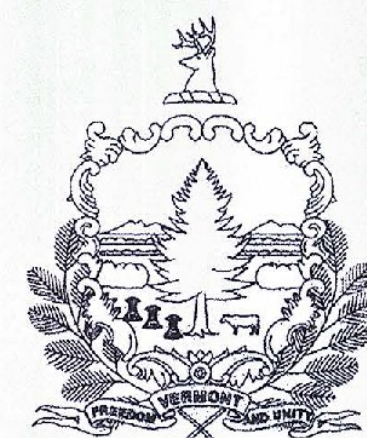


STATE OF VERMONT
AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT
BRIDGE PROJECT
TOWN OF LYNDON
COUNTY OF CALEDONIA
US ROUTE 5 BRIDGES NO. 144 & 147

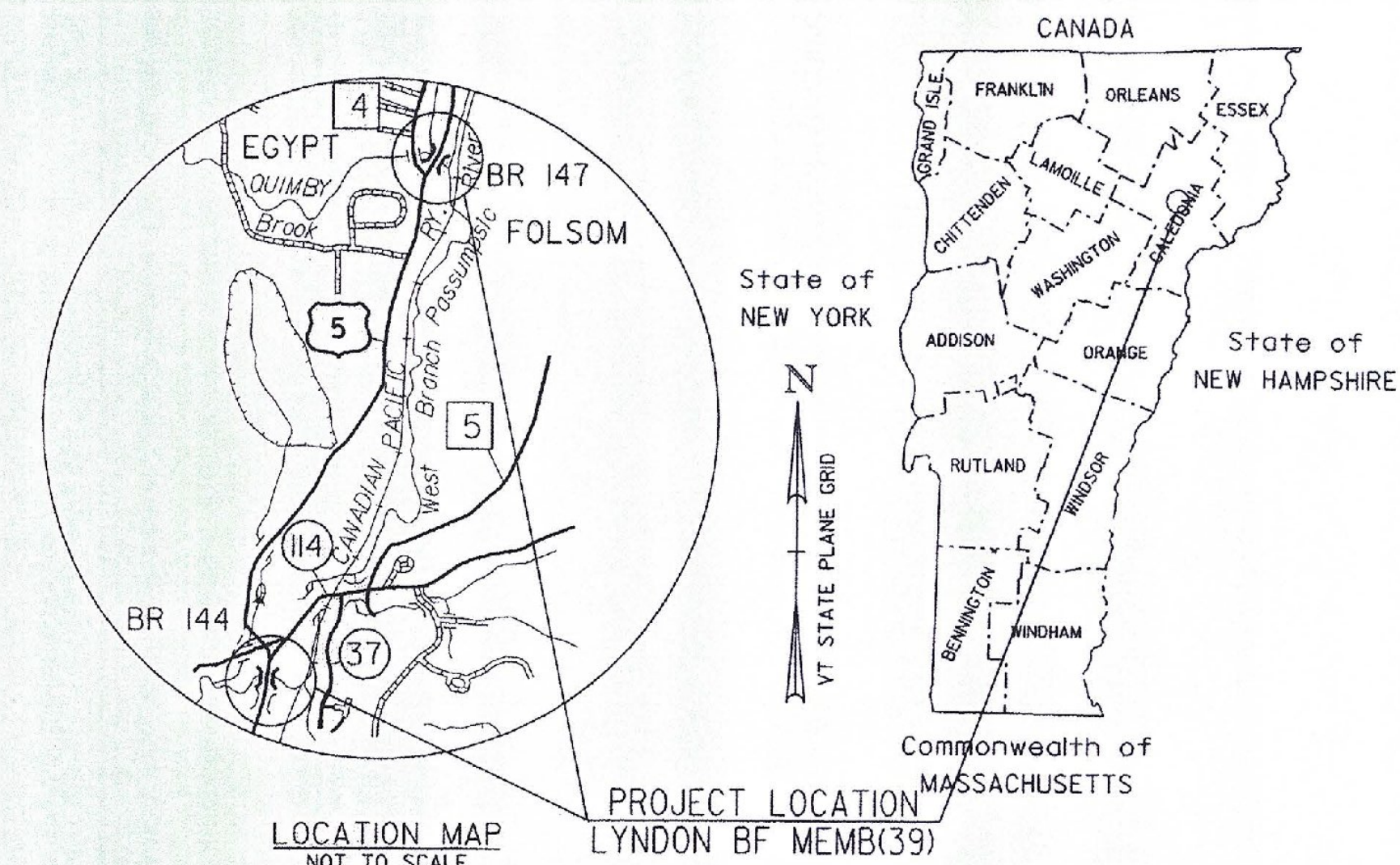
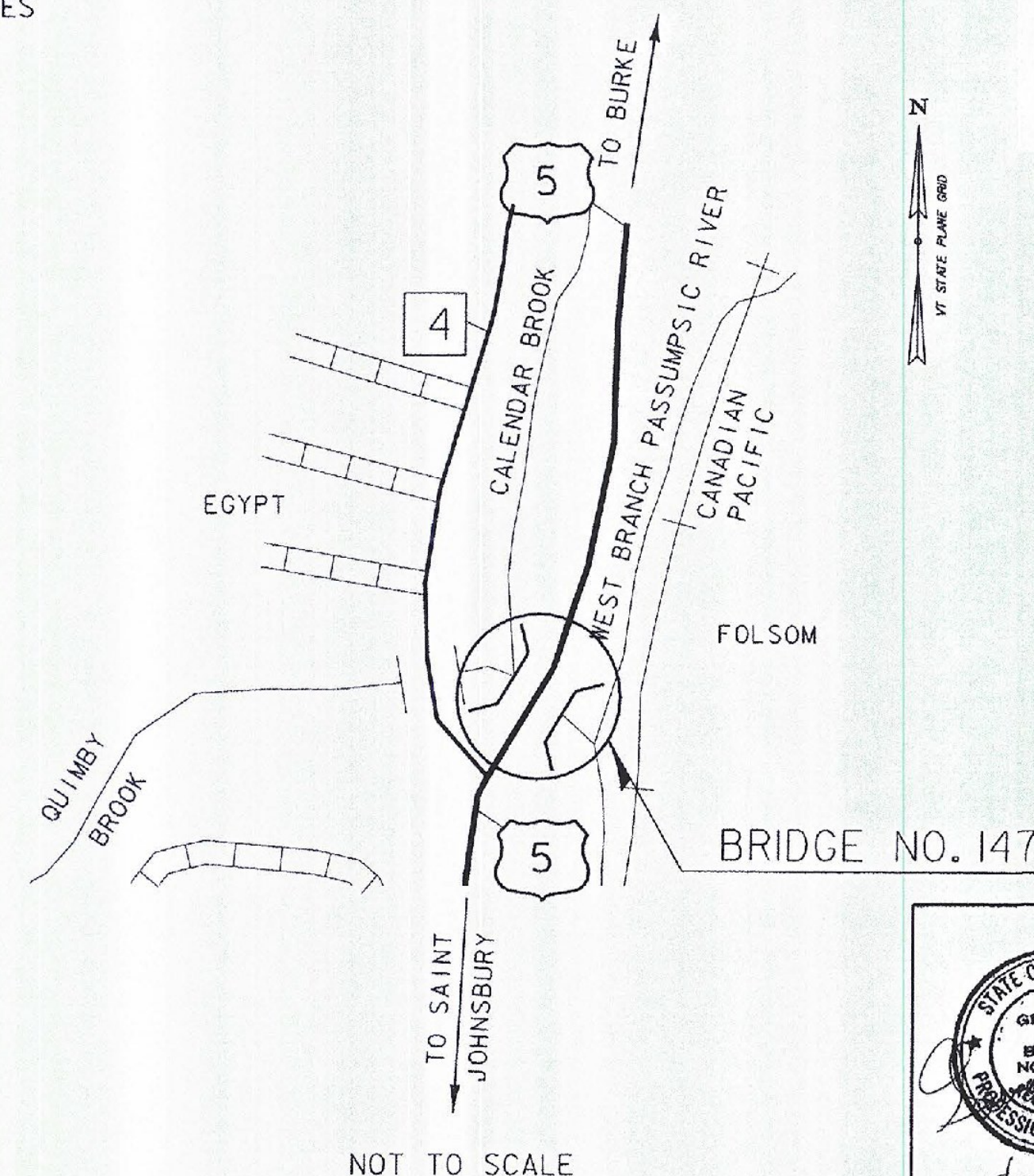
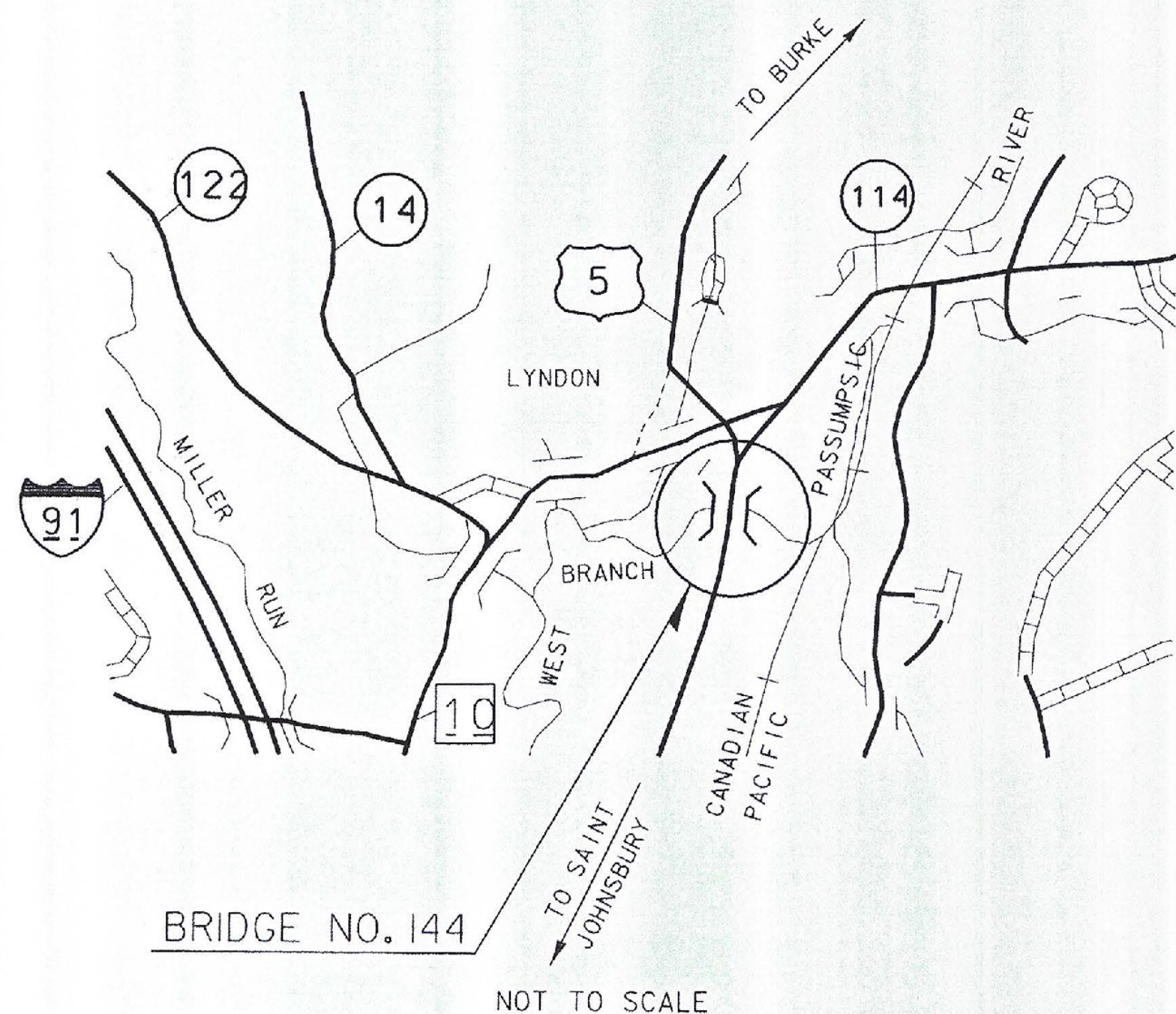
PROJECT LOCATIONS: BRIDGE 144 IS LOCATED ON US ROUTE 5 (M.M. 3.64) OVER PASSUMPSIC RIVER IN THE TOWN OF LYNDON.

BRIDGE 147 IS LOCATED ON US ROUTE 5 (M.M. 6.52) OVER CALENDAR BROOK IN THE TOWN OF LYNDON.

PROJECT DESCRIPTION: REMOVAL AND REPLACEMENT OF BITUMINOUS CONCRETE WEARING SURFACE AND MEMBRANE ON BRIDGES AND MINOR ASSOCIATED WORK.

LENGTH OF BRIDGES: 144 147.00 FEET = 0.028 MILES
147 54.00 FEET = 0.010 MILES

TOTAL LENGTH OF BRIDGES: 201.00 FEET = 0.038 MILES



RECORD PLANS

CONTRACTOR: J.P. SICARD, INC. - BARTON, VT

RESIDENT ENGINEER: KEVIN MCCLURE

CONSTRUCTION BEGAN: AUGUST 11, 2014

CONSTRUCTION COMPLETE: NOVEMBER 13, 2014

RECORD PLANS BY: KEVIN MCCLURE

I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.

BY Kevin McClure RESIDENT ENGINEER

DATE 5-8-15

NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found at Central Files in the electronic archives.

BUILT AS DESIGNED

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT.

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2011, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JULY 20, 2011 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 I

SURVEYED BY : N/A
SURVEYED DATE : N/A

DATUM
VERTICAL N/A
HORIZONTAL N/A



5/21/14

Stantec
Stantec Consulting Services Inc.
55 Green Mountain Drive
South Burlington VT U.S.A. 05403
Phone: (802) 864-0223
Fax: (802) 864-0265
www.stantec.com

DIRECTOR OF PROGRAM DEVELOPMENT

APPROVED Kevin A. Marshall DATE 5/22/14

PROJECT MANAGER : DOUG BONNEAU

PROJECT NAME : LYNDON

PROJECT NUMBER : BF MEMB (39)

SHEET 1 OF 28 SHEETS

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5-6	MD-01 - MD-02	MEMBRANE SPLICE DETAILS
7-9	TCP-01 - TCP-03	TRAFFIC CONTROL PLANS
10	BD-01	BITUMINOUS CONCRETE DETAILS
11	SJD-01	SIDEWALK JOINT DETAILS
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STRUCTURE DETAIL SHEETS

SD-516.10	BRIDGEJOINT ASPHALTIC PLUG	08/29/11
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VAOT STANDARD SHEETS

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E-123	GUIDE SIGN PLACEMENT - MISCELLANEOUS DETAILS	03/16/04
E-171A	TRAFFIC CONTROL SIGNALS GENERAL NOTES & DETAILS	08/09/95
E-172	VEHICLE LOOP DETAILS	08/09/95
E-191	PAVEMENT MARKING DETAILS	02/01/99
E-192	PAVEMENT MARKING DETAILS	10/12/00
E-193	PAVEMENT MARKING DETAILS	08/18/95
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PROJECT NOTES

GENERAL

- ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO STATE OF VERMONT, AGENCY OF TRANSPORTATION, 2011 STANDARD SPECIFICATIONS FOR CONSTRUCTION, AND ITS LATEST REVISIONS, AND THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6TH EDITION, AND ITS LATEST REVISIONS.
- ALL WORK AND ANY ASSOCIATED ACTIVITY ON THIS PROJECT SHALL BE PERFORMED WITHIN THE EXISTING RIGHT-OF-WAY LIMITS.
- WATER REPELLENT, SILANE SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES EXCEPT THE PIERS, THE UNDERSIDE OF THE DECK, AND THE SIDEWALK. THIS WORK WILL BE PAID FOR UNDER ITEM 514.10 WATER REPELLENT, SILANE.
- TREE LIMBS AND/OR ANY PLANTS/BUSHES THAT PREVENT THE APPLICATION OF WATER REPELLENT, SILANE TO THE ABUTMENTS OR WING WALLS SHALL BE REMOVED. THE COST OF REMOVING THESE TREE LIMBS AND/OR PLANTS/BUSHES SHALL BE INCIDENTAL TO ITEM 514.10.
- FOLLOWING THE COMPLETION OF ALL OTHER CONSTRUCTION ACTIVITIES, ALL BEAM SEATS SHALL BE CLEANED OFF, AND ALL DOWNSPOUTS AND SCUPPERS WITHIN THE LIMITS OF CONSTRUCTION AS SHOWN ON THE BITUMINOUS CONCRETE REMOVAL PLAN SHALL BE THOROUGHLY FLUSHED BY THE CONTRACTOR. THE COST FOR CLEANING BEAM SEATS AND FLUSHING THE DOWNSPOUTS AND SCUPPERS WILL BE INCIDENTAL TO ALL OTHER ITEMS IN THE CONTRACT.

PAVEMENT REMOVAL AND DECK REPAIRS

- THE FINAL ONE HALF INCH OF PAVEMENT ON THE CONCRETE BRIDGE DECK AND APPROACH SLABS SHALL BE REMOVED BY LOADER, GRADER OR EQUIPMENT APPROVED BY THE ENGINEER. COLD PLANING TO REMOVE BRIDGE AND APPROACH SLAB PAVEMENT WILL BE INCIDENTAL TO ITEM 529.10, "REMOVAL OF BRIDGE PAVEMENT".
- DURING BRIDGE AND APPROACH SLAB PAVEMENT REMOVAL, THE CONTRACTOR SHALL EXERCISE CARE TO INSURE THAT NO DAMAGE OCCURS TO THE EXISTING CONCRETE BRIDGE DECK AND THE EXISTING APPROACH SLABS. ANY DAMAGE TO THE CONCRETE BRIDGE DECK OR APPROACH SLABS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. REPAIRS SHALL BE MADE IN ACCORDANCE WITH SECTION 580.
- CARE SHALL BE TAKEN TO PROTECT ANY SCUPPERS OR DROP INLETS AT ALL STAGES OF CONSTRUCTION. ANY DAMAGE TO THESE STRUCTURES SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER AND AT THE CONTRACTOR'S EXPENSE.
- ALL SCUPPERS ON BRIDGES SHALL BE CLEANED TO REMOVE ANY DIRT AND DEBRIS THAT HAS ACCUMULATED IN THEM TO ALLOW WATER TO FLOW FREELY THROUGH THE SCUPPER. PAYMENT FOR CLEANING THE SCUPPERS WILL BE INCIDENTAL TO ITEM 529.10 "REMOVAL OF BRIDGE PAVEMENT". A COMPLETE INVENTORY OF PLUGGED SCUPPERS HAS NOT BEEN PERFORMED.
- AFTER THE REMOVAL OF THE BRIDGE PAVEMENT, THE BARRIER MEMBRANE SHALL BE REMOVED AND THE CONCRETE BRIDGE DECK SHALL BE CLEANED IN ACCORDANCE WITH SUBSECTION 580.04 AND TO THE SATISFACTION OF THE ENGINEER. REMOVAL OF THE BARRIER MEMBRANE AND THE CLEANING OF THE CONCRETE BRIDGE DECK WILL BE PAID FOR UNDER ITEM 580.16, "SURFACE PREPARATION FOR MEMBRANE".
- ONCE THE BARRIER MEMBRANE IS REMOVED, ANY AREAS ON THE CONCRETE BRIDGE DECK THAT ARE FOUND TO BE UNSOUND SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER. THE METHOD FOR DETERMINING AREAS OF UNSOUND CONCRETE SHALL BE APPROVED BY THE ENGINEER. THE ENGINEER SHALL MAKE A DETERMINATION AS TO HOW TO REPAIR THE DETERIORATED PORTION OF THE CONCRETE BRIDGE DECK AND THE LIMITS OF THE REPAIR. PAYMENT FOR REPAIR OF CONCRETE SUPERSTRUCTURE SURFACE SHALL BE MADE UNDER ITEMS 580.10 "REPAIR OF CONCRETE SUPERSTRUCTURE SURFACE, CLASS I", 580.11 "REPAIR OF CONCRETE SUPERSTRUCTURE CLASS II" AND 580.12 "REPAIR OF CONCRETE SUPERSTRUCTURE CLASS III". QUANTITIES FOR ITEMS 580.10, 580.11 AND 580.12 AS SHOWN ON THE QUANTITY SHEET ARE ESTIMATED. ANY ADDITIONAL REINFORCING STEEL NEEDED SHALL MEET THE REQUIREMENTS OF SECTION 507 AND WILL BE CONSIDERED INCIDENTAL TO THE RESPECTIVE 580 REPAIR OF CONCRETE SUPERSTRUCTURE ITEM.

PAVEMENT AND MEMBRANE

- UPON THE ENGINEER'S APPROVAL OF THE CONCRETE BRIDGE DECK'S CONDITION, ITEM 519.20, "SHEET MEMBRANE WATERPROOFING, TORCH APPLIED" SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 519. SHEET MEMBRANE WATERPROOFING SHALL NOT BE APPLIED WHEN THE DECK CONCRETE AND/OR DECK PATCH AREA'S MOISTURE CONTENT IS/ARE ABOVE THE SECTION 519 SPECIFICATIONS OR THE MANUFACTURER'S SPECIFICATIONS, WHICHEVER IS LESS.
- FOLLOWING THE INSTALLATION OF THE NEW SHEET MEMBRANE WATERPROOFING ON THE CONCRETE BRIDGE DECK, THE CONCRETE BRIDGE DECK AND THE AT-GRADE APPROACH SLABS SHALL BE PAVED WITH ITEM 900.680 SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY) IN TWO 1 1/4" LIFTS (SEE SHEET BD-01). THE PAVEMENT SHALL BE TYPE IVS FOR BOTH LIFTS. EMULSIFIED ASPHALT SHALL BE APPLIED TO ALL COLD PLANED SURFACES AND BETWEEN PAVEMENT LIFTS.

- CARE SHALL BE EXERCISED TO SMOOTHLY TRANSITION THE NEW BRIDGE PAVEMENT INTO THE EXISTING PAVEMENT. ANY COLD PLANING NECESSARY FOR SHAPING BRIDGE APPROACHES SHALL BE PAID FOR UNDER ITEM 210.10, "COLD PLANING, BITUMINOUS PAVEMENT".
- TESTING FOR PAVEMENT DENSITY WILL REQUIRE CORES OF THE PAVEMENT ON THE BRIDGE. THE COST FOR THIS WORK WILL BE CONSIDERED INCIDENTAL TO ITEM 900.680 BITUMINOUS CONCRETE PAVEMENT SMALL QUANTITY. ANY DAMAGE TO THE NEW SHEET MEMBRANE CAUSED BY CORING THE PAVEMENT SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER AND AT THE CONTRACTOR'S EXPENSE.
- FOR PG BINDER GRADE SEE SPECIAL PROVISIONS FOR PAY ITEM 900.680.
- EMULSIFIED ASPHALT SHALL BE APPLIED AT A RATE OF 0.08 GAL/SY TO ALL COLD PLANED SURFACES AND AT A RATE OF 0.03 TO 0.04 GAL/SY BETWEEN LIFTS. PAYMENT SHALL BE UNDER ITEM 900.683, SPECIAL PROVISION (EMULSIFIED ASPHALT) (RS-1H OR CRS-1H).
- THE CONTRACTOR SHALL INSTALL TEMPORARY PAVEMENT MARKINGS ON ALL PAVED SURFACES THAT WILL NOT HAVE THE PERMANENT MARKINGS APPLIED WITHIN 14 CALENDAR DAYS OF THE FINAL PAVING OPERATIONS AS DIRECTED BY THE ENGINEER.
- UPON COMPLETION OF ALL PAVING OPERATIONS FINAL PAVEMENT MARKINGS SHALL BE INSTALLED TO REPLICATE THE EXISTING CONFIGURATION.

TRAFFIC CONTROL

- THE TRAFFIC CONTROL PLANS ARE SCHEMATIC ONLY AND SHOULD BE USED AS A REFERENCE. THE CONTRACTOR SHALL DEVELOP AND IMPLEMENT A SITE SPECIFIC TRAFFIC CONTROL PLAN FOR ONE LANE CLOSURES PER THE LATEST VERSION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. THE CONTRACTOR SHALL ALLOW THE RESIDENT ENGINEER 14 CALENDAR DAYS TO REVIEW AND ACCEPT THE PROPOSED PLANS BEFORE THEY ARE TO BE IMPLEMENTED. NO WORK SHALL COMMENCE UNTIL THE TRAFFIC CONTROL PLAN HAS BEEN APPROVED. DEVELOPMENT AND IMPLEMENTATION OF THE TRAFFIC CONTROL PLAN SHALL BE INCIDENTAL TO ITEM 641.10 TRAFFIC CONTROL.
- UNLESS COVERED UNDER INDIVIDUAL PAY ITEMS OR NOTED OTHERWISE, ALL COSTS FOR WORK SHOWN ON THE TRAFFIC CONTROL SHEETS FOR TEMPORARY TRAFFIC CONTROL DEVICES INCLUDING RETROREFLECTIVE DRUMS, SIGNS AND SIGN POSTS WILL BE CONSIDERED TO BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR TRAFFIC CONTROL, ITEM 641.10.
- TRAFFIC WILL BE ALLOWED TO DRIVE ON THE BARE CONCRETE BRIDGE DECK AFTER THE REMOVAL OF THE BARRIER MEMBRANE AND PRIOR TO THE DECK BEING CLEANED AND PREPARED FOR THE NEW SHEET MEMBRANE. ONCE THE CONCRETE BRIDGE DECK IS PREPARED FOR THE NEW SHEET MEMBRANE, NO TRAFFIC WILL BE ALLOWED ON THE DECK UNTIL TWO LIFTS OF BITUMINOUS CONCRETE PAVEMENT ARE IN PLACE OVER THE ENTIRE LENGTH OF THE MEMBRANE.
- SIGNS SHALL BE INSTALLED SO AS NOT TO OBSTRUCT EXISTING SIGNS OR CORNER SIGHT DISTANCE FROM HIGHWAYS OR DRIVES.
- ALL SIGNS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION (FHWA).
- ORANGE SOLID SUBSTRATE CONSTRUCTION SIGNS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING "AMERICAN SOCIETY FOR TESTING AND MATERIALS" ASTM D-4956 TYPE VII, VIII OR IX REQUIREMENTS, UNLESS OTHERWISE NOTED.
- ROLL UP SIGNS SHALL HAVE RETROREFLECTIVE SHEETING EQUAL TO OR EXCEEDING ASTM D-4956 TYPE VI.

NOTES CONTINUED ON SHEET ID-02

PROJECT NAME: LYNDON
PROJECT NUMBER: BF MEMB(39)

FILE NAME: z13C122detail.dgn	PLOT DATE: 5/30/2014
PROJECT LEADER: G. BOGUE	DRAWN BY: P. ARMATA
DESIGNED BY: D. DEBAIE	CHECKED BY: D. DEBAIE
INDEX AND PROJECT NOTES ID-01	SHEET 2 OF 28



TRAFFIC CONTROL (CONTINUED)

27. SIGNS SHALL BE ERECTED BEFORE THE START OF ANY WORK AND SHALL BE COVERED UNTIL WORK COMMENCES, DURING PERIODS OF INACTIVITY OR UPON COMPLETION OF THE WORK. EACH SIGN SHALL BE ERECTED IN A NEAT AND WORKMANLIKE MANNER. SIGNS SHALL BE REMOVED UPON COMPLETION OF THE WORK AT THE DISCRETION OF THE ENGINEER.

28. FIXED SIGNS SHALL BE SET SECURELY IN THE GROUND. THE BOTTOM OF A SIGN SHALL BE AT LEAST SEVEN FEET ABOVE THE EDGE OF PAVEMENT. THE NEAREST EDGE OF A SIGN SHALL BE AT LEAST SIX FEET OUTSIDE THE SHOULDER POINT OR FOUR FEET OUTSIDE GUARDRAIL.

29. PORTABLE SIGNS SHALL BE PLACED ON THE EDGE OF ROADWAY AND ONE FOOT MINIMUM ABOVE TRAVELED WAY. ALL VEGETATION THAT INTERFERES WITH VISIBILITY OF THE SIGNS SHALL BE REMOVED. WHEN PLACED BEHIND GUARDRAIL, THE BOTTOM OF THE SIGN FACE SHALL BE ABOVE THE TOP OF THE GUARDRAIL.

30. WHERE SIGN INSTALLATIONS ARE NOT PROTECTED BY GUARDRAIL OR OTHER APPROVED TRAFFIC BARRIERS, ALL SIGN STANDS AND POST INSTALLATIONS SHALL BE "NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM" (NCHRP) REPORT 350 COMPLIANT. NO SIGN POSTS SHALL EXTEND OVER THE TOP OF THE SIGN INSTALLED ON SAID POST(S). WHEN ANCHORS ARE INSTALLED, STUB SHALL NOT BE GREATER THAN FOUR INCHES ABOVE EXISTING GROUND.

31. THE NUMBER OF CHANNELIZING DEVICES AND OTHER TRAFFIC CONTROL DEVICES SHOWN ON THE TRAFFIC CONTROL PLANS ARE FOR ILLUSTRATIVE PURPOSES ONLY. THE ACTUAL NUMBER REQUIRED IS TO BE DETERMINED BASED ON INDIVIDUAL DETOUR CONDITIONS (TAPERS, SPEED LIMITS, LENGTH OF DETOUR, CURVE, ETC.).

32. THE PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL BE USED AT THE DISCRETION OF THE ENGINEER. THE PCMS SHALL BE USED IN ACCORDANCE WITH SECTION 6F.60 OF THE MUTCD.

33. TWELVE FOOT TRAVEL LANES ARE DESIRABLE, ELEVEN FOOT WIDE TRAVEL LANES AND ONE FOOT WIDE SHOULDERS ARE MINIMUM REQUIREMENTS AS SHOWN ON MD-01 AND MD-02.

34. THE CONTRACTOR SHALL SHIFT TRAFFIC IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. ALL EQUIPMENT SHALL BE MOVED TO A LOCATION OFF PAVED SHOULDERS DURING NON-WORK PERIODS, AND PROTECTED BY BARRELS OR CONES.
43. ALL TEMPORARY SIGNAL EQUIPMENT, SIGNS, ETC., SHALL BELONG TO THE CONTRACTOR AT THE END OF THE PROJECT AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR REMOVAL INCLUDING ANY TEMPORARY PAVEMENT MARKINGS, UTILITY POLES, WIRES, ETC.

44. A 250 WATT MER/150 WATT HPS LUMINAIRE AND MAST ARM SHALL BE PROVIDED ON A POLE ON EACH APPROACH AT A MOUNTING HEIGHT OF 30 FEET ABOVE ROADWAY CENTERLINE. THE INTENT IS TO LIGHT UP THE AREA AROUND THE SIGNAL HEADS AND STOP BAR FOR INCREASED VISIBILITY. THE ENGINEER SHALL DETERMINE THE ADEQUACY OF THE LIGHTING AND DIRECT CHANGES IF THE LIGHTING IS INSUFFICIENT.

45. SEE STD. E-121 FOR SIGN PLACEMENT. SEE STDS, E-171A AND E-172 FOR ADDITIONAL INFORMATION ON SIGNALS.

46. ALL ELECTRICAL WORK SHALL MEET THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE.

47. ALL STOP SIGNS AND ANY TRAFFIC SIGNS MADE IRRELEVANT DUE TO THE TEMPORARY SIGNAL SHALL BE COMPLETELY COVERED DURING OPERATION OF THE TEMPORARY SIGNAL OR AT THE DISCRETION OF THE ENGINEER. THE COSTS OF COVERING AND UNCOVERING THESE SIGNS SHALL BE INCIDENTAL TO ITEM 641.10, "TRAFFIC CONTROL".

48. CONSTRUCTION APPROACH SIGNS SHALL BE PROVIDED ON EACH APPROACH PER THE "TRAFFIC CONTROL APPROACH SIGN PACKAGE" SHOWN ON THE TRAFFIC CONTROL PLAN SHEETS. ADDITIONAL CONSTRUCTION APPROACH SIGNS SHALL BE INSTALLED AS REQUIRED BY THE ENGINEER. THE COSTS ASSOCIATED WITH THESE SIGNS, THE REFLECTORIZED PLASTIC DRUMS, ETC., SHALL BE INCIDENTAL TO ITEM 641.10, "TRAFFIC CONTROL".

49. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING SIGNAL PHASING. THE CONTRACTOR SHALL SUBMIT A PHASING DIAGRAM TO THE ENGINEER FOR APPROVAL. THE CONTRACTOR SHALL MAKE SIGNALS OPERATIONAL ONLY AFTER RECEIVING APPROVAL OF THE PHASING DIAGRAM BY THE ENGINEER.

TEMPORARY TRAFFIC SIGNAL SYSTEM:

35. ALL WORK DESCRIBED HEREIN FOR TEMPORARY TRAFFIC SIGNAL SYSTEM, AND NOT SPECIFIED FOR PAYMENT UNDER A SEPARATE CONTRACT ITEM, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONTRACT ITEM 900.620, "TEMPORARY TRAFFIC SIGNAL SYSTEM, PORTABLE".

36. SIGNAL TIMING/TIMING ADJUSTMENTS REQUESTED BY THE ENGINEER SHALL BE ACCOMPLISHED WITHIN A 48 HOUR PERIOD.

37. SIGNAL FACES SHALL BE LED AND CONSIST OF 12" LENSES. (RED, YELLOW, AND GREEN).

38. THE BOTTOM OF THE HOUSING OF A SIGNAL FACE SUSPENDED OVER A ROADWAY SHALL NOT BE LESS THAN 16.5 FEET NOR MORE THAN 19 FEET ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY. THE BOTTOM OF A SIGNAL FACE NOT MOUNTED OVER A ROADWAY SHALL NOT BE LESS THAN 8 FEET NOR MORE THAN 15 FEET ABOVE THE GROUND. CAUTION SHOULD BE USED TO INSURE COMPLIANCE WITH THE HEIGHT REQUIREMENTS IN THE EVENT THE NEW APPROACH GRADES DIFFER SIGNIFICANTLY FROM THE OLD ROAD GRADE.

39. SIGNAL FACES FOR ANY ONE APPROACH SHALL NOT BE LESS THAN 8 FEET APART MEASURED HORIZONTALLY BETWEEN CENTER FACES.

40. AT LEAST ONE SIGNAL HEAD SHALL BE UNMISTAKABLY IN LINE WITH THE CENTER OF APPROACHING TRAFFIC AT ALL TIMES. THE SECOND SIGNAL HEAD MAY BE LOCATED AT A DISTANCE OF NO GREATER THAN 14.5 FEET FROM THE CENTER OF THE APPROACH LANE WHEN THE STOP BAR IS 40 FEET FROM THE SIGNAL HEAD. CONSULT THE CURRENT EDITION OF THE M.U.T.C.D. FOR ADDITIONAL INFORMATION CONCERNING SIGNAL PLACEMENT.

41. SIGNAL HEAD PLACEMENT IS CRITICAL. HEADS SHALL BE ADJUSTED TO REFLECT LANE LOCATION CHANGES.

42. THE SIGNAL SYSTEM SHALL INCLUDE THE SETUP AND REMOVAL OF TRAILER, AND TRAILER POLES, SIGNAL HEADS, CONTROLLER AND CABINET, LUMINAIRES, POWER SOURCE, AND ALL OTHER MATERIALS NECESSARY FOR A FULLY OPERATIONAL PORTABLE TEMPORARY TRAFFIC SIGNAL SYSTEM COMPLETE IN PLACE.

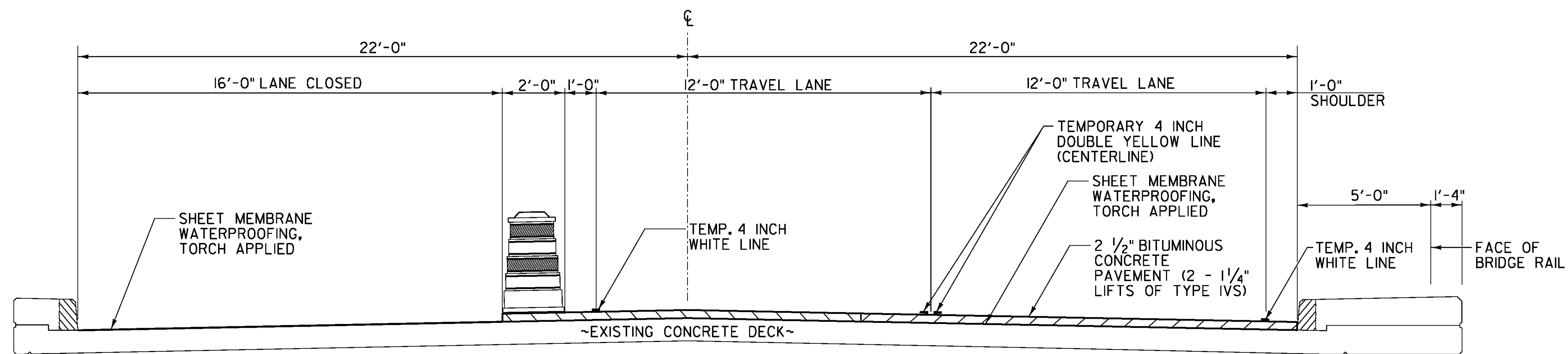
PROJECT NAME: LYNDON
PROJECT NUMBER: BF MEMB(39)

FILE NAME: z13C122detail.dgn	PLOT DATE: 5/30/2014
PROJECT LEADER: G. BOGUE	DRAWN BY: P. ARMATA
DESIGNED BY: D. DEBAIE	CHECKED BY: D. DEBAIE
INDEX AND PROJECT NOTES ID-02	SHEET 3 OF 28

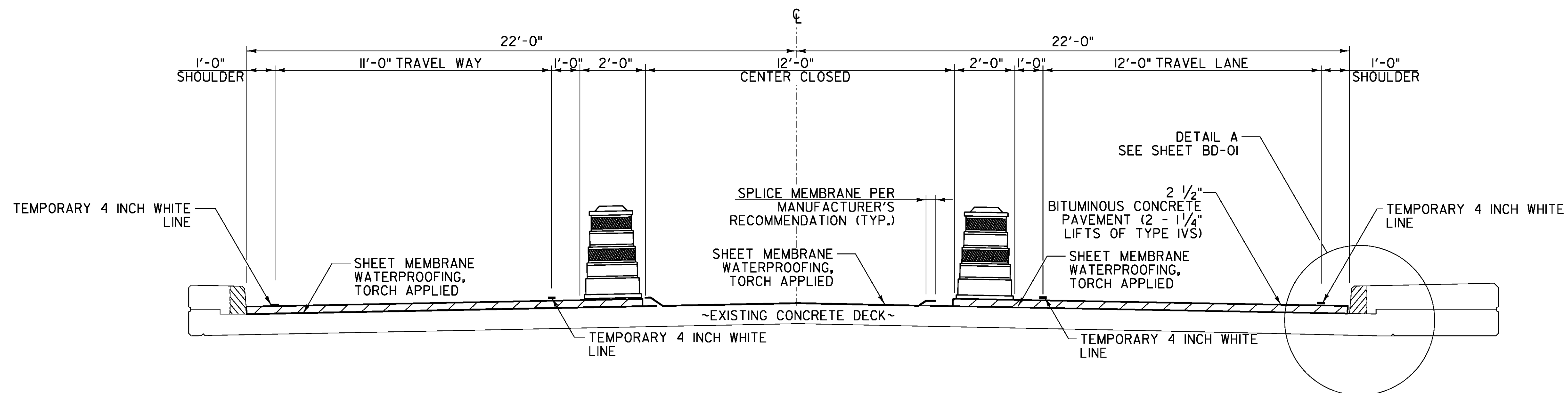


QUANTITY SHEET 1

PROJECT NAME:	LYNDON	
PROJECT NUMBER:	BF MEMB(39)	
FILE NAME:	z13C122frm.dgn	PLOT DATE: 5/22/2014
PROJECT LEADER:	G. BOGUE	DRAWN BY: P. ARMATA
DESIGNED BY:	D. DEBAIE	CHECKED BY: J. HUNGERFORD
QUANTITY SHEET QS-1		SHEET 4 OF 28



MEMBRANE SPLICE DETAIL - BRIDGE NO. 144 (LEFT SIDE CLOSED)
NOT TO SCALE
RIGHT SIDE SIMILAR



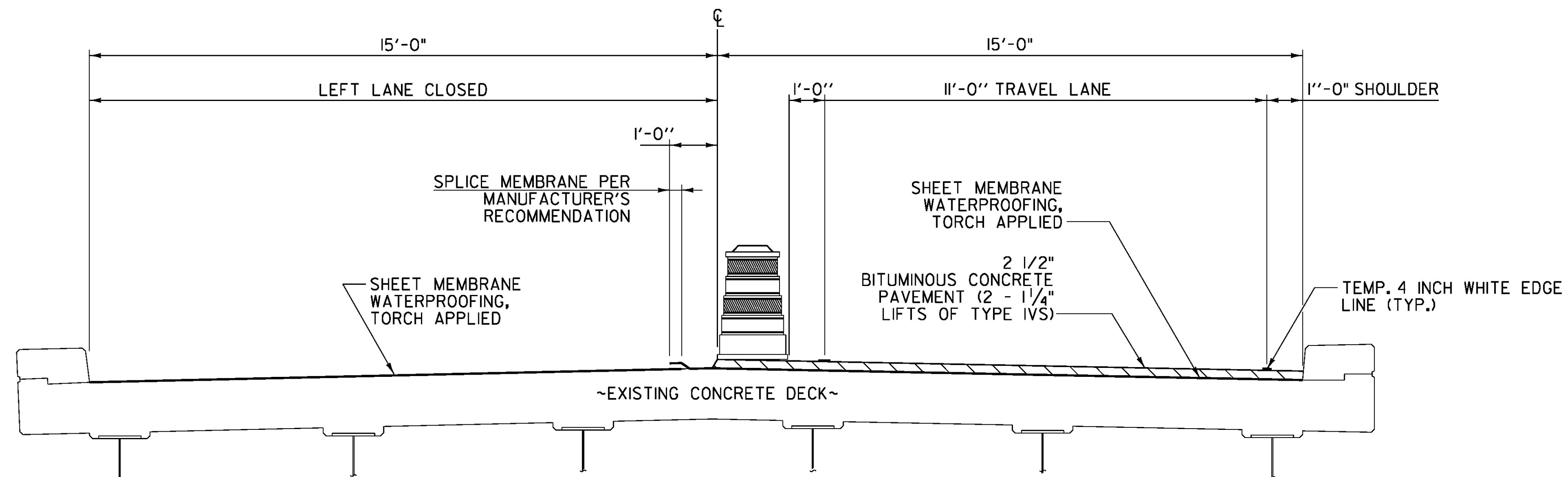
MEMBRANE SPLICE DETAIL - BRIDGE NO. 144 (CENTER CLOSED)
NOT TO SCALE



PROJECT NAME: LYNDON
PROJECT NUMBER: BF MEMB(39)

FILE NAME: z13ci22detail.dgn
PROJECT LEADER: G. BOGUE
DESIGNED BY: D. DEBAIE
MEMBRANE SPLICE DETAILS-MD-01

PLOT DATE: 5/22/2014
DRAWN BY: P. ARMATA
CHECKED BY: D. DEBAIE
SHEET 5 OF 28

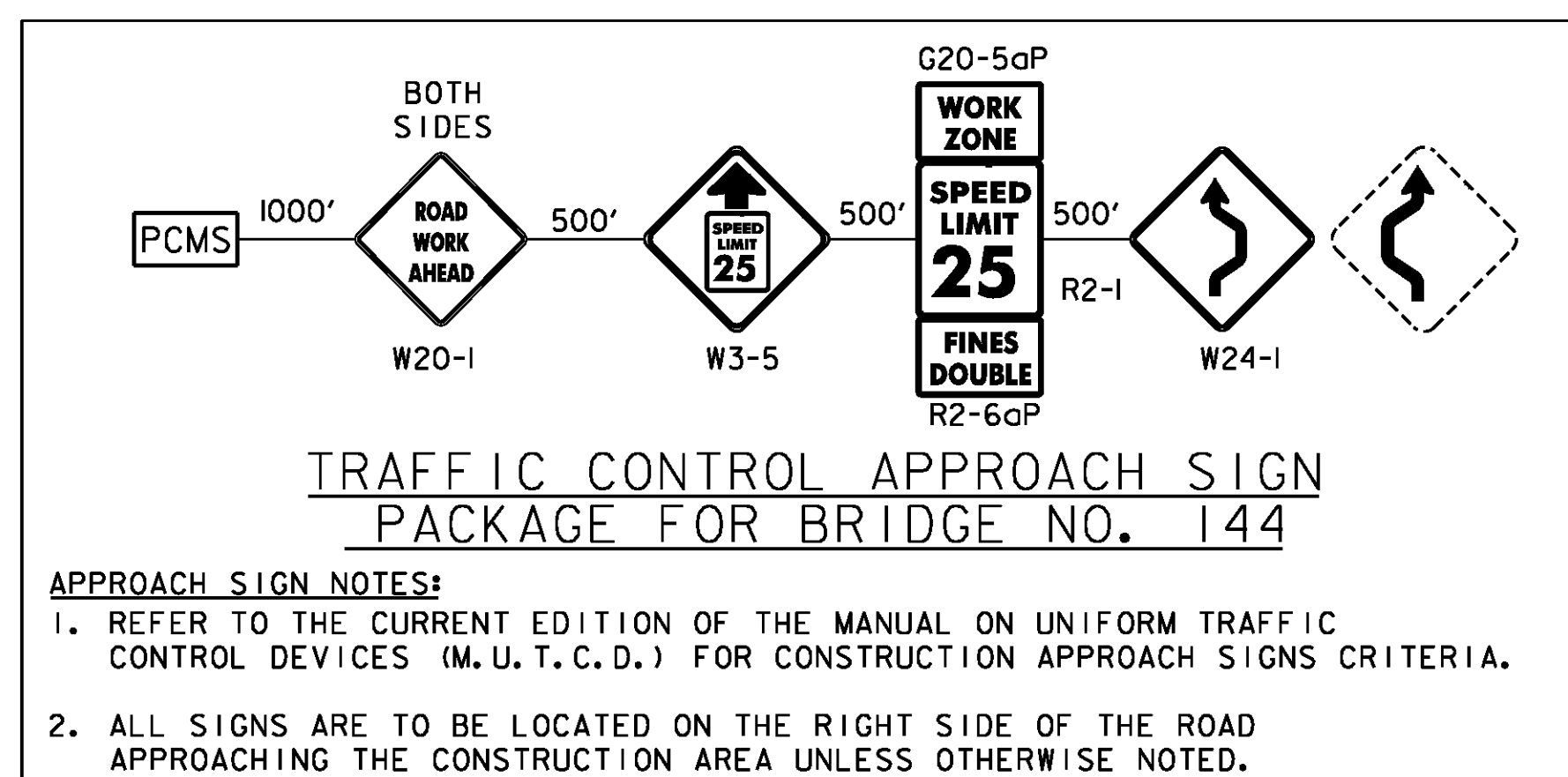
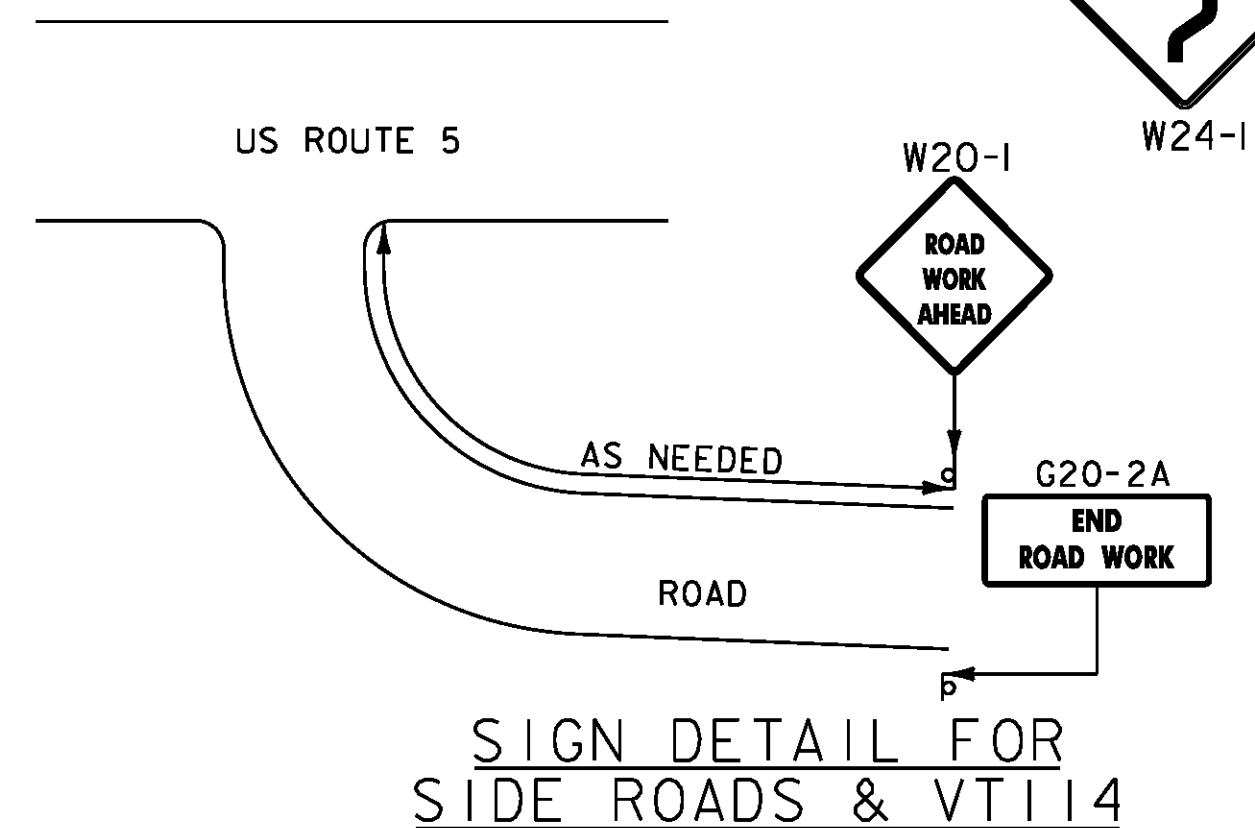
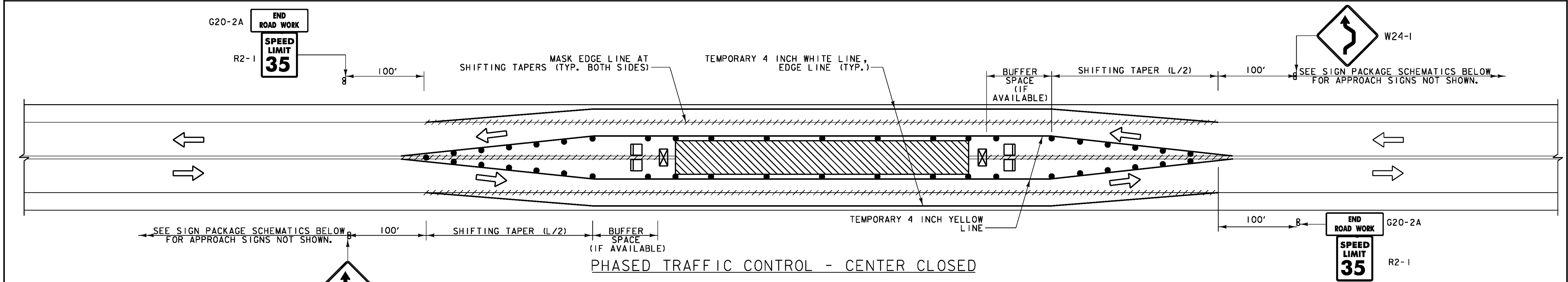
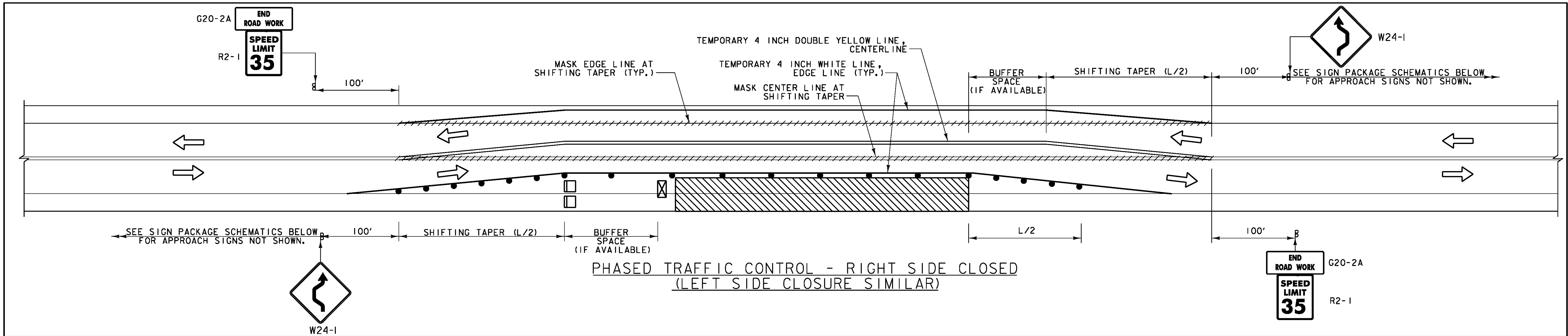


- NOTE:**
1. LEFT LANE CLOSURE AND LEFT SIDE MEMBRANE SPLICE SHOWN. RIGHT LANE CLOSURE AND RIGHT SIDE MEMBRANE SPLICE SIMILAR. CONTRACTOR TO DETERMINE WHICH LANE THE MEMBRANE SPLICE SHALL OCCUR IN.
 2. ON SUPER ELEVATED BRIDGES, CONTRACTOR SHALL APPLY MEMBRANE TO THE LOW SIDE OF THE BRIDGE FIRST.

MEMBRANE SPLICE DETAIL - BRIDGE 147 (LEFT SIDE CLOSED)
 NOT TO SCALE (RIGHT SIDE SIMILAR)



PROJECT NAME: LYNDON	
PROJECT NUMBER: BF MEMB(39)	
FILE NAME: z13ci22detail.dgn	PLOT DATE: 5/22/2014
PROJECT LEADER: G. BOGUE	DRAWN BY: P. ARMATA
DESIGNED BY: D. DEBAIE	CHECKED BY: D. DEBAIE
MEMBRANE SPLICE DETAILS-MD-02	SHEET 6 OF 28



BRIDGE 144 TRAFFIC CONTROL NOTES:

1. THE EXISTING SPEED LIMIT IS 35 M.P.H. FOR U.S. 5 AT BRIDGE 144.
2. DUE TO THE HIGH TRAFFIC VOLUMES ON U.S. 5, AND PROXIMITY OF DRIVEWAY THE CONTRACTOR SHALL NOT USE A TEMPORARY TRAFFIC SIGNAL FOR TRAFFIC CONTROL ON BRIDGE 144.
3. ACCESS TO ALL DRIVES, ROADS AND PARKING AREAS SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
4. SEE SHEETS 1D-01 AND 1D-02 FOR GENERAL TRAFFIC CONTROL NOTES.
5. COVER EXISTING SPEED LIMIT SIGNS DURING CONSTRUCTION.

LEGEND

- ➔ FLOW OF TRAFFIC
- RETROREFLECTIVE PLASTIC DRUM
- TYPE III BARRICADE
- ▨ WORK AREA
- ⊠ TRUCK/TRAILER MOUNTED ATTENUATOR
- PCMS PORTABLE CHANGEABLE MESSAGE SIGN

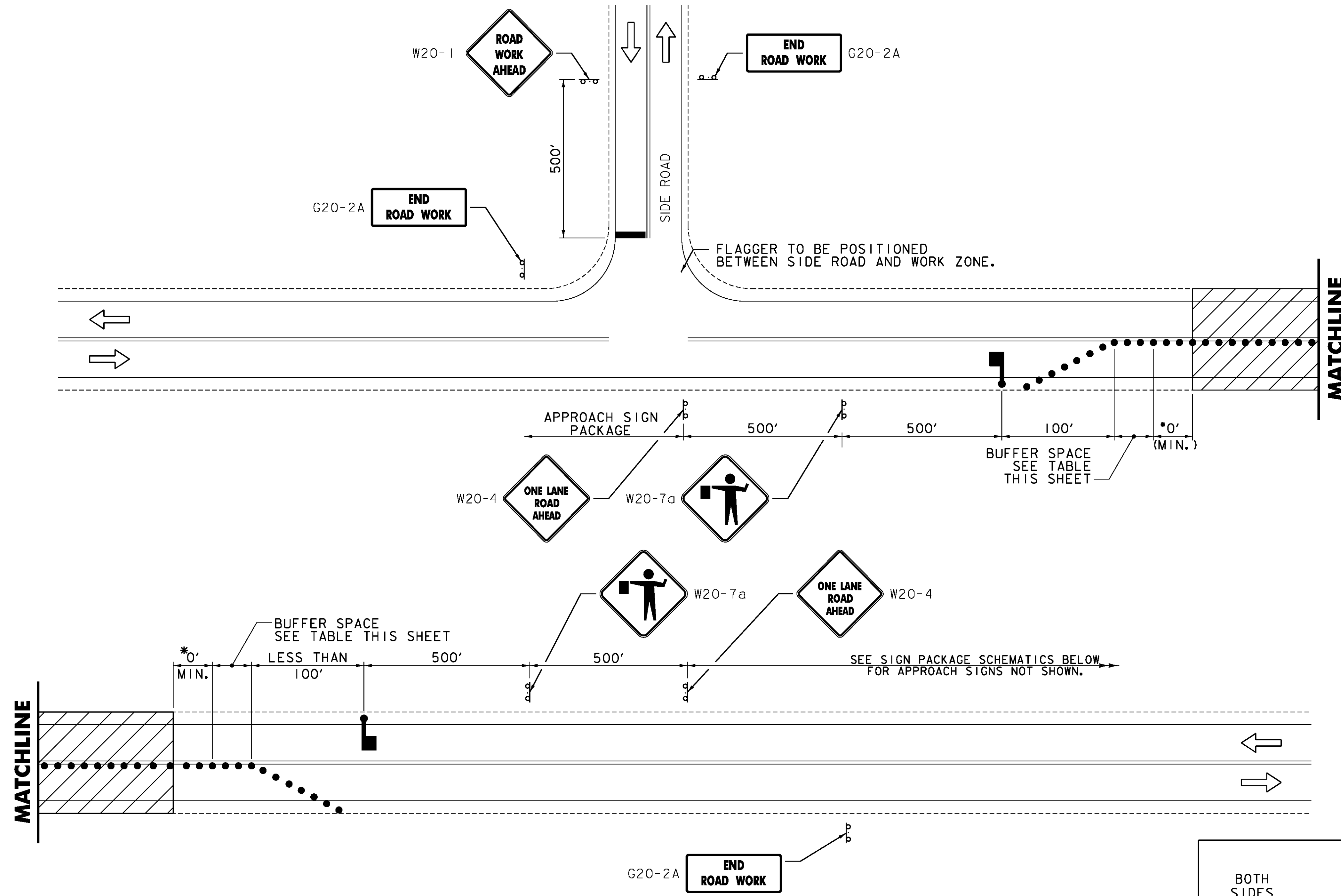
POSTED SPEED (MPH)	TAPER LENGTHS (FT)		TANGENT W=12 FT (L/2)	BARRIER FLARE RATE (MINIMUM)	MINIMUM BUFFER SPACE LENGTH (FT)	MAXIMUM CHANNELIZING DEVICE SPACING (FT)	
	SHOULDER W=8 FT (L/3)	MERGING 12 FT LANE (L)				TAPER (S)	TANGENT (2S)
25	28	130	65	1:9	155	25	50
30	40	180	90	1:9	200	30	60
35	55	250	125	1:9	250	35	70
40	72	310	155	1:9	305	40	80
45	120	540	270	1:9	360	45	90

TAPER RATES ARE DETERMINED USING THE FOLLOWING EQUATION:
 $L = WS$ FOR POSTED SPEEDS OF 45 MPH OR GREATER
 $L = WS/60$ FOR POSTED SPEEDS OF 40 MPH OR LESS

L = MINIMUM LENGTH OF TAPER
W = WIDTH OF OFFSET IN FEET. (TYPICAL)
S = POSTED SPEED IN MPH



PROJECT NAME:	LYNDON
PROJECT NUMBER:	BF MEMB(39)
FILE NAME:	z13ci22detail.dgn
PROJECT LEADER:	G. BOGUE
DESIGNED BY:	D. DEBAIE
TRAFFIC CONTROL PLAN - TC-01	
PLOT DATE:	5/22/2014
DRAWN BY:	P. ARMATA
CHECKED BY:	D. DEBAIE
SHEET	7 OF 28



* - ACTUAL DIMENSION TO BE DETERMINED BY INDIVIDUAL BRIDGE SITE CONDITIONS AND TO BE SHOWN ON TRAFFIC CONTROL PLANS SUBMITTED BY THE CONTRACTOR.

TRAFFIC CONTROL PLAN FOR DAYTIME WORK - FLAGGER (BRIDGE 147)
NOT TO SCALE

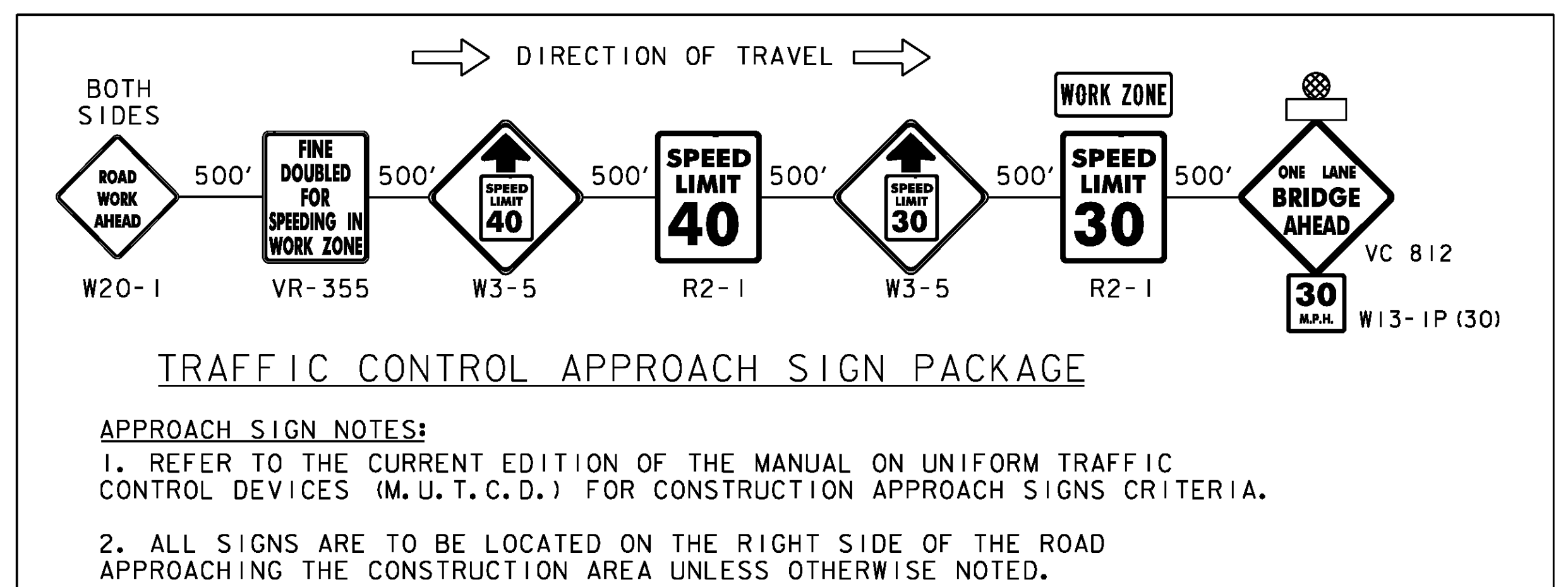
- LEGEND**
- FLOW OF TRAFFIC
 - RETROREFLECTIVE PLASTIC DRUM
 - WORK AREA
 - FLAGGER
 - PORTABLE CHANGEABLE MESSAGE SIGN

BRIDGE 147 TRAFFIC CONTROL NOTES:

- SEE SHEETS 1D-01 AND 1D-02 FOR GENERAL TRAFFIC CONTROL NOTES.
- THE CONTRACTOR MAY REDUCE TRAFFIC TO ONE LANE DURING WORKING HOURS IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. DURING NON-WORK PERIODS, ALL EQUIPMENT SHALL BE MOVED TO A LOCATION OFF PAVED SHOULDERS, OUTSIDE CLEAR ZONE AND DELINEATED BY BARRELS OR CONES. NORMAL TRAFFIC LANES SHALL BE RESTORED DURING NON-WORK PERIODS AND TEMPORARY TRAFFIC SIGNS REMOVED OR COVERED.
- THE PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL BE USED AT THE DISCRETION OF THE ENGINEER. THE PCMS SHALL BE USED IN ACCORDANCE WITH SECTION 6F.60 OF THE MUTCD.
- ANY PARKING AREAS OR DRIVES WITH AN ENTRANCE/EXIT BETWEEN THE FLAGGER AND THE WORK ZONE MAY, AS DETERMINED BY THE ENGINEER, HAVE THAT ENTRANCE/EXIT CLOSED WITH CONES OR DRUMS, PROVIDED ADDITIONAL ENTRANCES/EXITS EXIST IN THE AREA APPROACHING THE FLAGGER.

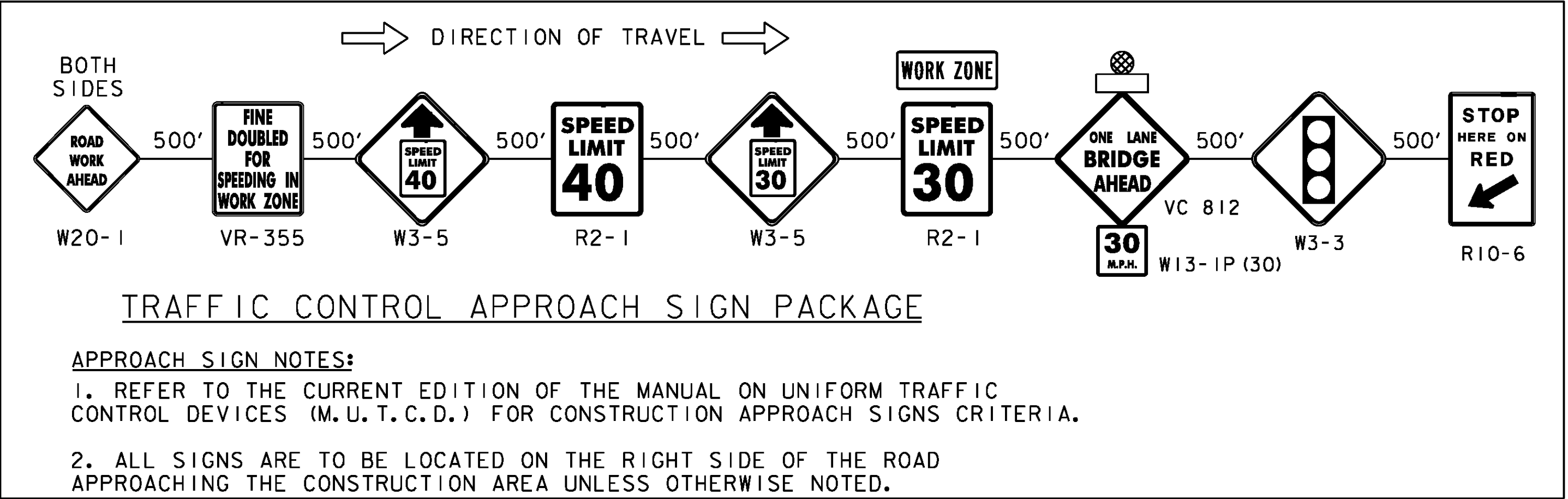
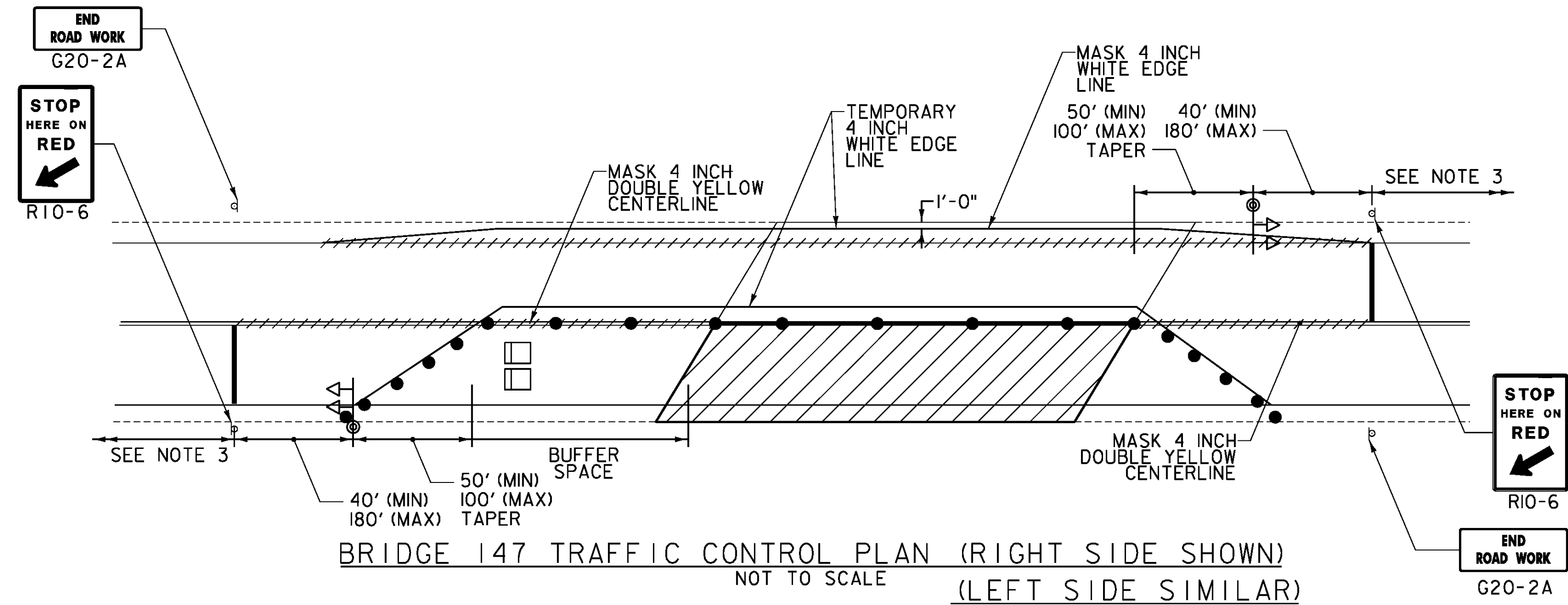
BUFFER SPACE TABLE

POSTED SPEED (MPH)	MINIMUM BUFFER SPACE LENGTH (FT)
25	155
30	200
35	250
40	305
45	360
50	425



PROJECT NAME:	LYNDON
PROJECT NUMBER:	BF MEMB(39)
FILE NAME:	z13ci22detail.dgn
PROJECT LEADER:	G. BOGUE
DESIGNED BY:	D. DEBAIE
TRAFFIC CONTROL PLAN - TC-02	
PLOT DATE:	5/22/2014
DRAWN BY:	P. ARMATA
CHECKED BY:	D. DEBAIE
SHEET	8 OF 28

- NOTES:
- 1. SEE SHEETS ID-01 AND ID-02 FOR GENERAL TRAFFIC CONTROL AND TEMPORARY TRAFFIC SIGNAL SYSTEM NOTES.
 - 2. CHANNELIZING DEVICE SPACING
TANGENT SECTIONS: 60 FT. (2X DESIGN SPEED LIMIT)
TAPER SECTIONS: 30 FT. (1X DESIGN SPEED LIMIT)
DESIGN SPEED THROUGH CONSTRUCTION ZONE = 30MPH
 - 3. ACCESS TO ALL EXISTING SIDE ROADS, DRIVES, AND PARKING AREAS SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. DRIVES, SIDE ROADS OR PARKING AREAS SHALL NOT BE LOCATED WITHIN THE ONE-LANE CLOSURE.
 - 4. IF DRIVEWAY WITHIN LIMITS OF TRAFFIC CONTROL PLAN IS ACTIVE THEN SEPARATE TEMPORARY TRAFFIC CONTROL SIGNALS, DETECTORS AND CONTROLLER PHASING SHALL BE FURNISHED FOR THAT DRIVEWAY IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.



TRAFFIC CONTROL APPROACH SIGN PACKAGE

- APPROACH SIGN NOTES:
- 1. REFER TO THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.) FOR CONSTRUCTION APPROACH SIGNS CRITERIA.
 - 2. ALL SIGNS ARE TO BE LOCATED ON THE RIGHT SIDE OF THE ROAD APPROACHING THE CONSTRUCTION AREA UNLESS OTHERWISE NOTED.

BUFFER SPACE TABLE

POSTED SPEED (MPH)	MINIMUM BUFFER SPACE LENGTH (FT)
25	155
30	200
35	250
40	305
45	360
50	425

LEGEND

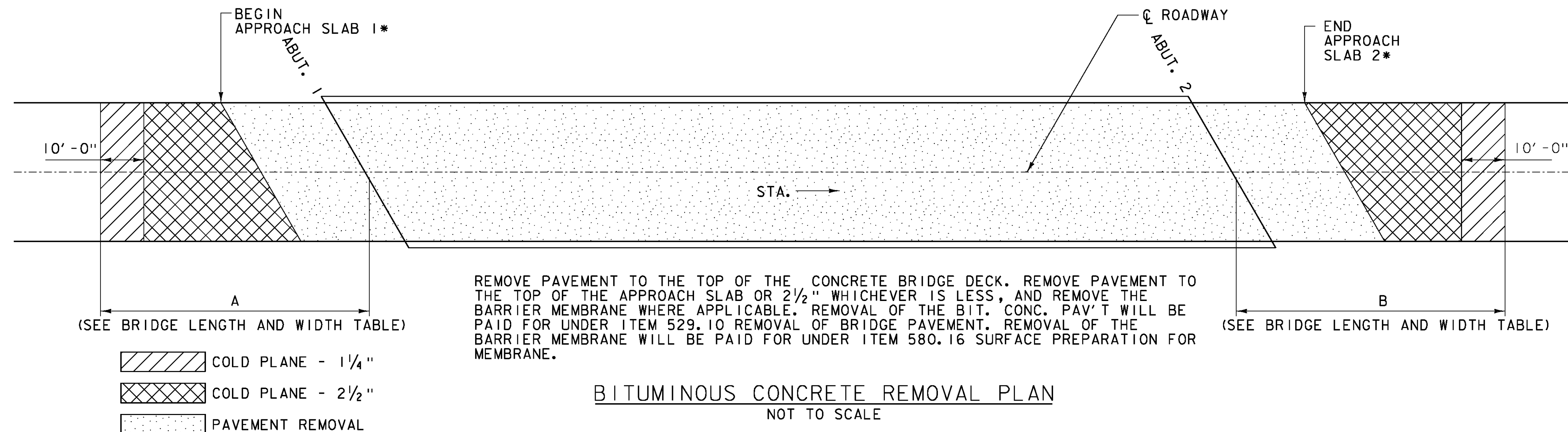
- /// MASK LINES
- REFLECTORIZED PLASTIC DRUM
- ⬆️ TEMPORARY TRAFFIC SIGNAL
- ⓪ TEMPORARY CONSTRUCTION SIGN
- ⚡ FLASHING BEACON
- ▨ WORK ZONE
- TYPE III BARRICADE



PROJECT NAME: LYNDON
PROJECT NUMBER: BF MEMB(39)

FILE NAME: z13ci22detail.dgn
PROJECT LEADER: G. BOGUE
DESIGNED BY: D. DEBAIE
TRAFFIC CONTROL PLAN - TC-03

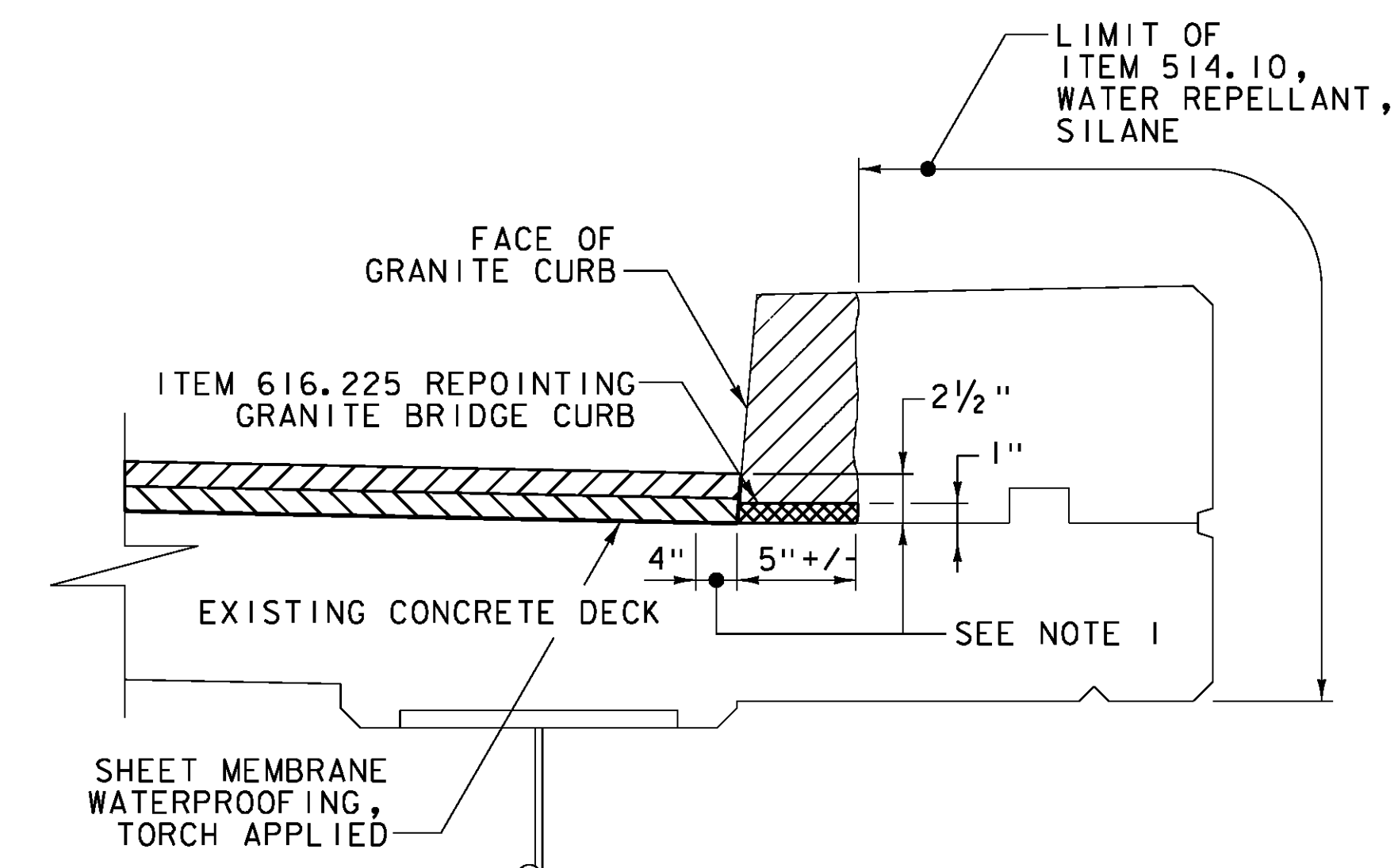
PLOT DATE: 5/22/2014
DRAWN BY: P. ARMATA
CHECKED BY: G. BOGUE
SHEET 9 OF 28



*THE APPROACH SLAB MAY SLOPE DOWN FROM THE ABUTMENTS. IF THIS OCCURS, REMOVE ONLY THE TOP 2 1/2" OF PAVEMENT.

BRIDGE LENGTH AND WIDTH (CURB TO CURB)				
BRIDGE NUMBER	WIDTH (CURB TO CURB) (FEET)	LENGTH (FEET)	A (FEET)	B (FEET)
144	44	147	50	50
147	30	54	50	50

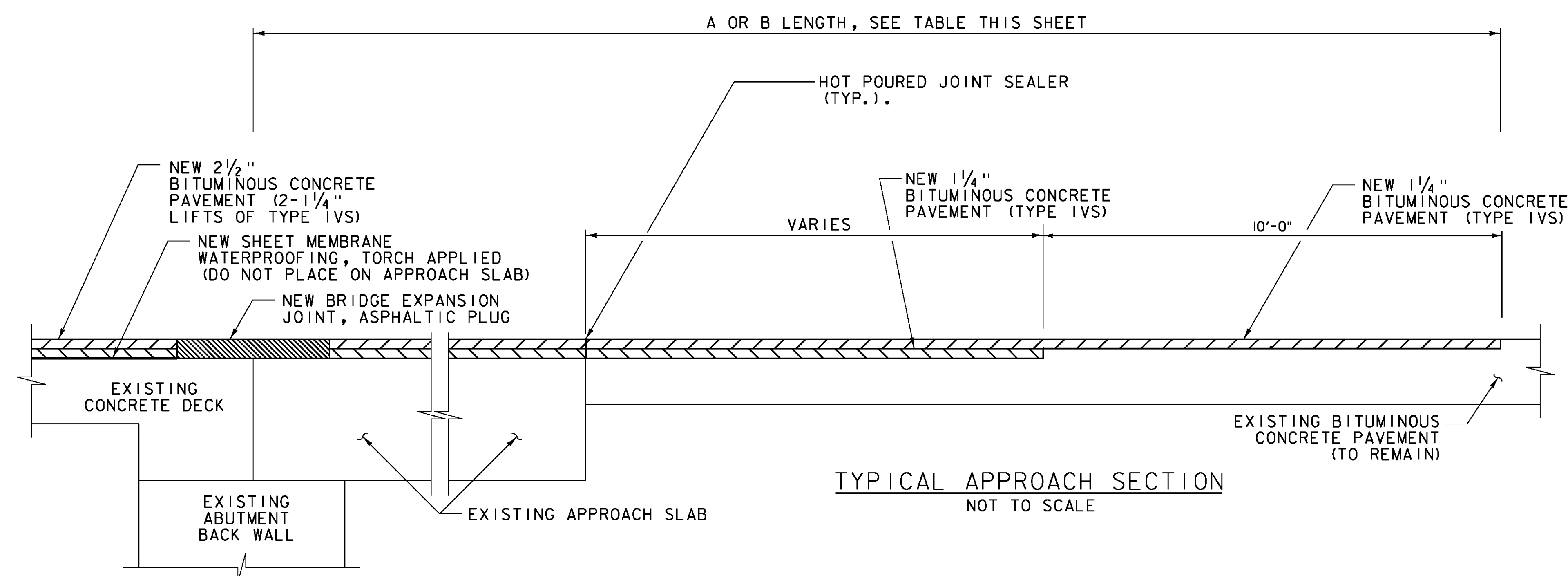
ASPHALTIC PLUG JOINT REPLACEMENT SCHEDULE				
BRIDGE NUMBER	ABUT 1	PIER 1	PIER 2	ABUT 2
144	51	51	51	51
147	31	-	-	31



DETAIL A NOTES:

- INDICATES AREA ALONG DECK AND UP FACE OF CURB FOR PLACEMENT OF TWO COATS OF POLYURETHANE MEMBRANE.
- POLYURETHANE MEMBRANE AND BLAST CLEANING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 519.20, SHEET MEMBRANE WATERPROOFING, TORCH APPLIED.
- SHEET MEMBRANE WATERPROOFING SHALL EXTEND TO FACE OF CURB AS SHOWN.
- IN ADDITION TO THE REQUIREMENTS OF SUBSECTION 519.04, BLAST CLEAN 2 1/2" UP THE FACE OF CURB PRIOR TO PLACING THE MEMBRANE, INCIDENTAL TO ITEM 519.20, SHEET MEMBRANE WATERPROOFING, TORCH APPLIED.

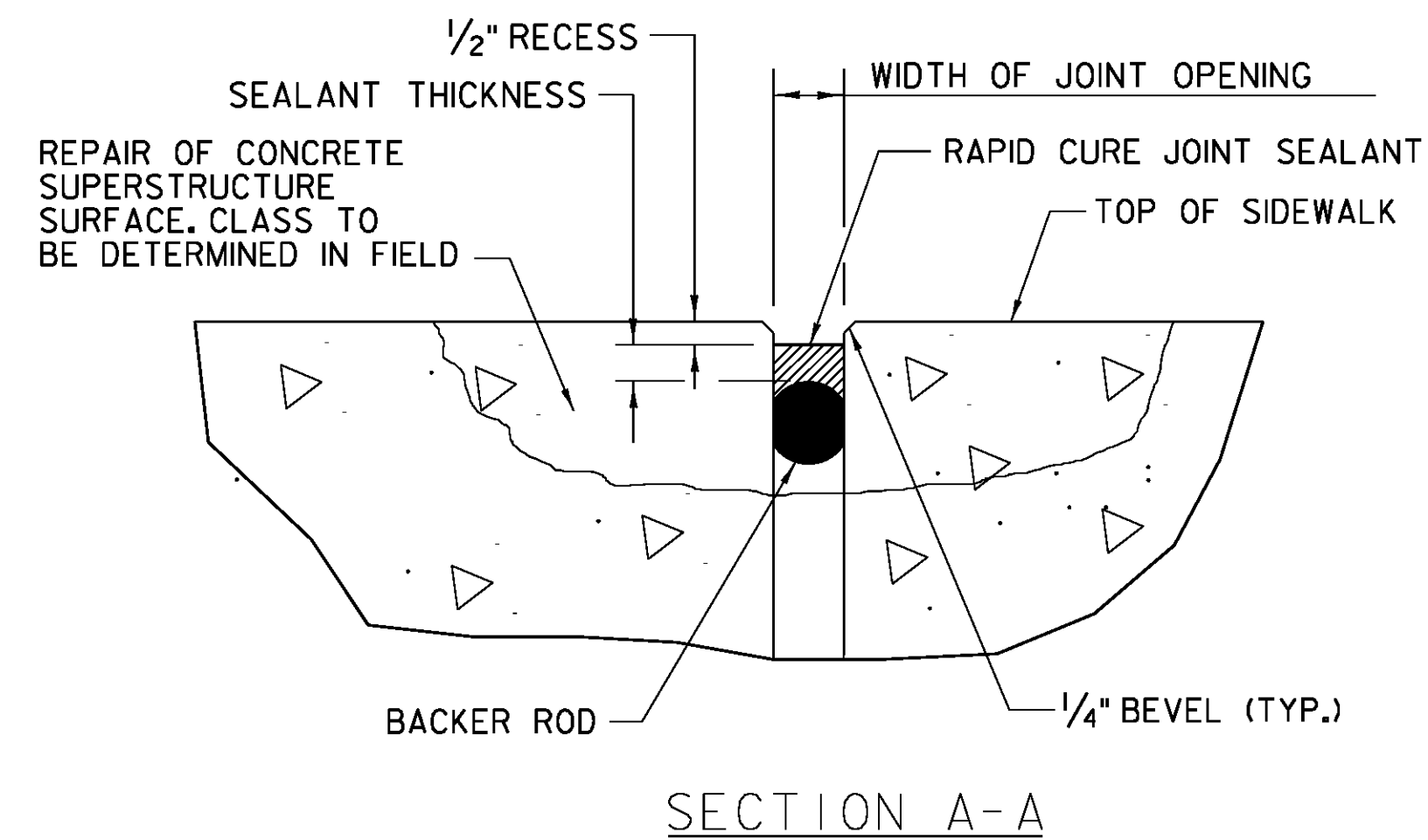
*EXISTING MORTAR BED AND VERTICAL CURB JOINTS TO BE REPOINTED AS DIRECTED BY THE ENGINEER AND PAID AS ITEM 616.225 REPOINTING GRANITE BRIDGE CURB. FOR QUANTITY ESTIMATE IT WAS ASSUMED THAT 20% OF THE BRIDGE CURB REQUIRES REPOINTING. A 1" HIGH BY 5" DEEP MORTAR BED AND VERTICAL JOINTS EQUATES TO 3.0 GAL/10 LF OF CURB.



PROJECT NAME: LYNDON
PROJECT NUMBER: BF MEMB(39)

FILE NAME: z13C122detail.dgn
PROJECT LEADER: G. BOGUE
DESIGNED BY: D. DEBAIE
BITUMINOUS CONCRETE DETAILS BD-01

PLOT DATE: 5/22/2014
DRAWN BY: P. ARMATA
CHECKED BY: D. DEBAIE
SHEET 10 OF 28

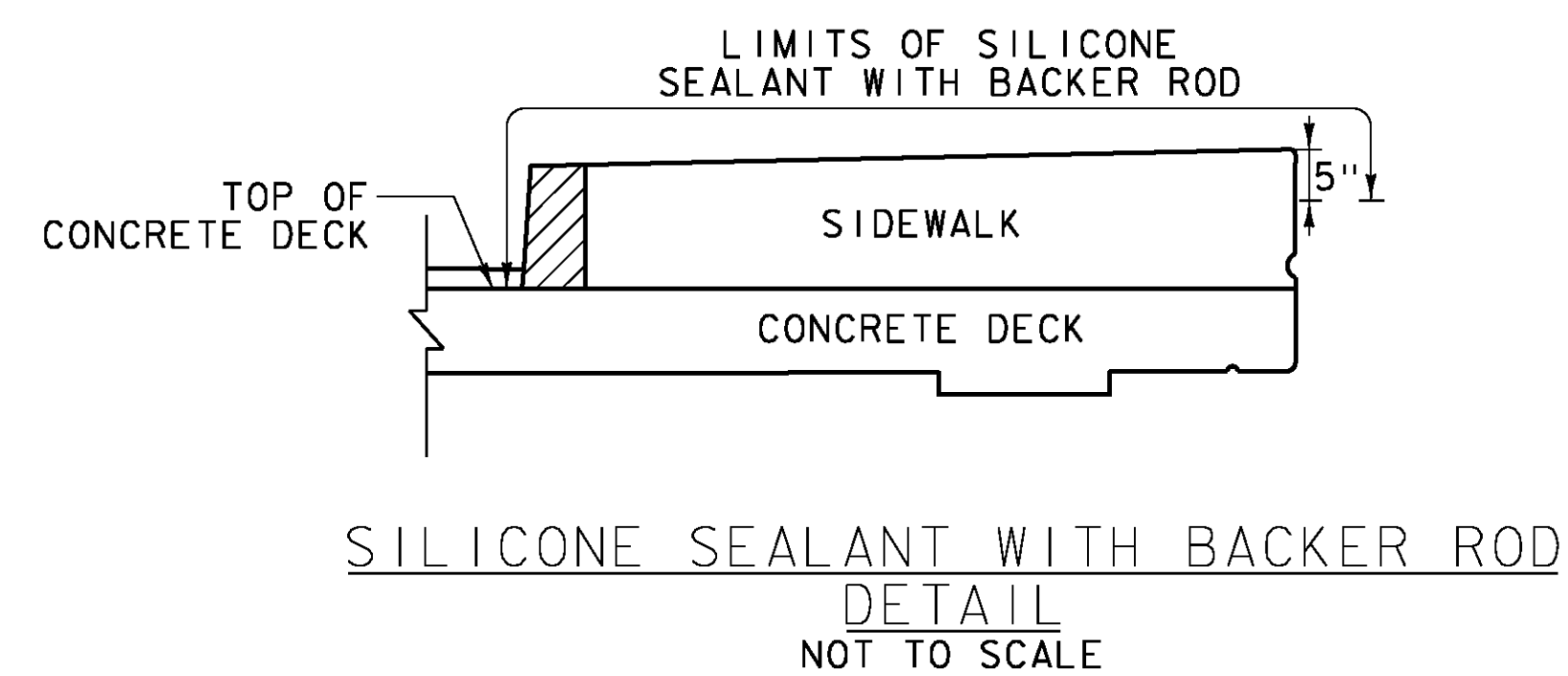
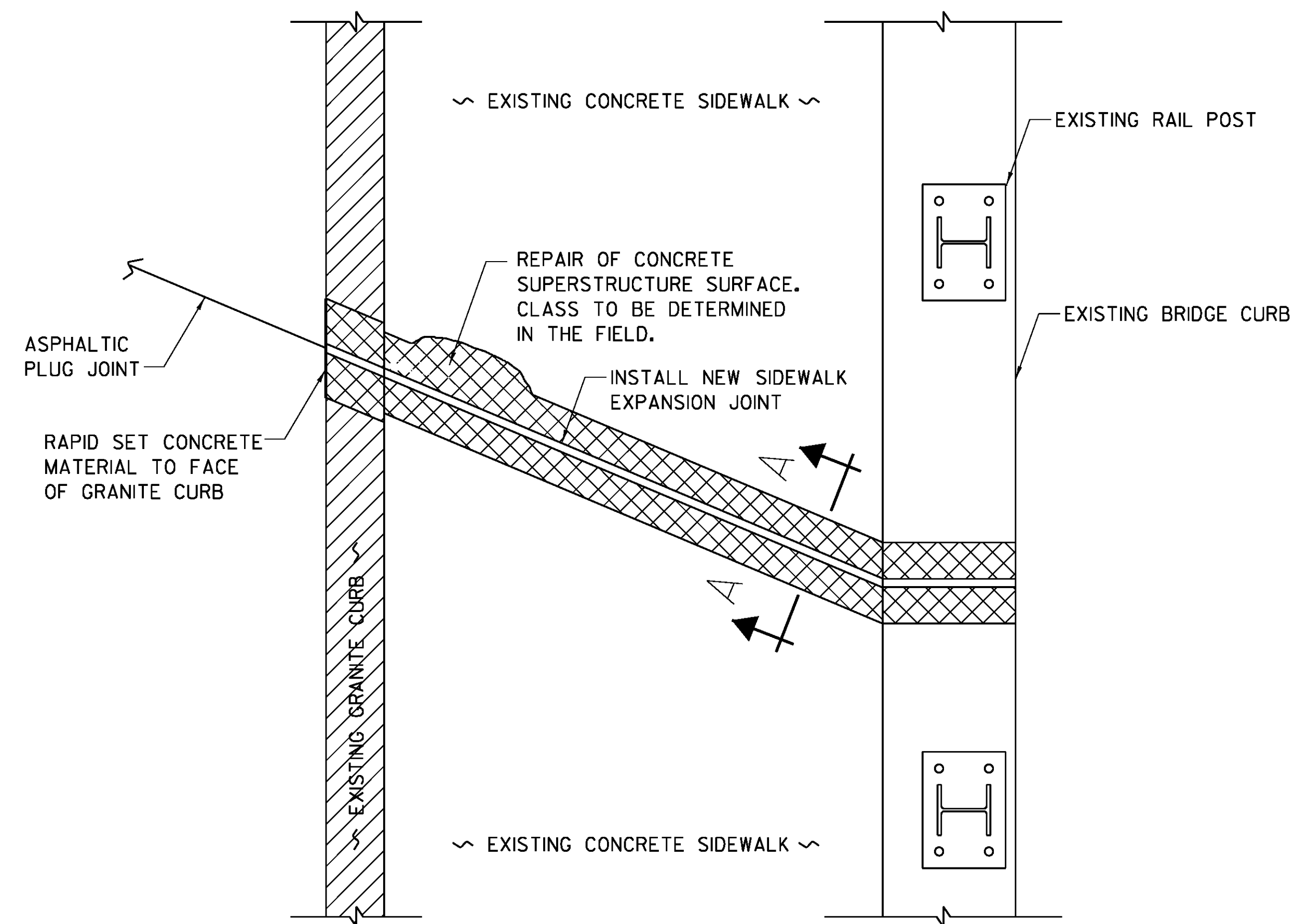


SIDEWALK JOINT NOTES:

1. EXISTING EXPANSION JOINT MATERIAL AND HARDWARE TO BE REMOVED. CUT-OFF ANCHOR BOLTS FLUSH WITH CONCRETE SURFACE.
2. THE NEW JOINT WILL BE A "SILICONE SEALANT WITH BACKER ROD."
3. THE SILICONE SEALANT THICKNESS AND WIDTH OF JOINT OPENING SHALL BE AS RECOMMENDED BY SILICONE SEALANT SUPPLIER. THE JOINT SHALL BE INSTALLED AS RECOMMENDED BY SEALANT SUPPLIER.
4. THE LIMITS OF "SILICONE SEALANT WITH BACKER ROD" SHALL BE 5 INCHES DOWN THE FASCIA FROM THE TOP, ACROSS THE TOP OF SIDEWALK AND DOWN THE CURB SIDE OF SIDEWALK TO TOP OF CONCRETE DECK. (SEE DETAIL THIS SHEET)
5. NEW SIDEWALK EXPANSION JOINTS SHALL BE PAID FOR UNDER ITEM 900.640 "SPECIAL PROVISION (SIDEWALK EXPANSION JOINT)".

BRIDGE EXPANSION JOINT NOTES:

1. EXISTING EXPANSION JOINT MATERIAL AND HARDWARE TO BE REMOVED. CUT-OFF ANCHOR BOLTS FLUSH WITH CONCRETE SURFACE.
2. NEW BRIDGE EXPANSION JOINTS SHALL BE PAID FOR UNDER ITEM 516.10 BRIDGE EXPANSION JOINT, ASPHALTIC PLUG.



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10-11	QUANTITY AND DRAINAGE
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13	RIGHT-OF-WAY DETAIL SHEETS
14	BRIDGE - PLAN, ELEVATION AND GENERAL NOTES
15	" " QUANTITY SHEET
16	" " BORINGS
17	" " TYPICAL SECTION, FRAMING PLAN, AND DETAIL
18	" " CURB AND RAILING LAYOUT AND RAILING DETAIL
19	" " PEIR JOINT DETAIL
20	" " ABUTMENT NO. 1
21	" " ABUTMENT NO. 2
22-23	" " PEIR NO. 1 AND PEIR NO. 2
24-25	" " APPROACH SLABS - PLAN AND DETAIL
26	" " REINFORCING SCHEDULE
27	" " CHANNEL SECTIONS
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39	E-33 BRIDGE CONSTRUCTION APPROACH SIGNS 1/6/67
40	E-34 ON PROJECT CONSTRUCTION SIGNS 5/3/67 (R)
41	E-36 ROAD CONSTRUCTION SIGNS BETTERMENT PROJECTS 1/24/68
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43	BLANK
44	G-10 END TRANSITION OF OF STANDARD STEEL BEAM GUARD RAIL TO BRIDGE RAILING 9/18/67
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STATE OF VERMONT DEPARTMENT OF HIGHWAYS

PROPOSED IMPROVEMENT

TOWN OF LYNDON COUNTY OF CALEDONIA

U.S. ROUTE 5

ST. JOHNSBURY-NEWPORT RD.

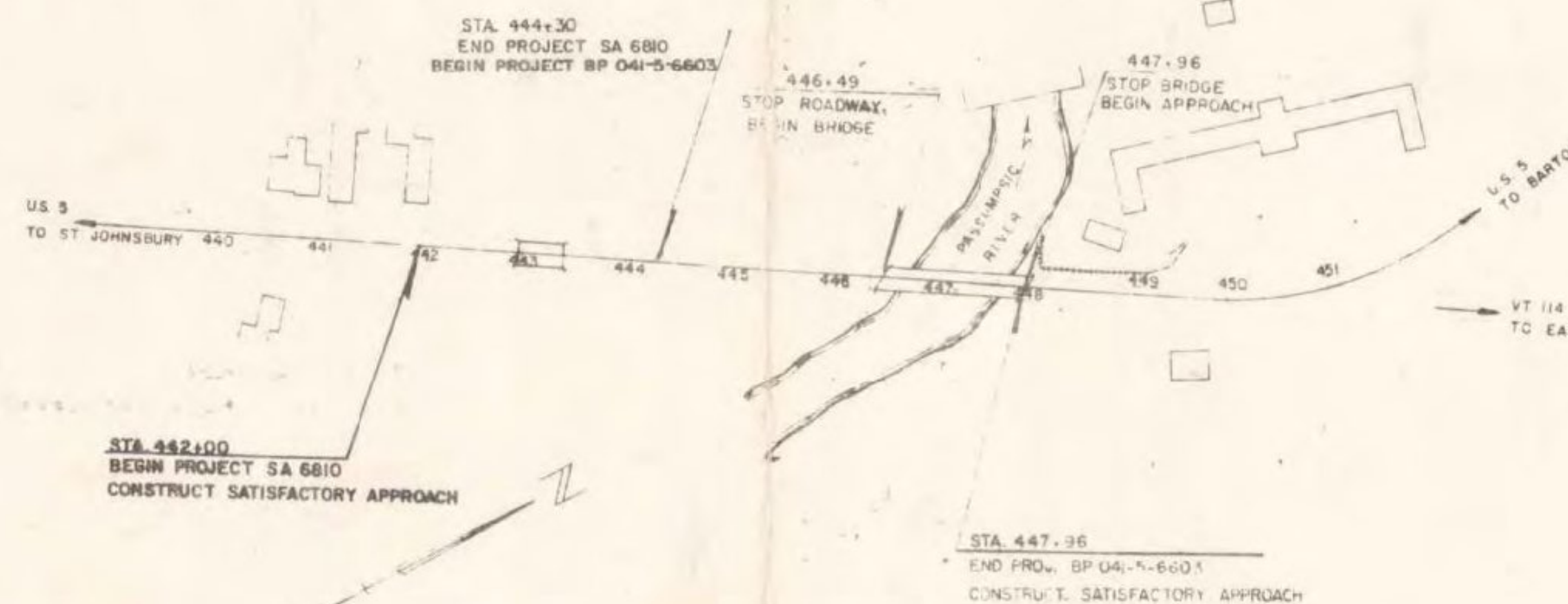
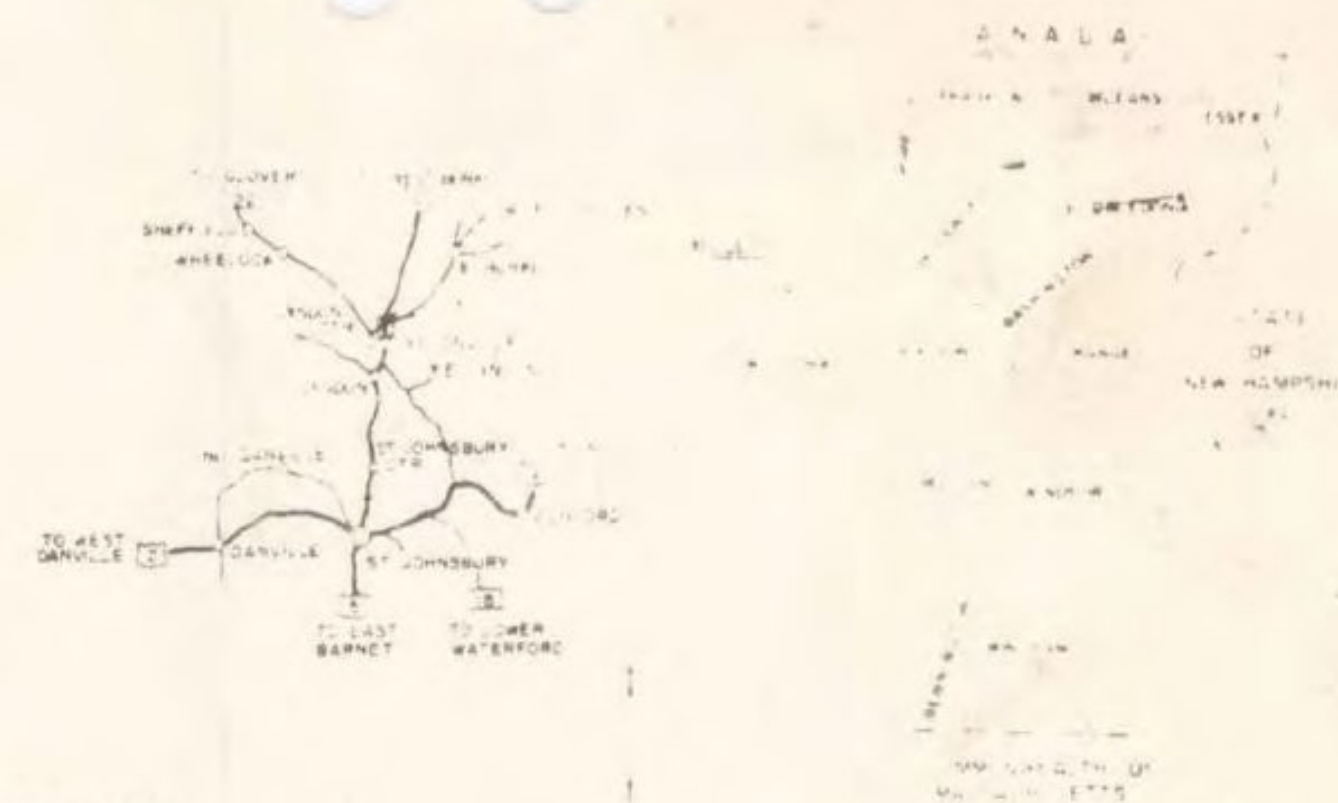
COMPOSITE

SA 6810

BEGINNING AT A POINT APPROXIMATELY 900 FT. SOUTH-
WESTERLY OF THE PRESENT INTERSECTION OF U.S.
ROUTE 5 AND VT. 114 IN THE TOWN OF LYNDON AND
EXTENDING NORTHEASTERLY 230 FT.
LENGTH OF PROJECT 230.0 FT. = .044 MI.

BP 041-5-6603

BEGINNING AT A POINT APPROXIMATELY 670 FT. SOUTH-
WESTERLY OF THE PRESENT INTERSECTION OF U.S.
ROUTE 5 AND VT. 114 IN THE TOWN OF LYNDON AND
EXTENDING NORTHEASTERLY 366 FT.
BRIDGE TOTAL 147.0 FT. = .028 MI.
ROADWAY TOTAL 219.0 FT. = .041 MI.
PROJECT TOTAL 366.0 FT. = .069 MI.



THESE PLANS HAVE BEEN REDUCED PHOTOGRAPHICALLY
TO APPROXIMATELY 1/2 SCALE

Dated 13 January 69

Bridges Inc. & Olson Const. Co.
Wesley Olson, President
Contractor

John T. Gray
Commissioner of Highways

LYNDON
BF MEMB(39)

SHEET 12 OF 28
BRIDGE 144
FOR REFERENCE ONLY

CONVENTIONAL SIGNS

POINT OF ACCESS	SR
LIMITS OF ACCESS	SR
COUNTY LINE	SR
TOWN LINE	SR
FENCE LINE	SR
STONE WALL	SR
UNFENCED PROPERTY	SR
GUARD RAIL	SR
TRAVELED WAY	SR
RAILROAD	SR
RETAINING WALL	SR
CENTER LINE	SR
SURVEY LINE	SR
CUVERT	SR
DROP INLET	SR
TROLLEY POLE	SR
POWER POLE	SR
TELEPHONE POLE	SR
TREES	SR
NECCE	SR
P.A. CONSTRUCTION IDENTIFICATION SIGNS	SR

SLOPE RIGHTS

GRADE ELEVATION

CURVE DATA

DEFLECTION OF ANGLE	A
DEGREE OF CURVE	D
RADIUS OF CURVE	R
TANGENT DISTANCE	T
LENGTH OF CURVE	L
EXTERNAL DISTANCE	E
POINT OF INTERSECTION	P.I.
POINT OF CURVE	P.C.
POINT OF TANGENT	P.T.
POINT ON TANGENT	P.O.T.
POINT ON SUB-TANGENT	P.O.S.T.
ROW LIMITS	

FOR RIGHT OF WAY DETAIL
SEE RIGHT OF WAY DETAIL FOR THIS PROJECT

THESE PLANS ARE THE PROPERTY OF THE VERMONT DEPARTMENT OF HIGHWAYS AND ARE TO BE USED ONLY FOR THE PROJECT AND FOR THE TERRITORY OF HIGHWAYS.
CONTRACTORS ARE TO BE ADVISED THAT THESE PLANS ARE THE PROPERTY OF THE VERMONT DEPARTMENT OF HIGHWAYS AND ARE TO BE USED ONLY FOR THE PROJECT AND FOR THE TERRITORY OF HIGHWAYS.
CONTRACTORS ARE TO BE ADVISED THAT THESE PLANS ARE THE PROPERTY OF THE VERMONT DEPARTMENT OF HIGHWAYS AND ARE TO BE USED ONLY FOR THE PROJECT AND FOR THE TERRITORY OF HIGHWAYS.

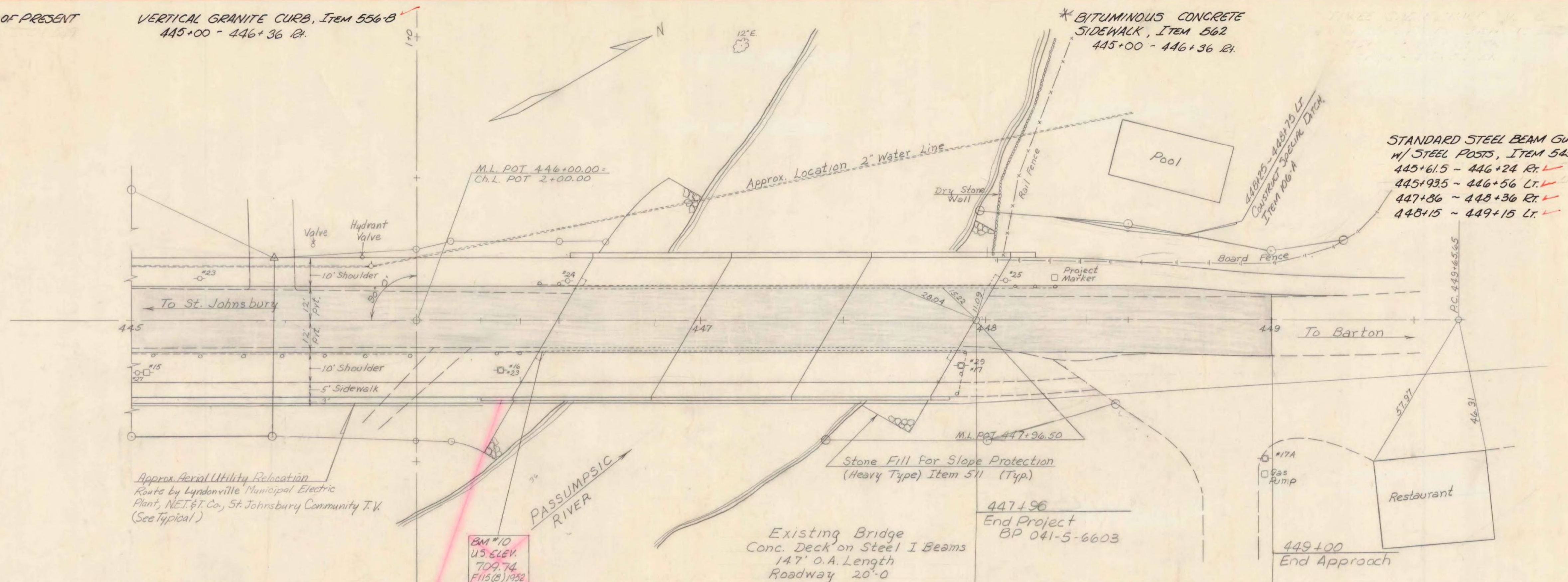
APPROVED <u>High J. Elder</u> DISTRICT ENGINEER DATE <u>1/14/68</u>	APPROVED <u>M. B. Jones</u> CONSTRUCTION ENGINEER DATE <u>1/19/68</u>	APPROVED <u>M. B. Jones</u> BRIDGE ENGINEER DATE <u>1-12-68</u>	APPROVED <u>G. M. Lane</u> CHIEF ENGINEER DATE <u>1-13-68</u>	APPROVED <u>E. H. Hickey</u> ASSISTANT ENGINEER DATE <u>1/18/68</u>	APPROVED <u>R. H. Crowl</u> CHIEF ENGINEER DATE <u>1/17/68</u>
---	---	---	---	---	--

DEPARTMENT OF TRANSPORTATION BUREAU OF PUBLIC ROADS
APPROVED
DIVISION ENGINEER
DATE
PROJECT LYNDON NO. BP 041-5-6603
COMPOSITE
SHEET 12 OF 28 SHEETS

REMOVAL AND DISPOSAL OF PRESENT
GUARD RAIL, ITEM 549

445+00 - 445+95 ~~24~~
446+28 - 446+43 ~~25~~
446+43 - 446+57 ~~26~~
447+91 - 447+94 ~~27~~
448+03 - 448+25 ~~28~~

VERTICAL GRANITE CURB, ITEM 556-B
445+00 - 446+36 R.



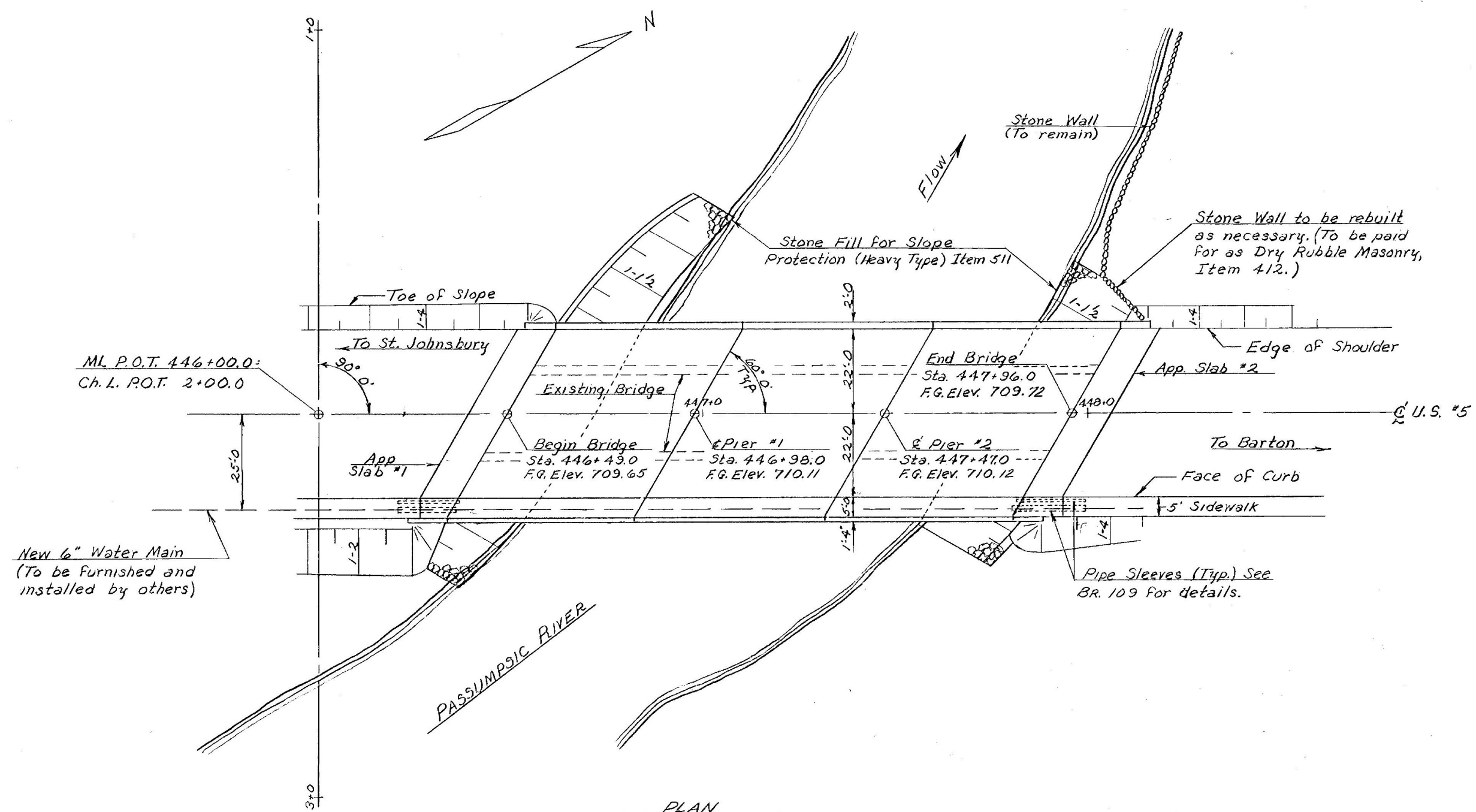
SCALE: 1" = 20'

LYNDON
BF MEMB(39)

SHEET 13 OF 28
BRIDGE 144
FOR REFERENCE ONLY

LYNDON
BP041-5-6603
Plan & Profile
445+00-445+50

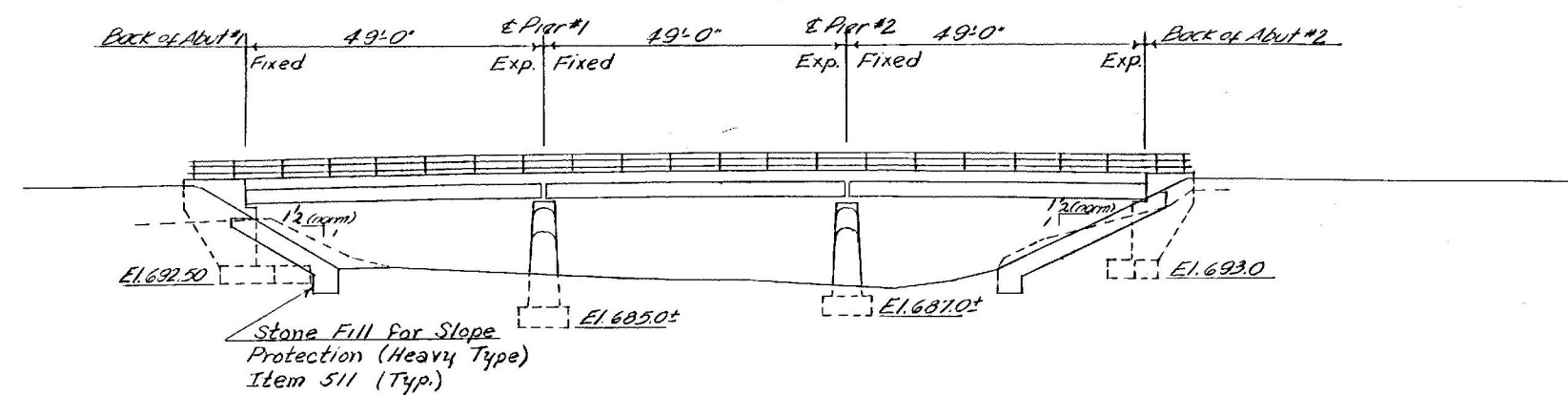
Sheet 4 of 50



PLAN
Scale 1" = 20'-0"

P.V.I.
447+50
Elev. 711.00
200' V.C.

+1.333% -2.225%



ELEVATION
Scale 1" = 20'-0"

STANDARD DRAWINGS

SCB-DI-67	1-24-68
SCB-DI-67, Det. A, B, & E	1-24-68
SCB-DI-67, Det. A, B, & E	1-24-68
SCB-DI-67, Det. A, B, & E	1-24-68
SCB-DI-67, Det. A	1-24-68
SCB-DI-67, Det. A	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
G-10	9-18-67

INDEX OF SHEETS

BR 100	Plan, Elevation, & General Notes
BR 101	Quantity Sheet
BR 102	Borings
BR 103	Typical Section, Framing Plan, & Details
BR 104	Curb and Railing Layout & Railing Detail
BR 105	Pier Joint Detail
BR 106	Abutment No. 1
BR 107	Abutment No. 2
BR 108	Pier No. 1 & Pier No. 2
BR 109	Approach Slabs - Plan & Detail
BR 110 & 111	Reinforcing Schedule
BR 112-114	Channel Sections

LYNDON
BF MEMB(39)
SHEET 14 OF 28
BRIDGE 144
FOR REFERENCE ONLY

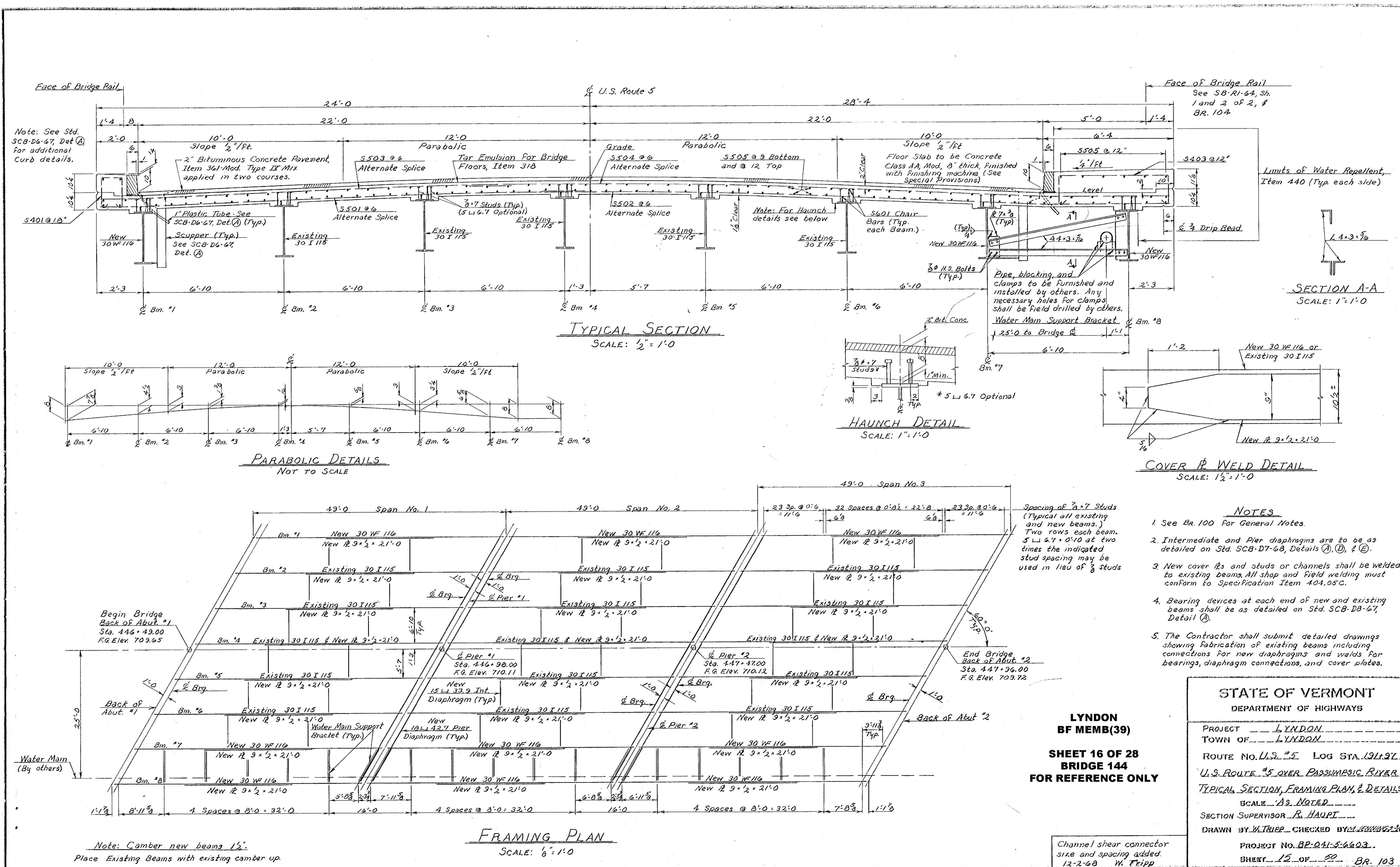
Std. G-10 Added
12-2-69 W. CAPP

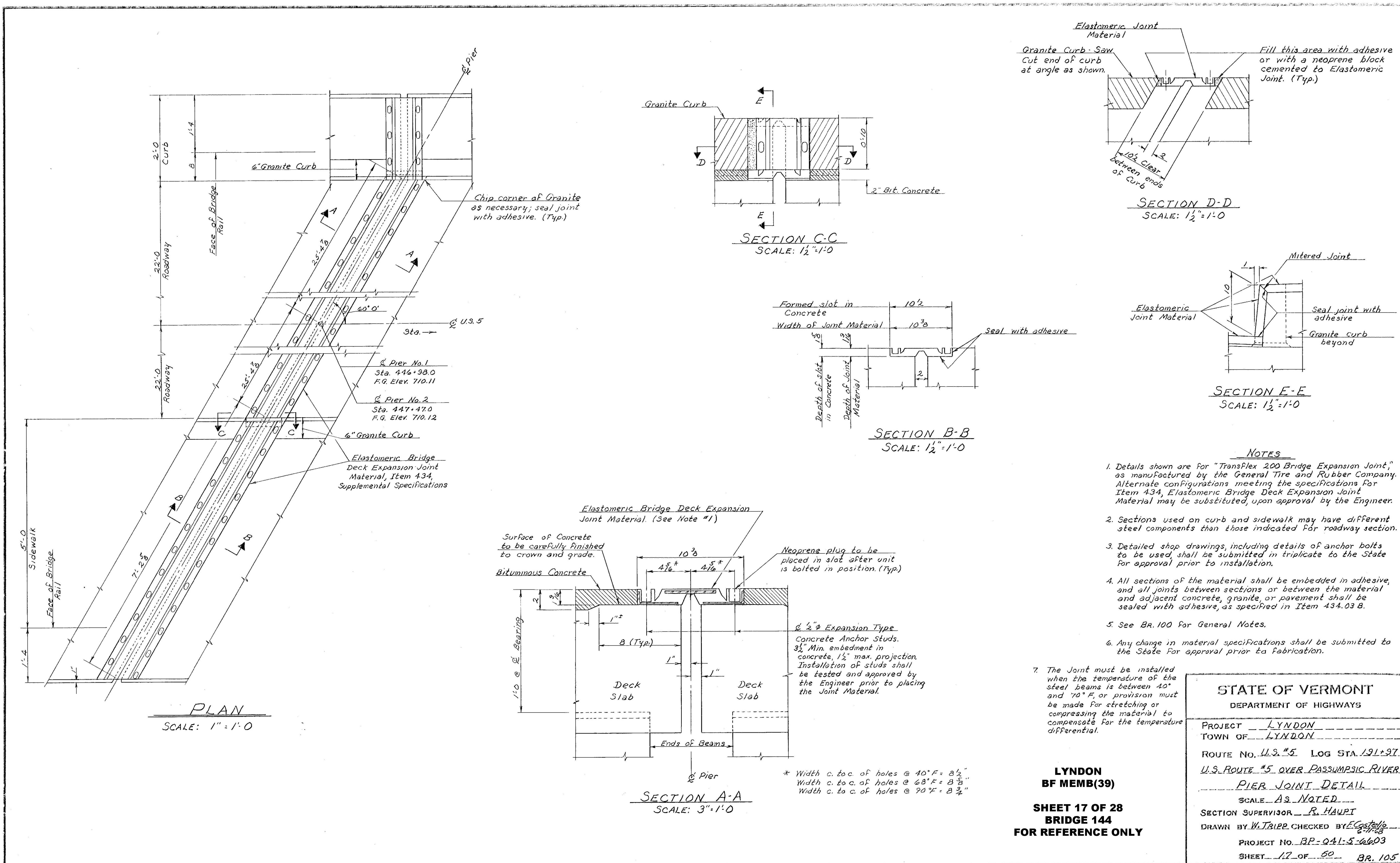
GENERAL NOTES

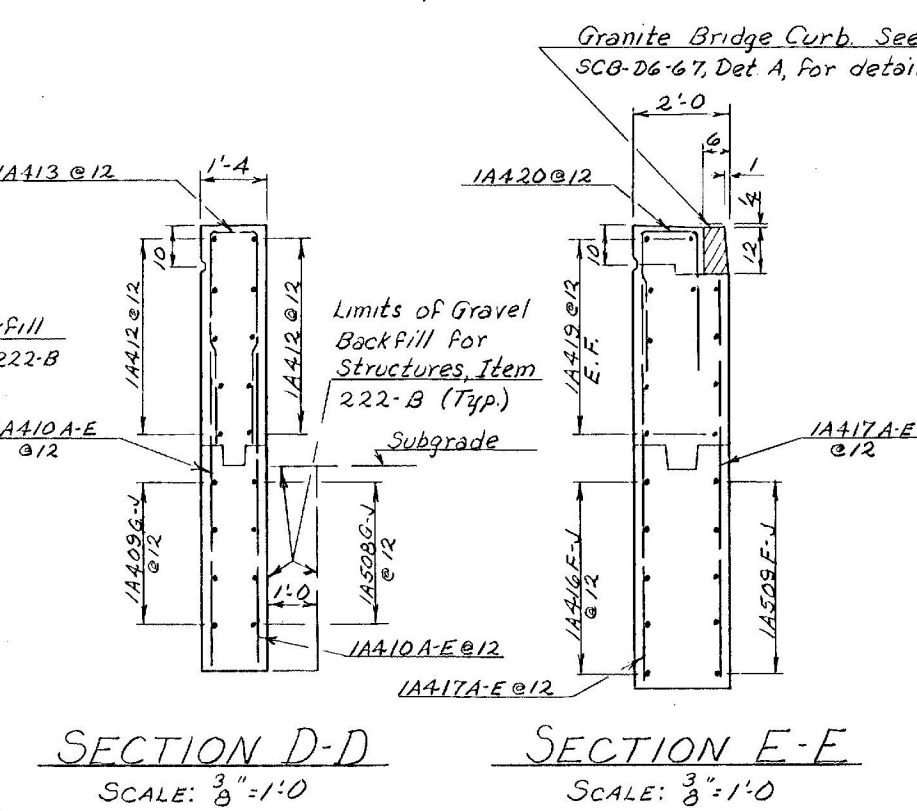
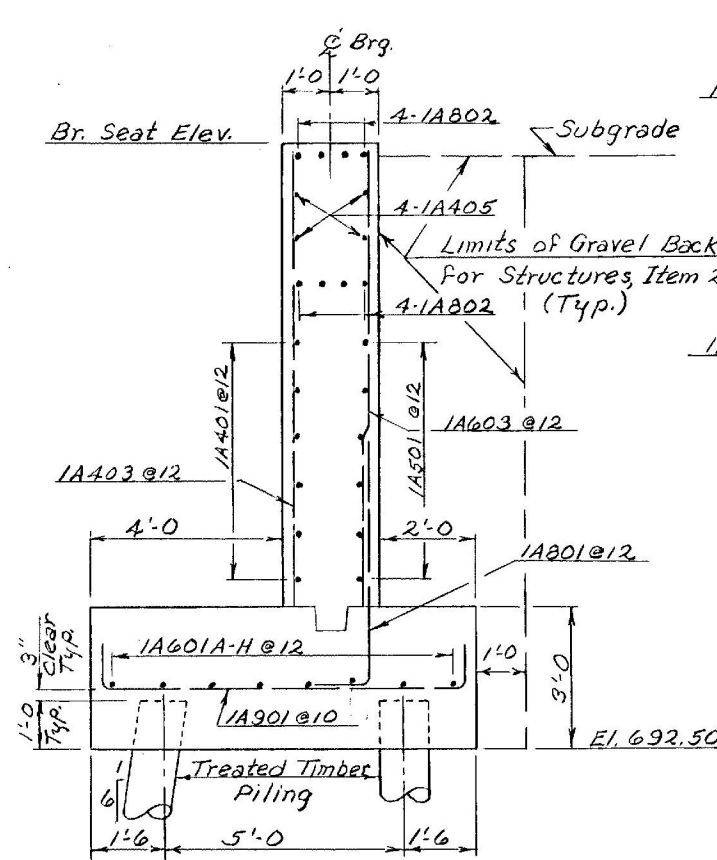
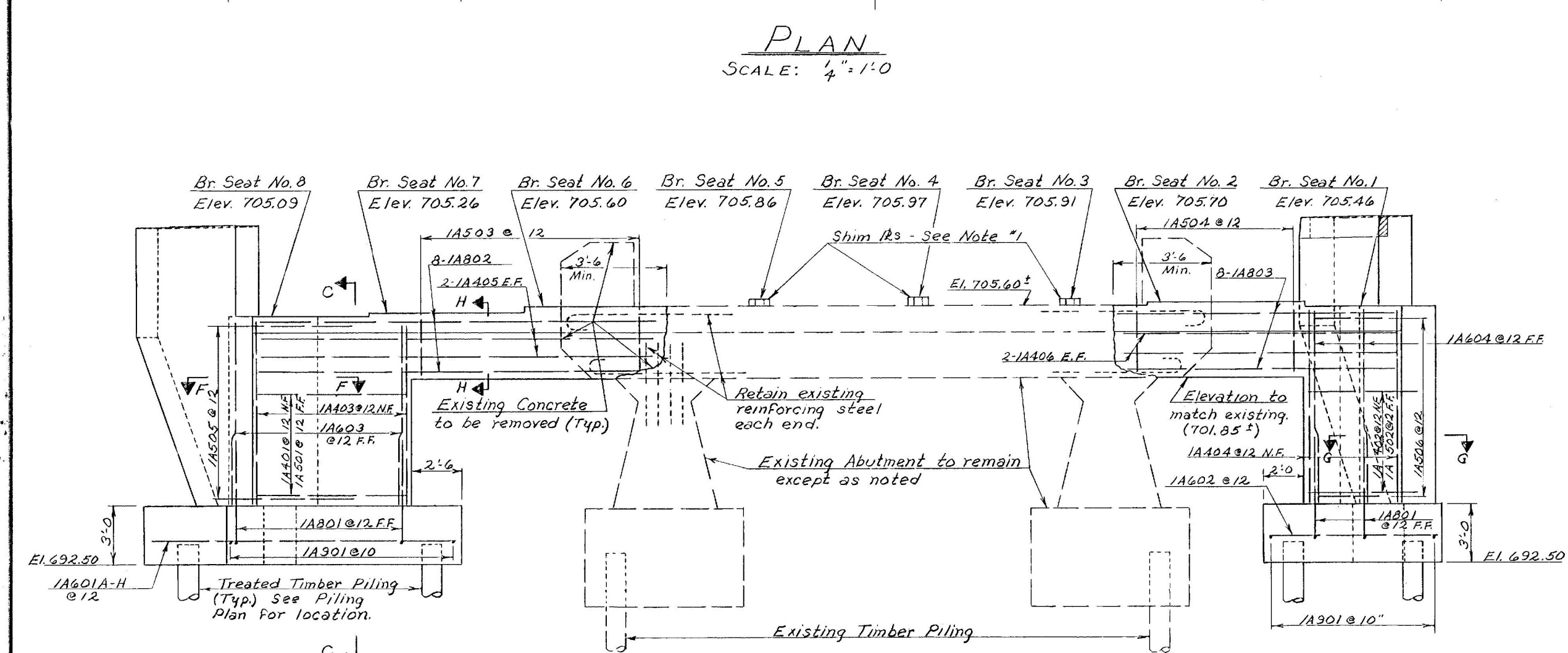
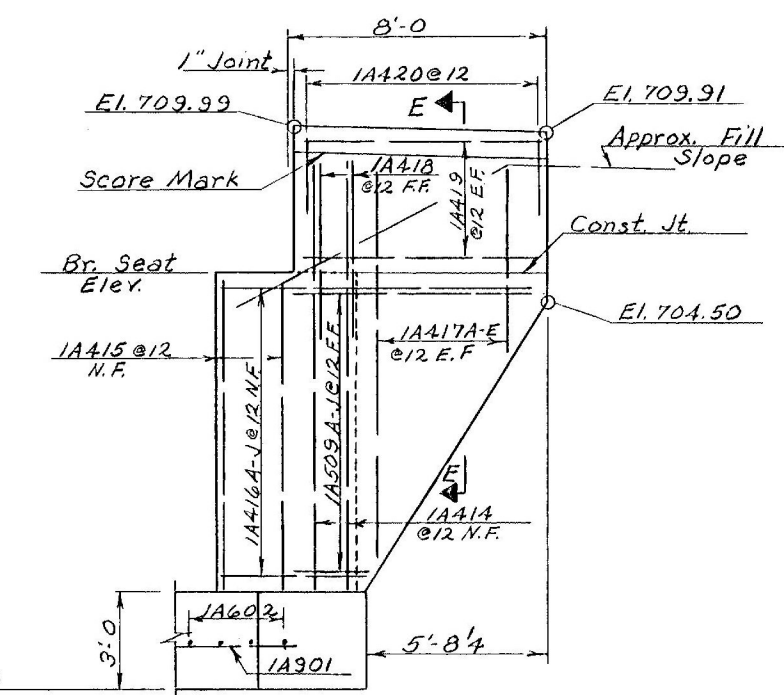
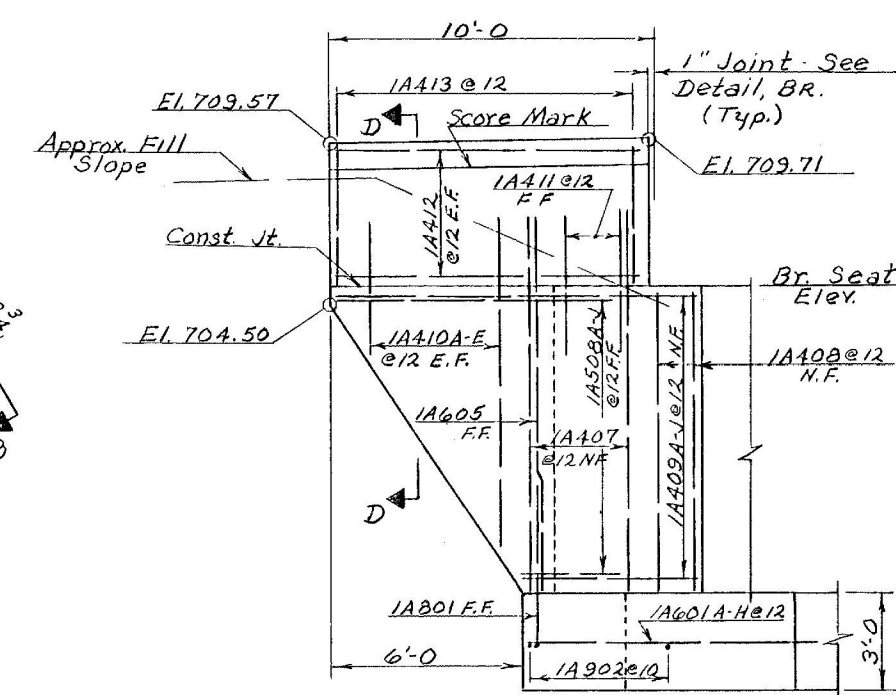
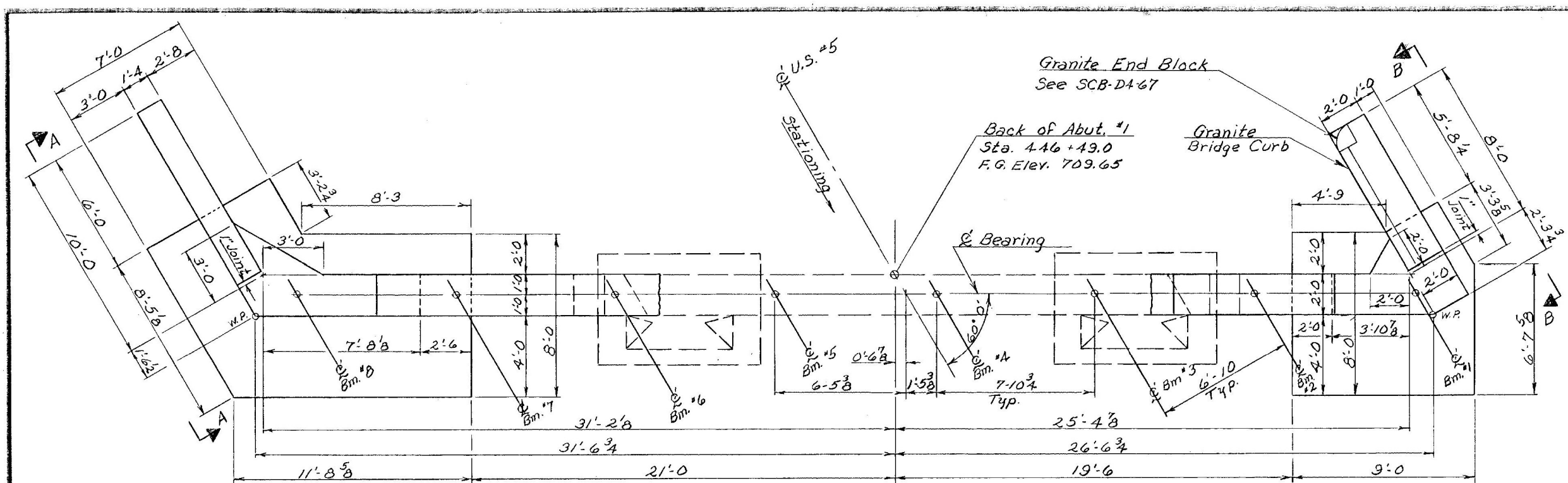
- Elevation Datum is based on Bench Mark #10, Elevation 709.74.
- Removal of existing portions of Abutment and Pier Concrete shall be paid for as Solid Rock Excavation, Item 103-B Modified. Where called for on the Plans, the existing reinforcing steel shall be carefully preserved to allow for use in future work. Any bars thus called for which are damaged or bent beyond use shall be replaced by welding new sections of bars to the existing at the Contractor's expense.
- The existing concrete deck and rail shall be removed as Item 442, Removal of Present Superstructure. Care shall be taken not to damage existing steel beams, which are to remain the property of the State, as detailed in Note 3 below.
- All Piling shall be Item 503-B, Treated Timber Piling. Lengths shown on the Plans are estimated lengths; order lengths shall be such as are determined by test piles at each substructure unit. Piling design loading is 20 Tons per pile maximum. Pile Loading Tests, Item 505, shall be used only when ordered in writing by the Engineer.
- For details of construction joints see Std. SCB-DI-67, Det. B.
- Wing Wall sections are not to be placed above adjacent bridge seat elevation until beams have been profiled and final grade determined by the Engineer.
- All existing 30 inch beams are to be re-used in new positions as indicated on the Framing Plan. Existing beams are to be cleaned as specified under Item 508-B, Flame Cleaning and Painting of Structural Steel, or Item 508-C, Sandblast Cleaning and Painting of Structural Steel, and are to receive three coats of paint as specified under Item 508.02. Existing beams are to be fitted for new bearing devices and diaphragms, and are to have new cover plates welded to the bottom flanges and shear connectors welded to the top flange. The cost of cleaning and painting all existing steel shall be paid for as Item 508-B, Flame Cleaning and Painting of Structural Steel. The cost of furnishing and attaching shear connectors to new and existing beams shall be paid for as Item 403 Shear Connectors. All new structural steel shall be paid for at the unit price bid for Item 404-A, Structural Steel.
- The cost of removing and resetting existing steel beams shall be included in the Lump Sum bid for Item 442, Removal of Present Superstructure.
- Bridge Railing shall be standard Aluminum Railing as detailed on BR 104 and Std. SB-R1-64, Sh. 1 & 2 of 2.
- See SCB-DI-67 For additional General Notes.
- All new batters and chamfers adjacent to existing concrete shall be constructed to match existing detail.
- The Contractor shall submit details of Temporary Bridge and approach, including alignment, and receive approval from the State prior to installation. The approaches shall be treated with a Tack Coat as specified under Item 316-B, Tack Coat-Type IVA. Cost of Tack Coat shall be included in the Lump Sum bid for Item 441-B.
- The cost of drilling and grouting new reinforcing steel into existing concrete shall be included in the unit price bid for Reinforcing Steel, Item 402.

STATE OF VERMONT DEPARTMENT OF HIGHWAYS

PROJECT LYNDON
TOWN OF LYNDON
ROUTE No. U.S. #5 LOG STA. 191+97
U.S. ROUTE #5 OVER PASSUMPSIC RIVER
PLAN, ELEVATION, & GENERAL NOTES
SCALE AS NOTED
SECTION SUPERVISOR R. HAVET
DRAWN BY K. TRIBE CHECKED BY E. COFFIN
PROJECT No. BP-041-56693
SHEET 14 OF 28 BR 100

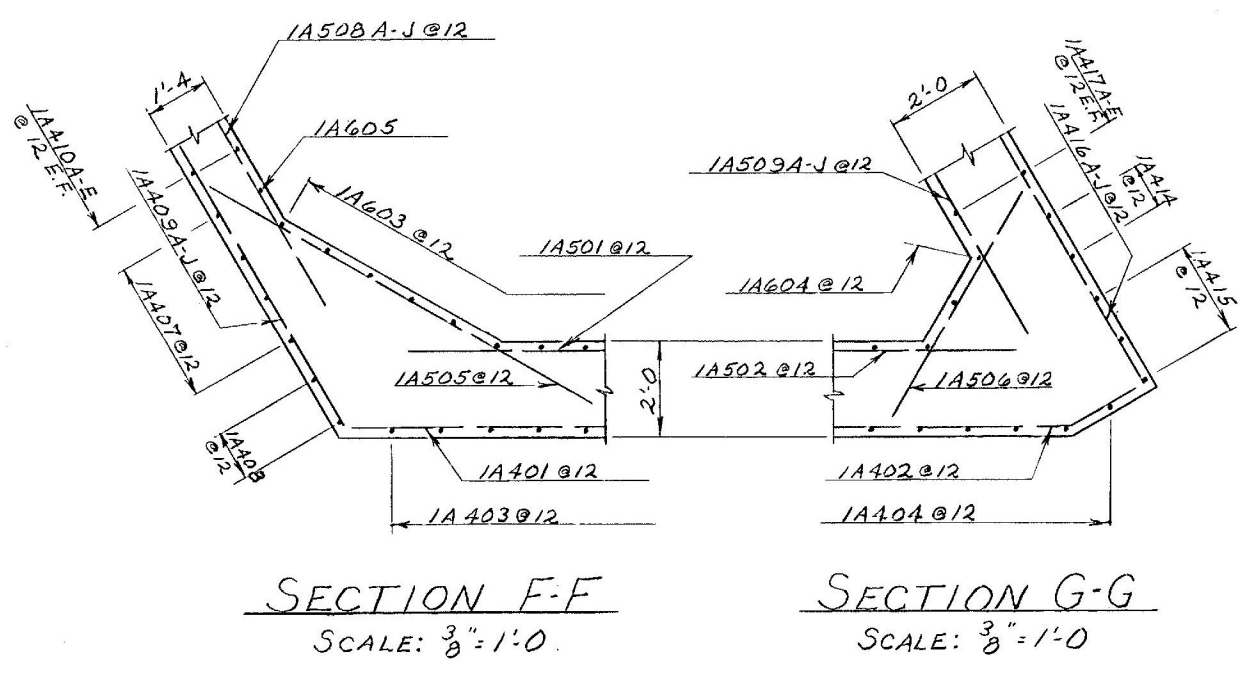
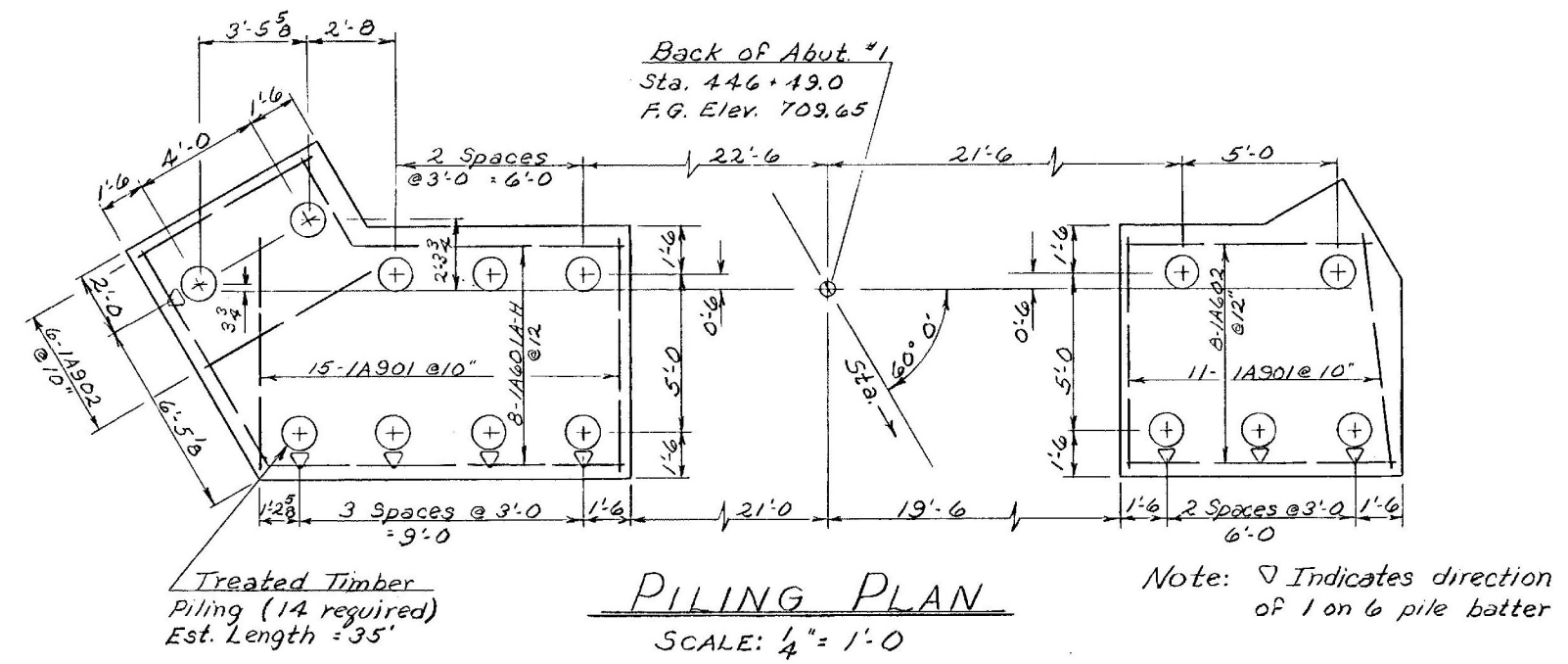
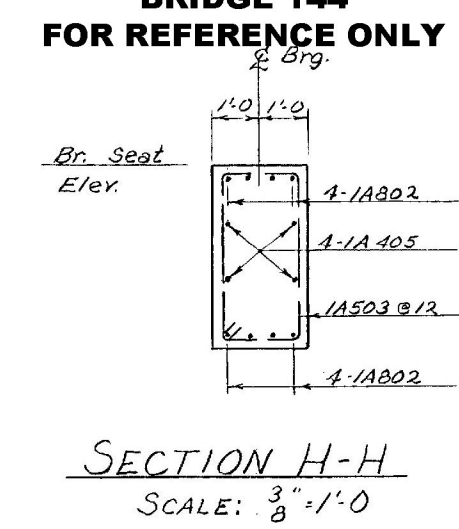




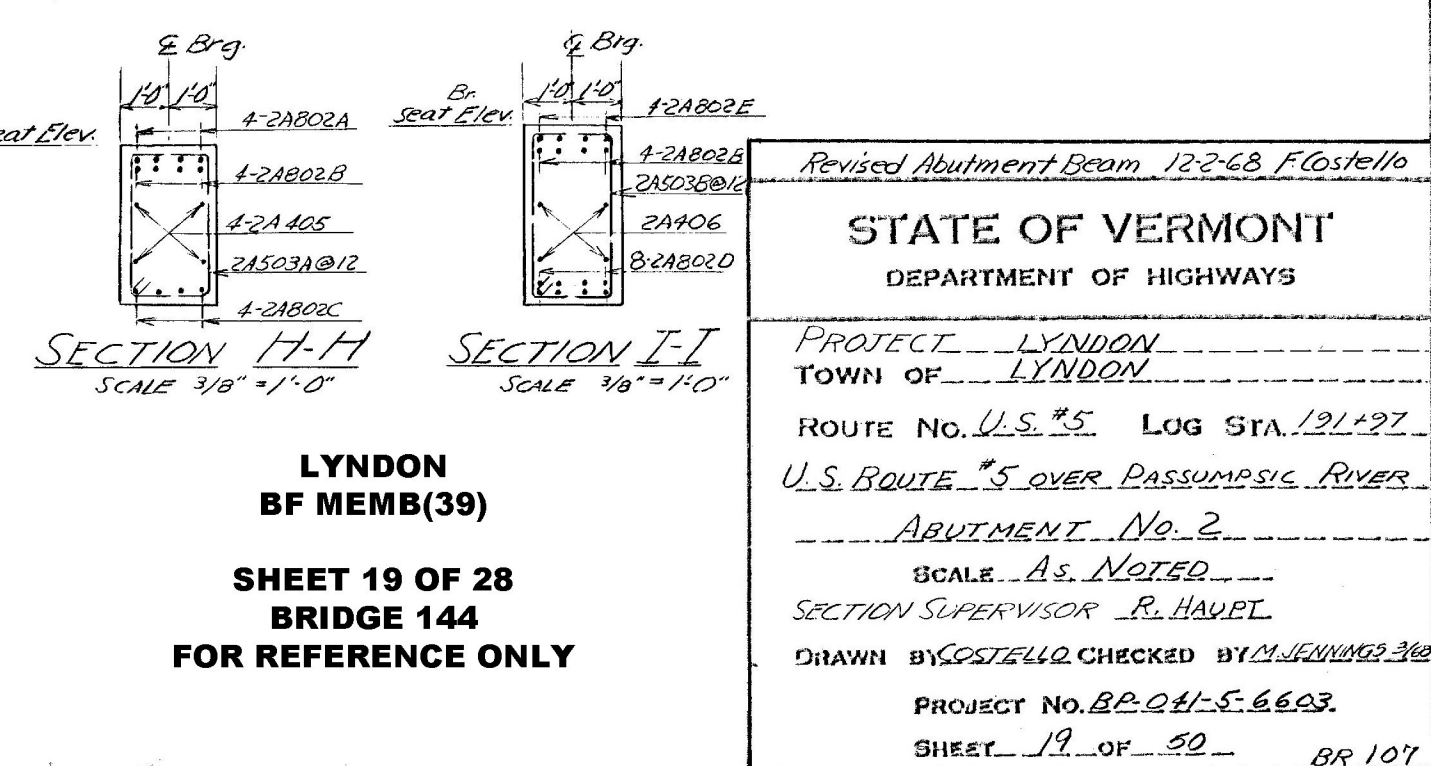
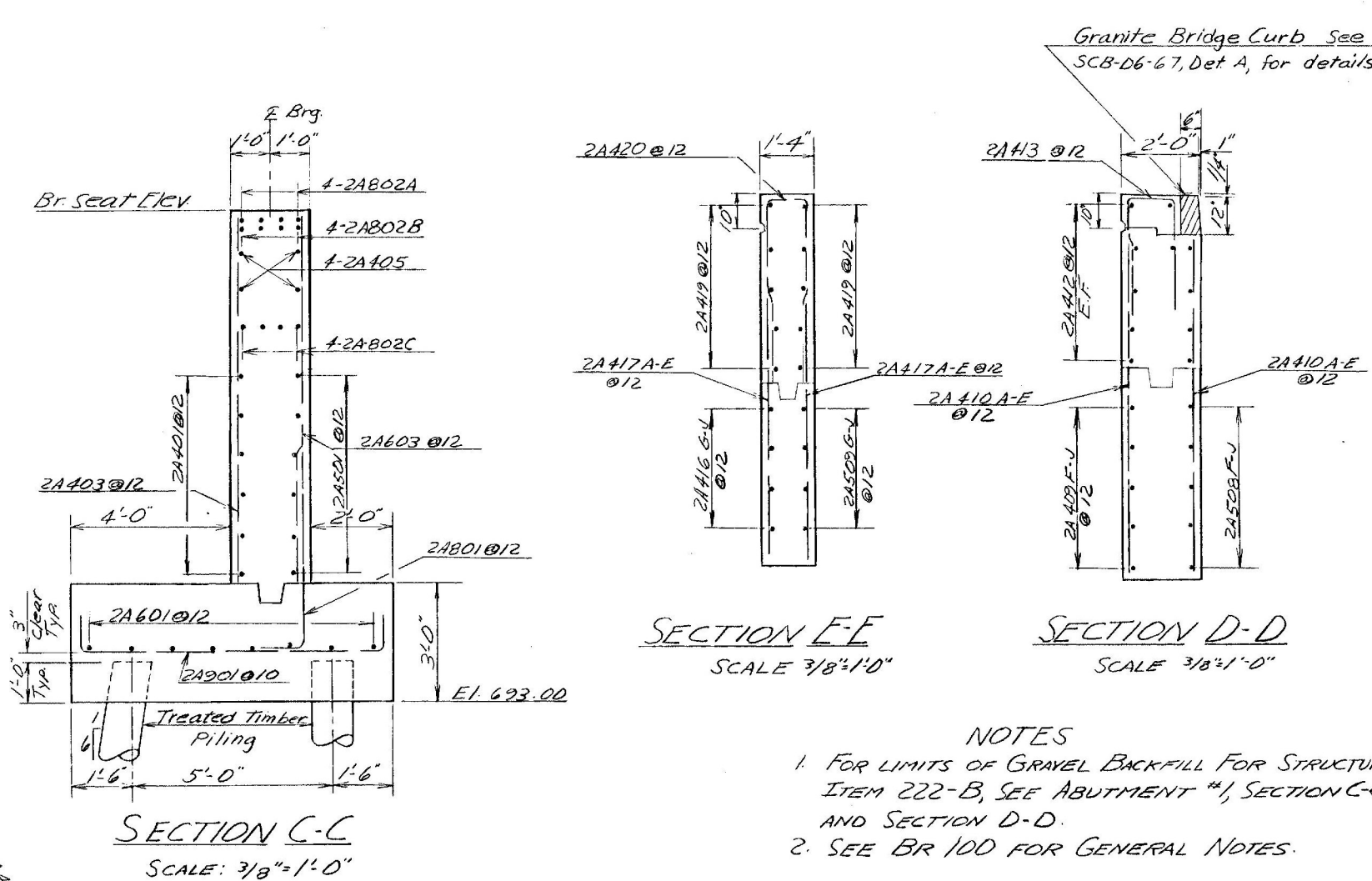
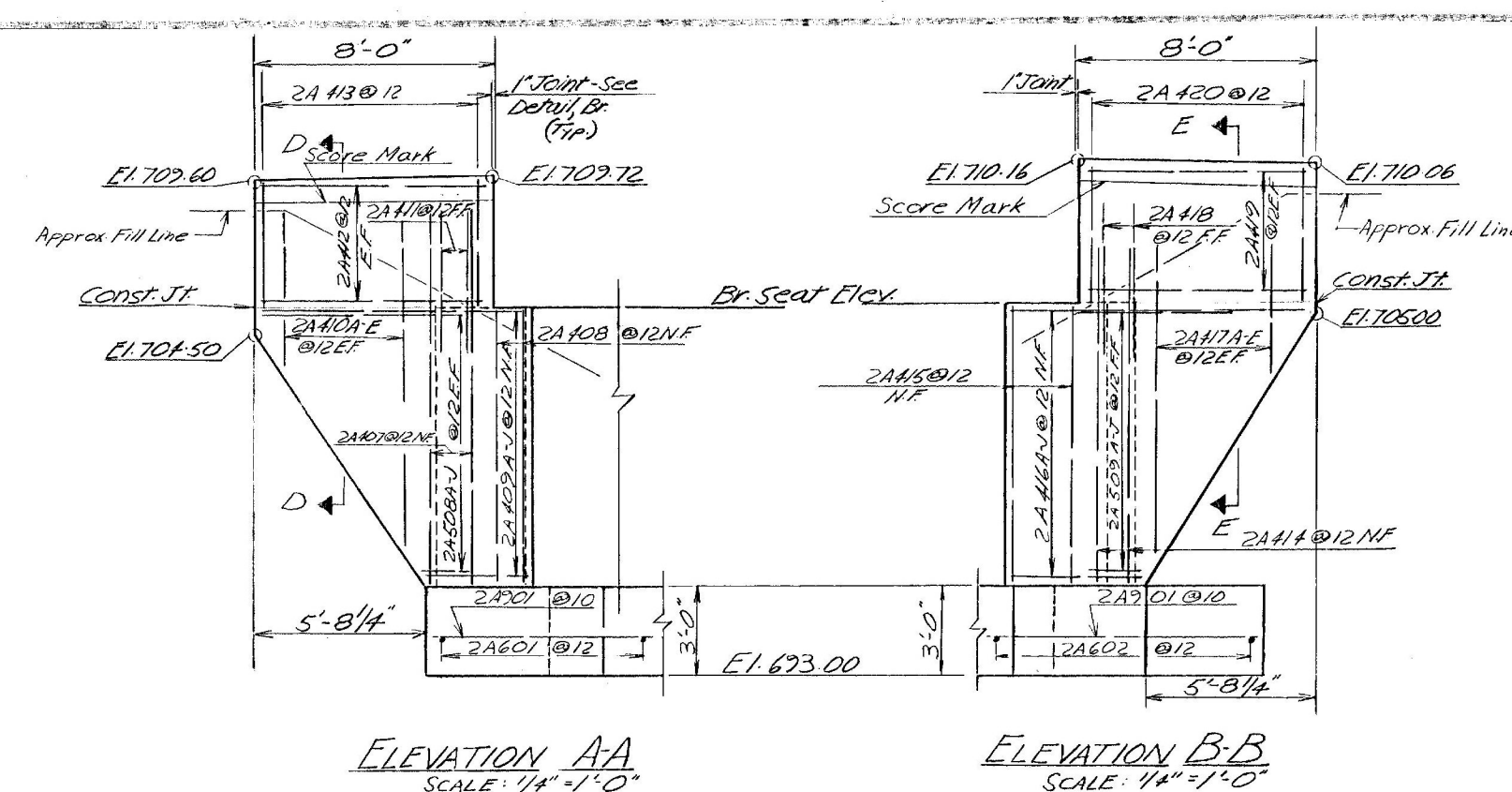


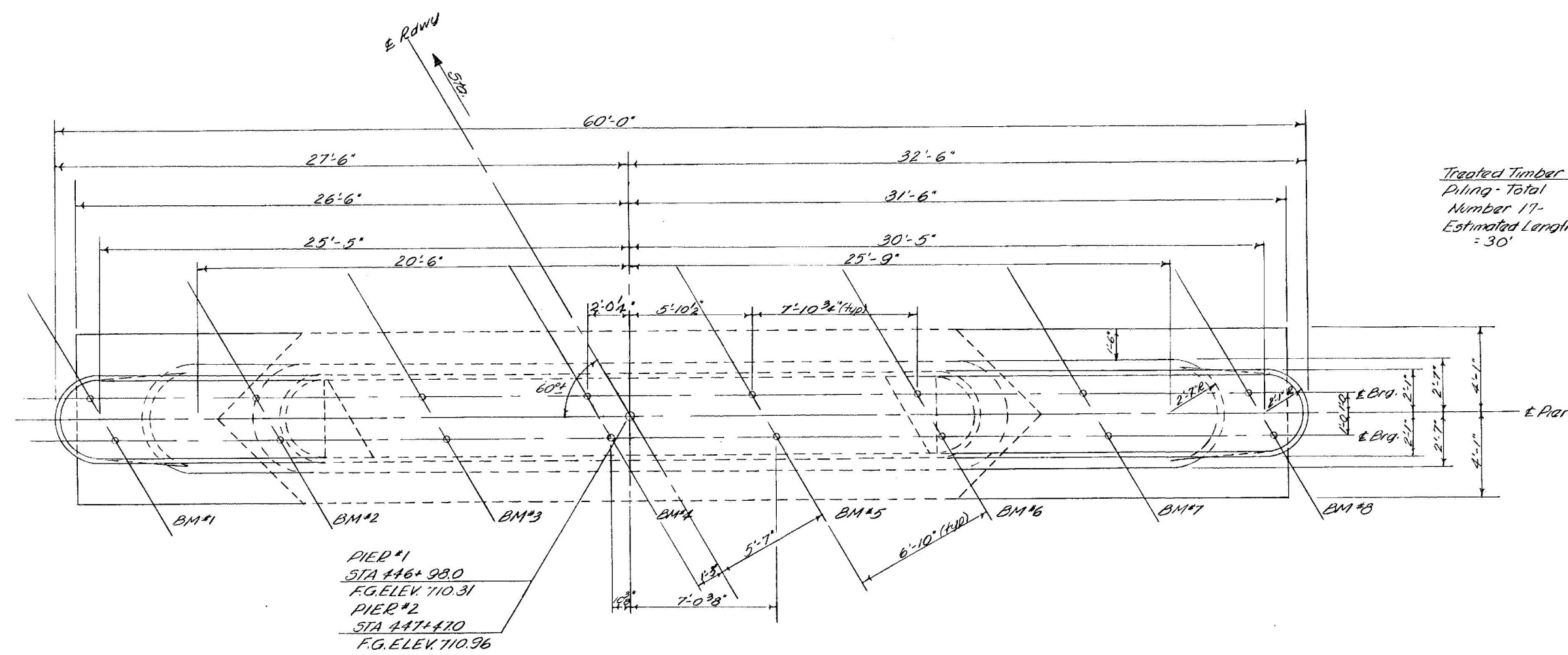
- NOTES**
1. Metal shim R₃ equal in size to the bearing R₃ shall be provided at Beams 3, 4, & 5 to raise existing elevation to required Bridge Seat Elevation.
 2. See BR. 100 For General Notes.
 3. Water Repellent, Item 440, shall be applied to all exposed surfaces not otherwise treated.

LYNDON
BF MEMB(39)
SHEET 18 OF 28
BRIDGE 144
FOR REFERENCE ONLY



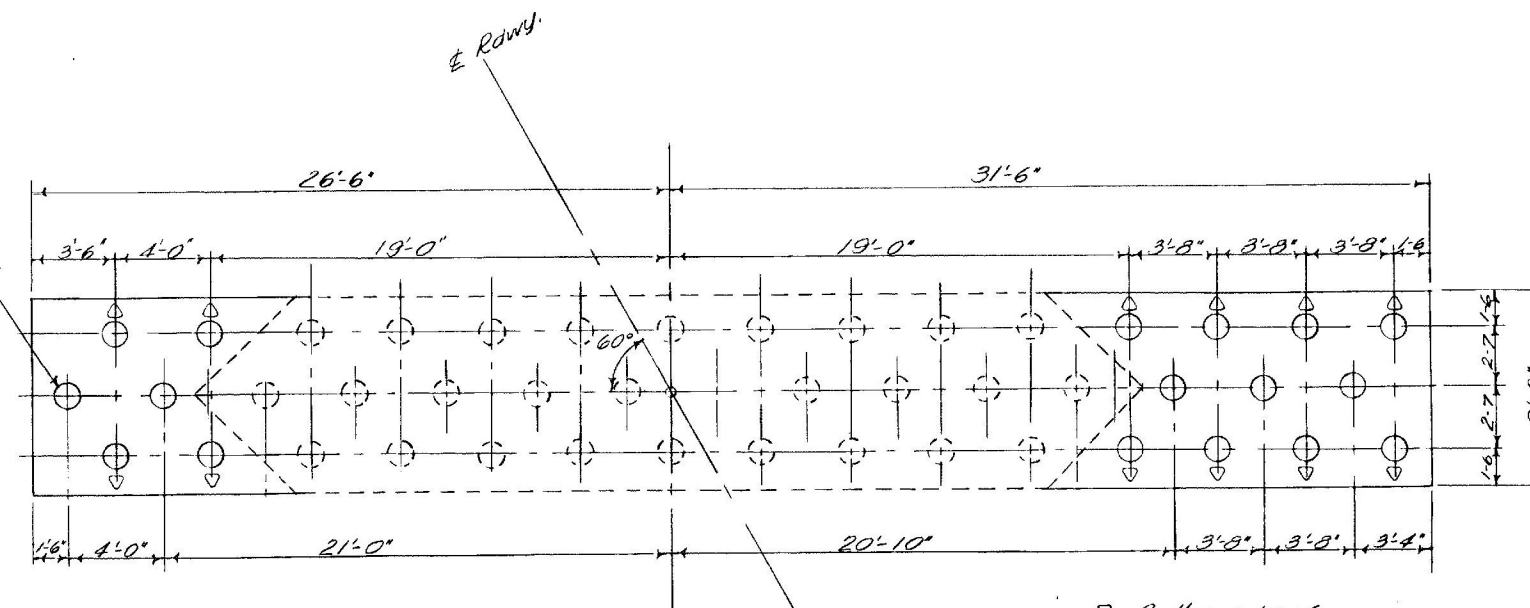
STATE OF VERMONT DEPARTMENT OF HIGHWAYS	
PROJECT	LYNDON
TOWN OF	LYNDON
ROUTE NO.	U.S. 5 LOG STA. 191.97
U.S. ROUTE 5 OVER PASSUMPSIC RIVER	
ABUTMENT NO. 1	
SCALE	AS NOTED
SECTION SUPERVISOR	R. HAVET
DRAWN BY	M. TRIBE
CHECKED BY	M. JENNINGS
PROJECT NO.	BR. 041-5-4403
SHEET	18 OF 50 BR. 106



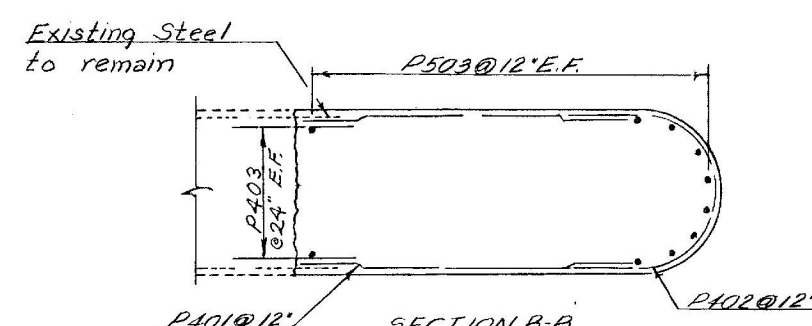


PLAN
Scale 1/4" = 1'-0"

Treated Timber
Piling - Total
Number 117
Estimated Length
= 30'

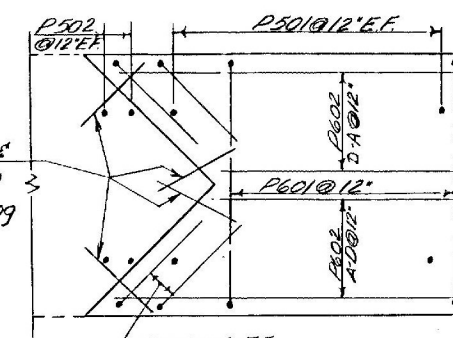


FOOTING PLAN
Scale 3/16" = 1'-0"



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

P201 @ 24" Top &
Bottom. Drill and
grout into existing
footings.



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

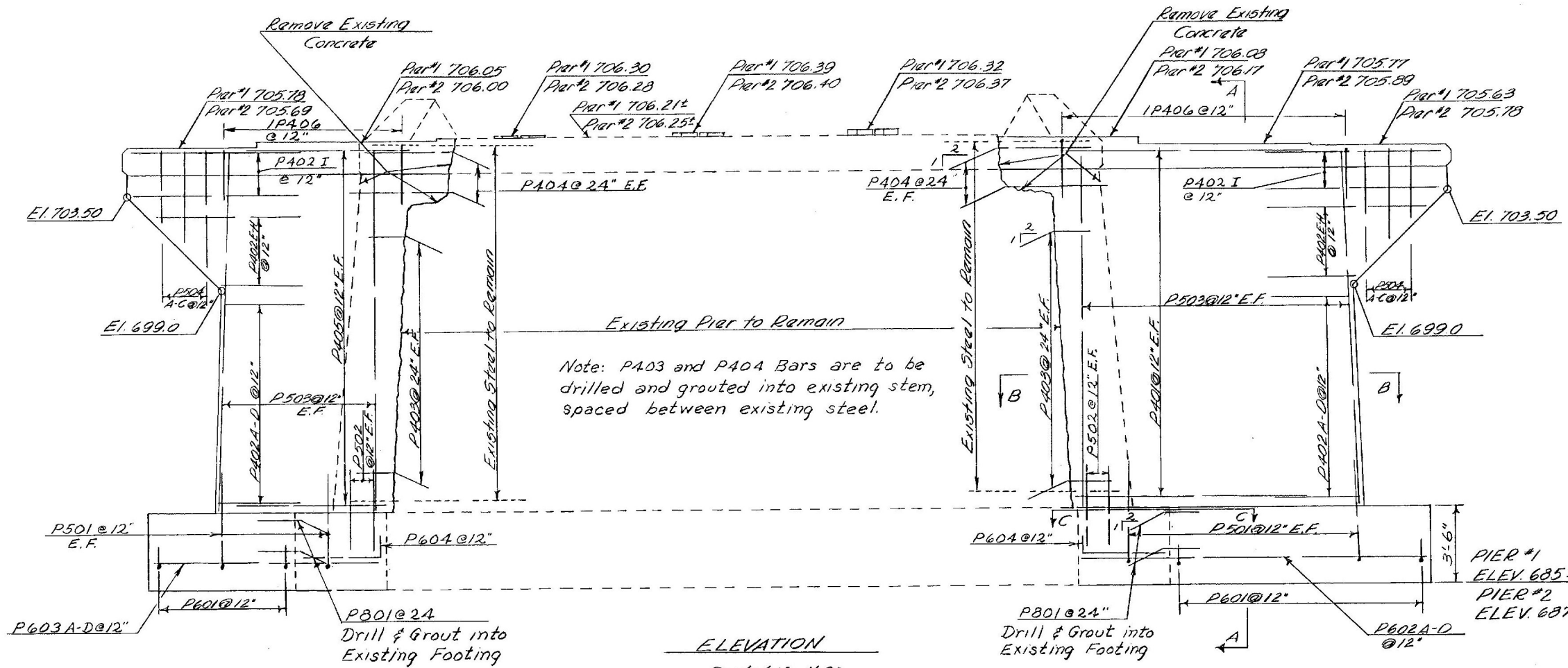
PILE TABLE			
Location	Type	Quantity	Length
Abut #1	Treated Timber	14	35 ft.
Abut #2	Treated Timber	12	35 ft.
Pier #1	Treated Timber	17	30 ft.
Pier #2	Treated Timber	17	30 ft.

LYNDON
BF MEMB(39)

SHEET 20 OF 28
BRIDGE 144
FOR REFERENCE ONLY

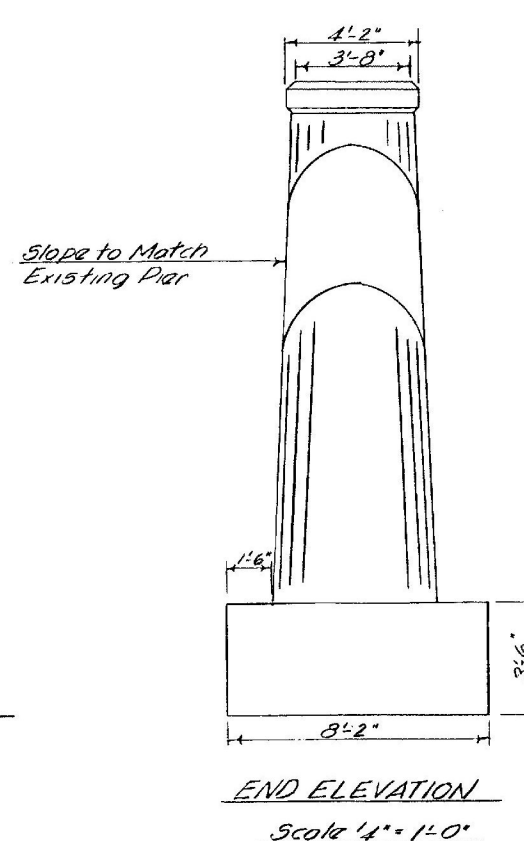
NOTES

- Water Resistant, Item 440, shall be applied to existing and new pier concrete from Bridge Seat Elevation to Elevation 693.0.
- Metal shim 1/8", equal in size to the bearing 1/8", shall be provided at Beams 3, 4, and 5 to raise existing elevation to required Bridge Seat Elevation.
- Bottoms of new footings are to be placed at the same elevation as the bottoms of existing footings.
- See Br. 100 for General Notes.

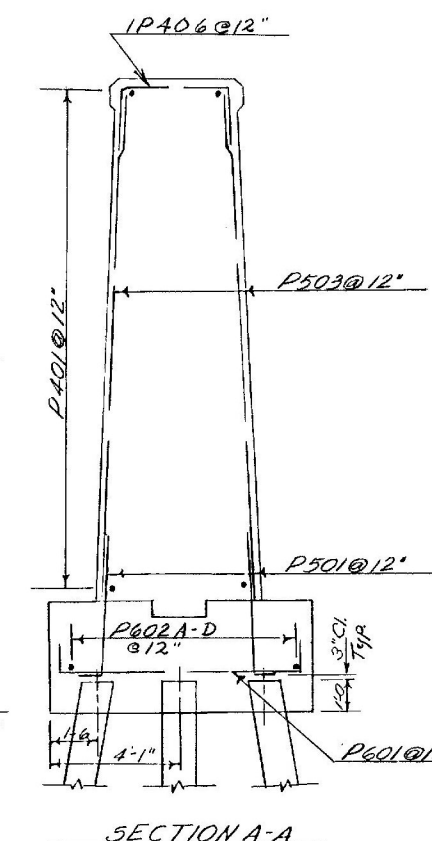


ELEVATION
Scale 1/4" = 1'-0"

Note: All Pier reinforcing bar marks are to be prefixed with Pier Number.



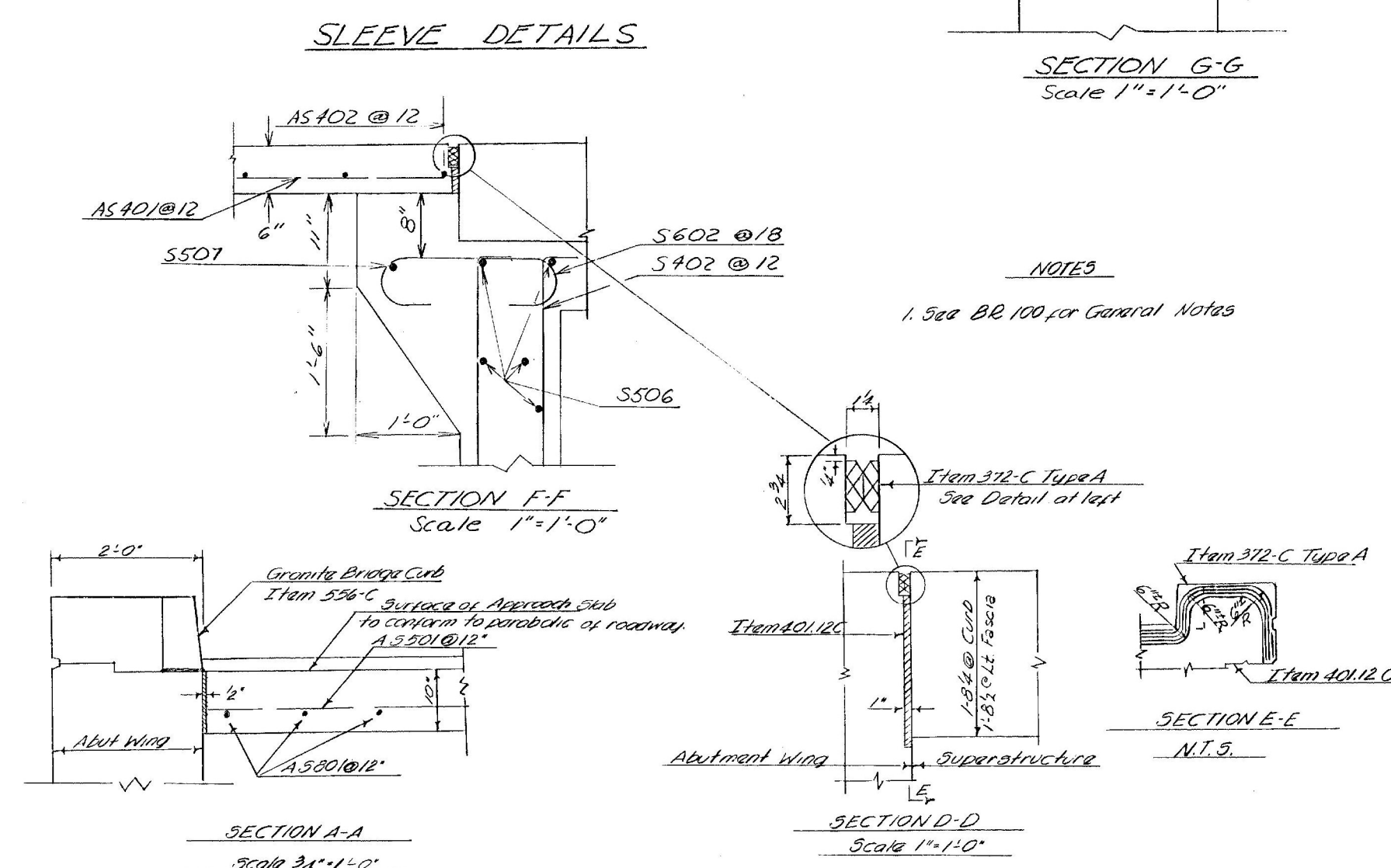
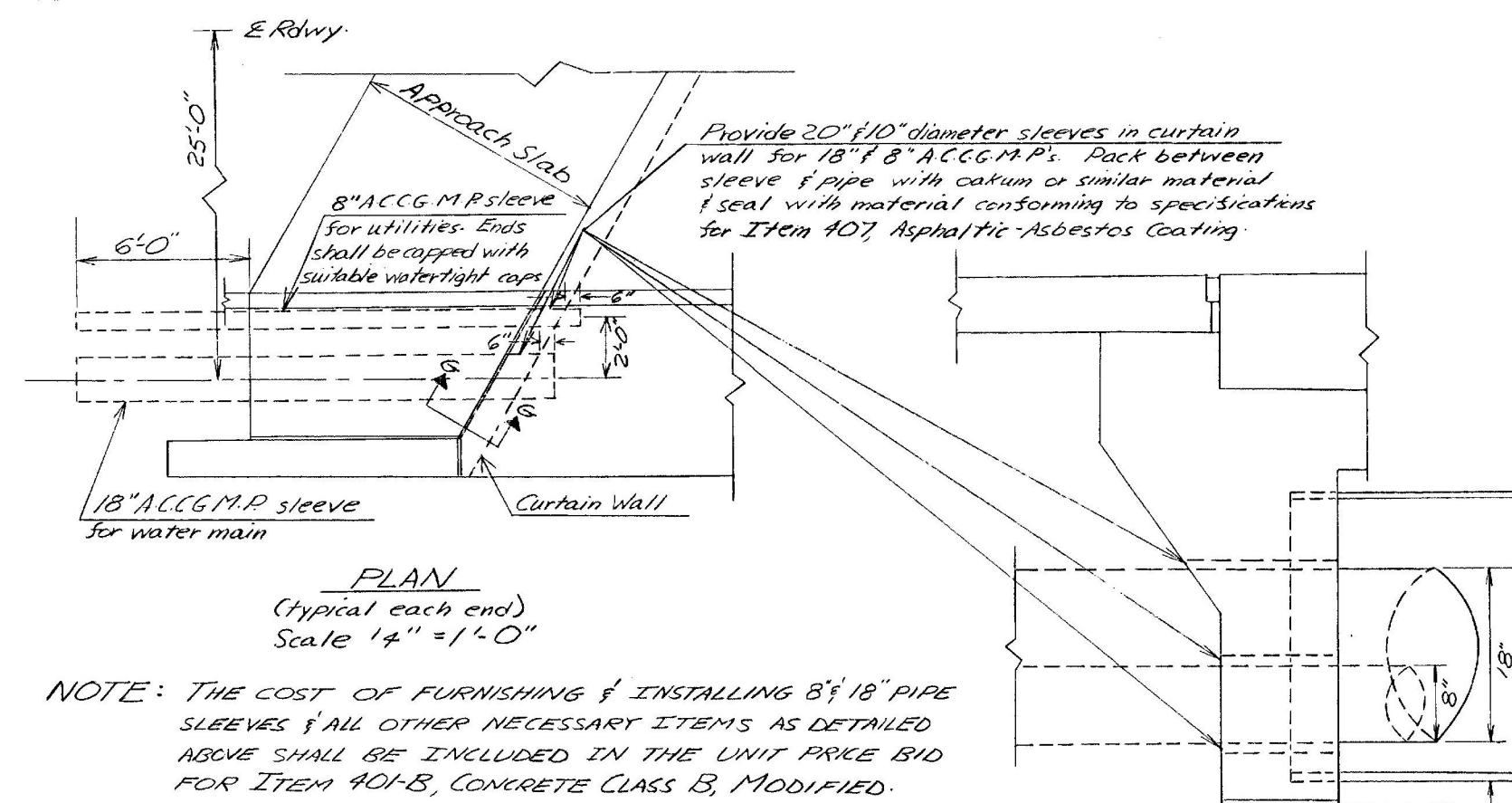
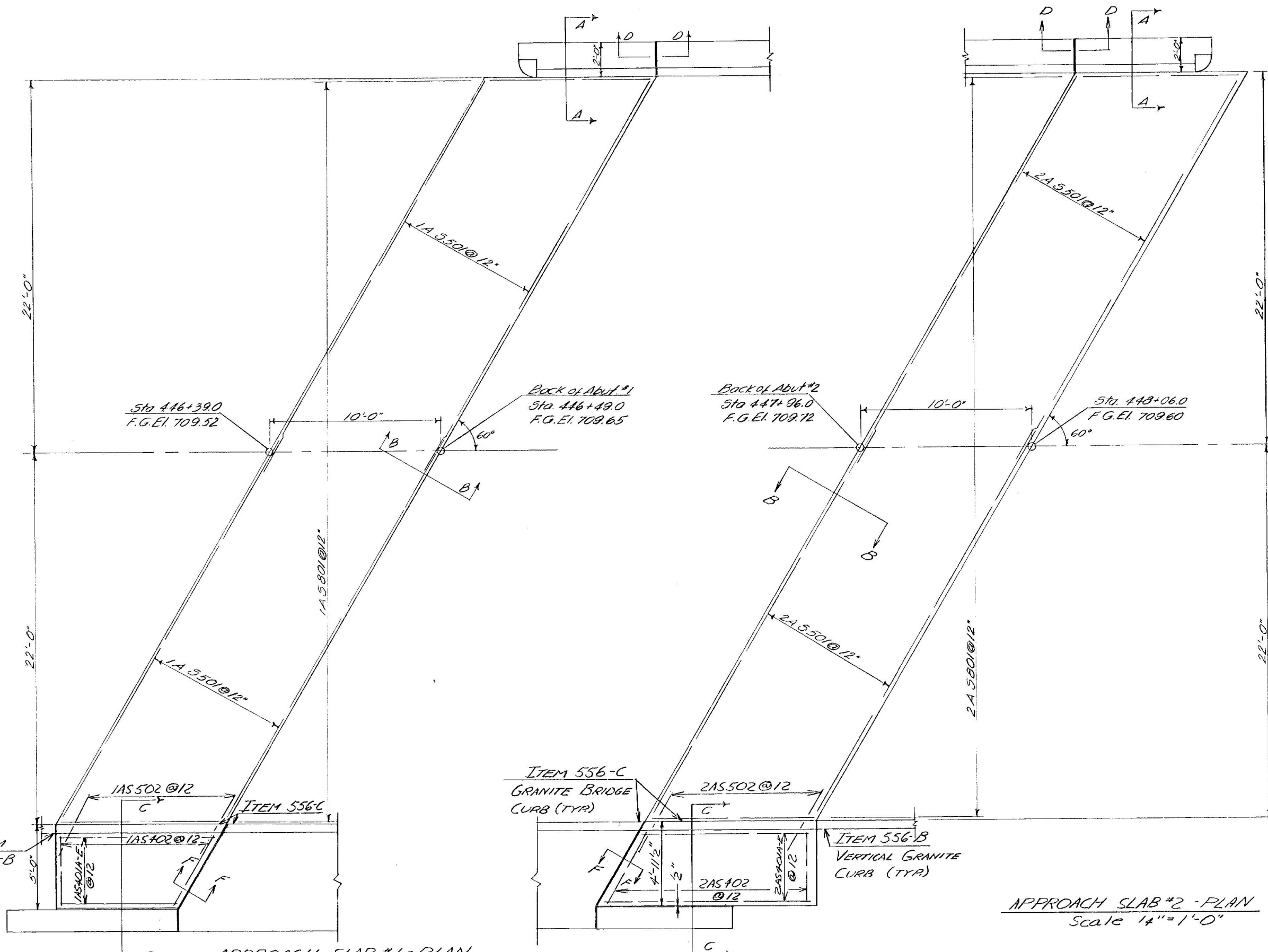
END ELEVATION
Scale 1/4" = 1'-0"



SECTION A-A
Scale 1/4" = 1'-0"

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT LYNDON
TOWN OF LYNDON
ROUTE No. 143 & 5 LOG STA. 194+92
U.S. ROUTE 5 OVER PASSUMPSIC RIVER
PIER #1 AND PIER #2
SCALE AS NOTED
SECTION SUPERVISOR R. HADRI
DRAWN BY J. HADRI CHECKED BY J. HADRI
PROJECT No. BR-01-5-6623
SHEET 20 OF 28 BR 108



STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PROJECT LYNDON
TOWN OF LYNDON

ROUTE NO. 102 LOG STA. 192.97

U.S. ROUTE 15 OVER PASSUMPSIC RIVER

APPROACH SLABS - PLAN AND DETAIL

SCALE AS NOTED

SECTION SUPERVISOR R. HAVET

DRAWN BY M. H. H. CHECKED BY C. C. H. H.

PROJECT NO. 80-01-5-6802

SHEET 21 OF 50 82 109

LYNDON
BF MEMB(39)

SHEET 21 OF 28
BRIDGE 144
FOR REFERENCE ONLY

INDEX OF SHEETS	
SHEET NO.	TITLE PAGE
2	TYPICAL CROSS SECTION OF IMPROVEMENT SINGLE TACK COAT OF REFINED TAR WITH SAND COVER, ITEM 316-A
3	BANKING AND WIDENING TABLES
4	QUANTITY SHEET (ITEMS)
5	QUANTITY SHEET (DRAINAGE)
6-13	EARTHWORK SHEETS
14-40	PLAN AND PROFILE SHEETS
41	PRELIMINARY INFORMATION SHEET (BRIDGE)
42	DETAILS OF ABUTMENT NO.1
43	DETAILS OF ABUTMENT NO.2
44	STANDARD STRUCTURE SHEET SIB-30 (H-20) SUPERSTRUCTURE
45	BRIDGE DETAILS (CURB AND RAILING)
46	REINFORCING STEEL SCHEDULE (BRIDGE)
47	DETAIL SHEET 6'X5' R.C.B. EXTENSION, STA. 482+26
48	DETAIL SHEET 4'X6.5' R.C.B. EXTENSION, STA. 752+94
49	REINFORCING STEEL SCHEDULE- STAS. 482+26 & 752+94
50	CONSTRUCTION DETAILS CD (DRAINAGE AND MARKERS)
51	CONSTRUCTION DETAILS CD-2 (TYPICAL GRADING)
52	STANDARD STRUCTURE SHEET S-40 (BARRICADES, SIGNS AND LIGHTS)
53	STANDARD STRUCTURE SHEET S-45-45 (TWO CABLE GUARD RAIL)
54	STANDARD STRUCTURE SHEET S-47-45 (DROP INLET)
55	STANDARD STRUCTURE SHEET S-48-48 (CABLE RAIL END UNITS)
56	STANDARD STRUCTURE SHEET S-53-48 (PRECAST R.C.P. DROP INLET)
57	STANDARD STRUCTURE SHEET SB-11 (BARRICADES, SIGNS AND LIGHTS)
58	STANDARD STRUCTURE SHEET SB-20 (DETAILS C, D, H (MOD) J, K, & L)
59	STANDARD STRUCTURE SHEET SC-2-4 (BOX CULVERTS)
60	STANDARD STRUCTURE SHEET SCW 2-3 BOX CULVERTS)
61-173	CROSS SECTIONS

STANDARD STRUCTURE SHEET APPROVED BY THE CHIEF ENGINEER, VERMONT STATE DEPARTMENT OF HIGHWAYS
S 40 JUNE 10 1950

STATE OF VERMONT DEPARTMENT OF HIGHWAYS

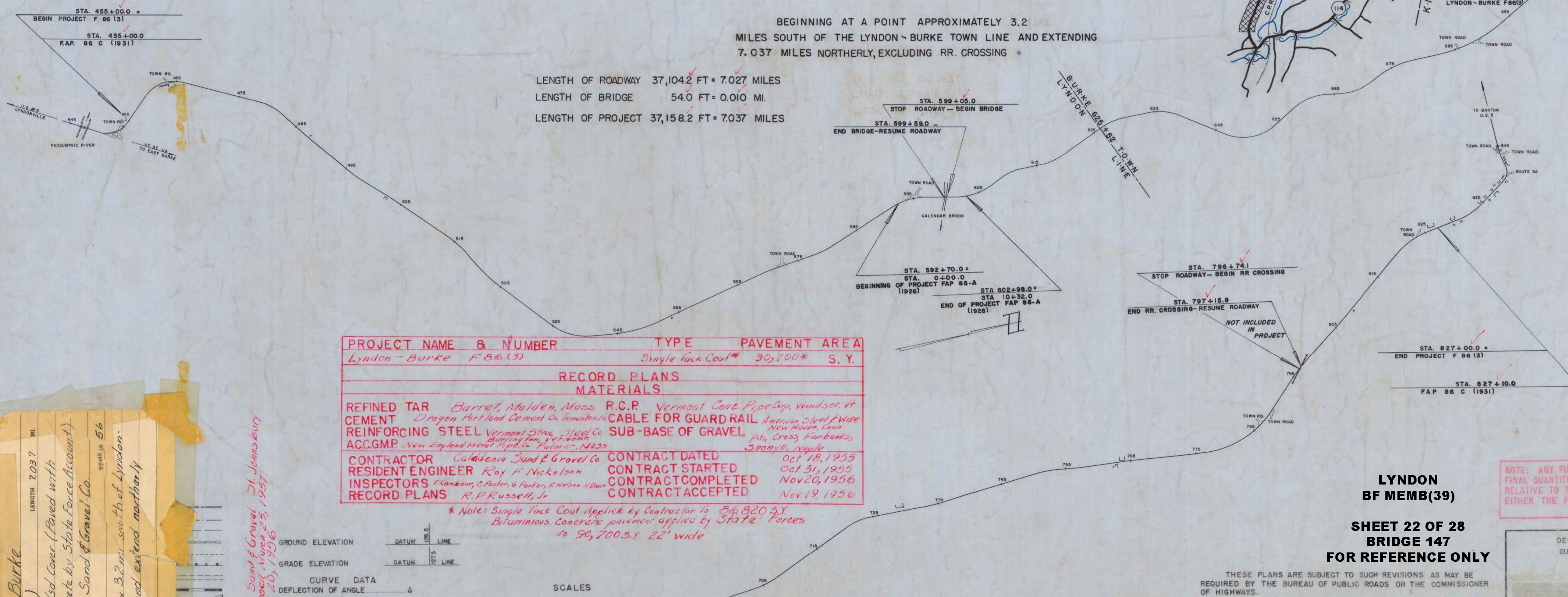
PROPOSED IMPROVEMENT

FEDERAL AID PROJECT

TOWN OF LYNDON - BURKE COUNTY OF CALEDONIA U.S. ROUTE 5 LYNDONVILLE BARTON ROAD

BEGINNING AT A POINT APPROXIMATELY 3.2
MILES SOUTH OF THE LYNDON - BURKE TOWN LINE AND EXTENDING
7.037 MILES NORTHERLY, EXCLUDING RR. CROSSING

LENGTH OF ROADWAY 37,104.2 FT = 7.027 MILES
LENGTH OF BRIDGE 54.0 FT = 0.010 MI.
LENGTH OF PROJECT 37,158.2 FT = 7.037 MILES



PROJECT NAME & NUMBER	TYPE	PAVEMENT AREA
Lyndon - Burke F 86 (3)	Single Tack Coat	90,700* S. Y.
RECORD PLANS MATERIALS		
REFINED TAR	Barrett, Malden, Mass.	R.C.P. Vermont Conc. Pipe Corp., Windsor, Vt.
CEMENT	Dryden Portland Cement Co., Manchester, N.H.	CABLE FOR GUARD RAIL American Steel & Wire
REINFORCING STEEL	Vermont Steel, Inc., Lyndon, Vt.	SUB-BASE OF GRAVEL New Haven, Conn.
ACC.GMP	New England Metal Pipe Co., Farmington, N.H.	ph. Cross, Fairbanks, Alaska
CONTRACTOR	Caledonia Sand & Gravel Co.	CONTRACT DATED Oct 18, 1955
RESIDENT ENGINEER	Roy F. Nickelson	CONTRACT STARTED Oct 31, 1955
INSPECTORS	Thompson, G. Foster, G. Parker, R. Nelson, J. Davis	CONTRACT COMPLETED Nov 20, 1956
RECORD PLANS	R.P. Russell, Jr.	CONTRACT ACCEPTED Nov 19, 1956

* Note: Single Tack Coat applied by Contractor to 86,820 S.Y.
Bituminous Concrete pavement applied by State Forces
to 90,700 S.Y. 22' wide

GROUND ELEVATION	DATUM	LINE
GRADE ELEVATION	DATUM	LINE
CURVE DATA		
DEFLECTION OF ANGLE	D	
DEGREE OF CURVE	D	
RADIUS OF CURVE	R	
TANGENT DISTANCE	T	
LENGTH OF CURVE	L	
EXTERNAL DISTANCE	E	
POINT OF INTERSECTION	P.I.	
POINT OF CURVE	P.C.	
POINT OF TANGENT	P.T.	
POINT ON TANGENT	P.O.T.	
POINT ON SUB-TANGENT	P.O.S.T.	

SCALES

TITLE	1" = 800'
TYPICAL	1" = 2'
PLAN	1" = 50'
PROFILE HORIZONTAL	1" = 50'
VERTICAL	1" = 10'
GROSS - SECTIONS	1" = 5'

PROJECT Lyndon-Burke
NUMBER F 86 (3)
TYPE Single Tack Coat (Paved with Bituminous Concrete by State Force Account)
CONTRACTOR Caledonia Sand & Gravel Co.
LOCATION Begins approx 3.2 mi. south of Lyndon, Burke town line and extend northerly 37,158.2 ft.

CONTRACTOR- Caledonia Sand & Gravel Co. St. Johnsbury
RECORD PLANS- R.F. Nickelson, March 25, 1957
CON ST. COMPLETED- Nov 20, 1956

NOTE: ANY FURTHER INFORMATION CONCERNING FINAL QUANTITIES, AMOUNTS OR OTHER DETAILS RELATIVE TO THIS PROJECT MAY BE FOUND IN EITHER THE FIELD BOOKS OR THE ESTIMATE FILE.

LYNDON
BF MEMB(39)
SHEET 22 OF 28
BRIDGE 147
FOR REFERENCE ONLY

THESE PLANS ARE SUBJECT TO SUCH REVISIONS AS MAY BE REQUIRED BY THE BUREAU OF PUBLIC ROADS OR THE COMMISSIONER OF HIGHWAYS.
CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THE PLANS AND THE STANDARD ROAD AND BRIDGE SPECIFICATIONS OF 1948, AS APPROVED JULY 25, 1949 BY THE BUREAU OF PUBLIC ROADS, INCLUDING ALL SUBSEQUENT APPROVED REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE SUBMITTED WITH THE PLANS.

DEPARTMENT OF COMMERCE BUREAU OF PUBLIC ROADS	
APPROVED	
DISTRICT ENGINEER	DATE
PROJECT F NO. 86 (3)	
SHEET 1 OF 173 SHEETS	

APPROVED <i>[Signature]</i> CONSTRUCTION ENGINEER DATE Sept 30 1955	APPROVED <i>[Signature]</i> BRIDGE ENGINEER DATE Sept 30 1955	APPROVED <i>[Signature]</i> DISTRICT ENGINEER DATE SEPT 30 1955	APPROVED <i>[Signature]</i> HIGHWAY ENGINEER DATE AUG. 5, 1955	APPROVED <i>[Signature]</i> CHIEF ENGINEER DATE AUG. 8, 1955
---	---	---	--	--

TWO CABLE GUARD RAIL
~~591+00 - 594+00 RT~~
~~594+00 - 597+00 RT~~
~~597+00 - 600+00 RT~~
~~599+00 - 600+00 RT~~
~~599+00 - 599+00 RT~~
 591+75 - 594+00 RT
 593+00 - Bridge Lt
 593+81 - Bridge Rt
 594+00 - 600+00 Lt
 594+00 - 599+00 Rt

CLEARING & GRUBBING
 586+50 - 587+10 Lt. 586+00 - 588+25 Lt
 587+50 - 588+10 Lt. 586+35 - 588+10 Rt
 586+50 - 588+10 Rt. 600+00 - 601+5 Lt
 587+00 - 588+00 Rt

CONSTRUCT DRIVES
 590+65 Rt
 596+90 Rt
 600+00 Rt

CONSTRUCT APPROACH
 594+00 - 595+50 Lt

WOOD GUIDE POSTS
 Lt 589+08 ~ 589+40
 Rt 589+40 ~ 590+28

REMOVAL & DISPOSAL OF
 PRESENT GUARD RAIL
~~591+00 - 594+00 Rt~~
~~594+00 - 600+00 Rt~~
~~599+00 - 600+00 Rt~~
 592+00 - 594+00 Rt

A.A. WEBSTER
 #7D 0.12 ACRE ±
 STA. 584+00 - 590+00 LT.

A.A. WEBSTER
 #7F 0.09 ACRE ±
 STA. 591+52 - 595+50 RT.

#7E 0.04 ACRE ±
 STA. 587+50 - 591+50 RT.

#7G 0.06 ACRE ±
 STA. 595+50 - 599+00 RT.

ALFRED B. DARLING
 #9B 0.05 ACRE ±
 STA. 599+45 - 601+22 LT.

ALFRED B. DARLING
 #9A 0.076 ACRE ±
 STA. 600+15 - 602+50 RT.

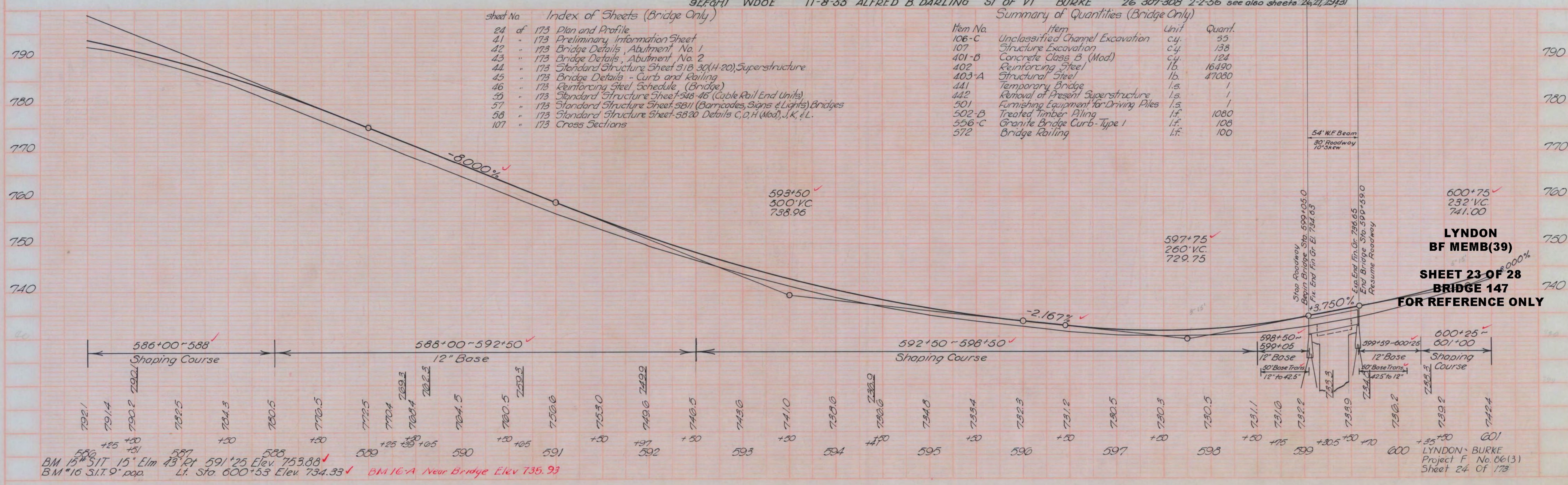
PARCEL	INSTRUMENT	DATE	GRANTOR	GRANTEE	RECORDED	TOWN OF	BOOK	PAGE	DATE	REMARKS
9ABCD	WDOE	11-8-55	ALFRED B. DARLING	ST OF VT	LYNDON	45	436	2-2-56	see also sheets 25 & 26	
9EFGHI	WDOE	11-8-55	ALFRED B. DARLING	ST OF VT	BURKE	26	307-308	2-2-56	see also sheets 26, 27, 29 & 31	

Sheet No. Index of Sheets (Bridge Only)

24	of 173 Plan and Profile
41	" 173 Preliminary Information Sheet
42	" 173 Bridge Details, Abutment No. 1
43	" 173 Bridge Details, Abutment No. 2
44	" 173 Standard Structure Sheet 518 30(H-20) Superstructure
45	" 173 Bridge Details - Curb and Railing
46	" 173 Reinforcing Steel Schedule (Bridge)
55	" 173 Standard Structure Sheet 548 46 (Cable Rail End Units)
57	" 173 Standard Structure Sheet 5811 (Barricades, Signs & Lights) Bridges
58	" 173 Standard Structure Sheet 5820 Details C, D, H (Mod), J, K, & L
107	" 173 Cross Sections

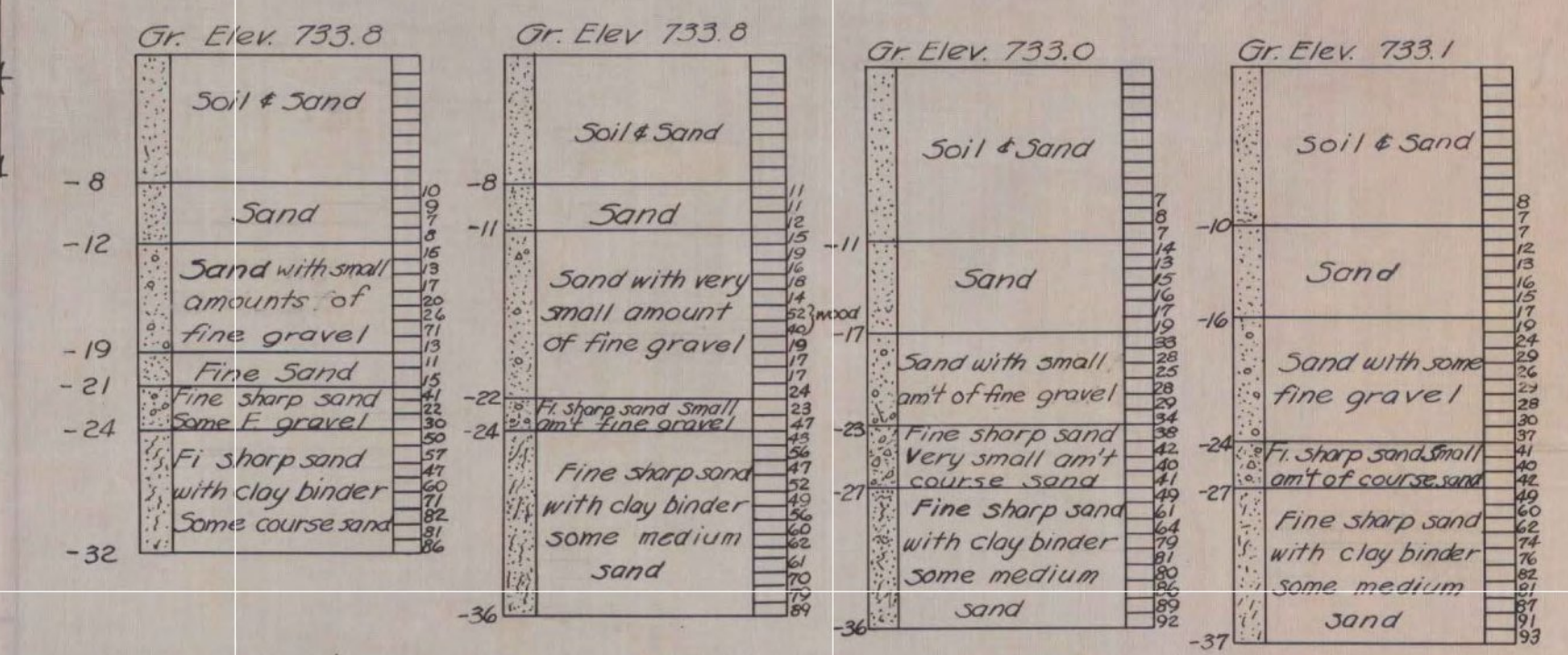
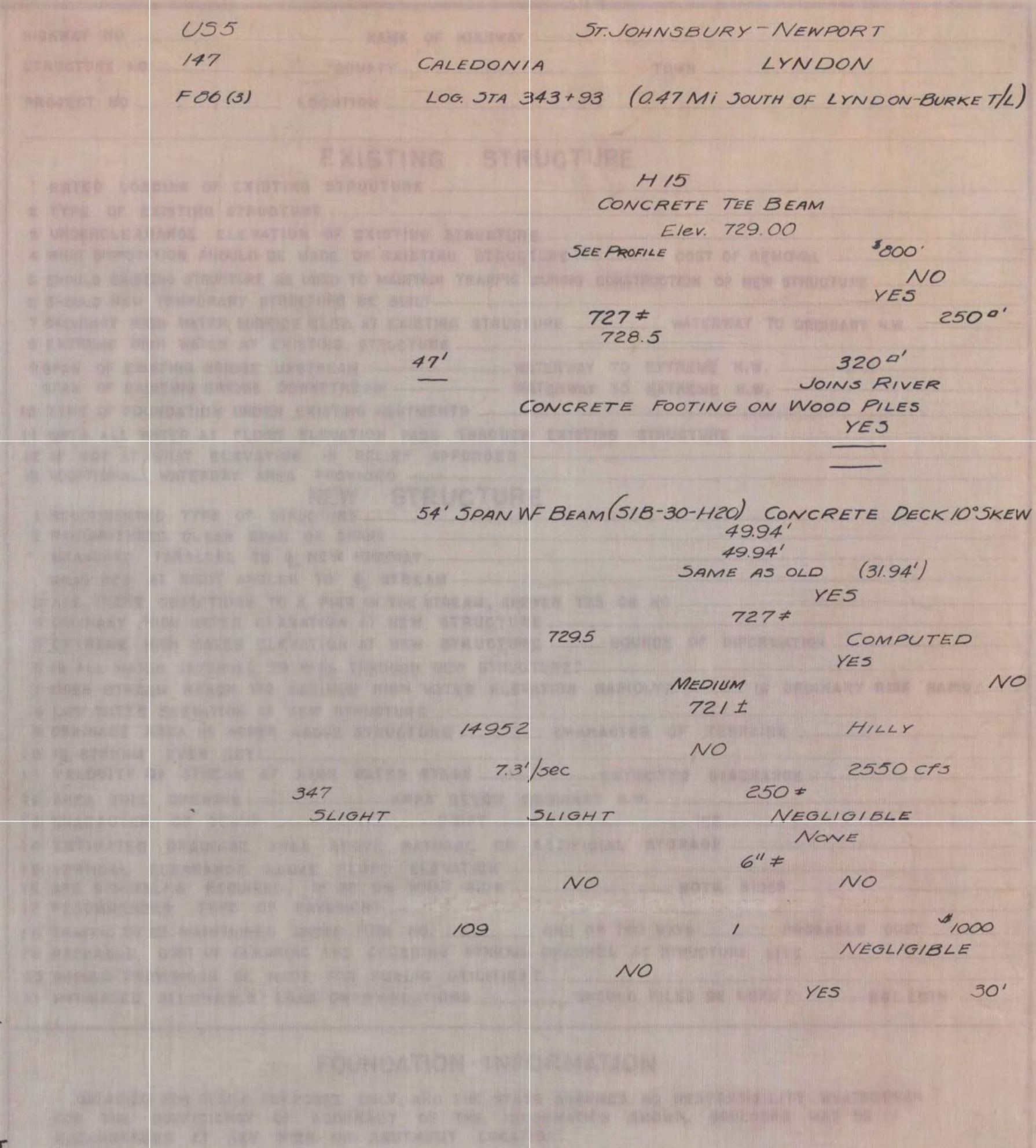
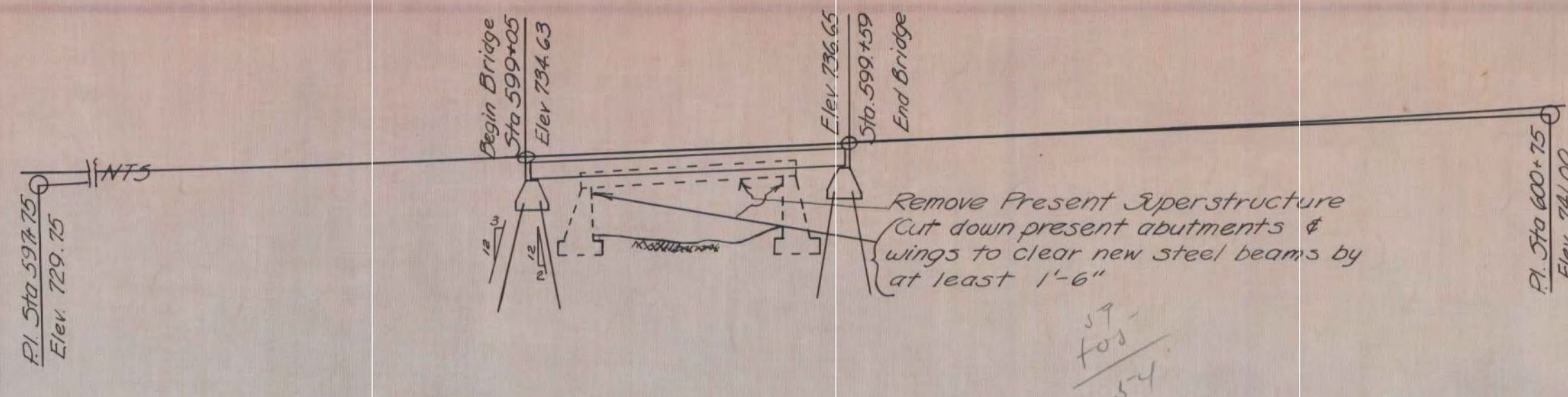
Summary of Quantities (Bridge Only)

Item No.	Item	Unit	Quant.
106-C	Unclassified Channel Excavation	c.y.	55
107	Structure Excavation	c.y.	138
401-B	Concrete Class B (Mod)	c.y.	124
402	Reinforcing Steel	lb.	16,490
403-A	Structural Steel	lb.	47,080
441	Temporary Bridge	l.s.	1
442	Removal of Present Superstructure	l.s.	1
501	Furnishing Equipment for Driving Piles	l.s.	1
502-B	Treated Timber Piling	l.f.	1080
556-C	Granite Bridge Curb - Type 1	l.f.	108
572	Bridge Railing	l.f.	100



LYNDON
 BF MEMB(39)
 SHEET 23 OF 28
 BRIDGE 147
 FOR REFERENCE ONLY

LYNDON - BURKE
 Project F No. 66(13)
 Sheet 24 of 173



Dia. of Casing 2 1/2"
Thickness of Shell 3/8"
Weight of Hammer 350 lbs
Drop - 24"

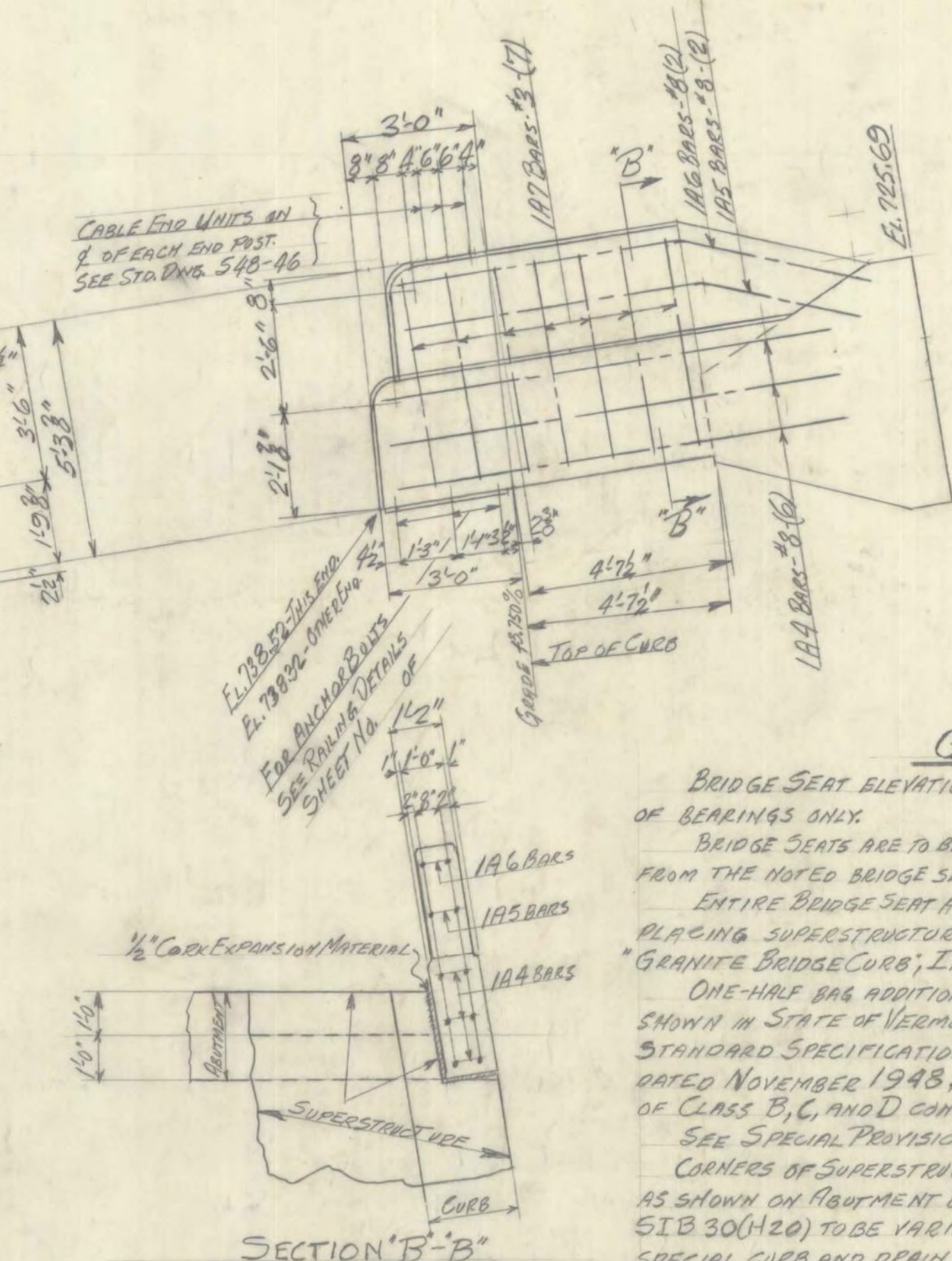
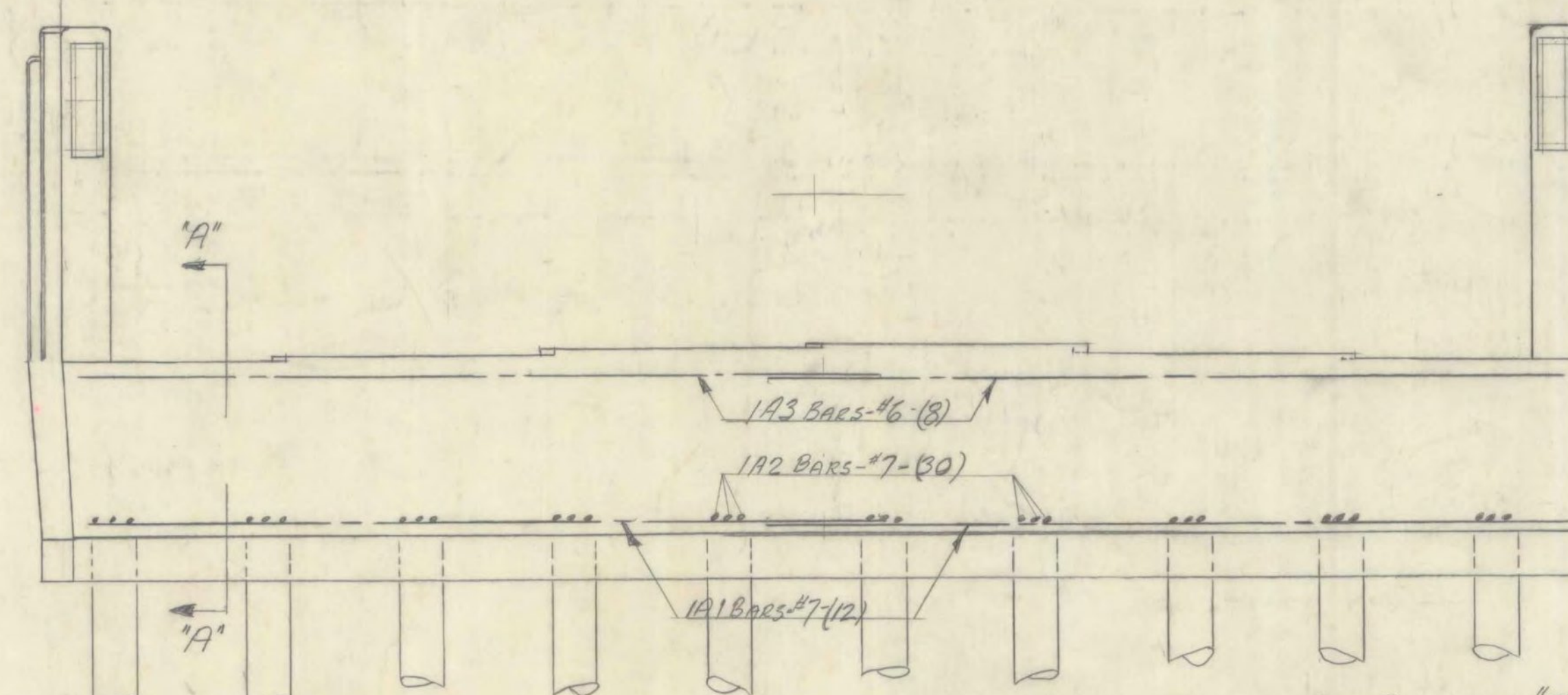
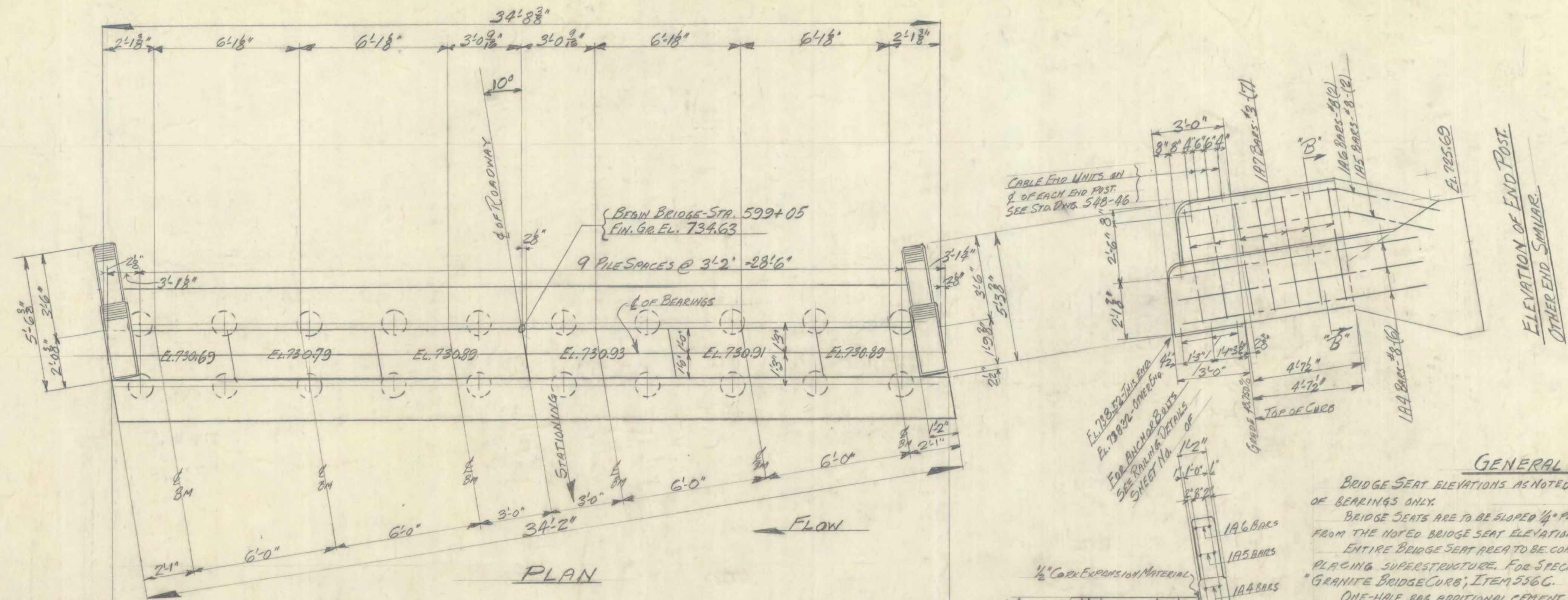
LYNDON
BF MEMB(39)

SHEET 24 OF 28
BRIDGE 147
FOR REFERENCE ONLY

LYNDON F86 (3)

STATE OF VERMONT
DEPT. OF HIGHWAYS
PRELIMINARY INFORMATION SHEET FOR BRIDGES

7/8/55
H. E. Sargent
Sheet 41 of 173



GENERAL NOTES

BRIDGE SEAT ELEVATIONS AS NOTED APPLY ALONG THE CENTERLINE OF BEARINGS ONLY.
 BRIDGE SEATS ARE TO BE SLOPED 1/4" PER FOOT TOWARD THE STREAM FROM THE NOTED BRIDGE SEAT ELEVATIONS.
 ENTIRE BRIDGE SEAT AREA TO BE COATED WITH 1/2" OF MASTIC BEFORE PLACING SUPERSTRUCTURE. FOR SPECIFICATION OF MASTIC SEE "GRANITE BRIDGE CURB", ITEM 556C.
 ONE-HALF BAG ADDITIONAL CEMENT, OVER AND ABOVE THE AMOUNT SHOWN IN STATE OF VERMONT, DEPARTMENT OF HIGHWAYS, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, DATED NOVEMBER 1948, SHALL BE ADDED TO EACH CUBIC YARD OF CLASS B, C, AND D CONCRETE ON THE PROJECT.
 SEE SPECIAL PROVISIONS FOR CURING CONCRETE.
 CORNERS OF SUPERSTRUCTURE TO BE NOTCHED AROUND END RAILING POSTS AS SHOWN ON ABUTMENT DETAILS. SUPERSTRUCTURE STD. DWG. SIB 30(H-20) TO BE VARIED TO MEET THIS CONDITION AND ALSO THE SPECIAL CURB AND DRAIN CONDITIONS INDICATED ON CURB AND RAILING DRAWING, SHEET No. OF

LYNDON
 BF MEMB(39)

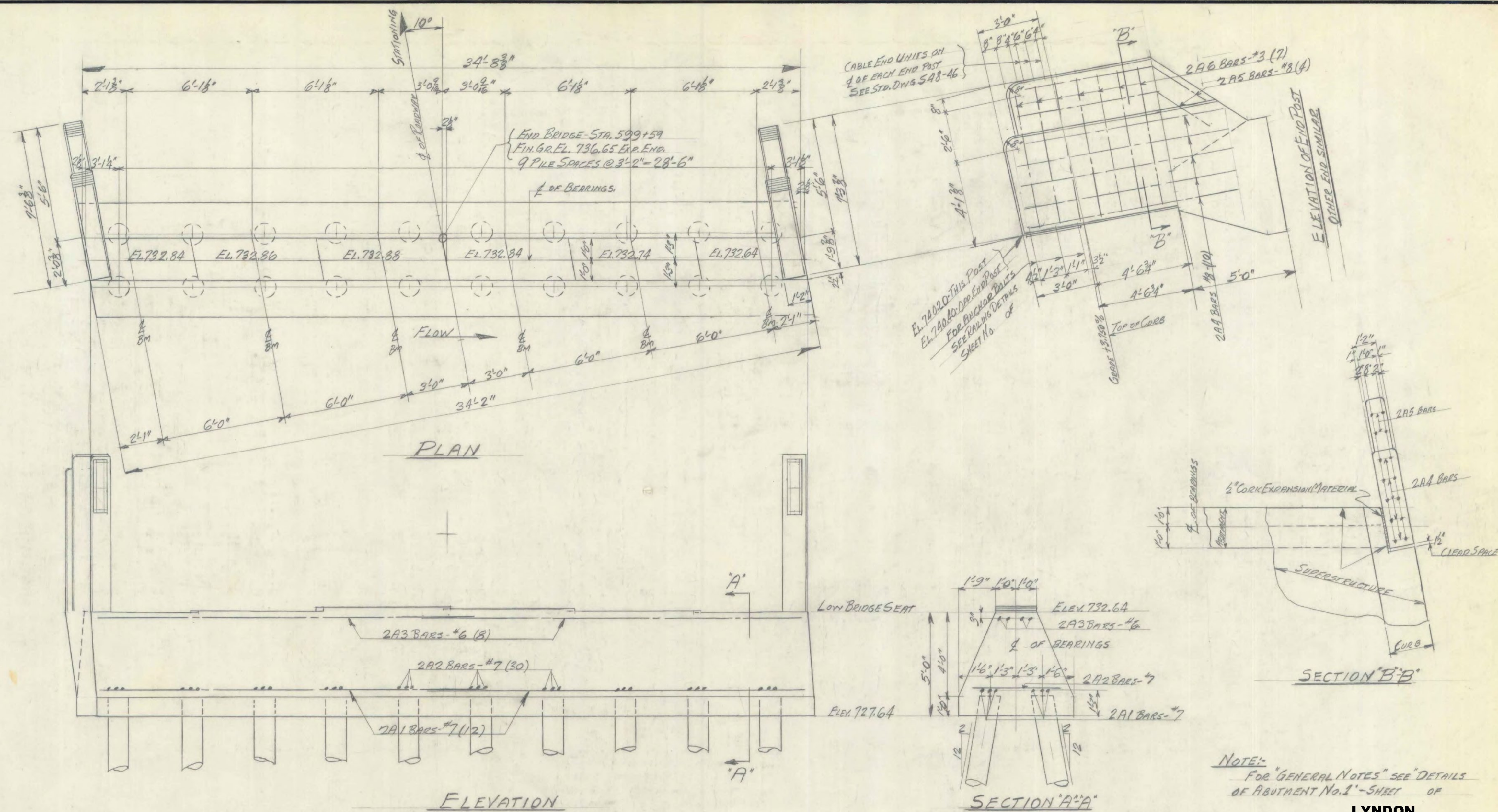
SHEET 25 OF 28
 BRIDGE 147
 FOR REFERENCE ONLY

STATE OF VERMONT
 DEPARTMENT OF HIGHWAYS

TOWN OF LYNDON
 ROUTE No. 155 LOG STA 343+93
 DETAILS OF ABUTMENT No. 1
 HOGBACK BRIDGE
 SCALE 3/8" = 1'-0"
 SURVEYED BY
 DRAWN BY HES CHECKED BY E.F.P.
 PROJECT No. F 86(3)
 SHEET 42 OF 173

ALL PILING TO BE TREATED TIMBER PILING, ITEM 502B. PILES TO BE DRIVEN TO A CAPACITY OF 15 TONS EACH.
 FOR ESTIMATING PURPOSES THE LENGTH OF EACH IS ASSUMED TO BE:
 EST. LENGTH OF PILES = 30'
 EST. PAY LENGTH = 27'
 EST. CUT-OFF LENGTH = 3'
 DRIVE PILES TO EL. 705.00 ±

FINAL	ESTIMATED QUANTITIES		
	ITEM	DESCRIPTION	QUANTITY
19.6	106C	UNCLASSIFIED CHANNEL EXCAVATION	24 CY
61	107	STRUCTURE EXCAVATION (MOD)	62 CY
32.2	401B	CONCRETE CLASS "B" (MOD)	30 CY
	402	REINFORCING STEEL (SEE RE-STEEL SHEET)	
592	502B	TREATED TIMBER PILING	540 LF
2		CUT-OFF FOR TREATED TIMBER PILING	60 LF



NOTE:
FOR "GENERAL NOTES" SEE "DETAILS
OF ABUTMENT No. 1" - SHEET OF

LYNDON
BF MEMB(39)

SHEET 26 OF 28
BRIDGE 147
FOR REFERENCE ONLY

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF LYNDON
ROUTE No. U.S. LOG STA. 343+93
ABUTMENT No. 2
HOGBACK BRIDGE
SCALE 3/8" = 1'-0"
SURVEYED BY
DRAWN BY HES CHECKED BY E.F.P.
PROJECT No. F. 86(3)
SHEET 43 OF 173

FINAL	ITEM	ESTIMATED QUANTITIES DESCRIPTION	QUANTITY
23.4	106C	UNCLASSIFIED CHANNEL EXCAVATION	26 CY
66	107	STRUCTURE EXCAVATION (1' MOD)	64 CY
32.2	401B	CONCRETE CLASS "B" (1' MOD)	32 CY
	402	REINFORCING STEEL (SEE RE-STEEL SHEET)	
574	502B	TREATED TIMBER PILING	540 LF
29		CUT-OFF FOR TREATED TIMBER PILING	60 LF

