ALONG 1st AVENUE AND GAY STREET.
12. REPAIR CRACKS IN SPECIFIED BENT LOCATIONS BY EPOXY INJECTION.
13. INSTALL A NEW REINFORCED CONCRETE WALL TO THE FRONT FACE OF THE EXISTING ABUTMENT 2 RETAINING WALL. THE WALL SHALL EXTEND FROM THE EXISTING FOOTING UP THE FRONT FACE OF ABUTMENT 2 TO THE BEARING LEDGE. THE NEW STABILIZING WALL SHALL EXTEND AROUND THE SIDES OF THE ABUTMENT TO CLOSE THE GAP BETWEEN ABUTMENT 2 AND THE SIDE RETAINING WALLS.
14. PERFORM SPOT REPAIR AT SPECIFIED LOCATIONS ON PIERS, BENTS, ABUTMENTS AND APPROACH RETAINING WALLS AT ABUTMENT 2.
15. REPAVE APPROACH TO ABUTMENT 2.
16. PROVIDE NETTING TO UNDERSIDE OF SUPERSTRUCTURE FOR BIRD CONTROL.
17. PROVIDE RUBBER DIPHRAGM FOR DRAINAGE CONTROL AT EXPANSION JOINTS. OVER TDOTS MOTOR POOL AREAS.
18. (2) TEXTURE COAT ALL EXPOSED CONCRETE SURFACES OF BENTS 4 THRU 18, ABUT. 2, UNDERSIDE OF OVERHANGS, PIER 3 AND APPROACH RETAINING WALLS AT ABUT. 2 (SEE SHEET BR-64-104).
19. PROVIDE FENCING FOR TDOT MOTORPOOL PARKING BETWEEN BENT *15 AND ABUTMENT *2. INCLUDES TWO SLIDING GATES (ONE ELECTRIC ROLL BACK GATE AND ONE MANUAL ROLL BACK GATE).
20. REMOVE AND REPLACE A SECTION OF DAMAGED ALUMINUM BRIDGE RAIL. (SEE SHEET BR-64-98)

NOTE: FOR BRIDGE APPURTENANCES, LIST OF BRIDGE REFERENCE DRAWINGS, LIST OF BRIDGE DRAWINGS AND LIST OF SPECIAL PROVISIONS, SEE SHEET BR-64-91.

(1) NO LANE CLOSURES WILL BE ALLOWED ON HOLIDAY WEEKENDS.

* DENOTES: RUBBER DIAPHRAGM DRAINAGE CONTROL REQUIRED AT THESE THREE LOCATIONS. (SEE SHEET BR-64-103 FOR NOTES AND DETAILS)

DESIGNED BY	SCOTT SCHRIVER, E.I.	DATE	1-03
DRAWN BY	SCOTT CRAIG	DATE	1-03
SUPERVISED BY	JACOB WILLIAMS, P.E.	DATE	1-03
CHECKED BY	JACOB WILLIAMS, P.E.	DATE	1-03

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

LAYOUT OF BRIDGE TO BE REPAIRED

BRIDGE NO. 19-SR6-9.74
SR-6 (VICTORY MEMORIAL BRIDGE) OVER CUMBERLAND RIVER AND GAY STREET
DAVIDSON CO.
2003

BR-64-90

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PROJECT NO.	YEAR	SHEET NO.
19023-4213-04	2003	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	1-31-03	CM	ADDED STANDARDS
2	2-06-03	JAW	UPDATED REV. DATES
3	3-19-03	JAW	UPDATED REV. DATES

LIST OF BRIDGE REFERENCE DRAWINGS

DWG. NO.	TITLE
E-9-1	GENERAL PLAN AND ELEVATION
E-9-2	PIER 1
E-9-3	PIER2
E-9-4	STONE DETAILS-PIERS 1 AND 2
E-9-5	BORINGS
E-14-1	TITLE SHEET-VICTORY MEMORIAL BRIDGE (1952)
E-14-1A	BRIDGE REPAIR DETAILS AND ESTIMATED QUANTITIES
E-14-1B	BRIDGE REPAIR DETAILS
E-14-3	SUMMARY OF QUANTITIES
E-14-4	GENERAL PLAN AND ELEVATION
E-14-4A	GENERAL PLAN AND ELEVATION
E-14-5	WEST PLAZA-NORTH RETAINING WALL
E-14-6	WEST PLAZA-SOUTH RETAINING WALL
E-14-7	WEST ABUTMENT
E-14-8	WEST PLAZA-REINFORCING STEEL SCHEDULE
E-14-9	PIER3
E-14-10	BENT4
E-14-11	BENT5
E-14-12	BENT6
E-14-13	BENTS 7 AND 8
E-14-14	BENT 9
E-14-15	BENTS 10,11 AND 12
E-14-16	BENT 13
E-14-17	BENTS 14,15,16,17
E-14-18	BENT 18
E-14-19	EAST ABUTMENT
E-14-20	EAST APPROACH-NORTH RETAINING WALL
E-14-21	EAST APPROACH-SOUTH RETAINING WALL
E-14-22	EAST APPROACH-SOUTH RETAINING WALL
E-14-23	ANCHOR BOLT PLAN AND LIGHTING DETAILS
E-14-24	DRAINAGE STRUCTURES
E-14-25	DRAINAGE TABLES
E-14-26	TYPICAL CROSS SECTION AND MISCELLANEOUS DETAILS
E-14-27	GROUND PLANS
E-14-28	GROUND PLANS
E-14-29	WEST PLAZA AND MEMORIAL
E-14-30	PERSPECTIVES
E-14-31	TRAFFIC SIGNALS
E-14-32	BORINGS
E-14-33	CROSS SECTIONS
E-14-34	CROSS SECTIONS
E-14-35	CROSS SECTIONS
E-14-36	CROSS SECTIONS
E-14-37	CROSS SECTIONS
E-14-38	TITLE SHEET-VICTORY MEMORIAL BRIDGE
E-14-39	ESTIMATED QUANTITIES
E-14-40	GENERAL PLAN AND ELEVATION
E-14-41	RIVER SPANS-ROADWAY CROSS SECTIONS
E-14-42	RIVER SPANS-FRAMING PLAN AND GIRDERS
E-14-43	RIVER SPANS-GIRDER DETAILS
E-14-44	RIVER SPANS-GIRDER OUTLINE AND STRESS DIAGRAMS
E-14-45	RIVER SPANS-ROADWAY SLAB
E-14-46	RIVER SPANS-EXPANSION JOINTS
E-14-47	RIVER SPANS-SHOES
E-14-48	EAST APPROACH SPANS-ROADWAY CROSS SECTIONS AND DRAINAGE
E-14-49	EAST APPROACH SPANS-FRAMING PLANS
E-14-50	EAST APPROACH SPANS-FRAMING PLAN AND BEAM SPLICES
E-14-51	EAST APPROACH SPANS-ROADWAY SLAB
E-14-52	EAST APPROACH SPANS-EXPANSION JOINTS
E-14-53	EAST APPROACH SPANS-ANCHOR BOLT PLAN AND SHOES
E-14-54	HANDRAIL AND CURB
E-14-55	LIGHTING
E-14-56	NAVIGATION LIGHTING, MEMORIAL PLAQUE AND SUMMARY OF QUANTITIES
E-14-57	STAIRWAY
E-14-58	TRAFFIC SIGNALS
E-14-78	WEST PLAZA-SOUTH RETAINING WALL

LIST OF BRIDGE DRAWINGS

DWG. NO.	DATE	TITLE
BR-64-90	2-06-03	LAYOUT OF BRIDGE TO BE REPAIRED (BRIDGE NO. 19-SR6-9.74)
BR-64-91	3-19-03	BRIDGE REFERENCE DRAWINGS
BR-64-92	3-19-03	ESTIMATED BRIDGE QUANTITIES & GENERAL NOTES
BR-64-93	1-31-03	SIDEWALK REPAIR AND EXPANSION JOINT REPAIRS
BR-64-94	1-31-03	SIDEWALK REPAIR AND EXPANSION JOINT REPAIRS
BR-64-95	1-31-03	SIDEWALK REPAIR AND EXPANSION JOINT REPAIRS
BR-64-96	1-31-03	BENT DRAINAGE DETAILS
BR-64-97	1-31-03	BENT & ABUTMENT DRAINAGE DETAILS
BR-64-98	1-31-03	EXPANSION JOINT REPAIR
BR-64-99	1-31-03	SIDEWALK EXPANSION JOINT REPAIR DETAILS
BR-64-100		ABUTMENT #2
BR-64-101	1-31-03	ABUTMENT #2 DETAILS
BR-64-102		BENT & ABUTMENT REPAIR DETAILS
BR-64-103		EXPANSION JOINT DRAIN DETAILS
BR-64-104	2-06-03	BRIDGE REPAIR DETAILS
BR-64-105		BILL OF STEEL

LIST OF SPECIAL PROVISIONS

DWG. NO.	DATE	TITLE
105A	**	APPROVAL OF SHOP DRAWINGS
108B	**	PROJECT COMPLETION AND INCENTIVE/DISINCENTIVE
604CR	**	REPAIR OF BRIDGE DECK CRACKS

** DENOTES CURRENT REVISION DATE AS PER CONTRACT DOCUMENTS

ROADWAY DESIGN STANDARDS

DWG. NO.	DATE	TITLE
RD-A-1	12-18-99	STANDARD ABBREVIATIONS
RD-L-1	07-29-96	STANDARD LEGEND

ROADWAY AND PAVEMENT APPURTENANCES

DWG. NO.	DATE	TITLE
RP-H-1	05-27-96	HANDICAP RAMP
RP-NMC-10	10-26-97	NONMOUNTABLE CONCRETE CURBS AND CONCRETE CURBS AND GUTTERS
RP-NMC-11	10-26-97	NONMOUNTABLE CONCRETE CURBS AND CONCRETE CURBS AND GUTTERS
RP-S-7	07-29-96	DETAILS FOR STANDARD CONCRETE SIDEWALKS

TRAFFIC CONTROL APPURTENANCES

DWG. NO.	DATE	TITLE
T-L-1	11-12-93	LIGHTING DETAILS - SUPPORTS
T-L-1A	10-26-95	LIGHTING DETAILS - FOUNDATIONS
T-L-3	04-15-96	LIGHTING DETAILS - PULL BOXES
T-L-4	07-29-96	LIGHTING DETAILS - CONDUIT AND CABLE INSTALLATION
T-M-1	07-29-98	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS AND MARKING ABBREVIATIONS
T-M-2	01-19-96	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS
T-M-3	09-19-91	MARKING STANDARDS FOR TRAFFIC ISLANDS, MEDIANS & PAVED SHOULDERS ON CONVENTIONAL ROADS
T-M-4	05-27-01	INTERSECTION PAVEMENT MARKINGS
T-S-10	12-07-90	MOUNTING DETAILS - FLAT SHEET SIGNS, ALUMINUM-STEEL DESIGN
T-S-12	05-27-01	STEEL GROUND MOUNTED SIGNS, BREAK-AWAY TYPE POST FOOTING DETAILS - SQUARE TUBES
T-S-18	05-27-01	END-OF-ROADWAY AND DEAD END SIGNS, METAL BARRICADES (TYPE III) AND WORK ZONE SPEED SIGNS
T-WZ-10	01-19-01	ADVANCE ROAD WORK SIGNING ON HIGHWAYS AND FREEWAYS

BRIDGE APPURTENANCES

DWG. NO.	DATE	TITLE
STD-9-1	12-19-94	REINFORCING BAR SUPPORT DETAILS FOR CONCRETE SLABS
STD-10-1	05-11-92	MISCELLANEOUS ABUTMENT AND DRAINAGE DETAILS - 1971

SAFTEY APPURTENANCES AND FENCE

DWG. NO.	DATE	TITLE
S-F-10B	05-27-01	RIGHT-OF-WAY CHAIN LINK FENCE

JACOB A. WILLIAMS — REGISTERED ENGINEER — TENNESSEE — 3-19-03 — NO. 107629 — STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REFERENCE DRAWINGS

BRIDGE NO. 19-SR6-9.74
SR-6 (VICTORY MEMORIAL BRIDGE)
OVER CUMBERLAND RIVER
AND GAY STREET
DAVIDSON CO.
2003

DESIGNED BY SCOTT SCHRIVER, E.I. DATE 1-03
DRAWN BY SCOTT SCHRIVER, E.I. DATE 1-03
SUPERVISED BY JACOB WILLIAMS, P.E. DATE 1-03
CHECKED BY JACOB WILLIAMS, P.E. DATE 1-03

BR-64-91

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BRIDGE GENERAL NOTES

FORMS AND FALSEWORK: ALL CONCRETE FORM WORK, FALSEWORK, AND TEMPORARY SUPPORTS SHALL BE REMOVED AFTER REPAIRS ARE COMPLETED. COST OF FORMS, FALSEWORK, AND TEMPORARY SUPPORT REMOVAL SHALL BE INCLUDED IN ITEMS BID ON. THIS WORK SHALL BE COMPLETED BEFORE FINAL PAYMENT IS APPROVED.

SPECIAL NOTE FOR UTILITIES: IT IS INTENDED THAT THE COST OF MATERIALS AND LABOR NECESSARY FOR THE COMPLETE INSTALLATION OF UTILITIES SHOULD BE BORNE BY OTHERS AND SHALL NOT BE PAID FOR AS A PART OF THIS CONTRACT. THE CONTRACTOR SHALL COOPERATE WITH OTHERS IN THE INSTALLATION OF UTILITIES WITH NO ADDITIONAL COMPENSATION ALLOWED THE CONTRACTOR AS A RESULT.

FINISHING CONCRETE SURFACES: CONCRETE FINISHING SHALL BE IN ACCORDANCE WITH SECTION 604.22 OF THE TENNESSEE STANDARD SPECIFICATION. A CLASS I FINISH FOLLOWED BY AN APPLIED TEXTURE FINISH SHALL BE USED IN LIEU OF A CLASS II FINISH. NO TEXTURE FINISH SHALL BE APPLIED PRIOR TO COMPLETION OF PAVING AND HAULING OPERATIONS AT THE BRIDGE SITE.

CRACK SEALING WITH METHACRYLATE (SIDEWALK CRACKS): APPLY HIGH MOLECULAR WEIGHT METHACRYLATE (HMWM) CRACK SEAL IN CONSTRUCTION JOINTS. SEALER SHALL BE APPLIED AFTER ALL CONCRETE HAS BEEN IN PLACE A MINIMUM OF TEN (10) DAYS.

QUICK SET PATCHING MATERIAL: QUICK SET PATCHING MATERIAL SHALL BE A POLYMER MODIFIED CEMENTIOUS PATCHING MATERIAL. SEE TDOT QUALIFIED PRODUCTS LIST 13, SUB LIST F, FOR ACCEPTABLE PATCHING MATERIAL.

WELDING: SHALL BE IN ACCORDANCE WITH ANSI/AASHTO/AWS D 1.5-96 BRIDGE WELDING CODE AND THE STANDARD SPECIFICATIONS.

SHOP DRAWINGS: SHALL BE SUBMITTED ACCORDING TO SPECIAL PROVISION NO. 105A, SHOP DRAWINGS SHALL BE SUBMITTED TO THE BRIDGE REPAIR OFFICE OF THE DIVISION OF STRUCTURES.

ANY DAMAGE TO EXISTING STRUCTURES TO BE LEFT IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

SPECIFICATIONS: STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION. (MARCH 1995 EDITION)

DESIGN SPECIFICATIONS: AASHTO 1996 EDITION WITH ADDENDA.

CONCRETE CURING: ALL CONCRETE TO BE CURED ACCORDING TO THE STANDARD SPECIFICATIONS.

REINFORCING STEEL: SEE THE STANDARD SPECIFICATIONS. ALL REINFORCEMENT SHALL BE EPOXY COATED.

DEMOLITION: THE CONTRACTOR SHALL TAKE SPECIAL CARE TO PROTECT ANY PARTS OF THE STRUCTURE THAT ARE NOT TO BE REMOVED SPECIFICALLY. THE CONTRACTOR IS NOT ALLOWED TO USE A HYDRAULIC RAM MOUNTED ON A BACKHOE (COMMONLY CALLED A HOE RAM) OR OTHER SIMILARLY HEAVY EQUIPMENT FOR CONCRETE REMOVAL. PNEUMATIC HAMMERS MAY BE USED TO REMOVE UNSOUND CONCRETE. FOR FULL DEPTH OF CONCRETE SLAB REMOVAL EXCEPT OVER BEAMS, THE MAXIMUM HAMMER SIZE IS 90 POUND CLASS. SAWING OR CUTTING OF THE CONCRETE IS ACCEPTABLE SO LONG AS ANY SPECIFIED PROJECTION OF THE EXISTING REINFORCING STEEL IS MAINTAINED. ALL DEVICES PROPOSED FOR CONCRETE DEMOLITION SHALL MEET THE APPROVAL OF THE ENGINEER.

HIGH EARLY STRENGTH CONCRETE: THE MIX TO MEET THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS, CLASS "A", EXCEPT THE CEMENT CONTENT SHALL BE A MINIMUM OF 714 LBS. THE WATER CEMENT RATIO SHALL BE A MAXIMUM OF 0.40, NO FLY ASH REPLACEMENT WILL BE PERMITTED, AND THE MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE 3,500 P.S.I. TRAFFIC SHALL NOT BE PERMITTED ON ANY OF THE REPAIR AREAS UNTIL TEST SPECIMENS ATTAIN A COMPRESSIVE STRENGTH OF 3000 P.S.I. MINIMUM AND THE CONCRETE HAS BEEN IN PLACE A MINIMUN OF TEN (10) DAYS.

GROUTED BARS IN DRILLED HOLES: HORIZONTALLY DRILLED HOLES SHALL BE DRILLED ¼" IN DIAMATER LARGER THAN THE BAR. CLEANED. PACKED WITH NON-SHRINK GROUT AND THE BAR ROTATED (NOT DRIVEN) INTO ITS SEAT. VERTICALLY DRILLED HOLES SHALL BE DRILLED ¼" IN DIAMETER LARGER THAN THE BAR, CLEANED, PACKED WITH EPOXY GROUT AND BAR DRIVEN TO IT'S SEAT. ALL GROUTING MATERIALS SHALL BE APPROVED BY T.D.O.T. MATERIALS AND TESTS.

SPECIAL ENVIRONMENTAL PROTECTION NOTE TO THE CONTRACTOR:
CONTRACTOR SHALL USE EXTREME CARE AND TAKE ANY MEASURE NECESSARY TO INSURE THAT NO DEBRIS IS DROPPED INTO THE STREAM OR ONTO RAILROAD R.O.W. THIS SHALL BE ACCOMPLISHED BY THE USE OF BASKETS, NETTING, WRAPPING, WORK PLATFORM, OR OTHER SIMILIARLY EFFECTIVE MEANS. ANY DEBRIS WHICH IS ALLOWED TO DROP ON THE BANKS BELOW THE BRIDGE SHALL NOT BE ALLOWED TO ENTER THE STREAM AND SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR. COST OF REMOVING AND DISPOSING OF DEBRIS SHALL BE INCLUDED IN ITEMS BID ON.

ANY CONSTRUCTION WITHIN THE STREAM CHANNEL AREA SHALL BE SEPARATED FROM FLOWING WATER, AND ACCOMPLISHED DURING LOW FLOW CONDITIONS. THIS SHALL BE ACCOMPLISHED DURING LOW FLOW CONDITIONS. THIS SHALL BE ACCOMPLISHED BY THE USE OF FLUMES, DIVERSION CHANNEL WITH SAND BAG BERM, DIVERSION PIPE, OR IN SOME CASES COFFERDAMS.

RAILROAD PROTECTION: FULL CONTAINMENT OF PAINTING OPERATION SHALL BE MAINTAINED TO PROTECT RAILROAD BALLAST FROM SAND RESIDUE AND ANY LEAD CONTAMINATION FROM THE OLD PAINT.

DESIGNED BY	SCOTT SCHRIVER, E.I.	DATE	1-03
DRAWN BY	JIM ROBERTS	DATE	1-03
SUPERVISED BY	JACOB WILLIAMS, P.E.	DATE	1-03
CHECKED BY	JACOB WILLIAMS, P.E.	DATE	1-03

1 3 PAINTING OF NEW STEEL: ALL STRUCTURAL STEEL SHALL BE BLAST CLEANED AND PAINTED. BLAST CLEANING SHALL BE IN ACCORDANCE WITH TENNESSEE STANDARD SPECIFICATION 603.05 (2B). PAINT SHALL BE SYSTEM 'A', INORGANIC ZINC PAINT SYSTEM, AS STATED IN STANDARD SPECIFICATION 603.06 (A). COLOR OF THE URETHANCE FINISH COAT SHALL COMPLY WITH FEDERAL STANDARD NO. 595A. ALL STEEL ELEMENTS TO BE PAINTED MOUNTAIN GRAY (16440) INCLUDING CURB RAIL. SEE SECTIONS 603 AND 910 OF THE STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION. ALL NEW STEEL SHALL RECEIVE A SHOP ZINC PRIMER.

CONTAINMENT AND DISPOSAL OF EXISTING PAINT SYSTEM: ACCORDING TO OUR RECORDS THE EXISTING PAINT SYSTEM CONTAINS LEAD SILICO CROMATE PAINT, WHICH HAS BEEN DESIGNATED AS A HAZARDOUS MATERIAL. THE CONTRACTOR SHALL CONTAIN AND DISPOSE OF ALL PAINT REMOVAL WASTE IN ACCORDANCE WITH THE TENNESSEE STANDARD SPECIFICATION 603.13.

BRACING: THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING REPAIRS. DETAILS OF ANY TEMPORARY SUPPORT SYSTEM OR FALSEWORK REQUIRED SHALL BE SUBMITTED TO THE ENGINEER BEFORE BEGINING ANY REPAIRS. COST TO BE INCLUDED IN ITEM NO. 602-10.05.

WORKER PROTECTION: OUR MAINTENANCE RECORDS INDICATE THAT THIS BRIDGE WAS ORIGINALLY PAINTED WITH MATERIALS CONTAINING LEAD AND/OR CHROMATE AND THE CONTRACTOR SHALL BE REQUIRED TO PROCEED ACCORDINGLY TO TAKE ALL MANDATORY SAFEGUARDS PRESCRIBED BY THE STATE AND FEDERAL LAW FOR BOTH THE WORKER'S PROTECTION AND HAZARDOUS MATERIALS DISPOSAL.

PAINT/TEXTURE COATING OVERSPRAY: ARRANGEMENTS SHALL BE MADE BY THE CONTRACTOR AT THE CONVENIENCE OF THE TDOT MOTOR POOL DURING PAINTING/TEXTURE COATING OPERATIONS SO AS TO PREVENT DAMAGE TO VEHICLES BY OVERSPRAY IN ADJACENT PARKING LOTS AND UNDERPASSES. THE CONTRACTOR SHALL ASSUME ALL LIABILITY FOR DAMAGE OCCURRING TO VEHICLES FROM OVERSPRAY OR FALLING DEBRIS.

1 2 3 RIVER NAVIGATIONAL LIGHTING: MAINTAIN RIVER NAVIGATIONAL LIGHTING DURING ALL PHASES OF WORK.

MOTOR POOL: PERSONELL SHALL RECEIVE 3 DAYS PRIOR NOTICE TO MOVE STATE VEHICLES WHEN WORKING IN A DESIRED AREA. NEW MOTOR POOL AREA SHALL BE COMPLETED FIRST TO PROVIDE LOCATIONS TO MOVE STATE CARS. CONTRACTOR WORK AREA ABOVE THE EXISTING MOTOR POOL IS DETERMINED BY THE CAPACITY OF CARS IN PROPOSED MOTOR POOL AREA. CONTRACTOR SHALL COOPERATE WITH TDOT MOTOR POOL PERSONNEL AS TO NOT EFFECT THE DAILY OPERATIONS OF THE MOTOR POOL.

PROJECT NO.	YEAR	SHEET NO.
19023-4213-04	2003	2

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	1-31-03	JAW	CHANGED ITEM NOS. & NOTES
2	2-6-03	JAW	CHANGED & ADDED ITEM NO.
3	3-19-03	JAW	CHANGED NOTES

ESTIMATED BRIDGE QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY (19-SR6-9.74)
(1)	202-04.01	REMOVAL OF STRUCTURES (BR. NO. 19-SR6-9.74)	L.S.	1
	204-02.01	DRY EXCAVATION (BRIDGES)	C.Y.	49
(6)	602-10.05	BRACING REPAIRS	L.S.	1
(13)	603-02.01	REPAINTING EXISTING STEEL STRUCTURES (BR. NO. 19-SR6-9.74)	L.S.	1
	603-05.20	CONTAINMENT & DISPOSAL OF WASTE (BR. NO. 19-SR6-9.74)	L.S.	1
	604-03.01	CLASS "A" CONCRETE (BRIDGES)	C.Y.	176
2 (19)	604-04.02	APPLIED TEXTURE FINISH (EXISTING STRUCTURES)	S.Y.	9645
(4)	604-10.05	CONCRETE	S.F.	185
(14)	604-10.43	PENETRATING WATER REPELLENT CONCRETE SEAL	S.Y.	4272
(9)	604-10.44	EXPANSION JOINT REPAIRS	L.F.	168
(5)	604-10.18	REINFORCING STEEL (REPAIRS)	LB.	23,840
(7)	604-10.30	BRIDGE DECK REPAIR (FULL DEPTH OF SLAB)	S.Y.	135
(17) (4)	604-10.54	CONCRETE REPAIRS	S.F.	215
(4)	604-10.62	EPOXY INJECTION REPAIRS (COMPLETE AND IN-PLACE)	L.F.	56
(12)	604-10.90	MISCELLANEOUS BRIDGE ITEMS	L.S.	1
1 (16)	610-11.03	PLASTIC PIPE DRAINS (8")	L.F.	300
(2)	617-02	BRIDGE DECK CRACK SEALING	L.F.	375
(3)	617-05	SEALANT (HMWM)	GAL.	5
1 (15)	620-09	REMOVAL & REPLACEMENT OF EXISTING BRIDGE RAIL	L.F.	25
1 (18)	714-01.01	STRUCTURAL LIGHTING (BR. NO. 19-SR6-9.74)	L.S.	1
	719-01.09	CLEAN DRAIN (WITH GRATE)	EACH	14

FOOTNOTES

(1) INCLUDES THE COST OF REMOVING SECTION OF ABANDONED RAILROAD TRACKS BETWEEN BENT NO. 18 & ABUTMENT NO. 2 AND CLOSED PIPE DRAINAGE SYSTEMS (ATTACHED TO BENTS).

(2) INCLUDES ALL COST FOR INSTALLING THE BRIDGE DECK CRACK SEALER (HMWM) INCLUDING CRACK PREPARATION, CLEANING LABOR, AND ALL MISCELLANEOUS MATERIALS REQUIRED TO SEAL THE LONGITUDINAL CONSTRUCTION JOINT ACCORDING TO SPECIAL PROVISION 604CR AND MANUFACTURER'S SPECIFICATIONS. THIS ITEM DOES NOT INCLUDE THE COST OF FURNISHING THE THE BRIDGE CRACK SEALANT ITSELF.

(3) INCLUDES ALL COST FOR FURNISHING THE SEALER (HMWM) FOR SEALING CRACKS. THE SEALER (HMWM) SHALL BE IN ACCORDANCE WITH SECTION 604CR.

(4) ITEM SHALL BE BID AS A CONTINGENCY AND MAY BE INCREASED, DECREASED, OR ELIMINATED AS DIRECTED BY THE ENGINEER.

(5) INCLUDES QUANTITY OF REINFORCING STEEL REQUIRED FOR ABUTMENT ADDITION.

(6) ITEM INCLUDES BRACING REQUIRED DURING THE REPLACEMENT OF SIDEWALK SECTIONS OCCURING ON THE BRIDGE.

1 (7) ITEM INCLUDES COST OF LABOR AND MATERIALS REQUIRED TO PERFORM FULL DEPTH REPAIR OF SIDEWALK SECTIONS ON BRIDGE SPECIFIED ON SHEETS BR-64-93 & BR-64-94.

(9) INCLUDES ALL COST OF LABOR AND MATERIALS FOR THE REPAIR OF EXPANSION JOINTS INCLUDING THE COST OF ELASTOMERIC CONCRETE.

(10) REQUIRED AT BENTS 9, 13 & 18. SEE DRAWING NO. BR-64-102 FOR DETAILS.

(11) COST TO CLEAN OUT UNDERGROUND PIPE TO STORM DRAIN SYSTEM TO BE INCLUDED ON ITEMS BID ON.

(12) ITEM INCLUDES ALL COSTS, INCLUDING MATERIALS AND LABOR, ASSOCIATED WITH THE INSTALLATION OF NETTING TO THE UNDERSIDE OF THE SUPERSTRUCTURE (SEE SHEET BR-64-104), INSTALLATION OF RUBBER GUTTERS AT SPECIFIED EXPANSION JOINT LOCATIONS (SEE SHEET BR-64-103) AND PROTECTIVE MEASURES SAFEGUARDING CARS IN PARKING LOT DURING CONSTRUCTION AND PAINTING (SEE SHEET BR-64-92).

(13) INCLUDES CLEANING AND PAINTING OF ALL STRUCTURAL STEEL. (APPOXIMATE WEIGHT OF STEEL TO BE PAINTED = 6,686,000 LBS.) INCLUDES CURB & CURB POST ON & OFF THE BRIDGE.

2 (14) INCLUDES PRESSURE WASHING SIDEWALKS FULL LENGTH OF BRIDGE (BOTH SIDES) AND THEN APPLYING THE PENETRATING WATER REPELLENT. FOR LIMITS SEE DRAWING NO. BR-64-93, 94 & 95. PRODUCT SHALL BE FROM THE QUALIFIED PRODUCT LIST 23 CATEGORY B OR AN APPROVED EQUAL.

(15) INCLUDES COST OF REMOVING AND REPLACING A SECTION OF ALUMINUM RAIL & POSTS. INCLUDES ALL LABOR & MATERIALS FOR COMPLETE IN PLACE INSTALLATION. FOR LOCATION AND DETAILS SEE DRAWING NO. BR-64-90. AND BR-64-98.

(16) INCLUDES SCHEDULE 40 PIPE, REDUCING SLEEVES, CLEAN OUT PLUGS, LABOR AND ADDITIONAL MATERIALS REQUIRED TO REPLACE BRIDGE DRAINS AS SHOWN ON BR-64-96 & 97.

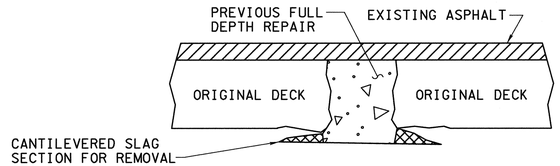
1 (17) INCLUDES COST OF REPAIR OF VERTICAL CURB FACE BRIDGE SIDEWALK SECTIONS. SEE SHEETS BR-64-93 & BR-64-99.

(18) FOR STRUCTURAL LIGHTING NOTES AND QUANTITIES, SEE SHEET 2M.

1 3

(19) FOR NOTES AND DETAILS REGARDING TEXTURE COATING,
2 SEE SHEET BR-64-104.

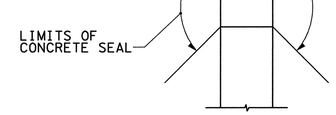
PAINTING: THE REQUIRED RECOAT TIME IS 24 HOURS OR BASED ON MANUFACTURER'S SUGGESTED RECOMMENDATION, WHICHEVER IS LONGER.



NOTE: REMOVE CONCRETE SLAG FROM LOCATIONS OF PAST FULL-DEPTH REPAIR SECTIONS ONLY ON BRIDGE DECK OCCURRING OVER LAND. COST TO BE INCLUDED IN ITEM 202-04.01 REMOVAL OF STRUCTURES, L.S.

DENOTES: AREAS TO BE REMOVED.

REMOVAL OF SLAG



NOTE: SEAL IS TO BE APPLIED ON SECTIONS OF BENTS THAT PROTRUDE FROM COVER OF SUPERSTRUCTURE.

BENT SEALANT

JACOB A. WILLIAMS — REGISTERED — 3-19-03 — STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED BRIDGE QUANTITIES AND GENERAL NOTES

BRIDGE NO. 19-SR6-9.74
SR-6 (VICTORY MEMORIAL BRIDGE) OVER CUMBERLAND RIVER AND GAY STREET DAVIDSON CO. 2003

BR-64-92

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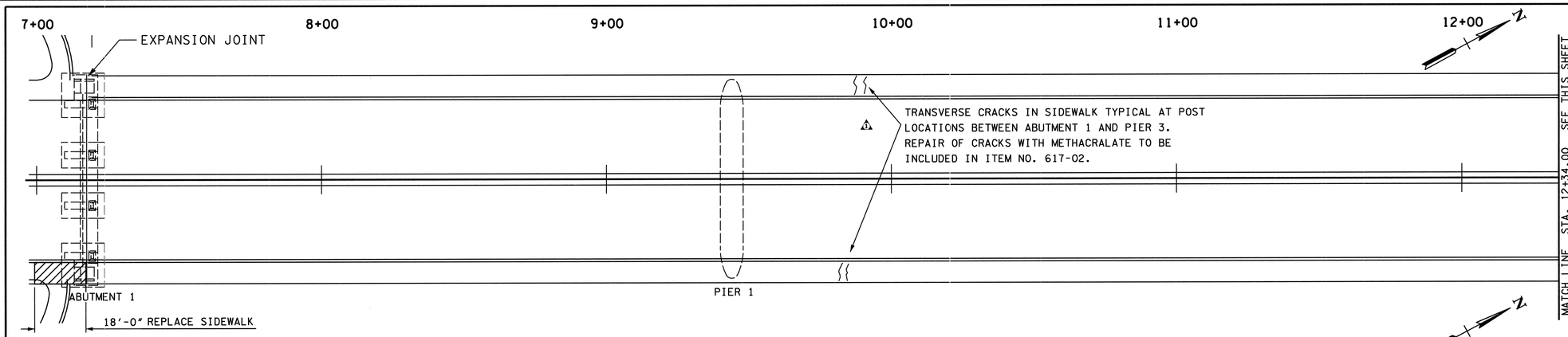

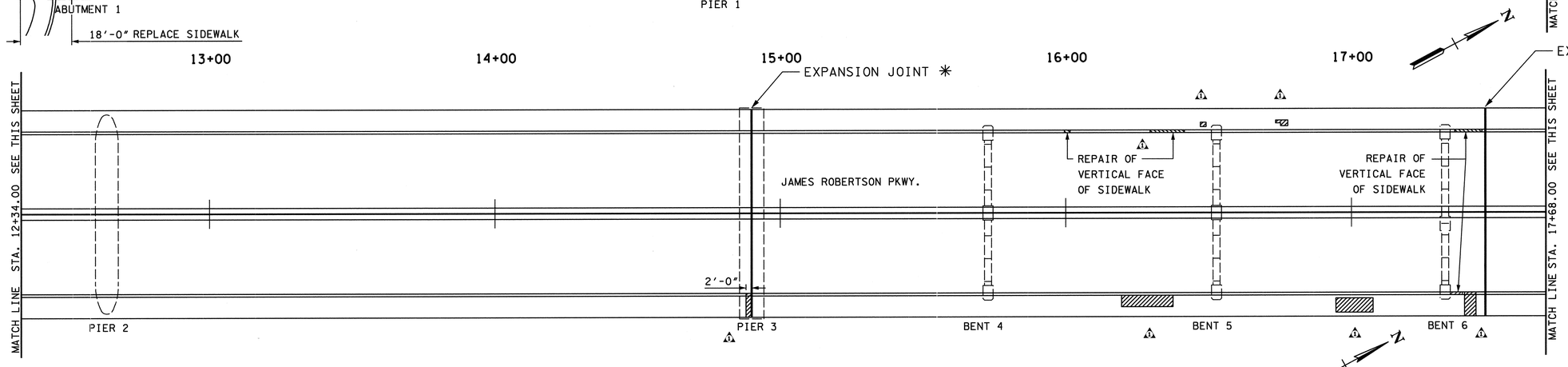

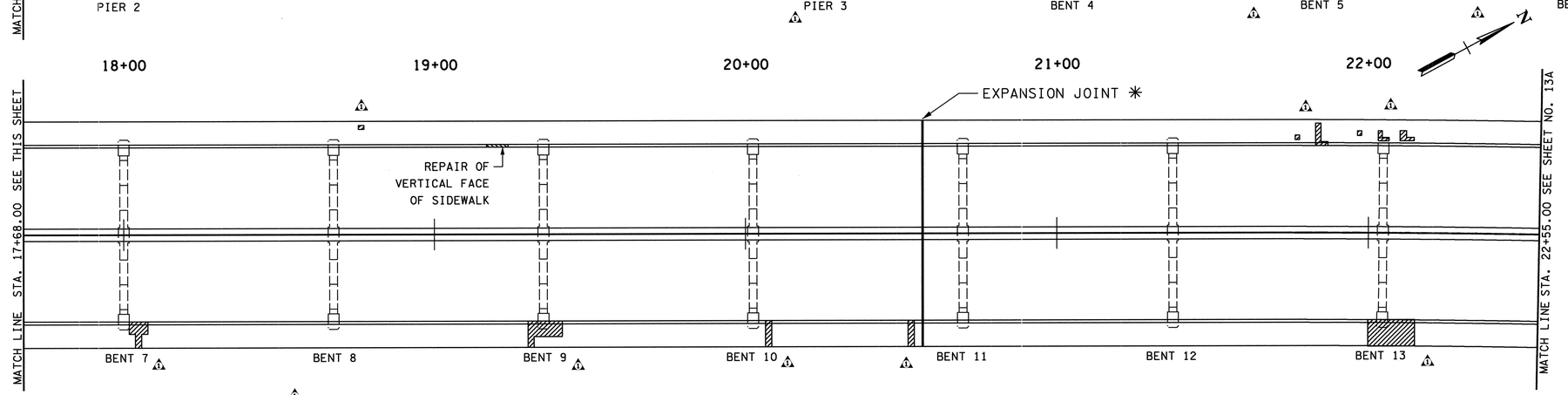

PROJECT NO.	YEAR	SHEET NO.
19023-4213-04	2003	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	1-03	SRS	ADDED REPAIR LOCATIONS

DENOTES: REPAIR OF VERTICAL FACE OF SIDEWALK FOR DETAIL SEE BR-64-99.

DENOTES: REQUIRED AREA OF FULL DEPTH REPAIR OF SIDEWALK. FOR DETAIL SEE BR-64-99.

✳ DENOTES: FOR DETAILS, NOTES AND ITEM NUMBERS OF REPAIR AT EXPANSION JOINTS, SEE SHEET BR-64-98.

NOTE: FOR ITEM NUMBERS AND GENERAL NOTES SEE SHEET BR-64-95.

0 20' 40' 60'

DESIGNED BY SCOTT SCHRIVER, E.I. DATE 1-03
DRAWN BY JIM ROBERTS DATE 1-03
SUPERVISED BY JACOB WILLIAMS, P.E. DATE 1-03
CHECKED BY JACOB WILLIAMS, P.E. DATE 1-03

JACOB A. WILLIAMS 2-3-03 No. 107523 STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIDEWALK AND EXPANSION JOINT REPAIR

BRIDGE NO. 19-SR6-9.74
SR-6 (VICTORY MEMORIAL BRIDGE) OVER CUMBERLAND RIVER AND GAY STREET DAVIDSON CO. 2003

BR-64-93

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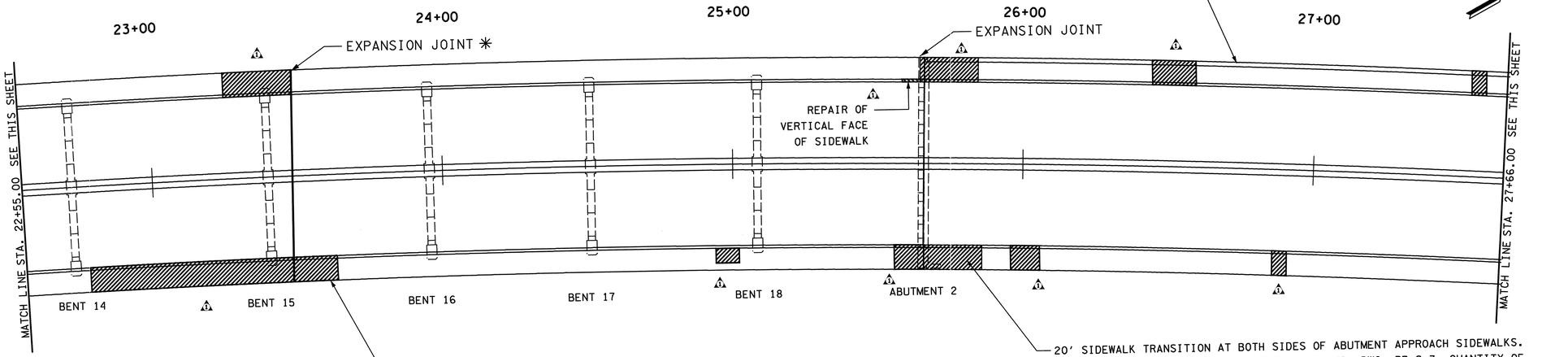
PROJECT NO.	YEAR	SHEET NO.
19023-4213-04	2003	

REVISIONS

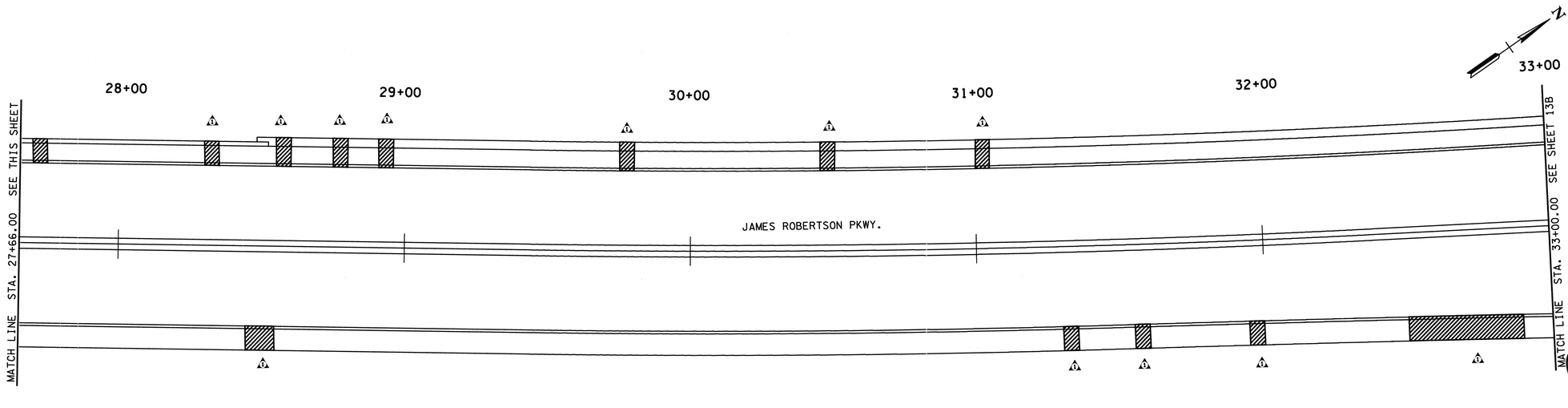
NO.	DATE	BY	BRIEF DESCRIPTION
1	1-03	SRS	ADDED REPAIR LOCATIONS

1 SIDEWALK TO BE PRESSURE WASHED AND RECEIVE A PENETRATING SEAL. COST OF PRESSURE WASHING AND PENETRATING SEAL TO BE INCLUDED IN ITEM NO. 604-10.43.



1 SIDEWALK TO BE PRESSURE WASHED AND RECEIVE A PENETRATING SEAL. COST OF PRESSURE WASHING AND PENETRATING SEAL TO BE INCLUDED IN ITEM NO. 604-10.43.

1 20' SIDEWALK TRANSITION AT BOTH SIDES OF ABUTMENT APPROACH SIDEWALKS. FOR DETAILS OF SIDEWALK REPLACEMENT SEE STD. DWG. RP-S-7. QUANTITY OF CONCRETE, STEEL, AND BASE STONE FOR LEVELING TO BE INCLUDED IN ITEM NO. 701-01.02.



1 DENOTES: REPAIR OF VERTICAL FACE OF SIDEWALK FOR DETAIL SEE BR-64-99.

DENOTES: REQUIRED AREA OF FULL DEPTH REPAIR OF SIDEWALK. FOR DETAIL SEE BR-64-99.

✳ DENOTES: FOR DETAILS, NOTES AND ITEM NUMBERS OF REPAIR AT EXPANSION JOINTS, SEE SHEET BR-64-98.

NOTE: FOR ITEM NUMBERS AND GENERAL NOTES SEE SHEET BR-64-95.

0 20' 40' 60'

DESIGNED BY	SCOTT SCHRIVER, E.I.	DATE	1-03
DRAWN BY	JIM ROBERTS	DATE	1-03
SUPERVISED BY	JACOB WILLIAMS, P.E.	DATE	1-03
CHECKED BY	JACOB WILLIAMS, P.E.	DATE	1-03

JACOB A. WILLIAMS — REGISTERED ENGINEER — No. 107628 — STATE OF TENNESSEE — 2-3-03

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIDEWALK AND EXPANSION JOINT REPAIR

BRIDGE NO. 19-SR6-9.74
SR-6 (VICTORY MEMORIAL BRIDGE) OVER CUMBERLAND RIVER AND GAY STREET DAVIDSON CO. 2003

BR-64-94

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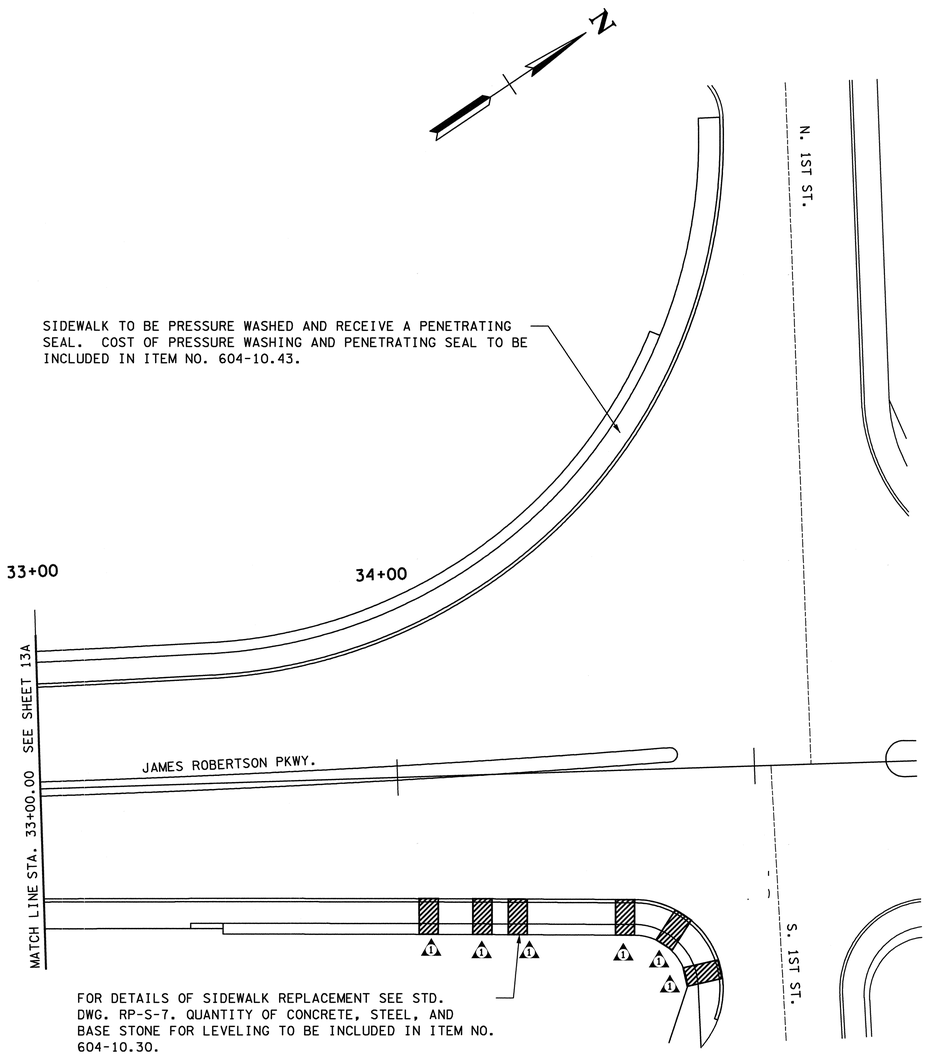

SIDEWALK TO BE PRESSURE WASHED AND RECEIVE A PENETRATING SEAL. COST OF PRESSURE WASHING AND PENETRATING SEAL TO BE INCLUDED IN ITEM NO. 604-10.43.

FOR DETAILS OF SIDEWALK REPLACEMENT SEE STD. DWG. RP-S-7. QUANTITY OF CONCRETE, STEEL, AND BASE STONE FOR LEVELING TO BE INCLUDED IN ITEM NO. 604-10.30.

0 20' 40' 60'

DENOTES: REQUIRED AREA OF FULL DEPTH REPAIR OF SIDEWALK.

NOTES:

ALL REINFORCING STEEL IN AREAS OF SIDEWALK REPAIR SHALL BE COMPLETELY CLEANED. ANY ADDITIONAL AREAS OF SIDEWALK REPAIR SHALL BE DESIGNATED BY PERSONNEL FROM THE BRIDGE REPAIR OFFICE. INSPECTIONS TO DETERMINE ADDITIONAL AREAS OF SIDEWALK REPAIR SHALL BE SCHEDULED WITH THE BRIDGE REPAIR OFFICE AT LEAST THREE (3) DAYS IN ADVANCE.

FOR DETAILS OF SIDEWALK REPAIR AT EXPANSION JOINT LOCATIONS, SEE SHEET BR-64-99.

COST OF LABOR AND MATERIALS REQUIRED TO REPLACE SECTIONS OF SIDEWALKS OCCURING ON APPROACHES TO BE PAID FOR UNDER ITEM No. 701-01.02.

ITEM No. 701-01.02 SHALL BE BID WITH THE CONTINGENCY THAT THESE ITEMS MAY BE INCREASED, DECREASED OR ELIMINATED AS DIRECTED BY THE ENGINEER.

COST OF FRAMING, CONCRETE, ABRASIVE BLASTING, LABOR AND CONCRETE REMOVAL BY PNEUMATIC HAMMERS AND ANY MISCELLANEOUS MATERIALS TO COMPLETE THE PARTIAL AND FULL DEPTH REPAIRS SHALL BE INCLUDED IN ITEM No. 701-01.02.

THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD ALL EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT. THE COST OF PROTECTING UTILITIES FROM DAMAGE AND FURNISHING SPECIAL EQUIPMENT WILL BE INCLUDED IN THE PRICE OF ITEMS BID ON.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLACING FORMWORK BELOW THE EXISTING BRIDGE DECK. THE FORMWORK IS REQUIRED SO THAT NO DEBRIS WILL FALL INTO THE STREAM DURING SLAB REPAIR. DETAILS OF TEMPORARY SUPPORT SYSTEM OR FALSEWORK REQUIRED SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND SHALL MEET WITH THE FULL SATISFACTION OF THE ENGINEER BEFORE ANY DEMOLITION IS BEGUN. COST OF FORMWORK SHALL BE INCLUDED IN ITEM No. 602-10.05, BRACING REPAIRS, L.S.

PROJECT NO.	YEAR	SHEET NO.
19023-4213-04	2003	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	1-03	SRS	ADDED REPAIR LOCATIONS

JACOB A. WILLIAMS REGISTERED ENGINEER No. 107628 STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIDEWALK AND EXPANSION JOINT REPAIR

BRIDGE NO. 19-SR6-9.74
SR-6 (VICTORY MEMORIAL BRIDGE) OVER CUMBERLAND RIVER AND GAY STREET
DAVIDSON CO.
2003

DESIGNED BY SCOTT SCHRIVER, E.I. DATE 1-03
DRAWN BY JIM ROBERTS DATE 1-03
SUPERVISED BY JACOB WILLIAMS, P.E. DATE 1-03
CHECKED BY JACOB WILLIAMS, P.E. DATE 1-03

BR-64-95

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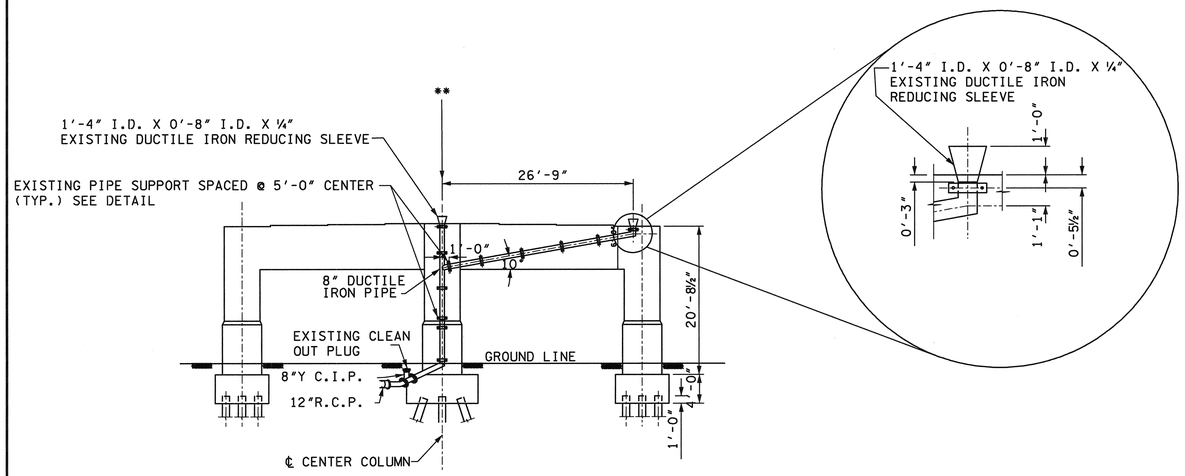
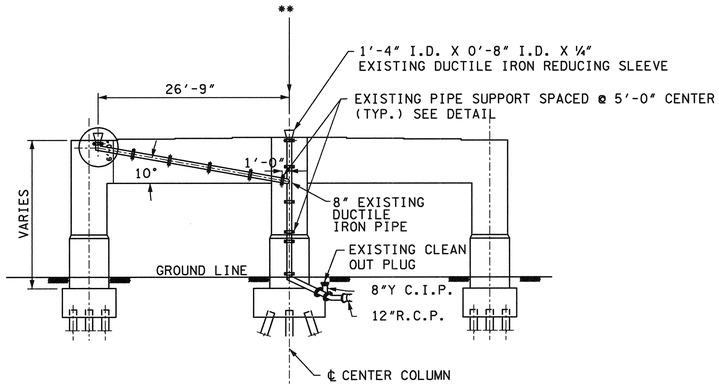
PROJECT NO.	YEAR	SHEET NO.
19023-4213-04	2003	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	1-31-03	JAW	CHANGED ITEM NO.



DOWNSPOUT ELEVATION FOR BENT 13
(WEST FACE)



DOWNSPOUT ELEVATION FOR BENTS 15 & 17
(EAST FACE)

** NOTE: CENTER COLUMN DOWNSPOUT IS NOT NEEDED BECAUSE THE ORIGINAL BRIDGE CENTERLINE DRAINS HAVE BEEN REMOVED.

NOTES:

1. REMOVE EXISTING CAST PIPE AND CAST REDUCING SLEEVES ABOVE GROUND AND REPLACE WITH SCHEDULE 40 PIPE, REDUCING SLEEVES, AND CLEAN OUT PLUGS RESPECTIVELY, IDENTICAL IN SIZE AND CONFORMING TO EXISTING CONFIGURATION.
2. CONTRACTOR MAY USE EXISTING ANCHORS FOR CLAMPS AND PIPE SUPPORTS. IF CONTRACTOR CHOOSES NOT TO USE THESE ANCHORS, THEN THE ANCHORS MUST BE REMOVED.
3. DRAWINGS ON THIS SHEET ARE RE-DRAWN FROM THE EXISTING PLANS.
4. BRIDGE DRAINAGE ELEMENTS ABOVE REDUCING SLEEVE TO BE BLAST-CLEANED AND PAINTED.
5. COST OF REMOVAL OF DRAINAGE PIPE SECTIONS SHALL BE INCLUDED IN ITEM NUMBER 202-04.01.
6. COST OF REMOVING DEBRIS PROHIBITING DRAINAGE THROUGH EXISTING GRATES AND REDUCING SLEEVES SHALL BE INCLUDED IN ITEM NUMBER 719-01.09.
7. ⚠1 COST OF SCHEDULE 40 PIPE, REDUCING SLEEVES, CLEAN OUT PLUGS, LABOR AND ADDITIONAL MATERIALS REQUIRED TO REPLACE DRAINS SHALL BE INCLUDED IN ITEM NUMBER 610-11.03.

JACOB A. WILLIAMS
REGISTERED ENGINEER
No. 107628
STATE OF TENNESSEE
1-31-03

DESIGNED BY SCOTT SCHRIVER, E.I. DATE 1-03
DRAWN BY WAGDY W. NEKELA DATE 1-03
SUPERVISED BY JACOB WILLIAMS, P.E. DATE 1-03
CHECKED BY JACOB WILLIAMS, P.E. DATE 1-03

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BENT DRAININGE DETAILS

BRIDGE NO. 19-SR6-9.74
SR-6 (VICTORY MEMORIAL BRIDGE)
OVER CUMBERLAND RIVER
AND GAY STREET
DAVIDSON CO.
2003

BR-64-96

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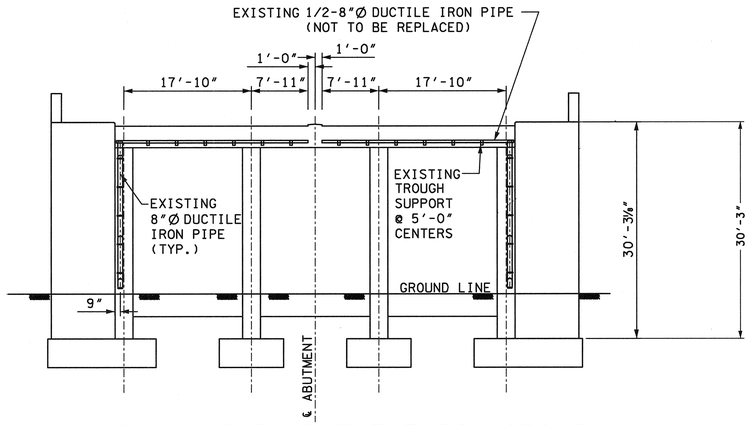
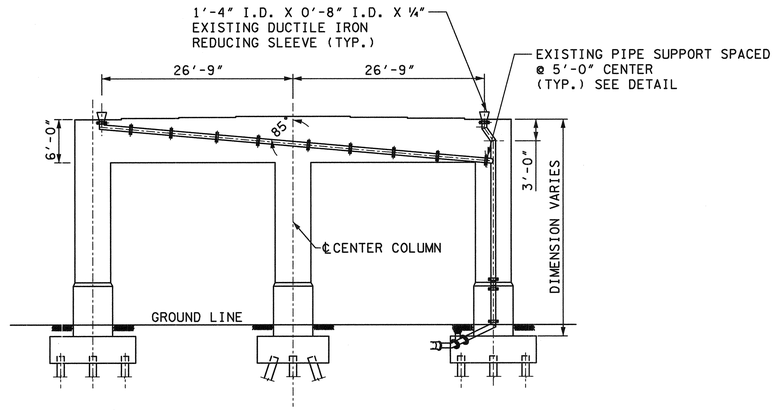


ELEVATION-WEST ABUTMENT DOWNSPOUT

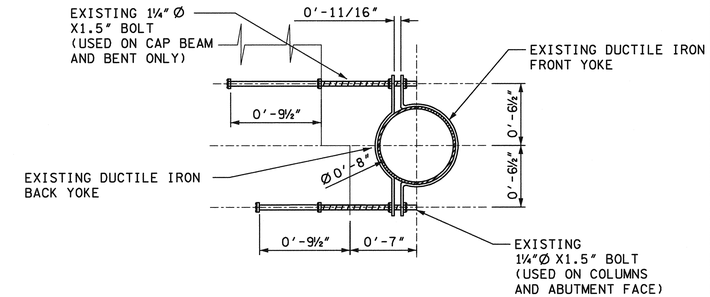


DOWNSPOUT ELEVATION FOR BENTS 6, 8 & 10
(EAST FACE)

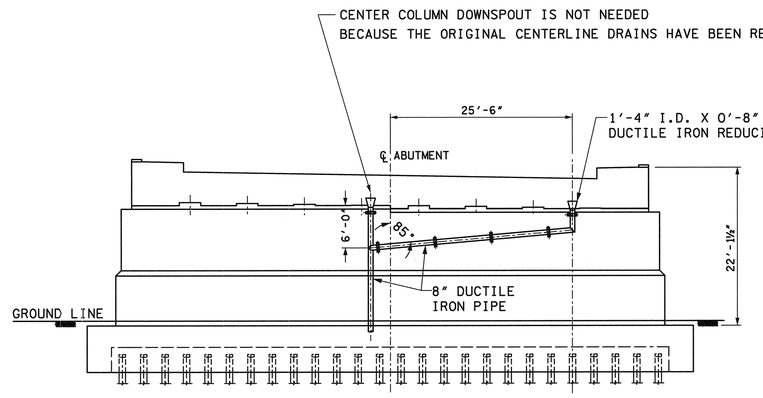
PROJECT NO.	YEAR	SHEET NO.
19023-4213-04	2003	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	1-31-03	JAW	CHANGED ITEM NO.



TYPICAL PIPE CLAMP DETAIL



ELEVATION-EAST ABUTMENT DOWNSPOUT

NOTE:
TIE IN TO EXISTING PIPES SHALL BE MODIFIED AND REQUIRE RELOCATION DUE TO NEW WALL BEING CONSTRUCTED.

NOTES:

1. REMOVE EXISTING CAST PIPE AND CAST REDUCING SLEEVES ABOVE GROUND AND REPLACE WITH SCHEDULE 40 PIPE, REDUCING SLEEVES, AND CLEAN OUT PLUGS RESPECTIVELY, IDENTICAL IN SIZE AND CONFORMING TO EXISTING CONFIGURATION.
2. CONTRACTOR MAY USE EXISTING ANCHORS FOR CLAMPS AND PIPE SUPPORTS. IF CONTRACTOR CHOOSES NOT TO USE THESE ANCHORS, THEN THE ANCHORS MUST BE REMOVED.
3. DRAWINGS ON THIS SHEET ARE RE-DRAWN FROM THE EXISTING PLANS.
4. BRIDGE DRAINAGE ELEMENTS ABOVE REDUCING SLEEVE TO BE BLAST-CLEANED AND PAINTED.
5. COST OF REMOVAL OF DRAINAGE PIPE SECTIONS SHALL BE INCLUDED IN ITEM NUMBER 202-04.01.
6. COST OF REMOVING DEBRIS PROHIBITING DRAINAGE THROUGH EXISTING GRATES AND REDUCING SLEEVES SHALL BE INCLUDED IN ITEM NUMBER 719-01.09.
7. COST OF SCHEDULE 40 PIPE, REDUCING SLEEVES, CLEAN OUT PLUGS, LABOR AND ADDITIONAL MATERIALS REQUIRED TO REPLACE DRAINS SHALL BE INCLUDED IN ITEM NUMBER 610-07.03. ADDITIONAL COST DUE TO RELOCATION OF PIPE FROM ORIGINAL CONFIGURATION AT EAST ABUTMENT SHALL ALSO BE IN ITEM NO. 610-07.03.
1. 8. COST OF REPAIR OR REPLACEMENT TO EXISTING METAL TROUGHS AT EXPANSION JOINT SHALL ALSO BE INCLUDED IN ITEM NO. 610-11.03.

DESIGNED BY SCOTT SCHRIVER, E.I. DATE 1-03
DRAWN BY WAGDY W. NEKELA DATE 1-03
SUPERVISED BY JACOB WILLIAMS, P.E. DATE 1-03
CHECKED BY JACOB WILLIAMS, P.E. DATE 1-03

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BENT & ABUTMENT DRAININGE DETAILS

BRIDGE NO. 19-SR6-9.74
SR-6 (VICTORY MEMORIAL BRIDGE)
OVER CUMBERLAND RIVER
AND GAY STREET
DAVIDSON CO.
2003

BR-64-97

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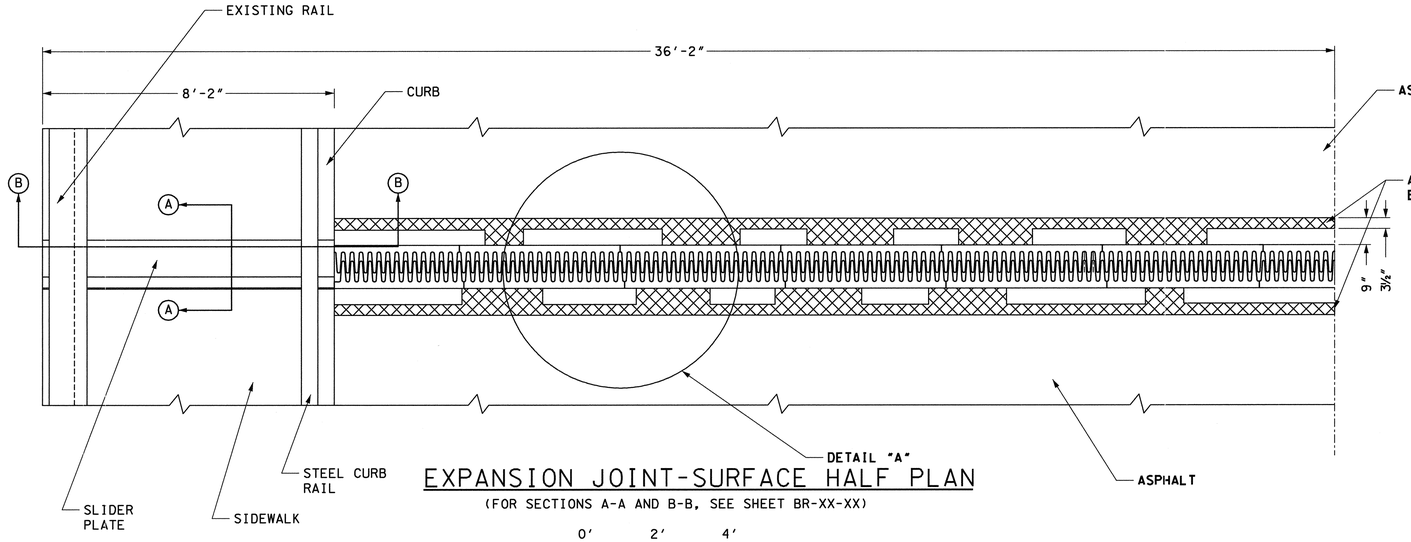
PROJECT NO.	YEAR	SHEET NO.
19023-4213-04	2003	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	1-03	CM	CHANGED NOTE

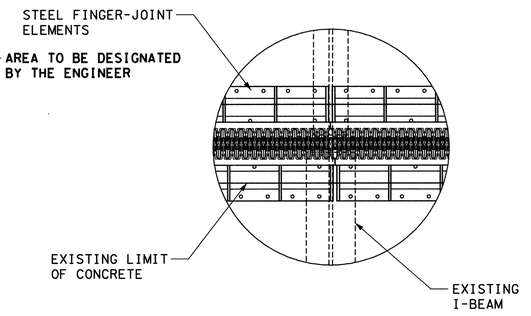


EXPANSION JOINT-SURFACE HALF PLAN

(FOR SECTIONS A-A AND B-B, SEE SHEET BR-XX-XX)

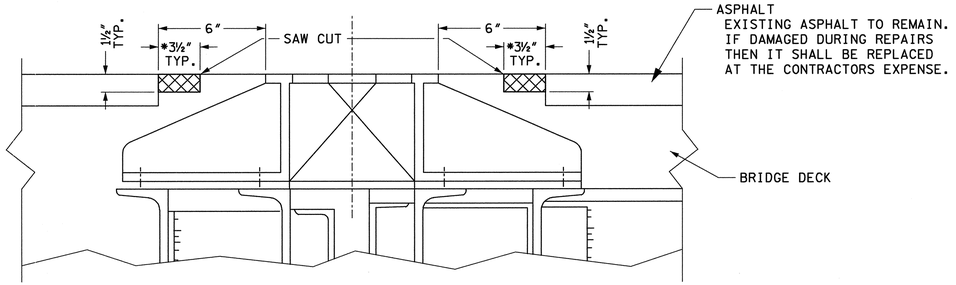
0' 2' 4'

AREA OF CONCRETE TO BE REMOVED AND REPLACED WITH ELASTOMERIC CONCRETE



DETAIL "A" - SUBSTRUCTURE

0' 2' 4'



EXPANSION JOINT HEADER DEMOLITION DETAIL

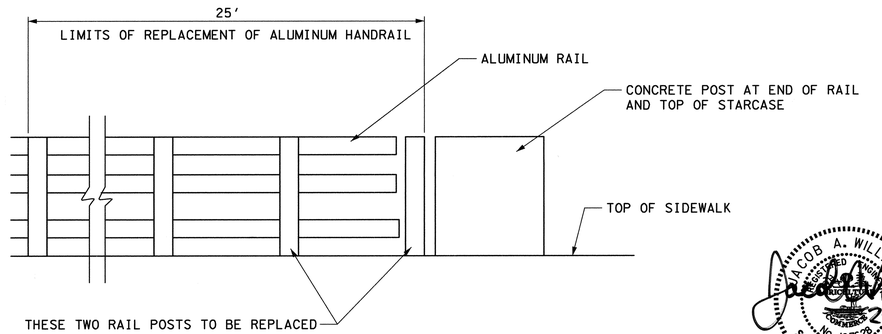
0' 0.5' 1.0'

* DENOTES: DIMENSION WILL VARY. QUANTITY SHALL BE BID AS A CONTINGENCY AND MAY BE INCREASED, DECREASED OR ELIMINATED AS DIRECTED BY THE ENGINEER.

NOTES:

1. ALL DEMOLITION OF CONCRETE TO BE INCLUDED IN ITEM NO. 202-04.01 (REMOVAL OF STRUCTURES).
2. ALL MATERIALS AND LABOR ASSOCIATED WITH THE CONSTRUCTION OF THE NEW EXPANSION JOINT HEADER, INCLUDING ELASTOMERIC CONCRETE, TO BE PAID FOR UNDER ITEM NOL 604-10.44.
3. POWER-DRIVEN HAND TOOLS USED FOR THE REMOVAL OF CONCRETE IN MAKING REPAIRS TO THE EXPANSION JOINTS ARE SUBJECT TO THE FOLLOWING RESTRICTIONS: A.)PNEUMATIC HAMMERS HEAVIER THAN NOMINAL 60 POUND CLASS SHALL NOT BE USED. ALSO, ALL REPAIRS OVER BEAMS WILL BE RESTRICTED TO 60 POUND PNEUMATIC HAMMERS. B.) CHIPPING HAMMERS OF THE 15 POUND CLASS SHALL BE USED TO REMOVE CONCRETE FROM BENEATH ANY REINFORCING STEEL.
4. ALL REINFORCING STEEL IN AREAS OF CONCRETE REPAIR SHALL BE COMPLETELY CLEANED.
5. AREAS OF CONCRETE REMOVAL SHALL BE DESIGNATED BY PERSONNEL FROM THE BRIDGE REPAIR OFFICE. INSPECTIONS TO DETERMINE AREAS OF CONCRETE REPAIR SHALL BE SCHEDULED WITH THE BRIDGE REPAIR OFFICE AT LEAST THREE (3) DAYS IN ADVANCE.

DESIGNED BY SCOTT SCHRIVER, E.I. DATE 10/02
DRAWN BY SCOTT SCHRIVER, E.I. DATE 10/02
SUPERVISED BY JACOB WILLIAMS, P.E. DATE 10/02
CHECKED BY JACOB WILLIAMS, P.E. DATE 10/02



ALUMINUM HANDRAIL REMOVAL DETAIL

NOTES:

FOR LOCATION OF PORTION TO BE REMOVED SEE SHEET BR-64-90.

COST OF REMOVAL AND REPLACEMENT OF RAIL TO BE INCLUDED IN ITEM NO. 620-09, HANDRAIL ASSEMBLY (ALUMINUM), L.F.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EXPANSION JOINT REPAIR

BRIDGE NO. 19-SR6-9.74
SR-6 (VICTORY MEMORIAL BRIDGE)
OVER CUMBERLAND RIVER
AND GAY STREET
DAVIDSON CO.
2003

BR-64-98

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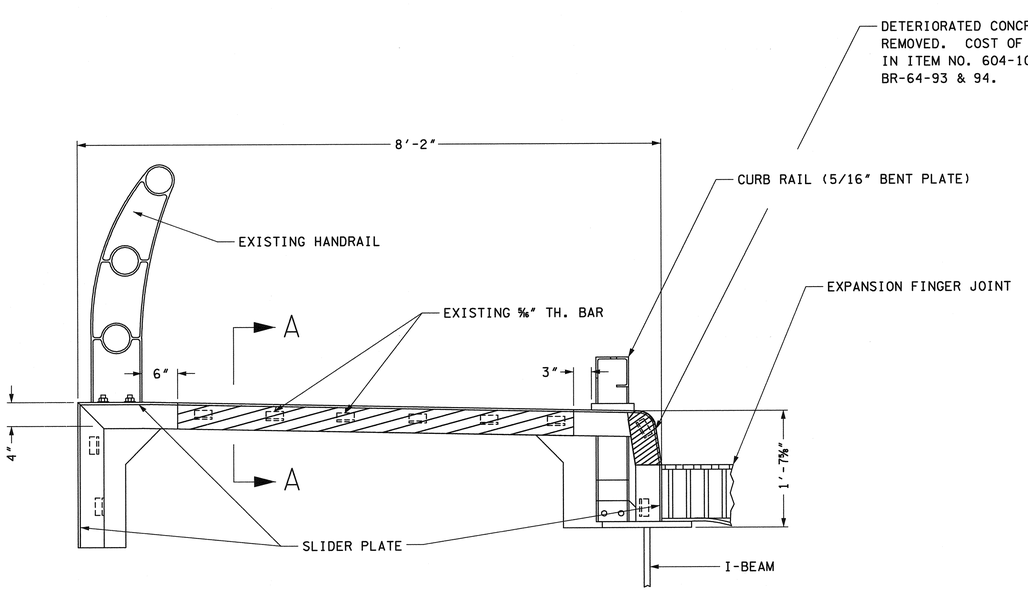
PROJECT NO.	YEAR	SHEET NO.
19023-4213-04	2003	

REVISIONS

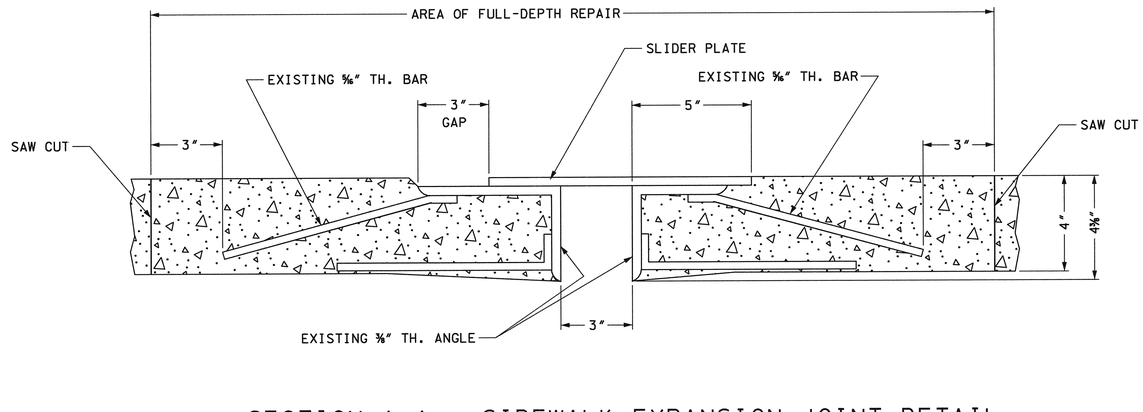
NO.	DATE	BY	BRIEF DESCRIPTION



SECTION TAKEN THRU SIDEWALK - SIDEWALK EXPANSION JOINT REPAIR

AREA OF CONCRETE REPLACEMENT

0' 1' 2' 3'



SECTION A-A - SIDEWALK EXPANSION JOINT DETAIL

0' 0.25' 0.5' 0.75' 1'

NOTES:

ALL REINFORCING STEEL IN AREAS OF SIDEWALK REPAIR SHALL BE COMPLETELY CLEANED. ANY ADDITIONAL AREAS OF SIDEWALK REPAIR SHALL BE DESIGNATED BY PERSONNEL FROM THE BRIDGE REPAIR OFFICE. INSPECTIONS TO DETERMINE ADDITIONAL AREAS OF SIDEWALK REPAIR SHALL BE SCHEDULED WITH THE BRIDGE REPAIR OFFICE AT LEAST THREE (3) DAYS IN ADVANCE.

FOR DETAILS OF SIDEWALK REPAIR AT EXPANSION JOINT LOCATIONS, SEE SHEET BR-64-93 & 94.

COST OF LABOR AND MATERIALS REQUIRED TO REPLACE SECTIONS OF SIDEWALKS OCCURING ON APPROACHES TO BE PAID FOR UNDER ITEM No. 602-10.28, PEDESTRIAN SIDEWALK REPAIRS, L.S.

ITEM No. 604-10.30 SHALL BE BID WITH THE CONTINGENCY THAT THESE ITEMS MAY BE INCREASED, DECREASED OR ELIMINATED AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD ALL EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT. THE COST OF PROTECTING UTILITIES FROM DAMAGE AND FURNISHING SPECIAL EQUIPMENT WILL BE INCLUDED IN THE PRICE OF ITEMS BID ON.

THE CONTRACTOR SHALL BE RESPONDSIBLE FOR PLACING FORMWORK BELOW THE EXISTING BRIDGE DECK. THE FORMWORK IS REQUIRED SO THAT NO DEBRIS WILL FALL INTO THE STREAM DURING SLAB REPAIR. DETAILS OF TEMPORARY SUPPORT SYSTEM OR FALSEWORK REQUIRED SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND SHALL MEET WITH THE FULL SATISFACTION OF THE ENGINEER BEFORE ANY DEMOLITION IS BEGUN. COST OF FORMWORK SHALL BE INCLUDED IN ITEM No. 602-10.05, BRACING REPAIRS, L.S.

ALL DEMOLITION OF CONCRETE TO BE INCLUDED IN THE COST OF ITEM NO. 604-10-30

POWER-DRIVEN HAND TOOLS USED FOR THE REMOVAL OF CONCRETE IN MAKING REPAIRS TO THE EXPANSION JOINTS ARE SUBJECT TO THE FOLLOWING RESTRICTIONS: (A) PNEUMATIC HAMMERS HEAVIER THAN NOMINAL 60 POUND CLASS SHALL NOT BE USED. ALSO, ALL REPAIRS OVER BEAMS WILL BE RESTRICTED TO 60 POUND PNEUMATIC HAMMERS. (B) CHIPPING HAMMERS OF THE 15 POUND CLASS SHALL BE USED TO REMOVE CONCRETE FROM BENEATH ANY REINFORCING STEEL.

COST OF FRAMING, CONCRETE, ABRASIVE BLASTING, LABOR AND CONCRETE REMOVAL BY PNEUMATIC HAMMERS AND ANY MISCELLANEOUS MATERIALS TO COMPLETE THE FULL DEPTH REPAIRS SHALL BE INCLUDED IN ITEM No. 604-10.30.

DESIGNED BY	SCOTT SCHRIVER, E.I.	DATE	1-03
DRAWN BY	SCOTT SCHRIVER, E.I.	DATE	10802
SUPERVISED BY	JACOB WILLIAMS, P.E.	DATE	1-03
CHECKED BY	JACOB WILLIAMS, P.E.	DATE	1-03

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIDEWALK EXPANSION JOINT REPAIR DETAILS

BRIDGE NO. 19-SR6-9.74
SR-6 (VICTORY MEMORIAL BRIDGE) OVER CUMBERLAND RIVER AND GAY STREET DAVIDSON CO. 2003

BR-64-99

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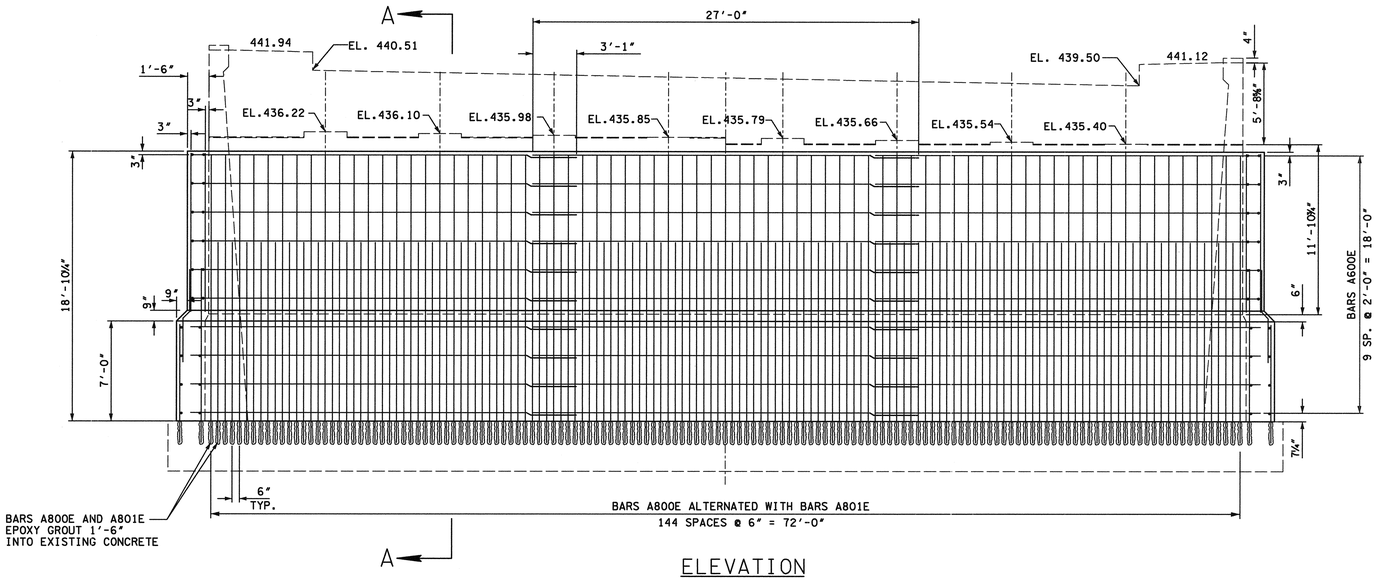
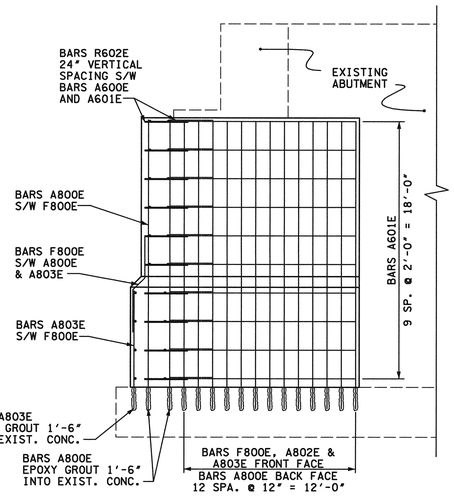
PROJECT NO.	YEAR	SHEET NO.
19023-4213-04	2003	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

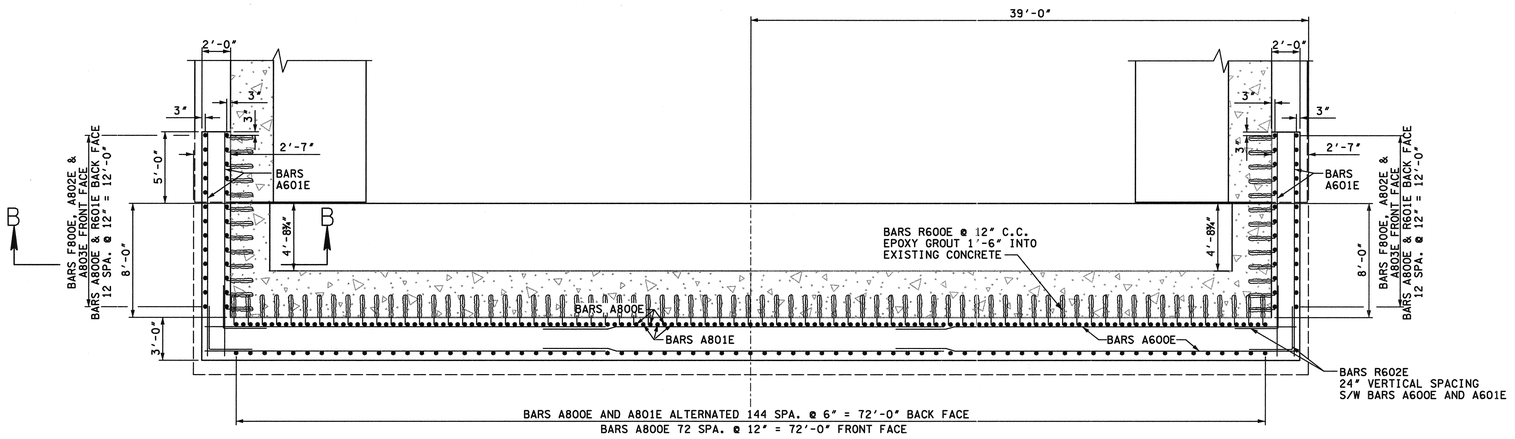


ELEVATION



ELEVATION - ABUTMENT 2
SIDE VIEW

NOTE: FOR ADDITIONAL ABUTMENT DETAILS, SEE SHEET BR-64-101.



PLAN

NOTE: FOR ITEM NUMBERS AND GENERAL NOTES, SEE SHEET BR-64-101.

DESIGNED BY	JACOB WILLIAMS, P.E.	DATE	10-02
DRAWN BY	JULIA TURNER	DATE	10-02
SUPERVISED BY	JACOB WILLIAMS, P.E.	DATE	10-02
CHECKED BY	JACOB WILLIAMS, P.E.	DATE	10-02

0 5 10 15
FEET

JACOB A. WILLIAMS
REGISTERED
ENGINEER
12403
AGRICULTURE & COMMERCE
No. 107626
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ABUTMENT 2

BRIDGE NO. 19-SR6-9.74
SR-6 OVER CUMBERLAND RIVER & GAY ST., DAVIDSON CO.
2003

BR-64-100

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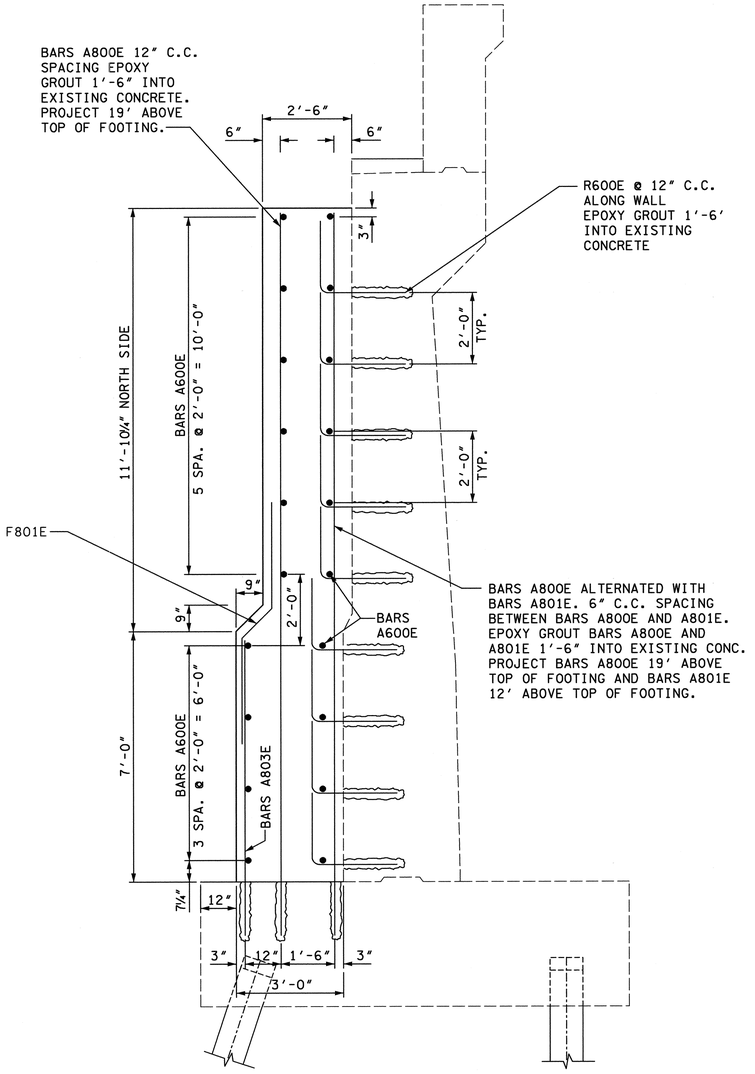
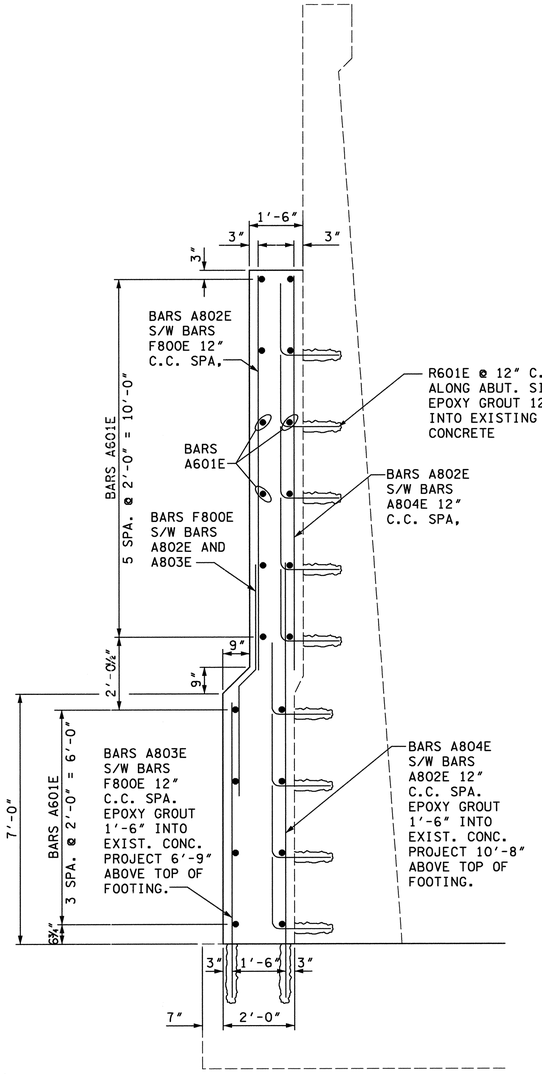
PROJECT NO.	YEAR	SHEET NO.
19023-4213-04	2003	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	1-03	CM	ADDED NOTE



SECTION A-A



SECTION B-B

NOTES:

CONTRACTOR SHALL FIELD VERIFY ALL MEASUREMENTS AND ELEMENTS PRIOR TO CONSTRUCTION.

COST OF REINFORCING STEEL FOR ABUTMENT ADDITIONS SHALL BE INCLUDED IN ITEM No. 604-10.18, REINFORCING STEEL (REPAIRS), LBS.

COST OF FORMING, LABOR, CONCRETE AND ALL MISCELLANEOUS MATERIALS NECESSARY FOR THE ABUTMENT ADDITIONS SHALL BE INCLUDED IN ITEM No. 604-03.01, CLASS "A" CONCRETE (BRIDGES), C.Y.

COST OF EXCAVATION REQUIRED TO TIE NEW ADDITION IN WITH THE EXISTING FOOTING SHALL BE INCLUDED IN ITEM No 204-02.01, DRY EXCAVATION (BRIDGES), C.Y.

1 COST OF FORMING LABOR, DRILLING AND GROUTING, TO BE INCLUDED IN 604-03.01.

NOTE: FOR ADDITIONAL ABUTMENT DETAILS, SEE SHEET BR-64-100.

0 2 4 6
FEET

DESIGNED BY SCOTT SCHRIVER, E.I. DATE 1-03
DRAWN BY JULIA TURNER DATE 1-03
SUPERVISED BY JACOB WILLIAMS, P.E. DATE 1-03
CHECKED BY JACOB WILLIAMS, P.E. DATE 1-03

JACOB A. WILLIAMS REGISTERED ENGINEER CIVIL CONSULTANT TENNESSEE No. 107628 STATE OF TENNESSEE
1-3-03

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ABUTMENT 2 DETAILS

BRIDGE NO. 19-SR6-9.74
SR-6 (VICTORY MEMORIAL BRIDGE) OVER CUMBERLAND RIVER AND GAY STREET
DAVIDSON CO.
2003

BR-64-101

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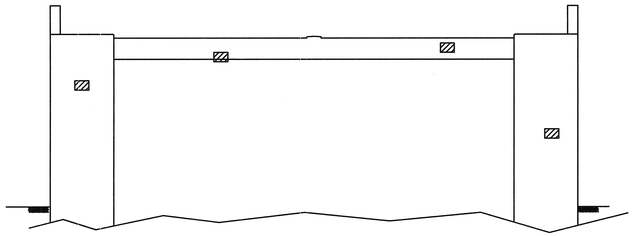
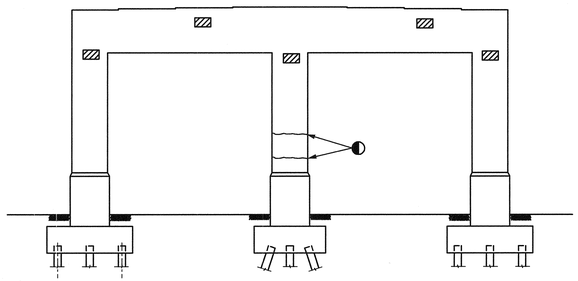


TYPICAL ABUTMENT ELEVATION

▨ LOCATIONS OF SPOT REPAIRS

NOTE: APPROACH RETAINING WALLS AT ABUTMENT 2 ARE TO BE INCLUDED IN SPOT REPAIRS.



TYPICAL BENT ELEVATION

▨ LOCATIONS OF SPOT REPAIRS

◐ CRACKS AT BENTS 9, 13, AND 18 TO BE EPOXY INJECTED (SEE NOTES THIS SHEET)

NOTE:

THE ENGINEER SHALL HAVE THE OPTION OF DESIGNATING A SPALL AREA TO BE REPAIRED UNDER ITEM No. 604-10.05 OR 604-10.54. PATCHING MATERIAL FOR ITEM No. 604-10.05 SHALL BE HIGH EARLY STRENGTH CONCRETE. PATCHING MATERIAL FOR ITEM No. 604-10.54 SHALL BE A POLYMER MODIFIED CEMENTIOUS STRUCTURAL PATCHING MATERIAL. SEE QUALIFIED PRODUCTS LIST 13, SUBLIST (F).

EXTREME CARE SHALL BE TAKEN WHEN REMOVING THE EXISTING SPALLED CONCRETE SO AS NOT TO DAMAGE THE EXISTING REINFORCING STEEL. ALL EXPOSED REINFORCING STEEL SHALL RECEIVE A COMPLETE CLEANING TO REMOVE ALL RUST. ALL EXISTING REINFORCEMENT SHALL REMAIN IN PLACE. ALL WORK MUST MEET WITH THE FULL APPROVAL OF THE ENGINEER.

THE ENGINEER SHALL DESIGNATE ALL SPALLED CONCRETE REPAIR AREAS IN THE FIELD. QUANTITIES GIVEN ARE APPROXIMATE. ITEM No. 604-10.05 AND 604-10.54 SHALL BE BID WITH THE CONTINGENCY THAT IT MAY BE INCREASED, DECREASED, OR ELIMINATED BY THE ENGINEER.

POWER DRIVEN HAND TOOLS USED FOR REMOVAL OF UNSOUND CONCRETE ARE SUBJECT TO THE FOLLOWING RESTRICTIONS:

1. PNEUMATIC HAMMERS HEAVIER THAN 35 LB. CLASS SHALL NOT BE USED.
2. CHIPPING HAMMERS OF THE 15 LB. CLASS SHALL BE USED TO REMOVE CONCRETE FROM BEHIND REINFORCING STEEL.

COST OF SAW CUTTING, REMOVING SPALL CONCRETE, CLEANING, PATCHING MATERIAL, LABOR AND ANY MISCELLANEOUS MATERIALS NECESSARY TO COMPLETE THE REPAIRS AS SHOWN TO BE INCLUDED IN ITEM No. 604-10.54, CONCRETE REPAIRS, S.F. OR ITEM No. 604-10.05, CONCRETE, S.F.

GENERAL NOTES AND SPECIFICATIONS FOR EPOXY INJECTION OF EXISTING STRUCTURAL CRACKS

ALL CRACKS SMALLER THAN ¼" SHALL BE INJECTED WITH AN APPROVED EPOXY RESIN ADHESIVE. ALL CRACKS ¼" OR LARGER SHALL BE INJECTED WITH AN APPROVED EPOXY RESIN ADHESIVE OF THE GEL TYPE.

EXTREME CAUTION SHALL BE TAKEN WHEN SELECTING A PRESSURE NECESSARY TO COMPLETE THE EPOXY INJECTION CRACK REPAIR SO AS NOT TO DAMAGE THE STRUCTURE BY CAUSING ADDITIONAL CRACKING. IF ADDITIONAL DAMAGE OCCURS, THE CONTRACTOR SHALL BEAR FULL RESPONSIBILITY. ALL EPOXY INJECTION WORK SHALL MEET WITH THE FULL APPROVAL OF THE ENGINEER.

ALL EPOXY INJECTION CONTRACTORS AND/OR SUBCONTRACTORS SHALL BE APPROVED BY THE TENNESSEE DEPARTMENT OF TRANSPORTATION, DIVISION OF MATERIALS AND TESTS.

AFTER EPOXY INJECTION IS COMPLETE, ALL INJECTION PORTS SHALL BE REMOVED AND ALL EXCESS SEALING MATERIAL AND EPOXY SHALL BE REMOVED FLUSH WITH THE SURROUNDING CONCRETE SURFACES.

CRACK LOCATIONS SHOWN THIS SHEET ARE APPROXIMATE ONLY. THE ENGINEER FROM THE STRUCTURES DIVISION, BRIDGE INSPECTION AND REPAIR, WILL MARK EXACT CRACK LOCATIONS TO RECEIVE EPOXY INJECTION.

THE ENGINEER SHALL COLLECT RANDOM SAMPLES OF THE EPOXY RESIN FOR EVALUATION BY THE MATERIALS AND TEST DEPARTMENT, DEPARTMENT OF TRANSPORTATION, FOR VERIFICATION OF THE STRENGTH AND QUALITY OF THE MATERIAL.

IF THE CRACKS ARE NOT FULLY SEALED OR THE STRENGTH REQUIRMENTS ARE NOT MET, THEN REDUCTION IN PAYMENT DETERMINED BY THE ENGINEER WILL BE MADE TO THE CONTRACTORS BID PRICE OF ITEM NO. 604-10.62, EPOXY INJECTION REPAIRS (COMPLETE AND IN PLACE), L.F..

THE ENGINEER FROM THE STRUCTURES DIVISION, BRIDGE INSPECTION AND REPAIR OFFICE SHALL DESIGNATE FOUR (4) RANDOM LOCATIONS WHERE THE CRACKS HAVE BEEN EPOXY INJECTED FOR THE CONTRACTOR TO CORE. THE ONE (1) INCH DIAMETER CORES WILL BE IMMEDIATELY TURNED OVER TO THE ENGINEER FOR INSPECTION AND TO VERIFY FULL SEALING OF THE CRACKS. COST OF CORING SHALL BE INCLUDED IN ITEM NO. 604-10.62, EPOXY INJECTION REPAIRS (COMPLETE AND IN PLACE), L.F..

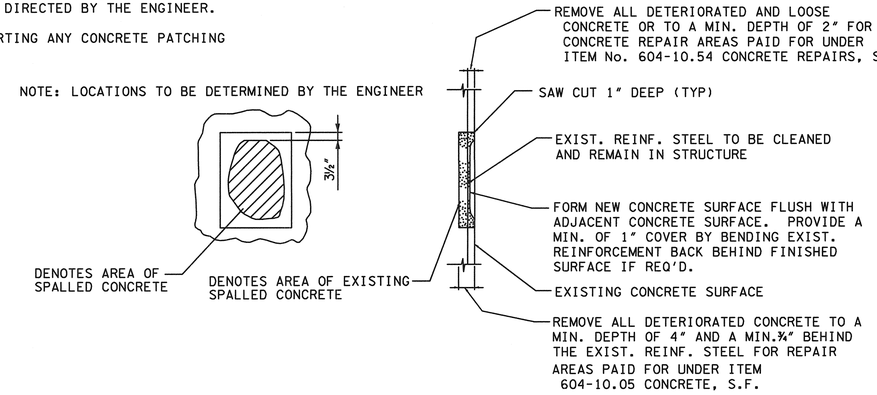
COST OF ALL LABOR AND MISCELLANEOUS MATERIALS NECESSARY TO COMPLETE THE EPOXY INJECTION REPAIRS TO EXISTING CONCRETE CRACKS SHALL BE INCLUDED UNDER ITEM NO. 604-10.62, EPOXY INJECTION REPAIR (COMPLETE AND IN PLACE), L.F.. ITEM NO. 604-10.62 SHALL BE BID SUCH THAT THIS ITEM MAY BE INCREASED, DECREASED, OR ELIMINATED AS DIRECTED BY THE ENGINEER.

ALL EPOXY INJECTION PER COLUMN SHALL BE COMPLETED BEFORE STARTING ANY CONCRETE PATCHING FOR DAMAGED AREAS.

PROJECT NO.	YEAR	SHEET NO.
19023-4213-04	2003	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



SPALLED CONCRETE REPAIR DETAIL

QUANTITIES

ITEM NO.	ABUT. NO.1	PIER NO.1	PIER NO.2	PIER NO.3	BENT NO.4	BENT NO.5	BENT NO.6	BENT NO.7	BENT NO.8	BENT NO.9	BENT NO.10	BENT NO.11	BENT NO.12	BENT NO.13	BENT NO.14	BENT NO.15	BENT NO.16	BENT NO.17	BENT NO.18	ABUT. NO.2
604-10.05 (SF)	10	5	5	5	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	70
604-10.54 (SF)	10	5	5	5	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	70

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BENT & ABUTMENT REPAIR DETAILS

BRIDGE NO. 19-SR6-9.74
SR-6 (VICTORY MEMORIAL BRIDGE)
OVER CUMBERLAND RIVER
AND GAY STREET
DAVIDSON CO.
2003

BR-64-102

DESIGNED BY SCOTT SCHRIVER, E.I. DATE 1-03
DRAWN BY WAGDY NEKLA DATE 1-03
SUPERVISED BY JACOB WILLIAMS, P.E. DATE 1-03
CHECKED BY JACOB WILLIAMS, P.E. DATE 1-03

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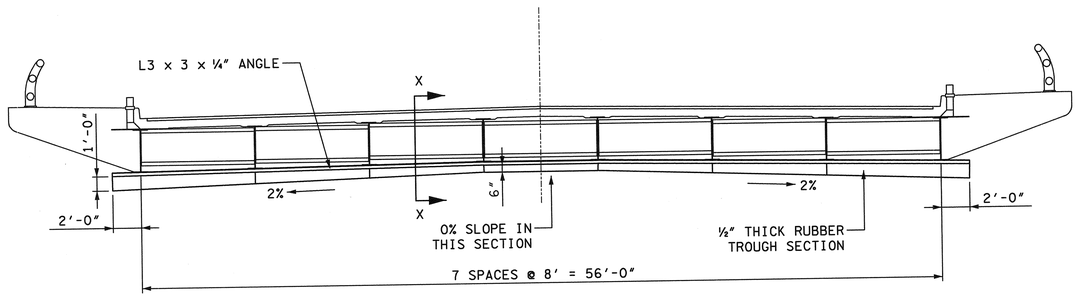
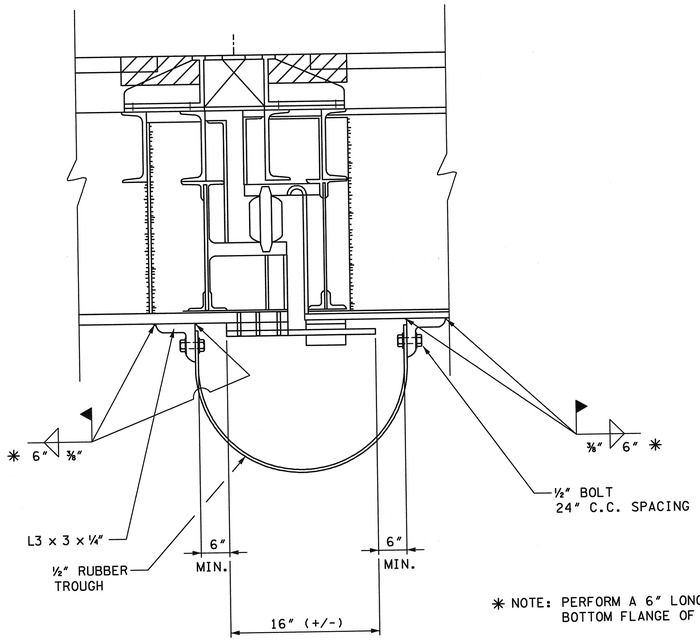
PROJECT NO.	YEAR	SHEET NO.
19023-4213-04	2003	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



CROSS SECTION SHOWING GUTTER AT EXPANSION JOINT



SECTION "X-X"

* NOTE: PERFORM A 6" LONG WELD OF ANGLE (BOTH ENDS OF LEG) TO BOTTOM FLANGE OF EACH BEAM ALONG LENGTH OF GUTTER.

NOTES:

COST OF ALL MATERIALS AND LABOR REQUIRED TO INSTALL GUTTER AT LOCATIONS SPECIFIED ON SHEET BR-64-90 SHALL BE INCLUDED UNDER ITEM No. 604-10.90, MISCELLANEOUS BRIDGE ITEMS, L.S.

THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL BY THE ENGINEER FOR GUTTER CONNECTION DETAILS.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EXPANSION JOINT DRAIN DETAILS

BRIDGE NO. 19-SR6-9.74
SR-6 (VICTORY MEMORIAL BRIDGE)
OVER CUMBERLAND RIVER
AND GAY STREET
DAVIDSON CO.
2003

BR-64-103

DESIGNED BY	SCOTT SCHRIVER, E.I.	DATE	1-03
DRAWN BY		DATE	1-03
SUPERVISED BY	JACOB WILLIAMS, P.E.	DATE	1-03
CHECKED BY	JACOB WILLIAMS, P.E.	DATE	1-03

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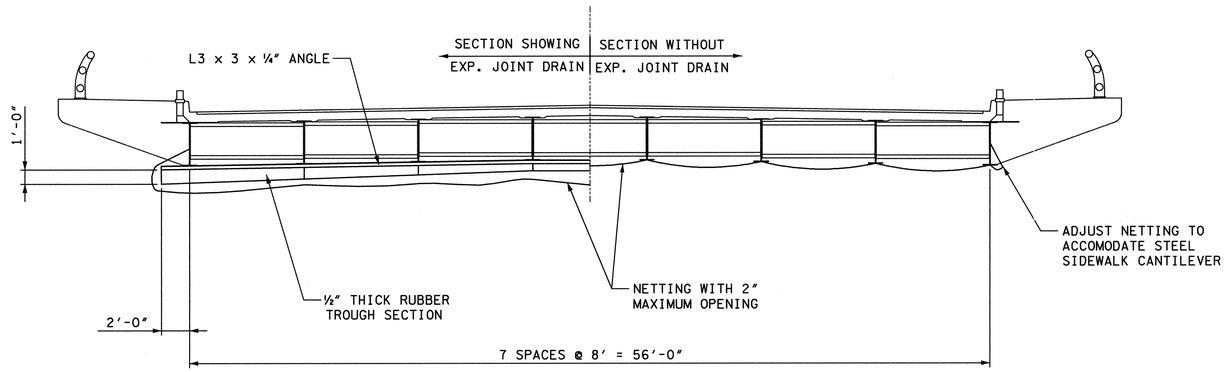


CROSS SECTION SHOWING NETTING INSTALLATION

NOTES:

COST OF MATERIALS AND LABOR REQUIRED FOR THE INSTALLATION OF THE NETTING SHALL BE INCLUDED UNDER ITEM No. 604-10.90, MISCELLANEOUS BRIDGE ITEMS, L.S.

NETTING COVERAGE IS REQUIRED OVER NEW AND EXISTING PARKING AREAS BETWEEN PIER 5 AND ABUTMENT 2.

NETTING IS REQUIRED FOR THE PREVENTION OF BIRD ROOSTING. THE CONTRACTOR SHALL ENSURE THAT GAPS OR ACCESS OPENINGS ARE COMPLETELY COVERED.

THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR NETTING CONNECTIONS AND DETAILS FOR APPROVAL BY THE ENGINEER.

PROVISIONS SHALL BE MADE TO ACCOMODATE THE NEW EXPANSION JOINT DRAIN DURING THE INSTALLATION OF THE NETTING.

△1 WIRE USED FOR THE NETTING TO MEET THE SAME SPECIFICATION REQUIREMENTS AS FOR THE CHAIN LINK FENCE.

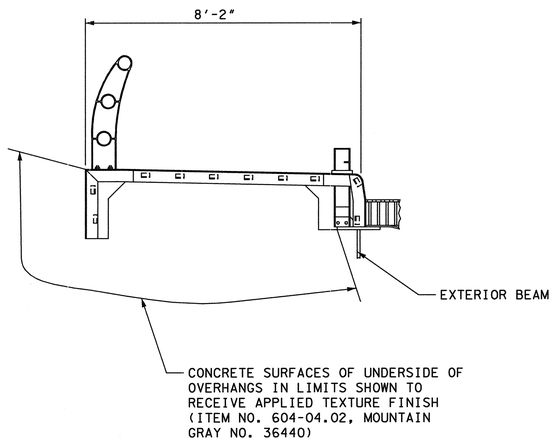
PROJECT NO.	YEAR	SHEET NO.
19023-4213-04	2003	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	1-03	CM	ADDED NOTE
2	2-03	JAW	ADDED NOTES AND DETAIL

△2 TEXTURE COATING: COST OF TEXTURE COATING SHALL BE INCLUDED IN ITEM NO. 604-04.02 AND INCLUDES TEXTURE COATING OF UNDERSIDE OF END OVERHANGS (SEE DETAIL THIS SHEET), ALL EXPOSED SURFACES OF ABUTMENT NO. 2, EXPOSED SURFACES OF APPROACH RETAINING WALLS AT ABUTMENT 2, EXPOSED SURFACES OF PIER NO. 3 AND EXPOSED SURFACES OF BENTS 4 THROUGH 18. NOTE THAT ABUTMENT 1, PIER 1 NOR PIER 2 SHALL NOT RECEIVE TEXTURE COATING. THIS ITEM SHALL BE BID AS A CONTINGENCY AND MAY BE INCREASED, DECREASED, OR ELIMINATED AS DIRECTED BY THE ENGINEER.

△2 BEFORE APPLYING ANY TEXTURE FINISH, ALL SURFACES SHALL BE COMPLETELY CLEANED OF ALL DEBRIS AND FOREIGN MATERIALS. THE CONTRACTOR SHALL USE CONTAINMENT SCREENS OR OTHER MEASURES AS NECESSARY TO PREVENT ANY TEXTURE COATING FROM ENTERING THE ENVIRONMENT. CONTAINMENT MEASURES SHALL BE APPROVED BY THE ENGINEER AND COST SHALL BE INCLUDED IN ITEMS BID ON.



△2 OVERHANG TEXTURE COATING DETAIL

JACOB A. WILLIAMS — REGISTERED ENGINEER — No. 107628 — STATE OF TENNESSEE — 2-6-03

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE REPAIR DETAILS

BRIDGE NO. 19-SR6-9.74
SR-6 (VICTORY MEMORIAL BRIDGE)
OVER CUMBERLAND RIVER
AND GAY STREET
DAVIDSON CO.
2003

DESIGNED BY SCOTT SCHRIVER, E.I. DATE 1-03
DRAWN BY CLIFTON McDANIEL DATE 1-03 △1
SUPERVISED BY JACOB WILLIAMS, P.E. DATE 1-03
CHECKED BY JACOB WILLIAMS, P.E. DATE 1-03

BR-64-104

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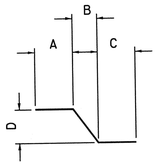
PROJECT NO.	YEAR	SHEET NO.
19023-4213-04	2003	

REVISIONS

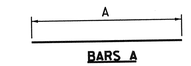
NO.	DATE	BY	BRIEF DESCRIPTION

ABUTMENT 2 (EPOXY COATED)

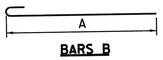
BAR	LOCATION	SIZE	NO. REQ'D.	BENDING DIMENSIONS				LENGTH
				A	B	C	D	
A600E	FRONT	6	30	27'-0"				27'-0"
A601E	SIDES	6	20	14'-9"				14'-9"
R602E	FRONT	6	657	2'-0"	2'-0"			4'-0"
R601E	SIDES	6	234	2'-0"	1'-6"			3'-6"
R602E	CORNERS	6	40	2'-0"	2'-0"			4'-0"
A800E	VERTICAL BAR	8	172	20'-2"				20'-2"
A801E	FRONT	8	72	14'-0"				14'-0"
A802E	SIDES	8	26	11'-1"				11'-1"
A803E	SIDES	8	99	8'-3"				8'-3"
F800E	SIDES	8	26	3'-0"	6"	3'-0"	6"	6'-8"
F801E	FRONT	8	73	3'-0"	9"	3'-0"	9"	7'-2"



BARS F



BARS A



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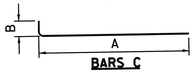
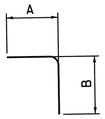


BARS C



BARS R

DESIGNED BY SCOTT SCHRIVER, E.I. DATE 1-03
DRAWN BY BEN BYARS, E.I. DATE 1-03
SUPERVISED BY JACOB WILLIAMS, P.E. DATE 1-03
CHECKED BY JACOB WILLIAMS, P.E. DATE 1-03

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BILL OF STEEL

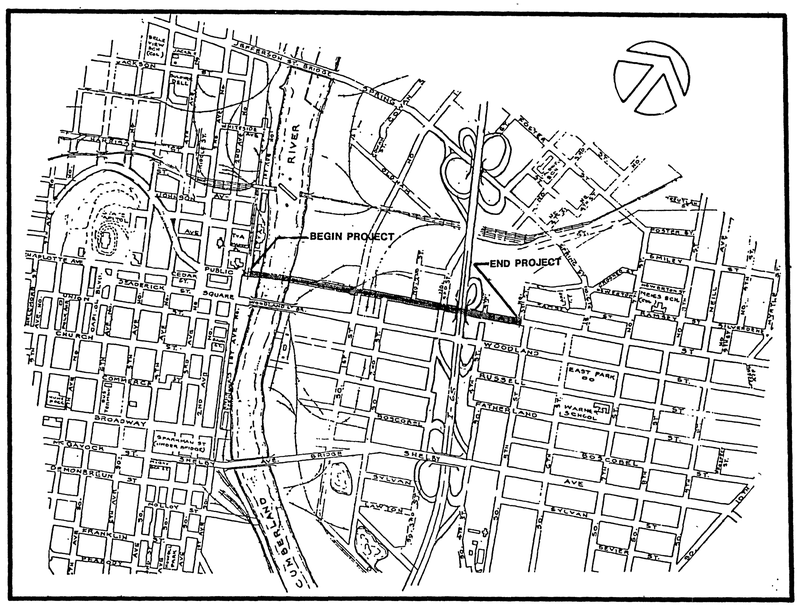
BRIDGE NO. 19-SR6-9.74
SR-6 (VICTORY MEMORIAL BRIDGE)
OVER CUMBERLAND RIVER
AND GAY STREET
DAVIDSON CO.
2003

BR-64-105

dgn jan 28, 2003 22:02:49

VICTORY MEMORIAL BRIDGE
REVERSIBLE LANES

METRO PROJECT NO. 88-B-10



LOCATION MAP

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Lawrence H. Day
4-5-89

CONSULTANT :

Tucker Hinson Associates, Inc.
25 Century Boulevard ▪ Suite 300 ▪ P.O. Box 140992
Nashville, Tennessee 37214-0992
TEL. (615) 871-0100 ▪ FAX (615) 885-2083

THA PROJECT NO. 88203

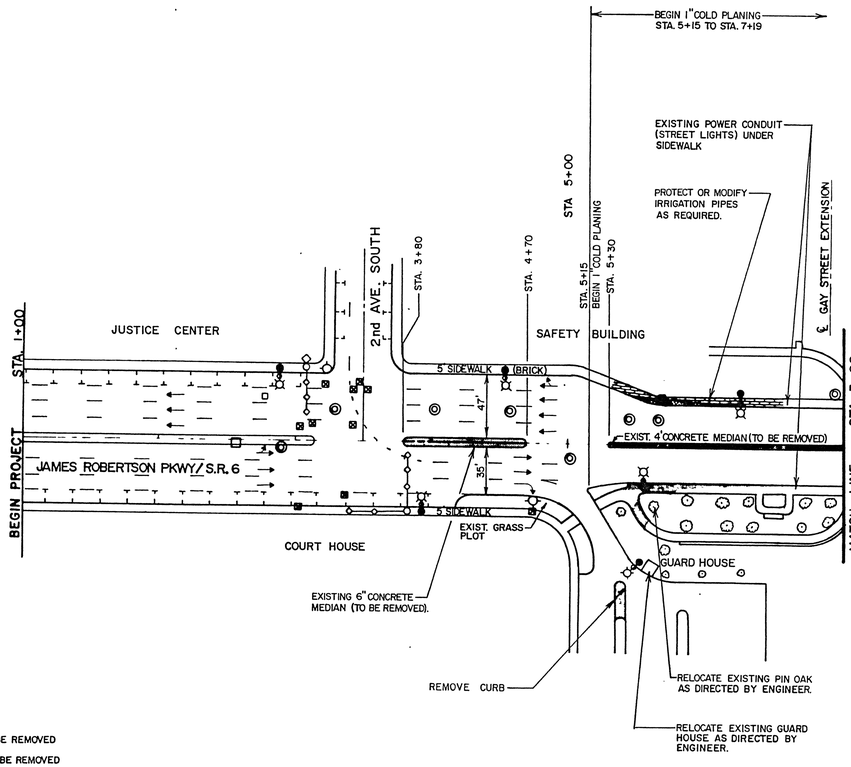
BILL BONER, MAYOR

METROPOLITAN GOVERNMENT OF NASHVILLE AND DAVIDSON COUNTY

DEPARTMENT OF PUBLIC WORKS
750 SOUTH FIFTH STREET
NASHVILLE, TENNESSEE 37206

Project Authorized by Council Resolution No. _____	
APPROVED: _____ DIRECTOR of PUBLIC WORKS	Date
APPROVED: J. Charles Bobo, P.E. ASST. DIRECTOR of PUBLIC WORKS	4-20-89 Date
File No.	Sheet 1 of

M-302-12



LEGEND

- EXISTING MANHOLE
- EXISTING WATER METER
- EXISTING CATCH BASIN
- EXISTING GAS MAIN
- EXISTING FIRE HYDRANT
- EXISTING SIGN
- EXISTING ELECTRICAL BOX
- EXISTING LIGHT STANDARD
- EXISTING SHRUBS
- EXISTING SIGNAL POLE
- EXISTING TRAFFIC CONTROLLER
- PROPOSED SIGNAL POLE
- PROPOSED ELECTRICAL BOX
- LANE SIGNAL HEADS
- BARRICADE
- EXISTING SIGNAL HEAD
- EXISTING POWER POLE
- PROPOSED POLE & MAST ARM

LEGEND

- ASPHALT TO BE REMOVED
- CONCRETE TO BE REMOVED
- BRICK SIDEWALK TO BE REMOVED

C.O.
1.01.01
1.01.02
1.01.03

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25 Century Boulevard
Suite 300, P.O. Box 140992
Nashville, Tn 37214-0992
(615) 871-0100

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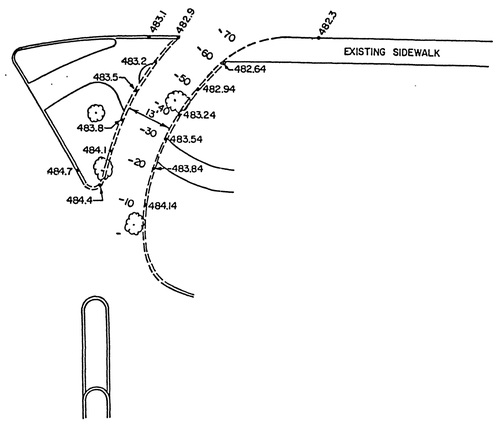
VICTORY MEMORIAL BRIDGE

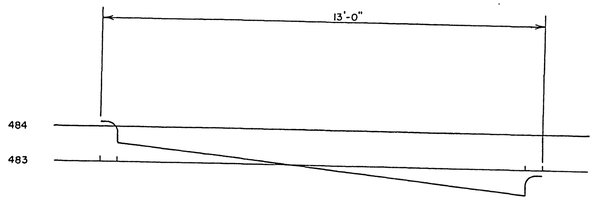
EXISTING PAVEMENT, UTILITIES & DEMOLITION PLAN STA. 1+00 TO STA. 7+00

SCALE: 1"=50'-0" THA FILE NO.: 88203
DRAWN BY: DBH CHECKED BY: L.D.

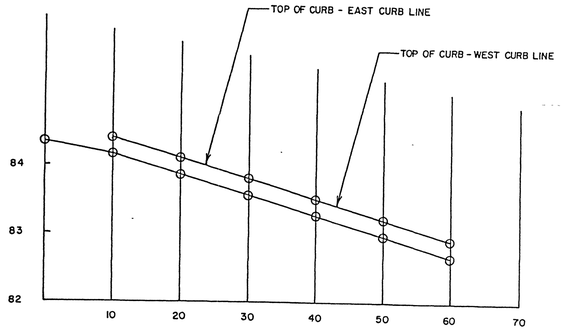
M-302-13



PLAN OF PROPOSED EXIT FROM PARKING LOT
SCALE: 1" = 20'



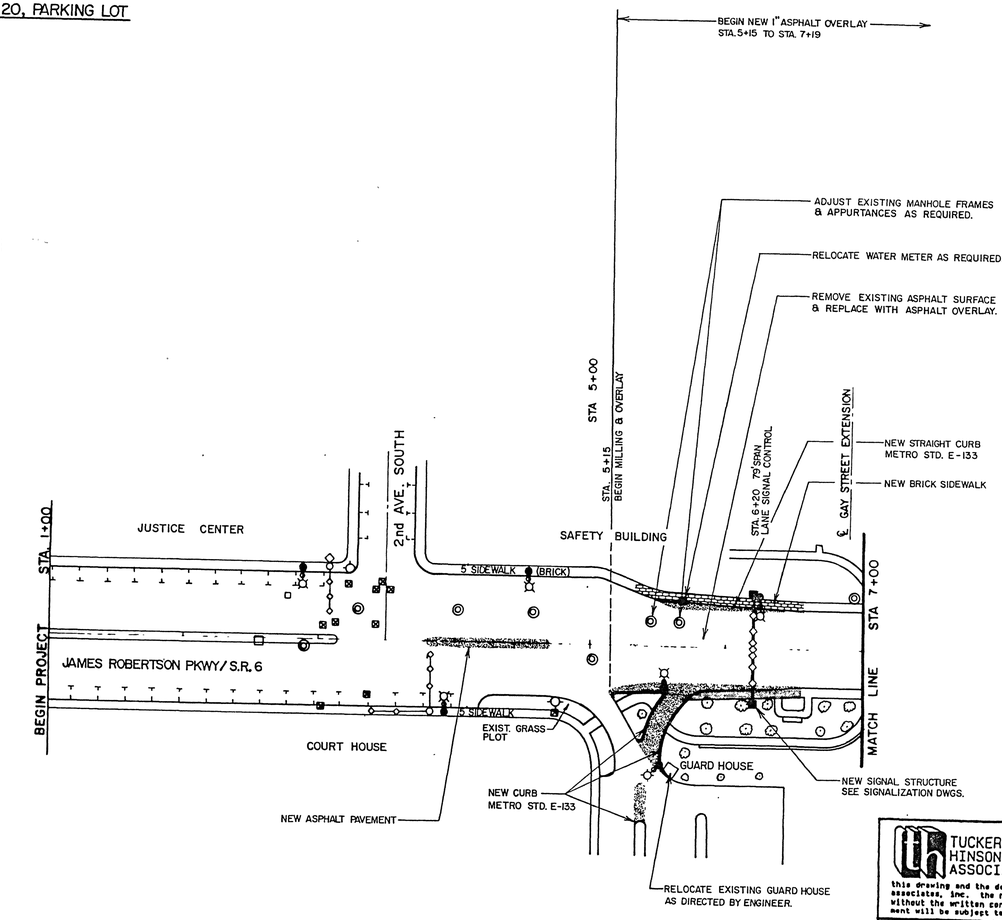
CROSS SECTION @ STA. 0+20, PARKING LOT
SCALE: 1" = 2'



PROFILE OF PROPOSED EXIT FROM PARKING LOT
SCALE: 1" = 10' HORIZ.
1" = 1' VERT.

LEGEND

- EXISTING MANHOLE
- EXISTING WATER METER
- EXISTING CATCH BASIN
- EXISTING GAS MAIN
- EXISTING FIRE HYDRANT
- EXISTING SIGN
- EXISTING ELECTRICAL BOX
- EXISTING LIGHT STANDARD
- EXISTING SHRUBS
- EXISTING SIGNAL POLE
- EXISTING TRAFFIC CONTROLLER
- PROPOSED SIGNAL POLE
- PROPOSED ELECTRICAL BOX
- LANE SIGNAL HEADS
- BARRICADE
- EXISTING SIGNAL HEAD
- EXISTING POWER POLE
- PROPOSED POLE & MAST ARM



LEGEND

- PROPOSED NEW ASPHALT PAVEMENT
- PROPOSED NEW CONCRETE SIDEWALK
- PROPOSED NEW BRICK SIDEWALK

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Nashville, Tn 37214-0992
(615) 871-0102

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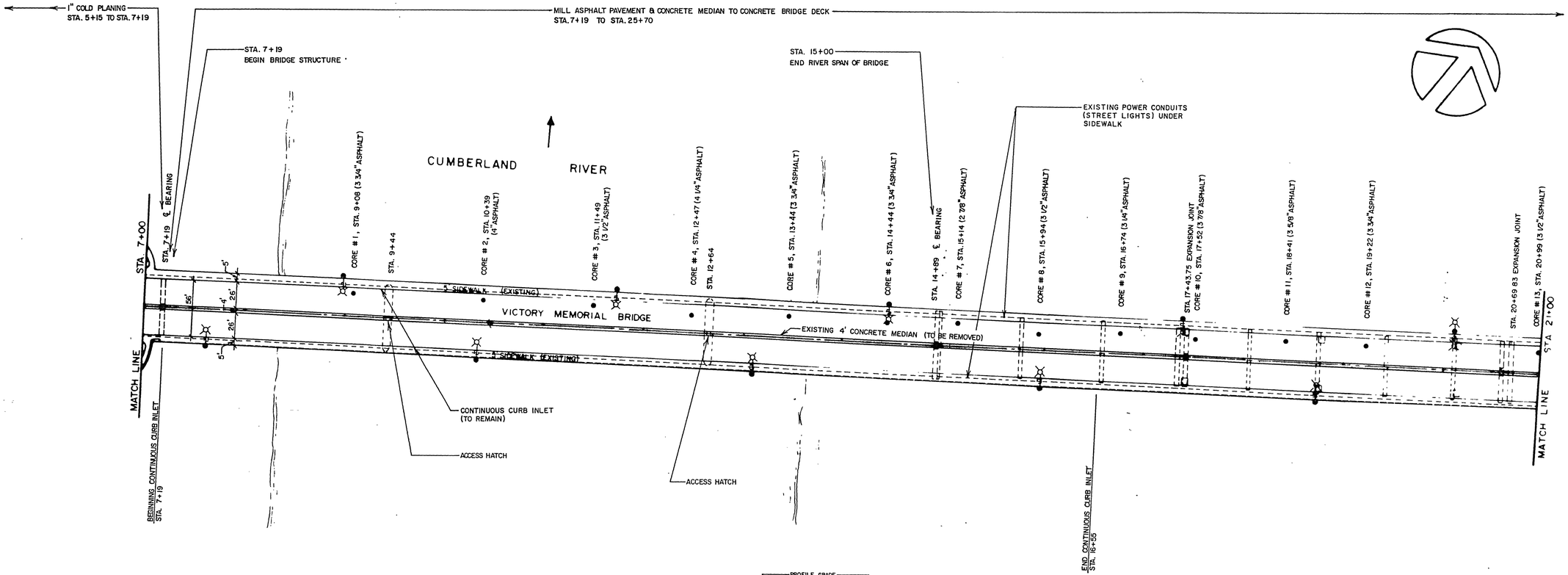
VICTORY MEMORIAL BRIDGE

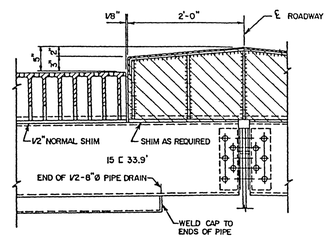
PROPOSED PAVEMENT PLAN
STA. 1+00 TO STA. 7+00

SCALE: 1"=50'-0" THA FILE NO.: 88203
DRAWN BY: DBH CHECKED BY:

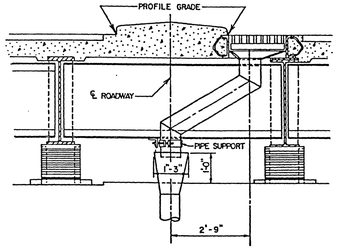
CO
1.01.01
1.01.02
1.01.03

M-302-14

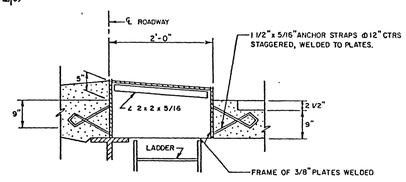




SECTION THRU EXISTING EXPANSION JOINT ⌀ MEDIAN
NOT TO SCALE



EXISTING STORM SEWER INTAKE AT MEDIAN
NOT TO SCALE
SEE DETAIL FOR PROPOSED ON SHT. C1.03a

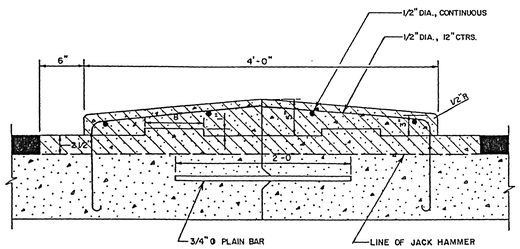


SECTION H - H

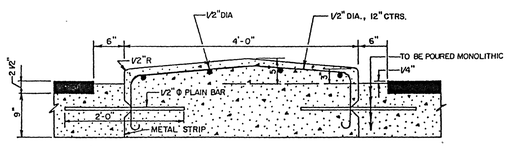
EXISTING ACCESS HATCH
NOT TO SCALE

NOTE:

1. CONTRACTOR IS TO BE AWARE THAT EXISTING ASPHALT PAVEMENT VARIES. SEE CORES # 1 THRU # 18.
2. EXISTING PAVEMENT IS TO BE REMOVED DOWN TO EXISTING CONCRETE SLAB.
3. WHEN PAVEMENT IS REMOVED, T.D.O.T. INSPECTORS ARE TO EXAMINE THE STRUCTURAL SLAB AND DETERMINE EXTENT AND SCOPE OF DECK REPAIR.
4. REPAIR IS TO BE PAID FOR AT UNIT PRICE OF PER SQUARE YARD AREA.



EXISTING MEDIAN STRIP FOR BRIDGE
NOT TO SCALE



NOTE - MEDIAN STRIP SHOWN ABOVE, EXISTING FROM EAST ABUTMENT (STA. 25+70 TO INTERSTATE DRIVE.

DETAIL OF EXISTING MEDIAN STRIP
NOT TO SCALE

LEGEND

- EXISTING MANHOLE
- EXISTING WATER METER
- EXISTING CATCH BASIN
- EXISTING GAS MAIN
- EXISTING FIRE HYDRANT
- EXISTING SIGN
- EXISTING ELECTRICAL BOX
- EXISTING LIGHT STANDARD
- EXISTING SHRUBS
- EXISTING SIGNAL POLE
- EXISTING TRAFFIC CONTROLLER
- PROPOSED SIGNAL POLE
- PROPOSED ELECTRICAL BOX
- LANE SIGNAL HEADS
- BARRICADE
- EXISTING SIGNAL HEAD
- EXISTING POWER POLE
- PROPOSED POLE & MAST ARM

LEGEND

- ASPHALT TO BE REMOVED
- CONCRETE TO BE REMOVED
- BRICK SIDEWALK TO BE REMOVED

TUCKER HINSON ASSOCIATES, INC
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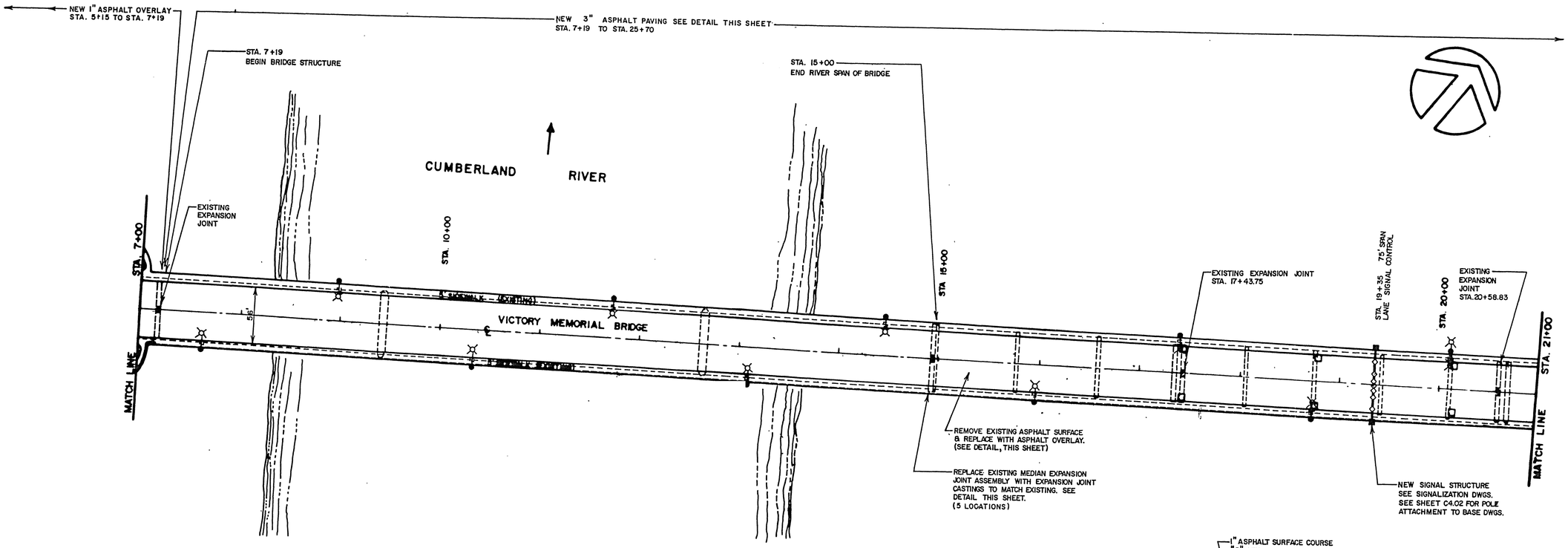
VICTORY MEMORIAL BRIDGE

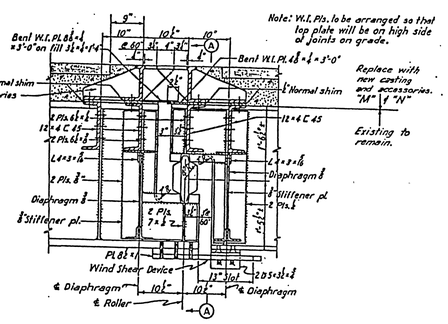
EXISTING PAVEMENT, UTILITIES & DEMOLITION PLAN STA. 7+00 TO STA. 21+00

SCALE: 1"=50'-0" THA FILE NO.: 88203
DRAWN BY: DRH CHECKED BY: L.D
REL. DATE: 3-1-89 SHEET NO.: C1.02

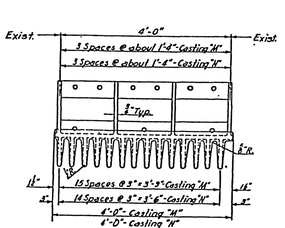
CO
1.02.01
1.02.02
1.02.03
4.02.05

M-302-15



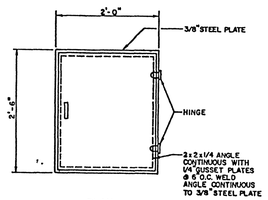


SECTION ACROSS EXPANSION JOINT
Scale. 1"=1'-0"



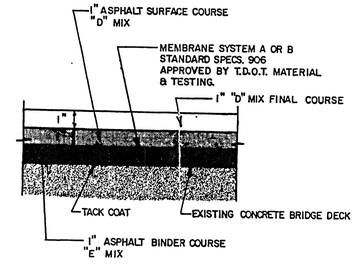
CASTINGS "M" AND "N"
Scale: 1"=1'-0"

Material: Cast steel
No. reqd.: Type "M"-5
Type "N"-5

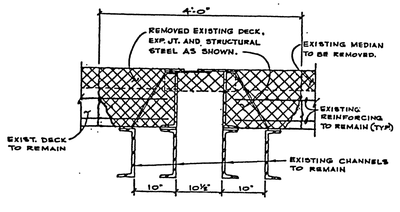


PLAN

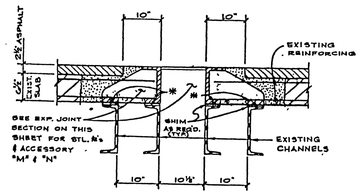
PROPOSED ACCESS HATCH
NOT TO SCALE



3" ASPHALT OVERLAY (TYPICAL)
NOT TO SCALE

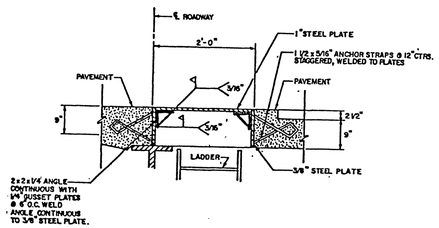


SECTION OF EXP. JOINT AT MEDIAN SHOWING EXISTING CONSTRUCTION TO BE REMOVED
NOT TO SCALE



SECTION OF EXP. JOINT SHOWING NEW CONSTRUCTION
NOT TO SCALE

NOTE: AT ℳ, CLEAN STEEL MEMBERS THOROUGHLY FREE OF ALL CONCRETE BEFORE PLACING NEW CONCRETE.



SECTION H-H

PROPOSED ACCESS HATCH
NOT TO SCALE

LEGEND

- EXISTING MANHOLE
- EXISTING WATER METER
- EXISTING CATCH BASIN
- EXISTING GAS MAIN
- EXISTING FIRE HYDRANT
- EXISTING SIGN
- EXISTING ELECTRICAL BOX
- EXISTING LIGHT STANDARD
- EXISTING SHRUBS
- EXISTING SIGNAL POLE
- EXISTING TRAFFIC CONTROLLER
- PROPOSED SIGNAL POLE
- PROPOSED ELECTRICAL BOX
- LANE SIGNAL HEADS
- BARRICADE
- EXISTING SIGNAL HEAD
- EXISTING POWER POLE
- PROPOSED POLE & MAST ARM

LEGEND

- PROPOSED NEW ASPHALT PAVEMENT
- PROPOSED NEW CONCRETE SIDEWALK
- PROPOSED NEW BRICK SIDEWALK

LAWRENCE G. DAY REGISTERED ENGINEER AGRICULTURAL No. 19275 STATE OF TENNESSEE
4-6-89

TUCKER HINSON ASSOCIATES, INC.
28 Century Boulevard Suite 204, P.O.Box 24082 Nashville, Tn. 37024-0082 (615) 371-0080

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VICTORY MEMORIAL BRIDGE

PROPOSED PAVEMENT PLAN STA. 7+00 TO STA. 21+00

SCALE: 1"=80'-0" TMA FILE NO.:

M-302-16

MILL ASPHALT PAVEMENT & CONCRETE MEDIAN TO CONCRETE BRIDGE DECK
STA. 7+19 TO STA. 25+70

1" COLD PLANING
STA. 25+70 TO STA. 46+70

℄ PROJECT
P.C. = 29+43.91
P.I. = 30+91.29
P.T. = 32+38.57
Δ = 3°41'00"
D = 1°15'00"
R = 4583.66
T = 147.38
L = 294.66

NORTH CURB
P.C. = 31+42.58
P.I. = 31+90.58
P.T. = 32+38.57
Δ = 1°12'26"
D = 1°15'28"
R = 4555.66
T = 48.00
L = 95.99

SOUTH CURB
P.C. = 0+00.00
P.I. = 1+58.10
P.T. = 3+16.19
Δ = 1°05'46"
D = 0°20'48"
R = 165277
T = 158.10
L = 316.19

NORTH CURB
Δ = 89°19'34"
P.I. = 150.00
T = 148.25
L = 233.86

CORE # 15 STA. 22+99 (3 1/2" ASPHALT)
NORTH FIRST STREET
STA. 23+50.92 EXPANSION JOINT
CORE #16 STA. 23+89 (3 3/4" ASPHALT)
CORE #17 STA. 24+75 (3 1/4" ASPHALT)
CORE #18 STA. 25+77 (3 5/8" ASPHALT)
COTTONWOOD ST
30+00
STA
NORTH MAIN STREET *
NORTH MAIN STREET *
NORTH MAIN STREET *
STA. 21+00
MATCH LINE
ONE WAY
RAMP DOWN
EXISTING 4' CONCRETE MEDIAN (TO BE REMOVED)
SOUTH MAIN STREET *
SOUTH FIRST STREET *
SOUTH SECOND STREET *
STA 37+00
I - 65 OVERPASS ABOVE
I - 65
LIMIT OF COLD PLANING
REMOVE POLES
LIMIT OF COLD PLANING
RELOCATE EXISTING CATCH BASINS
LIMIT OF COLD PLANING
INTERSTATE DRIVE
EXISTING TRAFFIC CONTROLLER
LIMIT OF COLD PLANING
REMOVE POLE
ADJUST EXISTING STORM SEWER MANHOLE FRAME & APPURTANCES AS REQUIRED.
RELOCATE EXISTING CATCH BASIN

℄ CURVE
P.C. = 21+66
P.I. = 24+66.13
P.T. = 27+66
Δ = 7°30'00"
D = 1°15'00"
T = 300.43
L = 600.00
R = 4583.66

EXISTING POWER CONDUIT (STREET LIGHTS) UNDER SIDEWALK.

NOTE * BELOW GRADE OF BRIDGE

LEGEND

- EXISTING MANHOLE
- EXISTING WATER METER
- EXISTING CATCH BASIN
- EXISTING GAS MAIN
- EXISTING FIRE HYDRANT
- EXISTING SIGN
- EXISTING ELECTRICAL BOX
- EXISTING LIGHT STANDARD
- EXISTING SHRUBS
- EXISTING SIGNAL POLE
- EXISTING TRAFFIC CONTROLLER
- PROPOSED SIGNAL POLE
- PROPOSED ELECTRICAL BOX
- LANE SIGNAL HEADS
- BARRICADE
- EXISTING SIGNAL HEAD
- EXISTING POWER POLE
- PROPOSED POLE & MAST ARM

LEGEND

- ASPHALT TO BE REMOVED
- CONCRETE TO BE REMOVED
- BRICK SIDEWALK TO BE REMOVED

TUCKER HINSON ASSOCIATES, INC.
25 Century Boulevard
Suite 350, P.O.Box 148888
Nashville, TN 37214-8888
(615) 871-0100

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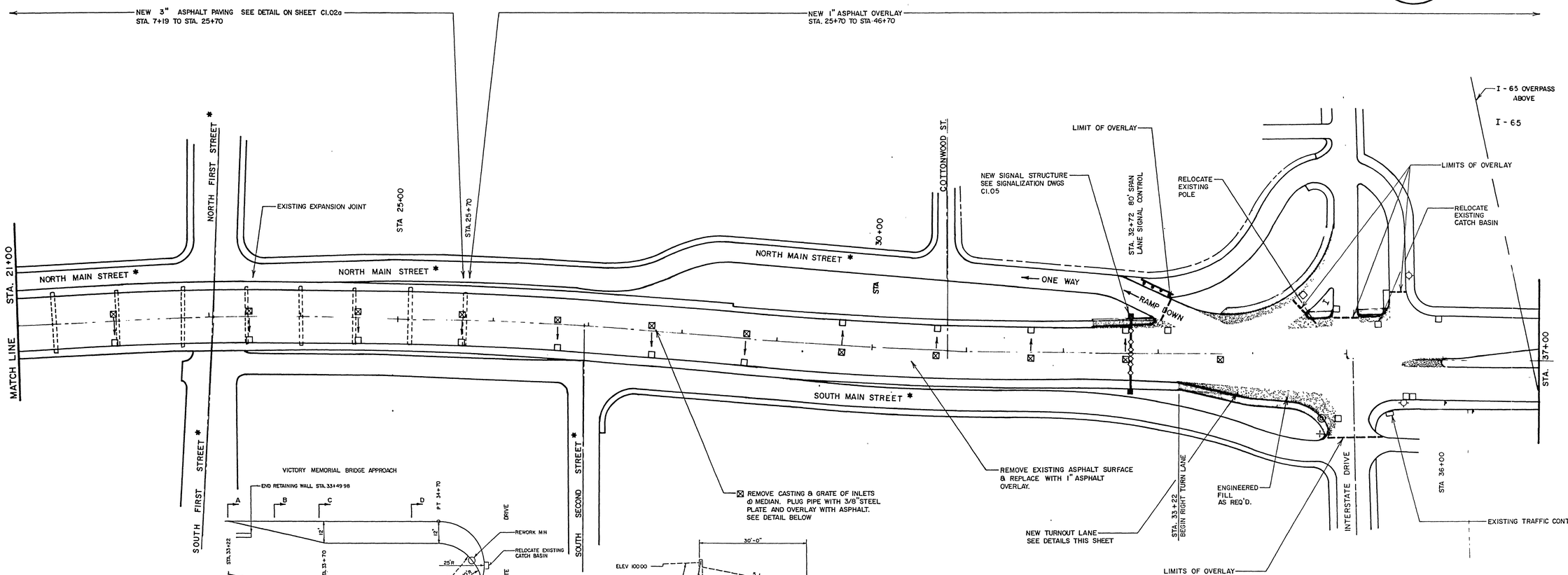
VICTORY MEMORIAL BRIDGE

EXISTING PAVEMENT, UTILITIES & DEMOLITION PLAN
STA. 21+00 TO STA. 37+00

SCALE: 1"=50'-0" THA FILE NO.: [redacted]
DRAWN BY: DAH CHECKED BY: [redacted]
REL. DATE: 3-1-00 SHEET NO.: C1.03

CO
1.03.01
1.02.02
1.02.03
4.00.00
1.01.04

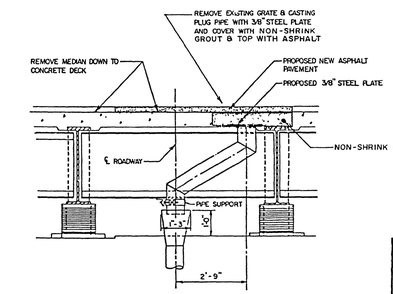
M-302-17



PLAN
RIGHT TURN LANE @ INTERSTATE DRIVE
NOT TO SCALE

PROFILE
RIGHT TURN LANE @ INTERSTATE DRIVE
NOT TO SCALE

CROSS - SECTIONS
RIGHT TURN LANE @ INTERSTATE DRIVE
NOT TO SCALE



REMOVAL OF STORM SEWER INTAKES AT MEDIAN
NOT TO SCALE

NOTE. * BELOW GRADE OF BRIDGE.

LEGEND

- EXISTING MANHOLE
- EXISTING WATER METER
- EXISTING CATCH BASIN
- EXISTING GAS MAIN
- EXISTING FIRE HYDRANT
- EXISTING SIGN
- EXISTING ELECTRICAL BOX
- EXISTING LIGHT STANDARD
- EXISTING SHRUBS
- EXISTING SIGNAL POLE
- EXISTING TRAFFIC CONTROLLER
- PROPOSED SIGNAL POLE
- PROPOSED ELECTRICAL BOX
- LANE SIGNAL HEADS
- BARRICADE
- EXISTING SIGNAL HEAD
- EXISTING POWER POLE
- PROPOSED POLE & MAST ARM

LEGEND

- PROPOSED NEW ASPHALT PAVEMENT
- PROPOSED NEW CONCRETE SIDEWALK
- PROPOSED NEW BRICK SIDEWALK

CO
1.03.01
1.03.02
1.03.03
1.03.06

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25 Century Boulevard
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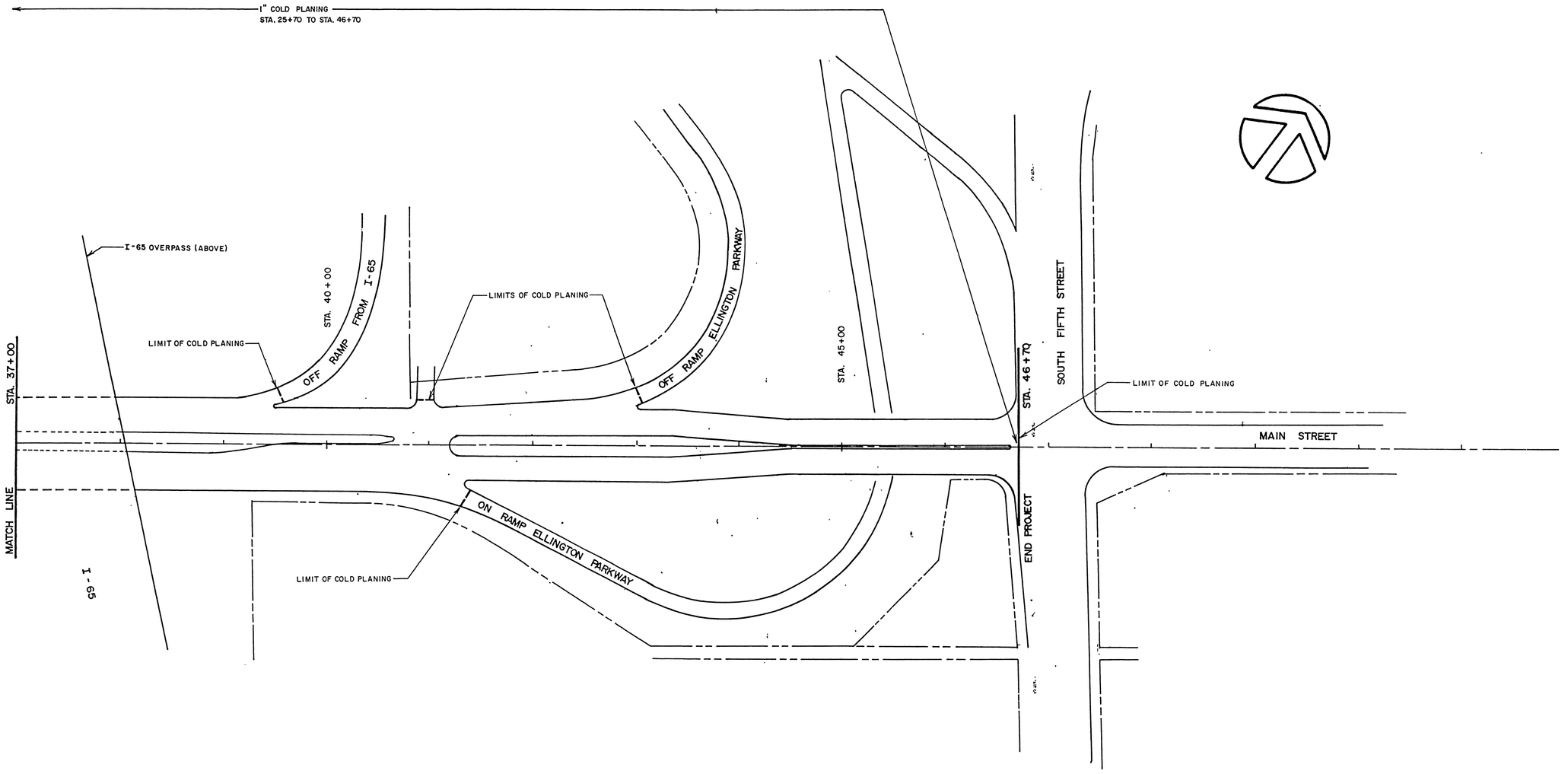
VICTORY MEMORIAL BRIDGE

PROPOSED PAVEMENT PLAN
STA. 21+00 TO STA. 37+00

SCALE: 1"=50'-0" THA FILE NO.: 88203
DRAWN BY: DBH CHECKED BY: L.D.
REL. DATE: 3-1-89 SHEET NO.: C1.03a

M-302-18



CO	CO	
B1	B1	
B2	B2	

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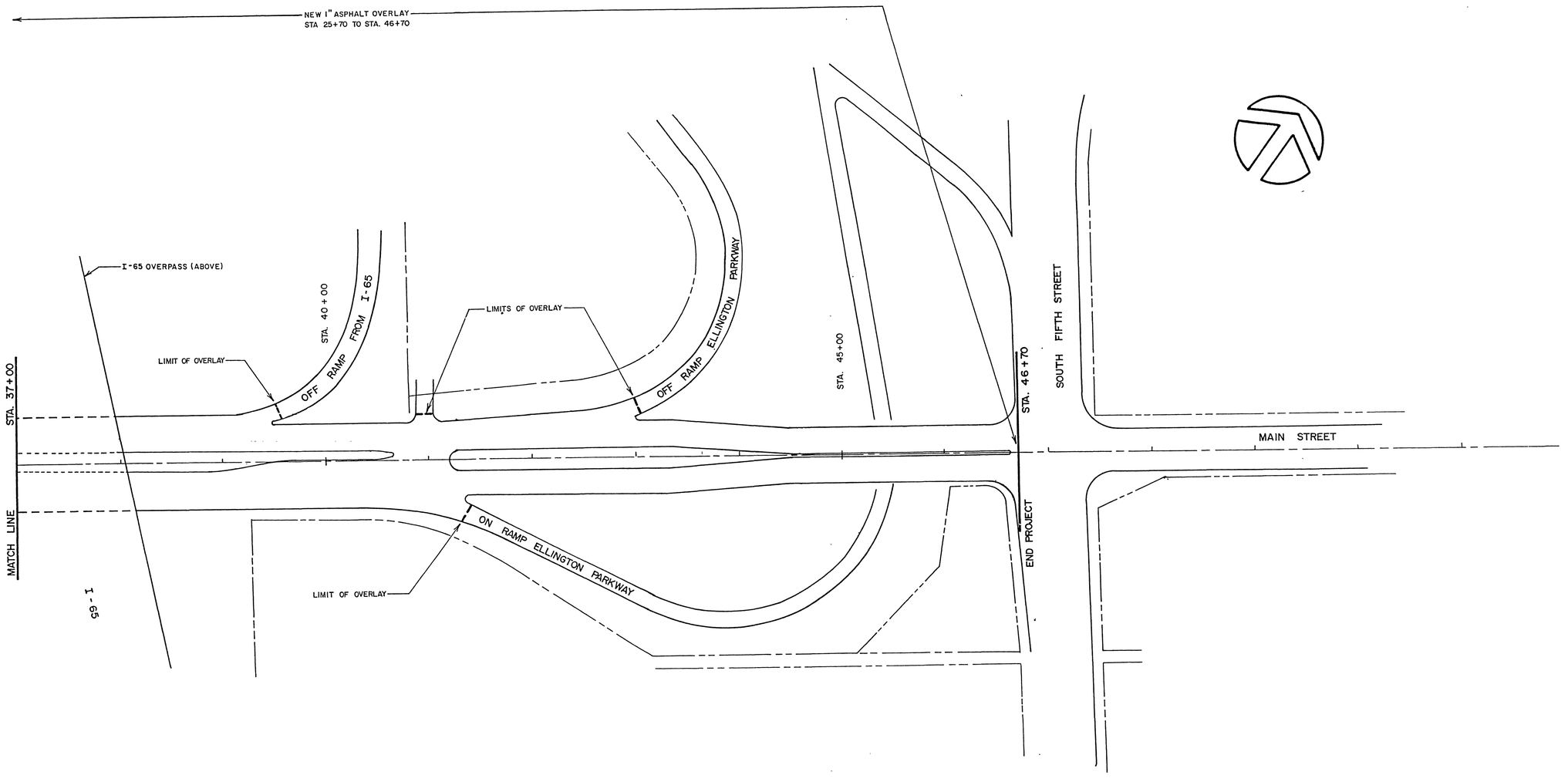
VICTORY MEMORIAL BRIDGE

EXISTING PAVEMENT PLAN

STA. 37+00 TO STA. 46+70

SCALE: 1"=50'-0" THA FILE NO.: 88203
DRAWN BY: DBH CHECKED BY: L.D.
REL. DATE: 3-1-89 SHEET NO.: C1.04

M-302-19



CO	CO	
B1	B1	
B2	B2	

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VICTORY MEMORIAL BRIDGE

PROPOSED PAVEMENT PLAN

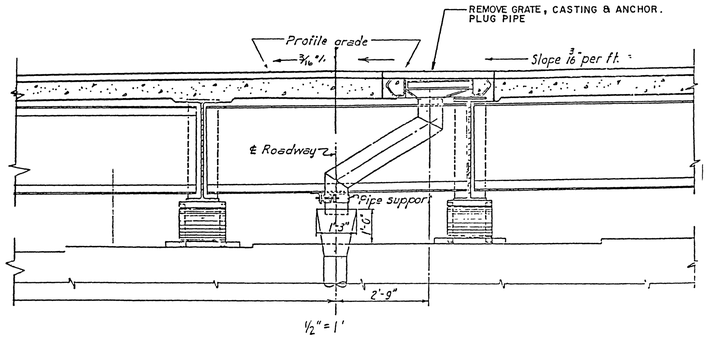
STA. 37+00 TO STA. 46+70

SCALE: 1"= 50'-0" THA FILE NO.: 88203

DRAWN BY: DBH CHECKED BY: L.D.

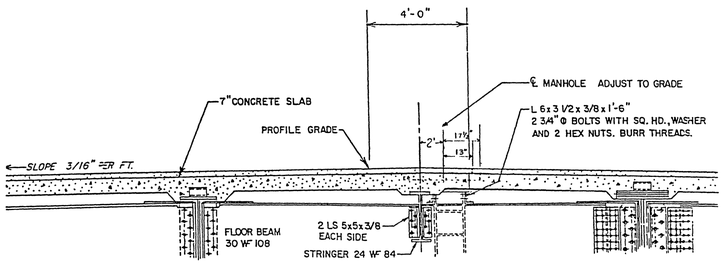
REL. DATE: 3-1-89 SHEET NO.: 01 OF 01

M-302-20



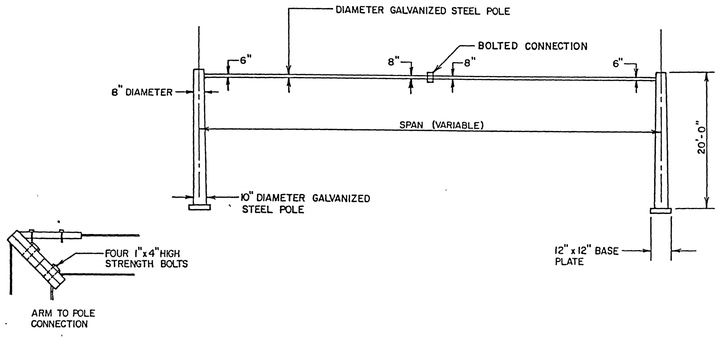
DETAIL OF CROWN IN SUPERELEVATED SECTIONS

NOT TO SCALE



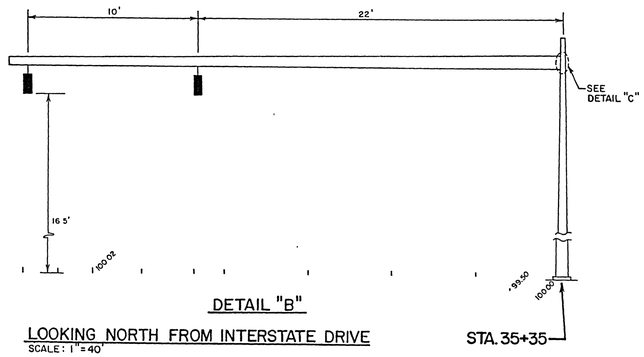
DETAIL OF CROWN IN NORMAL CROWN SECTIONS

NOT TO SCALE



GALVANIZED SIGNAL POLES & SPAN

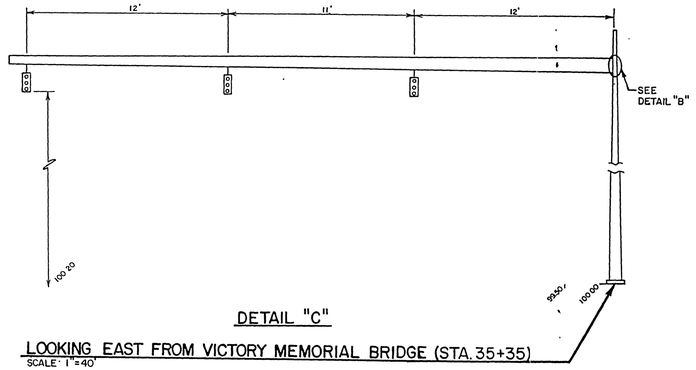
NOT TO SCALE



DETAIL "B"

LOOKING NORTH FROM INTERSTATE DRIVE

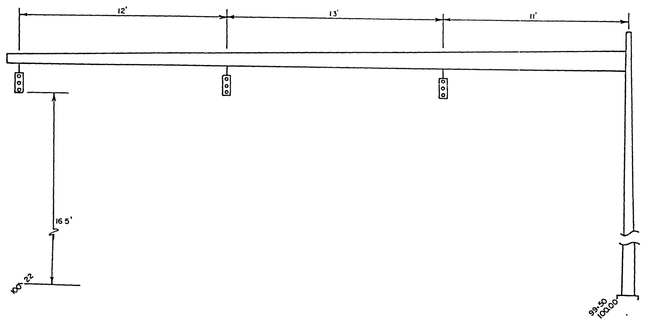
SCALE: 1" = 40'



DETAIL "C"

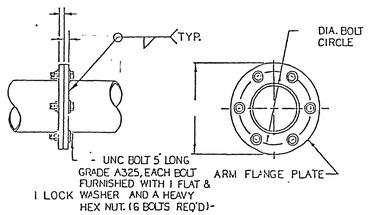
LOOKING EAST FROM VICTORY MEMORIAL BRIDGE (STA. 35+35)

SCALE: 1" = 40'



LOOKING WEST FROM I-65 (STA. 34+67)

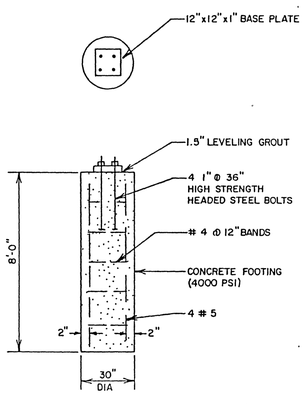
SCALE: 1" = 40'



NOTE: SEE GALVANIZED SIGNAL POLES & SPAN.

BOLTED CONNECTION

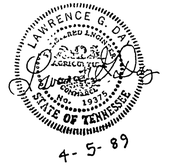
NOT TO SCALE



POLE FOOTING (GROUND LEVEL)

NOT TO SCALE

STA. 6+20 & STA. 32+72



4-5-89

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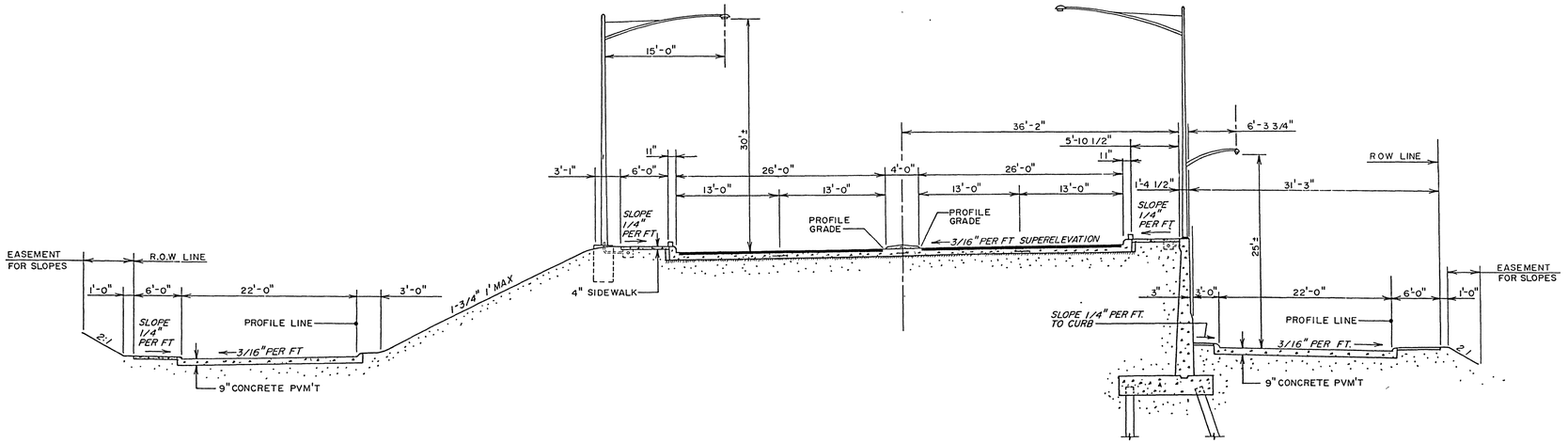
VICTORY MEMORIAL BRIDGE

PAVEMENT DETAILS

SCALE: AS SHOWN THA FILE NO.: 88203
DRAWN BY: BBH CHECKED BY: L.D.
REL. DATE: 3-1-89 SHEET NO.: C1.05

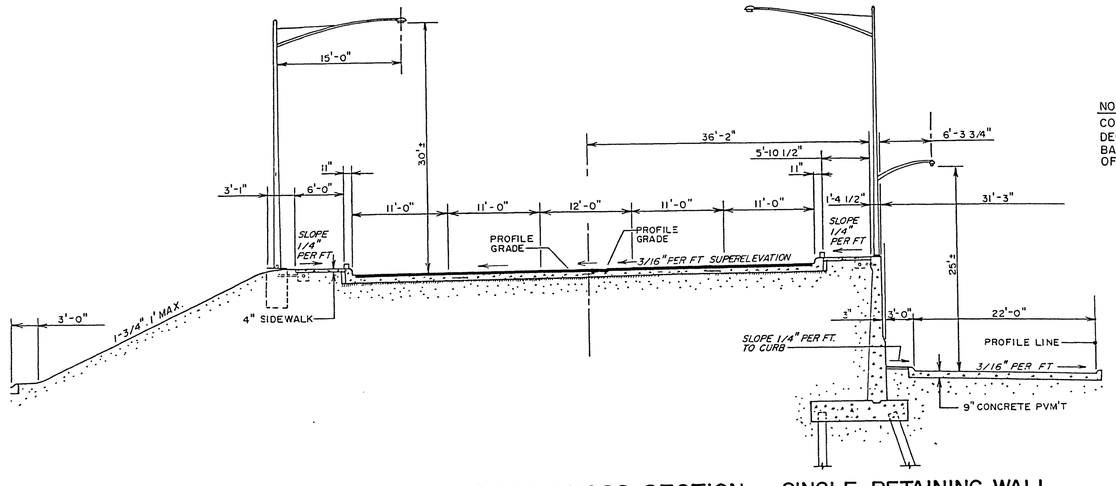
M-302-21



PRESENT CROSS SECTION - SINGLE RETAINING WALL

STA. 28+48.16 TO STA. 33+49.98

NOT TO SCALE



PROPOSED CROSS SECTION - SINGLE RETAINING WALL

STA. 28+48.16 TO STA. 33+49.98

NOT TO SCALE

NOTE:
CONCRETE MEDIAN (5" DEPTH), ASPHALT AND CONCRETE DECK SURFACE (2 1/4" DEPTH) AND REINFORCING STEEL BARS TO BE REMOVED SEE SHEET C2 05 FOR DETAILS OF EXISTING PAVEMENT.

Lawrence H Doty

4-5-89

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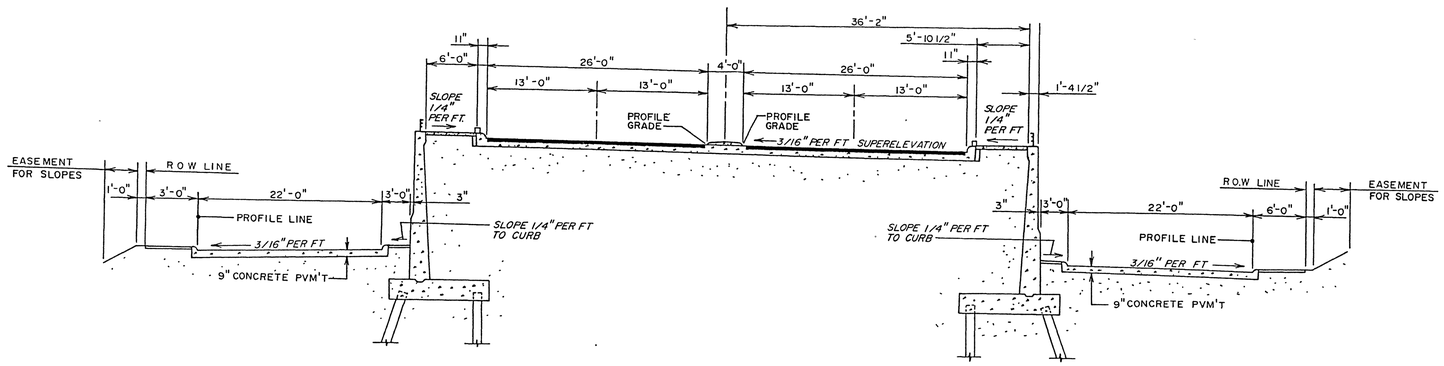
VICTORY MEMORIAL BRIDGE

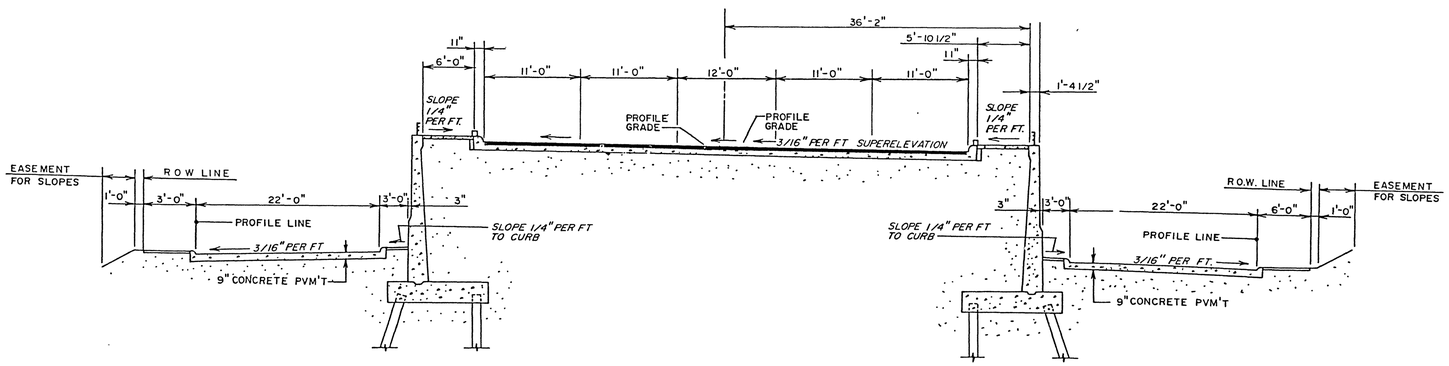
CROSS SECTIONS
PRESENT AND PROPOSED
EAST APPROACH

SCALE: AS SHOWN THA FILE NO.: 88203
DRAWN BY: DBH CHECKED BY: L.D.
REL. DATE: 3-1/89 SHEET NO.: C2 01

M-302-22



PRESENT CROSS SECTION – SUPERELEVATED DOUBLE RETAINING WALL
STA. 25+66.00 TO STA. 28+48.16
NOT TO SCALE



PROPOSED CROSS SECTION – SUPERELEVATED DOUBLE RETAINING WALL
STA. 25+66.00 TO STA. 28+48.16
NOT TO SCALE

Lawrence D Day
4-5-89

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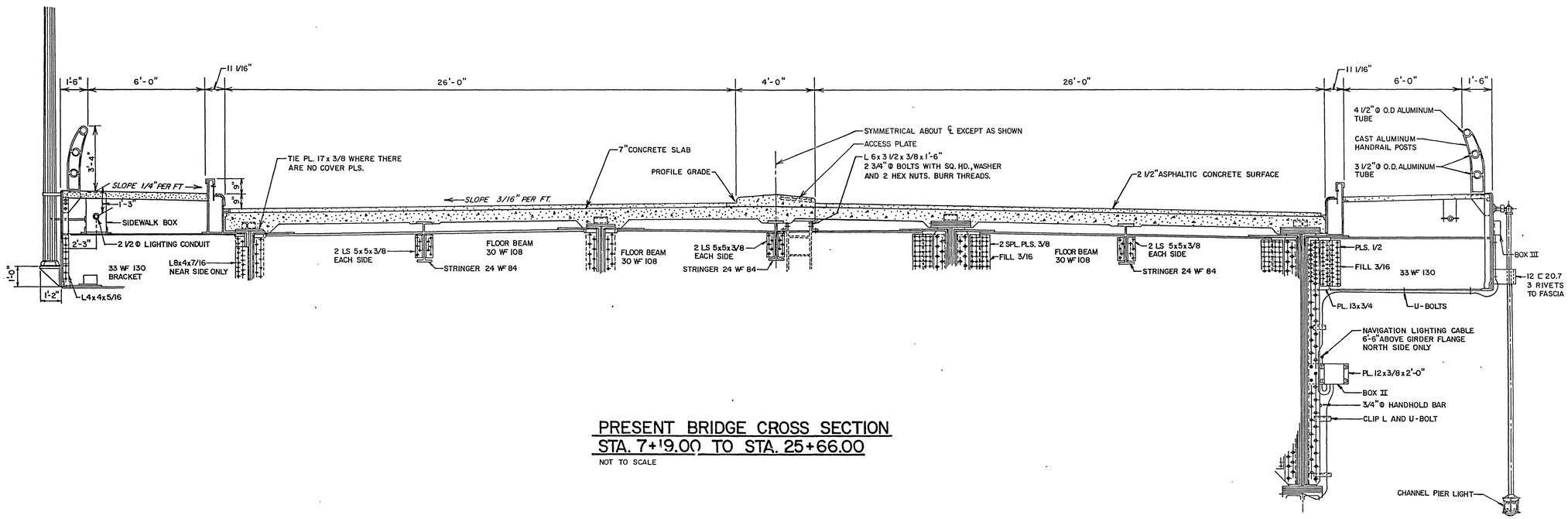
VICTORY MEMORIAL BRIDGE

CROSS SECTIONS
PRESENT AND PROPOSED
EAST APPROACH

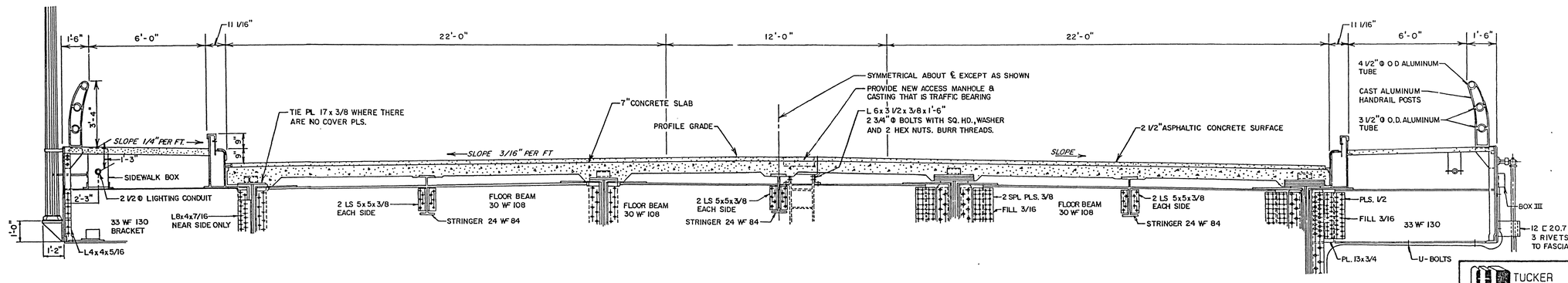
SCALE: AS SHOWN THA FILE NO.: 88203
DRAWN BY: DBH CHECKED BY: L.D.
REL. DATE: 3-1-89 SHEET NO.: C2.02

M-302-23



PRESENT BRIDGE CROSS SECTION STA. 7+19.00 TO STA. 25+66.00

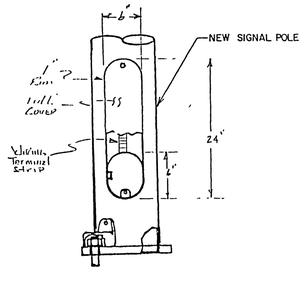
NOT TO SCALE



PROPOSED BRIDGE CROSS SECTION STA. 7+19.00 TO STA. 25+66.00

NOT TO SCALE

HAND HOLE



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VICTORY MEMORIAL BRIDGE

CROSS SECTIONS
PRESENT AND PROPOSED
BRIDGE

SCALE: AS SHOWN THA FILE NO.: 88203
DRAWN BY: DBH CHECKED BY: L.D
REL. DATE: 3-1-89 SHEET NO.: C2.03

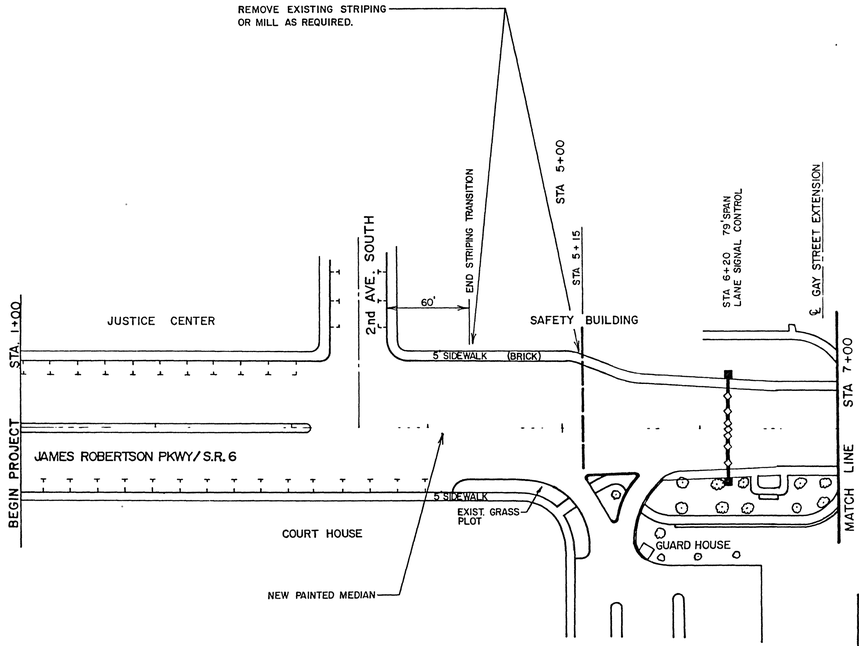
M-302-24

STRIPING LEGEND

- SINGLE WHITE 2' WITH 4' SKIPS
- DOUBLE YELLOW 2' WITH 4' SKIPS
- SINGLE WHITE 2' WITH 10' SKIPS
- DOUBLE YELLOW 2' WITH 10' SKIPS
- SINGLE WHITE 10' WITH 30' SKIPS
- DOUBLE YELLOW 10' WITH 30' SKIPS
- SINGLE SOLID WHITE LINE
- PAINTED MEDIAN (YELLOW)
- DOUBLE SOILID YELLOW LINE

LEGEND

- EXISTING MANHOLE
- EXISTING WATER METER
- EXISTING CATCH BASIN
- EXISTING GAS MAIN
- EXISTING FIRE HYDRANT
- EXISTING SIGN
- EXISTING ELECTRICAL BOX
- EXISTING LIGHT STANDARD
- EXISTING SHRUBS
- EXISTING SIGNAL POLE
- EXISTING TRAFFIC CONTROLLER
- PROPOSED SIGNAL POLE
- PROPOSED ELECTRICAL BOX
- LANE SIGNAL HEADS
- BARRICADE
- EXISTING SIGNAL HEAD
- EXISTING POWER POLE
- PROPOSED POLE & MAST ARM



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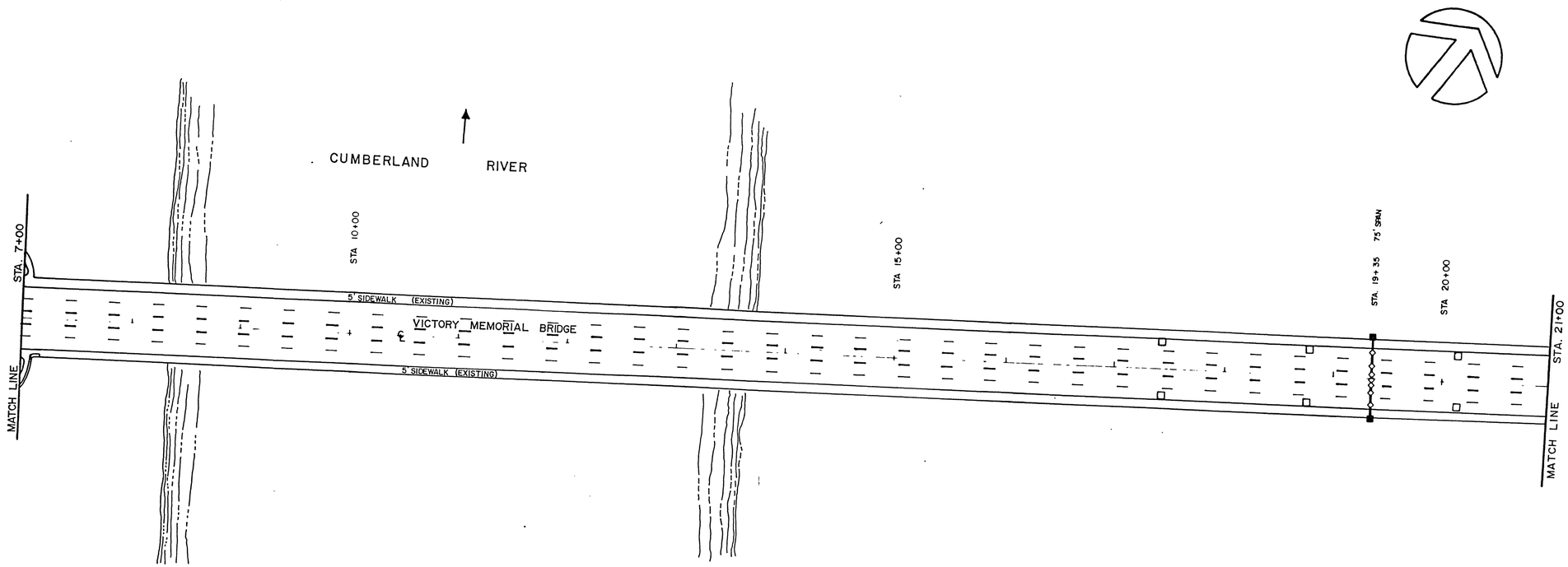
VICTORY MEMORIAL BRIDGE

PROPOSED STRIPING PLAN
STA. 1+00 TO STA. 7+00

SCALE: 1"=50'-0" THA FILE NO.: 88203
DRAWN BY: DBH CHECKED BY: L.D.
REL. DATE: 3 1 89 SHEET NO.: C3.01

C.O.
1.01.01
1.01.02
1.01.06

M-302-25



STRIPING LEGEND

- SINGLE WHITE 2' WITH 4' SKIPS
- DOUBLE YELLOW 2' WITH 4' SKIPS
- SINGLE WHITE 2' WITH 10' SKIPS
- DOUBLE YELLOW 2' WITH 10' SKIPS
- SINGLE WHITE 10' WITH 30' SKIPS
- DOUBLE YELLOW 10' WITH 30' SKIPS
- SINGLE SOLID WHITE LINE
- PAINTED MEDIAN (YELLOW)
- DOUBLE SOLID YELLOW LINE

LEGEND

- EXISTING MANHOLE
- EXISTING WATER METER
- EXISTING CATCH BASIN
- EXISTING GAS MAIN
- EXISTING FIRE HYDRANT
- EXISTING SIGN
- EXISTING ELECTRICAL BOX
- EXISTING LIGHT STANDARD
- EXISTING SHRUBS
- EXISTING SIGNAL POLE
- EXISTING TRAFFIC CONTROLLER
- PROPOSED SIGNAL POLE
- PROPOSED ELECTRICAL BOX
- LANE SIGNAL HEADS
- BARRICADE
- EXISTING SIGNAL HEAD
- EXISTING POWER POLE
- PROPOSED POLE & MAST ARM

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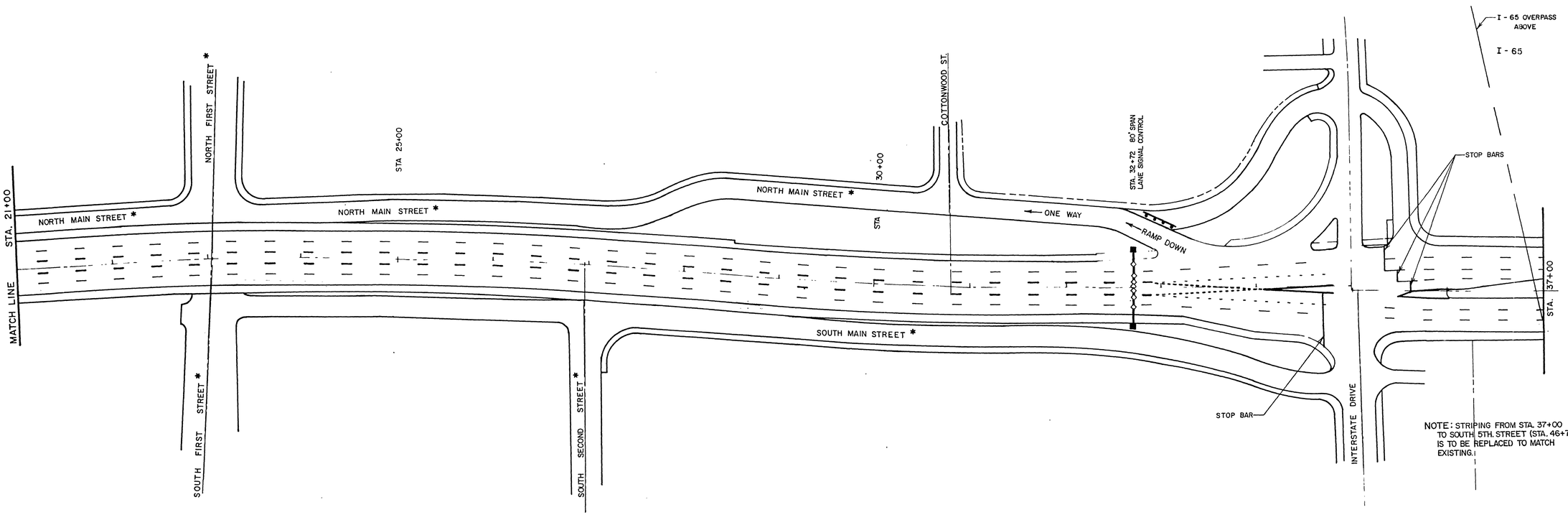
VICTORY MEMORIAL BRIDGE

PROPOSED STRIPING PLAN
STA. 7+00 TO STA. 21+00

SCALE: 1"=50'-0" THA FILE NO.: 88203
DRAWN BY: DBH CHECKED BY: L.D.
REL. DATE: 3-1-89 SHEET NO.: C3.02

M-302-26



NOTE: * BELOW GRADE OF BRIDGE.

STRIPING LEGEND

- - - - - - - - -	SINGLE WHITE 2' WITH 4' SKIPS
- - - - - - - - -	DOUBLE YELLOW 2' WITH 4' SKIPS
- - - - - -	SINGLE WHITE 2' WITH 10' SKIPS
- - - - - -	DOUBLE YELLOW 2' WITH 10' SKIPS
— —	SINGLE WHITE 10' WITH 30' SKIPS
— —	DOUBLE YELLOW 10' WITH 30' SKIPS
	SINGLE SOLID WHITE LINE
	PAINTED MEDIAN (YELLOW)
	DOUBLE SOLID YELLOW LINE

LEGEND

	EXISTING MANHOLE
	EXISTING WATER METER
	EXISTING CATCH BASIN
	EXISTING GAS MAIN
	EXISTING FIRE HYDRANT
	EXISTING SIGN
	EXISTING ELECTRICAL BOX
	EXISTING LIGHT STANDARD
	EXISTING SHRUBS
	EXISTING SIGNAL POLE
	EXISTING TRAFFIC CONTROLLER
	PROPOSED SIGNAL POLE
	PROPOSED ELECTRICAL BOX
	LANE SIGNAL HEADS
	BARRICADE
	EXISTING SIGNAL HEAD
	EXISTING POWER POLE
	PROPOSED POLE & MAST ARM

CO
1.03.01
~~F03-02~~
~~3.03.04~~
— —
1.03 06

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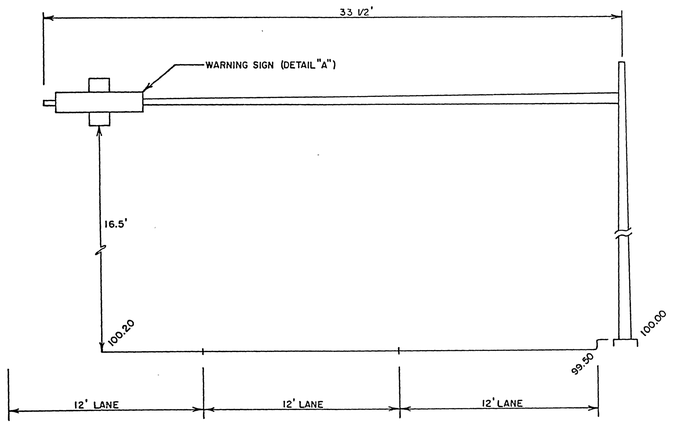
VICTORY MEMORIAL BRIDGE

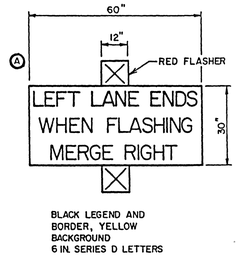
PROPOSED STRIPING PLAN
STA. 21+00 TO STA. 37+00

SCALE: 1"= 50'-0" THA FILE NO.: 88203
DRAWN BY: DBH CHECKED BY: L.D.
REL. DATE: 3-1-89 SHEET NO.: C3.03

M-302-27



STA. 4+65
NOT TO SCALE



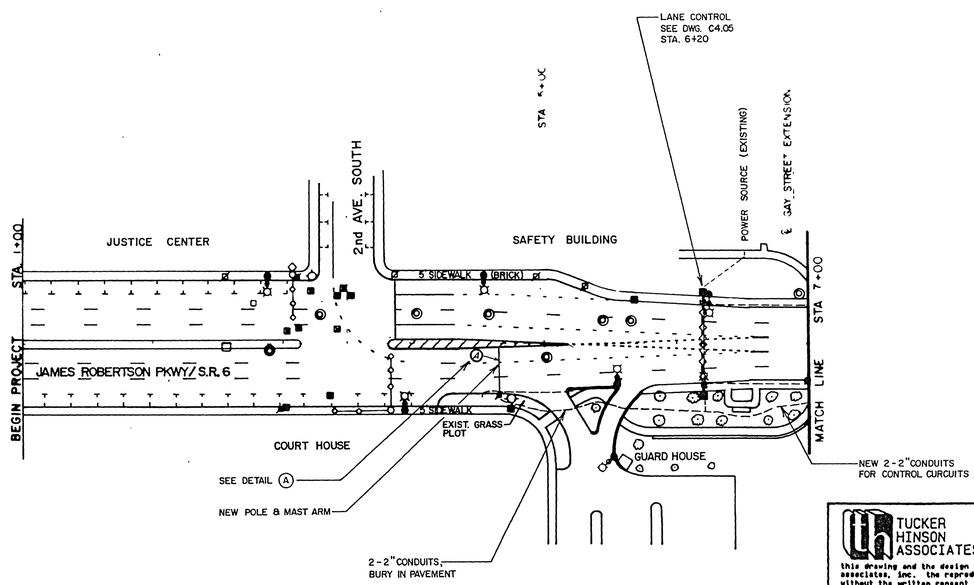
BLACK LEGEND AND
BORDER, YELLOW
BACKGROUND
6 IN. SERIES D LETTERS

DETAIL (A)

LEGEND

- EXISTING MANHOLE
- EXISTING WATER METER
- EXISTING CATCH BASIN
- EXISTING GAS MAIN
- EXISTING FIRE HYDRANT
- EXISTING SIGN
- EXISTING ELECTRICAL BOX
- EXISTING LIGHT STANDARD
- EXISTING SHRUBS
- EXISTING SIGNAL POLE
- EXISTING TRAFFIC CONTROLLER
- PROPOSED SIGNAL POLE
- PROPOSED ELECTRICAL BOX
- LANE SIGNAL HEADS
- BARRICADE
- EXISTING SIGNAL HEAD
- EXISTING POWER POLE
- PROPOSED POLE & MAST ARM

CO
1.01.01
~~1.01.02~~
1.01.03
3.01.04
4.01.05



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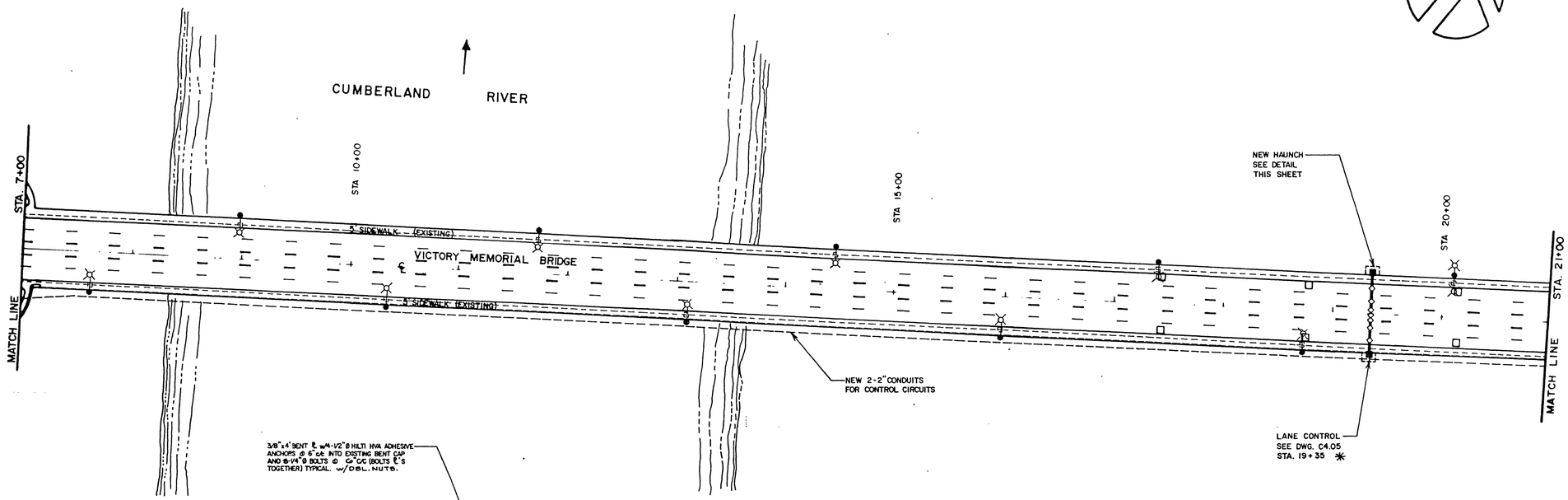
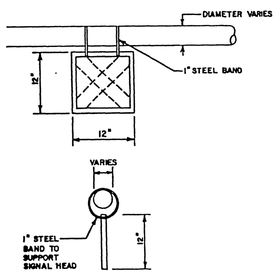
VICTORY MEMORIAL BRIDGE

PROPOSED SIGNALIZATION PLAN
STA. 1+00 TO STA. 7+00

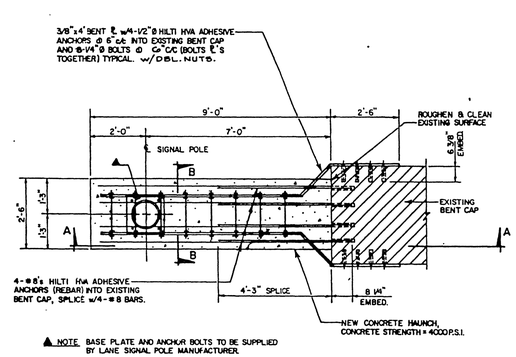
SCALE: 1"=50'-0"

M-302-28



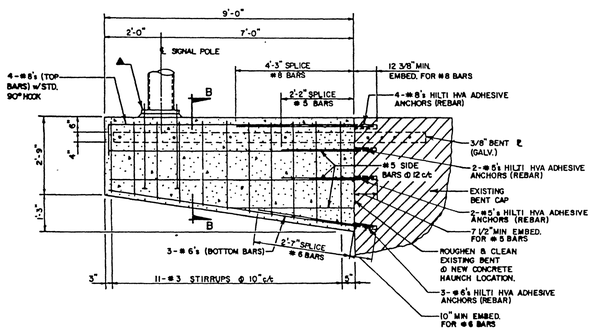


LANE SIGNAL DETAIL
NOT TO SCALE

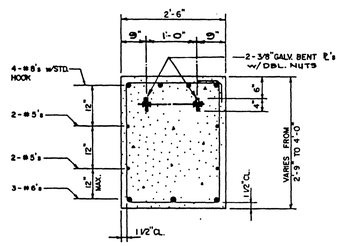


▲ NOTE: BASE PLATE AND ANCHOR BOLTS TO BE SUPPLIED BY LANE SIGNAL POLE MANUFACTURER

PLAN VIEW OF CONCRETE HAUNCH FOR LANE SIGNAL POLE BASE, STA. 19+35
NOT TO SCALE
AT EACH SIDE OF DECK



HAUNCH SECTION A-A
NOT TO SCALE



HAUNCH SECTION B-B
NOT TO SCALE

NOTE: TEXTURE COAT HAUNCH (MOUNTAIN GREY)

NOTE:

1. CONTRACTOR TO INFORM DESIGNER BEFORE DRILLING OF RE-BAR INTO EXISTING CONCRETE BENT.
2. ALL CONCRETE TO BE 4000 PSI. ALL CONCRETE TO BE VIBRATED.
3. ALL REINFORCING STEEL TO BE GRADE 60.
4. DO NOT POUR CONCRETE UNTIL APPROVAL FROM DESIGNER IS OBTAINED ON REINFORCING STEEL. FIELD TESTING MAY BE NECESSARY ON EXISTING BENT CONCRETE BEFORE COMMENCING WITH WORK.

REFER TO T.D.O.T. SPEC. PROVISION 604 CONCRETE STRUCTURES

LEGEND

- EXISTING MANHOLE
- EXISTING WATER METER
- EXISTING CATCH BASIN
- EXISTING GAS MAIN
- EXISTING FIRE HYDRANT
- EXISTING SIGN
- EXISTING ELECTRICAL BOX
- EXISTING LIGHT STANDARD
- EXISTING SHRUBS
- EXISTING SIGNAL POLE
- EXISTING TRAFFIC CONTROLLER
- PROPOSED SIGNAL POLE
- PROPOSED ELECTRICAL BOX
- LANE SIGNAL HEADS
- BARRICADE
- EXISTING SIGNAL HEAD
- EXISTING POWER POLE
- PROPOSED POLE & MAST ARM
- **SEE THIS SHEET FOR HAUNCH DETAILS.**

CO
1.02.01
1.08.02
1.08.03
3.02.04
4.02.05

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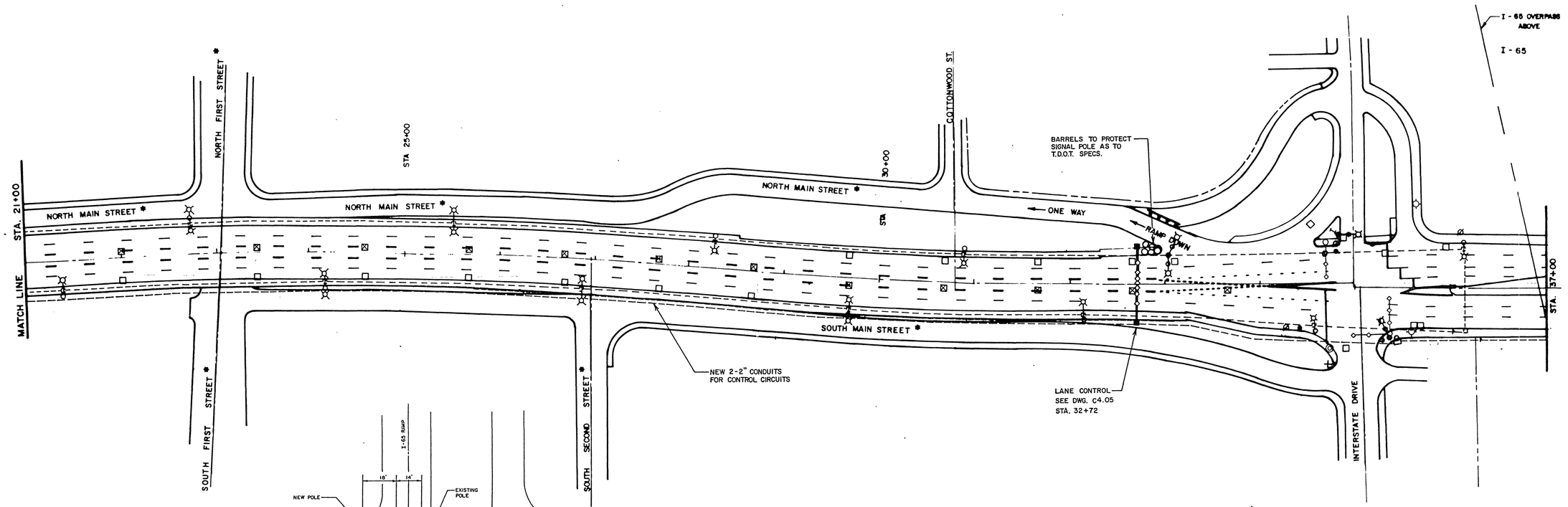
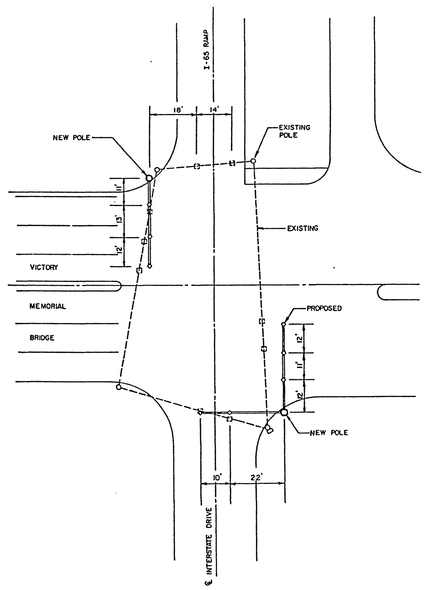
VICTORY MEMORIAL BRIDGE

PROPOSED SIGNALIZATION PLAN
STA. 7+00 TO STA. 21+00

SCALE: 1"=50'-0" THA FILE NO.: 88203
DRAWN BY: DBH CHECKED BY: L.D.
REL. DATE: 3-1-89 SHEET NO.: C4.03

11-302-29





SIGNALIZATION PLAN OF INTERSTATE DRIVE
NOT TO SCALE

NOTE: * BELOW GRADE OF BRIDGE.

LEGEND

- EXISTING MANHOLE
- EXISTING WATER METER
- EXISTING CATCH BASIN
- EXISTING GAS MAIN
- EXISTING FIRE HYDRANT
- EXISTING SIGN
- EXISTING ELECTRICAL BOX
- EXISTING LIGHT STANDARD
- EXISTING SHRUBS
- EXISTING SIGNAL POLE
- EXISTING TRAFFIC CONTROLLER
- PROPOSED SIGNAL POLE
- PROPOSED ELECTRICAL BOX
- LANE SIGNAL HEADS
- BARRICADE
- EXISTING SIGNAL HEAD
- EXISTING POWER POLE
- PROPOSED POLE & MAST ARM

LAWRENCE G. GRAY REGISTERED ENGINEER AGRICULTURE No. 19371 STATE OF TENNESSEE
4-5-07

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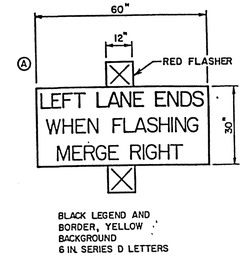
VICTORY MEMORIAL BRIDGE

PROPOSED SIGNALIZATION PLAN
STA. 21+00 TO STA. 37+00

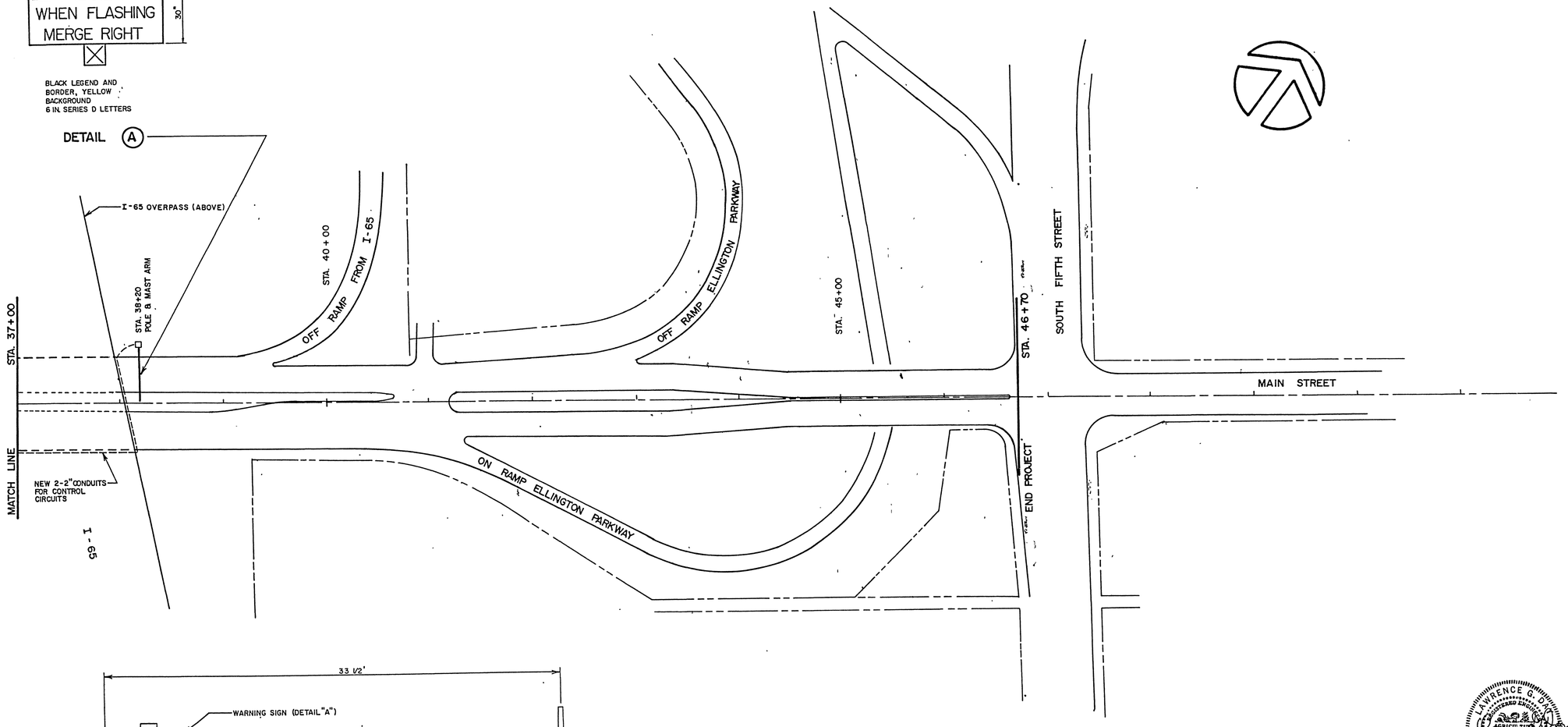
SCALE: 1"=50'-0" THA FILE NO.: 06008
DRAWN BY: DRH CHECKED BY: LJD

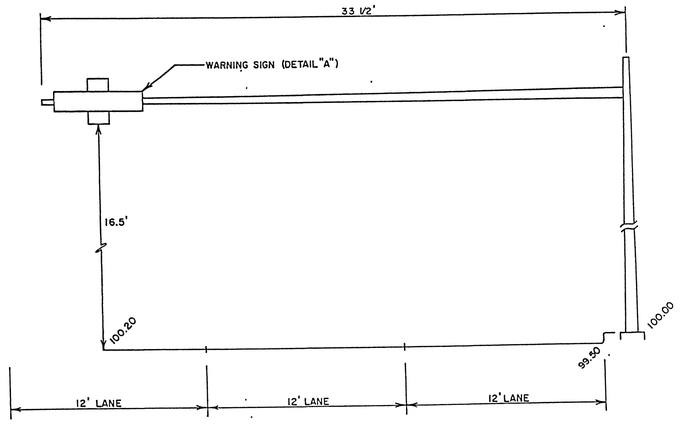
M-302-30

CO
1.03.01
1.03.02
1.03.03
1.03.04
1.03.05
1.03.06



DETAIL (A)





STA. 38+20
NOT TO SCALE

B1		
B2		

LAWRENCE G. DAVIS
REGISTERED LANDSCAPE ARCHITECT
No. 1975
STATE OF TENNESSEE

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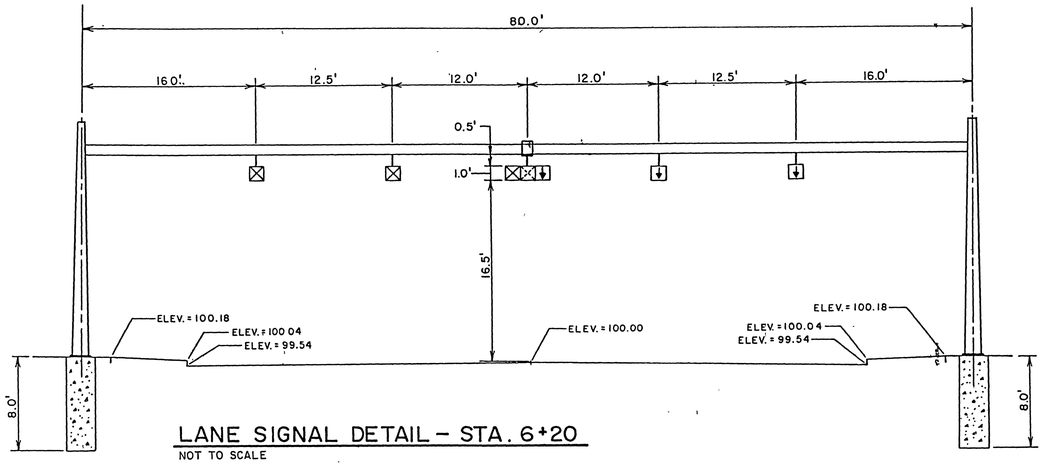
VICTORY MEMORIAL BRIDGE

PROPOSED SIGNALIZATION PLAN

STA. 37+00 TO STA. 46+70

SCALE: 1"=50'-0" THA FILE NO.: 88203
DRAWN BY: DBH CHECKED BY: L.D.
REL. DATE: 3-1-89 SHEET NO.: C4.04

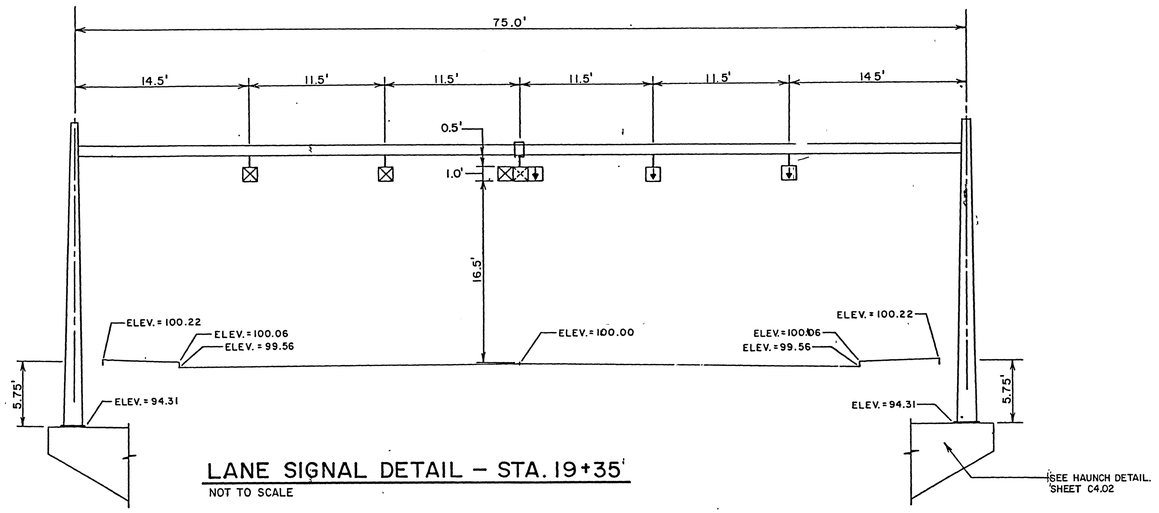
M-302-31



LANE SIGNAL DETAIL – STA. 6+20

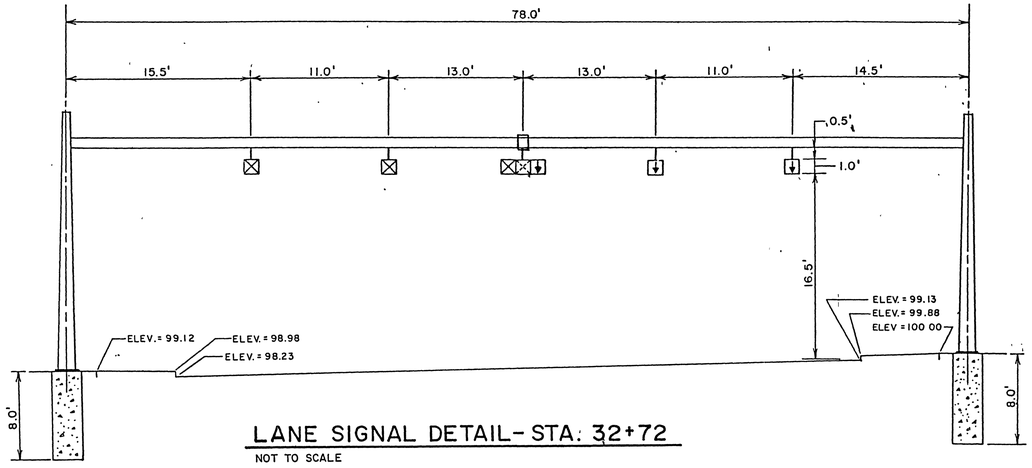
NOT TO SCALE

NOTE:
ALL ELEVATIONS ASSUMED.
NOT FIELD VERIFIED.



LANE SIGNAL DETAIL – STA. 19+35

NOT TO SCALE



LANE SIGNAL DETAIL- STA. 32+72

NOT TO SCALE

LAWRENCE G. DAVIS
REGISTERED
AGRICULTURE
No. 19371
STATE OF TENNESSEE
4-5-89

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VICTORY MEMORIAL BRIDGE

LANE SIGNAL DETAILS

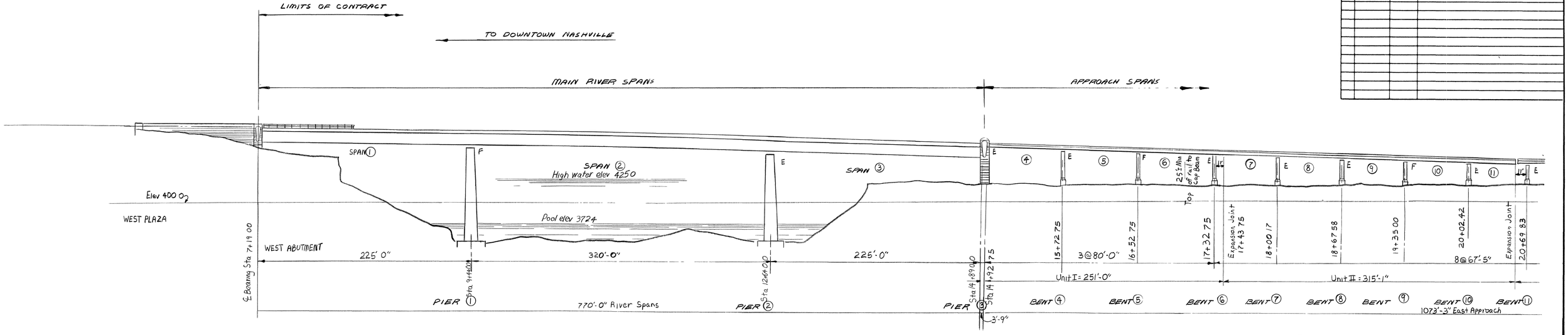
SCALE: AS SHOWN THA FILE NO.: 88203
DRAWN BY: DBH CHECKED BY: L.D.
REL. DATE: 3/1/89 SHEET NO.: C4.05

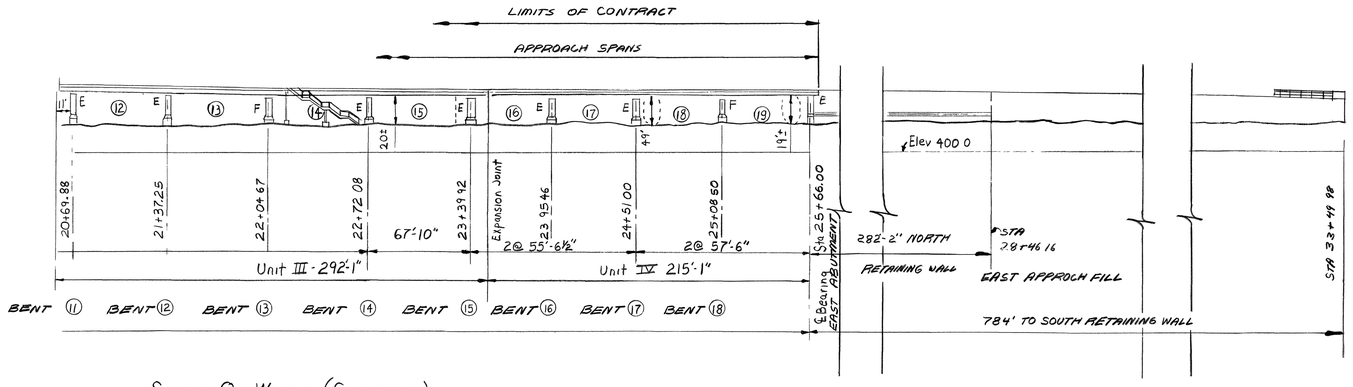
M-302-32

PROJECT NO.	YEAR	SHEET NO
19023-4208-04	1983	3

REVISIONS

NO	DATE	BY	BRIEF DESCRIPTION





Scope Of Work (General)

1) PART OF THE EXISTING STRUCTURAL STEEL TO BE BLASTCLEANED AND PAINTED. AREAS THAT ARE TO RECEIVE THE BLASTCLEAN AND PAINT ARE LISTED BELOW.

A.) ALL EXTERIOR STEEL AS SHOWN IN DETAIL "X" ON DWG. NO E14-18. THIS IS TYPICAL FOR BOTH SIDES OF BRIDGE, COMPLETE LENGTH IN SPANS NO 1, 2, & 3

B.) ALL STRUCTURAL STEEL IN THE MAIN RIVER SPANS BELOW THE ROADWAY SURFACE AND WITHIN TEN (10) FEET OF THE ℄ BEARING AT THE WEST ABUTMENT AND AT PIER NO. 3.

C) ALL STRUCTURAL STEEL IN THE APPROACH SPANS BELOW THE ROADWAY SURFACE AND WITHIN FIVE (5) FEET OF:
- a.) THE ℄ BEARING AT PIER NO. 3.
- b.) THE ROADWAY EXPANSION JOINTS NEAR BENT NO 6, BENT NO 11, AND BENT NO. 15
- c.) THE ℄ BEARING AT THE EAST ABUTMENT

D) ALL STRUCTURAL STEEL IN THE STAIRWAY ON THE SOUTH SIDE OF SPAN NO. 14

E) THE COMPLETE SOUTH SIDE EXTERIOR GIRDER IN SPAN NO 19

F) ALL ROADWAY DRAINAGE DOWNSPOUTS, THROUGHS, SUPPORTS, ETC. , BELOW THE ROADWAY SURFACE AT THE EAST AND WEST ABUTMENTS, PIER NO. 3 AND AT BENTS NO. 6, 8, 10, AND 13.

G) ALL STRUCTURAL STEEL AT FORTY (40) LOCATIONS THROUGHOUT THE APPROACH SPANS THAT WILL BE DESIGNATED BY THE ENGINEER. SEE DETAIL "Y" ON DWG NO. E14-18, FOR LIMITS OF BLASTCLEANING AND PAINTING AT EACH LOCATION.

Estimated Quantities
BRIDGE NO 19-SR6-9.78

	ITEM NO.	ITEM	UNIT	QUANTITY
(1)	603-02.01	REPAINTING EXISTING STEEL STRUCTURE	L.S	1
(2)	604-10.11	CONCRETE SLAB REPAIR	S.Y.	10
	712-01	TRAFFIC CONTROL	L.S.	1
	712-06	SIGNS (CONSTRUCTION)	S.F.	51
	712-07.01	Temporary Barricades (Type I)	L.F.	28
	717-01	Mobilization	L.S.	1

(1) SEE GENERAL SCOPE OF WORK (THIS SHEET) FOR LIMITS TO BE BLASTCLEANED & PAINTED

(2) SEE DETAIL ON DWG. NO. E14-18.

SPECIAL NOTE
BOTH INBOUND LANES AND ONE (1) OUTBOUND LANE SHALL REMAIN OPEN MONDAY THRU FRIDAY DURING THE MORNING RUSH HOUR TRAFFIC BETWEEN 6.30 AM AND 9.00 A.M.

BOTH OUTBOUND LANES AND ONE (1) INBOUND LANE SHALL REMAIN OPEN MONDAY THRU FRIDAY DURING THE AFTERNOON RUSH HOUR TRAFFIC BETWEEN 4.30 P.M. AND 6.00 P.M.

List Of Drawings	Dwg No	Last Rev Date
BRIDGE REPAIR DETAIL & ESTIMATED QUANTITIES	E-14-1A	
BRIDGE REPAIR DETAILS	E-14-1B	
REFERENCE DRAWINGS	E-14-4, 4A, 24, 41, E-14-42, 43, 48, 49, E-14-50, & E14-57	

General Notes

SPECIFICATIONS: STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION (MARCH 1981 EDITION)

PAINT.
SURFACE PREPARATION: SEE TENNESSEE STANDARD SPECIFICATION, SECTION 603.05 (b).

PRIMER 2 MILS OF MOBIL CHEMICAL COMPANY'S 13-R-50 (RED MODIFIED PHENOLIC UNIVERSAL TYPE PRIMER) OR EQUAL. SEE NOTE 2 BELOW

FINISH. 3 MIL DRY FILM THICKNESS MOBIL CHEMICAL COMPANY'S 583 ALUMINUM/VINYL OR EQUAL.

SEE TENNESSEE STANDARD SPECIFICATION SECTION 107.14 CONCERNING LEGAL RESPONSIBILITES OF THE CONTRACTOR IN PROTECTION OF PUBLIC AND PRIVATE PROPERTY. DUE TO PUBLIC AND PRIVATE VEHICLE PARKING UNDER AND NEAR THE WORK AREA, EXTRA PRECAUTIONS MAY BE NECESSARY FOR THE PROTECTION OF THESE VEHICLES.

NOTE 2. FORMULA AND SPECIFICATIONS FOR PRIMER TO BE SUBMITTED TO DIVISION OF MATERIALS AND TEST FOR REVIEW BEFORE WORK IS BEGUN

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

Bridge Repair Details And Estimated Quantities
State Route 6 Over Cumberland River
Bridge No. 19-SR6-9.78
Davidson County
1983

DESIGNED BY _____ DATE _____
DRAWN BY Greg Ross DATE 12-82
SUPERVISED BY A.S. INTURFF DATE 12-82
CHECKED BY A.S. INTURFF & G. GENTRY DATE 12-82

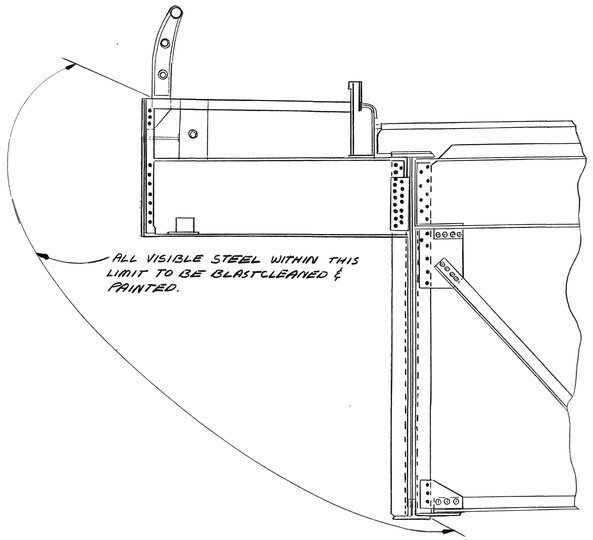
CORRECT Gordon L. Lovell
ENGINEER OF STRUCTURES
APPROVED Lewis Evans
DIRECTOR OF HIGHWAYS

E-14-1A

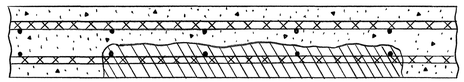
PROJECT NO.	YEAR	SHEET NO.
19023-4208-04	1983	4

REVISIONS

NO	DATE	BY	BRIEF DESCRIPTION

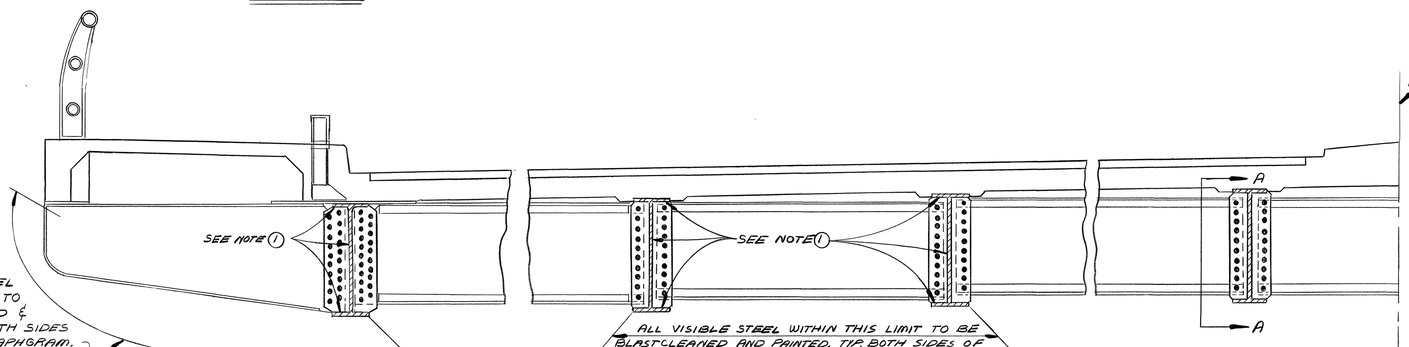


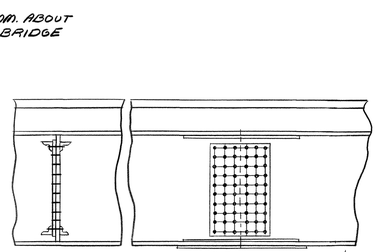
DETAIL "X"



SKETCH SHOWING BOTTOM OF SLAB REPAIR

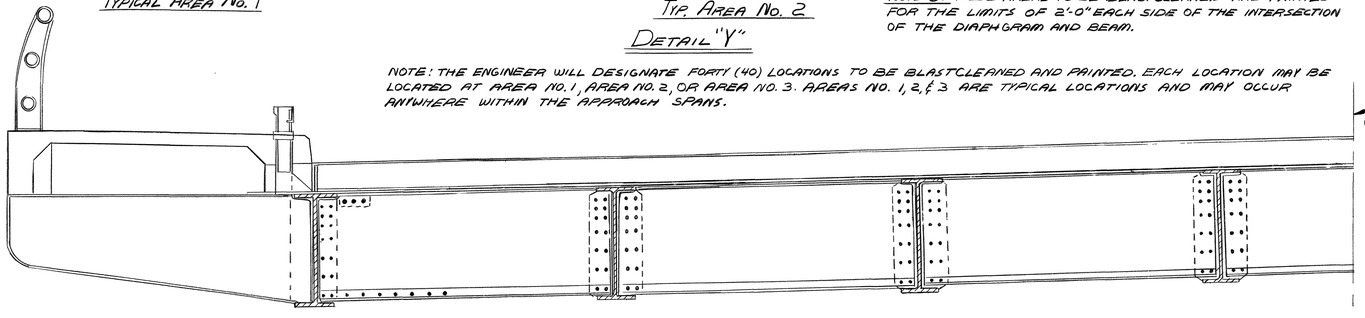
REMOVE CONCRETE IN ALL DETERIORATED AREAS TO A HEIGHT OF 3/4" ABOVE THE BOTTOM MAT OF REINFORCING STEEL. ALL REINFORCING STEEL IN AREAS OF SLAB REPAIR SHALL BE BLASTCLEANED AND THEN REPAIRED WITH SET 45 VERTIPATCH (OR APPROVED EQUAL). AREAS OF CONCRETE REMOVAL SHALL BE DESIGNATED BY THE ENGINEER. SLAB REPAIR IS TO BE PAID FOR UNDER ITEM NO. 604-10.11, CONCRETE SLAB REPAIR.





SECTION A-A
TYPICAL AREA NO. 3

NOTE: THE ENGINEER WILL DESIGNATE FORTY (40) LOCATIONS TO BE BLASTCLEANED AND PAINTED. EACH LOCATION MAY BE LOCATED AT AREA NO. 1, AREA NO. 2, OR AREA NO. 3. AREAS NO. 1, 2, & 3 ARE TYPICAL LOCATIONS AND MAY OCCUR ANYWHERE WITHIN THE APPROACH SPANS.



TYPICAL HALF SECTION IN APPROACH SPANS

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE REPAIR DETAILS
STATE ROUTE 6 OVER CUMBERLAND RIVER
BRIDGE NO. 19-SR6-9.78
DAVIDSON COUNTY
1983

DESIGNED BY
DRAWN BY GREG ROSS DATE 3-83
SUPERVISED BY McINTURFF DATE 3-83
CHECKED BY McINTURFF & GENTRY DATE 3-83

CORRECT Clellon L. Fowell
ENGINEER OF STRUCTURES
APPROVED Lewis Evans
DIRECTOR OF HIGHWAYS

E14-1B

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	SECTION
8	TENN.	U-068-1 (1)	1951	2	46	

PART 2

REVISED MAY 6, 1952
ESTIMATED ROADWAY QUANTITIES
GENERAL NOTES ADDED.

REVISED MAY 16, 1952
ITEM NO. 91-1 CHANGED TO ITEM 104-1

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	QUANTITY	UNIT
	11-1	CLEARING AND GRUBBING	1	LUMP SUM
	13-3	ROADWAY AND DRAINAGE EXCAVATION (UNCLASSIFIED)	3,000	CU. YD.
	15-3	BORROW EXCAVATION (UNCLASSIFIED)	64,000	CU. YD.
	17-1	CULVERT EXCAVATION (UNCLASSIFIED)	6,040	CU. YD.
	21-1	SODDING	6,400	SQ. YD
	104-1	FINE AGGREGATE ASPHALTIC CONCRETE	880	TON
	92-1	HOT ASPHALTIC CONCRETE BINDER MIXTURE	880	TON
	127-1	CEMENT CONCRETE PAVEMENT (PLAIN)	24,000	SQ. YD.
(1)	132-1	STRUCTURAL STEEL	47,969	LB.
(2)	135-4	CLASS "A" CONCRETE	240	CU. YD.
	141-1 OR 142-1	12" CONCRETE PIPE CULVERT OR 12" VITRIFIED CLAY PIPE CULVERT	1,218	LIN. FT.
	141-2 OR 142-2	15" CONCRETE PIPE CULVERT OR 15" VITRIFIED CLAY PIPE CULVERT	2,703	LIN. FT.
	141-3 OR 142-3	18" CONCRETE PIPE CULVERT OR 18" VITRIFIED CLAY PIPE CULVERT	642	LIN. FT.
	141-6 OR 142-6	36" CONCRETE PIPE CULVERT OR 36" VITRIFIED CLAY PIPE CULVERT	190	LIN. FT.
(3)	141-7 OR 142-7	42" CONCRETE PIPE CULVERT OR 42" VITRIFIED CLAY PIPE CULVERT	270	LIN. FT.
	148-24	8" CAST IRON PIPE DRAINS	21	LIN. FT.
	152-2	BRICK MASONRY	21	M
	161-1	CONCRETE SIDEWALK	38,300	SQ. FT.
	161-11	CONCRETE DRIVEWAY	5,600	SQ. FT.
	302	WATER (FOR EMBANKMENTS)	1,000	M. GAL.
	360	SUBGRADE INSULATION COURSE	850	CU. YD.
	500	2½" CEMENT ASBESTOS CONDUIT	3,900	LIN. FT.
	501	RAILROAD CROSSING SECTION	110	SQ. YD
	502	POROUS FILL	300	CU. YD.
	132-4a	GRAY IRON CASTINGS, GRADE 1	8,175	LB.
	135-12	STEEL BAR REINFORCEMENT	200	LB.
(4)	148-2 148-12	4" CONCRETE PIPE DRAINS OR 4" VITRIFIED CLAY PIPE DRAINS	100	LIN. FT.

(1) INCLUDES 41,904 LBS. FOR CATCH BASINS (2'X4'), WHICH ARE DETAILED ON SHEET NO. 24 AND LISTED ON SHEET NO. 25.
(2) INCLUDES 7.4 CU. YDS. FOR ENCLOSING PIPES UNDER RR. TRACKS, STA'S. 24 + ¢ 25 + LT. ¢ RT.
(3) BELL ¢ SPIGOT TYPE REQ'D. (SAN. SEWER)
(4) FOR CURB DRAINS ON FRONTAGE ROADS IF NECESSARY.

ESTIMATED BRIDGE QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
17-2	DRY EXCAVATION (BRIDGES)	5,460	CU. YD.
17-4	ROCK EXCAVATION (BRIDGES)	125	CU. YD.
132-1	STRUCTURAL STEEL	8,750	LB.
132-12	8" WROUGHT IRON PIPE	650	LIN. FT.
135-4	CLASS "A" CONCRETE	5,415	CU. YD.
135-5	CLASS "B" CONCRETE	1,100	CU. YD.
135-12	STEEL BAR REINFORCEMENT	677,700	LB.
137-1	WATERPROOFING TYPE "A"	2,950	SQ. YD.
137-3	WATERPROOFING TYPE "C"	230	SQ. YD.
737-1	STEEL PILES, 12"	29,850	LIN. FT.
737-2	STEEL PILES, 8"	100	LIN. FT.
503	CUT LIMESTONE MASONRY	1,154	CU. FT.
504	HANDRAIL, TYPE "A"	40	LIN. FT.
505	HANDRAIL, TYPE "B"	35	LIN. FT.

· GENERAL NOTES · (ROADWAY)

UNDER ITEM 15-3 THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUITABLE BORROW MATERIAL FROM A SITE APPROVED BY ENGINEER. THE BORROW MATERIAL SHALL BE TAKEN IN A MANNER THAT IT MAY BE READILY MEASURED.

THE CONTRACTOR WILL BE REQUIRED TO REMOVE ALL SALVAGE MATERIALS SUCH AS CATCH BASIN CURB INLETS, GRATES AND FRAMES, MANHOLE COVERS ¢ FRAMES, ETC., AND TO LOAD SAME ON VEHICLES TO BE FURNISHED BY THE CITY OF NASHVILLE.

ALL EXCESS MATERIALS NOT REQUIRED IN THE CONSTRUCTION OF THE PROJECT OR NOT DESIGNATED AS SALVAGE MATERIALS BY THE ENGINEER, SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND PROPER DISPOSAL THEREOF MADE BY THE CONTRACTOR. THE COST OF SALVAGE AND/OR REMOVAL AND DISPOSAL TO BE INCLUDED IN UNIT PRICES BID FOR ITEMS OF CONSTRUCTION.

WHEN NECESSARY TO JOIN NEW PAVEMENTS OR SIDEWALKS TO EXISTING PAVEMENTS OR SIDEWALKS, THE EXISTING SURFACE WILL BE CUT AND BROUGHT TO A NEAT LINE BY THE USE OF AN AIR HAMMER OR OTHER SUITABLE EQUIPMENT.

WHERE ELEVATION OF PROPOSED SIDEWALK IS ABOVE OR BELOW CONNECTING PRIVATE HOUSEWALKS, THE CONTRACTOR SHALL CONSTRUCT STEP OR STEPS AS INDICATED ON THE PLANS AND STANDARD DRAWINGS OR AS DIRECTED BY THE ENGINEER.

SOD IS TO BE PLACED ON ALL NEWLY GRADED EXCAVATION AND EMBANKMENT SLOPES AND WHERE SHOWN ON PLANS.

SEE SHEETS NO. 24 ¢ 26 FOR ADDITIONAL NOTES COVERING ROADWAY ITEMS.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

ESTIMATED QUANTITIES

SCALE
MADE J.G.S. DATE 10-16-51
TRCD. G.D. DATE 10-17-51
CKD. J.T. DATE 10-17-51

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
811 SHEET 2

MICROFILMED

File E-14-2

FED ROAD DIST NO.	STATE	FED. AID PROJ NO	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	SECTION
8	TENN.	U-068-1(1)	1952	3	46	

PART 2

Revised May 6, 1952
Estimated Quantities for Roadway Items
Notes & Sight distance data added.

SUMMARY OF ESTIMATED QUANTITIES FOR BRIDGE ITEMS

Item No	Description	West Abut.	South Wall	North Wall	Pier 3	Bent 4	Bent 5	Bent 6	Bent 7	Bent 8	Bent 9	Bent 10	Bent 11	Bent 12	Bent 13	Bent 14	Bent 15	Bent 16	Bent 17	Bent 18	East Abut	North Wall	South Wall	Memorial	Stair Ftgs.	Total	Item No
17-2	Dry Excavation (Bridges)	135 Cu Yds		405 Cu Yds	485 Cu Yds	120 Cu Yds	125 Cu Yds	110 Cu Yds	115 Cu Yds.	125 Cu Yds	175 Cu Yds.	125 Cu Yds.	145 Cu Yds	125 Cu Yds	125 Cu Yds.	100 Cu Yds.	105 Cu Yds	100 Cu Yds	105 Cu Yds.	140 Cu Yds.	250 Cu. Yds	700 Cu Yds	1,610 Cu Yds.	10 Cu Yds.	25 Cu Yds.	5,460 Cu Yds.	17-2
17-4	Rock Excavation (Bridges)	50 Cu Yds	50 Cu. Yds.	25 Cu Yds																						125 Cu Yds.	17-4
132-1	Structural Steel	590 Lbs.			2,490 Lbs.	225 Lbs.	445 Lbs	225 Lbs	225 Lbs.	225 Lbs	445 Lbs.	225 Lbs.	225 Lbs	225 Lbs	445 Lbs.	225 Lbs.	225 Lbs	225 Lbs.	225 Lbs.	445 Lbs.	225 Lbs	290 Lbs.	800 Lbs.		100 Lbs.	8,750 Lbs.	132-1
132-12	8" Wrought Iron Pipe	70 Lin. Ft.			85 Lin. Ft			95 Lin. Ft		95 Lin. Ft.		85 Lin. Ft.			55 Lin Ft		55 Lin Ft		55 Lin. Ft.		55 Lin Ft.					650 Lin. Ft.	132-12
135-4	Class "A" Concrete	340 Cu Yds.	250 Cu Yds	205 Cu Yds.		155 Cu Yds	155 Cu Yds.	145 Cu Yds	145 Cu Yds.	140 Cu Yds.	170 Cu Yds.	140 Cu Yds.	135 Cu Yds.	130 Cu Yds.	135 Cu. Yds.	120 Cu. Yds.	120 Cu. Yds	115 Cu. Yds.	115 Cu Yds.	135 Cu Yds.	305 Cu. Yds.	740 Cu. Yds	1,500 Cu Yds	5 Cu. Yds	15 Cu. Yds.	5,415 Cu Yds.	135-4
135-5	Class "B" Concrete				1,100 Cu Yds																					1,100 Cu Yds	135-5
135-12	Steel Bar Reinforcement	30,140 Lbs.	29,290 Lbs	23,680 Lbs	14,070 Lbs	26,320 Lbs	26,620 Lbs.	23,550 Lbs	23,140 Lbs	22,480 Lbs.	28,740 Lbs.	18,060 Lbs.	16,020 Lbs	15,390 Lbs	18,000 Lbs.	15,390 Lbs	15,390 Lbs	15,070 Lbs	15,070 Lbs.	18,830 Lbs	18,920 Lbs	94,580 Lbs.	168,520 Lbs	130 Lbs.	300 Lbs.	677,700 Lbs	135-12
137-1	Waterproofing Type "A"	210 Sq Yds	230 Sq. Yds	200 Sq Yds.																	200 Sq Yds	700 Sq Yds	1,410 Sq Yds			2,950 Sq Yds.	137-1
137-3	Waterproofing Type "C"	25 Sq Yds	15 Sq Yds.	10 Sq Yds.																	25 Sq Yds.	50 Sq Yds	105 Sq Yds.			230 Sq Yds	137-3
737-1	Steel Piles 12"				3,800 Lin Ft.	1,500 Lin Ft.	1,570 Lin. Ft.	1,250 Lin Ft.	1,060 Lin. Ft	1,020 Lin. Ft	1,230 Lin Ft.	1,100 Lin. Ft	1,030 Lin Ft.	980 Lin. Ft.	820 Lin. Ft.	700 Lin. Ft.	700 Lin. Ft.	710 Lin. Ft.	650 Lin. Ft.	630 Lin. Ft.	980 Lin Ft	2,920 Lin. Ft.	7,200 Lin. Ft			29,850 Lin Ft	737-1
737-2	Steel Piles 8"																								100 Lin. Ft.	100 Lin Ft.	737-2
503	Cut Limestone Masonry	123 Cu Ft	451 Cu Ft	220 Cu Ft	123 Cu Ft.																	41 Cu Ft.	41 Cu Ft.	138 Cu Ft.	17 Cu Ft.	1,154 Cu Ft	503
504	Handrail Type "A"			40 Lin. Ft																						40 Lin Ft.	504
505	Handrail Type "B"			35 Lin Ft.																						35 Lin Ft.	505

SUMMARY OF ESTIMATED QUANTITIES FOR ROADWAY ITEMS

Item No.	Description	Catch Basins	Manholes	Sewer Pipes	Traffic Signals	Roadway Lights	Conc. Steps **	Item Total
17-1	Culvert Excavation (unclassified)	722. Cu. Yds.	205 Cu Yds.	4543 Cu Yds	300 Cu Yds	270 Cu. Yds		6040 cu. Yds.
132-1	Structural Steel	41,904 Lbs			2,000 Lbs	4,065 Lbs.		47,969 Lbs.
135-4	Class "A" Concrete	205.2 Cu Yds.	8.4 Cu. Yds.		3 Cu. Yds.	6 Cu. Yds	10	232.6 cu. Yds
152-2	Brick Masonry	7.5 M	13.2 M					20.7 M
500	2" Cement Asbestos Conduit				1,470 Lin. Ft.	2,430 Lin. Ft.		3,900 Lin ft.
* 132-4a	Gray Iron Castings	5,480	2,695					8,175 Lbs.
135-12	Steel Bar Reinforcement						200	200 Lbs

* Includes Castings, Grates & Covers for No. 12 & 14 Catch basins and no. 2 manholes as shown on dwgs. S-C-12 & S-M-2a.

** Concrete Steps to be Constructed where directed by the engineer.

Minimum Horizontal Sight Distance ..... Unlimited
Minimum Vertical Sight Distance ..... Unlimited
Maximum Horizontal Curve (on ℄) 1°15' ..... Length 600 ft.
Maximum Grade (on ℄) 3.00% ..... Length 903 ft.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

SUMMARY OF QUANTITIES

SCALE
MADE J.G.S. DATE 10-15-51
TRCD HG. RR DATE 10-22-51
CKD J.G.S. DATE 10-22-51

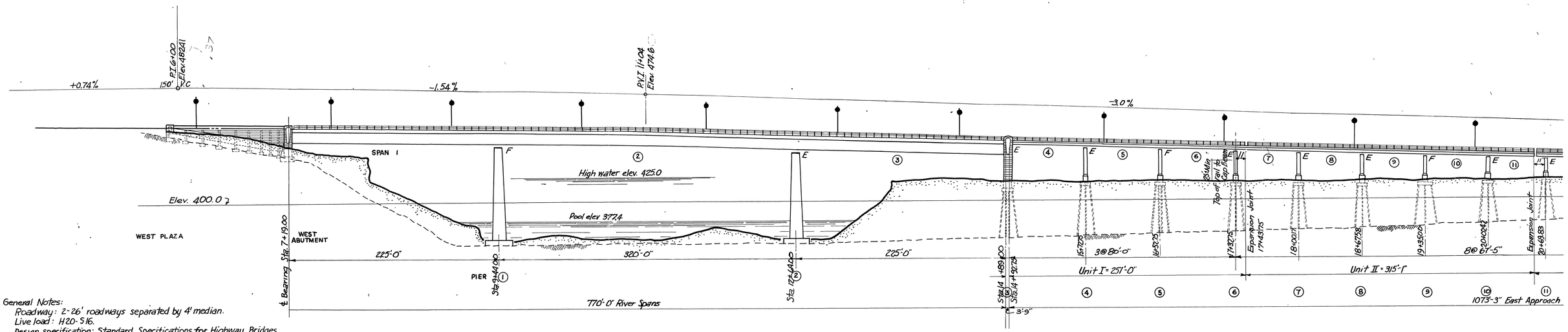
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
811 SHEET- 3

MICROFILMED

File E-14-3

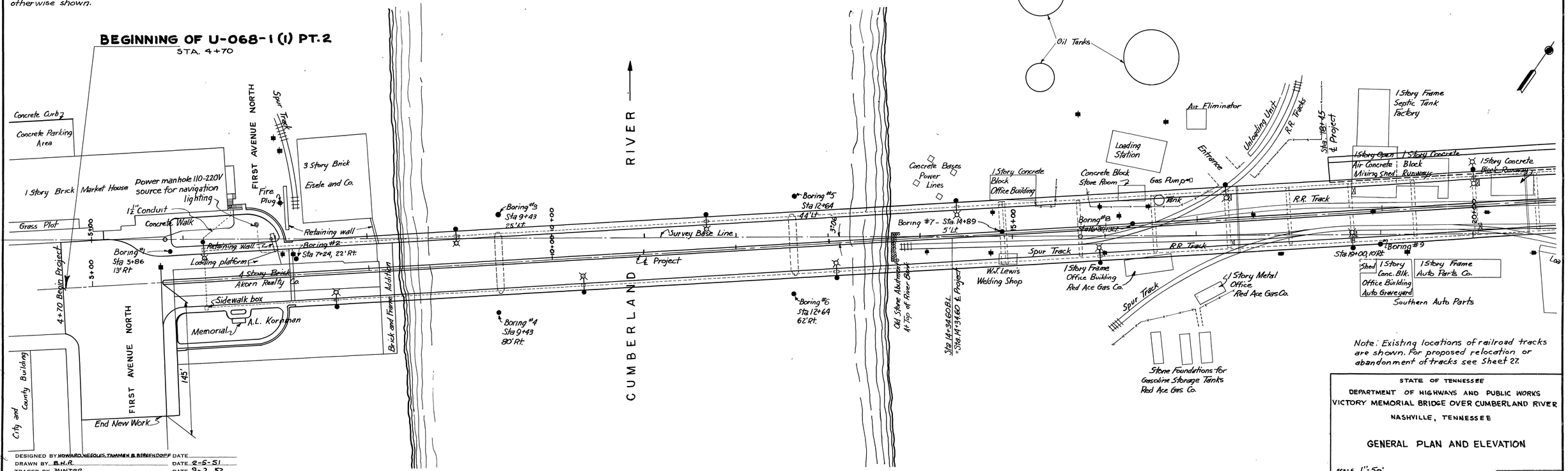
FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
8	TENN.	U-068-1(1)	1952	4	46

PART 2



General Notes:
Roadway: 2-26' roadways separated by 4' median.
Live load: H20-S16.
Design specification: Standard Specifications for Highway Bridges of the American Association of State Highway Officials, 1949."
All welding shall conform to the "American Welding Society Specifications for Fusion Welding of Highway and Railroad Bridges."
The correctness of the reinforcing bar lists on the drawings shall be verified by the Contractor before ordering bars.
All exposed metalwork shall be given 1 shop coat of red lead.
All piles shall be driven to refusal on rock.
All exposed edges of concrete shall have ¾" chamfer unless otherwise shown.

BEGINNING OF U-068-1 (1) PT. 2
STA. 4+70



DESIGNED BY HOWARD, NEEGLES, TAMMEN & BERGENDOFF DATE
DRAWN BY B.H.R. DATE 2-5-51
TRACED BY MINTER DATE 9-2-52
CHECKED BY H.P.B. DATE 2-21-51

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

GENERAL PLAN AND ELEVATION

SCALE 1" = 50'

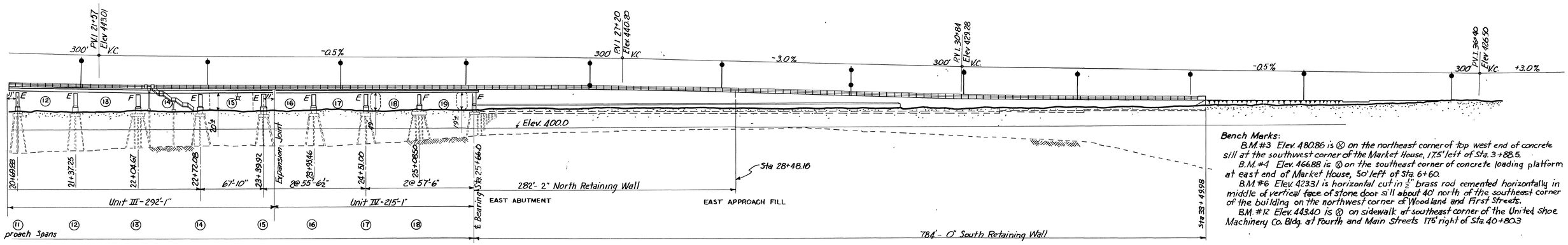
811 SHEET 4

WITH SHEET 4A
Filed E-14-4

MICROFILMED

FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
8	TENN.	U-068-1(1)	1952	4A	46

PART 2



Bench Marks:

B.M. #3 Elev. 480.86 is ⊗ on the northeast corner of top west end of concrete sill at the southwest corner of the Market House, 17.5' left of Sta. 3+88.5.

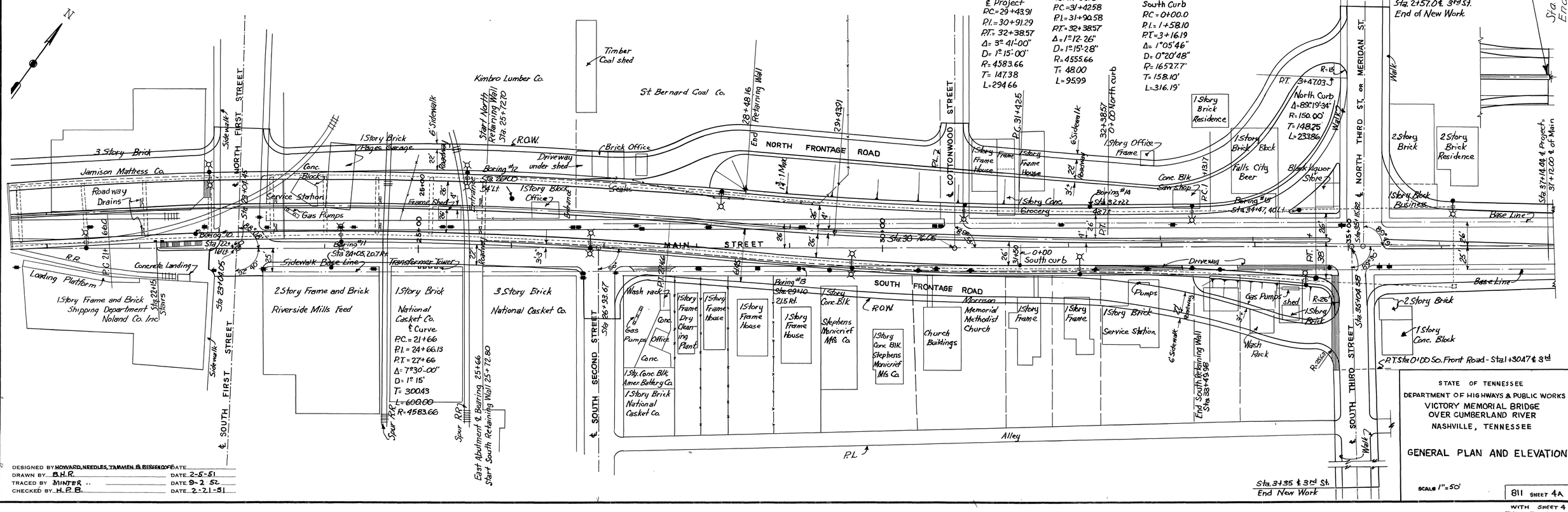
B.M. #4 Elev. 466.88 is ⊗ on the southeast corner of concrete loading platform at east end of Market House, 50' left of Sta. 6+60.

B.M. #6 Elev. 423.31 is horizontal cut in ½" brass rod cemented horizontally in middle of vertical face of stone door sill about 40' north of the southeast corner of the building on the northwest corner of Woodland and First Streets.

B.M. #12 Elev. 443.40 is ⊗ on sidewalk at southeast corner of the United Shoe Machinery Co. Bldg. at Fourth and Main Streets 17.5' right of Sta. 40+80.3

END OF U-068 1 (1) PT. 2
STA. 39 + 14.45

Sta 39+14.45 End of Project



STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS & PUBLIC WORKS
VICTORY MEMORIAL BRIDGE
OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

GENERAL PLAN AND ELEVATION

SCALE 1"=50'

811 SHEET 4A

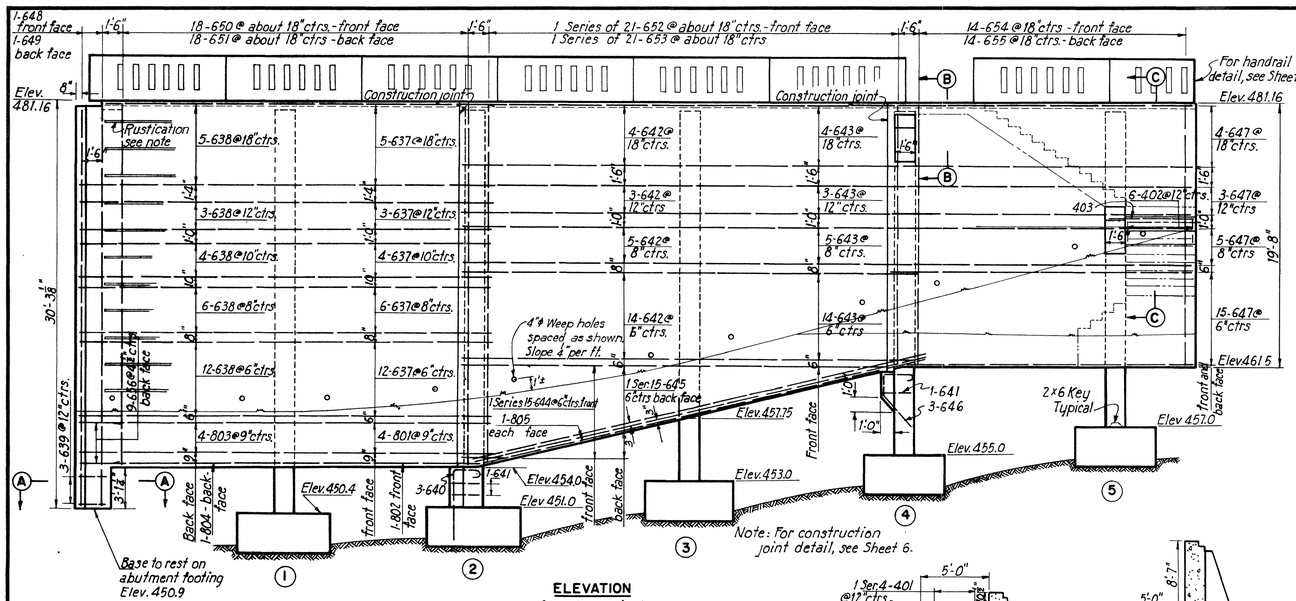
WITH SHEET 4
Filed E-14-4A

DESIGNED BY HOWARD, NEEDLES, TAMMEN & BERGENDOFF DATE
DRAWN BY B.H.R. DATE 2-5-51
TRACED BY MINTER DATE 9-2 52
CHECKED BY H.P.B. DATE 2-21-51

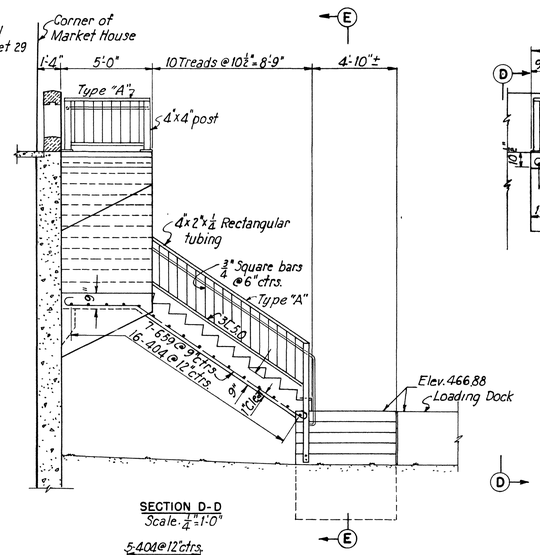
MICROFILMED

FED ROAD DIST NO.	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS	SECTION
8	TENN.	U-068-H(1)	1952	5	46	

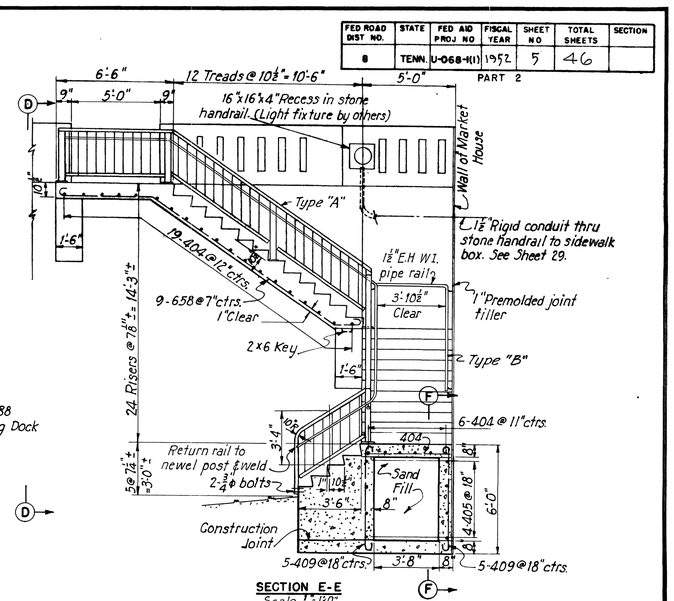
PART 2



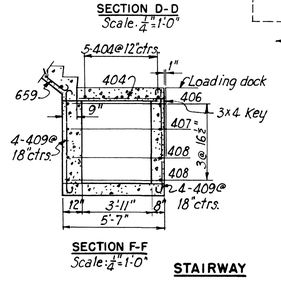
ELEVATION
(Developed view)
Scale: 3/16" = 1'-0"



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

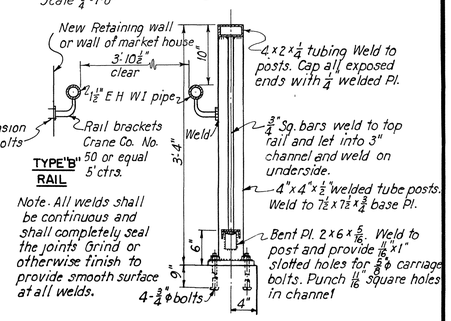


SECTION E-E
Scale 1/4" = 1'-0"



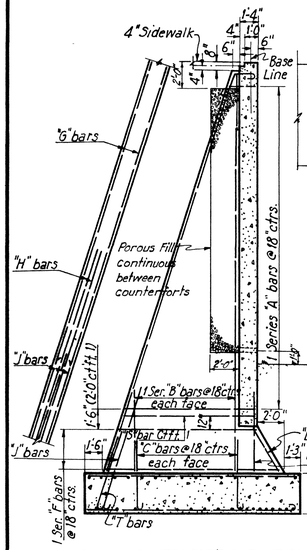
SECTION F-F
Scale: 1/4" = 1'-0"

STAIRWAY

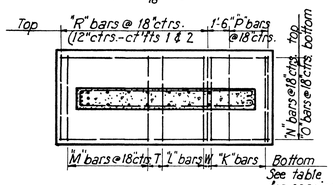


TYPE "A" RAIL

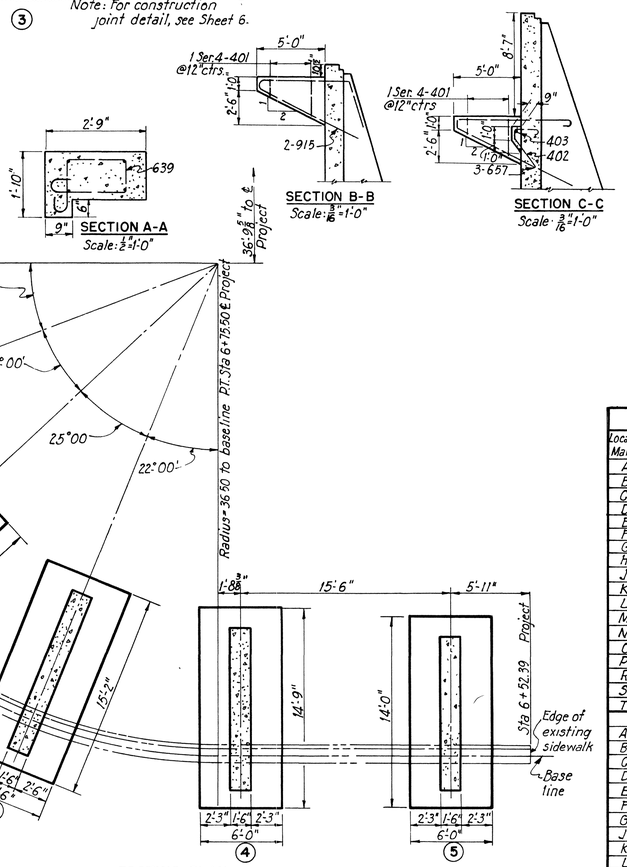
STAIRWAY HANDRAIL
Scale 1"=1'-0"
Note: Material in handrails to be Cor-Ten or equal.



TYPICAL COUNTERFORT ELEVATION
Scale: 3/16" = 1'-0"



TYPICAL FOOTING
Scale: 3/16" = 1'-0"



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

SECTION B-B
Scale: 3/16" = 1'-0"

SECTION C-C
Scale: 3/16" = 1'-0"

FOOTING PLAN
Scale: 3/16" = 1'-0"

SPACING FOR BOTTOM FOOTING BARS

	"K" bars	"L" bars	"M" bars	"T" Dim.	"W" Dim.
①	6" ctrs.	12" ctrs.	18" ctrs.	12"	6"
②	5" ctrs.	12" ctrs.	18" ctrs.	12"	5"
③	6" ctrs.	12" ctrs.	18" ctrs.	12"	6"
④	9" ctrs.	18" ctrs.	18" ctrs.	18"	9"
⑤	9" ctrs.	18" ctrs.	18" ctrs.	18"	9"

COUNTERFORT REINFORCING STEEL LOCATION

Location Mark	Mark	No. Reqd Counterfort ①	Mark	No. Reqd Counterfort ②	Mark	No. Reqd Counterfort ③
A	603	1 Series of 17	603	1 Series of 17	616	1 Series of 15
B	604	2 Series of 6	613	2 Series of 6	617	2 Series of 6
C	605	12	605	12	605	12
D	606	2	614	2	618	2
E	607	2	607	2	619	2
F	601	1 Series of 3	612	1 Series of 3	615	1 Series of 4
G	901	2	905	2	908	2
H	902	2	906	2	909	2
J	903	3	907	4	910	2
K	608	9	608	11	620	9
L	608	4	608	4	620	4
M	609	5	609	5	607	5
N	610	5	610	5	621	5
O	611	5	611	5	622	5
P	609	3	609	3	607	3
R	608	12	608	12	620	7
S	602	1				
T	904	4	904	4	904	4
	Counterfort ④		Counterfort ⑤			
A	624	1 Series of 12	633	1 Series of 13		
B	625	2 Series of 6	634	2 Series of 5		
C	605	12	605	10		
D	626	2	618	2		
E	627	2	619	2		
F	623	1 Series of 5	632	1 Series of 3		
G	911	2	913	2		
J	912	2	914	2		
K	630	7	630	7		
L	630	4	630	4		
M	631	3	631	2		
N	628	4	635	4		
O	629	4	636	4		
P	631	3	631	3		
R	630	7	630	7		
T	904	4	904	4		

Notes:
Backface of wall shall have Type "A" waterproofing full height of wall except at joints which shall have 2' wide strip of Type "C" waterproofing.
For reinforcing steel schedule, see Sheet 8.
Rustication to be a continuation of rustication on the abutment and is to run parallel to wall top
For details of rustication, see Sheet 9.
For details of end post, see Sheet 9.
Elevations at bottom of footings subject to change.
See notes Sheet 7.

ESTIMATED QUANTITIES

Item No.	Description	Quantity
17-2	Dry Excavation (Bridges)	405 Cu. Yds.
17-4	Rock Excavation (Bridges)	25 Cu Yds.
135-4	Class "A" Concrete	205 Cu. Yds
135-12	Steel Bar Reinforcement	23,680 Lbs.
137-1	Waterproofing, Type A	200 Sq. Yds
137-3	Waterproofing, Type C	10 Sq. Yds
	Cut Limestone Masonry	220 Cu. Ft.
	Handrail, Type A	40 Lin. Ft.
	Handrail, Type B	35 Lin Ft

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

WEST PLAZA
NORTH RETAINING WALL

SCALE 1" = 3/4" = 1/2" = 1'-0"
MADE B.H.R. DATE 4-3-51
TRCD P.R. DATE 4-11-51
CKD C.R. DATE 4-20-51

HOWARD, NEEDLES TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
SHEET 5

811

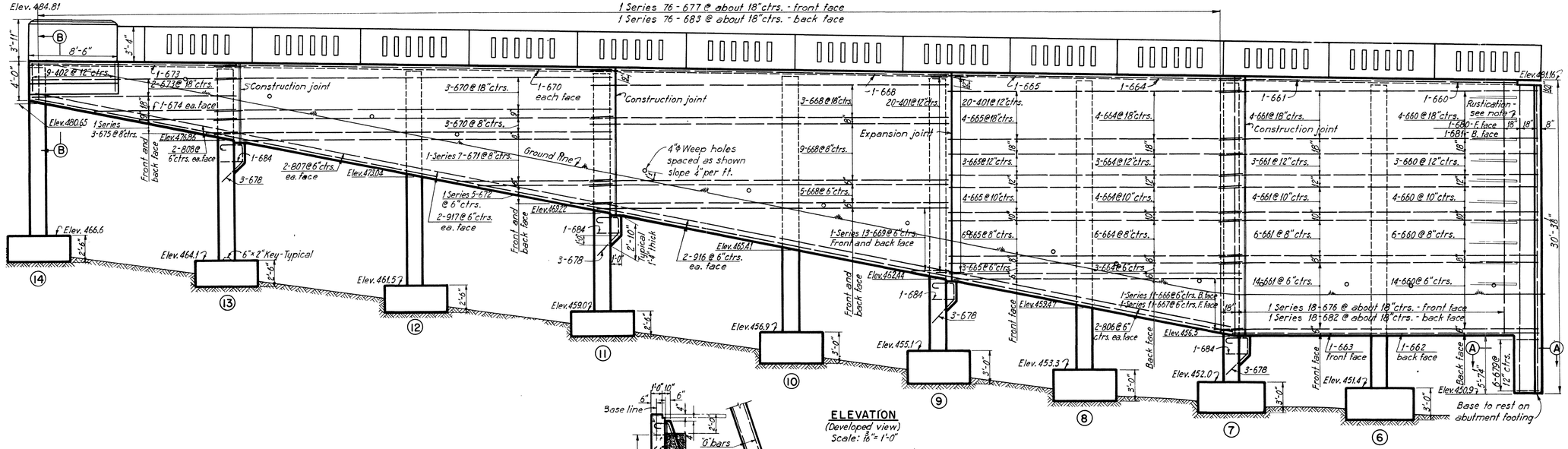
MICROFILMED

402

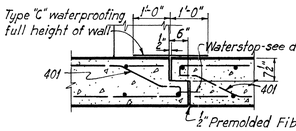
File E-14-5

FED ROAD DIST. NO	STATE	FED AID PROJ. NO.	FISCAL YEAR	SHEET NO	TOTAL SHEETS	SECTION
8	TENN	U-068-1(11)	1952	6	46	

PART 2



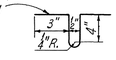
Type "C" waterproofing full height of wall



EXPANSION JOINT DETAIL

Scale: ½" = 1'-0"

24 oz. copper flashing



WATERSTOP

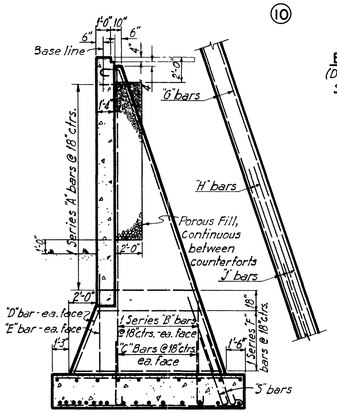
No Scale

Note: Construction joint to be similar to expansion joint except omit fibre joint filler and omit crimp in copper waterstop.

ELEVATION

(Developed view)

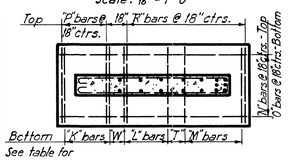
Scale: ⅛" = 1'-0"



TYPICAL COUNTERFORT ELEVATION

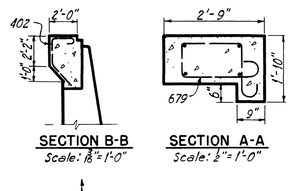
Scale: ⅛" = 1'-0"

SPACING FOR BOTTOM FOOTING BARS					
	"K" Bars	"L" Bars	"M" Bars	"T" Dim.	"W" Dim.
⑥	6" ctrs.	12" ctrs.	18" ctrs.	18"	6"
⑦	6" ctrs.	12" ctrs.	18" ctrs.	18"	6"
⑧	8" ctrs.	16" ctrs.	16" ctrs.	16"	8"
⑨	8" ctrs.	16" ctrs.	16" ctrs.	16"	8"
⑩	10" ctrs.	18" ctrs.	18" ctrs.	18"	18"
⑪	9" ctrs.	18" ctrs.	18" ctrs.	18"	18"
⑫	12" ctrs.	18" ctrs.	18" ctrs.	18"	18"
⑬	18" ctrs.	18" ctrs.	18" ctrs.	18"	18"
⑭	18" ctrs.	18" ctrs.	18" ctrs.	18"	18"



TYPICAL FOOTING

Scale: ⅛" = 1'-0"

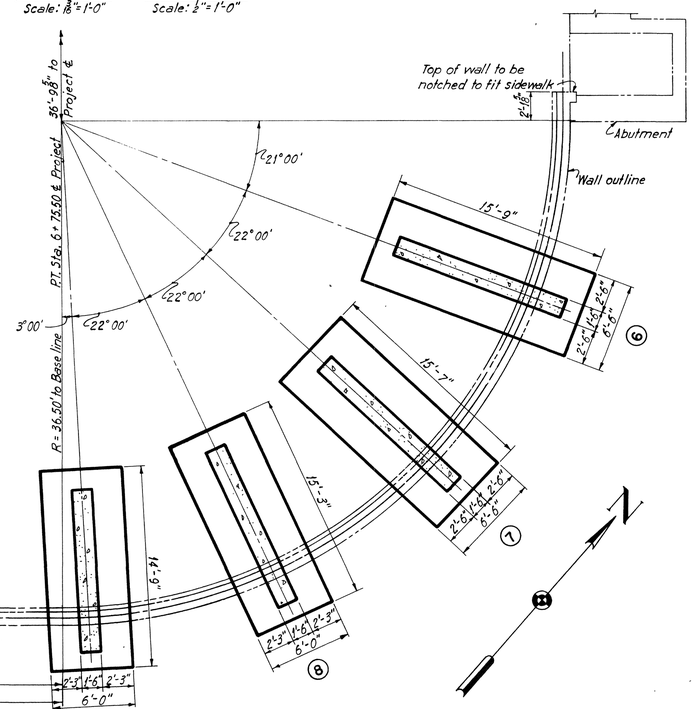


SECTION B-B

Scale: ⅜" = 1'-0"

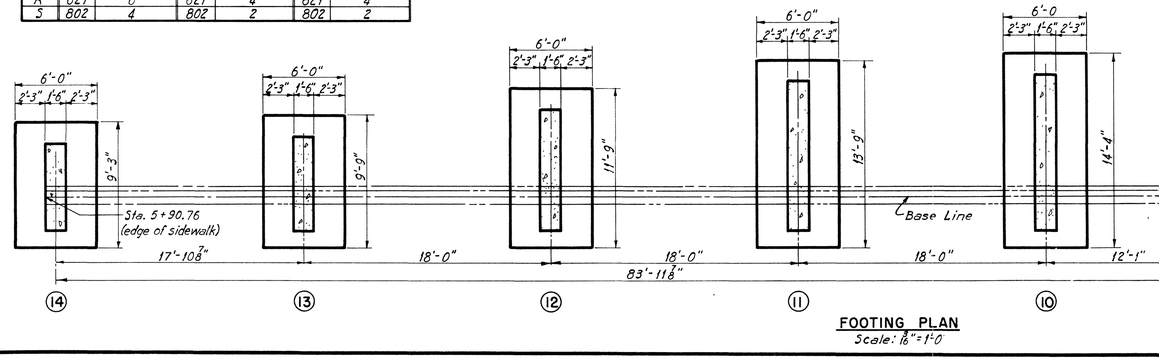
SECTION A-A

Scale: ½" = 1'-0"



ESTIMATED QUANTITIES		
Item No.	Description	Quantity
17-4	Rock Excavation (Bridges)	50 Cu.Yds.
135-4	Class "A" Concrete	250 Cu.Yds.
135-12	Steel Bar Reinforcement	29,290 Lbs.
137-1	Waterproofing, Type "A"	230 Sq.Yds.
137-3	Waterproofing, Type "C"	15 Sq.Yds.
	Cut Limestone Masonry	451 Cu. Ft.

COUNTERFORT REINFORCING STEEL LOCATION												
Location Mark	Mark	No. Req'd. Counterfort ⑥	Mark	No. Req'd. Counterfort ⑦	Mark	No. Req'd. Counterfort ⑧	Mark	No. Req'd Counterfort ⑨	Mark	No. Req'd Counterfort ⑩	Mark	No. Req'd. Counterfort ⑪
A	635	1 Series of 15	638	1 Series of 16	640	1 Series of 15	643	1 Series of 13	646	1 Series of 11	649	1 Series of 9
B	633	2 Series of 6	636	2 Series of 6	641	2 Series of 6	644	2 Series of 5	647	2 Series of 5	650	2 Series of 5
C	631	12	631	12	631	12	631	10	631	10	632	10
D	622	2	629	2	628	2	623	2	609	2	626	2
E	623	2	624	2	609	2	625	2	626	2	606	2
F	634	1 Series of 4	637	1 Series of 3	639	1 Series of 4	642	1 Series of 5	645	1 Series of 6	648	1 Series of 7
G	910	2	911	2	912	2	913	2	914	2	915	2
H	902	2	902	2	904	2						
J	901	2	901	2	903	1	905	2	906	2	907	1
K	619	9	619	9	621	8	621	8	621	7	621	7
L	619	5	619	5	621	4	621	4	621	3	621	3
M	620	4	620	4	622	4	622	4	622	3	622	3
N	601	5	602	5	603	4	604	4	605	4	606	4
O	610	5	611	5	612	4	613	4	614	4	615	4
P	620	4	620	4	622	4	622	3	622	3	622	3
R	619	7	619	7	621	7	621	7	621	7	621	7
S	908	6	908	6	908	5	908	4	908	4	909	3
	Counterfort ⑫		Counterfort ⑬		Counterfort ⑭							
A	652	1 Series of 6	655	1 Series of 4	658	1 Series of 2						
B	653	2 Series of 4	656	2 Series of 3	659	2 Series of 2						
C	632	8	632	6	632	4						
D	607	2	630	2	604	2						
E	604	2	602	2	627	2						
F	651	1 Series of 8	654	1 Series of 9	657	1 Series of 10						
G	803	2	804	2	805	2						
H												
J	801	2										
K	621	6	621	5	621	5						
L	621	2										
M	622	2	622	2	622	2						
N	607	4	608	4	609	4						
O	616	4	617	4	618	4						
P	622	2	622	3	622	3						
R	621	6	621	4	621	4						
S	802	4	802	2	802	2						



FOOTING PLAN

Scale: ⅛" = 1'-0

Notes:

Backface of wall shall have type "A" water-proofing full height of wall except at joints which shall have 2' wide strip of type "C" waterproofing.

Rustication to be a continuation of rustication on the abutment and is to run parallel to wall top.

For details of rustication, see Sheet 9.

For details of end post, see Sheet 9.

Elevations at bottom of footings subject to change. See notes Sheet 7.

For handrail details see Sheet 29.

For reinforcing steel schedule see Sheet 8.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

WEST PLAZA
SOUTH RETAINING WALL

SCALE As Shown
MADE B.H.R. DATE 1-23-51
TRCD. G.D. DATE 4-4-51
CKD D.L.W. DATE 4-18-51

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

811 SHEET 6

MICROFILMED

SEE DWG E-14-78 For Revised Retainingwall File E-14-6

FED ROAD DIST NO.	STATE	FED AID PROJ NO.	FISCAL YEAR	SHEET NO	TOTAL SHEETS	SECTION
8	TENN	U-0 68-1(1)	1952	7	46	

PART 2

Sidewalk steel 8-645@12"ctrs. 6" 6"

Symmetrical about ℄ Project and ℄ Abutment

Stop approach roadway paving

1-648

5-618 @12"ctrs.

4-637@12"ctrs.

11'-0"

9"

4'-6"

℄ Bearing

4'-0"

2'-0" 2'-0"

℄ Girder & Counterfort

See details of screed frame.

Slope 1" foot between pads

Sta. 7+19.00

8'-11" 8'-11" 8'-11" 2'-7" 7'-7"

36'-11"

1" 3½"R. Pl. 8¾"x⅜" Pl. 1"x⅜" Weld to L

Construction Joint

1½"x⅜" Straps at 2'-0" staggered.

60°

L 8"x4"x⅞"

9"

Surface of pavement

SECTION F - F

Scale: 1"=1'-0"

Curb post recesses 9" deep

4½" 6" 1'-0" 1:1" 10½"

8'-6"

F F

½"ϕ Flathead countersunk screws @18"ctrs.

Pl. 8¾"x⅜"

Pl. 1"x⅜"

2 Pl. 10½"x⅜"

1'-6" 5'-7" 2'-0"

PART PLAN AT SIDEWALK

Scale: ½"=1'-0"

2'-7" 2.649 2.640

1:3" 6"

1'-6"

G G

SECTION D-D

Scale: ¾"=1'-0"

PLAN

Scale: 3/16"=1'-0"

Construction joint

6-634@16"ctrs. front face

5-634@16"ctrs. back face

19-633@18"ctrs.

Construction Joint

Symmetrical about ℄ except as shown

Elev. 480.64 @ end of approach

3/16" /ft.

Surface of pavement

¼" per ft. Level

4"ϕ Pipe sleeve

2 equal spaces

9"

Rustication on outer face similar to Pier 3 sheet 9.

4"ϕ Pipe sleeve for 2½" conduit to power manhole in Plaza. See Sheet 29

Elev. 463.98

Elev. 463.69

30'-3⅜" at back corner

7 Spaces @ 2'-0"

3 Spaces @ 2'-0"

2'-7"

Construction joint

4-4"ϕ Weepholes @ 9'-0" ctrs.

4'-6"

Slope to front

2-639

12" 3-639

1-627 back face

3-627@10"ctrs.

1-621 front face

4-621@18" ctrs each face

3 Spa @ 18"

1-807 each face

5-807@15" ctrs each face

19-611@18"ctrs. each face

19-632@18"ctrs. front face

16" 11-624@18"ctrs. front face

11-626@18"ctrs. back face

4-620

7-628@18"ctrs. front face

4-621

12-629@18"ctrs. front face

6-622 @12"ctrs.

7-630@18"ctrs. back face

18"

12-631@18"ctrs. back face

7-806 @8"ctrs.

6-611@16"ctrs. front face

9-623 @18"ctrs. 9-625

12"

610

1-636 each face

5-611@16"ctrs. back face

front face

Back face

Elev. 450.9

10"x3" Key

Elev. 454.0

6x2 Key

10"x3" Key

4'-0" typical

Elev. 446.9 See notes

ELEVATION

Scale: 3/16"=1'-0"

A B E C D

627 633 611 2-905 4-903 1'-6" 9'-1½" 9" 1'-6" 1-611 each face Construction Joint Key 12x3 2-902 1-608 each face 1-609 each face 1-610 each face 1-613 1-612 1 Series 3-606@18"ctrs. each face 6-901 804 603 Series 9-616@18"ctrs. 629 632 631 630 4'-0" 1'-6" 1'-3" 16" 1 Series 4-618@18"ctrs. 18" 18" 18" 1'-6" 1 Series 3-614@16"ctrs. 7-607@18"ctrs. each face 12" 1-607 each face

SECTION A-A

1"Premolded Exp. Jt. 6" 1'-8" 11½" Expansion joint castings by others. Porous Fill continuous between counterforts 3-902 1-609 each face 1-608 each face 1 Series 3-606@18"ctrs. each face 3-901 803 602 601 Series 9-617@18"ctrs. 628 18" 1-610 each face 7-607@18"ctrs. each face 12" 1-607 each face

SECTION B-B

Porous Fill 2'-0" 2-906 4-634 each face @18"ctrs. Construction Joint 4-902 4-611@18" ctrs. each face 4-904 5'x2" Key 603 601 602 4-901 18 4-607@18" ctrs. each face 18"x18"x623@18"ctrs. back face 18"x11-624@18"ctrs. front face 20-638@18"ctrs. back

SECTION C-C

1-645 back face 1-646 front face 1-644 front face 8'-6" 2-5 2-647 4 Spa @ 18" 3'-0" 6'-1½" 3'-0" 1-635 each face 1-610 back face 1-602 front face 1-602 back face 9-643@18"ctrs front face 10-642@18"ctrs back face 2'-7½" 4-641 @12"ctrs. 5'-6" 1'-3" 5x2 Key

SECTION E-E

Scale: 3/16"=1'-0"

Notes:

Elevation of bottom of footings is subject to change when excavations reveal actual top of solid rock. All footings shall extend at least 3" into sound rock.

For downspout details, see Sheet 24.

For Reinforcing Steel schedule, see Sheet 8.

Back face of abutment shall have Type "A" waterproofing except at joints which shall have 2' wide strip of Type "C" waterproofing.

15-603@12"ctrs.-top 12-604@8"ctrs. top 7-606@12"ctrs.-top 7-605@12"ctrs.-bottom 617 638 625 623 12-604@8"ctrs. bottom 17-604@6"ctrs. bottom 11-602@16"ctrs.-bottom 12-601@16"ctrs.-bottom 18"

6-603@18"ctrs. Top 612 7-802@18"ctrs.-top 14-801@18" ctrs.-top 5-802@18"ctrs. bottom 12-801@8"ctrs. bottom 5-803@18"ctrs. bottom 6-804@18"ctrs. bottom

37'-5" 4'-5" 9'-0" 8'-10" 15'-2" 3'-3" 2'-6" 3'-3" 3'-3" 2'-6" 7'-5" 1'-6" 6" 12'-0" 15'-6" 2'-6" 3'-6" 8'-6" 1:3

℄ Symmetrical about ℄

FOOTING PLAN

Scale: 3/16"=1'-0"

1⅝" Diam. holes 1'-3½" 1'-3½" ¾"ϕ Air holes @ 12"ctrs. Pc 18 L 42.7 ℄ Brg. 2'-7" 9½" 9½" 3'-7" Butt weld and grind flush

Note: Upper frame shall be flattened and machined if necessary to provide a true plane surface.

UPPER TEMPLATE

For anchor bolt dimensions see Sheet 9.

ESTIMATED QUANTITIES		
Item No.	Description	Quantity
17-2	Dry Excavation (Bridges)	135 Cu.Yds.
17-4	Rock Excavation (Bridges)	50 Cu.Yds.
132-1	Structural Steel	590 Lbs.
132-12	8" Wrought Iron Pipe	70 Lin.Ft.
135-4	Class "A" Concrete	340 Cu.Yds.
136-12	Steel Bar Reinforcement	30,140 Lbs
137-1	Waterproofing, Type "A"	210 Sq.Yds.
137-3	Waterproofing, Type "C"	25 Sq.Yds.
	Cut Limestone Masonry	123 Cu.Ft.

Curb line 26'-0" Roadway 2'-0" 3½" 5@7" 7" 11" 7" 11" 7" 11" 7" 11" 7" 11" 7" 11" 7" 11" 7" 11" 7" 11" 7" 11" 7" 11" 3½" 10" 3½" 2@1'-5½" 2@1'-11½" 2@1'-11½" 2@1'-11½" 2@1'-11½" 2@1'-11½" 12" 12"

Bolt pattern symmetrical about ℄ Roadway.

1"ϕ bolts x 18" with 2 nuts and 2 washers. Thread 4" and project 5" above concrete.

Front face of backwall.

ANCHOR BOLTS FOR EXPANSION CASTINGS

Scale: ½"=1'-0"

Castings to be furnished and placed by others.

1'-3" 6" 2'-7" 64.1

SECTION G-G

635 639 647

SECTION H-H

1⅝" Diam. holes 2'-7" 1'-7" 6 C 8.2 ℄ Brg. Weld

LOWER TEMPLATE

TEMPLATE-SCREED FRAMES

Scale: ½"=1'-0"

STATE OF TENNESSEE

DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS

VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER

NASHVILLE, TENNESSEE

WEST ABUTMENT

SCALE 3/16"=1'-0", ½", 1"=1'-0" MADE B.H.R. DATE 3-1-51 TRCD J.H.G.R.R. DATE 3-28-51 CKD C.R. DATE 4-17-51

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

SHEET- 7 811

MICROFILMED

401

File E-14-7

FED ROAD DIST NO.	STATE	FED AID PROJ NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	SECTION
8	TENN.	U-068-1(1)	1952	8	46	

PART 2

SOUTH RETAINING WALL

Mark	Size	No. Req'd.	Length	Type	A	B
901	1"sq.	4	9'-0"	Str.		
902	1"sq.	4	14'-3"	Str.		
903	1"sq.	1	10'-0"	Str.		
904	1"sq.	2	13'-6"	Str.		
905	1"sq.	2	11'-0"	Str.		
906	1"sq.	2	12'-0"	Str.		
907	1"sq.	1	13'-0"	Str.		
908	1"sq.	25	8'-0"	104	6'-3"	
909	1"sq.	3	7'-6"	104	5'-9"	
910	1"sq.	2	33'-3"	120	4	30'-5"
911	1"sq.	2	33'-0"	120	4	30'-2"
912	1"sq.	2	32'-1"	120	4	29'-3"
913	1"sq.	2	30'-7"	120	4	27'-9"
914	1"sq.	2	29'-0"	120	4	26'-2"
915	1"sq.	2	27'-4"	120	4	24'-6"
916	1"sq.	4	36'-1"	Str.		
917	1"sq.	4	21'-4"	Str.		
801	1"ϕ	2	13'-0"	Str.		
802	1"ϕ	8	6'-7"	104	5'-3	
803	1"ϕ	2	24'-5"	120	3	22'-0"
804	1"ϕ	2	22'-0"	120	2	19'-7"
805	1"ϕ	2	19'-11"	120	2	17'-6"
* 806	1"ϕ	4	27'-6"	Str.		
807	1"ϕ	4	21'-11"	Str.		
808	1"ϕ	4	19'-6"	Str.		
601	¾"ϕ	5	15'-3"	Str.		
602	¾"ϕ	7	15'-0"	Str.		
603	¾"ϕ	4	14'-9"	Str.		
604	¾"ϕ	8	14'-3"	Str.		
605	¾"ϕ	4	13'-9"	Str.		
606	¾"ϕ	6	13'-3"	Str.		
607	¾"ϕ	6	11'-3"	Str.		
608	¾"ϕ	4	9'-3"	Str.		
609	¾"ϕ	8	8'-9"	Str.		
610	¾"ϕ	5	16'-0"	104	15'-0	
611	¾"ϕ	5	15'-10"	104	14'-10	
612	¾"ϕ	4	15'-6"	104	14'-6"	
613	¾"ϕ	4	15'-0"	104	14'-0"	
614	¾"ϕ	4	14'-7"	104	13'-7"	
615	¾"ϕ	4	14'-0"	104	13'-0"	
616	¾"ϕ	4	12'-0"	104	11'-0"	
617	¾"ϕ	4	10'-0"	104	9'-0"	
618	¾"ϕ	4	9'-6"	104	8'-6"	
619	¾"ϕ	42	7'-6"	105	5'-6"	
620	¾"ϕ	16	6'-0"	Str.		
621	¾"ϕ	104	7'-0"	105	5'-0"	
622	¾"ϕ	43	5'-6"	Str.		
623	¾"ϕ	4	7'-8"	Str.		
624	¾"ϕ	2	7'-0"	Str.		
625	¾"ϕ	2	10'-0"	Str.		
626	¾"ϕ	4	11'-0"	Str.		
627	¾"ϕ	2	16'-6"	Str.		
628	¾"ϕ	2	6'-6"	Str.		
629	¾"ϕ	2	5'-0"	Str.		
630	¾"ϕ	2	12'-9"	Str.		

Mark	Size	No. Req'd	Length	Type	A	B
631	¾"ϕ	56	6'-0	104	5'-0"	
632	¾"ϕ	28	5'-6"	104	4'-6"	
633	¾"ϕ	2 Series of 6	5'-0" to 29'-0"	Str.		
634	¾"ϕ	1 Series of 4	20'-7" to 27'-1"	110	1'-1"	8'-9" to 12'-0"
635	¾"ϕ	1 Series of 15	6'-7" to 19'-7"	110	1'-1"	1'-9" to 8'-3"
636	¾"ϕ	2 Series of 6	5'-0" to 28'-9"	Str.		
637	¾"ϕ	1 Series of 3	22'-1" to 26'-7"	110	1'-1"	9'-6" to 11'-9"
638	¾"ϕ	1 Series of 16	6'-5" to 20'-1"	110	1'-1"	1'-8" to 8'-6"
639	¾"ϕ	1 Series of 4	20'-5" to 26'-7"	110	1'-1"	8'-8" to 11'-9"
640	¾"ϕ	1 Series of 15	5'-9" to 18'-7"	110	1'-1"	1'-4" to 7'-9"
641	¾"ϕ	2 Series of 6	4'-6" to 27'-9"	Str.		
642	¾"ϕ	1 Series of 5	18'-7" to 25'-1"	110	1'-1"	7'-9" to 11'-0"
643	¾"ϕ	1 Series of 13	5'-9" to 16'-9"	110	1'-1"	1'-4" to 6'-10"
644	¾"ϕ	2 Series of 5	6'-0" to 26'-6"	Str.		
645	¾"ϕ	1 Series of 6	16'-9" to 24'-5"	110	1'-1"	6'-10" to 10'-8"
646	¾"ϕ	1 Series of 11	5'-11" to 15'-1"	110	1'-1"	1'-5" to 6'-0"
647	¾"ϕ	2 Series of 5	5'-6" to 24'-9"	Str.		
648	¾"ϕ	1 Series of 7	14'-5" to 23'-3"	110	1'-1"	5'-8" to 10'-1"
649	¾"ϕ	1 Series of 9	5'-11" to 13'-1"	110	1'-1"	1'-5" to 5'-0"
650	¾"ϕ	2 Series of 5	4'-6" to 23'-3"	Str.		
651	¾"ϕ	1 Series of 8	10'-7" to 19'-3"	110	1'-1"	3'-9" to 8'-1"
652	¾"ϕ	1 Series of 6	6'-1" to 10'-9"	110	1'-1"	1'-6" to 3'-10
653	¾"ϕ	2 Series of 4	4'-3" to 21'-3"	Str.		
654	¾"ϕ	1 Series of 9	7'-7" to 15'-5"	110	1'-1"	2'-3" to 6'-2"
655	¾"ϕ	1 Series of 4	5'-7" to 7'-1"	110	1'-1"	1'-3" to 2'-0"
656	¾"ϕ	2 Series of 3	4'-3" to 19'-0"	Str.		
657	¾"ϕ	1 Series of 10	6'-5" to 14'-5"	110	1'-1"	1'-8" to 5'-8"
658	¾"ϕ	1 Series of 2	5'-7" to 5'-11"	110	1'-1"	1'-3" to 1'-5"
659	¾"ϕ	2 Series of 2	7'-0" to 17'-0"	Str.		
* 660	¾"ϕ	32	32'-8"	103	1'-2"	30'-6"
* 661	¾"ϕ	32	31'-7"	104	30'-7"	
* 662	¾"ϕ	1	30'-5"	103	1'-2"	28'-3"
* 663	¾"ϕ	1	30'-0"	104	29'-0"	
* 664	¾"ϕ	21	27'-9"	Str.		
* 665	¾"ϕ	21	28'-0"	Str.		
* 666	¾"ϕ	1 Series of 11	3'-10" to 28'-5"	Str.		
* 667	¾"ϕ	1 Series of 11	3'-11" to 29'-1"	Str.		
668	¾"ϕ	36	34'-9"	Str.		
669	¾"ϕ	2 Series of 13	3'-5 to 33'-7"	Str.		
670	¾"ϕ	14	38'-6"	Str.		
671	¾"ϕ	2 Series of 7	16'-6" to 36'-6"	Str.		
672	¾"ϕ	2 Series of 5	4'-0" to 14'-0"	Str.		
673	¾"ϕ	6	19'-0"	Str.		
674	¾"ϕ	2	14'-4"	Str.		
675	¾"ϕ	2 Series of 3	3'-10 to 10'-6"	Str.		
676	¾"ϕ	1 Series of 18	24'-3" to 25'-0"	Str.		
677	¾"ϕ	1 Series of 76	3'-9" to 24'-9"	Str.		
678	¾"ϕ	12	6'-10"	108	1'-10"	1'-6"
679	¾"ϕ	6	8'-1"	112	1'-2"	2'-7"
680	¾"ϕ	2	29'-6"	Str.		
681	¾"ϕ	2	28'-9"	Str.		
682	¾"ϕ	1 Series of 18	23'-6" to 24'-3"	Str.		
683	¾"ϕ	1 Series of 76	3'-0" to 23'-9"	Str.		
684	¾"ϕ	4	6'-7"	110	11"	1'-10"
401	½"ϕ	40	3'-10"	117		
402	½"ϕ	9	6'-6"	108	1'-5"	1'-11"

WEST ABUTMENT

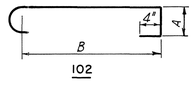
Mark	Size	Number	Length	Type	Dimension A	Dimension B
901	1"Sq.	26	8'-10"	104	7'-1"	
902	1"Sq.	24	16'-3"	Str.		
903	1"Sq.	8	21'-9"	Str.		
904	1"Sq.	8	11'-0"	104	9'-3"	
905	1"Sq.	4	11'-0"	Str.		
906	1"Sq.	4	17'-3"	Str.		
801	1"ϕ	32	10'-6"	105	7'-10"	
802	1"ϕ	24	8'-6"	Str.		
803	1"ϕ	10	6'-9"	104	5'-5"	
804	1"ϕ	12	16'-0"	104	14'-8"	
805	1"ϕ	7	58'-0"	Str.		
806	1"ϕ	7	55'-8"	Str.		
807	1"ϕ	14	60'-0"	Str.		
601	¾"ϕ	24	15'-9"	104	14'-9"	
602	¾"ϕ	24	6'-6"	104	5'-6"	
603	¾"ϕ	42	15'-0"	Str.		
604	¾"ϕ	58	16'-2"	105	14'-2"	
605	¾"ϕ	28	14'-8"	Str.		
606	¾"ϕ	8 Series of 3	6'-3" to 21'-0"	Str.		
607	¾"ϕ	80	7'-0"	104	6'-0"	
608	¾"ϕ	16	14'-10"	Str.		
609	¾"ϕ	8	12'-6"	Str.		
610	¾"ϕ	18	5'-9"	Str.		
611	¾"ϕ	122	15'-9"	Str.		
612	¾"ϕ	2	26'-7"	110	2'-1"	11'-3"
613	¾"ϕ	2	26'-1"	110	2'-1"	11'-0"
614	¾"ϕ	2 Series of 3	24'-3" to 25'-5"	110	2'-1"	10'-1" to 10'-8
615	¾"ϕ	2 Series of 4	21'-9" to 23'-9"	110	2'-1"	8'-10" to 9'-10
616	¾"ϕ	4 Series of 9	7'-11" to 13'-1"	110	2'-1"	1'-11" to 4'-6
617	¾"ϕ	2 Series of 9	21'-7" to 26'-7"	110	2'-1"	8'-9" to 11'-3
618	¾"ϕ	10	8'-7"	Str.		
619	¾"ϕ	4	56'-4"	Str.		

Mark	Size	Number	Length	Type	Dimension A	Dimension B
620	¾"ϕ	8	12'-8"	Str.		
621	¾"ϕ	5	35'-4"	Str.		
622	¾"ϕ	6	55'-8"	Str.		
623	¾"ϕ	18	23'-2"	109	1'-1"	11'-0"
624	¾"ϕ	22	19'-3"	109	1'-1"	7'-1"
625	¾"ϕ	18	12'-7"	105	10'-7"	
626	¾"ϕ	22	8'-9"	105	6'-9"	
627	¾"ϕ	12	60'-0"	Str.		
628	¾"ϕ	14	12'-8"	106	3'-6"	9'-2"
629	¾"ϕ	24	13'-0"	106	3'-6"	9'-6"
630	¾"ϕ	14	13'-9"	118	4'-3"	5'-8"
631	¾"ϕ	24	14'-0"	118	4'-6"	5'-8"
632	¾"ϕ	38	5'-7"	114	3'-10"	1'-9"
633	¾"ϕ	38	6'-3"	108	1'-7"	1'-2"
634	¾"ϕ	38	17'-0"	Str.		
635	¾"ϕ	4	20'-0"	Str.		
636	¾"ϕ	4	12'-5"	Str.		
637	¾"ϕ	10	7'-2"	Str.		
638	¾"ϕ	40	10'-4"	102	1'-1"	7'-11"
639	¾"ϕ	10	12'-0"	104	11'-0"	
640	¾"ϕ	4	12'-2"	107	6'-7"	152°-38'
641	¾"ϕ	8	12'-8"	116	1'-6"	6'-6"
642	¾"ϕ	20	5'-2"	Str.		
643	¾"ϕ	18	5'-9"	104	4'-9"	
644	¾"ϕ	2	8'-0"	104	7'-0"	
645	¾"ϕ	20	8'-2"	Str.		
646	¾"ϕ	4	8'-11"	104	7'-11"	
647	¾"ϕ	4	13'-1	116	3'-8"	5'-6"
648	¾"ϕ	4	4'-3"	Str.		
649	¾"ϕ	4	12'-2"	107	6'-7"	207°-22'

NORTH RETAINING WALL

Mark	Size	No. Req'd	Length	Type	A	B
901	1"Sq.	2	33'-11"	120	4	31'-2"
902	1"Sq.	2	15'-3"	Str.		
903	1"Sq.	3	11'-0"	104	9'-4"	
904	1"Sq.	20	7'-9"	104	6'-1"	
905	1"Sq.	2	33'-3"	120	4	30'-6"
906	1"Sq.	2	14'-9"	Str.		
907	1"Sq.	4	10'-9"	104	9'-7"	
908	1"Sq.	2	31'-3"	120	4	28'-6"
909	1"Sq.	2	13'-0"	Str.		
910	1"Sq.	2	12'-3"	104	10'-7"	
911	1"Sq.	2	29'-4"	120	4	26'-6"
912	1"Sq.	2	12'-0"	Str.		
913	1"Sq.	2	27'-1"	120	4	24'-4"
914	1"Sq.	2	11'-0"	Str.		
915	1"Sq.	2	18'-6"	122	6'-2"	8'-0" *
* 801	1"ϕ	4	32'-8"	104	31'-4"	
* 802	1"ϕ	1	31'-11"	104	30'-7"	
* 803	1"ϕ	4	31'-0"	Str.		
* 804	1"ϕ	1	29'-6"	Str.		
805	1"ϕ	6	34'-0"	Str.		
601	¾"ϕ	1 Series of 3	22'-7" to 27'-11"	110	1'-1"	9'-9" to 12'-5"
602	¾"ϕ	1	21'-7"	110	1'-1"	9'-3"
603	¾"ϕ	2 Series of 17	5'-11" to 20'-11"	110	1'-1"	1'-5" to 8'-11"
604	¾"ϕ	2 Series of 6	6'-10 to 29'-10"	Str.		
605	¾"ϕ	58	6'-1"	104	5'-1"	
606	¾"ϕ	2	4'-0"	Str.		
607	¾"ϕ	12	6'-0"	Str.		
608	¾"ϕ	52	8'-0"	105	6'-0"	
609	¾"ϕ	16	6'-6"	Str.		
610	¾"ϕ	10	15'-6"	Str.		
611	¾"ϕ	10	16'-0"	104	15'-0"	
612	¾"ϕ	1 Series of 3	21'-11" to 27'-7"	110	1'-1"	9'-5" to 12'-3"
613	¾"ϕ	2 Series of 6	6'-2" to 29'-3"	Str.		
614	¾"ϕ	2	3'-6"	Str.		
615	¾"ϕ	1 Series of 4	19'-3" to 26'-3"	110	1'-1"	8'-1" to 11'-7"
616	¾"ϕ	1 Series of 15	5'-7" to 18'-7"	110	1'-1"	1'-3" to 7'-9"
617	¾"ϕ	2 Series of 6	4'-2" to 27'-3"	Str.		
618	¾"ϕ	4	5'-0"	Str.		
619	¾"ϕ	4	7'-3"	Str.		
620	¾"ϕ	20	7'-6"	105	5'-6"	
621	¾"ϕ	5	14'-8"	Str.		
622	¾"ϕ	5	15'-5"	104	14'-5"	
623	¾"ϕ	1 Series of 5	17'-11" to 25'-9"	110	1'-1"	7'-5" to 11'-4"

Mark	Size	No. Req'd	Length	Type	A	B
624	¾"ϕ	1 Series of 12	6'-1" to 16'-9"	110	1'-1"	1'-6" to 6'-10"
625	¾"ϕ	2 Series of 6	3'-0" to 25'-2"	Str.		
626	¾"ϕ	2	6'-9"	Str.		
627	¾"ϕ	2	9'-0"	Str.		
628	¾"ϕ	4	14'-3"	Str.		
629	¾"ϕ	4	15'-0"	104	14'-0"	
630	¾"ϕ	36	6'-0"	105	5'-0"	
631	¾"ϕ	11	5'-6"	Str.		
632	¾"ϕ	1 Series of 3	18'-9" to 23'-3"	110	1'-1"	7'-10" to 10'-1"
633	¾"ϕ	1 Series of 13	5'-7" to 17'-3"	110	1'-1"	1'-3" to 7'-1"
634	¾"ϕ	2 Series of 5	5'-2" to 23'-2"	Str.		
635	¾"ϕ	4	13'-6"	Str.		
636	¾"ϕ	4	14'-3"	104	13'-3"	
* 637	¾"ϕ	30	31'-7"	104	30'-7"	
* 638	¾"ϕ	30	32'-10"	103	1'-2"	30'-8"
* 639	¾"ϕ	3	7'-5"	112	1'-2"	1'-9"
* 640	¾"ϕ	3	8'-3"	123	1'-10"	5'-5"
* 641	¾"ϕ	3	6'-7"	110	0'-11"	1'-10"
* 642	¾"ϕ	26	33'-9"	Str.		
* 643	¾"ϕ	26	34'-6"	Str.		
* 644	¾"ϕ	1 Series of 15	2'-8" to 32'-3"	Str.		
* 645	¾"ϕ	1 Series of 15	2'-7" to 31'-6"	Str.		
646	¾"ϕ	3	6'-10"	108	1'-10"	1'-6"
647	¾"ϕ	54	22'-6"	Str.		
648	¾"ϕ	2	30'-0"	Str.		
649	¾"ϕ	2	29'-3"	Str.		
650	¾"ϕ	18	26'-9"	Str.		
651	¾"ϕ	18	26'-6"	Str.		
652	¾"ϕ	1 Series of 21	19'-4" to 26'-9"	Str.		
653	¾"ϕ	1 Series of 21	18'-8" to 26'-2"	Str.		
654	¾"ϕ	14	19'-3"	Str.		
655	¾"ϕ	14	18'-6"	Str.		
656	¾"ϕ	9	4'-8"	103	1'-2"	2'-6"
657	¾"ϕ	3	19'-2"	121	8'-1"	9'-6"
658	¾"ϕ	9	19'-3"	113	4'-0"	1'-1"
659	¾"ϕ	7	16'-10"	107	11'-3"	145°-50'
401	½"ϕ	2 Series of 4	4'-6" to 8'-0"	111	1'-1"	0'-11" to 2'-8"
402	½"ϕ	6	5'-3"	108	1'-6"	7"
403	½"ϕ	1	6'-3"	Str.		
404	½"ϕ	46	4'-6"	Str.		
405	½"ϕ	8	5'-3"	Str.		
406	½"ϕ	2	5'-6"	Str.		
407	½"ϕ	2	7'-3"	Str.		
408	½"ϕ	4	8'-2"	Str.		
409	½"ϕ	18	6'-7"	105	5'-3"	



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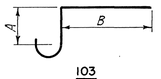

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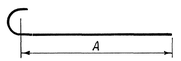

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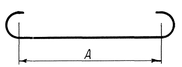

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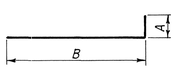

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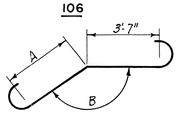

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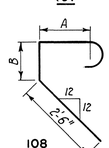

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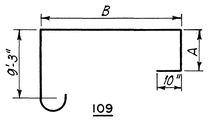

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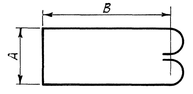

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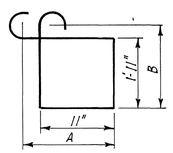

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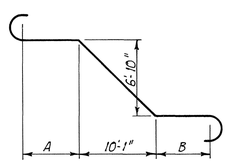

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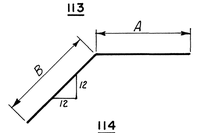

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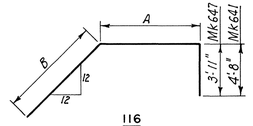

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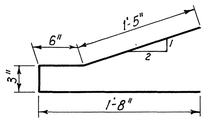

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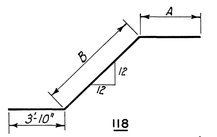

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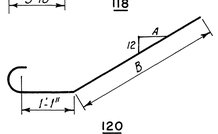

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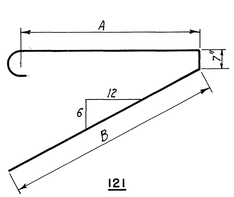

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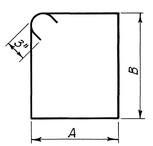

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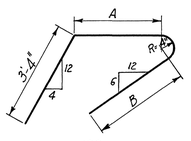

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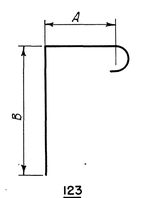


123

Note:
Bars marked with asterisk are horizontal bars through curved portion of retaining walls. These bars require bending to 35'-10½" radius for inside bars and 36'-9⅝" radius for outside bars.

SEE DWG E-14-78 For Bill of Steel For revised South Retaining wall,

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

WEST PLAZA
REINFORCING STEEL SCHEDULE

SCALE _____
MADE _____ DATE _____
TRCD. _____ DATE _____
CKD _____ DATE _____

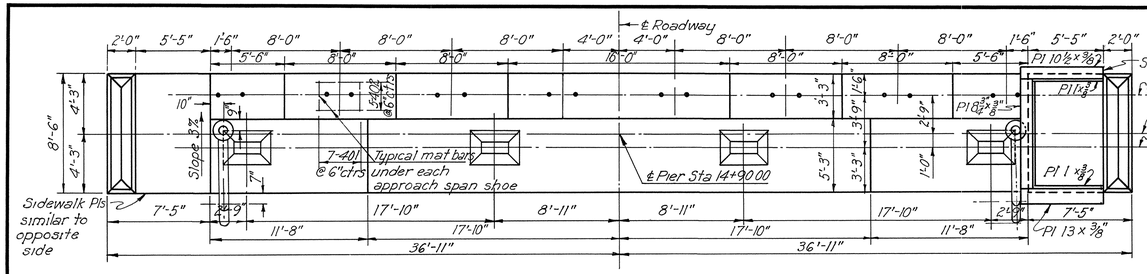
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

811 SHEET 8

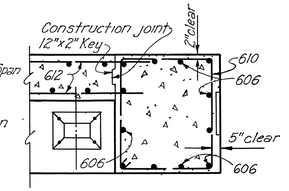
File E-14-8

FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS	SECTION
8	TENN	U-068-1(1)	1952	9	46	

PART 2

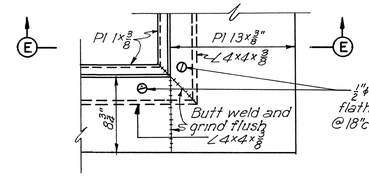


PLAN
Scale 3/16"=1'-0"

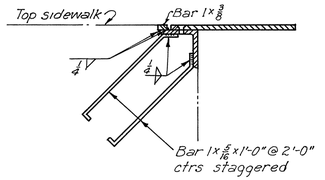


SECTION B-B
Scale 3/16"=1'-0"

Note Sidewalk Pls to conform to slopes as shown for sidewalk

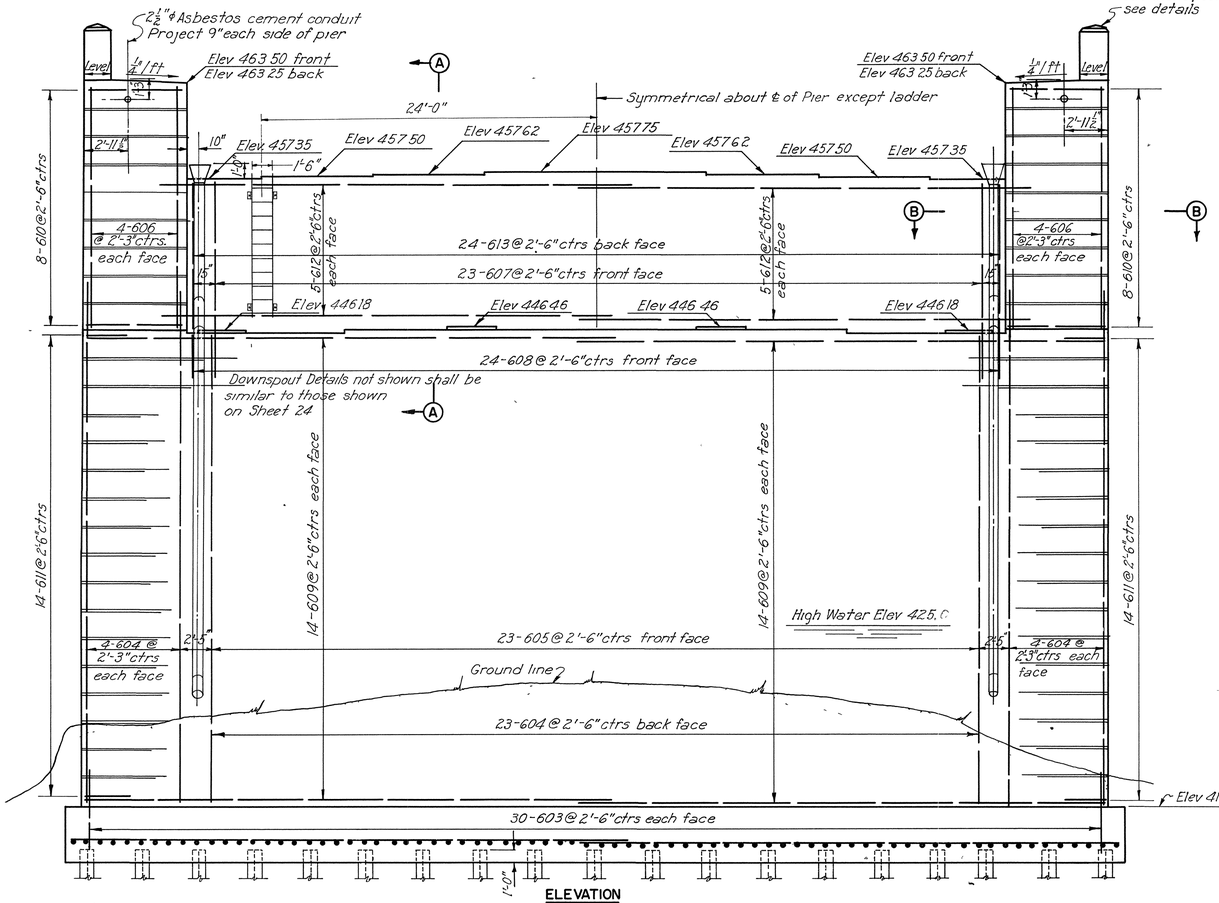


PLAN OF SIDEWALK PLATES

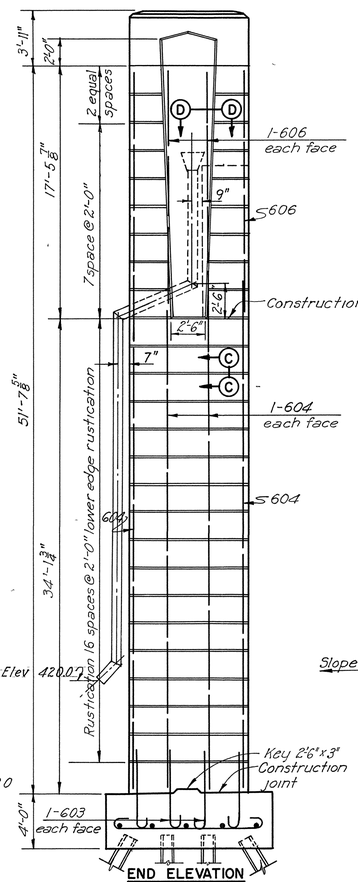


SECTION E-E
Scale 1 1/2"=1'-0"

REINFORCING STEEL SCHEDULE						
Mark	Equivalent Size	No	Length	Type	Dimensions A	Dimensions B
601	3/4" ϕ	10	39'-3"	Str		
602	3/4" ϕ	76	13'-0"	100	11'-0"	
603	3/4" ϕ	64	6'-0"	101	5'-0"	
604	3/4" ϕ	43	37'-0"	Str.		
605	3/4" ϕ	23	33'-9"	Str		
606	3/4" ϕ	24	17'-0"	Str		
607	3/4" ϕ	23	16'-3"	104	13'-6"	2'-9"
608	3/4" ϕ	24	10'-3"	104	7'-9"	2'-6"
609	3/4" ϕ	58	38'-0"	Str		
610	3/4" ϕ	16	29'-10"	109	8'-0"	6'-8"
611	3/4" ϕ	28	14'-0"	105	8'-0"	3'-0"
612	3/4" ϕ	20	33'-3"	Str		
613	3/4" ϕ	24	10'-11"	Str.		
401	1/2" ϕ	56	4'-0"	105	2'-0"	1'-0"
402	1/2" ϕ	40	5'-6"	105	3'-6"	1'-0"

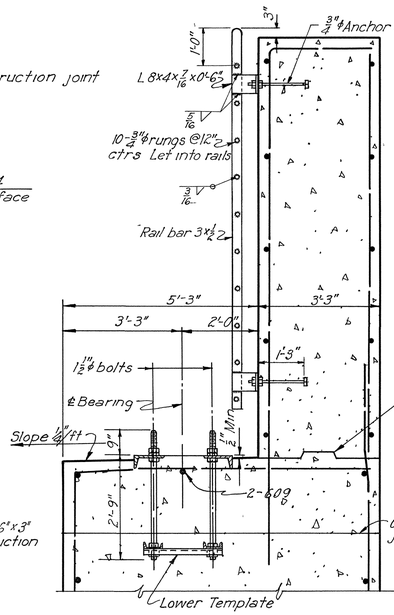


ELEVATION
Scale 3/16"=1'-0"



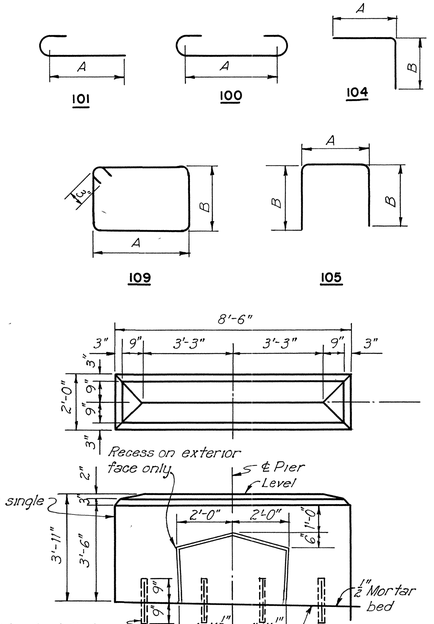
END ELEVATION
Scale 3/16"=1'-0"

Additional construction joints, if used in shaft shall be located at bottom of Rustication groove.



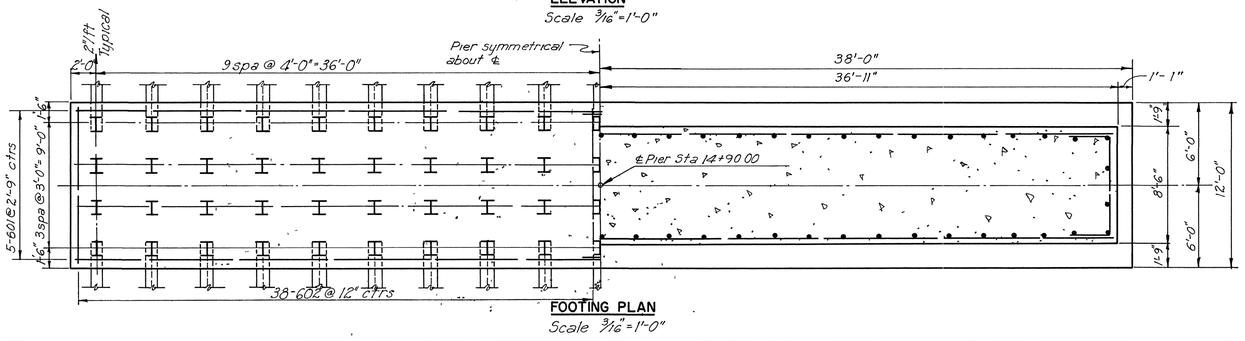
SECTION A-A
Scale 1/2"=1'-0"

Note · Provide 5 hex nuts and 1 3/8" plate washer with each bolt in template - screed assembly
Thread bolts 10" top and 6" bottom
See sheet 7 for details of frame

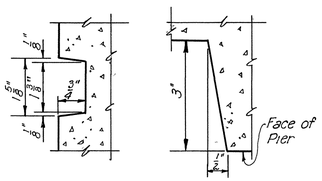


CUT STONE POST

Notes:
Paint all exposed surfaces of metal one shop coat of red lead
All concrete to be class B
For notes on reinforcing steel see sheet 10
For anchor bolt settings see sheet 23
All piles to be 12 BP53



FOOTING PLAN
Scale 3/16"=1'-0"



SECTION C-C SECTION D-D

RUSTICATION DETAILS
Scale 6"=1'-0"

ESTIMATED QUANTITIES		
Item No	Description	Quantity
17-2	Dry Excavation (Bridges)	485 Cu Yds
132-1	Structural Steel	2,490 Lbs
132-12	8" Wrought Iron Pipe	85 Lin Ft
135-5	Class "B" Concrete	1,100 Cu Yds
135-12	Steel Bar Reinforcement	14,070 Lbs
737-1	Steel Piles, 12"	3,800 Lin Ft
	Cut Limestone Masonry	123 Cu Ft

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

PIER 3

SCALE 3/16", 1", 1 1/2", 6"=1'-0"
MADE JWC DATE 11-24-50
TRCD JHG DATE 12-28-50
CKD H.B.A DATE 1-17-51

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

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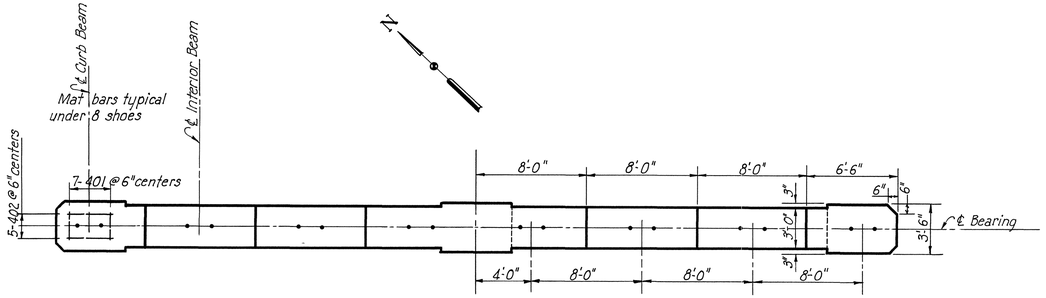
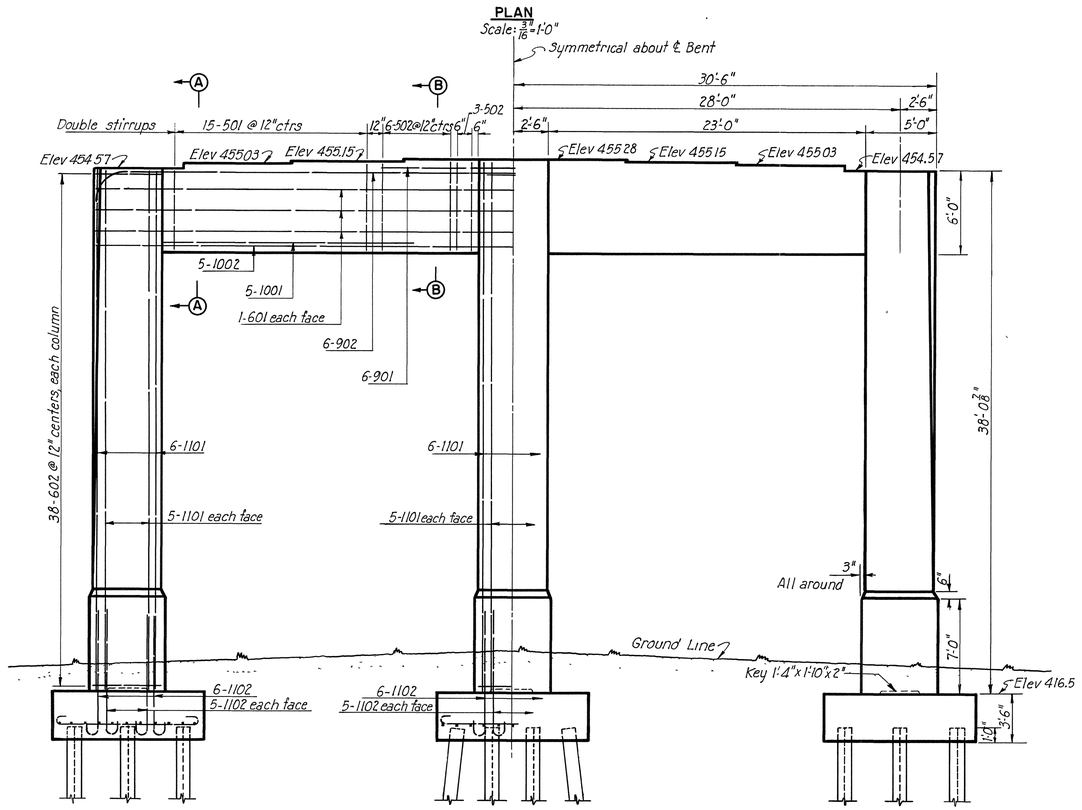
File E-14-9

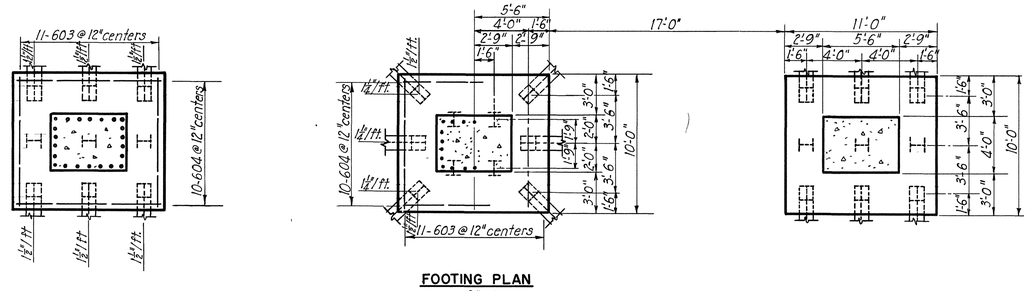
FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS	SECTION
8		TENN. U-068-1(1)	1952	10	46	

PART 2

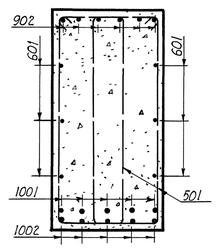




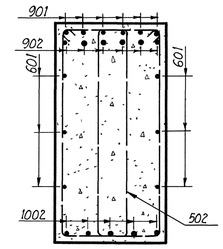
ELEVATION
Scale: 3/16"=1'-0"



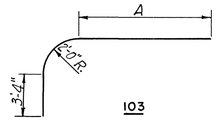
FOOTING PLAN
Scale 3/16"=1'-0"

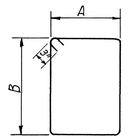


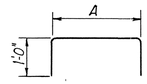
SECTION A-A
Scale 1/2"=1'-0"

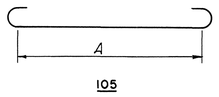


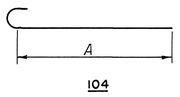
SECTION B-B
Scale 1/2"=1'-0"

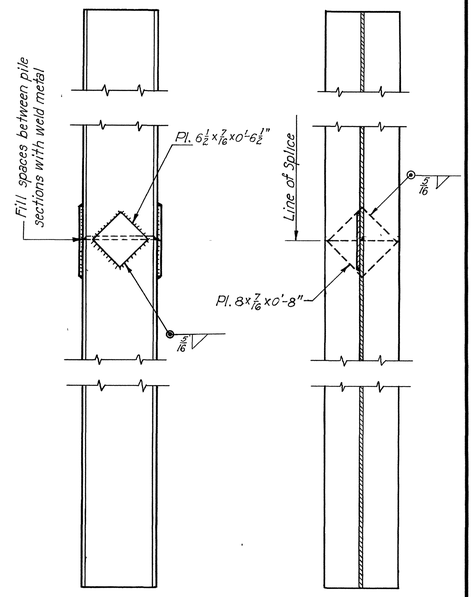












BEARING PILE DETAILS
Scale 1"=1'-0"

REINFORCING STEEL SCHEDULE

Mark	Equivalent Size	No	Length	Type	Dimensions A	Dimensions B
1101	1¼" Sq.	66	37'-9"	Str		
1102	1¼" Sq.	66	8'-9"	104	6'-11"	
1001	1⅛" Sq	10	18'-0"	Str		
1002	1⅛" Sq	5	60'-0"	Str		
901	1" Sq	6	19'-0"	Str		
902	1" Sq.	12	36'-5"	103	29'-11"	
601	¾" ϕ	6	60'-0"	Str		
602	¾" ϕ	114	15'-6"	102	3'-0"	4'-5"
603	¾" ϕ	33	11'-0"	105	9'-0"	
604	¾" ϕ	30	12'-0"	105	10'-0"	
501	⅝" ϕ	60	14'-10"	102	1'-7"	5'-7"
502	⅝" ϕ	36	15'-4"	102	1'-7"	5'-10"
401	½" ϕ	56	4'-2"	101	2'-2"	
402	½" ϕ	40	5'-2"	101	3'-2"	

ESTIMATED QUANTITIES

Item No	Description	Quantity
17-2	Dry Excavation (Bridges)	120 Cu Yds
132-1	Structural Steel	225 Lbs
135-4	Class "A" Concrete	155 Cu Yds
135-12	Steel Bar Reinforcement	26,320 Lbs
737-1	Steel Piles 12"	1,500 Lin. Ft

Notes.

All concrete in Bents, East Abutment and Retaining Walls shall be Class A.

For requirements on proportioning, mixing, placing and curing concrete, see Specifications

Reinforcing steel shall be structural or intermediate grade.

Minimum lap for reinforcing bars shall be 40 diameters

All bar bends shall be in accordance with AASHO specifications 1949, paragraph 2.5.4 except ties and stirrups shall be bent around a 2" diameter pin.

All dimensions for reinforcing bars are given to the center of the bars unless otherwise noted. Minimum coverage for reinforcing bars shall be 2" except footings shall be 3"

All piles are 12 BP53, steel bearing piles., See Specifications for requirements governing splicing of piles

For anchor bolt settings, see Sheet 23.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

BENT 4

SCALE 3/16", 1/2"=1'-0"
MADE MB DATE 12-5-50
TRCD CED/RR DATE 12-14-50
CKD H.B.A. DATE 1-5-51

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KANSAS CITY NEW YORK

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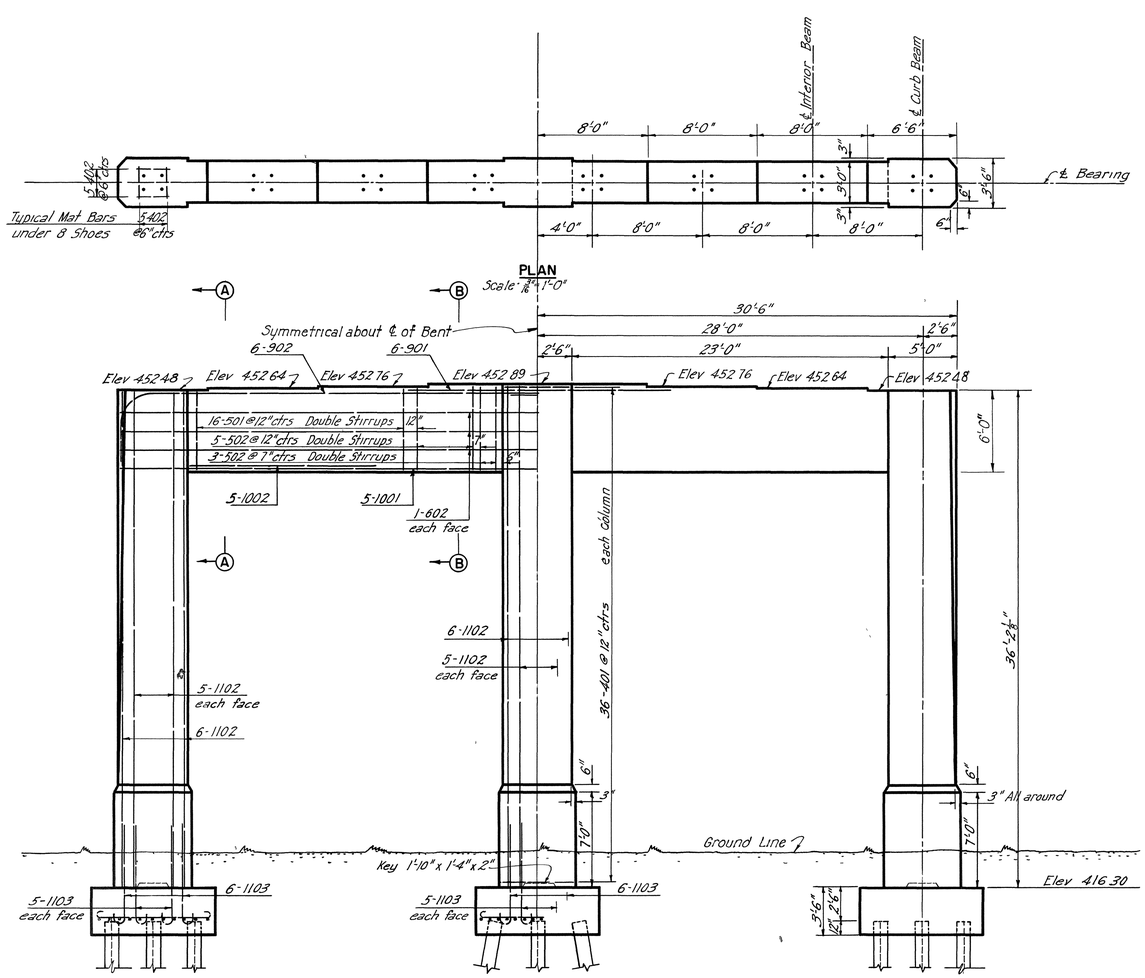
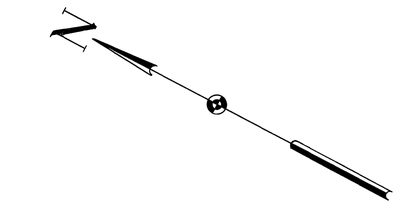
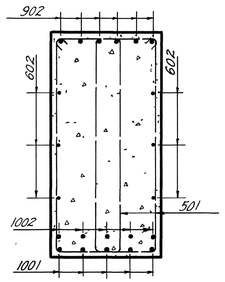
FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	SECTION
8	TENN	U-068-1(1)	1952	11	46	

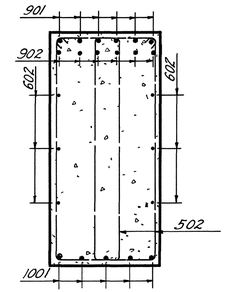
PART 2







SECTION A-A
Scale ½"=1'-0"



SECTION B-B
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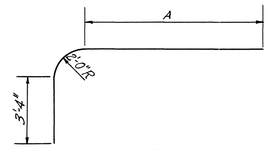

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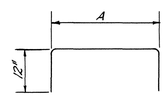

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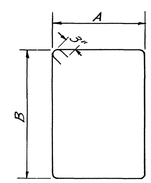

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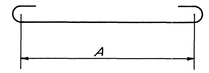

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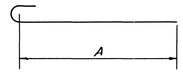

104

REINFORCING STEEL SCHEDULE

Mark	Equilalent Size	No	Length	Type	Dimensions A	Dimensions B
1101	1¼" sq	36	15'-9"	105	12'-0"	
1102	1¼" sq	66	36'-0"	Str		
1103	1¼" sq	66	8'-9"	104	6'-11"	
1001	1⅛" sq	5	60'-0"	Str		
1002	1⅛" sq	10	18'-0"	Str		
901	1" sq	6	19'-0"	Str		
902	1" sq	12	36'-5"	103	29'-11"	
601	¾" ϕ	42	10'-0"	105	8'-0"	
602	¾" ϕ	6	60'-0"	Str		
501	⅝" ϕ	64	14'-10"	102	1'-7"	5'-7"
502	⅝" ϕ	32	15'-4"	102	1'-7"	5'-10"
401	½" ϕ	108	15'-4"	102	3'-0"	4'-5"
402	½" ϕ	80	4'-2"	101	2'-2"	

Note For anchor bolt setting see Sheet 23
See general notes on Sheet 10

ESTIMATED QUANTITIES

Item No	Description	Quantity
17-2	Dry Excavation (Bridges)	125 Cu Yds
132-1	Structural Steel	445 Lbs
135-4	Class "A" Concrete	155 Cu Yds
135-12	Steel Bar Reinforcement	26,620 Lbs
737-1	Steel Piles, 12"	1,570 Lin Ft

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

BENT 5

SCALE ¾" & ½"=1'-0"
MADE C.E.D. DATE 12-6-50
TRCD C.E.D. 5MKG DATE 12-9-50
CKD H.B.A. DATE 1-8-51

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KANSAS CITY NEW YORK
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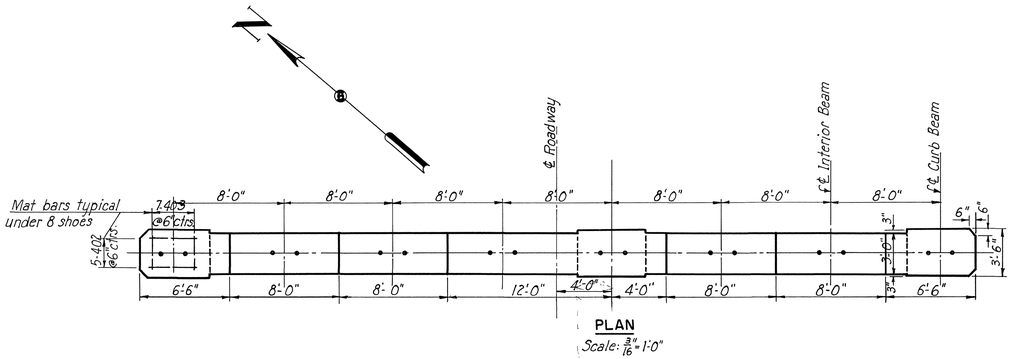
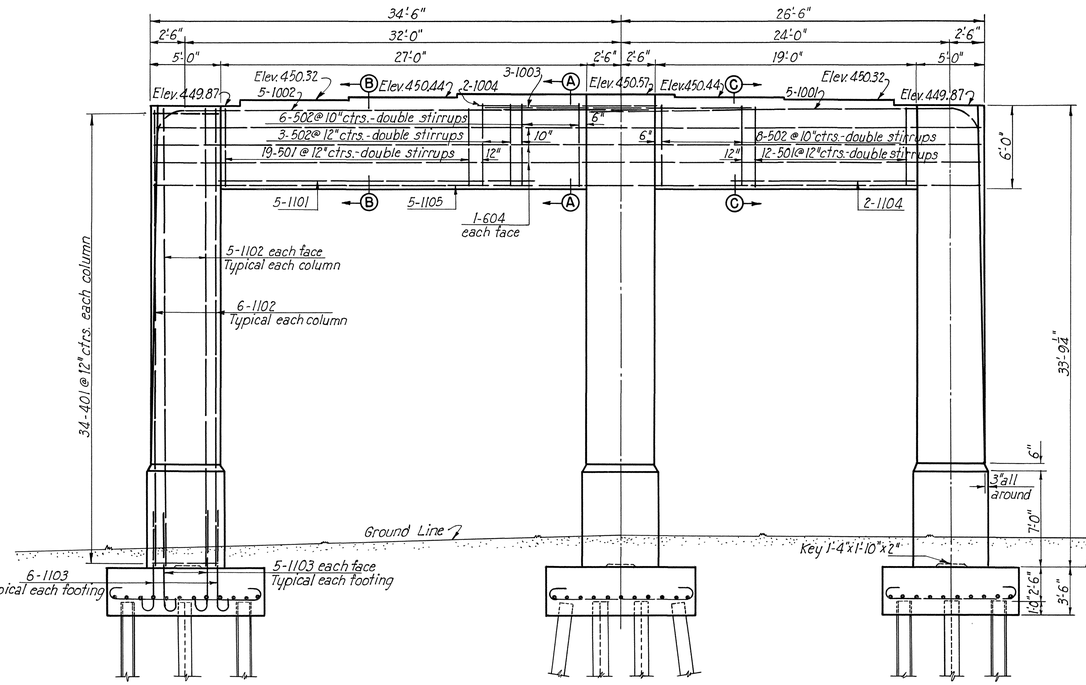
File E-14-11

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	SECTION
8	TENN.	U-068-1(1)	1952	12	46	

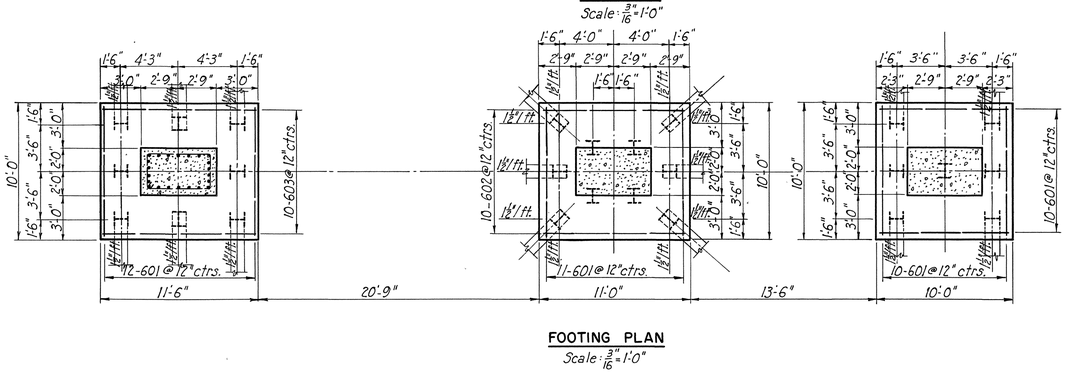
PART 2



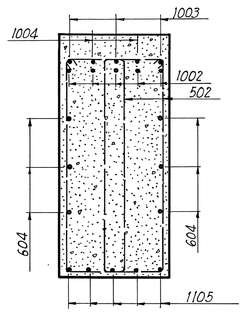
PLAN
Scale: $\frac{3}{16}$" = 1'-0"



ELEVATION
Scale: $\frac{3}{16}$" = 1'-0"



FOOTING PLAN
Scale: $\frac{3}{16}$" = 1'-0"



SECTION A-A
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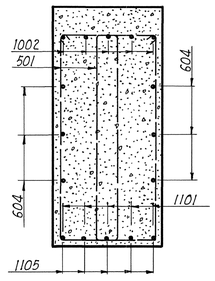
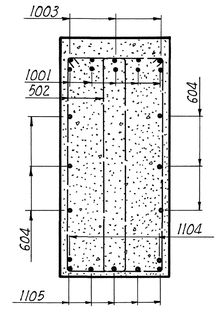


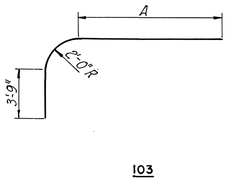
SECTION B-B
Scale: $\frac{1}{2}$" = 1'-0"



SECTION C-C
Scale: $\frac{1}{2}$" = 1'-0"

REINFORCING STEEL SCHEDULE

Mark	Equivalent Size	No.	Length	Type	Dimensions A	Dimensions B
1101	1¼" Sq.	5	23'-0"	Str.		
1102	1¼" Sq.	66	33'-6"	Str.		
1103	1¼" Sq.	66	8'-9"	104	6'-11"	
1104	1¼" Sq.	2	13'-6"	Str.		
1105	1¼" Sq.	5	60'-0"	Str.		
1001	1⅛" Sq.	5	33'-1"	103	26'-2"	
1002	1⅛" Sq.	5	41'-1"	103	34'-2"	
1003	1⅛" Sq.	3	19'-0"	Str.		
1004	1⅛" Sq.	2	13'-0"	Str.		
601	¾" ϕ	43	11'-0"	105	9'-0"	
602	¾" ϕ	10	12'-0"	105	10'-0"	
603	¾" ϕ	10	12'-6"	105	10'-6"	
604	¾" ϕ	6	60'-0"	Str.		
501	⅝" ϕ	62	14'-10"	102	1'-7"	5'-7"
502	⅝" ϕ	32	15'-4"	102	1'-7"	5'-10"
401	½" ϕ	102	15'-4"	102	3'-0"	4'-5"
402	½" ϕ	40	5'-2"	101	3'-2"	
403	½" ϕ	56	4'-2"	101	2'-2"	



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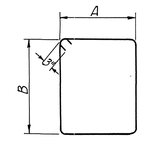

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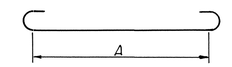

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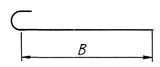

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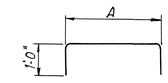

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ESTIMATED QUANTITIES

Item No.	Description	Quantity
17-2	Dry Excavation (Bridges)	110 Cu. Yds.
132-1	Structural Steel	225 Lbs.
132-12	8" Wrought Iron Pipe	95 Lin. Ft.
135-4	Class "A" Concrete	145 Cu. Yds.
135-12	Steel Bar Reinforcement	23,550 Lbs.
737-1	Steel Piles, 12"	1,250 Lin. Ft.

Note:
See general notes on Sheet 10.
For anchor bolt settings see Sheet 23.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

BENT 6

SCALE $\frac{3}{16}$" $\frac{1}{2}$" = 1'-0"
MADE B.H.R. DATE 12-11-50
TRCD R.R. DATE 1-2-51
CKD H.B.A. DATE 1-8-51

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

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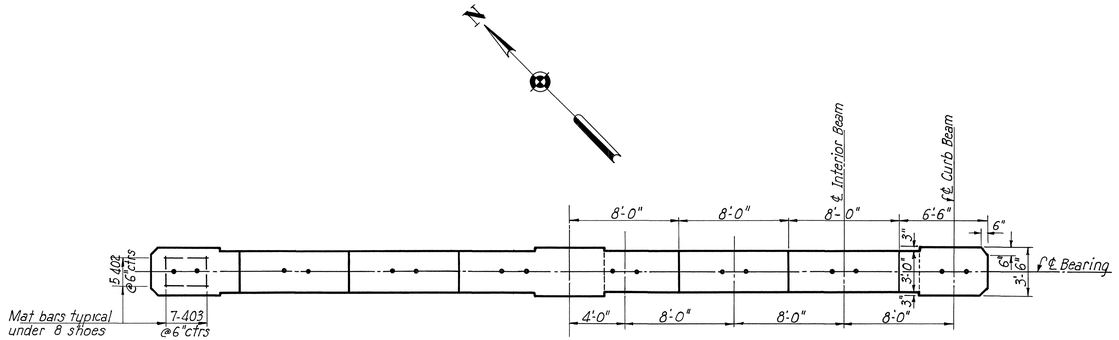
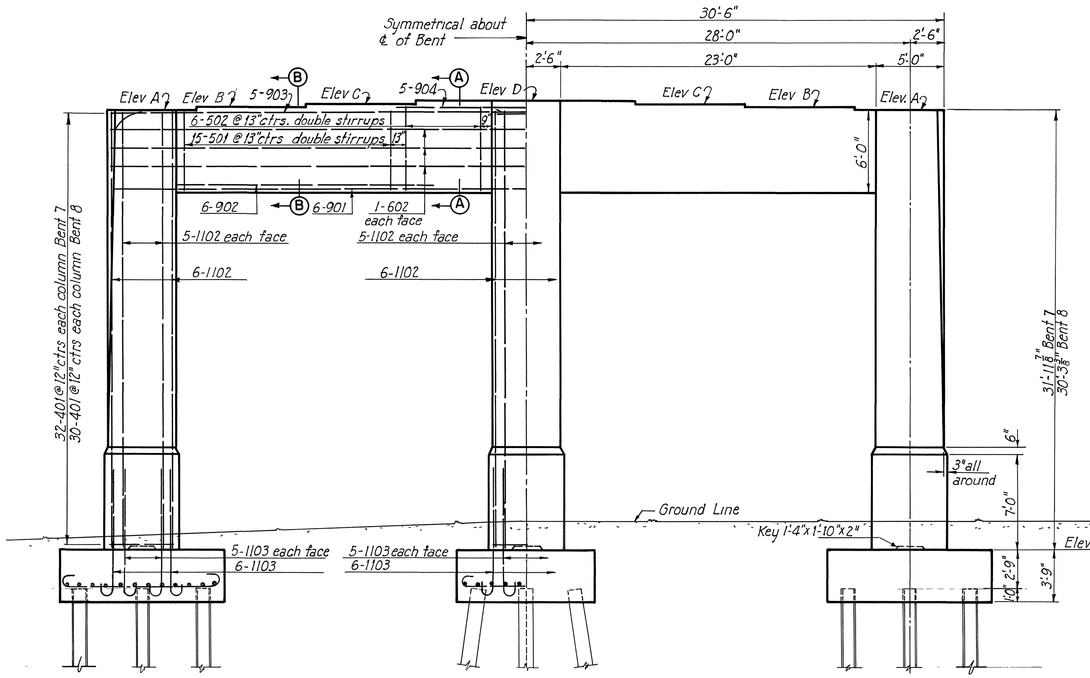
File E-14-12

FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS	SECTION
8	TENN	U-068-1(1)	1952	13	46	

PART 2



PLAN
Scale: $\frac{3}{16}$"=1'-0"



ELEVATION
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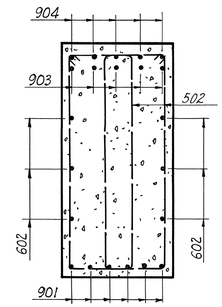
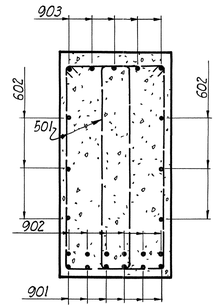


SECTION A-A
Scale $\frac{1}{2}$"=1'-0"



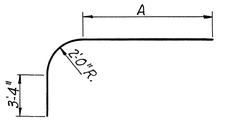
SECTION B-B
Scale $\frac{1}{2}$"=1'-0"

FOOTING PLAN
Scale $\frac{3}{16}$"=1'-0"

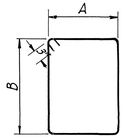
REINFORCING STEEL SCHEDULE FOR ONE BENT

Mark	Equivalent Size	No.	Length	Type	Dimensions A	Dimensions B
1101	1¼" Sq	20	14'-2"	105	10'-5"	
1102	1¼" Sq	66	**31'-9"	Str		
1103	1¼" Sq	66	9'-0"	104	7'-2"	
901	1" Sq	6	60'-0"	Str		
902	1" Sq	12	18'-0"	Str		
903	1" Sq	10	36'-5"	103	29'-11"	
904	1" Sq	5	19'-0"	Str		
601	Epoxy ¾" ϕ	44	11'-0"	105	9'-0"	
602	Epoxy ¾" ϕ	6	60'-0"	Str		
501	Epoxy ⅝" ϕ	60	14'-10"	102	1'-7"	5'-7"
502	Epoxy ⅝" ϕ	24	15'-4"	102	1'-7"	5'-10"
401	½" ϕ	96 *	15'-4"	102	3'-0"	4'-5"
402	½" ϕ	40	5'-2"	101	3'-2"	
403	½" ϕ	96	4'-2"	101	2'-2"	

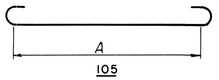
* 90-401 for Bent 8
** Length for Bent 8 = 30'-0"



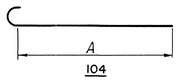
103



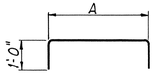
102



105



104



101

Bent	Elev A	Elev B	Elev C	Elev D	Elev H
7	448.09	448.26	448.38	448.51	416.10
8	446.08	446.25	446.37	446.50	415.80

ESTIMATED QUANTITIES

Item No	Description	Bent 7	Bent 8
17-2	Dry Excavation (Bridges)	115 Cu Yds	125 Cu Yds
132-1	Structural Steel	225 Lbs	225 Lbs
132-12	8" Wrought Iron Pipe		95 Lin Ft
135-4	Class "A" Concrete	145 Cu Yds	140 Cu Yds
135-12	Steel Bar Reinforcement	23,140 Lbs	22,480 Lbs
737-1	Steel Piles, 12"	1,060 Lin Ft	1,020 Lin Ft

Note
See General Notes on Sheet 10
For anchor bolt settings, see Sheet 23

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

BENTS 7 AND 8

SCALE $\frac{3}{16}$" = 1'-0"
MADE R.H.R. DATE 12-2-50
TRCD. R.R. DATE 1-3-51
CKD. H.B.A. DATE 1-9-51

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

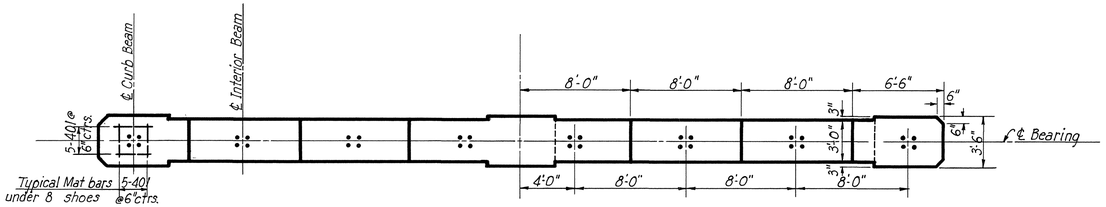
SHEET 13

RECEIVED
407

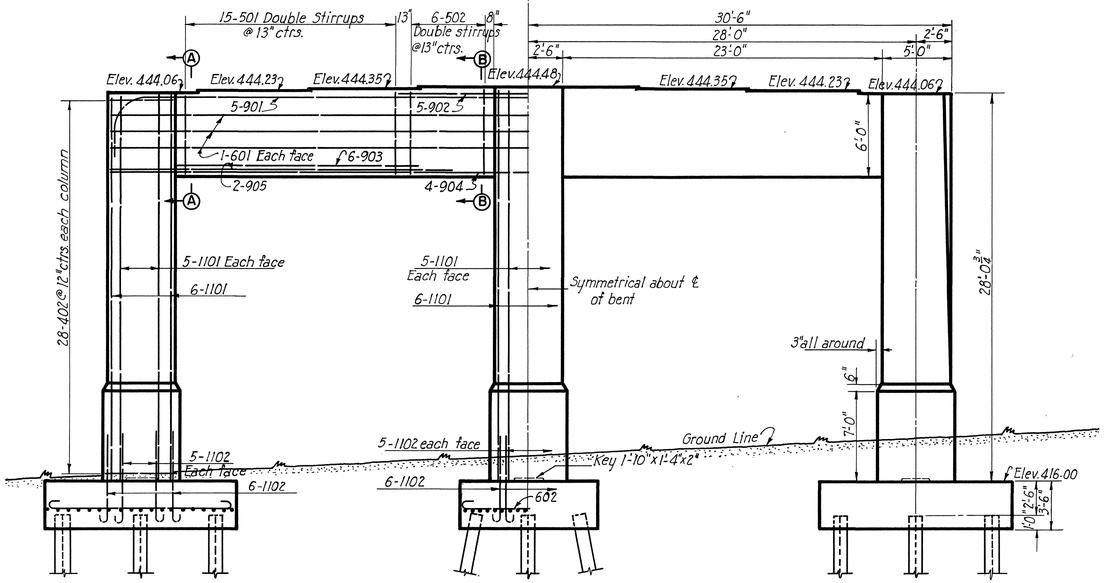
File E-14-13

FED ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO	TOTAL SHEETS	SECTION
8	TENN.	U-068-1(1)	1952	14	46	

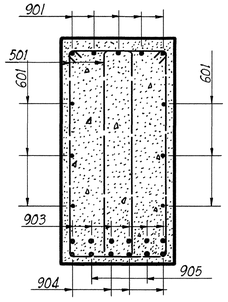
PART 2



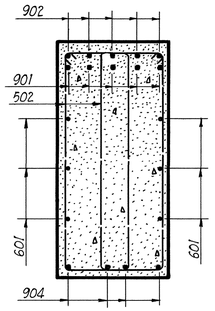
PLAN
Scale: 3/16" = 1'-0"



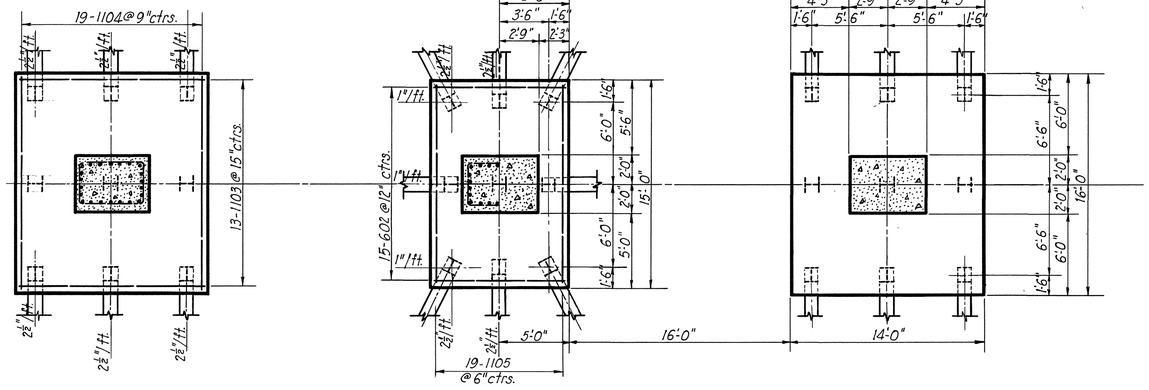
ELEVATION
Scale: 3/16" = 1'-0"



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



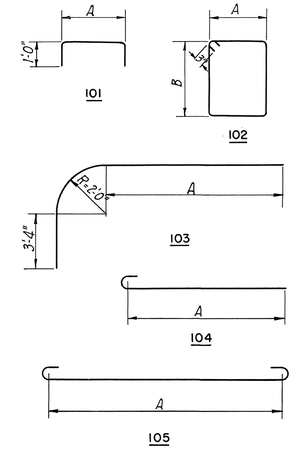
SECTION B-B
Scale: 1/2" = 1'-0"



FOOTING PLAN
Scale: 3/16" = 1'-0"

REINFORCING STEEL SCHEDULE

Mark	Equivalent Size	No.	Length	Type	Dimensions A	Dimensions B
1101	1 1/4" Sq.	66	27'-10"	Str.		
1102	1 1/4" Sq.	66	8'-9"	104	6'-11"	
1103	1 1/4" Sq.	26	16'-2"	105	12'-5"	
1104	1 1/4" Sq.	38	18'-2"	105	14'-5"	
1105	1 1/4" Sq.	19	17'-2"	105	13'-5"	
901	1" Sq.	10	36'-5"	103	29'-11"	
902	1" Sq.	5	19'-0"	Str.		
903	1" Sq.	12	18'-0"	Str.		
904	1" Sq.	4	60'-0"	Str.		
905	1" Sq.	4	24'-6"	Str.		
601	3/4" ϕ	6	60'-0"	Str.		
602	3/4" ϕ	15	11'-0"	105	9'-0"	
501	5/8" ϕ	60	14'-10"	102	1'-7"	5'-7"
502	5/8" ϕ	24	15'-4"	102	1'-7"	5'-10"
401	1/2" ϕ	80	4'-2"	101	2'-2"	
402	1/2" ϕ	84	15'-4"	102	3'-0"	4'-5"



Note:
For anchor bolt settings see Sheet 23.
See General Notes on Sheet 10.

ESTIMATED QUANTITIES

Item No.	Description	Quantity
17-2	Dry Excavation (Bridges)	175 Cu. Yds.
132-1	Structural Steel	445 Lbs.
135-4	Class "A" Concrete	170 Cu Yds.
135-12	Steel Bar Reinforcement	28,740 Lbs.
737-1	Steel Piles, 12"	1,230 Lin. Ft.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

BENT 9

SCALE 3/16" 1/2" = 1'-0" MADE H.F.S. DATE 11-27-50 TRCD CED, RR DATE 12-27-50 CKD H.B.A. DATE 1-9-51

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

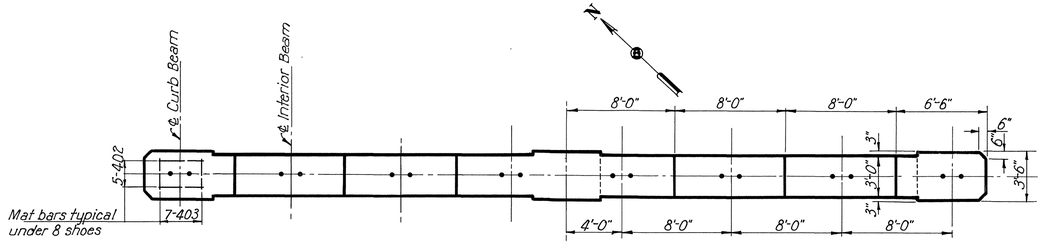
811 SHEET-14

MICROFILMED

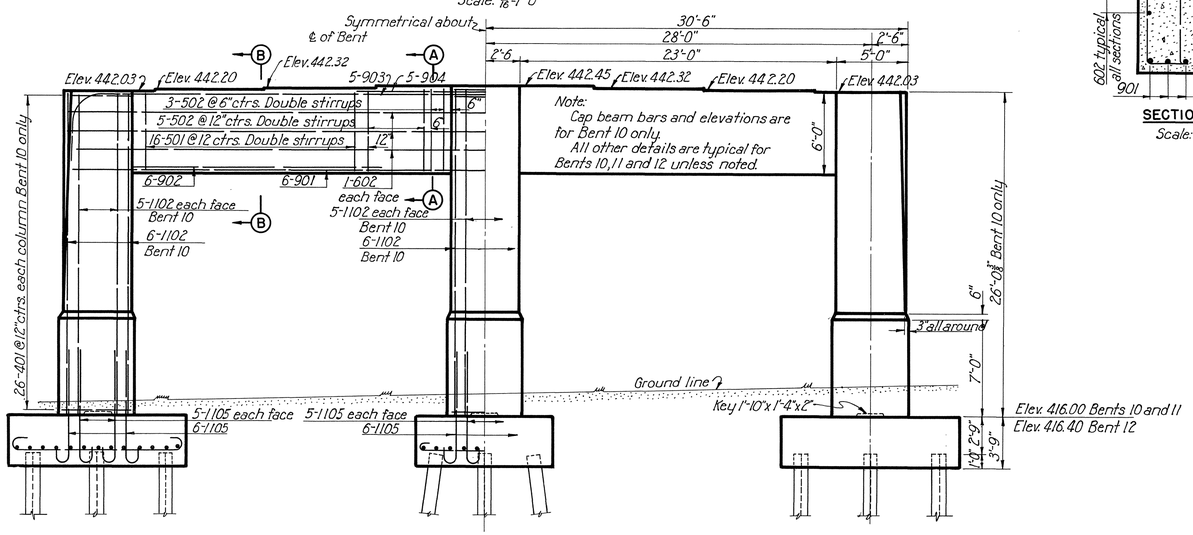
File E-14-14

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	SECTION
8	TENN.	U-068-1(1)	1952	15	46	

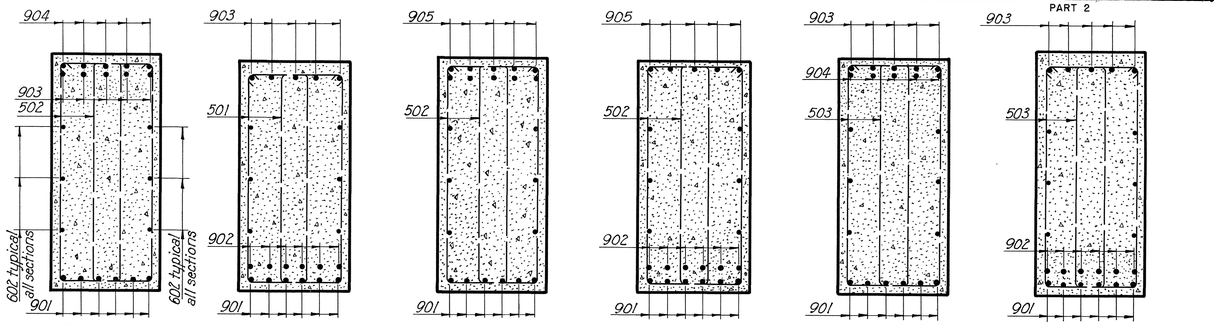
PART 2

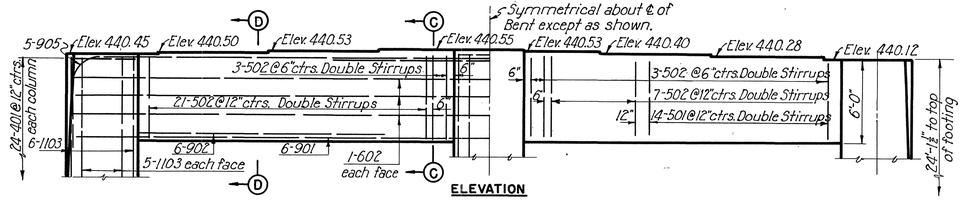


PLAN
Scale: 3/16"=1'-0"



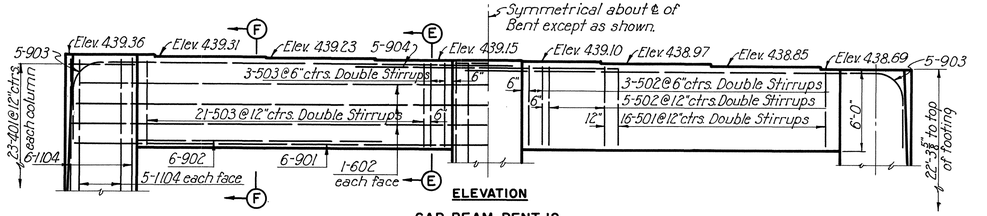
ELEVATION
Scale: 3/16"=1'-0"





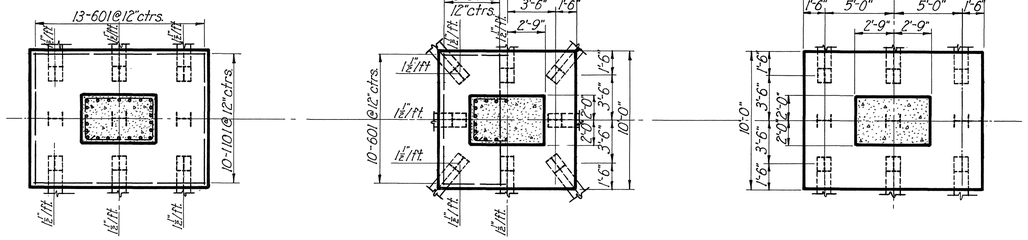
ELEVATION

CAP BEAM-BENT 11
Scale: 3/16"=1'-0"

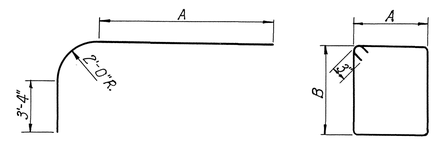


ELEVATION

CAP BEAM-BENT 12
Scale: 3/16"=1'-0"



FOOTING PLAN
Scale: 3/16"=1'-0"



REINFORCING STEEL SCHEDULE

Mark	Equivalent Size	Number Required Bent 10	Bent 11	Bent 12	Length	Type	Dimensions A	Dimensions B
1101	1¼ sq.	20	20	20	15'-2"	105	11'-5"	
1102	1¼ sq.	66			25'-9"	Str.		
1103	1¼ sq.		66		23'-9"	Str.		
1104	1¼ sq.			66	22'-0"	Str.		
1105	1¼ sq.	66	66	66	9'-0"	104	7'-2"	
901	1" sq.	6	6	6	60'-0"	Str.		
902	1" sq.	12	12	12	18'-0"	Str.		
903	1" sq.	10		10	36'-5"	103	29'-11"	
904	1" sq.	5		5	19'-0"	Str.		
905	1" sq.		10		45'-11"	103	39'-5"	
601	⅜" ϕ	46	46	46	11'-0"	105	9'-0"	
602	⅜" ϕ	6	6	6	60'-0"	Str.		
501	⅝" ϕ	64	28	32	14'-10"	102	1'-7"	5'-7"
502	⅝" ϕ	32	68	16	15'-4"	102	1'-7"	5'-10"
503	⅝" ϕ			48	15'-10"	102	1'-7"	6'-1"
401	½" ϕ	78	72	69	15'-4"	102	3'-0"	4'-5"
402	½" ϕ	40	40	40	5'-2"	101	3'-2"	
403	½" ϕ	56	56	56	4'-2"	101	2'-2"	

ESTIMATED QUANTITIES

Item No.	Description	Bent 10	Bent 11	Bent 12
17-2	Dry Excavation (Bridges)	125 Cu.Yds.	145 Cu.Yds.	125 Cu.Yds.
132-1	Structural Steel	225 Lbs.	225 Lbs.	225 Lbs.
132-12	8" Wrought Iron Pipe	85 Lin.Ft.		
135-4	Class "A" Concrete	140 Cu.Yds.	135 Cu.Yds.	130 Cu.Yds.
135-12	Steel Bar Reinforcement	18,060 Lbs.	16,020 Lbs.	15,390 Lbs.
737-1	Steel Piles 12"	1,100 Lin.Ft.	1,030 Lin.Ft.	980 Lin.Ft.

Note:
See general notes on sheet 10.
For anchor bolt settings, see sheet 23.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

BENTS 10, 11 AND 12

SCALE 3/16", 1/2" = 1'-0"
MADE B.H.R. DATE 11-30-50
TRCD. L.L. DATE 1-2-51
CKD. H.B.A. DATE 1-10-51

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

811 SHEET 15

MICROFILMED

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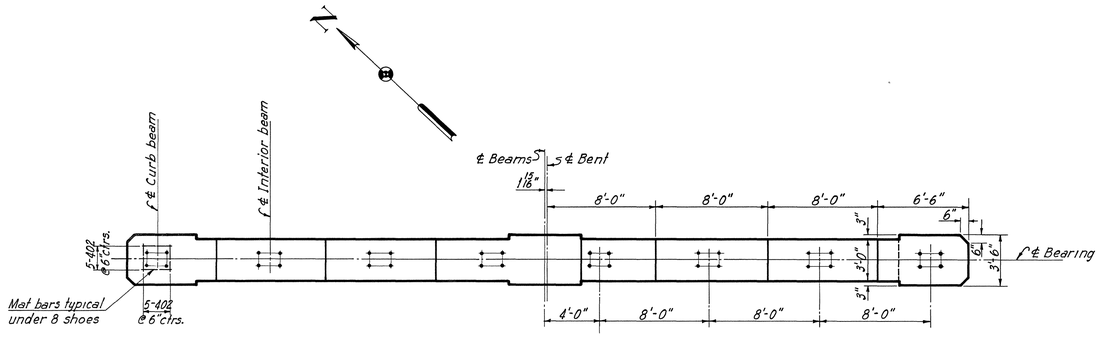
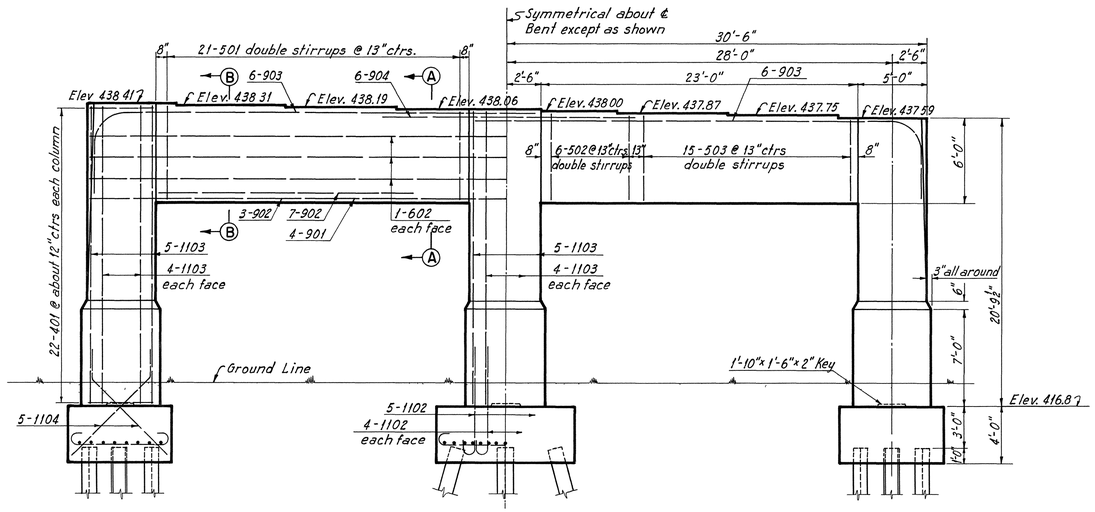
File E-14-15

FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS	SECTION
8	TENN.	U-068-I(1)	1952	16	46	

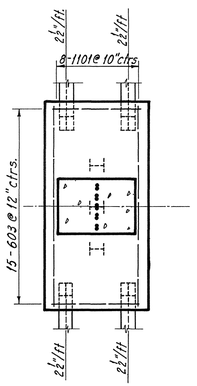
PART 2

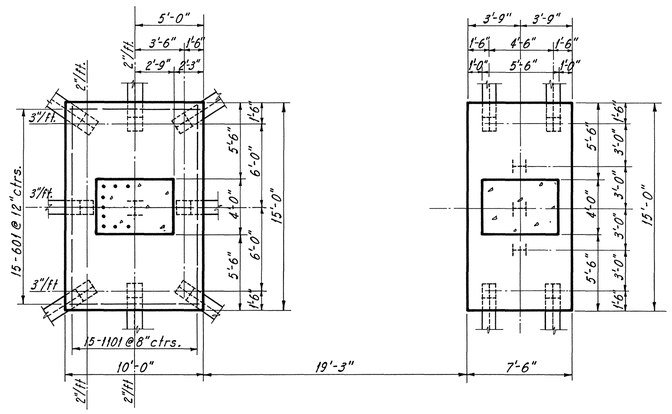


PLAN
Scale: 1/8"=1'-0"

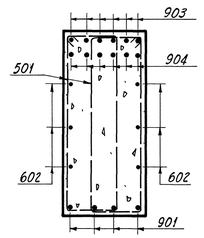


ELEVATION
Scale: 1/8"=1'-0"

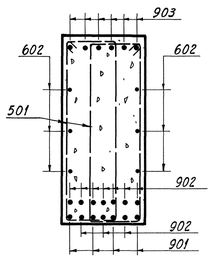




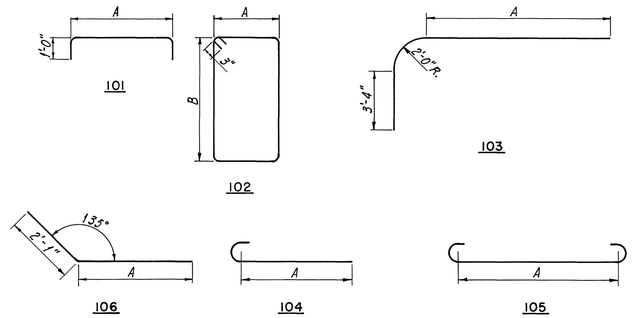
FOOTING PLAN
Scale 1/8"=1'-0"



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



SECTION B-B
Scale: 3/8"=1'-0"



ESTIMATED QUANTITIES		
Item No	Description	Quantity
17-2	Dry Excavation (Bridges)	125 Cu Yds
132-1	Structural Steel	445 Lbs
132-12	8" Wrought Iron Pipe	55 Lin Ft.
135-4	Class "A" Concrete	135 Cu Yds
135-12	Steel Bar Reinforcement	18,000 Lbs
737-1	Steel Piles, 12"	820 Lin Ft

REINFORCING STEEL SCHEDULE						
Mark	Equiv. Size	No.	Length	Type	Dimensions A	Dimensions B
1101	1¼" Sq	31	17'-2"	105	13'-5"	
1102	1¼" Sq.	18	9'-3"	104	7'-5"	
1103	1¼" Sq.	54	20'-6"	Str.		
1104	1¼" Sq.	20	9'-7"	106	7'-6"	
901	1" Sq.	4	60'-0"	Str.		
902	1" Sq	20	18'-0"	Str.		
903	1" Sq.	12	36'-5"	103	29'-11"	
904	1" Sq	6	19'-0"	Str.		
601	¾" ϕ	15	11'-0"	105	9'-0"	
602	¾" ϕ	6	60'-0"	Str.		
603	¾" ϕ	30	8'-6"	105	6'-6"	
501	⅜" ϕ	42	16'-4"	102	1'-10"	6'-1"
502	⅜" ϕ	12	15'-10"	102	1'-10"	5'-10"
503	⅜" ϕ	30	15'-4"	102	1'-10"	5'-7"
401	½" ϕ	66	15'-4"	102	3'-0"	4'-5"
402	½" ϕ	80	4'-2"	101	2'-2"	

Note:
See General Notes on Sheet 10.
For anchor bolt settings see Sheet 23.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

BENT 13

SCALE 3/16", 3/8" = 1'-0"
MADE J.G.S. DATE 10-15-51
TRCD. G.D. DATE 10-19-51
CKD. D.L.J. DATE 10-16-51

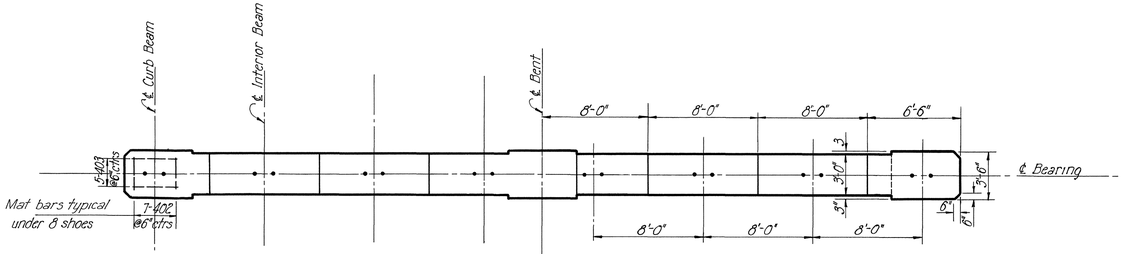
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

811 SHEET: 16

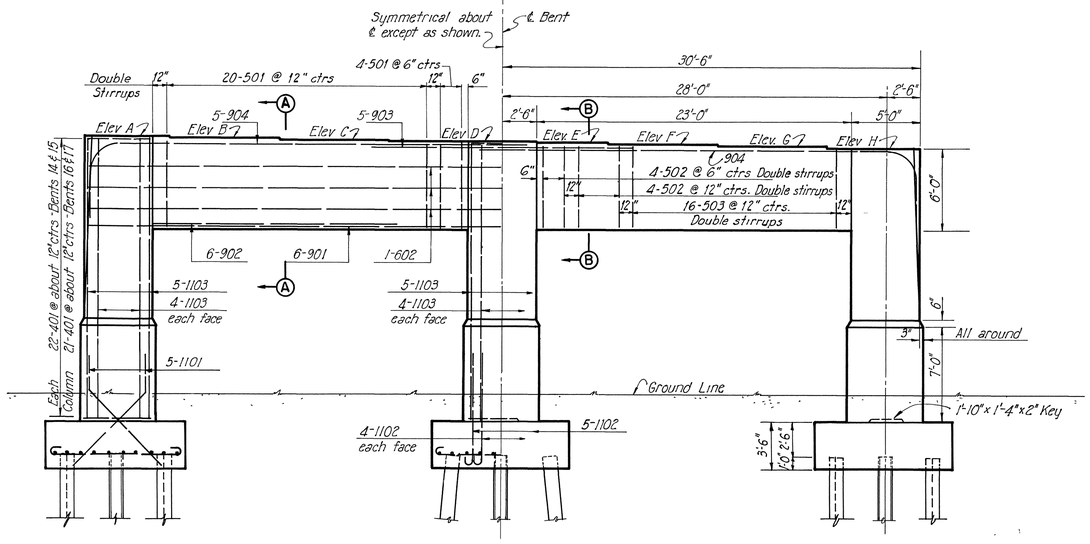
E-14-16

FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS	SECTION
8	TENN	U-068-1(1)	1952	17	46	

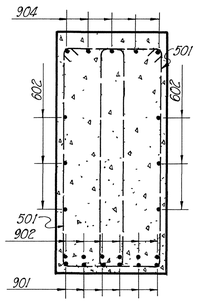
PART 2



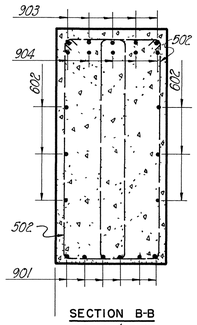
PLAN
Scale: 3/16"=1'-0"



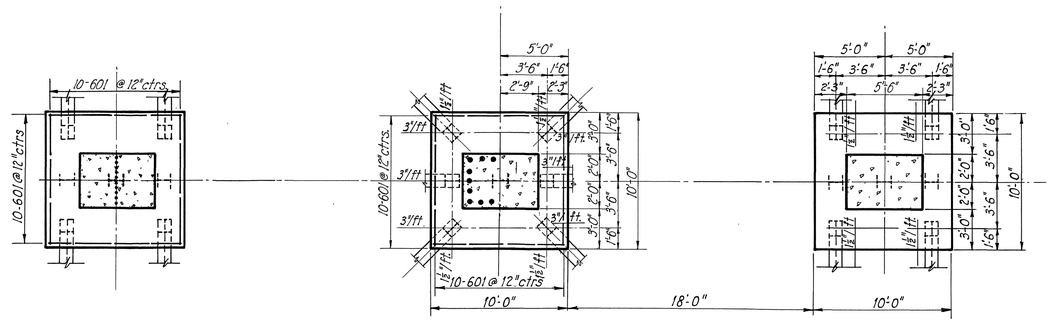
ELEVATION
Scale 3/16"=1'-0"



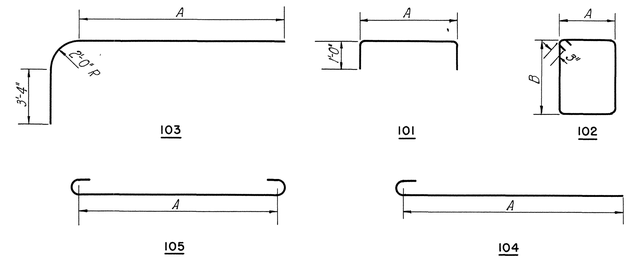
SECTION A-A
Scale 1/2"=1'-0"

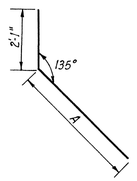


SECTION B-B
Scale 1/2"=1'-0"



FOOTING PLAN
Scale 3/16"=1'-0"





106

Note: Steel Schedule is for one bent only

REINFORCING STEEL SCHEDULE

Mark	Equivalent Size	No	Length	Type	Dimensions A	Dimensions B
1101	1¼" Sq	20	9'-7"	106	7'-6"	
1102	1¼" Sq	18	8'-9"	104	6'-11"	
1103	1¼" Sq	54	**19'-9"	Str.		
901	1" Sq	6	60'-0"	Str.		
902	1" Sq	12	18'-0"	Str.		
903	1" Sq	5	19'-0"	Str.		
904	1" Sq	10	36'-5"	103	29'-11"	
601	¾" ϕ	60	11'-0"	105	9'-0"	
602	¾" ϕ	6	60'-0"	Str.		
501	⅝" ϕ	48	15'-10"	102	1'-7"	6'-1"
502	⅝" ϕ	16	15'-4"	102	1'-7"	5'-10"
503	⅝" ϕ	32	14'-10"	102	1'-7"	5'-7"
401	⅜" ϕ	*66	15'-4"	102	3'-0"	4'-5"
402	⅜" ϕ	56	4'-2"	101	2'-2"	
403	⅜" ϕ	40	5'-2"	101	3'-2"	

* 63 Req'd in Bents 16 & 17.
** 20'-9" for Bents 14 & 15.

ELEVATIONS

Bent	A	B	C	D	E	F	G	H	Top of Footing
14	437.68	437.58	437.46	437.33	437.27	437.14	437.02	436.86	415.80
15	437.40	437.27	437.15	437.02	436.96	436.83	436.71	436.58	415.40
16	437.08	436.99	436.87	436.74	436.68	436.55	436.43	436.26	416.10
17	436.80	436.71	436.59	436.46	436.40	436.27	436.15	435.98	416.00

Note.
Beam spacing is not symmetrical about ℄ of Bents for beam spacings, offsets from ℄ Bents, and anchor bolt settings see Sheet 23
See General Notes on Sheet 10.

ESTIMATED QUANTITIES

Item No	Description	Bent 14	Bent 15	Bent 16	Bent 17
17-2	Dry Excavation (Bridges)	100 Cu.Yds	105 Cu.Yds	100 Cu Yds	105 Cu Yds.
132-1	Structural Steel	225 Cu Yds	225 Cu Yds	225 Lbs	225 Lbs
132-12	8" Wrought Iron Pipe		55 Lin.Ft.		55 Lin Ft
135-4	Class "A" Concrete	120 Cu Yds	120 Cu Yds	115 Cu Yds	115 Cu Yds
135-12	Steel Bar Reinforcement	15,390 Lbs.	15,390 Lbs	15,070 Lbs	15,010 Lbs
737-1	Steel Piles, 12"	700 Lin Ft.	700 Lin Ft	710 Lin Ft	650 Lin.Ft.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

BENTS 14, 15, 16, 17

SCALE 3/16"=1'-0"
MADE AER DATE 11-28-50
TRCD BLB DATE 1-5-51
CKD HBA DATE 1-11-51

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

811 SHEET 17

MICROFILMED

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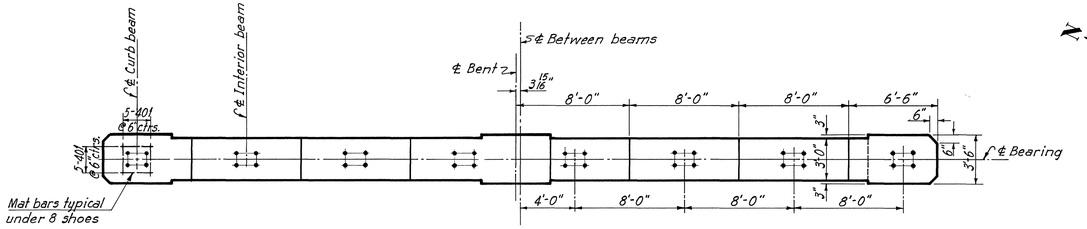
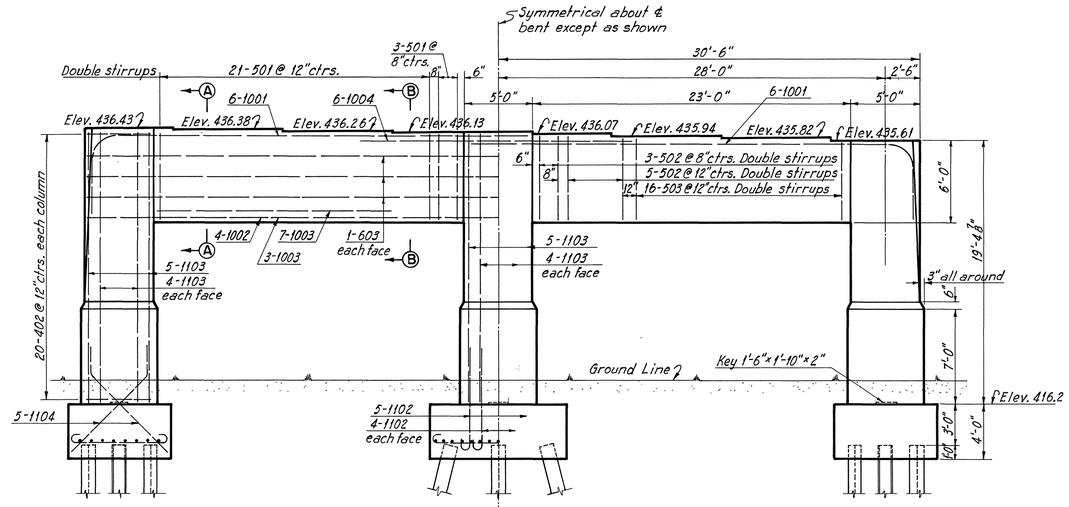
File E-14-17

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	SECTION
8	TENN.	U-068-1(1)	1952	18	46	

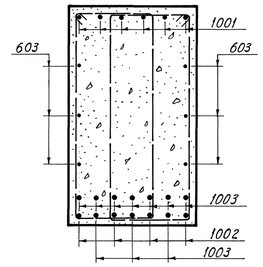
PART 2



PLAN
Scale: 3/16" = 1'-0"



ELEVATION
Scale: 3/16" = 1'-0"



SECTION A-A
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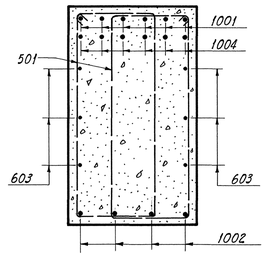

SECTION B-B
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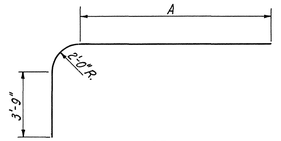
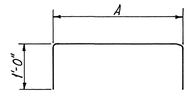


103



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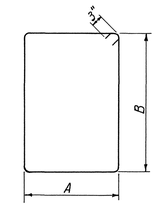

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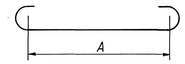

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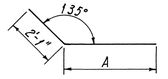

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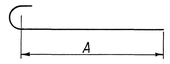
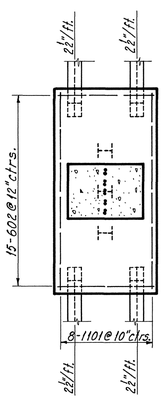
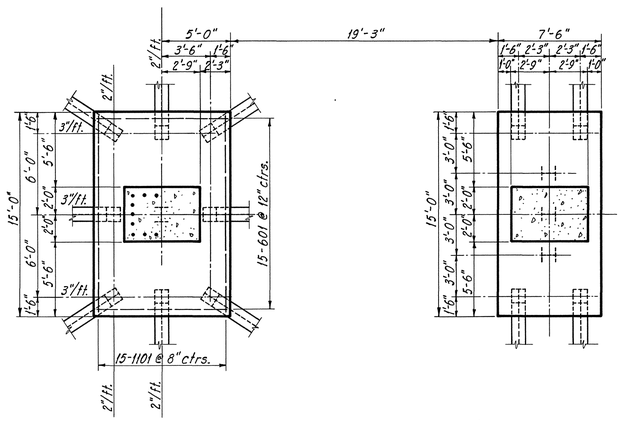


104

REINFORCING STEEL SCHEDULE						
Mark	Equiv. Size	No.	Length	Type	Dimensions A	Dimensions B
1101	1 1/4" Sq.	31	17'-2"	105	13'-5"	
1102	1 1/4" Sq.	18	9'-3"	104	7'-5"	
1103	1 1/4" Sq.	54	19'-2"	Str.		
1104	1 1/4" Sq.	20	9'-7"	106	7'-6"	
1001	1 1/8" Sq.	12	37'-0"	103	30'-1"	
1002	1 1/8" Sq.	4	60'-0"	Str.		
1003	1 1/8" Sq.	20	18'-0"	Str.		
1004	1 1/8" Sq.	6	19'-0"	Str.		
601	3/4" ϕ	15	11'-0"	105	9'-0"	
602	3/4" ϕ	30	8'-6"	105	6'-6"	
603	3/4" ϕ	6	60'-0"	Str.		
501	5/8" ϕ	48	16'-4"	102	1'-10"	6'-1"
502	5/8" ϕ	16	15'-10"	102	1'-10"	5'-10"
503	5/8" ϕ	32	15'-4"	102	1'-10"	5'-7"
401	1/2" ϕ	80	4'-2"	101	2'-2"	
402	1/2" ϕ	60	15'-4"	102	3'-0"	4'-5"





FOOTING PLAN
Scale: 3/16" = 1'-0"

ESTIMATED QUANTITIES		
Item No.	Description	Quantity
17-2	Dry Excavation (Bridges)	140 Cu Yds.
132-1	Structural Steel	445 Lbs.
135-4	Class "A" Concrete	135 Cu Yds.
135-12	Steel Bar Reinforcement	18,830 Lbs.
737-1	Steel Piles 12"	630 Lin. Ft.

Note: Beam spacing not symmetrical about ℄ bent.
For beam spacing, offsets from ℄ bent and anchor bolt settings see Sheet 23.
See General Notes on Sheet 10.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

BENT 18

SCALE 3/16" & 1/2" = 1'-0"
MADE G.D. DATE 10-15-51
TRCD G.D. DATE 10-18-51
CKD D.L.J. DATE 10-16-51

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

811 SHEET 18

MICROFILMED

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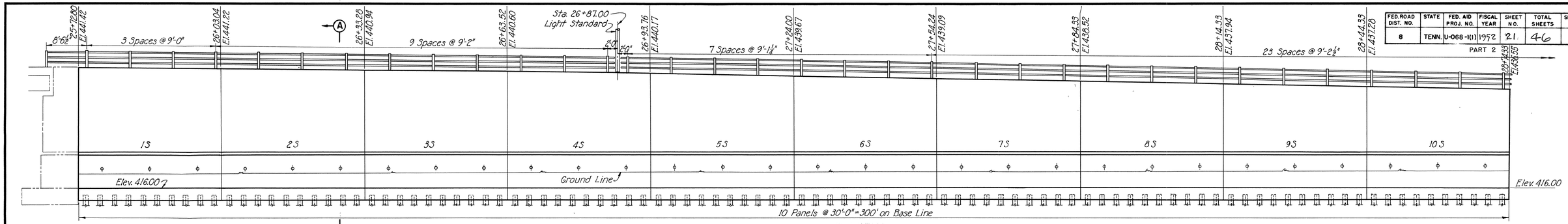
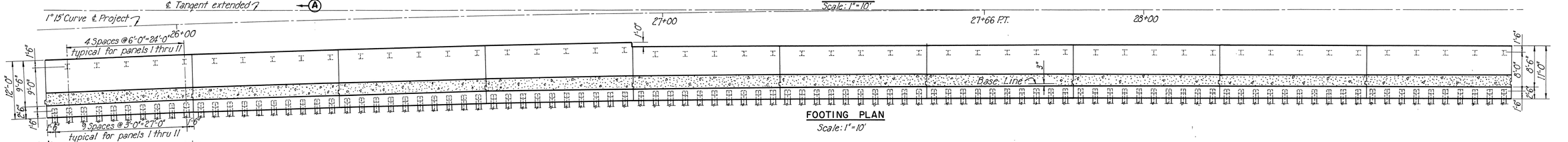
File E-14-18

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	SECTION
8	TENN.	U-068-1(1)	1952	21	46	

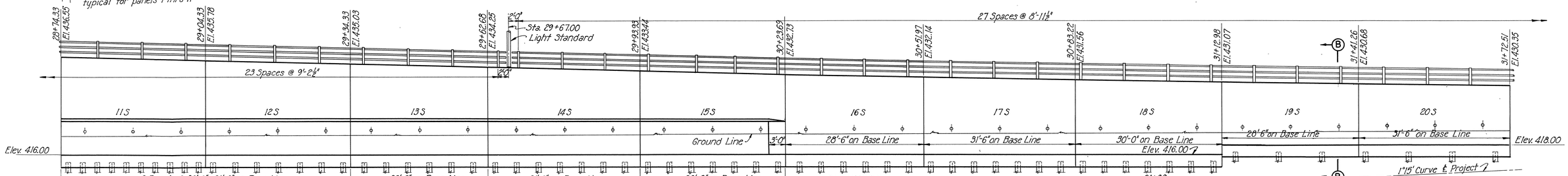
PART 2



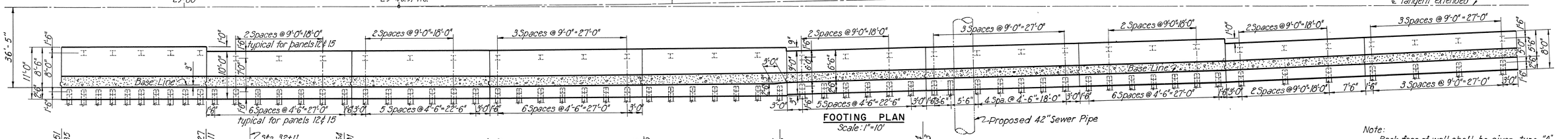
ELEVATION
Scale: 1" = 10'



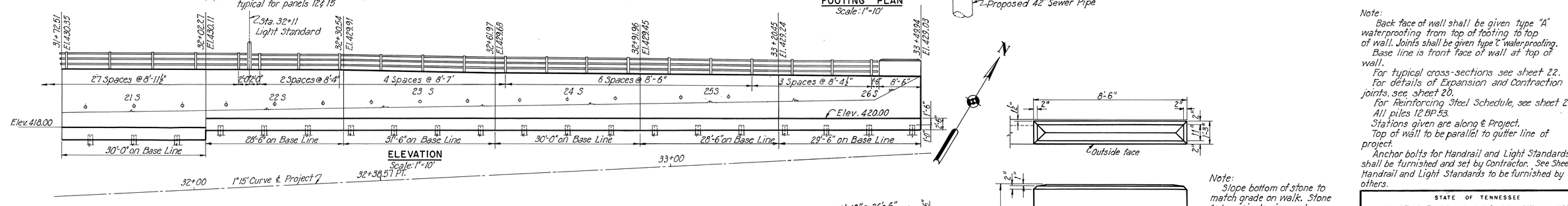
FOOTING PLAN
Scale: 1" = 10'



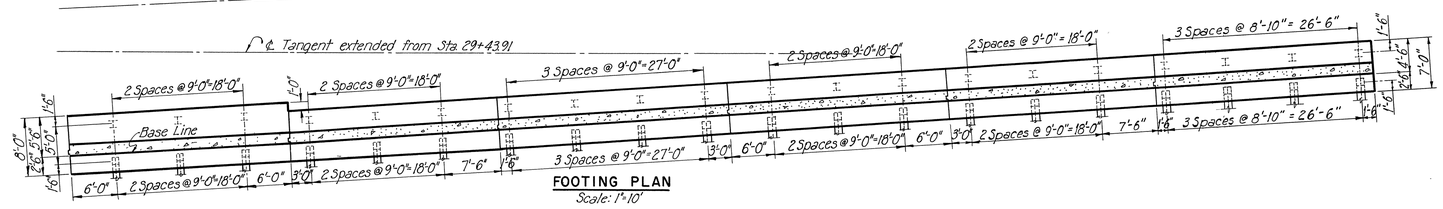
ELEVATION
Scale: 1" = 10'



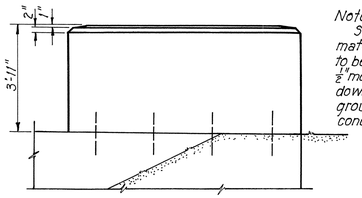
FOOTING PLAN
Scale: 1" = 10'



ELEVATION
Scale: 1" = 10'



FOOTING PLAN
Scale: 1" = 10'



CUT STONE END POST
Scale: 3/8" = 1'-0"

Note:
Slope bottom of stone to match grade on walk. Stone to be a single piece set on ½" mortar bed. Provide 4-¾" ϕ dowels, 18" long drilled and grouted into stone and concrete.

Note:
Back face of wall shall be given type "A" waterproofing from top of footing to top of wall. Joints shall be given type "C" waterproofing.
Base line is front face of wall at top of wall.
For typical cross-sections see sheet 22.
For details of Expansion and Contraction joints, see sheet 20.
For Reinforcing Steel Schedule, see sheet 22.
All piles 12 BP 53.
Stations given are along ℄ Project.
Top of wall to be parallel to gutter line of project.
Anchor bolts for Handrail and Light Standards shall be furnished and set by Contractor. See Sheet 20. Handrail and Light Standards to be furnished by others.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

EAST APPROACH SOUTH RETAINING WALL

SCALE 1" = 10'-0"
MADE B.H.R. DATE 1-8-50
TRCD. B.L.B. DATE 2-1-51
CKD. H.P.B. DATE 2-2-51

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

811 SHEET 21

MICROFILMED

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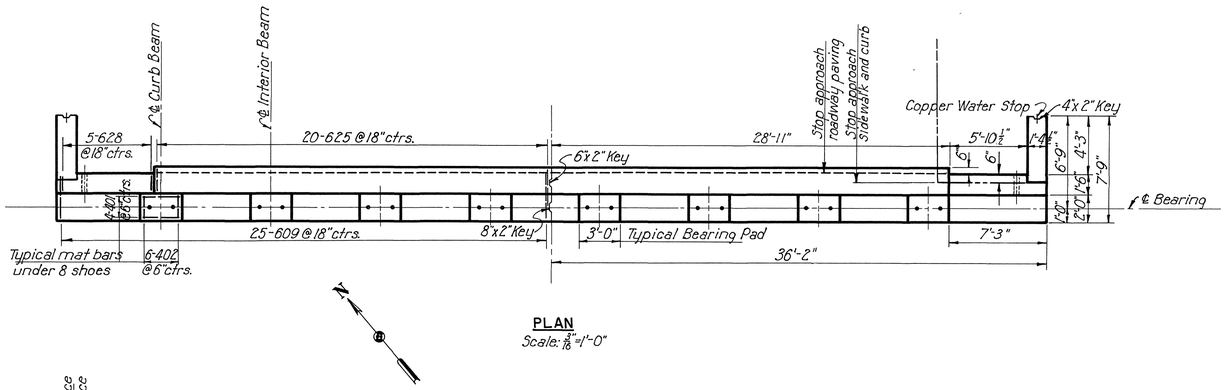
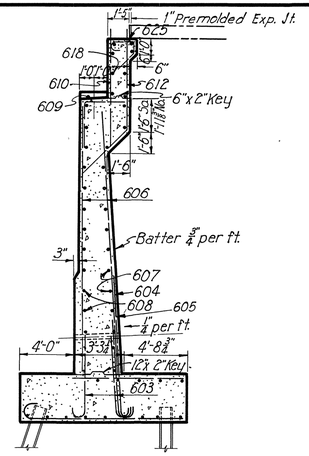
File E-14-21

FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS	SECTION
8	TENN	U-068-1(1)	1952	19	46	

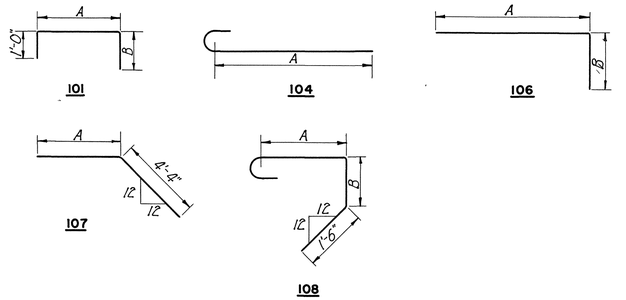
PART 2

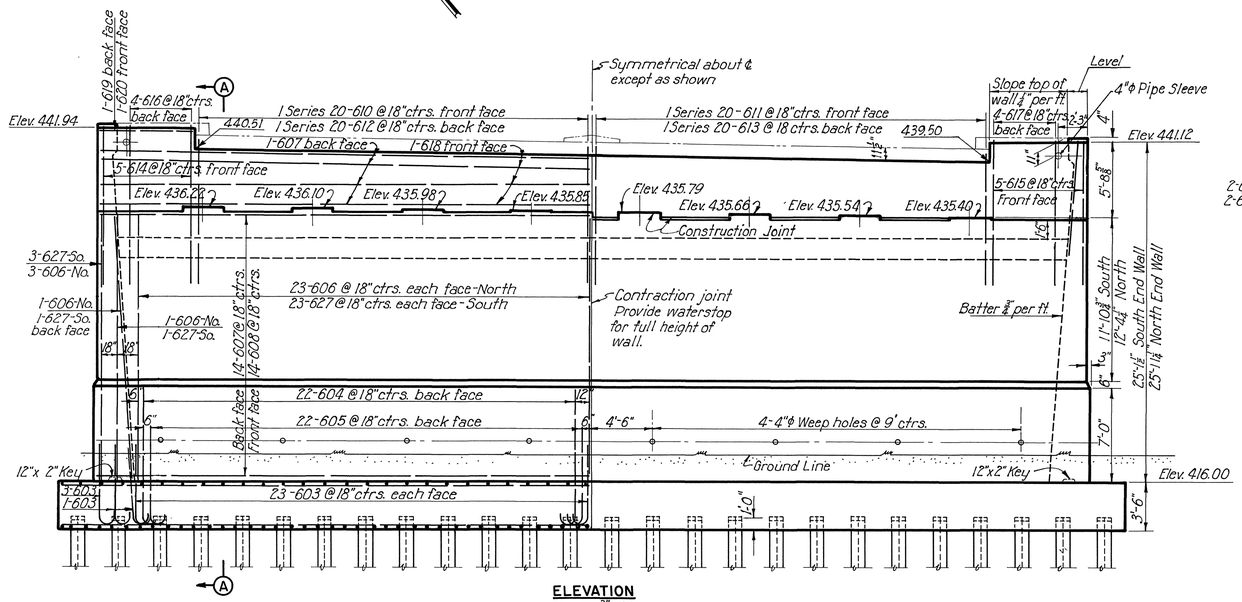


PLAN
Scale: 3/16"=1'-0"

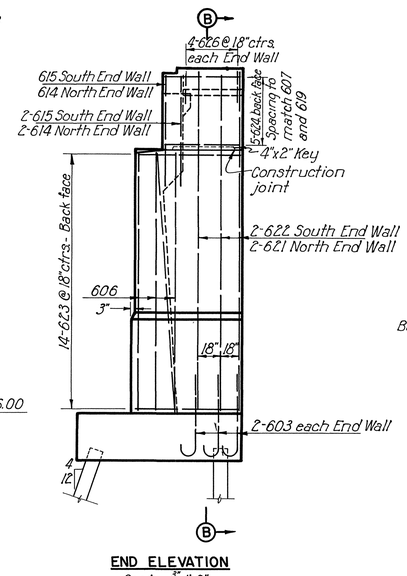


SECTION A-A
Scale: 3/16"=1'-0"

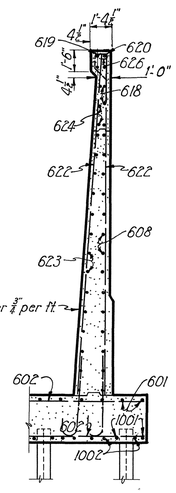




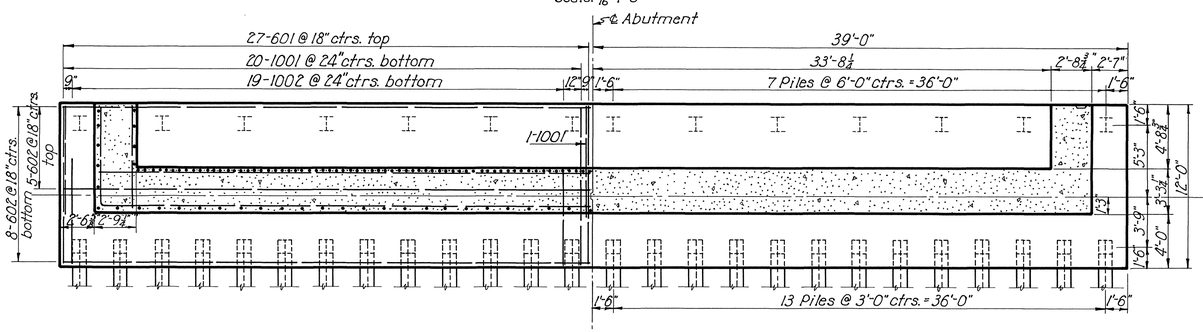
ELEVATION
Scale: 3/16"=1'-0"



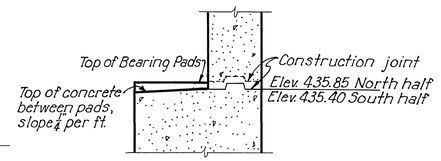
END ELEVATION
Scale: 3/16"=1'-0"



SECTION B-B
Scale: 3/16"=1'-0"



FOOTING PLAN
Scale: 3/16"=1'-0"



SECTION THRU BRIDGE SEAT
Scale: 1/2"=1'-0"

REINFORCING STEEL SCHEDULE

Mark	Equivalent Size	No.	Length	Type	Dimensions A	Dimensions B
1001	1⅛ sq.	42	12'-8"	104	11'-0"	
1002	1⅛ sq.	38	8'-9"	104	7'-1"	
601	¾"℄	54	8'-0"	Str.		
602	¾"℄	26	38'-6"	Str.		
603	¾"℄	114	6'-6"	104	5'-6"	
604	¾"℄	44	11'-0"	104	10'-0"	
605	¾"℄	44	8'-0"	104	7'-0"	
606	¾"℄	51	19'-7	Str.		
607	¾"℄	36	35'-10"	Str.		
608	¾"℄	28	43'-1"	106	35'-10"	7'-3"
609	¾"℄	50	6'-10"	101	3'-1"	2'-9"
610	¾"℄	1 Series of 20	7'-9" to 8'-2"	Str.		
611	¾"℄	1 Series of 20	7'-5" to 7'-9"	Str.		
612	¾"℄	1 Series of 20	10'-9" to 11'-2"	107	6'-5" to 6'-10"	
613	¾"℄	1 Series of 20	10'-4" to 10'-9"	107	6'-0" to 6'-5"	
614	¾"℄	7	9'-2"	Str.		
615	¾"℄	7	8'-5"	Str.		
616	¾"℄	4	12'-3"	107	7'-11"	
617	¾"℄	4	11'-5"	107	7'-1"	
618	¾"℄	8	41'-1"	106	35'-10"	5'-3"
619	¾"℄	2	6'-11"	Str.		
620	¾"℄	2	12'-2"	106	6'-11"	5'-3"
621	¾"℄	6	25'-9"	Str.		
622	¾"℄	6	25'-11"	Str.		
623	¾"℄	28	7'-5"	Str.		
624	¾"℄	10	5'-3"	Str.		
625	¾"℄	40	4'-6"	108	1'-4"	8"
626	¾"℄	8	4'-5"	108	9"	1'-2"
627	¾"℄	51	19'-2"	Str.		
628	¾"℄	10	3'-1"	101	1'-1"	1'-0"
401	½"℄	32	4'-8"	101	2'-8"	1'-0"
402	½"℄	48	3'-8"	101	1'-8"	1'-0"

ESTIMATED QUANTITIES

Item No	Description	Quantity
17-2	Dry Excavation (Bridges)	250 Cu.Yds.
132-1	Structural Steel	225 Lbs.
132-12	8" Wrought Iron Pipe	55 Lin.Ft.
135-4	Class "A" Concrete	305 Cu Yds.
135-12	Steel Bar Reinforcement	18920 Lbs.
137-1	Waterproofing Type "A"	200 Sq.Yds.
137-3	Waterproofing Type "C"	25 Sq.Yds.
737.1	Steel Piles 12"	980 Lin.Ft.

Note:
See general notes on sheet 10.
For Anchor bolt details see Sheet 23.
Spread bars at weep holes to maintain 2" min. cover.
Back face of abutment shall have type "A" waterproofing from top of footing to top of walls, except at joints which shall have 2' wide strip of type "C" waterproofing.
For details of copper waterstop, see Sheet 20.
For Downspout details, see Sheet 24.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

EAST ABUTMENT

SCALE 3/16", 1/2" = 1'-0"
MADE A.E.R. DATE 12-6-50
TRCD L.L. DATE 1-8-51
CKD H.B.A. DATE 1-15-51

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

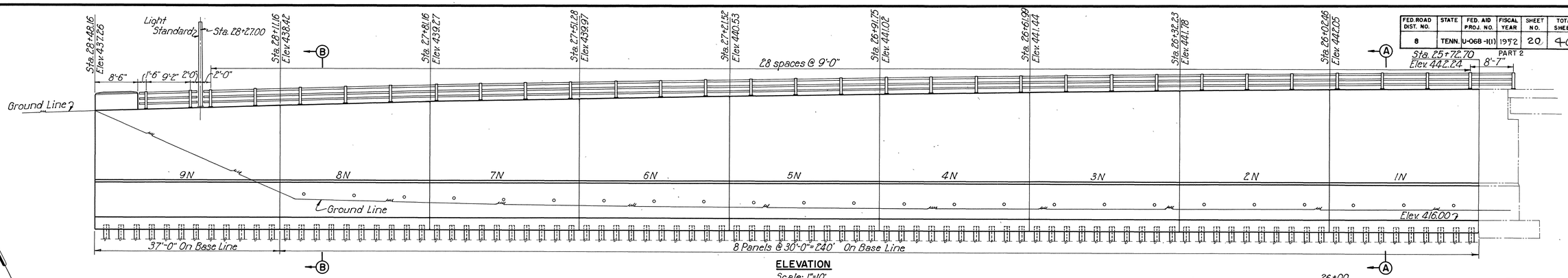
811 SHEET-19

414

File E-14-19

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	SECTION
8	TENN.	U-068-1(1)	1952	20	46	

PART 2



ELEVATION
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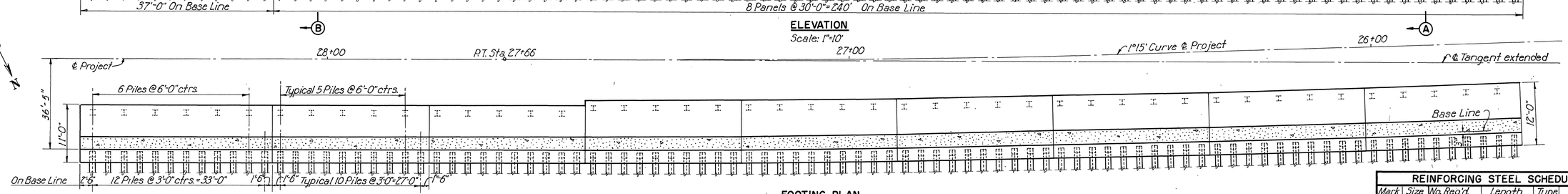
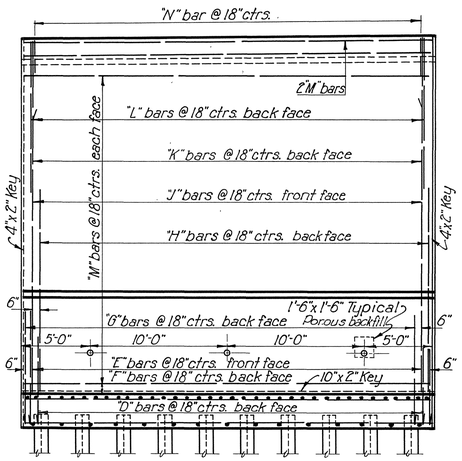
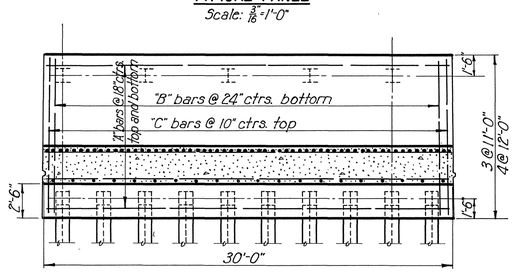


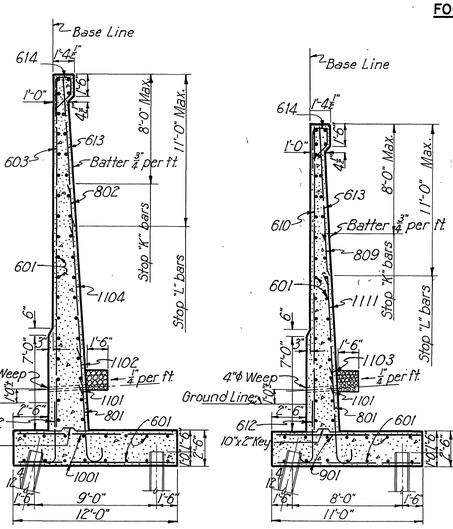


TYPICAL PANEL
Scale: $\frac{3}{16}$"=1'-0"



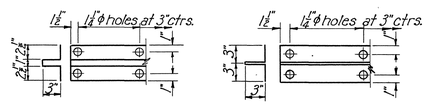
TYPICAL FOOTING
Scale: $\frac{3}{16}$"=1'-0"

FOOTING PLAN
Scale: 1"=10'



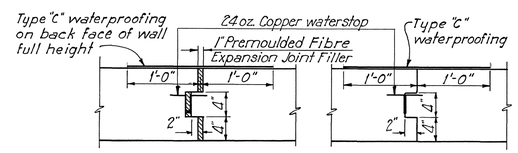
SECTION A-A
Scale: $\frac{3}{16}$"=1'-0"

SECTION B-B
Scale: $\frac{3}{16}$"=1'-0"



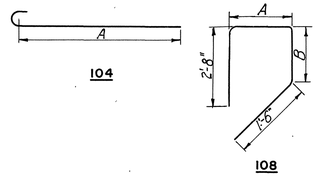
EXPANSION JOINT WATERSTOP
Scale: 1"=1'-0"

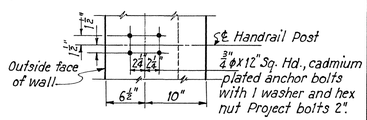
CONTRACTION JOINT WATERSTOP
Scale: 1"=1'-0"



EXPANSION JOINT
Scale: 1"=1'-0

CONTRACTION JOINT
Scale: 1"=1'-0"





ANCHOR BOLT PLAN

HANDRAIL POSTS
Scale: 1"=1'-0"

JOINT LOCATION			
Station	Type of Joint	Dist. from P.I. on ℄ Tan. Ext.	Offset from ℄ Tan. Ext.
25+72.70	Expansion	194.78'	32.06'
26+02.46	Contraction	164.80'	33.23
26+32.23	Contraction	134.82'	34.20
26+61.99	Expansion	104.83'	34.98
26+91.75	Contraction	74.83'	35.56
27+21.52	Contraction	44.84'	35.95
27+51.28	Expansion	14.84'	36.14
27+81.16	Contraction	15.16'	36.17
28+11.16	Contraction	45.16'	36.17
28+48.16	None	82.16'	36.17

ESTIMATED QUANTITIES		
Item No.	Description	Quantity
17-2	Dry Excavation (Bridges)	700 Cu.Yds.
132-1	Structural Steel	290 Lbs.
135-4	Class "A" Concrete	740 Cu.Yds.
135-12	Steel Bar Reinforcement	94,580 Lbs.
137-1	Waterproofing Type "A"	700 Sq.Yds.
137-3	Waterproofing Type "C"	50 Sq.Yds.
737-1	Steel Piles 12"	2920 Lin. Ft.
	Cut Limestone Masonry	41 Cu.Ft.

REINFORCING STEEL LOCATION

Position	1N		2N		3N	
Mark	Mark	No. Req'd.	Mark	No. Req'd.	Mark	No. Req'd.
A	601	16	601	16	601	16
B	1001	15	1001	15	1001	15
C	1001	36	1001	36	1001	36
D	1101	20	1101	20	1101	20
E	612	20	612	20	612	20
F	801	20	801	20	801	20
G	1102	20	1102	20	1102	20
H	1104	20	1105	20	1106	20
J	603	20	604	20	605	20
K	802	20	803	20	804	20
L	613	20	613	20	613	20
M	601	36	601	36	601	36
N	614	20	614	20	614	20
	4N		5N		6N	
A	601	16	601	16	601	16
B	1001	15	1001	15	1001	15
C	1001	36	1001	36	1001	36
D	1101	20	1101	20	1101	20
E	612	20	612	20	612	20
F	801	20	801	20	801	20
G	1102	20	1103	20	1103	20
H	1107	20	1108	20	1109	20
J	606	20	607	20	608	20
K	805	20	806	20	807	20
L	613	20	613	20	613	20
M	601	36	601	34	601	34
N	614	20	614	20	614	20
	7N		8N		9N	
A	601	14	601	14	602	14
B	901	15	901	15	901	19
C	901	36	901	36	901	44
D	1101	20	1101	20	1101	24
E	612	20	612	20	612	25
F	801	20	801	20	801	25
G	1103	20	1103	20	1103	24
H	1110	20	1111	20	1112	24
J	609	20	610	20	611	25
K	808	20	809	20	810	25
L	613	20	613	20	613	25
M	601	34	601	32	602	32
N	614	20	614	20	614	25

REINFORCING STEEL SCHEDULE

Mark	Size	No. Req'd.	Length	Type	A	B
1101	¼ sq.	184	7'-9"	104	5'-11"	
1102	¼ sq.	80	9'-7"	104	7'-9"	
1103	¼ sq.	104	7'-9"	104	5'-11"	
1104	¼ sq.	20	15'-0"	Str.		
1105	¼ sq.	20	14'-9"	Str.		
1106	¼ sq.	20	14'-6"	Str.		
1107	¼ sq.	20	14'-3"	Str.		
1108	¼ sq.	20	13'-9"	Str.		
1109	¼ sq.	20	13'-3"	Str.		
1110	¼ sq.	20	12'-9"	Str.		
1111	¼ sq.	20	12'-0"	Str.		
1112	¼ sq.	20	11'-3"	Str.		
1001	½ sq.	306	11'-6"	Str.		
901	1" sq.	165	10'-6"	Str.		
801	1" ϕ	185	6'-8"	104	5'-4"	
802	1" ϕ	20	18'-0"	Str.		
803	1" ϕ	20	17'-9"	Str.		
804	1" ϕ	20	17'-6"	Str.		
805	1" ϕ	20	17'-3"	Str.		
806	1" ϕ	20	16'-9"	Str.		
807	1" ϕ	20	16'-3"	Str.		
808	1" ϕ	20	15'-9"	Str.		
809	1" ϕ	20	15'-0"	Str.		
810	1" ϕ	25	14'-3"	Str.		
601	⅜" ϕ	402	2'9"-6"	Str.		
602	⅜" ϕ	46	36'-6	Str.		
603	⅜" ϕ	20	25'-9"	Str.		
604	⅜" ϕ	20	25'-6"	Str.		
605	⅜" ϕ	20	25'-3"	Str.		
606	⅜" ϕ	20	24'-9"	Str.		
607	⅜" ϕ	20	24'-3"	Str.		
608	⅜" ϕ	20	23'-9"	Str.		
609	⅜" ϕ	20	23'-0"	Str.		
610	⅜" ϕ	20	22'-3"	Str.		
611	⅜" ϕ	25	21'-0"	Str.		
612	⅜" ϕ	185	5'-7"	104	4'-7"	
613	⅜" ϕ	185	11'-0"	Str.		
614	¾" ϕ	185	6'-2"	108	11"	1'-1"

Note:
Top of wall to be on vertical curve passing thru elevations indicated and parallel to gutter line of project.
Wall panels to be built as chords of a circle. Dimensions given are along outer face of wall above rustication, referred to as base line, from ℄ joint to ℄ joint. Offsets are from ℄ tangent extended to base line.
Handrail and light standards to be furnished by others. Contractor shall furnish and set anchor bolts.
All piles to be 12 B.P. 53.
For endpost details see Sheet 21.
For light standard anchor bolt spacing see Sheet 23.
Backface of wall shall have Type "A" waterproofing from top of footing to top of wall, except at joints which shall have 2' wide strip of type "C" waterproofing.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

EAST APPROACH NORTH RETAINING WALL

SCALE $\frac{3}{16}$"=1'-0" & 1"=10'
MADE A.E.R. DATE 12-29-50
TRCD L.L. DATE 1-16-50
CKD H.P.B. DATE 1-24-51

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

811 SHEET 20

MICROFILMED

File E-14-20

FED ROAD DIST NO.	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	SECTION
8	TENN.	U-068-1(1)	1952	22	46	

PART 2

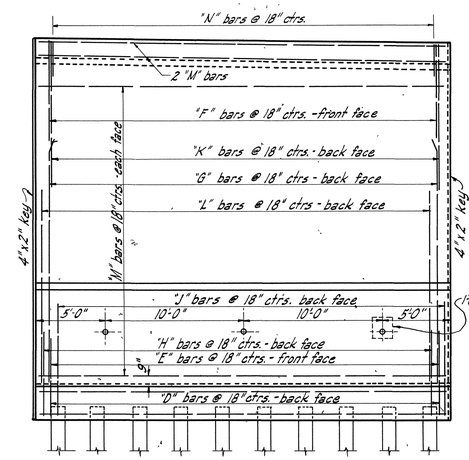
REINFORCING STEEL SCHEDULE

Mark	Size	No. Req'd.	Length	Type	A	B
1101	1¼" Sq.	340	7'-9"	104	5'-11"	
1102	1¼" Sq.	60	9'-7"	104	7'-9"	
1103	1¼" Sq.	20	13'-3"	104	11'-4"	
1104	1¼" Sq.	20	12'-6"	104	10'-7"	
1105	1¼" Sq.	19	11'-8"	104	9'-9"	
1106	1¼" Sq.	21	11'-0"	104	9'-1"	
1107	1¼" Sq.	20	10'-1"	104	8'-2"	
1108	1¼" Sq.	19	9'-5"	104	7'-6"	
1109	1¼" Sq.	21	8'-9"	104	6'-10"	
1110	1¼" Sq.	20	8'-3"	104	6'-4"	
1111	1¼" Sq.	20	14'-6"	Str.		
1112	1¼" Sq.	20	14'-3"	Str.		
1113	1¼" Sq.	20	14'-0"	Str.		
1114	1¼" Sq.	20	13'-9"	Str.		
1115	1¼" Sq.	20	13'-3"	Str.		
1116	1¼" Sq.	20	12'-9"	Str.		
1117	1¼" Sq.	20	12'-0"	Str.		
1118	1¼" Sq.	20	11'-6"	Str.		
1119	1¼" Sq.	20	11'-0"	Str.		
1120	1¼" Sq.	20	10'-3"	Str.		
1001	1¼" Sq.	204	11'-6"	Str.		
901	1" Sq.	357	10'-6"	Str.		
801	1" ϕ	300	7'-5"	104	6'-1"	
802	1" ϕ	19	12'-0"	104	10'-8"	
803	1" ϕ	21	11'-5"	104	10'-1"	
804	1" ϕ	20	10'-10"	104	9'-6"	
805	1" ϕ	19	8'-4"	104	7'-0"	
806	1" ϕ	21	8'-0"	104	6'-8"	
807	1" ϕ	20	7'-9"	104	6'-5"	
808	1" ϕ	99	7'-0"	104	5'-8"	
809	1" ϕ	20	17'-6"	Str.		
810	1" ϕ	20	17'-3"	Str.		
811	1" ϕ	20	17'-0"	Str.		
812	1" ϕ	20	16'-6"	Str.		
813	1" ϕ	20	16'-3"	Str.		
814	1" ϕ	20	15'-9"	Str.		
815	1" ϕ	20	15'-0"	Str.		
816	1" ϕ	20	14'-6"	Str.		
817	1" ϕ	20	14'-0"	Str.		
818	1" ϕ	20	13'-3"	Str.		
819	1" ϕ	20	12'-6"	Str.		
820	1" ϕ	20	11'-9"	Str.		
821	1" ϕ	19	11'-0"	Str.		
822	1" ϕ	21	10'-3"	Str.		
823	1" ϕ	20	9'-6"	Str.		
601	⅝" ϕ	710	29'-6"	Str.		
602	⅝" ϕ	152	28'-0"	Str.		
603	⅝" ϕ	126	31'-0"	Str.		
604	⅝" ϕ	24	29'-0"	Str.		
605	⅝" ϕ	259	9'-6"	Str.		
606	⅝" ϕ	180	8'-6"	Str.		
607	⅝" ϕ	120	7'-6"	Str.		
608	⅝" ϕ	108	6'-6"	Str.		
609	⅝" ϕ	60	5'-6"	104	4'-6"	
610	⅝" ϕ	20	25'-0"	Str.		
611	⅝" ϕ	20	24'-9"	Str.		
612	⅝" ϕ	20	24'-3"	Str.		
613	⅝" ϕ	20	24'-0"	Str.		
614	⅝" ϕ	20	23'-6"	Str.		
615	⅝" ϕ	20	22'-9"	Str.		
616	⅝" ϕ	20	22'-3"	Str.		
617	⅝" ϕ	20	21'-9"	Str.		
618	⅝" ϕ	20	21'-0"	Str.		
619	⅝" ϕ	20	20'-3"	Str.		
620	⅝" ϕ	20	19'-6"	Str.		
621	⅝" ϕ	20	18'-9"	Str.		
622	⅝" ϕ	19	18'-0"	Str.		
623	⅝" ϕ	21	17'-3"	Str.		
624	⅝" ϕ	20	16'-6"	Str.		
625	⅝" ϕ	19	16'-0"	Str.		
626	⅝" ϕ	21	15'-3"	Str.		
627	⅝" ϕ	20	14'-9"	Str.		
628	⅝" ϕ	19	12'-6"	Str.		
629	⅝" ϕ	21	12'-0"	Str.		
630	⅝" ϕ	20	11'-9"	Str.		
631	⅝" ϕ	19	9'-9"	Str.		
632	⅝" ϕ	21	9'-6"	Str.		
633	⅝" ϕ	20	9'-3"	Str.		
634	⅝" ϕ	19	9'-0"	Str.		
635	⅝" ϕ	420	11'-3"	Str.		
636	⅝" ϕ	60	9'-0"	Str.		
637	⅝" ϕ	519	4'-9"	Str.		
638	½" ϕ	519	5'-2"	108	11"	1'-1"
639	½" ϕ	40	6'-3"	Str.		

REINFORCING STEEL LOCATION

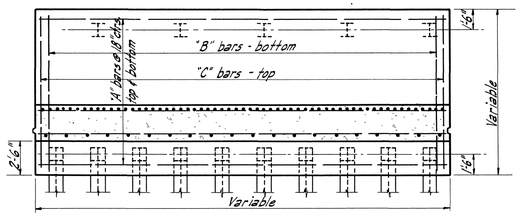
Location Mark	Mark	Req'd. No.	Mark	Req'd. No.	Mark	Req'd. No.	Mark	Req'd. No.	Mark	Req'd. No.
	1 S		2 S		3 S		4 S		5 S	
*A	601	8	601	8	601	8	601	8	601	7
B	1001	15	1001	15	1001	15	1001	15	901	15
C	1001	36	1001	36	1001	36	1001	36	901	36
D	801	20	801	20	801	20	801	20	801	20
E	637	20	637	20	637	20	637	20	637	20
F	610	20	611	20	612	20	613	20	614	20
G	809	20	810	20	811	20	812	20	813	20
H	1101	20	1101	20	1101	20	1101	20	1101	20
J	1102	20	1102	20	1102	20	1101	20	1101	20
K	635	20	635	20	635	20	635	20	635	20
L	1111	20	1112	20	1113	20	1114	20	1115	20
*M	601	18	601	17	601	17	601	17	601	17
N	638	20	638	20	638	20	638	20	638	20
	6 S		7 S		8 S		9 S		10 S	
*A	601	7	601	7	601	7	601	7	601	7
B	901	15	901	15	901	15	901	15	901	15
C	901	36	901	36	901	36	901	36	901	36
D	801	20	801	20	801	20	801	20	801	20
E	637	20	637	20	637	20	637	20	637	20
F	615	20	616	20	617	20	618	20	619	20
G	814	20	815	20	816	20	817	20	818	20
H	1101	20	1101	20	1101	20	1101	20	1101	20
J	1101	20	1101	20	1101	20	1101	20	1101	20
K	635	20	635	20	635	20	635	20	635	20
L	1116	20	1117	20	1118	20	1119	20	1120	20
*M	601	17	601	16	601	16	601	15	601	15
N	638	20	638	20	638	20	638	20	638	20
	11 S		12 S		13 S		14 S		15 S	
*A	601	7	601	7	602	7	603	7	601	7
B	901	15	605	20	605	19	605	21	605	20
C	901	36	605	40	605	38	605	42	605	40
D	801	20	801	20	801	19	801	21	801	20
E	637	20	637	20	637	19	637	21	637	20
F	620	20	621	20	622	19	623	21	624	20
G	819	20	820	20	821	19	822	21	823	20
H										
J	1103	20	1104	20	1105	19	1106	21	1107	20
K	635	20	635	20	635	19	635	21	635	20
L										
*M	601	14	601	14	602	13	603	13	601	12
N	638	20	638	20	638	19	638	21	638	20
	16 S		17 S		18 S		19 S		20 S	
*A	602	6	603	6	601	6	602	5	603	5
B	606	19	606	21	606	20	607	19	607	21
C	606	38	606	42	606	40	607	19	607	21
D	802	19	803	21	804	20	805	19	806	21
E	637	19	637	21	637	20	637	19	637	21
F	625	19	626	21	627	20	628	19	629	21
G										
H										
J	1108	19	1109	21	1110	20	609	19	609	21
K	635	19	635	21	635	20	635	19	635	21
L										
*M	602	12	603	11	601	11	602	9	603	9
N	638	19	638	21	638	20	638	19	638	21
	21 S		22 S		23 S		24 S		25 S	
*A	601	5	602	5	603	5	601	5	602	5
B	607	20	608	19	608	21	608	20	608	19
C	607	20	608	19	608	21	608	20	608	19
D	807	20	808	19	808	21	808	20	808	19
E	637	20	637	19	637	21	637	20	637	19
F	630	20	631	19	632	21	633	21	634	19
G										
H										
J	609	20	605							
K	635	20	605	19	636	21	636	20	636	19
L										
*M	601	9	602	7	603	7	601	7	602	7
N	638	20	638	19	638	21	638	20	638	19
	26 S									
*A	604	5								
B	608	20								
C	608	20								
D	808	20								
E	637	20								
F	639	20								
G										
H										
J										
K	639	20								
L										
*M	604	7								
N	638	20								

* Number of bars required for one face only.



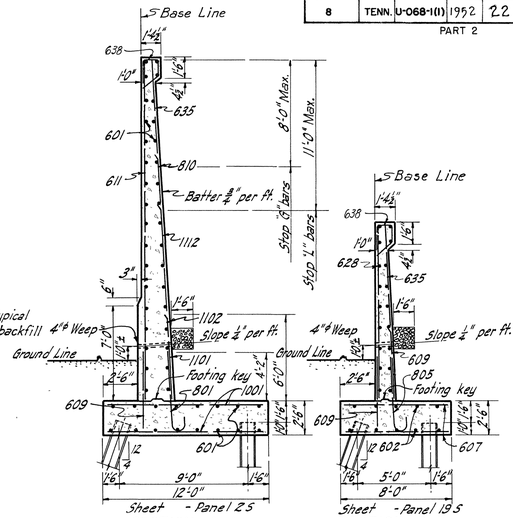
TYPICAL PANEL ELEVATION

Scale: 1/16" = 1'-0"



TYPICAL FOOTING

Scale: 1/16" = 1'-0"



FOOTING KEY	
Size	Panel
10" x 2"	1 thru 6
9" x 2"	7 thru 14
8" x 2"	15 thru 18
7" x 2"	19 thru 21
6" x 2"	22 thru 25

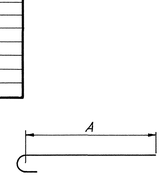
ESTIMATED QUANTITIES

Item No.	Description	Quantities
17-2	Dry Excavation (Bridges)	1610 Cu Yds.
132-1	Structural Steel	800 Lbs.
135-4	Class "A" Concrete	1500 Cu. Yds.
135-12	Steel Bar Reinforcement	168,520 Lbs.
137-1	Waterproofing Type "A"	1,410 Sq. Yds.
137-3	Waterproofing Type "C"	105 Sq Yds.
737-1	Steel Piles 12"	7,200 Lin. Ft.
	Cut Limestone Masonry	41 Cu. Ft

JOINT LOCATIONS

℄ Station	Type of Joint	Dist. (west) from PI on ℄ Tan. Ext.	Dist. (east) from PC on ℄ Tan Ext.	Offset from ℄ Tan. Extended
25+72.80	Expansion	191.62		40.21
26+03.04	Contraction	161.64		39.04
26+33.28	Contraction	131.66		38.08
26+63.52	Expansion	101.66		37.31
26+93.76	Contraction	71.67		36.73
27+24.00	Contraction	41.67		36.36
27+54.24	Expansion	11.67		36.19
27+84.33	Contraction			36.17
28+14.33	Contraction			36.17
28+44.33	Expansion			36.17
28+74.33	Contraction			36.17
29+04.33	Contraction			36.17
29+34.33	Expansion			36.17
29+62.68	Contraction		18.92	36.13
29+93.93	Contraction		50.42	35.89
30+23.69	Expansion		80.41	35.47
30+51.97	Contraction		108.90	34.89
30+83.22	Contraction		140.39	34.04
31+12.98	Expansion		170.38	33.03
31+41.26	Contraction		198.85	31.89
31+72.51	Contraction		230.32	30.50
32+02.27	Expansion		260.29	29.20
32+30.54	Contraction		288.76	27.99
32+61.97	Contraction		320.24	26.68
32+91.96	Expansion		350.21	25.46
33+20.45	Contraction		378.69	24.33
33+49.94	None		408.17	23.18

Note:
For Plan and Elevations of South wall see sheet 21.
For Details of Expansion and Contraction Joints see sheet 20.



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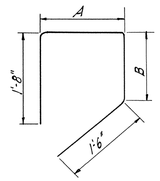

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STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

EAST APPROACH
SOUTH RETAINING WALL

SCALE 3/16" = 1'-0"
MADE B H R DATE 1-9-51
TRCD S W P. DATE 1-29-51
CKD H.P.B. DATE 2-1-51

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

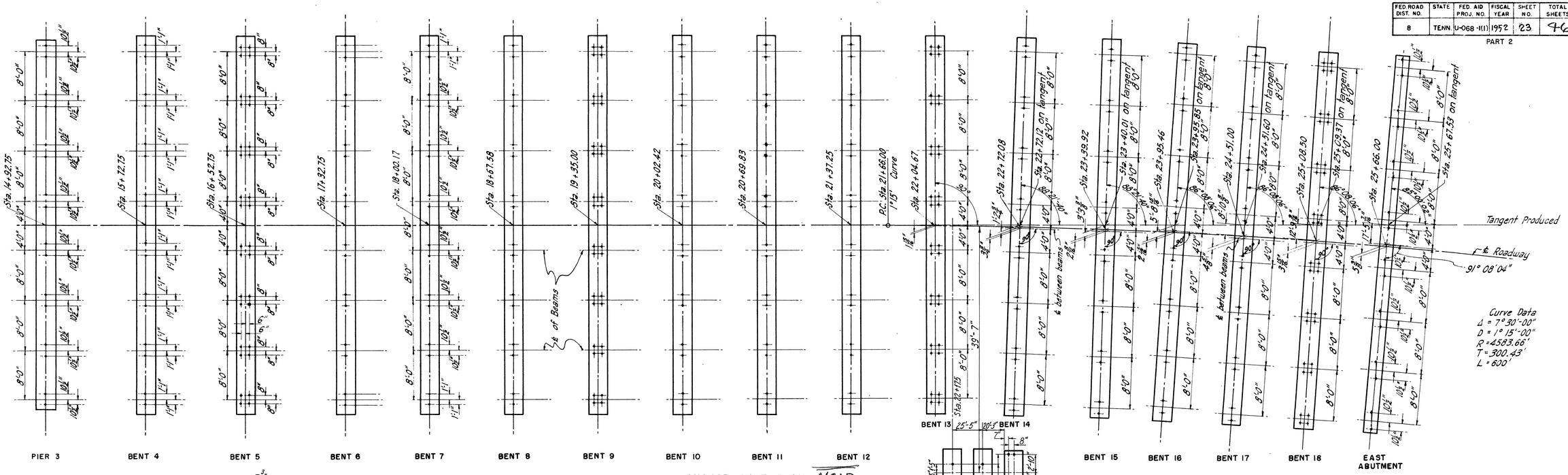
SHEET- 22

MICROFILMED

File E-14-72

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	SECTION
8	TENN.	U-068-1(1)	1952	23	46	

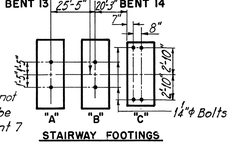
PART 2



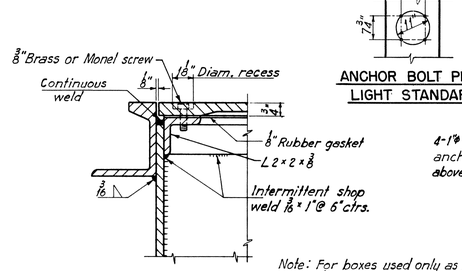
Curve Data
Δ = 7°30'-00"
D = 1°15'-00"
R = 4583.66'
T = 300.43'
L = 600'

ANCHOR BOLT PLAN — VOID

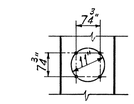
Bolt spacing not shown shall be similar to bent 7 or bent 5.



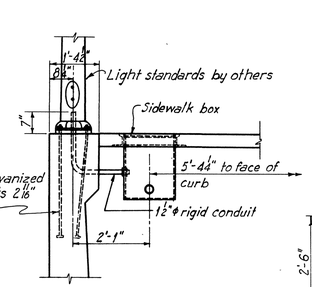
STAIRWAY FOOTINGS



COVER DETAIL
Scale: 3" = 1'-0"

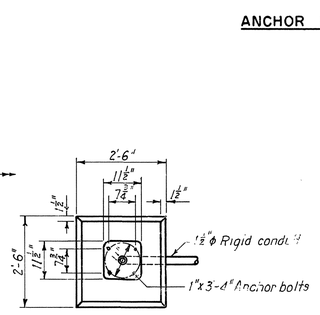


ANCHOR BOLT PLAN
LIGHT STANDARDS



Note: For boxes used only as junction omit 1½" conduit and arrange 2½" conduit entrances as required. Boxes at end standards shall have 3-2½" conduit entrances. Cap entrance not used.

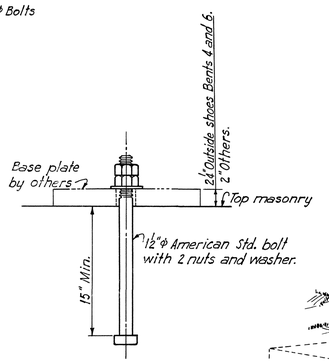
TYPICAL LIGHTING UNIT ON RETAINING WALL
Scale: ½" = 1'-0"
Sta. 26+87, Sta. 28+27, Sta. 29+67, Sta. 32+11



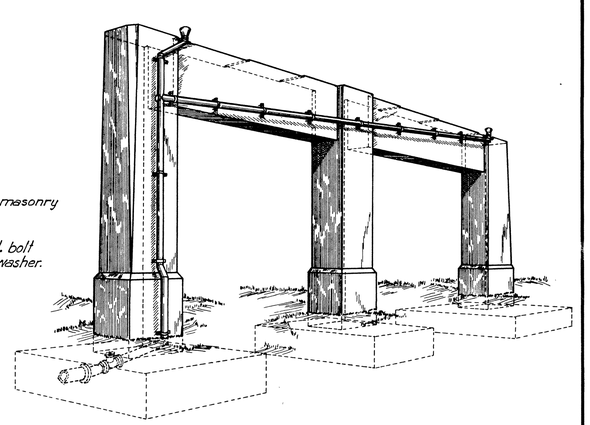
ESTIMATED ROADWAY QUANTITIES

Item No.	Description	Quantity
17-1	Culvert Excavation (Unclassified)	270 Cu Yds.
132-1	* Structural Steel	4,065 Lbs
136-4	Class "A" Concrete	6 Cu Yds.
	2½" Cement Asbestos Conduit	2,430 Lin. Ft.

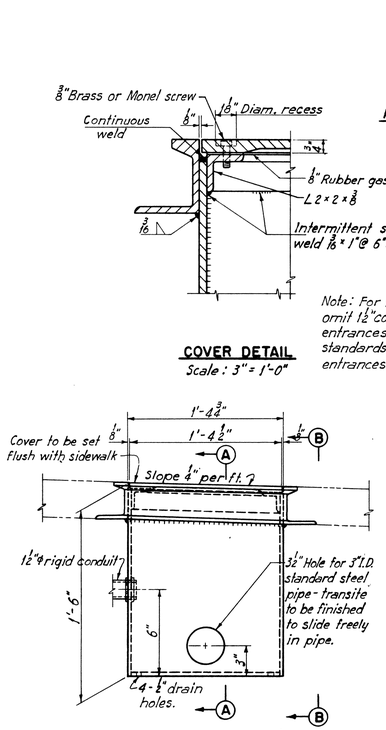
* Rigid conduit through walls and anchor bolts in walls included in bridge item



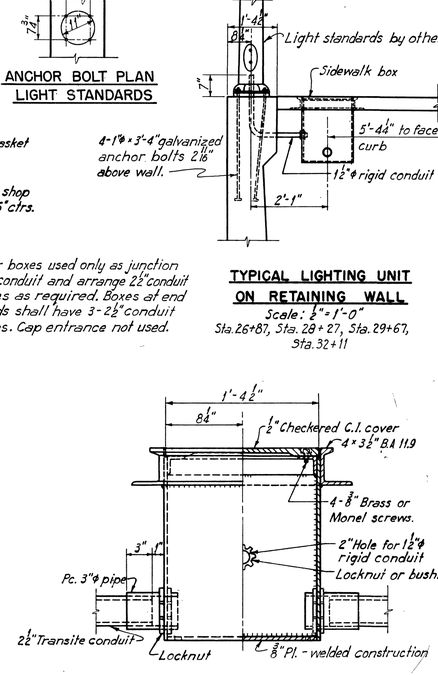
ANCHOR BOLTS FOR SHOES
Scale: 1½" = 1'-0"



PERSPECTIVE OF TYPICAL BENT

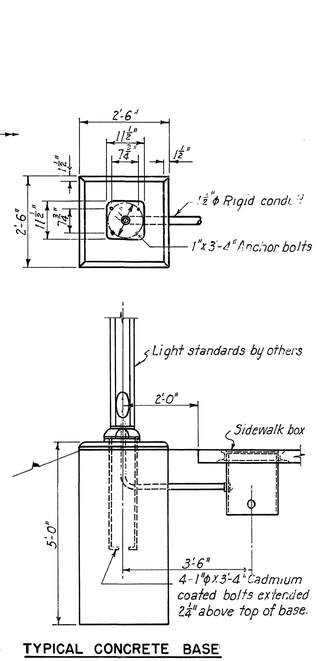


ELEVATION
Scale: 12" = 1'-0"



HALF VIEW B-B
Scale: 12" = 1'-0"

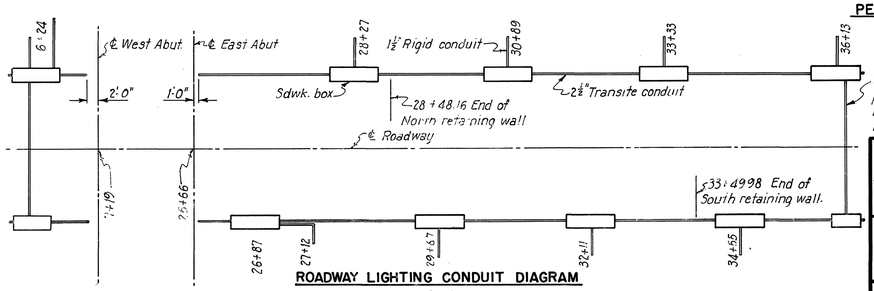
HALF SECTION A-A
Scale: 12" = 1'-0"



TYPICAL CONCRETE BASE ROADWAY LIGHTING UNIT
Scale: ½" = 1'-0"
Sta. 6+24, Sta. 30+89, Sta. 33+33, Sta. 34+55, Sta. 36+13

SIDEWALK BOX DETAILS

Number of Boxes Required:
4-As detailed. (For stds. on walls)
5-As detailed. (For stds. not on walls)
2-As noted for junction boxes.



ROADWAY LIGHTING CONDUIT DIAGRAM
No Scale

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

ANCHOR BOLT PLAN AND LIGHTING DETAILS

SCALE 1'-0" = 1'-0"
MADE F.J.E. DATE 11-16-50
TRCD SHF-60 DATE 12-12-50
CKD J.T. DATE 3-12-51

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

811 SHEET 23

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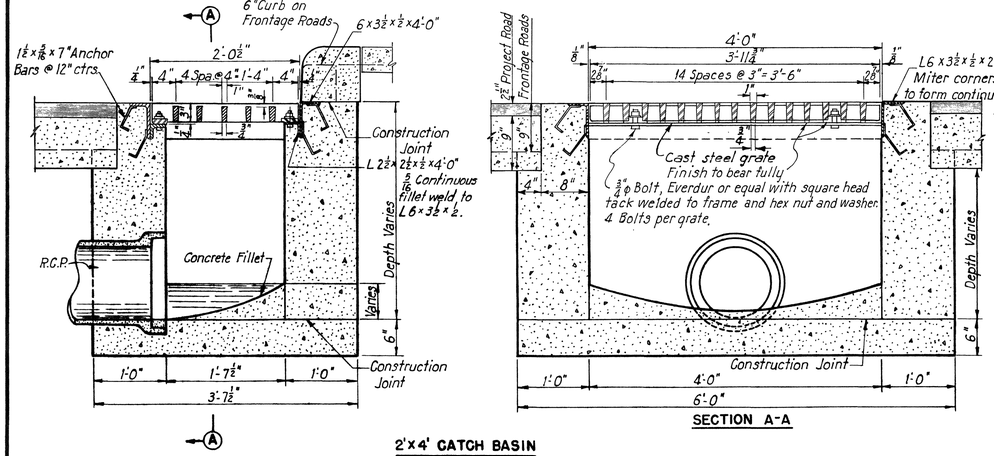
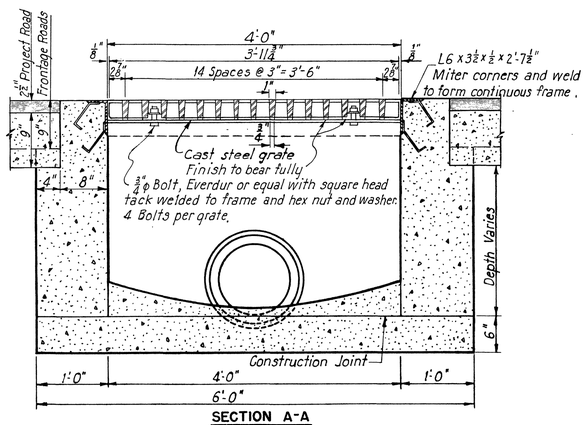
File E-14-23

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	SECTION
8	TENN.	U-068-1(1)	1952	24	46	

PART 2

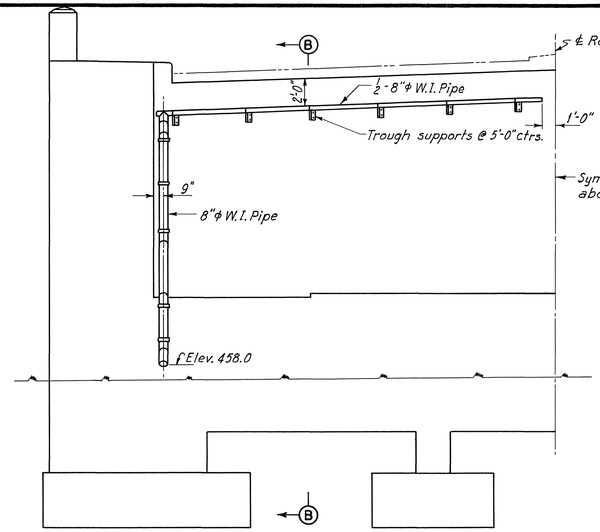
Revised May 6, 1952 : General notes.



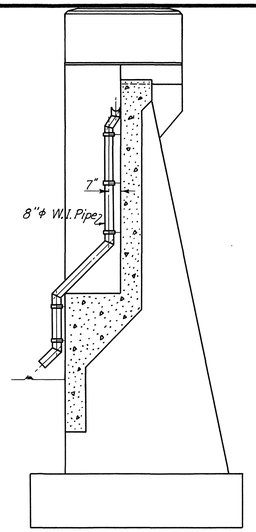


SECTION A-A

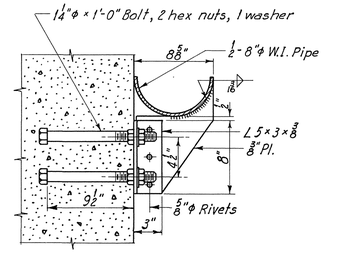
2'x4' CATCH BASIN
Scale: 1"=1'-0"



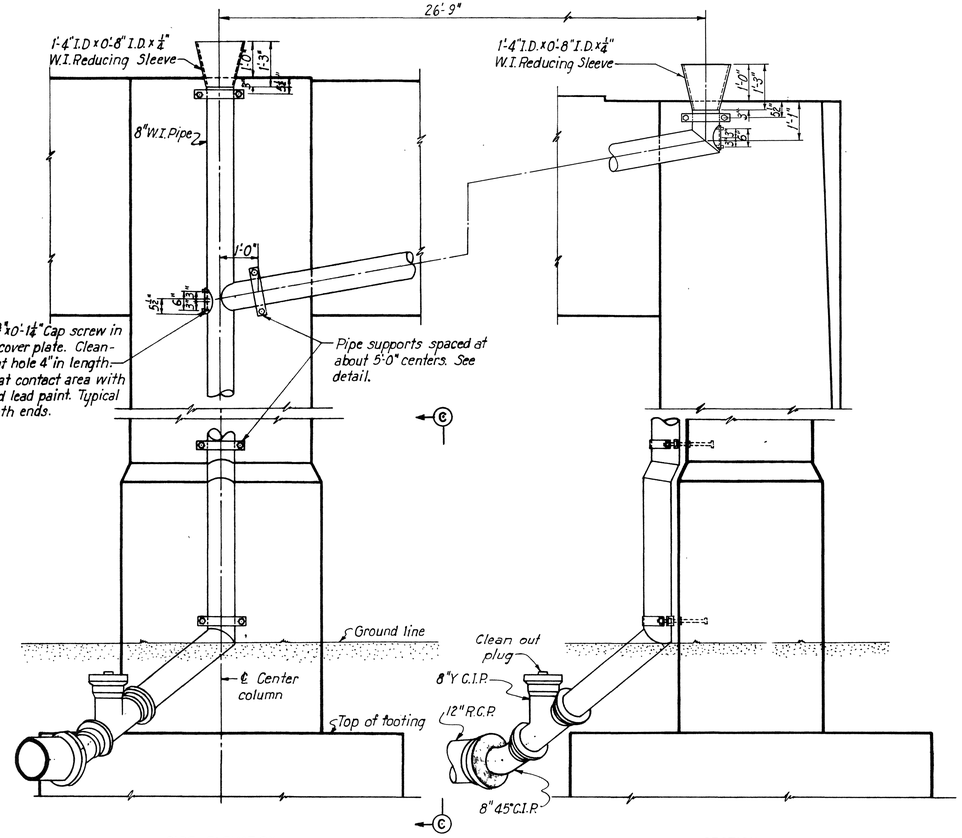
DOWNSPOUTS AND TROUGHS AT WEST ABUTMENT
Scale: 3/16"=1'-0"



SECTION B-B



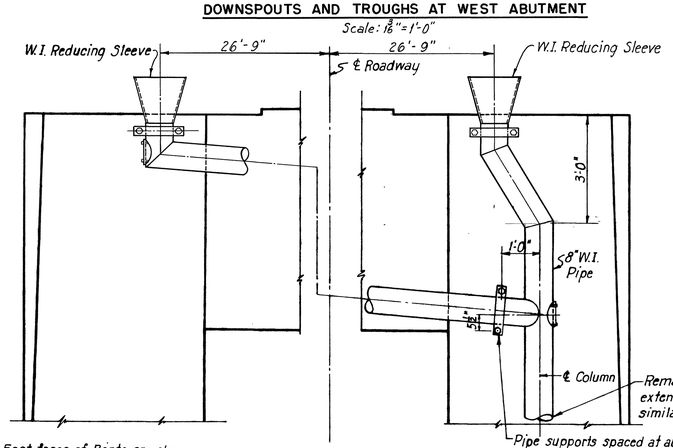
TROUGH SUPPORT
Scale: 1½"=1'-0"



SIDE ELEVATION

SECTION C-C

DOWNSPOUT AT BENT 13
Scale: ½"=1'-0"
Note: West face of bent shown
Downspouts at Bents 15 and 17 similar to that for Bent 13 but on East face of Bent.



Note: East faces of Bents are shown. Details not shown shall be similar to those shown for Bent 13.

DOWNSPOUTS AT BENTS 6, 8 AND 10
Scale: ½"=1'-0"

General Notes: (See Notes on Sheets 2 & 26).

Existing storm sewer lines not incorporated in the proposed storm sewer system shall be removed if within 3' of finished grade, or if in the opinion of the Engineer they are detrimental to the subgrade. Any such pipe left in place shall be plugged at ends with brick masonry. Existing catch basins which are to be reused in the proposed system as junction boxes shall be covered with a 6" reinforced concrete slab. The cost of properly disposing of existing lines and structures shall be included in the price bid for other items.

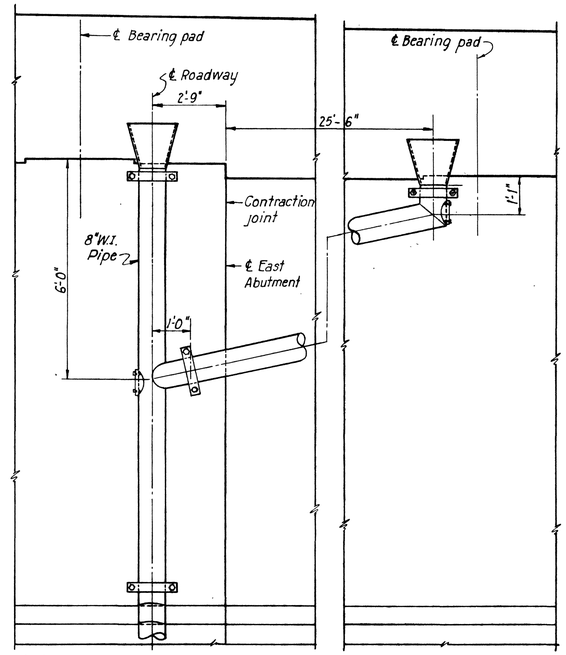
The cost of adjusting existing manholes and catch basins to new grades will be included in the price bid for other items.

For concrete quantities the catch basins are measured from the underside of the pavement slab, except Std. No. 12 & 14, See Std. drawings.

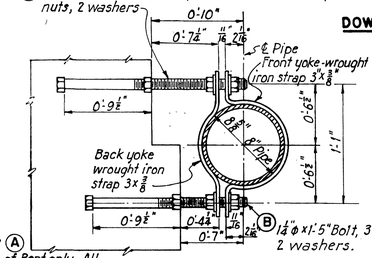
The unit price bid for 8"ϕ Wrought Iron Pipe shall include the cost of reducing sleeves, pipe supports and other accessories necessary to complete the item.

The cost of connecting Sewer pipe and/or structures to existing sewers and/or structures shall be included in the unit price bid for items of construction.

The cost of capping abandoned manholes and catch basins shall be paid for under items 135-4, 135-12, 152-2 & 17-1. Cap shall be similar to that shown on dwg. S-M-2a.



DOWNSPOUT AT EAST ABUTMENT
Scale: ½"=1'-0"
Details not shown shall be similar to those shown for Bent 13.



Note: Bolt marked Ⓐ to be used on cap beam of Bent only. All remaining bolts in columns and abutment face use bolts marked Ⓑ

PIPE SUPPORTS
Scale: 1½"=1'-0"

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

DRAINAGE STRUCTURES

SCALE ½", 1", 1½"=1'-0"
MADE B.H.R. DATE 2-12-51
TRCD. R.R. DATE 2-26-51
CKD B.H.R. DATE 4-6-51

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

811 SHEET- 24

MICROFILMED

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File E-14-24

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	SECTION
8	TENN.	U-068-1(1)	1952	25	46	

PART 2

Revised May 6, 1952 : Drainage Tables

EAST APPROACH

DRAINAGE STRUCTURES

Code	Location	Type	Size	Remarks	148-24 8" Cast Iron Pipe Drains	132-4a Gray Iron Castings Lbs.	17-1 Culvert Excavation	132-1 Structural Steel	135-4 Class "A" Concrete	152-2 Brick Masonry
(1)	Bent 6			P.C.P. and downspout junction	3.0					
(2)	Bent 8			P.C.P. and downspout junction	3.0					
(3)	16+85.0 No. Frontage	Catch basin	2'x4'				10 cu.yds.	776#	3.0 cu.yds.	
(4)	15+85.0 No. Frontage	Catch basin	2'x4'				13 cu. yds.	776#	3.8 cu.yds.	
(5)	Bent 10			P.C.P. and downspout junction	3.0					
(6)	14+90.0 No. Frontage	Catch basin	2'x4'				16 cu. yds.	776#	4.5 cu.yds.	
(7)	Bent 13			P.C.P. and downspout junction	3.0					
(8)	13+95.0 No. Frontage	Catch basin	2'x4'				19 cu.yds.	776#	5.2 cu.yds.	
(9)	P.C. @ 13+05± No. Fr.	Catch basin	2'x4'				21 cu. yds.	776#	6.0 cu.yds.	
(10)	1+00.0 No. 1st St.	Std. #2 Manhole S-M-2a	5' dia.	Place over exist 48" sewer		385	35 cu.yds.	385#	1.2 cu.yds.	2.0 M
(11)	8+93.0 No. Frontage	Catch basin	2'x4'				9 cu.yds.	776#	2.8 cu.yds.	
(12)	East Abutment			R.C.P. and downspout junction	3.0					
(13)	10+08.0 No. Frontage	Catch basin	2'x4'				12 cu.yds.	776#	3.5 cu.yds.	
(14)	Bent 17			R.C.P. and downspout junction	3.0					
(15)	11+00.0 No. Frontage	Catch basin	2'x4'				15 cu.yds.	776#	4.2 cu.yds.	
(16)	Bent 15			R.C.P. and downspout junction	3.0					
(17)	12+08.3 No. Frontage	Catch basin	2'x4'				20 cu.yds.	776#	5.4 cu.yds.	
(18)	23+19.0-37 Lt. Main St.	Existing manhole		Adjust cover frame to new grade						
(19)	22+83.0-28 Lt. Main St.	Existing catch basin		Abandon and remove						
(20)	23+27.5-28 Lt. Main St.	Existing catch basin		Abandon and remove						
(21)	22+81.0-31.8 Rt. Main St.	Existing catch basin		Adjust frame to new grade						
(22)	23+25.0-32.9 Rt. Main St.	Existing catch basin		Adjust frame to new grade						
(23)	24+36.0-21 Lt. Main St.	Existing catch basin		Abandon and remove						
(24)	24+69.0-21 Lt. Main St.	Existing catch basin		Abandon and remove						
(25)	So. Frontage opposite (26)	Catch basin	2'x4'				9 cu.yds.	776#	2.9 cu.yds.	
(26)	24+43.5-20.6 Rt. Main St.	Existing catch basin		Abandon grate - use only as junction						
(27)	24+70.0-20.7 Rt. Main St.	Existing catch basin		Abandon and remove						
(28)	9+45.0 South Frontage	Catch basin	2'x4'				9 cu. yds.	776#	2.8 cu.yds.	
(29)	25+60.0-21 Lt. Main St.	Existing catch basin		Abandon and remove						
(30)	So. Frontage opposite (28)	Catch basin	2'x4'				10 cu. yds.	776#	3.1 cu.yds.	
(31)	26+63.0-20.5 Rt. Main St.	Existing catch basin		Abandon and remove						
(32)	0+63.0-South 2nd St.	Catch basin	2'x4'				9 cu.yds.	776#	2.8 cu.yds.	
(33)	26+77.0-31.3 Rt. Main St.	Existing catch basins		Adjust to fit curb & grade						
(34)	27+10.0-32 Rt. Main St.	Existing catch basins		Abandon and remove						
(35)	27+25.0-21 Rt. Main St.	Existing catch basin		Abandon and remove						
(36)	26+93.0-22 Lt. Main St.	Existing catch basin		Abandon and remove						
(37)	26+65.0 Project	Catch basin	2'x4'				8 cu.yds.	776#	2.8 cu.yds.	
(38)	26+65.0 Project	Catch basin	2'x4'				10 cu.yds.	776#	3.3 cu.yds.	
(39)	27+65.0 Project	Catch basin	2'x4'				6 cu.yds.	776#	2.2 cu.yds.	
(40)	27+65.0 Project	Catch basin	2'x4'				12 cu.yds.	776#	3.6 cu.yds.	
(41)	28+65.0 Project	Catch basin	2'x4'				8 cu.yds.	776#	2.8 cu.yds.	
(42)	28+65.0 Project	Catch basin	2'x4'				12 cu.yds.	776#	3.8 cu.yds.	
(43)	29+65.0 Project	Catch basin	2'x4'				8 cu.yds.	776#	2.8 cu.yds.	
(44)	29+65.0 Project	Catch basin	2'x4'				13 cu.yds.	776#	4.0 cu.yds.	
(45)	30+65.0 Project	Catch basin	2'x4'				8 cu.yds.	776#	2.8 cu.yds.	
(46)	30+65.0 Project	Catch basin	2'x4'				16 cu.yds.	776#	4.7 cu.yds.	
(47)	30+56.0-15.5 Rt. Main St.	Existing manhole		Adjust cover frame to new grade						2.5 M
(48)	30+59.5-45.0 Rt. Project	Std. #2 Manhole	5' dia.	Dwg. S-M-2a		385	35 cu.yds.		1.2 cu.yds.	1.9 M
(49)	6+50.0 South Frontage	Catch basin	2'x4'				9 cu.yds.	776#	2.8 cu.yds.	
(50)	7+45.0 South Frontage	Catch basin	2'x4'				9 cu.yds.	776#	2.8 cu.yds.	
(51)	28+00±-9.5 Rt. Main St.	Std. #2 Manhole S-M-2a	5' dia.	Place over exist. 42" sewer, clear piles		385	35 cu.yds.		1.2 cu.yds.	2.0 M
(52)	5+50.0 South Frontage	Catch basin	2'x4'				9 cu.yds.	776#	2.8 cu.yds.	
(53)	4+45.0 South Frontage	Catch basin	2'x4'				15 cu.yds.	776#	4.4 cu.yds.	
(54)	0+79.0 South Frontage	Catch basin	2'x4'				9 cu.yds.	776#	2.8 cu.yds.	
(55)	2+00.0 South Frontage	Catch basin	2'x4'				11 cu.yds.	776#	3.3 cu.yds.	
(56)	3+20.0 South Frontage	Catch basin	2'x4'				12 cu.yds.	776#	3.7 cu.yds.	
(57)	30+66.5-21 Rt. Main St.	Existing catch basin		Abandon and remove						
(58)	30+53.0-21 Lt. Main St.	Existing catch basin		Abandon and remove						
(59)	30+88.0-31.5 Lt. Main St.	Existing catch basin		Abandon and remove						
(60)	31+03.0-20.5 Lt. Main St.	Existing catch basins		Abandon and remove						
(61)	1+85.0 North Frontage	Catch basin	2'x4'				8 cu.yds.	776#	2.6 cu.yds.	
(62)	6+85.0 North Frontage	Catch basin	2'x4'				9 cu.yds.	776#	2.9 cu.yds.	
(63)	5+85.0 North Frontage	Catch basin	2'x4'				12 cu.yds.	776#	3.5 cu.yds.	
(64)	1+00.0 North Cottonwood	Std. #2 Manhole	5' dia.	Place over exist. 36" sewer		385	25 cu.yds.		1.2 cu.yds.	1.1 M
(65)	1+11.0 North Frontage	Catch basin	2'x4'				9 cu.yds.	776#	2.8 cu.yds.	
(66)	33+65.0 Project	Catch basin	2'x4'				10 cu.yds.	776#	3.3 cu.yds.	
(67)	1+13.2 North Curb Line	Catch basin	2'x4'				14 cu.yds.	776#	4.3 cu.yds.	
(68)	2+50.0 North Frontage	Catch basin	2'x4'				12 cu.yds.	776#	3.6 cu.yds.	
(69)	32+65.0 Project	Catch basin	2'x4'				17 cu.yds.	776#	5.0 cu.yds.	
(70)	32+65.0 Project	Catch basin	2'x4'				20 cu.yds.	776#	6.0 cu.yds.	
(71)	3+50.0 North Frontage	Catch basin	2'x4'				14 cu.yds.	776#	3.9 cu.yds.	
(72)	31+65.0 Project	Catch basin	2'x4'				20 cu.yds.	776#	6.0 cu.yds.	
(73)	31+65.0 Project	Catch basin	2'x4'				24 cu.yds.	776#	7.0 cu.yds.	
(74)	4+51.0 North Frontage	Catch basin	2'x4'				14 cu.yds.	776#	3.9 cu.yds.	
(75)	0+03.0 North Line Sidewk	Catch basin	2'x4'				8 cu.yds.	776#	2.8 cu.yds.	
(76)	2+54.0 North 3rd St.	Catch basin	2'x4'				10 cu.yds.	776#	3.2 cu.yds.	
(77)	1+60.0 North 3rd St.	Catch basin	2'x4'				10 cu.yds.	776#	3.3 cu.yds.	
(78)	P.C.C. Curb 0+60± No. 3rd	Catch basin, Std No 14		See dwg. S-CB-14a *		1370	12 cu yds.		1.6 cu.yds.	2.3 M
(79)	36+45.0 Project	Catch basin	2'x4'				11 cu. yds.	776#	3.5 cu.yds.	
(80)	35+54.0-20 Lt. Main St.	Existing catch basin		Abandon						
(81)	2+30.0-North Curb Line	Catch basin, Std No 12		See dwg S-CB-12a *		685	11 cu. yds.		1.4 cu.yds.	0.8 M.
(82)	0+53.0-North 3rd St.	Catch basin Std No 12		See dwg S-CB-12a *		685	14 cu. yds.		1.4 cu.yds.	0.9 M.
(83)	34+90.0-20 Lt. Main St.	Existing catch basin		Abandon						
(84)	36+45.0 Project	Catch basin	2'x4'				11 cu.yds.	776#	3.6 cu.yds.	
(85)	35+47.0 Main St.	Catch basin	2'x4'				14 cu.yds.	776#	4.2 cu.yds.	
(86)	35+21.0-31 Rt. Main St.	Existing catch basin		Abandon						
(87)	0+58.2-South 3rd St.	Catch basin	2'x4'				14 cu.yds.	776#	4.3 cu.yds.	
(88)	34+79.0-30 Rt. Main St.	Existing catch basin		Abandon						
(89)	35+35.0-21.5 Rt. Main St.	Existing catch basin		Abandon and remove						1.0 M
(90)	2+08± South 3rd St.	Existing manhole		Adjust cover frame to new grade						
(91)	2+90.6 South 3rd St.	Catch basin, Std No. 14		See dwg. S-CB-14a *		1370	16 cu.yds.		1.6 cu.yds.	1.7 M
(92)	2+90.6 South 3rd St.	Catch basin, Std No. 14		See dwg. S-CB-14a *		1370	18 cu.yds.		1.6 cu.yds.	1.8 M
(93)	34+95± Lt. Main St.	Std #2 Manhole	5' Dia.	See dwg. S-M-2a *		385	40 cu.yds.		1.2 cu.yds.	2.2 M
(94)	2+80± So. 3rd St.	Std-#2 Manhole	5' Dia.	See dwg. S-M-2a *		385	15 cu yds.		1.2 cu.yds.	0.5 M.
(150)	24+87 Lt. Main St.	Catch Basin	2'x4'				12 cu.yds.	776#	4.0 cu.yds.	

WEST PLAZA

DRAINAGE STRUCTURES

					132-4a Gray Iron Castings Lbs.	17-1 Culvert Excavation	132-1 Structural Steel	135-4 Class "A" Concrete	152-2 Brick Masonry
(102)	5+76.0 Project P.C. 1st Ave Curb	Catch basin	2'x4'			9 cu.yds.	776#	2.9 cu.yds.	
(103)	5+69.3 Project 108' Lt.	Existing manhole		Adjust cover frame to new grade					
(104)	6+59.3 Project 21.4' Lt.	Existing manhole		Adjust cover frame to new grade					
(105)	6+69.5 Project 39.4' Lt.	Existing manhole		Adjust cover frame to new grade					
(106)	7+17.0 Project 43' Lt.	Std. #2 Manhole S-M-2a	5' Dia.	Replace existing manhole	385	20 cu.yds.		1.2 cu.yds.	1.0 M
(107)	7+55± Project			End of 36" sewer outfall					
(108)	7+12.0 Project	Catch basin	2'x4'			14 cu yds.	776#	4.1 cu.yds.	
(109)	7+12.0 Project	Catch basin	2'x4'			8 cu.yds.	776#	2.8 cu.yds.	

EAST APPROACH

SEWER PIPE

Code	From Elevation Surface	From Elevation Flow Line	Code	To Elevation Surface	To Elevation Flow Line	Pipe Data Length feet	Pipe Data Size inches	Pipe Data Grade per cent	17-1 Culvert Excavation
(1)	417.6±	413.43	(3)	416.52	412.03	140	12	1.00	76 Cu.Yds.
(2)	417.1±	412.95	(3)	416.52	412.53	21	12	2.00	8
(3)	416.52	411.72	(4)	416.67	410.76	95	15	1.00	70
(4)	416.67	410.51	(6)	416.80	409.60	90	15	1.00	84
(5)	417.0	411.85	(6)	416.80	410.10	70	12	2.50	52
(7)	416.80	409.35	(8)	416.94	408.44	90	18	1.00	106
(7)	418.6±	410.29	(8)	416.94	408.94	55	12	2.50	55
(6)	416.94	408.19	(9)	417.07	407.29	90	18	1.00	121
(9)	417.07	407.05	(10)	417.16	406.25	50	18	1.50	79
(11)	417.66	413.49	(13)	417.49	412.38	110	15	1.00	65
(12)	418.7±	413.98	(13)	417.49	412.88	55	12	2.00	28
(13)	417.49	411.88	(15)	417.36	411.00	90	15	1.00	67
(14)	418.2±	412.78	(15)	417.36	411.50	50	12	2.50	35
(15)	417.36	410.50	(17)	417.21	408.63	105	15	1.80	106
(16)	417.6±	410.83	(17)	417.21	409.63	48	12	2.50	42
(17)	417.21	408.00	(10)	417.16	407.46	35	15	1.50	44
(25)	418.07	413.64	(26)	417.9±	413.60	5	15	1.00	5
(28)	418.29	414.12	(30)	418.12	413.24	90	15	1.00	50
(29)	418.12	413.86	(24)	417.9±	413.60	26	15	1.00	13
(32)	418.5±	414.26	(33)	418.52	413.83	43	15	1.00	27
(37)	439.68	435.51	(38)	440.09	435.28	23	12	1.00	10
(38)	440.09	434.78	(40)	438.39	433.61	100	12	1.30	60
(39)	437.98	434.81	(40)	438.39	434.58	23	12	1.00	7
(40)	438.39	432.51	(42)	435.85	430.73	100	12	1.80	66
(41)	435.80	431.63	(42)	435.85	431.40	23	12	1.00	10
(42)	435.85	429.73	(44)	432.89	427.28	100	12	2.50	70
(43)	432.48	428.31	(44)	432.89	428.08	23	12	1.00	10
(44)	432.89	426.28	(46)	430.57	423.83	100	12	2.50	82
(45)	430.16	425.99	(46)	430.57	425.76	23	12	1.00	10
(46)	430.57	422.83	(47)	431±	421.98	17	12	5.00	15
(47)	431±	409.37	(48)	419.50	409.28	16	42	0.56	39
(48)	419.50	409.28	(51)	418.95	407.88	254	42	0.56	596
(49)	418.85	414.68	(51)	418.95	414.10	60	15	1.00	31
(50)	418.67	414.50	(51)	418.95	414.06	44	15	1.00	23
(52)	419.03	414.86	(53)	419.23	413.85	100	15	1.00	60
(53)	419.23	412.08	(48)	419.50	411.78	15	15	2.00	10
(54)	422.40	421.23	(55)	422.06	417.24	120	15	3.40	65
(55)	422.06	416.74	(56)	419.98	414.65	115	15	1.80	78
(56)	419.98	414.15	(58)	419.23	412.58	120	15	1.30	97
(61)	417.81	413.98	(62)	417.95	413.60	95	15	0.40	48
(62)	417.95	413.47	(63)	418.10	412.75	95	15	0.75	60
(63)	418.10	412.58	(64)	418.38	411.50	90	15	1.20	71
(65)	420.59	421.42	(66)	422.11	417.87	110	15	3.20	67
(66)	427.87	422.79	(67)	427.53	422.53	26	12	1.00	132
(67)	427.53	420.53	(68)	422.11	416.73	70	15	5.50	51
(68)	422.11	416.23	(71)	420.00	414.21	95	15	2.10	70
(69)	428.37	420.41	(70)	427.96	420.18	23	12	1.00	19
(70)	427.96	418.18	(71)	420.00	414.00	75	15	5.50	75
(71)	420.00	413.50	(74)	418.67	412.53	100	15	1.00	84
(72)	429.07	419.38	(73)	428.66	419.15	23	12	1.00	24
(73)	428.66	417.15	(74)	418.67	412.53	85	12	5.50	94
(74)	418.67	412.26	(64)	418.38	411.50	40	15	2.00	32
(75)	428.83	424.66	(76)	428.83	424.42	32	15	0.75	15
(76)	428.83	423.92	(77)	427.70	423.00	95	15	1.00	54
(77)	427.70	422.50	(78)	427.15	421.58	95	15	1.00	62
(78)	427.15	421.19	(80)	427.29	420.79	46	15	1.00	31
(79)	427.52	422.17	(80)	427.29	421.29	96	15	1.00	64
(81)	427.15	423.01	(82)	427.15	422.71	40	15	0.75	19
(82)	427.15	422.68	(83)	427.25	EXISTING 36"-SEWER	70	15	2.00	35
(84)	427.50	421.85	(101)	427.50	421.00±	12	15	7.00	8
(85)	427.19	420.39	(85)	427.25	419.00±	16	15	8.68	14
(87)	427.08	420.23	(88)	427.23	EXIST. 36"-SEWER	10	15		10
(88)	427.29	420.79	(89)	427.25	EXIST. 36"-SEWER	62	18		35
(92)		425.75	(93)	427.25	EXIST. 36"-SEWER	350	18	3.00	150
(91)	425.20	421.03	(91A)	425.20	36" EXIST. SEWER	12	15		8
(90)	425.20	420.64	(91A)	425.20	36" EXIST. SEWER	26	15		12

WEST PLAZA

SEWER PIPE

Code	From Elevation Surface	From Elevation Flow Line	Code	To Elevation Surface	To Elevation Flow Line	Pipe Data Length feet	Pipe Data Size inches	Pipe Data Grade per cent	17-1 Culvert Excavation
(101)	482.60	478.20	(102)	481.8±	477.04	60	15	2.00	30 Cu.Yds.
(104)	481.7±	458.3±	(105)	460.10	454.19	50	36	8.6±	236 Cu.Yds.
(105)	460.10	454.19	(106)	452.0±	442.0±	40	36	30.0±	69 Cu.Yds.
(107)	480.25	473.60	(103)	481.00	465.2±	50	12	16.8±	70 Cu.Yds.
(108)	480.25	476.00	(101)	480.25	474.00	40	12	5.00	22 Cu.Yds.
(109)	463.6±	460.0±	(109)	460.10	454.19	60	15	10.0±	43 Cu.Yds.

ESTIMATED QUANTITIES CATCH BASINS

	17-1 Culvert Excavation	132-1 Structural Steel	135-4 Class "A" Concrete	* 132-4a Gray Iron Castings	* 152-2 Brick Masonry
East Approach	691 Cu.Yds.	39,576 Lbs.	135.4 Cu.Yds.	5480	7.5
West Plaza	31 Cu.Yds.	2,328 Lbs.	9.8 Cu.Yds.		
Total	722 Cu.Yds.	41,904 Lbs.	205.2 Cu.Yds.	5480	7.5

*For Std. no. 12 & 14 Catch Basins Only

ESTIMATED QUANTITIES MANHOLES

	17-1 Culvert Excavation	132-4a Gray Iron Castings	135-4 Class "A" Concrete	152-2 Brick Masonry
East Approach	185 Cu.Yds.	2310 Lbs.	7.2 Cu.Yds.	12.2 M
West Plaza	20 Cu.Yds.	385 Lbs.	1.2 Cu.Yds.	1.0 M
Total	205 Cu.Yds.	2695 Lbs.	8.4 Cu.Yds.	13.2 M

ESTIMATED QUANTITIES SEWER PIPES

	148-24 8" ϕ Cast Iron Pipe Drains	141-1 12" Pipe	141-2 15" Pipe	141-3 18" Pipe	141-6 36" Pipe	141-7 42" Pipe	17-1 Culvert Excavation
East Approach	21 Lin. Ft.	1128 Lin. Ft.	2583 Lin. Ft.	642 Lin. Ft.		270 Lin. Ft.	3,806 Cu. Yds.
West Plaza		90 Lin. Ft.	120 Lin Ft.		90 Lin. Ft.		470 Cu Yds.
36" Pipe east (47)					100 Lin. Ft.		267 Cu. Yds.
Total	21 Lin. Ft.	1218 Lin. Ft.	2,703 Lin. Ft.	642 Lin. Ft.	190 Lin. Ft.	270 Lin. Ft.	4,543 Cu Yds.

Note:
100'± of new 36" sewer east of (47) to existing sewer will be required where location of existing pipe fouls bearing piles.
See standard sheet S-M-2a for manhole details.
All new manholes shall have a type "C" cover

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

DRAINAGE TABLES

SCALE
MADE B.H.R. DATE 2-15-51
TRCD. R.R. DATE 3-21-51
CKD. H.B.A. DATE 3-2-51

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

811 SHEET 25

File E-14-25

TRACED AND FILED

FED ROAD DIST. NO.	STATE	FED AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	SECTION
8	TENN.	U-068-1(1)	1952	26	46	

PART 2

REVISED MAY 6, 1952
DETAIL "B", DETAIL OF EXPANSION JOINT AND DUMMY JOINT ADDED.

REVISED MAY 16, 1952
ITEM 91-1 CHANGED TO 104-1

REVISED SEPT. 29, 1952
ADDED DETAIL OF MEDIAN STRIP FOR RDWY. ON APPROACHES.

Notes on Paving:

6" Integral curb as detailed shall be used on Frontage Roads including all returns unless otherwise shown on the plans. Concrete pavement item will be measured to back side of integral curbs for payment and cost of the 6" integral curbs and any lowered curb for driveways will be included in the unit price bid for concrete pavement.

Concrete driveways shall be constructed in the locations directed by the Engineer. For details, see Sheet P.D-14a.

9" Curb as detailed shall be used on the Project Road, on Third Street and at the west end of the project where new curb is required including all returns unless otherwise shown on the plans. Concrete pavement item will be measured to the back side of the curb and cost of the 9" curbs and the median strip will be included in the price bid for concrete pavement.

Load Transfers as detailed will be required at all construction and expansion joints but not at contraction (dummy) joints See Sheet P.E-29a for details of ⅞" Dummy Joint in Base and for details of Premolded Expansion Joint in Base and assembly and spacing of load transfer dowel bars

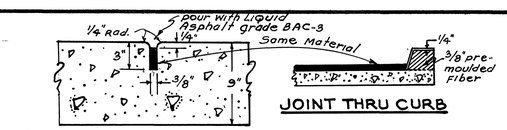
Transverse contraction (dummy) joints will be required at 20' intervals if gravel coarse aggregate is used and at 30' intervals if crushed stone coarse aggregate is used.

Expansion joints will be required at the ends of the bridge and at street intersections as shown on the plans. Metal center strip will be required at longitudinal joints for the entire length of project paving, but none will be required on the Frontage Roads. For details of alternate metal center strips see Sheet P.E-10a Dowel (tie) bars will be required.

The Contractor shall adjust grades at intersections of new pavement with existing streets and driveways as directed by the Engineer.

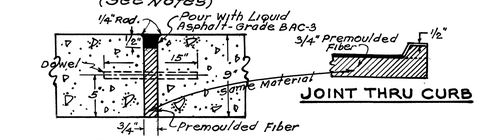
See standard Sheet P.C-10, Concrete Grade Crossing, for paving of Frontage Roads at railroad tracks.

Use Premolded Fiber Expansion Joint Filler in expansion joints in base. Use Premolded Cork Fiber Expansion Joint Filler in expansion joints in pavement not asphalt surfaced.



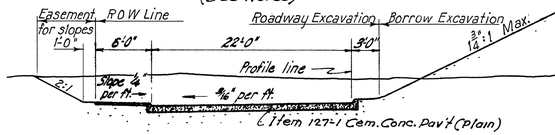
JOINT THRU CURB

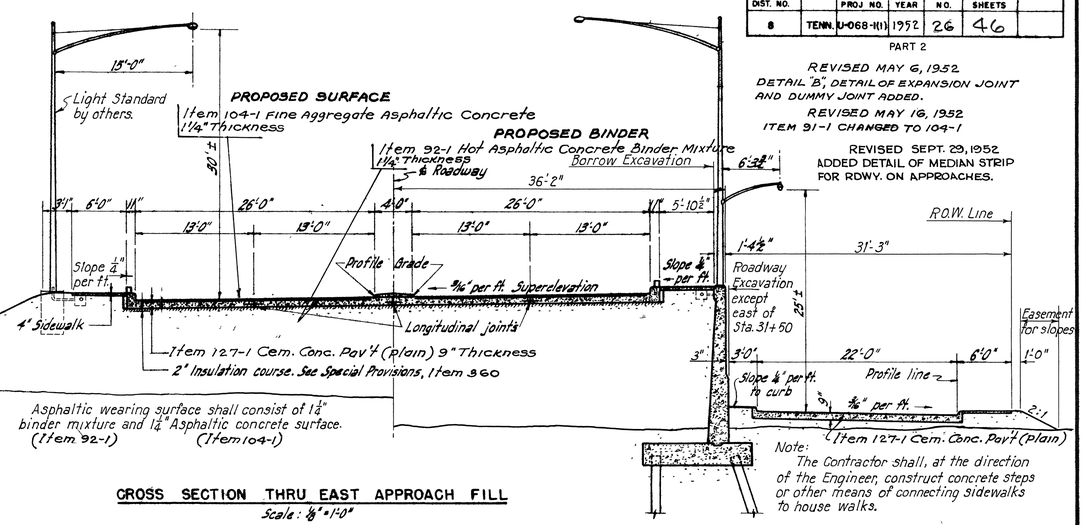
DETAIL OF TRANSVERSE CONTRACTION (DUMMY) JOINT
(See Notes)



JOINT THRU CURB

DETAIL OF TRANSVERSE EXPANSION JOINT WITH LOAD TRANSFERS
(See Notes)





Asphaltic wearing surface shall consist of 1¼" binder mixture and 1¼" Asphaltic concrete surface. (Item 92-1) (Item 104-1)

CROSS SECTION THRU EAST APPROACH FILL
Scale: ⅛" = 1'-0"

Note:
The Contractor shall, at the direction of the Engineer, construct concrete steps or other means of connecting sidewalks to house walks.

Notes:

Elevations on cross sections are finished grade elevations along profile grade except profile grade along centerline Project through the intersection with Third Street is theoretical only. Finished grade elevations for this intersection shall conform to the contours as shown on the plans.

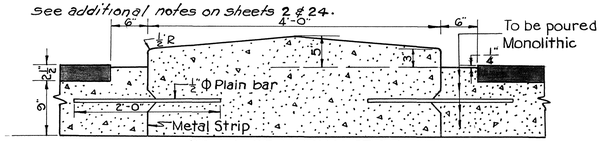
No direct compensation for overhaul will be allowed on this project

All earth embankment shall be constructed in layers not exceeding 6" in depth and each layer compacted with sheep foot or tamping at optimum moisture content.

The city shall adjust or relay all water mains, gas mains, sanitary sewers and service connections conflicting with the proposed improvement and is to remove all poles, hydrants & similar obstructions.

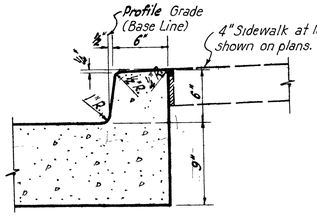
Superelevation of ⅜" per foot shall be provided on the Project Road from the East Abutment to Sta. 27+66.0. From Sta. 27+66 to Sta. 29+43.9 provide a transition to superelevation in the opposite direction. Roadway cross section from Sta. 29+43.9 to 31+00 shall conform to the contours as shown on the plans. Normal crown section shall have ⅜" slope both ways from Profile Grade.

See additional notes on sheets 2 & 24.

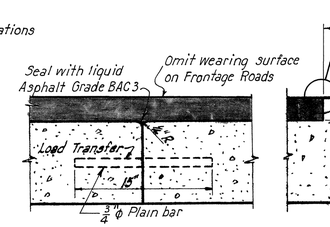


DETAIL OF MEDIAN STRIP

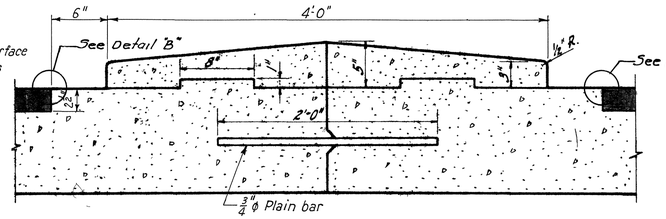
Note - Median strip shown above to be construsted from east abutment to 3rd. street.



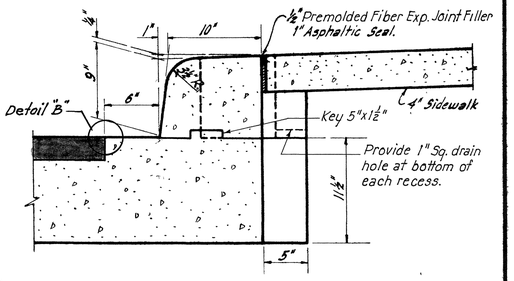
6" INTEGRAL CONCRETE CURB
Scale: 1½" = 1'-0"



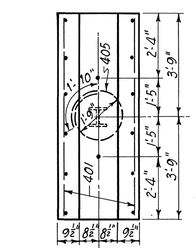
TRANSVERSE CONSTRUCTION JOINT WITH LOAD TRANSFER
Scale: 1½" = 1'-0"



MEDIAN STRIP FOR BRIDGE
Scale: 1½" = 1'-0"
Note - See other section for rdwy median strip.

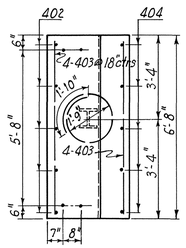


9" CURB
Scale. 1½" = 1'-0"



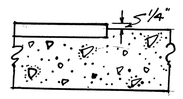
REINFORCING STEEL SCHEDULE				
Mark	Equiv. Size	No	Length	Type
401	½" Φ	16	7'-0"	Str.
402	½" Φ	29	4'-6"	Str.
403	½" Φ	8	6'-2"	Str.
404	½" Φ	5	3'-10"	Str.
405	½" Φ	18	7'-4"	See Plan

Note
Thread anchor bolts 3½"
Provide 2 nuts and washer each.

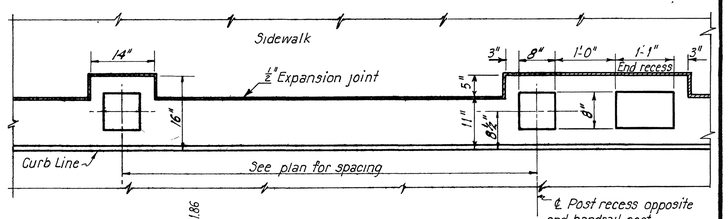


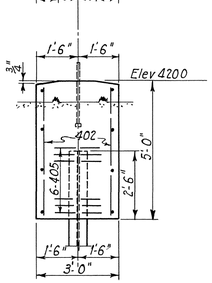
ESTIMATED QUANTITIES		
Item No	Description	Quantity
17-2	Dry Excavation (Bridges)	25 Cu Yds
132-1	* Structural Steel	100 Lbs
135-4	Class "A" Concrete	15 Cu Yds
135-12	Steel Bar Reinforcement	300 Lbs.
737-2	Steel Piles, 8"	100 Lin Ft
	Cut Limestone Masonry	17 Cu Ft

* Anchor bolts.

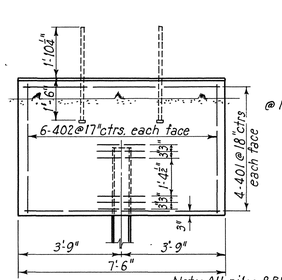


DETAIL "B"



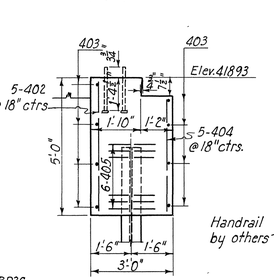


FOOTING "A" AND "B"

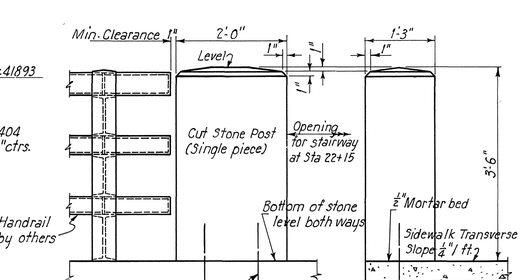


Note: All piles 8 BP 36.

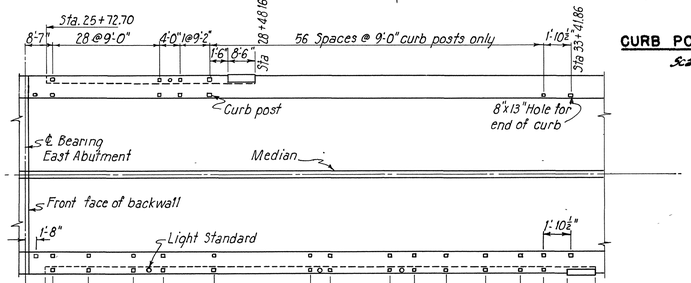
STAIRWAY FOOTINGS
Scale: ⅜" = 1'-0"



FOOTING "C"



CUT STONE POST - Build under Contract III
Scale: ¾" = 1'-0"
(2 Required)



SPACING PLAN OF HANDRAIL AND CURB POSTS
No Scale

CURB POST RECESSES
Scale: ¾" = 1'-0"

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

TYPICAL CROSS SECTION AND MISCELLANEOUS DETAILS

SCALE As Shown
MADE D.W.K. DATE 12-19-50
TRCD S.W.F. RE DATE 3-21-51
CKD B.H.R. DATE 4-6-51

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

811 SHEET- 26

MICROFILMED
419

(8) File E-14-26

FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS	SECTION
8	TENN	U-068-1(1)	1952	27	46	

REVISED MAY 27 1952
Voided Relocated R.R Spur track South of bridge, Sta. 17 to 21

Revised May 6, 1952: Detail "A" & Notes added. Pipes changed from 12" to 15"
Revised May 9, 1952: Added proposed relocated R.R. @ Sta. 14+59.7 & notes regarding removal of R.R. tracks.

PART 2

Nashville Electric Service
Power line steel tower conc. bases
New tracks to be placed by L & N R R Co
Ashland Oil and Refinery Co.
Loading Station
Air Eliminator
Unloading Unit
VOID - Relocated R.R. track
16° Curve
End North Frontage Road Sta. 18+45.0 ℄ Project
Factory 1 Story Frame
Sta. 20+44 ℄ Project Begin Transition (Bridge Floor)
Loading Platform
Jamison Mattress Co. 3 Story brick
PC Sta. 19+66.00 ℄ Project
Frontage Road parallel to ℄ Project
Conc. Block 1 Story
Gas Pump
Tank
8°30' Curve
Open Air Conc. Mixing Shed 1 Story
18" Conc Block Runways 1 Story
Conc. Block 1 Story
R.O.W.
10' R.
℄ Project
℄ Main St.
℄ MAIN ST.
Old stone abutment at top of river bank
Sta. 14+34.60 ℄ Main & Project
L & N R.R. Co. 206' ℄ 41° 39' R
Earth Metal
Red Ace Gas Co. 1 Story Frame
No. 17.0
Sta. 17+65
53°46'
Existing tracks to be removed by R.R. Co.
All relocating of tracks will be done by others.
VOID - RELOCATED R.R. TRACKS
Auto Graveyard 1 Story Conc
Auto Parts Co. 1 Story Frame
Stairway Footings
4" R.
6" Curb
Noland Co. Inc. Frame Shipping Department 1 Story
Existing track to be removed
Existing track to remain
New track
Note: All existing R.R. tracks within the limits of project to be removed by R.R. Co.
Red Ace Gas Co. 1 Story metal
Stone foundations for gas storage tanks
Concrete enclosure for 15" pipe under R.R. tracks to be paid for under item 135-4
Detail "A"
Class "A" conc
Δ = 7°30'-00"
D = 2°11'00.5"
R = 2624.06' B.L.
T = 171.99
L = 343.49
Std. concrete grade crossing See dwg. P.C.10.
Curve (S)
Δ = 94°-58'-00"
R = 25.00' ℄
T = 27.27'
L = 41.44'
P.T. Sta 1+91.24 B.L. No. Fr. Road
P.C. Sta 12+08.41 B.L. No. Fr. Road
P.T. Sta 1+27.19 ℄ No. First
NORTH FIRST ST.
SOUTH FIRST ST.
Sta. 23+04.05
6" Gas Main
12" Water Main
8" Sewer
6" Gas Main
16" Water Main
Tel. Line 9 Std.
Tel. Line 4 Std.
Sta. 24+16
Sta. 23+04.45
04-7593 1st St. 12+61.14
Service Station
1 Story brick
Pump Island
Riverside Mills Feed Store 2 Story frame, brick & block
NORTH FRONTAGE ROAD
Base Line
℄ Bearing East Abutment Sta. 25+66.00
Frame Shed
Conc. Block One Story
Frontage Road parallel to ℄ Project
See detail "A"
See detail "A" Std. conc. grade crossing See dwg P.C-10
National Casket Co. 1 Story brick
National Casket Co. 3 Story brick
MAIN ST.
SOUTH FRONTAGE RD.
6" Water Main
12" Sewer
Tel. Line 9 Std.
Tel. Line 2 Std.
SOUTH SECOND ST.
Sta 26+93.67 12" Sewer
Driveway under Shed
Brick Office
Kindling Pit
Wash Rack
Gas Pumps
Service Station
Note A From sidewalk box at Sta. 26+87 extend 2½" rigid conduit to Sta. 27+12. and project thru retaining wall 8" and thread for entrance fitting to be installed by others.
4" Concrete Median
Sidewalk box
2½" Asbestos cement conduit
See Note "A"
℄ Curve Data
Δ = 7°30'-00"
D = 1°-15'-00"
R = 4583.66'
T = 300.43'
L = 600.00'
Curve (R)
Δ = 94°-24'-00"
R = 35.46' B.L.
T = 38.29
L = 58.42
P.C. = Sta. 7+63.67 B.L. So. Fr. Road
P.T. = Sta. 8+22.09 = Sta. 0+63.0 ℄ So. Sec. St.
P.T. Sta 1+71.85 B.L. No. Fr. Rd.
P.R.C. 7+71.85 B.L. No. Fr. Road
Sta. 27+66.00 ℄ Project Transition = Sta. 7+38.03 So. Fr. Rd
Δ = 29°08'06.4"
R = 122.2' B.L.
T = 31.70'
L = 62.04'
P.C. Sta. 7+02.81 B.L. No. Fr. Road = Sta. 28+60.00 ℄ Project
PRC. 8+47.78 B.L. No. Fr. Road
P.T. Sta 27+66.00 ℄ Project Begin Transition
Δ = 28°59'26"
R = 150' B.L.
T = 38.78'
L = 75.90'
Curve (N)
Δ = 94°27'41"
R = 25.00' ℄
T = 27.03
L = 41.22
Curve (P)
Δ = 85°3'2'.20"
R = 25.00' ℄
T = 23.13
L = 37.32'
Sta. 1+31.81 ℄ Cottonwood
Sta. 1+26.35 ℄ Cottonwood
Sta. 5+25.57 B.L. No. Fr. Road
Sta. 4+55.35 Base Line No. Fr. Road
COTTONWOOD STREET
Sta 30+16.03
Sta. 4+88.79 B.L. No. Fr. Road = Sta. 0+78.21 ℄ Cottonwood
Sta. 30+89
Tel. Line 2 Std.
Gas Main
Sta 30+76.03
Tel 8 Std.
6" Water Main
SOUTH FRONTAGE ROAD
Base Line
End Transition P.C. Sta. 29+43.91 ℄ Project So. Frontage Road P.T. Sta 5+74.89
1 Story Frame House
1 Story Concrete Block
1 Story Frame House
1 Story Frame House
1 Story Concrete Block
1 Story Frame House
Frame House
1 Story Frame House
Base Line
Frame House
Sta. 4+31.79 B.L. No. Fr. Road = Sta. 0+78.21 ℄ Cottonwood 30+89
14:1 Max.
Loading Platform
7" R.
7"
4.2" R.
4" R.
6" Curb
Stairway Footings
20.0'
46'-0"
Sta. 24+16
Sta. 23+04.05
Sta. 25+66.00
Sta. 26+87
Sta. 27+12
Sta. 29+43.91
Sta. 30+89
Sta. 4+31.79
Sta. 5+25.57
Sta. 1+31.81
Sta. 1+26.35
Sta. 4+55.35
Sta. 30+16.03
Sta. 30+76.03

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

GROUND PLANS

SCALE 1"= 30'-0"
MADE J.W.C. DATE 11-13-50
TRC'D C.L.D. R.R. DATE 11-24-50
CK'D H.B.A. DATE 1-7-51

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

SHEET 27

417

File E-14-27

FED ROAD DIST NO	STATE	FED AID PROJ NO.	FISCAL YEAR	SHEET NO	TOTAL SHEETS	SECTION
8	TENN	U-068-1(1)	1952	28	46	

PART 2

REVISED MAY 6, 1952
DRAINAGE LAYOUT AT 3RD AND MAIN ST. CHANGED.
Nº 12 & 14 CATCH BASINS USED

REVISED JUNE 23 1953
TRANSITION AT END OF PROJECT ELIMINATED
92' ROW'S WIDTH EXTENDED TO STA. 38+95 L.T.
℄ STA 38+73.5 ON RT. CURB TRANSITIONS SHOWN.

LEGEND

Utility	Size	Symbol
City Gas	0.5'x0.5'	
Sewer Manhole	Dia.=2.0'	
Telephone Manhole	Dia.=2.6'	
Power Manhole	Dia=2.6'	
Fire Plug		
Water Valve	1'-1"x 1'-3"	
Water Meter	1'-4"x 2'-8"	
Power Pole		
Telephone or Telegraph Pole		
Expansion Joint (Paving)		E
New Sewer		
New 2½" Conduit		
Light Standard (by others)		
Existing sewer lateral		12"

North Curb Line Curve Data:
Δ=1°12'26"
D=1°15'28"
R=4555.66'
T=48.00'
L=95.99'

P.C.C. Sta. 0+53.06

P.T. Sta. 0+75.92 Base Line

P.C. Sta. 1+14.38 Base Line
Δ=64°21'40"
R=150.00' Base Line
T=94.39
L=168.50

P.T. Sta. 2+83.38 Base Line

P.T. Sta. 32+38.57 ℄ Project = P.C.C. Sta. 0+00 No. Curb Line

P.C.C. Sta. 0+00 = Sta. 32+38.57 ℄ Project

P.T. Sta. 0+96.58 No. Curb Line

P.C. Sta. 1+83.17 No. Curb Line

P.T. Sta. 0+92.50 No. Curb Line

P.C. Sta. 0+00 = Sta. 2+51 ℄ 3rd St. = End New Work

P.C.C. Sta. 0+23.56 6" Curb Base Line

P.T. Sta. 3+47.03 No. Curb Line = P.C. Sta. 0+00 B.L. No. Fr. Road = Sta. 1+83.36 ℄ 3rd. St.

North Curb Line Curve Data
Δ=89°19'34"
R=150.00'
T=148.25'
L=233.86'

THIRD STREET OR MERIDIAN STREET

Walnut Alley

Base Line

1 Story Frame Office

1 Story Brick and Block

To be sodded

Conc Block

Conc. Blk. Liquor Store 1 Story

1 Story Brick Service Station

Main Street Tavern

Wash Grease Rack

Gas Pumps

Concrete

Slope varies to 1 on 2 max

2 Story Brick

1 Story Block Business

1 Story Conc. Block

2 Story Brick

One Story Brick

1 Story Brick

1 Story Stucco

1 Story Conc.

1 Story Frame

1½ Story Brick

1 Story Brick

United Shoe Machinery Corp. 1 Story brick

1 Story Frame

Sta. 1+02.41 ℄ 3rd

Sta. 35+01.55 ℄ Main

Sta. 36+01.82 ℄ Main

Sta. 35+15.82

Sta. 37+14.44 ℄ Project = Sta. 37+12.00 ℄ Main

Sta. 39+14.45 = Sta. 41+12.00 ℄ Main

Sta. 39+95 ± ℄

Sta. 41+02.80

End Median Sta. 40+50.0

R.O.W.

Curb P.R.C. Sta. 37+91.48 ℄ Main

Curb P.R.C. Sta. 38+06.47 ℄ Main

Base Line

Prop. 6" integral curb

Prop. 10' conc sidewalk

Concrete Median

6" Water Main

Tel. Line 8 Std.

15" 12" Sewer ℄ Project

3" Gas Main

Sidewalk box

Sta. 0+63.96 ℄ 3rd

Sta. 35+46.24 ℄ Main

Brick

Conc Block

Profile Grade

(Ex. 51") 36" Sewer

9" Curb

Curve H
Δ=46°43'50"
R=72.00'
T=31.11'
L=58.73'

Curve K
Δ=76°43'50"
R=39.62'
T=31.63'
L=53.06'

Curve L
Δ=90°00'00"
R=15.00'
T=15.00'
L=23.56'

Base Line Curve M
Δ=60°00'00"
R=50.00'
T=28.87'
L=52.36'

Curve A
Δ=43°26'51"
R=50.00'
T=19.92'
L=37.92'

Curve B
Δ=44°00'00
R=80.00'
T=32.32'
L=61.44'

Curve C
Δ=88°35'20.1"
R=25.00'
T=24.82'
L=39.09'

Curve D
Δ=86°34'48.1
R=25.00'
T=23.55
L=37.78

Curve E
Δ=90°30'00"
R=25.00
T=25.22'
L=39.49'

Curve F
Δ=89°30'00"
R=25.63'
T=25.41'
L=40.04'

Curve W
Δ=5°19'24.4
D=6°39'552
R=859.51
T=39.96
L=79.87

Curve X
Δ=8°03'33.4"
D=6°39'55.2"
R=859.61'
T=60.56'
L=120.92

Curve Y
Δ=7°48'22.5"
D=8°13'41.6'
R=696.33
T=47.51'
L=94.87

Curve Z
Δ=8°43'02.4"
D=8°13'41.6
R=696.33
T=53.07
L=105.94

Δ=19°09'21"
D=8°40'52"
R=660'
T=111.37
L=220.66

Δ=20°51'16.8"
R=150.00'
T=27.60
L=54.60

PRC 3+15.30 So. Fr. Rd. = Sta 32+00 ℄ Project

PRC Sta. 0+94.40 So. Fr. Rd.

PRC 0+40.04 PT Sta 0+00 So. Fr. Road = Sta. 1+30.47 ℄ 3rd = Sta. 34+63.30

So. Front Road
Δ=3°12'04.2"
R=4645.08'
T=129.80'
L=259.53'
D=1°14'00.5"

℄ Project Curve Data
Δ=3°41'00"
D=1°15'00"
R=4583.66' ℄
T=147.38'
L=294.66'

So. Curb Line on Project
Δ=1°05'46"
D=0°20'48"
R=16,527.7'
T=158.10'
L=316.19'

Note:- Asphaltic Concrete surface and binder courses on the project Road, Third St. and West Plaza only.

Provide a 10' smooth transition where 9" and 6" curbs join.
All curve data given to face of curb unless otherwise noted.

PROFILE OF NORTH FRONTAGE ROAD

Base Line
Variable %
18+00 Elev. 416.70
-0.143%
P.T. 5+50 Elev. 418.49
P.I. 4+00 Elev. 418.70
-2.5%
P.C. 2+50 Elev. 422.45
1+00 Elev. 426.20

PROFILE OF SOUTH FRONTAGE ROAD

11+50 Elev. 417.90
-0.189%
P.T. 4+25 Elev. 419.27
P.T. Sta. 2+75 Elev. 419.55
-3.0%
P.C. 1+25 Elev. 424.05
1+00 Elev. 424.80
Variable %
Elev. 415.00
End New Work Sta. 3+35

PROFILE OF THIRD STREET

+1.8%
P.T. 1+54 Elev. 421.99
P.I. 1+04 Elev. 421.40
P.C. 0+54 Elev. 421.40
0.0%
100' V.C.
35+04.58 ℄ Main
35+15.82 ℄ Main
-1.00%
P.C. 2+35 Elev. 423.18
P.I. 2+85 Elev. 422.98
P.T. 3+35 Elev. 423.18
+0.80%
100' V.C.
NORTH THIRD
SOUTH THIRD
0+00 ℄ 3rd St.
0+00 ℄ N. 3rd St.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

GROUND PLANS

SCALE 1"=30'
MADE AER DATE 11-1450
TRCD C.E.D.R.R. DATE 11-25-50
CKD H.B.A. DATE 1-5-51

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

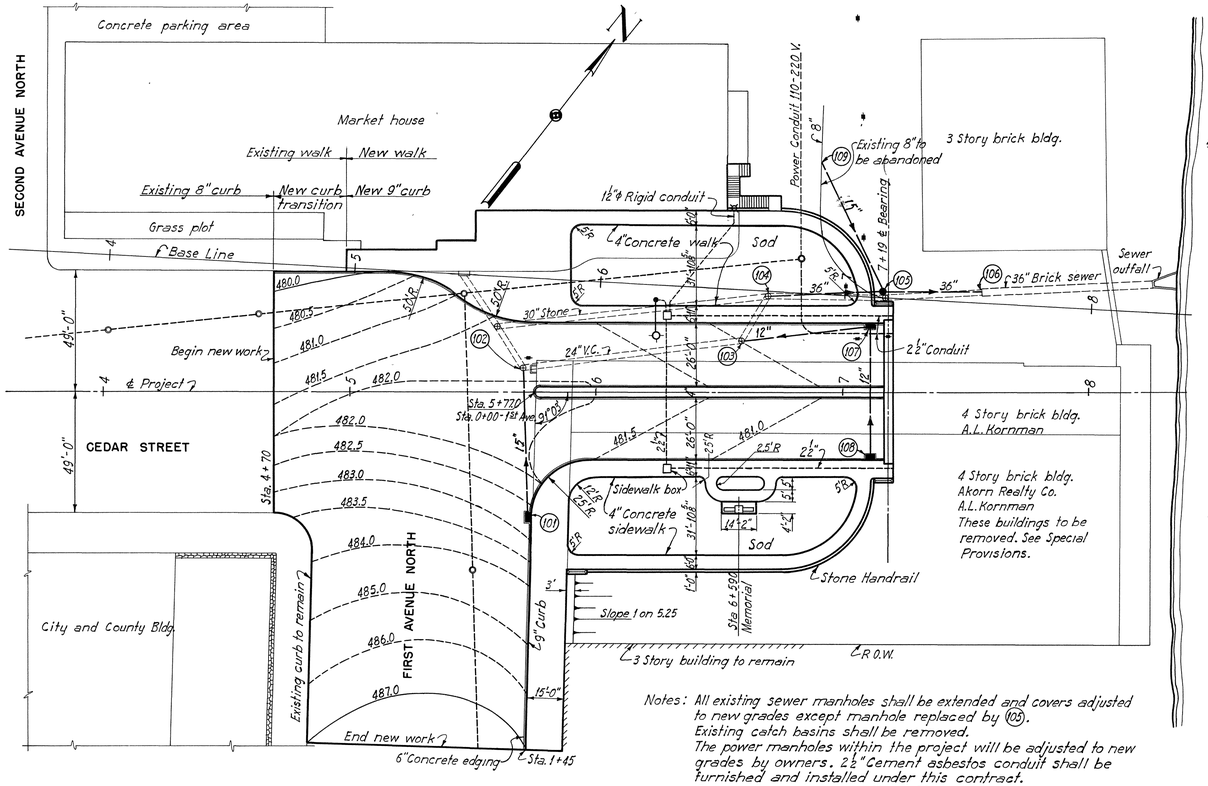
811 SHEET 28

File E-14-28

FED ROAD DIST NO.	STATE	FED AID PROJ. NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS	SECTION
8	TENN.	U-068-1(1)	1952	29	46	

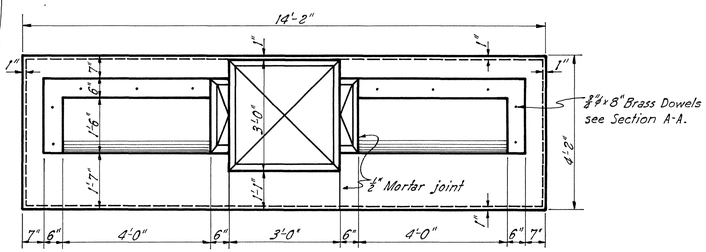
PART 2

Revised May 6, 1952
Storm sewer pipes changed from 12" to 15"

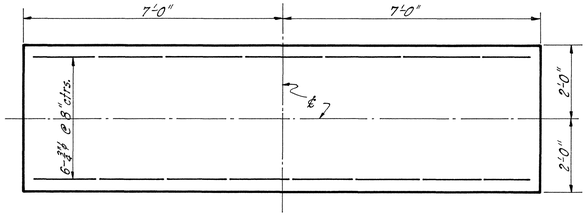


Notes: All existing sewer manholes shall be extended and covers adjusted to new grades except manhole replaced by (105).
Existing catch basins shall be removed.
The power manholes within the project will be adjusted to new grades by owners. 2½" Cement asbestos conduit shall be furnished and installed under this contract.
For key to symbols see Sheet 28.

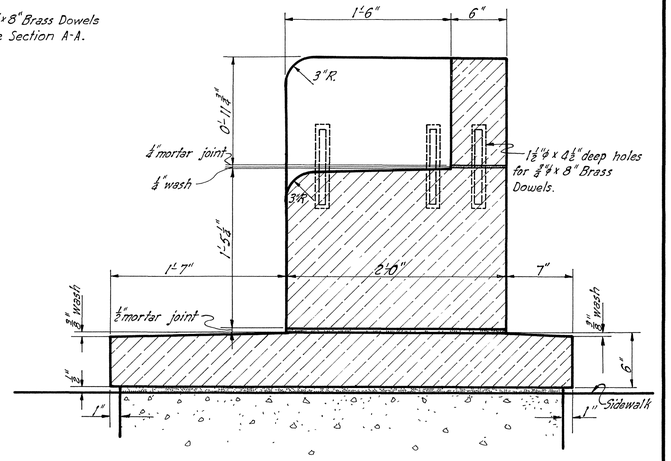
WEST PLAZA
Scale: 1" = 30'



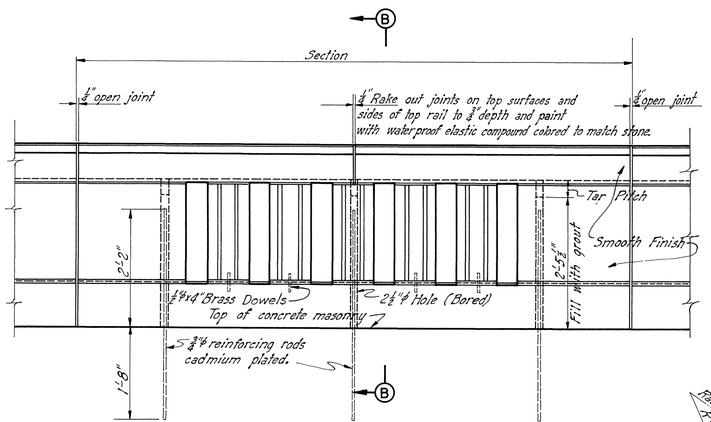
PLAN



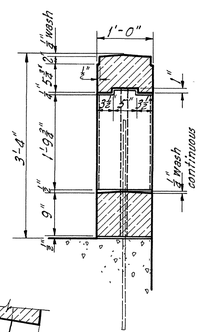
PLAN OF BASE



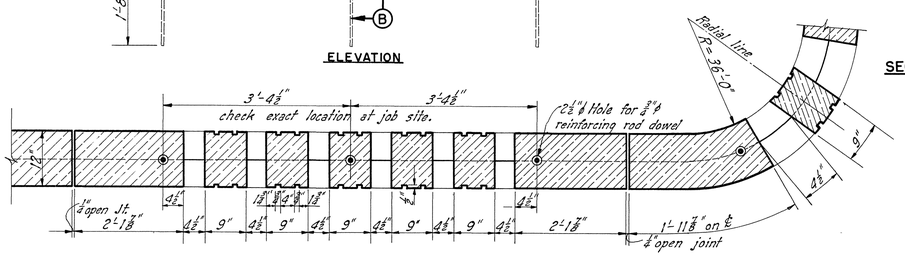
SECTION A-A
Scale: 1½" = 1'-0"



ELEVATION

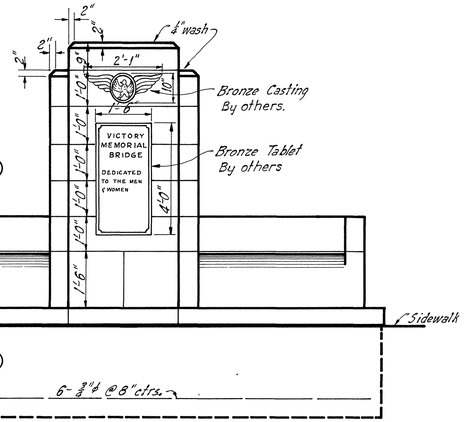


SECTION B-B

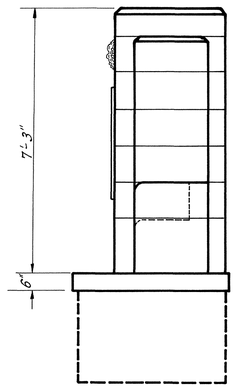


PLAN

TYPICAL SECTION OF STONE HANDRAIL
Scale: ¾" = 1'-0"



NORTH ELEVATION
Scale: ½" = 1'-0"



END VIEW

ESTIMATED QUANTITIES

Item No.	Description	Quantity
17-2	Dry Excavation (Bridges)	10 Cu. Yds.
135-4	Class "A" Concrete	5 Cu. Yds.
135-12	Steel Bar Reinforcement	130 Lbs.
	Cut Limestone Masonry	138 Cu. Ft.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

WEST PLAZA AND MEMORIAL

SCALE ¼"-¾"-1½" = 1'-0"
MADE W.L.G. DATE 3-1-51
TRCD C.K.V. DATE 3-20-51
CKD C.R. DATE 4-26-51

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

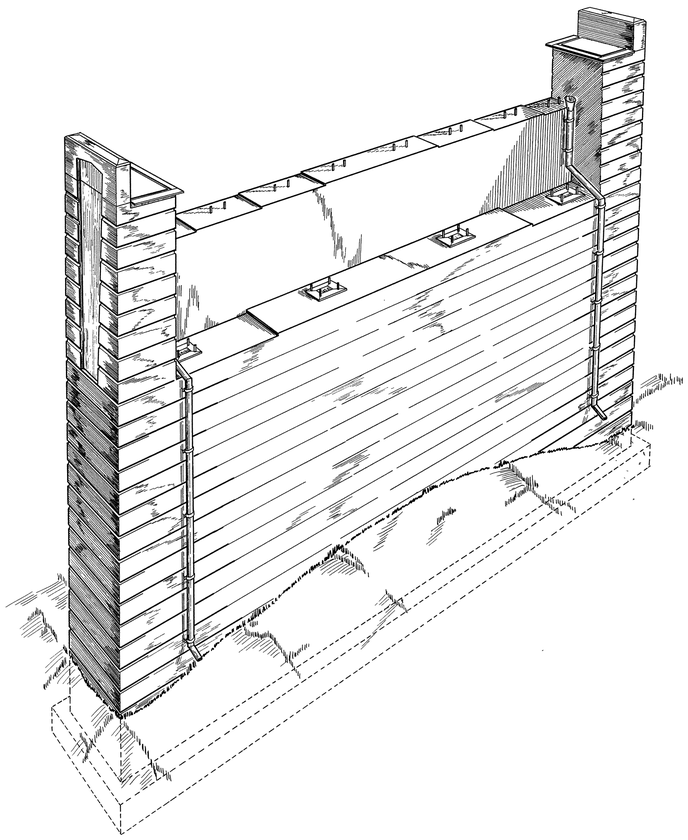
811 SHEET 29

MICROFILMED

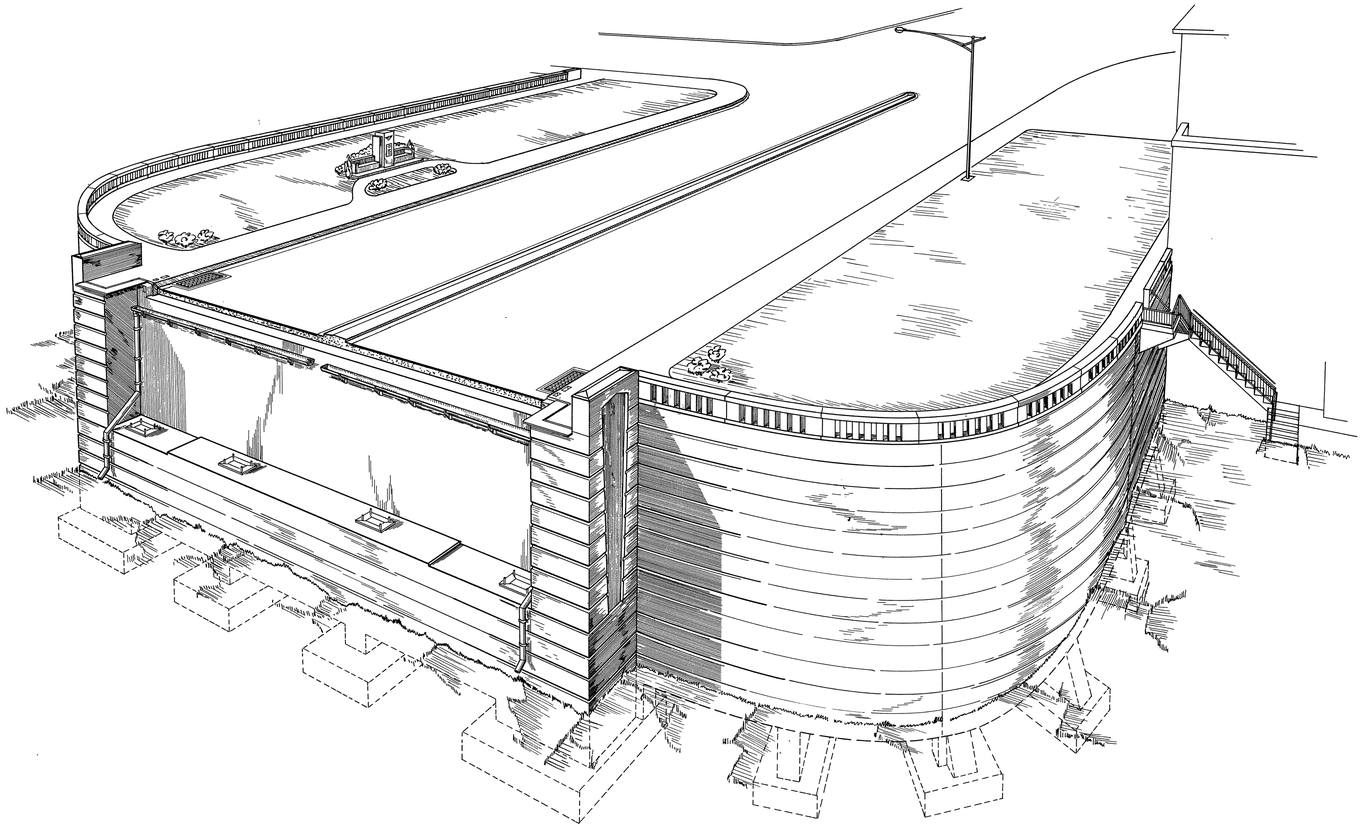
File E-14-23

FED ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	SECTION
		TENN. U-068-1(1)	1952	30	46	

PART 2



PERSPECTIVE OF PIER 3



PERSPECTIVE OF WEST ABUTMENT

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

PERSPECTIVES

SCALE
MADE S.W.F. DATE 2-6-51
TRCD. S.W.F. DATE 2-7-51
CKD. J.T. DATE 4-25-51

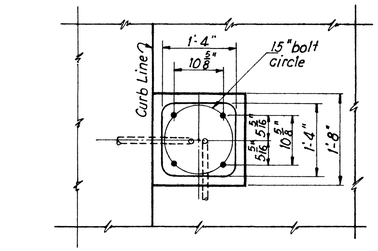
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

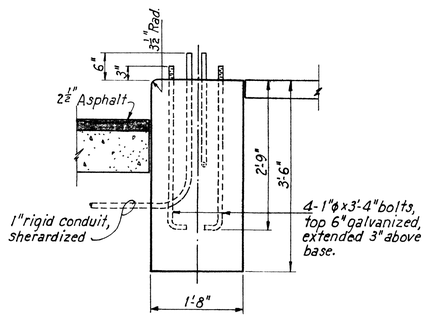
811 SHEET- 30

File E-14-30

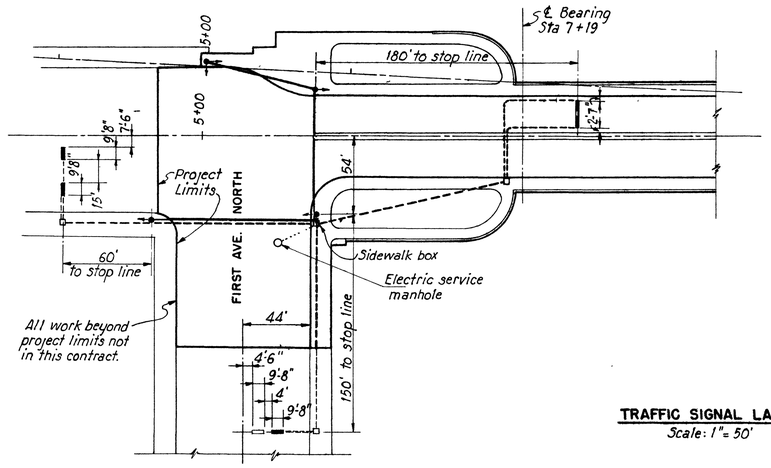
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	SECTION
8	TENN.	U-068-K(1)	1952	31	46	

PART 2

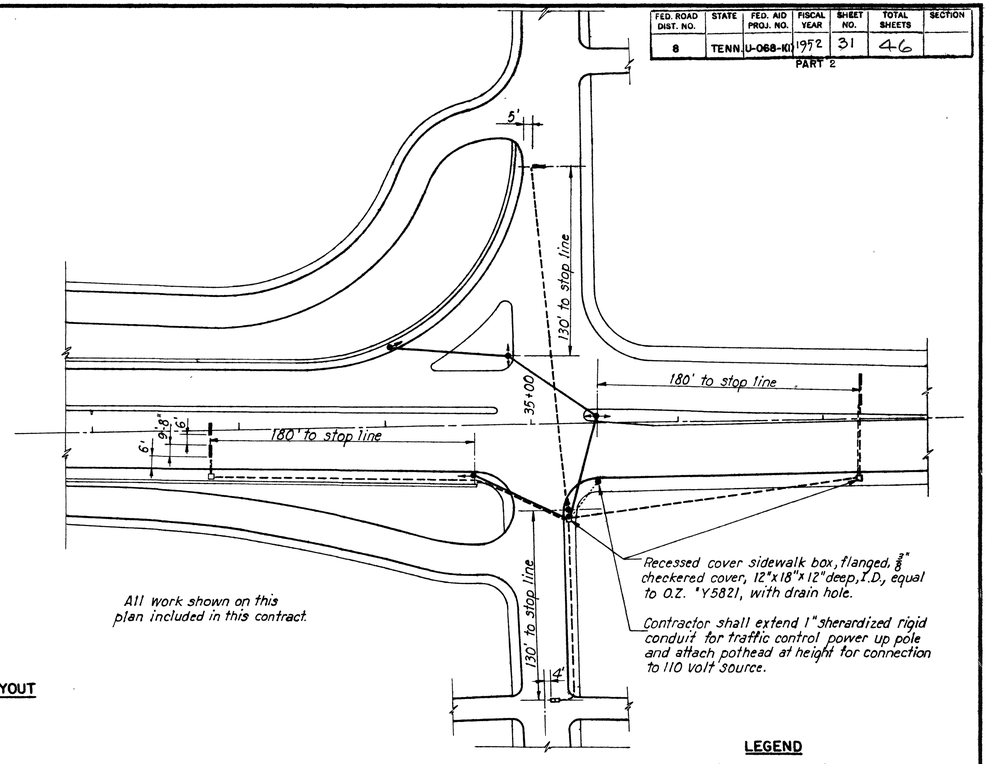




TRAFFIC SIGNAL FOUNDATION
Scale: 3/4" = 1'-0"
8 Required

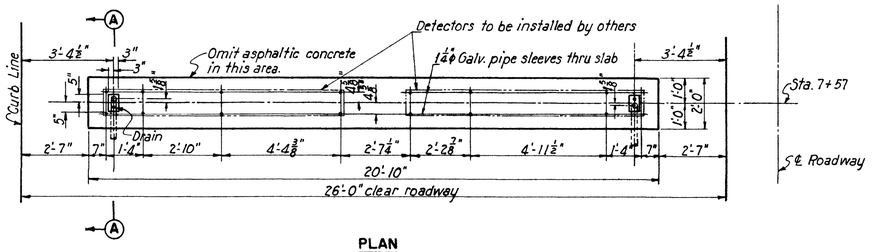


TRAFFIC SIGNAL LAYOUT
Scale: 1" = 50'

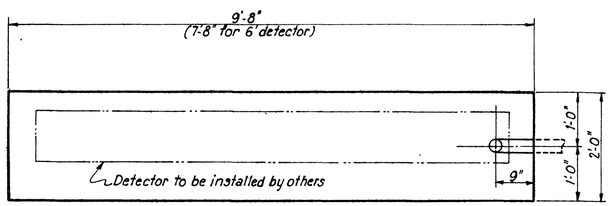


LEGEND

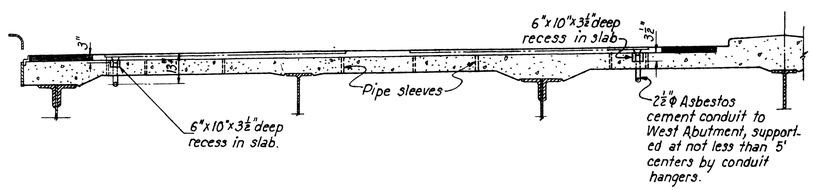
- Traffic signal pole footing
- Checkered cover sidewalk box.
- 6' non-directional detector recess.
- 8' non-directional detector recess
- 8' directional detector recess.
- Electrical service - 1" sherardized conduit.
- 1" sherardized conduit.
- 2½" transite conduit.



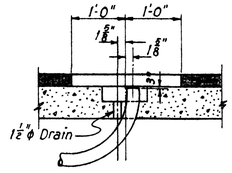
PLAN



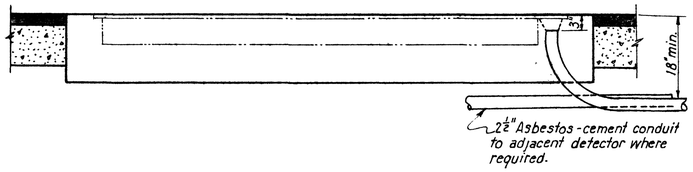
PLAN

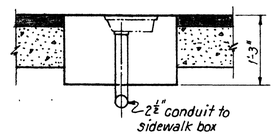


RECESS IN BRIDGE SLAB FOR DETECTORS
Scale: 3/8" = 1'-0"



SECTION A-A





RECESS IN ROADWAY FOR DETECTORS
Scale: 3/4" = 1'-0"

ESTIMATED ROADWAY QUANTITIES

Item No	Description	Quantity
17-1	Culvert Excavation (Unclassified)	300 Cu Yds
132-1	Structural Steel	2,000 Lbs.
135-4	Class "A" Concrete	3 Cu. Yds.
	2½" Asbestos-Cement Conduit	1,470 Lin Ft

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

TRAFFIC SIGNALS

SCALE 3/4" = 1'-0" | MADE G.I.C. DATE 4-16-51 | TRCD R.R. DATE 4-24-51 | CKD J.T. DATE 4-26-51

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

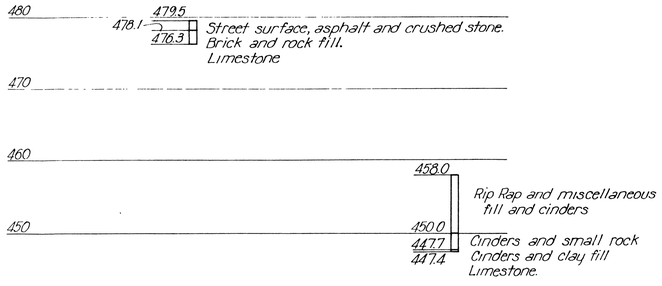
811 SHEET- 31

433

File E-14-31

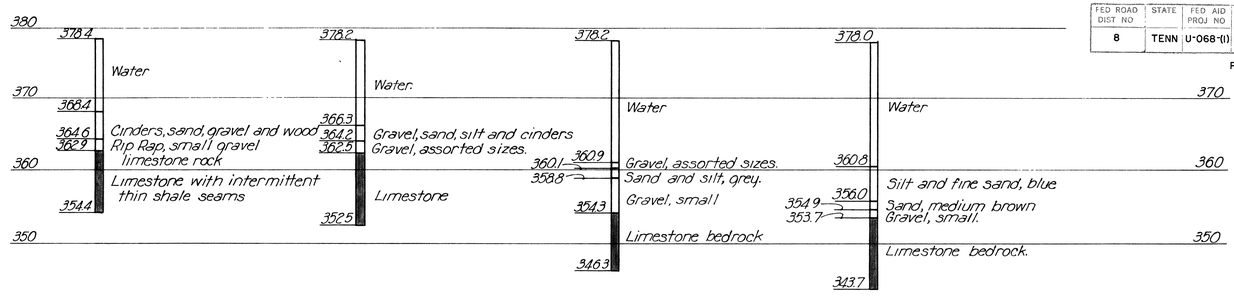
FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS	SECTION
8	TENN	U-068-(1)	1952	41	46	

PART 2



BORING NO. 1
Sta. 5+86
13' Rt

BORING NO. 2
Sta. 7+24
22'-Rt.

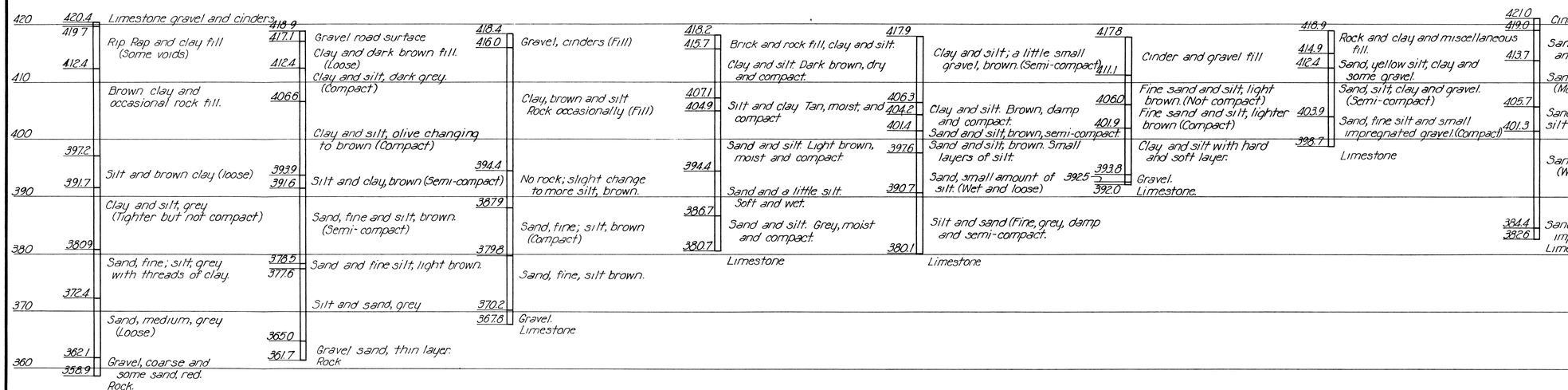


BORING NO.3
Sta. 9+43
25' Lt.

BORING NO.4
Sta. 9+43
80' Rt.

BORING NO.5
Sta 12+64
44' Lt.

BORING NO. 6
Sta 12+64
62' Rt.



BORING NO.7
Sta 14+89
5' Lt

BORING NO. 8
Sta 16+30
13' Lt.

BORING NO. 9
Sta 19+00
10' Rt.

BORING NO. 10
Sta 22+60
16' Lt.

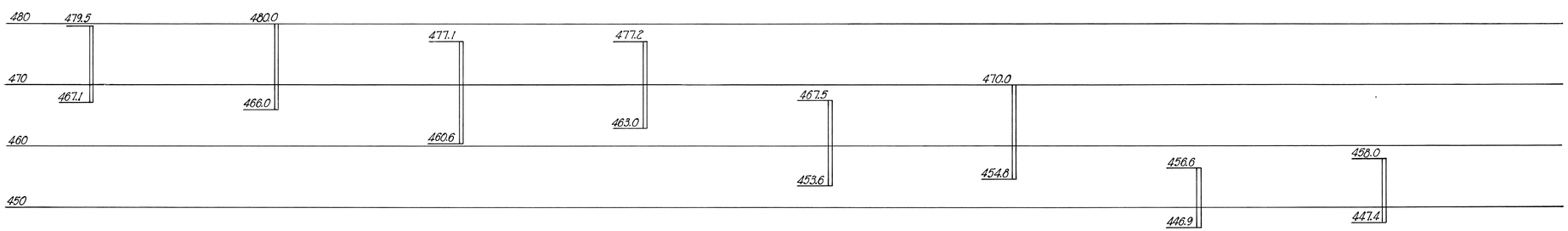
BORING NO. 11
Sta 24+05
207' Rt.

BORING NO. 12
Sta 26+00
54' Lt.

BORING NO. 13
Sta 29+10
21.5' Rt.

BORING NO. 14
Sta 32+22
43' Lt.

BORING NO. 15
Sta 34+47
40' Lt.



SOUNDING NO. 1
Sta. 5+86
3.0' Rt.

SOUNDING NO. 2
Sta. 5+86
2.3' Rt.

SOUNDING NO. 3
Sta. 6+05
9' Lt.

SOUNDING NO. 4
Sta. 6+05
28' Rt.

SOUNDING NO. 5
Sta. 6+65
15' Lt.

SOUNDING NO. 6
Sta. 6+65
15' Rt.

SOUNDING NO. 7
Sta. 7+19
10' Lt.

SOUNDING NO. 8
Sta. 7+24
22' Rt.

ROCK SOUNDINGS AT WEST ABUTMENT

Elevations are to top of ground and top of rock.

Note: Stations and offsets refer to Survey Base Line.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

BORINGS

SCALE 1"=10' Vert.
MADE J.T. DATE 8-29-50
CKD [illegible] DATE 9-13-50
TRCD B.L.B. DATE 9-14-50
CKD B.L.B. DATE 9-15-50

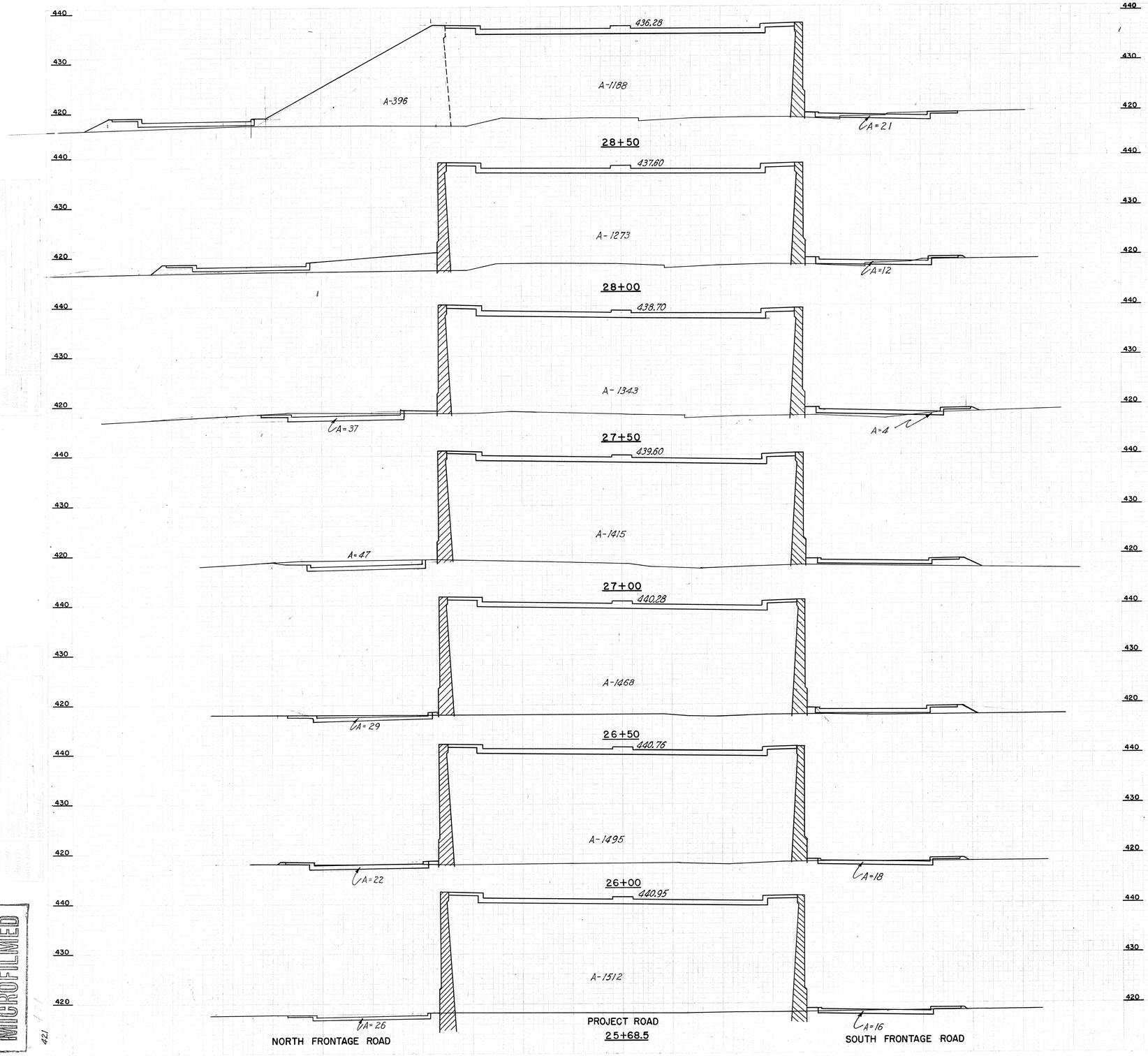
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

811 SHEET 41

File E-14-3

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	SECTION
8	TENN.	U-068-1(1)	1952	42	46	

PART 2



STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

CROSS SECTIONS

SCALE 1" = 10'
MADE DWK CED DATE 1-12-51
TRCD CED DATE 2-28-51
CHKD. JES DATE 3-26-51

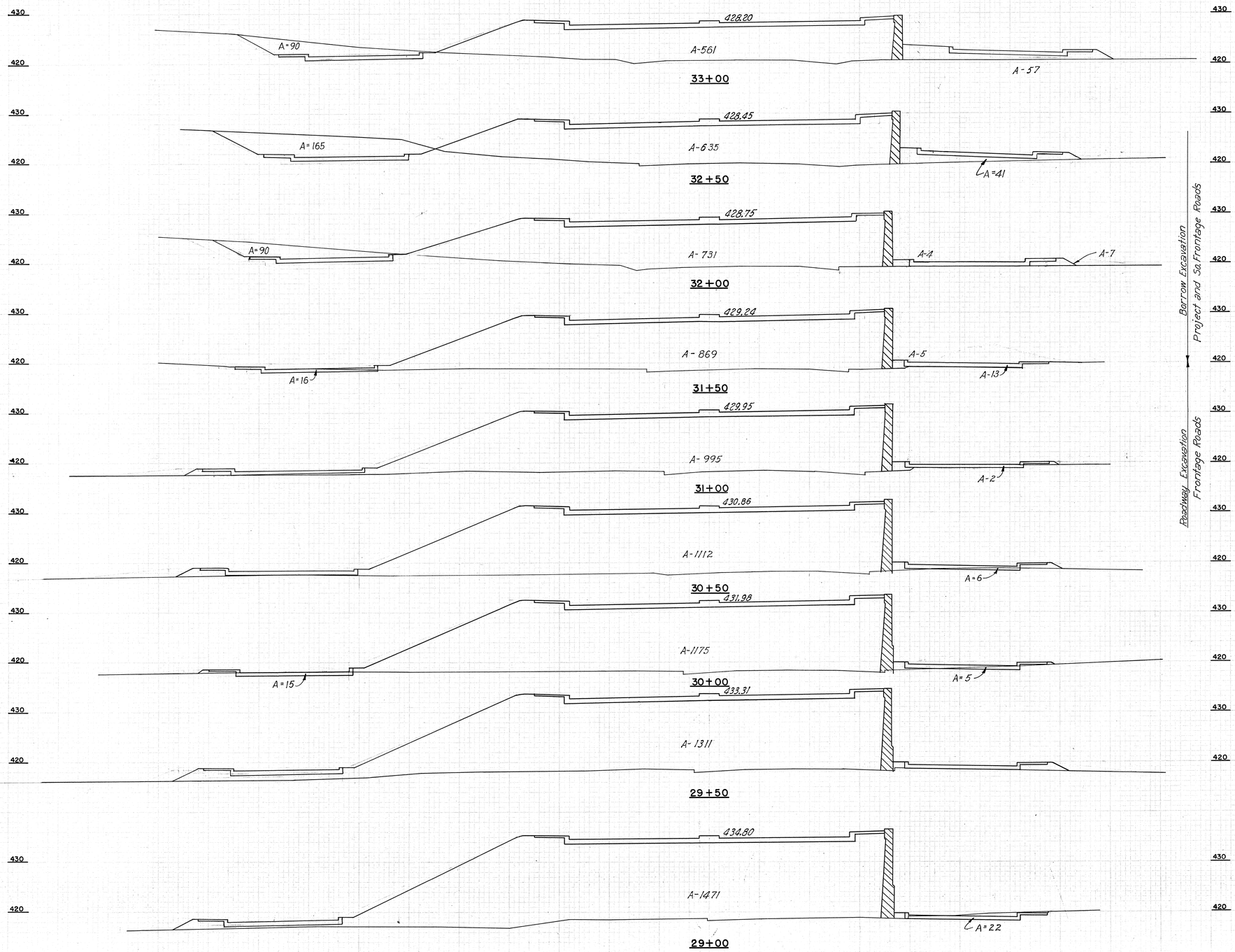
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
811 SHEET 4-2

MICROFILMED
421

File E-14-33

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	SECTION
8	TENN.	U-068-1(1)	1952	43	46	

PART 2



STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

CROSS SECTIONS

SCALE 1" = 10'
MADE DWK CED DATE 1-11-51
TRCD. CED DATE 3-1-51
CHKD. JGS DATE 4-26-51

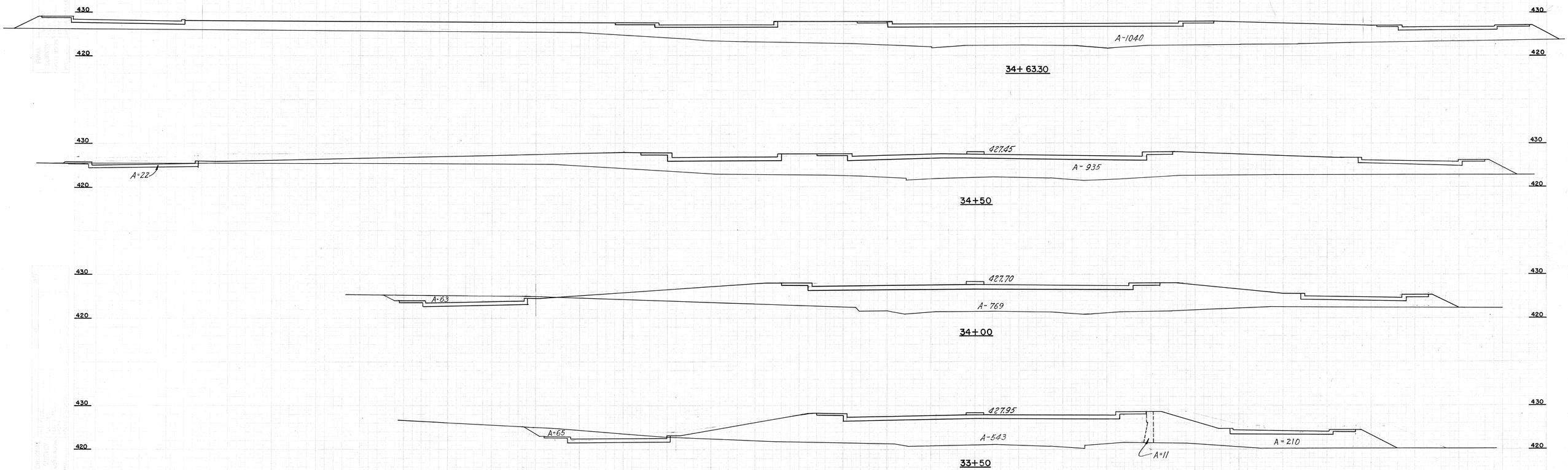
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
811 SHEET 43

File E-14-34

MICROFILMED

FED.ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	SECTION
8	TENN.	U-068-1(1)	1952	44	46	

PART 2



STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

CROSS SECTIONS

SCALE 1" = 10'
MADE DWK-CED DATE 1-12-51
TRCD CED DATE 2-20-51
CHKD. JGS DATE 4-25-51

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
811 SHEET 44

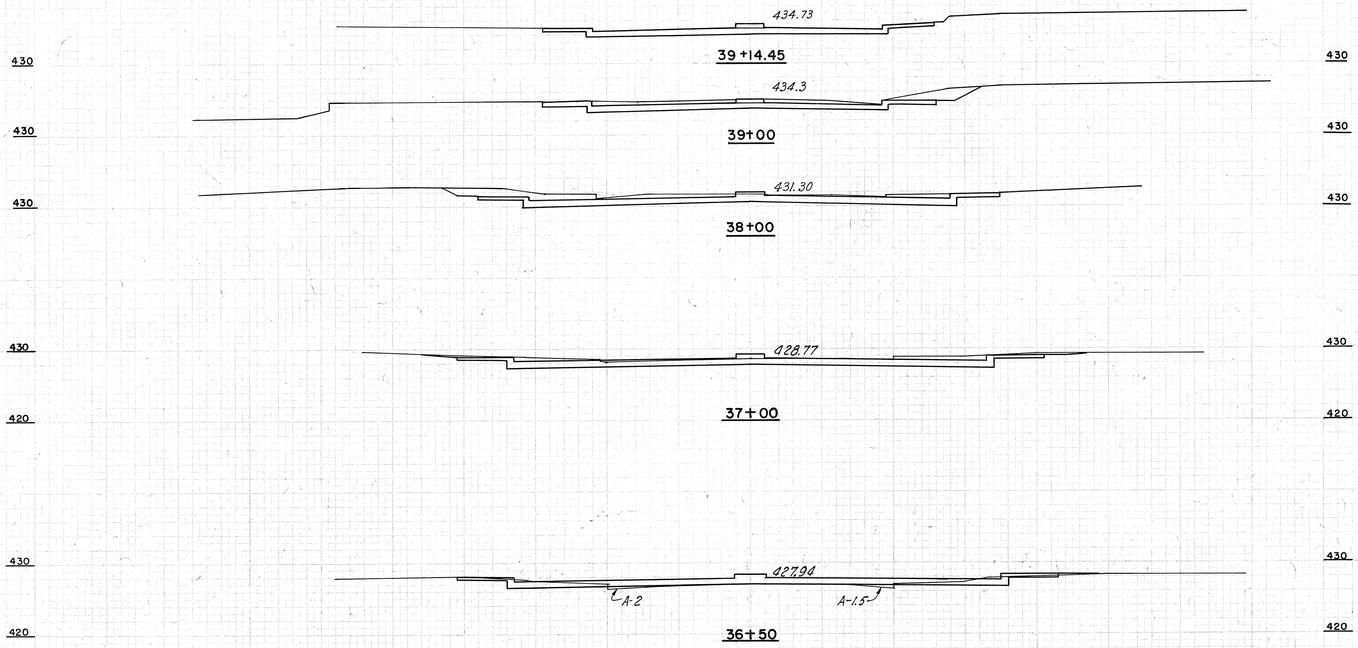
File E-14-35

PHOTOFILMED

PLATE 3 - CROSS SECTION A.P.P.S.S. FIGURE

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	SECTION
8	TENN.	U-068-1(11)	1952	45	46	

PART 2



STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

CROSS SECTIONS

SCALE 1"=10'
MADE CED DATE 2-14-51
TRCD CED DATE 3-6-51
CHKD JGS DATE 4-26-51

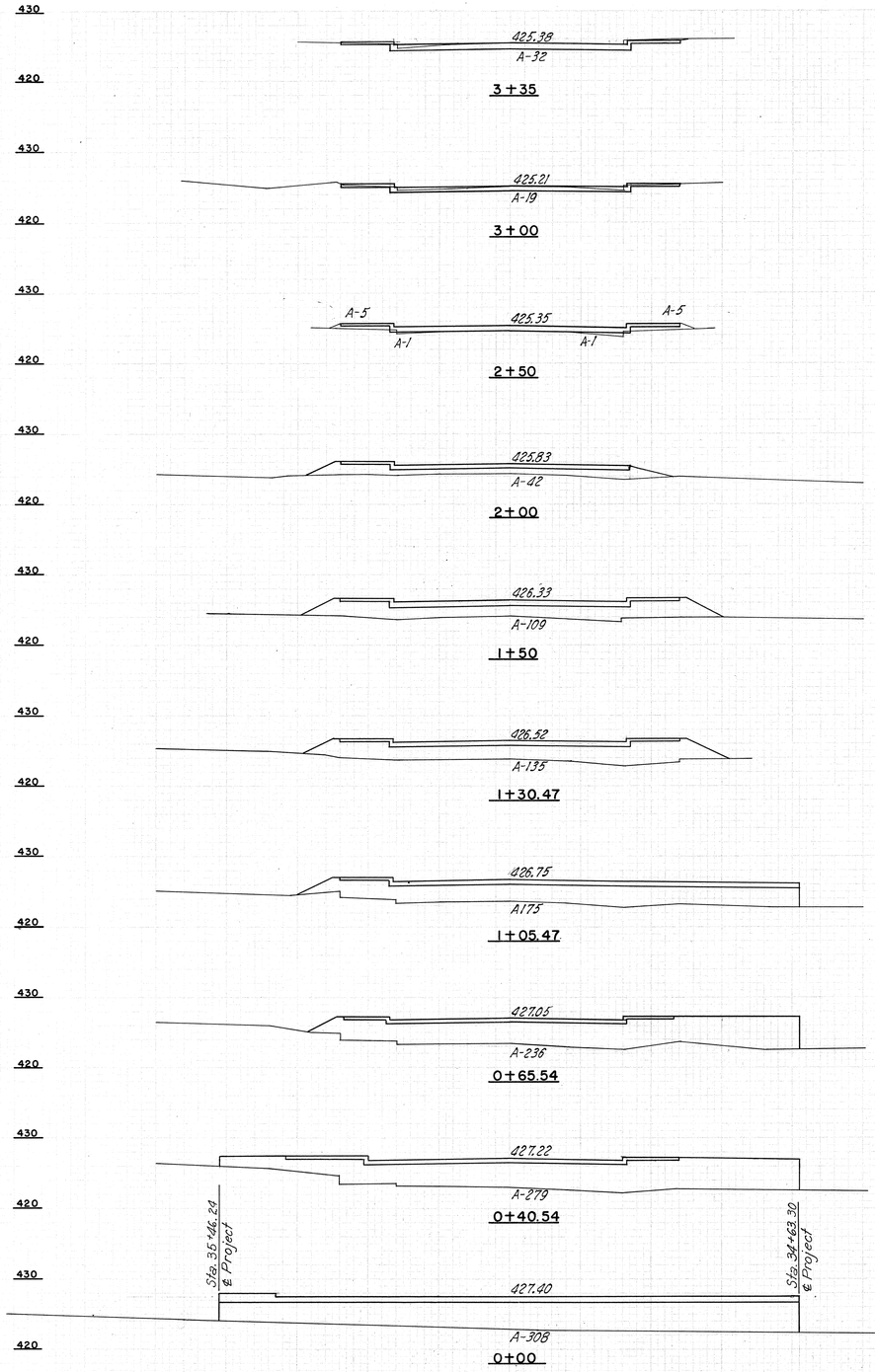
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
811 SHEET 45

MICROFILMED

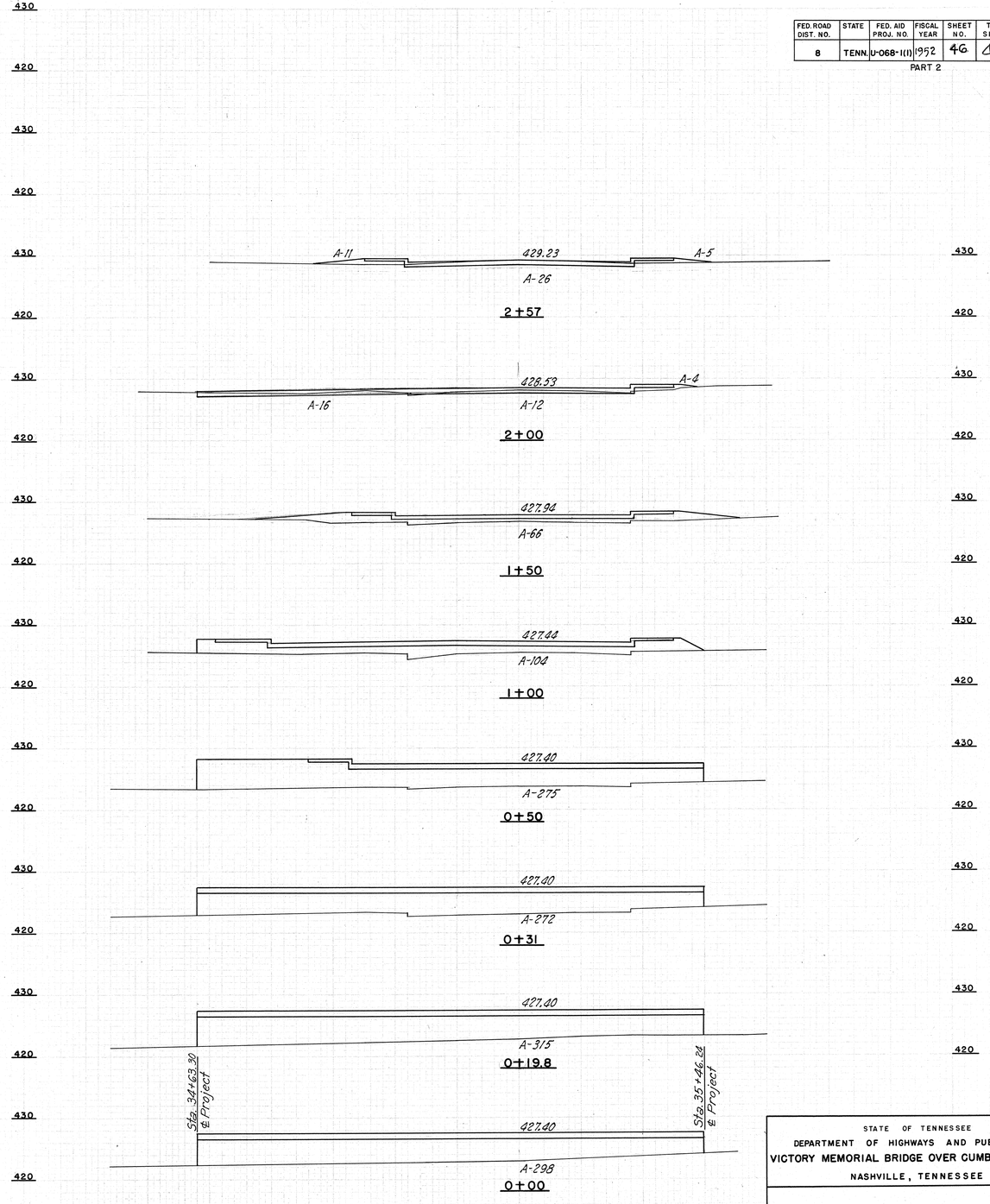
File E-14-30

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	SECTION
8	TENN.	U-068-1(1)	1952	46	46	

PART 2



THIRD STREET— GOING SOUTH



THIRD STREET— GOING NORTH

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

CROSS SECTIONS

SCALE 1"=10'
MADE DWK-CED DATE 2-13-51
TRCD CED DATE 3-2-51
CHKD JGS DATE 4-26-51

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
811 SHEET 46

MICROFILMED
1-67
IEP

File E-14-37

FED. ROAD DIST. NO.	STATE	FED. AID PROJ NO	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	TENN	U-068-1(1)	195	1	

PART 3
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE
SUPERSTRUCTURE

INDEX OF SHEETS

SHEET NO 1	TITLE SHEET
" " 2	ESTIMATED QUANTITIES
" " 3	GENERAL PLAN AND ELEVATION
" " 4	RIVER SPANS - ROADWAY CROSS SECTIONS
" " 5	RIVER SPANS - FRAMING PLAN AND GIRDERS
" " 6	RIVER SPANS - GIRDER DETAILS
" " 7	RIVER SPANS - GIRDER OUTLINE AND STRESS DIAGRAMS
" " 8	RIVER SPANS - ROADWAY SLAB
" " 9	RIVER SPANS - ROADWAY EXPANSION JOINTS
" " 10	RIVER SPANS - SHOES
" " 11	EAST APPROACH SPANS - ROADWAY CROSS SECTIONS & DRAINAGE
" " 12	EAST APPROACH SPANS - FRAMING PLANS
" " 13	EAST APPROACH SPANS - FRAMING PLANS AND BEAM SPLICES
" " 14	EAST APPROACH SPANS - ROADWAY SLAB
" " 15	EAST APPROACH SPANS - ROADWAY EXPANSION JOINTS
" " 16	EAST APPROACH SPANS - ANCHOR BOLT PLAN AND SHOES
" " 17	HANDRAIL AND CURB
" " 18	LIGHTING
" " 19	NAVIGATION LIGHTING, MEMORIAL PLAQUE AND SUMMARY OF QUANTITIES
" " 20	STAIRWAY
" " 21	TRAFFIC SIGNALS

THIS PROJECT TO BE CONSTRUCTED UNDER THE STANDARD SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS ADOPTED JANUARY 1, 1938 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT.

CONVENTIONAL SIGNS

COUNTY LINE .....
CITY VILLAGE OR BOROUGH .....
CULVERTS .....
POWER POLE .....
TELEPHONE OR TELEGRAPH POLE ....
FENCE LINE .....
GUARD RAIL .....
UNFENCED PROPERTY .....
RIGHT OF WAY LINE .....
TRAVELED WAY .....
RAILROAD .....
RETAINING WALL .....
BASE OR SURVEY LINE .....
DROP INLET .....
BRIDGE OVER 20 FT. SPAN .....

STATE OF TENNESSEE

DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS

PLAN AND PROFILE OF PROPOSED STATE HIGHWAY

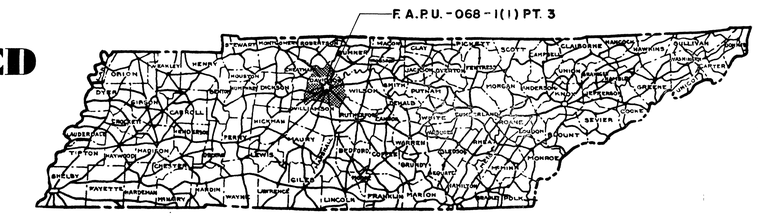
FEDERAL AID PROJECT NO. U-068-1(1) PART 3
SECTION-

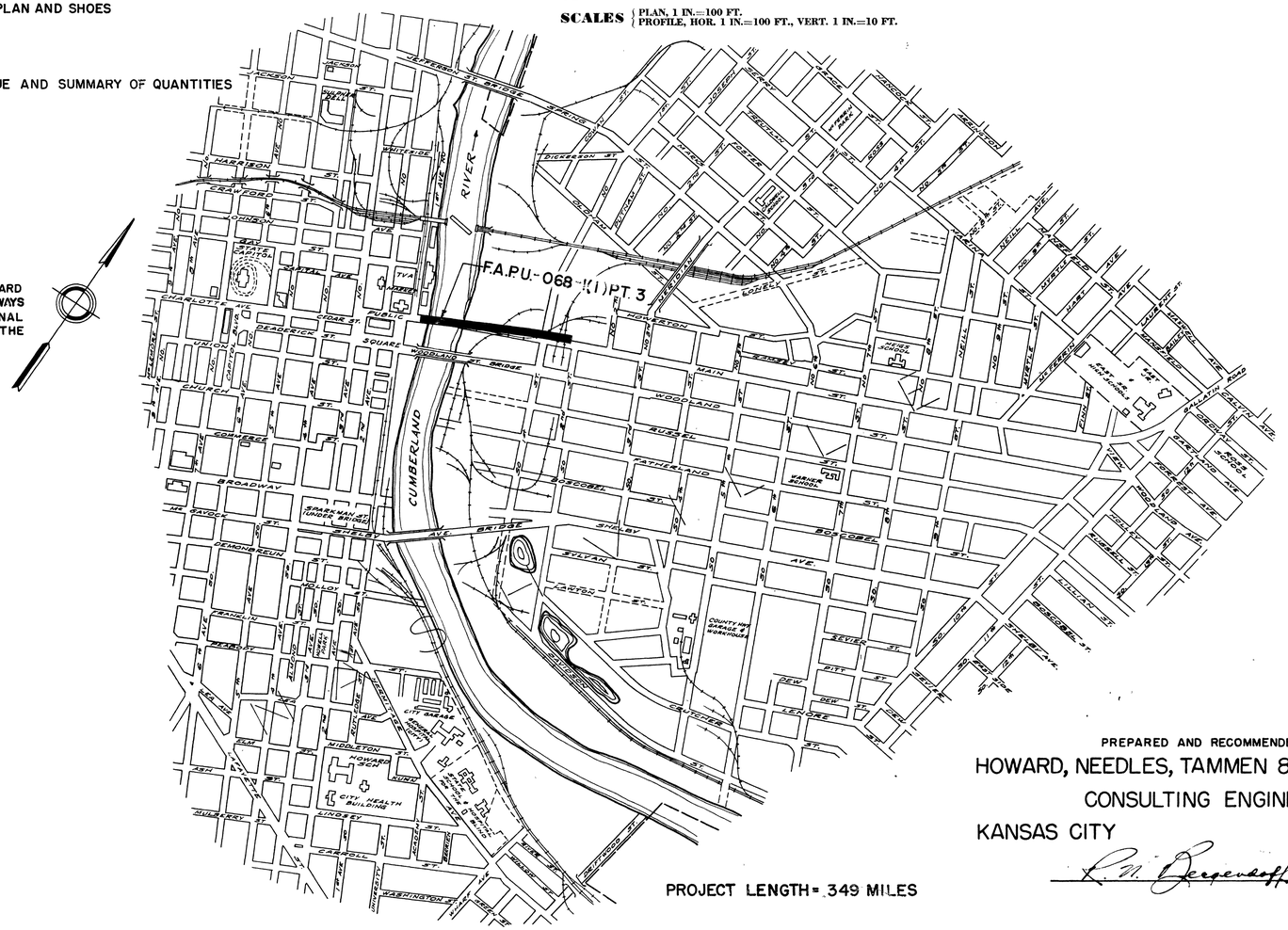
DAVIDSON COUNTY

THE CONSTRUCTION OF THE SUPERSTRUCTURE
OF THE VICTORY MEMORIAL BRIDGE

STATE HIGHWAY NO. 26 F.A.H.S. NO. 26

SCALES { PLAN, 1 IN.=100 FT.
PROFILE, HOR. 1 IN.=100 FT., VERT. 1 IN.=10 FT.





FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS	SECTION
8	TENN.	U-068-1(1)				

PART 3

ESTIMATED QUANTITIES SUPERSTRUCTURE

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
91-1	HOT ASPHALTIC CONCRETE (OPEN GRADED)	640	TON
92-1	HOT ASPHALTIC CONCRETE BINDER MIXTURE	640	TON
132-1	STRUCTURAL STEEL	6,686,000	LB.
132-2	STEEL CASTINGS	183,600	LB.
132-3	STEEL FORGINGS	63,200	LB.
132-11	WROUGHT IRON PLATES	7,600	LB.
132-12	8"WROUGHT IRON PIPE	120	LIN. FT.
135-4	CLASS "A" CONCRETE	2,850	CU. YD.
135-12	STEEL BAR REINFORCEMENT	600,000	LB.
506	HANDRAIL (SUPERSTRUCTURE)	4,720	LIN. FT.
507	HANDRAIL (STAIRWAY AT SPAN 14)	120	LIN. FT.
508	BRONZE INSCRIPTION PLATE AND ORNAMENT	LUMP SUM	
509	LIGHTING	LUMP SUM	

MICROFILMED

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

ESTIMATED QUANTITIES

SCALE
MADE J.G.S. DATE 10-16-51
TRCD G.D. DATE 10-17-51
CKD J.T. DATE 10-17-51

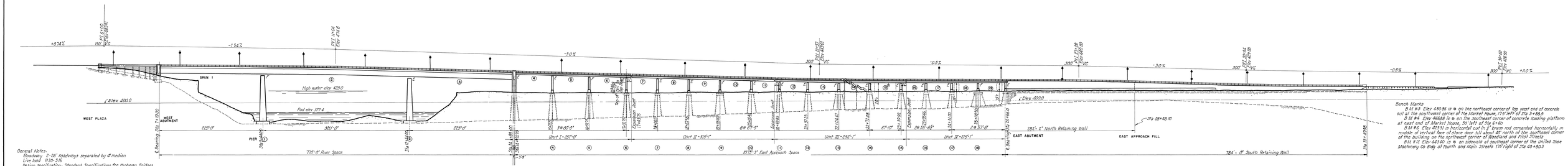
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

811 SHEET- 2

File E-14-39

FED ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	SECTION
6	TENN.	(068-B1)		-		

PART 3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WEST PLAZA
SPAN 1
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EAST ABUTMENT
EAST APPROACH FILL
Elev 420.0
High water elev 425.0
Pool elev 377.4
225'-0"
300'-0"
225'-0"
770'-0" River Spans
Unit 1 - 251'-0"
Unit II - 315'-1"
Unit III - 286'-1"
Unit IV - 215'-1"
10 13'-3" East Approach Spans
781'- 2" North Retaining Wall
784'- 0" South Retaining Wall
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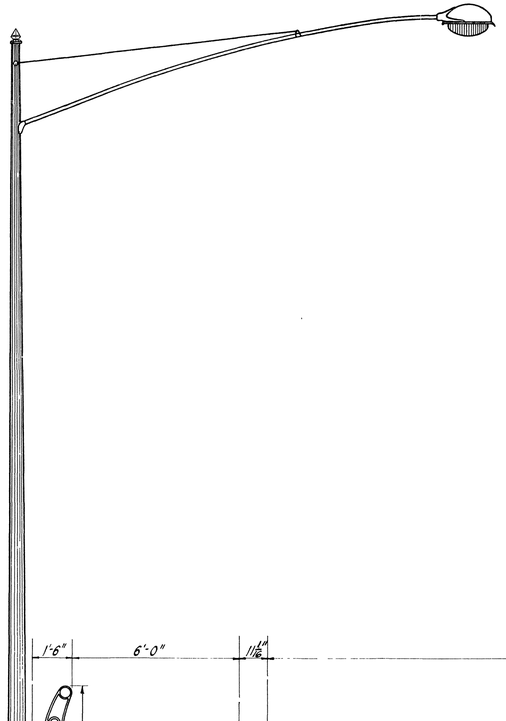
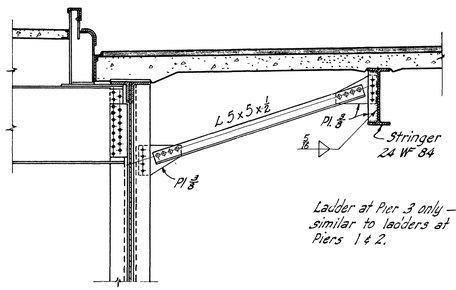
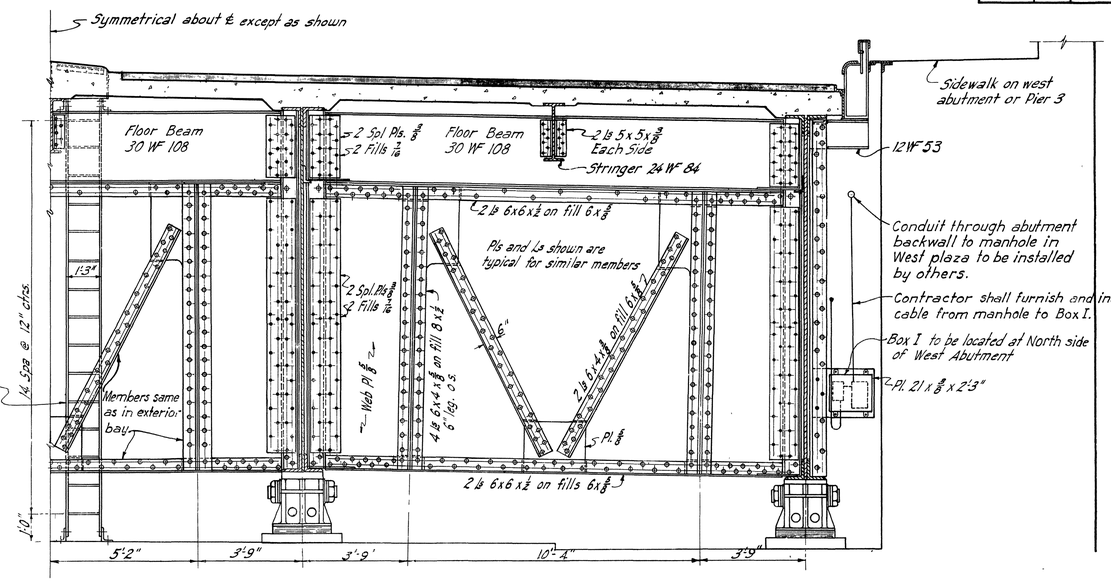
FED ROAD DIST NO.	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	SECTION
8	TENN.	U-068-1(1)				

PART 3

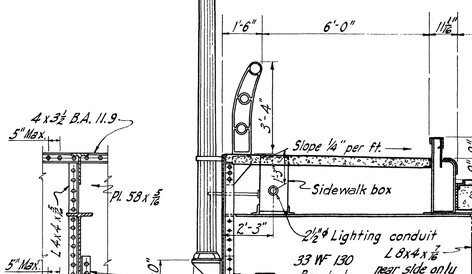




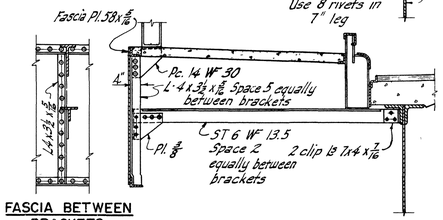
END SIDEWALK BRACKET



HALF SECTION AT END BEARINGS



FASCIA AT BRACKETS



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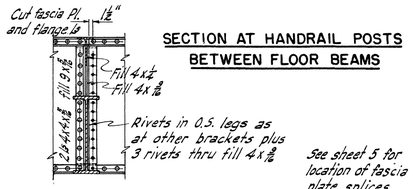
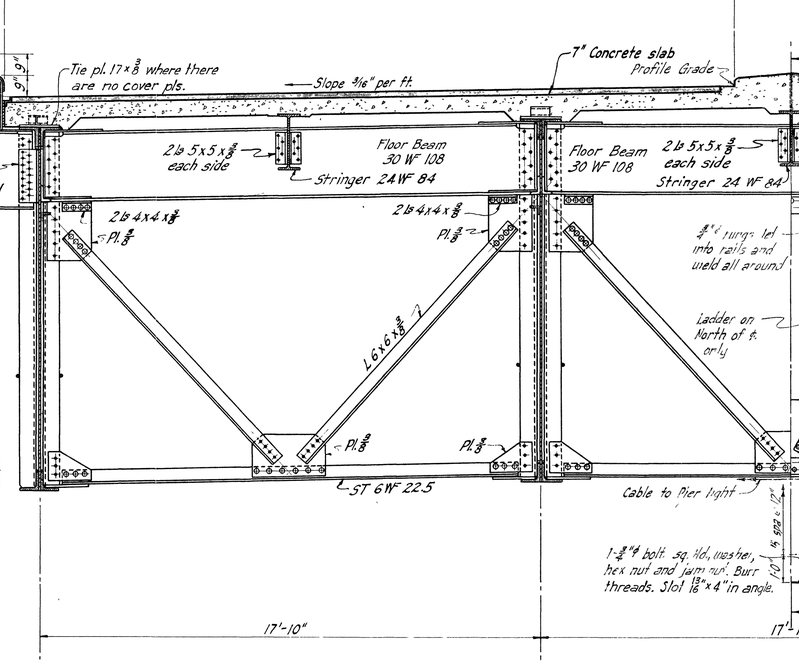


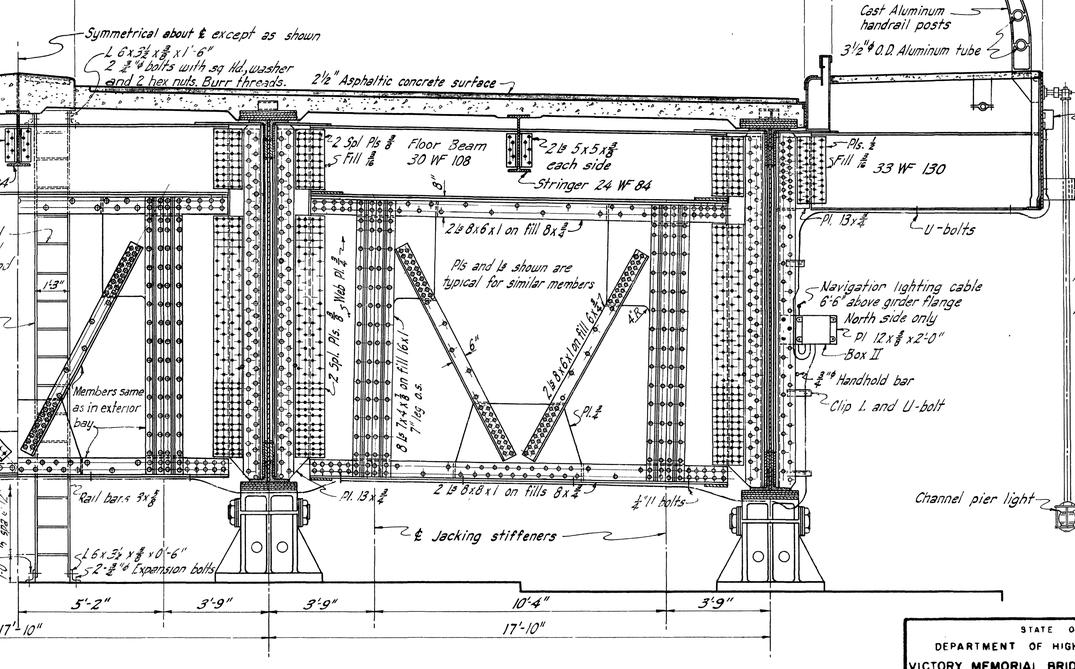
SECTION AT HANDRAIL POSTS BETWEEN FLOOR BEAMS

See sheet 5 for location of fascia plate splices

FASCIA AT SPLICES



HALF SECTION AT INTERMEDIATE FLOORBEAMS



HALF SECTION AT PIERS

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS.
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

RIVER SPANS
ROADWAY CROSS SECTIONS

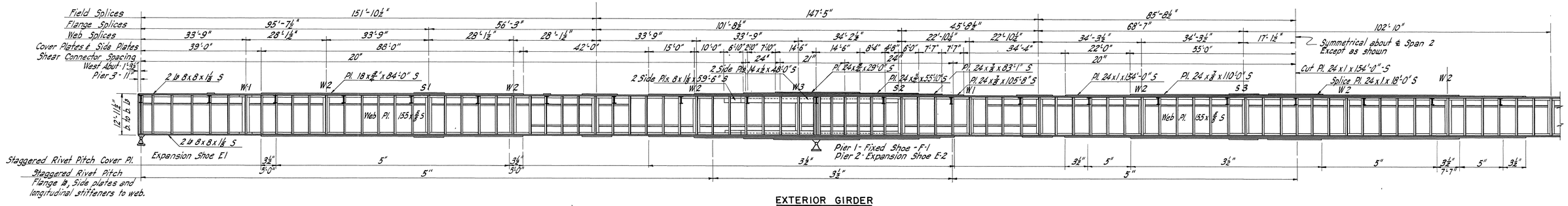
SCALE 3/16" = 1'-0" — HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS
MADE ECL FJE GMR DATE 12-15-50
TRCD GD SW BLB DATE 1-10-51
CHKD H P R DATE 2-14-51
KANSAS CITY NEW YORK
811 SHEET 4

303

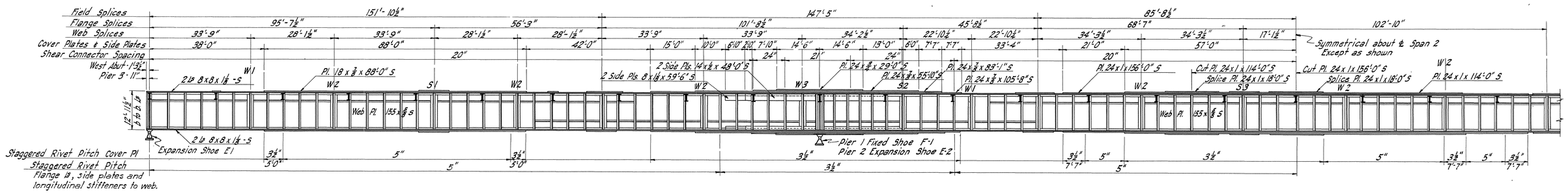
File E-14-44

FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS	SECTION
8	TENN	U-068-1(1)				

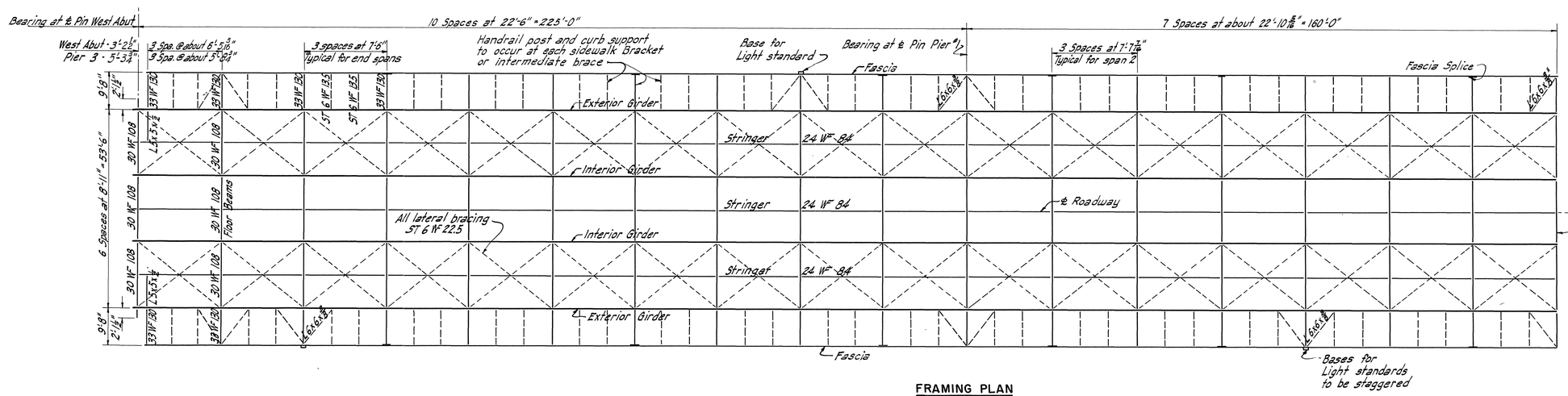
PART 3



EXTERIOR GIRDER



INTERIOR GIRDER



FRAMING PLAN

Notes:

All intermediate stiffeners shall be 2 Lⁱˢ 7x4 x½ on fills as required to limit crimping to ¾".

All stiffeners at intermediate panel points shall be 2 Lⁱˢ 7x4 x⅞ on fills as required and shall not be crimped.

Stiffeners at splices and points of bearing shall be as detailed. See Sheet 6.

All longitudinal stiffeners shall be 1-L 4x4 x⅜.

Cover plates and side plates at the bottom flanges shall be identical to those shown at the top flange.

All material marked with suffix "S" to be silicon steel. All other material to be carbon steel.

ESTIMATED QUANTITIES

Item No	Description	Silicon	Carbon	Total
132-1	Structural Steel Lbs	2,724,500 Lbs	1,288,100 Lbs	4,012,600 Lbs.

Includes material in girders, bracing, floor system and handhold bars.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

RIVER SPANS
FRAMING PLAN AND GIRDERS

SCALE ⅛" = 1'-0"
MADE E.C.L. DATE 9-27-50
TRCD. S.W.F. DATE 12-27-50
CKD. H.P.B. DATE 2-13-51

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

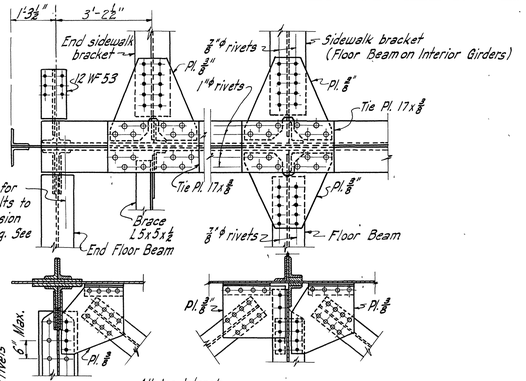
811 SHEET- 5

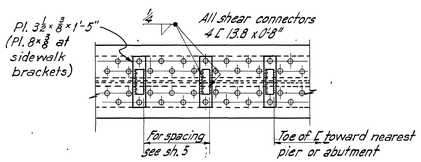
MICROFILMED
306

File E-14-47

FED ROAD DIST NO.	STATE	FED. AID PROJ. NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS	SECTION
8	TENN.	U-068-1(1)				

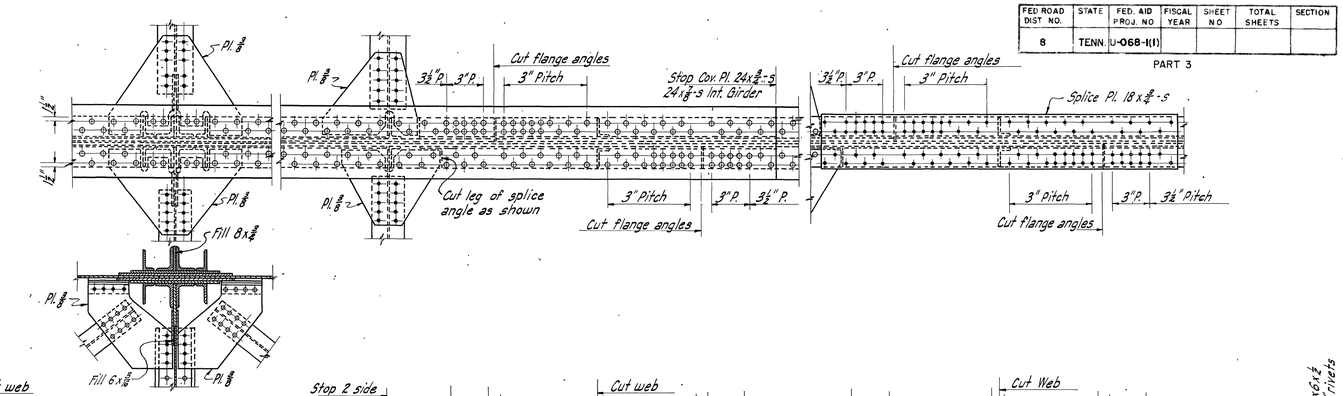
PART 3

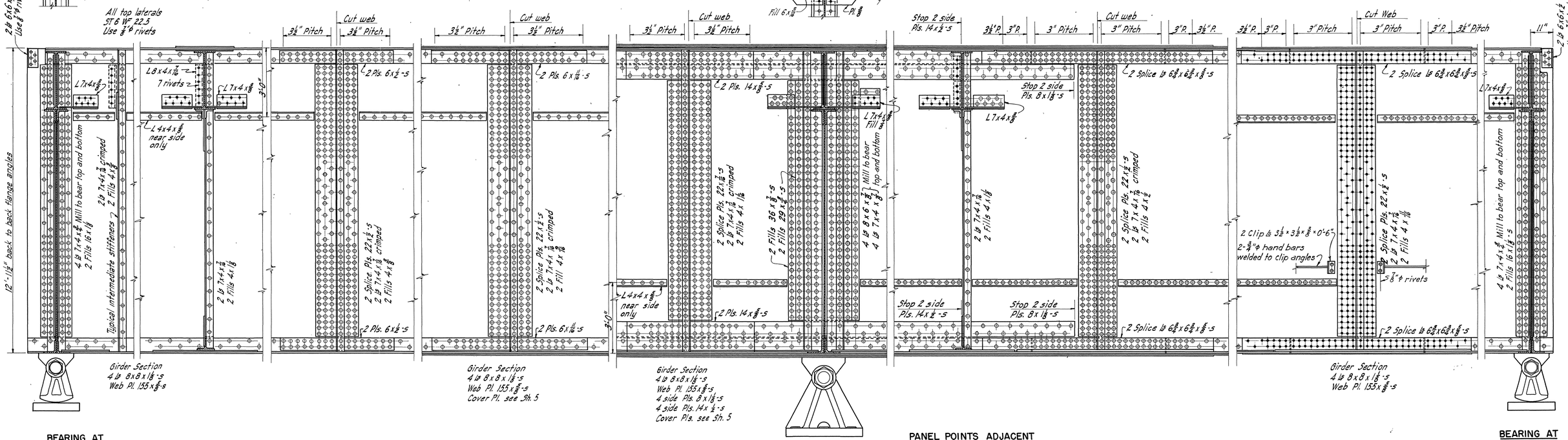




DETAIL AT SHEAR CONNECTORS

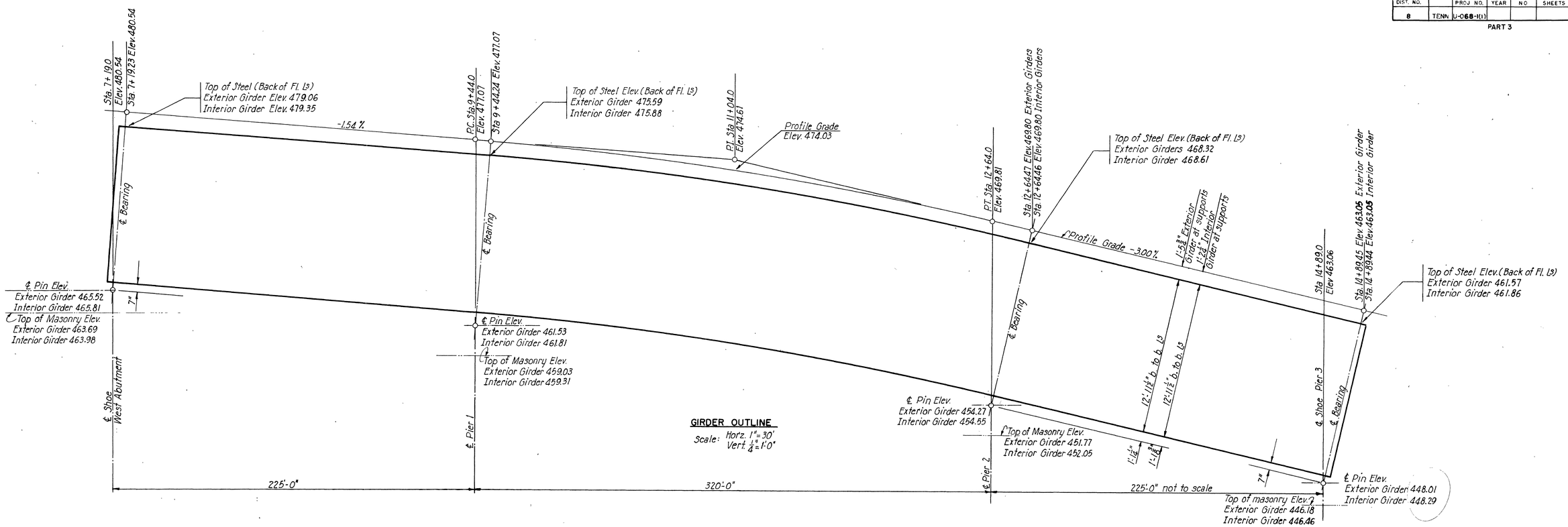
Note: Turn shear connectors occuring at sidewalk brackets 90° pointing toe toward ℄ bridge




2 Pls 6x½ Use ⅞"ϕ rivets
All top laterals 5T 6 WF 22.5 Use ⅞"ϕ rivets
3½" Pitch
Cut web
3½" Pitch
3½" Pitch
Cut web
3½" Pitch
3½" Pitch
Cut web
3½" Pitch
Stop 2 side Pls. 14x½-S
3½"P.
3"P.
3" Pitch
Cut web
3" Pitch
3"P.
3½"P.
3½"P.
3"P.
3" Pitch
Cut Web
3" Pitch
3"P.
3½" Pitch
11"
2 Pls 6x½ Use ⅞"ϕ rivets
12'-11½" back to back flange angles
L 7x4x⅞
L 8x4x7/16
7 rivets
L 7x4x⅞
3'-0"
L 4x4x⅝ near side only
2 Pls. 6x½-S
2 Pls. 6x11/16-S
2 Pls. 14x⅝-S
L 7x4x⅞ Fill ⅝
Mill to bear
L 7x4x⅞
Stop 2 side Pls. 8x1⅛-S
2 Splice Pls. 22x½-S
2 Splice Pls. 22x⅝

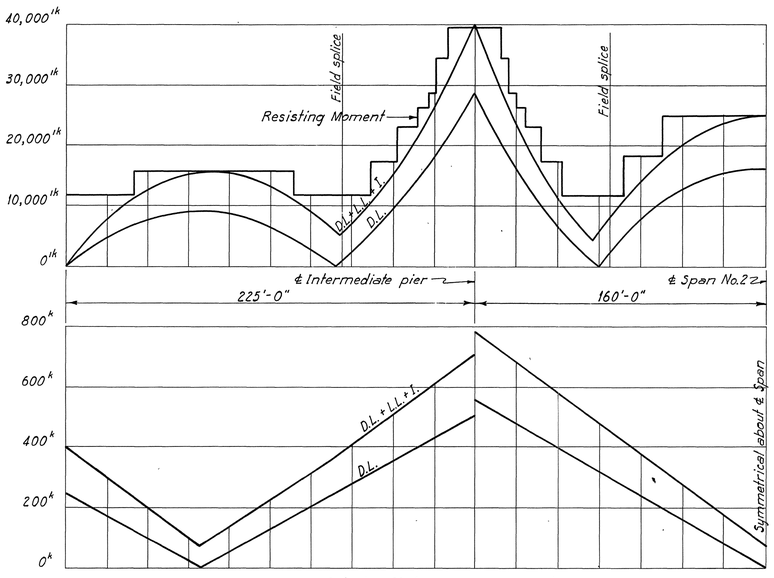
FED ROAD DIST. NO.	STATE	FED AID PROJ NO.	FISCAL YEAR	SHEET NO	TOTAL SHEETS	SECTION
8	TENN	U-068-1(1)				

PART 3

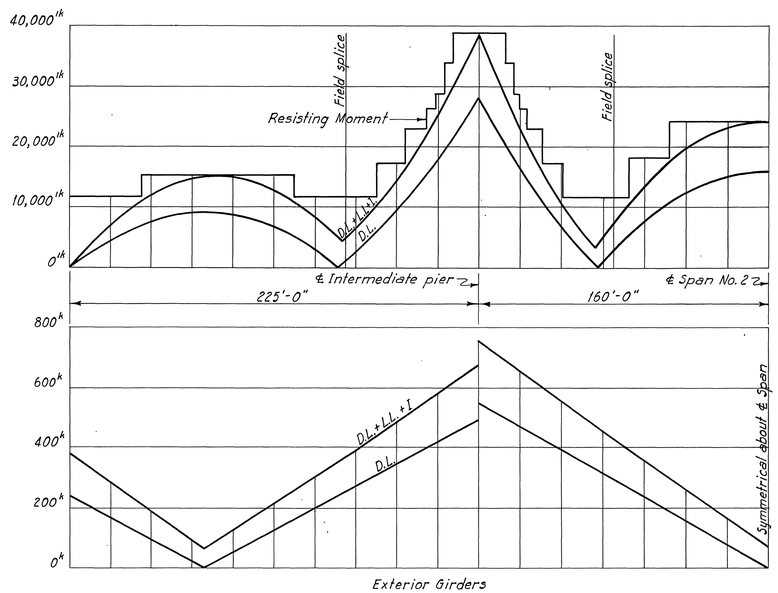


GIRDER OUTLINE

Scale: Horz. 1" = 30'
Vert. 1/4" = 1'-0"



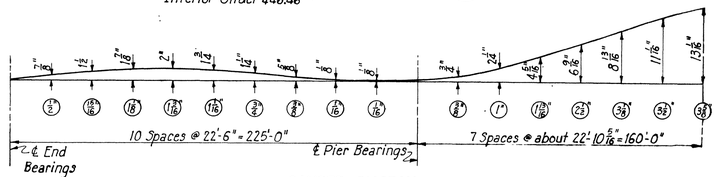
Interior Girders



Exterior Girders

MAXIMUM MOMENT AND MAXIMUM SHEAR DIAGRAMS

Scale: Horiz. 1" = 40' Vert. 1" = 12,000'k or 240k



CAMBER DIAGRAM

Interior and Exterior Girders

Dimensions shown in ◯ are the deflections which may be expected from the weight of the concrete roadway and sidewalk slabs including wearing surface.
Total amount of camber indicated includes camber for total dead load deflections (concrete and steel) in all spans and for vertical curve in center span.

Girder and Load		Reactions & Shears in Kips				Moments in Foot-Kips		
		W. Abut. & Pier 3	* Pier 1			Spans 1 & 3	Piers 1 & 2	Span 2
		R	V_W	V_E	R	+M	-M	+M
Exterior Girders	D.L.	244	495	550	1,045	8,700	28,130	15,910
	Sdwk. L.L.	32	42	48	88	1,510	2,520	2,110
	Rdwy. L.L.	93	127	141	241	4,110	7,110	5,590
	Imp.	13	16	18	30	600	890	620
	Total	382	680	757	1,404	14,920	38,650	24,230
Interior Girders	D.L.	249	505	561	1,066	8,870	28,700	16,230
	U.L.L.	93	141	161	302	4,660	8,620	6,510
	C.L.L.	38	38	38	38	1,150	1,410	1,380
	Imp.	19	23	25	43	850	1,260	880
	Total	399	707	785	1,449	15,530	39,990	25,000

* Shear values reverse for Pier 2.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

RIVER SPANS
GIRDER OUTLINE AND STRESS DIAGRAMS

SCALE
MADE E.C.L. DATE 10-2-50
TRCD H.R.R., R.R. DATE 11-14-50
CKD H.R.A.-D.L.J. DATE 10-10-51

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

811 SHEET 7

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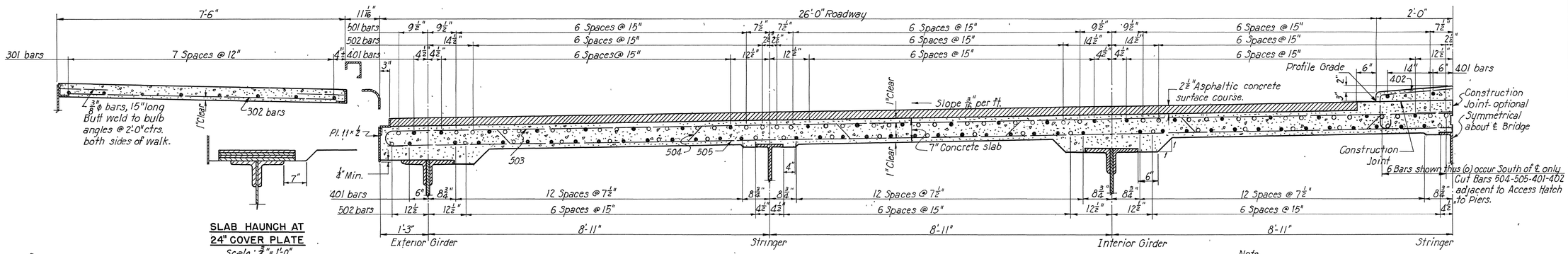
File E-14-44

FED ROAD DIST. NO.	STATE	FED AID PROJ. NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS	SECTION
8	TENN.	U-068-1(1)				

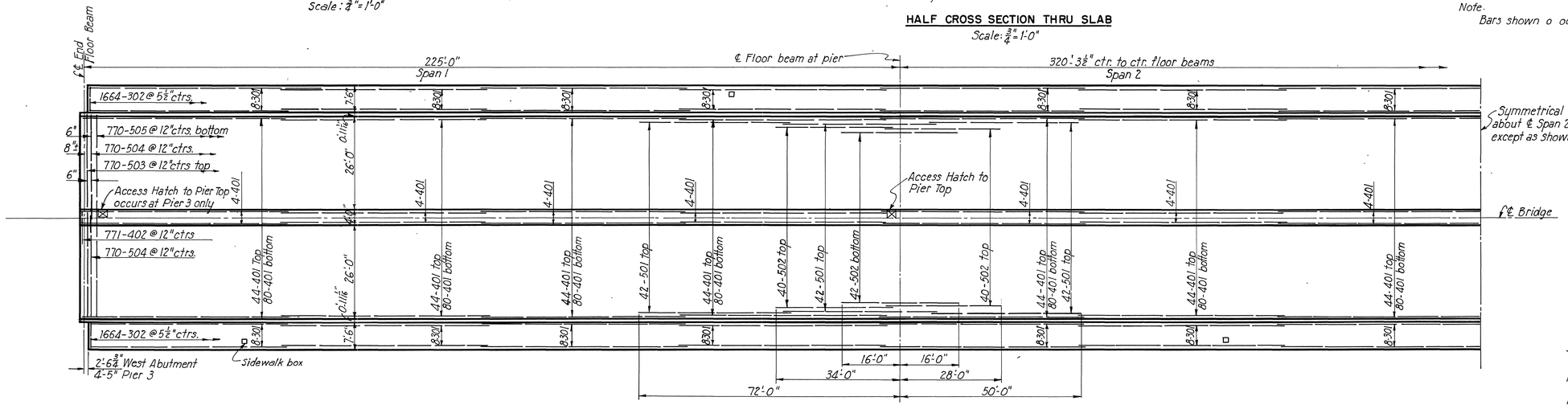
PART 3



SLAB HAUNCH AT 24" COVER PLATE
Scale: 3/4" = 1'-0"

HALF CROSS SECTION THRU SLAB
Scale: 3/4" = 1'-0"

Note.
Bars shown o occur only over piers

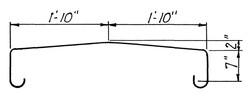


HALF SLAB PLAN
Scale: 1/16" = 1'-0"

ESTIMATED QUANTITIES			
Item No	Description		Quantity
91-1	Hot Asphaltic Concrete	*	270 Tons
92-1	Hot Asphaltic Concrete Binder Mixture	*	270 Tons
135-4	Class "A" Concrete		1250 Cu. Yds.
135-12	Steel Bar Reinforcement		243,800 Lbs.

* Based on weight of approximately 125 Lbs per Sq Yd.

REINFORCING STEEL SCHEDULE				
Mark	Size	No.	Length	Type
501	5/8" ϕ	252	42'-0"	Str.
502	5/8" ϕ	244	32'-0"	Str.
503	5/8" ϕ	770	51'-0"	100
504	5/8" ϕ	1540	30'-7"	119
505	5/8" ϕ	770	55'-8"	Str.
401	1/2" ϕ	1792	51'-0"	Str.
402	1/2" ϕ	771	6'-2"	120
301	3/8" ϕ	224	51'-0"	Str
302	3/8" ϕ	3328	7'-0"	Str



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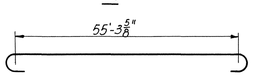

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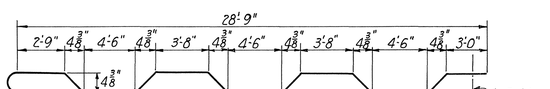

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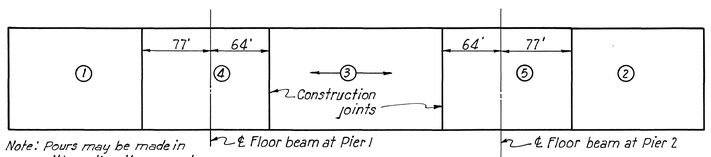
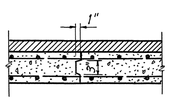


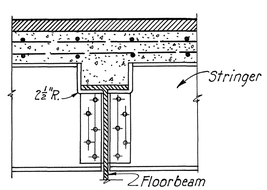
Note: Pours may be made in either direction except center span, which shall start at center and proceed both ways toward ends.

POURING SEQUENCE
No Scale



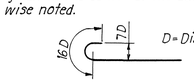
TRANSVERSE CONSTRUCTION JOINT
Scale: 3/4" = 1'-0"

Additional joints may be provided subject to the approval of the Engineer.



HAUNCH AT FLOOR BEAMS
Scale: 3/4" = 1'-0"

Notes:
All concrete shall be Class A
For details of curb and handrail post, see Sheet 17.
For requirements on proportioning, mixing, placing and curing concrete, see Specifications
Reinforcing steel shall be structural or intermediate grade
Minimum lap for reinforcing bars shall be 40 diameters.
All bar bends shall be in accordance with AASHO specifications, 1949, paragraph 2.5.4.
All dimensions for reinforcing bars are given to the center of the bars, unless otherwise noted.



Typical Hook

See Sheet 21 for provisions to be made in slab for traffic treadles.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

RIVER SPANS ROADWAY SLAB

SCALE 1/16" & 3/4" = 1'-0"
MADE E.C.L. DATE 10-9-50
TRCD R.R. DATE 11-28-50
CKD R.H.R. DATE 12-4-50

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

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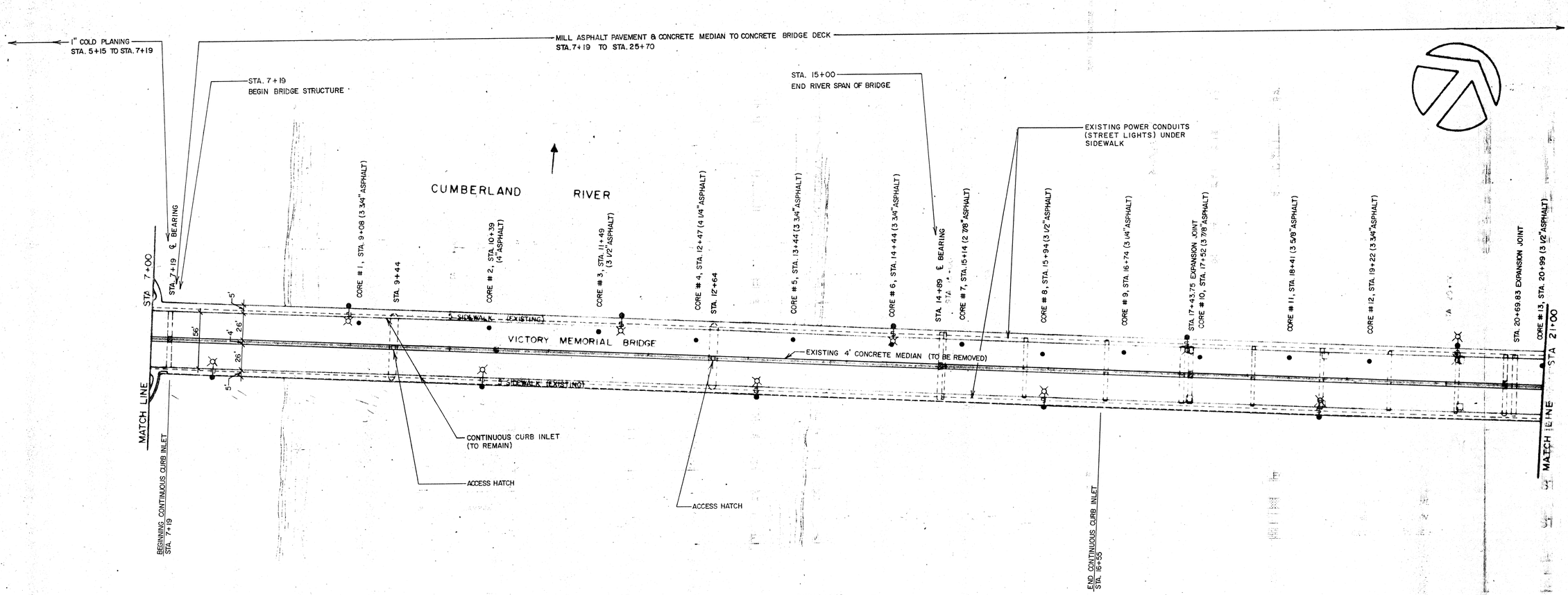
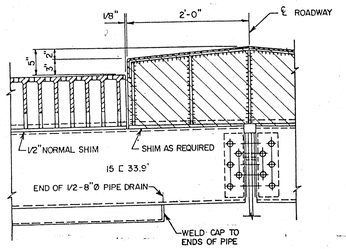
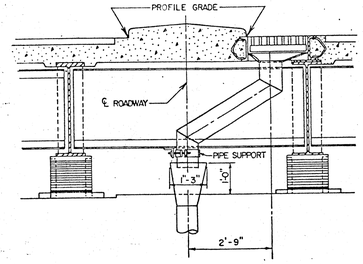
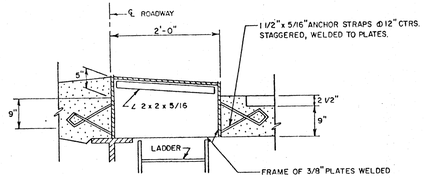




SECTION THRU EXISTING EXPANSION JOINT ⌀ MEDIAN
NOT TO SCALE



EXISTING STORM SEWER INTAKE AT MEDIAN
NOT TO SCALE
SEE DETAIL FOR PROPOSED ON SHT. C1.03a

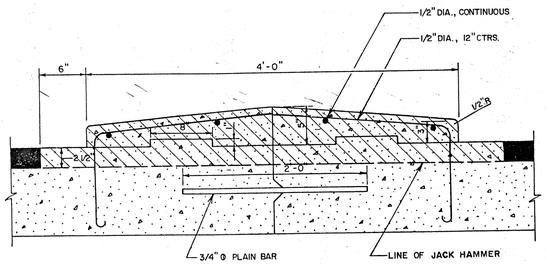


SECTION H - H

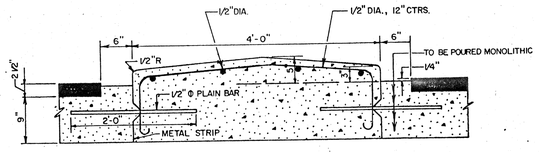
EXISTING ACCESS HATCH
NOT TO SCALE

NOTE:

1. CONTRACTOR IS TO BE AWARE THAT EXISTING ASPHALT PAVEMENT VARIES. SEE CORES # 1 THRU # 18.
2. EXISTING PAVEMENT IS TO BE REMOVED DOWN TO EXISTING CONCRETE SLAB.
3. WHEN PAVEMENT IS REMOVED, T.D.O.T. INSPECTORS ARE TO EXAMINE THE STRUCTURAL SLAB AND DETERMINE EXTENT AND SCOPE OF DECK REPAIR.
4. REPAIR IS TO BE PAID FOR AT UNIT PRICE OF PER SQUARE YARD AREA.



EXISTING MEDIAN STRIP FOR BRIDGE
NOT TO SCALE



NOTE - MEDIAN STRIP SHOWN ABOVE, EXISTING FROM EAST ABUTMENT (STA. 25+70 TO INTERSTATE DRIVE.

DETAIL OF EXISTING MEDIAN STRIP
NOT TO SCALE

LEGEND

- EXISTING ASPHALT
- EXISTING WATER METER
- EXISTING CATCH BASIN
- EXISTING GAS MAIN
- EXISTING FIRE HYDRANT
- EXISTING SIGN
- EXISTING ELECTRICAL BOX
- EXISTING LIGHT STANDARD
- EXISTING SHRUBS
- EXISTING SIGNAL POLE
- EXISTING TRAFFIC CONTROLLER
- PROPOSED SIGNAL POLE
- PROPOSED ELECTRICAL BOX
- LANE SIGNAL HEADS
- BARRICADE
- EXISTING SIGNAL HEAD
- EXISTING POWER POLE
- PROPOSED POLE & MAST ARM

LEGEND

- ASPHALT TO BE REMOVED
- CONCRETE TO BE REMOVED
- BRICK SIDEWALK TO BE REMOVED

CO
1.02.01
1.02.02
1.02.03
4.02.05

TUCKER HINSON ASSOCIATES, INC.
25 Century Boulevard
Suite 300, P.O Box 140992
Nashville, Tn 37214-0992
(615) 871-0100

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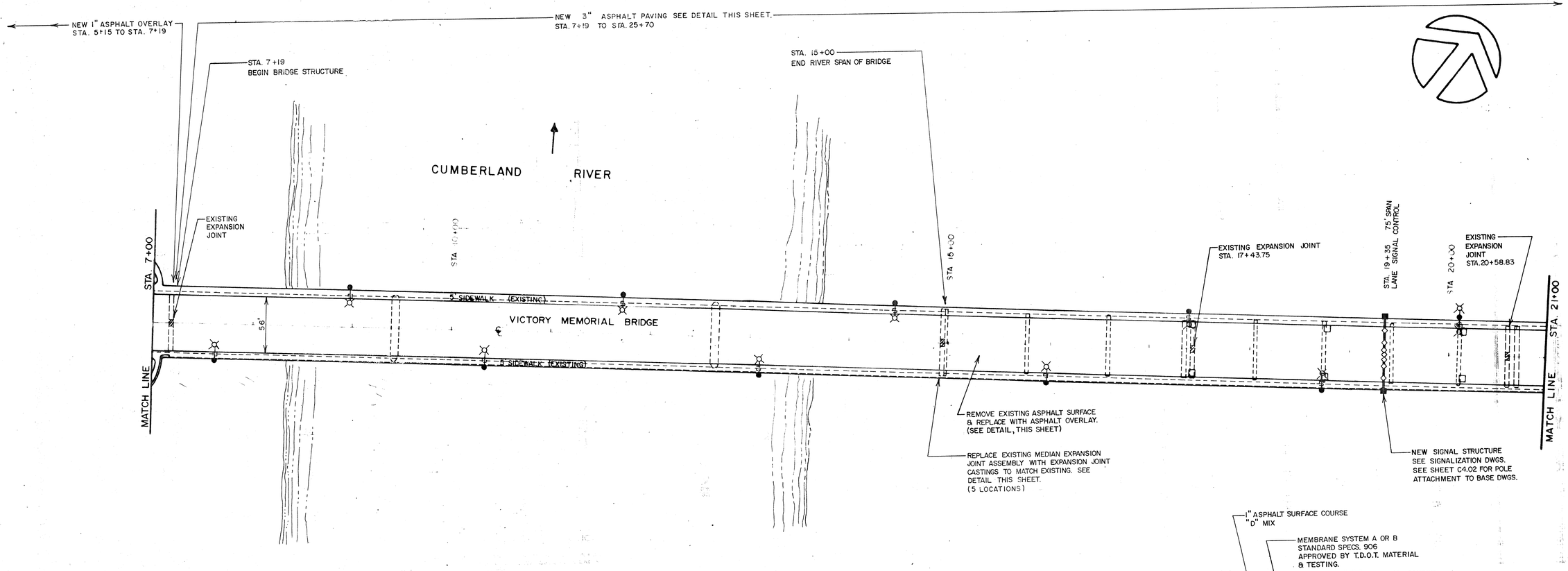
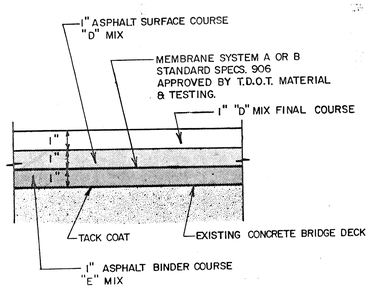
VICTORY MEMORIAL BRIDGE

EXISTING PAVEMENT, UTILITIES & DEMOLITION PLAN STA. 7+00 TO STA. 21+00

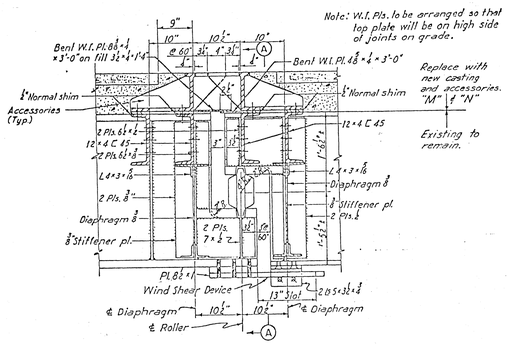
SCALE:	1"=50'-0"	THA FILE NO.:	88203
DRAWN BY:	DBH	CHECKED BY:	L.D.
REL. DATE:	3-1-89	SHEET NO.:	C1.02

E-14-45A

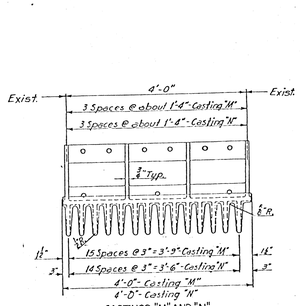




3" ASPHALT OVERLAY (TYPICAL)
NOT TO SCALE

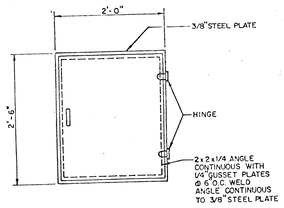


SECTION ACCROSS EXPANSION JOINT
Scale. 1"=1'-0"



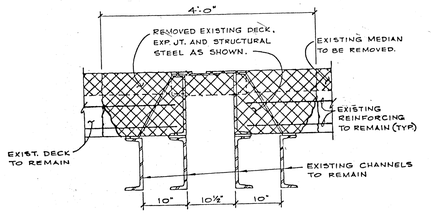
CASTINGS "M" AND "N"
Scale: 1"=1'-0"

Material: Cast steel
No. req'd.: Type "M"-5
Type "N"-5

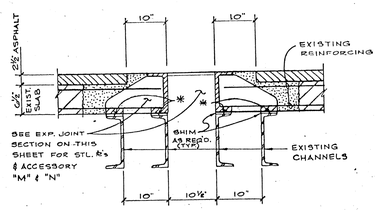


PLAN

PROPOSED ACCESS HATCH
NOT TO SCALE

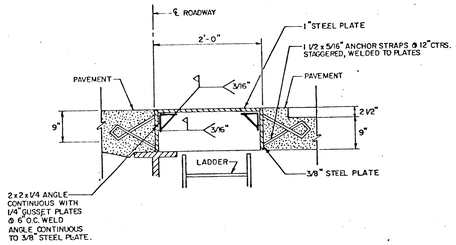


SECTION OF EXP. JOINT AT MEDIAN SHOWING EXISTING CONSTRUCTION TO BE REMOVED
NOT TO SCALE



SECTION OF EXP. JOINT SHOWING NEW CONSTRUCTION
NOT TO SCALE

NOTE: AT ✻, CLEAN STEEL MEMBERS THOROUGHLY FREE OF ALL CONCRETE BEFORE PLACING NEW CONCRETE.



SECTION H-H

PROPOSED ACCESS HATCH
NOT TO SCALE

LEGEND

- EXISTING MANHOLE
- EXISTING WATER METER
- EXISTING CATCH BASIN
- EXISTING GAS MAIN
- EXISTING FIRE HYDRANT
- EXISTING SIGN
- EXISTING ELECTRICAL BOX
- EXISTING LIGHT STANDARD
- EXISTING SHRUBS
- EXISTING SIGNAL POLE
- EXISTING TRAFFIC CONTROLLER
- PROPOSED SIGNAL POLE
- PROPOSED ELECTRICAL BOX
- LANE SIGNAL HEADS
- BARRICADE
- EXISTING SIGNAL HEAD
- EXISTING POWER POLE
- PROPOSED POLE & MAST ARM

LEGEND

- PROPOSED NEW ASPHALT PAVEMENT
- PROPOSED NEW CONCRETE SIDEWALK
- PROPOSED NEW BRICK SIDEWALK

L. Jerome H. Dey
4-6-89

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VICTORY MEMORIAL BRIDGE

PROPOSED PAVEMENT PLAN
STA. 7+00 TO STA. 21+00

SCALE: 1"=50'-0" THA FILE NO.: 88203
DRAWN BY: DBH CHECKED BY: L.D.

E-14-45B

02.01
02.02
02.03
02.05

NEW 3" ASPHALT PAVING SEE DETAIL ON SHEET C1.02a
STA. 7+19 TO STA. 25+70

NEW 1" ASPHALT OVERLAY
STA. 25+70 TO STA. 46+70

MATCH LINE STA. 21+00

NORTH MAIN STREET *

NORTH FIRST STREET *

EXISTING EXPANSION JOINT

STA 25+00

STA. 25+70

NORTH MAIN STREET *

STA 30+00

COTTONWOOD ST.

NEW SIGNAL STRUCTURE SEE SIGNALIZATION DWGS. C1.05

STA. 32+72 80' SPAN LANE SIGNAL CONTROL

LIMIT OF OVERLAY

RELOCATE EXISTING POLE

ONE WAY

RAMP DOWN

I - 65 OVERPASS ABOVE

I - 65

LIMITS OF OVERLAY

RELOCATE EXISTING CATCH BASIN

SOUTH MAIN STREET *

REMOVE EXISTING ASPHALT SURFACE & REPLACE WITH 1" ASPHALT OVERLAY.

☒ REMOVE CASTING & GRATE OF INLETS @ MEDIAN. PLUG PIPE WITH 3/8" STEEL PLATE AND OVERLAY WITH ASPHALT. SEE DETAIL BELOW.

SOUTH FIRST STREET *

SOUTH SECOND STREET *

VICTORY MEMORIAL BRIDGE APPROACH

END RETAINING WALL STA. 33+49.98

A B C D

P.T. 34+70

12'

12'

REWORK M.H.

RELOCATE EXISTING CATCH BASIN

STA. 33+22

STA. 33+70

25'8

20'9

10'8

INTERSTATE DRIVE

A B C D

SOUTH MAIN STREET

NEW TURNOUT LANE SEE DETAILS THIS SHEET

STA. 33+22 BEGIN RIGHT TURN LANE

ENGINEERED FILL AS REQ'D.

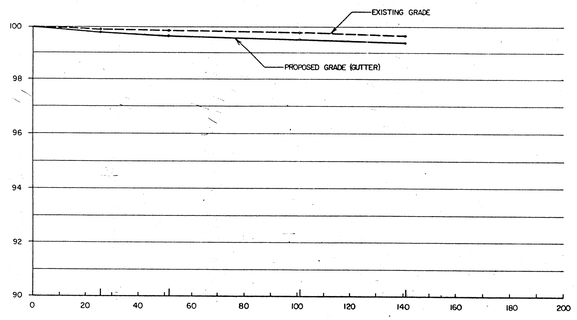
INTERSTATE DRIVE

STA. 36+00

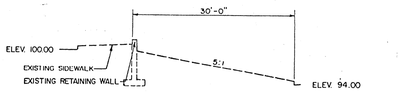
EXISTING TRAFFIC CONTROLLER

LIMITS OF OVERLAY

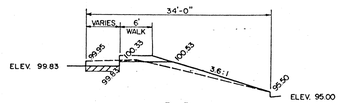
PLAN
RIGHT TURN LANE @ INTERSTATE DRIVE
NOT TO SCALE



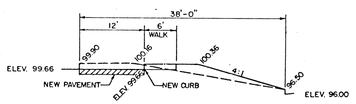
PROFILE
RIGHT TURN LANE @ INTERSTATE DRIVE
NOT TO SCALE



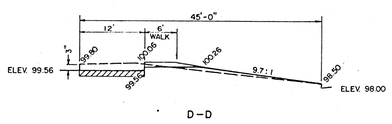
A – A
STA. 33+22



B – B

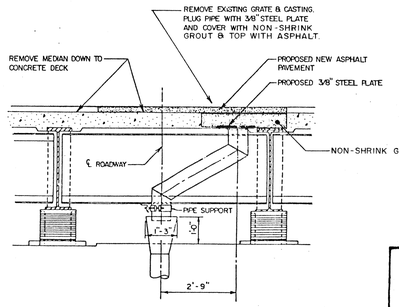


C – C
STA. 33+70



D – D

CROSS - SECTIONS
RIGHT TURN LANE @ INTERSTATE DRIVE
NOT TO SCALE



REMOVAL OF STORM SEWER INTAKES AT MEDIAN
NOT TO SCALE

NOTE: * BELOW GRADE OF BRIDGE

LEGEND

- EXISTING MANHOLE
- EXISTING WATER METER
- EXISTING CATCH BASIN
- EXISTING GAS MAIN
- EXISTING FIRE HYDRANT
- EXISTING SIGN
- EXISTING ELECTRICAL BOX
- EXISTING LIGHT STANDARD
- EXISTING SHRUBS
- EXISTING SIGNAL POLE
- EXISTING TRAFFIC CONTROLLER
- PROPOSED SIGNAL POLE
- PROPOSED ELECTRICAL BOX
- LANE SIGNAL HEADS
- BARRICADE
- EXISTING SIGNAL HEAD
- EXISTING POWER POLE
- PROPOSED POLE & MAST ARM

LEGEND

- PROPOSED NEW ASPHALT PAVEMENT
- PROPOSED NEW CONCRETE SIDEWALK
- PROPOSED NEW BRICK SIDEWALK

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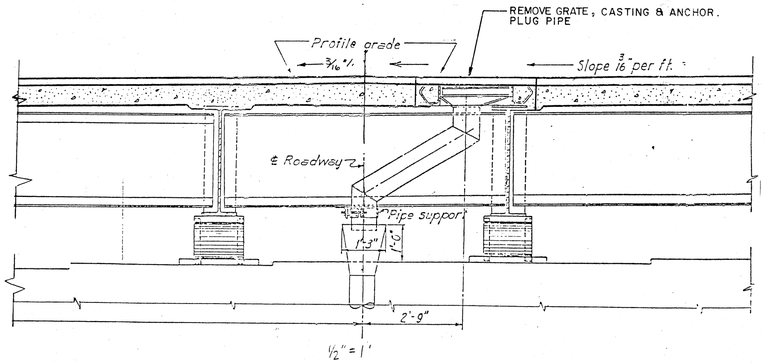
VICTORY MEMORIAL BRIDGE

PROPOSED PAVEMENT PLAN
STA. 21+00 TO STA. 37+00

SCALE: 1"= 50'-0" THA FILE NO.: 88203
DRAWN BY: DBH CHECKED BY: L.D.
REL. DATE: 3-1-89 SHEET NO.: C1.03a

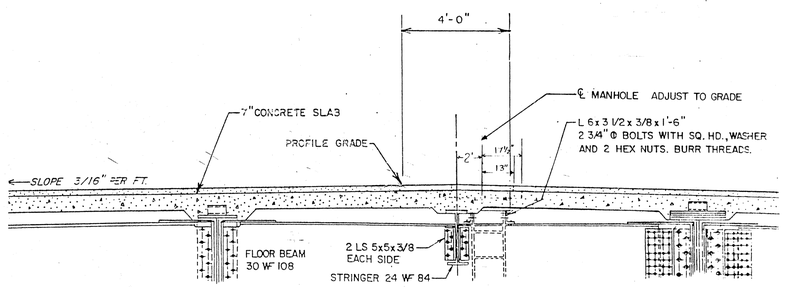
E-14-45C

03.01
03.02
03.03
06



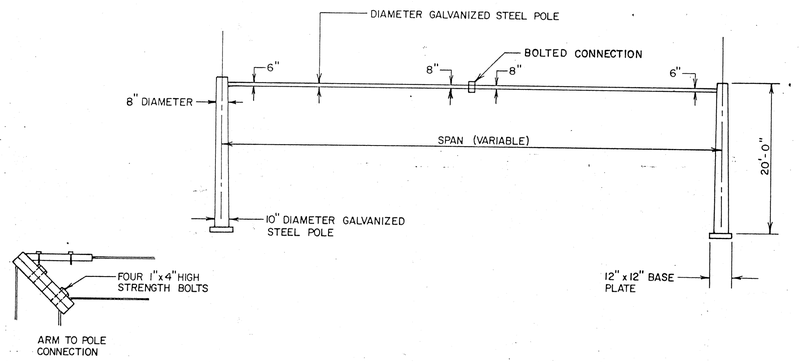
DETAIL OF CROWN IN SUPERELEVATED SECTIONS

NOT TO SCALE



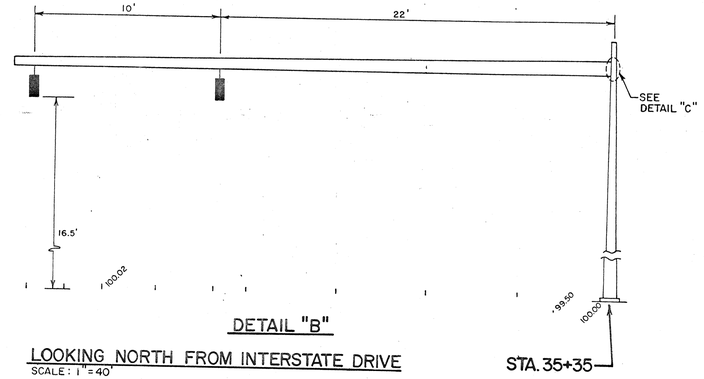
DETAIL OF CROWN IN NORMAL CROWN SECTIONS

NOT TO SCALE



GALVANIZED SIGNAL POLES & SPAN

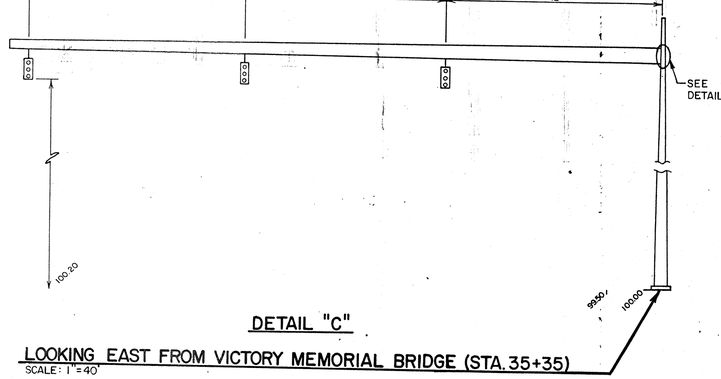
NOT TO SCALE



DETAIL "B"

LOOKING NORTH FROM INTERSTATE DRIVE

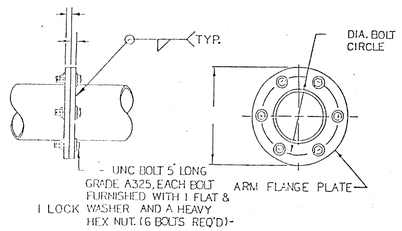
SCALE: 1" = 40'



DETAIL "C"

LOOKING EAST FROM VICTORY MEMORIAL BRIDGE (STA. 35+35)

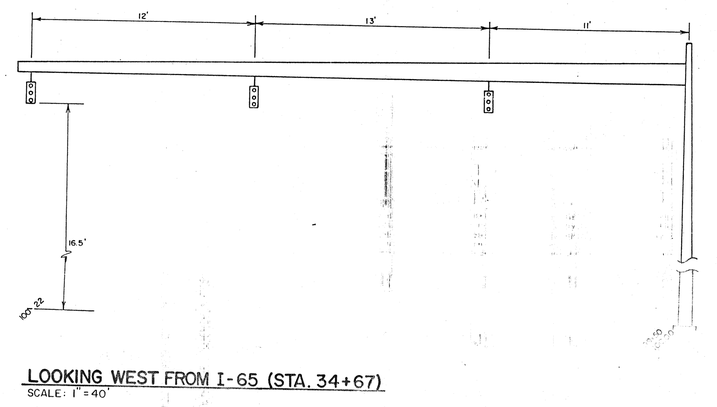
SCALE: 1" = 40'



NOTE: SEE GALVANIZED SIGNAL POLES & SPAN.

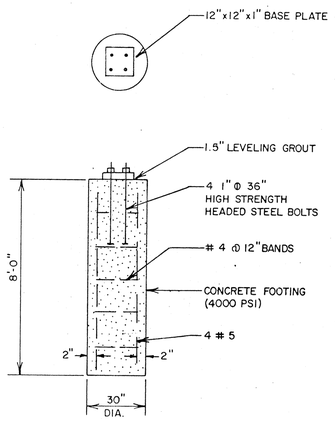
BOLTED CONNECTION

NOT TO SCALE



LOOKING WEST FROM I-65 (STA. 34+67)

SCALE: 1" = 40'



POLE FOOTING (GROUND LEVEL)

NOT TO SCALE

STA. 6+20 & STA. 32+72

LAWRENCE G. DAVIS REGISTERED ENGINEER AGRICULTURE CIVIL No. 19375 STATE OF TENNESSEE

4-5-89

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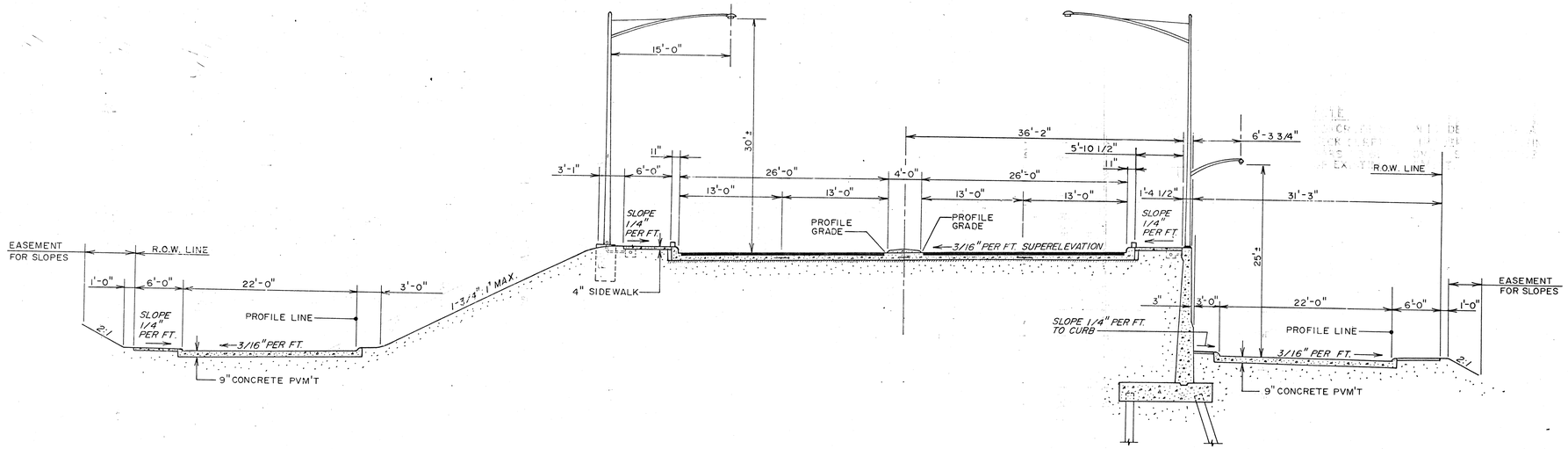
VICTORY MEMORIAL BRIDGE

PAVEMENT DETAILS

E-14-45D

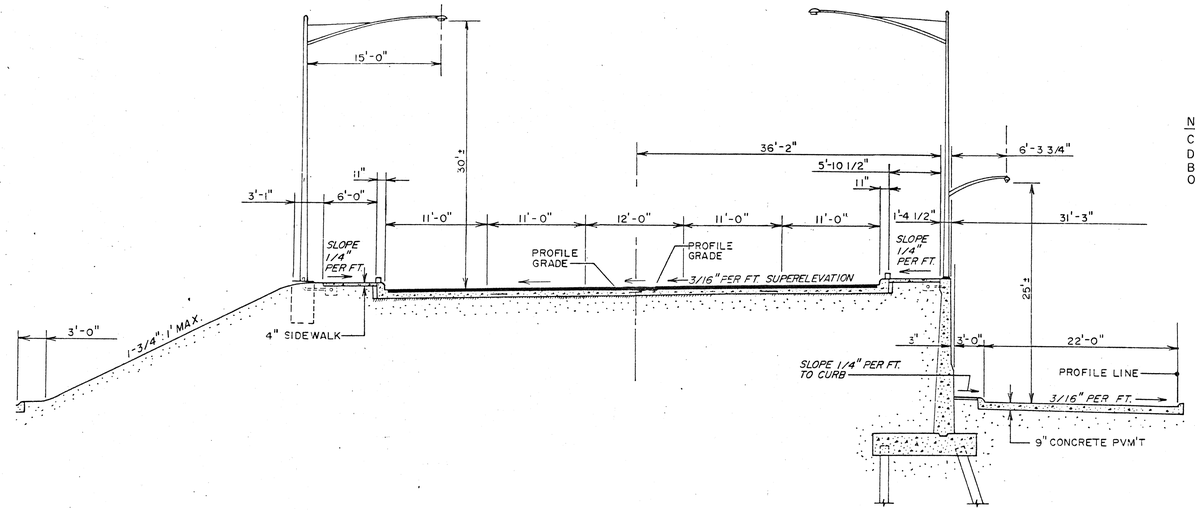
SCALE:	AS SHOWN	THA FILE NO.:	88203
DRAWN BY:	DSH	CHECKED BY:	L.D.
REL. DATE:	3-1-89	SHEET NO.:	C105



PRESENT CROSS SECTION - SINGLE RETAINING WALL

STA. 28+48.16 TO STA. 33+49.98.

NOT TO SCALE



PROPOSED CROSS SECTION - SINGLE RETAINING WALL

STA. 28+48.16 TO STA. 33+49.98

NOT TO SCALE

NOTE:
CONCRETE MEDIAN (5" DEPTH), ASPHALT AND CONCRETE DECK SURFACE (2 1/4" DEPTH) AND REINFORCING STEEL BARS TO BE REMOVED. SEE SHEET C2.05 FOR DETAILS OF EXISTING PAVEMENT.

Lawrence & Day

4-5-89

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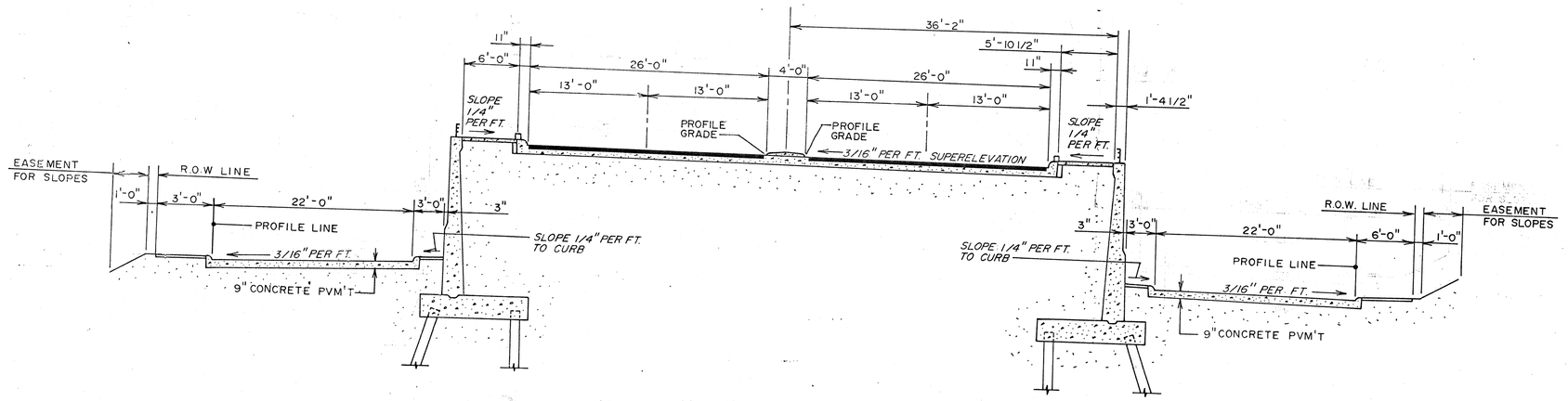
VICTORY MEMORIAL BRIDGE

CROSS SECTIONS
PRESENT AND PROPOSED
EAST APPROACH

SCALE: AS SHOWN THA FILE NO.: 88203
DRAWN BY: DBH CHECKED BY: L.D.
REL. DATE: 3-1/89 SHEET NO.: C2.01

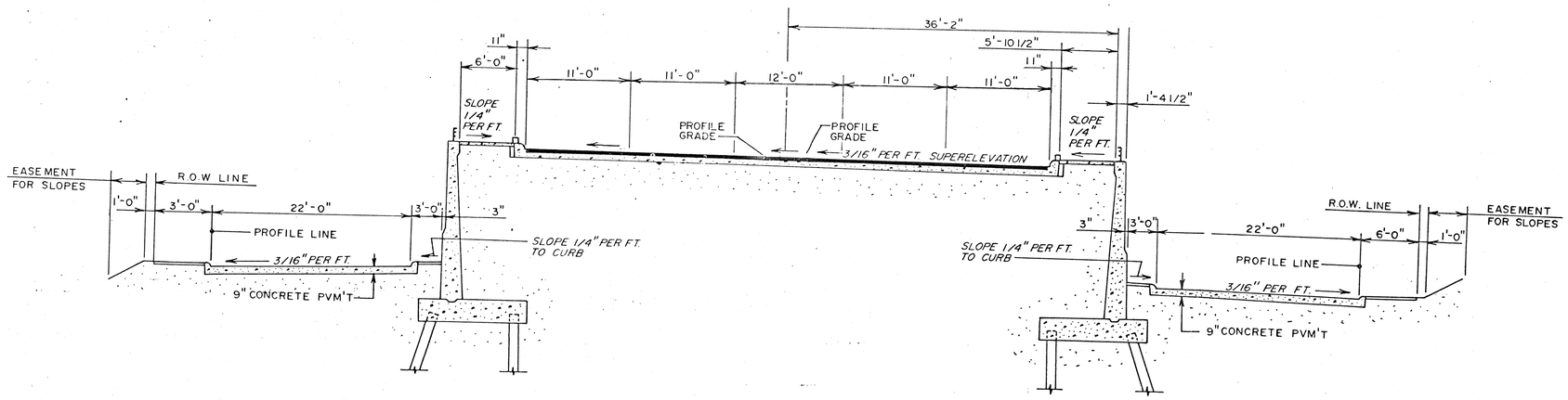
E-14-45E



PRESENT CROSS SECTION – SUPERELEVATED DOUBLE RETAINING WALL

STA. 25+66.00 TO STA. 28+48.16

NOT TO SCALE



PROPOSED CROSS SECTION – SUPERELEVATED DOUBLE RETAINING WALL

STA. 25+66.00 TO STA. 28+48.16

NOT TO SCALE

Lawrence H. Doss

4-5-89

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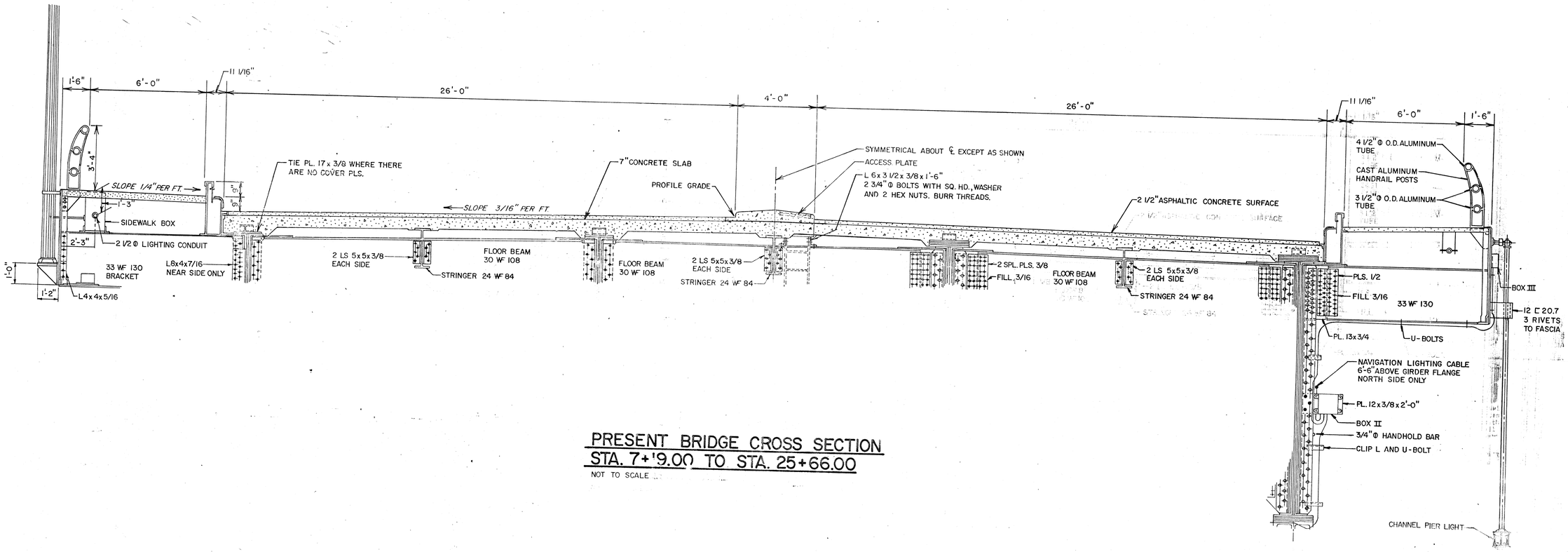
VICTORY MEMORIAL BRIDGE

CROSS SECTIONS
PRESENT AND PROPOSED
EAST APPROACH

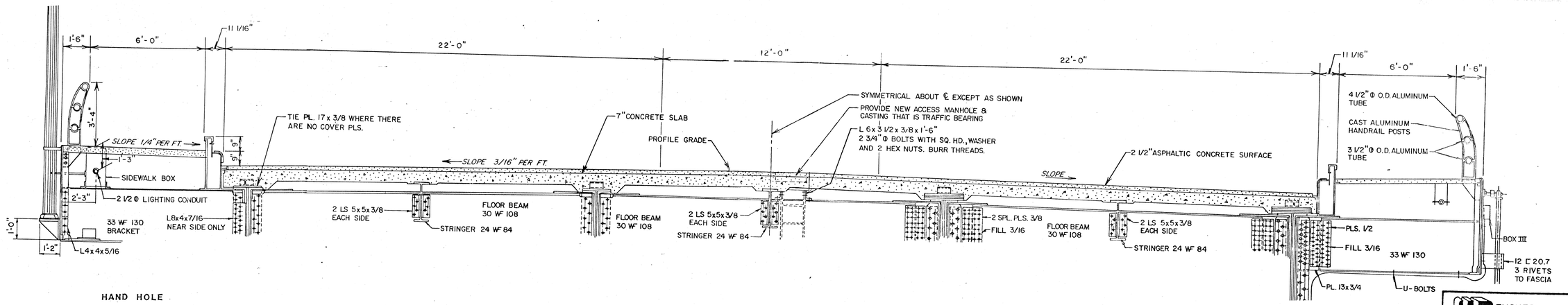
SCALE: AS SHOWN THA FILE NO.: 88203
DRAWN BY: DBH CHECKED BY: L.D.
REL. DATE: 3-1-89 SHEET NO.: C2.02

E-14.45F

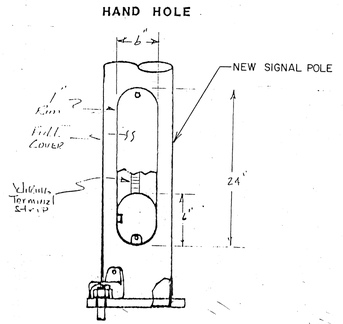


PRESENT BRIDGE CROSS SECTION
STA. 7+19.00 TO STA. 25+66.00

NOT TO SCALE



HAND HOLE



PROPOSED BRIDGE CROSS SECTION
STA. 7+19.00 TO STA. 25+66.00

NOT TO SCALE

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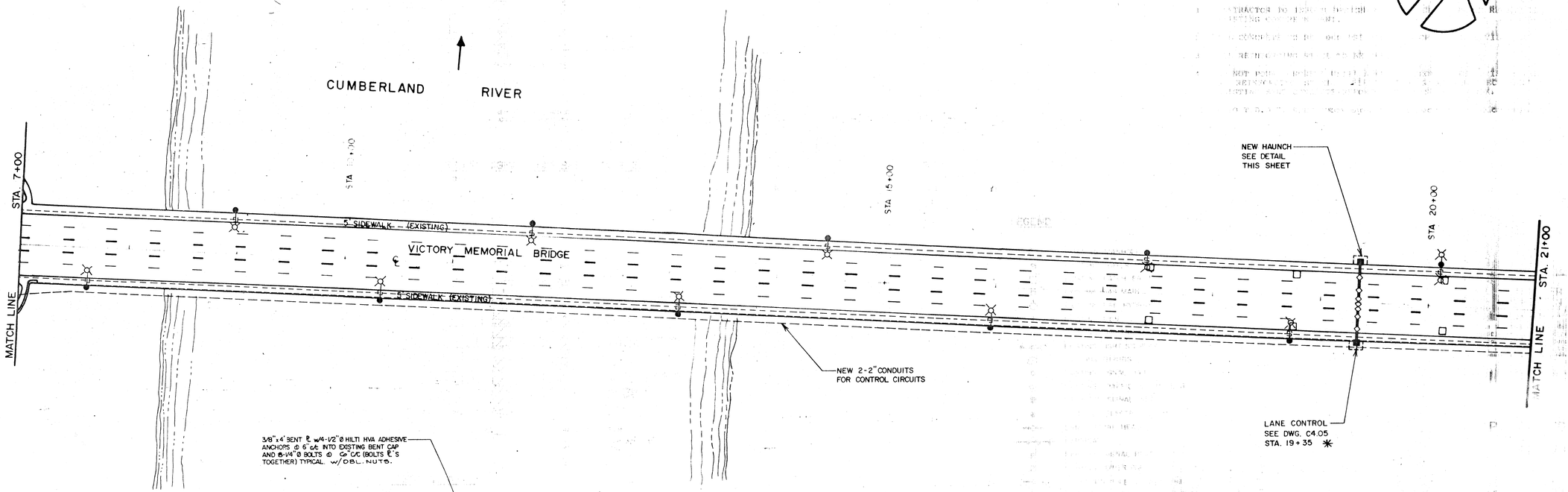
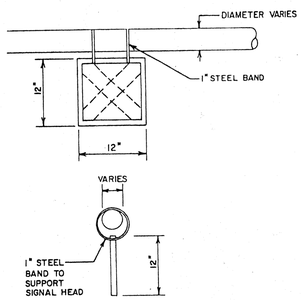
VICTORY MEMORIAL BRIDGE

CROSS SECTIONS
PRESENT AND PROPOSED
BRIDGE

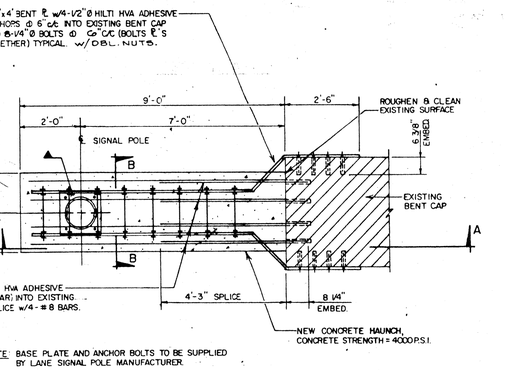
E-14-45G

SCALE:	AS SHOWN	THA FILE NO.:	88203
DRAWN BY:	DBH	CHECKED BY:	L.D.
REL. DATE:	3-1-89	SHEET NO.:	C2.03



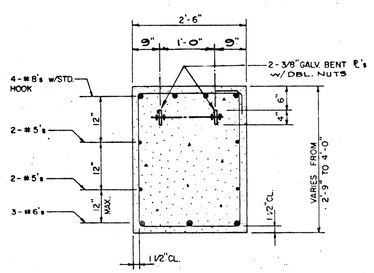


LANE SIGNAL DETAIL
NOT TO SCALE

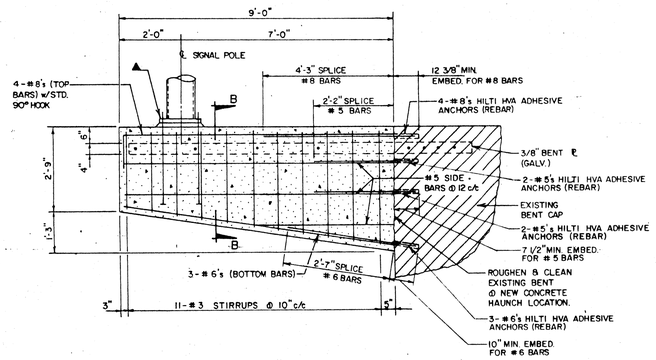


▲ NOTE: BASE PLATE AND ANCHOR BOLTS TO BE SUPPLIED BY LANE SIGNAL POLE MANUFACTURER.

PLAN VIEW OF CONCRETE HAUNCH FOR LANE SIGNAL POLE BASE, STA. 19+35
NOT TO SCALE
AT EACH SIDE OF DECK



HAUNCH SECTION B-B
NOT TO SCALE
NOTE: TEXTURE COAT HAUNCH (MOUNTAIN GREY)



HAUNCH SECTION A-A
NOT TO SCALE

NOTE:

1. CONTRACTOR TO INFORM DESIGNER BEFORE DRILLING OF RE-BAR INTO EXISTING CONCRETE BENT.
2. ALL CONCRETE TO BE 4000 PSI. ALL CONCRETE TO BE VIBRATED.
3. ALL REINFORCING STEEL TO BE GRADE 60.
4. DO NOT POUR CONCRETE UNTIL APPROVAL FROM DESIGNER IS OBTAINED ON REINFORCING STEEL. FIELD TESTING MAY BE NECESSARY ON EXISTING BENT CONCRETE BEFORE COMMENCING WITH WORK.

REFER TO T.D.O.T. SPEC. PROVISION 604 CONCRETE STRUCTURES.

LEGEND

- EXISTING MANHOLE
- EXISTING WATER METER
- EXISTING CATCH BASIN
- EXISTING GAS MAIN
- EXISTING FIRE HYDRANT
- EXISTING SIGN
- EXISTING ELECTRICAL BOX
- EXISTING LIGHT STANDARD
- EXISTING SHRUBS
- EXISTING SIGNAL POLE
- EXISTING TRAFFIC CONTROLLER
- PROPOSED SIGNAL POLE
- PROPOSED ELECTRICAL BOX
- LANE SIGNAL HEADS
- BARRICADE
- EXISTING SIGNAL HEAD
- EXISTING POWER POLE
- PROPOSED POLE & MAST ARM
- ✱ **SEE THIS SHEET FOR HAUNCH DETAILS.**

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VICTORY MEMORIAL BRIDGE

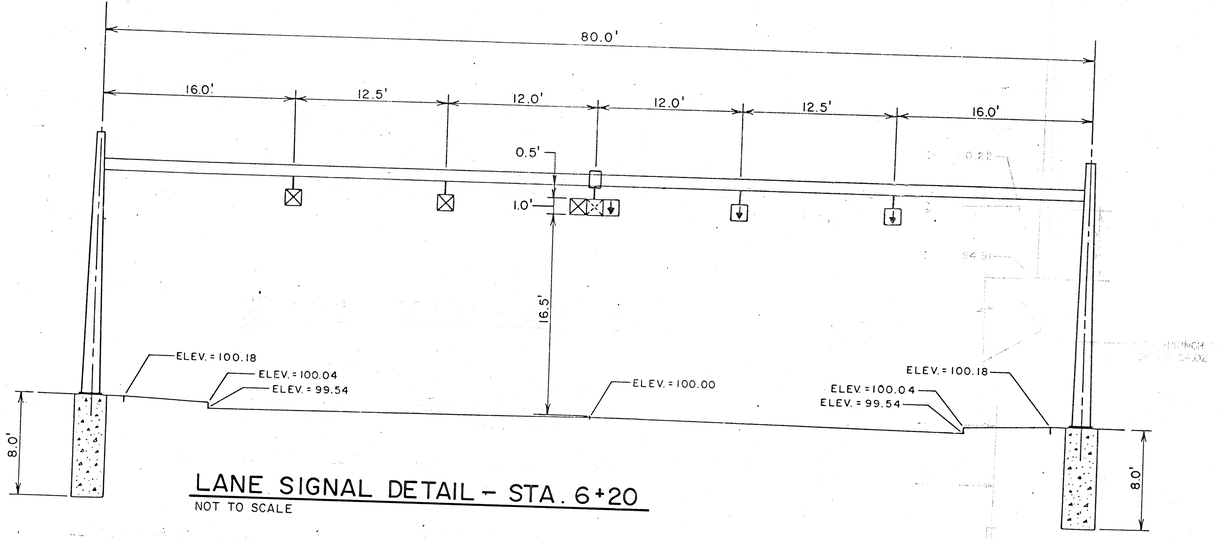
PROPOSED SIGNALIZATION PLAN

STA. 7+00 TO STA. 21+00

SCALE: 1"=50'-0" THA FILE NO.: 88203
DRAWN BY: DBH CHECKED BY: L.D.
REL. DATE: 3-1-89 SHEET NO.: C4.02

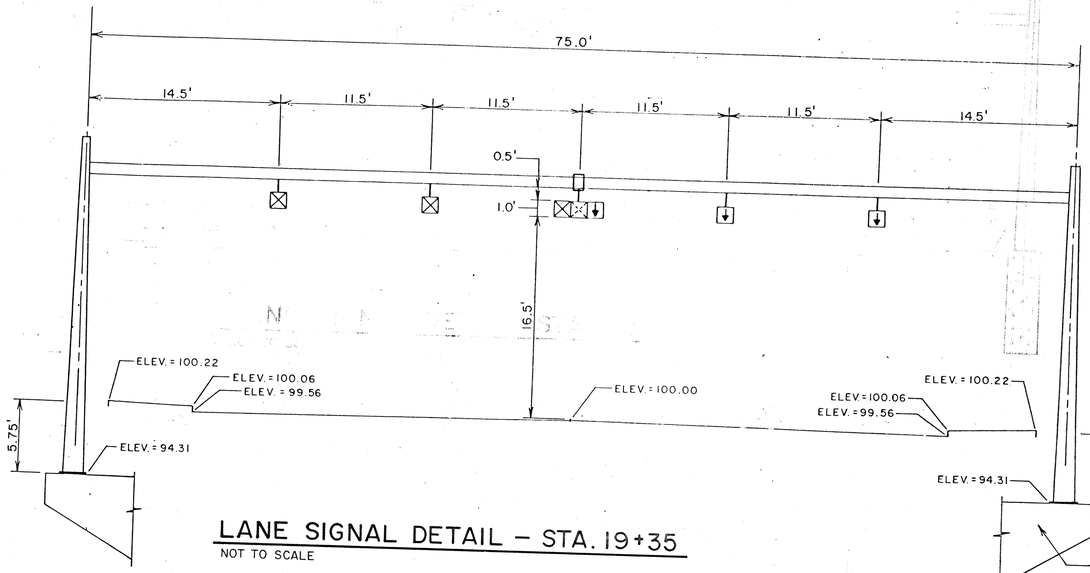
6-14-45H

C4.01
C4.02
C4.03
C4.04
C4.05



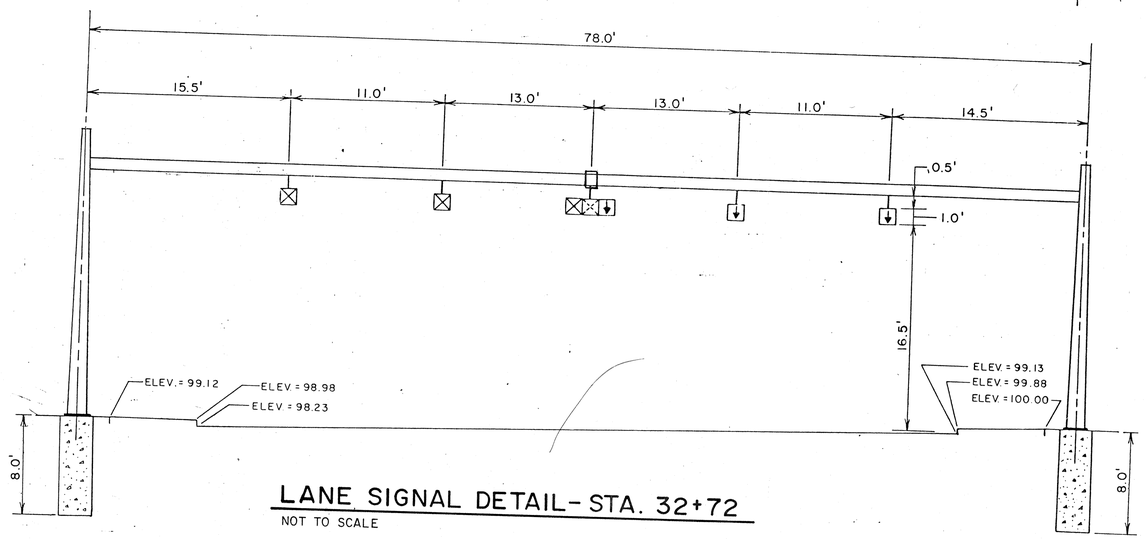
LANE SIGNAL DETAIL - STA. 6+20

NOT TO SCALE



LANE SIGNAL DETAIL - STA. 19+35

NOT TO SCALE



LANE SIGNAL DETAIL - STA. 32+72

NOT TO SCALE

NOTE:

ALL ELEVATIONS ASSUMED. NOT FIELD VERIFIED.

4-5-89

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VICTORY MEMORIAL BRIDGE

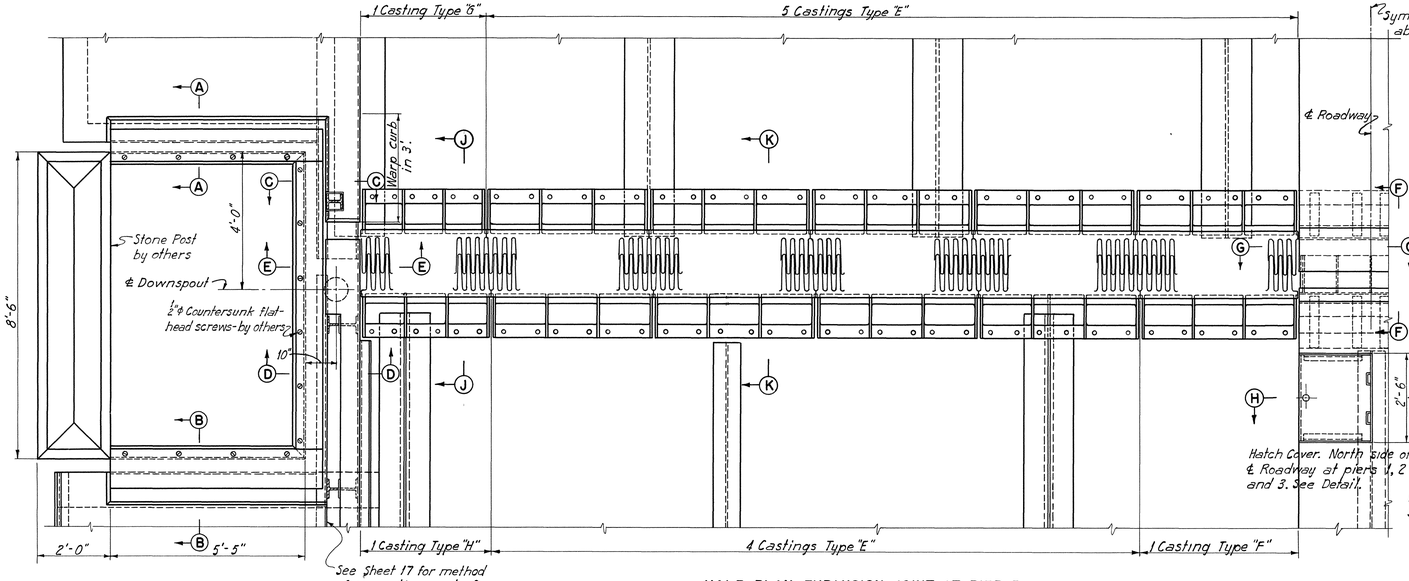
LANE SIGNAL DETAILS

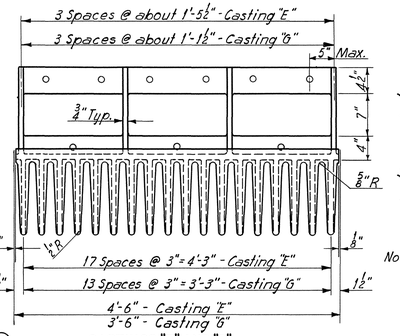
E-14-451

SCALE: AS SHOWN THA FILE NO.: 88203
DRAWN BY: DBH CHECKED BY: L.D.
REL. DATE: 3/1/89

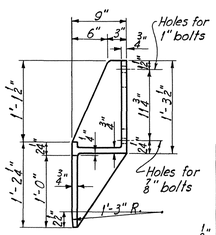
FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS	SECTION
8	TENN	U-068-1(1)				

PART 3

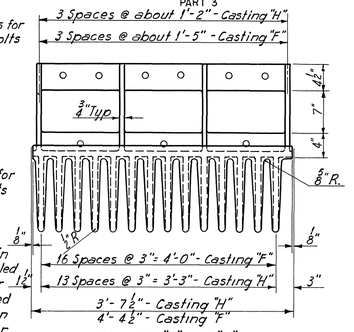




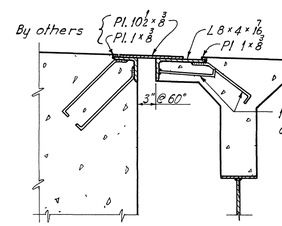
CASTINGS "E" AND "G"
Scale: 1" = 1'-0"
Casting "E" shown
Material: Cast steel
No req'd: Type "E" - 18
Type "G" - 2



Note: Rear anchor bolt holes in castings to be 1⅛"ϕ drilled for 1" bolts. Front anchor bolt holes to be ⅞"ϕ drilled for ⅝" bolts. Holes shown are minimum number required.



CASTINGS "F" AND "H"
Scale 1" = 1'-0"
Casting "H" shown
Material: Cast steel
No req'd. Type "F" - 2
Type "H" - 2



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

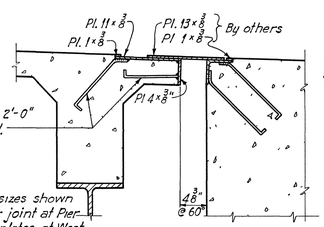
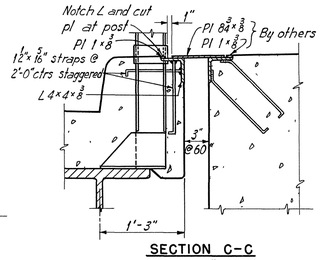
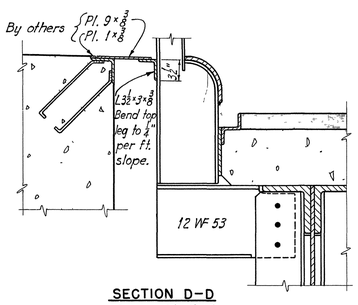


Plate sizes shown are for joint at Pier 3. For plates at West Abut. see plan.

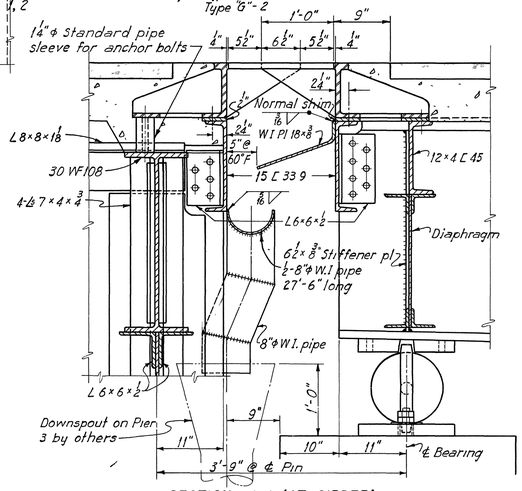
SECTION B-B
Scale: 1" = 1'-0"



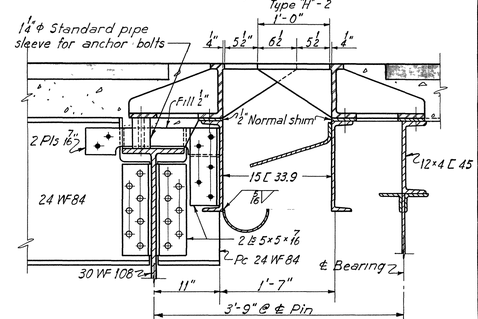
SECTION C-C
Scale: 1" = 1'-0"



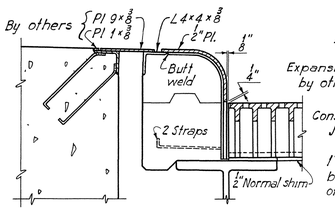
SECTION D-D
Scale: 1" = 1'-0"



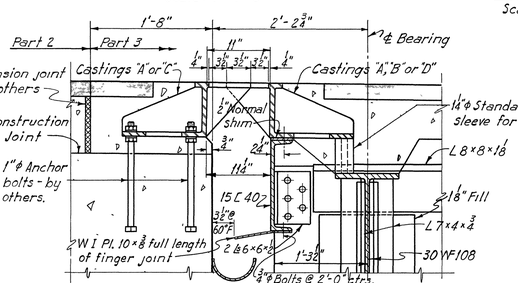
SECTION J-J (AT GIRDER)
Scale: 1" = 1'-0"



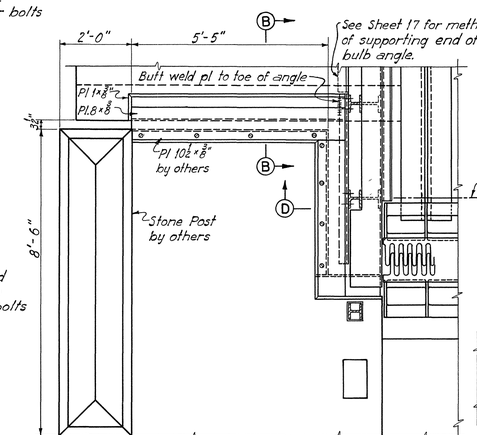
SECTION K-K (AT STRINGER)
Scale: 1" = 1'-0"



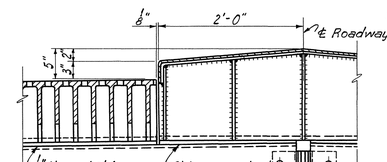
SECTION E-E
Scale: 1" = 1'-0"



ELEVATION EXPANSION JOINT AT GIRDER WEST ABUTMENT
Scale: 1" = 1'-0"

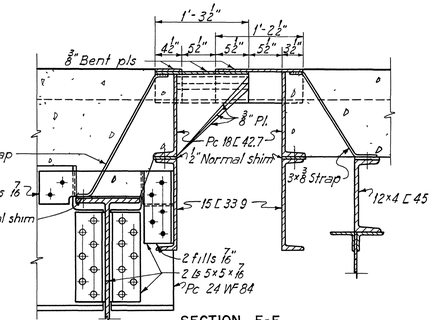


PART PLAN AT WEST ABUTMENT
Scale: ½" = 1'-0"



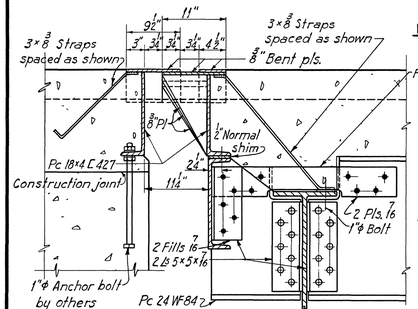
SECTION G-G
Scale: 1" = 1'-0"

Note: All welds on median to be ⅛" continuous fillet welds.

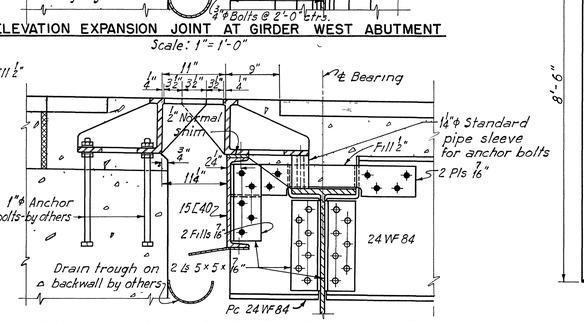


SECTION F-F
Scale: 1" = 1'-0"

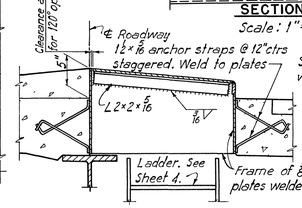
Notes: For details of castings and layout of roadway joint at abutment see Sheet 15.
For curb details see Sheet 17.
For estimated quantities see Sheet 15.



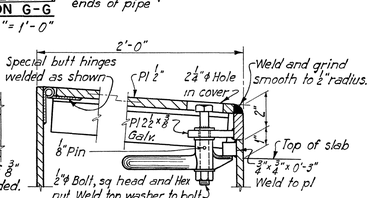
SECTION F-F AT WEST ABUTMENT
Scale: 1" = 1'-0"



ELEVATION EXPANSION JOINT AT STRINGER WEST ABUTMENT
Scale: 1" = 1'-0"



SECTION H-H
Scale: 1" = 1'-0"



HATCH COVER
Scale: 3" = 1'-0"

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

RIVER SPANS
EXPANSION JOINTS

SCALE 1" = 1'-0" 1/2" = 1'-0"
MADE G.D. DATE 12-28-50
TRCD. G.D. DATE 1-22-51
CKD. H.P.B. DATE 1-29-51

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

811 SHEET- 9

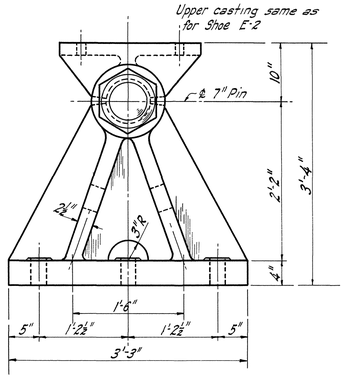
MICROFILMED

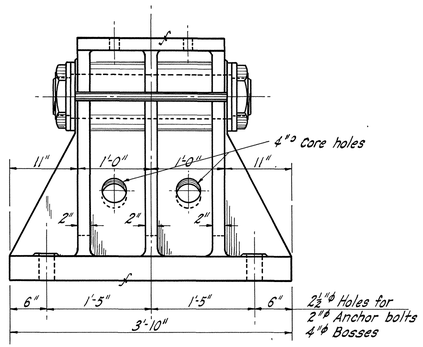
309

File E-14-46

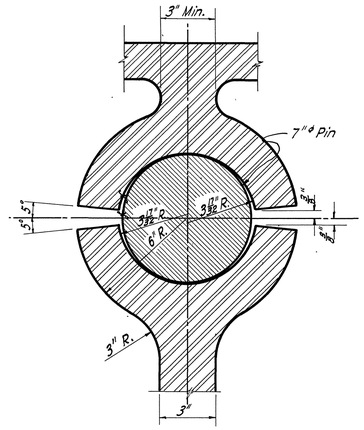
FED ROAD DIST NO	STATE	FED. AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS	SECTION
8	TENN	U-068-1(1)				

PART 3

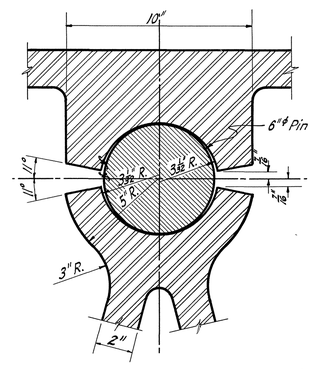




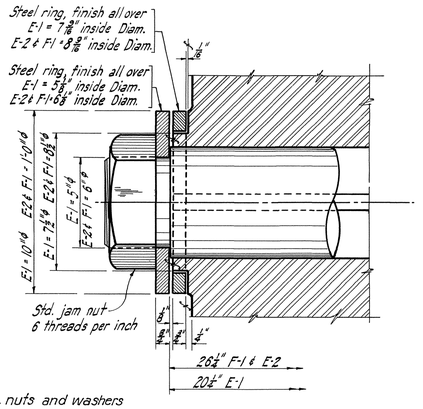
SHOES F-1
Scale: 1"=1'-0"
Pier 1
4 Required



SECTION THRU PIN
SHOES E-2 & F-1
Scale: 3"=1'-0"

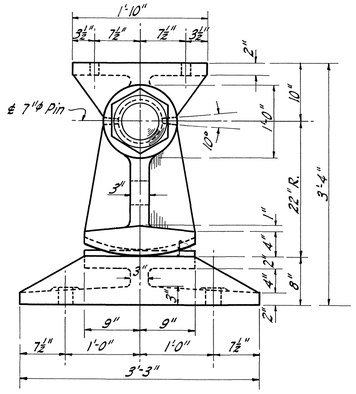


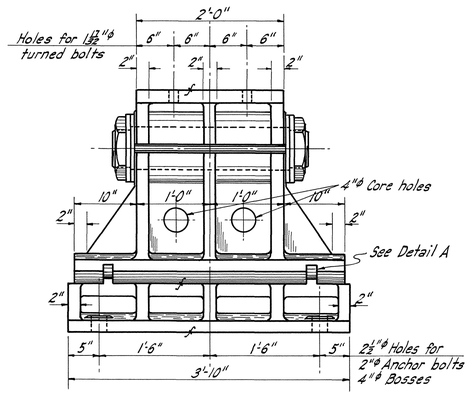
SECTION THRU PIN
SHOES E-1
Scale: 3"=1'-0"



PIN DETAIL
Scale: 3"=1'-0"

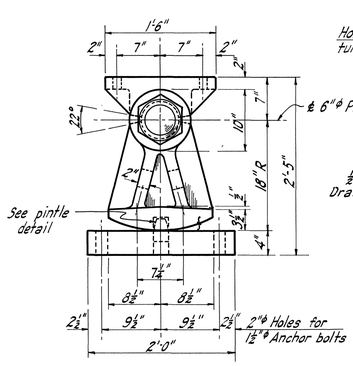
Pins, nuts and washers shall be structural carbon steel.

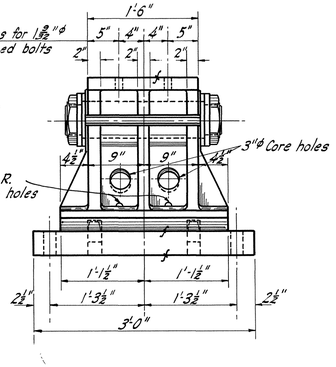




SHOES E-2
Scale: 1"=1'-0"
Pier 2
4 Required

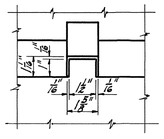
ESTIMATED QUANTITIES		
Item No.	Description	Quantity
132-1	Structural Steel	6,300 Lbs.
132-2	Steel Castings	59,780 Lbs



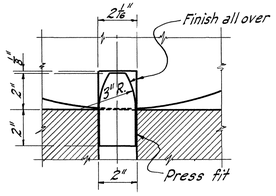


SHOES E-1
Scale: 1"=1'-0"
West Abutment and Pier 3
8 Required

Note:
Rockers shall be set so as to be Vertical under full dead load at 60° F.
Shoes E-1 shall be of structural carbon steel, A.S.T.M. Designation A 27-46 T., Grade 65-35.
Shoes E-2 and F-1 shall be of high strength steel, A.S.T.M. Designation A 148-46 T, Grade 80-50.
Machined surfaces of rockers which bear on base plates and all other exposed surfaces shall be painted.
All contact surfaces between metal parts shall be finished.
All base plates and shoe castings shall be scribed with longitudinal and transverse center lines.
Spaces around anchor bolts in base plates shall be filled with an approved metallic filler poured in place before setting nuts.
Before fabrication of shoes, contractor shall verify anchor bolt spacing in the field.
All fillets in castings shall be ¾" unless otherwise noted.



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



PINTLE DETAIL
Scale: 3"=1'-0"

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

RIVER SPANS
SHOES

SCALE 1", 3, = 1'-0"
MADE J.T. DATE 10-2-50
TRCD. S.W.F. DATE 12-22-50
CKD. G.M.N. DATE 12-26-50

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

811 SHEET- 10

MICROFILMED
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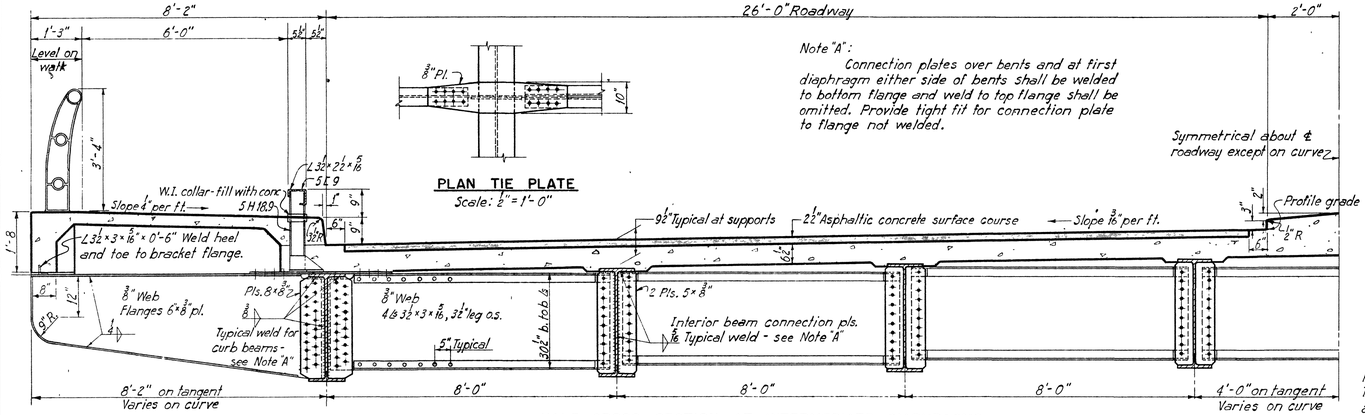
File E-14-47

FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS	SECTION
8	TENN	U-068-1(1)				

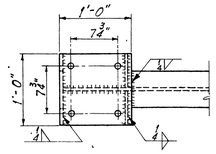
PART 3



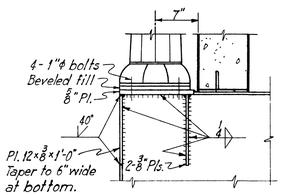
Note "A":
Connection plates over bents and at first diaphragm either side of bents shall be welded to bottom flange and weld to top flange shall be omitted. Provide tight fit for connection plate to flange not welded.

PLAN TIE PLATE
Scale: ½" = 1'-0"

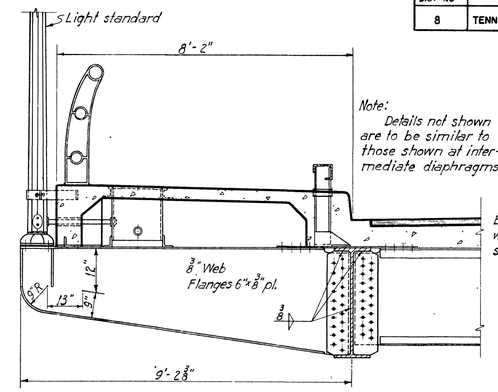
HALF CROSS SECTION AT INTERMEDIATE DIAPHRAGMS
Scale: ½" = 1'-0"
Normal crown section Sta. 14 + 92.75 to Sta. 20 + 04.0
Transition Sta. 20 + 04.0 to Sta. 21 + 66.0 (P.C.)
Full superelevation Sta. 21 + 66.0 to Sta. 25 + 66.0



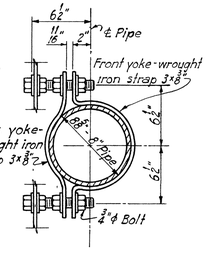
PLAN BASE PLATE
Scale: 1" = 1'-0"



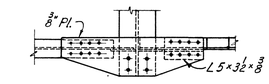
ELEVATION BASE PLATE
Scale: 1" = 1'-0"



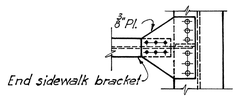
SIDEWALK BRACKET WITH LIGHT STANDARD
Scale: ½" = 1'-0"



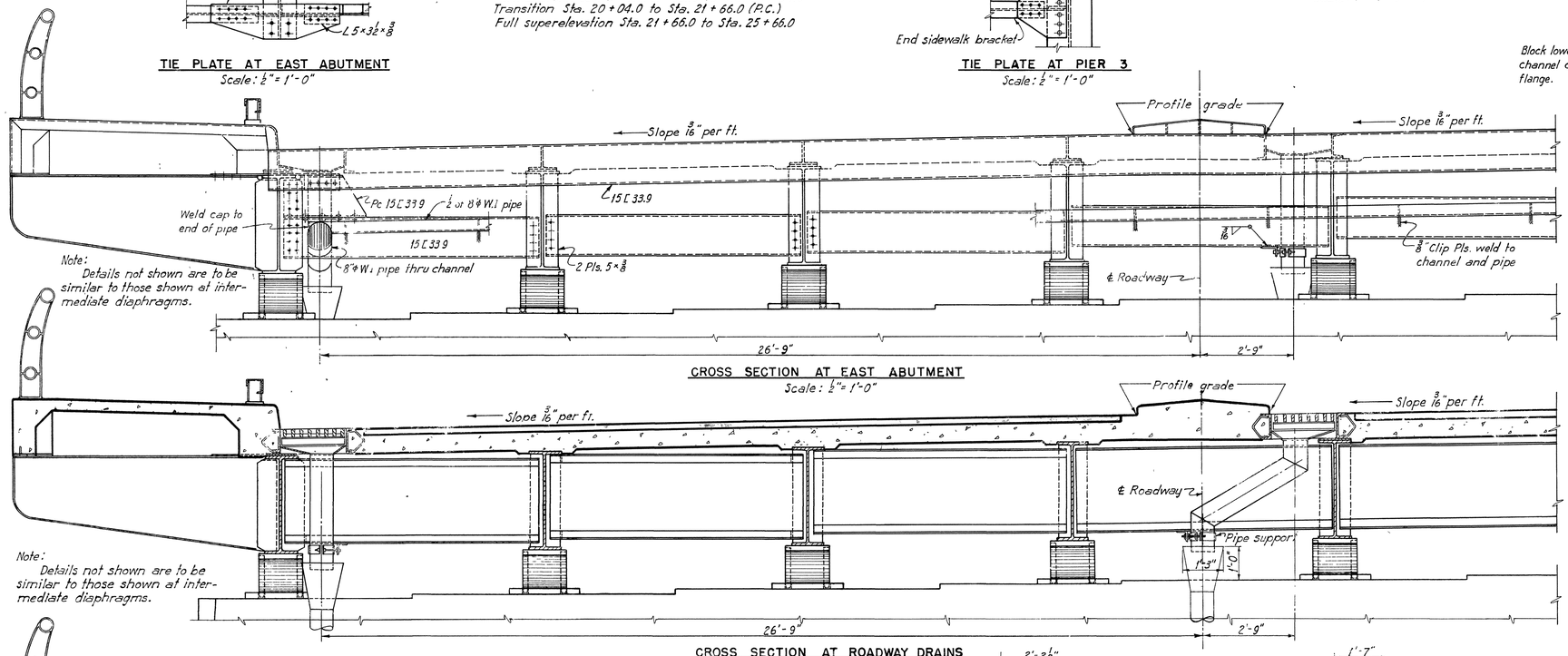
PIPE SUPPORT
Scale: 1½" = 1'-0"



TIE PLATE AT EAST ABUTMENT
Scale: ½" = 1'-0"



TIE PLATE AT PIER 3
Scale: ½" = 1'-0"

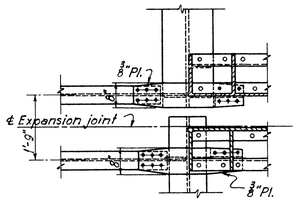


CROSS SECTION AT EAST ABUTMENT
Scale: ½" = 1'-0"

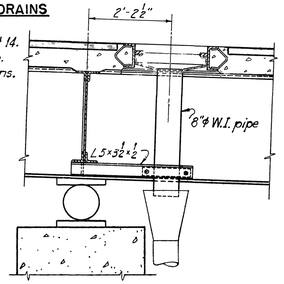
CROSS SECTION AT ROADWAY DRAINS
Scale: ½" = 1'-0"
For location of drains see Sheet 14.
Full superelevated section shown.
Normal section to have 2 curb drains.

Note: Details not shown are to be similar to those shown at intermediate diaphragms.

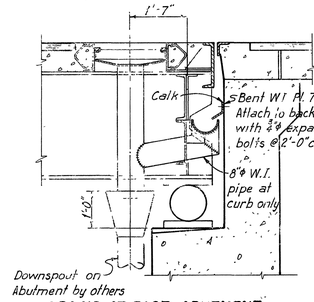
DIAPHRAGM AT EXPANSION JOINTS
Scale: ½" = 1'-0"



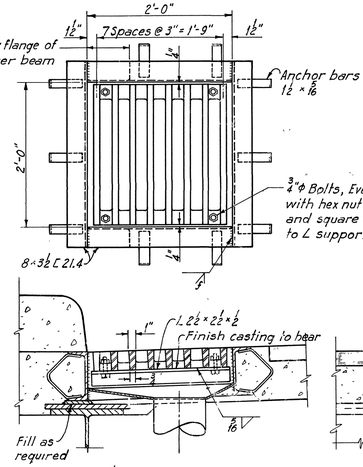
TIE PLATES AT EXPANSION JOINTS
Scale: ½" = 1'-0"



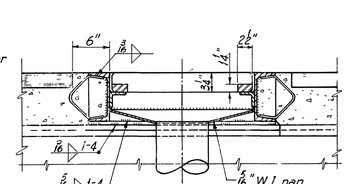
DRAINS AT BENTS
Scale: ½" = 1'-0"



DRAINS AT EAST ABUTMENT
Scale: ½" = 1'-0"



Note: Use 9 × 3½ L 23.9 in frame at points where there are no cover plates.



DRAIN GRATING AND FRAME
Scale: 1" = 1'-0"
Material in gratings: Cast steel
No. assembled drains required: 14

Structural steel includes pipe supports, expansion bolts and drain frames.
Half 8℄ Wrought Iron Pipe trough shall be measured for payment at the rate of one half foot per foot of trough.

ESTIMATED QUANTITIES

Item No	Description	Quantity
132-1	Structural Steel	4,300 Lbs
132-2	Steel Castings	2,800 Lbs
132-11	Wrought Iron Plates	650 Lbs
132-12	8℄ Wrought Iron Pipes	120 Lin Ft

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

EAST APPROACH SPANS
ROADWAY CROSS SECTIONS AND DRAINAGE

SCALE As Shown
MADE M.B. DATE 11-15-50
TRCD G.D. DATE 2-8-51
CKD H.B.A. DATE 12-11-50

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

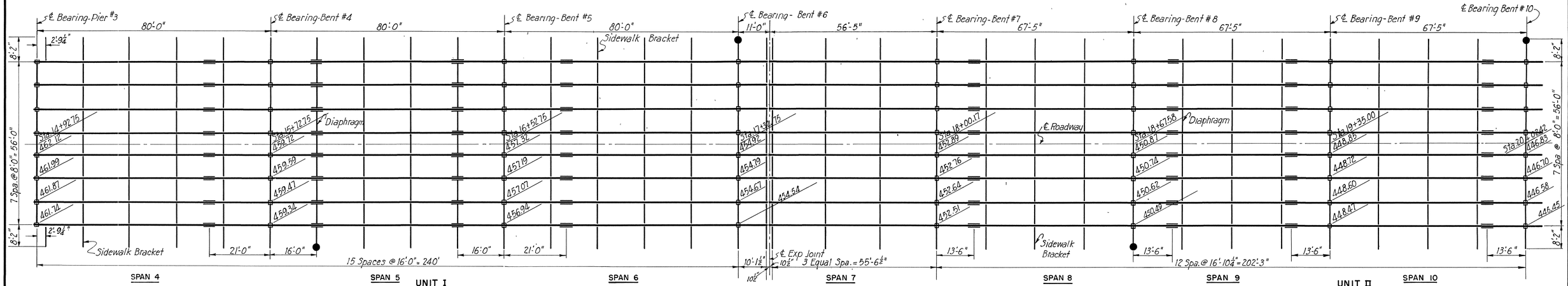
SHEET 11

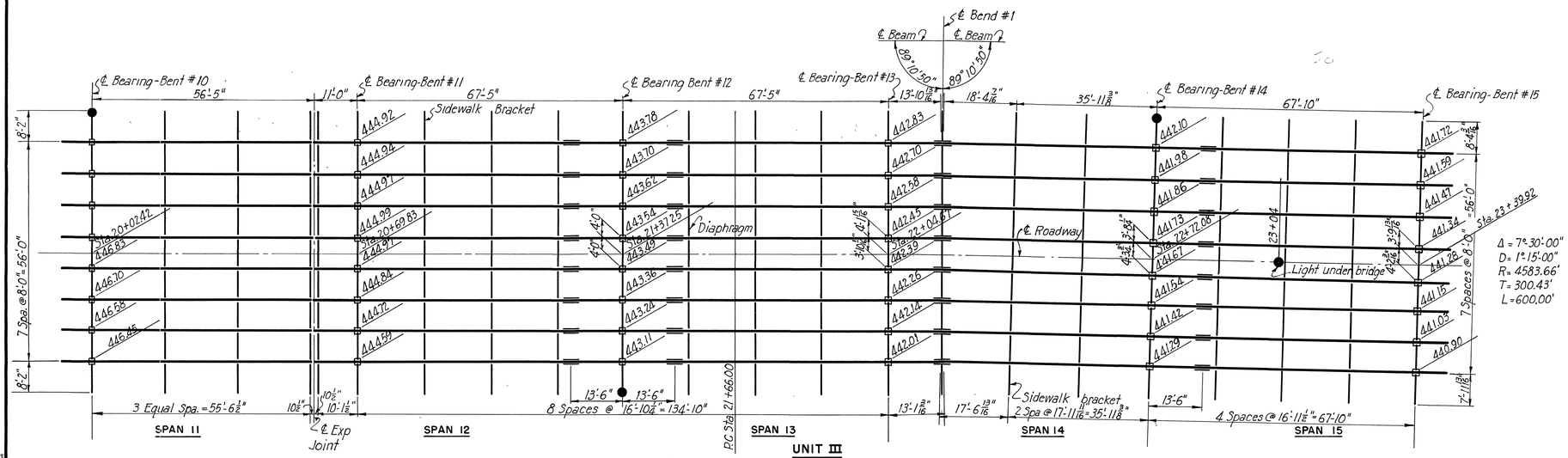
311

E-14-48

FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS	SECTION
8	TENN	U-068-1(1)				

PART 3





Note:

Cover plates shall be welded longitudinally along both sides to beam flanges with $\frac{3}{8}$" continuous fillet weld for plates $\frac{7}{8}$" and thicker and with $\frac{5}{16}$" continuous fillet weld for plates less than $\frac{7}{8}$" in thickness.

Normal length of sidewalk brackets from ℄ of Curb Beam is 8'-2" in spans on tangent.

In spans on curve, length of brackets will vary to maintain 36'-2" from ℄ Roadway to end of brackets

Elevations shown are to top of steel beams excluding cover plates. Elevations are symmetrical about ℄ of bridge between Pier #3 and Bent #10.

Symbol shown thus (●) indicates light standard bracket.

Handrail posts shall occur at each sidewalk bracket and midpoints between brackets except as otherwise shown. See Sheet 20

ESTIMATED QUANTITIES

Item No	Description	Quantity
132-1	Structural Steel	2,097,800 Lbs
132-11	* Wrought Iron Plates	950 Lbs

* Blast plates.

Structural steel includes beams, splices, cover plates, diaphragms and connections

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

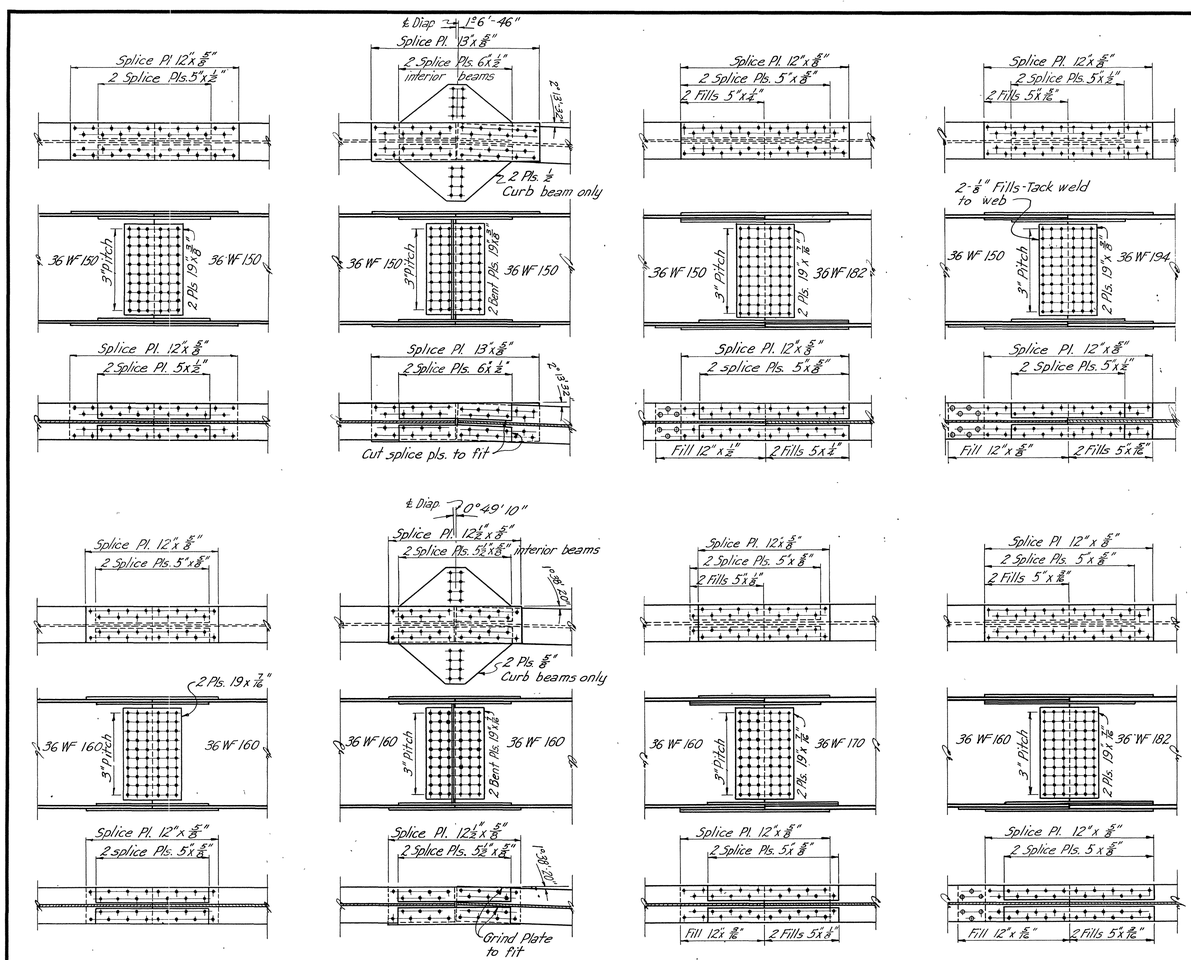
EAST APPROACH SPANS FRAMING PLANS

SCALE 1/16" = 1'-0"
MADE J.G.S. DATE 11-15-50
TRCD M.R.R.R. DATE 11-25-50
CKD J.W.C. DATE 12-8-50

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

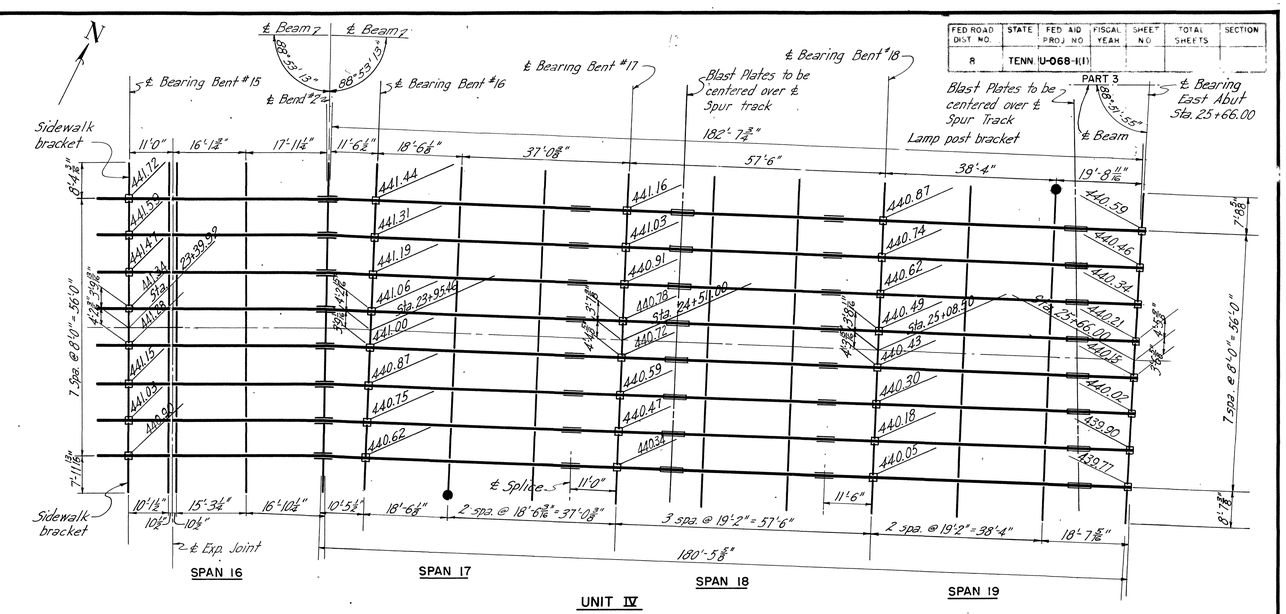
811 SHEET 12

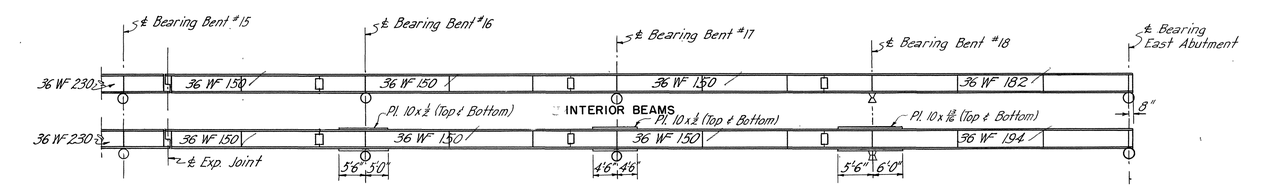
MICROFILMED



BEAM SPLICES

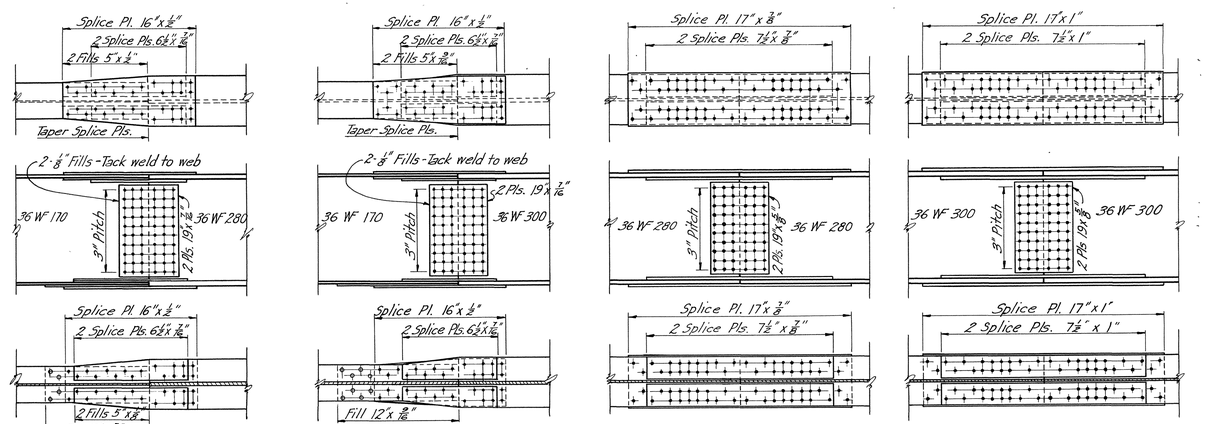
Scale: 1/2"=1'-0"





CURB BEAMS

For General Notes see sh. 12.



Note: See sheet 12 for Estimated Quantities.

BLAST PLATE DETAIL

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

FED ROAD DIST NO.	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS	SECTION
8	TENN. U-068-1(1)					

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

EAST APPROACH SPANS FRAMING PLAN AND BEAM SPLICES

SCALE 1/8" = 1'-0"
MADE JGS 11AR DATE 11-14-50
TRCD MB & RR DATE 11-28-50
CKD J.W.C. DATE 12-8-50

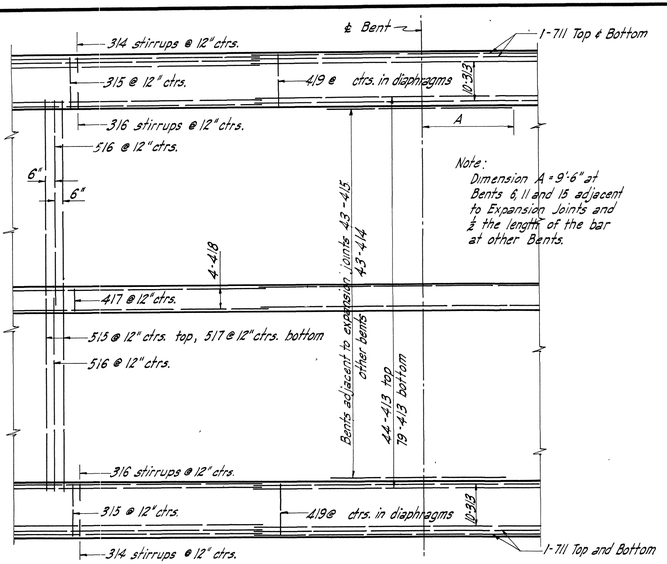
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

SHEET 13

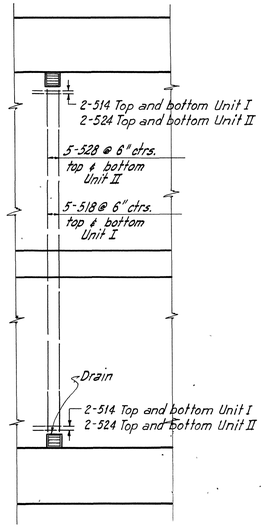
E-14-50

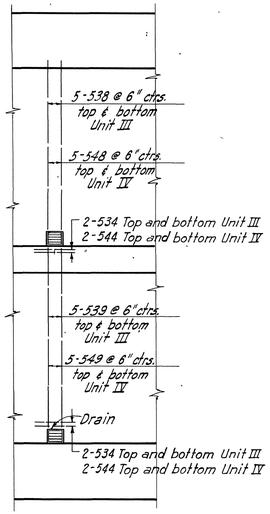
FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS	SECTION
8	TENN.	U-068-1(1)				

PART 3



Note:
Dimension A = 9'-6" at Bents 6, 11 and 15 adjacent to Expansion Joints and ½ the length of the bar at other Bents.

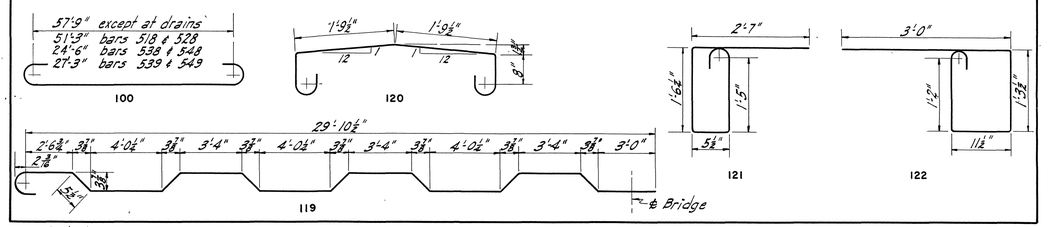




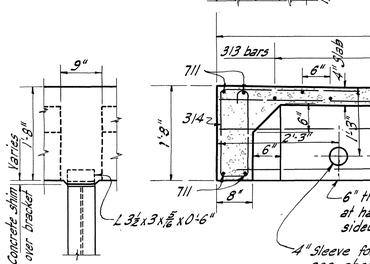
PART SLAB PLAN
Scale: 1/32" = 1'-0"

REINFORCING STEEL SCHEDULE

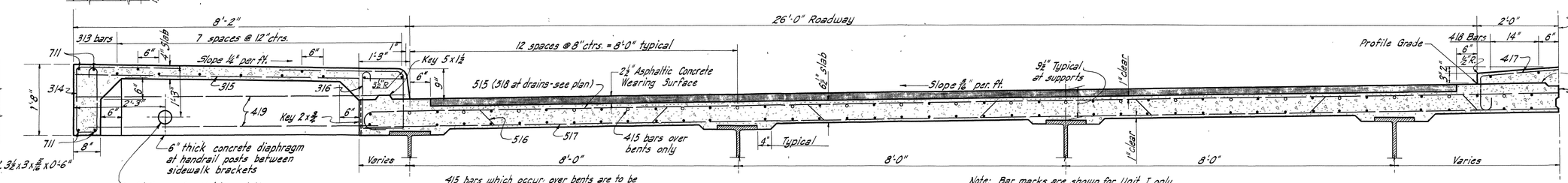
UNIT I					UNIT II					UNIT III					UNIT IV				
Mark	Size*	No.	Length	Type	Mark	Size*	No.	Length	Type	Mark	Size*	No.	Length	Type	Mark	Size*	No.	Length	Type
7/11	7/8"ø	40	53'-3"	Str.	7/21	1 1/8"ø	48	55'-0"	Str.	7/31	1 1/8"ø	48	51'-6"	Str.	7/41	7/8"ø	32	56'-0"	Str.
5/14	3/8"ø	8	6'-0"	Str.	5/24	3/8"ø	16	6'-0"	Str.	5/34	3/8"ø	16	6'-0"	Str.	5/44	3/8"ø	16	6'-0"	Str.
3/15	7/8"ø	248	53'-5"	100	3/25	7/8"ø	308	53'-5"	100	3/35	1 1/8"ø	285	53'-5"	100	3/45	7/8"ø	210	53'-5"	100
5/16	1 1/8"ø	492	31'-8"	119	5/26	1 1/8"ø	614	31'-8"	119	5/36	1 1/8"ø	568	31'-8"	119	5/46	1 1/8"ø	418	31'-8"	119
5/17	1 1/8"ø	248	58'-0"	Str.	5/27	1 1/8"ø	308	58'-0"	Str.	5/37	1 1/8"ø	285	58'-0"	Str.	5/47	1 1/8"ø	210	58'-0"	Str.
5/18	1 1/8"ø	10	52'-11"	100	5/28	1 1/8"ø	20	52'-11"	100	5/38	1 1/8"ø	20	52'-11"	100	5/48	1 1/8"ø	20	26'-2"	100
										5/39	7/8"ø	20	28'-11"	100	5/49	7/8"ø	20	28'-11"	100
4/13	1/2"ø	615	52'-0"	Str.	4/23	1 1/8"ø	738	54'-6"	Str.	4/33	1 1/8"ø	738	54'-6"	Str.					
4/14	1/2"ø	86	27'-0"	Str.	4/24	1 1/8"ø	144	27'-0"	Str.	4/34	1/2"ø	116	27'-0"	Str.	4/43	1 1/2"ø	492	55'-9"	Str.
4/15	1/2"ø	29	23'-0"	Str.	4/27	1/2"ø	315	6'-4"	120	4/35	1/2"ø	78	23'-0"	Str.	4/44	1/2"ø	78	27'-0"	Str.
4/17	1/2"ø	232	6'-3"	120	4/28	1/2"ø	24	54'-6"	Str.	4/37	1/2"ø	232	6'-4"	120	4/47	1/2"ø	215	6'-4"	120
4/18	1/2"ø	20	52'-0"	Str.	4/29	1/2"ø	72	6'-9"	Str.	4/38	1/2"ø	24	50'-3"	Str.	4/48	1/2"ø	16	53'-9"	Str.
4/19	1/2"ø	64	6'-9"	Str.						4/39	1/2"ø	68	6'-9"	Str.	4/49	1/2"ø	46	6'-9"	Str.
					3/23	3/4"ø	120	54'-0"	Str.										
3/13	3/4"ø	100	51'-3"	Str.	3/24	3/4"ø	636	6'-6"	121	3/33	3/4"ø	120	50'-0"	Str.	3/43	3/4"ø	80	55'-3"	Str.
3/14	3/4"ø	506	6'-6"	121	3/25	3/4"ø	636	7'-9"	Str.	3/34	3/4"ø	590	6'-6"	121	3/44	3/4"ø	434	6'-6"	121
3/15	3/4"ø	506	7'-9"	Str.	3/26	3/4"ø	636	6'-11"	122	3/35	3/4"ø	590	7'-9"	Str.	3/45	3/4"ø	434	7'-9"	Str.
3/16	3/4"ø	506	6'-11"	122						3/36	3/4"ø	590	6'-11"	122	3/46	3/4"ø	434	6'-11"	122



* Equivalent size



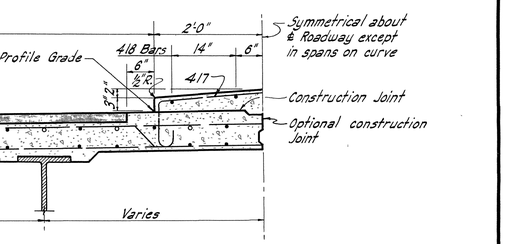
FASCIA AT BRACKET

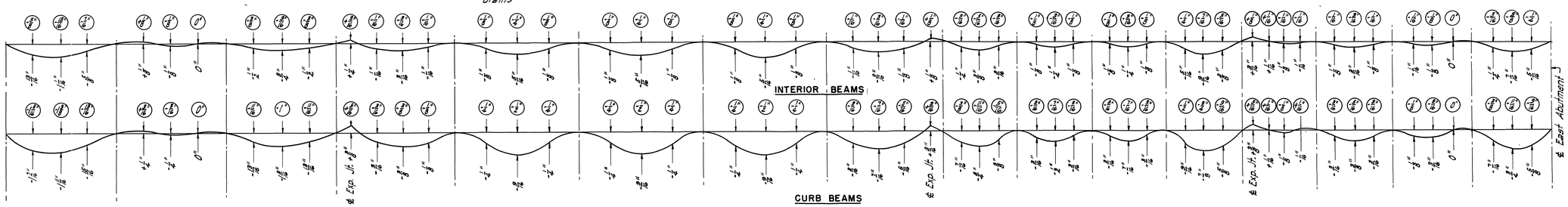


4/15 bars which occur over bents are to be omitted where drains interfere. All other longitudinal bars to be cut as required at drains

HALF CROSS SECTION THRU SLAB
Scale: ¾" = 1'-0"

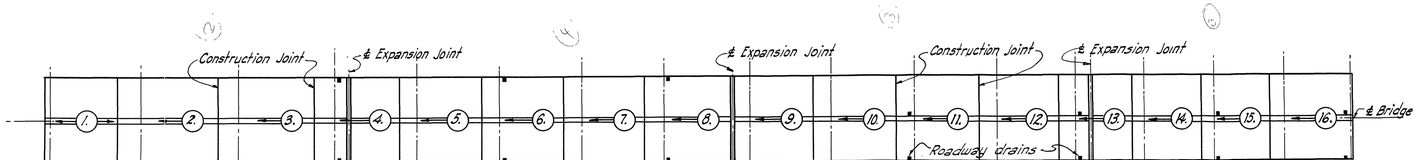
Note: Bar marks are shown for Unit I only. Bar marks for other Units will have center number corresponding to the Unit number.





HAUNCH DIAGRAMS

Notes:
Exposed corners of fascia and concrete diaphragms to have ¾" chamfers.
For general notes and Transverse Construction Joint detail See sh. 8
For handrail details See sh. 17.
Provide anchor bolts in fascia for stairway connection. See sh. 20.
Provide anchor bolts in sidewalk for handrail posts. See sh. 17.
For sleeves in fascia for lighting conduit see sh. 18.
Provide anchor bolts for light standards. See sh. 18.



SLAB POURING SEQUENCE

Pouring sequence does not apply to sidewalk, fascia and median.

Notes on Haunching
Beams shall not be cambered but allowable mill sweep shall be in the direction of camber. Slab between beams shall have a uniform thickness of 6½". Concrete haunches over beams shall be varied as required. Values encircled in the haunching diagrams are the deflections which may be expected in the beams from the weight of the concrete, asphalt and handrail. Other values are deflections due to total dead load.
Deflections are given at quarter points between bents or between bents and expansion joints as shown.

* Based on weight of approximately 125 Lbs. per Sq. Yd.

ESTIMATED QUANTITIES

Item No.	Description		Quantity	Item No.	Description	Quantity
91-1	Hot Asphaltic Concrete	*	370 Tons	135-4	Class "A" Concrete	1,600 Cu.Yds
92-1	Hot Asphaltic Concrete Binder	*	310 Tons	135-12	Steel Bar Reinforcement	356,200 Lbs

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

EAST APPROACH SPANS
ROADWAY SLAB

SCALE 3/16" = 1'-0" & 3/4" = 1'-0"
MADE D.W.K. DATE 11-18-50
TRCD. J.W.E. DATE 1-25-51
CKD. H.P.B. DATE 2-8-51

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

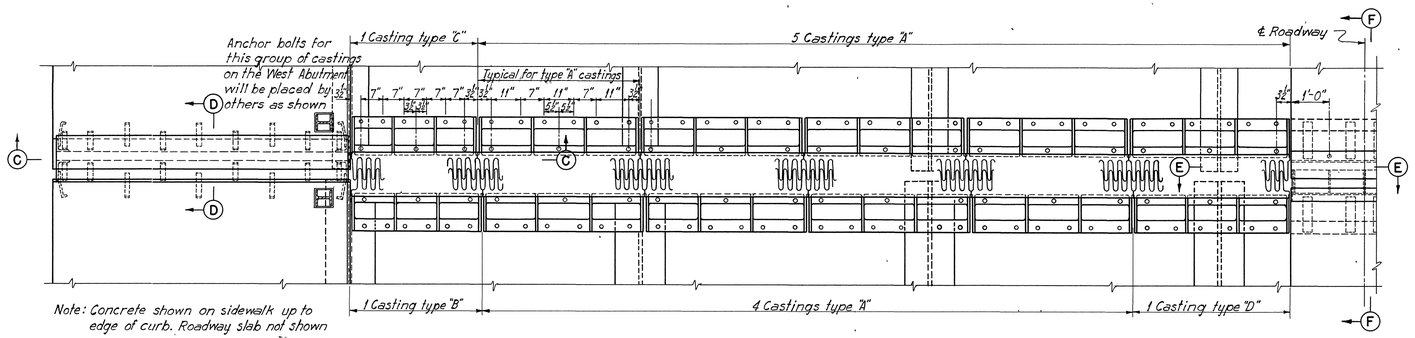
811 SHEET- 14

E-14-51

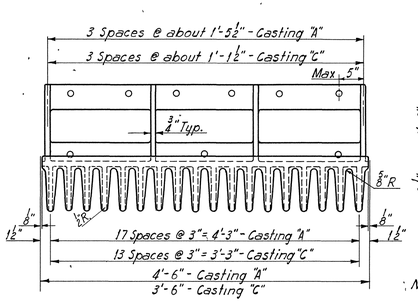
MICROFILMED

FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS	SECTION
8	TENN	U-068-1(1)				

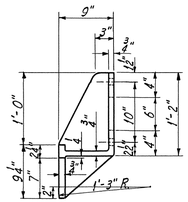
PART 3



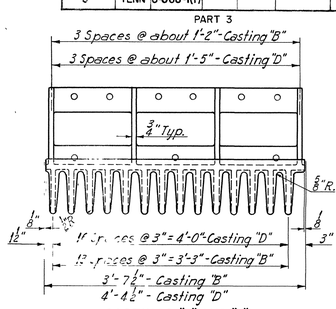
HALF PLAN EXPANSION JOINT
Scale: ½" = 1'-0"



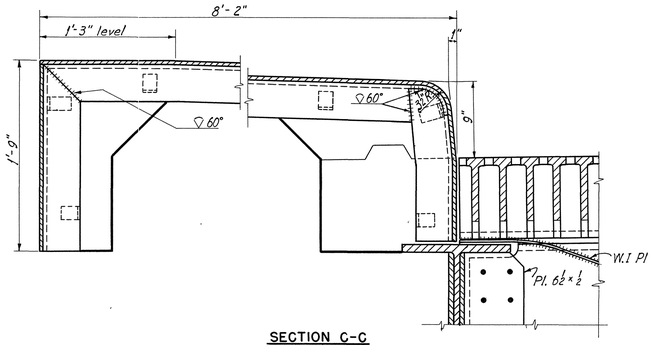
CASTINGS "A" AND "C"
Scale: 1" = 1'-0"
Casting "A" Shown
Material: Cast steel
No. reqd.: Type "A" - 72
Type "C" - 8



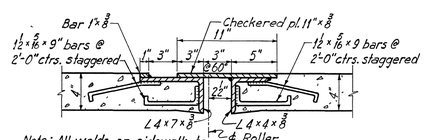
Note: Anchor bolt holes in castings to be 1⅛" ϕ drilled for 1" bolts. Number of holes shown are minimum required.



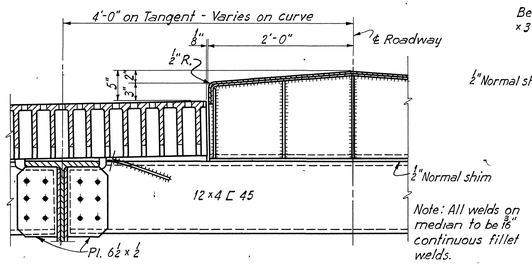
CASTINGS "B" AND "D"
Scale: 1" = 1'-0"
Casting "B" Shown. Casting "D" oppsite hand
Material: Cast steel
No. reqd.: Type "B" - 8
Type "D" - 8



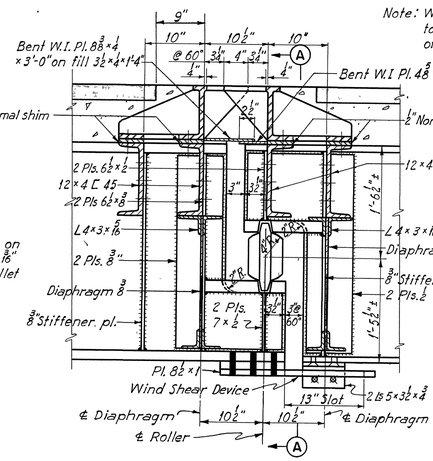
SECTION C-C
Scale: 1½" = 1'-0"



SECTION D-D
Scale: 1½" = 1'-0"

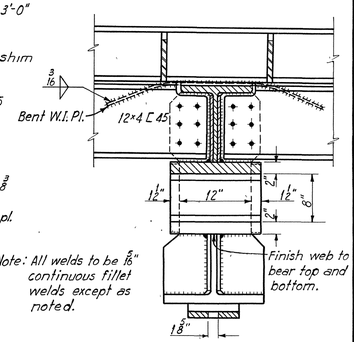


SECTION E-E
Scale: 1" = 1'-0"



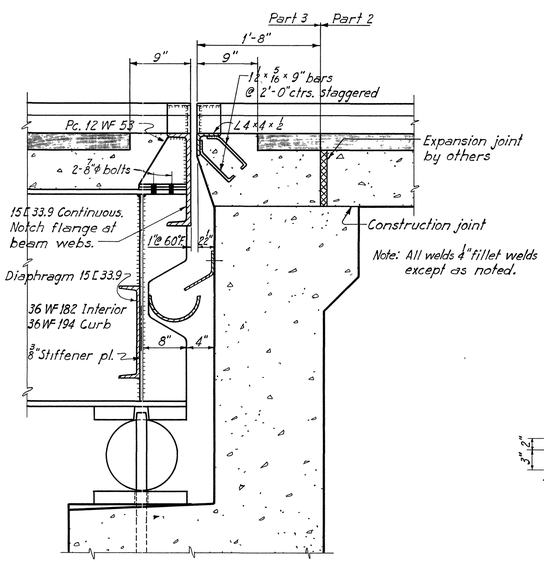
EXPANSION JOINT
Scale: 1" = 1'-0"

Note: W.I. Pls. to be arranged so that top plate will be on high side of joints on grade.

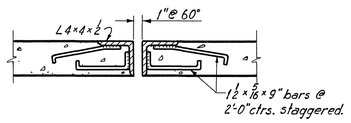


Note: All welds to be 5/16" continuous fillet welds except as noted.

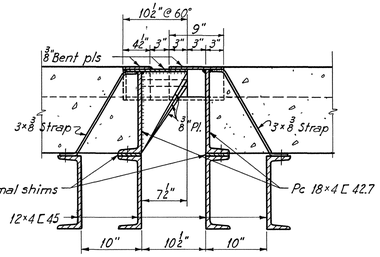
SECTION A-A
Scale: 1" = 1'-0"



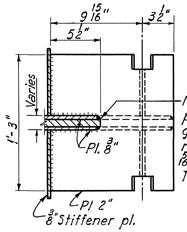
EXPANSION JOINT AT ABUTMENT
Scale: 1" = 1'-0"



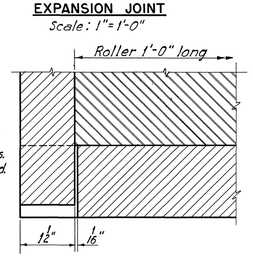
SECTION G-G
Scale: 1½" = 1'-0"



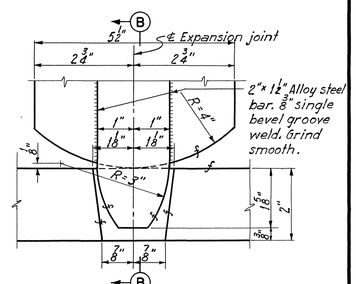
SECTION F-F
Scale: 1" = 1'-0"



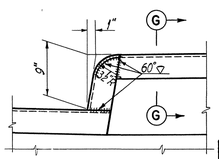
BEARING PLATE
Scale: 1½" = 1'-0"



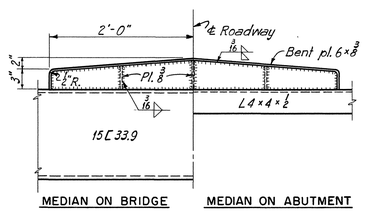
SECTION B-B
Scale: 6" = 1'-0"



TOOTH BAR AND BEARING PLATE DETAIL
Scale: 6" = 1'-0"



CURB ON ABUTMENT
Scale: 1" = 1'-0"



SECTION THRU JOINT AT EAST ABUTMENT
Scale: 1" = 1'-0"

ESTIMATED QUANTITIES			
Item No	Description	Quantity River Spans	Quantity East Approach
132-1	Structural Steel	8,800 Lbs	41,800 Lbs
132-2	Steel Castings	17,320 Lbs	43,000 Lbs
132-3	Steel Forgings	———	4,120 Lbs
132-11	Wrought Iron Plates	700 Lbs	2,350 Lbs

Notes:
Material for Rollers shall be Alloy steel forgings ASTM Designation A-237-49 T Class B.
Material for Bearing Plates shall be Alloy steel casting ASTM Designation A-148-46 T Grade 80-50.
Casting details and plan of roadway joint also apply to West Abutment
Anchor bolts for castings on West Abutment to be placed by others. Contractor shall field check spacing of these bolts before fabricating the castings.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

EAST APPROACH SPANS
EXPANSION JOINTS

SCALE ½", 1", 1½" & 6" = 1'-0"
MADE G.D. DATE 12-8-50
TRCD G.D. DATE 1-5-51
CKD H.P.B. DATE 12-26-50

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

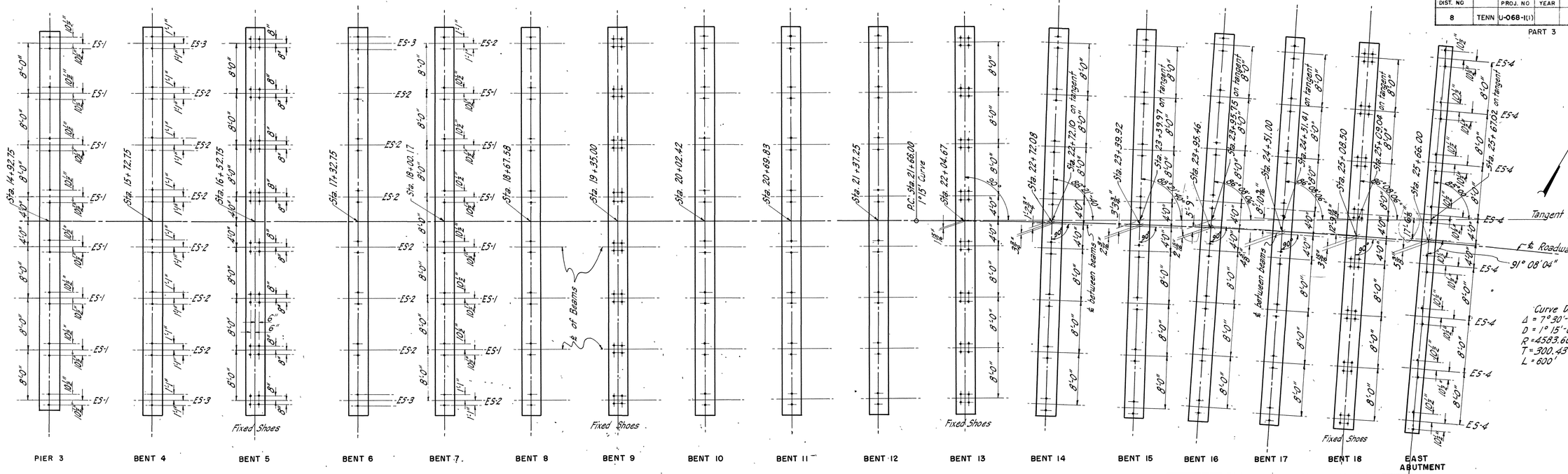
811 SHEET 15

RECORDED AND FILED
315

File E-14-52

FED ROAD DIST. NO	STATE	FED. AID PROJ. NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS	SECTION
8	TENN	U-068-1(1)				

PART 3



ANCHOR BOLT PLAN

Bolt spaces and shoes not shown shall be similar to Bent 7

ESTIMATED QUANTITIES

Item No.	Description	Total
132-1	Structural Steel	5,800 Lbs.
132-2	Steel Castings	60,700 Lbs.
132-3	Steel Forgings	59,080 Lbs.

TABULATION OF ROLLER EXPANSION SHOES

Shoe	No. Req'd.	Overall Ht.	A	B	C	D	E	F	G	H	K	Material for Rollers and Bearing Plates
ES-1	62	1'-4"	1'-4"	1'-4"	2⅜"	6"	2"	7"	10½"	2'-2"	12"	ES-1, ES-2 & ES-3 50,000 # Y.P.
ES-2	30	1'-4"	1'-4"	1'-9"	2⅜"	6"	2"	9½"	1'-1"	2'-11"	12"	Rollers - Alloy steel forging ASTM Designation A 237-49T Class B
ES-3	4	1'-7⅜"	1'-6"	1'-9"	3⅜"	7"	2⅜"	9½"	1'-1"	2'-11"	1'-3"	Plates - Alloy steel casting ASTM Designation A 148-46T Grade 80-50
ES-4	8	1'-4"	1'-4"	1'-4"	2⅜"	6"	2"	7"	10½"	2'-2"	12"	ES-4, Rollers - Carbon steel forging ASTM Designation A 235-49T Class C1. Plates - Carbon steel rolled plates 33,000 # Y.P.

Notes:

For method of preparing top of masonry under shoes see specifications.

All anchor bolts to be 1½"ϕ bolts furnished and set in the concrete by others. Contractor shall verify bolt spacing in the field before fabricating shoes.

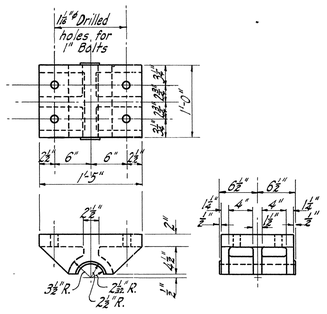
Spaces around anchor bolts in base plates shall be filled with an approved metallic filler poured in place before setting nuts.

Rollers shall be set so as to be vertical under full dead load at 60° F.

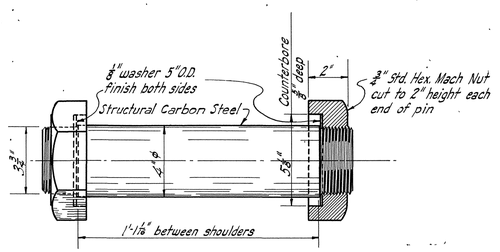
All contact surfaces between metal parts shall be finished.

Pockets between top of shoe and edge of narrow cover plates inaccessible for painting shall be filled with red lead paste

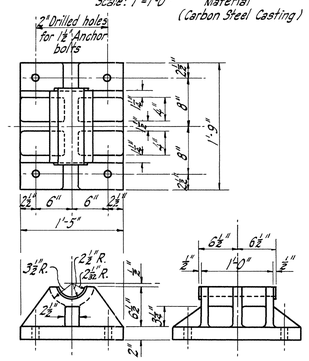
FIXED SHOE DETAILS



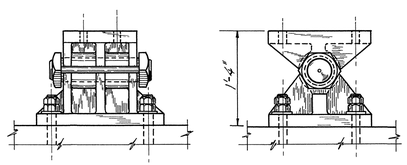
TOP CASTING
Scale: 1"=1'-0" Material (Carbon Steel Casting)



PIN DETAIL
Scale: 3"=1'-0"

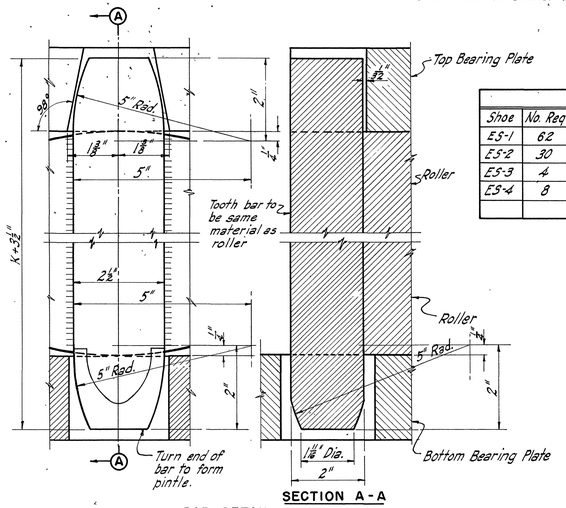


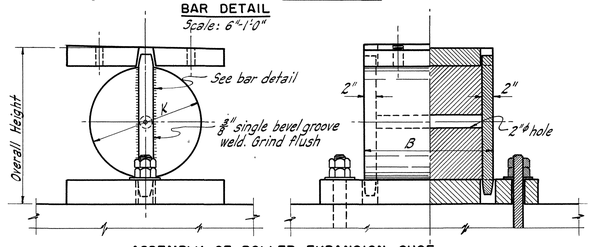
BOTTOM CASTING
Scale: 1"=1'-0"
Material (Carbon Steel Casting)



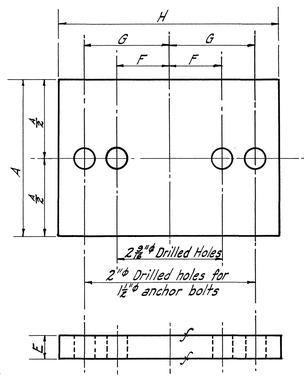
ASSEMBLY OF FIXED SHOE
Scale: 1"=1'-0"

EXPANSION SHOE DETAILS

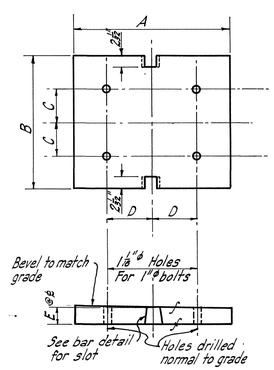




ASSEMBLY OF ROLLER EXPANSION SHOE
Scale: 1"=1'-0"



BOTTOM BEARING PLATE
Scale: 1"=1'-0"



TOP BEARING PLATE
Scale: 1"=1'-0"

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

EAST APPROACH SPANS ANCHOR BOLT PLAN AND SHOES

SCALE 1"=1'-0"
MADE F.J.E. DATE 11-16-50
TRCD. S.W.F. DATE 12-12-50
CKD H.B.A. DATE 12-15-50

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

811 SHEET- 16

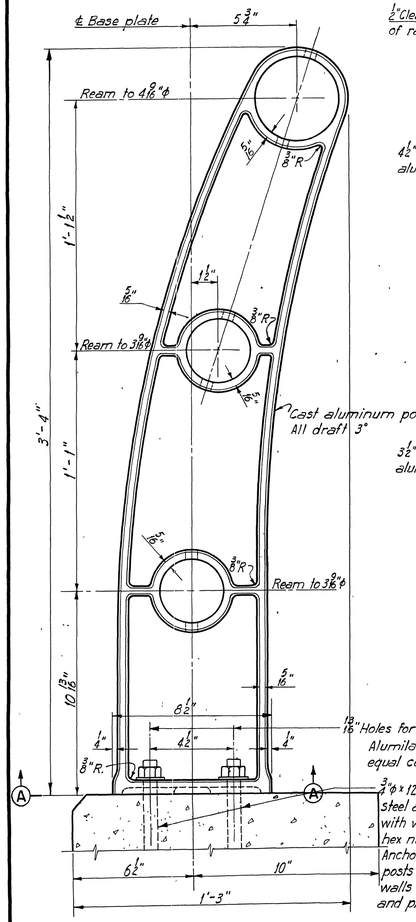
MICROFILMED

3/6 Revised 3/9/53 - offsets

E-14-53

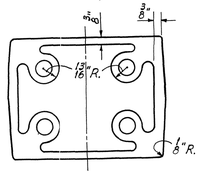
FED ROAD DIST NO	STATE	FED AID PROJ. NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS	SECTION
8	TENN	U-068-1(1)				

PART 3

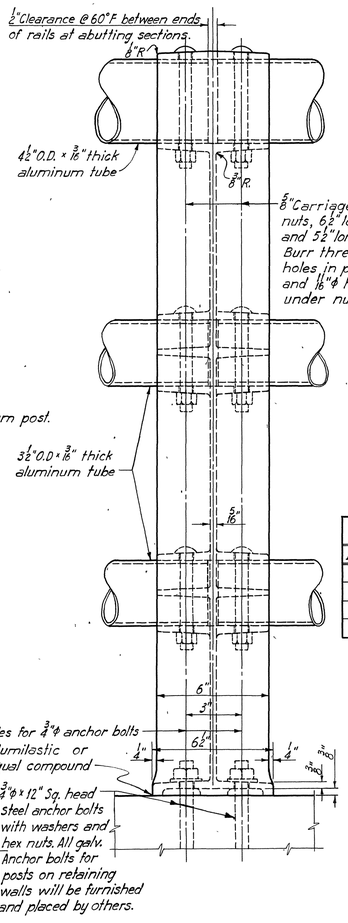


HANDRAIL POST EAST APPROACH

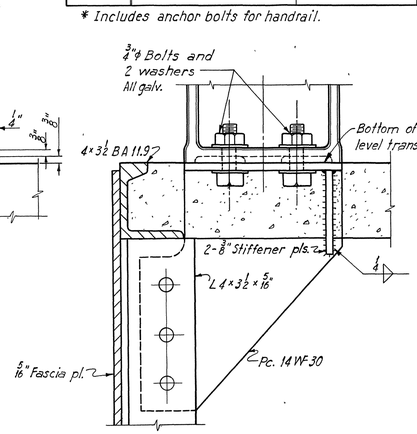
Post on retaining wall shown.
Post on Bridge similar.



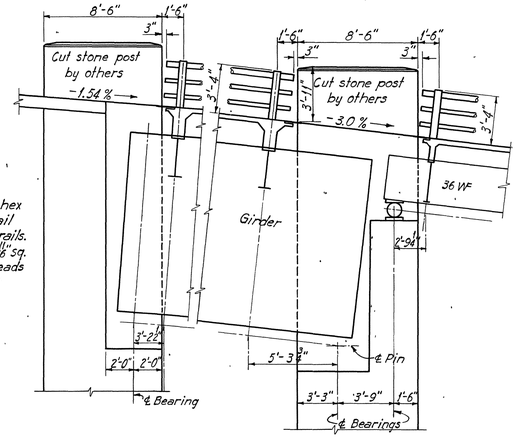
SECTION A-A



ELEVATION



HANDRAIL POST RIVER SPANS

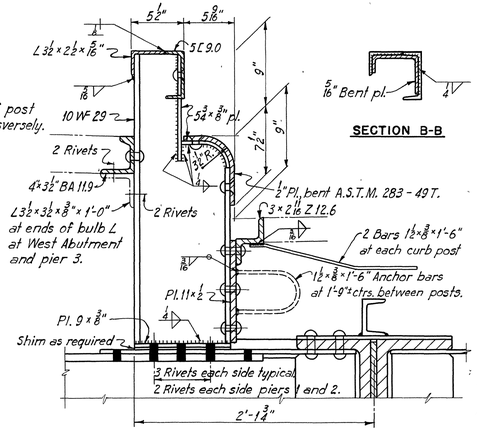


HANDRAIL RIVER SPANS

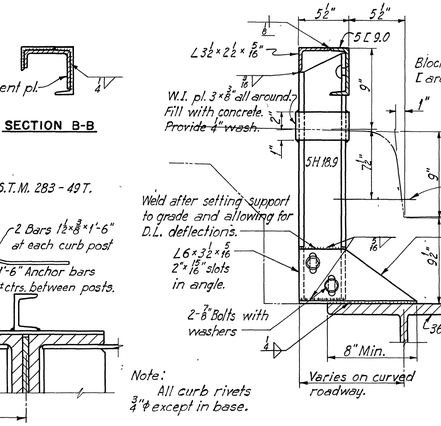
Scale: 3/16"= 1'-0"

ESTIMATED QUANTITIES				
Item No.	Description	River Spans	Approach Spans	Total
132-1	* Structural Steel	411,200 Lbs.	76,400 Lbs	487,600 Lbs.
132-11	Wrought Iron	315 Lbs	2,935 Lbs	2,950 Lbs
	Handrail (superstructure)	1,535 Lin.Ft	3,185 Lin Ft	4,720 Lin Ft

* Includes anchor bolts for handrail.

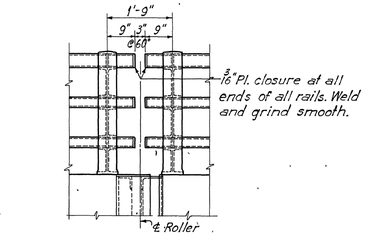


RIVER SPANS

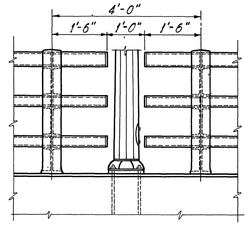


Note: All curb rivets 3/4"ϕ except in base.

EAST APPROACH SPANS



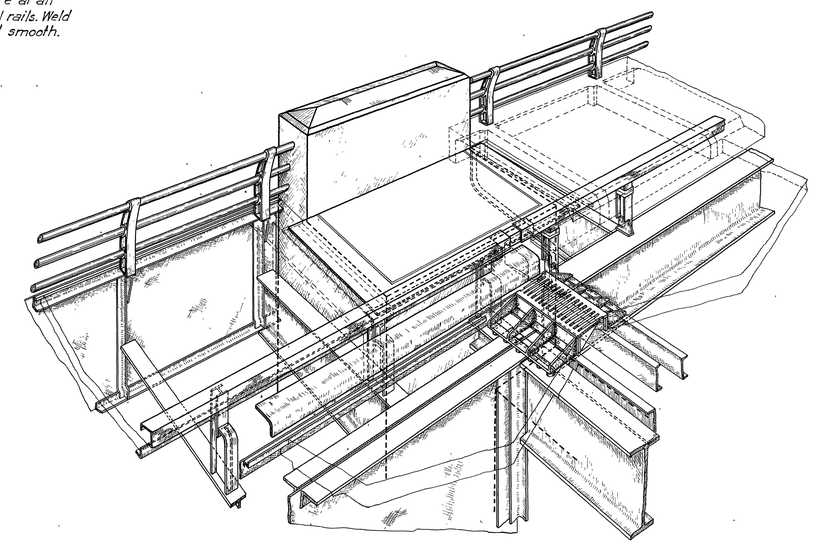
AT EXPANSION JOINT ON BRIDGE



AT LIGHT STANDARD ON RETAINING WALL

HANDRAIL EAST APPROACH

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



PERSPECTIVE OF EXPANSION JOINT PIER 3

Notes on Handrail:

All handrail posts to be normal to grade.

All parts of handrail except masonry anchor bolts and their washers and nuts to be aluminum.

Pipe rails to be fabricated in 3 panel sections.

Bolt holes in tubes at one intermediate post of section to be 1/16"diameter for 5/8" bolts. At other posts the bolt holes in tubes to be 1/16"x 1"slotted holes centered on bolts at normal temperature of 60°F.

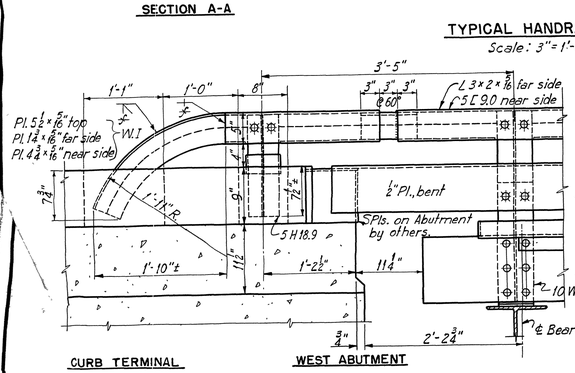
The handrail throughout the 1°15' curves shall be placed with the 3-panel rail sections bent to form a curve concentric with curb lines

Aluminum plate shims between concrete and post base may be used for adjusting rail alignment. Maximum thickness of shim to be 3/4"; where more tilting of post is required for proper alignment, concrete bearing area shall be ground down. Space between concrete and post base plate shall be thoroughly caulked with Alumilastic or equal compound.

Provide 3"± normal clearance between ends of rails and all stone posts, except as otherwise shown.

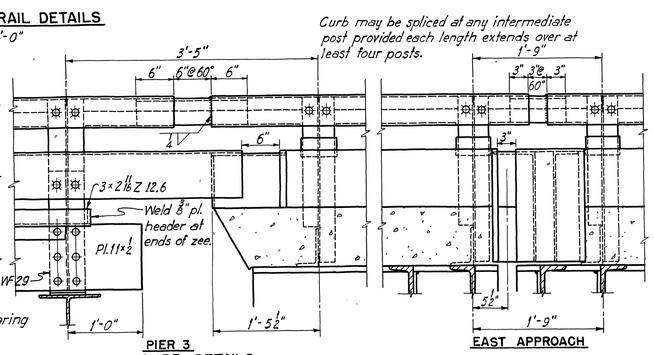
TYPICAL HANDRAIL DETAILS

Scale: 3"= 1'-0"



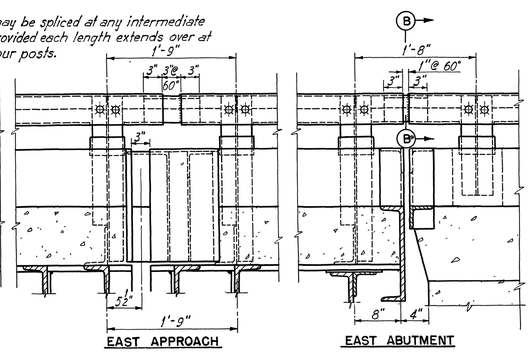
CURB TERMINAL

WEST ABUTMENT



PIER 3

Curb may be spliced at any intermediate post provided each length extends over at least four posts.



EAST APPROACH

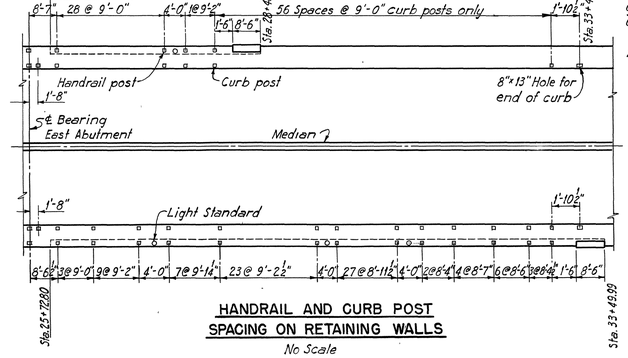
EAST ABUTMENT

CURB DETAILS

Scale: 1"= 1'-0"

TYPICAL CURB CROSS SECTIONS

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



HANDRAIL AND CURB POST SPACING ON RETAINING WALLS

No Scale

Notes on Curb:

The curb posts off the bridge shall be placed and grouted after alignment in recesses provided in the concrete curb by others.

Contractor shall verify spacing of the curb recesses in the field before fabricating metal curbs.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

HANDRAIL AND CURB

SCALE	8"; 1"; 1"; 1 1/2"; 3"= 1'-0"
MADE	M.R.-SW. DATE 3-16-51
TRCD	G.D.-SW. DATE 3-23-51
CKD.	C.R. DATE 4-24-51

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

811 SHEET- 17

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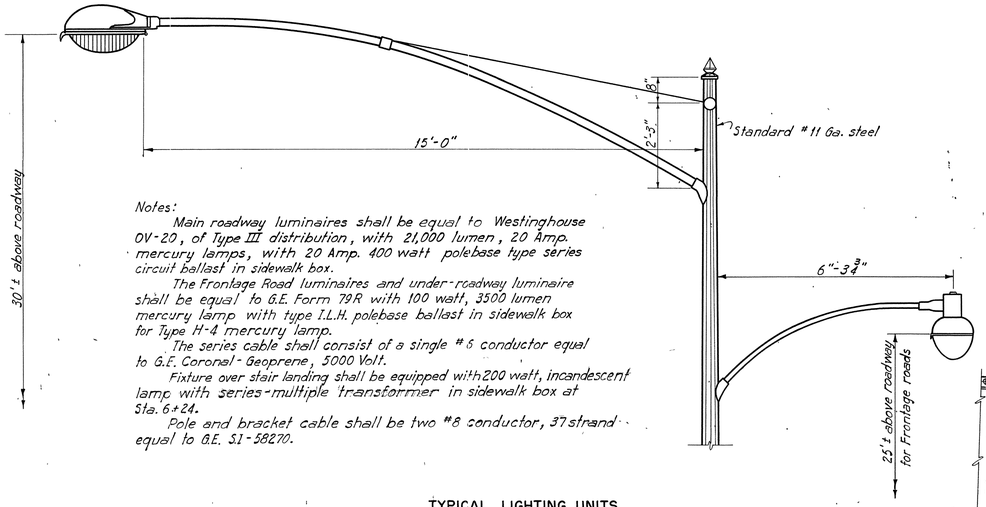
E-14

FED ROAD DIST. NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS	SECTION
8	TENN.	U-068-1(1)				

PART 3



Notes:

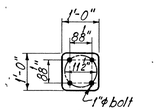
Main roadway luminaires shall be equal to Westinghouse OV-20, of Type III distribution, with 21,000 lumen, 20 Amp. mercury lamps, with 20 Amp. 400 watt polebase type series circuit ballast in sidewalk box.

The Frontage Road luminaires and under-roadway luminaire shall be equal to G.E. Form 79R with 100 watt, 3500 lumen mercury lamp with type I.L.H. polebase ballast in sidewalk box for Type H-4 mercury lamp.

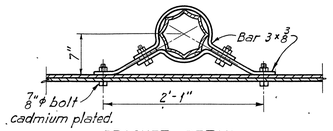
The series cable shall consist of a single #6 conductor equal to G.E. Coronal-Geoprene, 5000 Volt.

Fixture over stair landing shall be equipped with 200 watt, incandescent lamp with series-multiple transformer in sidewalk box at Sta. 6+24.

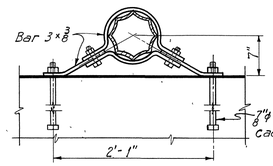
Pole end bracket cable shall be two #8 conductor, 37 strand equal to G.E. S1-58270.



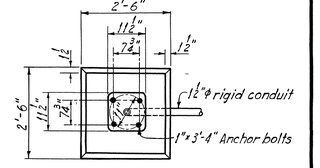
BASE DETAIL
Scale: ½" = 1'-0"

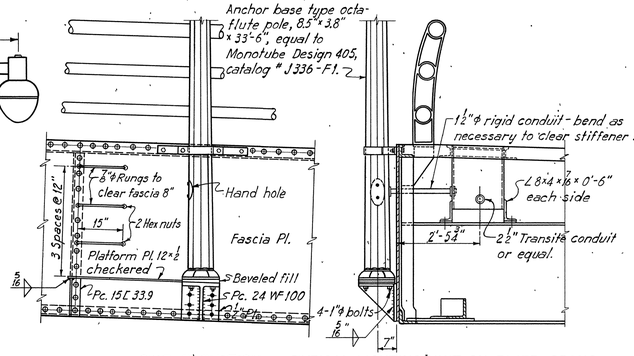


BRACKET DETAIL
Scale: 1" = 1'-0"



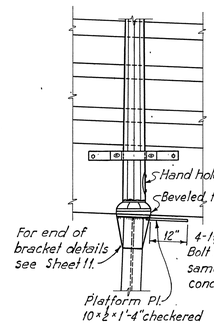
BRACKET DETAIL
Scale: 1" = 1'-0"



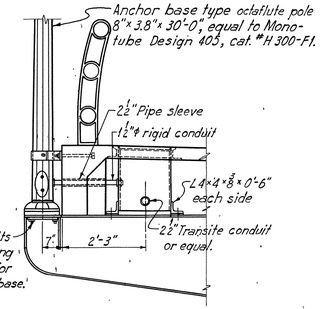


SIDE ELEVATION
Scale: ½" = 1'-0"

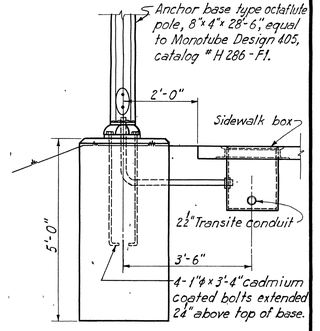
TYPICAL LIGHTING UNIT ON RIVER SPANS
Scale: ½" = 1'-0"
No. Req'd. - 6



SIDE ELEVATION
Scale: ½" = 1'-0"



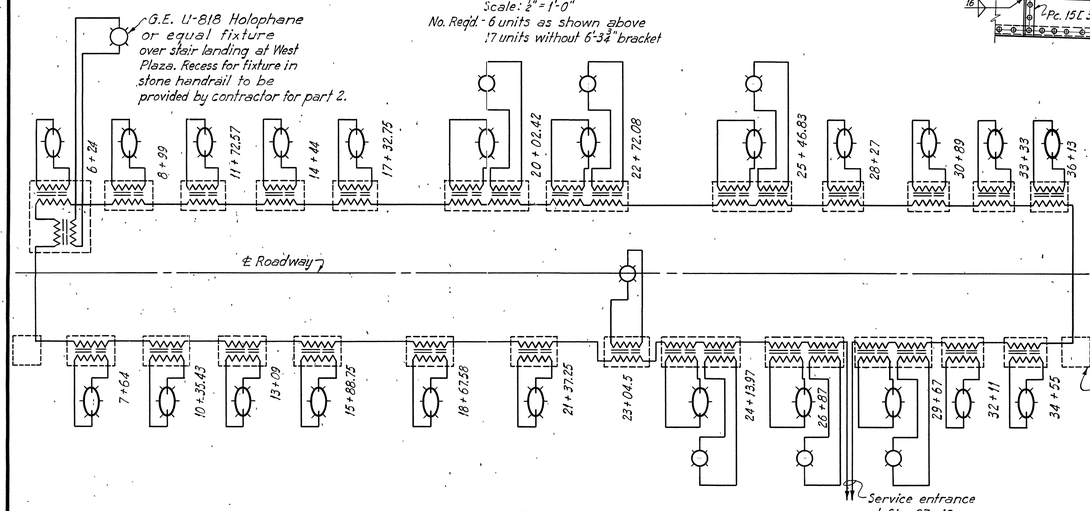
TYPICAL LIGHTING UNIT ON APPROACH SPANS
Scale: ½" = 1'-0"
No. Req'd. - 8



TYPICAL CONCRETE BASE ROADWAY LIGHTING UNIT
Scale: ½" = 1'-0"

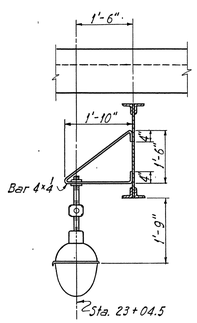
5 Concrete bases including anchor bolts will be furnished and installed under Part 2 of this Project at Sta. 6+24, Sta. 30+89, Sta. 33+33, Sta. 34+55, Sta. 36+13.

TYPICAL LIGHTING UNITS
Scale: ½" = 1'-0"
No. Req'd. - 6 units as shown above
17 units without 6'-3¾" bracket

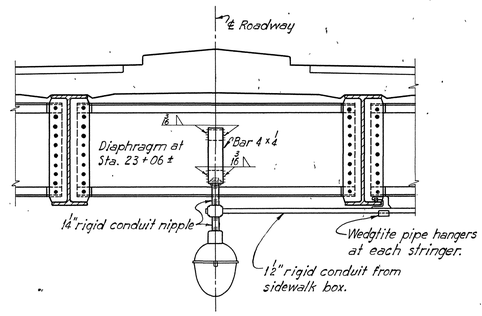


Note:
The required regulator capacity for bridge lighting system is 19.2 K.W. in an all mercury system but may be reduced according to percentage of incandescent load to mercury load.

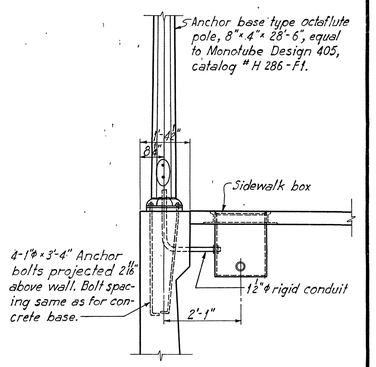
ROADWAY LIGHTING WIRING DIAGRAM
No scale



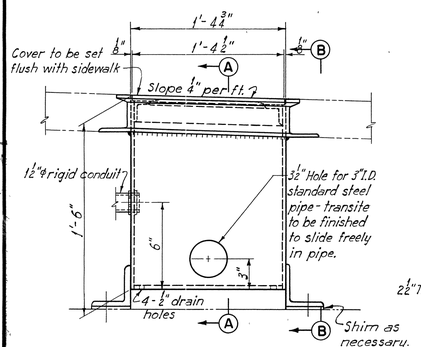
BRACKET DETAIL
Scale: ½" = 1'-0"



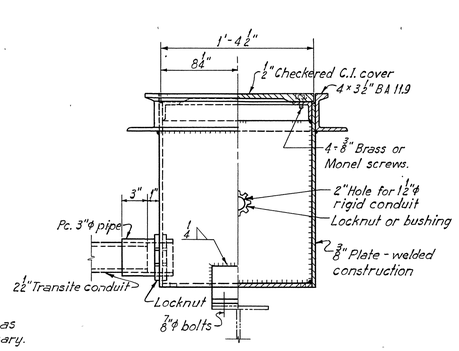
LUMINAIRE UNDER ROADWAY AT STA. 23+04.5
Scale: ½" = 1'-0"
No. Req'd. - 1



TYPICAL LIGHTING UNIT ON RETAINING WALL
Scale: ½" = 1'-0"
No. Req'd. - 4, Sta. 26+87, Sta. 28+27, Sta. 29+67, Sta. 32+11.

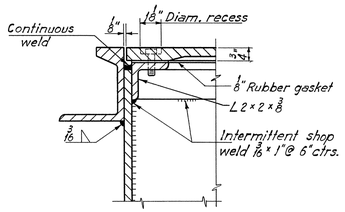


ELEVATION
Scale: 1½" = 1'-0"
No. req'd. - 15



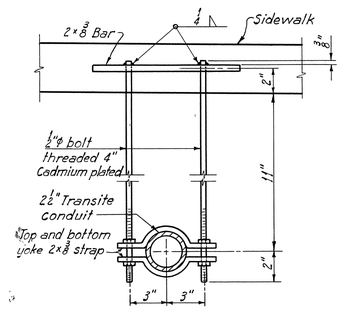
HALF VIEW B-B
Scale: 1½" = 1'-0"

HALF SECTION A-A
Scale: 1½" = 1'-0"

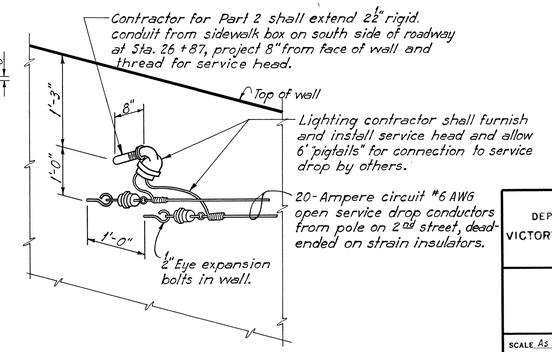


COVER DETAIL
Scale: 3" = 1'-0"
Boxes and fittings shall be galvanized

SIDEWALK BOX DETAILS



CONDUIT HANGER
Scale: 2" = 1'-0"
Space hangers at about 5' ctrs.



CONDUIT SERVICE ENTRANCE SOUTH WALL AT STATION 27+12
No Scale

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

LIGHTING

SCALE As Shown
MADE G.J.C. DATE 12-26-50
TRCD G.D. DATE 1-31-51
CKD G.D. DATE 1-15-51

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

811 SHEET- 18

RECORDED

File E-14-55

FED ROAD DIST. NO.	STATE	FED AID PROJ. NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS	SECTION
8	TENN	U-068-1(1)				

PART 3

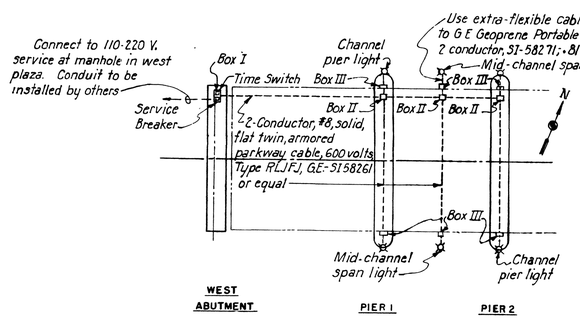
SUMMARY OF ESTIMATED QUANTITIES

Item No.	Description	RIVER SPANS					EAST APPROACH SPANS							Item Totals
		Main Members	Shoes	Expansion Joints	Handrail & Curb	Total	Main Members	Drains	Expansion Joints	Shoes	Handrail & Curb	Stairway	Total	
91-1	Hot Asphaltic Concrete (Open Graded)					270 Tons							370 Tons	640 Tons
92-1	Hot Asphaltic Concrete Binder Mixture					270 Tons							370 Tons	640 Tons
132-1	Structural Steel	4,012,600 Lbs.	6,300 Lbs.	8,800 Lbs	411,200 Lbs.	4,438,900 Lbs.	2,097,800 Lbs.	4,300 Lbs.	41,800 Lbs.	5,800 Lbs.	76,400 Lbs.	21,000 Lbs.	2,247,100 Lbs.	6,686,000 Lbs.
132-2	Steel Castings		59,780 Lbs.	17,320 Lbs.		77,100 Lbs		2,800 Lbs.	43,000 Lbs	60,700 Lbs.			106,500 Lbs.	183,600 Lbs.
132-3	Steel Forgings								4,120 Lbs.	59,080 Lbs.			63,200 Lbs.	63,200 Lbs
132-11	Wrought Iron Plates			700 Lbs.	15 Lbs.	715 Lbs	950 Lbs.	650 Lbs	2,350 Lbs		2,935 Lbs.		6,885 Lbs.	7,600 Lbs.
132-12	8"φ Wrought Iron Pipe							120 Lin. Ft.					120 Lin. Ft.	120 Lin. Ft.
135-4	Class "A" Concrete					1,250 Cu. Yds.							1,600 Cu Yds.	2,850 Cu Yds.
135-12	Steel Bar Reinforcement					243,800 Lbs.							356,200 Lbs.	600,000 Lbs
	Handrail (Superstructure)				1,535 Lin. Ft.	1,535 Lin. Ft.					3,185 Lin. Ft.		3,185 Lin Ft	4,720 Lin. Ft
	Handrail (Stairway at Span 14)											120 Lin. Ft.	120 Lin. Ft.	120 Lin. Ft

Cor-ten or other rust resisting metal may be substituted where wrought iron has been specified.

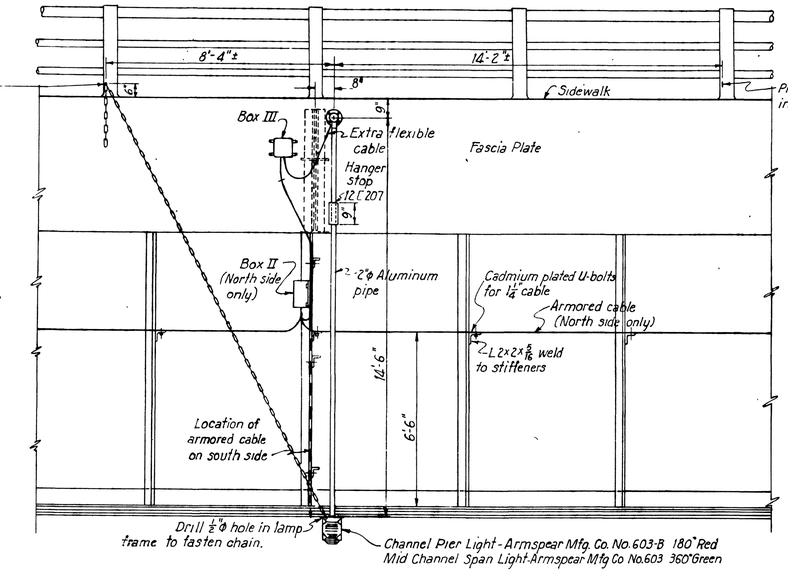
LIST OF NAVIGATION LIGHTING EQUIPMENT

Quant.	Description and size	Similar to Mfr:	Mfr: No.	Rating	Amps
1	Time Switch, 120 V. Ac.	Sangamo	V.SW-11	SPST	35
1	Main Service Breaker Switch	Heinemann	H-1801-35	SP	35
1	Main Service Junction Box-18"x16"x8"	Hope	H-1339		
3	Junction Box-12"x12"x6" Box II	Hope	H-1230		
6	Junction Box-8"x8"x4" Box III	Hope	H-1219		
19	Box Connectors for armored cable	National	#2161-EZ		
6	Box Connectors for flexible cable	T & B	#2370		



NAVIGATION LIGHTING WIRING DIAGRAM

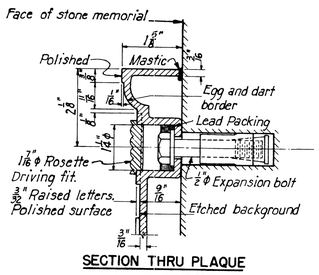
No Scale



GIRDER ELEVATION AT NAVIGATION LIGHTS

Scale 3/8"=1'-0"

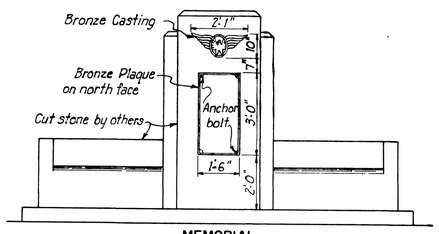
(North girder shown; south girder similar except as noted.)



SECTION THRU PLAQUE AT ANCHOR BOLT

Half Size

Note: The Contractor shall submit for approval a method for attaching the bronze casting to the stone.



MEMORIAL

Scale 3/8"=1'-0"

Masonry will be placed by others in the south section of the West Plaza. Contractor shall furnish and install bronze casting, plaque and fastenings. Inscription text for plaque to be supplied

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

NAVIGATION LIGHTING, MEMORIAL PLAQUE AND SUMMARY OF QUANTITIES

SCALE As Shown
MADE E.C.L. DATE 10-2-50
TRCD A.R.R.R. DATE 11-14-50
CKD H.B.A. DATE 1-31-51

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

811 SHEET 19

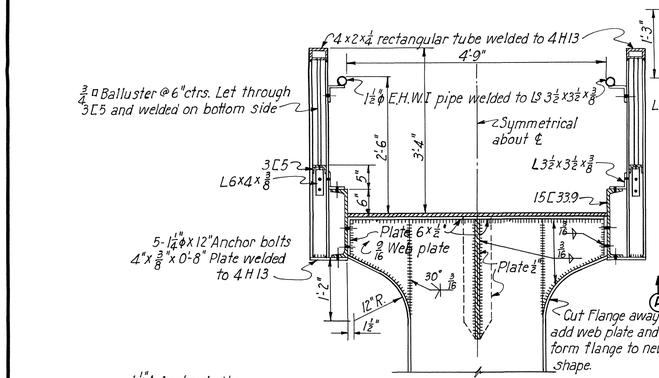
307

File E-14-516

FED ROAD DIST NO	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO	TOTAL SHEETS	SECTION
8	TENN.	U-068-1(1)				

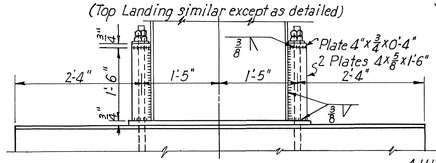
PART 3

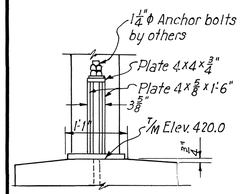
$1\frac{3}{8}$ x $1\frac{3}{8}$ Slotted holes in $\frac{3}{8}$" Pl.



MIDDLE LANDING

(Top Landing similar except as detailed)



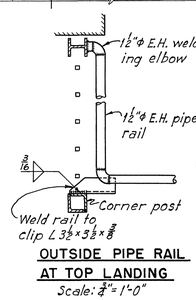


Base Pl. 12½" x ¾" x 3'-4" for 30 WF 116
Base Pl. 17" x ¾" x 3'-4" for 30 WF 172

COLUMN ANCHORAGE

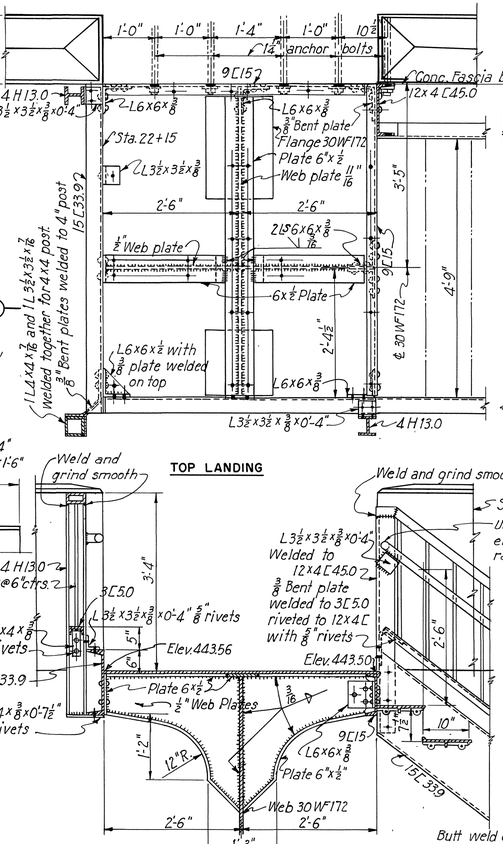
Scale: ¾" = 1'-0"

Note:
Provide 1½" ϕ holes for 1¼" ϕ anchor bolts in all ¾" ϕ base plates. Fill spaces in plates around bolts with an approved metallic filler.

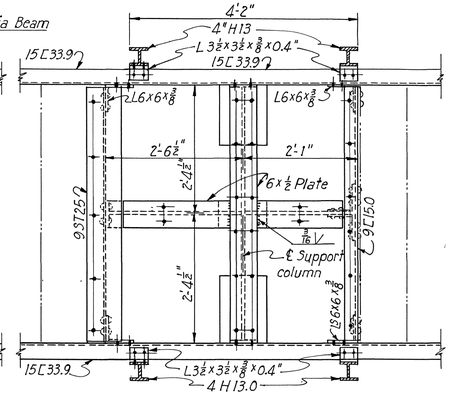


OUTSIDE PIPE RAIL AT TOP LANDING

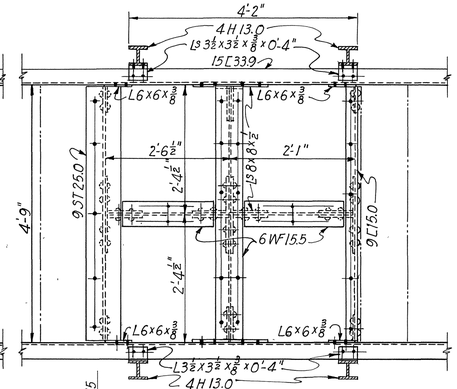
Scale: ¾" = 1'-0"



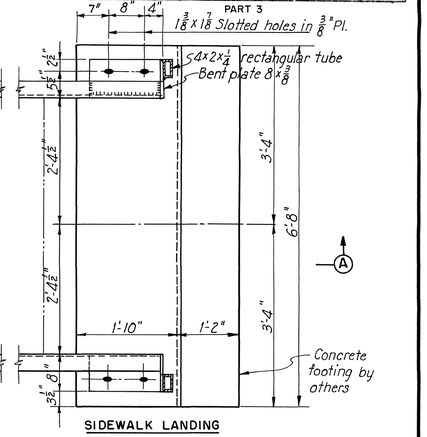
TOP LANDING



MIDDLE LANDING

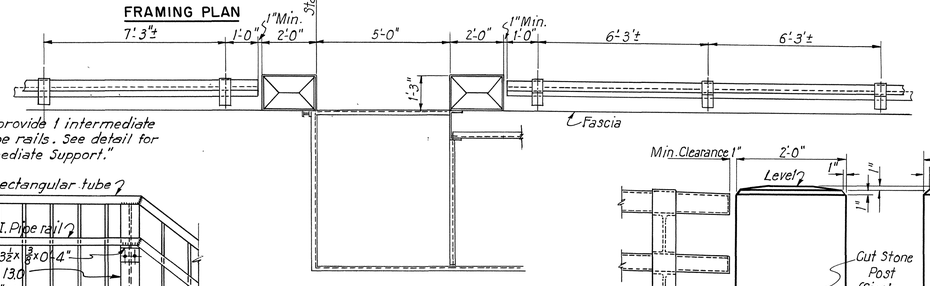


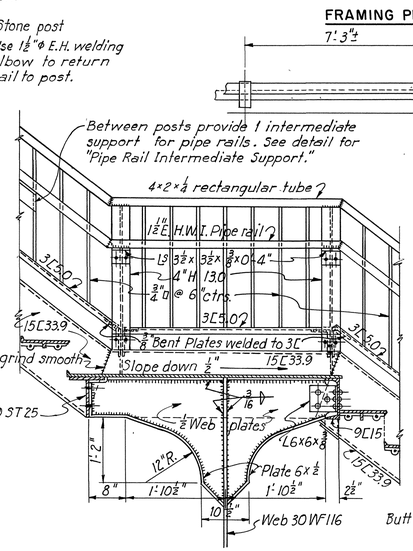
INTERMEDIATE LANDING



SIDEWALK LANDING

FRAMING PLAN

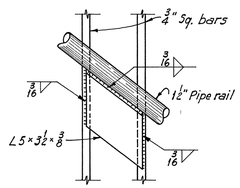




SECTION A-A

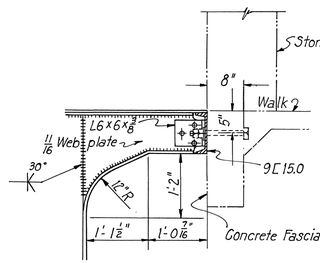
ELEVATION

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



PIPE RAIL INTERMEDIATE SUPPORT

Scale: 1½" = 1'-0"



TOP LANDING CONNECTION TO FASCIA

Notes:
All rivet connections in railing to be with ⅝" ϕ rivets.
All other rivets to be ⅞" ϕ.
All landings to have "Hatched "Feralun", Style K, or equal, abrasive plates ½" thick and to be secured with ⅜" ϕ Flat Head machine screws.
All treads to be hatched "Feralun", style R-K, or equal, abrasive treads ½" thick, 10¾" wide.
All welds to be 1/16 except as otherwise shown.
Handrail to be constructed on both sides of stairs and landings.

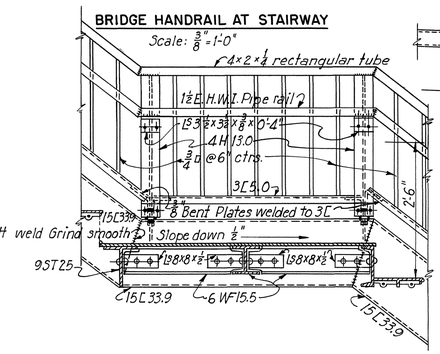
ESTIMATED QUANTITIES

No	Description	Quantity
132-1	Structural Steel	21,000 lbs.
	* Handrail (Stairway)	120 Lin. Ft.

*Cor-ten or equal. Includes posts, rails, ballusters and connections.

BRIDGE HANDRAIL AT STAIRWAY

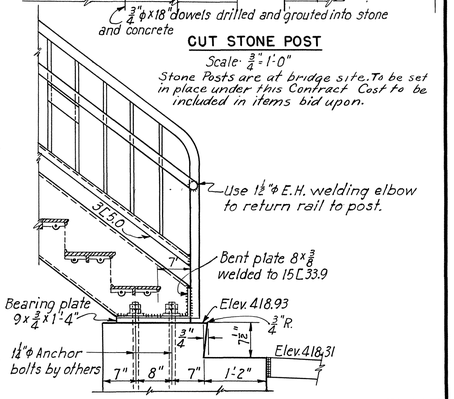
Scale: ⅜" = 1'-0"



CUT STONE POST

Scale: ¾" = 1'-0"

Stone Posts are at bridge site. To be set in place under this Contract. Cost to be included in items bid upon.



STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

STAIRWAY

SCALE ¾" = 1'-0" ⅜" = 1'-0" 1½" = 1'-0"
MADE W.L.G. DATE 2-7-51
TRCD R.R. DATE 2-19-51
CKD H.P.B. DATE 2-22-51

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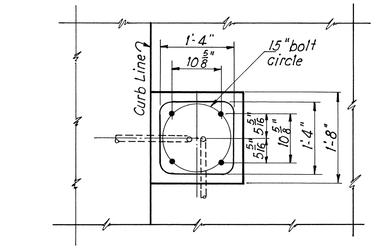
811 SHEET- 20

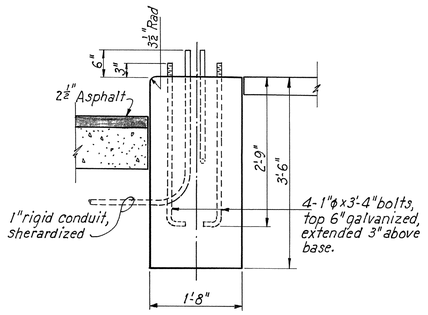
320

E-14-57

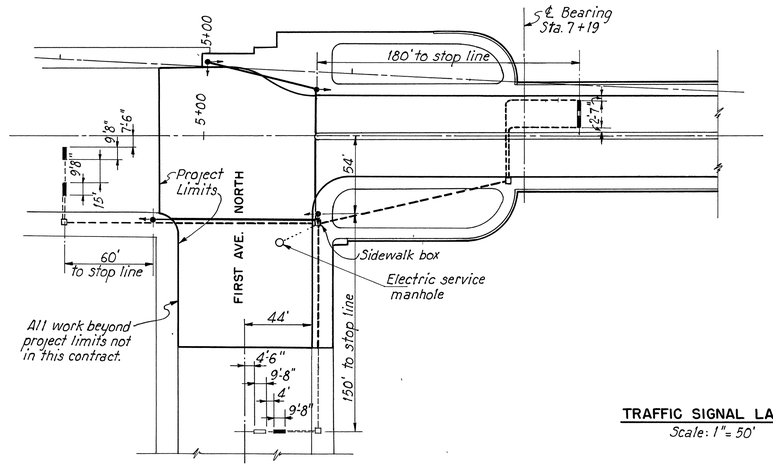
FED ROAD DIST NO	STATE	FED. AID PROJ. NO	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	SECTION
8	TENN.	U-068-I(1)				

PART 3

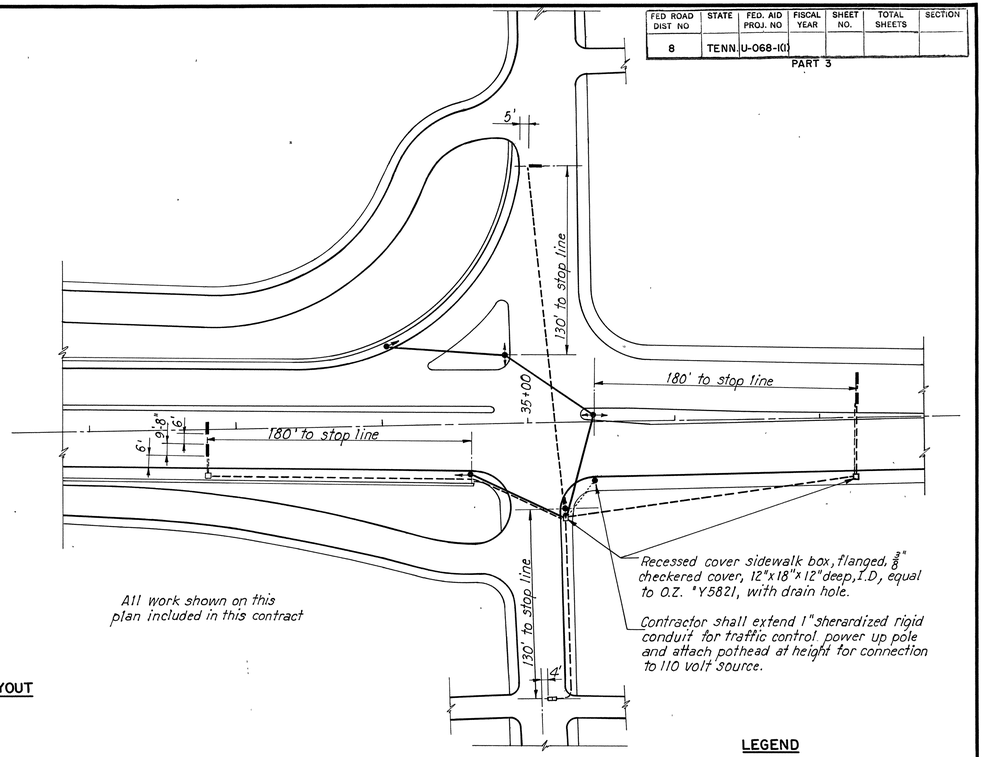




TRAFFIC SIGNAL FOUNDATION
Scale: ¾" = 1'-0"
8 Required

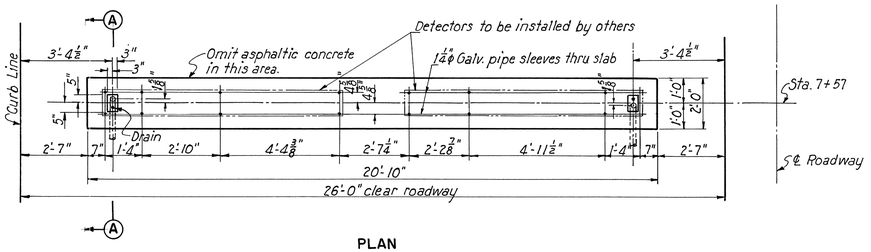


TRAFFIC SIGNAL LAYOUT
Scale: 1" = 50'

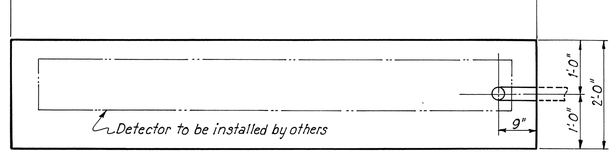


LEGEND

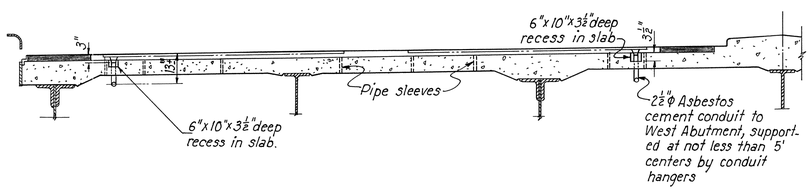
- Traffic signal pole footing
- Checkered cover sidewalk box.
- 6' non-directional detector recess
- 8' non-directional detector recess
- 8' directional detector recess.
- Electrical service - 1" sherardized conduit.
- 1" sherardized conduit.
- 2½" transite conduit.



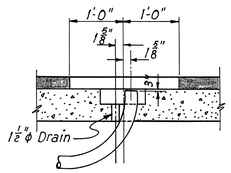
PLAN



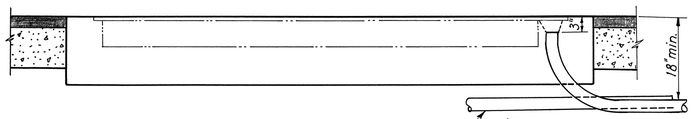
PLAN

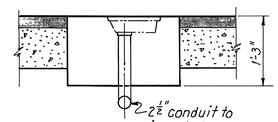


RECESS IN BRIDGE SLAB FOR DETECTORS
Scale: ⅜" = 1'-0"



SECTION A-A





RECESS IN ROADWAY FOR DETECTORS
Scale: ¾" = 1'-0"

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

TRAFFIC SIGNALS

SCALE ⅜ ⅜ 1" = 1'-0"
MADE G.I.C. DATE 4-16-51
TRCD R.R. DATE 4-24-51
CKD J.T. DATE 4-26-51

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

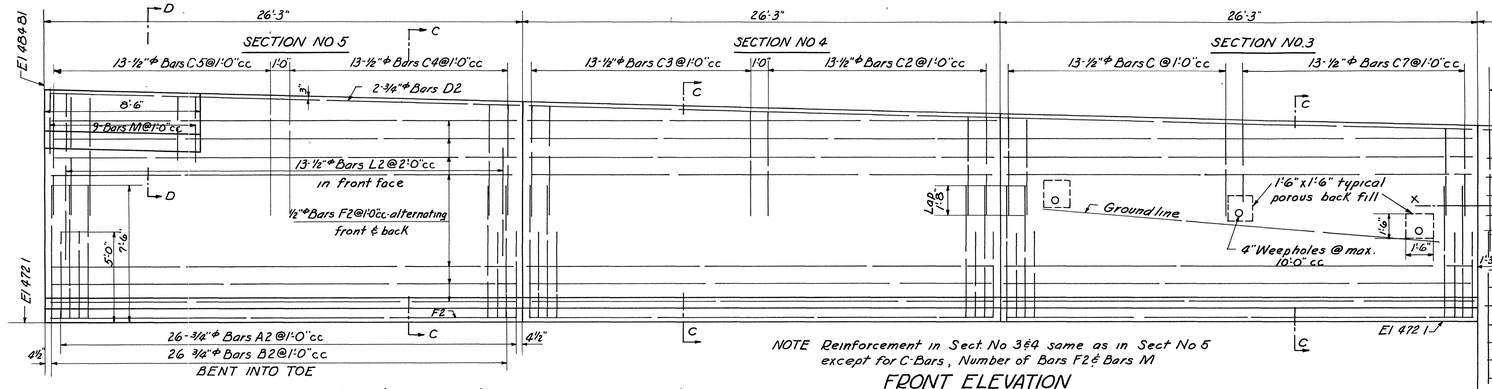
811 SHEET- 21

433

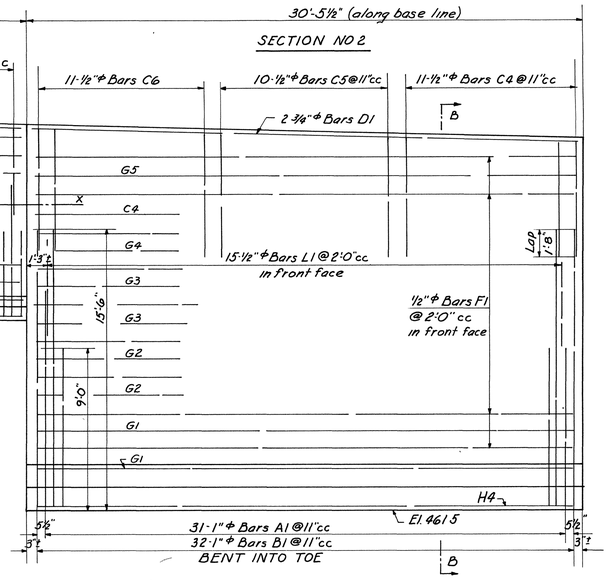
File E-45-5

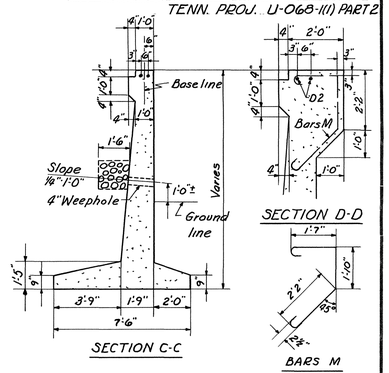
FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
8	TENN.		19		

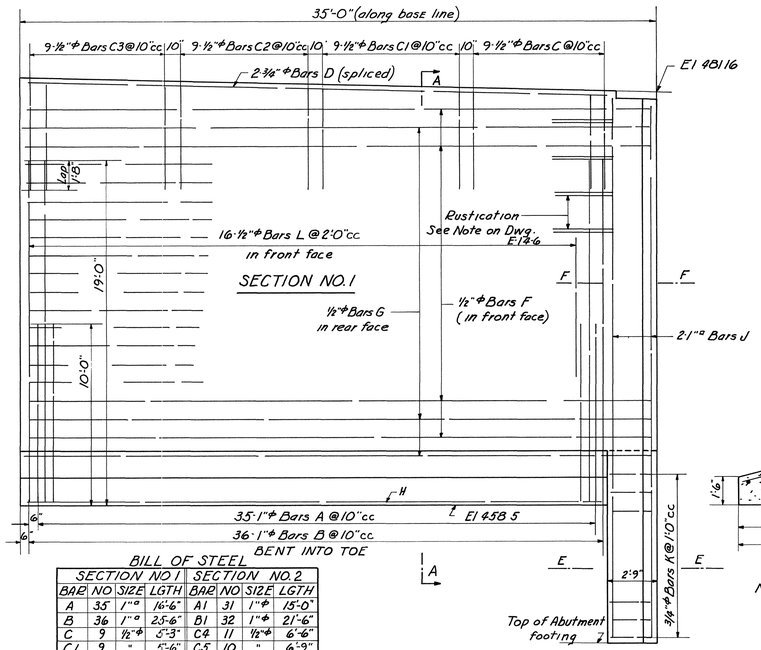
TENN. PROJ. U-068-1(1) PART 2

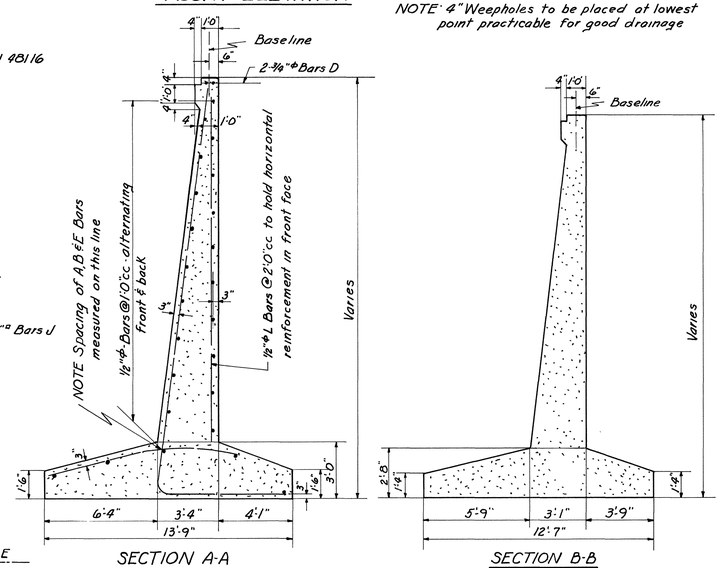


NOTE Reinforcement in Sect No 3 & 4 same as in Sect No 5 except for C-Bars, Number of Bars F2 & Bars M

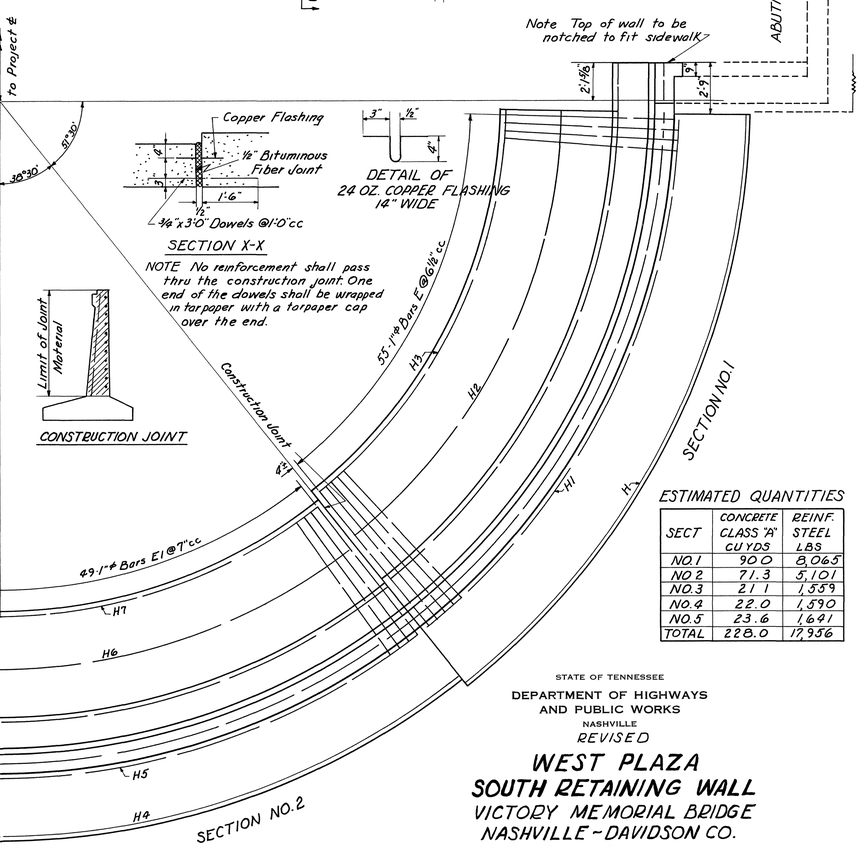






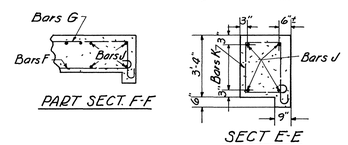


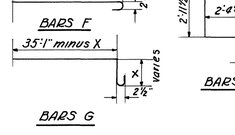
NOTE: 4" Weepholes to be placed at lowest point practicable for good drainage



BILL OF STEEL

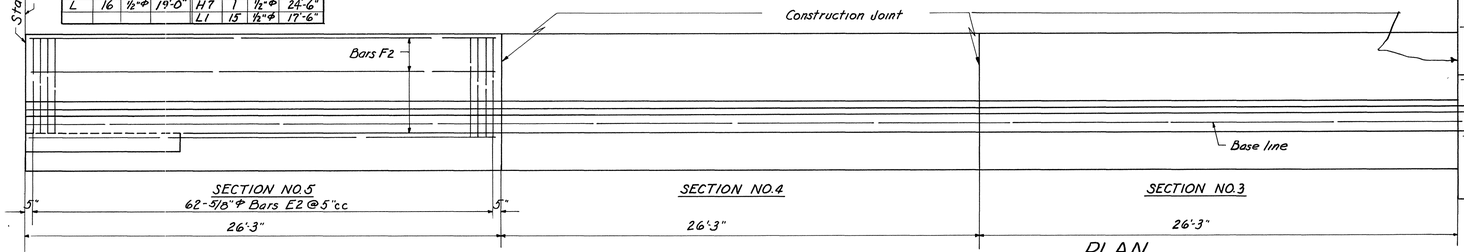
SECTION NO 1				SECTION NO 2			
BAR	NO	SIZE	LGTH	BAR	NO	SIZE	LGTH
A	35	1"□	16'-6"	A1	31	1"ϕ	15'-0"
B	36	1"□	25'-6"	B1	32	1"ϕ	21'-6"
C	9	½"ϕ	5'-3"	C4	11	½"ϕ	6'-6"
C1	9	"	5'-6"	C5	10	"	6'-9"
C2	9	"	5'-9"	C6	11	½"ϕ	7'-0"
C3	9	½"ϕ	6'-0"	D1	2	¾"ϕ	30'-0"
D	4	¾"ϕ	18'-6"	E1	49	1"ϕ	9'-0"
E	55	1"ϕ	9'-6"	F1	9	½"ϕ	30'-3"
F	10	½"ϕ	35'-3"	G1	2	"	28'-6"
G	10	½"ϕ	35'-6"	G2	2	"	28'9"
H	1	"	35'-6"	G3	2	"	29'-3"
H1	1	"	32'0"	G4	2	"	29'-6"
H2	1	"	26'6"	G5	1	½"ϕ	29'-9"
H3	1	½"ϕ	24'0"	H4	1	"	32'9"
J	4	1"□	29'-3"	H5	1	"	30'-6"
K	10	¾"ϕ	12'3"	H6	1	"	26'6"
L	16	½"ϕ	19'0"	H7	1	½"ϕ	24'6"
				L1	15	½"ϕ	17'-6"





BILL OF STEEL

SECTION NO.3				SECTION NO.4				SECTION NO.5			
BAR	NO	SIZE	LGTH	BAR	NO	SIZE	LGTH	BAR	NO	SIZE	LGTH
A2	26	⅜"ϕ	7'-9"	A2	26	⅜"ϕ	7'-9"	A2	26	⅜"ϕ	7'-9"
B2	26	⅜"ϕ	10'-3"	B2	26	⅜"ϕ	10'-3"	B2	26	⅜"ϕ	10'-3"
C	13	½"ϕ	5'-3"	C2	13	½"ϕ	5'-9"	C4	13	½"ϕ	6'-6"
C7	13	½"ϕ	5'-0"	C3	13	½"ϕ	6'-0"	C5	13	½"ϕ	6'-9"
D2	2	¾"ϕ	25'-9"	D2	2	¾"ϕ	25'-9"	D2	2	¾"ϕ	25'-9"
E2	62	⅝"ϕ	5'-9"	E2	62	⅝"ϕ	5'-9"	E2	62	⅝"ϕ	5'-9"
F2	14	½"ϕ	25'-9"	F2	15	½"ϕ	25'-9"	F2	15	½"ϕ	25'-9"
L2	13	½"ϕ	9'-0"	L2	13	½"ϕ	9'-0"	L2	13	½"ϕ	9'-0"
								M	9	½"ϕ	6'-5"



ESTIMATED QUANTITIES

SECT	CONCRETE CLASS "A" CU YDS	REINF. STEEL LBS
NO.1	90.0	8,065
NO.2	71.3	5,101
NO.3	21.1	1,589
NO.4	22.0	1,590
NO.5	23.6	1,641
TOTAL	228.0	17,936

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE
REVISED

WEST PLAZA SOUTH RETAINING WALL
VICTORY MEMORIAL BRIDGE
NASHVILLE-DAVIDSON CO.
1953

CORRECT L. V. Erickson BRIDGE ENGINEER
APPROVED Herbert S. Bates STATE HIGHWAY ENGINEER

E-14-78

DESIGNED BY _____ DATE _____
DRAWN BY W. SUTER DATE 3-4-53
TRACED BY R.E. ALLEY DATE 3-13-53
CHECKED BY _____ DATE _____

MICROFILMED
M.C.M.S. 8/17/72

(7)

INDEX OF SHEETS

SHEET NO.	1	TITLE SHEET
" "	2	ESTIMATED QUANTITIES
" "	3	SUMMARY OF QUANTITIES
" "	4	GENERAL PLAN AND ELEVATION
" "	5	WEST PLAZA-NORTH RETAINING WALL
" "	6	WEST PLAZA-SOUTH RETAINING WALL
" "	7	WEST ABUTMENT
" "	8	WEST PLAZA-REINFORCING STEEL SCHEDULE
"	9	PIER 3
" "	10	BENT 4
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" "	12	BENT 6
" "	13	BENTS 7 AND 8
" "	14	BENT 9
" "	15	BENTS 10, 11 AND 12
" "	16	BENT 13
" "	17	BENTS 14, 15, 16 AND 17
" "	18	BENT 18
" "	19	EAST ABUTMENT
" "	20	EAST APPROACH-NORTH RETAINING WALL
" "	21	EAST APPROACH-SOUTH RETAINING WALL
" "	22	EAST APPROACH-SOUTH PETAINING WALL
" "	23	ANCHOR BOLT PLAN AND LIGHTING DETAILS
" "	24	DRAINAGE STRUCTURES
" "	25	DRAINAGE TABLES
" "	26	TYPICAL CROSS SECTIONS & MISCELLANEOUS DETAILS
" "	27	GROUND PLANS
" "	28	GROUND PLANS
" "	29	WEST PLAZA AND MEMORIAL
" "	30	PERSPECTIVES
" "	31	TRAFFIC SIGNALS
" "	32	STANDARD R. R. GRADE CROSSINGS, DWG. P-C-10
" "	33	STANDARD EXPANSION & DUMMY JOINTS & DOWEL ASSEMBLIES, DWG. P-E-29-A (2 SHEETS)
" "	34	EXAMPLES OF STREET & ALLEY INTERSECTIONS, DWG. P-I-5a
" "	35	STANDARD CONCRETE DRIVEWAYS, DWG. P-D-14a
" "	36	STANDARD CONCRETE STEPS & SIDEWALKS, DWG. P-S-7a
" "	37	DETAILS OF STANDARD Nº12 CATCH BASIN, DWG. S-CB-12a.
" "	38	DETAILS OF STANDARD Nº14 CATCH BASIN, DWG. S-CB-14a.
" "	39	DETAILS OF STANDARD CASTINGS FOR Nº 12, 14 & 15 CATCH BASINS, DWG. S-C-12a.
" "	40	DETAILS OF STANDARD Nº2 MANHOLE, CASTINGS, DWG. S-M-2a.
" "	41	BORINGS.
" "	42-46	CROSS-SECTIONS.

THIS PROJECT TO BE CONSTRUCTED UNDER THE STANDARD SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS ADOPTED JANUARY 1, 1938 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT.

CONVENTIONAL SIGNS

COUNTY LINE .....
CITY VILLAGE OR BOROUGH .....
CULVERTS .....
POWER POLE .....
TELEPHONE OR TELEGRAPH POLE .....
FENCE LINE .....
GUARD RAIL .....
UNFENCED PROPERTY .....
RIGHT OF WAY LINE .....
TRAVELED WAY .....
RAILROAD .....
RETAINING WALL .....
BASE OR SURVEY LINE .....
DROP INLET .....
BRIDGE OVER 10 FT. SPAN .....

SURVEY NO.

STATE OF TENNESSEE

DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS

Revised May 1, 1952 Traffic Data

PART 2
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE
SUBSTRUCTURE
REVISED MAY 2, 1952
INDEX AND MILEAGE

F.A.P.U. 068-1(1) PT. 2

PLAN AND PROFILE OF PROPOSED STATE HIGHWAY

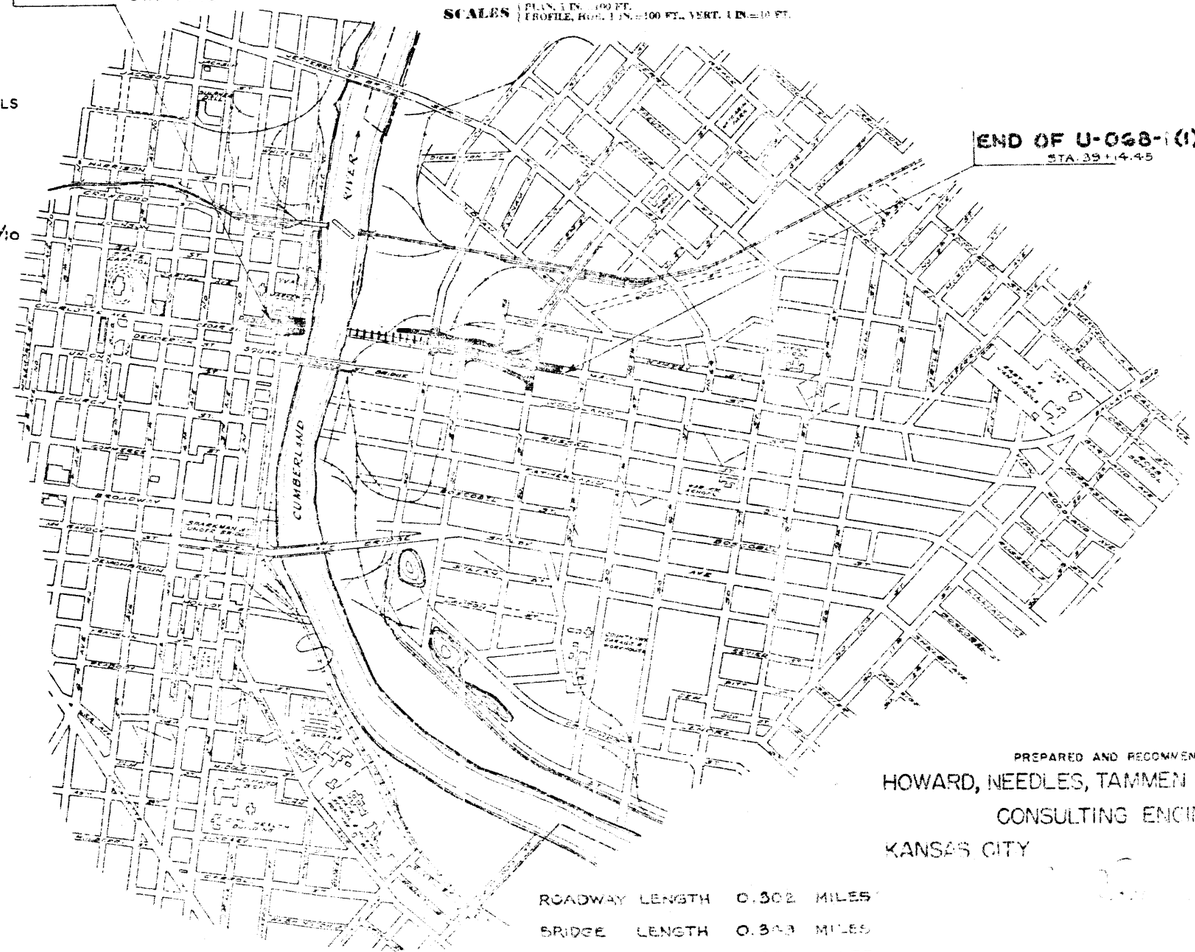
FEDERAL AID PROJECT NO. U-068-1(1) PART 2
SECTION-

DAVIDSON COUNTY

THE CONSTRUCTION OF THE SUBSTRUCTURE OF VICTORY MEMORIAL BRIDGE AND APPROACHES

STATE HIGHWAY NO. 35 F.A.H.S. NO. 35

SCALES { PLAN 1 IN. = 100 FT. / PROFILE, HOR. 1 IN. = 100 FT., VERT. 1 IN. = 10 FT.



ROADWAY LENGTH 0.302 MILES
BRIDGE LENGTH 0.349 MILES
PROJECT LENGTH 0.651 MILES

NO EXCEPTIONS
NO EQUATIONS
NO EXCLUSIONS

The Contractor will be required to maintain through traffic on 1st Street, 3rd Street and Main Street between 3rd and 4th Streets.

He will be required to provide ingress and egress to private property throughout the length of the project.

PREPARED AND RECOMMENDED BY
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

APPROVED ..... R. H. Patton
ENGINEER OF SURVEYS AND DESIGN
DATE ..... MAY 1952

APPROVED ..... S. M. Squires
STATE HIGHWAY ENGINEER
DATE .....

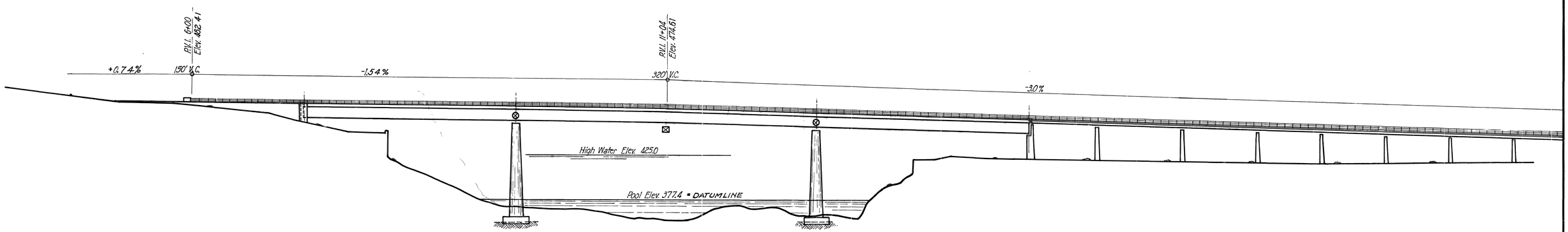
APPROVED ..... C. W. Ernst
COMMISSIONER

RECOMMENDED FOR APPROVAL DATE .....
DISTRICT ENGINEER
BUREAU OF PUBLIC ROADS
DEPARTMENT OF COMMERCE

APPROVED DATE .....
DIVISION ENGINEER
BUREAU OF PUBLIC ROADS
DEPARTMENT OF COMMERCE

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	SECTION
8	TENN.	U-0261(1)	950	3	7

PART I



PIER 1 PIER 2

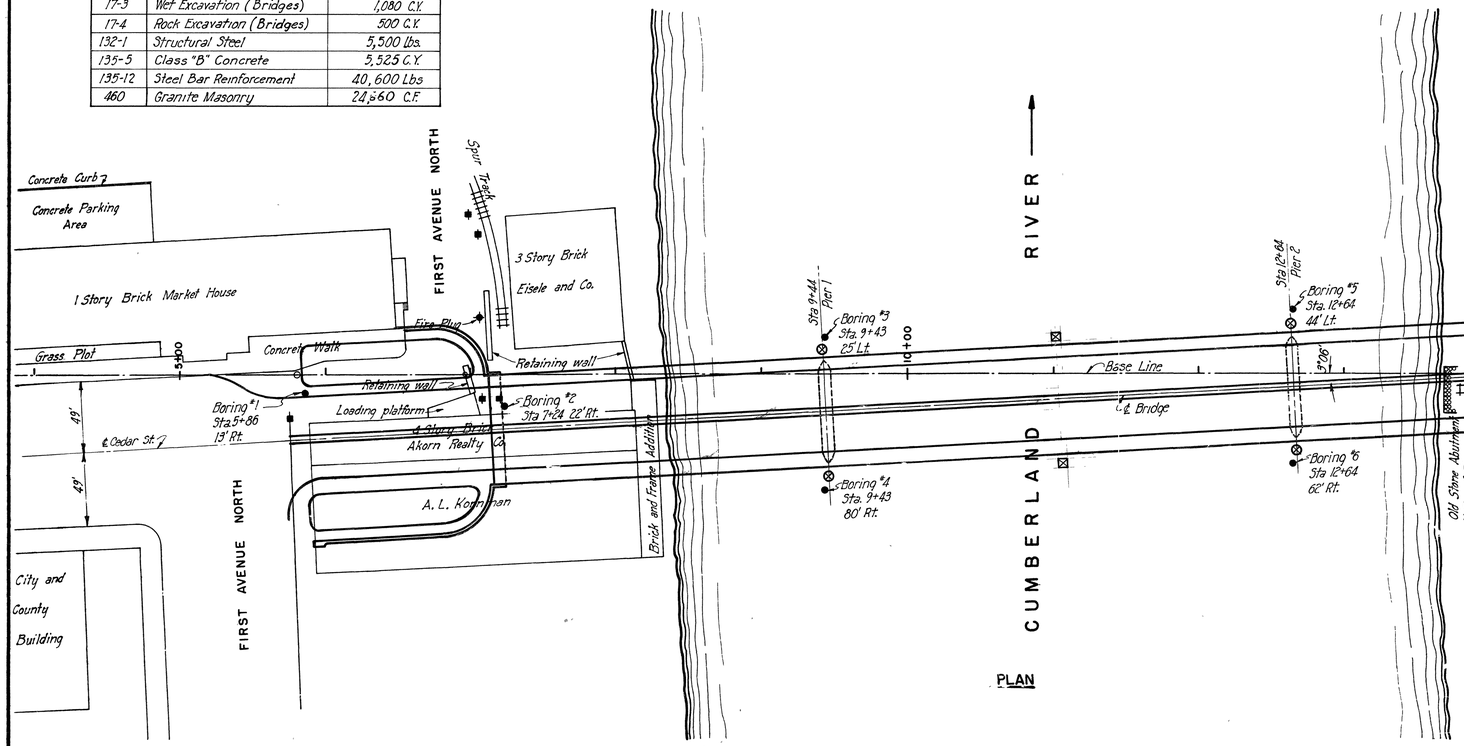
ELEVATION

RIVER MILE 190.6

⊠ Required 2 Channel Lights (Green 360°)
⊗ Required 4 Pier Lights (Red 180°)

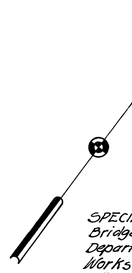
ESTIMATED QUANTITIES - PIERS 1 AND 2

No.	Item	Total
17-3	Wet Excavation (Bridges)	1,080 C.Y.
17-4	Rock Excavation (Bridges)	500 C.Y.
132-1	Structural Steel	5,500 lbs.
135-5	Class "B" Concrete	5,525 C.Y.
135-12	Steel Bar Reinforcement	40,600 Lbs
460	Granite Masonry	24,560 C.F.



LIST OF DRAWINGS

PIER NO. 1	E-9-2
PIER NO. 2	E-9-3
STONE DETAILS - PIERS 1 & 2	E-9-4
BORINGS	E-9-5



GENERAL NOTES
SPECIFICATIONS: Standard Road and Bridge Specifications of the Tennessee Department of Highways and Public Works for construction, unless noted otherwise.

See M-302-12 (Repairs)

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

GENERAL PLAN AND ELEVATION

SCALE 1"=50' ..... HOWARD, NEEDLES, TAMMEN & BERGENDOFF
MADE BHW DATE 6-28-50 CONSULTING ENGINEERS
TRCD. B.H.W. DATE 7-12-50 KANSAS CITY NEW YORK
CHKD. J.H. DATE 7-12-50 811 SHEET 2.02

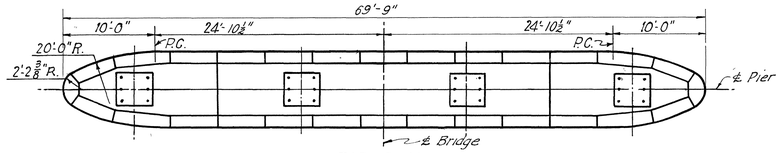
2/27/51 Location of Navigation Path added
Revised 3-27-51

TDH 1330V

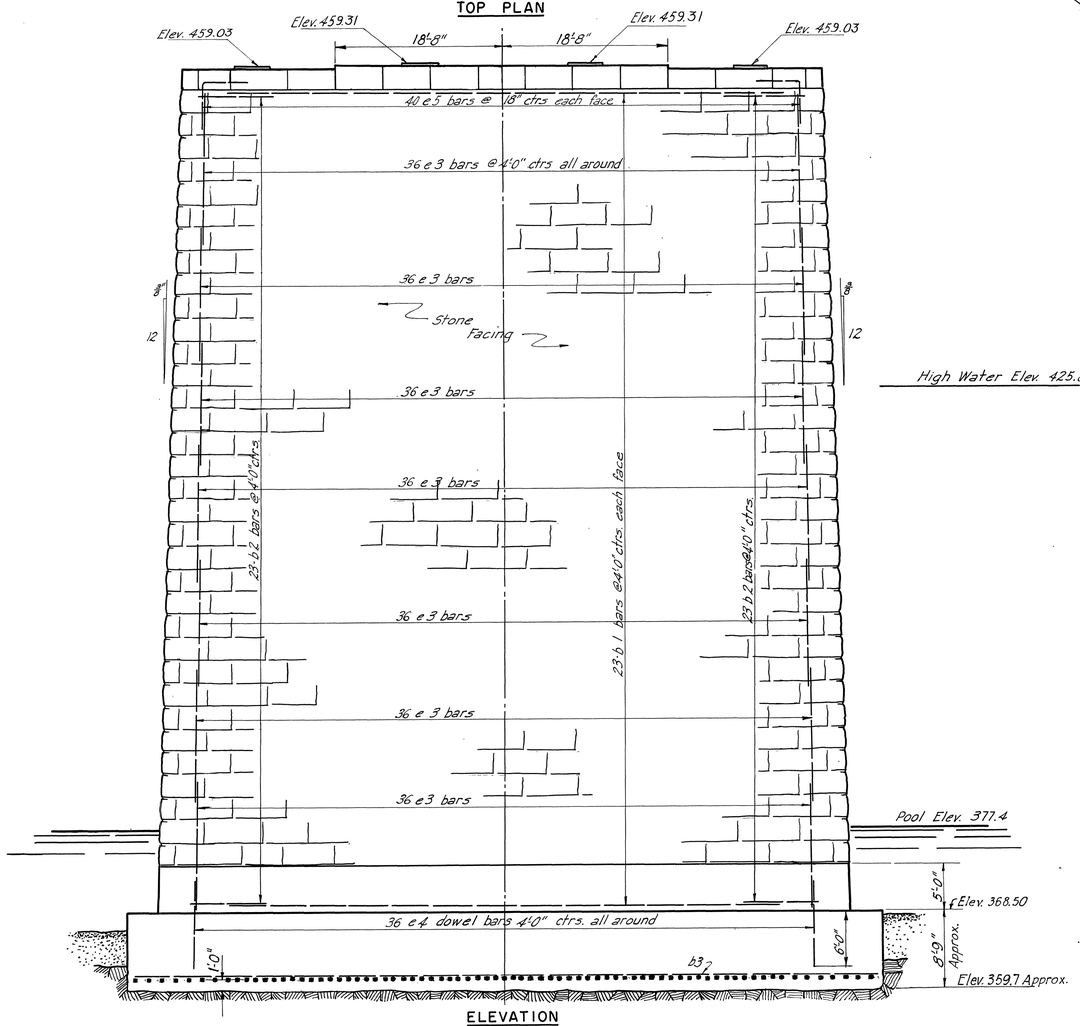
E-9-1

FED ROAD DIST NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	SECTION
8	TENN.	U-026-1(1)		3	6	

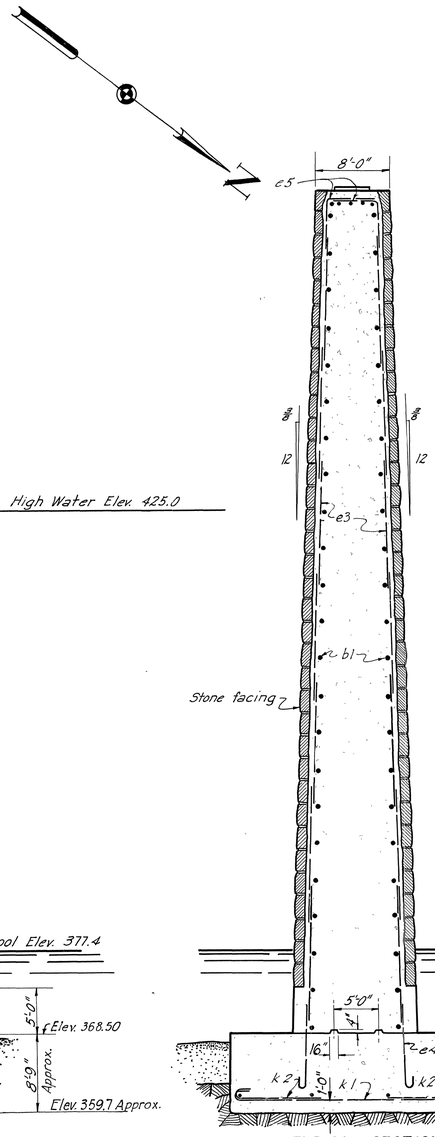
PART I



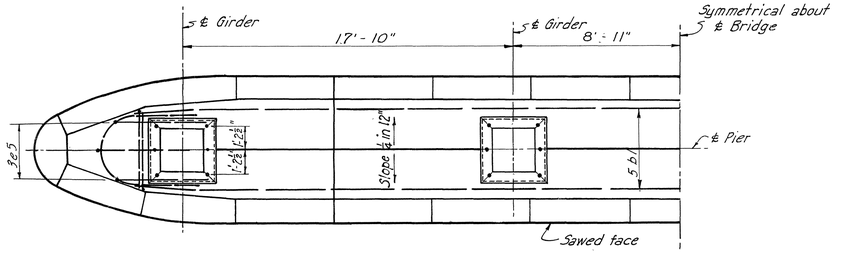
TOP PLAN



ELEVATION



TYPICAL SECTION



HALF PLAN OF TOP

Scale: ¼" = 1'-0"

Notes:

Length of vertical bars may be changed by the contractor, subject to approval of the Engineer. For details of stone facing see sheet 2.05

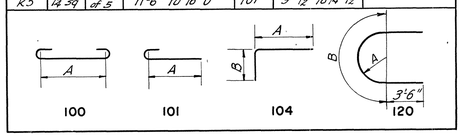
For location of construction joints and permissible height of pours see specifications; **ALSO, SEE SPECIAL PROVISIONS FOR RIVER PIERS.**

ESTIMATED QUANTITIES

17-3	Wet Excavation (Bridges)	440 C.Y.
17-4	Rock Excavation (Bridges)	250 C.Y.
132-1	Structural Steel	3,000 Lbs.
135-5	Class "B" Concrete	2,710 C.Y.
135-12	Steel Bar Reinforcement	23,520 Lbs.
460	Granite Masonry	12,910 C.F.

REINFORCEMENT SCHEDULE

MARK	SIZE	NO REQ'D	LENGTH	TYPE	DIMENSIONS A	DIMENSIONS B
k1	1¼" sq	13	29'-3"	100	25'-6"	
k2	1¼" sq	96	12'-2"	101	10'-5½"	
k3	1¼" sq	28	8'-0"	Str.		
k4	1¼" sq	4 sets of 7	13'-0" to 17'-0"	101	11'-1½" to 15'-1⅛"	
e1	¾" ϕ	12	12'-0"	Str.		
e2	¾" ϕ	2	26'-6"	Str.		
e3	¾" ϕ	252	14'-6"	Str.		
e4	¾" ϕ	36	9'-3"	101	8'-3"	
e5	¾" ϕ	86	10'-6"	104	4'-0"	6'-6"
b1	1" ϕ	51	59'-0"	Str.		
b2	1" ϕ	2 sets of 23	13'-3" to 21'-2"	120	2'-0" to 4'-6"	6'-3" to 14'-2"
b3	1" ϕ	9	42'-0"	Str.		
k5	1¼" sq	4 sets of 5	11'-6" to 16'-0"	101	9'-1½" to 14'-1½"	



GENERAL NOTES ON CONCRETE

All concrete shall be Class "B", air entrained concrete placed in the dry. All cement shall be Type II or IIA.

For requirements on proportioning, mixing, placing and curing concrete see specifications.

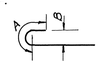
Reinforcing steel shall be structural or intermediate grade.

Minimum lap for reinforcing bars shall be 40 bar diameters.

Minimum cover for reinforcing bars shall be 2" except as otherwise shown.

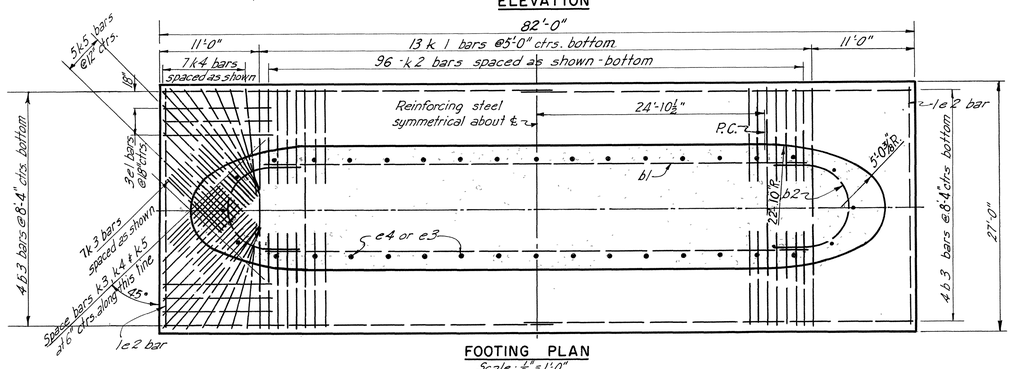
All bar bends shall be in accordance with AASHO specifications for Highway Bridges, 1949, paragraph 2.5.4.

All dimensions for reinforcing bars are given to the center of the bar.



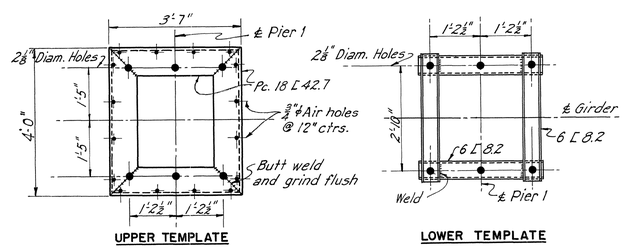
Typical Hook

A - 16 bar diameters for bars up to 1".
B - 7 bar diameters for bars up to 1".
A - 18 bar diameters for bars over 1".
B - 9 bar diameters for bars over 1".



FOOTING PLAN

Scale: ⅛" = 1'-0"



UPPER TEMPLATE

LOWER TEMPLATE

TEMPLATE - SCREED FRAMES

Scale: ½" = 1'-0"

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

PIER I

SCALE 1/16", 1/4" & 1/8" = 1'-0"
MADE C.R.H. DATE 6-16-50
TRCD S.W.F. DATE 6-26-50
CKD J.T DATE 9-15-50

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
811 SHEET 2.03

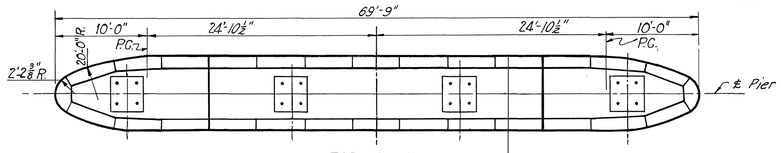
Revised 7-17-51
Revised 3-27-51

DOCUMENT HAS BEEN MICROFILMED

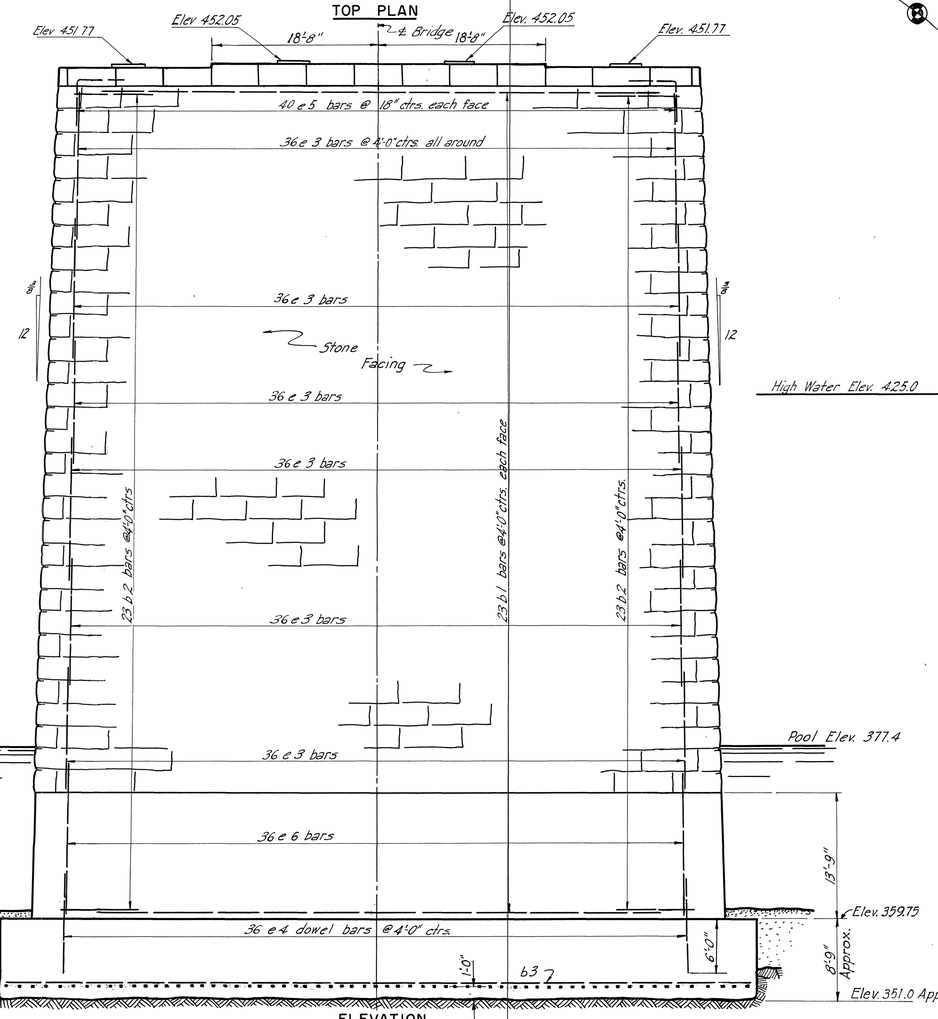
E-9-2

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	SECTION
8	TENN.	U-026(10)		4	6	

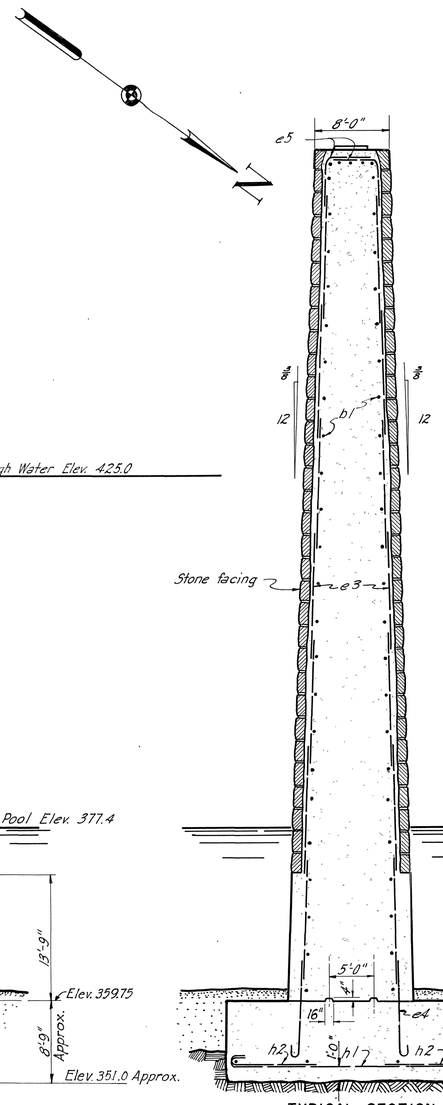
PART I



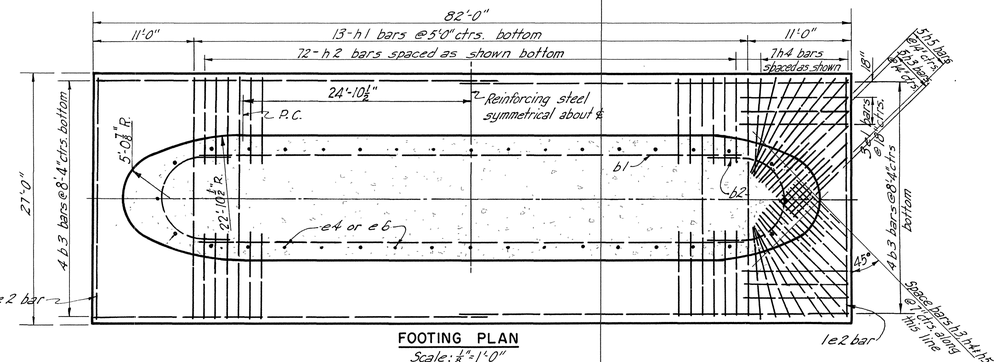
TOP PLAN



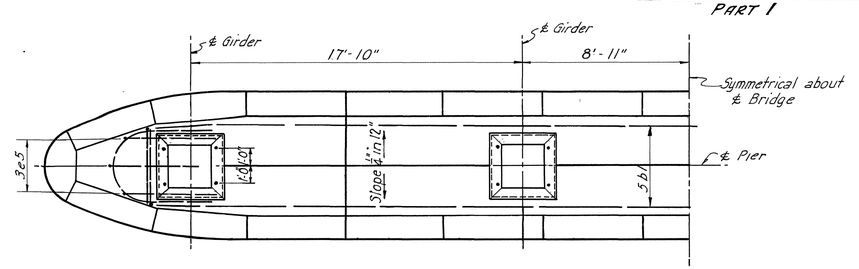
ELEVATION



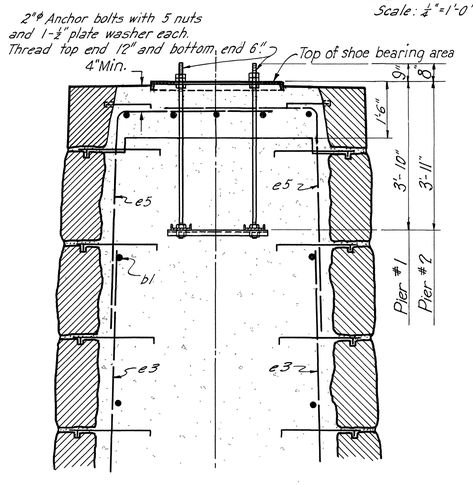
TYPICAL SECTION



FOOTING PLAN
Scale: ⅛"=1'-0"



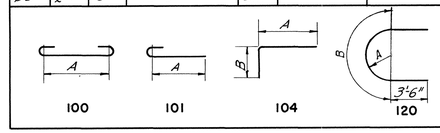
HALF PLAN OF TOP
Scale: ¼"=1'-0"

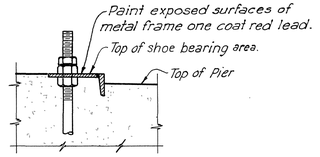


PIER TOP DETAILS
Scale: ½"=1'-0"

REINFORCEMENT SCHEDULE

MARK	SIZE	NO REQ'D	LENGTH	TYPE	DIMENSIONS A	DIMENSIONS B
h1	1" sq.	13	28'-6"	100	25'-10"	
h2	1" sq.	72	10'-10"	101	9'-6"	
h3	1" sq.	20	7'-0"	Str.		
h4	1" sq.	4 sets of 7	12'0" to 16'0"	101	10'8" to 14'8"	
h5	1" sq.	4 sets of 5	10'0" to 14'6"	101	8'8" to 13'2"	
e1	⅜" ϕ	12	12'0"	Str.		
e2	⅜" ϕ	2	26'6"	Str.		
e3	⅜" ϕ	216	14'6"	Str.		
e4	⅜" ϕ	36	9'3"	101	8'3"	
e5	⅜" ϕ	86	10'6"	104	4'0"	6'6"
e6	⅜" ϕ	36	16'9"	Str.		
b1	½" ϕ	51	59'0"	Str.		
b2	½" ϕ	2 sets of 23	13'3" to 21'2"	120	2'0" to 4'6"	6'3" to 14'2"
b3	½" ϕ	8	42'-0"	Str.		

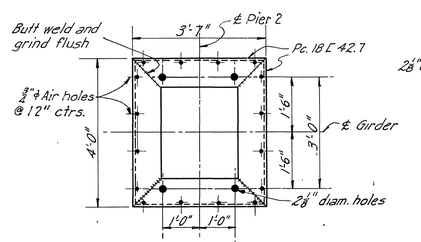




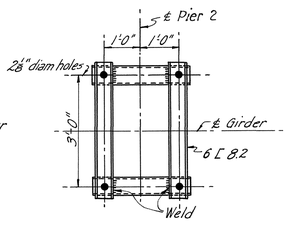
Notes:
For General Notes on Concrete see sheet 2.03.
Length of vertical bars in pier shaft may be changed by the contractor, subject to approval of the Engineer.
For details of stone facing see sheet 2.05.
For location of construction joints and permissible height of pours see specifications; ALSO, SEE SPECIAL PROVISIONS FOR RIVER PIERS.

ESTIMATED QUANTITIES

17-3	Wet Excavation (Bridges)	640 C.Y.
17-4	Rock Excavation (Bridges)	250 C.Y.
132-1	Structural Steel	2,500 Lbs.
135-5	Class "B" Concrete	2,815 C.Y.
135-12	Steel Bar Reinforcement	17,080 Lbs.
460	Granite Masonry	11,750 C.F.



UPPER TEMPLATE



LOWER TEMPLATE

TEMPLATE - SCREED FRAMES
Scale: ½"=1'-0"

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

PIER 2

SCALE 1/8", 1/4", 1/2" = 1'-0"
MADE C.R.H. DATE 6-17-50
TRCD S.W.F. DATE 6-27-50
CKD J.T. DATE 9-15-50

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

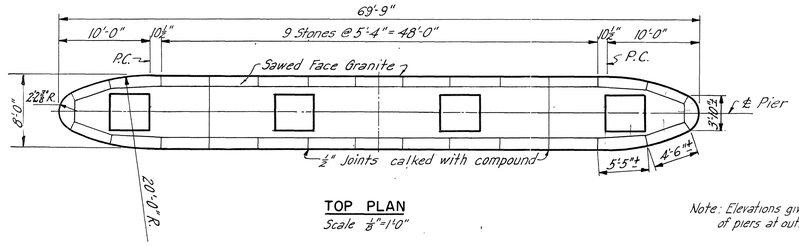
SHEET 2.04

Revised 8-17-51: Anchor Bolt dimensions changed.
Revised 3/27/51

E-9-3

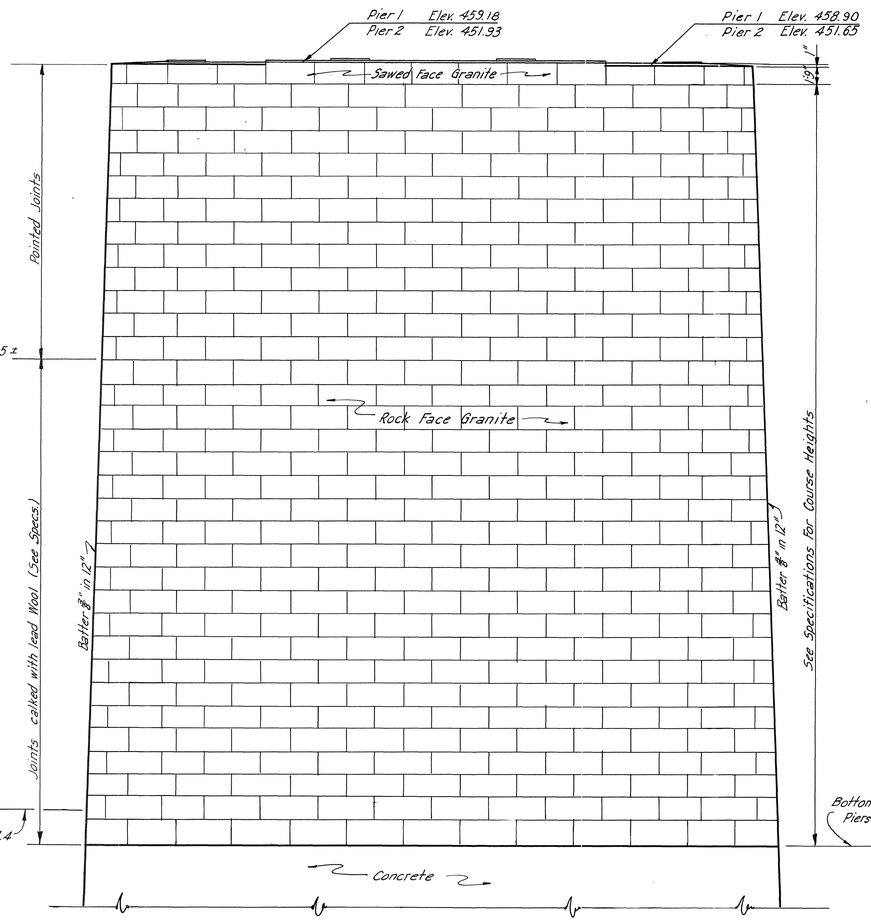
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	SECTION
8	TENN.	U-026-(1)		5	6	

PART I

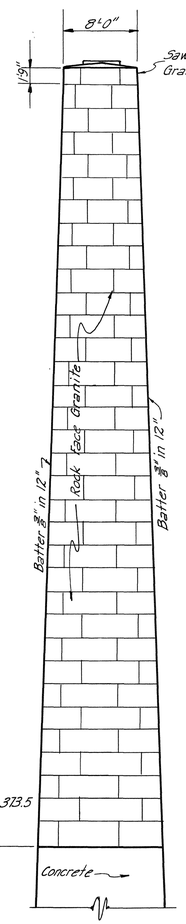


TOP PLAN
Scale ⅛"=1'0"

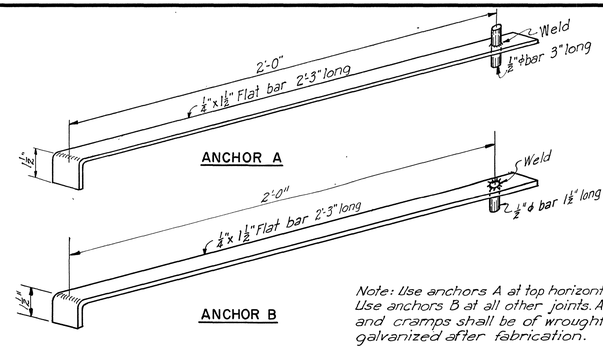
Note: Elevations given are top of piers at outside edges



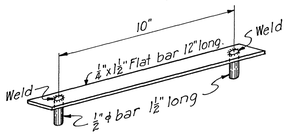
SIDE VIEW
Scale: ⅛"=1'0"



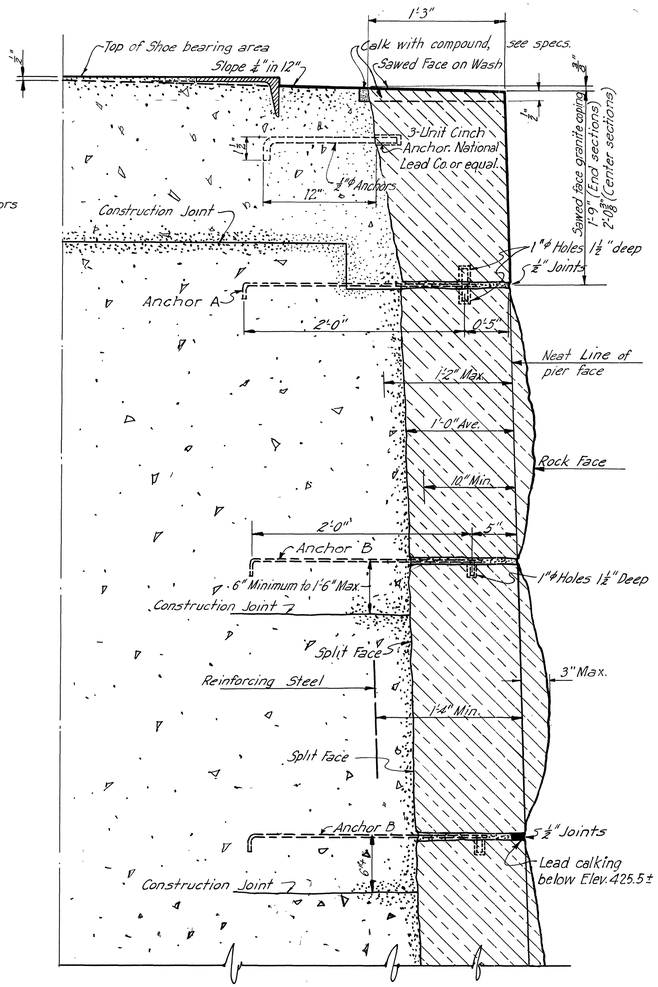
END VIEW
Scale: ⅛"=1'0"



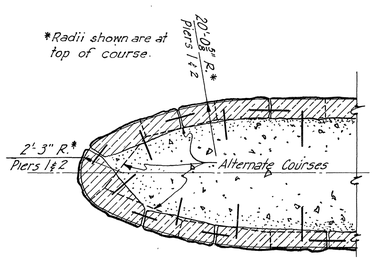
Note: Use anchors A at top horizontal joint. Use anchors B at all other joints. All anchors and cramps shall be of wrought iron, galvanized after fabrication.



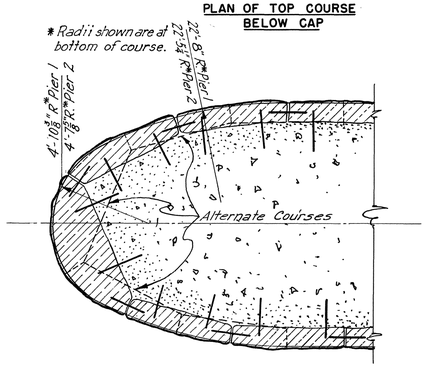
CRAMP



TYPICAL SECTION
Scale: 1½"=1'0"



PLAN OF TOP COURSE BELOW CAP



PLAN OF BOTTOM COURSE

DETAIL OF NOSING
Scale: ½"=1'0"

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

STONE DETAILS
PIERS 1 AND 2

SCALE as shown
MADE W.L.G. DATE 6-28-50
TRCD W.L.G. S.F. DATE 6-30-50
CKD J.T. DATE 9-15-50

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

811 SHEET- 2.05

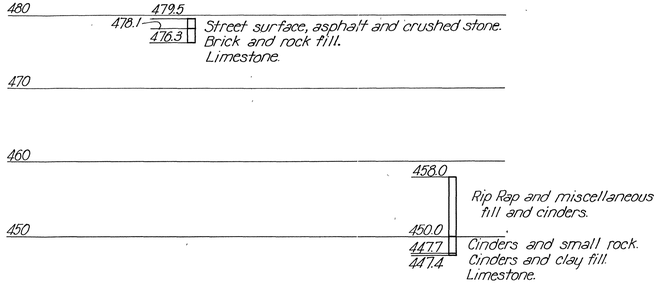
Revised 3/27/51

MICROFILMED

E-9-4

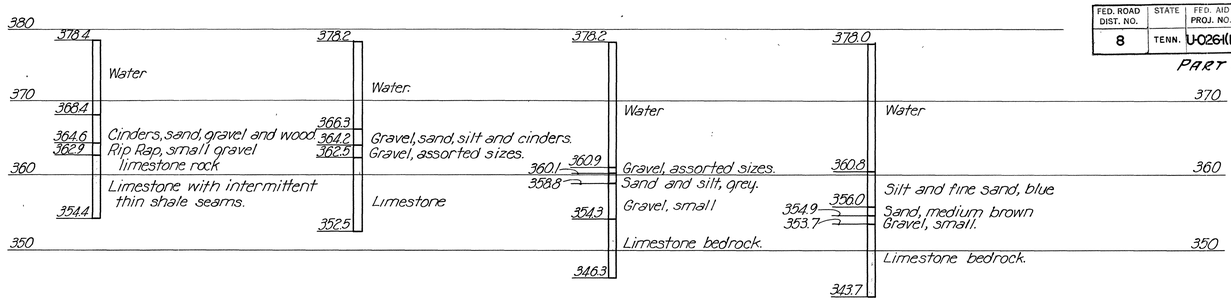
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEETS	TOTAL SHEETS	SECTION
8	TENN.	U-026(1)		6	6	

PART 1



BORING NO. 1
Sta. 5+86
13' Rt.

BORING NO. 2
Sta. 7+24
22'-Rt.

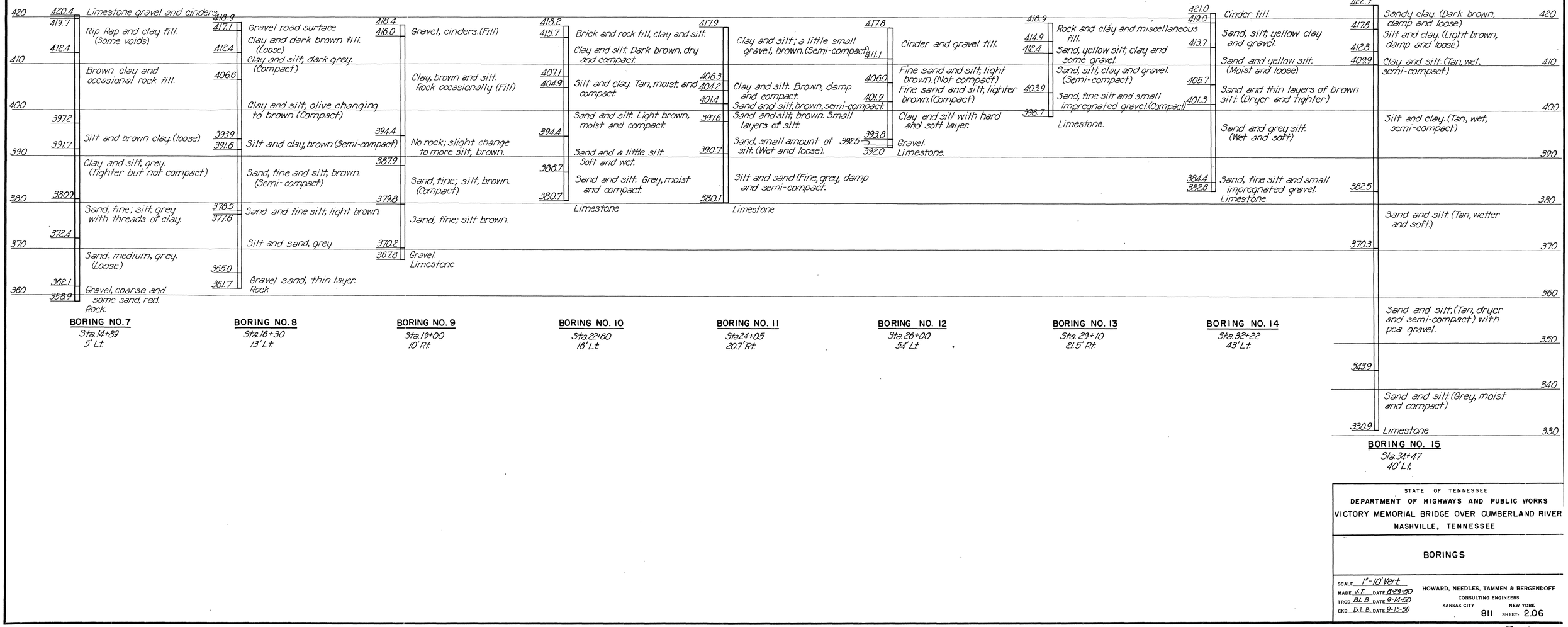


BORING NO.3
Sta. 9+43
25' Lt.

BORING NO.4
Sta. 9+43
80' Rt.

BORING NO.5
Sta. 12+64
44' Lt.

BORING NO. 6
Sta. 12+64
62' Rt.



BORING NO. 7
Sta. 14+89
5' Lt.

BORING NO. 8
Sta. 16+30
13' Lt.

BORING NO. 9
Sta. 19+00
10' Rt.

BORING NO. 10
Sta. 22+60
16' Lt.

BORING NO. 11
Sta. 24+05
20.7' Rt.

BORING NO. 12
Sta. 26+00
54' Lt.

BORING NO. 13
Sta. 29+10
21.5' Rt.

BORING NO. 14
Sta. 32+22
43' Lt.

BORING NO. 15
Sta. 34+47
40' Lt.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
VICTORY MEMORIAL BRIDGE OVER CUMBERLAND RIVER
NASHVILLE, TENNESSEE

BORINGS

SCALE 1"=10' Vert.
MADE J.T. DATE 8-29-50
TRCD B.L.B. DATE 9-14-50
CKD B.L.B. DATE 9-15-50

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

811 SHEET: 2.06

E-9-5