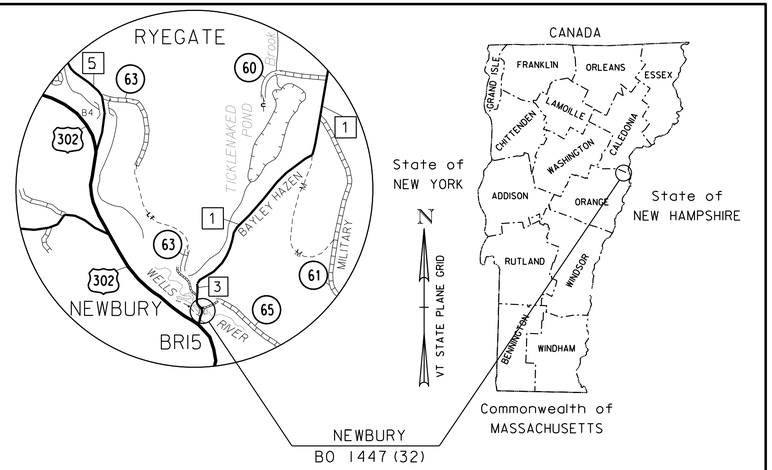
REVIEWER NOTES:

1. NO ADDITIONAL ROW WILL BE ACQUIRED. ASSUMED ROW SHOWN, VTRANS TO VERIFY.
2. TRAFFIC WILL BE MAINTAINED ON AN OFF-SITE DETOUR SIGNED BY THE TOWN.
3. THE PROJECT WILL BE CONSTRUCTED UNDER A 60-DAY CLOSURE.
4. CURRENT SPEED LIMIT IS UNPOSTED. STANTEC SUGGESTS A POSTED SPEED OF 35 MPH; TO BE DISCUSSED WITH THE TOWN.
5. FINAL HYDRAULICS HAS NOT BEEN COMPLETED. PROPOSED STRUCTURE MEETS THE REQUIREMENTS OF PRELIMINARY HYDRAULICS.

STATE OF VERMONT
AGENCY OF TRANSPORTATION



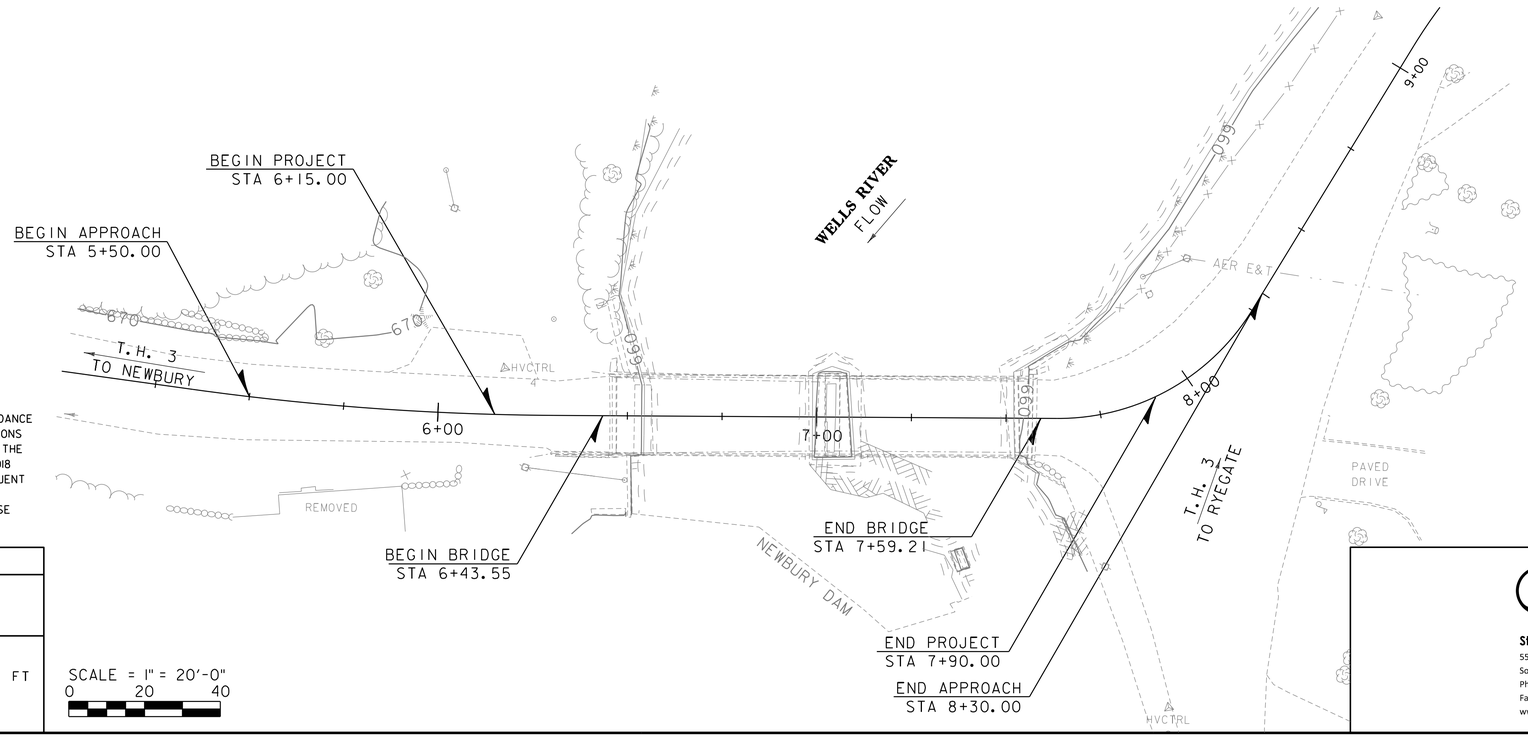
PROPOSED IMPROVEMENT
BRIDGE PROJECT
TOWN OF NEWBURY
COUNTY OF ORANGE

ROUTE NO : TOWN HIGHWAY 3, LOCAL ROAD, CLASS 2 TOWN HIGHWAY BRIDGE NO : 15

PROJECT LOCATION: THE PROJECT IS LOCATED ON T.H. 3, 0.8 MILES NORTH OF THE INTERSECTION WITH US ROUTE 302.

PROJECT DESCRIPTION: REPLACEMENT OF EXISTING SUPERSTRUCTURE WITH NECESSARY APPROACH WORK.

LENGTH OF STRUCTURE:	115.66 FEET
LENGTH OF ROADWAY:	59.34 FEET
LENGTH OF PROJECT:	175.00 FEET



PRELIMINARY PLANS
12/13/2019

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2018, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON APRIL 13, 2018 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

QUALITY ASSURANCE PROGRAM : LEVEL 2	
SURVEYED BY :	VSE
SURVEYED DATE :	11-20-2013
DATUM	
VERTICAL	NAVD 88 (GEOID12A) FT
HORIZONTAL	NAD 83(2011) sFT

Stantec
Stantec Consulting Services Inc.
55 Green Mountain Drive
South Burlington VT U.S.A. 05403
Phone: (802) 864-0223
Fax: (802) 864-0165
www.stantec.com

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATOR
APPROVED _____ DATE _____

HIGHWAY DIVISION, CHIEF ENGINEER
APPROVED _____ DATE _____

PROJECT MANAGER : TODD SUMNER

PROJECT NAME : NEWBURY
PROJECT NUMBER : BO 1447(32)

SHEET 1 OF 20 SHEETS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

PRELIMINARY INFORMATION SHEET (BRIDGE)

Version
LRFD

INDEX OF SHEETS

PLAN SHEETS

STANDARDS LIST

B-71	STANDARD FOR RESIDENTIAL AND COMMERCIAL DRIVES	07-08-2005
E-121	STANDARD SIGN PLACEMENT - CONVENTIONAL ROAD	08-08-1995
G-1	STEEL BEAM GUARDRAIL DETAILS (POST, DELINEATOR, TYPICALS)	03-10-2017
G-1D	STEEL BEAM GUARDRAIL DETAILS (END TERMINAL, ANCHOR, MEDIAN)	03-10-2017
G-10	ANCHOR FOR CABLE GUARD RAIL AT OPENINGS	02-23-1995
S-352A	BRIDGE RAILING, GALVANIZED STEEL TUBING/CONCRETE COMBINATION	08-22-2012
S-352B	BRIDGE RAILING, GALVANIZED STEEL TUBING/CONCRETE COMBINATION	08-22-2012
S-352C	BRIDGE RAILING, GALVANIZED STEEL TUBING/CONCRETE COMBINATION	08-22-2012
T-1	TRAFFIC CONTROL GENERAL NOTES	04-25-2016
T-10	CONVENTIONAL ROADS CONSTRUCTION APPROACH SIGNING	08-06-2012
T-28	CONSTRUCTION SIGN DETAILS	08-06-2012
T-30	CONSTRUCTION SIGN DETAILS	08-06-2012
T-35	CONSTRUCTION ZONE LONGITUDINAL DROP-OFFS	08-06-2012
T-36	CONSTRUCTION ZONE LONGITUDINAL DROP-OFFS FOR PAVING	08-06-2012
T-42	BRIDGE NUMBER PLAQUE	04-09-2014
T-45	SQUARE TUBE SIGN POST AND ANCHOR	01-02-2013
T-56	STANDARD SIGN PLACEMENT	10-26-2015

DETAIL SHEETS

SD-501.00	CONCRETE DETAILS AND NOTES	2/9/2012
SD-502.00	CONCRETE DETAILS AND NOTES	10/12/2012
SD-516.10	BRIDGE JOINT ASHPALTIC PLUG	8/29/2011
SD-601.00	STRUCTURAL STEEL DETAILS AND NOTES	6/4/2010
SD-602.00	STRUCTURAL STEEL PLATE GIRDER DETAILS AND NOTES	5/2/2011
HSD-400.01	SAFETY EDGE DETAILS	1/5/2018

TRAFFIC DATA

YEAR	ADT	DHV	% D	% T	ADTT
2021	400	60	61	8.3	61
2041	430	65	61	9.5	61

20 year ESAL for flexible pavement from 2021 to 2041 : No Data

40 year ESAL for flexible pavement from 2021 to 2061 : No Date

Design Speed : 35 mph

AS BUILT "REBAR" DETAIL

LEVEL I	LEVEL II	LEVEL III
TYPE:	TYPE:	TYPE:
GRADE:	GRADE:	GRADE:

FINAL HYDRAULIC REPORT

LRFR LOAD RATING FACTORS

LOADING LEVELS	TRUCK						
	H-20	HL-93	3S2	6 AXLE	3A. STR.	4A. STR.	5A. SEMI
TONNAGE	20	36	36	66	30	34.5	38
INVENTORY							
POSTING							
OPERATING							
COMMENTS:							

TRAFFIC MAINTENANCE NOTES

1. MAINTAIN TRAFFIC ON AN OFF SITE DETOUR.
2. TRAFFIC SIGNALS ARE NOT NECESSARY.
3. SIDEWALKS ARE NOT NECESSARY

DESIGN VALUES

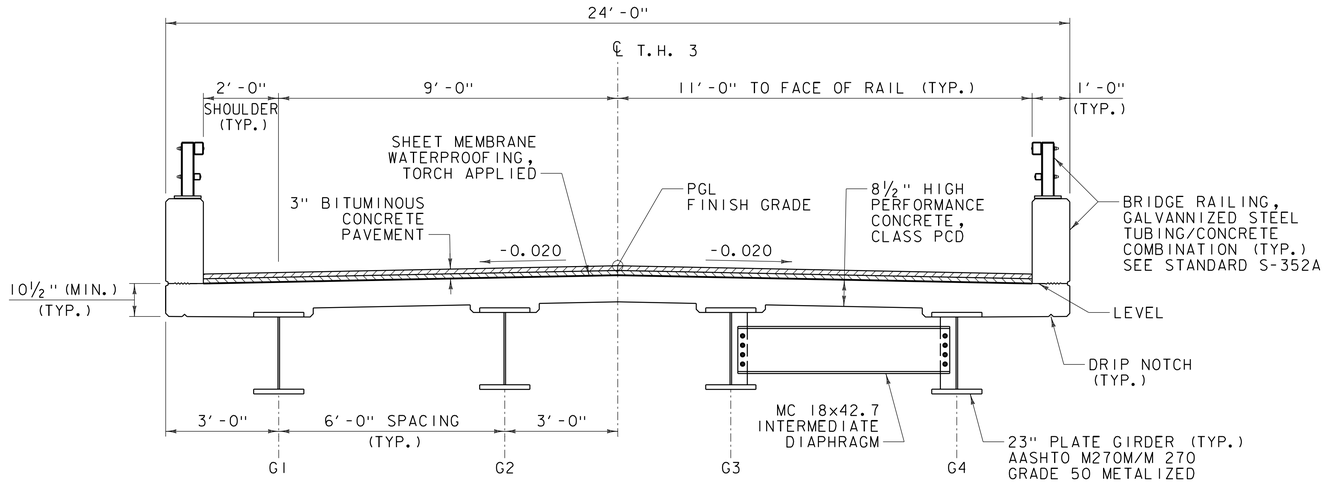
1.	DESIGN LIVE LOAD		HL-93
2.	FUTURE PAVEMENT	d_p:	0.0 INCH
3.	ABUTMENT BEARING TO BEARING LENGTH (TWO SPANS) (58FT-53FT)	L:	111.00 FT
4.	MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS)	Δ:	- - -
5.	PRESTRESSING STRAND	f_y:	- - -
6.	PRESTRESSED CONCRETE STRENGTH	f'_c:	---
7.	PRESTRESSED CONCRETE RELEASE STRENGTH	f'_{ci}:	---
8.	HIGH PERFORMANCE CONCRETE, CLASS PCD	f'_c:	4.0 KSI
9.	HIGH PERFORMANCE CONCRETE, CLASS PCS	f'_c:	3.5 KSI
10.	CONCRETE HIGH PERFORMANCE, CLASS PSS	f'_c:	4.0 KSI
11.	CONCRETE, CLASS C	f'_c:	3.0 KSI
12.	REINFORCING STEEL	f_y:	60 KSI
13.	STRUCTURAL STEEL AASHTO M270 (METALIZED)	f_y:	50 KSI
14.	NOMINAL BEARING RESISTANCE OF SOIL	q_n:	4.0 KSF
15.	SOIL BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	- - -
16.	NOMINAL BEARING RESISTANCE OF ROCK	q_n:	10.0 KSF
17.	ROCK BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)	ϕ:	- - -
18.	PILE RESISTANCE FACTOR	ϕ:	- - -
19.	LATERAL PILE DEFLECTION	Δ:	- - -
20.	BASIC WIND SPEED	V_{3s}:	- - -
21.	MINIMUM GROUND SNOW LOAD	p_g:	- - -
22.	SEISMIC DATA	PGA: - - -	S_s: - - -
			S_1: - - -
23.			- - -
24.			- - -
25.			- - -
26.			- - -

PROJECT NAME: **NEWBURY**

PROJECT NUMBER: **BO 1447(32)**

FILE NAME: **z16j179_pi.xls**
PROJECT LEADER: **G. BOGUE**
DESIGNED BY: **J. GRIGAS**
PRELIMINARY INFORMATION SHEET

PLOT DATE: 12/12/2019
DRAWN BY: **J. BURKE**
CHECKED BY: **J. GRIGAS**
SHEET 2 OF 20



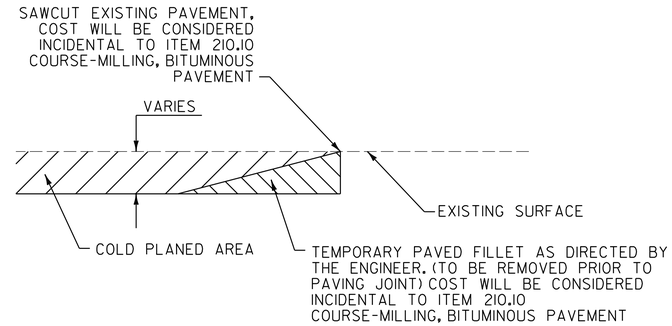
TYPICAL BRIDGE SECTION

SCALE: ½" = 1'-0"

*2 LIFTS OF 1½" BITUMINOUS CONCRETE PAVEMENT, TYPE IVB

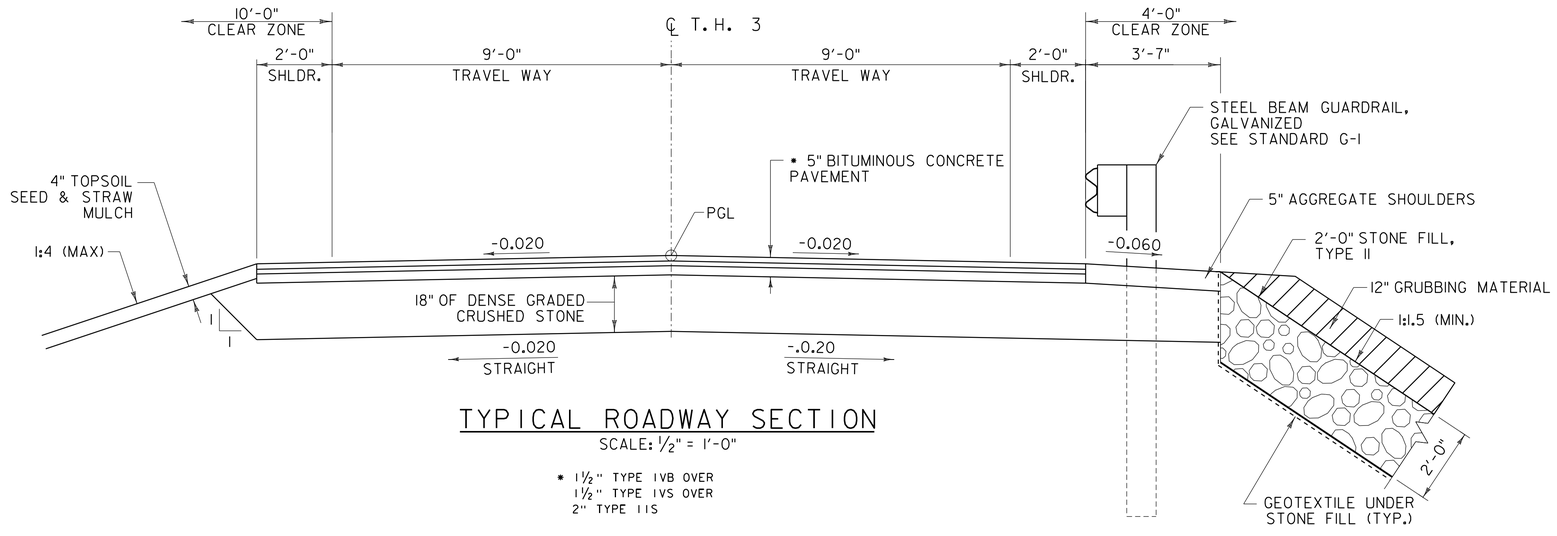
MATERIAL TOLERANCES
(IF USED ON PROJECT)

SURFACE	
- PAVEMENT (TOTAL THICKNESS)	+/- ¼"
- AGGREGATE SURFACE COARSE	+/- ½"
SUBBASE	+/- 1"
SAND BORROW	+/- 1"



DETAIL AT VERTICAL COLD PLANE JOINTS

NOTE: THIS DETAIL SHALL BE USED AT THE LOCATIONS SHOWN ABOVE AS DIRECTED BY THE ENGINEER.



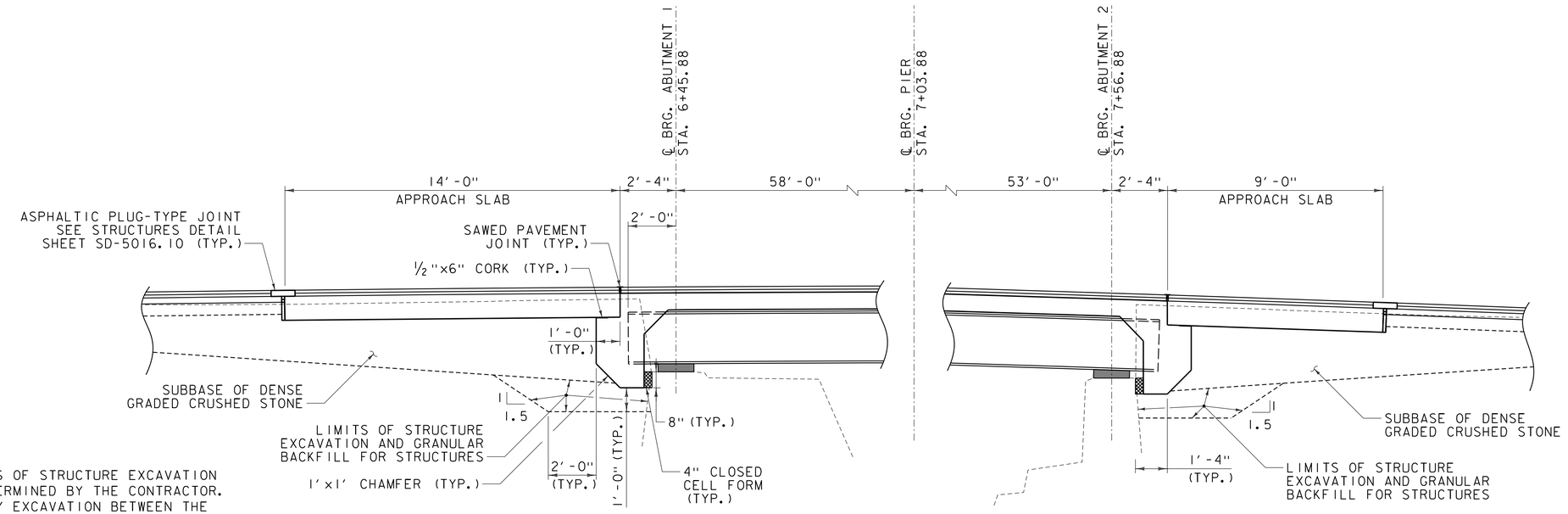
TYPICAL ROADWAY SECTION

SCALE: ½" = 1'-0"

* 1½" TYPE IVB OVER
1½" TYPE IVS OVER
2" TYPE IIS

Stantec

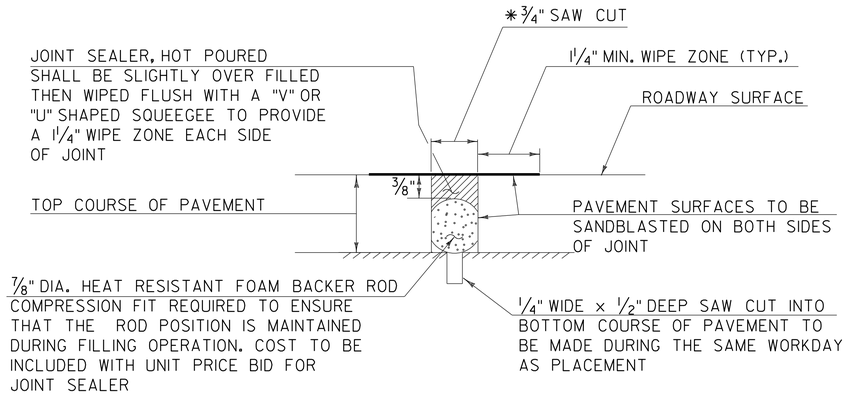
PROJECT NAME: NEWBURY	
PROJECT NUMBER: BO 1447(32)	
FILE NAME: z16j179typ.dgn	PLOT DATE: 12/13/2019
PROJECT LEADER: G. BOGUE	DRAWN BY: J. BURKE
DESIGNED BY: J. GRIGAS	CHECKED BY: T. KNIGHT
TYPICAL SECTIONS 1	SHEET 3 OF 20



NOTE:
ACTUAL LIMITS OF STRUCTURE EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR. HOWEVER, ONLY EXCAVATION BETWEEN THE LIMITS SHOWN WILL BE PAID FOR UNDER ITEM 204.25 "STRUCTURE EXCAVATION". EXCAVATION BY THE CONTRACTOR OUTSIDE OF THESE LIMITS WILL BE AT THE EXPENSE OF THE CONTRACTOR.

ABUTMENT 1 EARTHWORK SECTION
(NOT TO SCALE)

ABUTMENT 2 EARTHWORK SECTION
(NOT TO SCALE)



NOTE: PLACE JOINT SEALER, HOT POURED AT THE BEGINNING OF THE APPROACH SLABS.

SAWED PAVEMENT JOINT DETAIL
NOT TO SCALE

*JOINT IS TO BE LOCATED ACCURATELY BY STRING LINING, OR OTHER MEANS, PRIOR TO PAVING, SO THAT THE SAW CUTS WILL BE MADE DIRECTLY OVER THE END OF CONCRETE DECK. JOINT SHALL BE CUT DRY IN A SINGLE PASS AND BE SEALED WITHIN 24 HOURS OR PRIOR TO EXPOSURE TO TRAFFIC. JOINT SHALL BE CLEANED PRIOR TO APPLYING THE JOINT SEALER.

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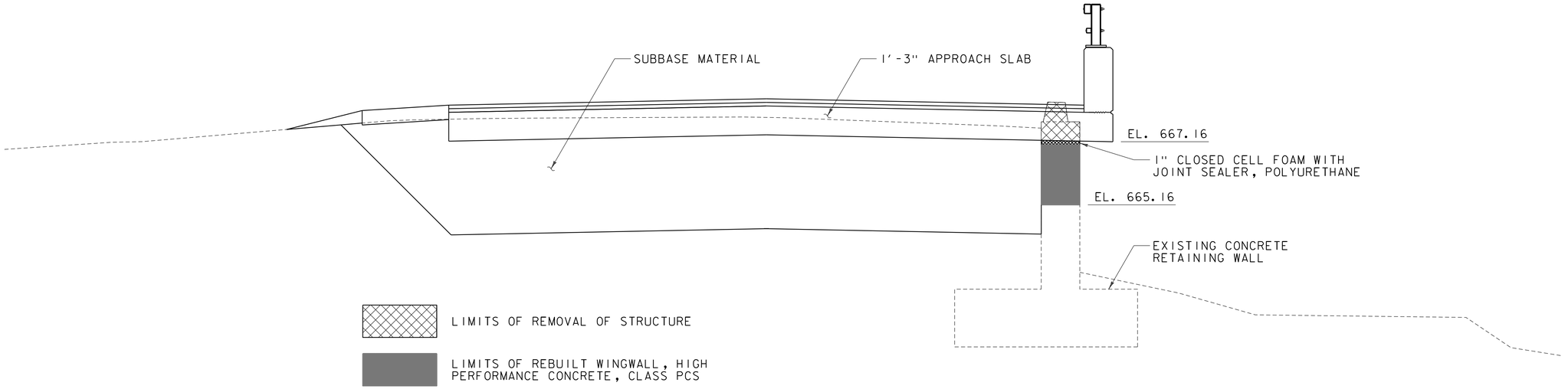
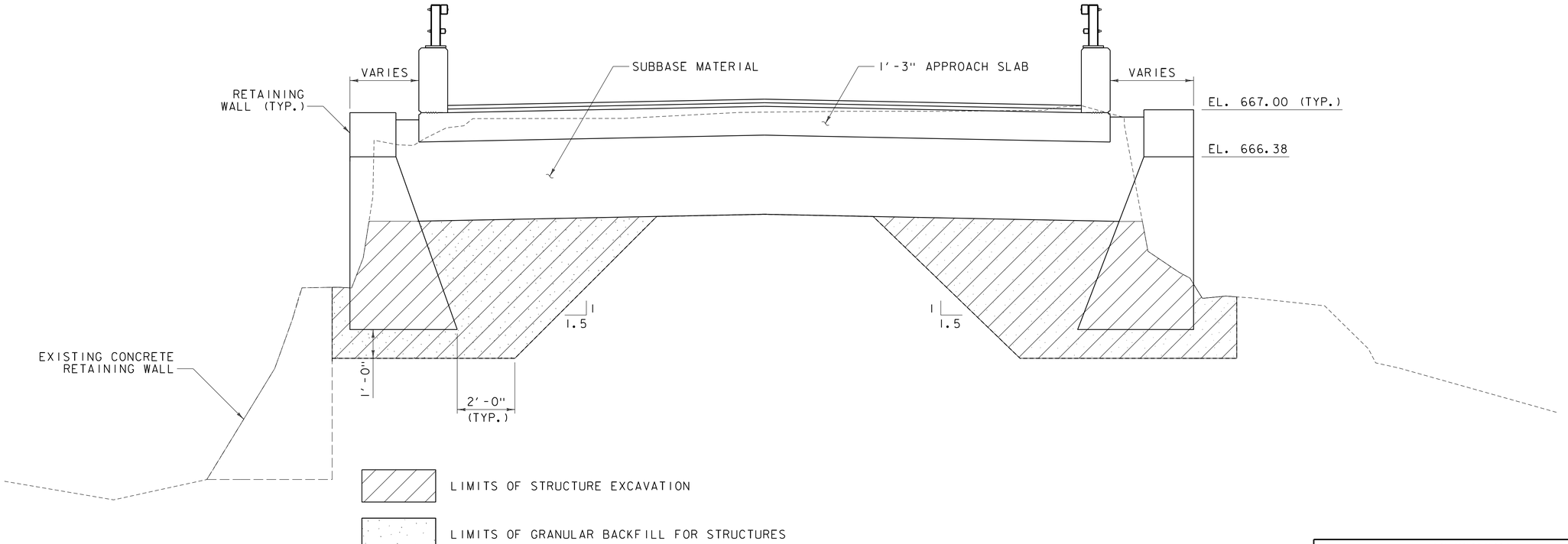
PROJECT NAME: NEWBURY	
PROJECT NUMBER: BO 1447(32)	
FILE NAME: z16j179typ.dgn	PLOT DATE: 12/13/2019
PROJECT LEADER: G. BOGUE	DRAWN BY: J. BURKE
DESIGNED BY: J. GRIGAS	CHECKED BY: T. KNIGHT
TYPICAL SECTIONS 2	SHEET 4 OF 20



APPROACH SLAB 1 TYPICAL EARTHWORKS SECTION

SCALE: ½" = 1'-0"



APPROACH SLAB 2 TYPICAL EARTHWORKS SECTION

SCALE: ½" = 1'-0"

Stantec

PROJECT NAME:	NEWBURY
PROJECT NUMBER:	BO 1447(32)
FILE NAME: z16j179typ.dgn	PLOT DATE: 12/13/2019
PROJECT LEADER: G. BOGUE	DRAWN BY: J. GRIGAS
DESIGNED BY: J. GRIGAS	CHECKED BY: T. KNIGHT
TYPICAL SECTIONS 3	SHEET 5 OF 20

GENERAL INFORMATION

SYMBOLOGY LEGEND NOTE

THE SYMBOLOGY ON THIS SHEET IS INTENDED TO COVER STANDARD CONVENTIONAL SYMBOLOGY. THE SYMBOLOGY IS USED FOR EXISTING & PROPOSED FEATURES WITH HEAVIER LINEWEIGHT, IN COMBINATION WITH PROJECT ANNOTATION, AS NOTED ON PROJECT PLAN SHEETS. THIS LEGEND SHEET COVERS THE BASICS. SYMBOLOGY ON PLANS MAY VARY, PLAN ANNOTATIONS AND NOTES SHOULD BE USED TO CLARIFY AS NEEDED.

R.O.W. ABBREVIATIONS (CODES) & SYMBOLS

POINT	CODE	DESCRIPTION
	BF	BARRIER FENCE
	CH	CHANNEL EASEMENT
	CONST	CONSTRUCTION EASEMENT
	CUL	CULVERT EASEMENT
	D&C	DISCONNECT & CONNECT
	DIT	DITCH EASEMENT
	DR	DRAINAGE EASEMENT
	DRIVE	DRIVEWAY EASEMENT
	EC	EROSION CONTROL
	HWY	HIGHWAY EASEMENT
	I&M	INSTALL & MAINTAIN EASEMENT
	LAND	LANDSCAPE EASEMENT
	PDF	PROJECT DEMARCATION FENCE
	R&RES	REMOVE & RESET
	R&REP	REMOVE & REPLACE
	R.T.& I.	RIGHT, TITLE, AND INTEREST
	SR	SLOPE RIGHT
	UE	UTILITY EASEMENT
	(P)	PERMANENT EASEMENT
	(T)	TEMPORARY EASEMENT
■	BNDNS	BOUND SET
⧈	BNDNS	BOUND TO BE SET
◎	IPNF	IRON PIN FOUND
●	IPNS	IRON PIN TO BE SET
⊠	CALC	EXISTING ROW POINT
○	PROW	PROPOSED ROW POINT
[LENGTH]		LENGTH CARRIED ON NEXT SHEET

COMMON TOPOGRAPHIC POINT SYMBOLS

POINT	CODE	DESCRIPTION
	APL	BOUND APPARENT LOCATION
	BM	BENCHMARK
	BND	BOUND
	CB	CATCH BASIN
	COMB	COMBINATION POLE
	DITHR	DROP INLET THROATED DNC
	EL	ELECTRIC POWER POLE
	FPOLE	FLAGPOLE
	GASFIL	GAS FILLER
	GP	GUIDE POST
	GSO	GAS SHUT OFF
	GUY	GUY POLE
	GUYW	GUY WIRE
	GV	GATE VALVE
	H	TREE HARDWOOD
	HCTRL	CONTROL HORIZONTAL
	HVCTRL	CONTROL HORIZ. & VERTICAL
	HYD	HYDRANT
	IP	IRON PIN
	IPIPE	IRON PIPE
	LI	LIGHT - STREET OR YARD
	MB	MAILBOX
	MH	MANHOLE (MH)
	MM	MILE MARKER
	PM	PARKING METER
	PMK	PROJECT MARKER
	POST	POST STONE/WOOD
	RRSIG	RAILROAD SIGNAL
	RRSL	RAILROAD SWITCH LEVER
	S	TREE SOFTWOOD
	SAT	SATELLITE DISH
	SHRUB	SHRUB
	SIGN	SIGN
	STUMP	STUMP
	TEL	TELEPHONE POLE
	TIE	TIE
	TSIGN	SIGN W/DOUBLE POST
	VCTRL	CONTROL VERTICAL
	WELL	WELL
	WSO	WATER SHUT OFF

THESE ARE COMMON VAOT SURVEY POINT SYMBOLS FOR EXISTING FEATURES, ALSO USED FOR PROPOSED FEATURES WITH HEAVIER LINEWEIGHT, IN COMBINATION WITH PROPOSED ANNOTATION.

PROPOSED GEOMETRY CODES

CODE	DESCRIPTION
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
CC	CENTER OF CURVE
PT	POINT OF TANGENCY
PCC	POINT OF COMPOUND CURVE
PRC	POINT OF REVERSE CURVE
POB	POINT OF BEGINNING
POE	POINT OF ENDING
STA	STATION PREFIX
AH	AHEAD STATION SUFFIX
BK	BACK STATION SUFFIX
D	CURVE DEGREE OF (100FT)
R	CURVE RADIUS OF
T	CURVE TANGENT LENGTH
L	CURVE LENGTH OF
E	CURVE EXTERNAL DISTANCE
CB	CHORD BEARING

UTILITY SYMBOLOGY

UNDERGROUND UTILITIES

- UGU — UTILITY (GENERIC-UNKNOWN)
- UT — TELEPHONE
- UE — ELECTRIC
- UC — CABLE (TV)
- UEC — ELECTRIC+CABLE
- UET — ELECTRIC+TELEPHONE
- UCT — CABLE+TELEPHONE
- UECT — ELECTRIC+CABLE+TELEPHONE
- G — GAS LINE
- W — WATER LINE
- S — SANITARY SEWER (SEPTIC)

ABOVE GROUND UTILITIES (AERIAL)

- AGU — UTILITY (GENERIC-UNKNOWN)
- T — TELEPHONE
- E — ELECTRIC
- C — CABLE (TV)
- EC — ELECTRIC+CABLE
- ET — ELECTRIC+TELEPHONE
- AER E&T — ELECTRIC+TELEPHONE
- CT — CABLE+TELEPHONE
- ECT — ELECTRIC+CABLE+TELEPHONE
- UTILITY POLE GUY WIRE

PROJECT CONSTRUCTION SYMBOLOGY

PROJECT DESIGN & LAYOUT SYMBOLOGY

- CZ — CLEAR ZONE
- PLAN LAYOUT MATCHLINE

PROJECT CONSTRUCTION FEATURES

- TOP OF CUT SLOPE
- TOE OF FILL SLOPE
- STONE FILL
- BOTTOM OF DITCH ℄
- CULVERT PROPOSED
- STRUCTURE SUBSURFACE
- PDF — PDF — PROJECT DEMARCATION FENCE
- BF — BF — BARRIER FENCE
- TREE PROTECTION ZONE (TPZ)
- STRIPING LINE REMOVAL
- SHEET PILES

CONVENTIONAL BOUNDARY SYMBOLOGY

BOUNDARY LINES

- TOWN LINE — TOWN BOUNDARY LINE
- COUNTY LINE — COUNTY BOUNDARY LINE
- STATE LINE — STATE BOUNDARY LINE
- PROPOSED STATE R.O.W. (LIMITED ACCESS)
- PROPOSED STATE R.O.W.
- STATE ROW (LIMITED ACCESS)
- STATE ROW
- TOWN ROW
- PERMANENT EASEMENT LINE (P)
- TEMPORARY EASEMENT LINE (T)
- SURVEY LINE
- P/L — PROPERTY LINE (P/L)
- SR SR SR — SLOPE RIGHTS
- 6f — 6f — 6F PROPERTY BOUNDARY
- 4f — 4f — 4F PROPERTY BOUNDARY
- HAZ — HAZ — HAZARDOUS WASTE

EPSC LAYOUT PLAN SYMBOLOGY

EPSC MEASURES

- FILTER CURTAIN
- SILT FENCE
- SILT FENCE WOVEN WIRE
- CHECK DAM
- DISTURBED AREAS REQUIRING RE-VEGETATION
- EROSION MATTING

SEE EPSC DETAIL SHEETS FOR ADDITIONAL SYMBOLOGY

ENVIRONMENTAL RESOURCES

- WETLAND BOUNDARY
- RIPARIAN BUFFER ZONE
- WETLAND BUFFER ZONE
- SOIL TYPE BOUNDARY
- T&E — THREATENED & ENDANGERED SPECIES
- HAZ — HAZ — HAZARDOUS WASTE AREA
- AG — AGRICULTURAL LAND
- HABITAT — FISH & WILDLIFE HABITAT
- FLOOD PLAIN — FLOOD PLAIN
- OHW — ORDINARY HIGH WATER (OHW)
- STORM WATER
- USDA FOREST SERVICE LANDS
- WILDLIFE HABITAT SUIT/CONN

ARCHEOLOGICAL & HISTORIC

- ARCH — ARCHEOLOGICAL BOUNDARY
- HISTORIC DIST — HISTORIC DISTRICT BOUNDARY
- HISTORIC — HISTORIC AREA
- (H) HISTORIC STRUCTURE

CONVENTIONAL TOPOGRAPHIC SYMBOLOGY

EXISTING FEATURES

- ROAD EDGE PAVEMENT
- ROAD EDGE GRAVEL
- DRIVEWAY EDGE
- DITCH
- FOUNDATION
- FENCE (EXISTING)
- FENCE WOOD POST
- FENCE STEEL POST
- GARDEN
- ROAD GUARDRAIL
- RAILROAD TRACKS
- CULVERT (EXISTING)
- STONE WALL
- WALL
- WOOD LINE
- BRUSH LINE
- HEDGE
- BODY OF WATER EDGE
- LEDGE EXPOSED

Stantec

PROJECT NAME: NEWBURY
PROJECT NUMBER: BO 1447(32)

FILE NAME: z16jl79frm.dgn
PROJECT LEADER: G. BOGUE
DESIGNED BY: VTRANS
CONVENTIONAL SYMBOLOGY & LEGEND

PLOT DATE: 12/13/2019
DRAWN BY: VTRANS
CHECKED BY: VTRANS
SHEET 6 OF 20

GPS/NGS CONTROL POINTS

BRADFORD CORS ARP

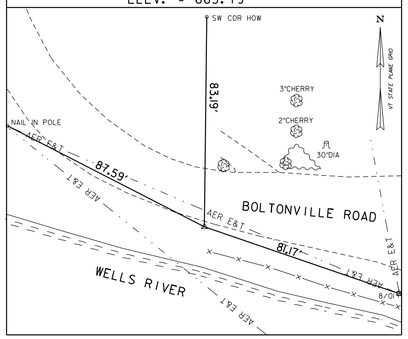
PID DJ8957
N = 549808.87
E = 1741884.52
ELLIP HEIGHT = 414.75

STATION IS A GPS CONTINOUSLY OPERATING REFERENCE STATION. STATION IS THE ANTENNA REFERENCE POINT OF THE GPS ANTENNA. THE ANTENNA IS MOUNTED ON THE ROOF OF OXBOW HIGH SCHOOL, BRADFORD, VT. THE MONUMENT IS ATTACHED TO A TWO STORY CONCRETE /BRICK BUILDING WITH A 6 FT CONCRETE FOUNDATION BUILT IN 1972. THE MAST IS A 1.75 INCH DIA GALV PIPE THAT IS 108 INCHES LONG. THE MAST ATTACHED TO A STEEL MOUNTING FRAME WITH THREE ATTACHMENTS CONSISTING OF 3/8 INCH SS THROUGH BOLTS. THE MOUNTING FRAME IS ATTACHED TO THE BUILDING USING 8 ATTACHMENT POINTS. THE TOP 4 ARE 1/2 INCH SS BOLTS SECURED TO THE BRICK OR CONC WITH LEAD ANCHORS. THE BOTTOM 4 ATTACHMENTS ARE TROUGH BOLTED AND CONSIST OF 1/2 INCH SS THREADED ROD AND NUTS.

TRAVERSE TIES

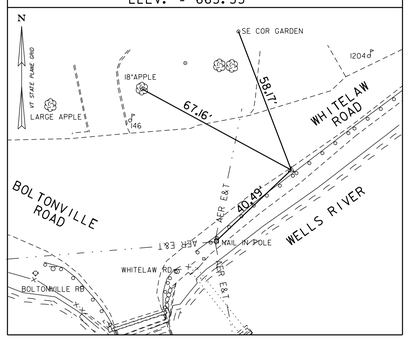
HVCTRL #1 — 5/8"REBAR W/ VSE CONTROL CAP

NORTH = 609725.65
EAST = 1745308.64
ELEV. = 663.19



HVCTRL #2 — 5/8"REBAR W/ VSE CONTROL CAP

NORTH = 609284.00
EAST = 1745499.18
ELEV. = 665.55



* TRAVERSE COMPLETED: NOVEMBER 20. 2013 BY VSE, T. CATTANEO-PC, T. COMSTOCK

ALIGNMENT TIES

DATUM
VERTICAL NAVD 88(GEOID12A) FT
HORIZONTAL NAD 83(2011) sFT
ADJUSTMENT LSQ

VERMONT SURVEY AND ENGINEERING

PROJECT NAME: NEWBURY
PROJECT NUMBER: BO 1447(32)

FILE NAME: z16j179ti.dgn
PROJECT LEADER: G. BOGUE
DESIGNED BY: VSE
SURVEY CONTROL AND TIES

PLOT DATE: 12/13/2019
DRAWN BY: VSE
CHECKED BY: VSE
SHEET 7 OF 20

GUARDRAIL APPROACH SECTION TO CONCRETE BRIDGE RAILING, TL-2
STA. 6+18.2 TO 6+29.6, RT
STA. 6+31.3 TO 6+42.5, LT
STA. 7+67.5 TO 7+76.0, RT
STA. 7+69.2 TO 7+83.2, LT

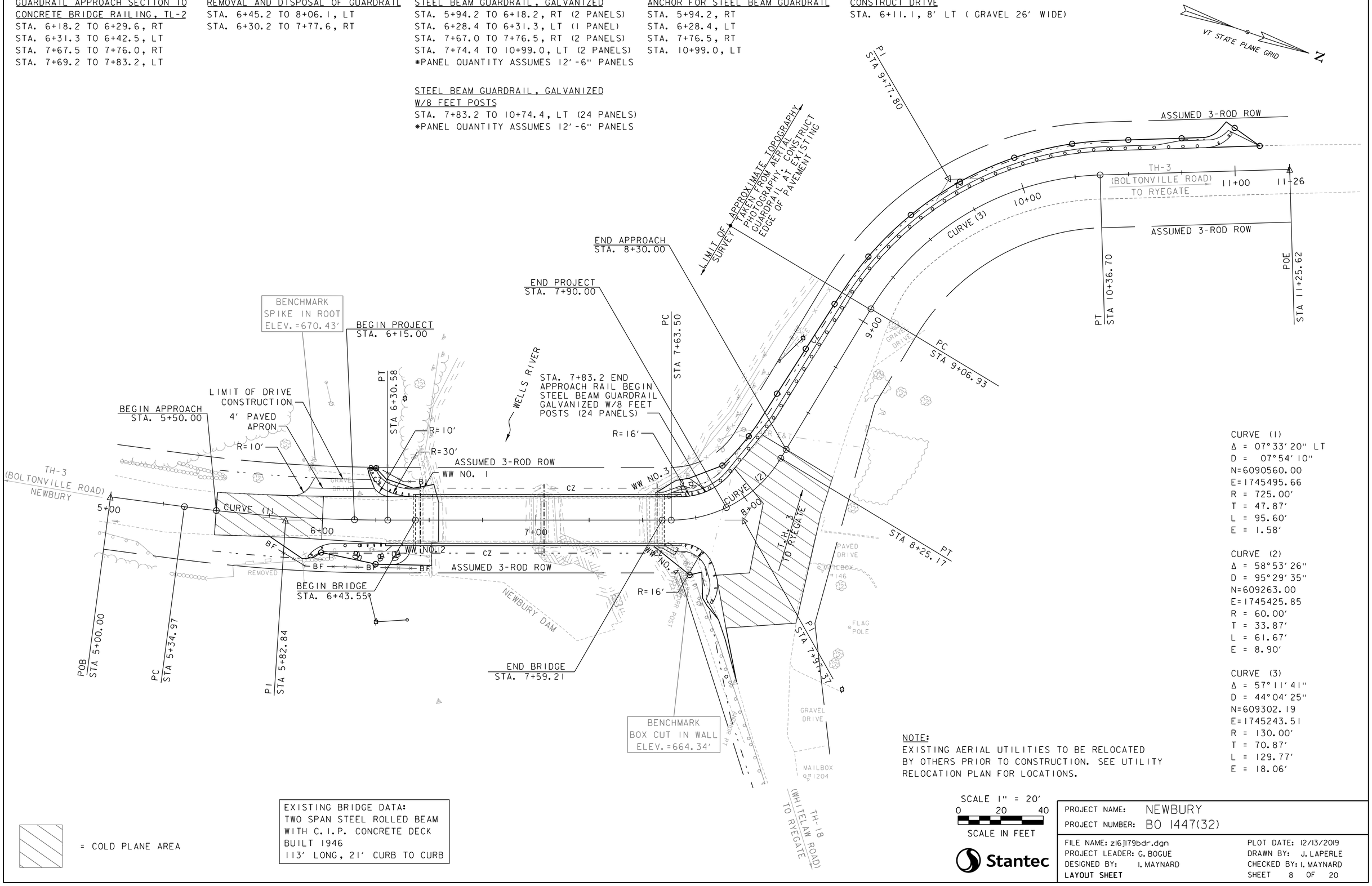
REMOVAL AND DISPOSAL OF GUARDRAIL
STA. 6+45.2 TO 8+06.1, LT
STA. 6+30.2 TO 7+77.6, RT

STEEL BEAM GUARDRAIL, GALVANIZED
STA. 5+94.2 TO 6+18.2, RT (2 PANELS)
STA. 6+28.4 TO 6+31.3, LT (1 PANEL)
STA. 7+67.0 TO 7+76.5, RT (2 PANELS)
STA. 7+74.4 TO 10+99.0, LT (2 PANELS)
*PANEL QUANTITY ASSUMES 12'-6" PANELS

STEEL BEAM GUARDRAIL, GALVANIZED W/8 FEET POSTS
STA. 7+83.2 TO 10+74.4, LT (24 PANELS)
*PANEL QUANTITY ASSUMES 12'-6" PANELS

ANCHOR FOR STEEL BEAM GUARDRAIL
STA. 5+94.2, RT
STA. 6+28.4, LT
STA. 7+76.5, RT
STA. 10+99.0, LT

CONSTRUCT DRIVE
STA. 6+11.1, 8' LT (GRAVEL 26' WIDE)



CURVE (1)
Δ = 07°33'20" LT
D = 07°54'10"
N=6090560.00
E=1745495.66
R = 725.00'
T = 47.87'
L = 95.60'
E = 1.58'

CURVE (2)
Δ = 58°53'26"
D = 95°29'35"
N=609263.00
E=1745425.85
R = 60.00'
T = 33.87'
L = 61.67'
E = 8.90'

CURVE (3)
Δ = 57°11'41"
D = 44°04'25"
N=609302.19
E=1745243.51
R = 130.00'
T = 70.87'
L = 129.77'
E = 18.06'

NOTE:
EXISTING AERIAL UTILITIES TO BE RELOCATED BY OTHERS PRIOR TO CONSTRUCTION. SEE UTILITY RELOCATION PLAN FOR LOCATIONS.

= COLD PLANE AREA

EXISTING BRIDGE DATA:
TWO SPAN STEEL ROLLED BEAM WITH C.I.P. CONCRETE DECK
BUILT 1946
113' LONG, 21' CURB TO CURB

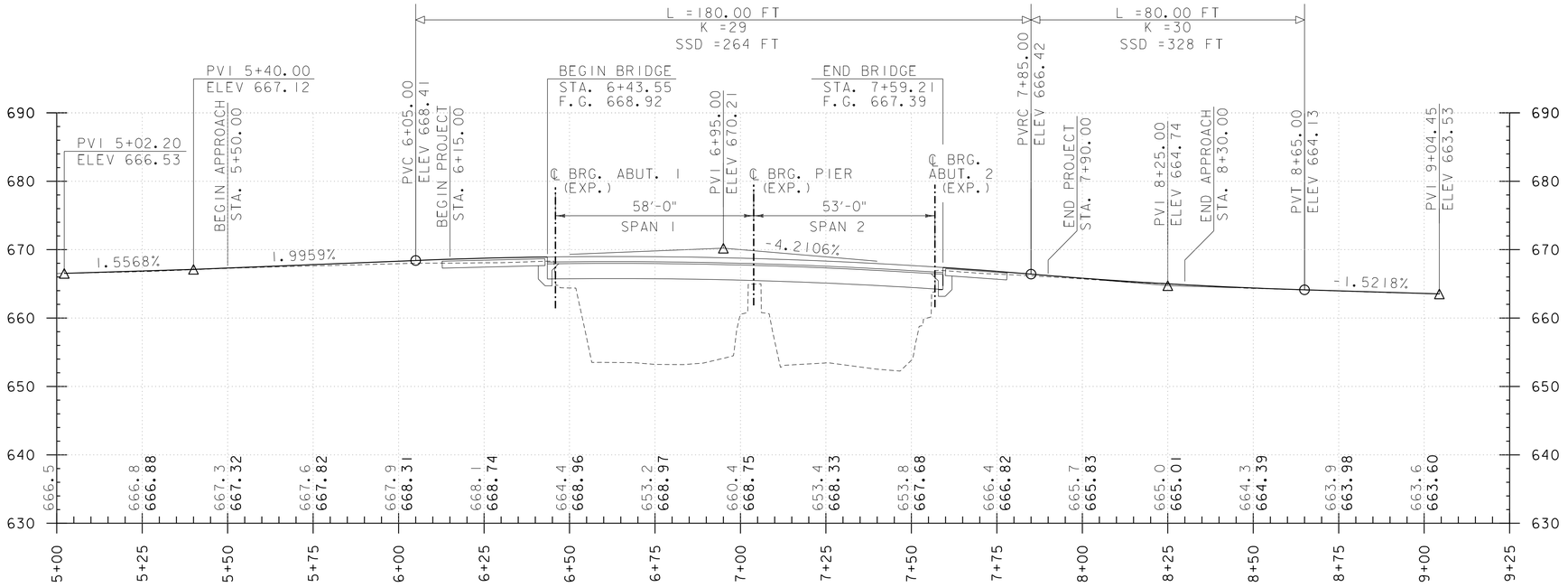
SCALE 1" = 20'
0 20 40
SCALE IN FEET

Stantec

PROJECT NAME: NEWBURY
PROJECT NUMBER: BO 1447(32)

FILE NAME: z16jl79bdr.dgn
PROJECT LEADER: G. BOGUE
DESIGNED BY: I. MAYNARD
LAYOUT SHEET

PLOT DATE: 12/13/2019
DRAWN BY: J. LAPERLE
CHECKED BY: I. MAYNARD
SHEET 8 OF 20



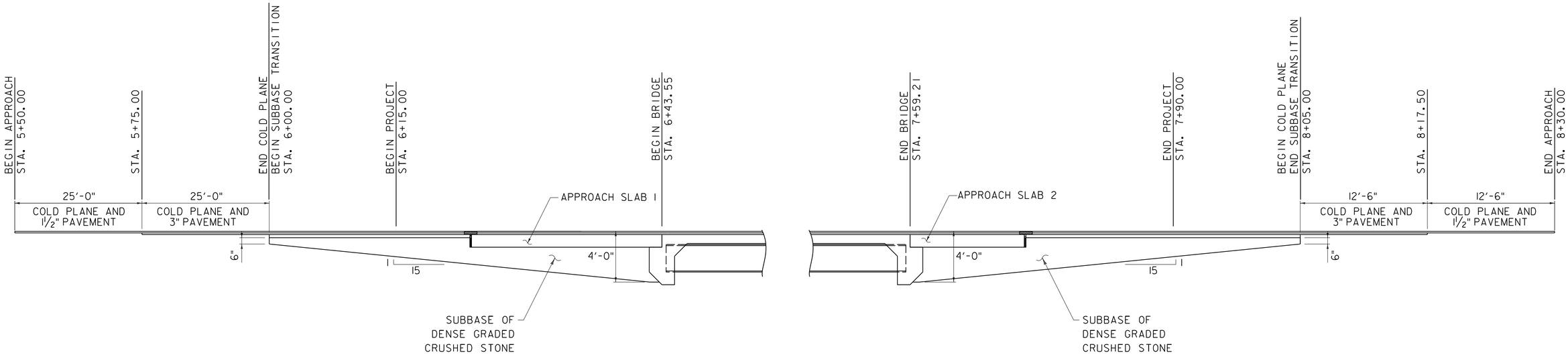
NOTE:

GRADES SHOWN TO THE NEAREST TENTH ARE EXISTING GROUND ALONG ℄

GRADES SHOWN TO THE NEAREST HUNDREDTH ARE FINISH GRADE ALONG ℄

TH 3
PROPOSED PROFILE

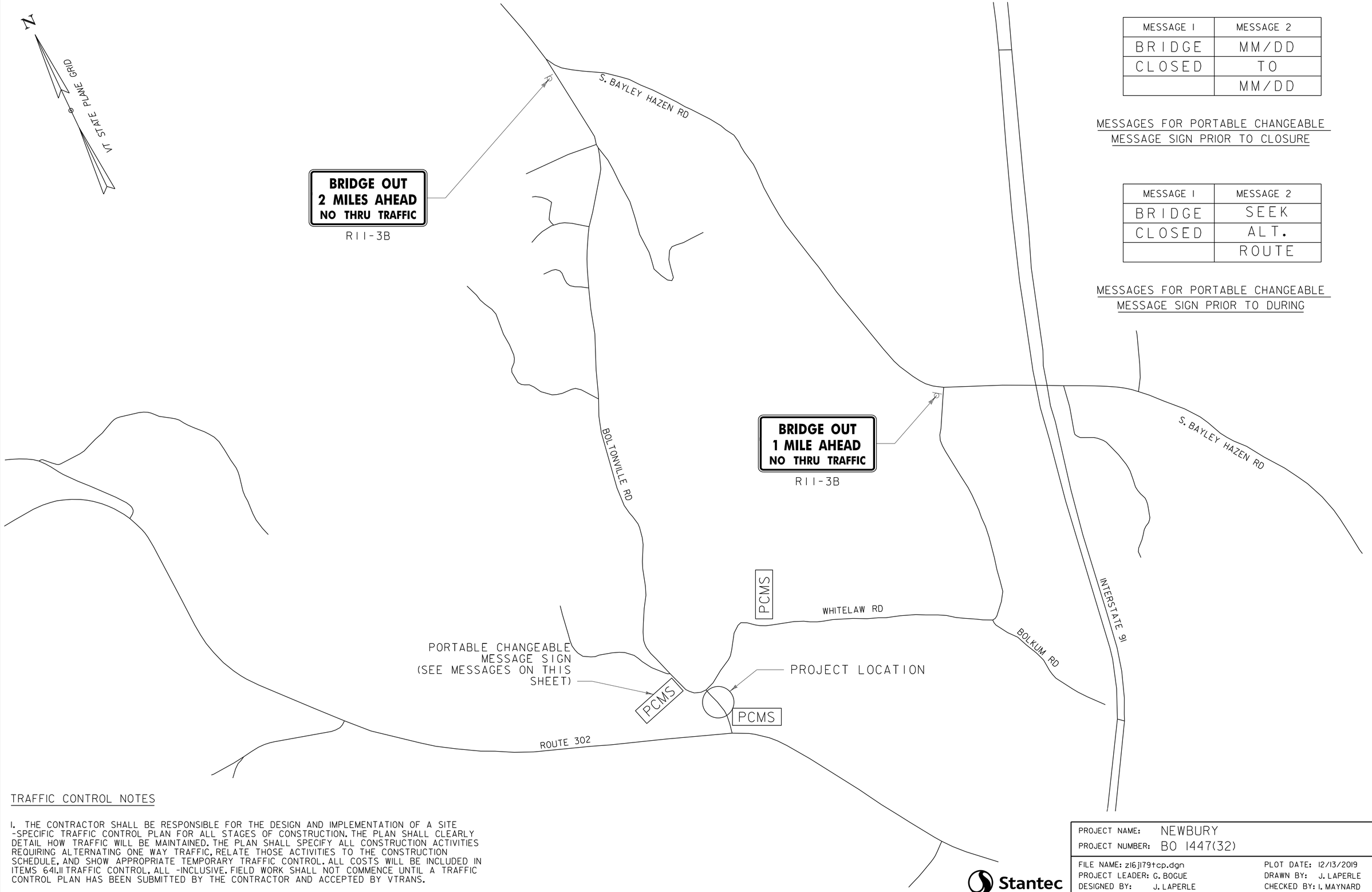
HORIZONTAL SCALE: 1' = 20'
VERTICAL SCALE: 1" = 10'



MATERIAL TRANSITION DETAIL
(NOT TO SCALE)

Stantec

PROJECT NAME:	NEWBURY
PROJECT NUMBER:	BO 1447(32)
FILE NAME: z16j179pro.dgn	PLOT DATE: 12/13/2019
PROJECT LEADER: G. BOGUE	DRAWN BY: J. LAPERLE
DESIGNED BY: I. MAYNARD	CHECKED BY: I. MAYNARD
ROADWAY PROFILE	SHEET 9 OF 20



MESSAGE 1	MESSAGE 2
BRIDGE	MM/DD
CLOSED	TO
	MM/DD

MESSAGES FOR PORTABLE CHANGEABLE MESSAGE SIGN PRIOR TO CLOSURE

MESSAGE 1	MESSAGE 2
BRIDGE	SEEK
CLOSED	ALT.
	ROUTE

MESSAGES FOR PORTABLE CHANGEABLE MESSAGE SIGN PRIOR TO DURING

TRAFFIC CONTROL NOTES

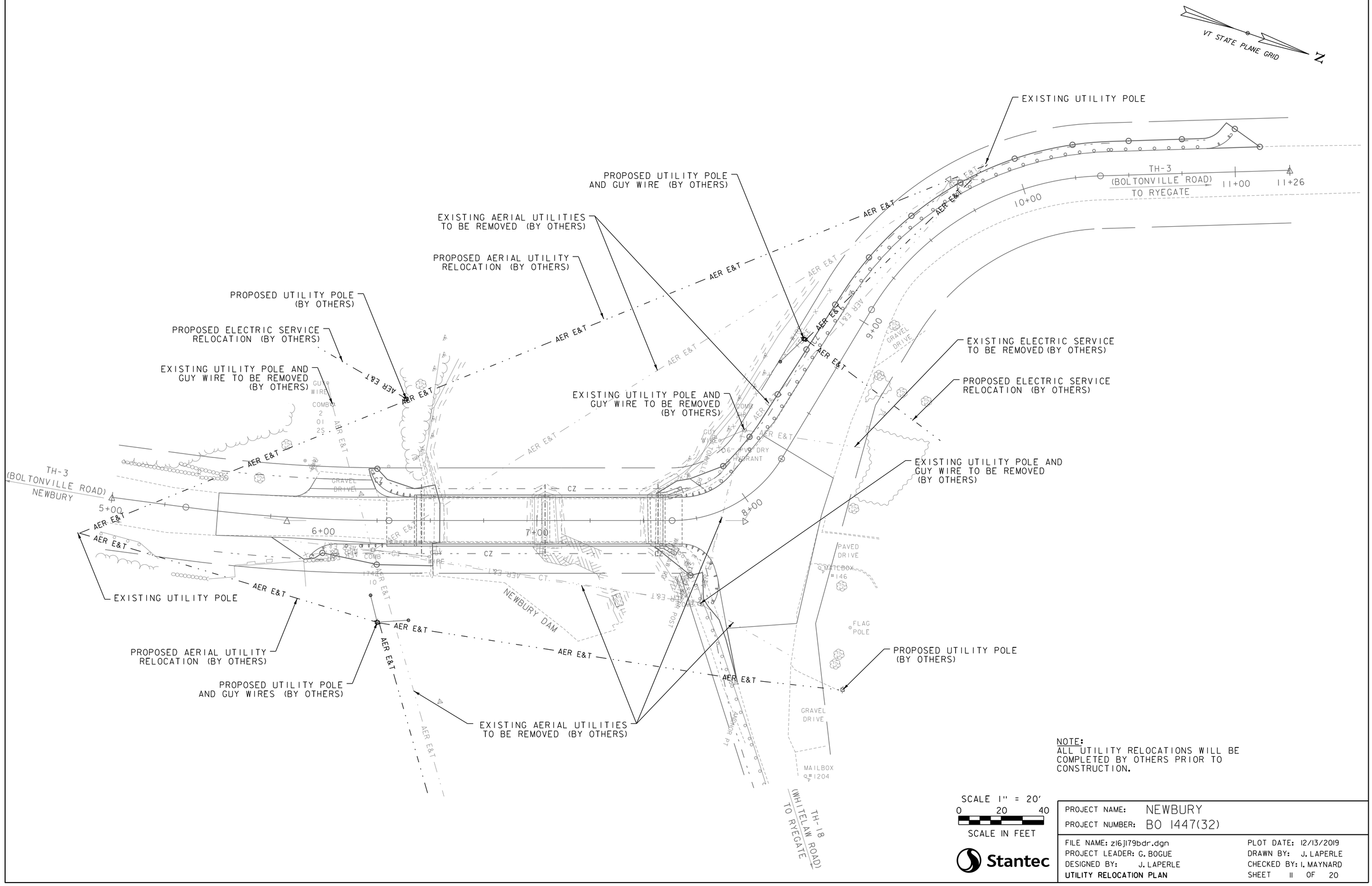
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND IMPLEMENTATION OF A SITE -SPECIFIC TRAFFIC CONTROL PLAN FOR ALL STAGES OF CONSTRUCTION. THE PLAN SHALL CLEARLY DETAIL HOW TRAFFIC WILL BE MAINTAINED. THE PLAN SHALL SPECIFY ALL CONSTRUCTION ACTIVITIES REQUIRING ALTERNATING ONE WAY TRAFFIC, RELATE THOSE ACTIVITIES TO THE CONSTRUCTION SCHEDULE, AND SHOW APPROPRIATE TEMPORARY TRAFFIC CONTROL. ALL COSTS WILL BE INCLUDED IN ITEMS 641.11 TRAFFIC CONTROL, ALL -INCLUSIVE. FIELD WORK SHALL NOT COMMENCE UNTIL A TRAFFIC CONTROL PLAN HAS BEEN SUBMITTED BY THE CONTRACTOR AND ACCEPTED BY VTRANS.

Stantec

PROJECT NAME: NEWBURY
PROJECT NUMBER: BO 1447(32)

FILE NAME: z16j179tcp.dgn
PROJECT LEADER: G. BOGUE
DESIGNED BY: J. LAPERLE
TRAFFIC CONTROL PLAN

PLOT DATE: 12/13/2019
DRAWN BY: J. LAPERLE
CHECKED BY: I. MAYNARD
SHEET 10 OF 20



NOTE:
ALL UTILITY RELOCATIONS WILL BE COMPLETED BY OTHERS PRIOR TO CONSTRUCTION.

SCALE 1" = 20'
0 20 40
SCALE IN FEET

Stantec

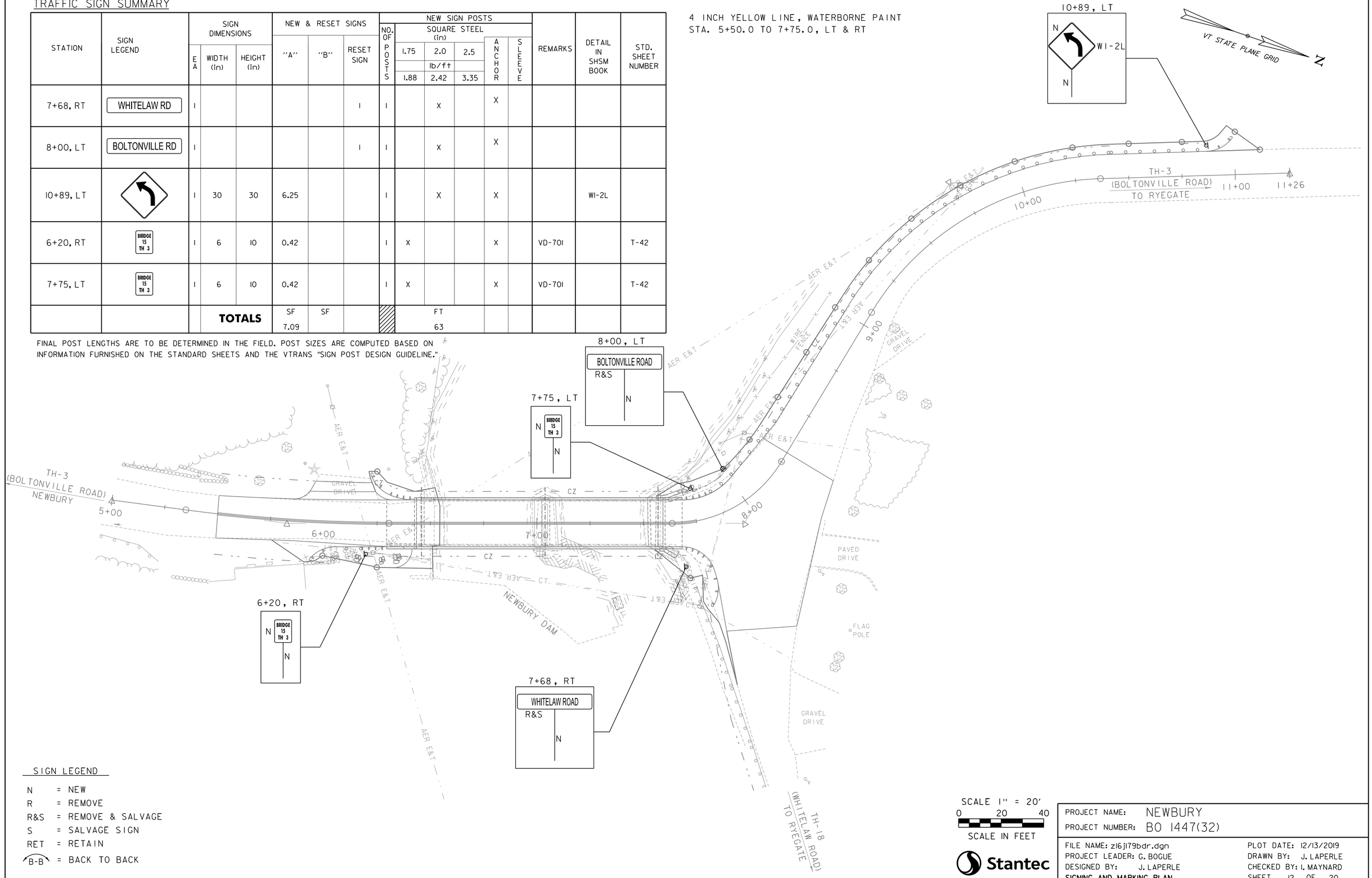
PROJECT NAME:	NEWBURY
PROJECT NUMBER:	BO 1447(32)
FILE NAME: z16j179bdr.dgn	PLOT DATE: 12/13/2019
PROJECT LEADER: G. BOGUE	DRAWN BY: J. LAPERLE
DESIGNED BY: J. LAPERLE	CHECKED BY: I. MAYNARD
UTILITY RELOCATION PLAN	SHEET 11 OF 20

TRAFFIC SIGN SUMMARY

STATION	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (in)	HEIGHT (in)	NEW & RESET SIGNS "A"	"B"	RESET SIGN	NEW SIGN POSTS NO. OF POSTS	SQUARE STEEL (in) 1.75 lb/ft 1.88	2.0 lb/ft 2.42	2.5 lb/ft 3.35	ANCHOR	SLEEVE	REMARKS	DETAIL IN SHSM BOOK	STD. SHEET NUMBER
7+68, RT	WHITELAW RD	1					1	1		X		X				
8+00, LT	BOLTONVILLE RD	1					1	1		X		X				
10+89, LT		1	30	30	6.25			1		X		X			WI-2L	
6+20, RT	BRIDGE 15 TH 3	1	6	10	0.42			1	X			X		VD-701		T-42
7+75, LT	BRIDGE 15 TH 3	1	6	10	0.42			1	X			X		VD-701		T-42
			TOTALS		SF 7.09	SF			FT 63							

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."

4 INCH YELLOW LINE, WATERBORNE PAINT
STA. 5+50.0 TO 7+75.0, LT & RT



SIGN LEGEND

N = NEW
R = REMOVE
R&S = REMOVE & SALVAGE
S = SALVAGE SIGN
RET = RETAIN
B-B = BACK TO BACK

SCALE 1" = 20'
0 20 40
SCALE IN FEET

Stantec

PROJECT NAME:	NEWBURY
PROJECT NUMBER:	BO 1447(32)
FILE NAME: z16j179bdr.dgn	PLOT DATE: 12/13/2019
PROJECT LEADER: G. BOGUE	DRAWN BY: J. LAPERLE
DESIGNED BY: J. LAPERLE	CHECKED BY: I. MAYNARD
SIGNING AND MARKING PLAN	SHEET 12 OF 20

PC STA 5+34.97

PT STA 6+30.58

WELLS RIVER

VT STATE PLANE GRID N

PT STA 8+25.17

PC STA 7+63.50

ASSUMED 3-ROD R.O.W.

R=16'-0"

WW. NO. 1

℄ BEARING PIER STA. 7+03.88 F.G. = 668.7

WW. NO. 3

R=30'-0"

T.H. 3 TO NEWBURY

90°0'0" (TYP.)

℄ T.H. 3

2'-1½" (TYP.)

8+00

6+00

7+00

T.H. 3 TO RYEGATE

WW. NO. 2

1:1.5

R=16'-0"

WW. NO. 4

1:4

PI STA 7+97.37

ASSUMED 3-ROD R.O.W.

STONE FILL, TYPE II (TYP.)

PI STA 5+82.84

BEGIN BRIDGE STA. 6+43.55 F.G. = 668.92

℄ BRG. ABUT. 1 STA. 6+45.88 F.G. = 668.94

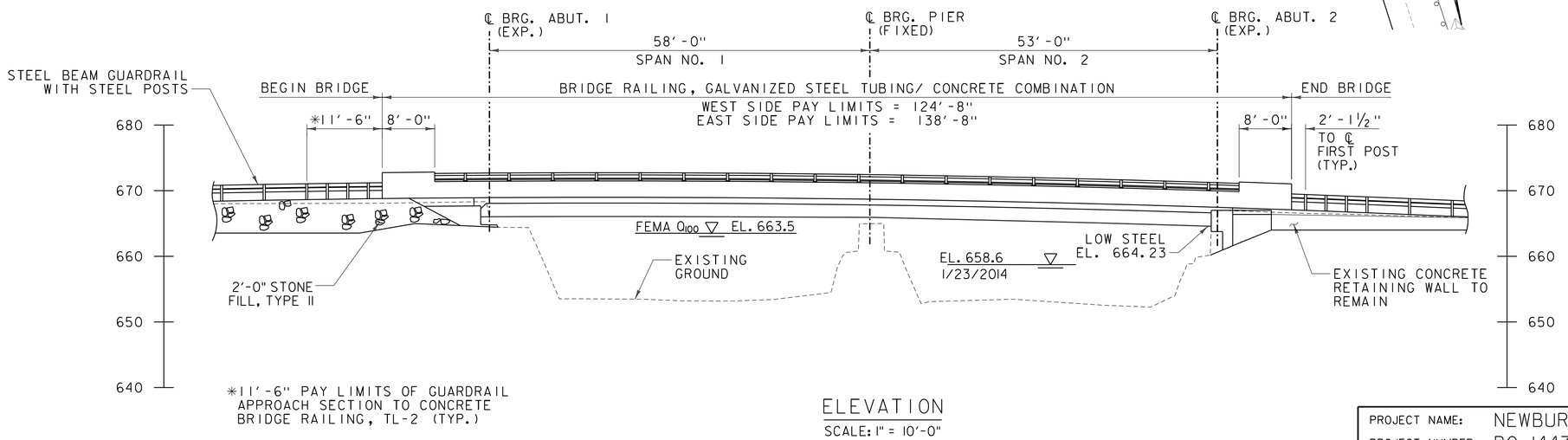
℄ BRG. ABUT. 2 STA. 7+56.88 F.G. = 667.47

END BRIDGE STA. 7+59.21 F.G. = 667.39

R=16'-0"

PLAN

SCALE: 1" = 10'-0"



ELEVATION

SCALE: 1" = 10'-0"

0 10 20

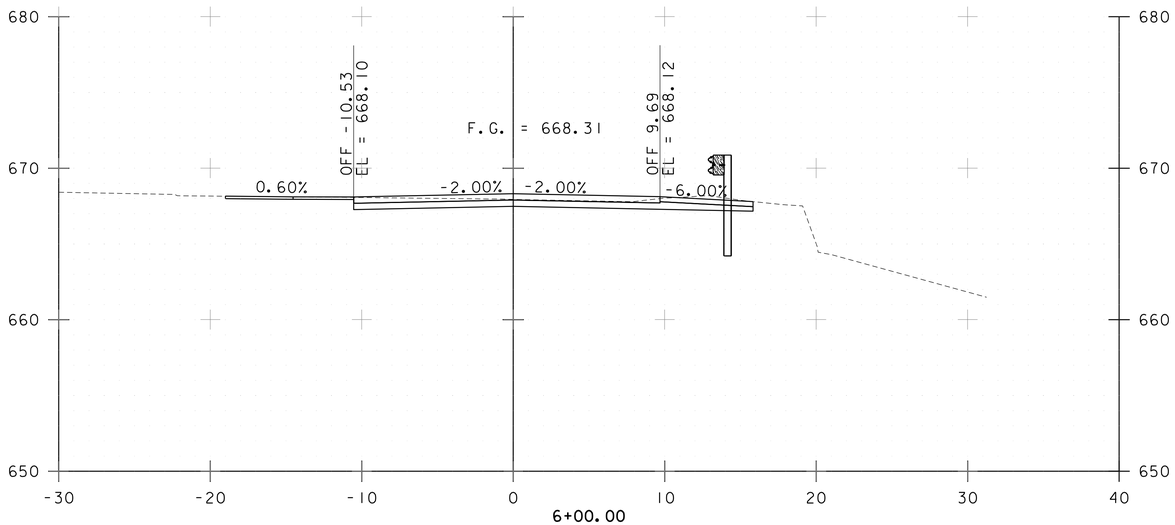
Stantec

PROJECT NAME: NEWBURY
PROJECT NUMBER: BO 1447(32)

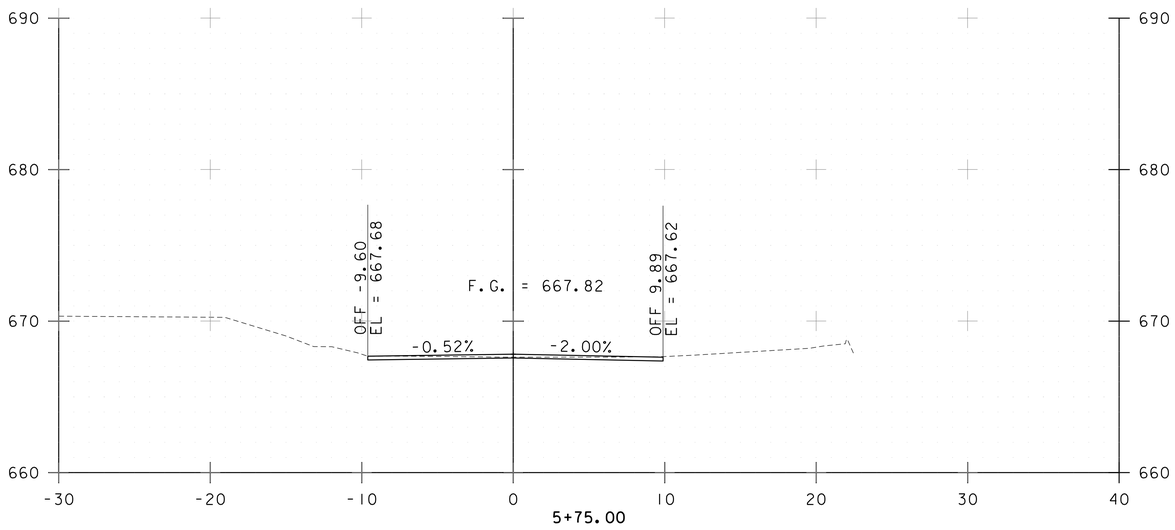
FILE NAME: z16j179bdr_pe.dgn
PROJECT LEADER: G. BOGUE
DESIGNED BY: J. GRIGAS
PLAN AND ELEVATION

PLOT DATE: 12/13/2019
DRAWN BY: J. BURKE
CHECKED BY: J. GRIGAS
SHEET 13 OF 20

6+15 BEGIN PROJECT



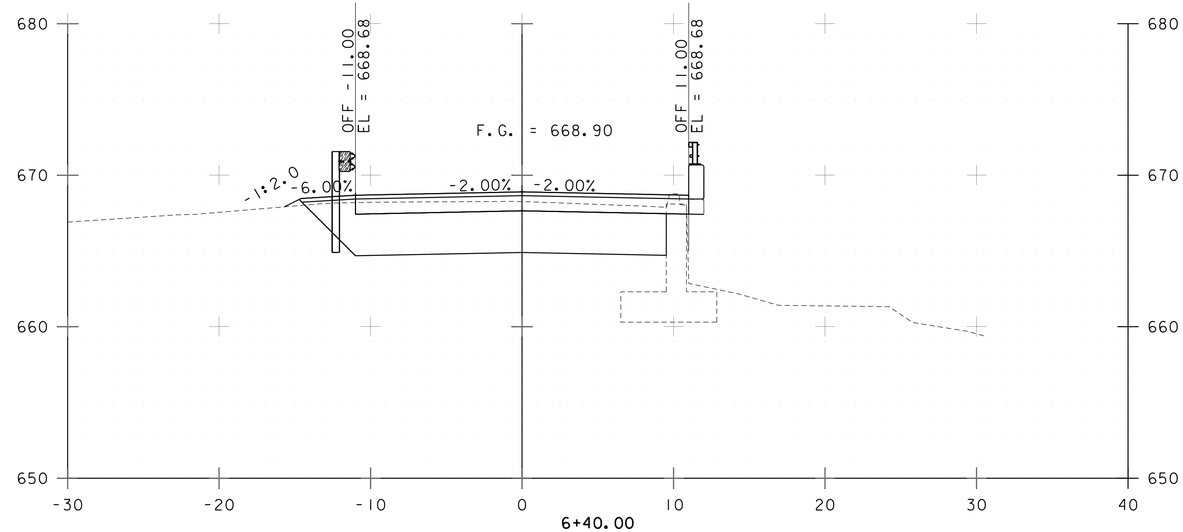
6+00.00



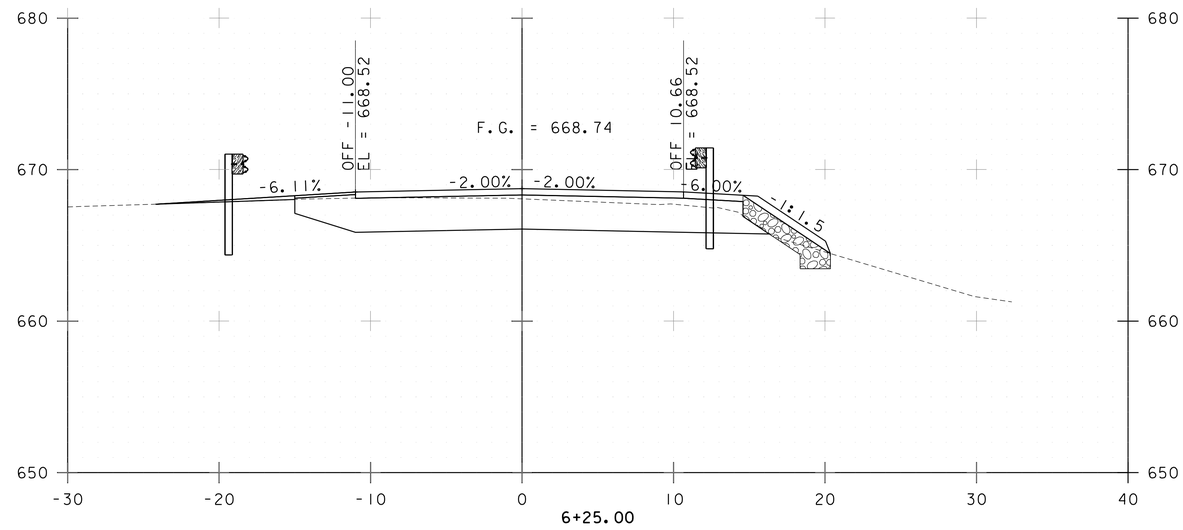
5+75.00

5+50.00 BEGIN APPROACH

6+43.55 BEGIN BRIDGE



6+40.00

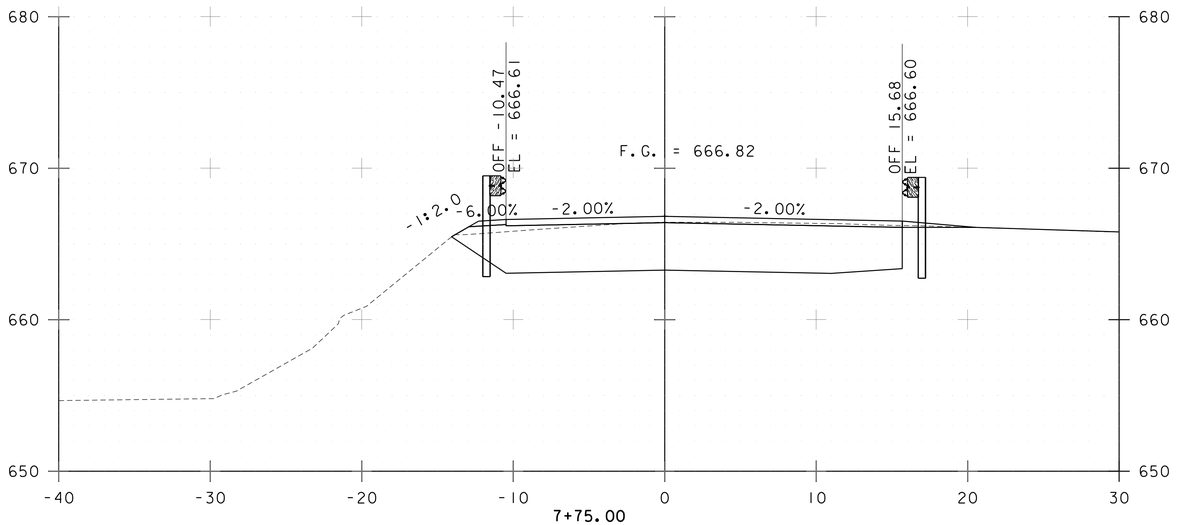


6+25.00

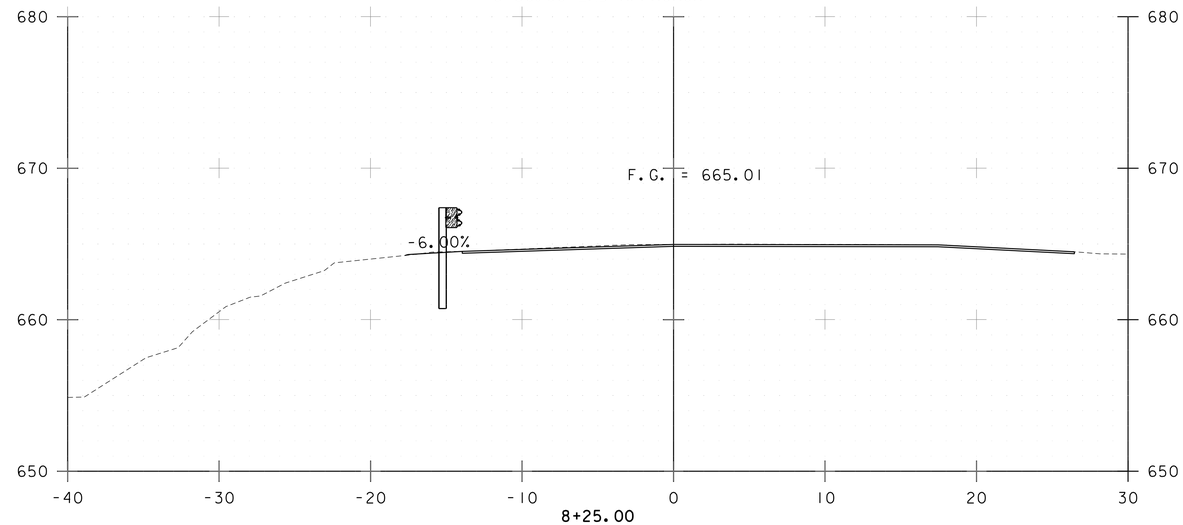
STA. 5+75 TO STA. 6+40

Stantec

PROJECT NAME:	NEWBURY
PROJECT NUMBER:	BO 1447(32)
FILE NAME: z16j179xs.dgn	PLOT DATE: 12/13/2019
PROJECT LEADER: G. BOGUE	DRAWN BY: J. LAPERLE
DESIGNED BY: I. MAYNARD	CHECKED BY: I. MAYNARD
ROADWAY CROSS SECTION 1	SHEET 14 OF 20

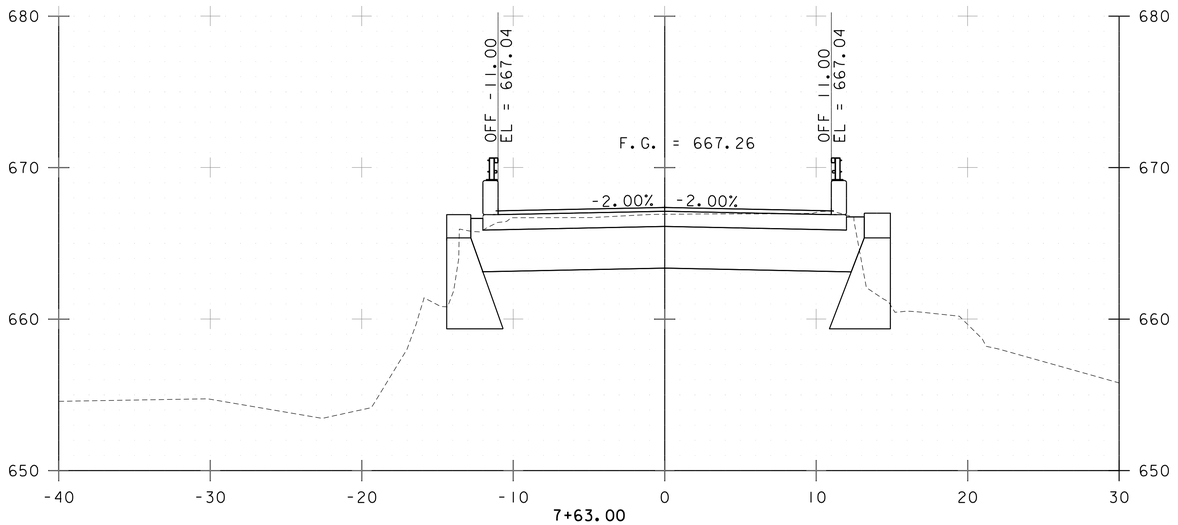


7+75.00



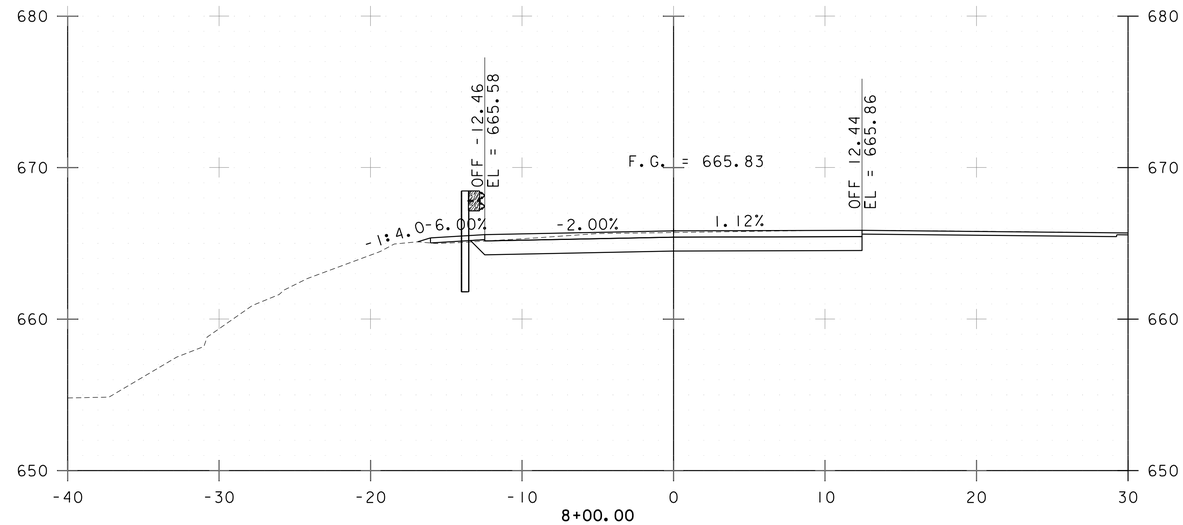
8+30.00 END APPROACH

8+25.00



7+63.00

7+59.21 END BRIDGE



8+00.00

7+90.00 END PROJECT

STA. 7+60 TO STA. 8+25

Stantec

PROJECT NAME:	NEWBURY
PROJECT NUMBER:	BO 1447(32)
FILE NAME: z16jl79xs.dgn	PLOT DATE: 12/13/2019
PROJECT LEADER: G. BOGUE	DRAWN BY: J. LAPERLE
DESIGNED BY: I. MAYNARD	CHECKED BY: I. MAYNARD
ROADWAY CROSS SECTION 2	SHEET 15 OF 20

TOTAL AREA OF EARTH DISTURBANCE = 0.14 ACRES

VT STATE PLANE GRID

N

50' RIPARIAN AND WETLANDS BUFFER

SOIL CLASSIFICATION C

SACO MUCKY SILT LOAM
"K" FACTOR = 0.43
HIGH EROSION POTENTIAL

BENCHMARK
SPIKE IN ROOT
ELEV.=670.43'

EXISTING RIPARIAN BUFFER AT EDGE OF EXISTING ROADWAY

SOIL CLASSIFICATION C

TUNBRIDGE-WOODSTOCK VERY ROCKY FINE SANDS
8 TO 25% SLOPES
"K" FACTOR = 0.24
MODERATE EROSION POTENTIAL

50' RIPARIAN BUFFER

EXISTING RIPARIAN BUFFER AT EDGE OF EXISTING ROADWAY

BENCHMARK
BOX CUT IN WALL
ELEV.=664.34'

SOIL CLASSIFICATION C

CHARLES SILT LOAM
0 TO 2% SLOPES
"K" FACTOR = 0.43
HIGH EROSION POTENTIAL

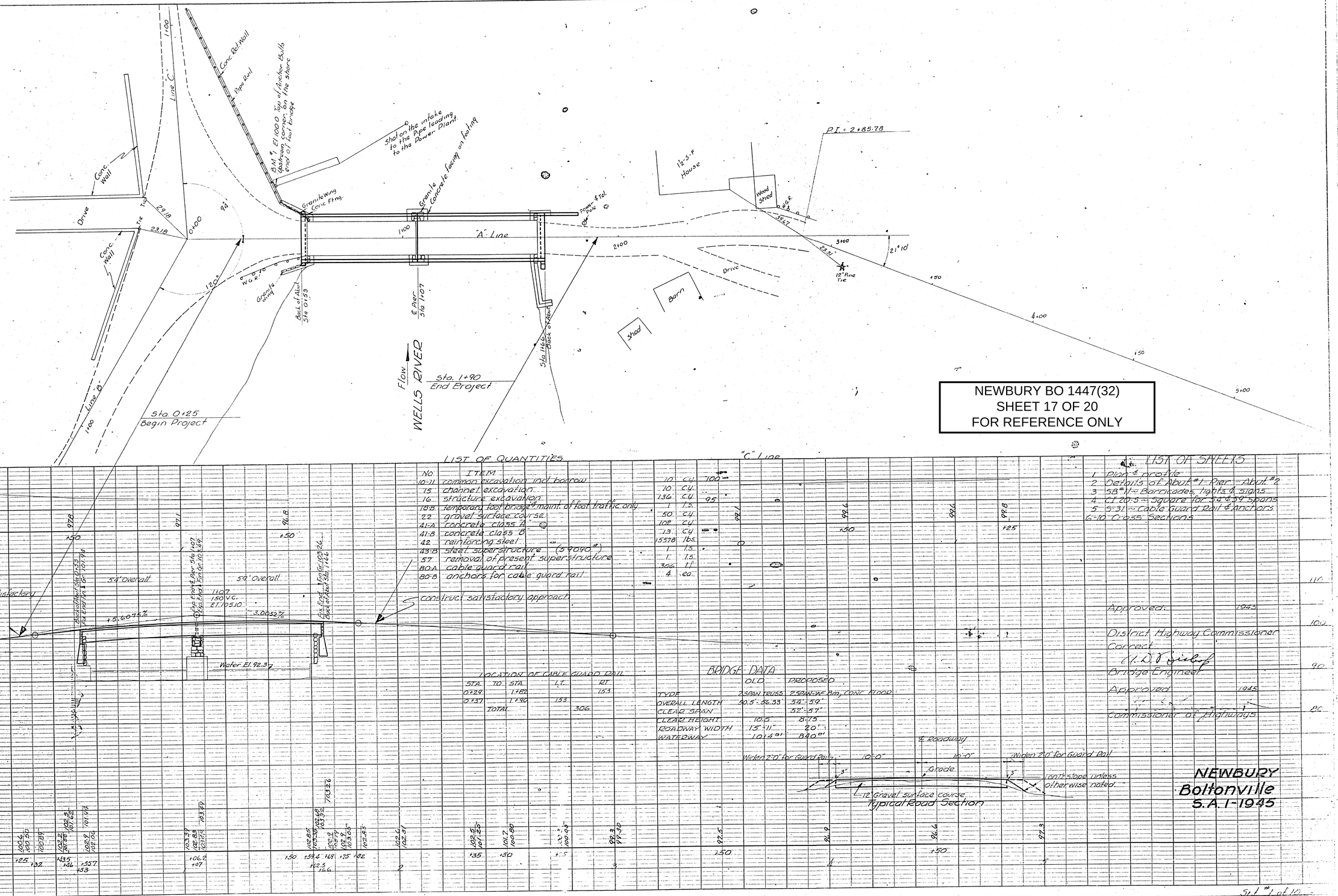
SCALE 1" = 20'
0 20 40
SCALE IN FEET

Stantec

PROJECT NAME:	NEWBURY
PROJECT NUMBER:	BO 1447(32)
FILE NAME: z16j179bdr.dgn	PLOT DATE: 12/13/2019
PROJECT LEADER: G. BOGUE	DRAWN BY: J. LAPERLE
DESIGNED BY: I. MAYNARD	CHECKED BY: I. MAYNARD
EXISTING CONDITIONS PLAN	SHEET 16 OF 20

PLAN | SURVEYED | PLOTTED | NOTE BOOK | GRADES CHECKED | ALIGNMENT CHECKED | RT. OF WAY CHECKED | NO. | BY | DATE

PROFILE | SURVEYED | PLOTTED | NOTE BOOK | GRADES CHECKED | ALIGNMENT CHECKED | STRUCTURE NOTATIONS CHKD. | NO. | BY | DATE



LIST OF QUANTITIES

NO.	ITEM		
10-11	common excavation incl borrow	10	cu yd
15	channel excavation	10	cu yd
16	structure excavation	136	cu yd
18B	temporary foot bridge & maint. of foot traffic only	1	l.s.
22	gravel surface course	50	cu yd
41-A	concrete class A	108	cu yd
41-B	concrete class B	13	cu yd
42	reinforcing steel	15578	lbs.
43-B	steel superstructure (59090 #)	1	l.s.
57	removal of present superstructure	1	l.s.
80-A	cable guard rail	306	l.f.
80-B	anchors for cable guard rail	4	ea.

LOCATION OF CABLE GUARD RAIL

STA.	TO STA.	L.T.	RT.
0+29	1+82		153
0+37	1+90	153	
TOTAL		153	306

BRIDGE DATA

	OLD	PROPOSED
TYPE	2 SPAN TRUSS	2 SPAN-S-F Rm. CONC. HOOD
OVERALL LENGTH	50.5'-56.33'	54'-59'
CLEAR SPAN		52'-57'
CLEAR HEIGHT	10.5	8.75
ROADWAY WIDTH	13'-11"	20'
WATERWAY	1014 sq ft	820 sq ft

LIST OF SHEETS

1 Plan & profile
2 Details of Abut #1 - Pier - Abut #2
3 SB #1 - Barricades, lights & signs
4 CI 20-5 - Square for 54' & 59' spans
5 S-31 - cable guard rail & anchors
6-10 Cross Sections

Approved: 1945

District Highway Commissioner

Correct

C. D. Gilbert

Bridge Engineer

Approved 1945

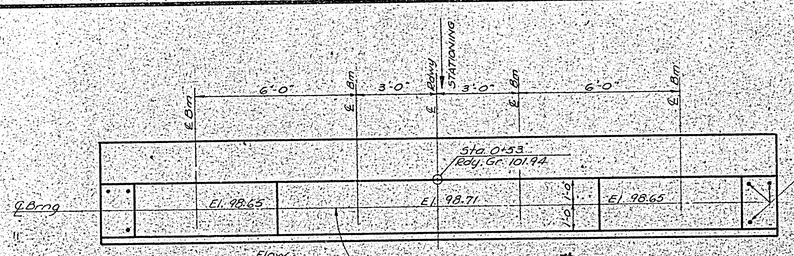
Commissioner of Highways

NEWBURY
Boltonville
S.A.I-1945

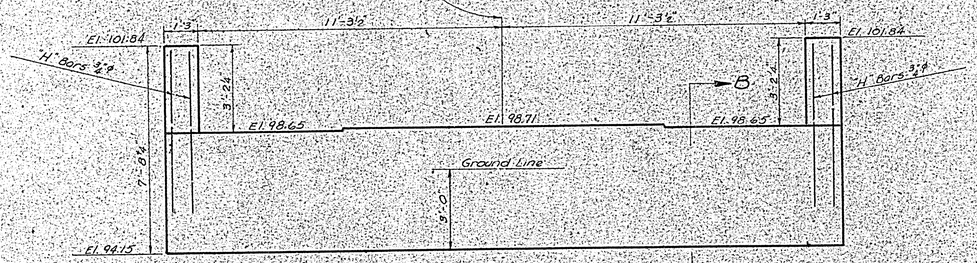
NEWBURY BO 1447(32)
SHEET 17 OF 20
FOR REFERENCE ONLY

Sht # 1 of 10

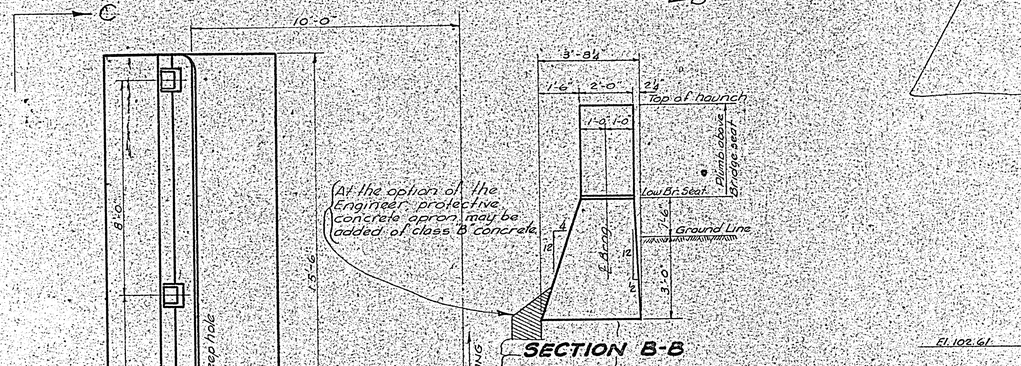
PLATE 1—PLAN-PROFILE O. P. R. & R. C. STANDARD
KEUFFEL & ESSER CO., NEW YORK.



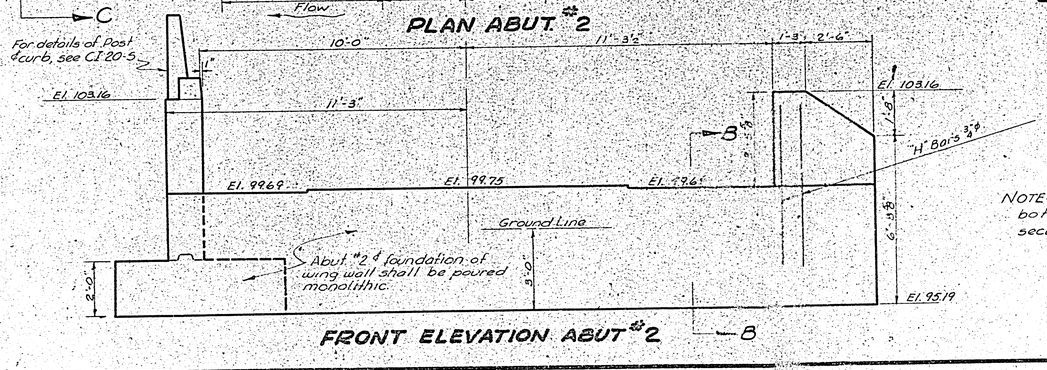
PLAN ABUT #1



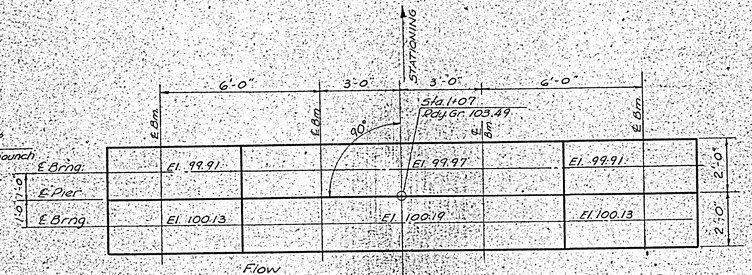
FRONT ELEVATION-ABUT #1



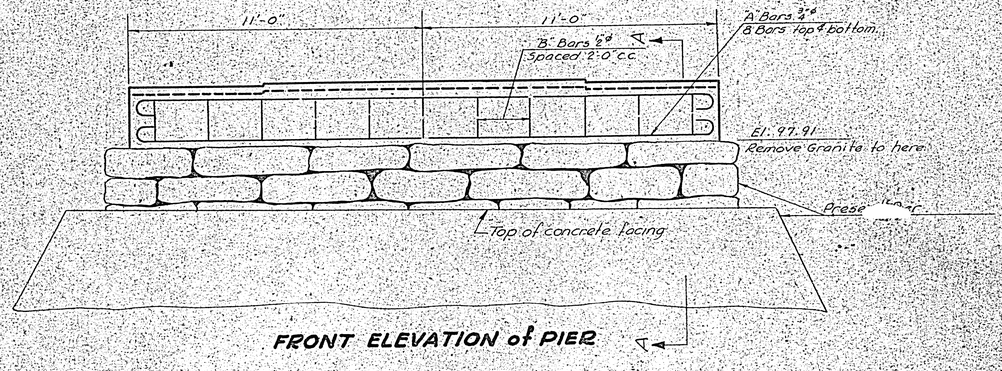
PLAN ABUT #2



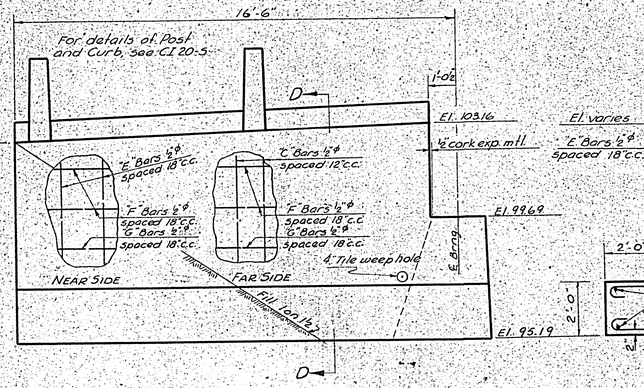
FRONT ELEVATION ABUT #2



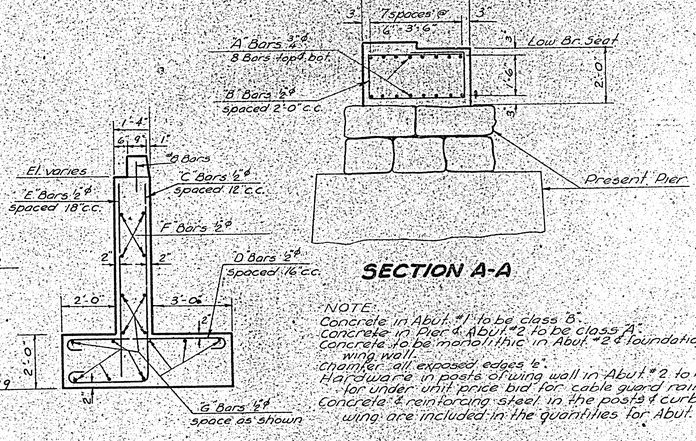
PLAN of PIER



FRONT ELEVATION of PIER



ELEVATION C-C of WING



SECTION A-A

SECTION D-D

NOTE:-
Concrete in Abut. #1 to be class 'B'.
Concrete in Pier & Abut. #2 to be class 'A'.
Concrete to be monolithic in Abut. #2 & foundation of wing wall.
Chamfer all exposed edges ¾".
Hardware in posts & wing wall in Abut. #2 to be paid for under unit price bid for cable guard rail.
Concrete & reinforcing steel in the posts & curb on the wing are included in the quantities for Abut. #2.

NOTE:- At the option of the Engineer, the bottom of footings may be lowered to secure satisfactory bearing.

REINFORCING STEEL

Bar	Size	No. Req.	T. Leng.	Location	Details
A	¾ϕ	16	23'-3"	Pier	4" 4" R-3"-2" 21'-0"
B	⅝ϕ	11	12'-4"	Pier	2'-0" 1'-7" 31'-7"
C	⅝ϕ	15	10'-7"	Wing Abut #2	4" 2'-1" R-2" 6'-11"
D	⅝ϕ	14	7'-2"	Wing Abut #2	4" 4" R-2"-2 5'-6"
E	⅝ϕ	11	7'-0"	Wing Abut #2	Straight
F	⅝ϕ	4	15'-0"	" " "	"
G	⅝ϕ	12	17'-0"	" " "	"
*5	⅝ϕ	2	19'-0"	Curb Abut #2	"
*7	⅝ϕ	8	4'-2"	Post Abut #2	4" R-2" 3'-1"
*8	⅝ϕ	8	1'-6"	Curb Abut #2	Straight - Dowels
*9	⅝ϕ	4	3'-0"	Curb Abut #2	6" 6" 6" 6" 6"
H	¾ϕ	9	6'-0"	Abut #1 & #2	Straight

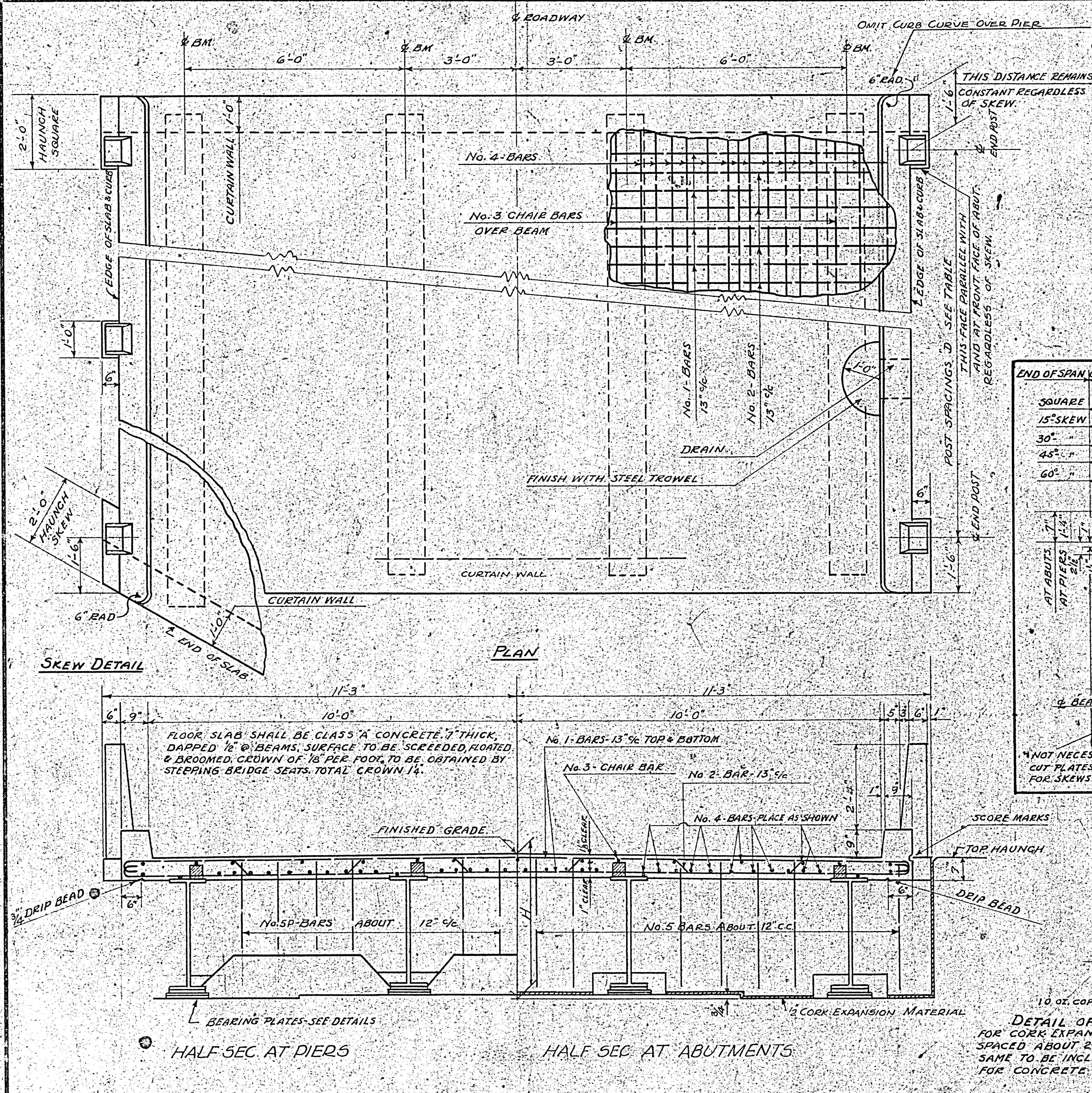
ESTIMATED QUANTITIES

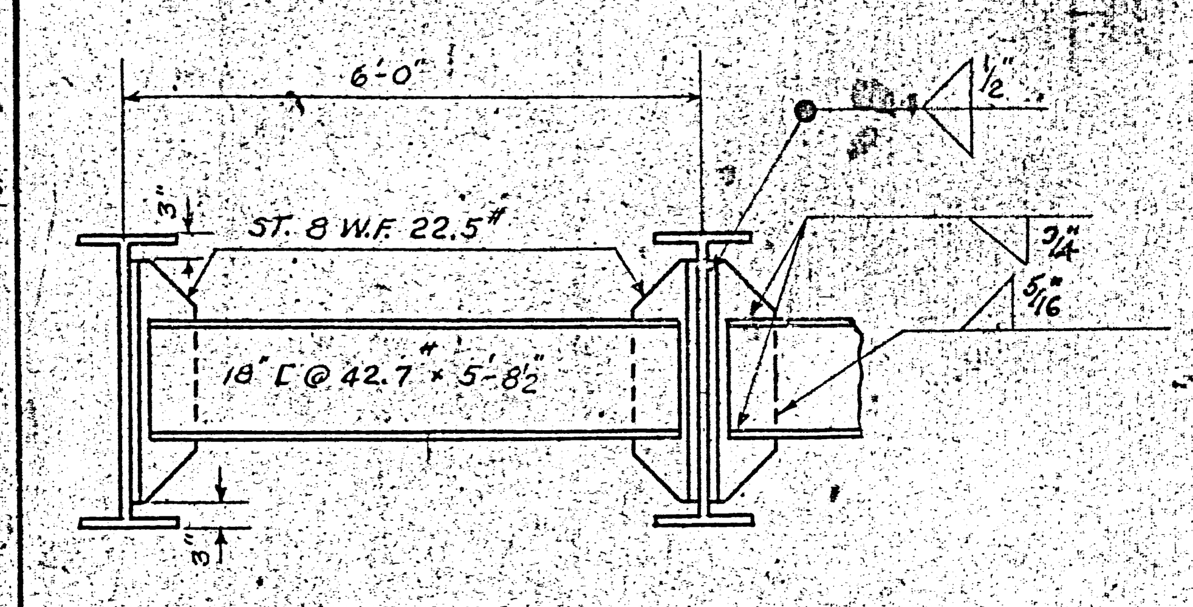
		Abut. #1	Pier	Abut. #2	Total
Channel Excavation	cu.			10	10
Structure Excavation	cu.	46	20	70	136
Concrete Class 'A'	cu.		7	26	33
Concrete Class 'B'	cu.	13			13
Reinforcing Steel	lb.	54	648	543	1245

NEWBURY BO 1447(32)
SHEET 18 OF 20
FOR REFERENCE ONLY

BOLTONVILLE
TOWN of NEWBURY
DETAILS of ABUT. #1-ABUT. #2-PIER

Surveyed by
Designed by J.L.H.
Drawn by J.L.H.
Traced by H.W.S.
Checked by I.S.P. ~ 5/17/45
Series S.A. No. 1-1945 Filed
Sheet 2 of 10 Sheets

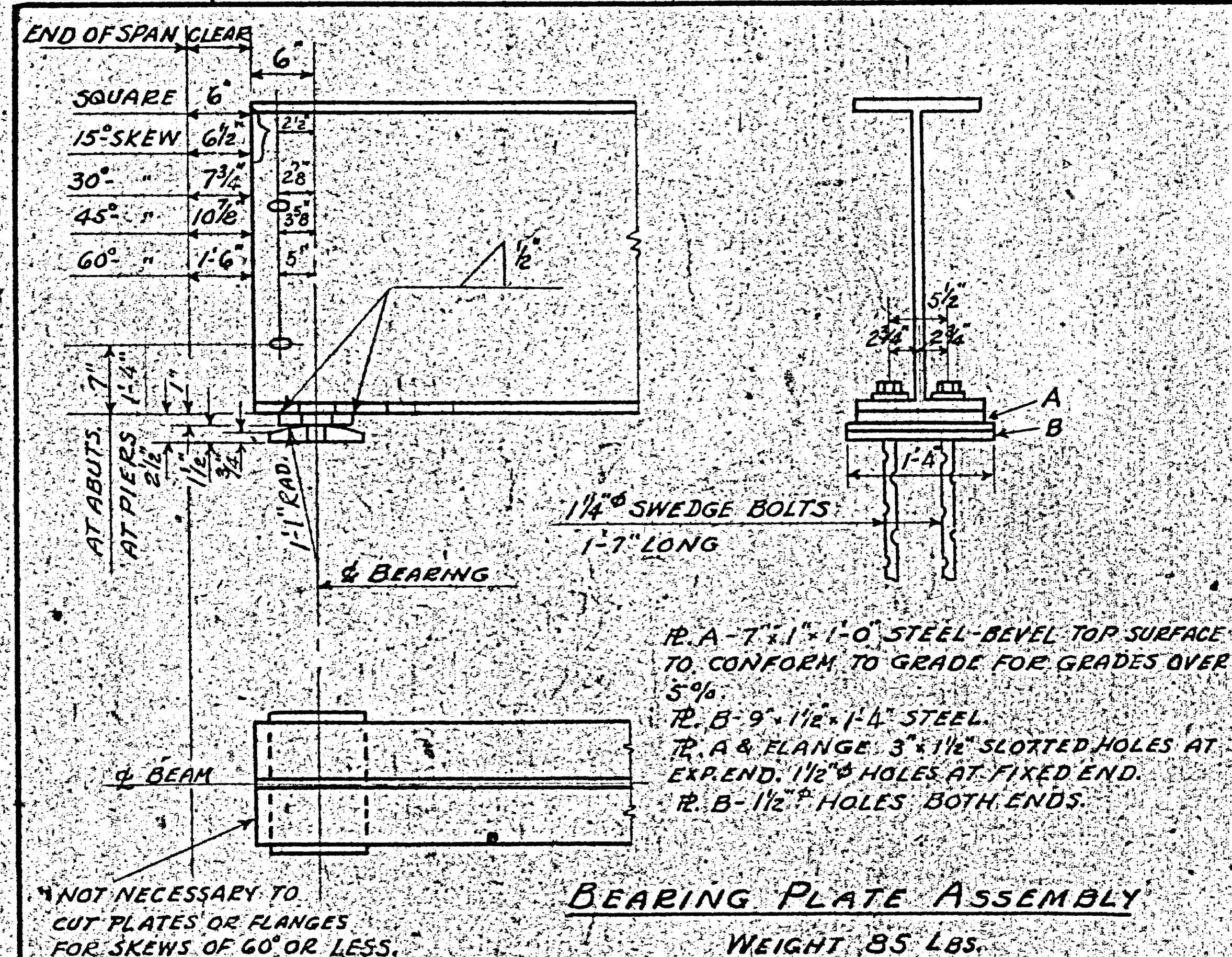




Typical Details of Diaphragm Assembly

SPANS 29'-0" THROUGH 44'-0" REQUIRE 1 SET OF DIAPHRAGMS.
SPANS 49'-0" THROUGH 64'-0" REQUIRE 2 SET OF DIAPHRAGMS.
69'-0" " 89'-0" " 3
94'-0" " 99'-0" " 4

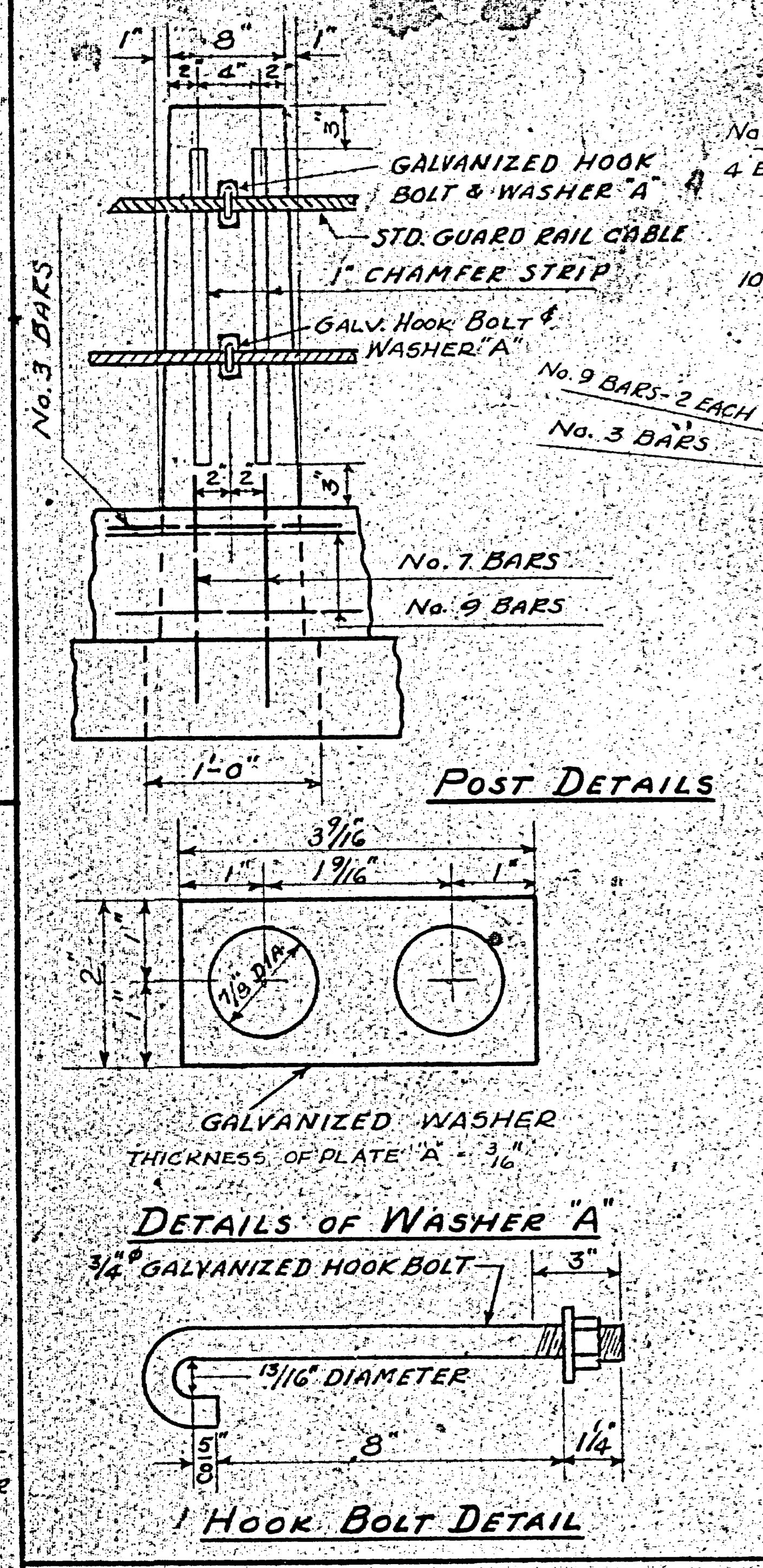
DIAPHRAGM SHALL BE DETAILED TO PASS THRU POINTS MIDWAY BETWEEN REFERENCE POINTS (½, ⅓, ¼ or ⅕ POINTS) OF ADJACENT BEAMS ON ALL SPANS.



PL. A - 7" x 1" - 1'-0" STEEL-BEVEL TOP SURFACE TO CONFORM TO GRADE FOR GRADES OVER 5%.
PL. B 9" x 1½" x 1'-4" STEEL.
PL. A & FLANGE: 3" x 1⅛" SLOTTED HOLES AT EXP. END. 1½" ϕ HOLES AT FIXED END.
PL. B - 1½" ϕ HOLES BOTH ENDS.

Bearing Plate Assembly

WEIGHT 85 LBS.



Rail Data

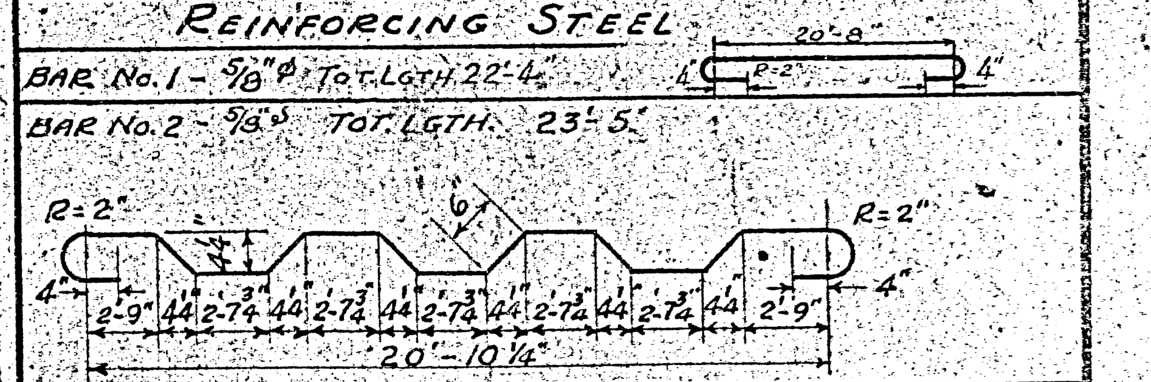
SPAN	CABLE RAIL LIN. FT.	POST SPCG. "D"	No. POSTS REQ'D.
29'	58'-0"	6'-6"	10
34'	68'-0"	7'-9"	10
39'	78'-0"	7'-2⅜"	12
44'	88'-0"	6'-10"	14
49'	98'-0"	7'-8"	14
54'	108'-0"	7'-3⅜"	16
59'	118'-0"	8'-0	16
64'	128'-0"	7'-7½"	18
69'	138'-0"	7'-4	20
74'	148'-0"	7'-10⅝"	20
79'	158'-0"	7'-7¼"	22
84'	168'-0"	8'-1¼	22
89'	178'-0"	7'-9⅞"	24
94'	188'-0"	7'-7"	26
99'	198'-0"	8'-0"	26

20' Roadway ⓧ

Reinforcing Steel

BAR No. 1 - ⅝" ϕ TOT. LGTH. 22'-4"

BAR No. 2 - ⅝" ϕ TOT. LGTH. 23'-5"



BAR No. 3 - ¾" ϕ
BAR No. 4 - ½" ϕ
STRAIGHT

BAR No. 5 - ⅜" ϕ (AT ABUTMENT ENDS)
BAR No. 5P - ⅜" ϕ (AT PIER ENDS)

SPAN	BAR LENGTH	SPAN	A (For Bar No. 5)	TOT. LTH. (For Bar No. 5)
29'	28'-6"	29'	1'-9"	4'-8"
34'	33'-6"	34'	2'-0"	5'-2"
39'	38'-6"	39'	2'-0"	5'-2"
44'	43'-6"	44'	2'-3"	5'-8"
49'	25'-3"	49'	2'-3"	5'-8"
54'	27'-9"	54'	2'-6"	6'-2"
59'	30'-3"	59'	2'-9"	6'-8"
64'	32'-9"	64'	2'-9"	6'-8"
69'	35'-3"	69'	3'-0"	7'-2"
74'	37'-9"	74'	3'-0"	7'-2"
79'	40'-3"	79'	2'-9"	6'-8"
84'	42'-9"	84'	3'-0"	7'-2"
89'	30'-10"	89'	3'-0"	7'-2"
94'	32'-6"	94'	3'-0"	7'-2"
99'	34'-2"	99'	3'-0"	7'-2"

SHORTEN "A" DIMENSION 9" FOR No. 5P-BARS AT PIERS

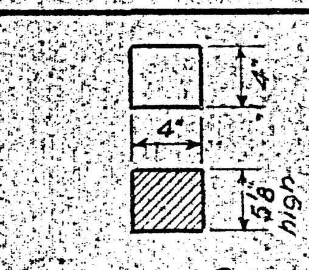
BAR No. 6 - ⅝" ϕ STRAIGHT-LENGTH 22'-0" FOR SQUARE BRIDGE
INCREASE LENGTH FOR SKEW BRIDGE

BAR No. 7 - ¾" ϕ
TOTAL LENGTH 4'-2"

BAR No. 8 - ⅝" ϕ DOWELS - STRAIGHT-LENGTH 1'-0"

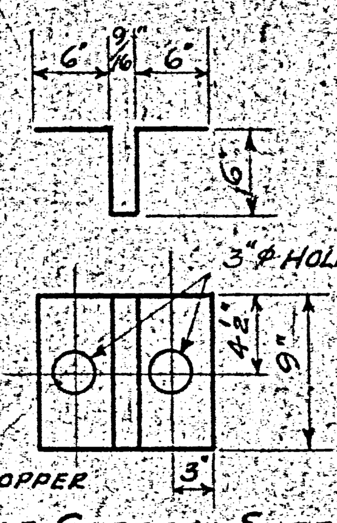
BAR No. 9 - ½" ϕ
TOTAL LENGTH 3'-0"

ⓧ For 18' Roadway change 18" [@ 42.7# 5'-8½" to 5'-4½"
#1 - 20'-8" to 18'-8" T.L. 22'-4" to 20'-4".
#2 - 2'-7¾" to 2'-2¾"; 20'-10¼" to 18'-9¼", T.L. 21'-4".



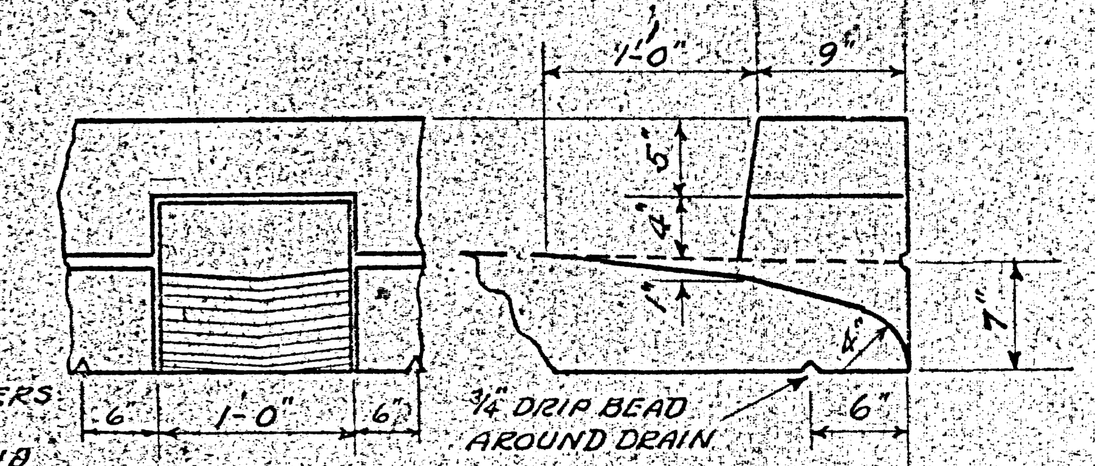
Concrete Chair Detail

SPACE 5'-0" ALONG EACH BEAM



Detail of Copper Support

FOR CORK EXPANSION MATERIAL AT PIERS. SPACED ABOUT 2'-0" c/c. PAYMENT FOR SAME TO BE INCLUDED IN UNIT PRICE 818 FOR CONCRETE CLASS "A".



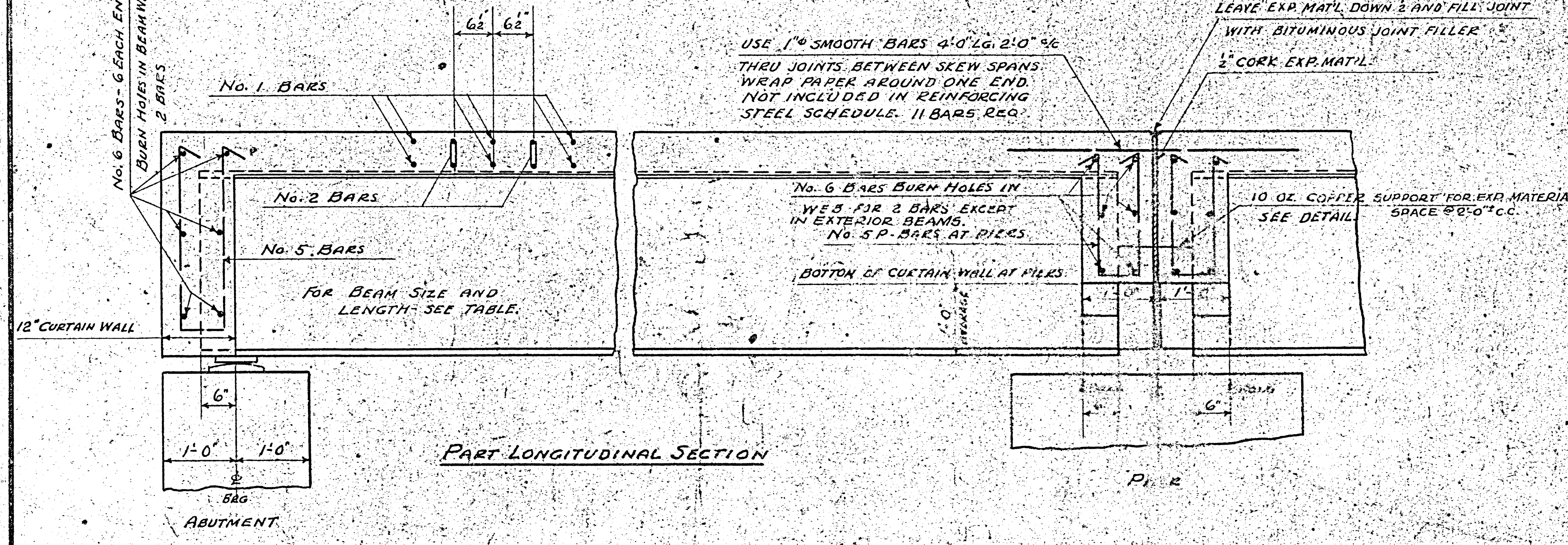
Drain Details

PLACE DRAINS THROUGH EACH CURB. ONE EACH SIDE FOR SPANS 40' OR LESS; ABOUT 20' APART FOR SPANS OVER 40'.

Table of Quantities for Single Span (Square)

Overall Span	Structural Steel Data: Size W.F. Beam	Beam Length *	Mid. Ord. for D.L. Camber	Sec. Mod. Reqd.	Dim. "H"	Total Weight	Reinforcing Steel Schedule ⓐ: Bar 1	2	3	4	5 and/or 5P	6	7	8	9	Conc. Chair	Total Weight	Conc. Cl. A
29'-0"	20⅞" @ 59#	28'-0"	¼"	116	2.58	8,204	54	27	8	47	28	12	40	30	20	24	3800	18.6
34'-0"	23⅞" @ 74#	33'-0"	⅜"	151	2.83	11,398	64	32	8	47	28	12	40	34	20	28	4380	21.6
39'-0"	24⅛" @ 87#	38'-0"	½"	189	2.85	14,854	72	36	8	47	28	12	48	40	24	32	4950	24.3
44'-0"	26⅞" @ 91#	43'-0"	⅝"	229	3.08	17,315	82	41	8	47	28	12	56	44	28	36	5590	27.3
49'-0"	27⅛" @ 106#	48'-0"	¾"	274	3.10	23,000	92	45	16	94	28	12	56	50	28	40	6230	29.8
54'-0"	30" @ 116#	53'-0"	⅞"	322	3.34	27,307	100	50	16	94	28	12	64	54	32	44	6820	33.0
59'-0"	33" @ 125#	58'-0"	1"	376	3.59	31,783	110	55	16	94	28	12	64	60	32	48	7410	35.9
64'-0"	33¼" @ 141#	63'-0"	1¼"	443	3.61	38,315	118	59	16	94	28	12	72	64	36	52	7970	38.6
69'-0"	36" @ 160#	68'-0"	1¼"	517	3.84	47,406	128	64	16	94	28	12	80	70	40	56	8610	41.7
74'-0"	36⅜" @ 182#	73'-0"	1½"	597	3.87	57,079	138	69	16	94	28	12	80	74	40	60	9190	44.3
79'-0"	33¼" @ 220#	78'-0"	2	688	3.61	72,498	146	73	16	94	28	12	88	80	44	64	9750	46.[illegible]
84'-0"	35⅞" @ 230#	83'-0"	2	781	3.83	80,295	156	78	16	94	28	12	88	84	44	68	10330	[illegible]
89'-0"	36¼" @ 260#	88'-0"	2⅜"	883	3.86	95,455	166	82	24	141	28	12	96	90	48	72	11030	5[illegible]
94'-0"	36½" @ 280#	93'-0"	2¾"	1002	3.88	109,131	174	87	24	141	28	12	104	94	52	76	11620	54.[illegible]
99'-0"	36¾" @ 300#	98'-0"	3¼"	1120	3.91	122,571	184	92	24	141	28	12	104	100	52	80	12200	57.3

* ON SKEW SPANS BEAMS ARE SHORTER, SEE END CLEARANCES ON BEARING PLATE ASSEMBLY DETAIL.
ⓐ ON MULTI SPAN SKEW BRIDGES, ADD FOR EACH PIER 11 SMOOTH BAR, 1" ϕ, 4'-0" LONG, ONE END WRAPPED IN PAPER. PLACE AS SPECIFIED ON "PART LONGITUDINAL SECTION", THIS SHEET. (WT. OF 11 BARS ~ 103#.)



General Notes:

STEEL SUPERSTRUCTURE: TO INCLUDE INDICATED W.F. BEAMS, BEARING DEVICES AND DIAPHRAGMS.

CAMBER: ALL STEEL BEAMS SHALL BE ROLLED TO A TRUE CIRCULAR CAMBER FOR THE FULL LENGTH OF THE BEAM. THE MIDDLE ORDINATE TO BE AS LISTED IN THE TABLE. UNLESS OTHERWISE NOTED ON PLAN & PROFILE SHEET.

PAINT: ALL STRUCTURAL STEEL SHALL BE PAINTED AS SPECIFIED UNDER ITEM 43A-B OF PAMPHLET "E" STANDARD ROAD AND BRIDGE SPECIFICATIONS, STATE OF VERMONT, 1936. THE FINAL COAT OF FIELD PAINT SHALL BE GREEN UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

QUANTITIES: THIS SHEET INCLUDES QUANTITIES FOR RAILING, CURBS, AND POSTS.

REINFORCING: WHEN BRIDGE IS BUILT ON SKEW, TRANSVERSE BARS SHALL BE FURNISHED AS FOR SQUARE SPAN. BARS SHALL BE CUT IN FIELD TO FIT ONE SKEW END AND CUT OFF ENDS SHALL BE USED IN OPPOSITE SKEW END. IN SKEW SPANS THE No. 6 BARS SHALL BE LENGTHENED AND THE NUMBER OF No. 5 SERIES BARS SHALL BE INCREASED.

DESIGN: ALL MATERIAL AND CONSTRUCTION SHALL CONFORM TO THE STANDARD ROAD AND BRIDGE SPECIFICATIONS, STATE OF VERMONT 1936. DESIGNED FOR H-15 LIVE LOADING, 25#/□' PAVING ALLOWANCE, DEAD LOAD INCLUDES WEIGHT OF BEAMS, SLAB AND RAIL. DEAD & LIVE LOAD DISTRIBUTED EQUALLY TO ALL BEAMS. FOR LOCATION OF FIXED AND EXPANSION BEARINGS SEE PLAN & PROFILE SHEET.

Standard W.F.-Beam Bridge
Reinforced Concrete Deck
for
State Aid & Town Highways
20 Ft. Roadway
2-H15

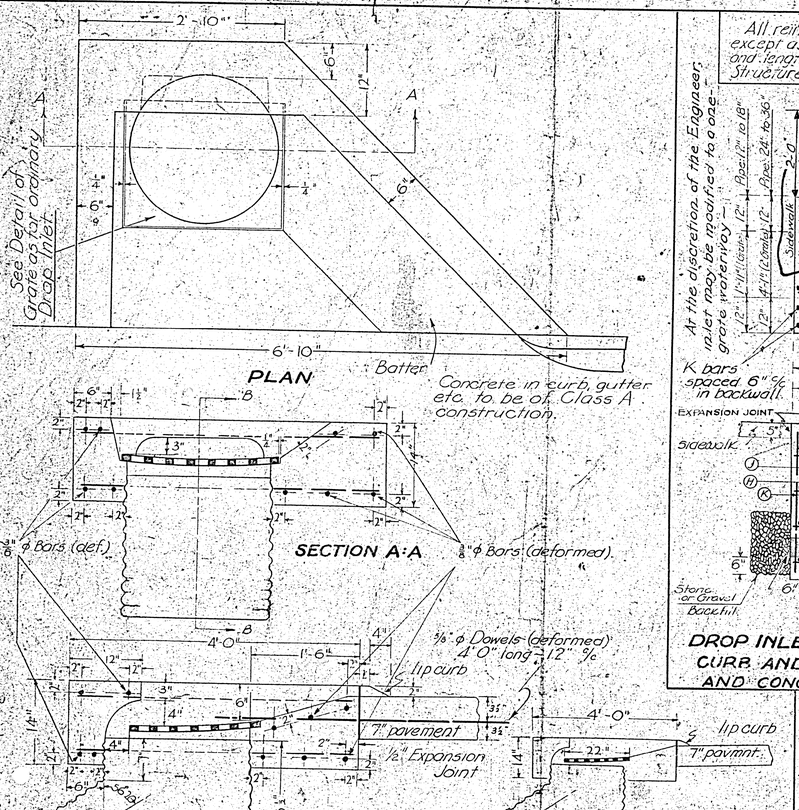
USED WITH
CHESTER - ST. FL. #65
REVISED: 12-2-41 - BEAM SIZES & WEIGHTS FOR SPANS 79'-0" & 89'-0" W.H.D.

Surveyed by
Designed by W. H. DAY — OCTOBER 1939
Drawn by W. H. DAY
Traced by D. W. P.
Checked by J.G.G. - W.A.S.
Series C.I. 20-5 — Filed
Sheet

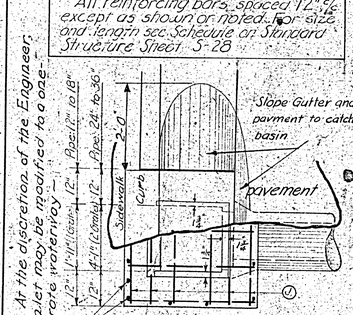
NEWBURY BO 1447(32)
SHEET 19 OF 20
FOR REFERENCE ONLY

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
9	VT.				

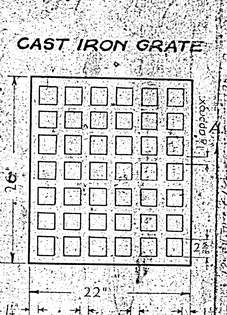
DROP INLET WITH GRATE, CURB AND SIDEWALK AND CONCRETE PAVEMENT



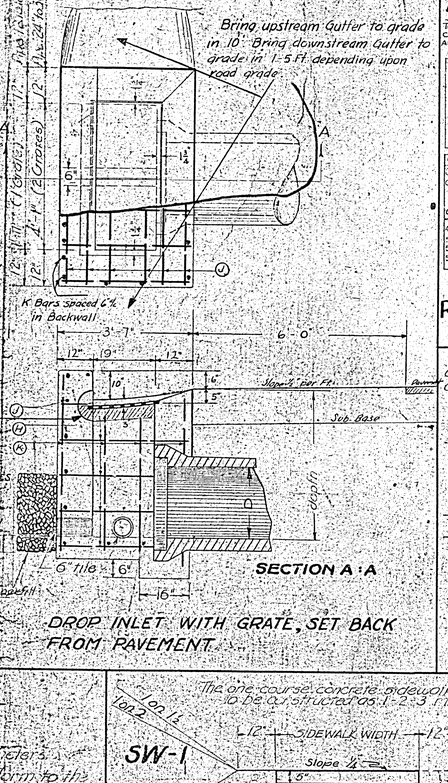
All reinforcing bars spaced 12" c/c except as shown or noted for size and length on Schedule on Standard Structure Sheet S-28



CAST IRON GRATE



To be paid for as Concrete class A (item 41A), Reinforcing Steel (item 42), Drop Inlet, Grate (item 89)



ALL GRATES TO BE SET 3 INCHES LOWER THAN PAVEMENT EDGE WITH 2 INCH SLOPE TO CURB. DROP INLET MAY BE SET FLUSH WITH PAVEMENT EDGE BY OFFSET IN CURB.

REINFORCED CONCRETE RETAINING WALL, CURB, AND GUTTER

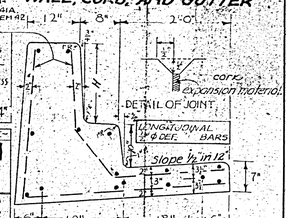
TO BE PAID FOR AS CONCRETE CLASS A ITEM 41A AND REINF. STEEL ITEM 42

TRANSVERSE AND VERTICAL BARS	
⅝" ϕ deformed -	
12" c/c where H = 12' or less	
9" c/c " "	over 14'
6" c/c " "	

QUANTITIES PER LIN. FT.

CONC CLASS A	REINF STEEL excl. pavement dowels	REINF STEEL including pavement dowels
Cu. Ft.	1.85	
4,616	16.51	17.56
5,100	19.41	20.46
5,211	24.31	25.35
5,440	24.78	25.82

H



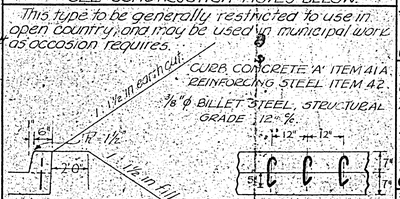
RW-1

2" BARS (PLAIN) DOWELS Length 2'-0" 3 at each joint.

Premoulded Cork Expansion Joint Filler (½" thick) to be placed between face of gutter and pavement slab.

SEE CONSTRUCTION NOTES BELOW.

This type to be generally restricted to use in open country, and may be used on municipal work as occasion requires.



Curb end area: 0.3591 sq yd
Steel per lin ft: 0.585 lbs.

To be paid for as Concrete class A (item 41A) and as Reinf. Steel

DETAIL OF CURB DOWELLED TO PAVEMENT SLAB

GENERAL NOTES —

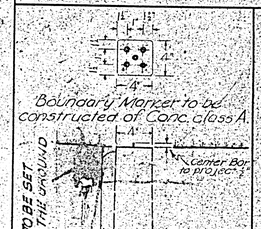
All exposed edges to be chamfered one inch.
All concrete to be class A.
Splices shall have a length of not less than 40 diameters.
Reinforcing Steel Bar reinforcement shall conform to the requirements of the Standard Specifications for New Bridges, Steel Concrete Reinforcement Bars, Serial Designation A-15-35 of the American Society for Testing Materials, Serial Designation A-16-33. "Dowels are to conform to requirements of A-15-35, Structural Steel Grade.
Steel Schedule contemplates some cutting and bending in the field.
All steel to be deformed bars.

REINFORCING STEEL in combined frame, curb and gutter is to conform to Standard Requirements for Conc. Reinforcement Bars of the American Society for Testing Materials, Serial Designation A-16-33. "Dowels are to conform to requirements of A-15-35, Structural Steel Grade.

CORRUGATED GALVANIZED METAL DROP INLETS, ASPHALT COATED WITH GRATES (ITEM 90)

Drop Inlets to be constructed of 24" Corrugated Galvanized Metal Pipe, Asphalt Coated, with outlet pipe of 12" C.G.M.P.A.C. The bottom of the Drop Inlet shall be made of the same gauge of metal as the 24" pipe and shall be welded to it. The 12" outlet pipe is to be welded or riveted to the 24" pipe at the angle shown. The entire metal drop inlet with outlet pipe is to be thoroughly coated, inside and outside, with water-proof asphaltic material. All riveted joints are to be water-tight.

A 12" square asphalt coated column is to be used at the junction of the 12" outlet pipe and the lead-off pipe. Said column to be the same in dimensions as the Metal Drop Inlet.

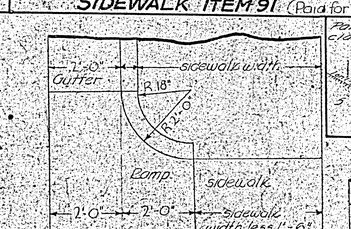


BOUNDARY MARKERS (ITEM 89)

GENERAL NOTES —

All exposed edges to be chamfered one inch.
All concrete to be class A.
Splices shall have a length of not less than 40 diameters.
Reinforcing Steel Bar reinforcement shall conform to the requirements of the Standard Specifications for New Bridges, Steel Concrete Reinforcement Bars, Serial Designation A-15-35 of the American Society for Testing Materials, Serial Designation A-16-33. "Dowels are to conform to requirements of A-15-35, Structural Steel Grade.
Steel Schedule contemplates some cutting and bending in the field.
All steel to be deformed bars.

The one course concrete sidewalk to be constructed as 1:2:3 mix.



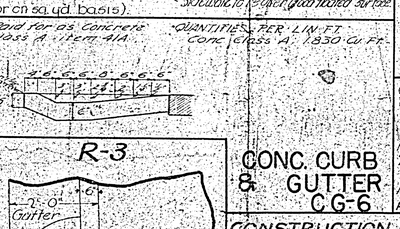
ONE COURSE CEMENT CONCRETE SIDEWALK ITEM 91 (Paid for on sq. yd. basis).

Coarse aggregate to have a maximum size of three-quarters of an inch.

Sidewalk joints to be placed every 6 ft. and so adjusted that one will occur opposite each transverse joint in the pavement, when sidewalk or curb is placed adjacent. Metal separation plates ⅜ to ¾" thick will be allowed with expansion joint material. ½" thick, placed at intervals of approximately every 30 feet.

½" expansion joint material to be placed between sidewalk and curb or concrete gutter at locations called for on the plans.

Sidewalk to be given a broom finish surface.



Ramps are to be constructed of One Course Concrete Pavement (ITEM 35A) as specified in Item 609 of the Standard Specifications for Highway and Bridge Construction.

DETAIL OF RAMPS

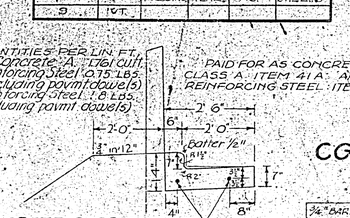
ONE COURSE CEMENT CONCRETE PAVEMENT (ITEM 35A)

REINFORCED CONCRETE CURB AND GUTTER WITH GUARD RAIL

CG-1

QUANTITIES PER LIN. FT.
Concrete Class A: 1.161 cu. ft.
Reinforcing Steel: 0.75 lbs. (excluding pavmt dowels)
*Reinforcing Steel: 1.8 lbs. (including pavmt dowels)

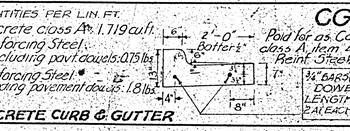
PAID FOR AS CONCRETE CLASS A ITEM 41A AND REINFORCING STEEL ITEM 42.



CONCRETE CURB AND GUTTER

CG-2

QUANTITIES PER LIN. FT.
Concrete class A: 1.119 cu. ft.
Reinforcing Steel excluding pavt. dowels: 0.75 lbs.
*Reinforcing Steel including pavement dowels: 1.8 lbs.

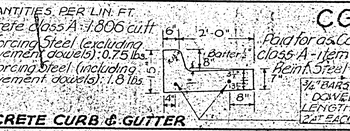


Paid for as Concrete class A Item 41A and Reinf. Steel Item 42

CONCRETE CURB & GUTTER

CG-3

QUANTITIES PER LIN. FT.
Concrete class A: 1.806 cu. ft.
Reinforcing Steel (excluding pavement dowels): 0.75 lbs.
Reinforcing Steel (including *pavement dowels): 1.8 lbs.

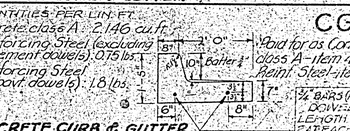


Paid for as Concrete class A Item 41A and Reinf. Steel Item 42

CONCRETE CURB & GUTTER

CG-4

QUANTITIES PER LIN. FT.
Concrete class A: 2.146 cu. ft.
Reinforcing Steel (excluding pavement dowels): 0.75 lbs.
*Reinforcing Steel (incl. pavt. dowels): 1.8 lbs.

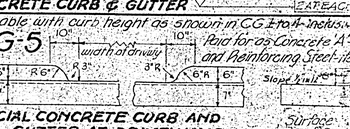


Paid for as Concrete class A Item 41A and Reinf. Steel Item 42

CONCRETE CURB & GUTTER

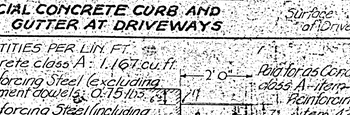
† Variable with curb height as shown in CG-1 to 4 inclusive.

CG-5



SPECIAL CONCRETE CURB AND GUTTER AT DRIVEWAYS

QUANTITIES PER LIN. FT.
Concrete class A: 1.167 cu. ft.
Reinforcing Steel (excluding pavement dowels): 0.75 lbs.
*Reinforcing Steel including pavement dowels: 1.8 lbs.

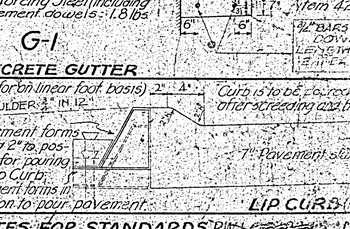


Paid for as Concrete class A Item 41A and Reinforcing Steel Item 42

G-1

CONCRETE GUTTER

(Paid for on linear foot basis)



CONC. CURB & GUTTER CG-6

CONSTRUCTION NOTES FOR STANDARDS RW-1, CG-1 AND G-1

1. If called for on the plans, curb and gutter sections are to be doweled to the pavement slabs with ⅝" ϕ (deformed) Bars, 4'-0" long, two dowels being used for every 8'-0" section.
2. Joints in Curb and Gutter and Wall Curb and Gutter not to exceed 8'-0" apart.
3. Pre-moulded bituminous expansion joint filler, ½" thick, to be placed every 40 ft. in Curb and Gutter, and in Wall Curb and Gutter, every 81 ft.
4. Remaining Joints to be either butt joints painted with bituminous material or dummy joints.
5. Joints in CG-6 Gutter section are to be placed so that one will occur every reverse curve.
6. Unless otherwise specified, all exposed edges are to be rounded to 3/8" Rad.
7. Joints between pavement and gutter to be pointed with bituminous material unless noted otherwise.

DESIGNED	A.J. RUNNALS	
DRAWN	W.S.P.	8-55
TRACED	G	
CHECKED	L.F.C.ONE	
APPROVED	Oct. 29 1954	

ROAD ENGINEER

SUBMITTED BY ORDER OF THE STATE HIGHWAY BOARD

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

STANDARD STRUCTURES

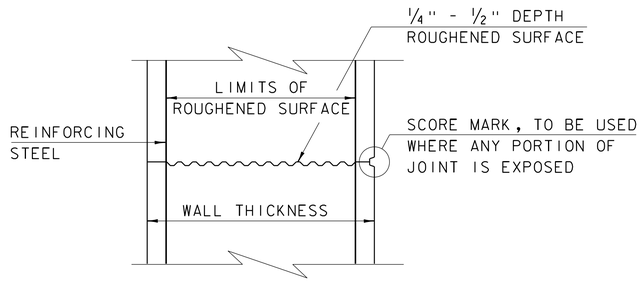
SPECIAL DROP INLETS, CURB AND GUTTER, RETAINING WALLS, SIDEWALKS ETC.

SERIES 1955

NEWBURY BO 1447(32)
SHEET 20 OF 20
FOR REFERENCE ONLY

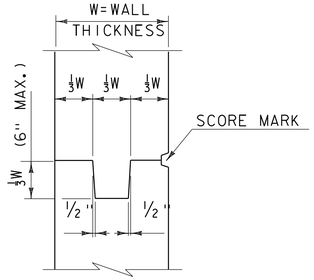
CONCRETE GENERAL NOTES

1. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1" x 1"
2. REINFORCING STEEL SIZE AND SPACING SHOWN IN THE PLANS IS BASED ON 60 KSI STEEL, UNLESS NOTED OTHERWISE. WITH THE ENGINEER'S PERMISSION, BAR SIZE AND SPACING MAY BE MODIFIED ACCORDING TO THE LATEST AASHTO LRFD BRIDGE DESIGN SPECIFICATION AND STRUCTURES DESIGN MANUAL WHEN USING HIGHER STRENGTH STEEL.

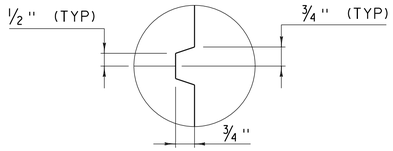


TYPICAL HORIZONTAL CONSTRUCTION JOINT
(NOT TO SCALE)

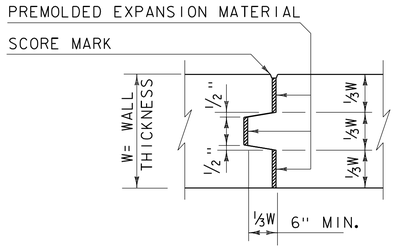
1. THE SURFACE OF THE CONCRETE CONSTRUCTION JOINTS SHALL BE CLEANED AND FREE OF LAITANCE.
2. IMMEDIATELY BEFORE NEW CONCRETE IS PLACED, ALL CONSTRUCTION JOINTS SHALL BE WETTED AND STANDING WATER REMOVED.



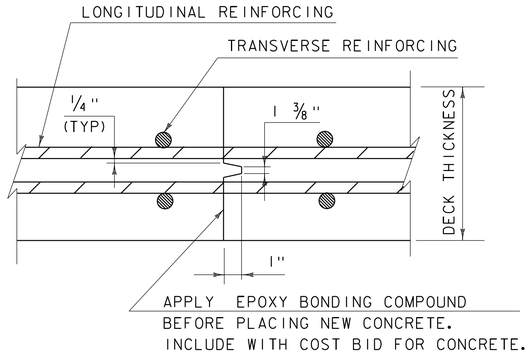
TYPICAL CONCRETE CONSTRUCTION JOINT
(NOT TO SCALE)



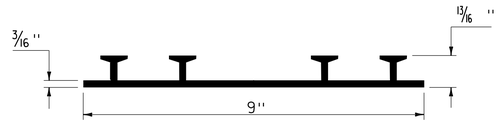
SCORE MARK DETAIL
(NOT TO SCALE)



TYPICAL CONCRETE EXPANSION JOINT
(NOT TO SCALE)



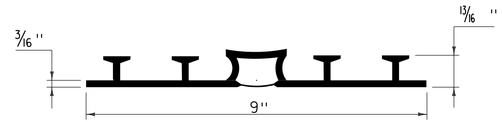
TRANSVERSE BRIDGE SLAB CONSTRUCTION JOINT DETAILS
(NOT TO SCALE)



P.V.C. WATERSTOP FOR CONSTRUCTION JOINTS
(NOT TO SCALE)

PAYMENT FOR THE P.V.C. WATERSTOP SHALL BE INCIDENTAL TO THE UNIT BID PRICE FOR THE ADJACENT CONCRETE.

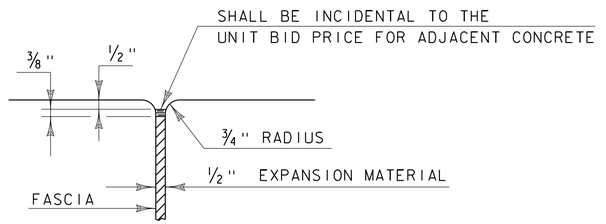
OTHER CONFIGURATIONS OF WATERSTOP MAY BE USED UPON APPROVAL OF THE ENGINEER.



P.V.C. WATERSTOP FOR EXPANSION JOINTS
(NOT TO SCALE)

PAYMENT FOR THE P.V.C. WATERSTOP SHALL BE INCIDENTAL TO THE UNIT BID PRICE FOR THE ADJACENT CONCRETE.

OTHER CONFIGURATIONS OF WATERSTOP MAY BE USED UPON APPROVAL OF THE ENGINEER.



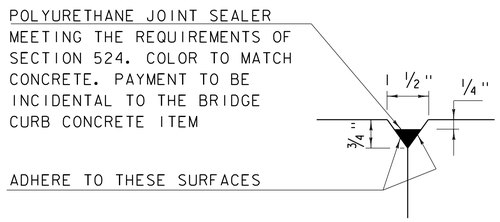
JOINT BETWEEN FASCIA AND WINGWALL
(NOT TO SCALE)

REVISIONS	
MAY 7, 2010	APPROVED FOR USE BY VAOT STRUCTURES SECTION
FEBRUARY 9, 2012	REBAR SUBSTITUTION ALLOWANCE ADDED TO CONCRETE GENERAL NOTES.

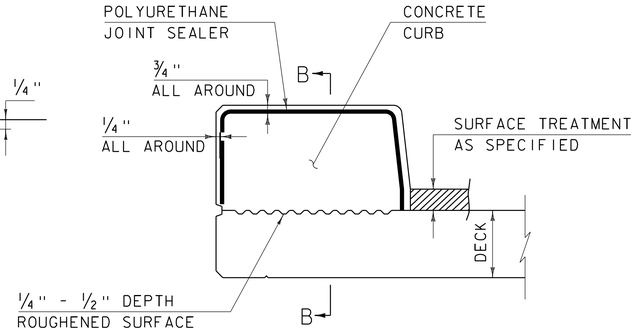
CONCRETE DETAILS AND NOTES

VERMONT AGENCY OF TRANSPORTATION
STRUCTURES - SECTION

STRUCTURES DETAIL
SD-501.00

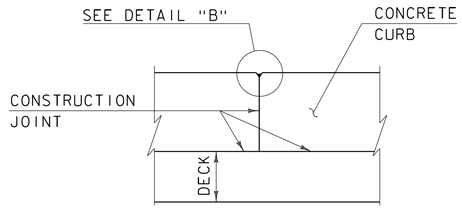


DETAIL "B"
(NOT TO SCALE)

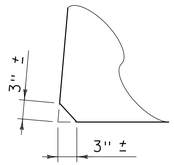


CONCRETE CURB JOINT SECTION
(NOT TO SCALE)

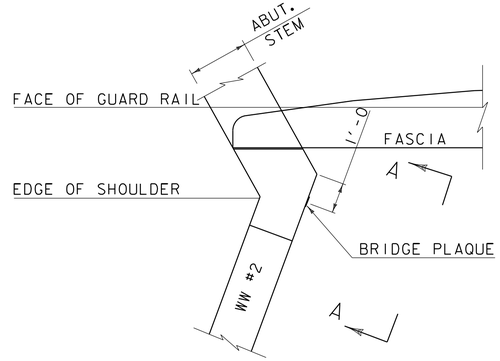
1. SEE TYPICAL HORIZONTAL CONSTRUCTION JOINT DETAIL FOR ADDITIONAL INFORMATION



SECTION B - B
(NOT TO SCALE)



ACUTE ANGLE CLIP DETAIL
(NOT TO SCALE)



PLAN

CONCRETE CURB JOINT NOTES

1. CONCRETE CURBS MAY BE PLACED IN ONE CONTINUOUS OPERATION IF AN APPROVED SHRINKAGE REDUCING ADMIXTURE LISTED IN THE SPECIAL PROVISIONS IS USED WITH THE CONCRETE MIX DESIGN. PAYMENT FOR THE SHRINKAGE REDUCING ADMIXTURE WILL BE INCIDENTAL TO THE BRIDGE CURB CONCRETE ITEM.

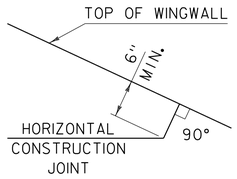
2. IF THE CONTRACTOR CHOOSES NOT TO USE AN APPROVED SHRINKAGE REDUCING ADMIXTURE, THE CURBS SHALL BE CONSTRUCTED WITH CONSTRUCTION JOINTS SPACED AT A MAXIMUM OF 15'-0" CENTER TO CENTER AND 2'-0" MINIMUM FROM THE CENTER OF NEAREST BRIDGE RAILING POST.

3. ON MULTI-SPAN CONTINUOUS SUPERSTRUCTURES, REGARDLESS OF WHETHER APPROVED SHRINKAGE REDUCING ADMIXTURE IS USED, CURB JOINTS SHALL BE LOCATED OVER THE CENTERLINE OF PIERS AND 7'-0" EACH SIDE OF THE CENTERLINE OF EACH PIER.

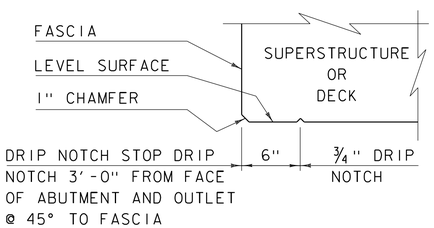
4. WHEN CURB JOINTS ARE USED THE CURBS SHALL BE PLACED IN ALTERNATE SECTIONS WITH A MINIMUM OF 48 HOUR DELAY BETWEEN ADJACENT PLACEMENTS.

5. LONGITUDINAL REINFORCING SHALL BE CONTINUOUS THROUGH CURB CONSTRUCTION JOINTS. CURB STIRRUP BARS SHALL BE TURNED AS NECESSARY TO MAINTAIN COVER IN THE FLARED CURB ENDS.

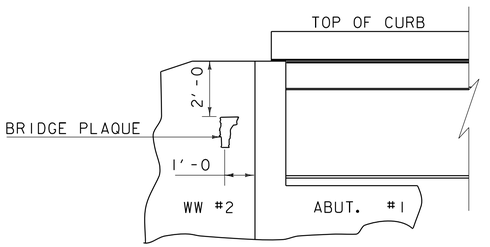
6. THE JOINT SPACING AND DETAILS SHOWN SHALL APPLY TO SIDEWALKS WHEN SHOWN IN THE PLANS.



HORIZONTAL WINGWALL CONSTRUCTION JOINT
(NOT TO SCALE)



DRIP NOTCH DETAIL
(NOT TO SCALE)



VIEW "A - A"

BRIDGE PLAQUE
(NOT TO SCALE)

THE BRIDGE PLAQUE WILL BE SUPPLIED BY THE AGENCY OF TRANSPORTATION AND SHALL BE INSTALLED BY THE CONTRACTOR AT ABUTMENT #1 ON THE RIGHT SIDE AS SHOWN OR AS DIRECTED BY THE ENGINEER.

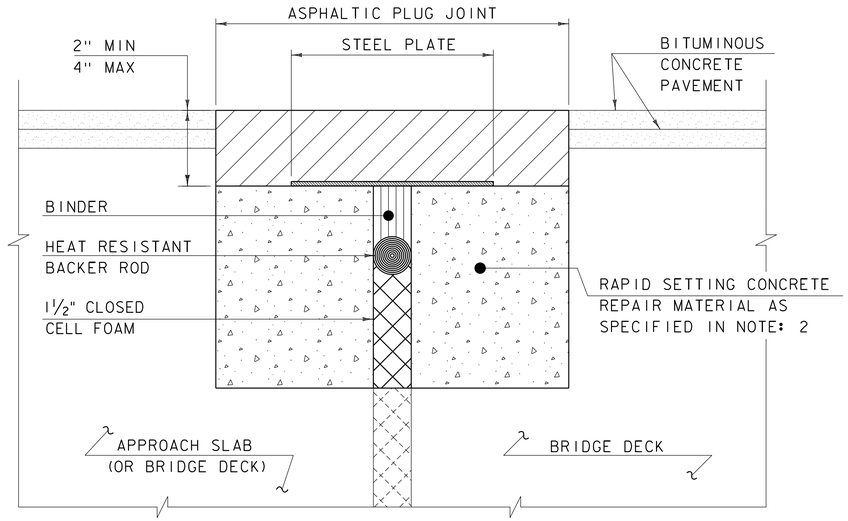
PAYMENT FOR INSTALLATION OF THE BRIDGE PLAQUE SHALL BE INCIDENTAL TO THE ADJACENT CONCRETE.

REVISIONS	
MAY 7, 2010	APPROVED FOR USE BY VAOT STRUCTURES SECTION
JUNE 4, 2010	MODIFIED AND ADDED TWO DETAILS
OCTOBER 10, 2012	MODIFIED HORZ. JOINT WINGWALL ADD 6" MIN. DIMENSION

CONCRETE DETAILS AND NOTES

VERMONT AGENCY OF TRANSPORTATION
STRUCTURES - SECTION

STRUCTURES DETAIL
SD-502.00



ASPHALTIC PLUG JOINT DETAIL - REHAB

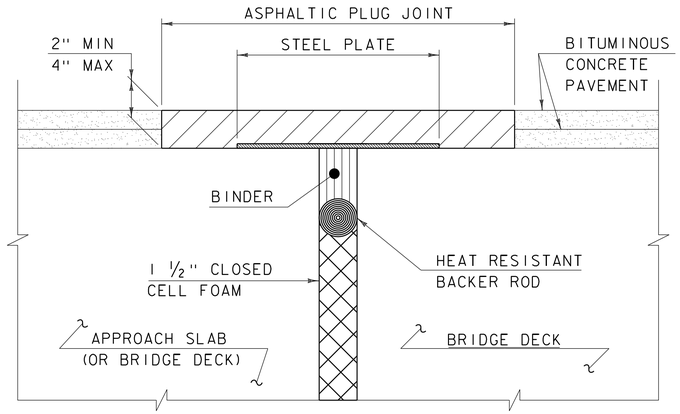
NOTES:

1. THE CONTRACTOR SHALL REMOVE ALL ASPHALTIC PLUG JOINT MATERIAL AND DETERIORATED CONCRETE AS DIRECTED BY THE ENGINEER. REMOVAL OF THE FIRST 4 INCHES OF MATERIAL SHALL BE INCLUDED IN THE BID PRICE FOR ITEM 516.10 BRIDGE EXPANSION JOINT, ASPHALTIC PLUG. ANY REMOVAL OF MATERIAL GREATER THAN 4 INCHES SHALL BE INCLUDED IN THE BID PRICE OF ITEM 580.20 RAPID SETTING CONCRETE REPAIR MATERIAL WITH COARSE AGGREGATE.

2. THE CONTRACTOR SHALL REPLACE REMOVED MATERIAL THAT IS LESS THAN 4" FROM FINISHED GRADE WITH ASPHALTIC PLUG JOINT MATERIAL MEETING THE REQUIREMENTS OF SUBSECTION 707.15. ALL REMOVED MATERIAL THAT IS GREATER THAN 4 INCHES FROM FINISHED GRADE SHALL BE REPLACED WITH RAPID SETTING CONCRETE REPAIR MATERIAL WITH COARSE AGGREGATE MEETING THE REQUIREMENTS OF SUBSECTION 780.04.

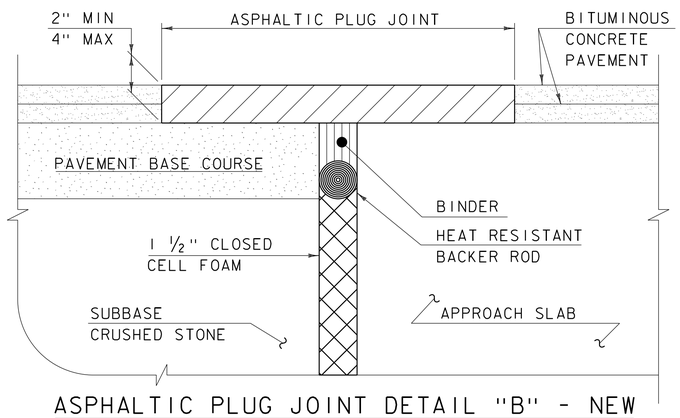
3. REINFORCING STEEL NOT SHOWN FOR CLARITY.

4. PLACE 1/4" THICK BY 8" WIDE SECTIONS OF STEEL PLATE OVER THE CENTER OF THE MOVEMENT GAP. SECURE THE PLATES FROM MOVING BY INSERTING LOCATING PINS THROUGH THE PRE-STAMPED HOLES INTO BACKER ROD AND COVER WITH HOT BINDER. THE STEEL PLATES MAY BE OMITTED WHERE THE ENGINEER DETERMINES THAT THE APPROACH SLAB OR BRIDGE DECK WILL PROVIDE INADEQUATE SUPPORT AND WHERE VERTICAL MOVEMENT OF THE PLATES MIGHT OCCUR.



ASPHALTIC PLUG JOINT DETAIL "A" - NEW

NOTE:
PLACE 1/4" THICK BY 8" WIDE SECTIONS OF STEEL PLATE OVER THE CENTER OF THE MOVEMENT GAP. SECURE THE PLATES FROM MOVING BY INSERTING LOCATING PINS THROUGH THE PRE-STAMPED HOLES INTO BACKER ROD AND COVER WITH HOT BINDER.



ASPHALTIC PLUG JOINT DETAIL "B" - NEW

ASPHALTIC PLUG JOINT NOTES

INSTALLATION:

1. LOCATE THE JOINT CENTRALLY OVER THE DECK OVERLAY EXPANSION GAP OR FIXED JOINT, MARKED OUT TO THE MANUFACTURER'S RECOMMENDED WIDTH.
2. REMOVE THE BITUMINOUS CONCRETE PAVEMENT FULL DEPTH AS SHOWN ON THE PLANS. THE PAVEMENT SHALL BE DRY AND SAW CUT TO THE LIMITS REQUIRED TO PLACE THE JOINT. A PNEUMATIC HAMMER AND CHISEL MAY BE USED ADJACENT TO THE CURB ONLY WHEN SAW CUTTING IS NOT POSSIBLE.
3. BLAST CLEAN THE JOINT AREA OF DEBRIS, ASPHALT AND SHEET MEMBRANE. THOROUGHLY DRY THE JOINT AREA WITH COMPRESSED AIR PRIOR TO APPLYING BINDER MATERIAL.
4. PLACE PROPERLY SIZED HEAT RESISTANT BACKER ROD IN THE MOVEMENT GAP ALLOWING FOR 1" +/- OF BINDER ABOVE THE ROD.
5. HEAT AND PLACE THE BINDER MATERIAL AS RECOMMENDED BY THE MANUFACTURER.
6. IMMEDIATELY AFTER TOP COATING, CAST AN ANTI-SKID MATERIAL OVER THE JOINT TO REDUCE THE RISK OF TRACKING.

WEATHER LIMITATIONS

APPLY BINDER MATERIAL ONLY WHEN THE FOLLOWING CONDITIONS PREVAIL OR AS RECOMMENDED BY THE MANUFACTURER:

1. THE AMBIENT AIR TEMPERATURE IS AT LEAST 10 DEG C (50 DEG F) AND RISING.
2. THE ROAD SURFACE IS DRY.
3. WEATHER CONDITIONS OR OTHER CONDITIONS ARE FAVORABLE AND ARE EXPECTED TO REMAIN SO FOR THE PERFORMANCE OF SATISFACTORY WORK.

DETAILS ON THIS SHEET ARE NOT TO SCALE.

REVISIONS	
MAY 7, 2010	APPROVED FOR USE BY VAOT STRUCTURES SECTION
AUGUST 29, 2011	ADD DETAIL "B" AND REV. NOTES

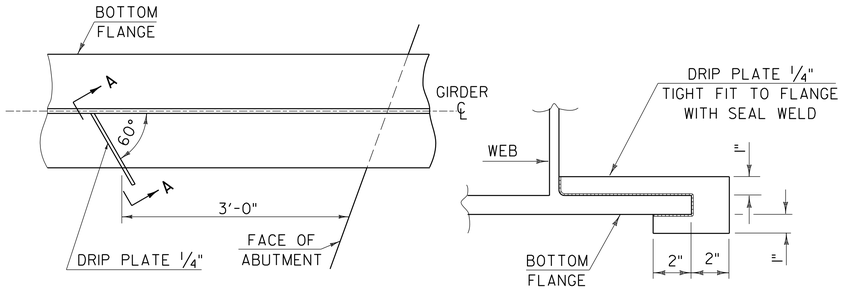
BRIDGE JOINT
ASPHALTIC PLUG

VERMONT AGENCY OF TRANSPORTATION
STRUCTURES - DIVISION

STRUCTURES DETAIL
SD-516.10

STRUCTURAL STEEL GENERAL NOTES:

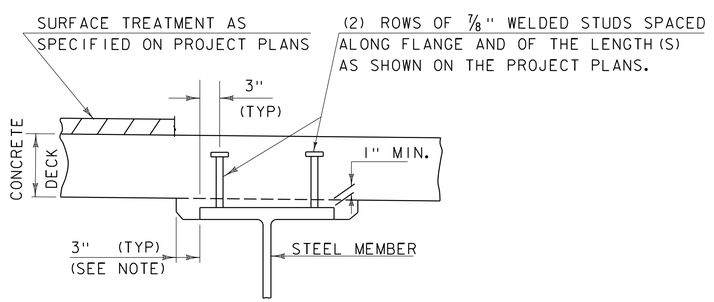
1. ALL FIELD CONNECTIONS SHALL BE MADE WITH 7/8" DIAMETER HIGH-STRENGTH BOLTS IN 15/16" DIAMETER HOLES, PER SUBSECTION 506.19, UNLESS OTHERWISE SPECIFIED.
2. ALL HOLES IN THE WEBS OF THE FASCIA GIRDERS THAT ARE NOT OTHERWISE FILLED, SHALL BE FILLED WITH EITHER BUTTON HEAD OR HEX HEAD BOLTS. THESE BOLTS SHALL BE TIGHTENED IN ACCORDANCE WITH SUBSECTION 506.19.
3. ALL WELDING SHALL CONFORM TO THE PROVISIONS OF SUBSECTION 506.10.
4. ANY CONNECTIONS THAT ARE NOT DETAILED ON THE PLANS SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE STRUCTURES ENGINEER FOR APPROVAL.
5. STRUCTURAL STEEL MEMBERS DESIGNATED "CVN" IN THE PLANS SHALL BE CHARPY V-NOTCH TESTED IN ACCORDANCE WITH SUBSECTION 714.01 OF THE STANDARD SPECIFICATIONS.
6. ENDS OF GIRDERS ARE TO BE VERTICAL IN THEIR FINAL POSITION.
7. AFTER SUPERSTRUCTURE STEEL HAS BEEN ERECTED, ELEVATIONS ALONG THE TOP OF THE GIRDERS SHALL BE TAKEN AS DIRECTED BY THE RESIDENT ENGINEER FOR USE IN DETERMINING FINISHED GRADES.



PLAN DRIP PLATE

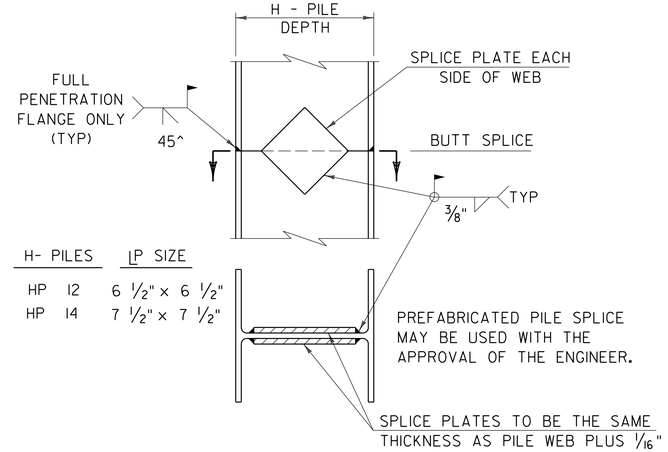
SECTION A - A

NOTE: DRIP PLATES SHALL BE PLACED ON OUTSIDE EDGE OF FASCIA GIRDERS ON THE HIGH SIDE OF ALL PIERS AND ABUTMENTS OR AS INDICATED ON PROJECT PLANS.



NOTE:
THE 3" HORIZONTAL SECTION MAY BE ELIMINATED FOR FORMING SYSTEMS DESIGNED FOR THE CONSTRUCTION OF VERTICAL HAUNCHES. ANY VOIDS RESULTING FROM FORMING SYSTEM ELEMENTS SHALL BE FILLED WITH JOINT SEALER, POLYURETHANE MEETING THE REQUIREMENTS OF SECTION 524. THE COST OF THE JOINT SEALER, POLYURETHANE SHALL BE INCIDENTAL TO THE ADJACENT CONCRETE.

HAUNCH AND SHEAR CONNECTOR DETAIL



H- PILES	LP SIZE
HP 12	6 1/2" x 6 1/2"
HP 14	7 1/2" x 7 1/2"

DETAIL OF PILE SPLICE

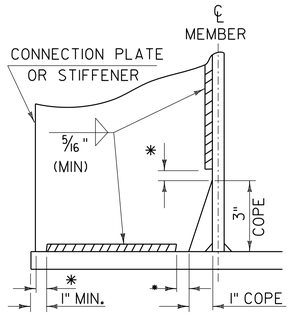
DETAILS ON THIS SHEET ARE "NOT TO SCALE" UNLESS NOTED OTHERWISE.

REVISIONS	
MAY 7, 2010	APPROVED FOR USE BY VAOT STRUCTURES SECTION
JUNE 4, 2010	MODIFIED NOTES

STRUCTURAL STEEL DETAILS & NOTES

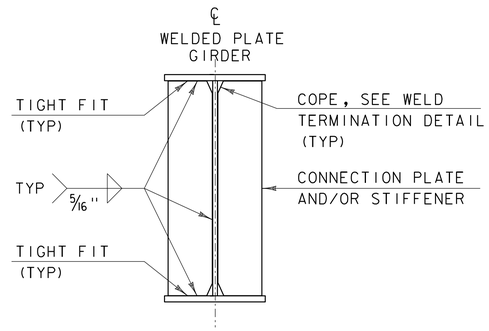
VERMONT AGENCY OF TRANSPORTATION
STRUCTURES - SECTION

STRUCTURES DETAIL
SD-601.00



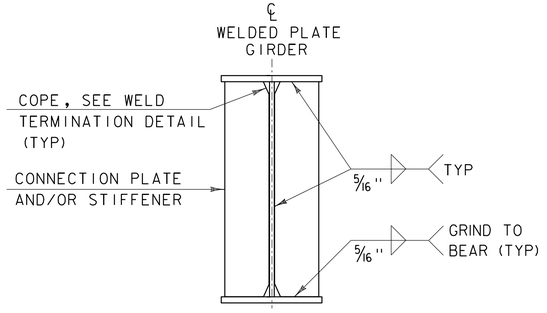
WELD TERMINATION AND COPING DETAILS FOR STEEL MEMBERS

*NO WELD FOR 3/8" MIN. 7/8" MAX. (EXCEPT MUST MAINTAIN 1" MINIMUM FROM EDGE OF FLANGE)

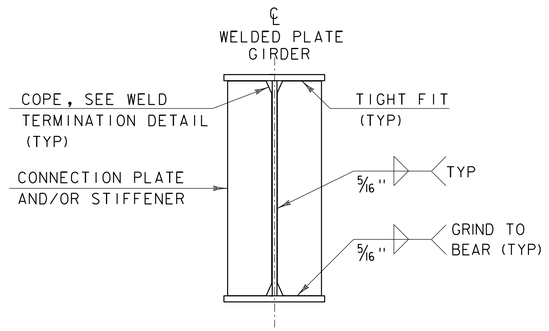


INTERMEDIATE CONNECTION PLATES AND/OR STIFFENERS FOR WELDED PLATE GIRDERS

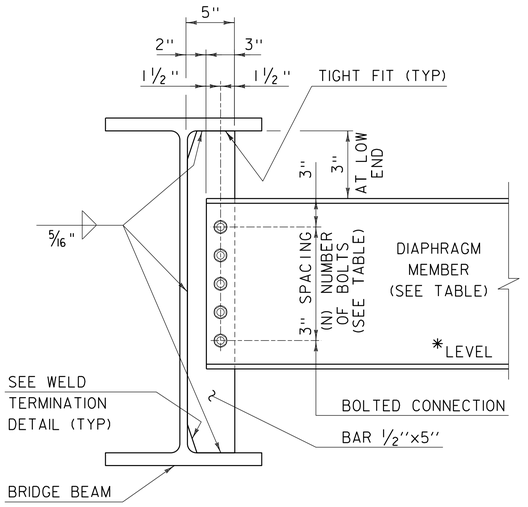
INTERMEDIATE DETAIL IS ONLY USED WHEN PLATE DOES NOT OCCUR AT AN ABUTMENT OR PIER.



ABUTMENT BEARING STIFFENERS AND/OR CONNECTION PLATES FOR WELDED PLATE GIRDERS



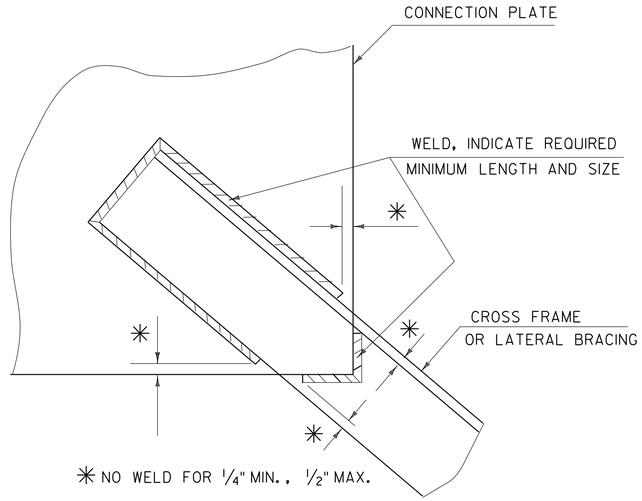
PIER BEARING STIFFENERS AND/OR CONNECTION PLATES FOR WELDED PLATE GIRDERS



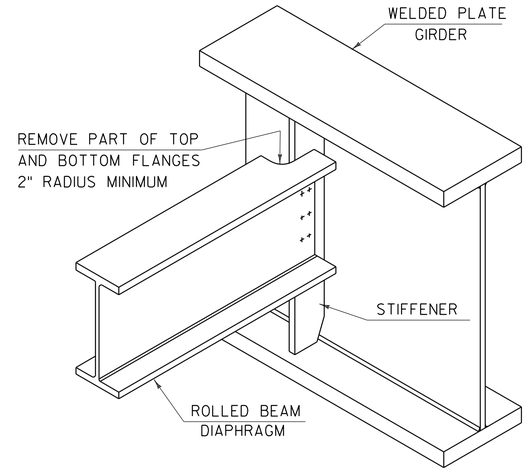
DEPTH		DIAPHRAGM MEMBER	(N) BOLTS
ROLLED BEAM	24" 30"	C15x33.9	4
	31" 36"	MC18x42.7	5
	37" 42"	W21x44	6
PLATE GIRDER WEB	31" 36"	W27x84	7
	37" 42"	W33x118	9
	43" 48"	W36x135	10

INTERMEDIATE DIAPHRAGMS FOR 24" TO 48" BRIDGE BEAMS

* IF CLEARANCE CANNOT BE MET, DIAPHRAGM MAY BE SLOPED.



WELD LOCATION DETAIL AT CROSS FRAMES AND LATERAL BRACING



SEE CONTRACT DRAWINGS FOR SIZES OF MEMBERS AND CONNECTION DETAILS

ROLLED BEAM USED AS DIAPHRAGM

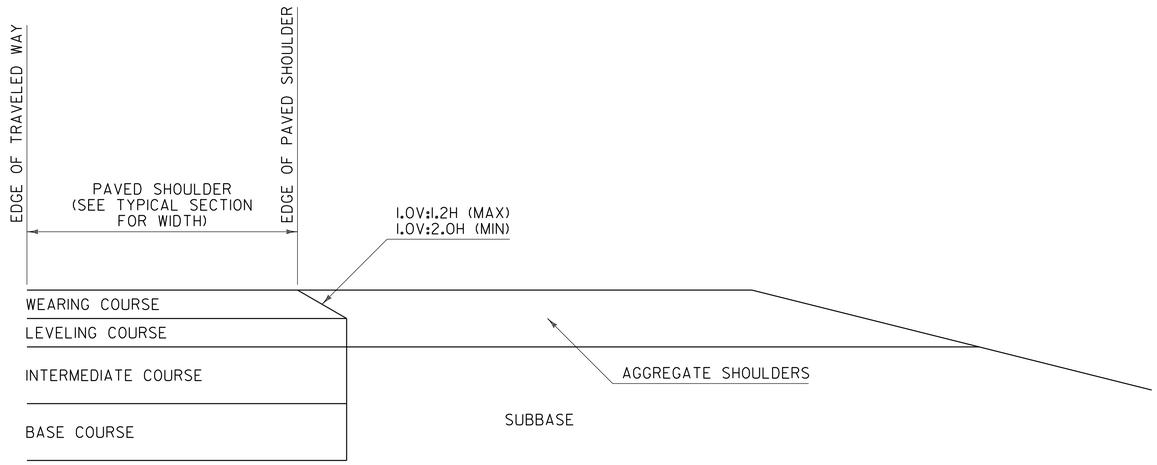
DETAILS ON THIS SHEET ARE "NOT TO SCALE" UNLESS NOTED OTHERWISE.

REVISIONS	
MAY 7, 2010	APPROVED FOR USE BY VAOT STRUCTURES SECTION
MAY 2, 2011	ADD INTERMEDIATE DIAPHRAGMS DETAIL & ADD NOT TO SCALE NOTE

STRUCTURAL STEEL PLATE GIRDER DETAILS AND NOTES

VERMONT AGENCY OF TRANSPORTATION
STRUCTURES - SECTION

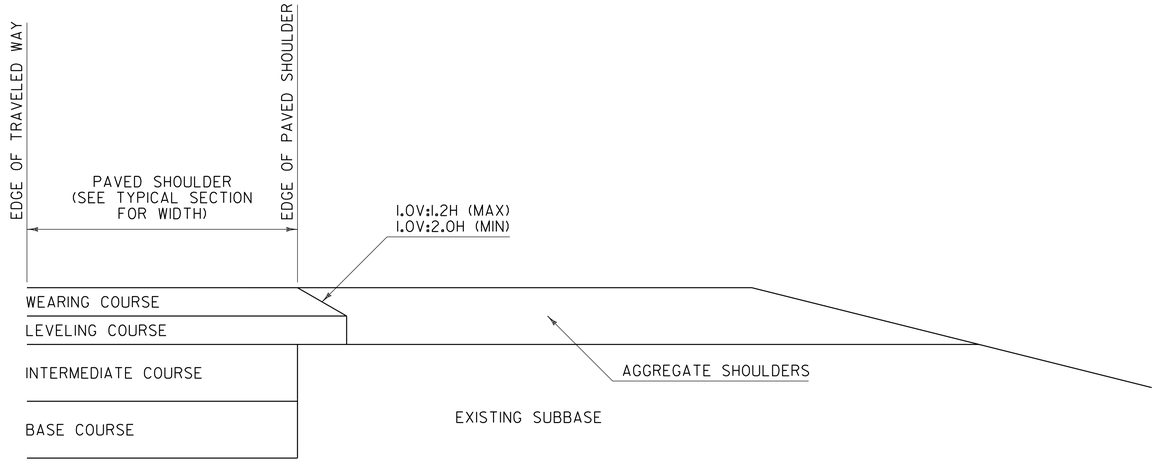
STRUCTURES DETAIL SD-602.00



SAFETY EDGE DETAIL
FOR PAVING BELOW WEARING COURSE

NOTES:

1. THIS DETAIL IS INTENDED FOR WHEN PAVING EXTENDS BELOW THE WEARING COURSE.
2. PRIOR TO PLACEMENT OF THE LEVELING AND/OR WEARING COURSE, THE SUBBASE LOCATED BENEATH THE AGGREGATE SHOULDERS SHALL BE PREPARED FLUSH WITH THE BOTTOM OF THE LEVELING COURSE.
3. BASE COURSE LIMITS MAY VARY, SEE TYPICAL SECTIONS FOR WIDTH.



SAFETY EDGE DETAIL
FOR PAVING WEARING COURSE ONLY

NOTES:

1. THIS DETAIL IS INTENDED FOR WHEN ONLY THE LEVELING AND/OR WEARING COURSE IS TO BE PLACED.
2. PAVEMENT COURSES MAY VARY, SEE TYPICAL SECTIONS FOR ACTUAL PAVEMENT COURSES REQUIRED.

SAFETY EDGE WIDTH BASED ON WEARING COURSE THICKNESS AND A 1V:1.6H SLOPE	
WEARING COURSE THICKNESS (INCHES)	NOMINAL SAFETY EDGE WIDTH (INCHES)
1.25	2.000
1.50	2.375
1.75	2.750
2.00	3.125
2.25	3.500
2.50	4.000

GENERAL NOTES:

1. PLACEMENT OF THE WEARING COURSE SHALL INCLUDE THE SAFETY EDGE, UNLESS THE FOLLOWING APPLIES:
   - A. THE ADJACENT SLOPE IS STEEPER THAN THE SAFETY EDGE.
   - B. THE EDGE OF PAVEMENT BEING PLACED ABUTS BOUND MATERIAL.
   - C. VEHICLES ARE RESTRICTED FROM LEAVING THE PAVED SURFACE (EXAMPLE: GUARDRAIL).
2. THE SAFETY EDGE SHALL BE FORMED IN SUCH A WAY THAT THE BITUMINOUS CONCRETE PAVEMENT IS EXTRUDED OR COMPRESSED TO FORM THE SLOPE. DEVICES THAT SIMPLY STRIKE-OFF THE MIX WITHOUT PROVIDING ANY COMPACTIVE EFFORT WILL NOT BE ALLOWED.
3. THE SAFETY EDGE SHALL NOT BE CONSIDERED PART OF THE PAVED SHOULDER.
4. THIS WORK SHALL BE INCIDENTAL TO THE RESPECTIVE BITUMINOUS CONCRETE PAVEMENT ITEM.

REV.	DATE	DESCRIPTION
0	MAR. 29, 2016	ORIGINAL APPROVAL
1	JAN. 5, 2018	ANNOTATION CORRECTIONS

OTHER DETAILS REQUIRED: NONE

DETAILS APPROVED FOR USE BY HIGHWAY SAFETY & DESIGN

SAFETY EDGE DETAILS

VTrans Working to Get You There
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HIGHWAY SAFETY & DESIGN DETAIL

HSD-400.01