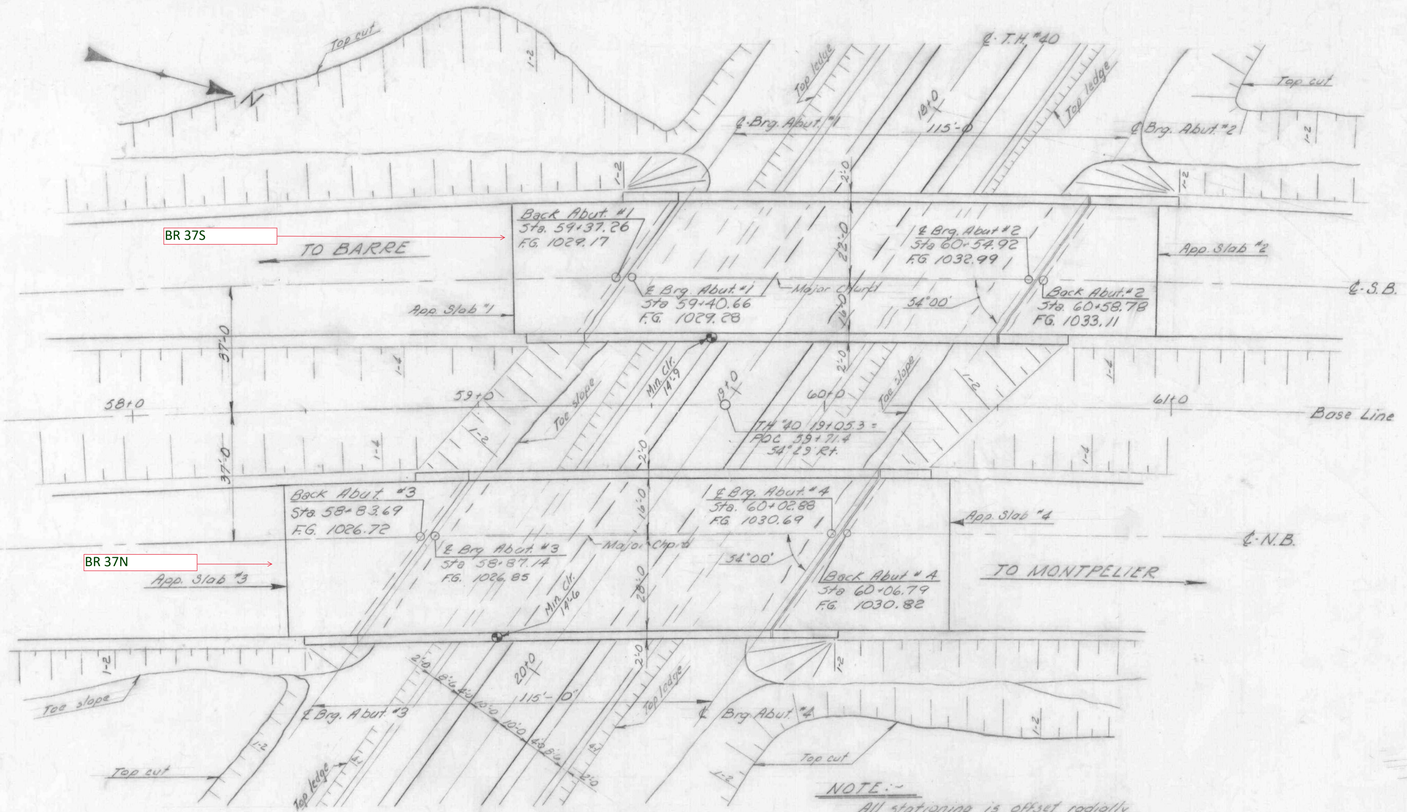
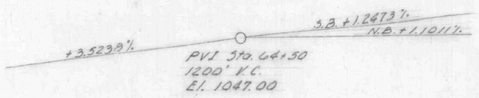


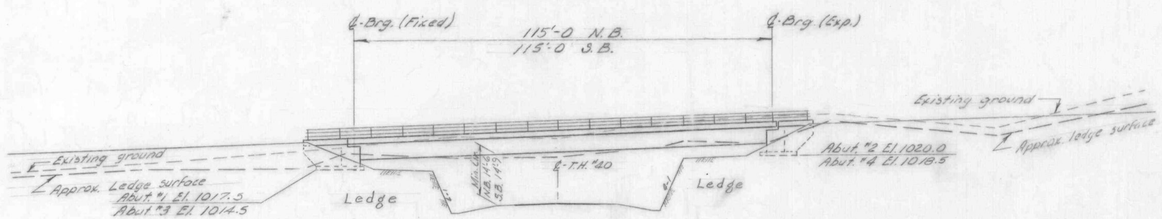
NOTE:-
All stationing is offset radially from the Base Line.

PLAN
SCALE 1 IN = 20 FT.

REVISED BASE LINE CURVE DATA

Δ = 9° 56' Rt
D = 1° 00'
R = 5729.58
T = 497.91'
L = 993.33'
E = 21.6'
Bank = 5/8"/Ft





ELEVATION - N.B. FASCIA
SCALE 1 IN = 20 FT.

GENERAL NOTES

1. For additional General Notes see Std. Sheet SCB-D1-67.
2. Elevation Datum is sea level based on nearest U.S. Government vertical control.
3. Abutment Footings shall be placed on sound ledge which shall be roughened such that no ledge projects above bottom of footing elevation shown on the plans. All overbreakage of ledge below given bottom of footing elevation shall be replaced with Concrete Class B. A maximum of 0.25 Ft. average extra depth of Concrete shall be paid for as Item 401-B; any additional Concrete required shall be placed without cost to the State. Footings are designed for maximum bearing pressure of 3 Tons per square foot.
4. Superstructure concrete shall be Class A-A; all other concrete shall be Class B.
5. Bridge railing is to be as detailed on Std. Sheet SB-R1-64, Sh. 1 & 2 of 2, or SB-R2-65. Post spacing shall not exceed maximum shown on Standards.
6. Wing wall sections are not to be placed above adjacent bridge seat elevation until girders have been profiled and final grade determined by the Engineer.
7. Water Repellent, Item 440, shall be used as follows:
   Abutments and Wings: All exposed surfaces not otherwise treated.
   Superstructure: Top of concrete curb, Fascia and bottom of deck from fascia to exterior girder.
8. No scuppers are to be used on this structure.
9. Approach slabs are to be built as a part of Stage I construction.
10. Painting of structural Steel is to conform to Attachment "3 to the special provisions.
11. Shop splices in girder web shall be detailed by the Contractor and submitted to the State for approval.

BERLIN-HIGHGATE IM BPNT(18)
PROJECT BRIDGE 37 N&S

FOR INFORMATION ONLY

LIST OF BRIDGE SHEETS

BR 100 PLAN, ELEVATION, AND GENERAL NOTES
101 QUANTITY SHEET
102 PRELIMINARY INFORMATION
103,104 BORINGS
105 S.B. FRAMING PLAN, DETAILS, & EXP. BEARING
106 N.B. FRAMING PLAN, DETAILS, & FIXED BEARING
107 S.B. TYPICAL SECTION AND DETAILS
108 N.B. TYPICAL SECTION AND DETAILS
109 EXPANSION AND FIXED END JOINT DETAILS
110-113 ABUTMENT DETAILS
114 APPROACH SLAB DETAILS
115-117 REINFORCING SCHEDULES

STANDARD SHEETS

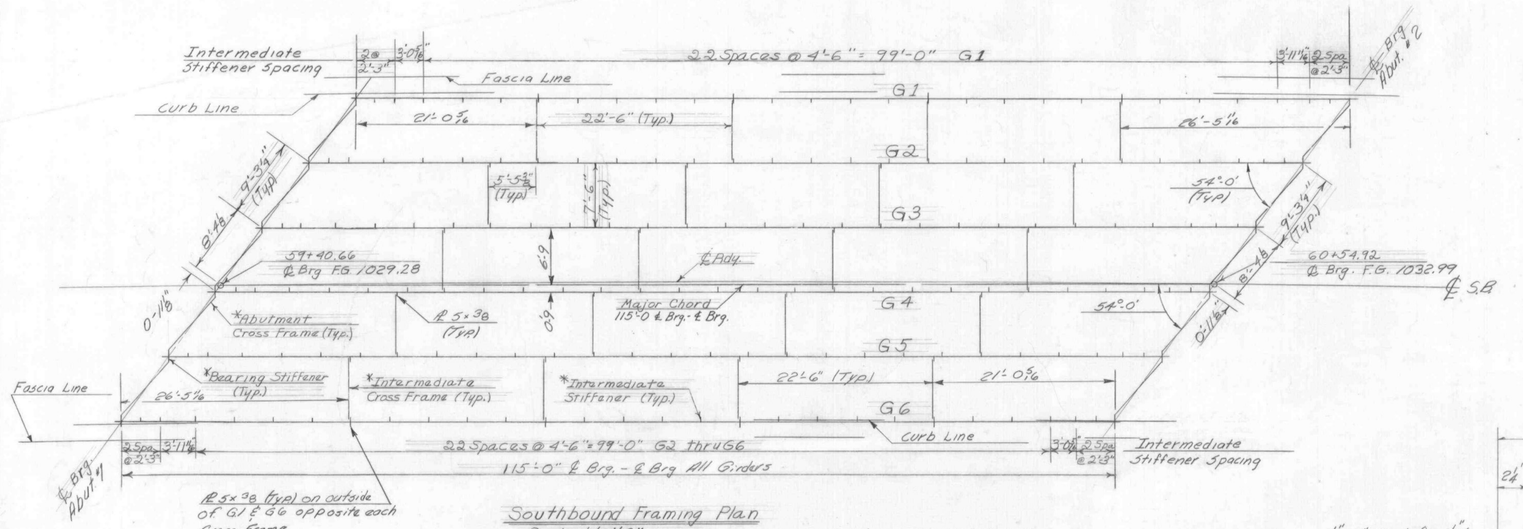
SCB-D1-67 1-24-68
SCB-D3-67, DETAIL C 1-24-68
SCB-D6-67, DETAIL A,B 1-24-68
SB-R1-64, SH. 1 OF 2 1-31-68 R
SB-R1-64, SH. 2 OF 2 11-8-66 R
SB-R2-65 11-8-66 R

ROADWAY REFERENCE SHEETS

I 89 PLAN STA. 57+00 - 73+00
I 89 PROFILE STA. 57+00 - 73+00
I 89 SECTIONS STA. 57+00 - 61+00
TH 40 PLAN & PROFILE STA 5+00-21+00
TH 40 SECTIONS STA. 17+50 - 21+50

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT: BERLIN-MONTPELIER
TOWN OF BERLIN
ROUTE NO. I-89 STA. 59+70
I 89 OVER T.H. #40
PLAN, ELEVATION, & GENERAL NOTES
SCALE As shown
IN CHARGE W. Smith
DRAWN BY R. Dailey CHECKED BY J. Couture & P.H.F. Flanders 8-67
PROJECT NO. I 89-1(12)
SHEET 90 OF 497
BR. 100

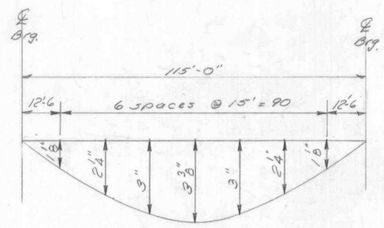


Southbound Framing Plan

Scale: ⅛"=1'-0"

BR 37 SOUTH

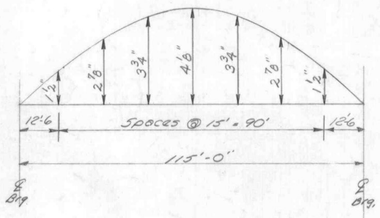
* Note: For details not shown see Br. 107



S.B. Dead Load Deflection

N.T.S.

(Due to weight of Girder, Bracing, Slab, Curb, Railing, and Pavement.)

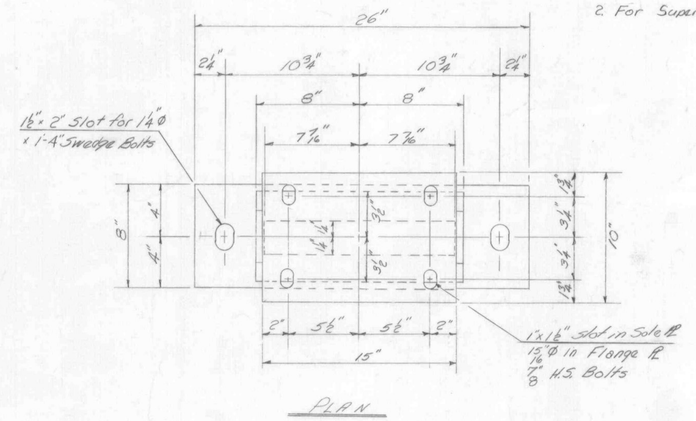


S.B. Camber Diagram

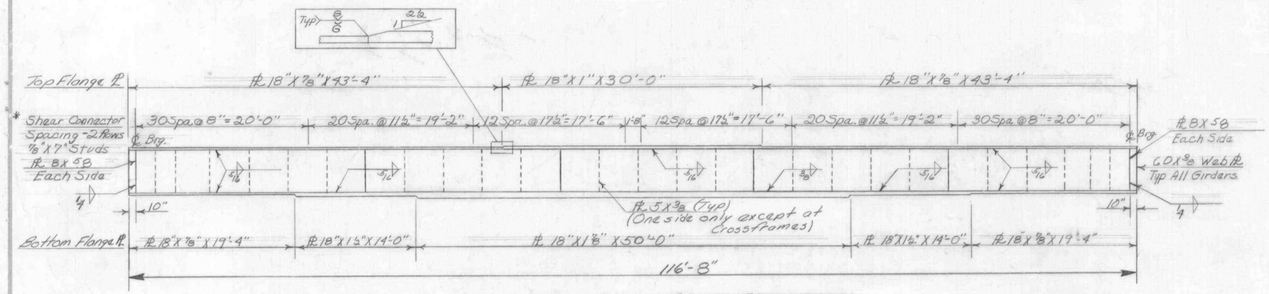
N.T.S.

Notes

1. For bearing device notes see Br. 106.
2. For Superstructure Notes see Br. 108.



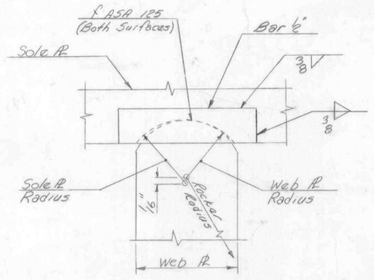
PLAN



Typical Southbound Girder Elevation

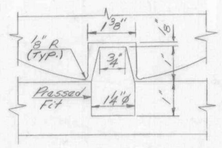
Scale: ⅛"=1'-0"

* For Details see Br. 107



Detail A

N.T.S.

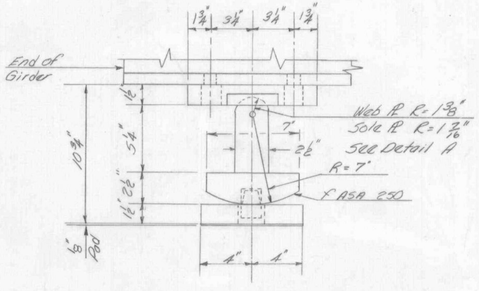


Pintel Detail

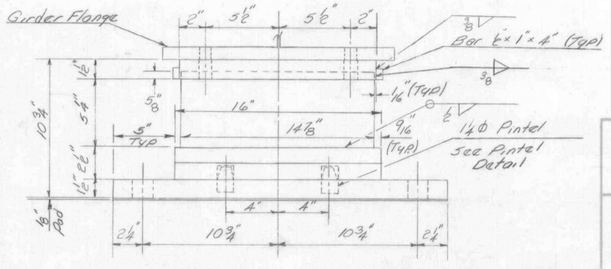
N.T.S.

(Finish All Over)

Reactions	
Dead Load	15^k
Live Load	95^k
Impact	10^k
Total	130^k



Side Elevation



Front Elevation

Expansion Bearing

N.T.S.

(Use for N.B. & S.B. Exp. End.)

BERLIN-HIGHGATE IM BPNT(18)
PROJECT BRIDGE 37 N&S

FOR INFORMATION ONLY

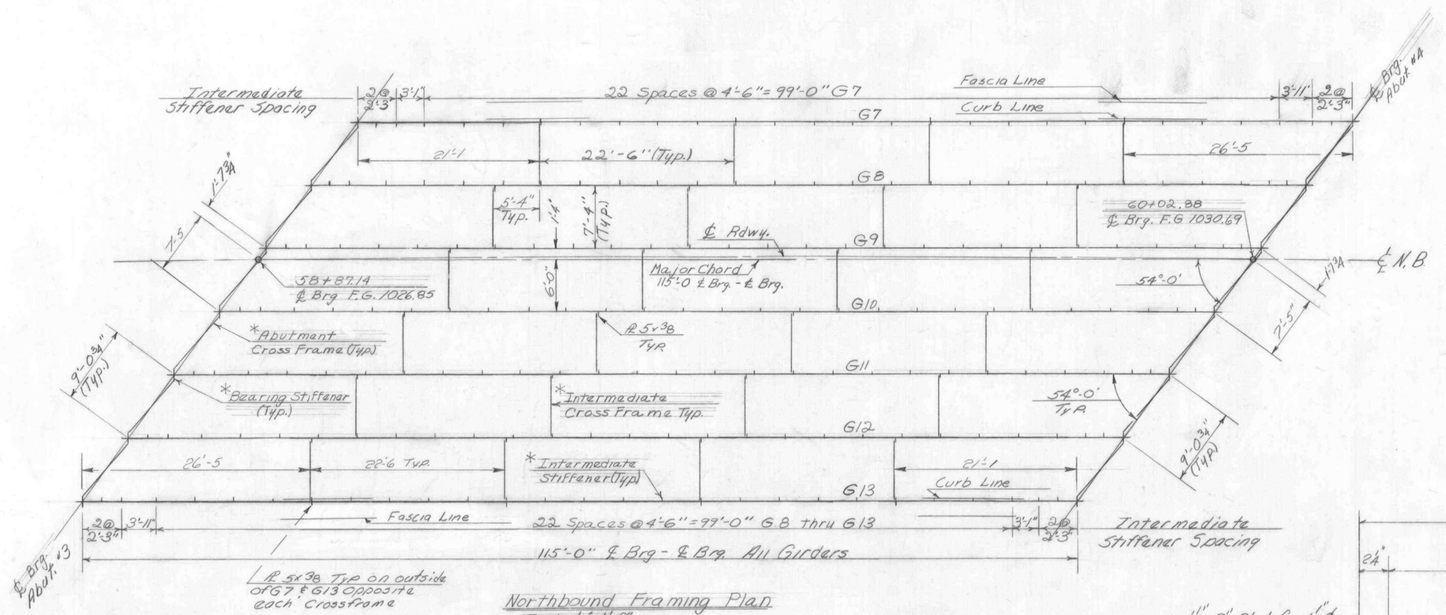
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT BERLIN-MONTPELIER
TOWN OF BERLIN
ROUTE NO. I-89 STA. 59+70±
I-89 OVER T.H. #40
S.B. Framing Plan & Details & Exp. Bearing
SCALE AS NOTED
IN CHARGE W.M. SMITH
DRAWN BY J. COUTURE & F.H. Flanders CHECKED BY W. TRIPP 7-67
PROJECT NO. I89-1(12)
SHEET 95 OF 497

Br 105

BEARING DEVICE NOTES

1. Preformed Fabric Pads, ½" thick, equal in size to the bearing plates and conforming to Specification 404.02(23) shall be used under each bearing.
2. Align devices so that all rocker arm shafts will be vertical at 45°F.
3. Contact surfaces of rockers are to be given one shop coat of white lead and tallow. Pintal holes are to be filled with graphite and grease at time of placement. Remainder of bearing is to be given 3 coats of paint in accordance with specification 409.03.
4. Sweedge bolts are to project ⅝" above top of base plate.
5. For General notes see Br. 100.
6. For details of Expansion Bearing see Br 105.

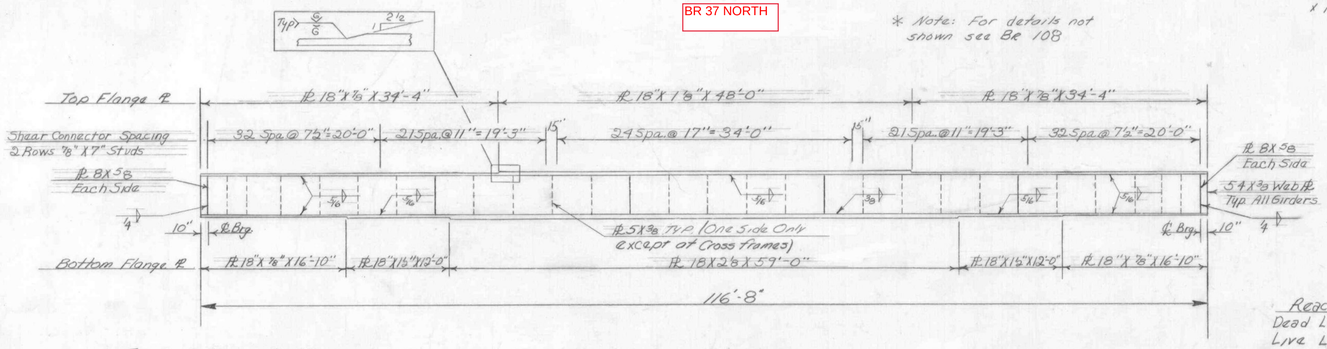


Northbound Framing Plan

Scale: ⅛"=1'-0"

BR 37 NORTH

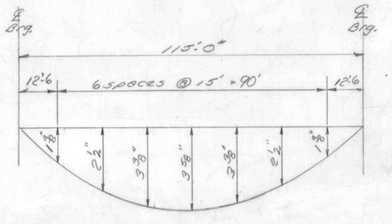
* Note: For details not shown see Br 108



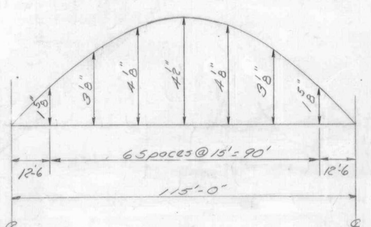
* For Details see Br. 107

Typical Northbound Girder Elevation

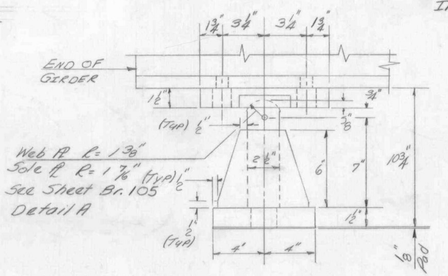
Scale: ⅛"=1'-0"



N.B. DEAD LOAD DEFLECTION
N.T.S.
(Due to weight of Girder, Bracing, Slab, Curb, Railing, and Pavement.)



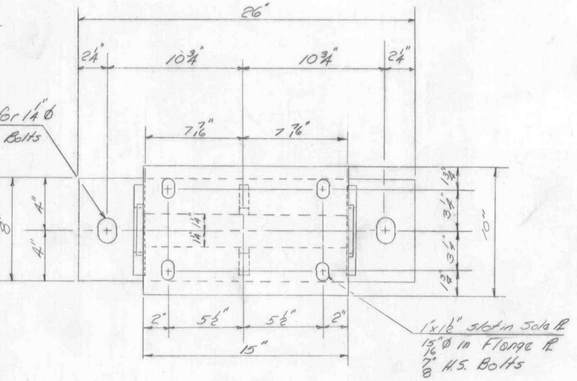
N.B. CAMBER DIAGRAM
N.T.S.



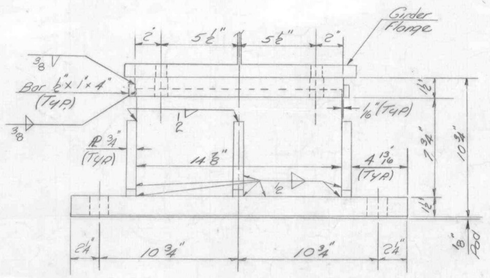
SIDE ELEVATION

Reactions

Dead Load	75k
Live Load	45k
Impact	10k
Total	130



PLAN



FRONT ELEVATION

FIXED BEARING

N.T.S.

(Use for N.B. & S.B. Fixed End)

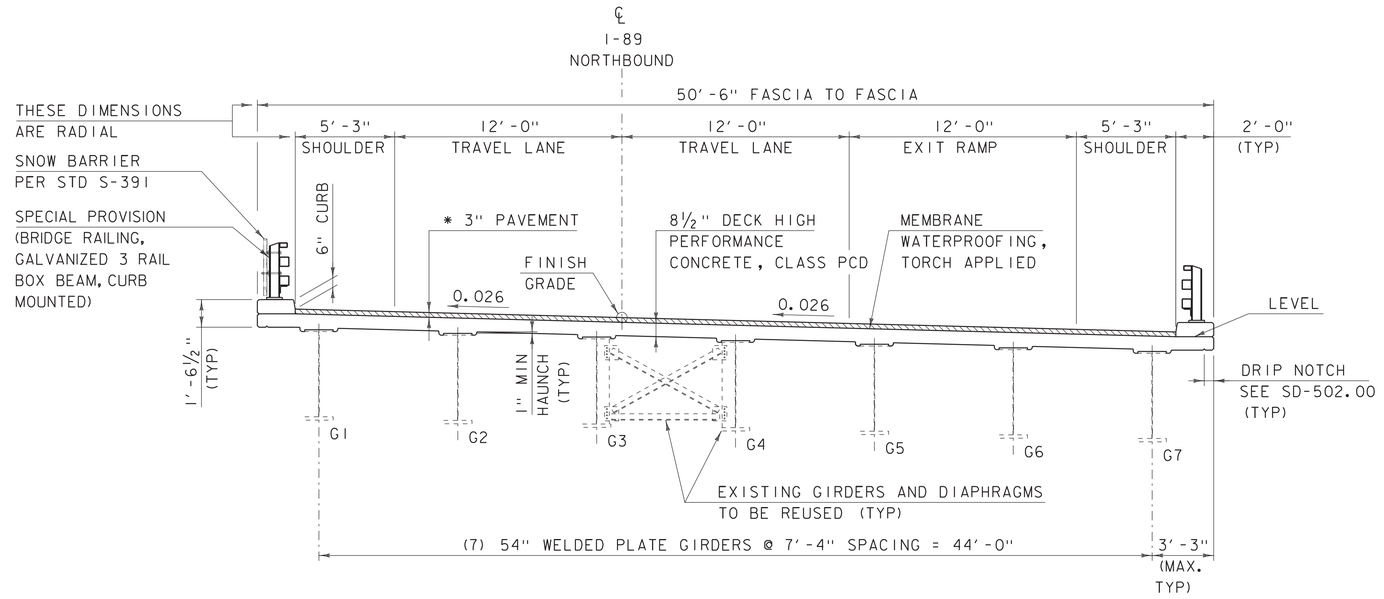
BERLIN-HIGHGATE IM BPNT(18)
PROJECT BRIDGE 37 N&S

FOR INFORMATION ONLY

For Superstructure Notes see Br. 108

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT BERLIN-MONTPELIER
TOWN OF BERLIN
ROUTE NO. I-89 STA. 594+70±
I-89 OVER T.H. #40
N.B. FRAMING PLAN, DETAILS, & FIXED BEARING
SCALE AS NOTED
IN CHARGE W.N. SMITH
DRAWN BY J. COUTURE CHECKED BY W. TRIPP 7-67
& P.A. FLANDERS
PROJECT NO. I 89-1(12)
SHEET 36 OF 497 Br 106



* BITUMINOUS CONCRETE PAVEMENT
(2) 1½" LIFTS TYPE IVB

BRIDGE 37 NORTHBOUND TYPICAL SECTION

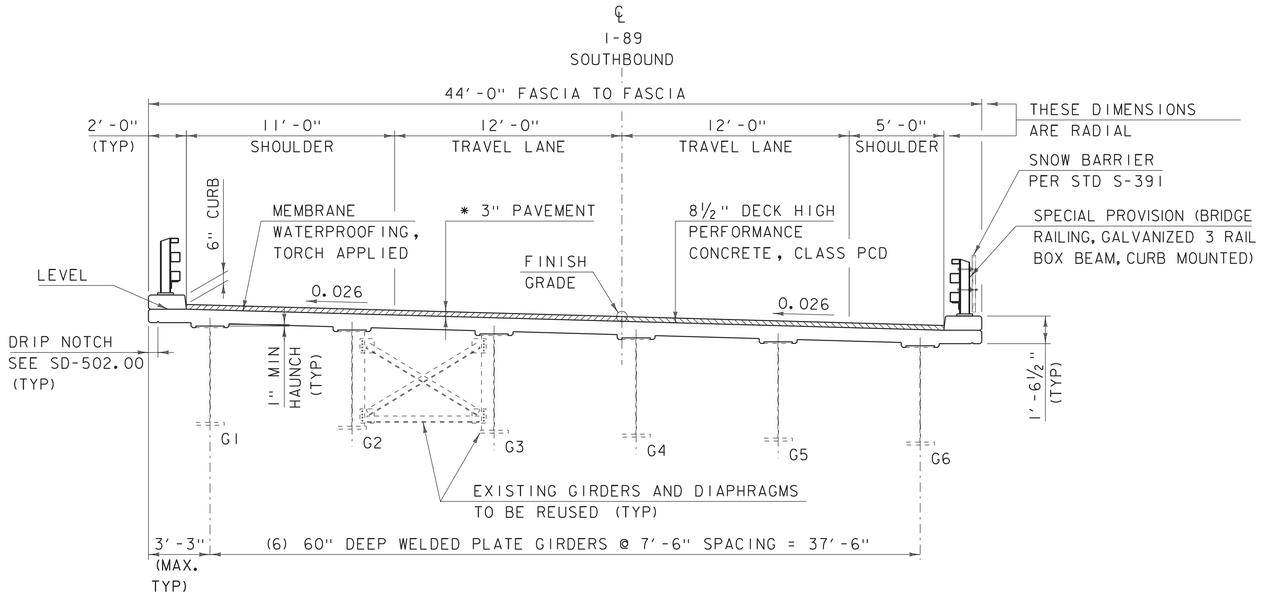
SCALE ¼" = 1'-0"

BERLIN-HIGHGATE IM BPNT(18)
PROJECT BRIDGE 37 N

FOR INFORMATION ONLY

PROJECT NAME:	BERLIN
PROJECT NUMBER:	IM DECK (42)

FILE NAME: sl5all2comb_typ.dgn	PLOT DATE: 30-SEP-2019
PROJECT LEADER: J.LACROIX	DRAWN BY: M.LONGSTREET
DESIGNED BY: VTRANS	CHECKED BY: J.LACROIX
BRIDGE 37N TYPICAL	SHEET 65 OF 115



* BITUMINOUS CONCRETE PAVEMENT
(2) 1½" LIFTS TYPE IVB

BRIDGE 37 SOUTHBOUND TYPICAL SECTION

SCALE ¼" = 1'-0"

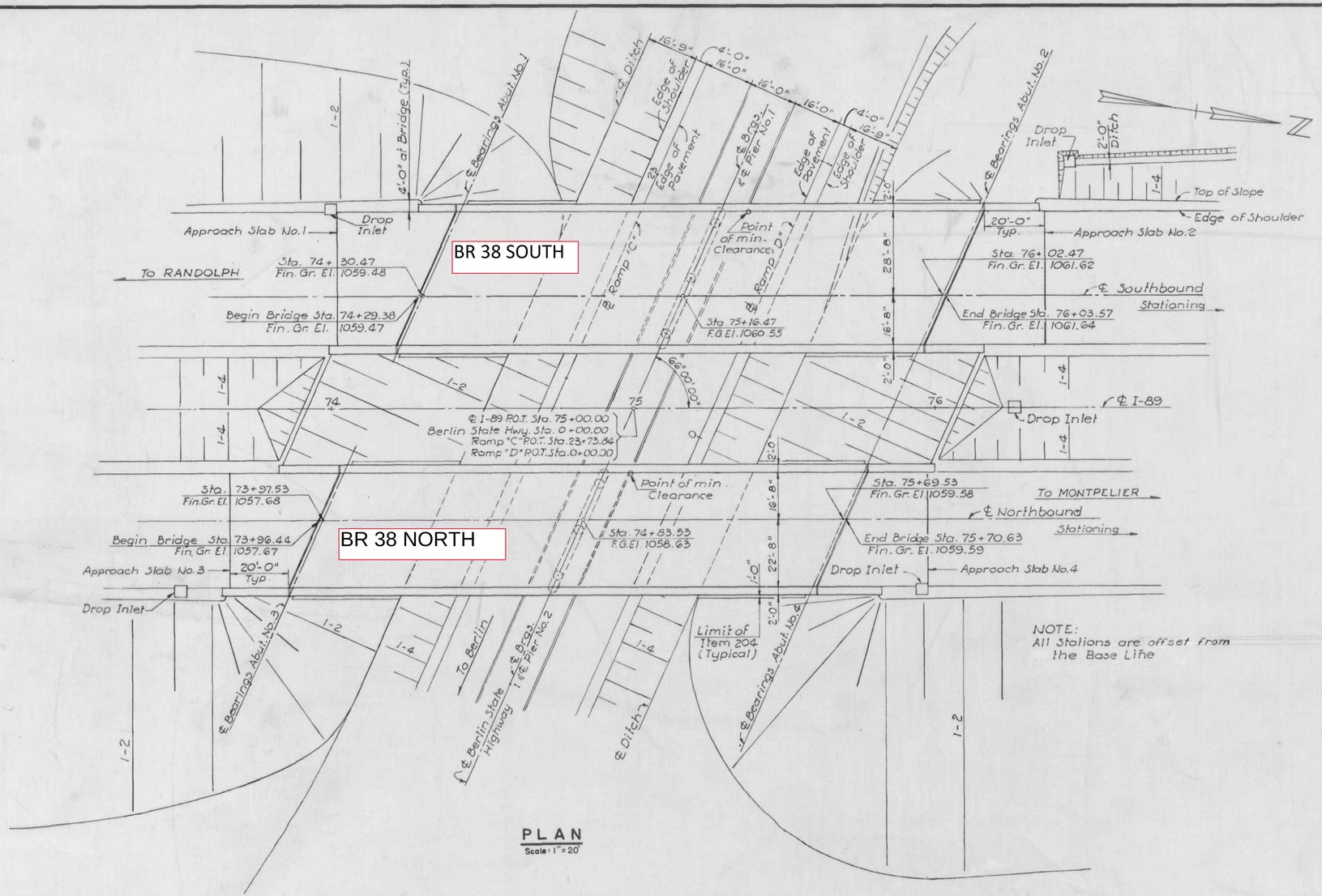
BERLIN-HIGHGATE IM BPNT(18)
PROJECT BRIDGE 37 S

FOR INFORMATION ONLY

PROJECT NAME: BERLIN
PROJECT NUMBER: IM DECK (43)

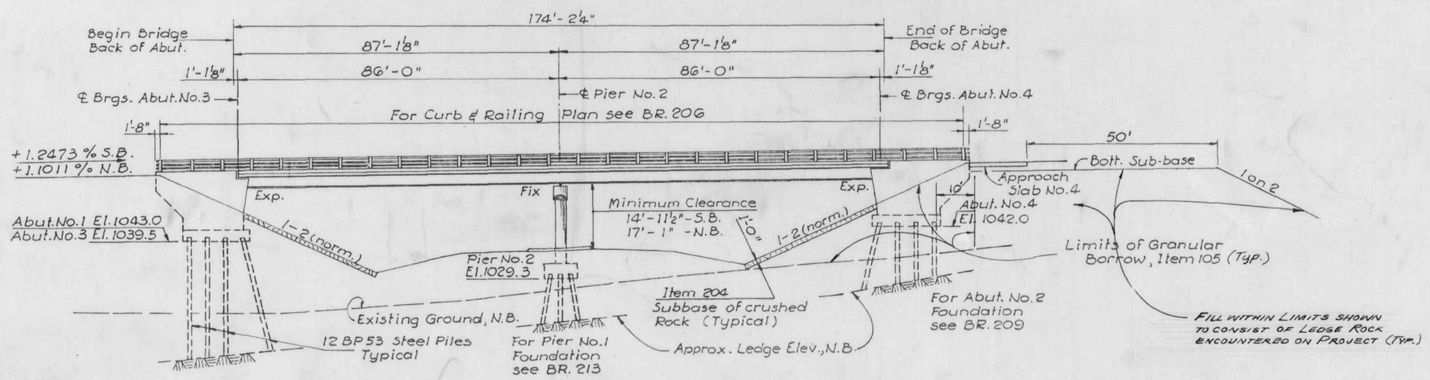
FILE NAME: sl5all2comb_typ.dgn
PROJECT LEADER: J.LACROIX
DESIGNED BY: VTRANS
BRIDGE 37S TYPICAL

PLOT DATE: 30-SEP-2019
DRAWN BY: M.LONGSTREET
CHECKED BY: J.LACROIX
SHEET 73 OF 115



PLAN
Scale: 1"=20'

NOTE:
All Stations are offset from the Base Line



ELEVATION
(NORTHBOUND SHOWN)
Scale: 1"=20'

INDEX OF BRIDGE DRAWINGS

BR. 200	Preliminary Bridge Information Sheet
BR. 201	Plan and Elevation
BR. 202	Bridge Quantity Sheet
BR. 203	Boring Plan and Logs - 1
BR. 204	Boring Logs - 2
BR. 205	Boring Logs - 3
BR. 206	Superstructure - 1
BR. 207	Superstructure - 2
BR. 208	Bearing Devices
BR. 209	Abutment No. 1
BR. 210	Abutment No. 2 - 1
BR. 211	Abutment No. 2 - 2
BR. 212	Abutment No. 3
BR. 213	Abutment No. 4
BR. 214	Pier No. 1
BR. 215	Pier No. 2
BR. 216	Approach Slab No. 1
BR. 217	Approach Slab No. 2
BR. 218	Approach Slab No. 3
BR. 219	Approach Slab No. 4
BR. 220	Reinforcing Steel Details - 1
BR. 221	Reinforcing Steel Details - 2
BR. 222	Reinforcing Steel Details - 3
BR. 223	SCB 38-67-T
BR. 224	SCB 44-67-T

STANDARD DRAWINGS

SCB-D1-67	All Details used 1-24-68
SCB-D2-67	Details Ⓐ, Ⓑ & Ⓒ 1-24-68
SCB-D4-67	All Details used 1-24-68
SCB-D6-67	Details Ⓐ, Ⓑ, Ⓕ 1-24-68
SCB-D7-67	Details Ⓐ, Ⓓ 1-24-68
SCB-D9-67	Detail Ⓐ 1-24-68
SB-R1-64	(Sh.1 - 1-31-68R, Sh.2 - 11-8-66R) (Sheets 1 & 2) Aluminum Railing Details
SB-R2-65	Steel Railing Details 11-8-66 R

REFERENCE SHEETS

Title Sheet I-89
Plan I-89 (Scale 1"=50') Sta. 73 to 89 SB & NB
Profile I-89 (Scale 1"=50') Sta. 73 to 89 SB & NB
Plan & Profile Berlin St. Hwy. (Scale 1"=50' Sta. 3 to 19
Profile Ramp D (Scale 1"=50') Sta. 0 to 14+89.40
Profile Ramp C (Scale 1"=50') Sta. 16 to 23+73.84
Cross Sections I-89 (Scale 1"=10') Sta. 73+50 to 75+00
Cross Sections I-89 (Scale 1"=10') Sta. 75+50 to 76+50
Cross Sections Ramp D (Scale 1"=10') Sta. 0+00 to 1+50
Cross Sections Ramp C (Scale 1"=10') Sta. 23+00 to 23+73.84
Cross Sections Berlin St. Hwy. (Scale 1"=10') Sta. 0+50 to 2+50

GENERAL NOTES

For additional General Notes see SCB-D1-67

BLASTING: Where rock is encountered, no blasting shall be done within 200 feet of any concrete structure, and proper precaution against damage shall be taken when blasting outside this 200 feet limit.

STEEL PILES: Steel Bearing Piles shall be driven to ledge rock unless otherwise approved by the Engineer. When piles are driven in fill the material should be such as to have no stones large enough to interfere with the driving of the piles.

APPROACH SLABS: Cross slope of approach slabs shall conform to the cross slope of the bridge. All expansion material shall be premoulded cork containing no bitumen or asphalt.

WATER REPELLENT: Item 440 shall be applied as follows:
Abutments: All exposed surfaces not otherwise treated.
Piers: Columns above grade, sides, ends and bottom of pier caps.
Superstructure: Safety Walks, fascia and bottom of Deck from fascia to the flange of first beam.

BERLIN-HIGHGATE IM BPNT(18)
PROJECT BRIDGE 38 N&S

FOR INFORMATION ONLY

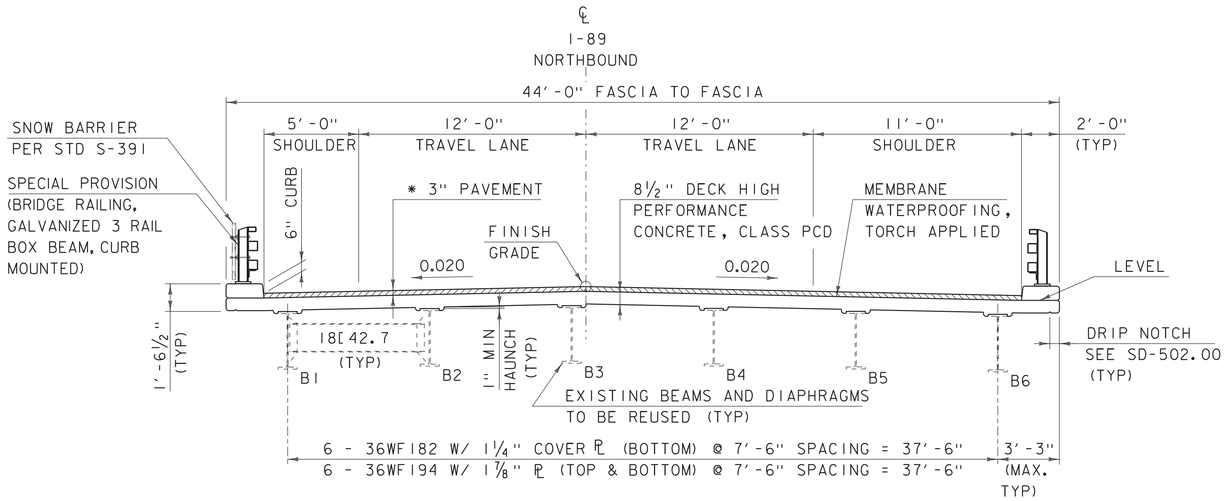
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT BERLIN - MONTPELIER
TOWN OF BERLIN
ROUTE No I-89 STA. 75+00
I-89 OVER BERLIN STATE HIGHWAY
PLAN AND ELEVATION

PORTER, ARMSTRONG, RIPA & ASSOCIATES
ENGINEERING PLANNING · ARCHITECTURE
NEWARK, N.J.

DESIGNED K. SU	CHECKED R. EITEL	DATE JULY, 1967
DRAWN B. UDAL	ENGR. IN CHARGE A. SOUSA	SCALE AS SHOWN

PROJECT NO. I-89-1(12) SH. 109 OF 492 BR. 201



* BITUMINOUS CONCRETE PAVEMENT
(2) 1½" LIFTS TYPE IVB

BRIDGE 38 NORTHBOUND TYPICAL SECTION

SCALE ¼" = 1'-0"

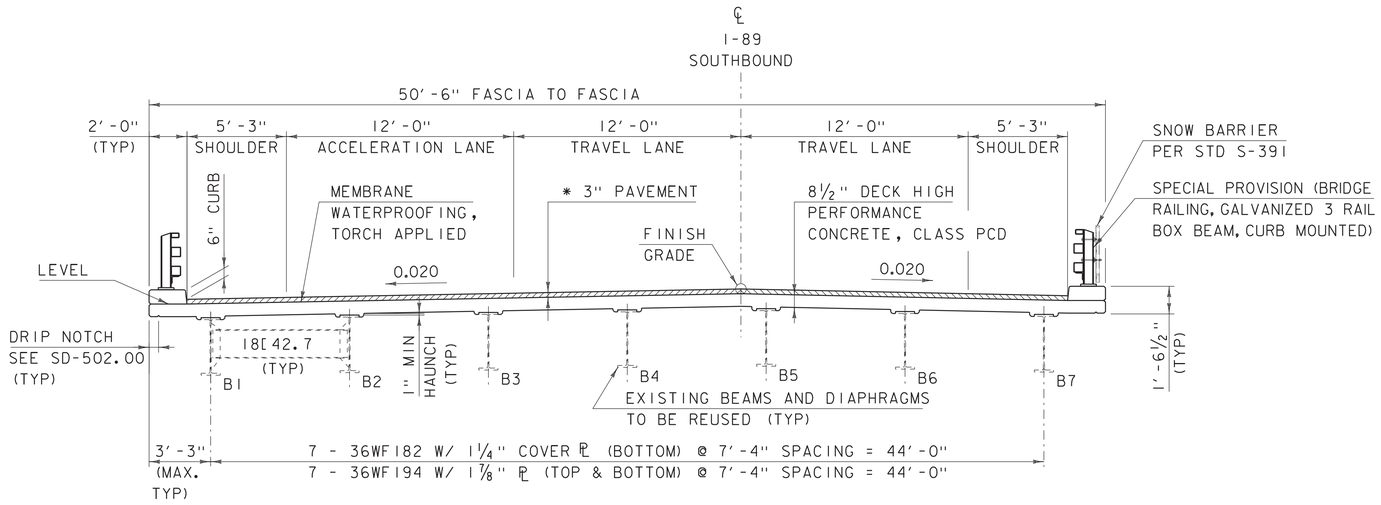
BERLIN-HIGHGATE IM BPNT(18)
PROJECT BRIDGE 38 N

FOR INFORMATION ONLY

PROJECT NAME: BERLIN
PROJECT NUMBER: IM DECK (43)

FILE NAME: sl5all2comb_typ.dgn
PROJECT LEADER: J.LACROIX
DESIGNED BY: VTRANS
BRIDGE 38N TYPICAL

PLOT DATE: 30-SEP-2019
DRAWN BY: M.LONGSTREET
CHECKED BY: J.LACROIX
SHEET 81 OF 115



* BITUMINOUS CONCRETE PAVEMENT
(2) 1½" LIFTS TYPE IVB

BRIDGE 38 SOUTHBOUND TYPICAL SECTION

SCALE ¼" = 1'-0"

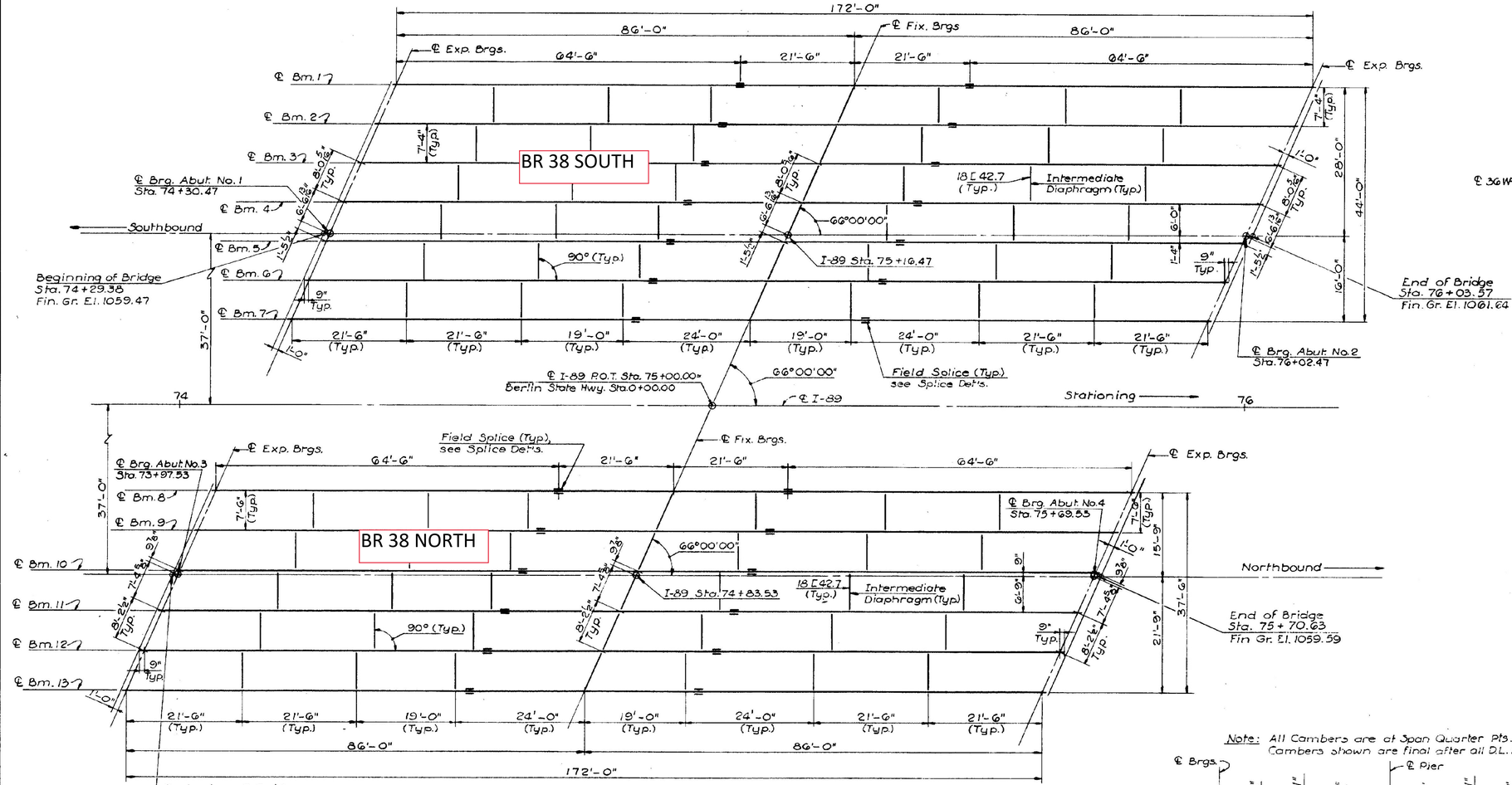
BERLIN-HIGHGATE IM BPNT(18)
PROJECT BRIDGE 38 S

FOR INFORMATION ONLY

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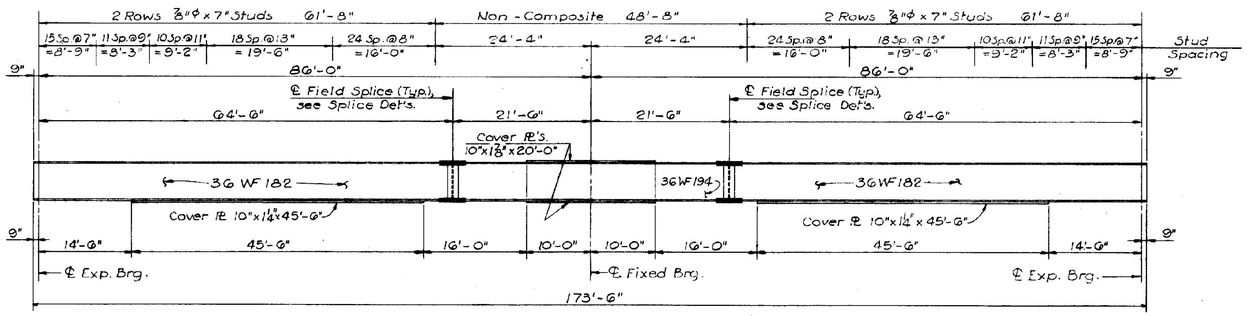
FILE NAME: sl5all2comb_typ.dgn
PROJECT LEADER: J.LACROIX
DESIGNED BY: VTRANS
BRIDGE 38S TYPICAL

PLOT DATE: 30-SEP-2019
DRAWN BY: M.LONGSTREET
CHECKED BY: J.LACROIX
SHEET 89 OF 115



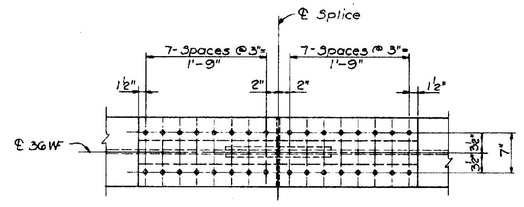
FRAMING PLAN

Scale: 3/32"=1'-0"

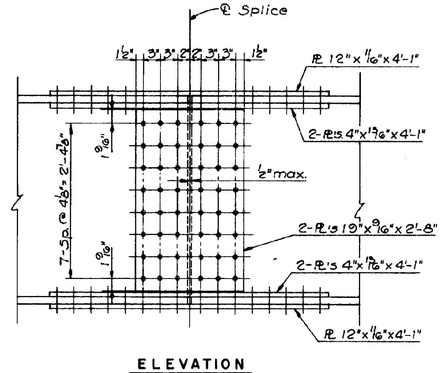


TYPICAL BEAM ELEVATIONS N.B. & S.B.

Scale: Vert. 3/16"=1'-0" Horiz. 3/32"=1'-0"



PLAN

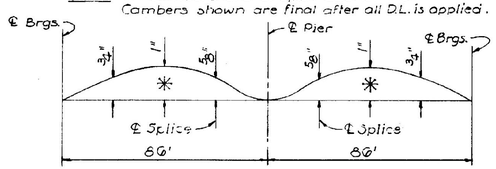


ELEVATION

SPLICE DETAILS

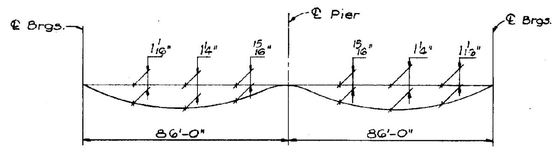
Scale: 1"=1'-0"

Note: All Cambers are at Span Quarter Pts.
Cambers shown are final after all D.L. is applied.



CAMBER DIAGRAM

N.T.S.



Note: All Deflections are at Span Quarter Pts.
D.L. Deflections shown are total, which include Girder, Slab & superimposed Loads.

DEAD LOAD DEFLECTION DIAGRAM

N.T.S.

BERLIN-HIGHGATE IM BPNT(18)
PROJECT BRIDGE 38 N&S

FOR INFORMATION ONLY

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT BERLIN - MONTPELIER
TOWN OF BERLIN
ROUTE No I-89 STA. 75+00
I-89 OVER BERLIN STATE HIGHWAY
SUPERSTRUCTURE - 2

PORTER, ARMSTRONG, RIPA & ASSOCIATES
ENGINEERING · PLANNING · ARCHITECTURE
NEWARK, N.J.

DESIGNED K.SU	CHECKED R. EITEL	DATE JULY 1987
DRAWN R.WOLT	ENGR. IN CHARGE A. SOUSA	SCALE AS SHOWN

PROJECT NO. I-89-1(12) SH 118 OF 492 BR. 207

Existing Route 100
Curve Data

Δ = 56°-24'
D = 26°-00'
R = 220.4'
T = 118.2'
L = 216.9'
E = 29.7

Winter Rye and Mulch on all slopes outside fascige. Not included in Bridge Estimate.

Taper of Speed Change Lane

℄ Interstate Southbound

℄ Interstate

℄ Interstate Northbound

Begin Bridge

End Bridge

℄ Route 100

N 86°-52'-08.6" E

℄ Pier #1

℄ Pier #2

℄ Pier #3

℄ Pier #4

Thatcher Brook

Existing Route 100

Future Shoulder

Future Road

Exist Road

Improved Channel

10'-0" C.P. Sewer

Exist Channel

Exist Manhole to be lowered

Exist Bridge to be removed

Guardrail 50' long

Approach Slab

Existing Manhole

Scupper (Typ.)

Fire Hydrant

Existing House to be removed

For slope in this area see General Plan & Elevation Sheet, Ramp 'A' Bridge.

Existing 3'-3" Conc. Box Culvert

Existing 18" Tile Pipe

Existing Wall

Fin. Gr. Elev. 467.03

Fin. Gr. Elev. 466.37

Fin. Gr. Elev. 467.73

Fin. Gr. Elev. 468.36

Fin. Gr. Elev. 469.13

Fin. Gr. Elev. 469.88

Fin. Gr. Elev. 467.76

Fin. Gr. Elev. 468.39

Fin. Gr. Elev. 469.06

Fin. Gr. Elev. 469.78

Fin. Gr. Elev. 470.50

Fin. Gr. Elev. 471.22

Sta. 773+10.07

Sta. 773+78.37

Sta. 774+14.51

Sta. 774+38.37 Ahd. 100

Sta. 773+07.03

Sta. 773+76.68

Sta. 774+51.30

Sta. 775+19.55

Sta. 775+97.25

Sta. 775+05.58

Sta. 775+84.63

Sta. 776+29.48

Sta. 776+63.70

Sta. 777+13.12

Sta. 776+74.90

Spiral Curve Data

P.I. – 770+50.4 Bk.=
769+44.67 Ah.
Δ = 48°-25' Lt.
D = 3°-00'
Rc = 1909.86'
Lc = 1263.89'
Ls = 350'
θs = 5°-15'
Ts = 1034.81
LT = 233.44
S.T. = 116.76
P = 2.67
K = 174.95
Es = 187.07
S.E. = 15/16" / Ft.

PLAN
Scale: 1"=20'

Railing Post Spacing

S. Fascia Southbound N. Fascia: 9 Spaces @ 6'-11 1/2" = 62'-5 1/2"; 9 Spaces @ 6'-10 3/8" = 61'-9 1/8"; 10 Spaces @ 6'-9 1/8" = 67'-6"; 10 Spaces @ 6'-8 3/8" = 66'-10 1/8"; 9 Spaces @ 6'-11 1/2" = 62'-5 1/2"; 9 Spaces @ 6'-10 3/8" = 61'-9 1/8"; 9 Spaces @ 6'-9 1/8" = 60'-10 1/8"; 12 Spaces @ 6'-11 1/8" = 83'-3 3/8"; 11 Spaces @ 6'-7 1/8" = 72'-10 1/8"; 11 Spaces @ 6'-6 3/8" = 71'-7 3/8"; 11 Spaces @ 6'-6 7/8" = 72'-3 3/8"; 11 Spaces @ 6'-7 1/8" = 72'-5"; 11 Spaces @ 6'-5 7/16" = 71'-1 1/16"; 11 Spaces @ 6'-6 7/8" = 72'-1 3/8"; 11 Spaces @ 6'-7 1/8" = 72'-5"; 11 Spaces @ 6'-6 3/8" = 71'-7 3/8"; 11 Spaces @ 6'-5 7/16" = 71'-1 1/16"; 11 Spaces @ 6'-6 7/8" = 72'-1 3/8"; 11 Spaces @ 6'-7 1/8" = 72'-5"; 11 Spaces @ 6'-5 7/16" = 71'-1 1/16"

S.W. Abut. Elev. 455.0
S.E. Abut. Elev. 454.0
N.W. Abut. Elev. 454.5
N.E. Abut. Elev. 458.0

Fix. Exp. Fix. Exp. Fix. Exp. Fix. Exp. Fix. Exp.

2:1 (Normal)

S.B. Elev. 430.0 / 429.5
N.B. Elev. 429.0 / 428.5

Rte. 100

Existing Wall

26'-3" Clear

Extreme High Water Elev. 426

2'-0"

6'± Item 521 Stone Fill Heavy Type

Elev. 414.5 S.B. / 414.0 S.B.
Elev. 419.0 S.B. / 409.5 N.B.
Elev. 402.0 N.B. / 409.0

Elev. 412.0 S.B. / 407.0 S.B.
Elev. 407.0 N.B. / 403.85 N.B.

1'-0" Item 204 Mod Sub-base of Crushed Rock between fascias.

Limits of Borrow Item 102

Approx. existing ground at East fascia.

Span 1 69'-0" | Span 2 74'-0" | Span 3 69'-0" Southbound 79'-0" Northbound | Span 4 79'-0" | Span 5 79'-0"

Begin Bridge | ℄ Pier #1 | ℄ Pier #2 | ℄ Pier #3 | ℄ Pier #4 | End Bridge

ELEVATION
Scale: 1"=20'

INDEX TO DRAWINGS

Sheet No.	Title
1	General Plan and Elevation
2	Boring Logs and Profiles
3	Framing Plan Spans 1, 2 & 3
4	Framing Plan Spans 4 & 5
5	Details of Channel Improvement
6	Southwest and Southeast Abutment Details
7	Northwest Abutment Details
8	Northeast Abutment Details
9	Pier Details Piers 1, 2, 3 & 4 S.B. and 1 & 2 N.B.
10	Pier Details Piers 3 & 4 N.B.
11	Pier #3 S.B. & N.B. Wall and Foundation
12	Approach Slab Details, S.E. & S.W. Abut.'s
13	Approach Slab Details, N.E. & N.W. Abut.'s
14	Reinforcing Bar Schedule, Abutments
15	Reinforcing Bar Schedule, Superstr. and Approach Slabs
16	Reinforcing Bar Schedule, Piers

REFERENCE DRAWINGS

Superstructure Std. Drwg. SCB 30-56 Sh 1 & 2
Handrail " " SB-56-57 Sh 1

BERLIN-HIGHGATE IM BPNT(18)
PROJECT BRIDGE 46 N&S

FOR INFORMATION ONLY

VERMONT
STATE HIGHWAY DEPARTMENT
TOWNS OF MIDDLESEX - WATERBURY
INTERSTATE PROJECT

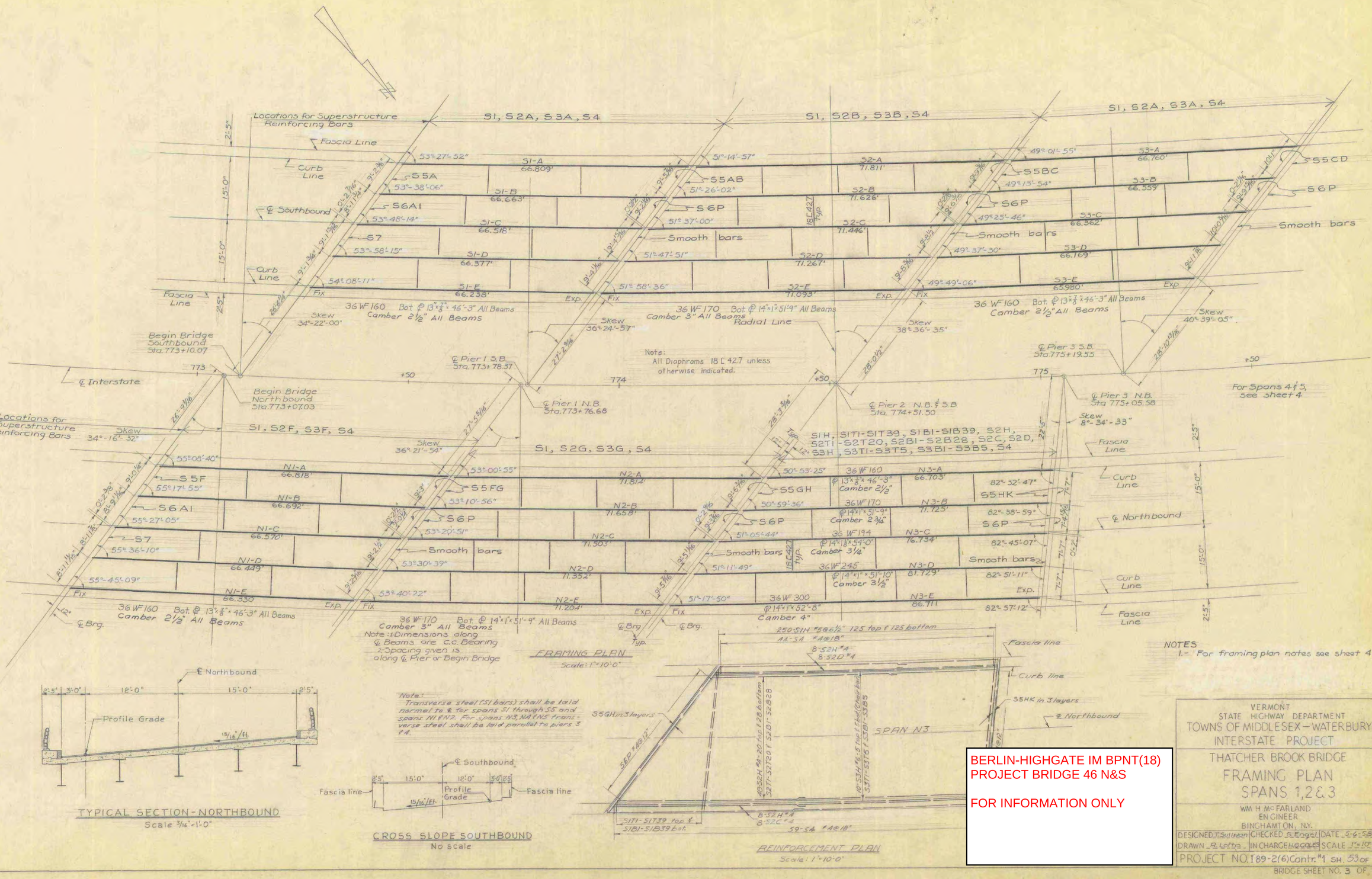
THATCHER BROOK BRIDGE

GENERAL PLAN AND ELEVATION

WM. H. Mc FARLAND
ENGINEER
BINGHAMTON, N.Y.

DESIGNED F.W.C. | CHECKED F.W.C. | DATE 5/6/58
DRAWN J. Kleske | IN CHARGE H.G. Coles | SCALE as shown
PROJECT NO. 189-2(6) Contr. #1 SH 51 OF 329

BRIDGE SHEET NO. 1 OF 16



BERLIN-HIGHGATE IM BPNT(18)
PROJECT BRIDGE 46 N&S

FOR INFORMATION ONLY

VERMONT
STATE HIGHWAY DEPARTMENT
TOWNS OF MIDDLESEX – WATERBURY
INTERSTATE PROJECT

THATCHER BROOK BRIDGE

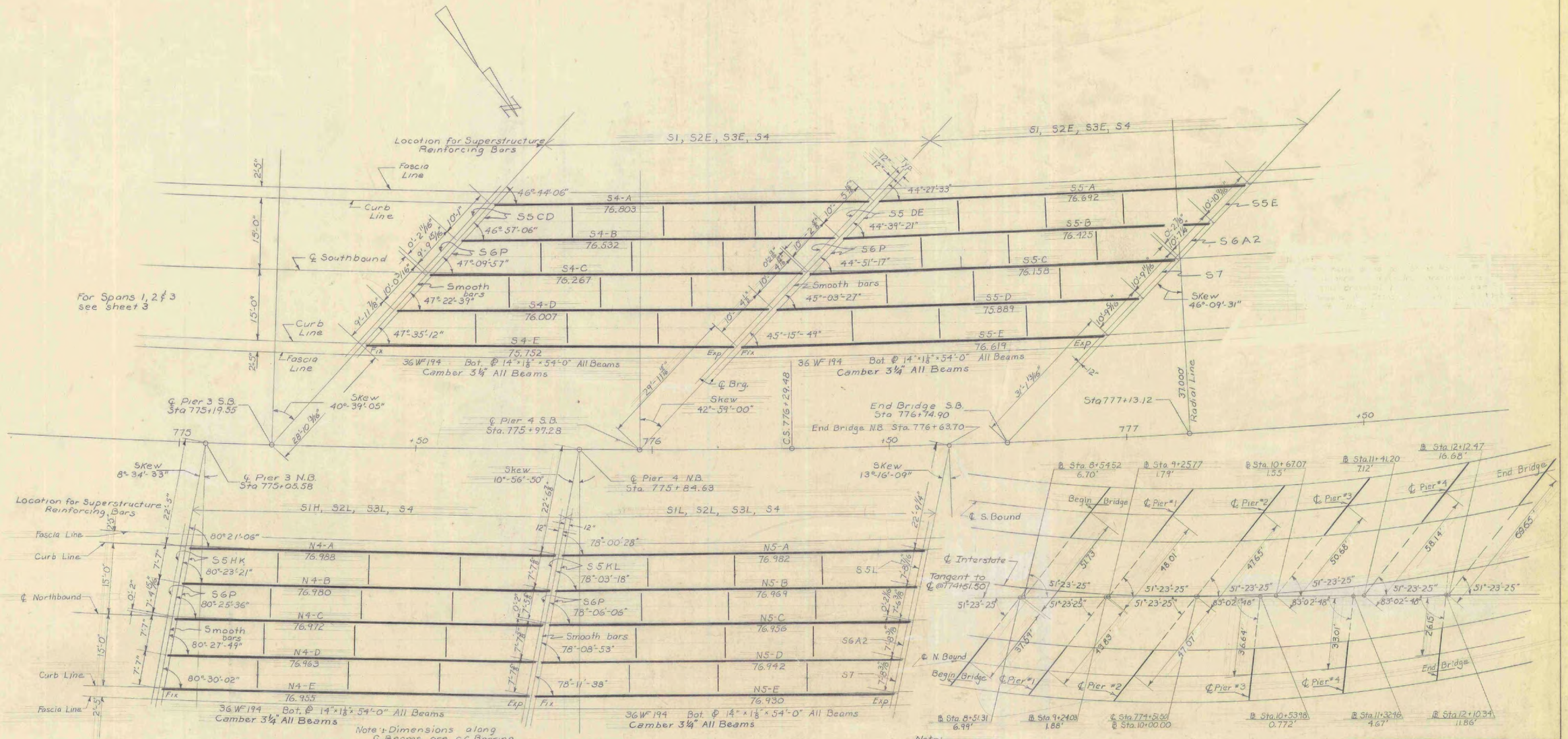
FRAMING PLAN
SPANS 1, 2 & 3

WM H. McFARLAND
ENGINEER
BINGHAMTON, N.Y.

DESIGNED T. Sullivan	CHECKED G. Engel	DATE 3-6-58
DRAWN R. Loftis	IN CHARGE H. Cooles	SCALE 1"=10'

PROJECT NO. I 89-2(6) Contr. "1 SH. 53 OF 379

BRIDGE SHEET NO. 3 OF 16



Note: Distances shown under baseline stations are measurements along ℄ of Piers between Baseline and ℄ of Interstate.

SKETCH - PIER LAYOUT
No Scale

Note:
1. Dimensions along ℄ Beams are c.c. Bearing
2. Spacing given is along ℄ Pier or End Bridge
3. All intermediate diaphragms are 18 [42.7.

FRAMING PLAN
Scale: 1"=10'

BERLIN-HIGHGATE IM BPNT(18)
PROJECT BRIDGE 46 N&S

FOR INFORMATION ONLY

Notes:

1. For General Notes see sheet 1.
2. End diaphragm reinforcing bars indicated on framing plans. For details see Bar Schedule and standard drawing SCB-30-56 sheets 1 & 2.
3. All expansion bearings shall have plates "B" and "E" as shown on standard sheet SB-20-56 detail "C" made of Lubrite or equal.
4. Haunch over beams to vary in order to compensate for camber.

VERMONT
STATE HIGHWAY DEPARTMENT
TOWNS OF MIDDLESEX - WATERBURY
INTERSTATE PROJECT

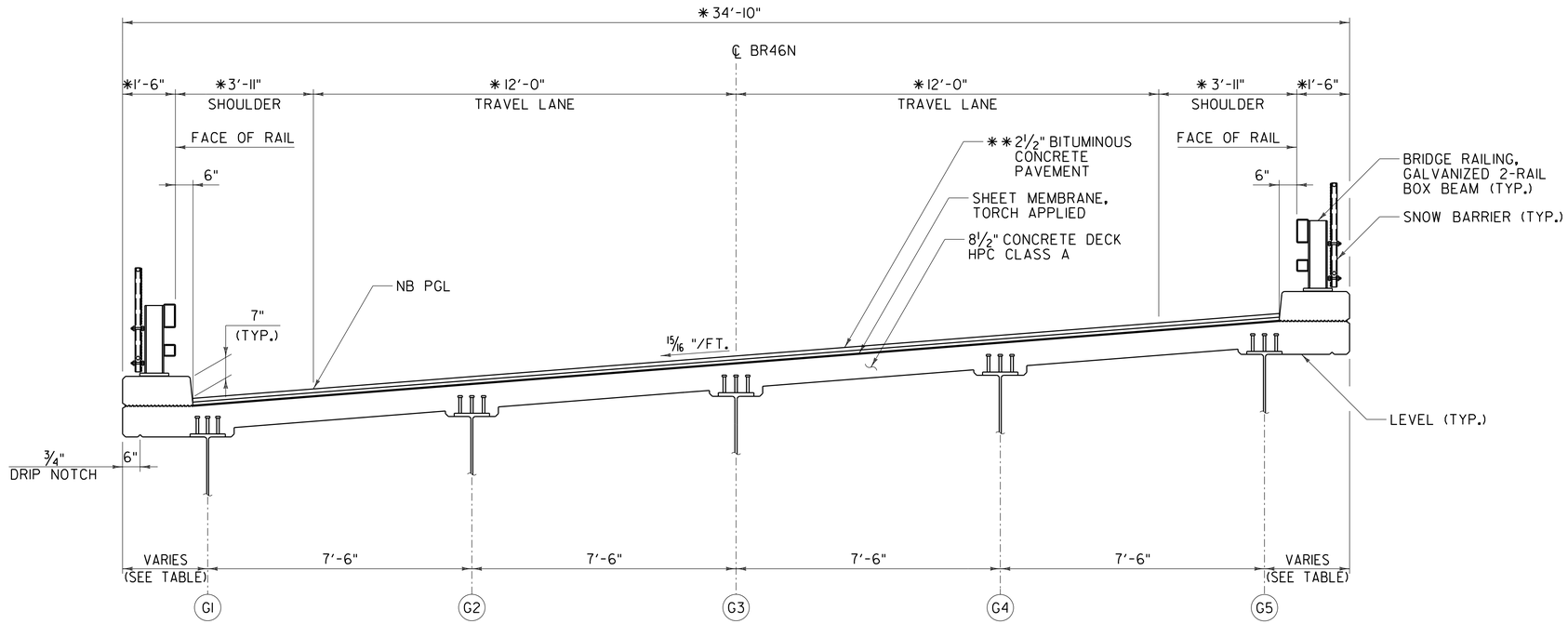
THATCHER BROOK BRIDGE
FRAMING PLAN
SPANS 4 & 5

WM. H McFARLAND
ENGINEER
BINGHAMTON, N.Y.

DESIGNED J. Sullivan	CHECKED G. Eagel	DATE 5-6-58	
DRAWN R. Loftis	IN CHARGE H.G. COLE	SCALE 1"=10'	

PROJECT NO. 189-2(6) Contr. #1 SH. 54 OF 339

BRIDGE SHEET NO. 4 OF 16



CONCRETE DECK OVERHANG TABLE

BRIDGE LOCATION	MIN. DIST.	MAX. DIST.
BRIDGE 46N - EAST OVERHANG	2'-2⅛"	2'-11⁄16"
BRIDGE 46N - WEST OVERHANG	2'-0⅝16"	2'-9⅛16"

BR46N TYPICAL SECTION

SCALE: ½" = 1'-0"

0 1 2

*DENOTES RADIAL DIMENSION

**TWO LIFTS 1¼" MEDIUM DUTY BIT. CONC. PAVEMENT (TYPE IV)

BERLIN-HIGHGATE IM BPNT(18)
PROJECT BRIDGE 46 N

FOR INFORMATION ONLY

STATE OF VERMONT
AGENCY OF TRANSPORTATION

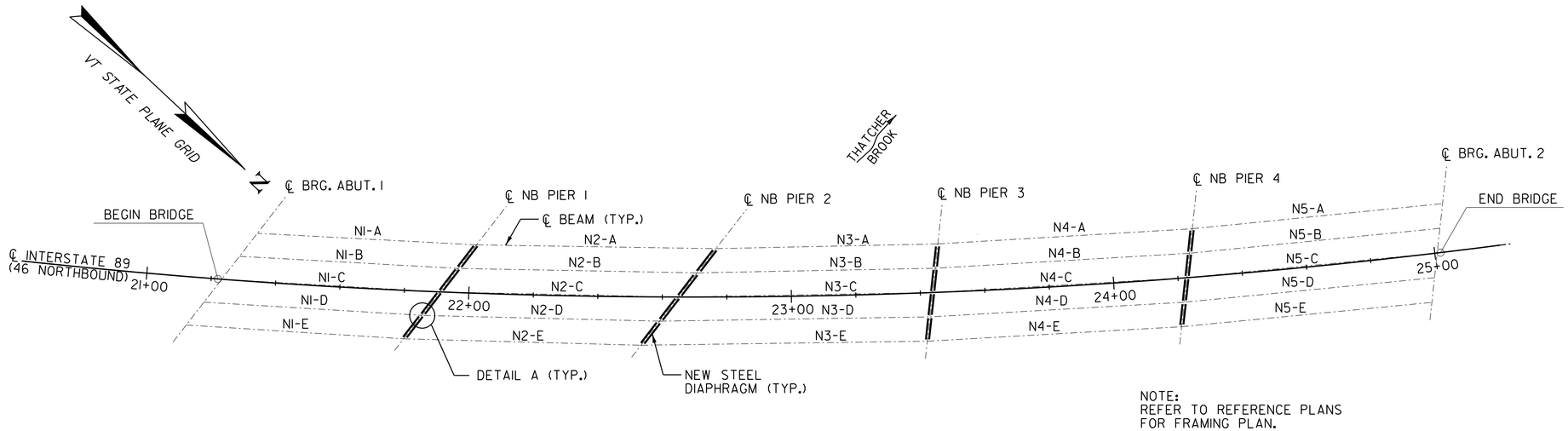
Town Of WATERBURY	Bridge No. 46N
Highway No. INTERSTATE 89	Log Sta. / Surv. Sta.

INTERSTATE 89 OVER STOWE ST. & THATCHER BROOK

BR46N TYPICAL SECTION

Designed By J. HUNGERFORD	Drawn By J. SOTER
Checked By T. KNIGHT Date 08/2012	Bridge Design Supervisor G. BOGUE Date 08/2012
PROJECT WATERBURY	PROJECT NO. IM 089-2(43)
Dgn: ...\BR46N_TYP_SEC.dgn	Plot Date: 9/14/2012
Bridge Sheet No. BR302	Sheet 142 of 188

Stantec

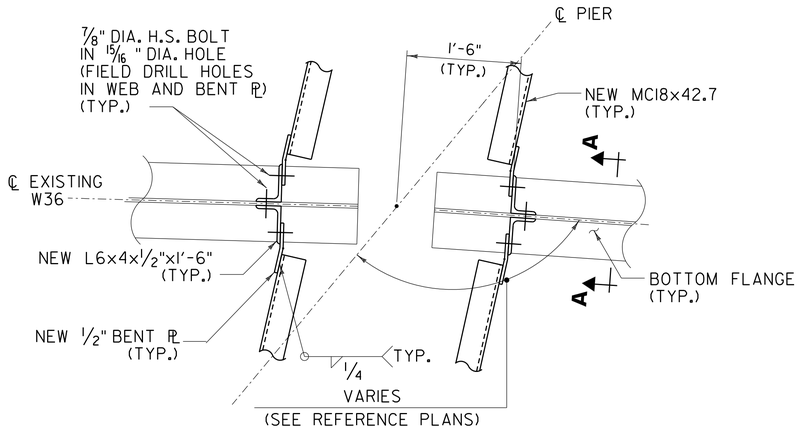


NOTE:
REFER TO REFERENCE PLANS
FOR FRAMING PLAN.

BR46N STEEL DIAPHRAGM LOCATION PLAN

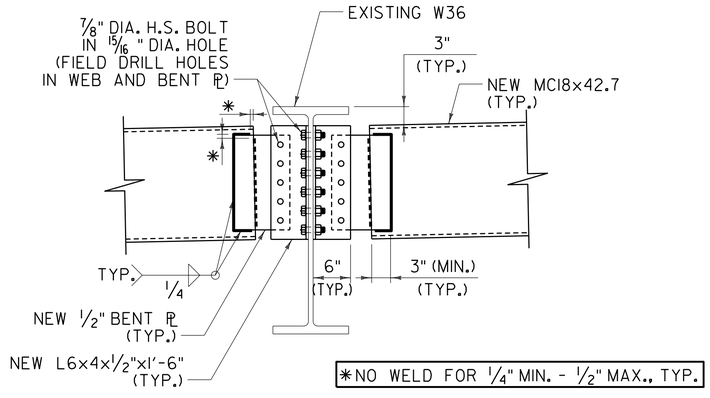
SCALE: 1" = 20'-0"

0 20 40



DETAIL A

NOT TO SCALE



*NO WELD FOR 1/4" MIN. - 1/2" MAX., TYP.

SECTION A–A

NOT TO SCALE

BERLIN-HIGHGATE IM BPNT(18)
PROJECT BRIDGE 46 N

FOR INFORMATION ONLY

STATE OF VERMONT
AGENCY OF TRANSPORTATION

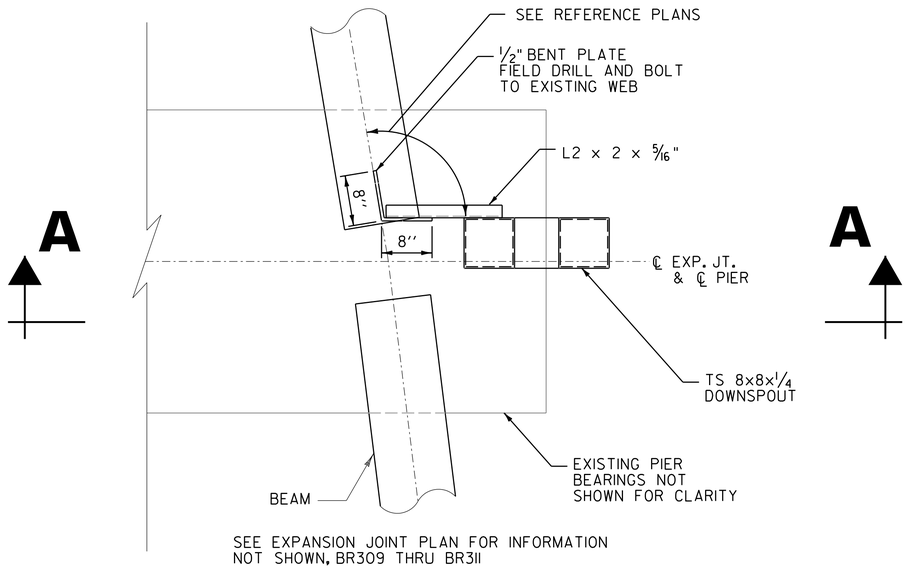
Town Of WATERBURY	Bridge No. 46N
Highway No. INTERSTATE 89	Log Sta. / Surv. Sta.

INTERSTATE 89 OVER STOWE ST. & THATCHER BROOK

BR46N STEEL DIAPHRAGM DETAILS

Designed By T. KNIGHT	Drawn By L. BUXTON
Checked By T. KNIGHT Date 08/2012	Bridge Design Supervisor G. BOGUE Date 08/2012
PROJECT WATERBURY	PROJECT NO. IM 089-2(43)
Dgn: ...\BR46N STEEL DIAPHRAGM DETS.dgn	Plot Date: 9/14/2012
Bridge Sheet No. BR308	Sheet 148 of 188

Stantec

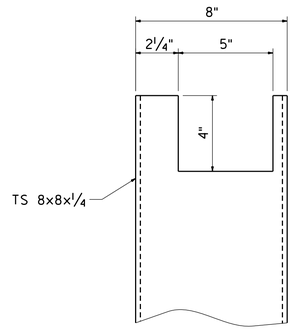


SEE EXPANSION JOINT PLAN FOR INFORMATION NOT SHOWN, BR309 THRU BR311

PARTIAL PLAN DOWNSPOUT

SCALE 1" = 1'-0

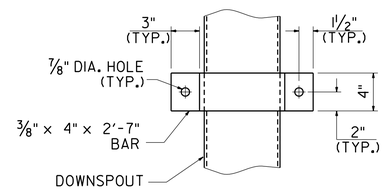
1 9 6 3 0 1 2



DOWNSPOUT CUTOUT FOR TROUGH

SCALE 3" = 1'-0

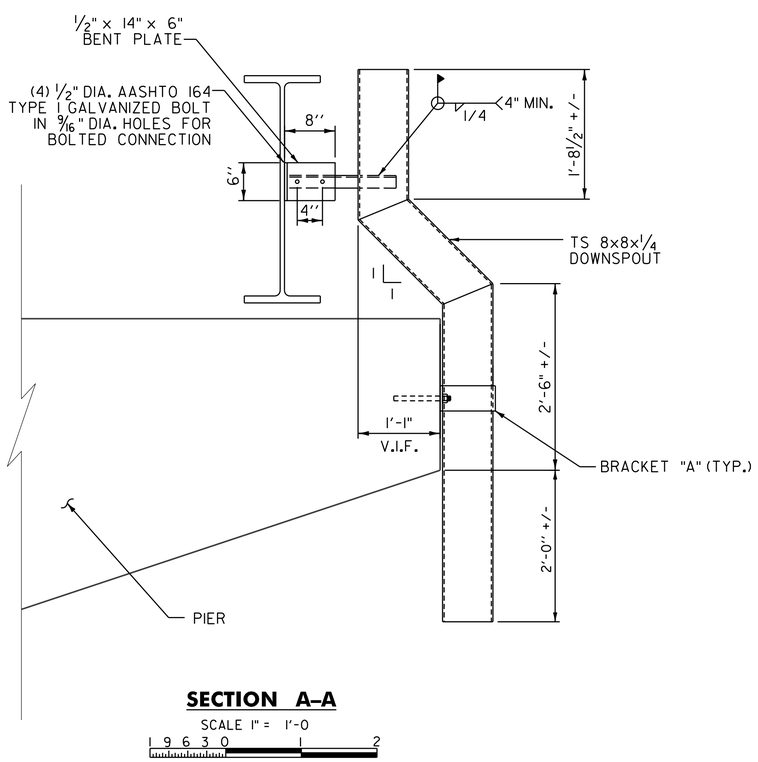
1 9 6 3 0 1



ELEVATION VIEW OF BRACKET A

SCALE 1 1/2" = 1'-0

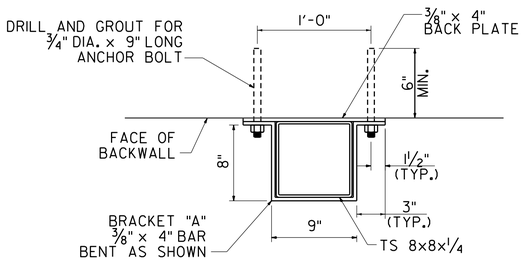
1 9 6 3 0



SECTION A-A

SCALE 1" = 1'-0

1 9 6 3 0 1 2



DETAIL FOR ATTACHING DOWNSPOUT TO BACKWALL

SCALE 1 1/2" = 1'-0

1 9 6 3 0

DOWNSPOUT NOTES

1. HOLLOW STRUCTURAL STEEL TUBING SHALL CONFORM TO ASTM A500 OR A501.
2. ALL PLATES, BARS, AND ANGLES SHALL CONFORM TO AASHTO M270 GRADE 36.
3. DOWNSPOUTS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A-123 AFTER FABRICATION.
4. ALL BOLTS AND RELATED HARDWARE SHALL BE ASTM A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A513 (AASHTO M232).
5. IN AREAS WHERE THE GALVANIZING HAS BEEN REMOVED FROM THE DOWNSPOUT EITHER BY CUTTING, BURNING, WELDING, PLACING, OR ANY OTHER MEANS, IT SHALL BE REPAIRED BY THOROUGHLY CLEANING THE DAMAGED AREAS WITH A WIRE BRUSH AND PAINTING THE DAMAGED AREAS WITH TWO COATS OF AN APPROVED SEALANT.
6. ALL MATERIALS AND INSTALLATION COSTS FOR THE DOWNSPOUT, INCLUDING STEEL TUBING, RELATED HARDWARE, AND ANCHOR BOLTS SHALL BE PAID FOR UNDER ITEM 506.55 "STRUCTURAL STEEL (PLATE GIRDER)".

BERLIN-HIGHGATE IM BPNT(18)
PROJECT BRIDGE 46 N

FOR INFORMATION ONLY

Stantec

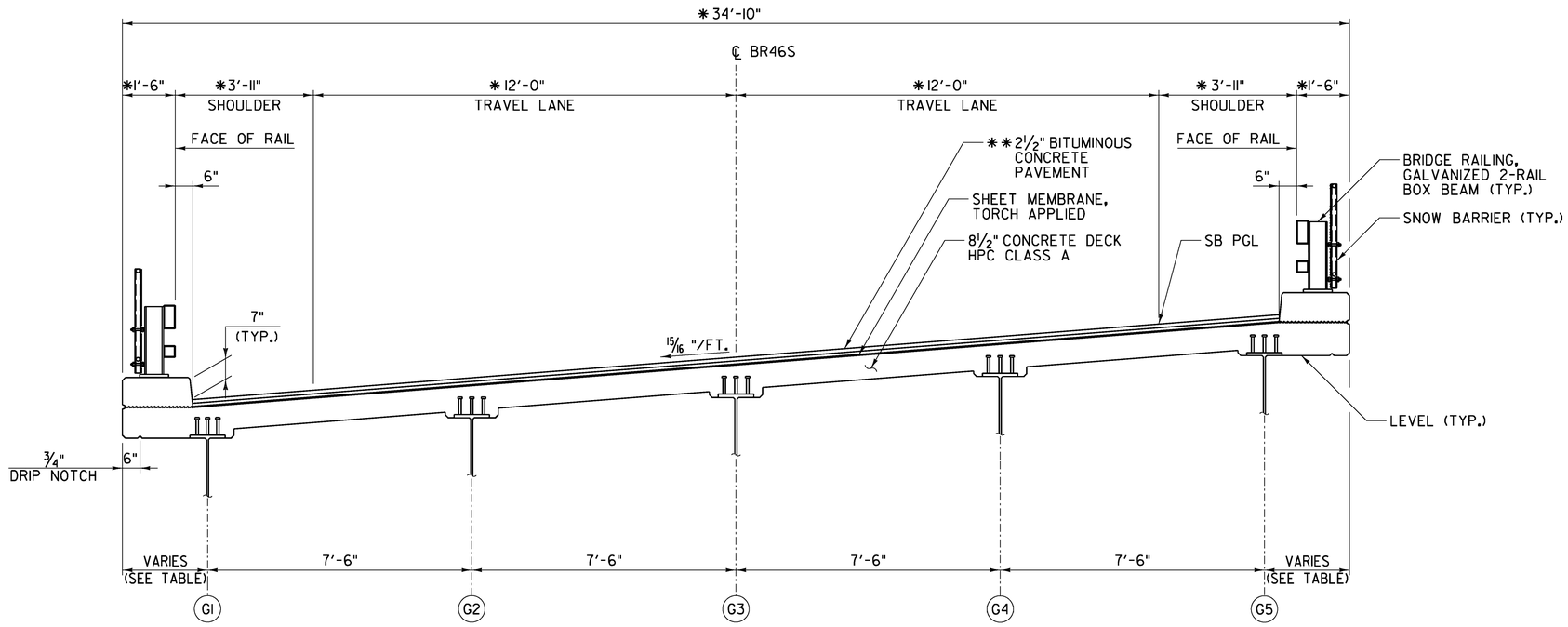
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WATERBURY	Bridge No. 46N
Highway No. INTERSTATE 89	Log Sta. / Surv. Sta.

INTERSTATE 89 OVER STOWE ST. & THATCHER BROOK

BR46N DOWNSPOUT DETAILS

Designed By J. HUNGERFORD	Drawn By L. BUXTON
Checked By T. KNIGHT Date 08/2012	Bridge Design Supervisor G. BOGUE Date 08/2012
PROJECT WATERBURY	PROJECT NO. IM 089-2(43)
Dgn: ...\BR46N DOWNSPOUT DETS.dgn	Plot Date: 9/14/2012
Bridge Sheet No. BR312	Sheet 152 of 188



CONCRETE DECK OVERHANG TABLE

BRIDGE LOCATION	MIN. DIST.	MAX. DIST.
BRIDGE 46S - EAST OVERHANG	2'-0 9/16"	2'-9 1/4"
BRIDGE 46S - WEST OVERHANG	2'-0 7/16"	2'-9 1/2"

BR46S TYPICAL SECTION

SCALE: ½" = 1'-0"

0 1 2

*DENOTES RADIAL DIMENSION

**TWO LIFTS 1¼" MEDIUM DUTY BIT. CONC. PAVEMENT (TYPE IV)

BERLIN-HIGHGATE IM BPNT(18)
PROJECT BRIDGE 46 S

FOR INFORMATION ONLY

STATE OF VERMONT
AGENCY OF TRANSPORTATION

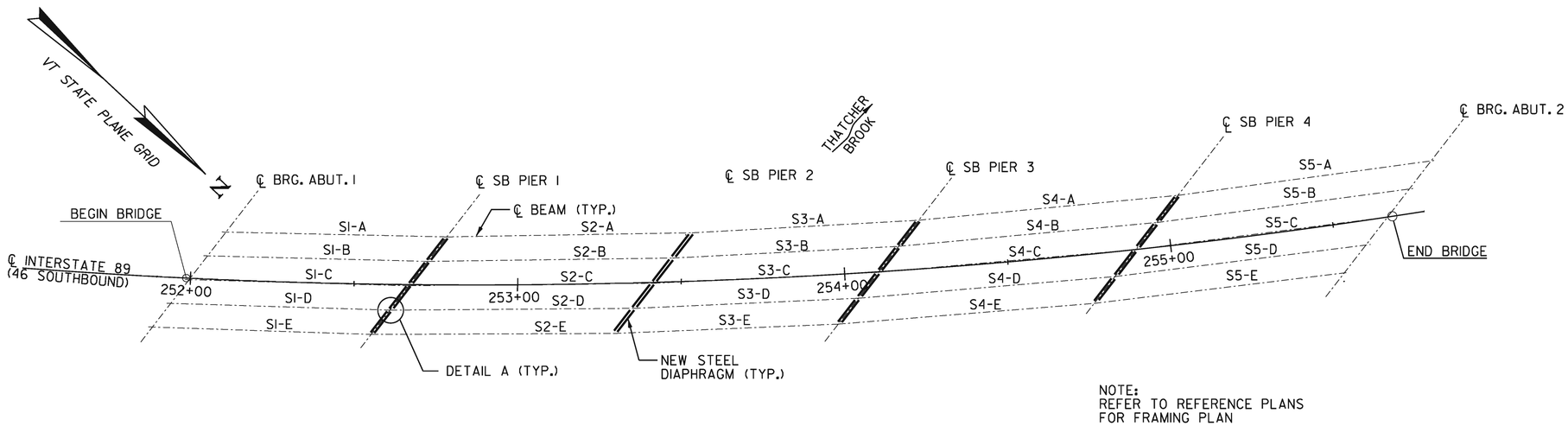
Town Of WATERBURY	Bridge No. 46S
Highway No. INTERSTATE 89	Log Sta. / Surv. Sta.

INTERSTATE 89 OVER STOWE ST. & THATCHER BROOK

BR46S TYPICAL SECTION

Designed By J. HUNGERFORD	Drawn By J. SOTER
Checked By T. KNIGHT — Date 08/2012	Bridge Design Supervisor G. BOGUE — Date 08/2012
PROJECT WATERBURY	PROJECT NO. IM 089-2(43)
Dgn: ...\BR46S_TYP_SEC.dgn	Plot Date: 9/14/2012
Bridge Sheet No. BR202	Sheet 119 of 188

Stantec

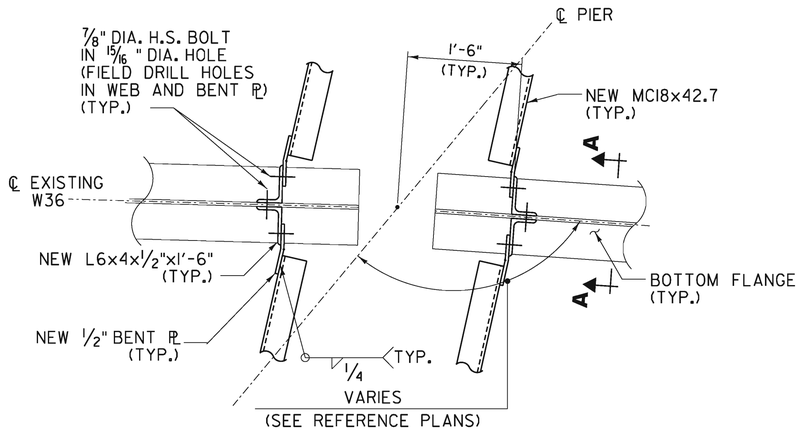


NOTE:
REFER TO REFERENCE PLANS
FOR FRAMING PLAN

BR46S STEEL DIAPHRAGM LOCATION PLAN

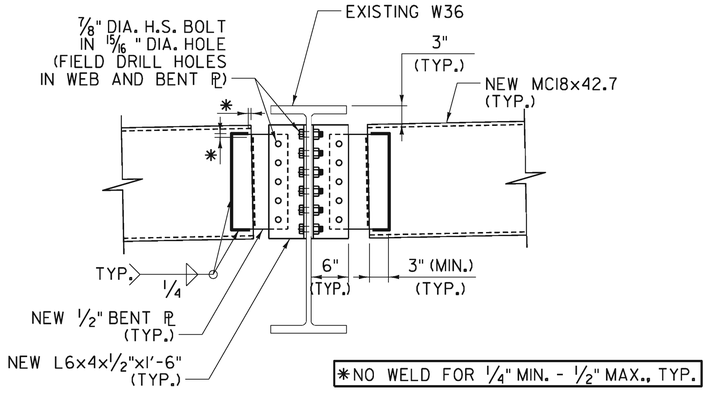
SCALE: 1" = 20'-0"

0 20 40



DETAIL A

NOT TO SCALE



*NO WELD FOR 1/4" MIN. - 1/2" MAX., TYP.

SECTION A-A

NOT TO SCALE

BERLIN-HIGHGATE IM BPNT(18)
PROJECT BRIDGE 46 S

FOR INFORMATION ONLY

Stantec

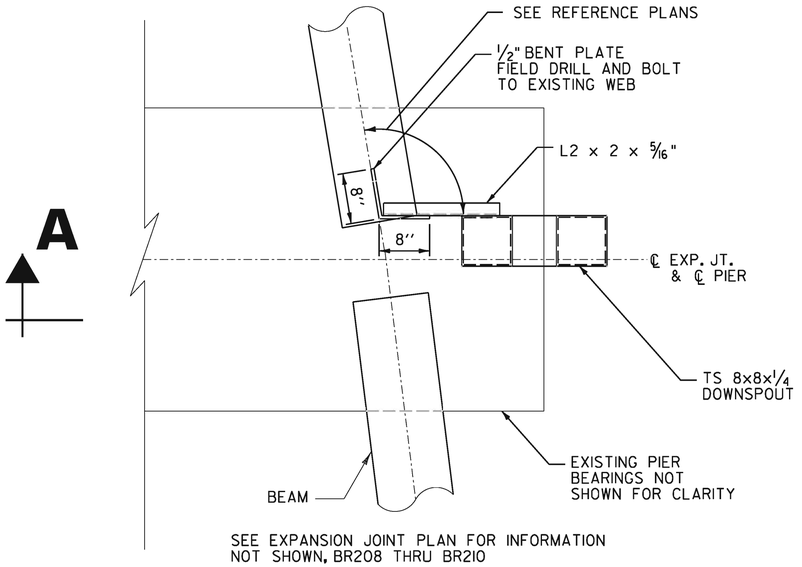
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WATERBURY	Bridge No. 46S
Highway No. INTERSTATE 89	Log Sta. / Surv. Sta.

INTERSTATE 89 OVER STOWE ST. & THATCHER BROOK

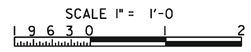
BR46S STEEL DIAPHRAGM DETAILS

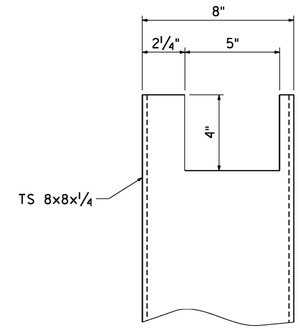
Designed By T. KNIGHT	Drawn By L. BUXTON
Checked By T. KNIGHT Date 02/2012	Bridge Design Supervisor G. BOGUE Date 08/2012
PROJECT WATERBURY	PROJECT NO. IM 089-2(43)
Dgn: ...\BR46S STEEL DIAPHRAGM DET.dgn	Plot Date: 9/14/2012
Bridge Sheet No. BR207	Sheet 124 of 188



PARTIAL PLAN DOWNSPOUT

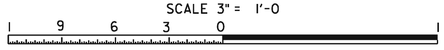
SCALE 1" = 1'-0

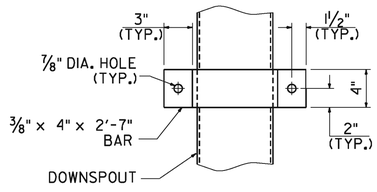




DOWNSPOUT CUTOUT FOR TROUGH

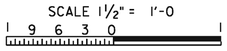
SCALE 3" = 1'-0

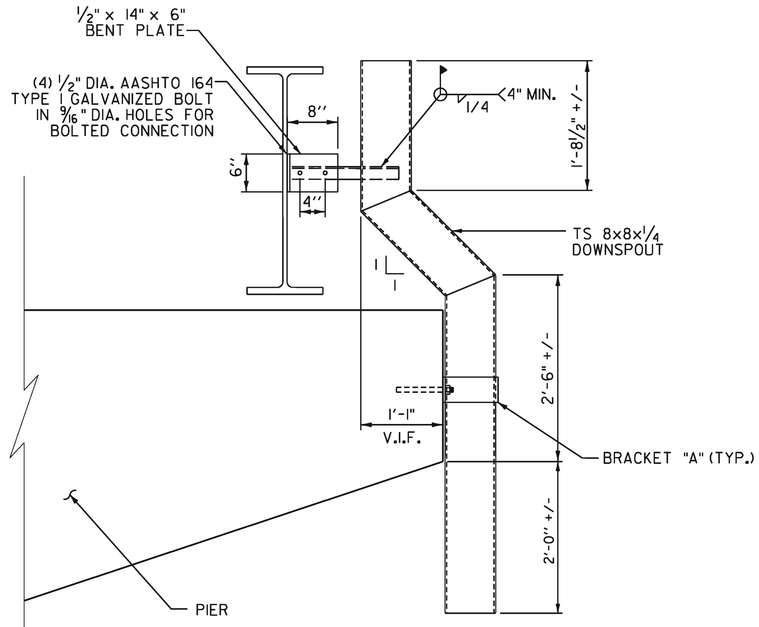




ELEVATION VIEW OF BRACKET A

SCALE 1 1/2" = 1'-0

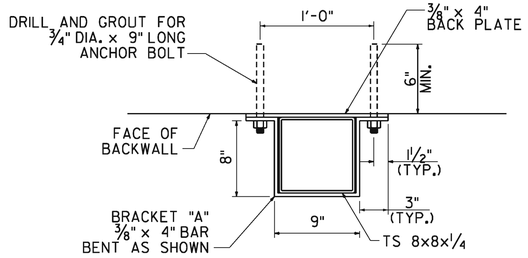




SECTION A–A

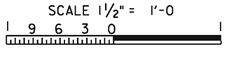
SCALE 1" = 1'-0





DETAIL FOR ATTACHING DOWNSPOUT TO BACKWALL

SCALE 1 1/2" = 1'-0



DOWNSPOUT NOTES

1. HOLLOW STRUCTURAL STEEL TUBING SHALL CONFORM TO ASTM A500 OR A501.
2. ALL PLATES, BARS, AND ANGLES SHALL CONFORM TO AASHTO M270 GRADE 36.
3. DOWNSPOUTS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A-123 AFTER FABRICATION.
4. ALL BOLTS AND RELATED HARDWARE SHALL BE ASTM A307 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A513 (AASHTO M232).
5. IN AREAS WHERE THE GALVANIZING HAS BEEN REMOVED FROM THE DOWNSPOUT EITHER BY CUTTING, BURNING, WELDING, PLACING, OR ANY OTHER MEANS, IT SHALL BE REPAIRED BY THOROUGHLY CLEANING THE DAMAGED AREAS WITH A WIRE BRUSH AND PAINTING THE DAMAGED AREAS WITH TWO COATS OF AN APPROVED SEALANT.
6. ALL MATERIALS AND INSTALLATION COSTS FOR THE DOWNSPOUT, INCLUDING STEEL TUBING, RELATED HARDWARE, AND ANCHOR BOLTS SHALL BE PAID FOR UNDER ITEM 506.55 "STRUCTURAL STEEL (PLATE GIRDER)".

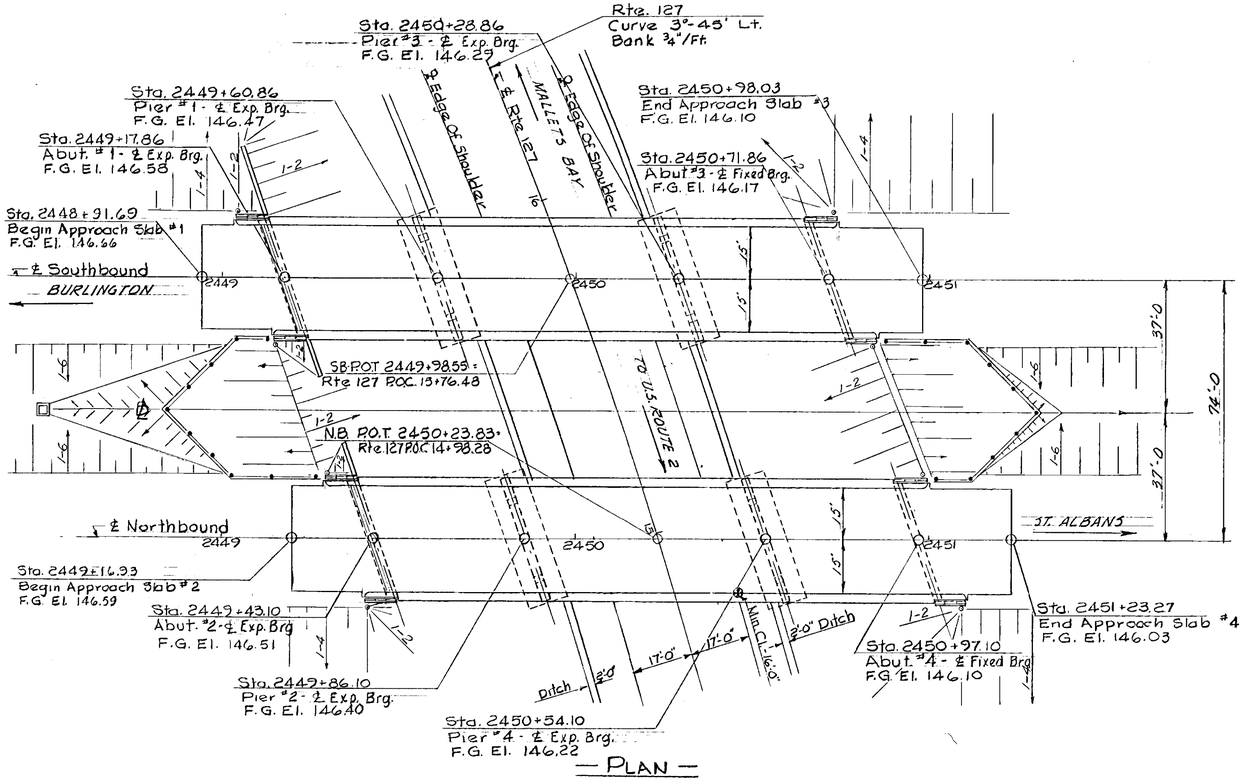
BERLIN-HIGHGATE IM BPNT(18)
PROJECT BRIDGE 46 S

FOR INFORMATION ONLY

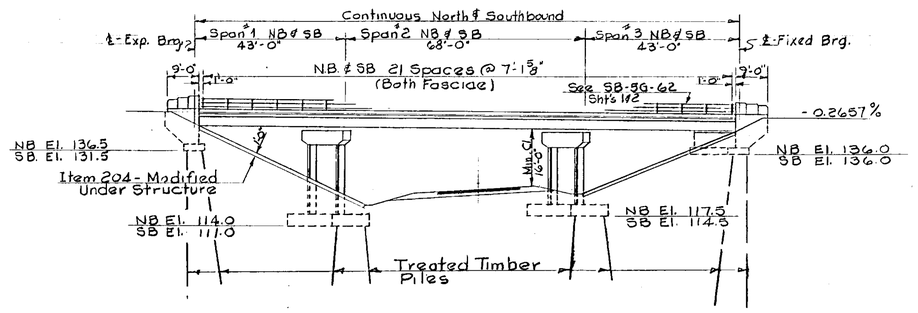
Stantec

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of WATERBURY	Bridge No. 46S
Highway No. INTERSTATE 89	Log Sta. / Surv. Sta.
INTERSTATE 89 OVER STOWE ST. & THATCHER BROOK	
BR46S DOWNSPOUT DETAILS	
Designed By T. KNIGHT	Drawn By L. BUXTON
Checked By T. KNIGHT — Date 08/2012	Bridge Design Supervisor G. BOGUE — Date 08/2012
PROJECT WATERBURY	PROJECT NO. IM 089-2(43)
Dgn: ...\BR46S DOWNSPOUT DET.dgn	Plot Date: 9/14/2012
Bridge Sheet No. BR211	Sheet 128 of 188



— PLAN —



— ELEVATION —

GENERAL NOTES

1- Elevation datum sea level based on nearest U.S. Government Vertical Control.
2- For additional notes see SCB-D1-62.
3- Approach slabs shall be constructed as part of Stage II construction.
4- If abuts. are in fill, fill is to be made to pile Cut-off Elev. prior to driving piles. Excav. to Bot. of Ftg. Elev. after driving piles to be paid under Item 107.

— LIST OF BRIDGE SHEETS —

BR-1	Plan & Profile Of Roadway
BR-2	Plan & Elevation Of Bridge
BR-3	Quantities
BR-4	Preliminary Information
BR-5	Borings
BR-6	Framing Plan
BR-7	Abutment #1
BR-8	" #2
BR-9	Abutments #3 & #4
BR-10	Piers #1, 2, 3, & 4
BR-11	Expansion Dams
BR-12	Bearing Devices
BR-13,14	Reinforcing Steel Schedule
BR-15,16	Cross Sections Of Interstate
BR-17	Plan & Profile Of Rte. 127
BR-18,19	Cross Sections Of " "
BR-20	Standard Sheet SCB-30-62
BR-21-27	" " SCB-D1, 2, 4, 6, 7, 8, 9, -62
BR-28,29	" " SB-5G-62
BR-30,31	" " SB-A5-62

BERLIN-HIGHGATE IM BPNT(18)
PROJECT BRIDGE 76 N&S

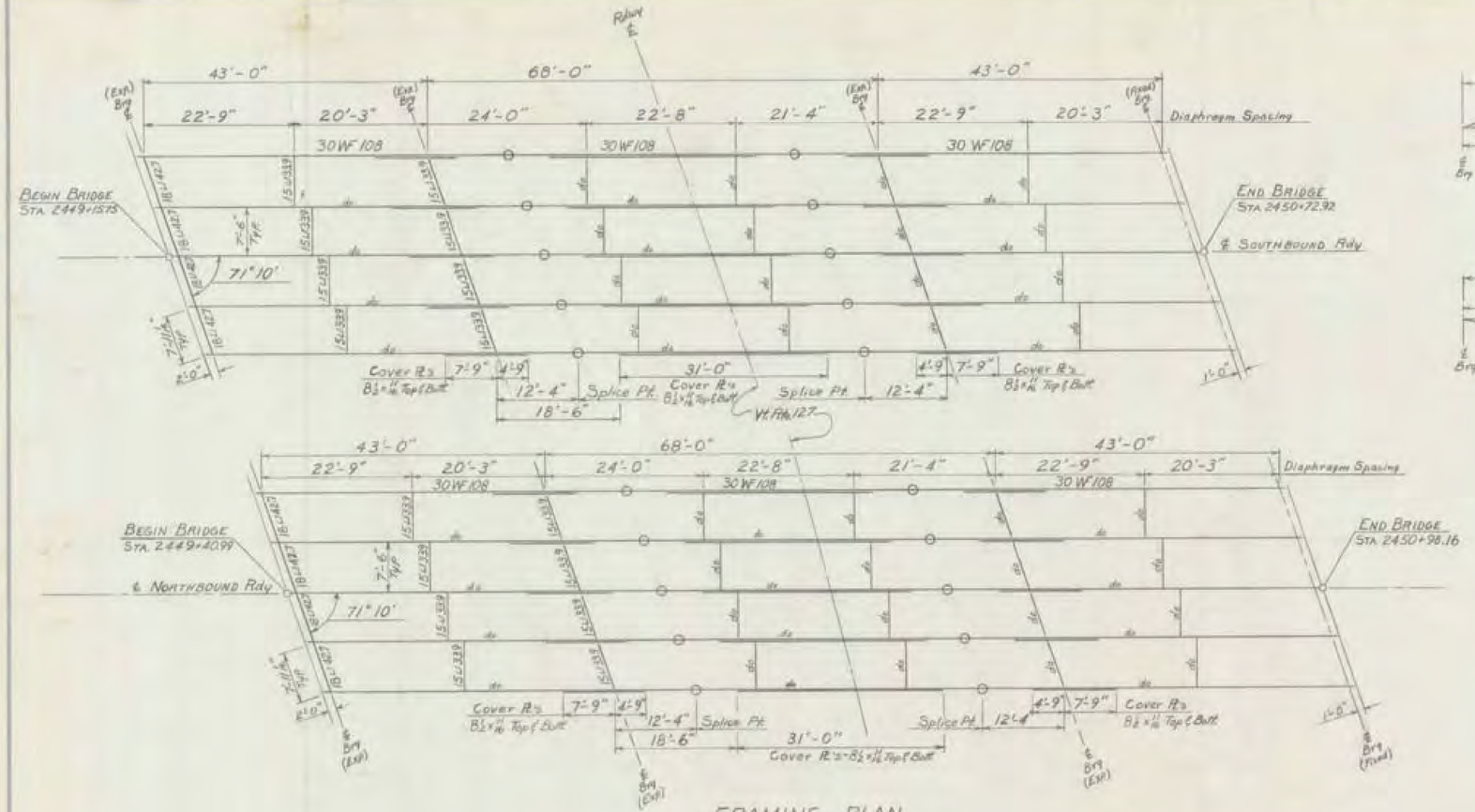
FOR INFORMATION ONLY

STAGE II CONSTR.
B.R. 2 OF 31

ITEM NO.	ITEM	UNIT	NET	OVERRUN	TOTAL	FINAL
106-A	CHAN. EXCAV. OF EARTH	C.Y.				
106-B	CHAN. EXCAV. OF ROCK	C.Y.				
106-C	UNCLASS. CHAN. EXCAV.	C.Y.				
107	STRUCT. EXCAV.	C.Y.				
101-B	CONC. CLASS B (MOD.)	C.Y.				
102	REINF. STEEL	LBS.				
107	ASPHALTIC-ASB. COATING	S.Y.				
502-B	TREATED TIMBER PILING	L.F.				
503	SPLICES FOR STEEL PILING	EA.				
501	STEEL PILING	L.F.				
502-A	UNTREATED TIMBER PILING	L.F.				

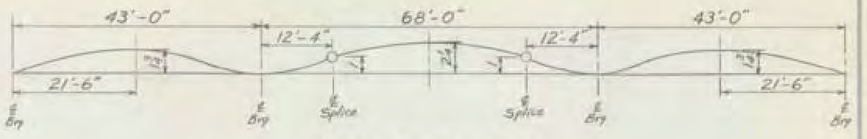
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF COLCHESTER
ROUTE NO. I-89 ~~I-89-5(14)~~
PLAN & ELEVATION OF INT.
OVER Rte. 127
SCALE 1"=20'
SURVEYED BY Bruce
DRAWN BY NBT CHECKED BY RLO
PROJECT NO. I-89-3(29)
SHEET 79 OF 261 CONTR. #1
#85(19)S/2



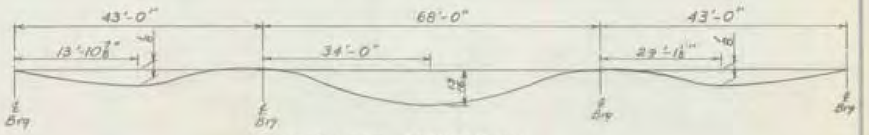
FRAMING PLAN

SCALE 1" = 10'-0"



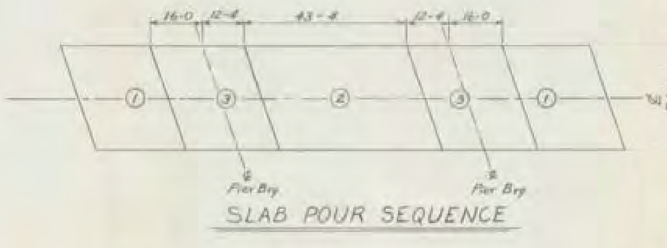
CAMBER DIAGRAM

Not to Scale



DEAD LOAD DEFLECTION

Not to Scale



SLAB POUR SEQUENCE

NOTES:

1. See Standard Sheet SCB-08-62, Details Ⓐ and Ⓑ, for cutoff and bearing details at the fixed end.
2. See Standard Sheet SCB-07-62, Details Ⓐ and Ⓓ, for details of diaphragms and diaphragm connections.
3. In lieu of the above indicated slab pour sequence the slab may be placed in one continuous pour under the direction of the Engineer, using a retarding admixture for concrete meeting the requirements of the General Special Provisions as specified under Concrete Item 601 section 601.02 - H, General.
4. If the slab is placed in one continuous pour the pour must be started at the expansion end of the bridge.
5. Camber stringers as indicated, final roadway grade and haunch depth will be determined following erection of the structural steel.
6. All superstructure concrete to be class AA (Mod).
7. For slab details see Std Sheet SCB-30-62.

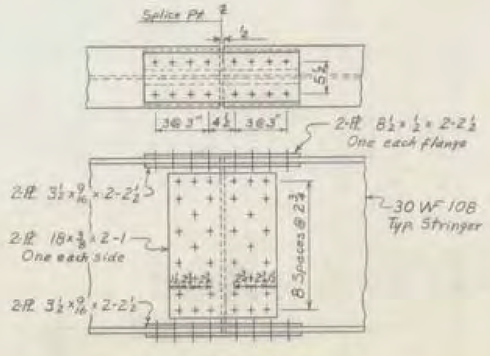
BERLIN-HIGHGATE IM BPNT(18)
PROJECT BRIDGE 76 N&S

FOR INFORMATION ONLY



COVER PLATE DETAIL

NOT TO SCALE



SPLICE DETAIL

SCALE 1" = 1'-0"

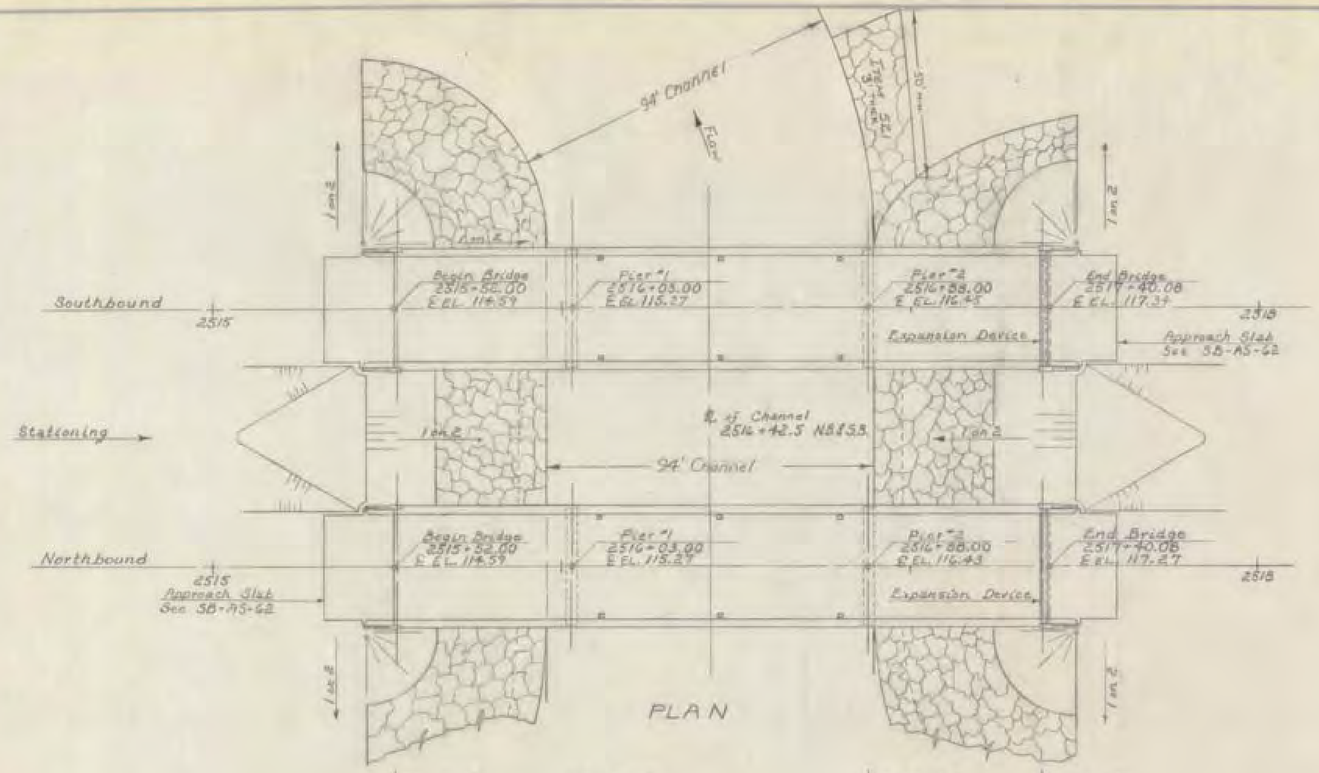
STAGE I CONSTRUCTION

ITEM NO.	ITEM	UNIT			TOTAL	FINAL
120-A	CHAN. EXCAV. OF EARTH	C.Y.				
120-B	CHAN. EXCAV. OF ROCK	C.Y.				
120-C	ENCLOSE CHAN. EXCAV.	C.Y.				
150	STRUCT. EXCAV.	C.Y.				
401-B	CONC. CLASS B (MOD.)	C.Y.				
403	REINF. STEEL	LBS.				
407	ASPHALTIC OIL COATING	S.Y.				
501-B	ENCASED TIMBER PILING	L.F.				
503	SPLICES FOR STEEL PILING	EA.				
504	STEEL PILING	L.F.				
512-B	ORIENTED TIMBER PILING	L.F.				
606A	STRUCTURAL STEEL (Total includes bearing devices and expansion dams.)	LB.			233,816	

BR. 6 OF 31

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF COLCHESTER
ROUTE NO. I 89 LOG STA.
FRAMING PLAN
INTERSTATE OVER VT. RTE. 127
SCALE AS NOTED
SURVEYED BY Bruce
DRAWN BY RLM CHECKED BY RLO 11-21-62
PROJECT NO. I 89-3(19) Cont 2
SHEET 89 OF 265



- GENERAL NOTES -

1. Where Rock is encountered, no footings shall be poured until all blasting in an area 300 ft. from the structure has been completed.
2. Piers are not designed to withstand ice pressures without superstructure in place, and if necessary, the contractor shall take proper precautions.
3. Steel Bearing Piles shall be driven to ledge rock unless otherwise approved by the Engineer.
4. All expansion material shall be premolded cork containing no bitumen or asphalt.
5. End sections of main WF Beams shall be fabricated with mill camber down. Center section between splices shall be cambered as determined by D.L. Deflection.
6. Where granular material is indicated around bridge abutments, rock fill, if available, shall be substituted except in the area where piles are to be driven. Wherever materials from excavation are used in embankments requiring granular material they shall be paid for as indicated under Item 106, Excavation.
7. Raw original channel sections should be taken to conform with relocated channel.
8. Where Channel Excavation, Item 106 and Muck Excavation, Item 119 occur jointly and severally at the same location, measurement for Muck Excavation will be made below the finish grade of channel excavation.
9. The side limits of Item 521 under the structures, above elev. 103.0, shall be directly below the superstructure fascia.
10. Main WF members and splice plates shall be A-440 Steel. Diaphragms and connections shall be A-36 steel. Remainder to be as indicated. Shop drawings shall clearly indicate the type of steel to be used for each member.
11. Elevation Datum and level based on nearest U.S. Government Vertical Control.
12. Cross slope of Approach slab to conform with the cross slope of the bridge.

FOR ADDITIONAL NOTES SEE SCB-D1-62

- LIST OF SHEETS -

BR-1 PLAN & ELEVATION
BR-2 BRIDGE QUANTITY SHEET
BR-3 PLAN & PROFILE (EDWY.)
BR-4 PLAN & PROFILE (EDWY.)
BR-5 PRELIMINARY INFORMATION SHEET
BR-6 BORINGS (HIGH)
BR-7 BORINGS (N.B.)
BR-8 BORINGS (S.B.)
BR-9 FRAMING PLAN
BR-10 ABUTMENT No. 1 N.B. & S.B.
BR-11 PIERS No. 1 & 2 N.B. & S.B.
BR-12 ABUTMENT No. 2 N.B. & S.B.
BR-13 EXPANSION PLATE DEVICE
BR-14 BEARINGS
BR-15 APPROACH SLABS No. 1
BR-16 APPROACH SLABS No. 2
BR-17 REINFORCING STEEL SHEET
BR-18 CROSS SECTIONS (EDWY.)
BR-19 CROSS SECTIONS (EDWY.)
BR-20-24 CHANNEL SECTIONS
BR-25 SCB-D1-62
BR-26 SCB-D2-62
BR-27 SCB-D6-62
BR-28 SCB-D8-62
BR-29 SCB-D9-62
BR-30-31 SB-5G-62 SHEETS 1&2

N.B. & S.B. 15

ITEM NO.	ITEM	UNIT	TOTAL	FINAL	TOTAL	FINAL
106-A	CHAN. EXCAV. OF EARTH	C.Y.	~~15,800~~	18,749		
106-B	CHAN. EXCAV. OF ROCK	C.Y.				
119	MUCK EXCAVATION	C.Y.	~~1,000~~	1,194		
*372-A	JOINT SEALER-HOT POURED	L.F.	180			
601-B	CONC. CLASS B (HIGH)	C.Y.				
603	REINF. STEEL	LBS.				
407	ASPHALTIC ADH. COATING	G.A.				
502-B	TREATED TIMBER PILING	L.F.				
505	SPLICES FOR STEEL PILING	EA.				
504	STEEL PILING	L.F.				
507-A	UNTREATED TIMBER PILING	L.F.				
521	STONE FILL (HEAVY TYPE)	C.Y.	~~3,000~~	3,468		
*	STAGE II ITEM					

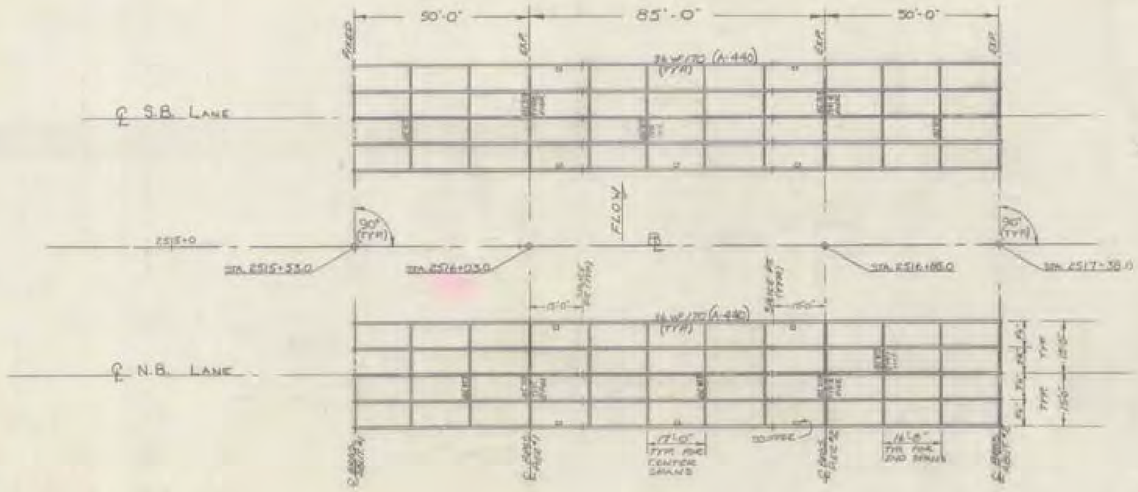
BERLIN-HIGHGATE IM BPNT(18)
PROJECT BRIDGE 77 N&S

FOR INFORMATION ONLY

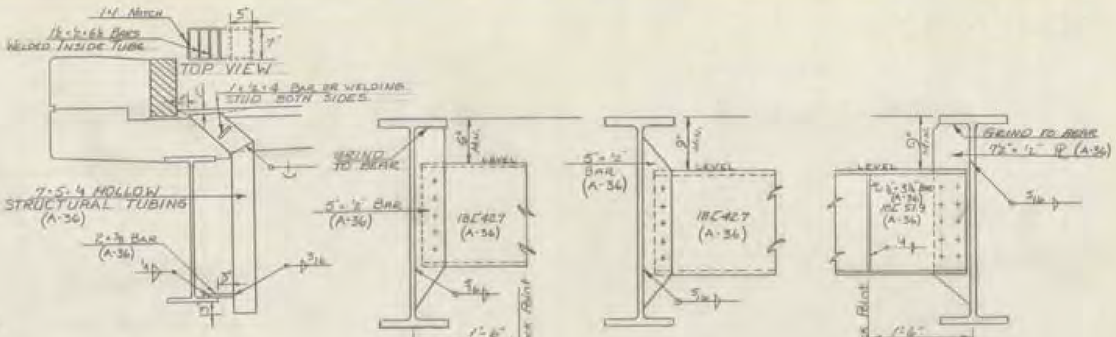
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF COLCHESTER
ROUTE NO. I89 STA. 2514+42.5
PLAN and ELEVATION
MUNSON FLATS
SCALE 1"=20'
SURVEYED BY
DRAWN BY R.P.G. CHECKED BY J.A.B.
PROJECT NO. I89-3(29) Comm #2
SHEET 89 OF 136

BR-1



FRAMING PLAN

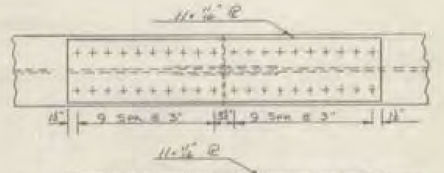


TYPICAL SCUPPER DETAIL
6 req'd. per Bridge

-END-

-INTERMEDIATE-
DIAPHRAGM DETAILS
USE 7/8"ϕ HI-TENSILE BOLTS.

-PIER-



SPLICE DETAILS
USE 7/8"ϕ HI-TENSILE BOLTS
F. A-440 Rq.



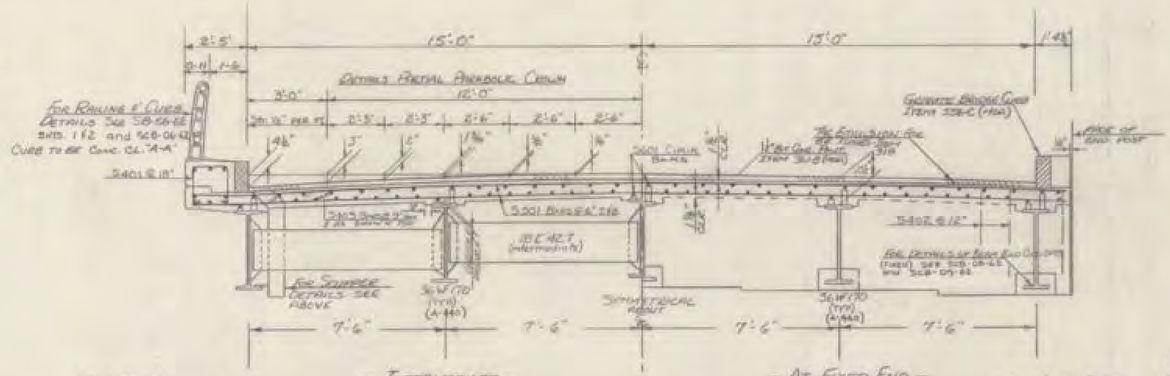
All Deflections at Quarter-Span Pts.
D.L. DEFLECTION DIAGRAM



Pouring Sequence the Same for Both Bridges.

POURING DIAGRAM

In lieu of the above indicated slab pour sequence the slab may be placed in one continuous pour, under the direction of the Engineer, using a retarding admixture for concrete meeting the requirements of the General Special Provisions as specified under Concrete Item 401 section 401.02-H, General

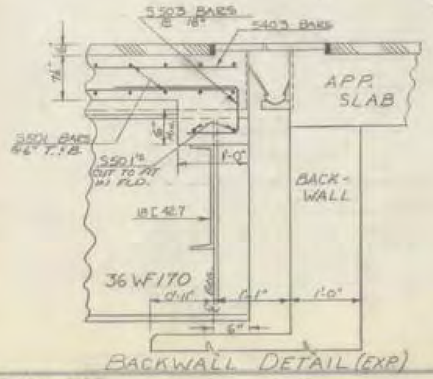


— INTERMEDIATE —

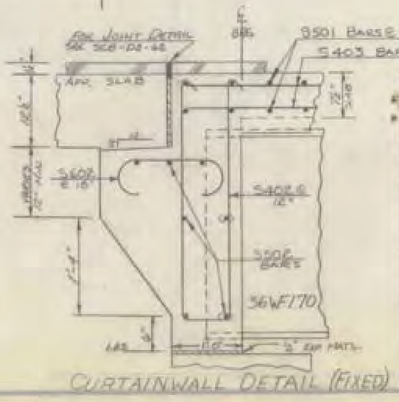
— AT FIXED END —

Floor slab to be Concrete Class "A-A" (Mod.) 7" thick, crowned at beams. Surface to be screeded, floated & brushed. Parapet parabolic crown to be obtained by stepping bridge seats.

TYPICAL SECTION



BACKWALL DETAIL (EXP)



CURTAINWALL DETAIL (FIXED)

ITEM NO.	ITEM	UNIT	NORTHBOUND EST.	NORTHBOUND FINAL	SOUTHBOUND EST.	SOUTHBOUND FINAL
516	Tar Emulsion for Bridge Floors	Gal.	248		248	182
561-P(Mod)	Bit. Conc. Pvmt. (2" Course)	Ton	53		53	
5560	Granite Br. Curb Type 1 (Mod.)	L.F.	372	372	372	372
572	Bridge Railing (Galv. Metal)	L.F.	365	366	365	366
401-AA	Conc. Class A-A (Mod.)	C.Y.	196	195	196	195
402	Rein. Steel	Lbs.	40,867	40,869	40,867	40,869
403	Asphaltic Mbr. Coating	S.Y.				
503-B	Treated Timber Piling	L.F.				
503	Splice for Steel Piling	Ea.				
504	Steel Piling	L.F.				
505-A	Laminated Timber Piling	L.F.				
401-A	Structural Steel	lbs.				
	A-440	-	164,810		164,810	
	A-36	-	16,502		16,502	
	Misc.	-	4,560		4,560	
	Total		185,872	196,810	185,872	196,810

* Stage II Item

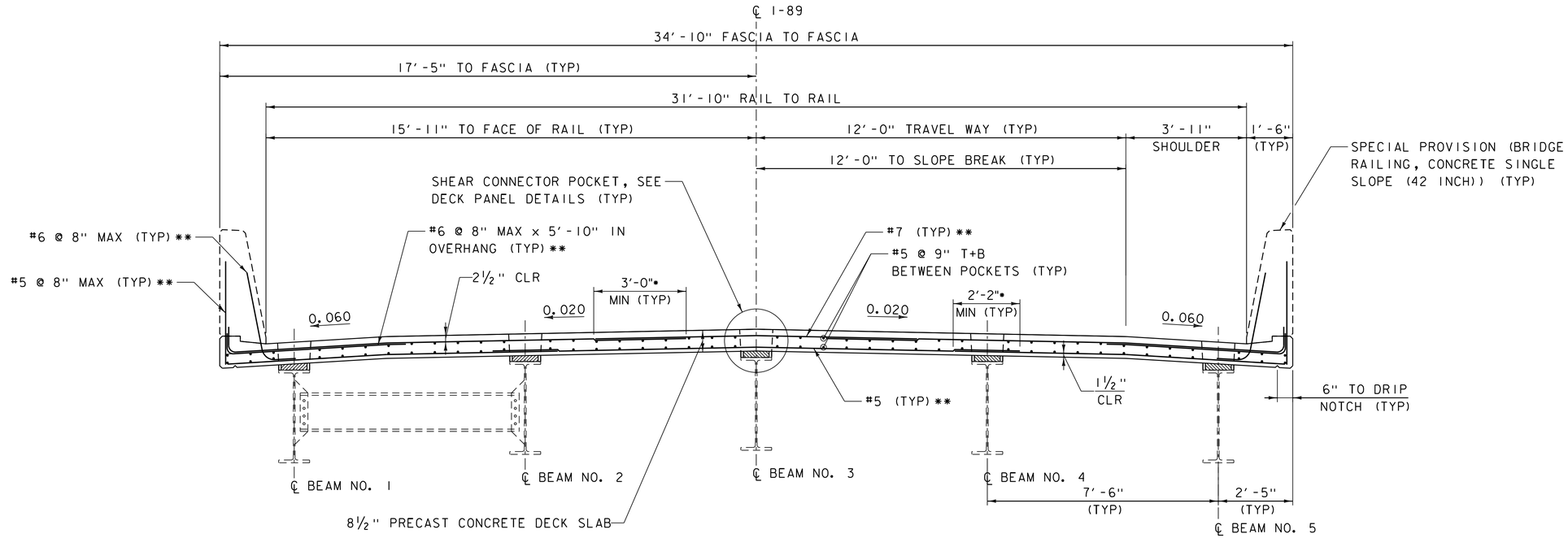
BERLIN-HIGHGATE IM BPNT(18)
PROJECT BRIDGE 77 N&S

FOR INFORMATION ONLY

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF COLCHESTER
ROUTE NO. I-89 ~~100~~ STA. 2516+42.5
3-SPAN BR. & MUNSON FLATS
FRAMING PLAN
SCALE
SURVEYED BY
DRAWN BY J.A.B. CHECKED BY N.B.T.
PROJECT NO. I-89-3(19) CONTR. #3
SHEET 65 OF 236

BR-9

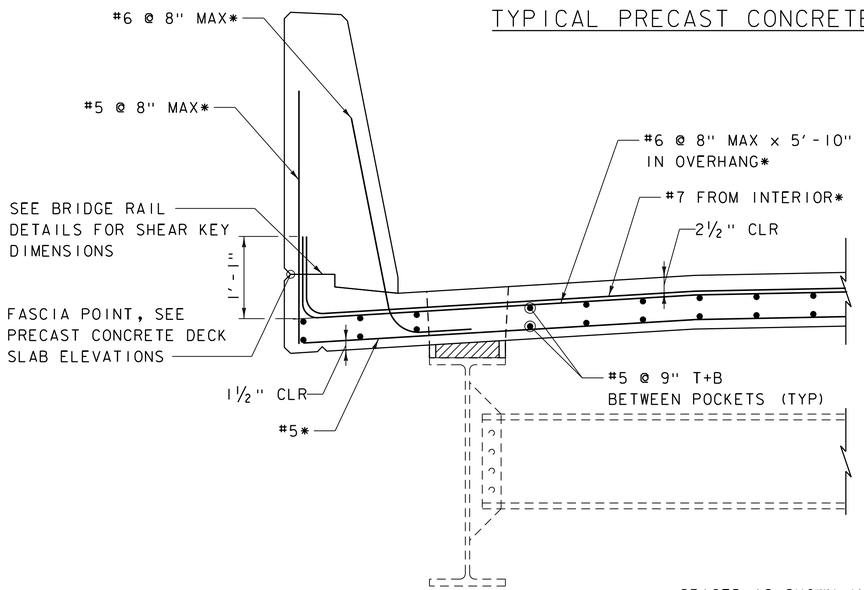


* TOP LAP TO ALTERNATE BETWEEN CENTER OF BAY 2 AND BAY 3.
BOTTOM LAP TO ALTERNATE OVER BEAM 2 AND BEAM 4

**SPACED AS SHOWN IN DECK PANEL DETAILS

TYPICAL PRECAST CONCRETE DECK SLAB REINFORCING SECTION (BRIDGE NOS. 76 N&S AND 77 N&S)

SCALE ½" = 1'-0"



* SPACED AS SHOWN IN DECK PANEL DETAILS

TYPICAL DECK OVERHANG REINFORCING SECTION

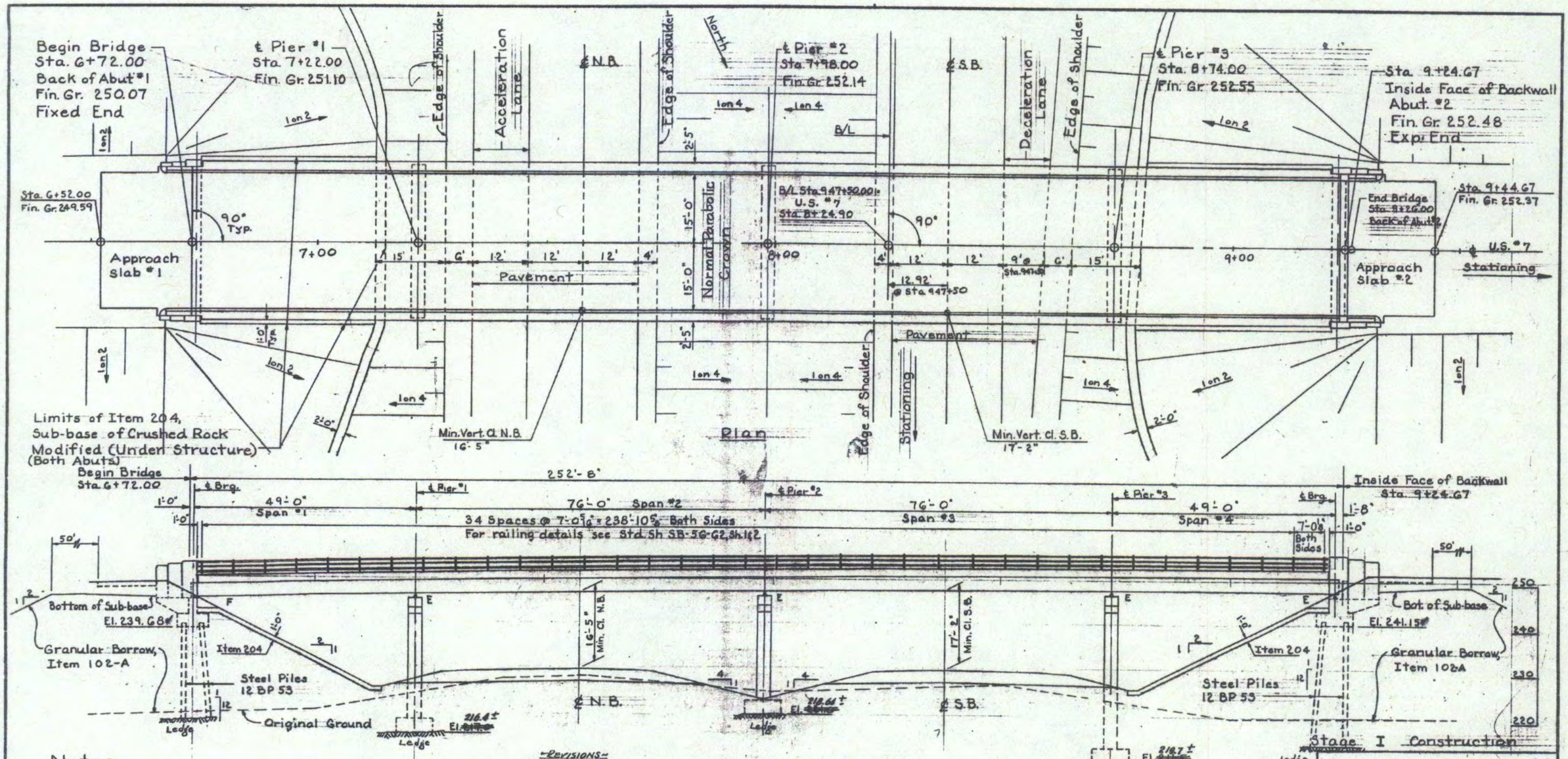
SCALE 1" = 1'-0"

BERLIN-HIGHGATE IM BPNT(18)
PROJECT BRIDGE 76 N&S and 77 N&S

FOR INFORMATION ONLY

PROJECT NAME:	COLCHESTER
PROJECT NUMBER:	IM 089-3(69)
FILE NAME: z95a208deck.dgn	PLOT DATE: 9/24/2018
PROJECT LEADER: S.E. BURBANK	DRAWN BY: J.D. KEENER
DESIGNED BY: J.D. KEENER	CHECKED BY: R.H. BARNES
DECK PANEL SECTIONS	SHEET 112 OF 263

VHB 57804



Notes

1. For General Notes see Std. Sh. SCB-DI-G2
2. The superstructure is of non-composite, WF beam, continuous design for a 30 ft. roadway. The superstructure deck details are in accordance with Std. Sh. SCB-30-G2.
3. Bridge railing is detailed for aluminum. If steel railing is used, post spacing may be increased to a max. of 10'-0" in accordance with Std. Sh. SB-5G-G2, Sh. 1&2.
4. All exposed edge of Concrete in the superstructure, abutments and piers shall be chamfered 1"x1" unless otherwise noted.
5. Granite bridge curb layout details are shown on Sh. BR-304.
6. Where granular material is indicated around bridge abutments, rock fill, if available, shall be substituted, except in the area where piles are to be driven. Wherever materials from excavation are used in embankments requiring Granular Material, They shall be paid for as indicated under Item 121, Excavation.

② 7. Vermont Specs. dated April 1966 apply to Stage II Construction.

"REVISIONS"

① ADDED STAGE II AND STAGE I CONVERTS TO LIST OF BRIDGE SHEETS 5-28-65 ETC.

② ADDED NOTE 7. 5-28-65 ETC.

① Elevation

List of Bridge Sheets

Stage II	Stage I	
BR 300	BR-300	General Plan & Elevation
BR 301	BR-301	Bridge Quantity Sheet
	BR-302	Preliminary Information
	BR-303	Boring Logs
BR 304	BR-304	Framing Plan
BR 305	BR-305	Details of Bearings and Exp. Joint Assembly
	BR-306	Moment Diagram
	BR-307	Details of Abutment #1
	BR-308	Details of Abutment #2
	BR-309	Pier Layout Details
	BR-310	Pier Reinforcing Details
BR 311	BR-311	Approach Slab #1 Details (SB-AS-G2)
BR 312	BR-312	Approach Slab #2 Details (SB-AS-G2)
SCB-DI-G2	BR-313	Reinforcing Schedule

Bridge Standards

Std. Sh. SCB-30-G2, SCB-DI-G2, SCB-D2-G2, SCB-D4-G2, SCB-D6-G2, SCB-D8-G2, SCB-D9-G2, SCWPG-30-G2, Sheets #1 and #4, SB-5G-G2 Sheets #1 and #2

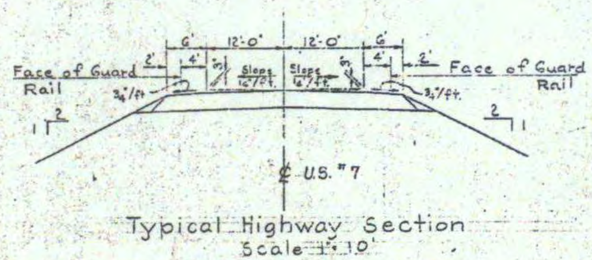
BERLIN-HIGHGATE IM BPNT(18)
PROJECT BRIDGE 184

FOR INFORMATION ONLY

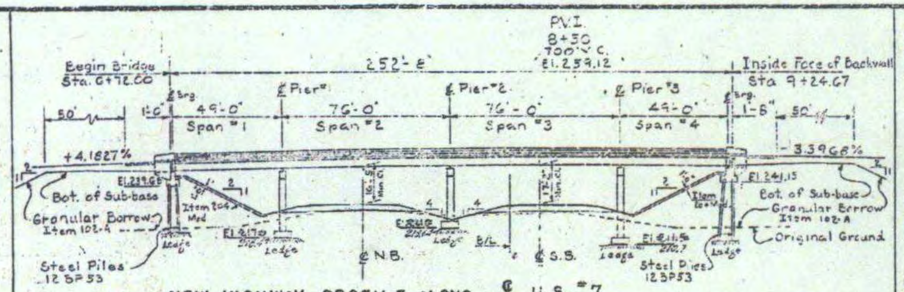
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF Highgate
ROUTE NO. I 89 LOG STA.
General Plan & Elevation
U.S. #7 over Interstate
SCALE 1" = 10'

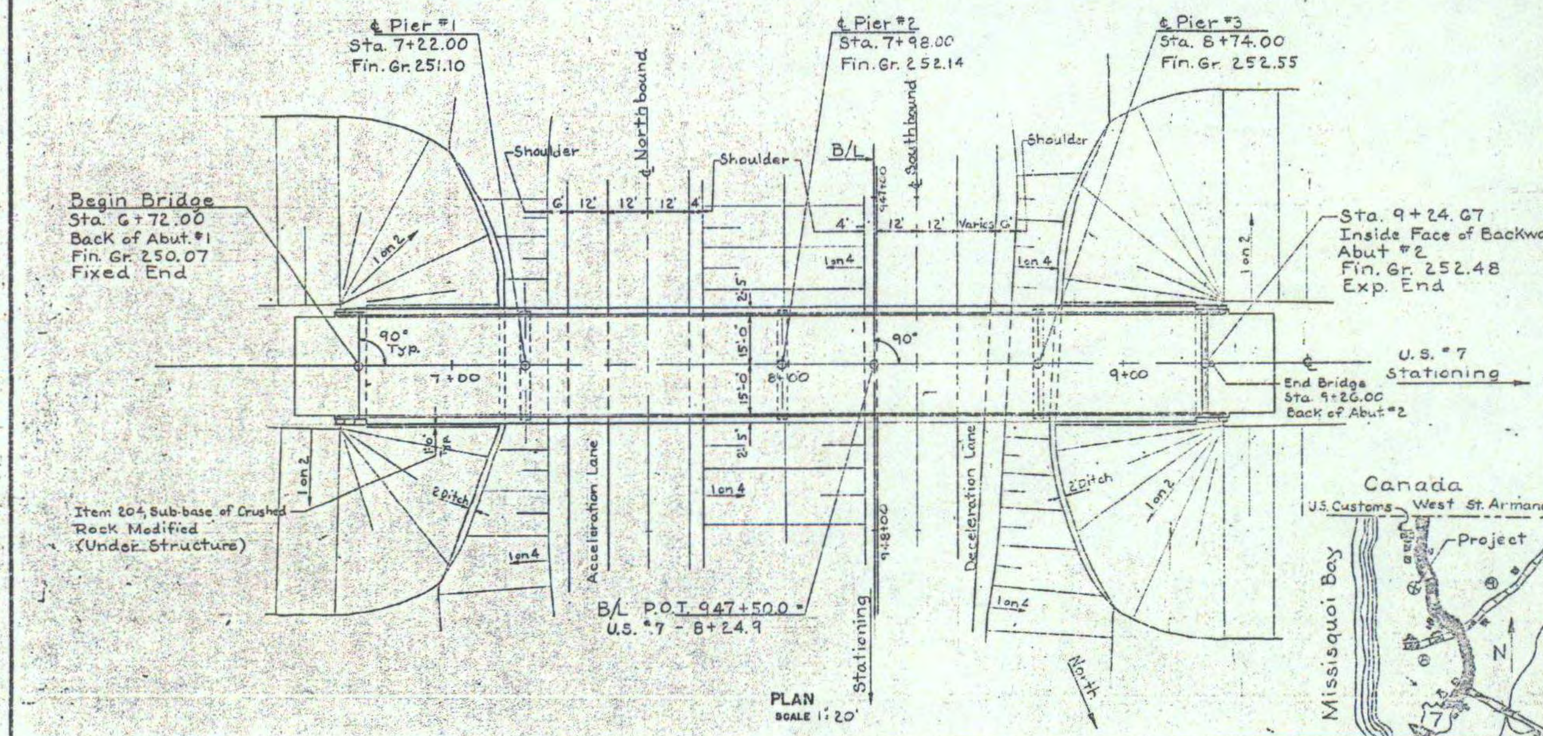
FOR INFORMATION ONLY
HIGHGATE
BHF 0285(15)
SHEET R1

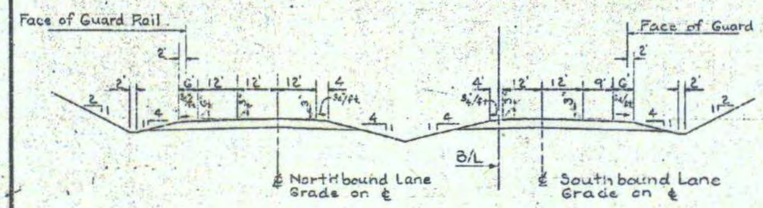


Typical Highway Section
Scale 1"=10'

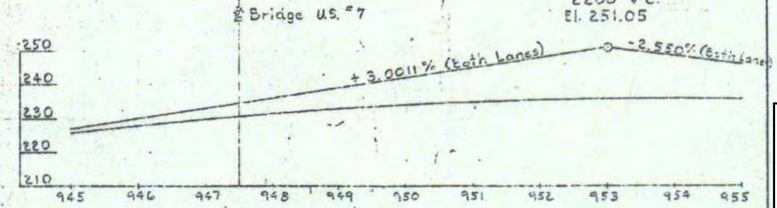


NEW HIGHWAY PROFILE ALONG ℄ U.S. "7
SCALE 1"=30'





Interstate Section Sta. 947+50 (Facing South)
Scale 1"=20'



Interstate Profile
Scale 1"=100' Horiz., 1"=20' Vert

HIGHWAY NO I 89 U.S. #7 NAME OF HIGHWAY Interstate
STRUCTURE NO see Interstate COUNTY Franklin TOWN Highgate
PROJECT NO I 89-3(33) LOCATION Highgate

EXISTING STRUCTURE

1 RATED LOADING OF EXISTING STRUCTURE
2 TYPE OF EXISTING STRUCTURE None
3 UNDERCLEARANCE ELEVATION OF EXISTING STRUCTURE
4 WHAT DISPOSITION SHOULD BE MADE OF EXISTING STRUCTURE — COST OF REMOVAL
5 SHOULD EXISTING STRUCTURE BE USED TO MAINTAIN TRAFFIC DURING CONSTRUCTION OF NEW STRUCTURE
6 SHOULD NEW TEMPORARY STRUCTURE BE BUILT
7 ORDINARY HIGH WATER SURFACE ELEV. AT EXISTING STRUCTURE — WATERWAY TO ORDINARY H.W.
8 EXTREME HIGH WATER AT EXISTING STRUCTURE
9 SPAN OF EXISTING BRIDGE UPSTREAM — WATERWAY TO EXTREME H.W.
SPAN OF EXISTING BRIDGE DOWNSTREAM — WATERWAY TO EXTREME H.W.
10 TYPE OF FOUNDATION UNDER EXISTING ABUTMENTS
11 DOES ALL WATER AT FLOOD ELEVATION PASS THROUGH EXISTING STRUCTURE
12 IF NOT AT WHAT ELEVATION IS RELIEF AFFORDED
13 ADDITIONAL WATERWAY AREA PROVIDED

NEW STRUCTURE

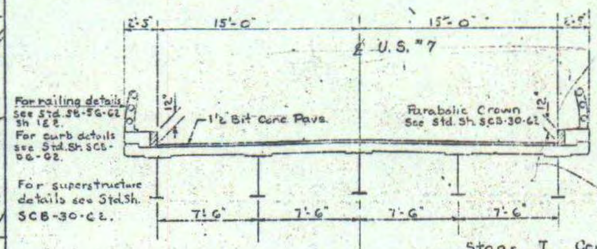
1 RECOMMENDED TYPE OF STRUCTURE Continuous Vσ Beam, Non-Composite
2 RECOMMENDED CLEAR SPAN OR SPANS 49-76-76-49
MEASURED PARALLEL TO ℄ NEW HIGHWAY 49-76-76-49
MEASURED AT RIGHT ANGLES TO ℄ STREAM
3 ARE THERE OBJECTIONS TO A PIER IN THE STREAM, ANSWER YES OR NO
4 ORDINARY HIGH WATER ELEVATION AT NEW STRUCTURE
5 EXTREME HIGH WATER ELEVATION AT NEW STRUCTURE — SOURCE OF INFORMATION
6 IS ALL WATER INTENDED TO PASS THROUGH NEW STRUCTURE?
7 DOES STREAM REACH ITS MAXIMUM HIGH WATER ELEVATION RAPIDLY? — IS ORDINARY RISE RAPID?
8 LOW WATER ELEVATION AT NEW STRUCTURE
9 DRAINAGE AREA IN ACRES ABOVE STRUCTURE — CHARACTER OF TERRAINE
10 IS STREAM EVER DRY?
11 VELOCITY OF STREAM AT HIGH WATER STAGE — ESTIMATED DISCHARGE
12 AREA FULL OPENING — AREA BELOW ORDINARY H.W.
13 CHARACTER OF SCOUR — DRIFT — ICE
14 ESTIMATED DRAINAGE AREA ABOVE NATURAL OR ARTIFICIAL STORAGE
15 VERTICAL CLEARANCE ABOVE FLOOD ELEVATION
16 ARE SIDEWALKS REQUIRED, IF SO ON WHAT SIDE None — BOTH SIDES
17 RECOMMENDED TYPE OF PAVEMENT 1½" Bit. Concrete Pavement
18 TRAFFIC TO BE MAINTAINED UNDER ITEM NO. — ONE OR TWO WAYS — PROBABLE COST
19 PROBABLE COST OF CLEARING AND GRUBBING STREAM CHANNEL AT STRUCTURE SITE
20 SHOULD PROVISIONS BE MADE FOR PUBLIC UTILITIES? No
21 ESTIMATED ALLOWABLE LOAD ON FOUNDATIONS 33 Tons/s SHOULD PILES BE USED? Yes EST. LGTH. Only At Abuts. - Abut #1-27', Abut #2-31'

FOUNDATION INFORMATION

OBTAINED FOR DESIGN PURPOSES ONLY, AND THE STATE ASSUMES NO RESPONSIBILITY WHATSOEVER FOR THE SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN. BOULDERS MAY BE ENCOUNTERED AT ANY PIER OR ABUTMENT LOCATION.

For boring information see sh. BR-303.

Design Loading H20-S16(44)



Stage I Construction

Typical Bridge Section
Scale 1"=5'

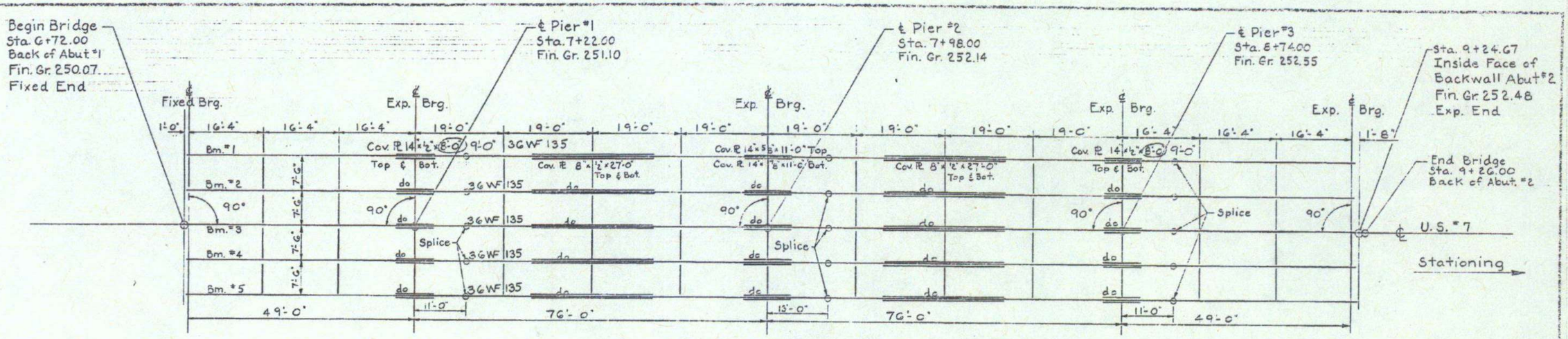
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
Interstate IN THE TOWNS OF Highgate
ROUTE NO I 89 LOG STA U.S. "7 over Interstate

BERLIN-HIGHGATE IM BPNT(18)
PROJECT BRIDGE 184

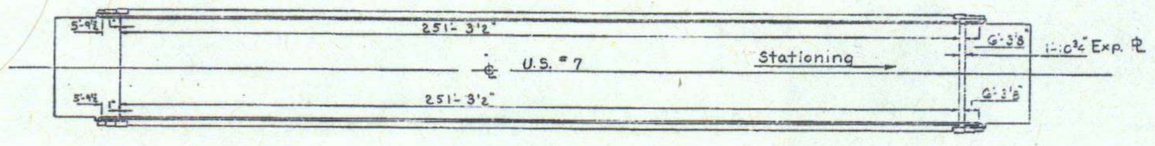
FOR INFORMATION ONLY

FOR INFORMATION ONLY
HIGHGATE
BHF 0285(15)
SHEET R2

R-302



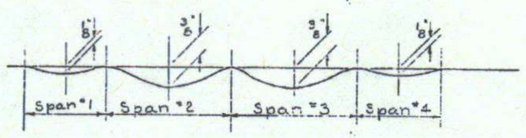
Framing Plan
Scale 1"=10'



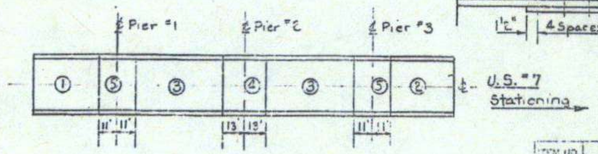
Granite Curb Layout
Scale 1"=20'

Note

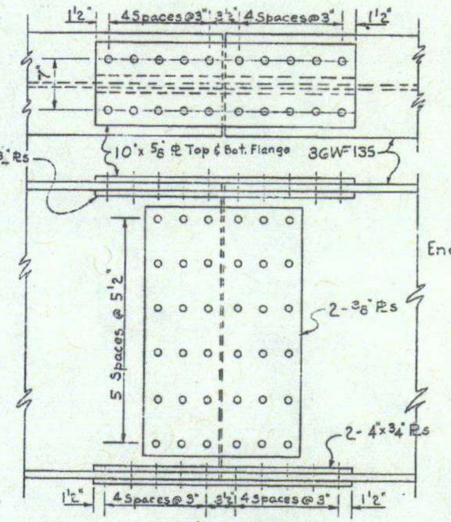
For Granite Curb details see Std. Sh. SCB-DG-G2 and sheet BR-305. The ends of the granite curb shall be sawed square where they butt against the metal expansion plates.



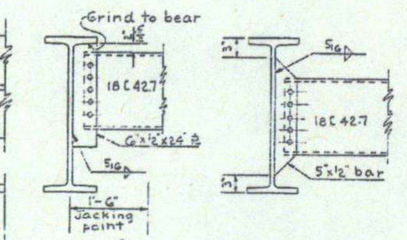
D.L. Deflection Diagram
Not to Scale



Pouring Schedule
Scale 1"=40'



Splice Details
Scale 1½"=1'-0"



End @ Abut. #2 Intermediate Pier

Diaphragm Details
Scale ¾"=1'-0"

Notes

1. Structural steel for beams, cover plates and splice plates shall be A.S.T.M. designation A36-G2T.
2. All bolts to be H.S. ⅞"ϕ and holes 1⅛" unless otherwise noted.
3. All diaphragms to be 18C42.7.
4. No camber is required. Fabricate beams with mill camber, if any, up.
5. All welds to be continuous shop welds.
6. No scuppers are to be used on this bridge.
7. For General Notes see Std. Sh. SCB-D1-G2, SCWPG-30-G2, Sh. #1 and sheet BR-300.
8. For cover plate details see Sh. BR-306.

Estimated Superstructure Quantities — Stage I Construction

	ITEM NO	ITEM	UNIT		TOTAL	FINAL
*	318	Tar Emulsion for Bridge Floor	Gal	Stage II	335	
*	361-3	Bit. Conc Pavement (Dense Graded Top Course)	Ton	Stage II	71	
*	372-A	Joint Sealer, hot Poured	L.F.	Stage II	90	
	379	Rubber Joint Material	L.F.		~~77~~	73
	401-AA	Concrete, Class AA, Mod.	C.Y.		~~650~~	640
	402	Reinforcing Steel	Lb.		~~63050~~	62,920
	404-A	Structural Steel	Lb.		~~226000~~	224,924
	556-C	Granite Bridge Curb, Mod	L.F.		503	502
	572	Bridge Railing	L.F.		~~495~~	494

Revised for 14"x½"x9'-0" Cov. Pl.
6/26/64 J.L.H.

* Items included in Roadway Quantities only.

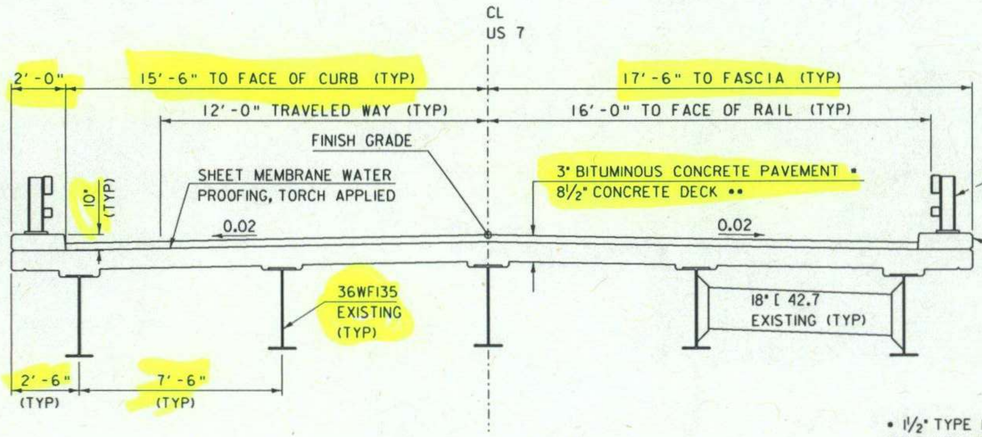
STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF Highgate
ROUTE No. I 89 LOG STA.
Framing Plan
U.S. #7 over Interstate
SCALE As Noted
SURVEYED BY Webster-Martin

BERLIN-HIGHGATE IM BPNT(18)
PROJECT BRIDGE 184

FOR INFORMATION ONLY

FOR INFORMATION ONLY
HIGHGATE
BHF 0285(15)
SHEET R3

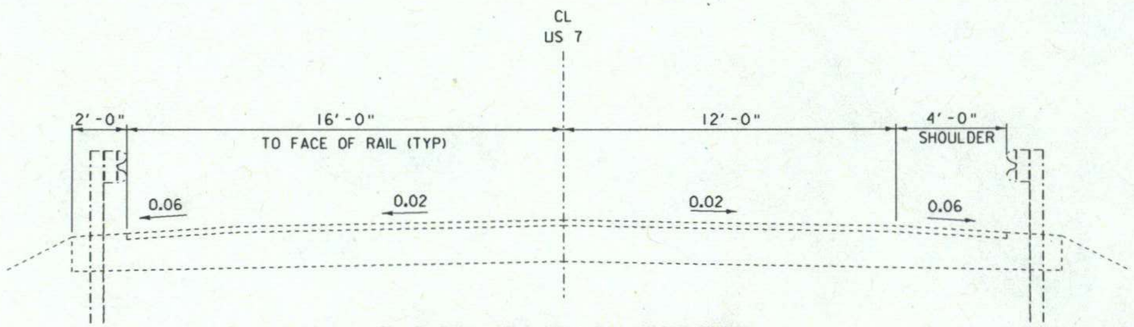


PROPOSED TYPICAL BRIDGE SECTION

SCALE ⅜"=1'-0"

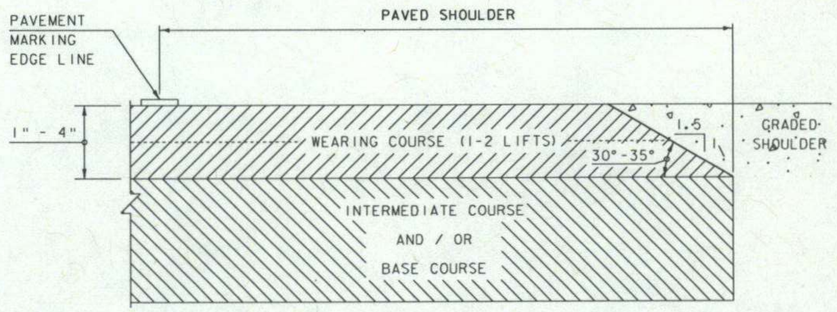
•• SPECIAL PROVISION (HIGH PERFORMANCE CONCRETE, CLASS A LOW CEMENT)

• 1½" TYPE IVS OVER 1½" TYPE IVS. NOTE THAT NEW PAVEMENT ON BRIDGE COULD BE HIGHER THAN EXISTING PAVEMENT ON BRIDGE AND ON APPROACH SLAB. IF NECESSARY, SHIM PAVEMENT ON APPROACH SLAB TO PROVIDE SMOOTH TRANSITION TO THE SATISFACTION OF THE ENGINEER.



TYPICAL ROADWAY SECTION

SCALE ⅜"=1'-0"



SAFETY EDGE DETAIL

NOT TO SCALE

NOTE: LEVELING COURSE MAY INCLUDE THE "SAFETY EDGE" AT THE CONTRACTOR'S CHOICE.

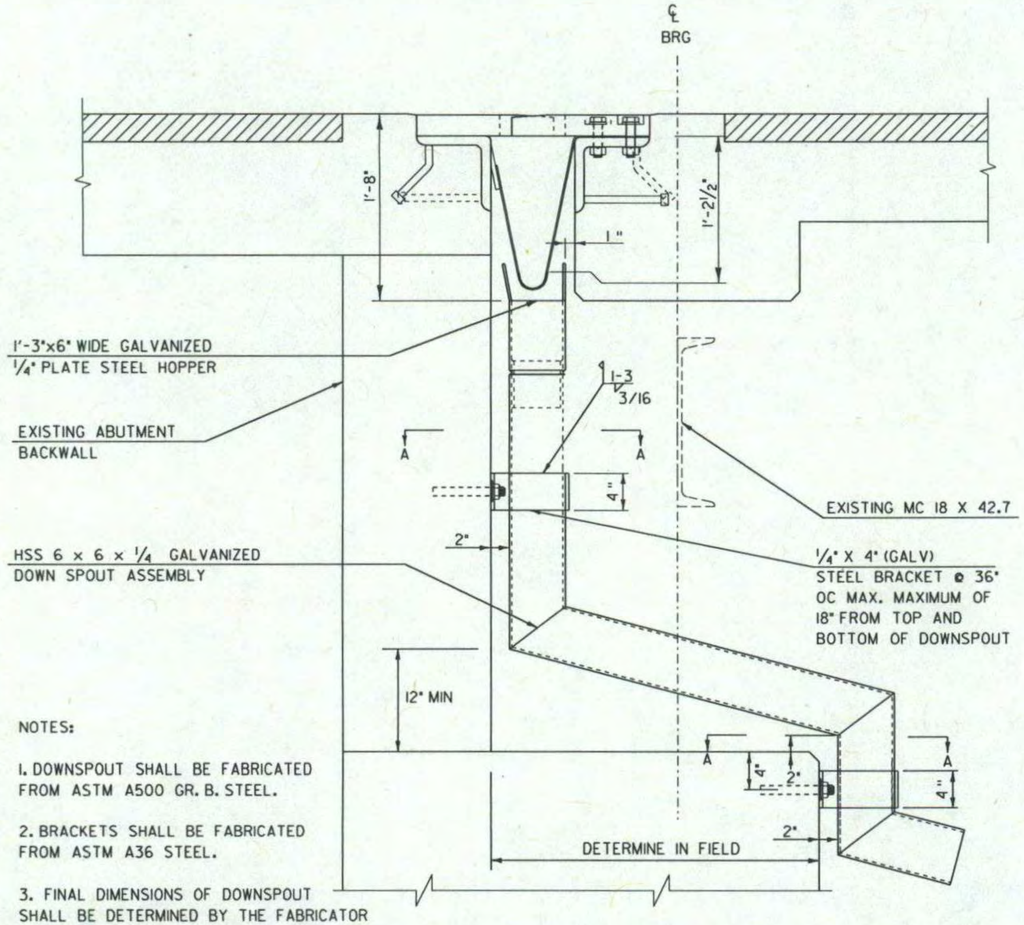
BERLIN-HIGHGATE IM BPNT(18)
PROJECT BRIDGE 184

FOR INFORMATION ONLY

PROJECT NAME: HIGHGATE
PROJECT NUMBER: BHF 0285(15)

FILE NAME: s10c136typ.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H.J. SALLS
TYPICAL SECTIONS

PLOT DATE: 16-JUN-2011
DRAWN BY: H.I. SALLS
CHECKED BY: G. SWEENY
SHEET 3 OF 14



NOTES:

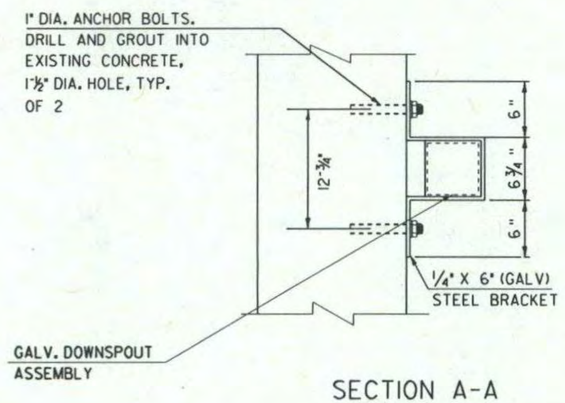
1. DOWNSPOUT SHALL BE FABRICATED FROM ASTM A500 GR. B. STEEL.

2. BRACKETS SHALL BE FABRICATED FROM ASTM A36 STEEL.

3. FINAL DIMENSIONS OF DOWNSPOUT SHALL BE DETERMINED BY THE FABRICATOR BASED ON FIELD MEASUREMENTS MADE BY THE CONTRACTOR OF EXISTING ABUTMENTS AND BACKWALL.

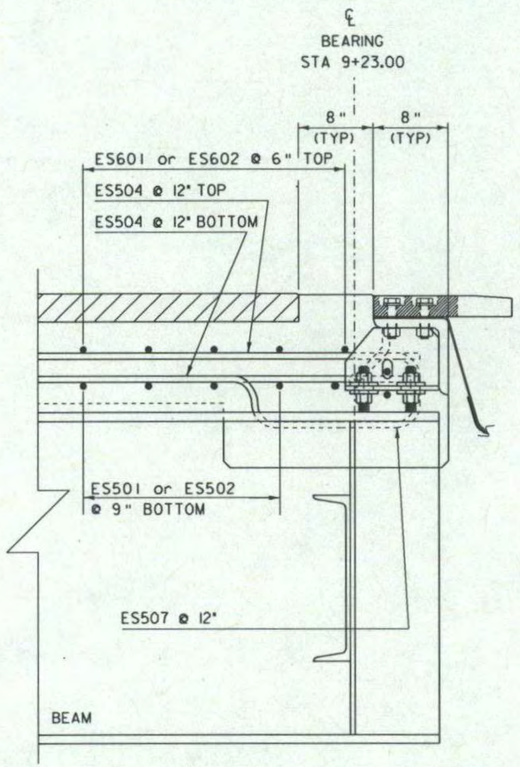
DOWNSPOUT TYPICAL SECTION

NTS



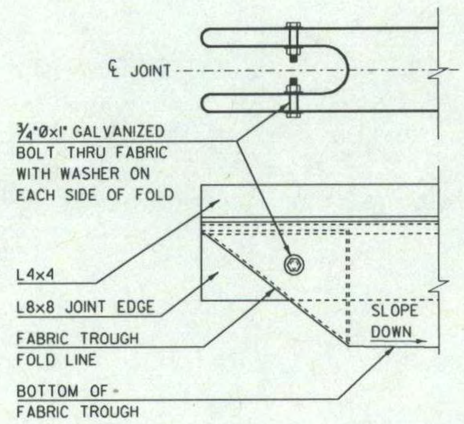
SECTION A-A

NTS



DECK SECTION

NTS

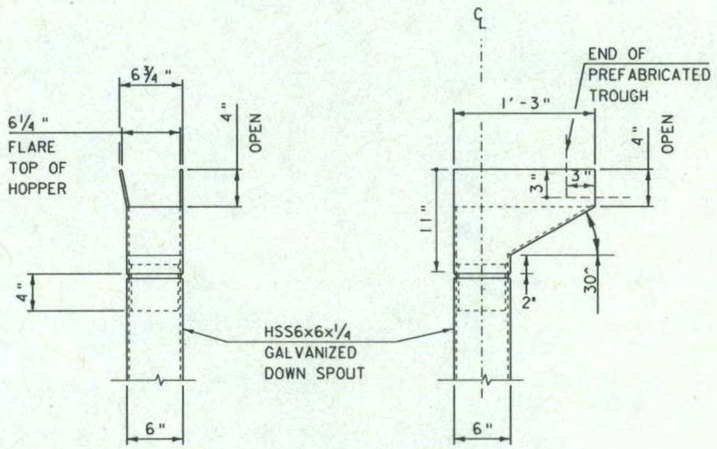


FOLDED TROUGH END DETAIL

NTS

1. TROUGH SHALL BE FOLDED AT UPPER END (NORTH) BRIDGE FASCIA END. TROUGH SHALL SLOPE TOWARD DOWN SPOUT HOPPER LOCATION (SOUTH).

2. BOLTS, NUTS AND WASHERS FOR FOLD SHALL MEET REQUIRMENTS OF SUBSECTION 714.04 AND SHALL BE GALVANIZED.

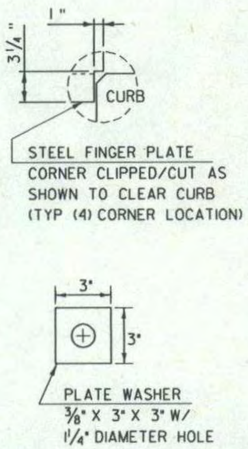


SIDE VIEW

FRONT VIEW

HOPPER DE

NTS



BRACKET PLATE WASHER

NTS

BERLIN-HIGHGATE IM BPNT(18)
PROJECT BRIDGE 184

FOR INFORMATION ONLY

PROJECT NAME: HIGHGATE	
PROJECT NUMBER: BHF 0285(15)	
FILE NAME: s10c136joint.dgn	PLOT DATE: 16-JUN-2011
PROJECT LEADER: C. CARLSON	DRAWN BY: H.I. SALLS
DESIGNED BY: H.I. SALLS	CHECKED BY: G. SWEENY
EXPANSION JOINT DETAIL SHEET 2	SHEET 6 OF 14