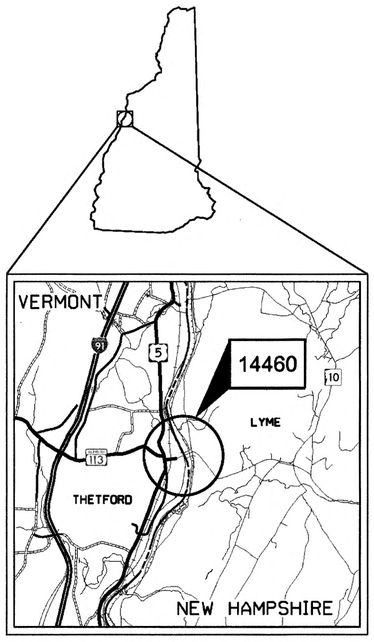
THE STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION PLANS
FEDERAL AID PROJECT

A000(394)
NH PROJECT NO. 14460
VT ROUTE 113 & EAST THETFORD ROAD OVER
THE CONNECTICUT RIVER

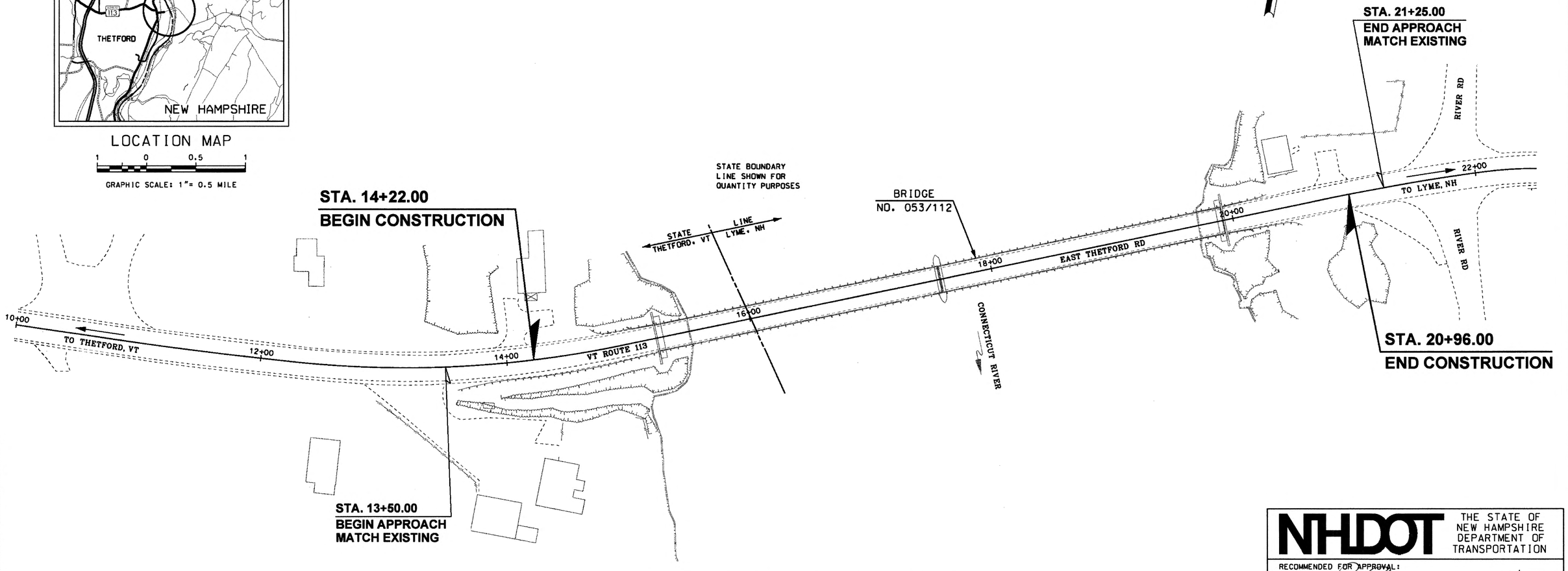
DESIGN DATA	
AVERAGE DAILY TRAFFIC 2016	2,200
AVERAGE DAILY TRAFFIC 2036	2,700
PERCENT OF TRUCKS	9.5%
DESIGN SPEED	25 MPH
LENGTH OF ROADWAY	775 FT



LOCATION MAP

1 0 0.5 1

GRAPHIC SCALE: 1"= 0.5 MILE



LYME, NH - THETFORD, VT

COUNTIES OF GRAFTON, NH - ORANGE, VT

SCALE: 1" = 40'

DRAWN BY TJC DATE 02/2021

CHECKED BY DEM DATE 02/2021

PLANS PREPARED BY:

STANTEC CONSULTING SERVICES, INC
5 DARTMOUTH DR, SUITE 200, AUBURN, NH 03032
TEL (603) 669-8672 FAX (603) 669-7636

STAMP:

STATE OF NEW HAMPSHIRE
DANIEL D. TAYLOR
No. 13354
LICENSED PROFESSIONAL ENGINEER
07/08/2021

Stantec

NHDOT THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION

RECOMMENDED FOR APPROVAL:
DIRECTOR OF PROJECT DEVELOPMENT — DATE 7/9/2021

APPROVED:
ASSISTANT COMMISSIONER AND CHIEF ENGINEER — DATE 7/9/21

FEDERAL PROJECT NO.	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
A000(394)	14460	1	67

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE PAGE
2	INDEX OF SHEETS AND GENERAL NOTES
3-4	STANDARD SYMBOLS
5	SUMMARY OF ROADWAY QUANTITIES
6	TYPICAL SECTIONS
7	CONSTRUCTION DETAILS
8-9	EAGRT PLATFORM DETAILS
10	TERMINAL UNIT DELINEATION DETAILS
11	DRIVEWAY DETAILS
	BRIDGE PLANS
12	GENERAL PLAN AND ELEVATION
13-14	BRIDGE NOTES AND SUMMARY OF QUANTITIES
15	SITE PLAN AND PROFILE
16	BORING PLAN
17-19	BORING LOGS
20-22	ABUTMENT A DETAILS
23-25	ABUTMENT B DETAILS
26	EXISTING PIER REHABILITATION
27	PIER JACKET REINFORCING
28	FRAMING PLAN
29	FLOOR BEAM DETAILS
30	STRINGER DETAILS
31	LATERAL BRACING DETAILS
32	STEEL REPAIR DETAILS
33	SCUPPER DETAILS
34	BRIDGE TYPICAL SECTIONS
35	BOTTOM OF SLAB ELEVATIONS
36	DECK PLAN
37	BRIDGE DECK DETAILS
38-40	DECK REINFORCING
41-42	PIER STRIP SEAL EXPANSION JOINT
43-44	ABUTMENT B STRIP SEAL EXPANSION JOINT
45	BRIDGE RAIL LAYOUT
46	T3 STEEL BRIDGE RAIL
47	T3 STEEL BRIDGE APPROACH RAIL (STEEL POSTS)
48-49	REINFORCING SCHEDULE
	ROADWAY PLANS
50-51	GENERAL PLANS
52	EAST THETFORD ROAD PROFILE
53	CONSTRUCTION ACCESS AND RIGHT-OF-WAY PLAN
54-55	PAVEMENT MARKING AND SIGNING PLANS
56	SIGN TEXT LAYOUT
57-57A	TEMPORARY SIGN TEXT LAYOUT
58-59	DETOUR PLANS
60-67	EAST THETFORD ROAD CROSS-SECTIONS

GENERAL NOTES

1. FOR STANDARD PLANS, SEE DEPARTMENT OF TRANSPORTATION WEBSITE AT: WWW.NH.GOV/DOT/ORG/PROJECTDEVELOPMENT/HIGHWAYDESIGN/STANDARDPLANS/INDEX.HTM.
2. HIGH TENSION OVERHEAD TRANSMISSION LINES ARE LOCATED THROUGHOUT THE PROJECT WITH CROSSINGS AT VARIOUS LOCATIONS AND RUNNING ALONG THE ROAD THROUGHOUT THE PROJECT EVEN ON REGULAR POLES. THE CONTRACTOR IS ADVISED THAT EXTREME CAUTION WILL BE REQUIRED IN THE OPERATION OF EQUIPMENT, ESPECIALLY CRANES AND PILE DRIVING EQUIPMENT.
3. MODIFY SUPERELEVATION ON EXISTING CURVES BY THE USE OF A LEVELING COURSE TO THE RATES INDICATED ON THE PLANS OR AS ORDERED.
4. EXISTING DELINEATORS AND WITNESS MARKERS THAT ARE REMOVED AND DETERMINED BY THE ENGINEER TO BE IN ACCEPTABLE CONDITION SHALL BE RESET (SUBSIDIARY). ADDITIONAL DELINEATORS AND WITNESS MARKERS ORDERED WILL BE PAID UNDER THE APPROPRIATE ITEMS OF THE CONTRACT.
5. NO EXISTING MONUMENTS, BOUNDS, OR BENCHMARKS SHALL BE DISTURBED WITHOUT FIRST MAKING PROVISIONS FOR RELOCATION.
6. PERFORM ALL WORK WITHIN THE EXISTING RIGHT-OF-WAY, UNLESS OTHERWISE SHOWN ON THE PLANS OR AS ORDERED BY THE ENGINEER.
7. REMOVE UNPROTECTED PROJECT MARKERS (SUBSIDIARY).
8. SURVEY DATA FOR THIS PROJECT WAS COLLECTED BY SDR AND THE FIELD NOTES CAN BE FOUND IN THE SURVEY FIELD BOOK(S) 12113. COORDINATES ARE NEW HAMPSHIRE STATE PLANE COORDINATES OF NAD83, 1986 ADJUSTMENT AND THE BEARINGS ARE GRID. ELEVATIONS ARE REFERENCED TO NGVD 1929.
9. QUANTITIES FOR EMBANKMENT AND EXCAVATION FOR SLOPE ROUNDINGS AS SHOWN ON THE TYPICALS HAVE NOT BEEN CALCULATED AND ARE NOT INCLUDED IN THE QUANTITY SUMMARIES, AND ARE CONSIDERED SUBSIDIARY TO THE APPROPRIATE 203 ITEMS.

THE FOLLOWING GENERAL NOTES WILL BE USED ON THIS PROJECT:											
1	2	3	4	5	6	7	8	9			

STATE OF NEW HAMPSHIRE
LYME, NH & THETFORD, VT
DEPARTMENT OF TRANSPORTATION ◦ BUREAU OF HIGHWAY DESIGN

INDEX OF SHEETS AND GENERAL NOTES

REVISION DATE	DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
9-1-2016	14460IND	14460	2	67

GENERAL

EDGE OF PAVEMENT — PROPOSED ROADWAY
TRAVELED WAY — existing roadway — (pavement removed outside slope lines)

DRIVEWAYS — (label surface type)

BUILDINGS — (building to be removed)
(label house or type of building)

FOUNDATION — (label type)

LEACH FIELD — leach field

BRIDGE CROSSINGS — STREAM — OVERPASS

STEPS AND WALK — (label type)

INTERMITTENT WATER COURSE

SHORE LINE — river/stream — pond — (label name of water body)

POTENTIAL WET AREA SYMBOL

BRUSH OR WOODS LINE

TREES (PLANS) — (deciduous) (coniferous) (stump)

TREE OR STUMP (CROSS-SECTIONS) — (show station, circumference in feet & type)

HEDGE — (label type)

MONITORING WELL — mon W

WELL — W

FLAG POLE — fp

ORIGINAL GROUND (TYPICALS)

ROCK OUTCROP

ROCK LINE (TYPICALS & SECTIONS ONLY)

GUARDRAIL (label type) — existing — PROPOSED — bgr — cgr

JERSEY BARRIER

CURB (LABEL TYPE)

STONE WALL

RETAINING WALL (LABEL TYPE) — (points toward retained ground)

FENCE (LABEL TYPE)

SIGNS — (single post) — (double post)

GAS PUMP — gp

FUEL TANK (ABOVE GROUND) — ft (label size & type)

STORAGE TANK FILLER CAP — fc

SEPTIC TANK — S

GRAVE — gr

MAILBOX — mb

VENT PIPE — vp

SATELLITE DISH ANTENNA — da

PHONE — ph

GROUND LIGHT/LAMP POST — gl — lp

BORING LOCATION — B

TEST PIT — TP

INTERSTATE NUMBERED HIGHWAY — 293

UNITED STATES NUMBERED HIGHWAY — 3

STATE NUMBERED HIGHWAY — 102

SHORELAND - WETLAND

WETLAND DESIGNATION AND TYPE — 2 PUB2E

DELINEATED WETLAND — DW
ORDINARY HIGH WATER — OHW
TOP OF BANK — TOB
TOP OF BANK & ORDINARY HIGH WATER — TOBOHW
NORMAL HIGH WATER — NHW
WIDTH AT BANK FULL — WBF
PRIME WETLAND — PWET
PRIME WETLAND 100' BUFFER — PWET100
NON-JURISDICTIONAL DRAINAGE AREA — NJDA
COWARDIN DISTINCTION LINE — CDL
TIDAL BUFFER ZONE — TBZ
DEVELOPED TIDAL BUFFER ZONE — DTBZ
HIGHEST OBSERVABLE TIDE LINE — HOTL
MEAN HIGH WATER — MHW
MEAN LOW WATER — MLW
VERNAL POOL — VP
SPECIAL AQUATIC SITE — SAS
REFERENCE LINE — REF
WATER FRONT BUFFER — WB50
NATURAL WOODLAND BUFFER — NWB150
PROTECTED SHORELAND — PS250
INVASIVE SPECIES LABEL — I.S. I — I.S. II
INVASIVE SPECIES — INV

FLOODPLAIN / FLOODWAY

500 YEAR FLOODPLAIN BOUNDARY — FP500
100 YEAR FLOODPLAIN BOUNDARY — FP100
FLOODWAY — FW

ENGINEERING

CONSTRUCTION BASELINE — 30 31 32

PC. PT. POT (ON CONST BASELINE)

PI (IN CONSTRUCTION BASELINES)

INTERSECTION OR EQUATION OF TWO LINES

ORIGINAL GROUND LINE (PROFILES AND CROSS-SECTIONS)

PROFILE GRADE LINE (PROFILES AND CROSS-SECTIONS)

CLEARING LINE — SLOPE LINE

SLOPE LINE (FILL)

SLOPE LINE (CUT)

PROFILES AND CROSS SECTIONS:
ORIGINAL GROUND ELEVATION (LEFT) — 72.5
FINISHED GRADE ELEVATION (RIGHT) — 79.14

SHEET 1 OF 2

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION ◦ BUREAU OF HIGHWAY DESIGN

STANDARD SYMBOLS

REVISION DATE	DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
11-21-2014	14460SYM01	14460	3	67

DRAINAGE

MANHOLE

CATCH BASIN — cb

DROP INLET — di

(existing) (PROPOSED)

DRAINAGE PIPE (existing) — (label size & type)

DRAINAGE PIPE (PROPOSED)

UNDERDRAIN (existing) W/ FLUSHING BASIN — fb — (label size & type)

UNDERDRAIN (PROPOSED) W/ FLUSHING BASIN

show direction of flow

HEADER (existing & PROPOSED) — (with stone outlet protection)

END SECTION (existing & PROPOSED) — METAL or PLASTIC; RCP

OPEN DITCH (PROPOSED)

EROSION CONTROL/ STONE SLOPE PROTECTION

BOUNDARIES / RIGHT-OF-WAY

RIGHT-OF-WAY LINE — (label type)

RR RIGHT-OF-WAY LINE

PROPERTY LINE

PROPERTY LINE (COMMON OWNER) — Z

TOWN LINE — BOW / CONCORD

COUNTY LINE — COOS / GRAFTON

STATE LINE — MAINE / NEW HAMPSHIRE

NATIONAL FOREST

CONSERVATION LAND — LC

BENCH MARK / SURVEY DISK

BOUND — bnd — (PROPOSED)

STATE LINE/ TOWN LINE MONUMENT — S/L — T/L

NHDOT PROJECT MARKER

IRON PIPE OR PIN — ip

DRILL HOLE IN ROCK — dh

TAX MAP AND LOT NUMBER — 156 / 14 — 1642/341 — 6.80 Ac.±

PROPERTY PARCEL NUMBER — 12

HISTORIC PROPERTY — H

UTILITIES

existing PROPOSED

TELEPHONE POLE

POWER POLE

JOINT OCCUPANCY

MISCELLANEOUS/UNKNOWN POLE

GUY POLE OR PUSH BRACE

(plot point at face not center of symbol)

LIGHT POLE

LIGHT ON POWER POLE

LIGHT ON JOINT POLE

POLE STATUS:
REMOVE, LEAVE, PROPOSED, OR TEMPORARY
AS APPLICABLE e.g.:

R L — P+04 25.0' — T+04 25.0'

RAILROAD — (label ownership)

RAILROAD SIGN

RAILROAD SIGNAL

UTILITY JUNCTION BOX — jb — JB

OVERHEAD WIRE — OW — (label type)

UNDERGROUND UTILITIES

WATER (on existing lines label size, type and note if abandoned) — W — PW

SEWER — S — PS

TELEPHONE — T — PT

ELECTRIC — E — PE

GAS — G — PG

LIGHTING — L — PL

INTELLIGENT TRANSPORTATION SYSTEM — ITS

FIBER OPTIC — FO — PFO

WATER SHUT OFF

GAS SHUT OFF

HYDRANT

MANHOLES

SEWER — MHS

TELEPHONE — MHT

ELECTRICAL — MHE

GAS — MHG

UNKNOWN — U

TRAFFIC SIGNALS / ITS

existing PROPOSED

MAST ARM (existing) — 30' MA (NOTE ANGLE FROM ℄)

OPTICOM RECEIVER

OPTICOM STROBE

TRAFFIC SIGNAL

PEDESTAL WITH PEDESTRIAN SIGNAL HEADS AND PUSH BUTTON UNIT

SIGNAL CONDUIT — C — PC

CONTROLLER CABINET — cc — CC

METER PEDESTAL — mp — MP

PULL BOX — pb — PB

LOOP DETECTOR (QUADRUPOLE) — (label size)

LOOP DETECTOR (RECTANGULAR) — (label size)

CAMERA POLE (CCTV)

FIBER OPTIC DELINEATOR — fod — FOD

FIBER OPTIC SPLICE VAULT — SVF

ITS EQUIPMENT CABINET — its — ITS

VARIABLE SPEED LIMIT SIGN

DYNAMIC MESSAGE SIGN

ROAD AND WEATHER INFO SYSTEM

CONSTRUCTION NOTES

CURB MARK NUMBER - BITUMINOUS — B-1

CURB MARK NUMBER - GRANITE — G-1

CLEARING AND GRUBBING AREA — A

DRAINAGE NOTE — 1

EROSION CONTROL NOTE — A

FENCING NOTE — A

GUARDRAIL NOTE — 1

ITS NOTE — 1

LIGHTING NOTE — A

TRAFFIC SIGNAL NOTE — 1

STATE OF NEW HAMPSHIRE

DEPARTMENT OF TRANSPORTATION ∘ BUREAU OF HIGHWAY DESIGN

STANDARD SYMBOLS

REVISION DATE	DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
9-1-2016	14460SYM02	14460	4	67

ESTIMATED ROADWAY QUANTITIES SUMMARY TABLE

ITEM NO.	ITEM DESCRIPTION	UNIT	VT TOTAL	NH TOTAL	TOTAL QUANTITY
201.1	CLEARING AND GRUBBING (F)	A	0.050	0.050	0.100
201.881	INVASIVE SPECIES CONTROL TYPE I	SY	0	25	25
201.882	INVASIVE SPECIES CONTROL TYPE II	SY	0	5	5
202.6	CURB REMOVAL FOR SALVAGE	LF	30	40	70
202.7	REMOVAL OF GUARDRAIL	LF	220	100	320
203.1	COMMON EXCAVATION	CY	360	360	720
203.11	COMMON EXCAVATION - LRS	CY	0	40	40
203.5562	EAGRT PLATFORM ALTERNATE	U	2	0	2
203.5572	EAGRT PLATFORM ALTERNATE, TL 2 - 25'	U	0	2	2
203.6	EMBANKMENT-IN-PLACE (F)	CY	5	3	8
206.1	COMMON STRUCTURE EXCAVATION	CY	40	70	110
206.19	COMMON STRUCTURE EXCAVATION EXPLORATORY	CY	8	8	16
214.	FINE GRADING	U	0.5	0.5	1.0
304.1	SAND (F)	CY	102	103	205
304.2	GRAVEL (F)	CY	115	116	231
304.3	CRUSHED GRAVEL (F)	CY	135	135	270
304.33	CRUSHED AGGREGATE FOR SHOULDERS	CY	10	10	20
304.35	CRUSHED GRAVEL FOR DRIVES	CY	4	4	8
403.11023	HBP - 3/4" BINDER MIX, MACHINE METHOD	TON	50	55	105
403.11043	HBP - 1/2" SURFACE MIX, MACHINE METHOD	TON	55	40	95
403.12	HBP - HAND METHOD	TON	10	10	20
403.16	PAVEMENT JOINT ADHESIVE	LF	300	260	560
410.22	ASPHALT EMULSION FOR TACK COAT	GAL	30	20	50
417.	COLD PLANING BITUMINOUS SURFACES	SY	175	50	225
570.4	MORTAR RUBBLE MASONRY (F)	CY	0	4	4
585.2	STONE FILL, CLASS B	CY	10	45	55
585.22	STONE FILL, CLASS B INTERMIXED WITH HUMUS	CY	35	30	65
593.411	GEOTEXTILE: PERM CONTROL CL.1, NON-WOVEN	SY	60	110	170
603.0001	VIDEO INSPECTION	LF	0	150	150
603.00218	18" R.C. PIPE, 2000D	LF	0	150	150
604.0007	POLYETHYLENE LINER	EA	0	2	2
604.124	CATCH BASINS TYPE B, 4-FOOT DIAMETER	U	0	3	3
604.324	DRAINAGE MANHOLES, 4-FOOT DIAMETER	U	0	1	1
604.4	RECONSTRUCTING/ADJUSTING CATCH BASIN & DROP INLET	LF	0	5	5
606.1255	BEAM GUARDRAIL (TERMINAL UNIT TYPE EAGRT, TL 2) (STEEL POST)	U	2	0	2
606.12551	BEAM GUARDRAIL (TERMINAL UNIT TYPE EAGRT, TL 2- 25') (STEEL POST)	U	0	2	2
606.18001	31" W-BEAM GUARDRAIL WITH 8" OFFSET BLOCK (STEEL POST)	LF	100	50	150
609.01	STRAIGHT GRANITE CURB	LF	70	70	140
615.0301	TRAFFIC SIGN TYPE C	SF	35	20	55
615.033	REMOVING TRAFFIC SIGN, TYPE C	U	9	4	13
615.0501	TRAFFIC SIGN TYPE BB	SF	10	10	20
615.0601	TRAFFIC SIGN TYPE CC	SF	5	0	5
615.30691	BRIDGE MOUNTED TRAFFIC SIGN STRUCTURE (MODIFIED)	U	1	1	2
618.61	UNIFORMED OFFICERS WITH VEHICLE	$	*	*	*
618.7	FLAGGERS	HR	205	435	640
619.1	MAINTENANCE OF TRAFFIC	U	0.32	0.68	1.00
619.25	PORTABLE CHANGEABLE MESSAGE SIGN	U	3	3	6
621.2	RETROREFLECTIVE BEAM GUARDRAIL DELINEATOR	EA	10	5	15
621.31	SINGLE DELINEATOR WITH POST	EA	1	1	2
621.32	DOUBLE DELINEATOR WITH POST	EA	1	1	2
622.1	STEEL WITNESS MARKERS	EA	0	1	1
628.2	SAWED BITUMINOUS PAVEMENT	LF	30	30	60
632.0104	RETROREFLECTIVE PAINT PAVE. MARKING, 4" LINE	LF	1400	1100	2500
645.51	HAY BALES FOR TEMPORARY EROSION CONTROL	EA	0	10	10
645.52	RYEGRASS FOR TEMPORARY EROSION CONTROL	LB	1	1	2
645.531	SILT FENCE	LF	525	450	975
645.7	STORM WATER POLLUTION PREVENTION PLAN	U	0.32	0.68	1.00
645.71	MONITORING SWPPP AND EROSION AND SEDIMENT CONTROLS	HR	83	177	260
646.31	TURF ESTABLISHMENT WITH MULCH AND TACKIFIERS	SY	90	80	170
647.1	HUMUS	CY	5	10	15
697.11	INVASIVE SPECIES CONTROL AND MANAGEMENT PLAN	U	0.32	0.68	1.00
697.31	PROJECT OPERATIONS PLAN	U	0.32	0.68	1.00
697.41	CRITICAL PATH METHOD (CPM) ELECTRONIC SCHEDULE	U	0.32	0.68	1.00
698.13	FIELD OFFICE TYPE C	MON	7	14	21
699.	MISCELLANEOUS TEMPORARY EROSION AND SEDIMENT CONTROL	$	*	*	*
1010.15	FUEL ADJUSTMENT	$	*	*	*

* = SEE PROPOSAL

PERMANENT CONSTRUCTION SIGNS
(INCLUDED IN ITEM NO. 619.1)

SIGN NO.	DESCRIPTION	SIZE (FT) W	SIZE (FT) H	SF	NO. REQ.	TOTAL AREA SF	PORTABLE MOUNTS	U-CHANNEL POSTS	REMARKS
G20-2a	"END ROAD WORK"	4	2	8	4	32		3	ORANGE / BLACK
W20-3a	"ROAD CLOSED AHEAD"	4	4	16	4	64		3	FLOURESCENT ORANGE / BLACK
W20-3b	"ROAD CLOSED 500 FT"	4	4	16	4	64		3	FLOURESCENT ORANGE / BLACK
W20-3c	"ROAD CLOSED 1000 FT"	4	4	16	4	64		3	FLOURESCENT ORANGE / BLACK

NOTE: THE ESTIMATED QUANTITIES OF "PERMANENT CONTROLS" ARE HEREBY LISTED. THE CONTRACTOR IS RESPONSIBLE FOR ALL "OPERATIONAL CONTROLS" REQUIRED UNDER SECTION 619 OF THE NHDOT SPECIFICATIONS AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), PART VI.

NOTE: SEE DETOUR PLAN FOR LOCATION OF PERMANENT CONSTRUCTION & DETOUR SIGNS.

REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	DESCRIPTION

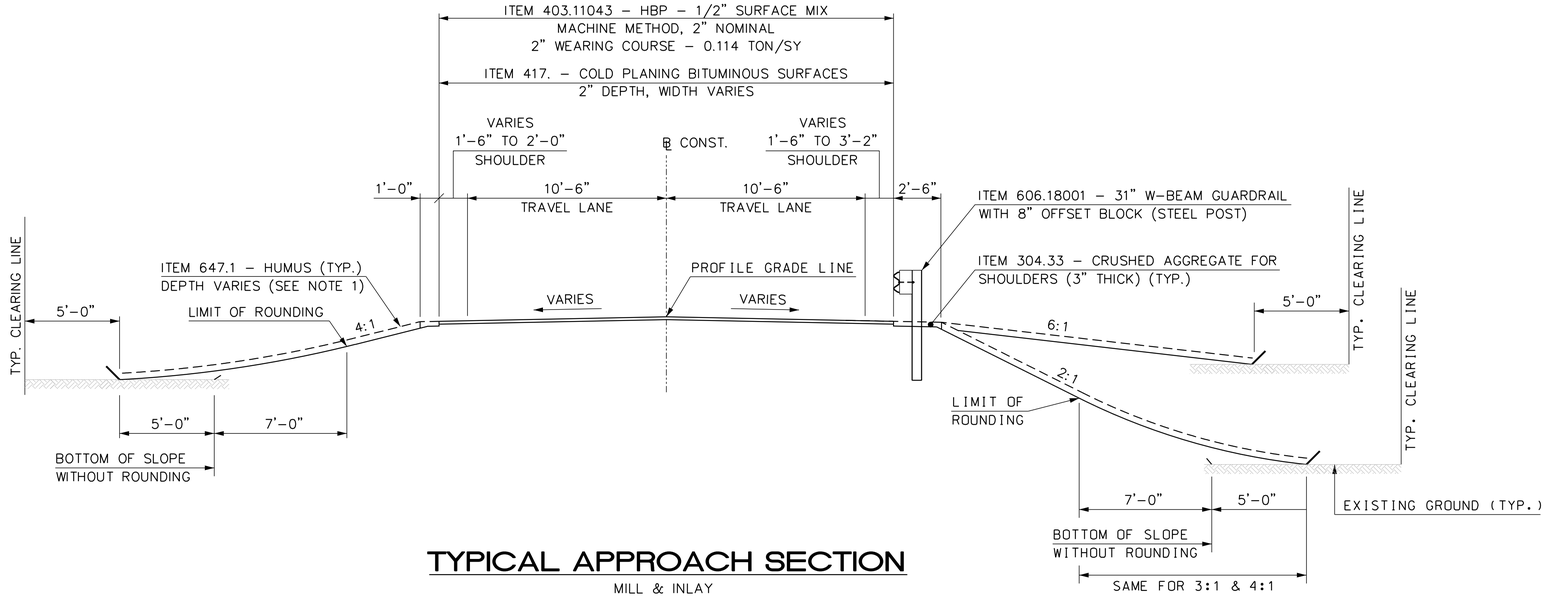
SDR PROCESSED - DATE -
NEW DESIGN TJG DATE 07/21
SHEET CHECKED DEM DATE 07/21
AS BUILT DETAILS DATE

Stantec

STATE OF NEW HAMPSHIRE
LYME, NH & THETFORD, VT
DEPARTMENT OF TRANSPORTATION ◦ BUREAU OF HIGHWAY DESIGN

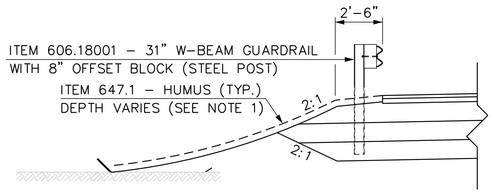
SUMMARY OF ROADWAY QUANTITIES

DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
14460SM	14460	5	67



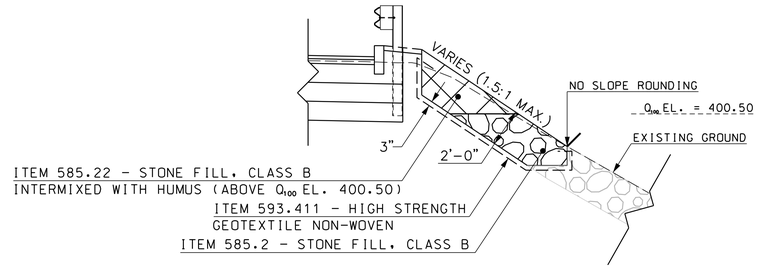
TYPICAL APPROACH SECTION

MILL & INLAY
STA. 13+50 TO STA. 14+22
STA. 20+96 TO STA. 21+25
NOT TO SCALE



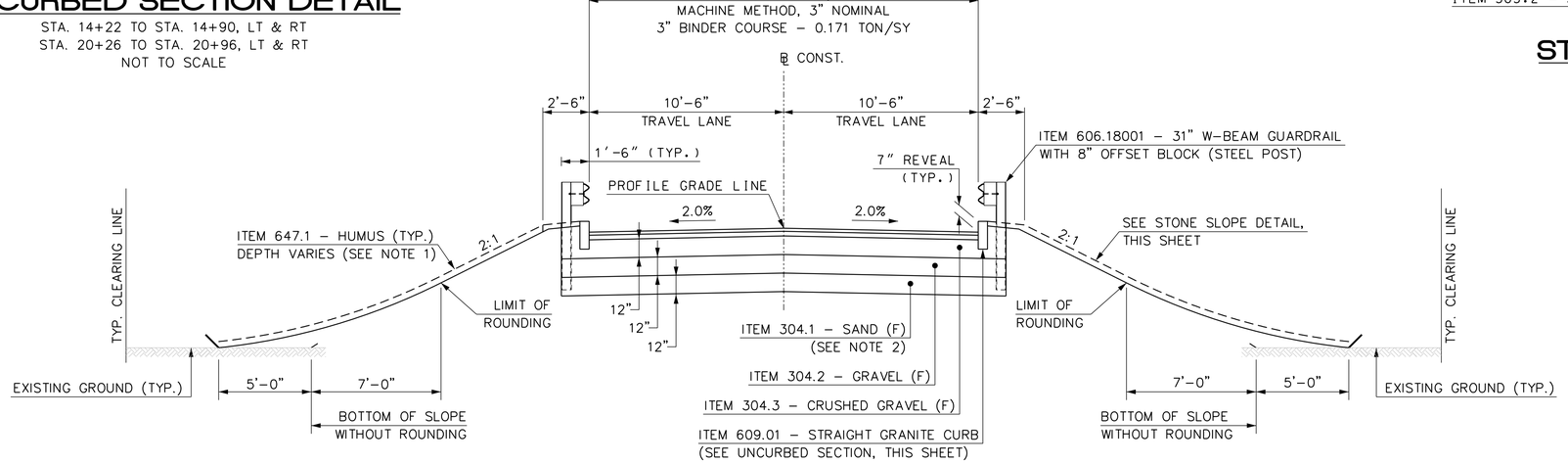
UNCURBED SECTION DETAIL

STA. 14+22 TO STA. 14+90, LT & RT
STA. 20+26 TO STA. 20+96, LT & RT
NOT TO SCALE



STONE SLOPE DETAIL

STA. 15+00 TO STA. 20+10, LT
STA. 15+00 TO STA. 20+30, RT
NOT TO SCALE



TYPICAL APPROACH SECTION

FULL–DEPTH CONSTRUCTION
STA. 14+22 TO STA. 15+25
STA. 19+91 TO STA. 20+96
NOT TO SCALE

NOTES:

1. EXCAVATED TOPSOIL IN NEW HAMPSHIRE SHALL BE UTILIZED ON SITE FOR HUMUS WITHIN THE STATE OF NEW HAMPSHIRE RIGHT–OF–WAY AND SHALL BE PLACED AT A DEPTH OF UP TO 12" TO EXHAUST THE SUPPLY OF LRS. HUMUS TO BE PLACED AT A DEPTH OF 4" IN VERMONT. SEE OF PROSECUTION OF WORK FOR ADDITIONAL INFORMATION.

2. SAND LAYER MAY BE OMITTED IN AREAS IN CONFLICT WITH UNDERGROUND UTILITIES AS DIRECTED.

REVISIONS AFTER PROPOSAL			
DESCRIPTION	STATION	DATE	NUMBER

SDR PROCESSED	NHDOT	DATE –	
NEW DESIGN	DEM	DATE 02/21	
SHEET CHECKED	TJG	DATE 02/21	
AS BUILT DETAILS			DATE

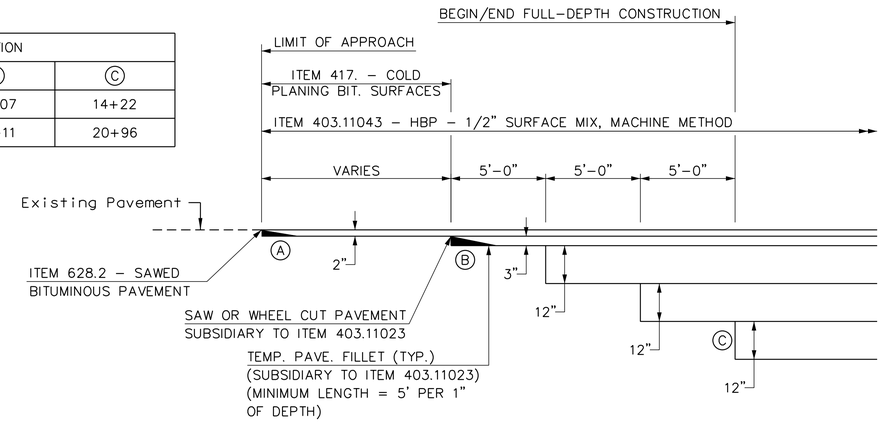
STATE OF NEW HAMPSHIRE
LYME, NH & THETFORD, VT
DEPARTMENT OF TRANSPORTATION ∘ BUREAU OF HIGHWAY DESIGN

TYPICAL SECTIONS

DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
14460TY01	14460	6	67

Stantec

STATION		
Ⓐ	Ⓑ	Ⓒ
13+50	14+07	14+22
21+25	21+11	20+96



EAST THETFORD ROAD
PAVEMENT TRANSITION DETAIL

NOT TO SCALE

REVISIONS AFTER PROPOSAL

NUMBER	DATE	DESCRIPTION	STATION

SDR PROCESSED NHDOT DATE -
NEW DESIGN DEM DATE 02/21
SHEET CHECKED TJG DATE 02/21

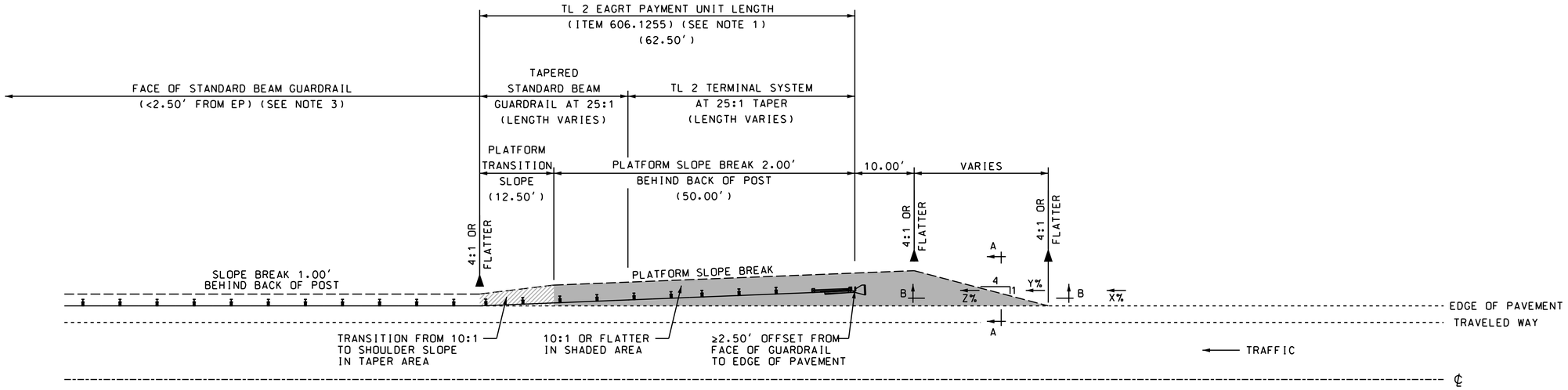
AS BUILT DETAILS DATE

Stantec

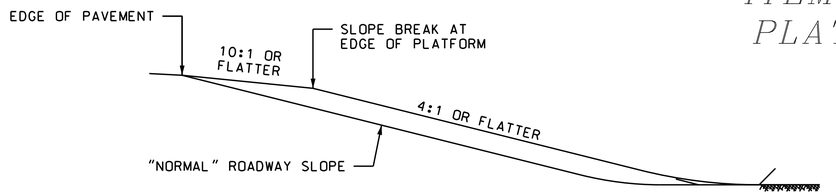
STATE OF NEW HAMPSHIRE
LYME, NH & THETFORD, VT
DEPARTMENT OF TRANSPORTATION ◦ BUREAU OF HIGHWAY DESIGN

CONSTRUCTION DETAILS

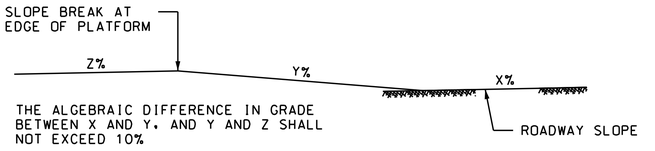
DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
14460TY02	14460	7	67



ITEM 203.5562 - EAGRT PLATFORM ALTERNATE

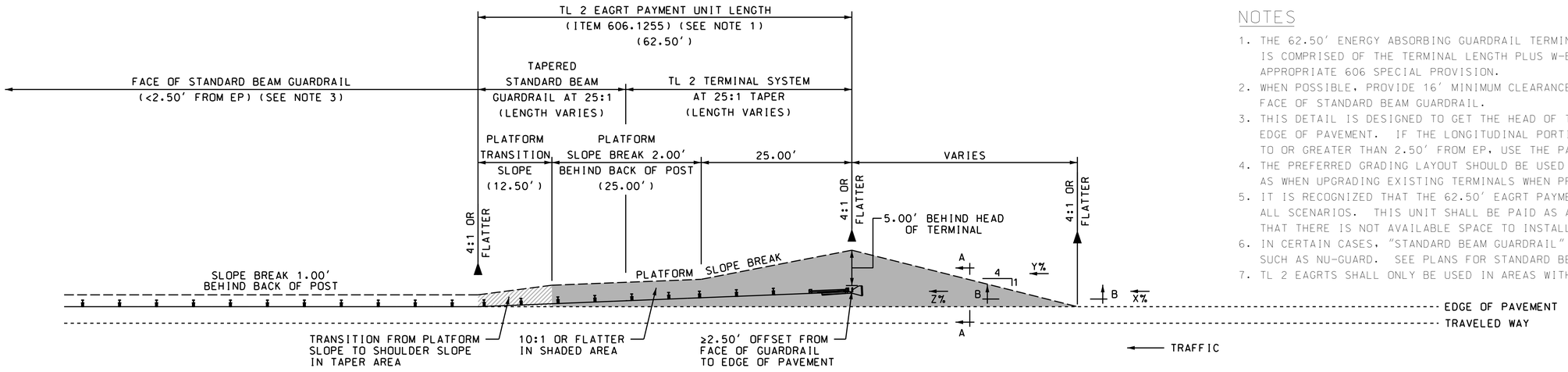


SECTION A-A
PLATFORM SLOPE GRADING



X% = LONGITUDINAL GRADE OF ROADWAY SLOPE IN ADVANCE OF PLATFORM
Y% = LONGITUDINAL GRADE OF PLATFORM APPROACH
Z% = LONGITUDINAL GRADE OF PLATFORM

SECTION B-B
PLATFORM APPROACH GRADING



ITEM 203.5561 - EAGRT PLATFORM PREFERRED

NOTES

1. THE 62.50' ENERGY ABSORBING GUARDRAIL TERMINAL (EAGRT) PAYMENT UNIT LENGTH IS COMPRISED OF THE TERMINAL LENGTH PLUS W-BEAM RAIL AS DESCRIBED IN THE APPROPRIATE 606 SPECIAL PROVISION.
2. WHEN POSSIBLE, PROVIDE 16' MINIMUM CLEARANCE BETWEEN ROADWAY CENTERLINE AND FACE OF STANDARD BEAM GUARDRAIL.
3. THIS DETAIL IS DESIGNED TO GET THE HEAD OF THE TERMINAL UNIT AWAY FROM THE EDGE OF PAVEMENT. IF THE LONGITUDINAL PORTION OF THE GUARDRAIL RUN IS EQUAL TO OR GREATER THAN 2.50' FROM EP, USE THE PARALLEL EAGRT DETAIL.
4. THE PREFERRED GRADING LAYOUT SHOULD BE USED ON ALL NEW CONSTRUCTION, AS WELL AS WHEN UPGRADING EXISTING TERMINALS WHEN PRACTICAL.
5. IT IS RECOGNIZED THAT THE 62.50' EAGRT PAYMENT UNIT LENGTH MAY NOT FIT ALL SCENARIOS. THIS UNIT SHALL BE PAID AS A COMPLETE INSTALLATION IN THE EVENT THAT THERE IS NOT AVAILABLE SPACE TO INSTALL PER THIS DETAIL.
6. IN CERTAIN CASES, "STANDARD BEAM GUARDRAIL" MAY BE A PROPRIETARY ITEM SUCH AS NU-GUARD. SEE PLANS FOR STANDARD BEAM GUARDRAIL TYPE.
7. TL 2 EAGRTS SHALL ONLY BE USED IN AREAS WITH DESIGN SPEEDS OF 45 MPH AND UNDER.

NOT TO SCALE

REVISIONS AFTER PROPOSAL

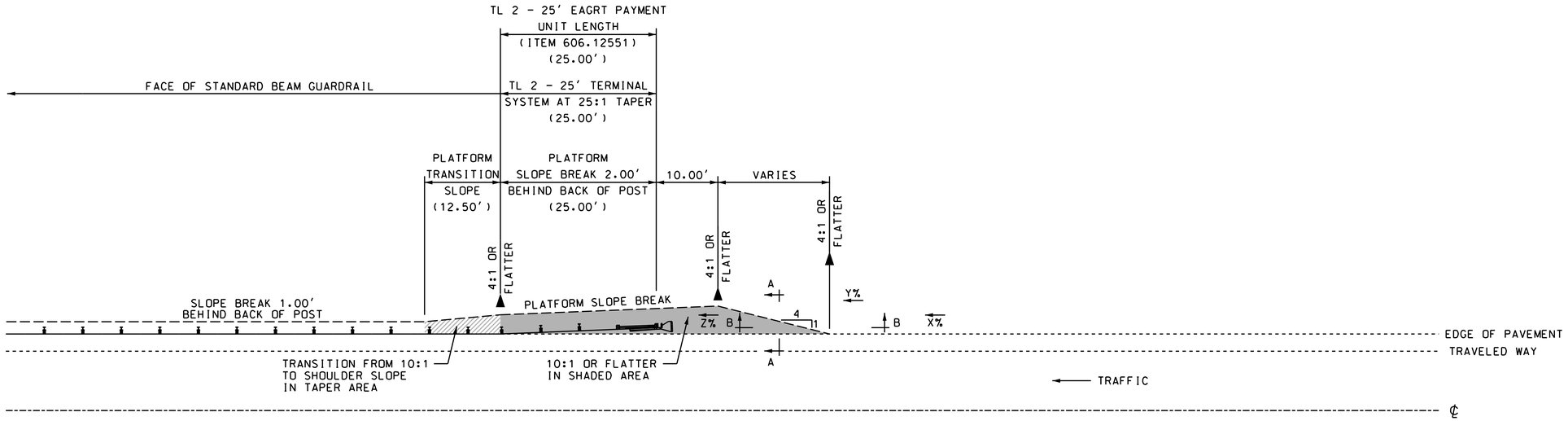
NUMBER	DESCRIPTION	DATE	STATION

SDR PROCESSED	NHDOT	DATE -
NEW DESIGN	-	DATE -
SHEET CHECKED	-	DATE -
AS BUILT DETAILS		DATE

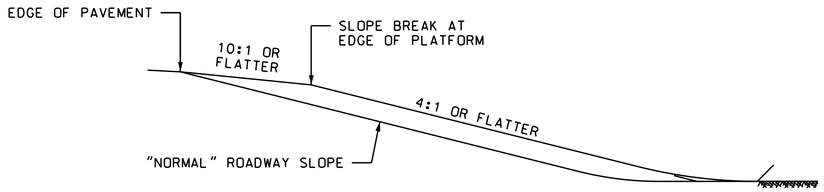
STATE OF NEW HAMPSHIRE
LYME, NH & THETFORD, VT
DEPARTMENT OF TRANSPORTATION ∘ BUREAU OF HIGHWAY DESIGN

TL 2 TAPERED EAGRT PLATFORM DETAILS FOR GUARDRAIL < 2.50' FROM EP

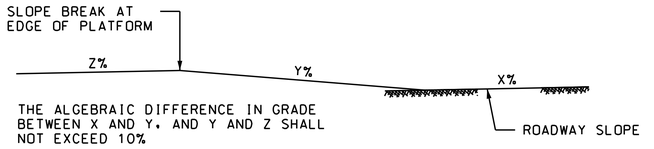
REVISION DATE	DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
01/22/19	14460TY03	14460	8	67



ITEM 203.5572 - EAGRT PLATFORM ALTERNATE, TL 2 - 25'

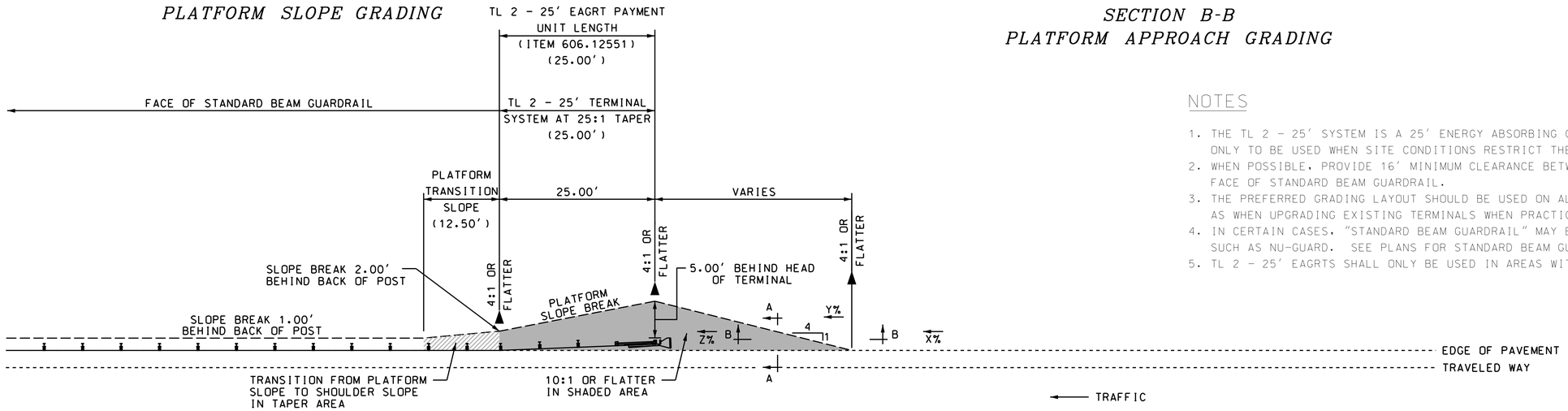


SECTION A-A
PLATFORM SLOPE GRADING



X% = LONGITUDINAL GRADE OF ROADWAY SLOPE IN ADVANCE OF PLATFORM
Y% = LONGITUDINAL GRADE OF PLATFORM APPROACH
Z% = LONGITUDINAL GRADE OF PLATFORM

SECTION B-B
PLATFORM APPROACH GRADING



ITEM 203.5571 - EAGRT PLATFORM PREFERRED, TL 2 - 25'

NOTES

1. THE TL 2 - 25' SYSTEM IS A 25' ENERGY ABSORBING GUARDRAIL TERMINAL (EAGRT) UNIT ONLY TO BE USED WHEN SITE CONDITIONS RESTRICT THE USE OF A STANDARD TL 2 SYSTEM.
2. WHEN POSSIBLE, PROVIDE 16' MINIMUM CLEARANCE BETWEEN ROADWAY CENTERLINE AND FACE OF STANDARD BEAM GUARDRAIL.
3. THE PREFERRED GRADING LAYOUT SHOULD BE USED ON ALL NEW CONSTRUCTION, AS WELL AS WHEN UPGRADING EXISTING TERMINALS WHEN PRACTICAL.
4. IN CERTAIN CASES, "STANDARD BEAM GUARDRAIL" MAY BE A PROPRIETARY ITEM SUCH AS NU-GUARD. SEE PLANS FOR STANDARD BEAM GUARDRAIL TYPE.
5. TL 2 - 25' EAGRTS SHALL ONLY BE USED IN AREAS WITH DESIGN SPEEDS OF 45 MPH AND UNDER.

NOT TO SCALE

REVISIONS AFTER PROPOSAL

NUMBER	DESCRIPTION	DATE	STATION

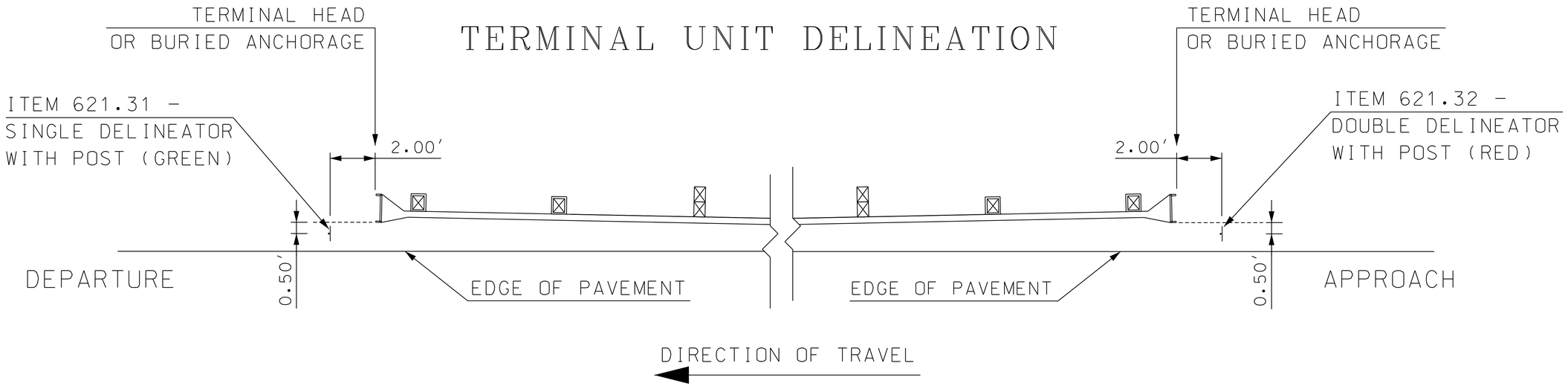
SDR PROCESSED NHDOT DATE -
NEW DESIGN - DATE -
SHEET CHECKED - DATE -
AS BUILT DETAILS DATE

STATE OF NEW HAMPSHIRE
LYME, NH & THETFORD, VT
DEPARTMENT OF TRANSPORTATION ∘ BUREAU OF HIGHWAY DESIGN

TL 2 - 25' EAGRT PLATFORM DETAILS

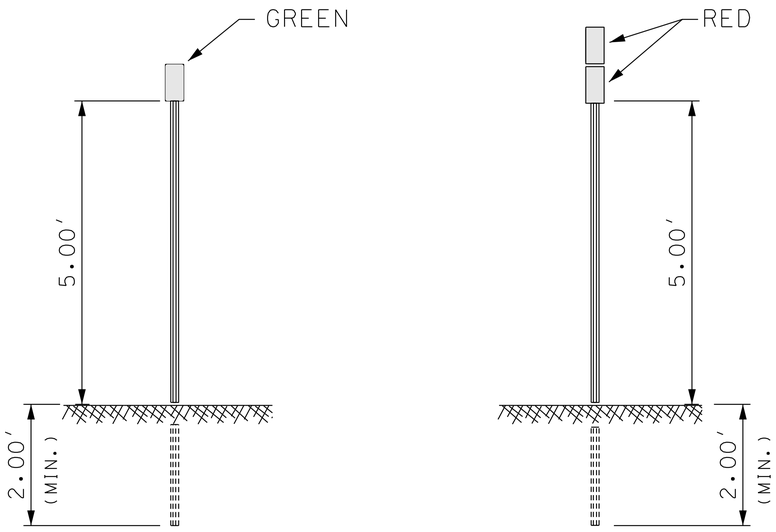
REVISION DATE	DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
01/22/19	14460TY04	14460	9	67

TERMINAL UNIT DELINEATION



ITEM 621.31 - SINGLE DELINEATOR WITH POST

ITEM 621.32 - DOUBLE DELINEATOR WITH POST



TYPICAL INSTALLATION

REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	DESCRIPTION

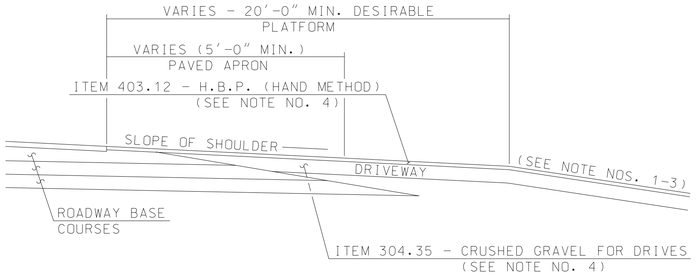
SDR PROCESSED NHDOT DATE -
NEW DESIGN - DATE -
SHEET CHECKED - DATE -
AS BUILT DETAILS DATE

STATE OF NEW HAMPSHIRE
LYME, NH & THETFORD, VT
DEPARTMENT OF TRANSPORTATION ∘ BUREAU OF HIGHWAY DESIGN

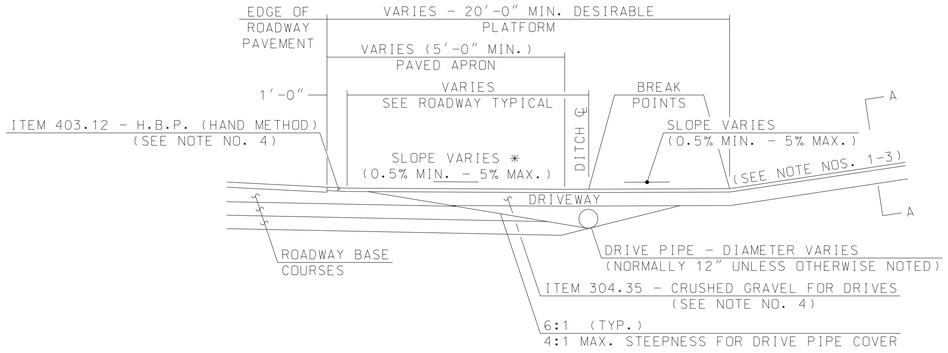
TERMINAL UNIT DELINEATION

REVISION DATE	DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
12/05/20	14460TY05	14460	10	67

NOTE: REFER TO PAVEMENT LAYOUT PLANS AND CROSS-SECTIONS FOR DRIVEWAY LENGTHS, WIDTHS, RADII, CURB CUTS, GRADES AND PAVEMENT & BASE COURSE DEPTHS

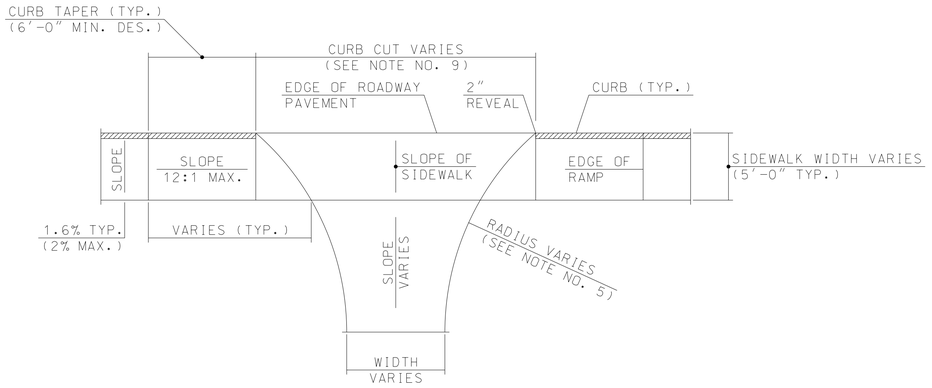


TYPICAL UNCURBED DRIVE IN FILL SECTION

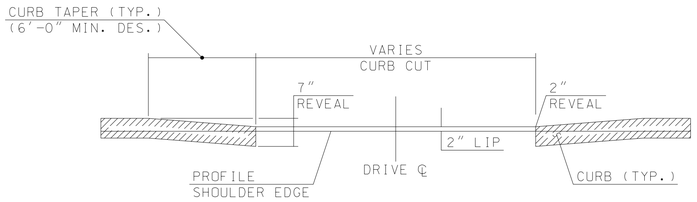


A-A DRIVEWAY CROSS-SECTION

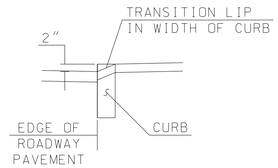
TYPICAL UNCURBED DRIVE IN CUT SECTION



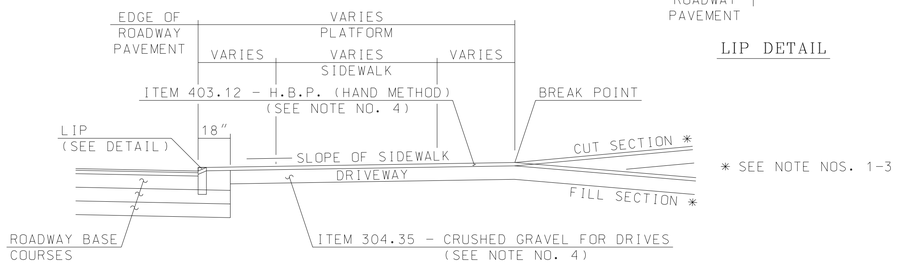
PLAN VIEW WITH SIDEWALK RAMP



END VIEW



LIP DETAIL



TYPICAL URBAN CURBED DRIVE IN CUT/FILL SECTION

GENERAL NOTES

1. GRADES OF MAJOR ENTRANCES BEYOND THE PLATFORM SHOULD NOT EXCEED 8%.
2. GRADES OF OTHER DRIVES BEYOND THE PLATFORM SHOULD NOT EXCEED 15%.
3. THE ALGEBRAIC DIFFERENCE BETWEEN TWO ADJACENT GRADES SHOULD NOT EXCEED 10%.
4. PAVEMENT AND BASE COURSE DEPTHS ARE:
   A. TYPICALLY 8" CRUSHED GRAVEL WITH 3" HBP (HAND METHOD, PLACED IN 2 COURSES) FOR RESIDENTIAL DRIVES ADJACENT TO ROADWAYS WITH CONVENTIONAL CRUSHED GRAVEL, GRAVEL, AND SAND STRUCTURAL BOX. IF THE DRIVE IS ADJACENT TO A ROADWAY WITH A CRUSHED STONE STRUCTURAL BOX, 6" OF CRUSHED STONE FINE GRADATION MAY BE SUBSTITUTED FOR THE 8" OF CRUSHED GRAVEL NOTED ABOVE.
   B. TYPICALLY 12" CRUSHED GRAVEL WITH 3" HBP (HAND METHOD, PLACED IN 2 COURSES) FOR COMMERCIAL DRIVES WITH FREQUENT HEAVY TRUCK TRAFFIC THAT ARE ADJACENT TO ROADWAYS WITH CONVENTIONAL CRUSHED GRAVEL, GRAVEL, AND SAND STRUCTURAL BOX. IF THE DRIVE IS ADJACENT TO A ROADWAY WITH A CRUSHED STONE STRUCTURAL BOX, 9" OF CRUSHED STONE FINE GRADATION MAY BE SUBSTITUTED FOR THE 12" OF CRUSHED GRAVEL NOTED ABOVE.
5. FOR DESIGN CRITERIA AND OTHER ADDITIONAL INFORMATION, REFER TO THE NHDOT DRIVEWAY MANUAL.
6. DITCHES ARE RECOMMENDED FOR UNCURBED DRIVEWAYS IN CUT SLOPES.
7. USE SLOPED END SECTIONS ON DRIVE PIPES FOR UNCURBED DRIVEWAYS.
8. CURBING CAN BE FLARED TO FIT DRIVE RADII IF APPROPRIATE OR ENDED AS DETAILED ABOVE.
9. CURB CUTS FOR RESIDENTIAL DRIVES WITH ANGLES OF ENTRY OF 75°-90° ARE TYPICALLY 25'-0".

NUMBER	DATE	STATION	DESCRIPTION
		STATION	REVISIONS AFTER PROPOSAL

SDR PROCESSED	NHDOT	DATE -
NEW DESIGN	-	DATE -
SHEET CHECKED	-	DATE -
AS BUILT DETAILS		DATE

STATE OF NEW HAMPSHIRE
LYME, NH & THETFORD, VT
DEPARTMENT OF TRANSPORTATION ∘ BUREAU OF HIGHWAY DESIGN

DRIVEWAY DETAILS

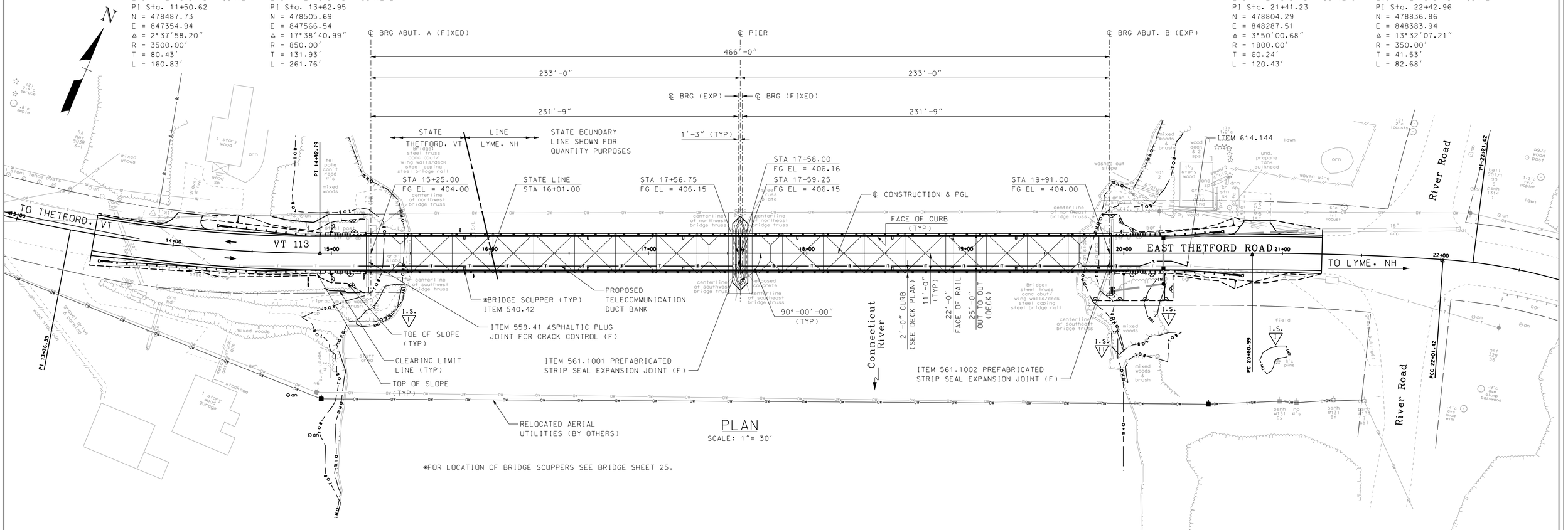
REVISION DATE	DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
06/04/12	14460TY06	14460	11	67

EAST THETFORD RD - CURVE 1
PI Sta. 11+50.62
N = 478487.73
E = 847354.94
Δ = 2°37'58.20"
R = 3500.00'
T = 80.43'
L = 160.83'

EAST THETFORD RD - CURVE 2
PI Sta. 13+62.95
N = 478505.69
E = 847566.54
Δ = 17°38'40.99"
R = 850.00'
T = 131.93'
L = 261.76'

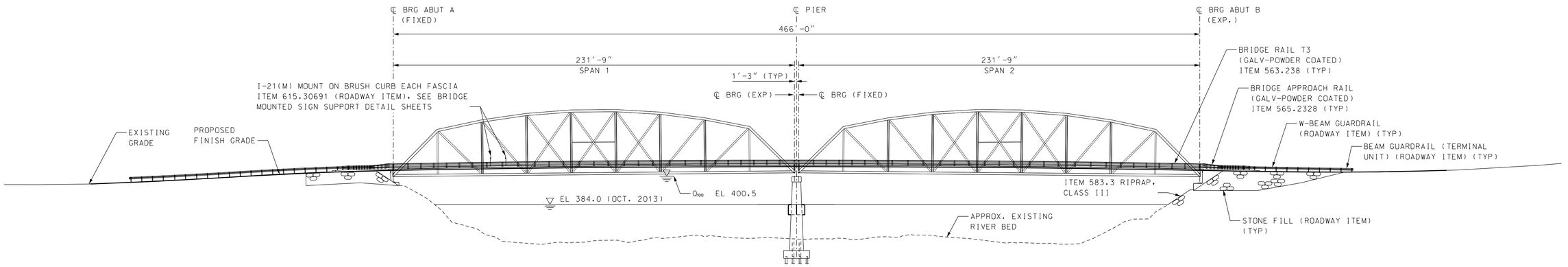
EAST THETFORD RD - CURVE 3
PI Sta. 21+41.23
N = 478804.29
E = 848287.51
Δ = 3°50'00.68"
R = 1800.00'
T = 60.24'
L = 120.43'

EAST THETFORD RD - CURVE 4
PI Sta. 22+42.96
N = 478836.86
E = 848383.94
Δ = 13°32'07.21"
R = 350.00'
T = 41.53'
L = 82.68'



PLAN
SCALE: 1"= 30'

*FOR LOCATION OF BRIDGE SCUPPERS SEE BRIDGE SHEET 25.



ELEVATION
SCALE: 1"= 30'

HYDRAULIC DATA

1. DRAINAGE AREA: 3380 SQ. MI.
2. DESIGN FLOOD: Q_{100}= 10800 cfs
3. DESIGN FLOOD ELEVATION: 400.5 FEET
4. DESIGN VELOCITY: 8.3 fps
5. BRIDGE FULL WATERWAY OPENING: 14700 SQ. FT.

Stantec

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC	12_gen_plan	AS NOTED

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN LYME, NH & THETFORD, VT | BRIDGE NO. 053\112 | STATE PROJECT 14460

LOCATION VT ROUTE 113 & EAST THETFORD ROAD OVER THE CONNECTICUT RIVER

GENERAL PLAN AND ELEVATION

BRIDGE SHEET: 1 OF 38

REVISIONS AFTER PROPOSAL	BY	DATE		BY	DATE
	JDG	01/2019	CHECKED	JGS	03/2019
	LRB	02/2019	CHECKED	JGS	03/2019
	JDG	03/2019	CHECKED	TEK	03/2019

ISSUE DATE	FEDERAL PROJECT NO.	SHEET NO.	TOTAL SHEETS
REV. DATE	A000(394)	12	67

FILE NUMBER: 1-14-2-6

DESIGN LOADS, MATERIALS, AND SPECIFICATIONS

(1) DESIGN LOADING: HL-93 (BRIDGE DECK, FLOOR BEAMS, STRINGERS)

(2) DESIGN METHOD: LOAD AND RESISTANCE FACTOR DESIGN (LRFD)
(BRIDGE DECK, FLOOR BEAMS, STRINGERS)

(3) SPECIFICATIONS: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION
NHDOT 2016 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AS AMENDED.

(4) REINFORCING STEEL: AASHTO M31 (ASTM A615) GRADE 60.
ABUTMENT BACKWALLS/WINGWALLS SHALL BE EPOXY COATED
BRIDGE DECK AND BRUSH CURBS SHALL BE CONTINUOUSLY GALVANIZED

(5) STRUCTURAL STEEL: AASHTO M270 GRADE 50 (ASTM A709 GRADE 50), PAINTED. SEE NOTES ON BRIDGE SHEET 3 FOR ADDITIONAL INFORMATION.

(6) CONCRETE: ABUTMENT, WINGWALL, AND PIER REPAIRS = 4,000 PSI:
ITEM 520.02012, CONCRETE CLASS AA, ABOVE FOOTINGS
(ABUT/WALL/PIER REPAIR)

ABUTMENT BACKWALL/WINGWALL RECONSTRUCTION = 4,000 PSI:
ITEM 520.0201, CONCRETE CLASS AA, ABOVE FOOTINGS

PIER JACKET = 4,000 PSI:
ITEM 520.02011, CONCRETE CLASS AA, ABOVE FOOTINGS

BRIDGE DECK = 4,000 PSI:
ITEM 520.7002, CONCRETE BRIDGE DECK (QC/QA) (F)

BRUSH CURBS = 4,000 PSI:
ITEM 520.70028, CONCRETE BRIDGE DECK (QC/QA) (INTEGRALLY COLORED) (F)

GENERAL CONSTRUCTION NOTES

(1) EXISTING PLANS (FILE NO. 1-14-2-6) AND INSPECTION REPORTS ARE AVAILABLE ON-LINE IN THE BID PACKAGE ON THE INVITATION TO BID WEBPAGE DURING THE BIDDING PERIOD. AFTER THE CONTRACT HAS BEEN AWARDED, A COMPLETE SET OF EXISTING PLANS WILL BE FORWARDED TO THE CONTRACTOR UPON REQUEST.

(2) THE CONTRACTOR SHOULD BE AWARE THAT EXISTING STRUCTURE DIMENSIONS AND ELEVATIONS SHOWN IN THESE PLANS WERE TAKEN FROM THE ORIGINAL BRIDGE PLANS AND/OR SUBSEQUENT REHABILITATION PLANS AND DO NOT NECESSARILY REPRESENT "AS BUILT" DIMENSIONS AND ELEVATIONS. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS OF EXISTING STRUCTURES AND SHALL BE PREPARED TO MAKE ADJUSTMENTS REQUIRED TO PROPERLY COMPLETE THE PROPOSED RECONSTRUCTION. ANY DISCREPANCIES IN DIMENSIONS, CHARACTER, OR EXTENT OF EXISTING FEATURES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO ADVANCING THE WORK.

(3) A VERTICAL DATUM CONVERSION OF +215.70 FEET AT THE ABUTMENTS AND +215.85 FEET AT THE PIER WAS USED TO CONVERT EXISTING PLAN ELEVATIONS TO THE SURVEY DATUM IN THESE PLANS. THESE CONVERSIONS ARE BASED ON THE SURVEYED TOP OF BEARING MASONRY PLATE ELEVATIONS RELATIVE TO THE BRIDGE SEAT ELEVATIONS ON THE EXISTING PLANS.

(4) THE CONTRACTOR SHALL CONTACT DIG SAFE TO SURVEY AND TAG ALL UNDERGROUND LOCATIONS NEAR THE BRIDGE FOR POSSIBLE UTILITIES.

(5) SPECIAL CARE AND PRECAUTIONS, INCLUDING PROTECTIVE STRUCTURES, ENCLOSURES, OR SHIELDING AS REQUIRED OR ORDERED, SHALL BE TAKEN TO ENSURE THAT NO DEBRIS IS ALLOWED TO FALL IN THE WATERWAY BELOW DURING BRIDGE REMOVAL AND CONSTRUCTION OPERATIONS AND TO ALLOW FOR SAFE PASSAGE OF RIVER USERS. ALL COSTS FOR ERECTION, MAINTENANCE, AND REMOVAL OF PROTECTIVE STRUCTURES, ENCLOSURES, OR SHIELDING, REQUIRED OR ORDERED, SHALL BE SUBSIDIARY TO THE WORK.

(6) ALL EXPOSED EDGES OF NEW CONCRETE SHALL MATCH ADJACENT EXISTING EDGES, OR BE CHAMFERED $^{3}/_{4}$" IF NO EXISTING EDGE EXISTS.

(7) ALL PLAN DIMENSIONS ARE MEASURED HORIZONTALLY WITHOUT ACCOUNTING FOR PROFILE GRADE OR CROSS SLOPE, UNLESS NOTED OTHERWISE.

(8) ALL EXISTING BRONZE DISCS REPRESENTING STATE BENCHMARKS OR SURVEY TRIANGULATION POINTS MUST NOT BE DISTURBED. WHEN THE WORK CALLED FOR INVOLVES DISTURBING A BRONZE DISC THE CONTRACTOR SHALL NOTIFY THE ENGINEER SUFFICIENTLY IN ADVANCE OF THE WORK TO PERMIT THE STATE TO TEMPORARILY RELOCATE THE AFFECTED MARKER.

(9) FOR UTILITY INFORMATION REFER TO THE PROSECUTION OF WORK.

(10) FOR HYDRAULIC DATA SEE BRIDGE SHEET 1.

(11) FOR BORING NOTES SEE BRIDGE SHEET 5.

(12) FOR SCUPPER NOTES SEE BRIDGE SHEET 22.

(13) FOR DECK SLAB ELEVATION NOTES SEE BRIDGE SHEET 24.

(14) FOR EXPANSION JOINT NOTES SEE BRIDGE SHEETS 30 & 32.

(15) FOR BRIDGE AND APPROACH RAIL NOTES SEE BRIDGE SHEETS 35-36.

ACCESS FOR BRIDGE CONSTRUCTION NOTES

(1) ITEM 500.02, ACCESS FOR BRIDGE CONSTRUCTION, SHALL CONSIST OF THE DESIGN, CONSTRUCTION, MAINTENANCE, AND REMOVAL OF ANY TEMPORARY ACCESS ROADS AND STRUCTURES BY THE CONTRACTOR NECESSARY TO REHABILITATE AND REMOVE PORTIONS OF THE EXISTING BRIDGE AS SHOWN IN THE PLANS. SEE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.

(2) ACCESS FOR BRIDGE CONSTRUCTION WITHIN THE RIVER SHALL BE OPEN STRUCTURES, TEMPORARY TRESTLE OR WORK PLATFORM, OR BARGES, UNLESS NOTED OTHERWISE.

(3) TEMPORARY ACCESS SHOWN FOR BRIDGE CONSTRUCTION IS SCHEMATIC ONLY. ACTUAL TEMPORARY ACCESS SHALL BE DEVELOPED BY THE CONTRACTOR.

(4) ACCESS SHALL REMAIN WITHIN WETLAND IMPACT AREAS SHOWN IN THE WETLAND PERMIT AND WITHIN THE EASEMENTS SHOWN ON THE CONSTRUCTION ACCESS PLAN. ANY ALTERATIONS SHALL BE CHECKED FOR CONFORMANCE WITH THE WETLAND PERMIT. ADDITIONAL COSTS FOR PERMITS NEEDED ASSOCIATED WITH CHANGES BASED ON THE CONTRACTOR'S METHOD OF CONSTRUCTION SHALL BE THE CONTRACTOR'S RESPONSIBILITY.

(5) AFTER CONSTRUCTION IS COMPLETE, ALL TEMPORARY MATERIAL SHALL BE REMOVED AND THE AREA RETURNED TO AS NEAR AS PRACTICABLE TO THE PRE-CONSTRUCTION CONDITIONS AND AS DIRECTED BY THE ENGINEER. ALL COSTS SHALL BE SUBSIDIARY TO ITEM 500.02.

BRIDGE REMOVAL NOTES

(1) THE CONTRACTOR'S METHOD FOR PARTIAL REMOVAL OF THE EXISTING BRIDGE SHALL BE SUBMITTED FOR DOCUMENTATION IN ACCORDANCE WITH 105.02, PRIOR TO THE COMMENCEMENT OF ANY REMOVAL OPERATIONS.

(2) REMOVAL OF EXISTING BRIDGE STRUCTURE, ITEM 502, UNLESS OTHERWISE SHOWN ON THE PLANS, SHALL INCLUDE THE FOLLOWING:
- EXCAVATION, TEMPORARY EARTH SUPPORT, BACKFILL, AND GRADING NOT INCLUDED IN OTHER ITEMS, BUT REQUIRED FOR THE ABUTMENT AND WINGWALL REHABILITATION WORK.
- REMOVAL OF THE BRIDGE DECK, INCLUDING EXPANSION JOINT STEEL, SCUPPERS, PAVEMENT, AND MEMBRANE. THE EXISTING BRIDGE DECK HAS NO SHEAR CONNECTORS ACCORDING TO THE AVAILABLE EXISTING PLANS.
- REMOVAL OF THE STEEL BRIDGE CURBS AND BRIDGE RAIL. RAIL POSTS AT THE END FLOOR BEAMS OF EACH TRUSS TO BE RETAINED AND INCORPORATED IN THE WORK.
- REMOVAL OF ABUTMENT BACKWALLS INCLUDING EXPANSION JOINT STEEL.
- REMOVAL OF RIVETS.
- REMOVAL OF EXTERIOR STRINGERS AND END FLOORBEAMS, INCLUDING CONNECTION ANGLES.
- REMOVAL OF THE FLOOR SYSTEM LOWER LATERAL BRACING, INCLUDING GUSSET PLATES AND DESIGN OF TEMPORARY BRACING.
- REMOVAL OF DETERIORATED TRUSS LACING BARS.
- REMOVAL OF EXISTING BRIDGE-MOUNTED CONDUIT.

(3) DURING CONCRETE DECK REMOVAL OPERATIONS, CARE SHALL BE TAKEN NOT TO DAMAGE TOP FLANGES OF STRINGERS AND FLOOR BEAMS TO REMAIN. ANY DAMAGE TO STRUCTURAL STEEL SHALL BE IMMEDIATELY REPORTED TO THE BUREAU OF BRIDGE DESIGN AND REPAIRED AS DIRECTED, AT THE CONTRACTOR'S EXPENSE.

(4) REMOVAL OF THE EXISTING BRIDGE APPROACH RAIL IS PAID UNDER ITEM 202.7 (ROADWAY ITEM).

COFFERDAM NOTES

(1) A TEMPORARY COFFERDAM SHALL BE INSTALLED AROUND THE PERIMETER OF THE PIER FOR ENVIRONMENTAL CONTAINMENT AND TO MAINTAIN A DEWATERED CONDITION NECESSARY FOR CONSTRUCTION OF THE CONCRETE PIER REPAIRS. ALL COSTS FOR MATERIALS, INSTALLATION, MAINTENANCE, AND REMOVAL SHALL BE INCLUDED IN ITEM 503.201, COFFERDAMS.

(2) THE LIMITS OF THE COFFERDAM SHOWN ON THE PLANS IS APPROXIMATE AND SHALL BE ADJUSTED AS NECESSARY TO ACCOMMODATE THE CONTRACTOR'S MEANS AND METHODS.

(3) ALL ITEMS COVERED UNDER SECTION 503 OF THE SPECIFICATIONS SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER, LICENSED IN THE STATE OF NH. THE CONTRACTOR SHALL SUBMIT STAMPED WORKING DRAWINGS AND CALCULATIONS FOR REVIEW AND DOCUMENTATION IN ACCORDANCE WITH SECTION 105.02.

(4) ALL COSTS FOR HANDLING ANY WATER DISPLACED FROM WITHIN THE COFFERDAM SHALL BE SUBSIDIARY TO ITEM 503.201. ALL MEANS AND METHODS ASSOCIATED WITH HANDLING DISPLACED WATER DURING CONSTRUCTION SHALL BE LOCATED WITHIN THE LIMITS OF WORK SHOWN ON THE WETLANDS PERMIT FOR THE PROJECT.

(5) PRE-EXCAVATION OF COBBLES AND BOULDERS MAY BE NECESSARY PRIOR TO INSTALLING THE COFFERDAM. DURING EXCAVATION THE CONTRACTOR SHALL DISTURB THE AREA AS LITTLE AS POSSIBLE AND USE NECESSARY PRECAUTIONS TO MINIMIZE IMPACTS TO THE RIVER. ALL COSTS SHALL BE SUBSIDIARY TO ITEM 503.201.

(6) ITEM 645.0001 TURBIDITY BARRIER SHALL BE USED IN CONJUNCTION WITH THE COFFERDAM AND SHALL BE IN PLACE PRIOR TO DISTURBANCE OF THE CHANNEL BOTTOM AND REMAIN IN PLACE UNTIL THE PIER WORK IS COMPLETE.

SUBSTRUCTURE REHABILITATION NOTES

(1) EXISTING ABUTMENT, WINGWALL, AND PIER SURFACES SHALL BE INSPECTED FOR DETERIORATED CONCRETE JOINTLY BY THE CONTRACT ADMINISTRATOR AND THE CONTRACTOR. ALL DETERIORATED CONCRETE SHALL BE REMOVED TO A SOUND CONCRETE SURFACE. ALL INSPECTION, REMOVAL, AND CLEANING SHALL BE AS SPECIFIED IN SECTION 512 FOR CLASS II SURFACE PREPARATION. ALL COSTS FOR SURFACE PREPARATION AND CONTAINMENT OF DEBRIS SHALL BE INCLUDED IN ITEMS 512.020X, PREPARATION FOR CONCRETE REPAIRS, CLASS II.

(2) PRIOR TO PLACING NEW CONCRETE AGAINST EXISTING CONCRETE SURFACES, AT ABUTMENT, WINGWALLS, AND PIER, THE EXISTING CONCRETE SURFACES SHALL BE BLAST-CLEANED AND PREPARED TO A SATURATED SURFACE-DRY CONDITION. ALL COSTS SHALL BE SUBSIDIARY TO ITEMS 520.0201, 520.02011, AND 520.02012 AS APPROPRIATE.

(3) REPAIRS TO EXISTING PIER CONCRETE SURFACES BELOW THE WATER SHALL BE DONE IN-THE-DRY. THE WORK SHALL BE ACCOMPLISHED USING A DE-WATERED COFFERDAM, WATERTIGHT FALSEWORK, OR BY OTHER MEANS AS APPROVED BY THE ENGINEER.

(4) HOLES DRILLED IN EXISTING CONCRETE FOR ANCHORING REINFORCING STEEL SHALL BE GROUTED WITH AN APPROVED HIGH STRENGTH, NON-SHRINK GROUT LISTED UNDER SECTION 528 OF THE NHDOT QUALIFIED PRODUCTS LIST. HOLES SHALL BE DRILLED $^{1}/_{2}$" LARGER THAN THE BAR DIAMETER UNLESS OTHERWISE RECOMMENDED BY THE GROUT MANUFACTURER. ALL COSTS FOR DRILLING AND GROUTING SHALL BE SUBSIDIARY TO ITEM 544 AND 544.2, UNLESS OTHERWISE NOTED.

(5) SAWCUT ALL EXPOSED CONCRETE REMOVAL AREAS TO PROVIDE NEAT REMOVAL LINES IN ACCORDANCE WITH 512.3.2.3. ALL COSTS INCLUDED IN ITEM 502, REMOVAL OF EXISTING BRIDGE STRUCTURE, OR ITEMS 512.020X, PREPARATION FOR CONCRETE REPAIRS, CLASS II, AS APPROPRIATE.

(6) AFTER ALL PIER REPAIRS ARE MADE, COAT THE PIER CAP SURFACES TO THE LIMITS SHOWN WITH ITEM 536.11, EPOXY COATING FOR CONCRETE.

(7) AFTER ALL SUBSTRUCTURE REPAIRS ARE MADE, ALL EXPOSED CONCRETE SURFACES SHALL BE WASHED, SUBSIDIARY TO ITEM 534.3, IN SUCH A MANNER THAT OVERSPRAY INTO SURFACE WATERS IS KEPT TO A MINIMUM. IF THE WATER BEADS, NO COATING NEEDS TO BE APPLIED. IF THE WATER DOES NOT BEAD, COAT THE SURFACE (EXCEPT SURFACES TO BE COATED WITH ITEM 536.11) WITH ITEM 534.3, WATER REPELLENT (SILANE-SILOXANE).

(8) EXISTING ABUTMENT BACKWALLS AND WINGWALLS SHALL BE REMOVED TO THE LIMITS SHOWN ON THE PLANS. EXISTING REINFORCING STEEL TO BE RETAINED SHALL BE CUT OFF OR BENT AS NEEDED TO PROVIDE 2$^{1}/_{2}$" CLEAR FROM PROPOSED CONCRETE SURFACES, UNLESS NOTED OTHERWISE. ALL COSTS INCLUDED IN ITEM 502, REMOVAL OF EXISTING BRIDGE STRUCTURE.

(9) ITEM 538.2, BARRIER MEMBRANE, PEEL AND STICK - VERTICAL SURFACES (F), 2 FEET WIDE WITH PROTECTION BOARD (SUBSIDIARY), SHALL BE PLACED CENTERED OVER THE HORIZONTAL AND VERTICAL CONSTRUCTION JOINTS AT THE BACK OF THE ABUTMENT BACKWALL, AS SHOWN ON THE PLANS.

(10) PLACE 1" THICK SELF-EXPANDING CORK FILLER IN THE VERTICAL JOINT BETWEEN THE PROPOSED BRIDGE DECK AND THE RECONSTRUCTED ABUTMENT WINGWALLS AT ABUTMENT A AS SHOWN ON THE PLANS. SET CORK FILLER $^{1}/_{2}$" BELOW EXPOSED SURFACES AND SEAL WITH 1" x $^{1}/_{2}$" ITEM 562.1, SILICONE JOINT SEALANT.

(11) A GALVANIC CORROSION PROTECTION SYSTEM (DISTRIBUTED ANODES), ITEM 540.511 SHALL BE PLACED IN THE RECONSTRUCTED ABUTMENT BACKWALLS/WINGWALLS, AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. SEE SPECIAL PROVISION FOR ADDITIONAL INFORMATION.

(12) A GALVANIC CORROSION PROTECTION SYSTEM (DISCRETE ANODES), ITEM 540.512 SHALL BE PLACED IN THE CONCRETE REPAIR AREAS OF THE ABUTMENTS AND PIER, AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. SEE SPECIAL PROVISION FOR ADDITIONAL INFORMATION.

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN LYME, NH & THETFORD, VT BRIDGE NO. 053\112 STATE PROJECT 14460

LOCATION VT ROUTE 113 & EAST THETFORD ROAD OVER THE CONNECTICUT RIVER

BRIDGE NOTES & SUMMARY QUANTITIES (1 OF 2)

BRIDGE SHEET 2 OF 38

REVISIONS AFTER PROPOSAL			BY	DATE		BY	DATE
		DESIGNED	JDG	01/2019	CHECKED	DDT	02/2021
		DRAWN	LRB	02/2019	CHECKED	DDT	04/2022
		QUANTITIES	JDG	02/2021	CHECKED	TEK	02/2021
		ISSUE DATE		FEDERAL PROJECT NO.		SHEET NO.	TOTAL SHEETS
		REV. DATE		A000(394)		13	67

FILE NUMBER 1-14-2-6

Stantec

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC	13_BridgeNotes_1	AS NOTED

STRUCTURAL STEEL AND SUPERSTRUCTURE REHABILITATION NOTES

(1) UNLESS OTHERWISE NOTED, ALL STRUCTURAL STEEL SHALL BE PAID UNDER ITEM 550.1, STRUCTURAL STEEL (F), INCLUDING FLOOR BEAMS, STRINGERS, CONNECTION ANGLES, LATERAL BRACING, GUSSET PLATES, UTILITY SUPPORT ANGLES, PIER JACKET NOSE ARMOR, AND STRUCTURAL FASTENERS. STRUCTURAL STEEL FOR RUST HOLE REPAIR AND LACING BAR REPLACEMENT SHALL BE PAID UNDER ITEM 550.40X. REFER TO BRIDGE SHEET 21 FOR DETAILS.

(2) STRUCTURAL STEEL SHALL CONFORM TO AASHTO M270 GRADE 50 (ASTM A709 GRADE 50). LATERAL BRACING ANGLES AND GUSSET PLATES, RUST HOLE REPAIR PLATES, LACING BARS, UTILITY SUPPORT ANGLES, AND PIER JACKET NOSE ARMOR MAY CONFORM TO ASTM A36. ALL STRUCTURAL STEEL SHALL BE PAINTED UNLESS OTHERWISE NOTED.

(3) THE NOTCH TOUGHNESS REQUIREMENTS OF NHDOT STANDARD SPECIFICATIONS SHALL APPLY TO FLOOR BEAMS, STRINGERS, CONNECTION ANGLES, AND RUST HOLE REPAIR PLATES.

(4) FRACTURE CRITICAL MEMBERS SHALL BE FABRICATED ACCORDING TO THE PROVISIONS OF CLAUSE 12 OF THE AASHTO/AWS D1.5 BRIDGE WELDING CODE. FRACTURE CRITICAL MEMBERS ARE DESIGNATED "FCM" AND INCLUDE THE END FLOOR BEAMS.

(5) THE STRUCTURAL STEEL FABRICATOR SHALL ARRANGE FOR NON-DESTRUCTIVE TESTING OF THE WELDS. ALL COSTS SHALL BE INCLUDED IN ITEM 550.1, STRUCTURAL STEEL (F).

(6) ALL WELDING AND FABRICATION SHALL BE PERFORMED IN ACCORDANCE WITH THE AASHTO/AWS D1.5-20 BRIDGE WELDING CODE (INCLUDING ALL REVISIONS PUBLISHED BY AASHTO AS OF THE BID OPENING DATE) AND NHDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

(7) THE CONTRACTOR SHALL SUBMIT A HANDLING AND ERECTION PLAN TO THE ENGINEER PRIOR TO HANDLING THE STRUCTURAL STEEL IN ACCORDANCE WITH SECTIONS 550.3.14 AND 550.3.15.

(8) FIELD WELDING OF ATTACHMENTS TO, OR PLACEMENT OF HOLES IN, ANY EXPOSED PORTION OF THE STRINGERS OR FLOOR BEAMS FOR CONSTRUCTION PURPOSES, IS NOT PERMITTED. FIELD ATTACHMENTS TO THE TOP FLANGE FOR CONSTRUCTION PURPOSES MUST BE APPROVED BY THE ENGINEER.

(9) BRIDGE DECK CONCRETE SHALL REMAIN PLASTIC THROUGHOUT EACH PLACEMENT. BRIDGE DECK CONCRETE IN EACH SPAN SHALL BE PLACED CONTINUOUSLY, EXCLUDING EXPANSION JOINT BLOCKOUTS

(10) EXISTING RIVETS SHALL BE REMOVED BY AN APPROVED METHOD WHICH WILL NOT DAMAGE REMAINING STEEL MEMBERS. THE CONTRACTOR SHALL SUBMIT THE PROPOSED METHOD OF RIVET REMOVAL FOR APPROVAL PRIOR TO COMMENCEMENT OF ANY REMOVAL OPERATIONS. ALL COSTS INCLUDED IN ITEM 502.

(11) AFTER REMOVAL OF STEEL MEMBERS, ALL EXISTING RIVET HOLES NOT REUSED SHALL BE FILLED WITH FULLY-TENSIONED $^{7}/_{8}$" HIGH-STRENGTH BOLTS. ALL COSTS SHALL BE INCLUDED IN ITEM 550.1.

(12) FAYING SURFACES OF EXISTING STEEL CONNECTIONS SHALL BE CLEANED AND PRIMED IN ACCORDANCE WITH THE SECTION 556 SPECIAL PROVISION PRIOR TO INSTALLING NEW STEEL.

(13) THE CONTRACTOR IS ADVISED THAT THE PAINT SYSTEM(S) ON THE EXISTING STRUCTURAL STEEL IS LEAD BEARING PAINT. PAINT DEBRIS SHALL BE REMOVED, COLLECTED, AND DISPOSED OF IN A MANNER CONFORMING TO POLLUTION CONTROL REQUIREMENTS IN ACCORDANCE WITH THE SECTION 556 SPECIAL PROVISION. SEE PROSECUTION OF WORK FOR ADDITIONAL INFORMATION.

(14) THE COST OF SHOP AND FIELD PAINTING NEW STRUCTURAL STEEL SHALL BE INCLUDED IN ITEM 550.1 AND 550.40X. THE COST OF CLEANING AND PAINTING EXISTING STEEL SHALL BE INCLUDED IN ITEMS 556.X01. REFER TO THE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.

(15) PRECAST STAY-IN-PLACE DECK PANELS WILL NOT BE PERMITTED FOR FORMING THE BRIDGE DECK.

(16) SCREED RAIL SUPPORTS REQUIRED FOR PLACEMENT OF THE DECK CONCRETE SHALL BE LOCATED AT THE CENTERLINE OF THE STRINGERS.

(17) ALL BOLTED CONNECTIONS SHALL BE MADE WITH $^{7}/_{8}$" HIGH-STRENGTH BOLTS IN $^{15}/_{16}$" HOLES, UNLESS NOTED OTHERWISE. RIVETS REMOVED SHALL BE REPLACED WITH HIGH-STRENGTH BOLTS OF THE SAME SIZE. FASTENERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F3125, GRADE A325 TYPE 1, GALVANIZED. DIRECT TENSION INDICATORS SHALL BE INSTALLED WITH HIGH-STRENGTH BOLTS. WHERE THE OUTER FACE OF THE BOLTED PARTS HAS A SLOPE GREATER THAN 1:20 WITH RESPECT TO A PLANE NORMAL TO THE BOLT AXIS (e.g. CHANNEL FLANGES), A HARDENED BEVELED WASHER SHALL BE USED TO COMPENSATE FOR THE LACK OF PARALLELISM. THE COST OF ALL FIELD DRILLING AS REQUIRED SHALL BE INCLUDED IN ITEM 550.1 AND 550.40X.

(18) THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN AND INSTALLATION OF TEMPORARY FLOOR SYSTEM LATERAL BRACING NECESSARY DURING REMOVAL AND REPLACEMENT OF THE EXISTING LOWER LATERAL BRACING. THE TEMPORARY BRACING PLAN SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW HAMPSHIRE. THE CONTRACTOR SHALL SUBMIT STAMPED WORKING DRAWINGS AND CALCULATIONS FOR REVIEW AND DOCUMENTATION IN ACCORDANCE WITH SECTION 105.02. ALL COSTS SHALL BE INCLUDED IN ITEM 502, REMOVAL OF EXISTING BRIDGE STRUCTURE.

(19) IF THE CONTRACTOR CHOOSES TO USE THE EXISTING BRIDGE TO SUPPORT CONSTRUCTION LOADS DURING THE REHABILITATION WORK, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANALYZING THE EXISTING STRUCTURE TO ENSURE THAT THE PROPOSED LOADINGS CAN BE SAFELY SUPPORTED. THE LOADINGS FROM THE CONTRACTOR'S OPERATIONS SHALL NOT EXCEED THE OPERATING CAPACITY OF THE EXISTING BRIDGE. ALL TEMPORARY LOADING PLANS SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW HAMPSHIRE. THE CONTRACTOR SHALL SUBMIT STAMPED WORKING DRAWINGS AND CALCULATIONS FOR REVIEW AND DOCUMENTATION IN ACCORDANCE WITH SECTION 105.02. ALL COSTS SHALL BE SUBSIDIARY TO THE WORK.

(20) STRUCTURAL STEEL SHALL BE INSPECTED FOR STRUCTURAL DEFICIENCIES (SIGNIFICANT STEEL LOSS, CRACKS, MISSING BOLTS, ETC.) JOINTLY BY THE CONTRACT ADMINISTRATOR AND CONTRACTOR. ANY APPROVED REPAIRS REQUIRED BY THE DEPARTMENT, IN ADDITION TO THE WORK IDENTIFIED IN THE PLANS, SHALL BE PERFORMED BY THE CONTRACTOR AND PAID UNDER ITEM 1002.1, REPAIRS OR REPLACEMENTS AS NEEDED - BRIDGE STRUCTURES.

STRUCTURAL STEEL AND SUPERSTRUCTURE REHABILITATION NOTES

(21) JACKING AND SHORING IS REQUIRED TO REPLACE LATERAL BRACING GUSSET PLATES AT THE BEARINGS AND TO MAKE SUBSTRUCTURE REPAIRS AS NEEDED. THE DETAILS SHOWN IN THE PLANS ASSUME THE BRIDGE WILL BE JACKED FROM THE NEW END FLOOR BEAMS AFTER THE EXISTING DECK AND UTILITY CONDUITS ARE REMOVED. UNFACTORED JACKING DEAD LOAD PER BEARING IS ESTIMATED TO BE 55 TONS WITH EXISTING DECK REMOVED. TEMPORARY SHIMS OR BLOCKS SHALL BE PLACED UNDER THE TRUSS(ES) DURING THE TIME THAT JACKS ARE SUPPORTING THE LOADS. TEMPORARY LATERAL BRACING TO THE SUBSTRUCTURE SHALL BE INSTALLED AS DETERMINED BY THE CONTRACTOR. ALL JACKING AND SHORING PLANS SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW HAMPSHIRE. THE CONTRACTOR SHALL SUBMIT STAMPED WORKING DRAWINGS AND CALCULATIONS FOR REVIEW AND DOCUMENTATION IN ACCORDANCE WITH SECTION 105.02. ALL COSTS SHALL BE INCLUDED IN ITEM 550.19, TEMPORARY STRUCTURE SUPPORT SYSTEM. FOR JACKING POINTS SEE BRIDGE SHEET 18.

(22) THE CONTRACTOR SHALL TAKE FIELD MEASUREMENTS TO DETERMINE ALL DIMENSIONS NECESSARY TO PREPARE DETAILED SHOP DRAWINGS FOR APPROVAL. SHOP DRAWINGS SHALL INCLUDE ACTUAL FIELD MEASUREMENTS AND FIELD MEASURED DIMENSIONS SHALL BE NOTED. ALL COSTS INCLUDED IN ITEM 550.1 AND 550.40X.

(23) CAMBER IS NOT REQUIRED FOR THE STRINGERS AND FLOOR BEAMS. PROVIDE ANY NATURAL CAMBER UP.

(24) RUST HOLES AND SIGNIFICANT PITTING IN TRUSS VERTICALS AND DIAGONALS SHALL BE REPAIRED IN ACCORDANCE WITH DETAILS ON THE PLANS AND MEASUREMENTS TAKEN IN THE FIELD. ALL COSTS FOR REPAIR PLATES, ANGLES, STRUCTURAL FASTENERS, FIELD DRILLING, AND SEALING IS INCLUDED IN ITEM 550.406, STRUCTURAL STEEL REPAIR - RUST HOLE REPAIR.

(25) DETERIORATED LACING BARS SHALL BE REMOVED AND REPLACED IN ACCORDANCE WITH DETAILS ON THE PLANS AND MEASUREMENTS TAKEN IN THE FIELD. ALL COSTS FOR LACING BARS AND STRUCTURAL FASTENERS IS INCLUDED IN ITEM 550.407, STRUCTURAL STEEL REPAIR - LACING BAR REPLACEMENT.

(26) EXISTING BRIDGE SHOE ANCHOR BOLTS SHALL BE INSPECTED JOINTLY BY THE CONTRACT ADMINISTRATOR AND CONTRACTOR. ANY APPROVED REPAIRS REQUIRED BY THE DEPARTMENT, SHALL BE PERFORMED BY THE CONTRACTOR AS SHOWN ON THE ANCHOR BOLT EXTENSION DETAIL (BRIDGE SHEET 21), AND PAID UNDER ITEM 1002.1, REPAIRS OR REPLACEMENTS AS NEEDED BRIDGE STRUCTURES. ANCHOR BOLT EXTENSIONS, IF NEEDED, SHALL BE FABRICATED IN ACCORDANCE WITH SECTION 550.2.5.

SUMMARY OF BRIDGE QUANTITIES

ITEM NO.	ITEM DESCRIPTION	UNIT	VT TOTAL	NH TOTAL	TOTAL QUANTITY
207.3	UNCLASSIFIED CHANNEL EXCAVATION	CY	0	24	24
209.201	GRANULAR BACKFILL (BRIDGE) (F)	CY	18	15	33
500.02	ACCESS FOR BRIDGE CONSTRUCTION	U	0	1	1
502.	REMOVAL OF EXISTING BRIDGE STRUCTURE	U	0.14	0.86	1
503.201	COFFERDAMS	U	0	1	1
504.1	COMMON BRIDGE EXCAVATION (F)	CY	19	15	34
512.0201	PREPARATION FOR CONCRETE REPAIRS, CLASS II	SY	11	4	15
512.0202	PREPARATION FOR CONCRETE REPAIRS, CLASS II	SY	0	179	179
520.0201	CONCRETE CLASS AA, ABOVE FOOTINGS	CY	5	4	9
520.02011	CONCRETE CLASS AA, ABOVE FOOTINGS	CY	0	37	37
520.02012	CONCRETE CLASS AA, ABOVE FOOTINGS (ABUTMENT/WALL/PIER REPAIR)	CY	2	31	33
520.421	CONCRETE CLASS F, FLOWABLE FILL, EXCAVATABLE	CY	0	2	2
520.7002	CONCRETE BRIDGE DECK (QC/QA) (F)	CY	44	273	317
520.70028	CONCRETE BRIDGE DECK (QC/QA) (INTEGRALLY COLORED) (F)	CY	6	40	46
526.3	HIGH MOLECULAR WEIGHT METHACRYLATE CRACK SEALER	GAL	0	3	3
534.3	WATER REPELLENT (SILANE/SILOXANE)	GAL	16	92	108
536.11	EPOXY COATING FOR CONCRETE (F)	SF	0	195	195
538.2	BARRIER MEMBRANE, PEEL AND STICK - VERTICAL SURFACES (F)	SY	12	12	24
540.42	SCUPPER (FRP)	EA	2	10	12
540.511	GALVANIC CORROSION PROTECTION SYSTEM (DISTRIBUTED ANODES)	LF	58	58	116
540.512	GALVANIC CORROSION PROTECTION SYSTEM (DISCRETE ANODES)	EA	18	485	503
541.5	PVC WATERSTOPS, NH TYPE 5 (F)	LF	29	0	29
544.	REINFORCING STEEL (F)	LB	0	1453	1453
544.2	REINFORCING STEEL, EPOXY COATED (F)	LB	266	160	426
544.43	REINFORCING STEEL - CONTINUOUSLY GALVANIZED (F)	LB	11691	71819	83510
550.1	STRUCTURAL STEEL (F)	LB	19677	100442	120119
550.19	TEMPORARY STRUCTURE SUPPORT SYSTEM	U	0.14	0.86	1
550.406	STRUCTURAL STEEL REPAIR - RUST HOLE REPAIR	U	0	23	23
550.407	STRUCTURAL STEEL REPAIR - LACING BAR REPLACEMENT	U	1	3	4
556.101	PAINTING EXISTING STRUCTURAL STEEL	U	0.14	0.86	1
556.201	CONTAINMENT AND ENVIRONMENTAL PROTECTION	U	0.14	0.86	1
556.301	WORKER PROTECTION	U	0.14	0.86	1
556.401	WASTE MANAGEMENT	U	0.14	0.86	1
559.41	ASPHALTIC PLUG FOR CRACK CONTROL (F)	LF	21	0	21
561.1001	PREFABRICATED STRIP SEAL EXPANSION JOINT (F)	LF	0	23	23
561.1002	PREFABRICATED STRIP SEAL EXPANSION JOINT (F)	LF	0	23	23
562.1	SILICONE JOINT SEALANT (F)	LF	16	7	23
563.238	BRIDGE RAIL T3 (GALV-POWDER COATED)	LF	132	811	943
565.2328	BRIDGE APPROACH RAIL T3 (STEEL POSTS) (GALV-POWDER COATED)	U	2	2	4
583.3	RIPRAP, CLASS III	CY	0	68	68
628.5	DIAMOND GRINDING CONCRETE PAVEMENT	SY	146	891	1037
645.0001	TURBIDITY BARRIER	LF	0	315	315
692.	MOBILIZATION	U	0.14	0.86	1
1002.1	REPAIRS OR REPLACEMENTS AS NEEDED - BRIDGE STRUCTURES	$	**	**	**
1010.41	QUALITY CONTROL / QUALITY ASSURANCE (QC/QA) FOR CONCRETE	$	**	**	**

** SEE PROPOSAL

SUMMARY OF QUANTITIES (NON-PARTICIPATING ITEMS)

ITEM NO.	ITEM DESCRIPTION	UNIT	TOTAL
206.19	COMMON STRUCTURE EXCAVATION - EXPLORATORY	CY	15
206.2	ROCK STRUCTURE EXCAVATION	CY	4
614.144	4" 4-DUCT CONDUIT CONCRETE ENCASED	LF	47
614.24499	4" 4-DUCT FIBERGLASS CONDUIT (BRIDGE MOUNTED) (SUPPLIED BY OTHERS)	LF	483

REINFORCING STEEL NOTES

(1) REINFORCING STEEL SHALL HAVE 2$^{1}/_{2}$" MINIMUM CLEAR COVER, UNLESS OTHERWISE NOTED.

(2) PLACE REINFORCING STEEL TO AVOID RAIL POST ANCHOR ASSEMBLIES AND EXPANSION JOINT STEEL.

(3) ANY COATED REINFORCING STEEL CUT TO FIT SHALL BE TOUCHED UP IN ACCORDANCE WITH 544. ALL COSTS SHALL BE SUBSIDIARY.

(4) REINFORCING LEGEND:

ALT	= ALTERNATE	MID	= MIDDLE
BOT	= BOTTOM	MIN	= MINIMUM
BRG	= BEARING	NS	= NEAR SIDE
CG	= CONTINUOUSLY GALVANIZED	SECT	= SECTION
CLR	= CLEAR	SP	= SPACES
DOW	= DOWEL	SPL	= SPLICE
E	= EPOXY COATED	SYM	= SYMMETRICAL
EQ	= EQUAL	TYP	= TYPICAL
FS	= FAR SIDE		
MAX	= MAXIMUM		
MC	= MECHANICAL CONNECTOR		

Stantec

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC	14_BridgeNotes_2	AS NOTED

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN LYME, NH & THETFORD, VT BRIDGE NO. 053\112 STATE PROJECT 14460

LOCATION VT ROUTE 113 & EAST THETFORD ROAD OVER THE CONNECTICUT RIVER

BRIDGE NOTES & SUMMARY QUANTITIES (2 OF 2)

BRIDGE SHEET: 3 OF 38

REVISIONS AFTER PROPOSAL		BY	DATE		BY	DATE
	DESIGNED	JDG	01/2019	CHECKED	DDT	02/2021
	DRAWN	LRB	02/2019	CHECKED	DDT	02/2021
	QUANTITIES	JDG	02/2021	CHECKED	TEK	02/2021
	ISSUE DATE		FEDERAL PROJECT NO.		SHEET NO.	TOTAL SHEETS
	REV. DATE		A000(394)		14	67

FILE NUMBER: 1-14-2-6

EAST THETFORD RD - CURVE 1
PI Sta. 11+50.62
N = 478487.73
E = 847354.94
Δ = 2°37'58.20"
R = 3500.00'
T = 80.43'
L = 160.83'

EAST THETFORD RD - CURVE 2
PI Sta. 13+62.95
N = 478505.69
E = 847566.54
Δ = 17°38'40.99"
R = 850.00'
T = 131.93'
L = 261.76'

EAST THETFORD RD - CURVE 3
PI Sta. 21+41.23
N = 478804.29
E = 848287.51
Δ = 3°50'00.68"
R = 1800.00'
T = 60.24'
L = 120.43'

EAST THETFORD RD - CURVE 4
PI Sta. 22+42.96
N = 478836.86
E = 848383.94
Δ = 13°32'07.21"
R = 350.00'
T = 41.53'
L = 82.68'

CLAUDIA HENRION

LOUIS R. PETERS

403/23 TYLER, GILLIAN

403/22 RAYMOND A. ZACK TRUST

Connecticut River

STATE LINE
THETFORD, VT | LYME, NH

STATE BOUNDARY LINE SHOWN FOR QUANTITY PURPOSES

TO THETFORD, VT

VT 113

EAST THETFORD ROAD

TO LYME, NH

River Road

EXIST. R.O.W.

WPFR 2

PI 13+36.35

PI 14+92.79

PC 20+80.99

PCC 22+01.42

EL 392.00

EL 394.00

EL 394.00

EL 382.00

1.5:1

TURBIDITY BARRIER
ITEM 645.0001
APPROXIMATE LIMITS

ITEM 583.3
(SEE BRIDGE SHEET 13)

ITEM 520.02011
PIER JACKET

ITEM 503.201 COFFERDAM
APPROXIMATE LIMITS (NOT SHOWN ON PROFILE)

TURBIDITY BARRIER
ITEM 645.0001
APPROXIMATE LIMITS

PLAN
SCALE: 1"= 30'

℄ BRG ABUT A (FIXED)
℄ PIER
℄ BRG ABUT B (EXP.)

466'-0"
231'-9"
231'-9"

PVI 17+58.00
PVI EL = 408.31
VC = 466.00'
K = 126

LVC = 80.00'
K = 19

1'-3" (TYP)

℄ BRG (EXP) — ℄ BRG (FIXED)

THETFORD, VT | LYME, NH

PVI STA 13+50.00 PVI EL = 396.08
PVI STA 13+87.50 PVI EL = 397.43
PVC STA 14+45.00 EL = 400.87
PVI STA 14+85.00 PVI EL = 403.26
PVCC STA 15+25.00 EL = 404.00
PVT 19+91.00 EL = 404.00
PVI 20+18.00 PVI EL = 403.50
PVI 20+95.00 PVI EL = 402.88
PVI 21+25.00 PVI EL = 403.70

3.60% 5.98% -1.85% -0.81% 2.74%

EXISTING GRADE
PROPOSED FINISH GRADE
EL 384.0 (OCT. 2013)
Q_{100} EL 400.5
PIER JACKET REPAIR
ITEM 583.3. RIPRAP. CLASS III
APPROX. EXISTING RIVER BED
APPROXMIATE BEDROCK SURFACE (SEE BORING LOGS)
EXISTING BRIDGE DECK ELEVATION (TYP)

DATUM = 320.00'

13+00	14+00	15+00	16+00	17+00	18+00	19+00	20+00	21+00	22+00
395.7	398.2 / 398.18	403.0 / 403.38	(404.8) 364.2 / 405.16	(405.7) 366.5 / 406.02	(405.8) 364.9 / 406.09	(405.1) 361.8 / 405.35	403.7 / 403.83	403.0 / 403.01	407.9

PROFILE
SCALE: 1"= 30'

Stantec

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN LYME, NH & THETFORD, VT | BRIDGE NO. 053\112 | STATE PROJECT 14460

LOCATION VT ROUTE 113 & EAST THETFORD ROAD OVER THE CONNECTICUT RIVER

SITE PLAN AND PROFILE

BRIDGE SHEET: 4 OF 38

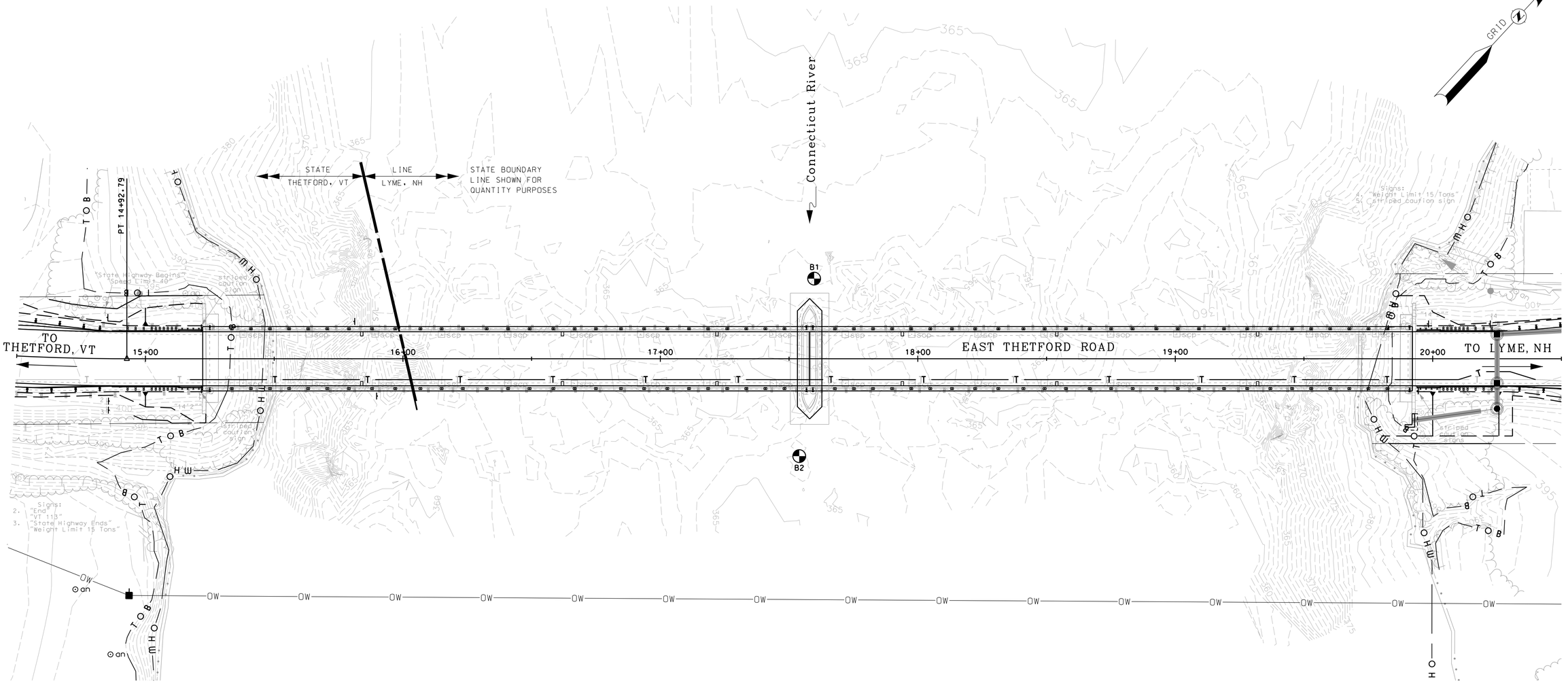
REVISIONS AFTER PROPOSAL	BY	DATE

	BY	DATE		BY	DATE
DESIGNED	JDG	01/2019	CHECKED	JGS	03/2019
DRAWN	LRB	02/2019	CHECKED	JGS	03/2019
QUANTITIES	JDG	03/2019	CHECKED	TEK	03/2019

FILE NUMBER: 1-14-2-6

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC	15_site_plan	AS NOTED

ISSUE DATE	FEDERAL PROJECT NO.	SHEET NO.	TOTAL SHEETS
REV. DATE	A000(394)	15	67



BORING PLAN

SCALE: 1" = 20'

LEGEND

- TEST BORING
- TEST PIT
- HAND AUGER
- PAVEMENT CORE
- GROUNDWATER OBSERVATION WELL

Note: Any one or several exploration types may be absent within the project.

BORING NOTES

1. SUBSURFACE INVESTIGATIONS WERE PERFORMED BY NHDOT NOVEMBER 2016.
2. BOREHOLE WATER LEVEL MEASUREMENTS MAY NOT REPRESENT STABILIZED GROUNDWATER LEVELS WHICH COULD TAKE LONGER PERIODS OF TIME TO REACH EQUILIBRIUM THAN AVAILABLE AT THE TIME OF MEASUREMENT.
3. SUBSURFACE CONDITIONS ARE KNOWN ONLY AT THE EXPLORATION LOCATIONS AND COULD VARY AT OTHER LOCATIONS ON THE SITE.

BORING LOCATIONS

BORING #	NORTHING	EASTING	STATION	OFFSET
B1	478687	847923	17+59.7	31.1' LT
B2	478621	847944	17+54.0	38.1' RT

Stantec

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC/Borings	14460bor_reg	AS NOTED

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN LYME, NH & THETFORD, VT BRIDGE NO. 053\112 STATE PROJECT 14460

LOCATION VT ROUTE 113 & EAST THETFORD ROAD OVER THE CONNECTICUT RIVER

BORING PLAN

BRIDGE SHEET 5 OF 38

REVISIONS AFTER PROPOSAL	BY	DATE		BY	DATE
DESIGNED	GAB	09/2015	CHECKED		
DRAWN	LRB	09/2015	CHECKED		
QUANTITIES			CHECKED		
ISSUE DATE		FEDERAL PROJECT NO.		SHEET NO.	TOTAL SHEETS
REV. DATE		A000(394)		16	67

FILE NUMBER 1-14-2-6

TEST BORING REPORT

STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION
MATERIALS & RESEARCH BUREAU - GEOTECHNICAL SECTION

PROJECT NAME LYME, NH-THETFORD, VT 14460 BRIDGE NO. 053/112
DESCRIPTION VT Route 113 Bridge

BORING NO. B-1
SHEET NO. 1 OF 3
STA. 107+59.7 OFF. LT. 30'-10"
BASELINE
ELEVATION (ft) 364.0
START/END 11/9/16 / 11/10/16
DRILLER Brad Enos (NEBC)
INSPECTOR Mirsad Alihodzic
CLASSIFIER Mirsad Alihodzic
EAST/NORTH (ft) 847923/478687

GROUNDWATER						EQUIPMENT	SAMPLER	CASING	CORE
DATE	TIME	DEPTH (ft)	ELEV. (ft)	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE:	S	NW	
						SIZE I.D. (in):	1.375	3	
						HAMMER WT. (lb):	140	DRILL RIG	
						HAMMER FALL (in):	30	CME 45-C Barge	
						HAMMER TYPE:	Safety		

DEPTH (ft)	STRATUM CHANGE (ft) DEPTH	STRATUM CHANGE (ft) ELEVATION	BLOWS PER 0.5 ft	SAMPLE NUMBER	SAMPLER RECOVERY (ft) [%]	DEPTH RANGE (ft)	FIELD CLASSIFICATION AND REMARKS	STRATUM SYMBOL
0			WOR/2'	S-1	0.0 [0]	0.0 - 2.0	(Mudline at elevation ±364.0, 19.7 feet below the river level elevation of ±383.7) No recovery.	
			WOR 1 1 1	S-2	0.3 [15]	3.0 - 5.0	Very loose, gray, silty COARSE - FINE SAND.	
5			2 3 3 15	S-3	0.9 [45]	8.0 - 10.0	Loose, gray, silty COARSE - FINE SAND.	
10			WOR 2 1 3	S-4	1.4 [70]	13.0 - 15.0	Very loose, gray, silty MEDIUM - FINE SAND.	
15							- SILTY SAND -	
			WOR 2 3 5	S-5	1.7 [85]	18.0 - 20.0	Loose, gray, silty FINE SAND.	
20								
			WOH 3 3 3	S-6	1.1 [55]	23.0 - 25.0	Loose, gray, silty FINE SAND.	
25								
			WOH 1			28.0		

Sampler Identification		COHESIVE SOILS		NON-COHESIVE SOILS		Soil Descriptions	Proportion
S	Standard Split Spoon	Blows/foot	Consistency	Blows/foot	Density	Capitalized Soil Name	Major Component
SL	Large Spoon (O.D.= 3 in)	0 - 1	Very Soft	0 - 4	Very Loose	Lower Case Adjective	35% - 50%
T	Thin Wall Tube	2 - 4	Soft	5 - 10	Loose	Some	20% - 35%
U	Undisturbed Piston	5 - 8	Medium Stiff	11 - 24	Medium Dense	Little	10% - 20%
O	Open End Rod	9 - 15	Stiff	25 - 50	Dense	Trace	1% - 10%
A	Auger Flight	16 - 30	Very Stiff	> 50	Very Dense		
C	Core Barrel	31 - 60	Hard	WOR - Weight of Rod		ENGLISH	
NR	Not Recorded	> 60	Very Hard	WOH - Weight of Hammer			

TEST BORING REPORT

STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION
MATERIALS & RESEARCH BUREAU - GEOTECHNICAL SECTION

PROJECT NAME LYME, NH-THETFORD, VT 14460 BRIDGE NO. 053/112
DESCRIPTION VT Route 113 Bridge

BORING NO. B-1
SHEET NO. 2 OF 3
STA. 107+59.7 OFF. LT. 30'-10"
BASELINE
ELEVATION (ft) 364.0

DEPTH (ft)	STRATUM CHANGE (ft) DEPTH	STRATUM CHANGE (ft) ELEVATION	BLOWS PER 0.5 ft	SAMPLE NUMBER	SAMPLER RECOVERY (ft) [%]	DEPTH RANGE (ft)	FIELD CLASSIFICATION AND REMARKS	STRATUM SYMBOL
30			1 1	S-7	1.1 [55]	30.0	Very loose, gray, silty FINE SAND.	
			15 8 5 3	S-8	0.0 [0]	33.0 - 35.0	No recovery.	
35	35.9	328.1					- SILTY SAND -	
							- APPROXIMATE BEDROCK SURFACE -	
				C-1	2.6 [87]	37.0 - 40.0	Advanced exploration through weathered bedrock surface with roller bit to seat casing at 37 feet. Hard, slightly weathered, moderately fractured, green to gray, fine grained, GREENSCHIST, joints are close to slightly spaced, low angle, undulating, rough. Occasional ¼-inch or less quartz veins throughout core. RQD = 2.5/3.0 = 83%	
40				C-2	4.8 [96]	40.0 - 45.0	Hard, fresh, moderately fractured, green to gray, fine grained, GREENSCHIST, joints are close, low angle, undulating, rough. Occasional ¼-inch or less quartz veins throughout core. RQD = 4.2/5.0 = 84%	
45				C-3	5.0 [100]	45.0 - 50.0	Hard, fresh, moderately fractured, green to gray, fine grained, GREENSCHIST, joints are close, low angle, undulating, rough. Quartz band at 47.8 to 48.1 feet. RQD = 4.0/5.0 = 80%	
50				C-4	4.8 [96]	50.0 - 55.0	Hard, fresh, moderately fractured, green to gray, fine grained, GREENSCHIST, joints are close, low angle, undulating, rough. Occasional ½-inch or less quartz veins throughout core. RQD = 4.2/5.0 = 84%	
55				C-5	4.8 [96]	55.0 - 60.0	Hard, fresh, moderately fractured, green to gray, fine grained, GREENSCHIST, joints are close, low angle, undulating, rough. RQD = 4.2/5.0 = 84%	
60				C-6	5.0 [100]	60.0 - 65.0	Hard, fresh, moderately fractured, green to gray, fine grained, GREENSCHIST, joints are close, low angle, undulating, rough. Quartz band at 62.9 to 63.1 feet and 63.7 to 64 feet. RQD = 2.4/5.0 = 48%	
65						65.0		

BORING NO. B-1
CONTINUED

Stantec

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN LYME, NH & THETFORD, VT BRIDGE NO. 053\112 STATE PROJECT 14460
LOCATION VT ROUTE 113 & EAST THETFORD ROAD OVER THE CONNECTICUT RIVER

BORING LOG (1 OF 3)

BRIDGE SHEET 6 OF 38

REVISIONS AFTER PROPOSAL	BY	DATE		BY	DATE
	DESIGNED	NHDOT	11/2016	CHECKED	
	DRAWN	LRB	12/2016	CHECKED	
	QUANTITIES			CHECKED	

FILE NUMBER 1-14-2-6

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE	ISSUE DATE	FEDERAL PROJECT NO.	SHEET NO.	TOTAL SHEETS
BRC	14460bor log1	AS NOTED	REV. DATE	A000(394)	17	67

TEST BORING REPORT

STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION
MATERIALS & RESEARCH BUREAU - GEOTECHNICAL SECTION

PROJECT NAME LYME, NH-THETFORD, VT 14460 BRIDGE NO. 053/112
DESCRIPTION VT Route 113 Bridge

BORING NO. B-1
SHEET NO. 3 OF 3
STA. 107+59.7 OFF. LT. 30'-10"
BASELINE
ELEVATION (ft) 364.0

DEPTH (ft)	STRATUM CHANGE (ft) DEPTH	STRATUM CHANGE (ft) ELEVATION	BLOWS PER 0.5 ft	SAMPLE NUMBER	SAMPLER RECOVERY (ft) [%]	DEPTH RANGE (ft)	FIELD CLASSIFICATION AND REMARKS	STRATUM SYMBOL
				C-7	2.0 [100]		Hard, fresh, moderately fractured, green to gray, fine grained, GREENSCHIST, joints are close, low angle, undulating, rough, with silt infilling. RQD = 0/2.0 = 0%	
						67.0	Bottom of Exploration @ 67.0 ft (El. 297.0)	
70								
75								
80								
85								
90								
95								
100								

TB-06 \\GZAMAN1\JOBS\04JOBSINT PROJECT DATABASES\04.0190236.02 - DOT LYME NH BRIDGE 053 112.GPJ 11/18/2016 10:58:30 AM TB-06

BORING NO. B-1
CONTINUED

Stantec

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC	14460bor log2	AS NOTED

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN LYME, NH & THETFORD, VT BRIDGE NO. 053\112 STATE PROJECT 14460
LOCATION VT ROUTE 113 & EAST THETFORD ROAD OVER THE CONNECTICUT RIVER

BORING LOG (2 OF 3)

BRIDGE SHEET 7 OF 38

REVISIONS AFTER PROPOSAL	BY	DATE		BY	DATE
	DESIGNED	NHDOT	11/2016	CHECKED	
	DRAWN	LRB	12/2016	CHECKED	
	QUANTITIES			CHECKED	

FILE NUMBER 1-14-2-6

ISSUE DATE	FEDERAL PROJECT NO.	SHEET NO.	TOTAL SHEETS
REV. DATE	A000(394)	18	67

TEST BORING REPORT

STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION
MATERIALS & RESEARCH BUREAU - GEOTECHNICAL SECTION

PROJECT NAME LYME, NH-THETFORD, VT 14460 BRIDGE NO. 053/112
DESCRIPTION VT Route 113 Bridge

BORING NO. B-2

SHEET NO. 1 OF 2
STA. 107+53.9 OFF. LT. 38'-2"
BASELINE
ELEVATION (ft) 363.5
START/END 11/8/16 / 11/9/16
DRILLER Brad Enos (NEBC)
INSPECTOR Mirsad Alihodzic
CLASSIFIER Mirsad Alihodzic
EAST/NORTH (ft) 847944/478621

GROUNDWATER						EQUIPMENT	SAMPLER	CASING	CORE
DATE	TIME	DEPTH (ft)	ELEV. (ft)	BOTTOM OF CASING	BOTTOM OF HOLE	TYPE:	S	NW	
						SIZE I.D. (in):	1.375	3	
						HAMMER WT. (lb):	140	DRILL RIG	
						HAMMER FALL (in)	30	CME 45-C Barge	
						HAMMER TYPE:	Safety		

DEPTH (ft)	STRATUM CHANGE (ft) DEPTH	STRATUM CHANGE (ft) ELEVATION	BLOWS PER 0.5 ft	SAMPLE NUMBER	SAMPLER RECOVERY (ft) [%]	DEPTH RANGE (ft)	FIELD CLASSIFICATION AND REMARKS	STRATUM SYMBOL
0			WOR 1 1 1	S-1	0.0 [0]	0.0 2.0	(Mudline at elevation ±363.5, 20.5 feet below the river level elevation of ±384) No recovery.	
5			WOH 1 3 6	S-2	1.1 [55]	4.0 6.0	Very loose, gray, silty COARSE - FINE SAND, trace gravel.	
10			1 1 2 4	S-3	0.7 [35]	9.0 11.0	Very loose, gray, silty MEDIUM - FINE SAND. - SILTY SAND -	
15			WOH 1 1 1	S-4	0.7 [35]	14.0 16.0	Very loose, gray, silty MEDIUM - FINE SAND, trace gravel.	
20			2 1 2 4	S-5	0.9 [45]	19.0 21.0	Very loose, gray, silty FINE SAND.	
25	23.8	339.7	35 53 56 36	S-6	1.0 [50]	24.0 26.0	Very dense, gray, silty COARSE - FINE GRAVEL, little fine sand. - SILTY GRAVEL -	
	28.2	335.3						

TB-06 \GZAMAN1\JOBS\04JOBSINT PROJECT DATABASES\04.0190236.02 - DOT LYME NH BRIDGE (053 112.GPJ 11/18/2016 10:58:32 AM TB-06

Sampler Identification	
S	Standard Split Spoon
SL	Large Spoon (O.D.= 3 in)
T	Thin Wall Tube
U	Undisturbed Piston
O	Open End Rod
A	Auger Flight
C	Core Barrel
NR	Not Recorded

COHESIVE SOILS	
Blows/foot	Consistency
0 - 1	Very Soft
2 - 4	Soft
5 - 8	Medium Stiff
9 - 15	Stiff
16 - 30	Very Stiff
31 - 60	Hard
> 60	Very Hard

NON-COHESIVE SOILS	
Blows/foot	Density
0 - 4	Very Loose
5 - 10	Loose
11 - 24	Medium Dense
25 - 50	Dense
> 50	Very Dense

WOR - Weight of Rod
WOH - Weight of Hammer

Soil Descriptions	Proportion
Capitalized Soil Name	Major Component
Lower Case Adjective	35% - 50%
Some	20% - 35%
Little	10% - 20%
Trace	1% - 10%

ENGLISH

BORING NO. B-2
STA. 17+53.9, 38.2' LT

TEST BORING REPORT

STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION
MATERIALS & RESEARCH BUREAU - GEOTECHNICAL SECTION

PROJECT NAME LYME, NH-THETFORD, VT 14460 BRIDGE NO. 053/112
DESCRIPTION VT Route 113 Bridge

BORING NO. B-2

SHEET NO. 2 OF 2
STA. 107+53.9 OFF. LT. 38'-2"
BASELINE
ELEVATION (ft) 363.5

DEPTH (ft)	STRATUM CHANGE (ft) DEPTH	STRATUM CHANGE (ft) ELEVATION	BLOWS PER 0.5 ft	SAMPLE NUMBER	SAMPLER RECOVERY (ft) [%]	DEPTH RANGE (ft)	FIELD CLASSIFICATION AND REMARKS	STRATUM SYMBOL
						29.0	- APPROXIMATE BEDROCK SURFACE - Advanced exploration into bedrock surface with roller bit to seat casing.	
30				C-1	5.0 [100]	34.0	Hard, slightly weathered, highly fractured, green to gray, fine grained, GREENSCHIST, joints are close to moderately spaced, low angle, undulating, rough. Occasional ¼-inch or less quartz veins throughout core. RQD = 4.7/5.0 = 94%	
35				C-2	5.0 [100]	34.0 39.0	Hard, slightly weathered, highly fractured, green to gray, fine grained, GREENSCHIST, joints are close to moderately spaced, low angle, undulating, rough. Occasional ¼-inch or less quartz veins throughout core. RQD = 2.0/5.0 = 40%	
40				C-3	4.8 [96]	39.0 44.0	Hard, fresh, highly fractured, green to gray, fine grained, GREENSCHIST, joints are close to moderately spaced, low angle, undulating, rough to smooth. Quartz band at 39.8 to 40.1 feet with occasional ¼-inch or less quartz veins throughout core. RQD = 3.8/5.0 = 76%	
45				C-4	4.8 [96]	44.0 49.0	Hard, fresh, highly fractured, green to gray, fine grained, GREENSCHIST, joints are close to moderately spaced, low angle, undulating, rough to smooth. Occasional ¼-inch or less quartz veins throughout core. RQD = 4.8/5.0 = 96%	
50				C-5	4.7 [94]	49.0 54.0	Hard, fresh, highly fractured, green to gray, fine grained, GREENSCHIST, joints are close to moderately spaced, low angle, undulating, rough to smooth, with silt infilling. Quartz band at 50.5 to 51.1 feet and 53.2 to 53.5 feet, with occasional ¼-inch or less quartz veins throughout core. RQD = 4.3/5.0 = 86%	
55				C-6	5.0 [100]	54.0 59.0	Hard, fresh, highly fractured, green to gray, fine grained, GREENSCHIST, joints are close to moderately spaced, low angle, undulating, rough to smooth, with silt infilling. Occasional ¼-inch or less quartz veins throughout core. RQD = 3.5/5.0 = 70%	
60							Bottom of Exploration @ 59.0 ft (El. 304.5)	
65								

TB-06 \GZAMAN1\JOBS\04JOBSINT PROJECT DATABASES\04.0190236.02 - DOT LYME NH BRIDGE (053 112.GPJ 11/18/2016 10:58:33 AM TB-06

BORING NO. B-2
CONTINUED

Stantec

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC	14460bor log3	AS NOTED

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN LYME, NH & THETFORD, VT BRIDGE NO. 053\112 STATE PROJECT 14460
LOCATION VT ROUTE 113 & EAST THETFORD ROAD OVER THE CONNECTICUT RIVER

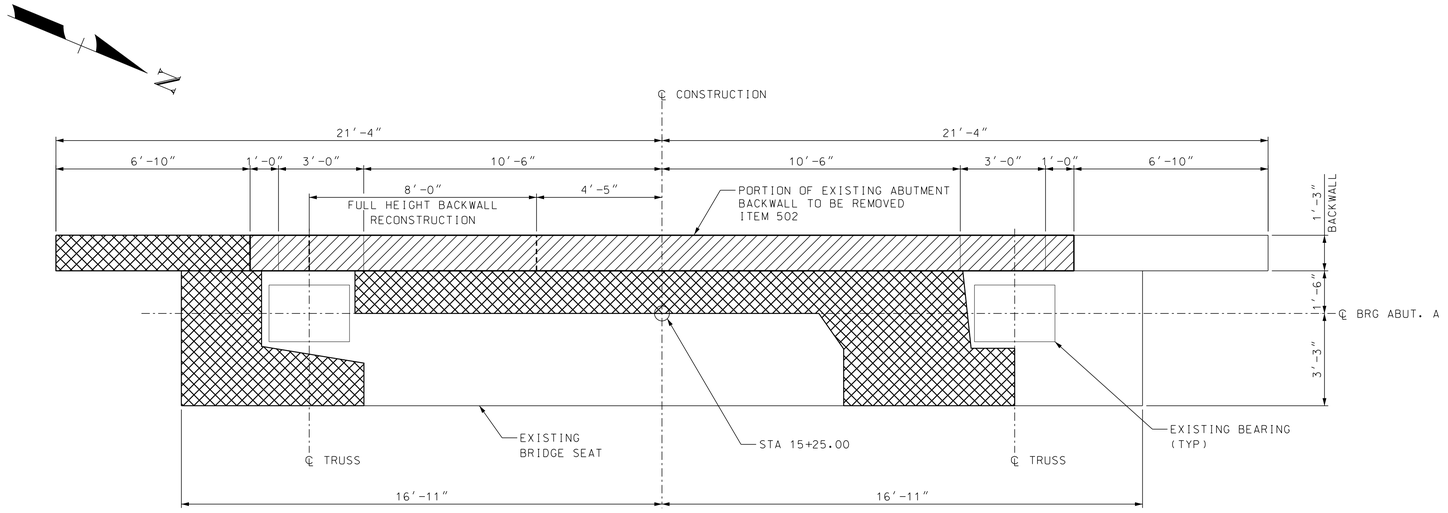
BORING LOG (3 OF 3)

BRIDGE SHEET 8 OF 38

REVISIONS AFTER PROPOSAL	BY	DATE		BY	DATE
	DESIGNED	NHDOT	11/2016	CHECKED	
	DRAWN	LRB	12/2016	CHECKED	
	QUANTITIES			CHECKED	
	ISSUE DATE				
	REV. DATE				

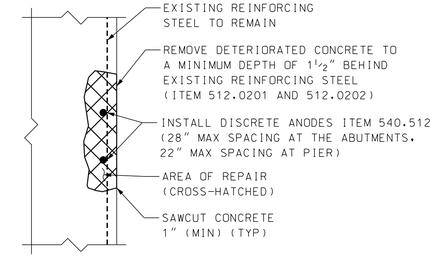
FEDERAL PROJECT NO.	SHEET NO.	TOTAL SHEETS
A000(394)	19	67

FILE NUMBER 1-14-2-6



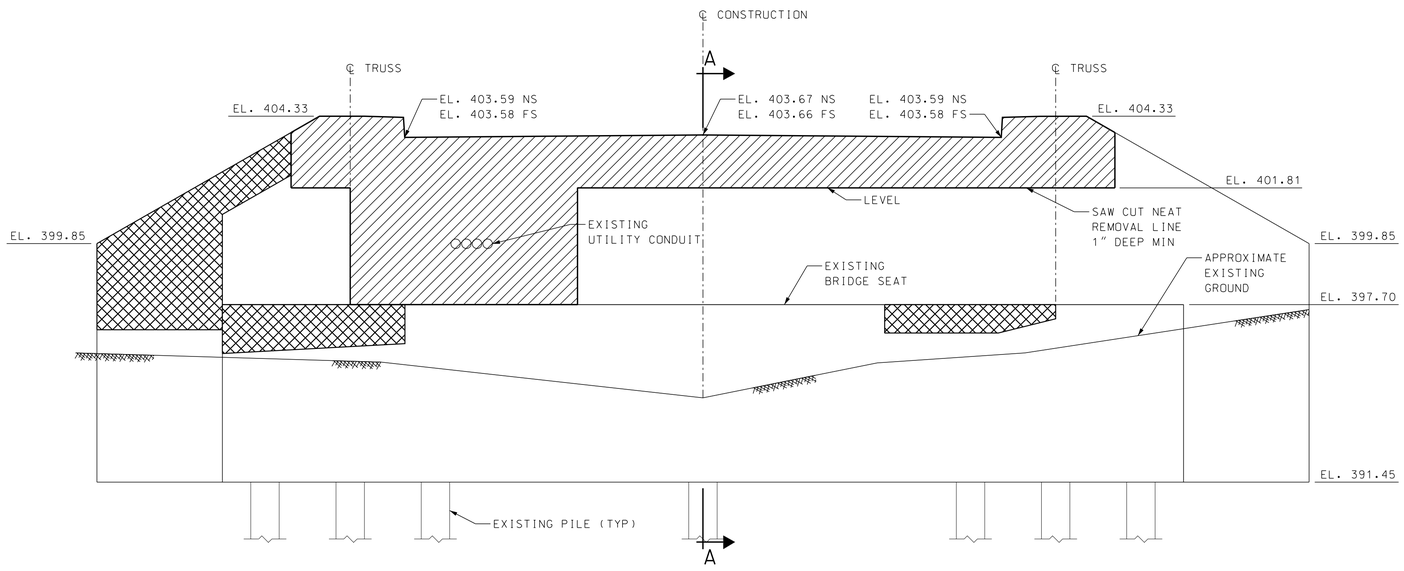
PLAN

SCALE: $^{3}/_{8}$″=1′-0″



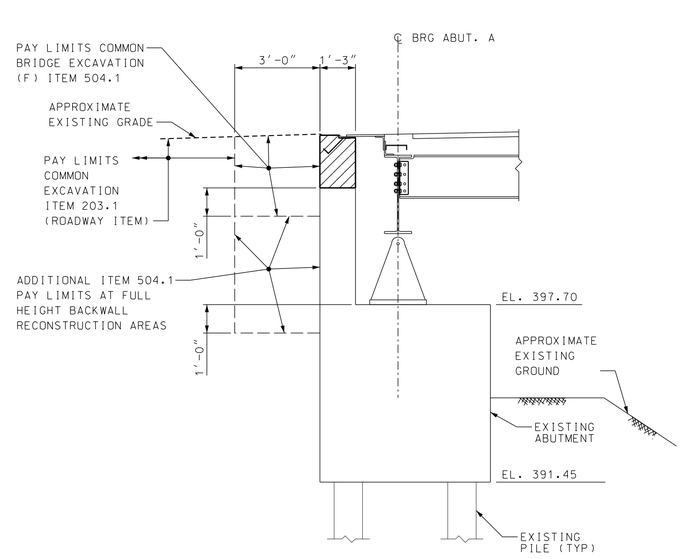
CONCRETE REPAIR DETAIL

FOR ABUTMENTS, WINGWALLS, AND PIER
NOT TO SCALE



ELEVATION

SCALE: $^{3}/_{8}$″=1′-0″



SECTION A-A

SCALE: $^{3}/_{8}$″=1′-0″

INDICATES REMOVAL LIMITS ITEM 502

APPROX. AREA OF DETERIORATED CONCRETE TO BE REPAIRED. SEE CONCRETE REPAIR DETAIL (TYP)

Stantec

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC	20_Abut_A	AS NOTED

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN LYME, NH & THETFORD, VT BRIDGE NO. 053\112 STATE PROJECT 14460

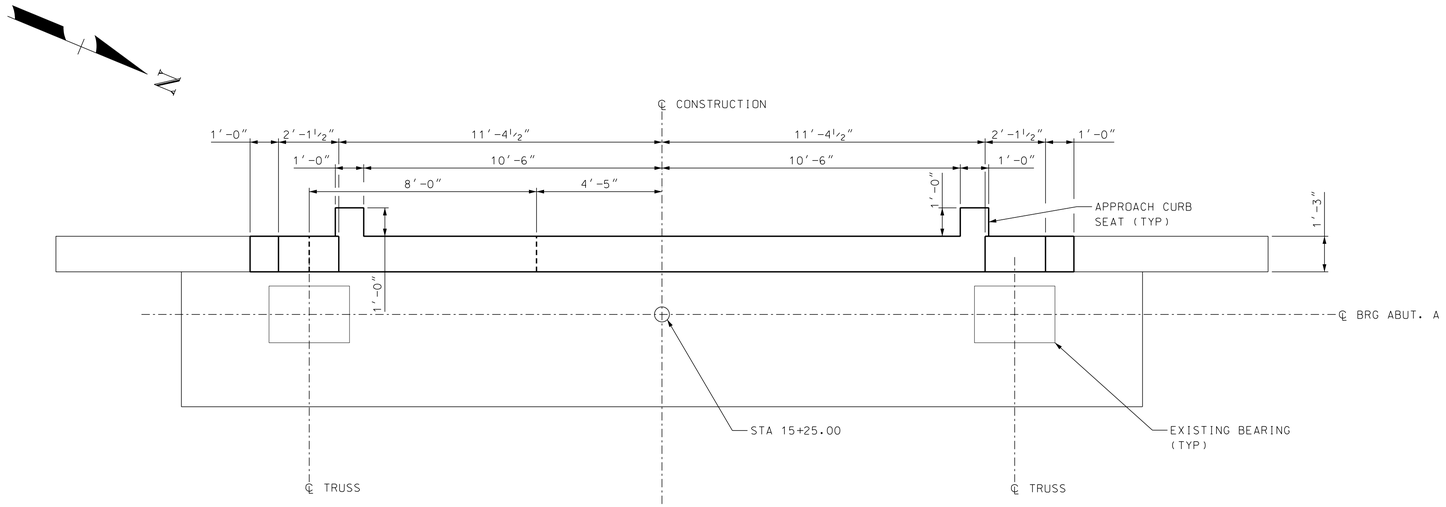
LOCATION VT ROUTE 113 & EAST THETFORD ROAD OVER THE CONNECTICUT RIVER

ABUTMENT A REMOVAL

BRIDGE SHEET 9 OF 38

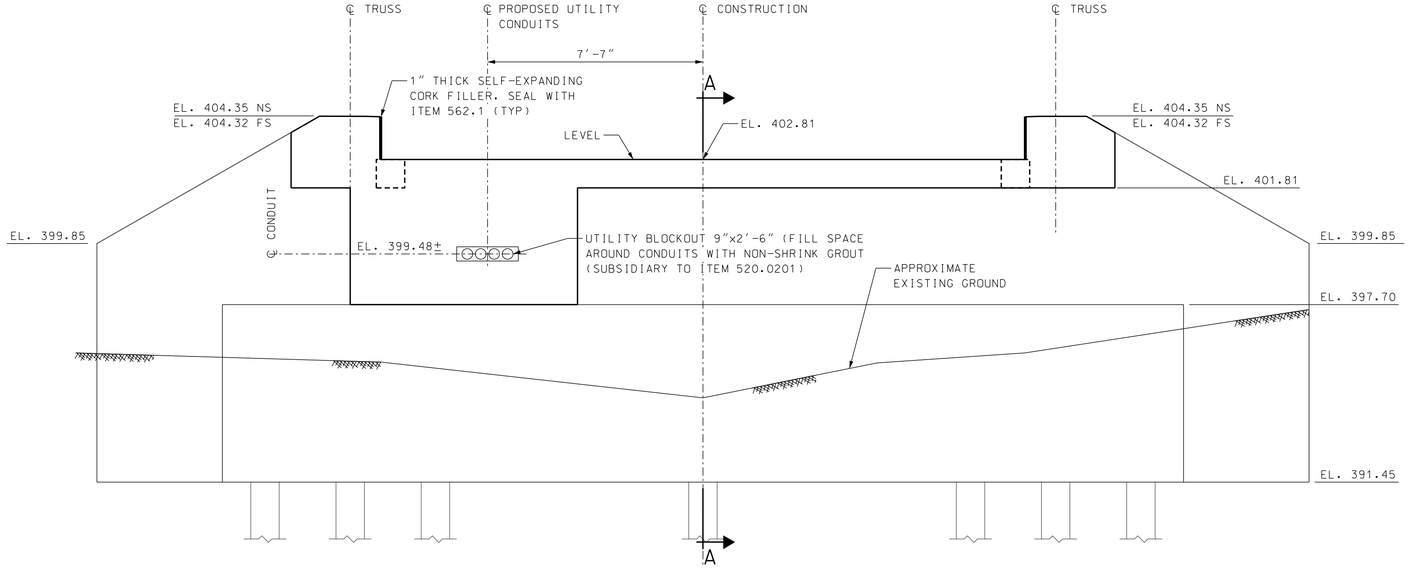
FILE NUMBER 1-14-2-6

REVISIONS AFTER PROPOSAL		BY	DATE		BY	DATE
	DESIGNED	KLW	04/2021	CHECKED	DDT	04/2021
	DRAWN	KLW	04/2021	CHECKED	LSF	04/2021
	QUANTITIES	KLW	04/2021	CHECKED	JDG	04/2021
	ISSUE DATE		FEDERAL PROJECT NO.		SHEET NO.	TOTAL SHEETS
	REV. DATE		A000(394)		20	67



PLAN

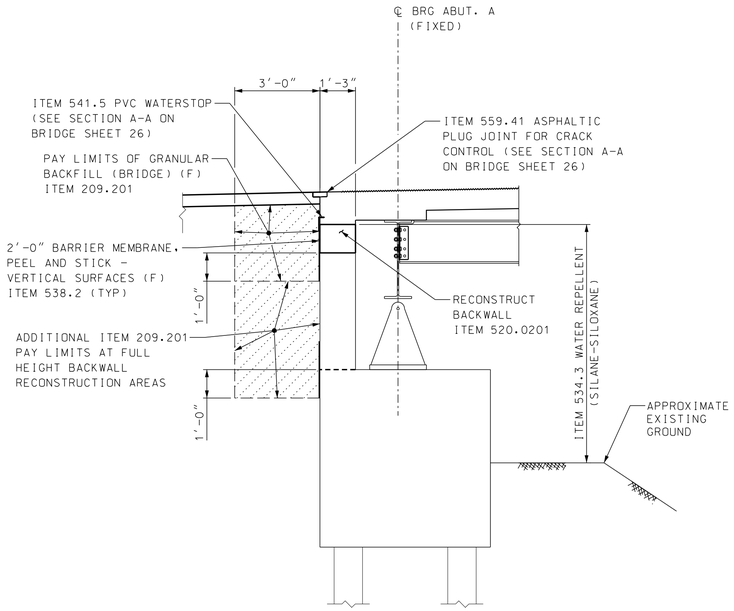
SCALE: $\frac{3}{8}$″=1′-0″



ELEVATION

SCALE: $\frac{3}{8}$″=1′-0″

NOTE: ABUTMENT REPAIR AREAS NOT SHOWN. SEE BRIDGE SHEET 9.



SECTION A-A

SCALE: $\frac{3}{8}$″=1′-0″

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN LYME, NH & THETFORD, VT BRIDGE NO. 053\112 STATE PROJECT 14460

LOCATION VT ROUTE 113 & EAST THETFORD ROAD OVER THE CONNECTICUT RIVER

ABUTMENT A RECONSTRUCTION

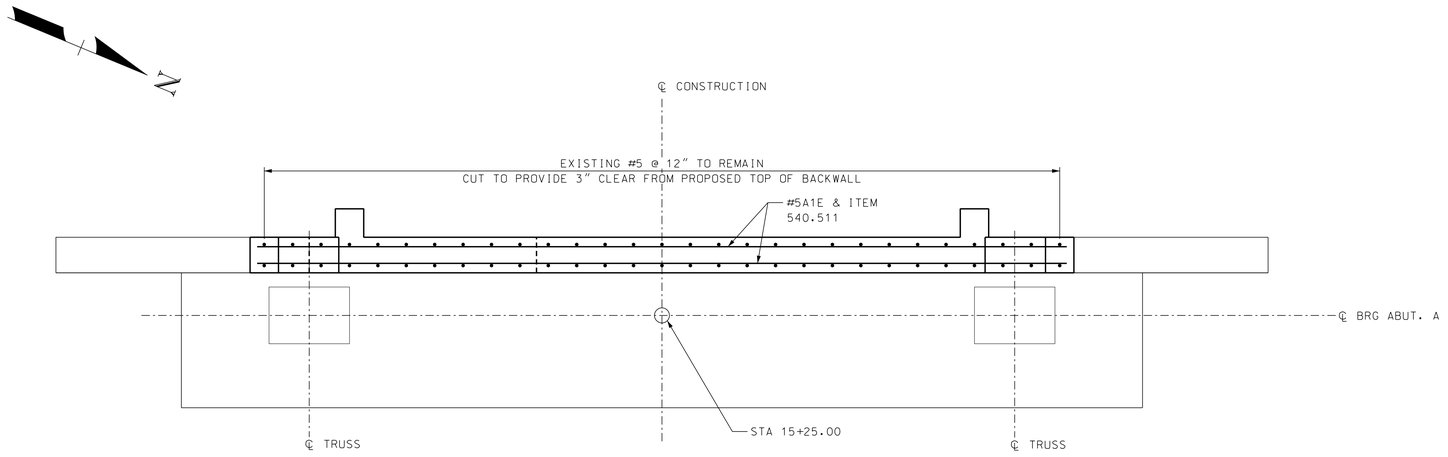
BRIDGE SHEET: 10 OF 38

FILE NUMBER: 1-14-2-6

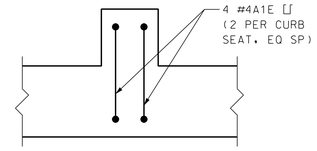
REVISIONS AFTER PROPOSAL		BY	DATE		BY	DATE
	DESIGNED	KLW	04/2021	CHECKED	DDT	04/2021
	DRAWN	KLW	04/2021	CHECKED	LSF	04/2021
	QUANTITIES	KLW	04/2021	CHECKED	JDG	04/2021
	ISSUE DATE		FEDERAL PROJECT NO.		SHEET NO.	TOTAL SHEETS
	REV. DATE		A000(394)		21	67

Stantec

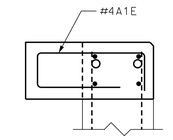
SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC	21_Abut_A_P	AS NOTED



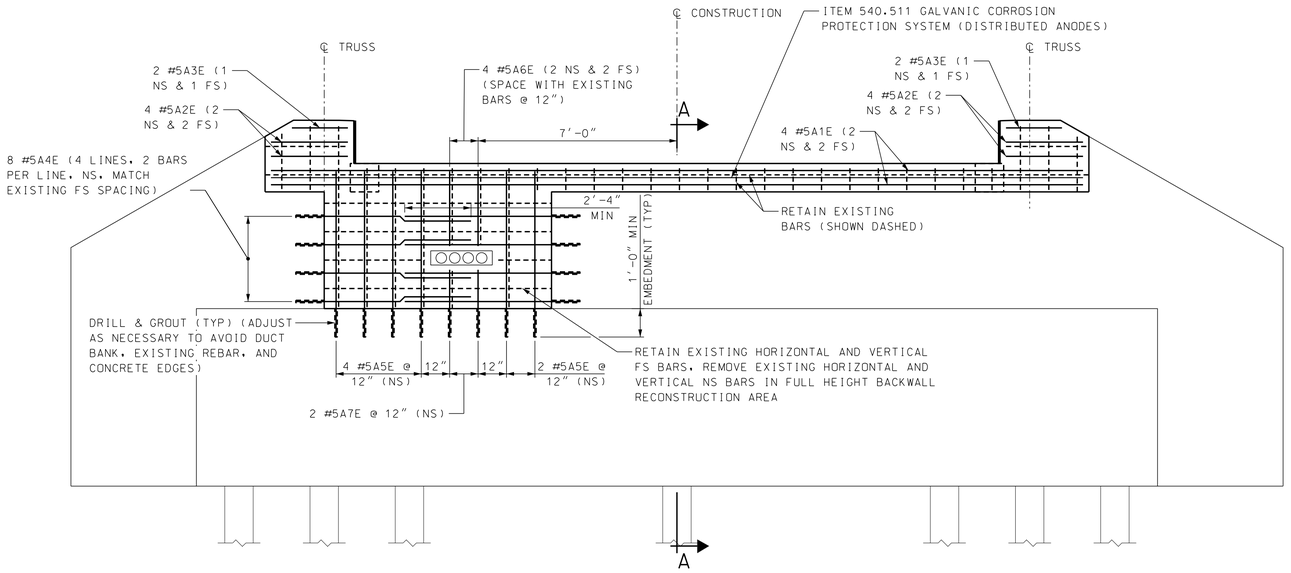
PLAN
SCALE: 3/8"=1'-0"



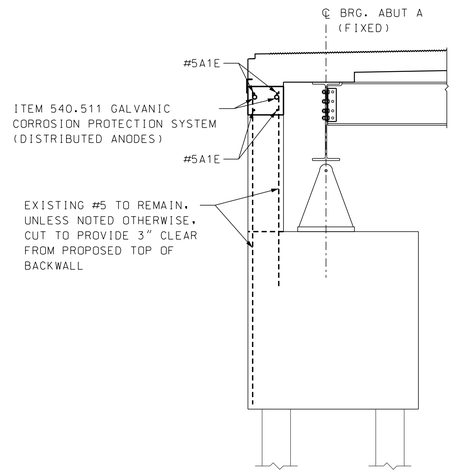
APPROACH CURB SEAT REINFORCING PLAN
SCALE: 3/4" = 1'-0"



APPROACH CURB SEAT REINFORCING SECTION
SCALE: 3/4" = 1'-0"



ELEVATION
SCALE: 3/8"=1'-0"



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

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN LYME, NH & THETFORD, VT | BRIDGE NO. 053\112 | STATE PROJECT 14460

LOCATION VT ROUTE 113 & EAST THETFORD ROAD OVER THE CONNECTICUT RIVER

ABUTMENT A REINFORCING

BRIDGE SHEET: 11 OF 38

REVISIONS AFTER PROPOSAL	BY	DATE

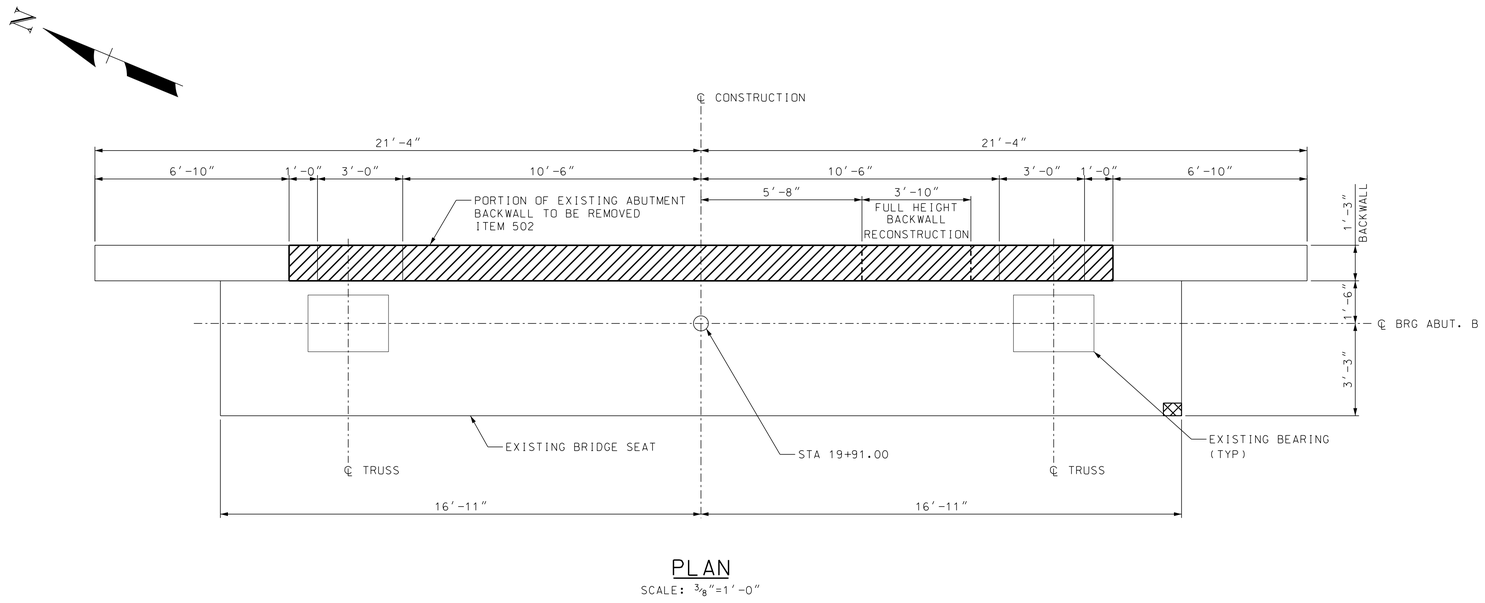
	BY	DATE		BY	DATE
DESIGNED	KLW	04/2021	CHECKED	DDT	04/2021
DRAWN	KLW	04/2021	CHECKED	LSF	04/2021
QUANTITIES	KLW	04/2021	CHECKED	TEK	04/2021

FILE NUMBER: 1-14-2-6

ISSUE DATE		FEDERAL PROJECT NO.	SHEET NO.	TOTAL SHEETS
REV. DATE		A000(394)	22	67

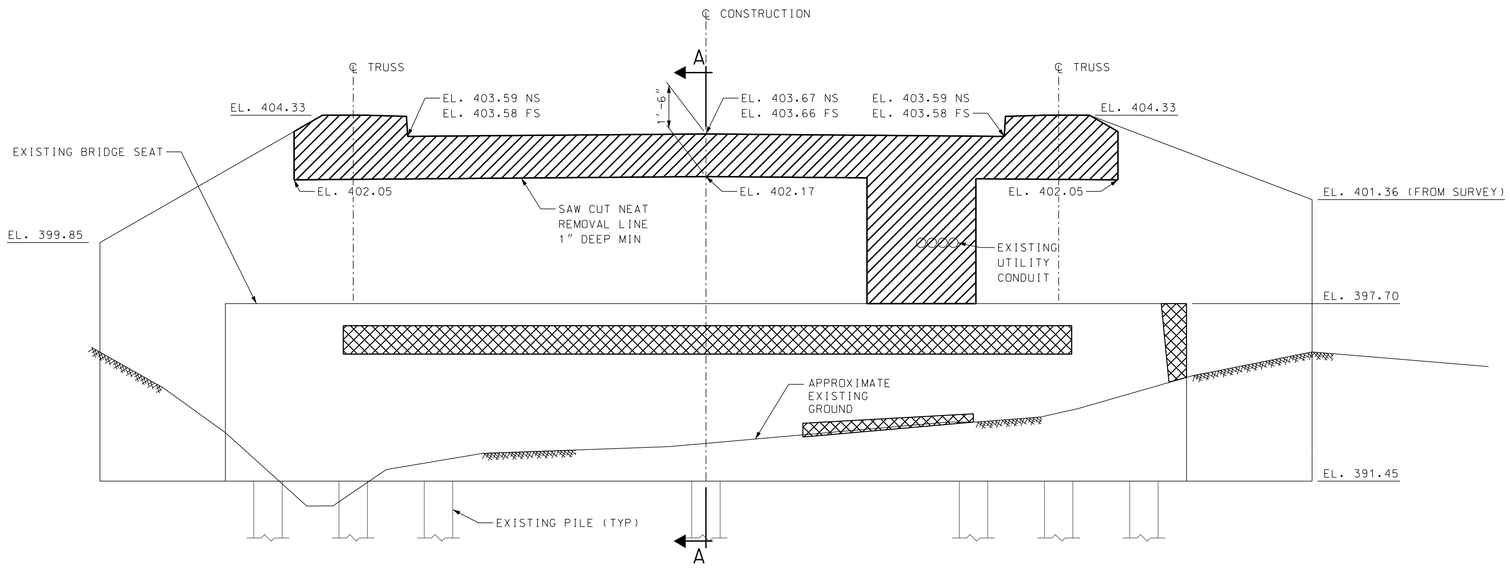
Stantec

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC	22_Abut_A_Rein	AS NOTED



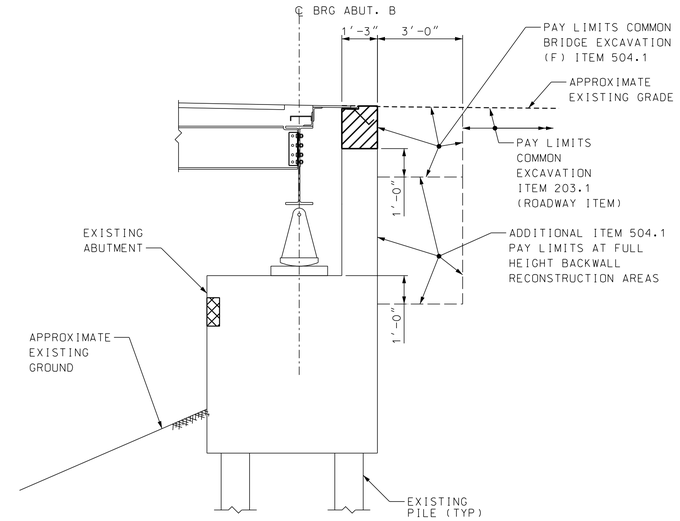
PLAN

SCALE: $^{3}/_{8}$″=1′-0″



ELEVATION

SCALE: $^{3}/_{8}$″=1′-0″



SECTION A-A

SCALE: $^{3}/_{8}$″=1′-0″

INDICATES REMOVAL LIMITS ITEM 502

APPROX. AREA OF DETERIORATED CONCRETE TO BE REPAIRED. SEE CONCRETE REPAIR DETAIL ON BRIDGE SHEET 9 (TYP).

Stantec

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC	23_Abut_B	AS NOTED

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN LYME, NH & THETFORD, VT BRIDGE NO. 053\112 STATE PROJECT 14460

LOCATION VT ROUTE 113 & EAST THETFORD ROAD OVER THE CONNECTICUT RIVER

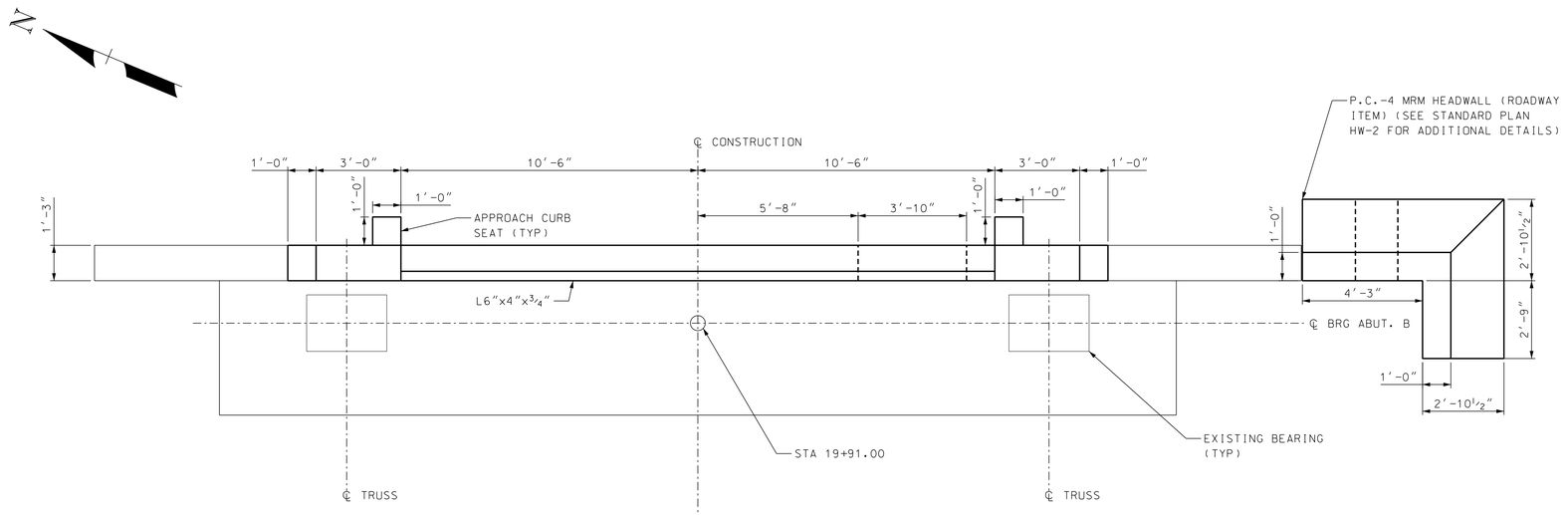
ABUTMENT B REMOVAL

BRIDGE SHEET: 12 OF 38

FILE NUMBER: 1-14-2-6

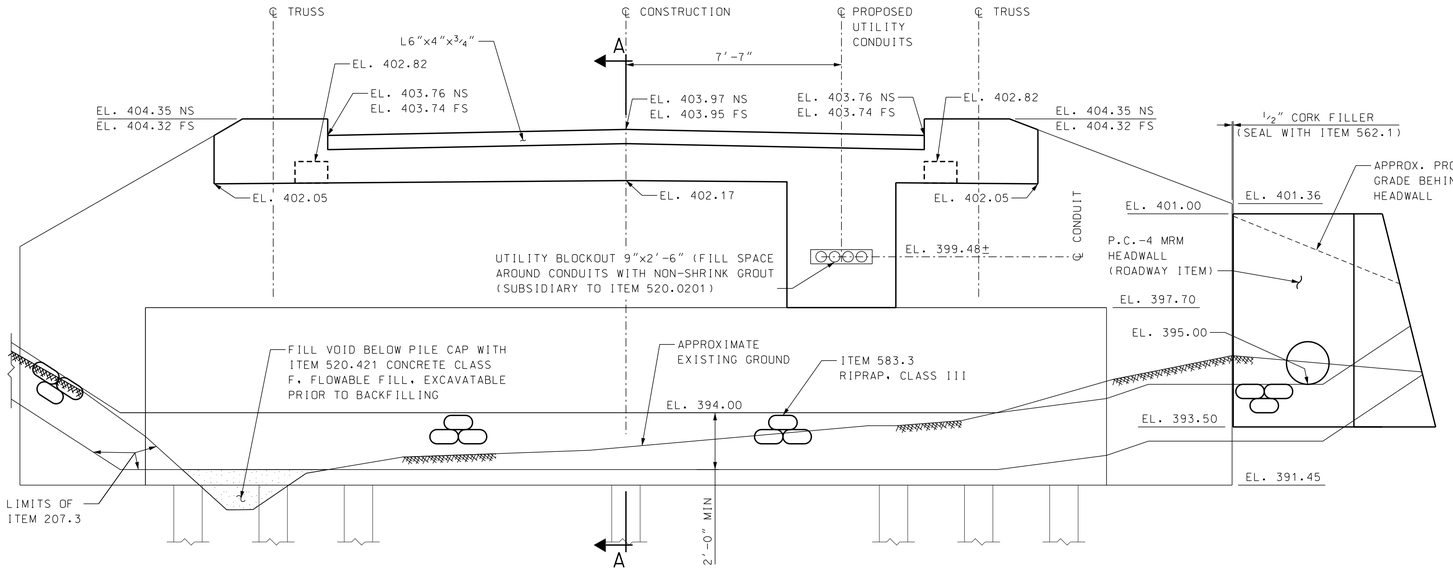
REVISIONS AFTER PROPOSAL		BY	DATE		BY	DATE
	DESIGNED	KLW	04/2021	CHECKED	DDT	04/2021
	DRAWN	KLW	04/2021	CHECKED	LSF	04/2021
	QUANTITIES	KLW	04/2021	CHECKED	JDG	04/2021

ISSUE DATE		FEDERAL PROJECT NO.	SHEET NO.	TOTAL SHEETS
REV. DATE		A000(394)	23	67



PLAN

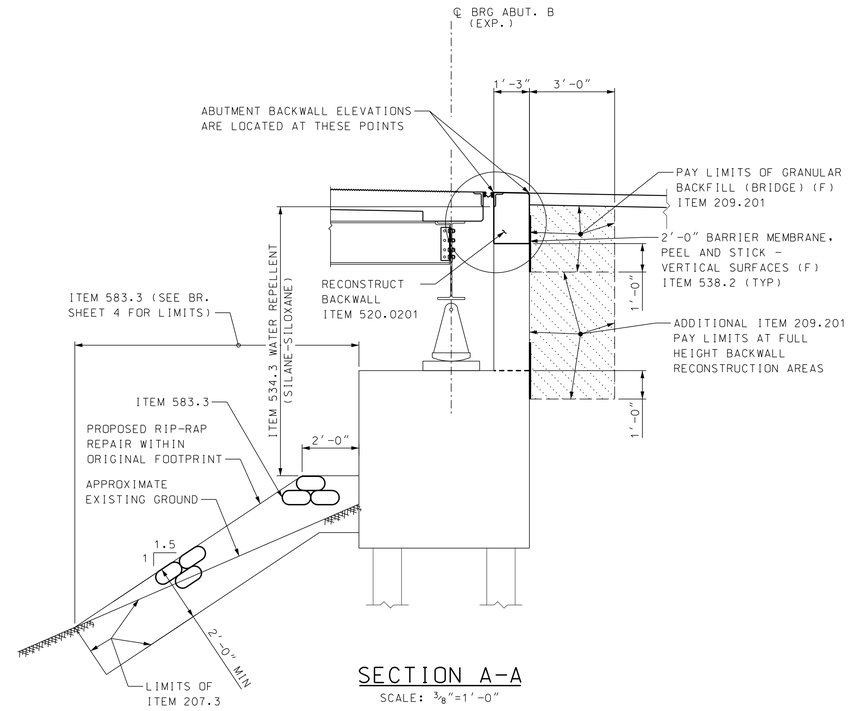
SCALE: ⅜″=1′-0″



ELEVATION

SCALE: ⅜″=1′-0″

NOTE: ABUTMENT REPAIR AREAS NOT SHOWN. SEE BRIDGE SHEET 12.



SECTION A-A

SCALE: ⅜″=1′-0″

Stantec

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC	24_Abut_B_P	AS NOTED

STATE OF NEW HAMPSHIRE

DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN LYME, NH & THETFORD, VT BRIDGE NO. 053\112 STATE PROJECT 14460

LOCATION VT ROUTE 113 & EAST THETFORD ROAD OVER THE CONNECTICUT RIVER

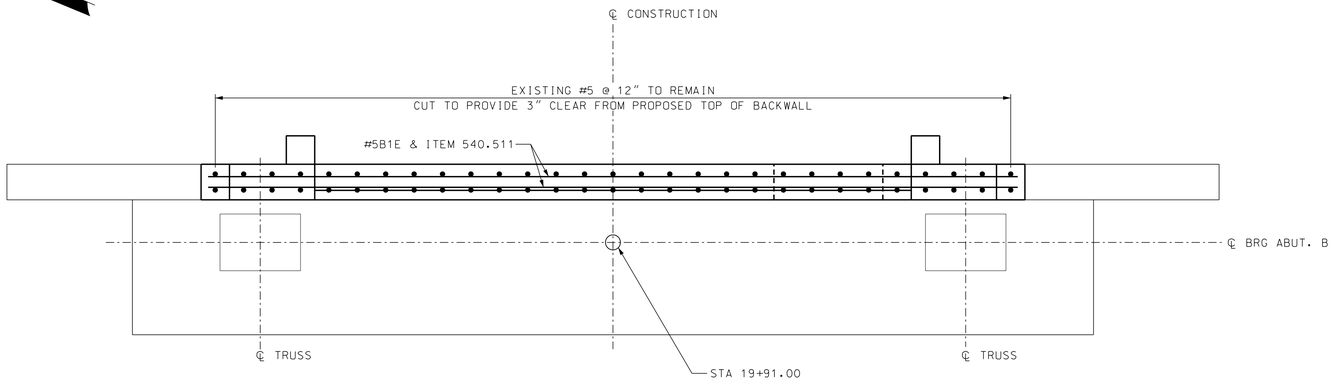
ABUTMENT B RECONSTRUCTION

BRIDGE SHEET 13 OF 38

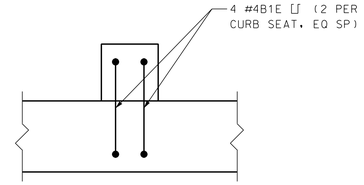
REVISIONS AFTER PROPOSAL	BY	DATE		BY	DATE
DESIGNED	KLW	04/2021	CHECKED	DDT	04/2021
DRAWN	KLW	04/2021	CHECKED	LSF	04/2021
QUANTITIES	KLW	04/2021	CHECKED	JDG	04/2021

FILE NUMBER 1-14-2-6

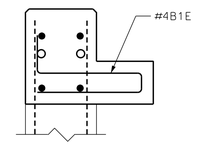
ISSUE DATE	FEDERAL PROJECT NO.	SHEET NO.	TOTAL SHEETS
REV. DATE	A000(394)	24	67



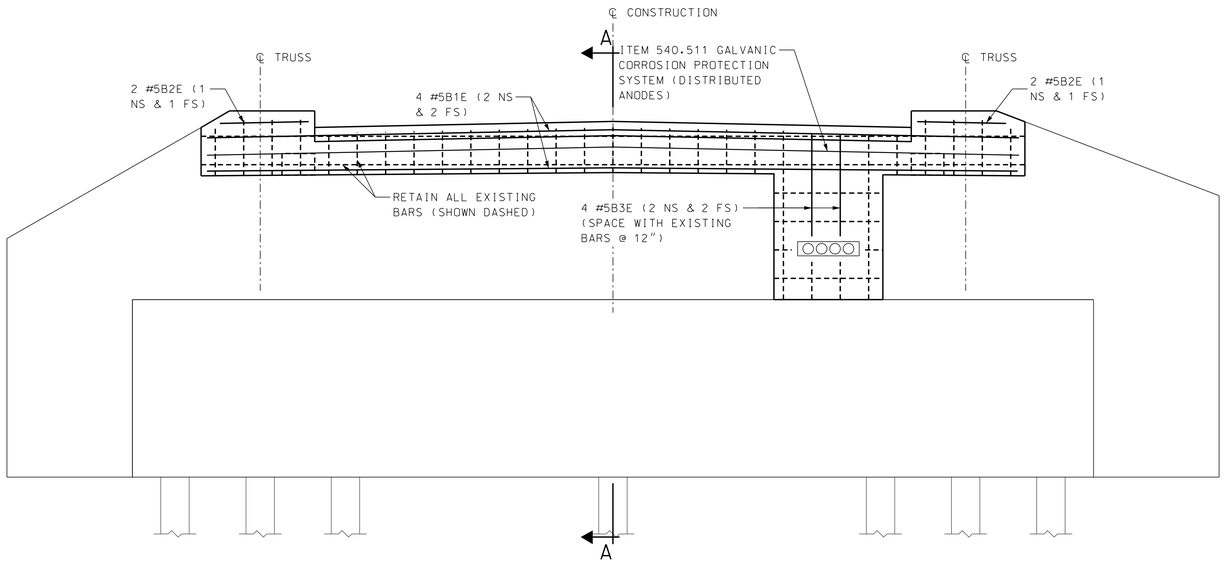
PLAN
SCALE: $\frac{3}{8}$"=1'-0"



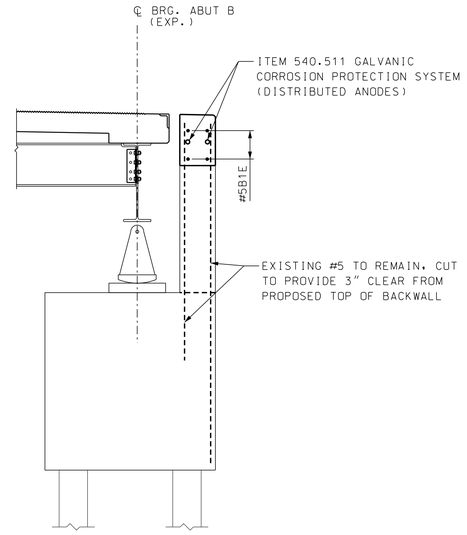
APPROACH CURB SEAT REINFORCING PLAN
SCALE: $\frac{3}{4}$" = 1'-0"



APPROACH CURB SEAT REINFORCING SECTION
SCALE: $\frac{3}{4}$" = 1'-0"



ELEVATION
SCALE: $\frac{3}{8}$"=1'-0"



SECTION A-A
SCALE: $\frac{3}{8}$"=1'-0"

Stantec

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN LYME, NH & THETFORD, VT | BRIDGE NO. 053\112 | STATE PROJECT 14460

LOCATION VT ROUTE 113 & EAST THETFORD ROAD OVER THE CONNECTICUT RIVER

ABUTMENT B REINFORCING

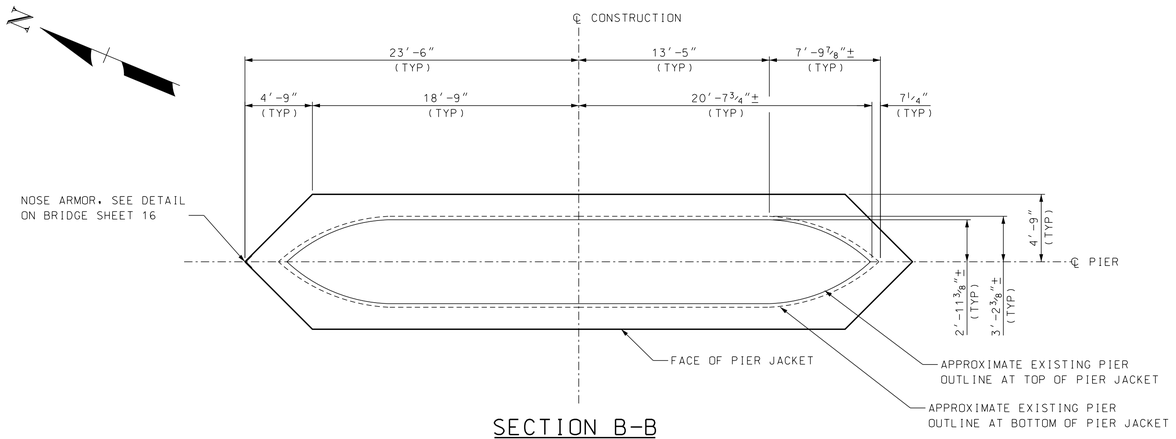
BRIDGE SHEET: 14 OF 38

REVISIONS AFTER PROPOSAL	BY	DATE		BY	DATE
DESIGNED	KLW	04/2021	CHECKED	DDT	04/2021
DRAWN	KLW	04/2021	CHECKED	LSF	04/2021
QUANTITIES	KLW	04/2021	CHECKED	TEK	04/2021

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC	25_Abut_B_Rein	AS NOTED

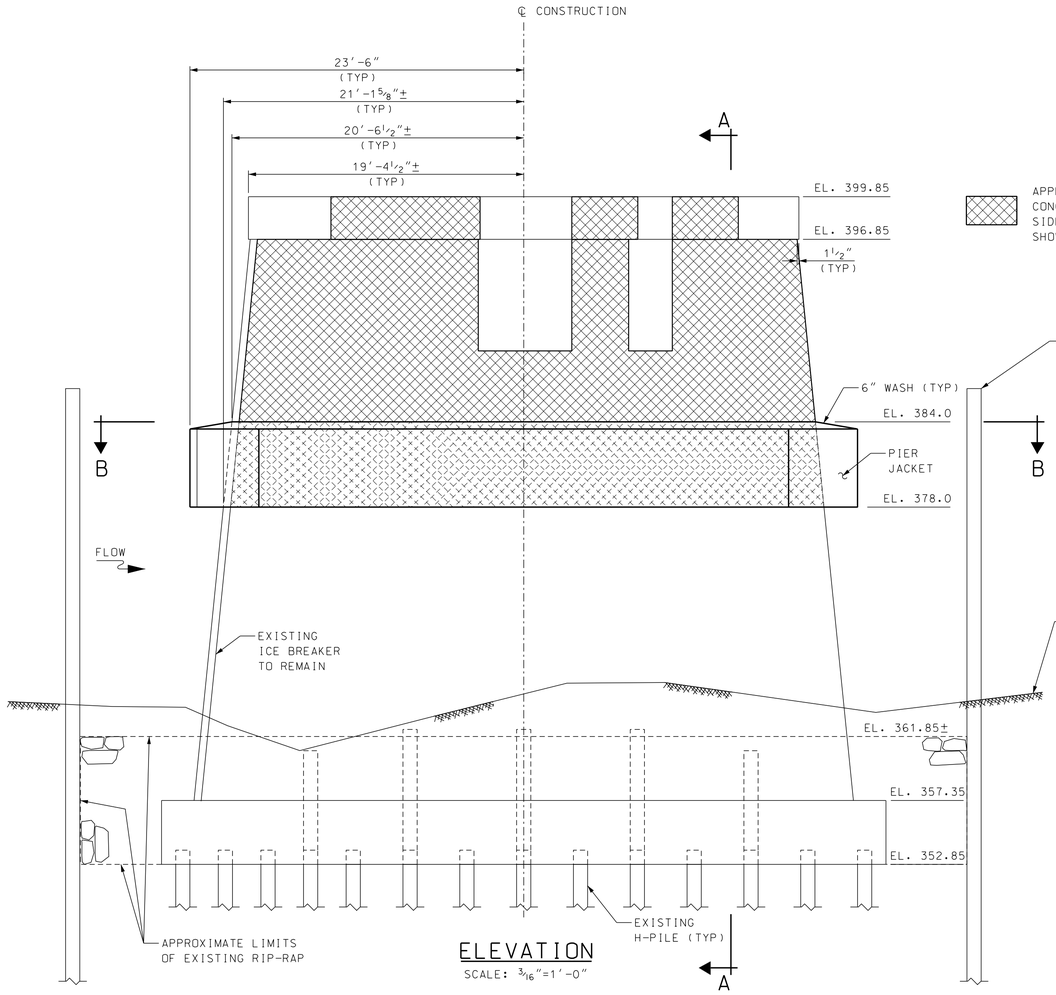
ISSUE DATE	FEDERAL PROJECT NO.	SHEET NO.	TOTAL SHEETS
REV. DATE	A000(394)	25	67

FILE NUMBER: 1-14-2-6



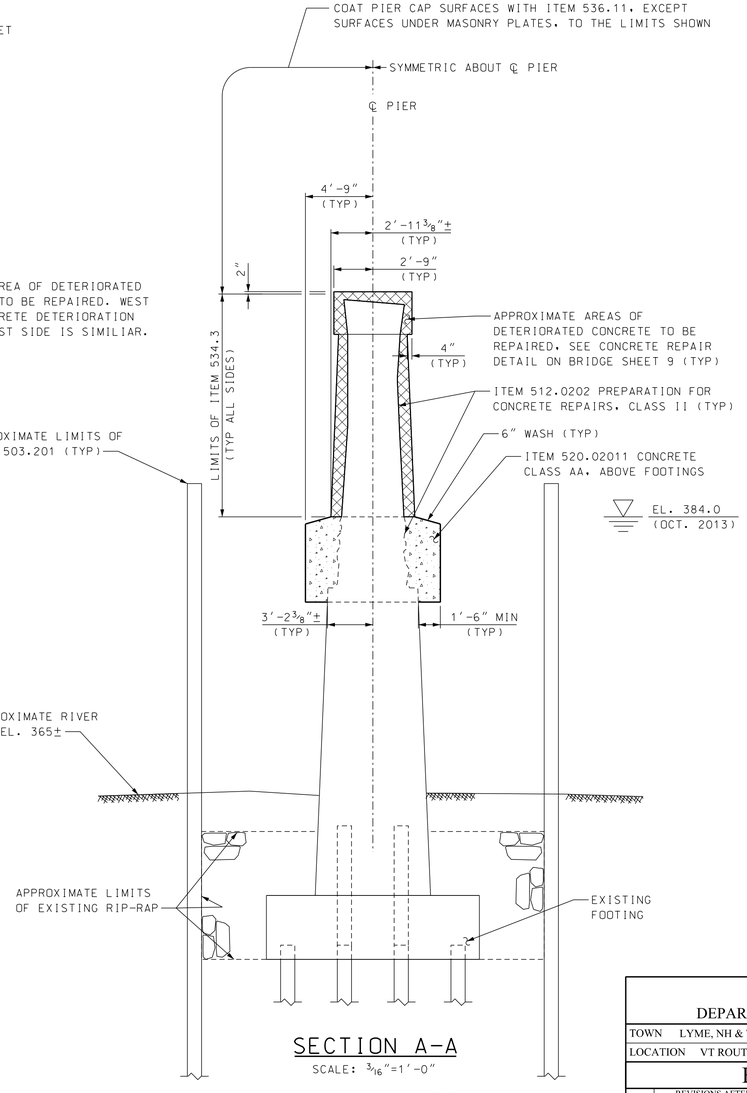
SECTION B-B

SCALE: 3/16″=1′-0″



ELEVATION

SCALE: 3/16″=1′-0″



SECTION A-A

SCALE: 3/16″=1′-0″

Stantec

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC	26_Pier_rev	AS NOTED

STATE OF NEW HAMPSHIRE

DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN LYME, NH & THETFORD, VT BRIDGE NO. 053\112 STATE PROJECT 14460

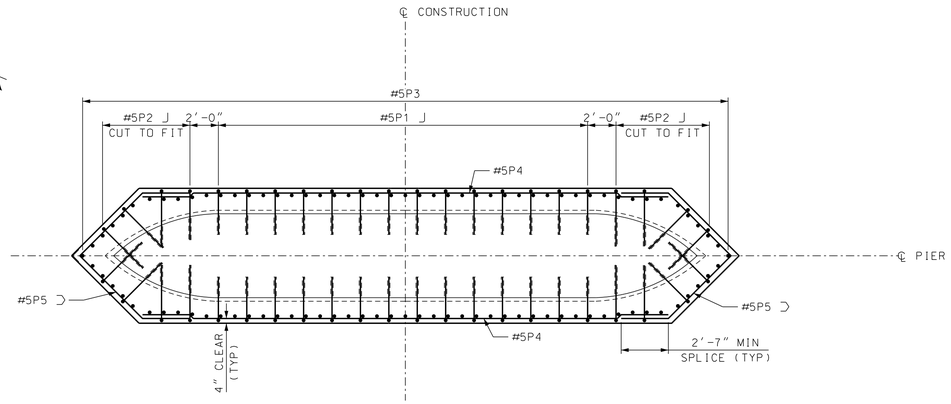
LOCATION VT ROUTE 113 & EAST THETFORD ROAD OVER THE CONNECTICUT RIVER

EXISTING PIER REHABILITATION

BRIDGE SHEET 15 OF 38

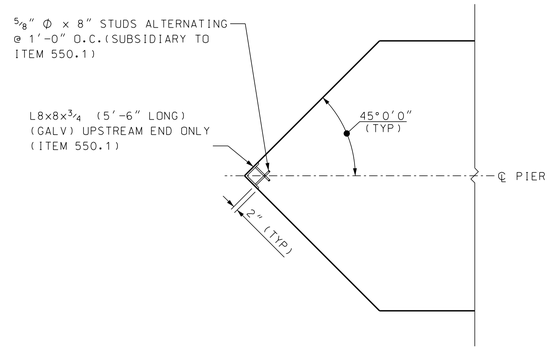
REVISIONS AFTER PROPOSAL		BY	DATE		BY	DATE
	DESIGNED	KLW	04/2021	CHECKED	DDT	04/2021
	DRAWN	KLW	04/2021	CHECKED	DDT	04/2021
	QUANTITIES	KLW	04/2021	CHECKED	JDG	04/2021
	ISSUE DATE		FEDERAL PROJECT NO.		SHEET NO.	TOTAL SHEETS
	REV. DATE		A000(394)		26	67

FILE NUMBER 1-14-2-6



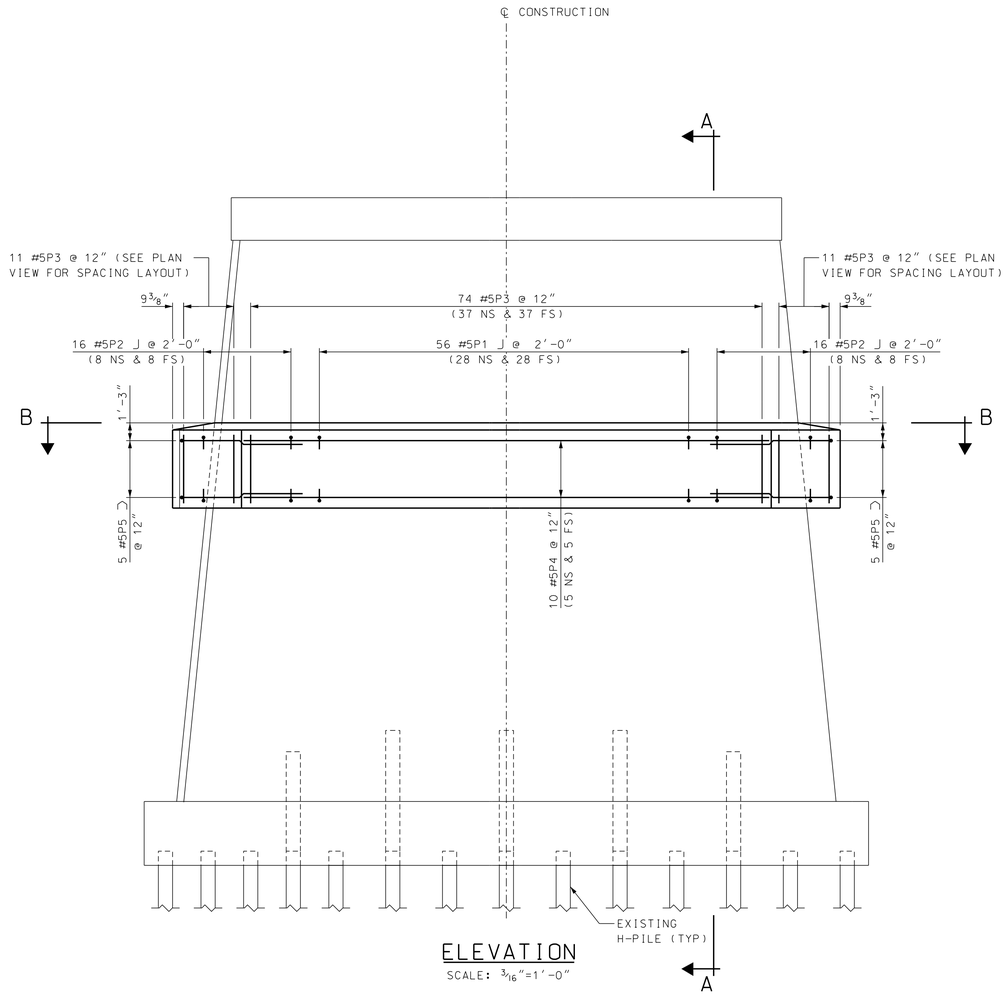
SECTION B-B

SCALE: $^{3}/_{16}$"=1'-0"



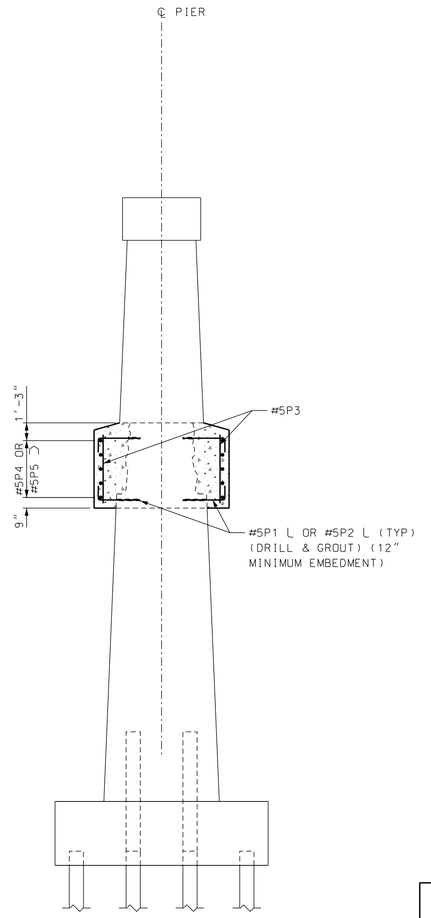
PIER JACKET NOSE ARMOR DETAIL

SCALE: $^{3}/_{8}$"=1'-0"



ELEVATION

SCALE: $^{3}/_{16}$"=1'-0"



SECTION A-A

SCALE: $^{3}/_{16}$"=1'-0"

Stantec

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN LYME, NH & THETFORD, VT BRIDGE NO. 053\112 STATE PROJECT 14460

LOCATION VT ROUTE 113 & EAST THETFORD ROAD OVER THE CONNECTICUT RIVER

PIER JACKET REINFORCING

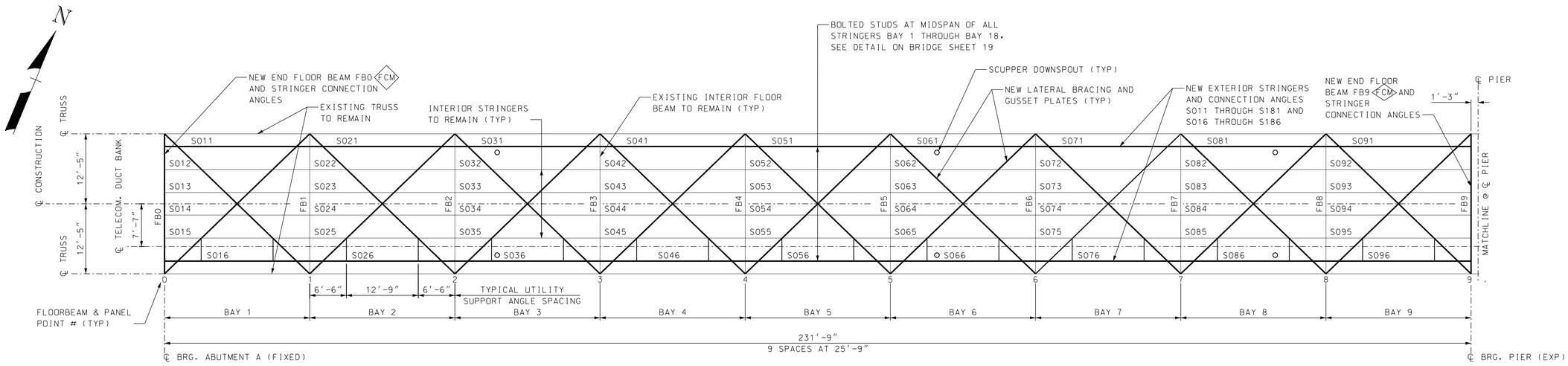
BRIDGE SHEET: 16 OF 38

REVISIONS AFTER PROPOSAL		BY	DATE		BY	DATE
	DESIGNED	KLW	04/2021	CHECKED	DDT	04/2021
	DRAWN	KLW	04/2021	CHECKED	DDT	04/2021
	QUANTITIES	KLW	04/2021	CHECKED	JDG	04/2021

FILE NUMBER: 1-14-2-6

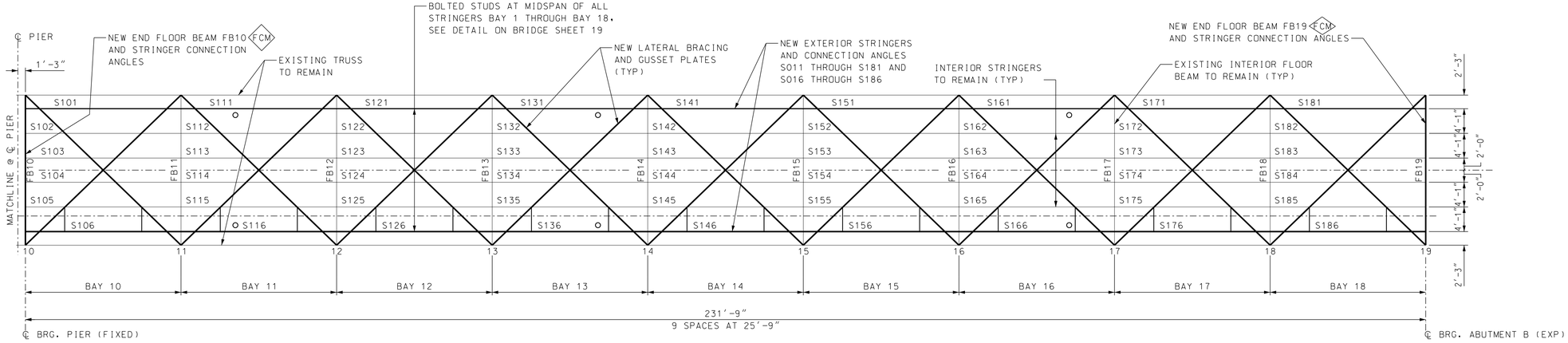
SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC	27_PierReinforcing	AS NOTED

ISSUE DATE		FEDERAL PROJECT NO.	SHEET NO.	TOTAL SHEETS
REV. DATE		A000(394)	27	67



FRAMING PLAN – SPAN 1

SCALE: 1" = 10'-0"



FRAMING PLAN – SPAN 2

SCALE: 1" = 10'-0"

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN LYME, NH & THETFORD, VT BRIDGE NO. 053\112 STATE PROJECT 14460

LOCATION VT ROUTE 113 & EAST THETFORD ROAD OVER THE CONNECTICUT RIVER

FRAMING PLAN

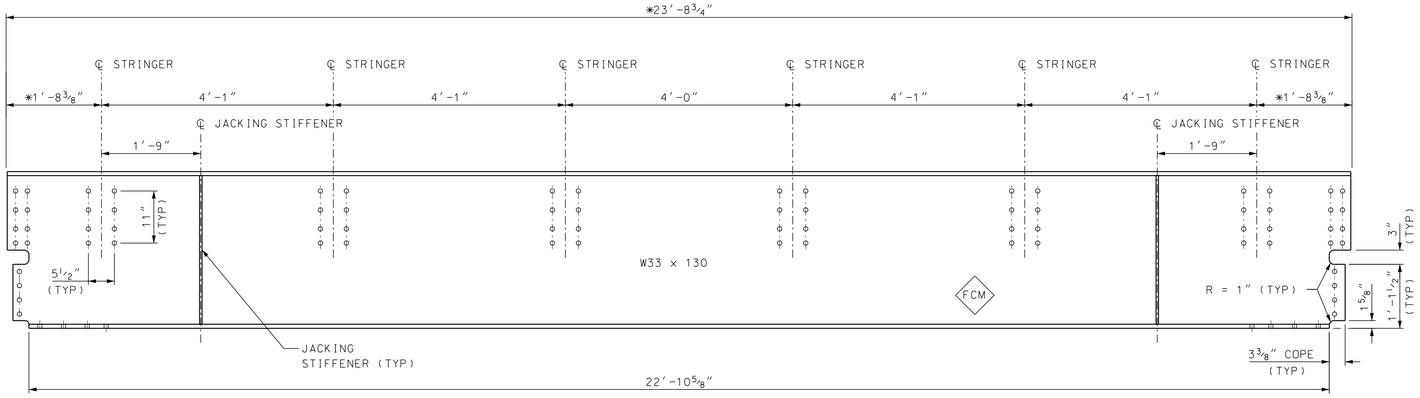
BRIDGE SHEET: 17 OF 38

REVISIONS AFTER PROPOSAL	BY	DATE		BY	DATE
	DESIGNED JDG	01/2019	CHECKED JGS		03/2019
	DRAWN LRB	02/2019	CHECKED JGS/TEK		04/2021
	QUANTITIES JDG	03/2019	CHECKED TEK		03/2019

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC	28_Fram	AS NOTED

ISSUE DATE		FEDERAL PROJECT NO.	SHEET NO.	TOTAL SHEETS
REV. DATE		A000(394)	28	67

FILE NUMBER: 1-14-2-6

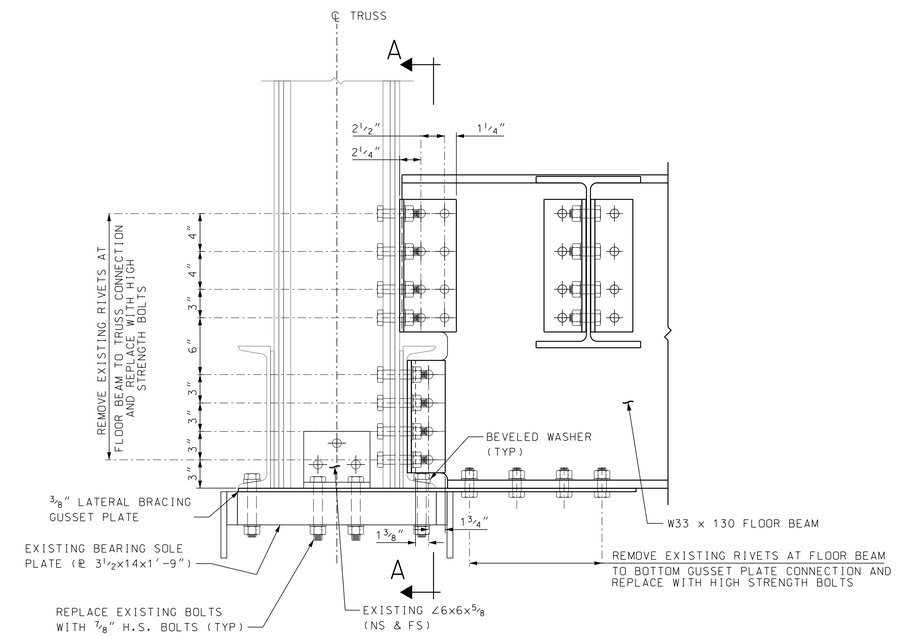


END FLOOR BEAM ELEVATION

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

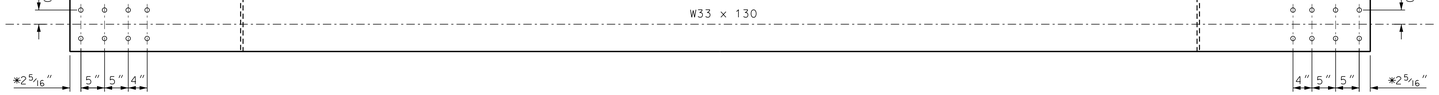
* DESIGNATED AS OUT-TO-OUT CONNECTION ANGLE DIMENSION ON EXISTING PLANS. CONTRACTOR TO VERIFY END GAP.

FCM = FRACTURE CRITICAL MEMBER



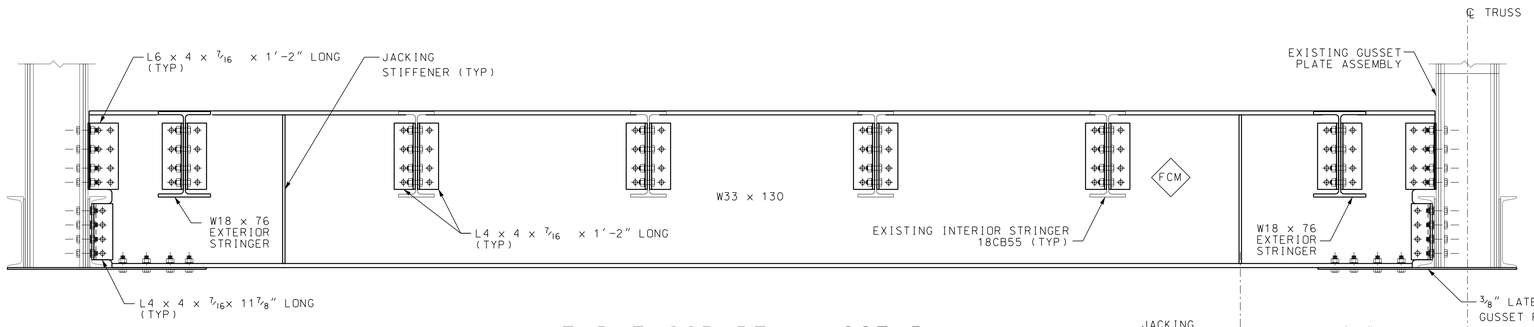
END FLOOR BEAM TO TRUSS CONNECTION DETAIL

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



END FLOOR BEAM (BOTTOM FLANGE)

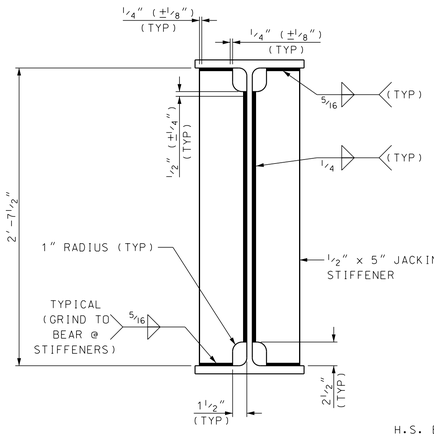
SCALE: 3/4"=1'-0"



END FLOOR BEAM ASSEMBLY

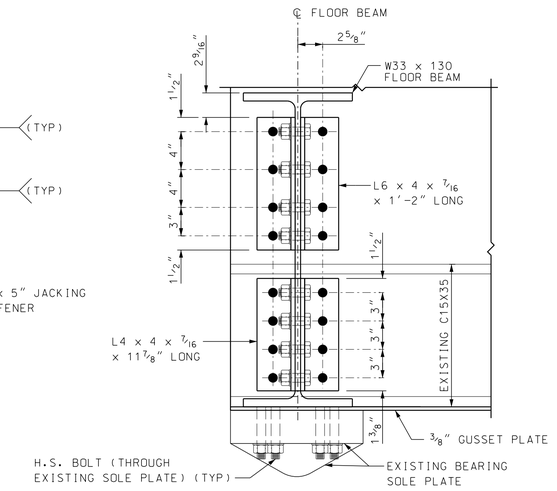
SCALE: 3/4"=1'-0"

(FB0, FB9, FB10, FB19)



JACKING STIFFENER SECTION

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



SECTION A-A

(TRUSS GUSSET CONNECTIONS NOT SHOWN FOR CLARITY)

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

LEGEND

● = REMOVE RIVET AND INSTALL HIGH STRENGTH BOLT.

Stantec

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC	29_Flr_Bm	AS NOTED

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN LYME, NH & THETFORD, VT BRIDGE NO. 053\112 STATE PROJECT 14460

LOCATION VT ROUTE 113 & EAST THETFORD ROAD OVER THE CONNECTICUT RIVER

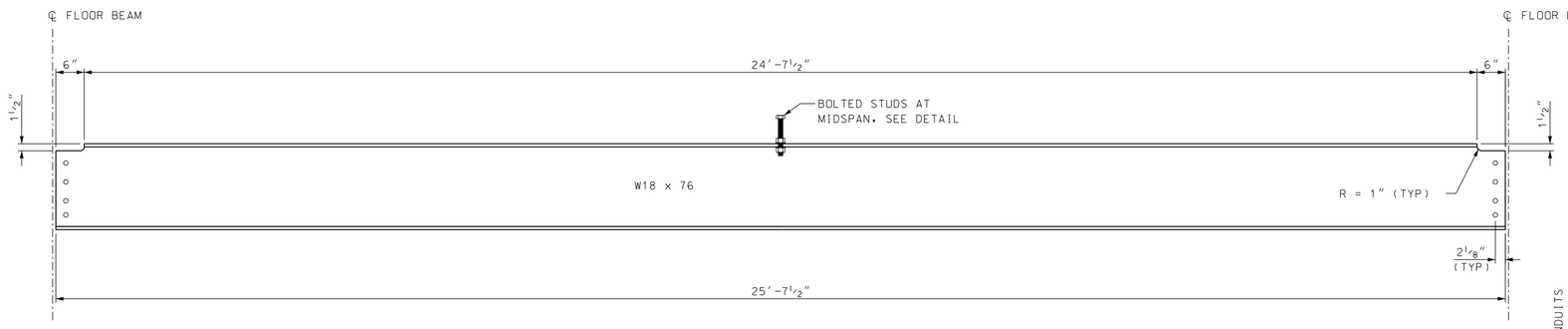
FLOOR BEAM DETAILS

BRIDGE SHEET 18 OF 38

REVISIONS AFTER PROPOSAL	BY	DATE		BY	DATE
DESIGNED	JDG	01/2019	CHECKED	JGS	03/2019
DRAWN	LRB	02/2019	CHECKED	JGS/TEK	04/2021
QUANTITIES	JDG	03/2019	CHECKED	TEK	03/2019

FILE NUMBER 1-14-2-6

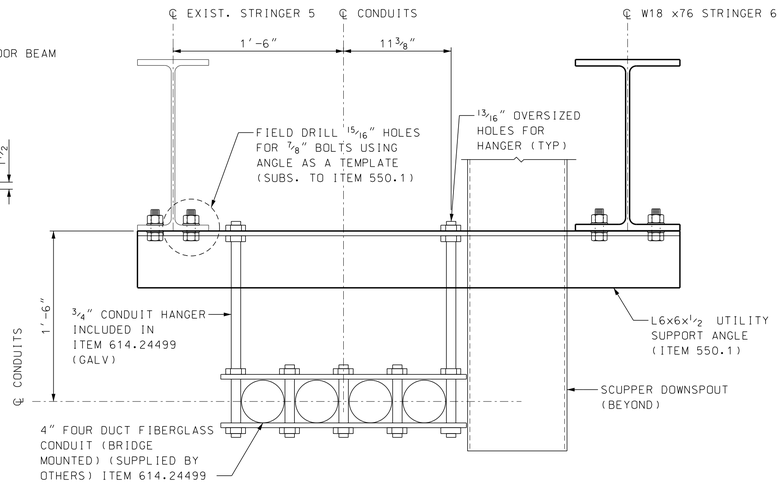
ISSUE DATE	FEDERAL PROJECT NO.	SHEET NO.	TOTAL SHEETS
REV. DATE	A000(394)	29	67



EXTERIOR STRINGER ELEVATION

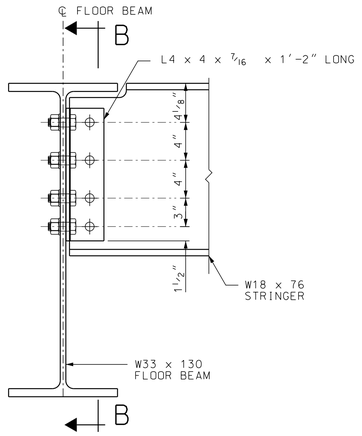
SCALE: ¾″=1′-0″

(S011 THRU S181, S016 THRU S186)



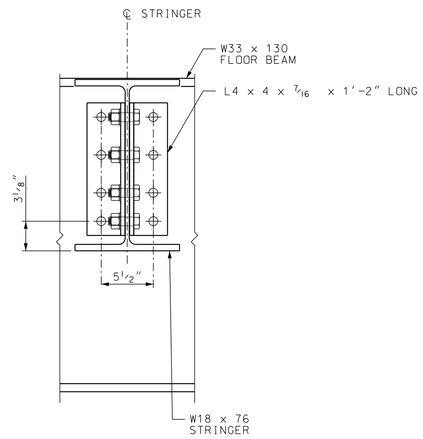
UTILITY SUPPORT

1½″ = 1′-0″



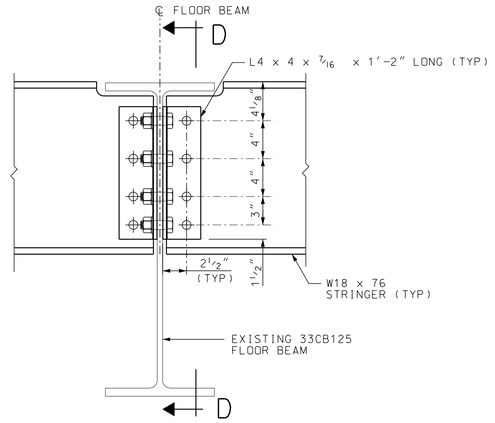
EXTERIOR STRINGER TO END FLOOR BEAM CONNECTION DETAIL

SCALE: 1½″=1′-0″



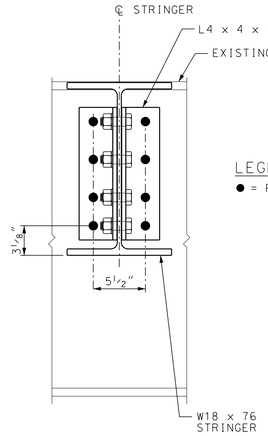
SECTION B-B

SCALE: 1½″=1′-0″



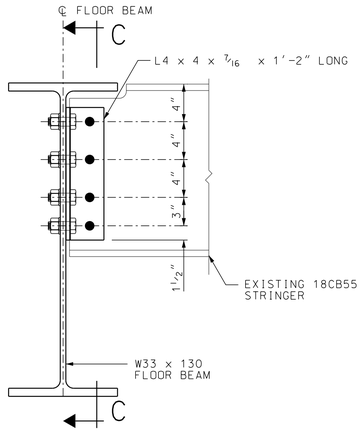
EXTERIOR STRINGER TO EXISTING INTERIOR FLOOR BEAM CONNECTION DETAIL

SCALE: 1½″=1′-0″



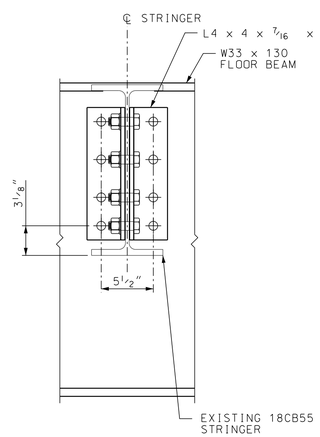
SECTION D-D

SCALE: 1½″=1′-0″



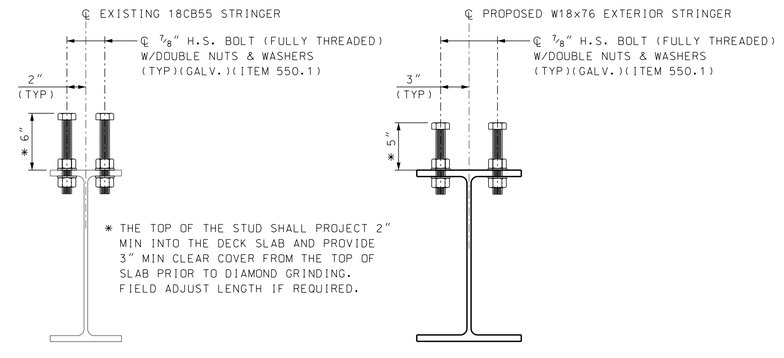
EXISTING INTERIOR STRINGER TO END FLOOR BEAM CONNECTION DETAIL

SCALE: 1½″=1′-0″



SECTION C-C

SCALE: 1½″=1′-0″



NOTE: FIELD DRILL 15/16″ HOLES IN EXISTING STRINGER FLANGE (SUBSIDIARY TO ITEM 550.1)

BOLTED STUD DETAIL

SCALE: 1½″ = 1′-0″

LEGEND

● = REMOVE RIVET AND INSTALL HIGH STRENGTH BOLT.

Stantec

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC	30_Stringer_det	AS NOTED

STATE OF NEW HAMPSHIRE

DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN LYME, NH & THETFORD, VT BRIDGE NO. 053\112 STATE PROJECT 14460

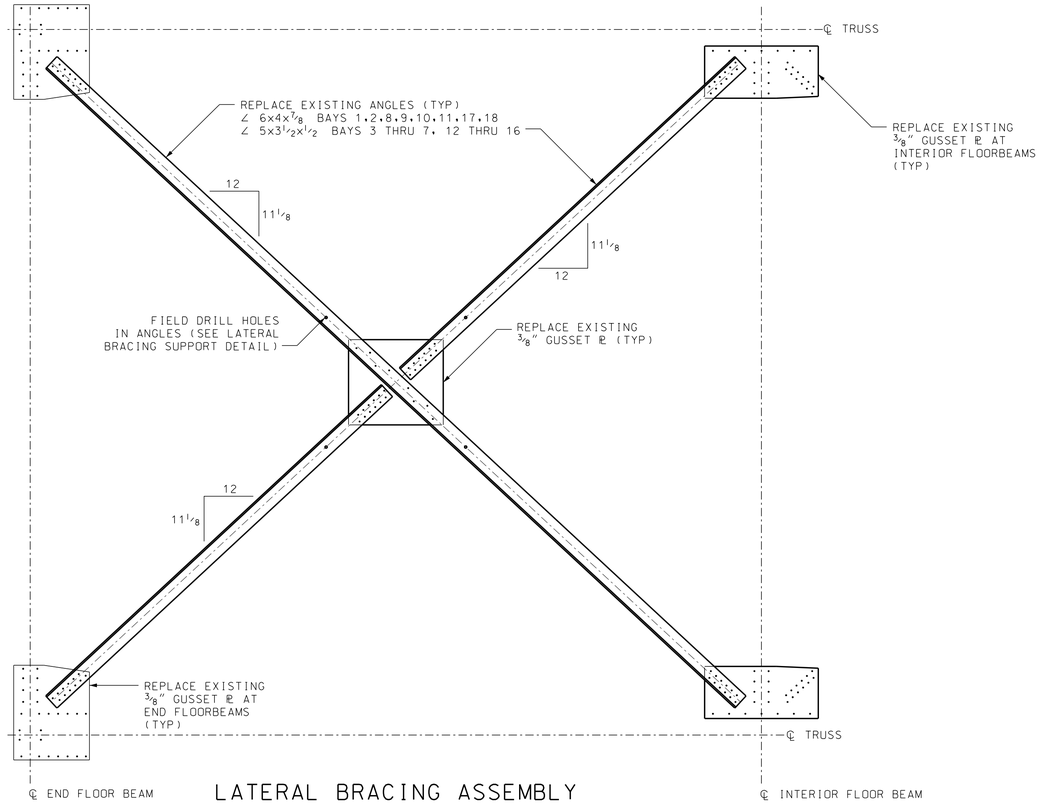
LOCATION VT ROUTE 113 & EAST THETFORD ROAD OVER THE CONNECTICUT RIVER

STRINGER DETAILS

BRIDGE SHEET 19 OF 38

FILE NUMBER 1-14-2-6

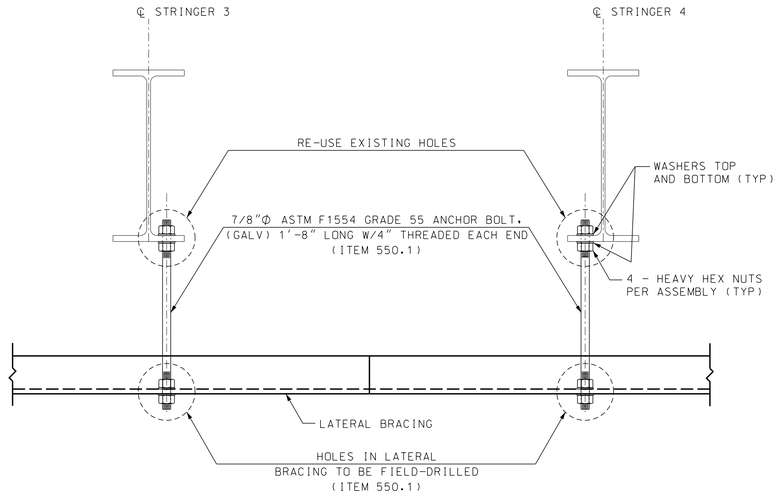
REVISIONS AFTER PROPOSAL		BY	DATE		BY	DATE
	DESIGNED	JDG	01/2019	CHECKED	JGS	03/2019
	DRAWN	LRB	02/2019	CHECKED	JGS/TEK	04/2021
	QUANTITIES	JDG	03/2019	CHECKED	TEK	03/2019
	ISSUE DATE		FEDERAL PROJECT NO.		SHEET NO.	TOTAL SHEETS
	REV. DATE		A000(394)		30	67



LATERAL BRACING ASSEMBLY

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

(BAY 1 THRU BAY 18)



LATERAL BRACING SUPPORT DETAIL

1 1/2" = 1'-0"

Stantec

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC	31_Lat_Br_Det	AS NOTED

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN LYME, NH & THETFORD, VT BRIDGE NO. 053\112 STATE PROJECT 14460

LOCATION VT ROUTE 113 & EAST THETFORD ROAD OVER THE CONNECTICUT RIVER

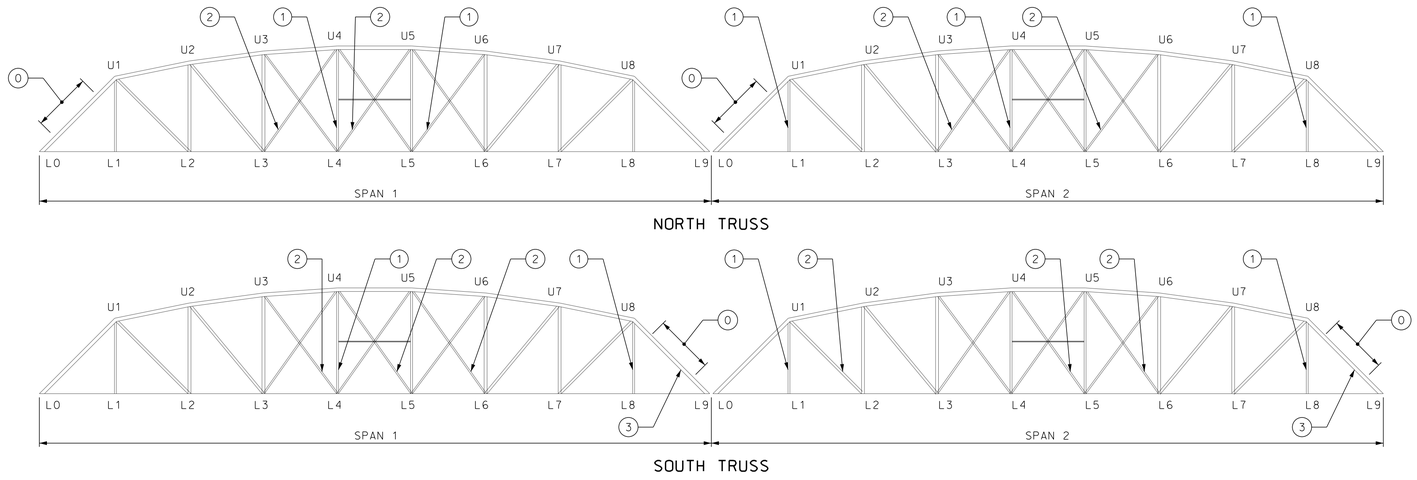
LATERAL BRACING DETAILS

BRIDGE SHEET: 20 OF 38

FILE NUMBER: 1-14-2-6

REVISIONS AFTER PROPOSAL			BY	DATE		BY	DATE
		DESIGNED	JDG	01/2019	CHECKED	JGS	03/2019
		DRAWN	LRB	02/2019	CHECKED	JGS/TEK	04/2021
		QUANTITIES	JDG	03/2019	CHECKED	TEK	03/2019

ISSUE DATE		FEDERAL PROJECT NO.	SHEET NO.	TOTAL SHEETS
REV. DATE		A000(394)	31	67



ELEVATION - TRUSS REPAIRS

NOT TO SCALE

KEY

(0) LACING BAR REPLACEMENT ON UNDERSIDE OF END POSTS
APPROXIMATE LENGTH = 9' (ITEM 550.407)

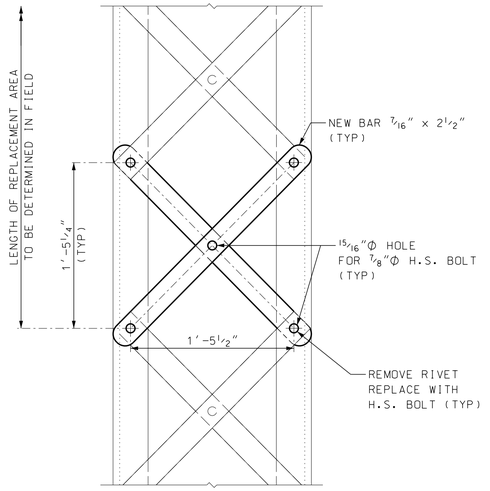
(1) TYPE 1 WEB REPAIR
APPROXIMATE LENGTH = UP TO 10' (ITEM 550.406)

(2) TYPE 2 WEB REPAIR
APPROXIMATE LENGTH = UP TO 10' (ITEM 550.406)

(3) TYPE 1 CHANNEL WEB REPAIR AT ENDPOST (2 CHANNEL WEBS)
APPROXIMATE LENGTH = 5' EACH CHANNEL WEB (ITEM 550.406)

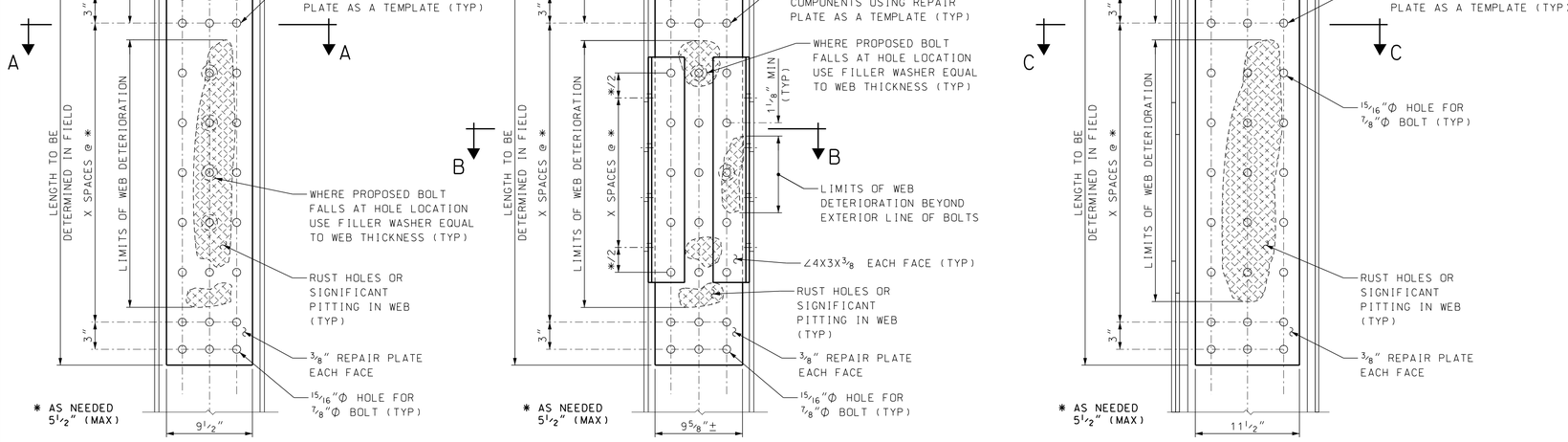
REPAIR NOTES:

1. TYPE 1 WEB REPAIR SHALL BE USED WHEN SIGNIFICANT PITTING OR WEB HOLES ARE LOCATED WITHIN THE WEB REPAIR BOLT PATTERN. TOWARDS THE MIDDLE OF THE WEB. WHEN SIGNIFICANT WEB PITTING OR HOLES ARE LOCATED NEAR THE EXISTING FLANGE, OUTSIDE THE EXTERIOR LINE OF REPAIR BOLTS. TYPE 2 REPAIR SHALL BE USED.
2. REPAIR PLATES AND ANGLES SHALL BE INSTALLED SYMMETRIC TO THE ORIGINAL TRUSS MEMBER SECTION.
3. EPOXY PASTE VOID FILLER SHALL BE APPLIED TO ROUGH STEEL SURFACES AS REQUIRED PRIOR TO RECEIVING NEW STEEL REPAIR PLATES TO ENSURE A SMOOTH AND EVEN SURFACE. THE EPOXY PASTE VOID FILLER SHALL BE TWO COMPONENT, HIGH-MODULUS, EPOXY ADHESIVE MEETING ASTM C881, GRADE 3, CLASS B/C. SIKADUR 31 HI-MOD GEL OR APPROVED EQUAL.



LACING BAR REPLACEMENT

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



SECTION A-A

TYPE 1 WEB REPAIR DETAIL

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

SECTION B-B

TYPE 2 WEB REPAIR DETAIL

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

SECTION C-C

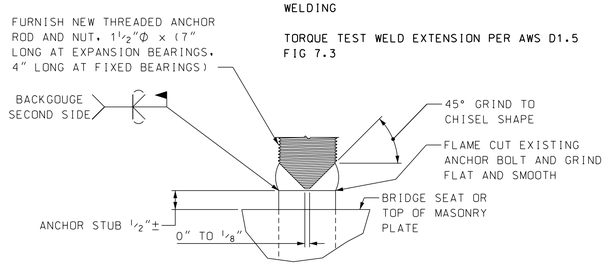
TYPE 1 WEB REPAIR DETAIL (ENDPOST)

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

NOTES: REPAIR BEARING ANCHOR BOLTS AS REQUIRED OR DIRECTED (ITEM 1002.1)

CLEAN TO BARE METAL IN AREA OF WELD BEFORE WELDING

TORQUE TEST WELD EXTENSION PER AWS D1.5 FIG 7.3



ANCHOR BOLT EXTENSION DETAIL AS NEEDED

N.T.S

Stantec

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN LYME, NH & THETFORD, VT BRIDGE NO. 053\112 STATE PROJECT 14460

LOCATION VT ROUTE 113 & EAST THETFORD ROAD OVER THE CONNECTICUT RIVER

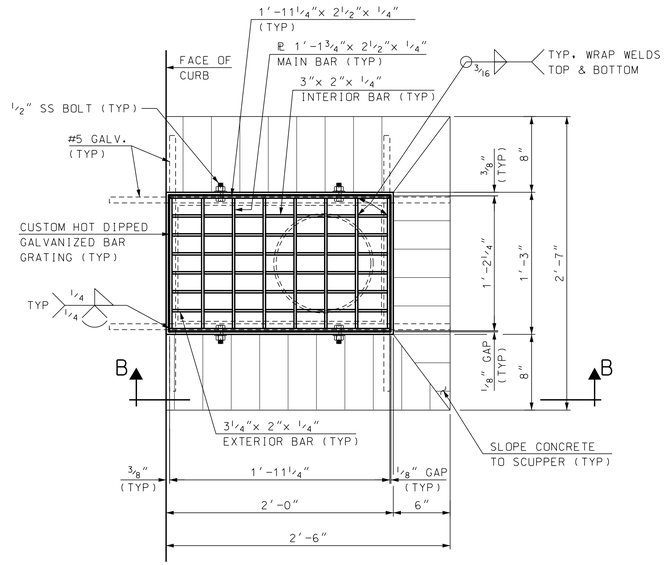
STEEL REPAIR DETAILS

BRIDGE SHEET 21 OF 38

REVISIONS AFTER PROPOSAL		BY	DATE		BY	DATE
	DESIGNED	IS	04/2022	CHECKED	DDT	04/2022
	DRAWN	IS	04/2022	CHECKED	DDT	04/2021
	QUANTITIES	IS	04/2022	CHECKED	DDT	04/2022
	ISSUE DATE		FEDERAL PROJECT NO.		SHEET NO.	TOTAL SHEETS
	REV. DATE		A000(394)		32	67

FILE NUMBER 1-14-2-6

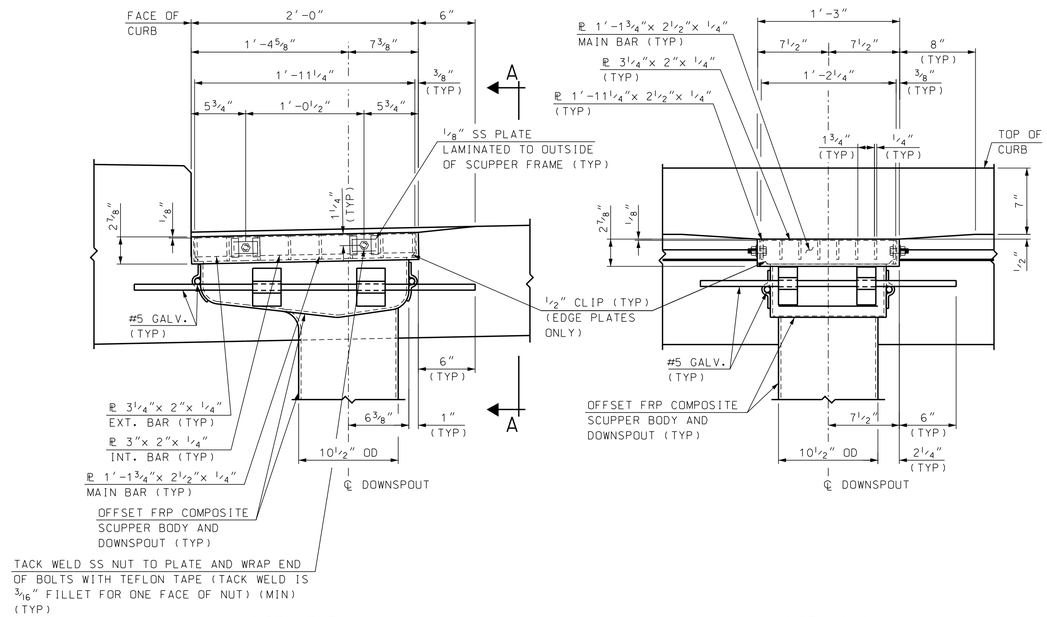
SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC	32_Stl Repair_Det	AS NOTED



TOP VIEW

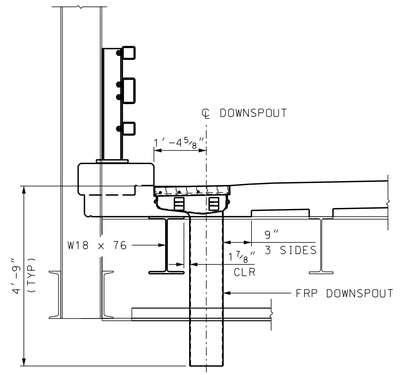
SCUPPER NOTES

1. 1/2" STAINLESS STEEL BOLTS AND NUTS SHALL BE USED TO ATTACH THE GRATE TO THE SCUPPER BODY.
2. HOLES IN THE GRATING, FRP SCUPPER, AND STAINLESS STEEL PLATE SHALL BE 5/8" DIAMETER.
3. GRATING SHALL BE INSTALLED IN THE FRP SCUPPER BODY PRIOR TO SHIPPING TO VERIFY A PROPER FIT AND ATTACHMENT. THE GRATE SHALL BE SEATED COMPLETELY ON THE SCUPPER BODY. ANY ADJUSTMENTS THAT NEED TO BE MADE TO THE GRATING IN ORDER TO FIT AND BOLT THE SCUPPER BODY SHALL BE MADE PRIOR TO SHIPPING.
4. THE DIMENSIONS FOR THE STAINLESS STEEL PLATE AND ITS REQUIREMENTS FOR LAMINATION TO THE SCUPPER FRAME WILL BE BASED ON THE MANUFACTURER'S RECOMMENDATION.
5. STAINLESS STEEL BOLTS AND MATCHING NUTS SHALL CONFORM TO ASTM A276 TYPE 304. STAINLESS STEEL PLATES SHALL CONFORM TO ASTM A240 TYPE 304.
6. GRATES SHALL CONFORM TO ASTM A36 AND BE GALVANIZED AFTER MANUFACTURING IN ACCORDANCE WITH AASHTO M111 (ASTM A123).
7. THE MANUFACTURER MAY PROPOSE AN ALTERNATE GRATE ATTACHMENT DETAIL WHICH SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
8. SHOP DRAWINGS OF THE FRP SCUPPERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
9. THE ENTIRE ASSEMBLY INCLUDING FRP SCUPPERS AND DOWNSPOUTS, STEEL GRATING, #5 GALVANIZED REINFORCING, MISC. PLATES AND FASTENERS SHALL BE PAID FOR AS ITEM 540.42, SCUPPER (FRP). SEE SPECIAL PROVISION FOR ADDITIONAL INFORMATION.
10. COAT THE AREA IN CONTACT WITH CONCRETE WITH AN APPROVED BONDING AGENT JUST PRIOR TO PLACING THE DECK CONCRETE (COST INCLUDED IN ITEM 520.7002).



VIEW B-B

VIEW A-A



SCUPPER SECTION

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

SCUPPER DETAIL

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

Stantec

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC	33_Scupper_Det	AS NOTED

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN LYME, NH & THETFORD, VT — BRIDGE NO. 053\112 — STATE PROJECT 14460

LOCATION VT ROUTE 113 & EAST THETFORD ROAD OVER THE CONNECTICUT RIVER

SCUPPER DETAILS

BRIDGE SHEET: 22 OF 38

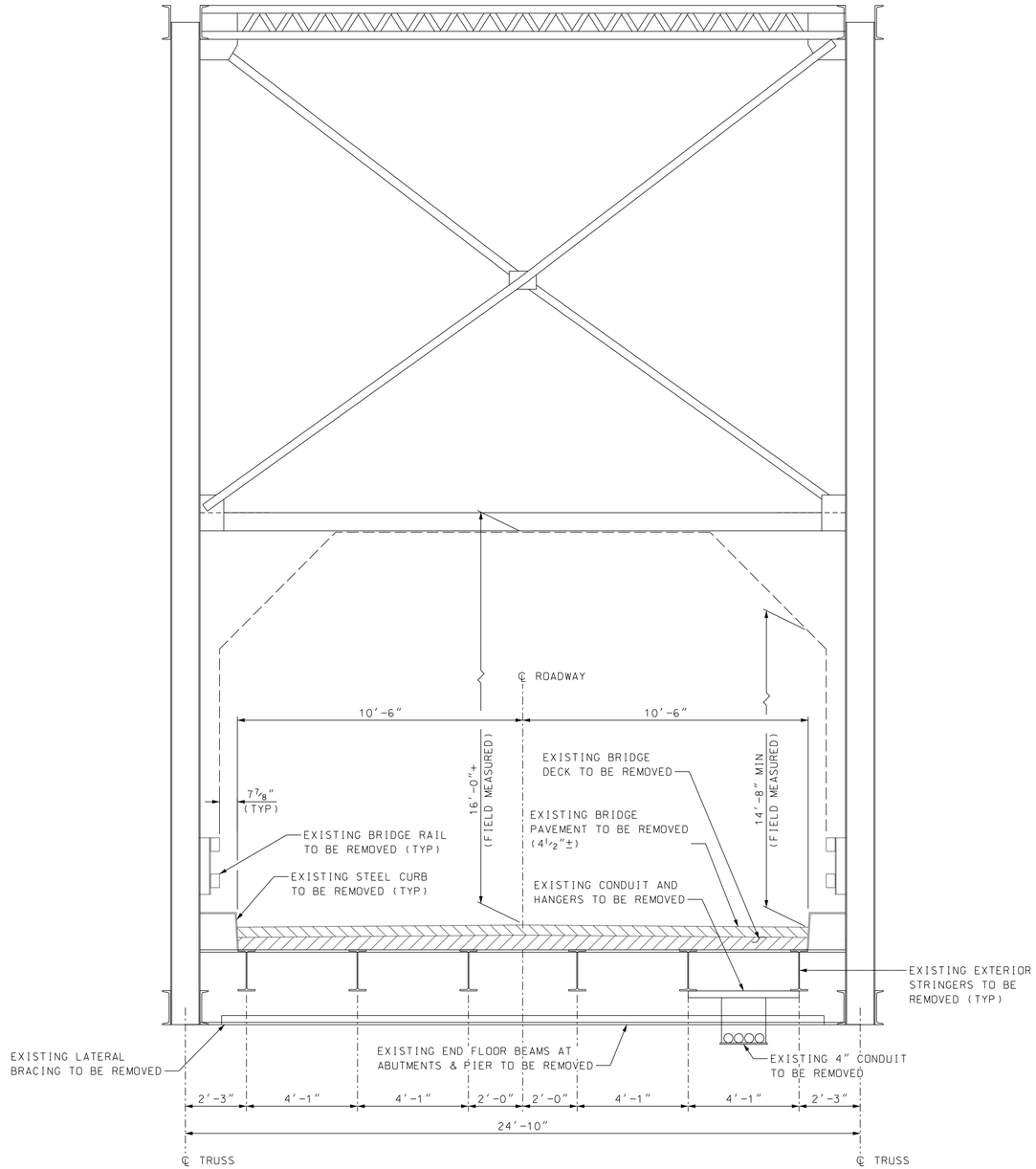
REVISIONS AFTER PROPOSAL		BY	DATE		BY	DATE
	DESIGNED	JDG	01/2021	CHECKED	DDT	01/2021
	DRAWN	JDG	01/2021	CHECKED	DDT	01/2021
	QUANTITIES	JDG	01/2021	CHECKED	KLW	01/2021
	ISSUE DATE					
	REV. DATE					

FEDERAL PROJECT NO.: A000(394)

FILE NUMBER: 1-14-2-6

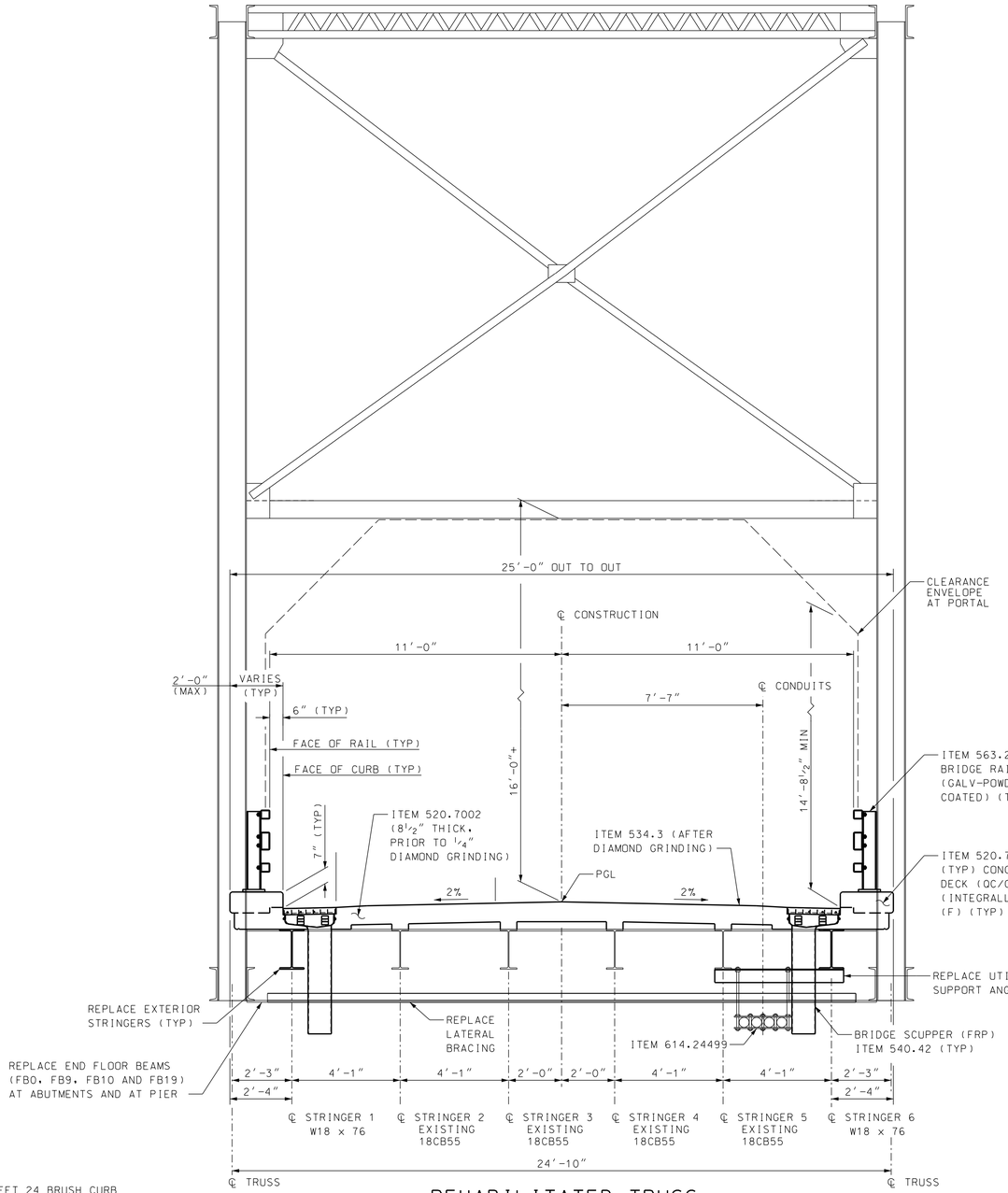
SHEET NO.: 33

TOTAL SHEETS: 67



EXISTING TRUSS

SCALE: 3/8″=1′-0″



REHABILITATED TRUSS

SCALE: 3/8″=1′-0″

NOTE:
SEE BRIDGE SHEET 24 BRUSH CURB FASCIA DETAIL FOR LIMITS OF ITEM 534.3 & 628.5.

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN LYME, NH & THETFORD, VT BRIDGE NO. 053\112 STATE PROJECT 14460

LOCATION VT ROUTE 113 & EAST THETFORD ROAD OVER THE CONNECTICUT RIVER

BRIDGE TYPICAL SECTIONS

BRIDGE SHEET: 23 OF 38

REVISIONS AFTER PROPOSAL	BY	DATE

	BY	DATE		BY	DATE
DESIGNED	JDG	01/2019	CHECKED	JGS	03/2019
DRAWN	LRB	02/2019	CHECKED	JGS	03/2019
QUANTITIES	JDG	03/2019	CHECKED	TEK	03/2019
ISSUE DATE					
REV. DATE					

FILE NUMBER: 1-14-2-6

FEDERAL PROJECT NO.: A000(394)

SHEET NO.: 34

TOTAL SHEETS: 67

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC	34_TypSec	AS NOTED

Stantec

BOTTOM OF CONCRETE DECK ELEVATIONS (SPAN 1) (FT)

STRINGER	CL BRG ABUT A FB 1	STA 15+37.88	STA 15+50.75 FB 2	STA 15+63.63	STA 15+76.50 FB 3	STA 15+89.38	STA 16+02.25 FB 4	STA 16+15.13	STA 16+28.00 FB 5	STA 16+40.88	STA 16+53.75 FB 6	STA 16+66.63	STA 16+79.50 FB 7	STA 16+92.38	STA 17+05.25 FB 8	STA 17+18.13	STA 17+31.00 FB 9	STA 17+43.88	CL BRG PIER FB 10
1	403.09	403.36	403.60	403.83	404.02	404.22	404.39	404.56	404.70	404.84	404.94	405.04	405.11	405.18	405.22	405.26	405.27	405.28	405.25
2	403.18	403.45	403.68	403.91	404.11	404.31	404.48	404.65	404.79	404.92	405.03	405.13	405.20	405.27	405.30	405.35	405.36	405.36	405.33
3	403.26	403.53	403.77	404.00	404.19	404.39	404.56	404.73	404.87	405.01	405.11	405.21	405.28	405.35	405.39	405.43	405.44	405.45	405.41
4	403.26	403.53	403.77	404.00	404.19	404.39	404.56	404.73	404.87	405.01	405.11	405.21	405.28	405.35	405.39	405.43	405.44	405.45	405.41
5	403.18	403.45	403.68	403.91	404.11	404.31	404.48	404.65	404.79	404.92	405.03	405.13	405.20	405.27	405.30	405.35	405.36	405.36	405.33
6	403.09	403.36	403.60	403.83	404.02	404.22	404.39	404.56	404.70	404.84	404.94	405.04	405.11	405.18	405.22	405.26	405.27	405.28	405.25

BOTTOM OF CONCRETE DECK ELEVATIONS (SPAN 2) (FT)

STRINGER	CL BRG PIER FB 11	STA 17+72.13	STA 17+85.00 FB 12	STA 17+97.88	STA 18+10.75 FB 13	STA 18+23.63	STA 18+36.50 FB 14	STA 18+49.38	STA 18+62.25 FB 15	STA 18+75.13	STA 18+88.00 FB 16	STA 19+00.88	STA 19+13.75 FB 17	STA 19+26.63	STA 19+39.50 FB 18	STA 19+52.38	STA 19+65.25 FB 19	STA 19+78.13	CL BRG ABUT B FB 20
1	405.25	405.28	405.28	405.27	405.22	405.19	405.12	405.05	404.94	404.84	404.70	404.57	404.40	404.23	404.03	403.83	403.60	403.36	403.09
2	405.33	405.36	405.35	405.34	405.30	405.26	405.19	405.12	405.02	404.92	404.78	404.65	404.48	404.31	404.10	403.91	403.68	403.44	403.17
3	405.41	405.45	405.44	405.43	405.39	405.35	405.28	405.21	405.11	405.01	404.87	404.73	404.56	404.39	404.19	404.00	403.77	403.53	403.26
4	405.41	405.45	405.44	405.43	405.39	405.35	405.28	405.21	405.11	405.01	404.87	404.73	404.56	404.39	404.19	404.00	403.77	403.53	403.26
5	405.33	405.36	405.35	405.34	405.30	405.26	405.19	405.12	405.02	404.92	404.78	404.65	404.48	404.31	404.10	403.91	403.68	403.44	403.17
6	405.25	405.28	405.28	405.27	405.22	405.19	405.12	405.05	404.94	404.84	404.70	404.57	404.40	404.23	404.03	403.83	403.60	403.36	403.09

DECK SLAB ELEVATION NOTES

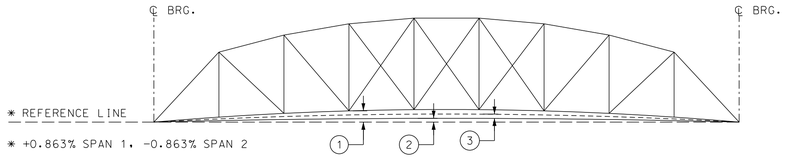
(1) AFTER THE STRUCTURAL STEEL IS ERECTED BUT BEFORE THE DECK FORMS ARE BUILT, ELEVATIONS ON THE TOP FLANGE OF THE FLOOR BEAMS AND STRINGERS ARE TO BE OBTAINED AT THE POINTS INDICATED IN THE TABLE. THE DIFFERENCE BETWEEN THE ELEVATIONS OBTAINED AND THOSE IN THE TABLE IS THE ACTUAL BLOCKING DISTANCE FROM THE TOP OF THE FLANGE AND THE BOTTOM OF DECK AT THE CENTERLINE OF THE FLOOR BEAMS AND STRINGERS. SEE ELEVATION TABLE AND HAUNCH DETAIL ON THIS SHEET.

(2) ELEVATIONS SHOWN IN THE TABLE ARE FINISHED BOTTOM OF SLAB ELEVATIONS ADJUSTED FOR TOTAL DEAD LOAD DEFLECTION, LESS THE DEFLECTION DUE TO STRUCTURAL STEEL WEIGHT.

(3) AFTER REMOVAL OF EXISTING STEEL CURB, BUT PRIOR TO REMOVAL OF CONCRETE BRIDGE DECK, THE CONTRACTOR SHALL TAKE ELEVATIONS ON ALL FLOOR BEAMS AT FACE OF BOTH TRUSSES. ELEVATIONS AT THE SAME POINTS SHALL BE TAKEN AGAIN AFTER REMOVAL OF THE BRIDGE DECK. THE DIFFERENCE BETWEEN THE ELEVATIONS IS THE APPROXIMATE DEFLECTION OF THE TRUSSES DUE TO THE WEIGHT OF THE BRIDGE DECK. THIS INFORMATION SHALL BE USED TO MAKE ANY ADJUSTMENTS TO THE TABULATED BOTTOM OF CONCRETE DECK ELEVATIONS AS NEEDED - COMPARE TO ROW 3 IN THE TRUSS CAMBER DIAGRAM, THIS SHEET.

(4) THEORETICAL BLOCKING HEIGHTS WERE DETERMINED USING A CALCULATED TOP OF FLOOR BEAM ELEVATION AT CENTERLINE OF BEARING AT THE ABUTMENTS OF EL. 402.96 AND EL. 405.11 AT THE CENTERLINE OF BEARINGS AT THE PIER BASED ON SURVEY INFORMATION. THE CONTRACTOR SHALL VERIFY THESE ELEVATIONS AFTER THE DECK IS REMOVED AND MAKE ADJUSTMENTS AS NEEDED.

(5) IT IS ANTICIPATED THAT THERE WILL BE NO MEASUREABLE DIFFERENCE IN DEFLECTION DUE TO THE EXISTING DECK, CURB, RAILING, AND WEARING SURFACE COMPARED TO THE PROPOSED DECK, CURB, AND RAILING.



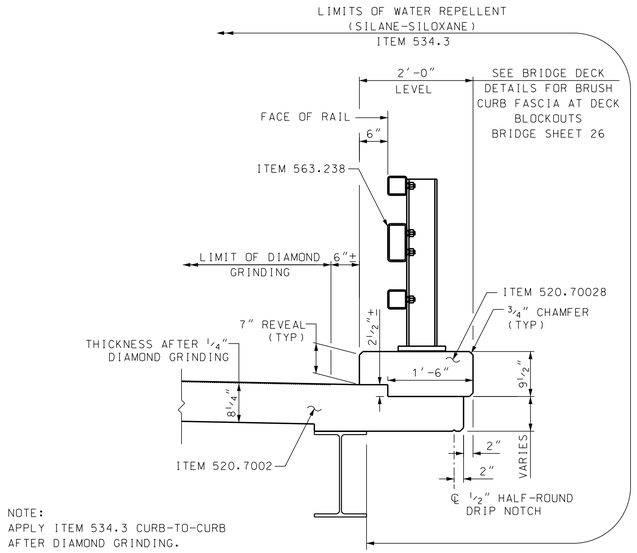
	SPAN 1 STATION	15+25.00	15+50.75	15+76.50	16+02.25	16+28.00	16+53.75	16+79.50	17+05.25	17+31.00	17+56.75
	SPAN 2 STATION	17+59.25	17+85.00	18+10.75	18+36.50	18+62.25	18+88.00	19+13.75	19+39.50	19+65.25	19+91.00
(1)	TOTAL CAMBER PER ORIGINAL SHOP DRAWINGS	0"	3 3/8"	5 5/8"	7 3/8"	8 1/4"	8 1/4"	7 3/8"	5 5/8"	3 3/8"	0"
(2)	REMAINING CAMBER AFTER ALL DEAD LOAD IS APPLIED	0"	2 3/8"	4 1/8"	5 3/8"	6"	6"	5 3/8"	4 1/8"	2 3/8"	0"
(3)	ANTICIPATED DEFLECTION OF NEW DECK, CURB, & RAIL	0"	1 1/16"	1 1/16"	1 3/8"	1 1/2"	1 1/2"	1 3/8"	1 1/16"	1 1/16"	0"

TRUSS CAMBER DIAGRAM

NOT TO SCALE

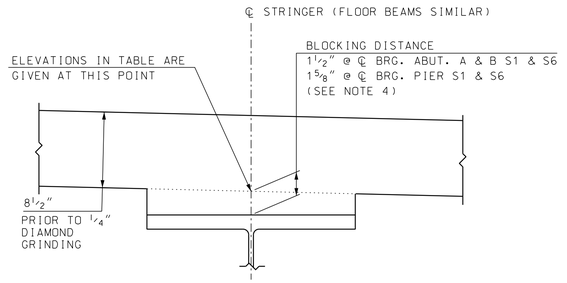
	STRINGERS	FLOOR BEAMS
SELF WEIGHT DEFLECTION	0.02"	0.01"
DEFLECTION DUE TO DECK, CURB, & RAILING	1/8"	1/8"
TOTAL DEAD LOAD DEFLECTION	1/8"	1/8"

STRINGER & FLOOR BEAM MIDSPAN DEFLECTIONS



BRUSH CURB FASCIA DETAIL

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



HAUNCH DETAIL

NOT TO SCALE

Stantec

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC	35_Bot_slab_elev	AS NOTED

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN LYME, NH & THETFORD, VT BRIDGE NO. 053\112 STATE PROJECT 14460

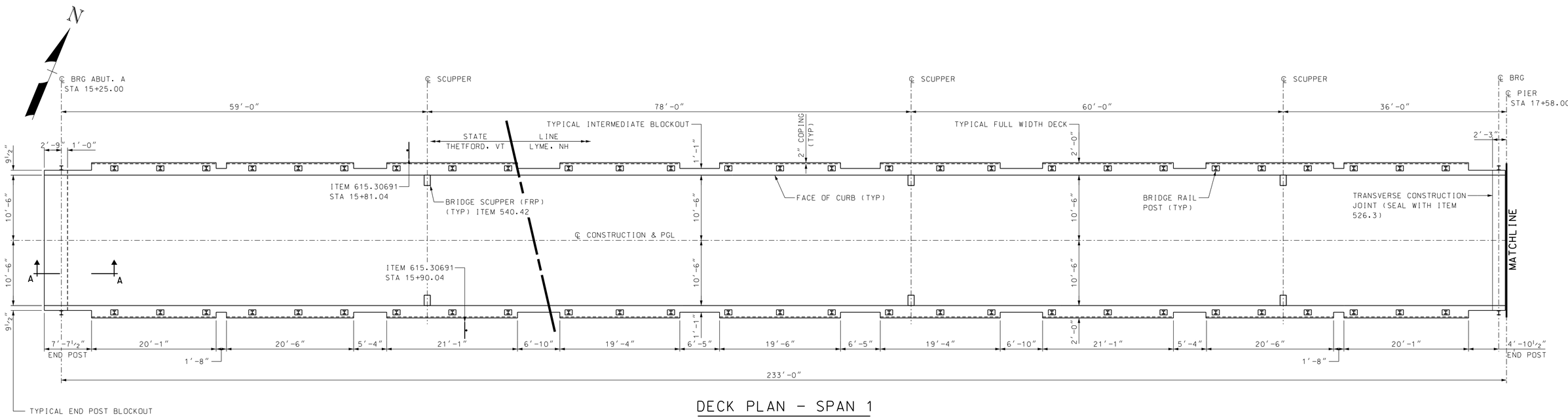
LOCATION VT ROUTE 113 & EAST THETFORD ROAD OVER THE CONNECTICUT RIVER

BOTTOM OF SLAB ELEVATIONS

BRIDGE SHEET 24 OF 38

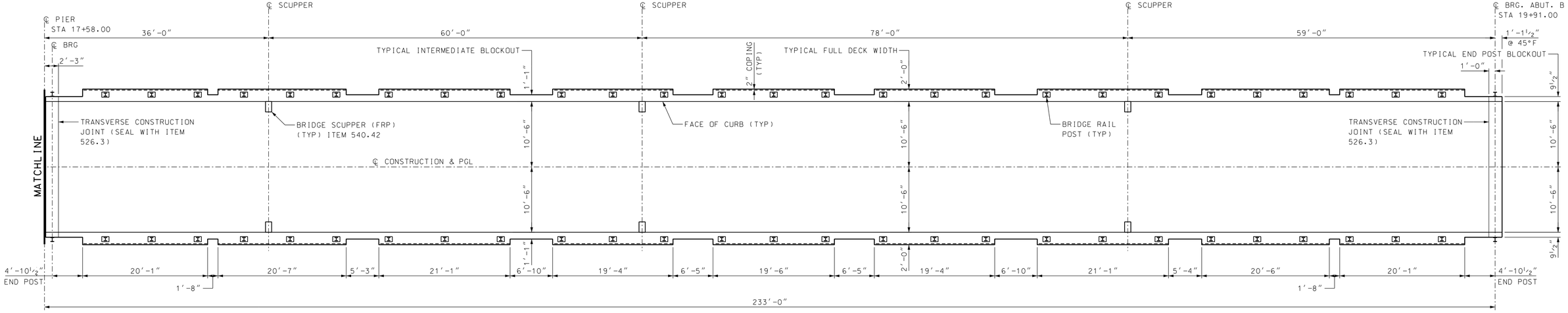
FILE NUMBER 1-14-2-6

REVISIONS AFTER PROPOSAL	BY	DATE		BY	DATE
	DESIGNED	JDG	01/2019	CHECKED	DDT	04/2021
	DRAWN	LRB	02/2019	CHECKED	DDT	04/2021
	QUANTITIES	JDG	03/2019	CHECKED	TEK	04/2021
	ISSUE DATE		FEDERAL PROJECT NO.		SHEET NO.	TOTAL SHEETS
	REV. DATE		A000(394)		35	67



DECK PLAN – SPAN 1

SCALE: ⅛" = 1'-0"



DECK PLAN – SPAN 2

SCALE: ⅛" = 1'-0"

NOTES:

FOR SECTION A-A SEE BRIDGE SHEET 26.
FOR SECTION AT ABUTMENT B SEE BRIDGE SHEET 33.

Stantec

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC	36_Deck	AS NOTED

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN LYME, NH & THETFORD, VT BRIDGE NO. 053\112 STATE PROJECT 14460

LOCATION VT ROUTE 113 & EAST THETFORD ROAD OVER THE CONNECTICUT RIVER

DECK PLAN

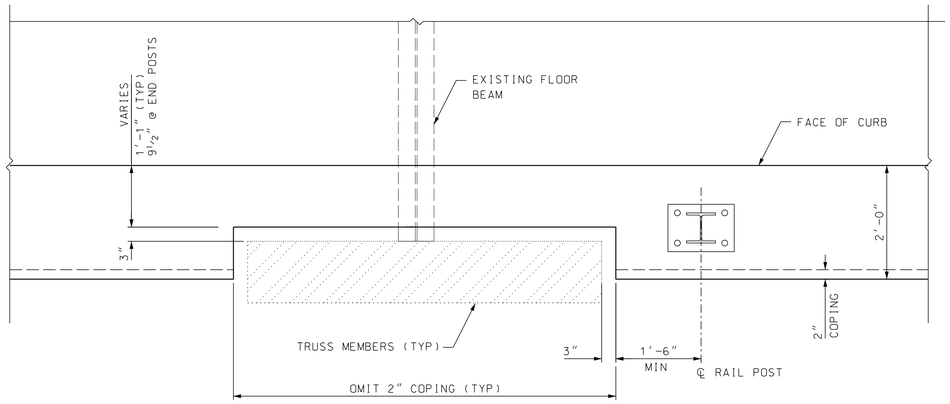
REVISIONS AFTER PROPOSAL	BY	DATE

	BY	DATE		BY	DATE
DESIGNED	JDG	01/2019	CHECKED	JGS	03/2019
DRAWN	KLW	04/2021	CHECKED	DDT	04/2021
QUANTITIES	KLW	04/2021	CHECKED	JGS	04/2021

ISSUE DATE		FEDERAL PROJECT NO.	SHEET NO.	TOTAL SHEETS
REV. DATE		A000(394)	36	67

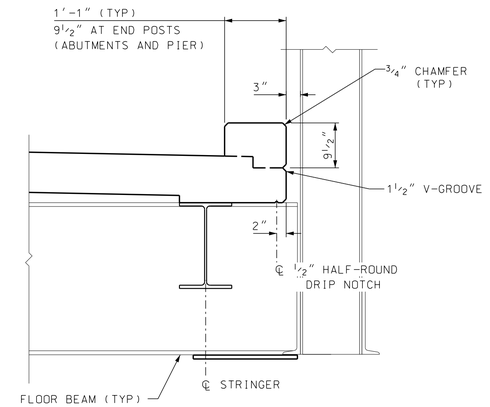
BRIDGE SHEET 25 OF 38

FILE NUMBER 1-14-2-6



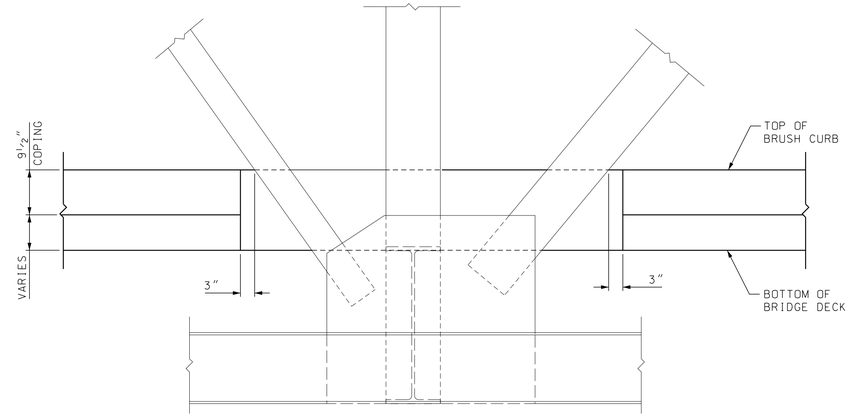
DECK BLOCKOUT PLAN

SCALE: ¾"=1'-0"
(INTERMEDIATE SHOWN, END POSTS SIMILAR)



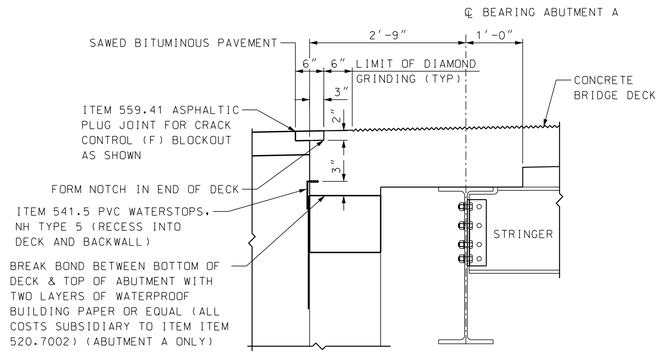
TYPICAL DECK BLOCKOUT SECTION

SCALE: ¾"=1'-0"



DECK BLOCKOUT ELEVATION

SCALE: ¾"=1'-0"



SECTION A-A

SCALE: ¾"=1'-0"

NOTE:
FOR LOCATION OF SECTION A-A SEE BR. SHT. 25.

Stantec

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC	37_Deck_Det	AS NOTED

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN LYME, NH & THETFORD, VT BRIDGE NO. 053\112 STATE PROJECT 14460

LOCATION VT ROUTE 113 & EAST THETFORD ROAD OVER THE CONNECTICUT RIVER

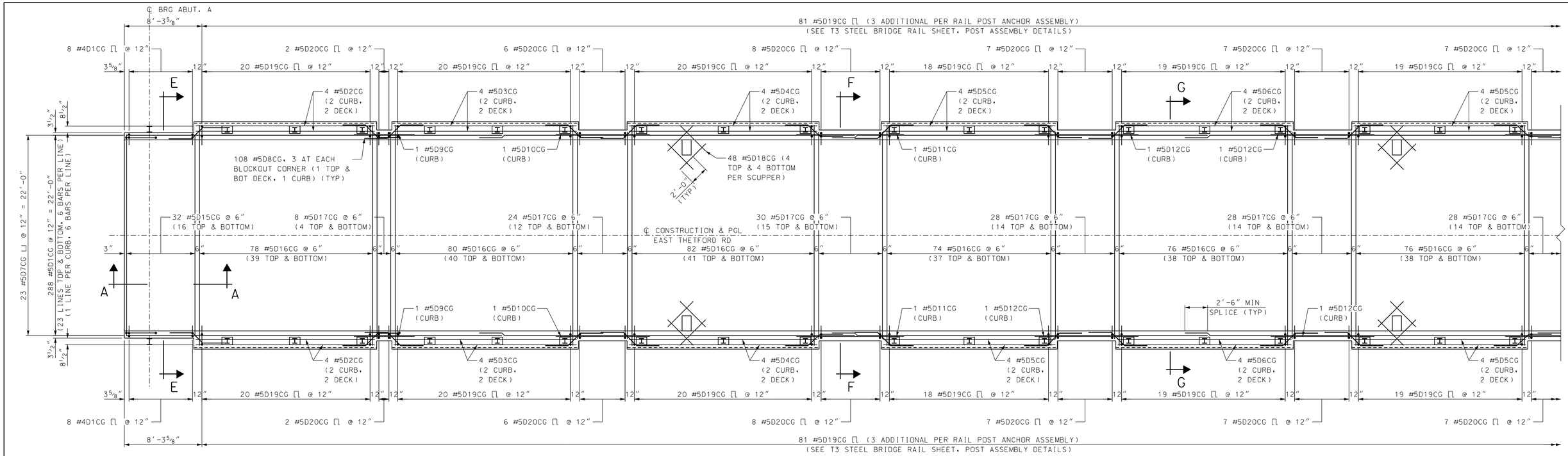
BRIDGE DECK DETAILS

BRIDGE SHEET: 26 OF 38

REVISIONS AFTER PROPOSAL		BY	DATE		BY	DATE
	DESIGNED	JDG	01/2019	CHECKED	JGS	03/2019
	DRAWN	LRB	02/2019	CHECKED	JGS	03/2019
	QUANTITIES	JDG	03/2019	CHECKED	TEK	03/2019

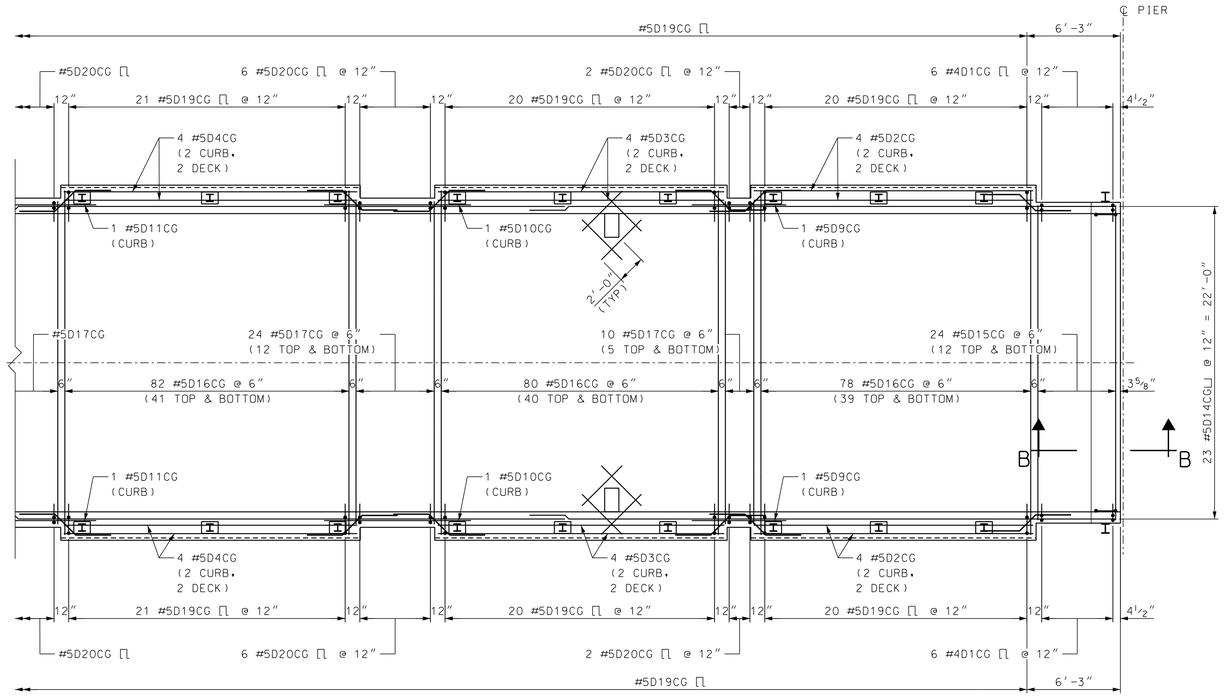
ISSUE DATE		FEDERAL PROJECT NO.	SHEET NO.	TOTAL SHEETS
REV. DATE		A000(394)	37	67

FILE NUMBER: 1-14-2-6



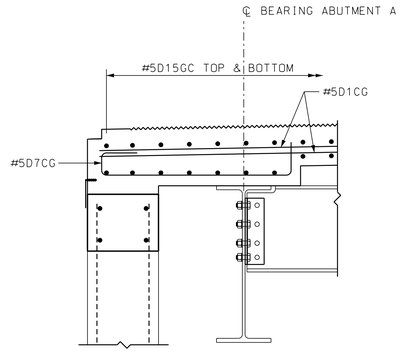
DECK REINFORCEMENT PLAN – SPAN 1

SCALE: 3/16″=1′-0″



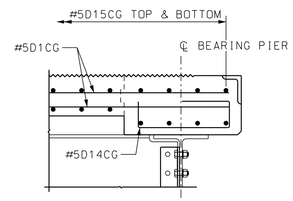
DECK REINFORCEMENT PLAN – SPAN 1

SCALE: 3/16″=1′-0″



SECTION A–A

SCALE: 3/4″=1′-0″



SECTION B–B

SCALE: 3/4″=1′-0″

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN LYME, NH & THETFORD, VT — BRIDGE NO. 053\112 — STATE PROJECT 14460

LOCATION VT ROUTE 113 & EAST THETFORD ROAD OVER THE CONNECTICUT RIVER

DECK REINFORCING (SHEET 1 OF 3)

BRIDGE SHEET: 27 OF 38

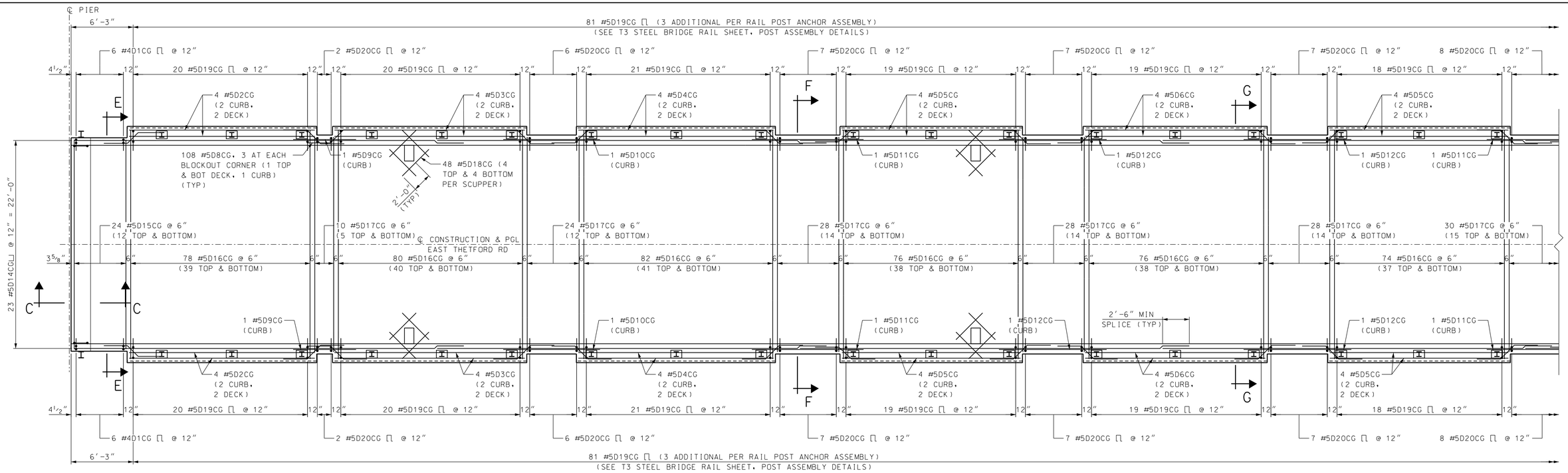
REVISIONS AFTER PROPOSAL	BY	DATE		BY	DATE
	DESIGNED JDG	01/2019	CHECKED JGS	03/2019	
	DRAWN KLW	04/2021	CHECKED LSF	04/2021	
	QUANTITIES KLW	04/2021	CHECKED LSF	04/2021	

FILE NUMBER: 1-14-2-6

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC	38_Deck_sect_1	AS NOTED

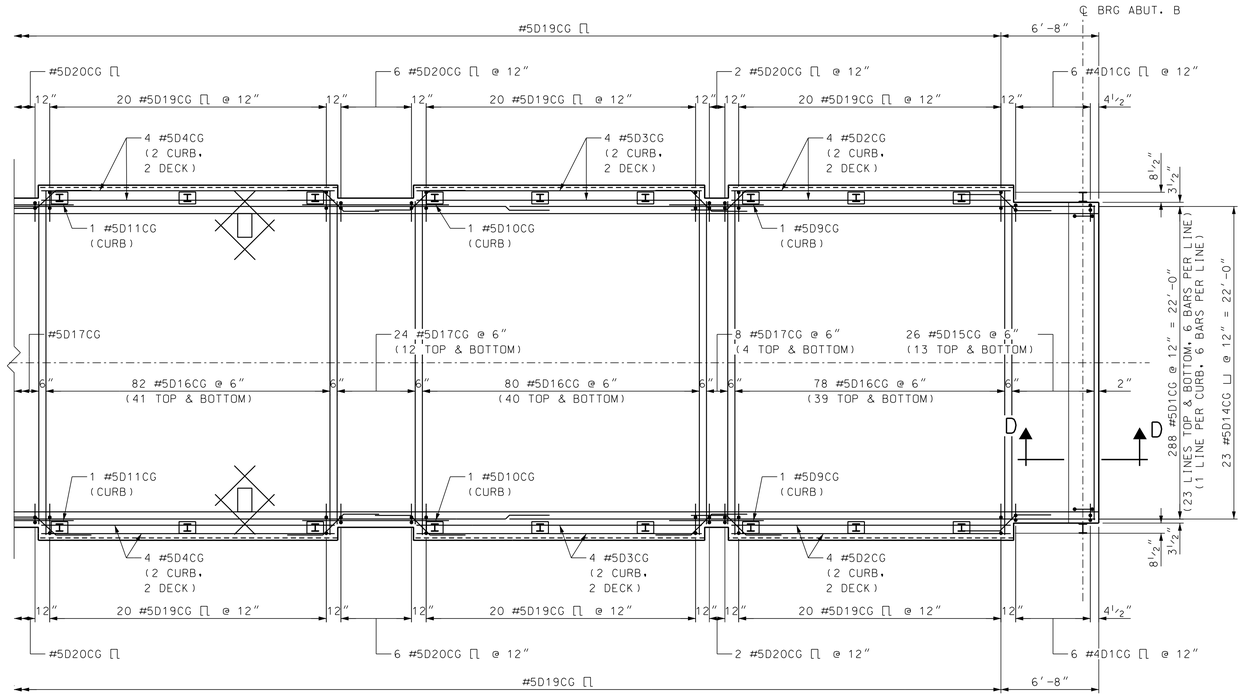
ISSUE DATE	FEDERAL PROJECT NO.	SHEET NO.	TOTAL SHEETS
REV. DATE	A000(394)	38	67

Stantec



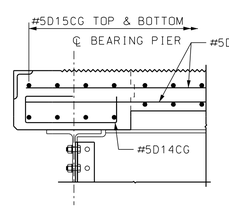
DECK REINFORCEMENT PLAN – SPAN 2

SCALE: 3/16″=1′-0″



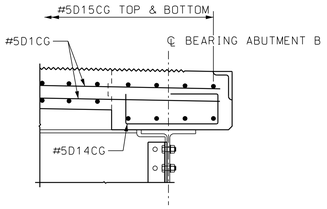
DECK REINFORCEMENT PLAN – SPAN 2

SCALE: 3/16″=1′-0″



SECTION C-C

SCALE: 3/4″=1′-0″



SECTION D-D

SCALE: 3/4″=1′-0″

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC	39_Deck_sect_2	AS NOTED

Stantec

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN LYME, NH & THETFORD, VT — BRIDGE NO. 053\112 — STATE PROJECT 14460

LOCATION VT ROUTE 113 & EAST THETFORD ROAD OVER THE CONNECTICUT RIVER

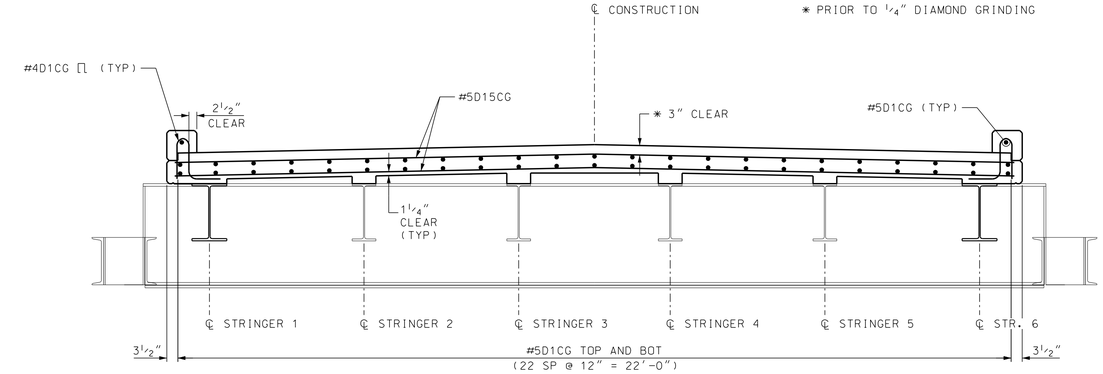
DECK REINFORCING (SHEET 2 OF 3)

BRIDGE SHEET: 28 OF 38

REVISIONS AFTER PROPOSAL	BY	DATE		BY	DATE
	DESIGNED JDG	01/2019	CHECKED	JGS	03/2019
	DRAWN KLW	04/2021	CHECKED	LSF	04/2021
	QUANTITIES KLW	04/2021	CHECKED	LSF	04/2021

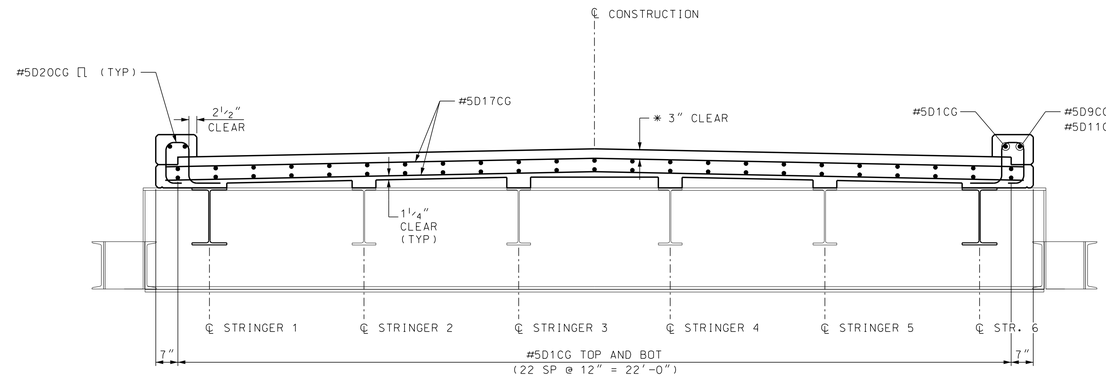
ISSUE DATE	FEDERAL PROJECT NO.	SHEET NO.	TOTAL SHEETS
REV. DATE	A000(394)	39	67

FILE NUMBER: 1-14-2-6



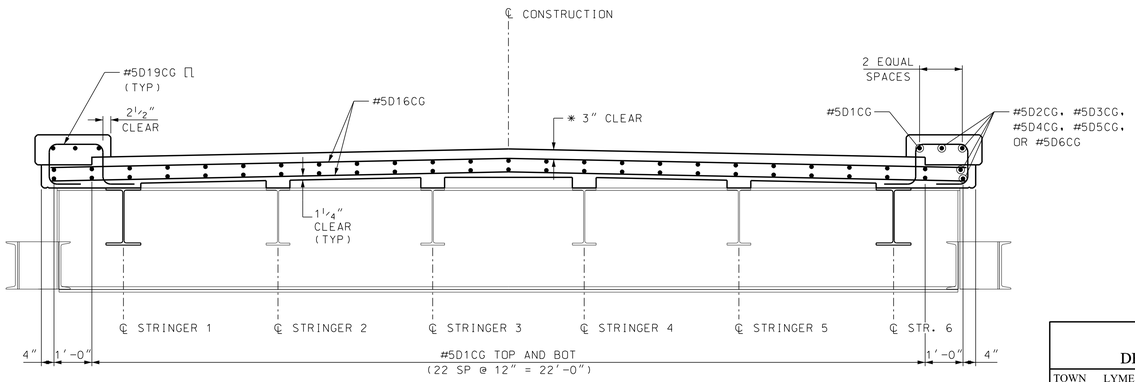
SECTION E-E (TYPICAL SECTION AT END POST BLOCKOUTS)

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



SECTION F-F (TYPICAL SECTION AT INTERMEDIATE DECK BLOCKOUTS)

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



SECTION G-G (TYPICAL FULL WIDTH SECTION)

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

Stantec

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC	40_Deck_sect_3	AS NOTED

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN LYME, NH & THETFORD, VT BRIDGE NO. 053\112 STATE PROJECT 14460

LOCATION VT ROUTE 113 & EAST THETFORD ROAD OVER THE CONNECTICUT RIVER

DECK REINFORCING (SHEET 3 OF 3)

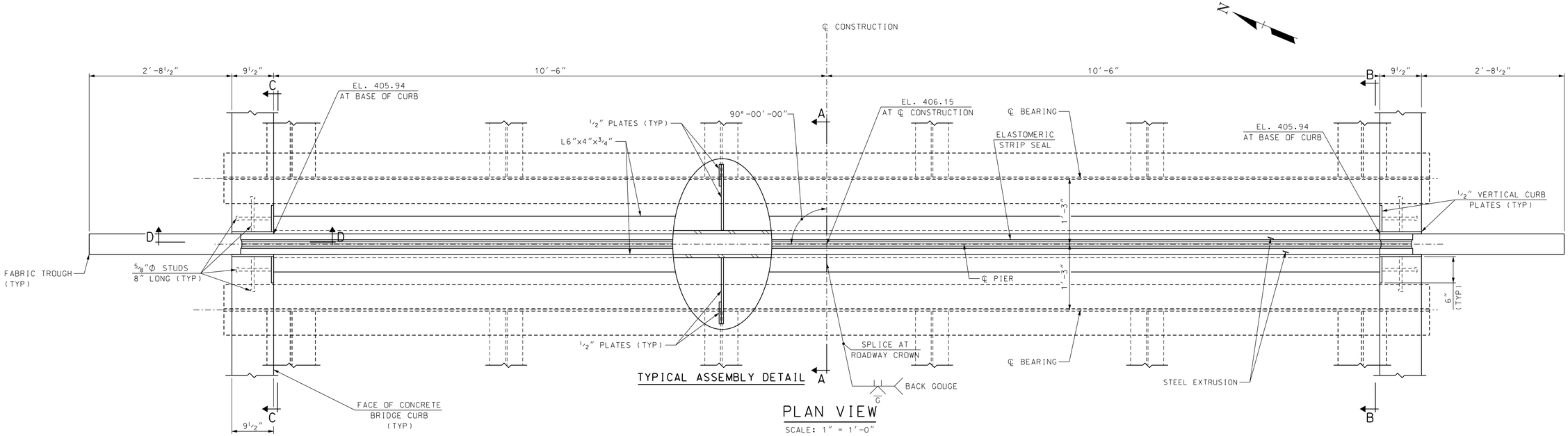
BRIDGE SHEET: 29 OF 38

REVISIONS AFTER PROPOSAL	BY	DATE

	BY	DATE		BY	DATE
DESIGNED	JDG	01/2019	CHECKED	JGS	03/2019
DRAWN	KLW	04/2021	CHECKED	LSF	04/2021
QUANTITIES	KLW	04/2021	CHECKED	LSF	04/2021

ISSUE DATE		FEDERAL PROJECT NO.	SHEET NO.	TOTAL SHEETS
REV. DATE		A000(394)	40	67

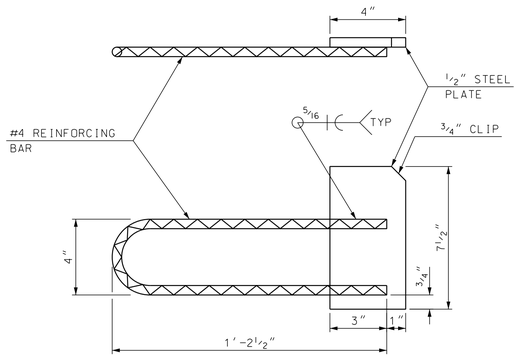
FILE NUMBER: 1-14-2-6



TYPICAL ASSEMBLY DETAIL

PLAN VIEW

SCALE: 1″ = 1′-0″



DECK ANCHORAGE DETAIL

(90° CROSSING)

SCALE: 3″ = 1′-0″

EXPANSION JOINT NOTES

(1) ALL EXPANSION JOINT STEEL, INCLUDING ANCHORS, SHALL BE GALVANIZED. STEEL ANGLES SHALL BE ASTM A572 GRADE 50. MINOR STEEL PLATES MAY CONFORM TO ASTM A36. THE ENTIRE ASSEMBLY, INCLUDING STRIP SEAL, FABRIC TROUGH, AND ATTACHMENTS SHALL BE PAID FOR AS ITEM 561.1001, PREFABRICATED STRIP SEAL EXPANSION JOINT (F).

(2) SPLICES FOR STEEL ANGLES SHALL DEVELOP FULL STRENGTH.

(3) EXPANSION JOINT OPENING SHALL BE ADJUSTED TO TEMPERATURE ANTICIPATED JUST PRIOR TO POURING DECK BLOCKOUT. FINAL SETTING IN THE FIELD SHALL BE DETERMINED BY THE CONTRACT ADMINISTRATOR. SEE TEMPERATURE ADJUSTMENT TABLE & NOTES.

(4) STRIP SEAL SHALL BE FURNISHED IN ONE CONTINUOUS LENGTH. NO SPLICES WILL BE ALLOWED. SEAL SHALL BE INSTALLED IN THE FIELD BY THE CONTRACTOR, IN ACCORDANCE WITH THE MANUFACTURER OF THE SEAL, USING AN APPROVED TOOL THAT WILL NOT DAMAGE THE SEAL.

(5) JOINT SUPPORT PLATES AND CURB PLATES SHALL BE SHOP WELDED TO EXPANSION JOINT STEEL AND SHALL BE NORMAL TO GRADE AFTER JOINT ASSEMBLY HAS BEEN ADJUSTED FOR ROADWAY CROSS-SLOPE AND GRADE. STEEL ANGLES AND EXTRUSIONS SHALL BE ASSEMBLED WITH A CONSTANT JOINT OPENING TO ENSURE PROPER PERFORMANCE AND WATER TIGHTNESS.

(6) IMMEDIATELY AFTER THE JOINT HAS BEEN SECURED TO THE STRUCTURAL STEEL AND BACKWALL, REMOVE SHIPPING DEVICES AND GRIND SMOOTH ANY WELDS ON EXPOSED SURFACES. REPAIR ANY DAMAGE TO GALVANIZED SURFACES IN ACCORDANCE WITH SECTION 550.

(7) PROTECT TOP OF EXPANSION JOINT DURING PLACEMENT OF CONCRETE.

(8) THE STRIP SEAL HAS BEEN DESIGNED FOR A TOTAL FACTORED MOVEMENT OF $2\frac{3}{4}$ INCHES. DESIGN INCLUDES MOVEMENT DUE TO TEMPERATURE, SKEW, SHRINKAGE AND MINIMUM INSTALLATION WIDTH. THE CONTRACTOR SHALL USE AN SE-400 SEAL BY WATSON BOWMAN OR A2R-400 BY D.S. BROWN, AS NOTED IN THE OPL.

(9) NO "LOW PROFILE" STEEL EXTRUSIONS SHALL BE ALLOWED. SEE OPL FOR APPROVED PRODUCTS.

(10) PRIOR TO INSTALLING THE SEAL, ALL TEMPORARY FORM WORK SHALL BE REMOVED. STEEL ANGLES AND EXTRUSIONS SHALL BE MAINTAINED FREE FROM DIRT, WATER AND ANY OTHER LOOSE DEBRIS, WITH THE USE OF COMPRESSED AIR, TO ENSURE PROPER FIT OF THE SEAL. CARE SHALL BE TAKEN NOT TO DAMAGE GALVANIZED SURFACES.

(11) THE FABRIC TROUGH SHALL CONFORM TO 561.2.2.2.

Stantec

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN LYME, NH & THETFORD, VT BRIDGE NO. 053\112 STATE PROJECT 14460

LOCATION VT ROUTE 113 & EAST THETFORD ROAD OVER THE CONNECTICUT RIVER

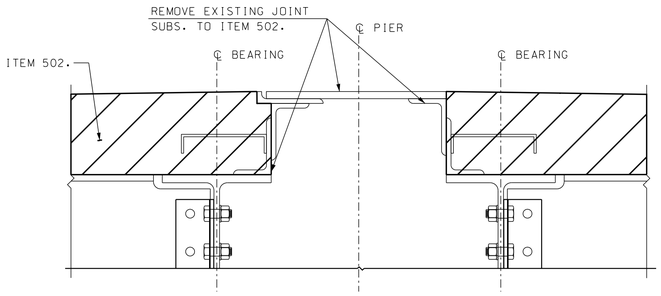
PIER STRIP SEAL EXPANSION JOINT (SHEET 1 OF 2)

BRIDGE SHEET: 30 OF 38

REVISIONS AFTER PROPOSAL				BY	DATE		BY	DATE
			DESIGNED	KLW	04/2021	CHECKED	DDT	04/2021
			DRAWN	KLW	04/2021	CHECKED	DDT	04/2021
			QUANTITIES	KLW	04/2021	CHECKED	JDG	04/2021

FILE NUMBER: 1-14-2-6

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE	ISSUE DATE	FEDERAL PROJECT NO.	SHEET NO.	TOTAL SHEETS
BRC	41_Backwall_Pier	AS NOTED	REV. DATE	A000(394)	41	67



SECTION A-A REMOVAL

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

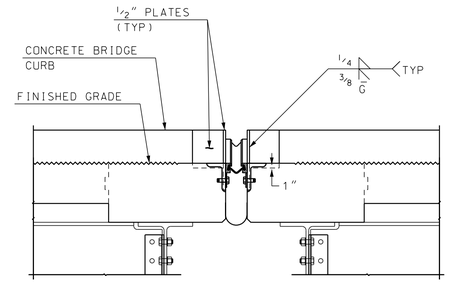
TEMPERATURE ADJUSTMENT TABLE	
TEMPERATURE	"T"
20°F	2 1/16"
35°F	2 9/16"
50°F	2 1/4"
65°F	2"
80°F	1 3/4"
95°F	1 7/16"

TEMPERATURE ADJUSTMENT NOTES

(1 "T" DIMENSIONS ARE PERPENDICULAR TO FACE OF BACKWALL.

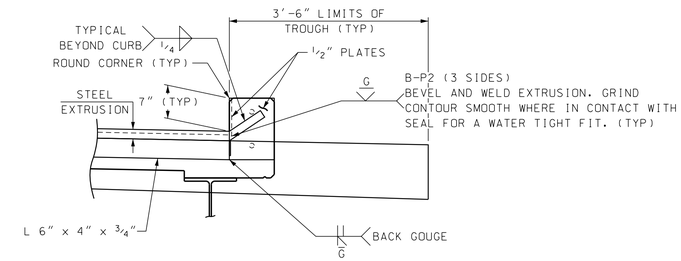
(2) MINIMUM "T" WIDTH FOR SEAL INSTALLATION = 2" (APPROXIMATELY 65°F OR LESS).

(3) VALUES IN THE TEMPERATURE ADJUSTMENT TABLE ARE FOR SETTING THE EXPANSION JOINT ASSEMBLY IMMEDIATELY PRIOR TO POURING THE DECK BLOCKOUT.



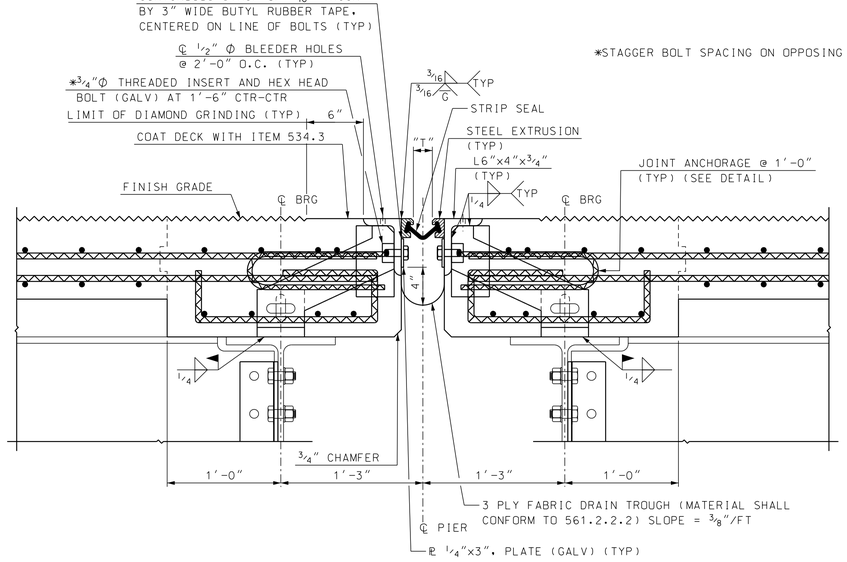
SECTION C-C

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



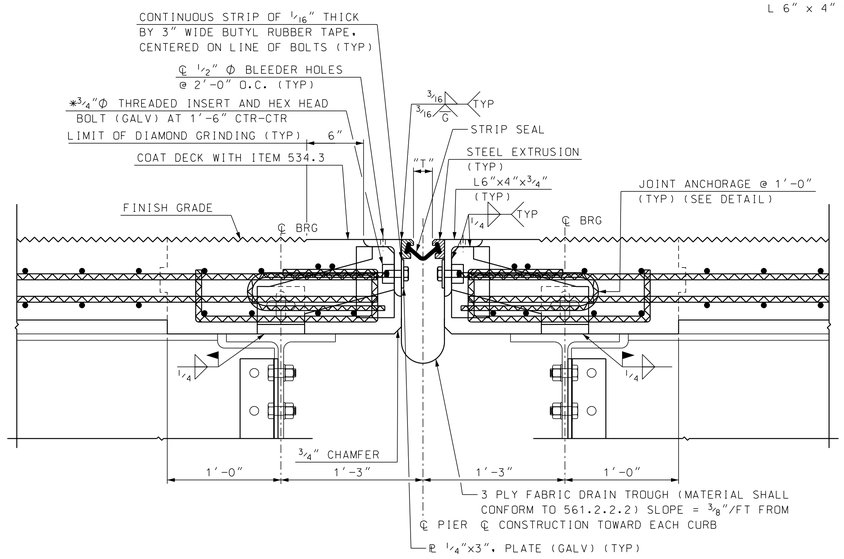
SECTION D-D

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



SECTION A-A CONSTRUCTION (AT ℄ CONSTRUCTION)

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



SECTION B-B CONSTRUCTION

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

Stantec

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC	42_Backwall_Detail_Pier	AS NOTED

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN LYME, NH & THETFORD, VT BRIDGE NO. 053\112 STATE PROJECT 14460

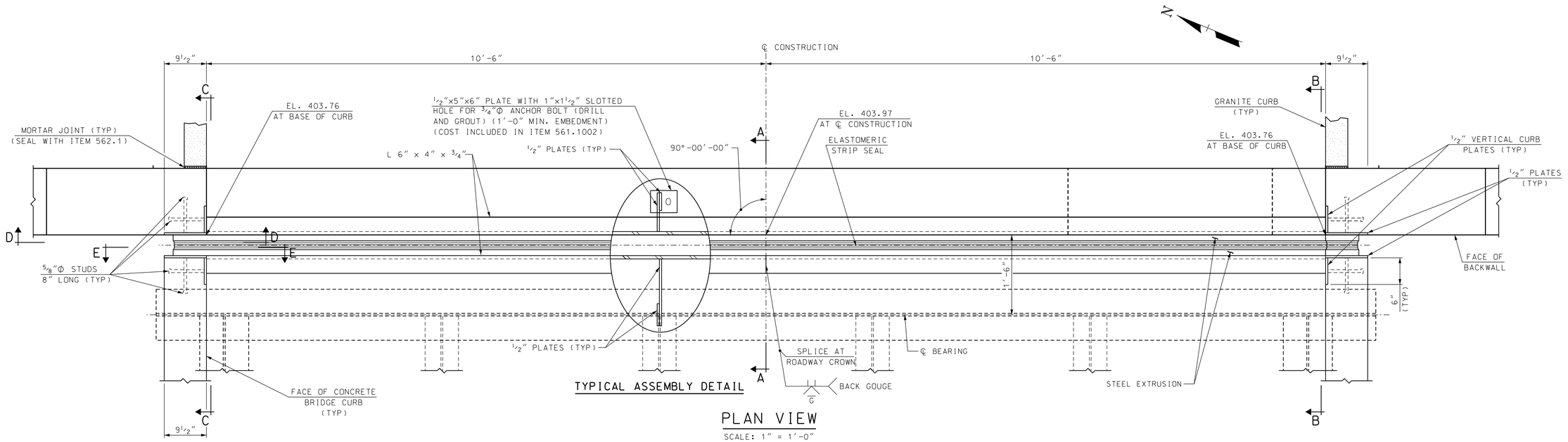
LOCATION VT ROUTE 113 & EAST THETFORD ROAD OVER THE CONNECTICUT RIVER

PIER STRIP SEAL EXPANSION JOINT (SHEET 2 OF 2)

BRIDGE SHEET 31 OF 38

REVISIONS AFTER PROPOSAL		BY	DATE		BY	DATE
	DESIGNED	KLW	04/2021	CHECKED	DDT	04/2021
	DRAWN	KLW	04/2021	CHECKED	DDT	04/2021
	QUANTITIES	KLW	04/2021	CHECKED	JDG	04/2021
	ISSUE DATE		FEDERAL PROJECT NO.		SHEET NO.	TOTAL SHEETS
	REV. DATE		A000(394)		42	67

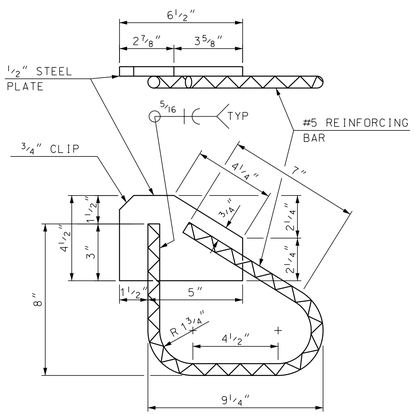
FILE NUMBER 1-14-2-6



TYPICAL ASSEMBLY DETAIL

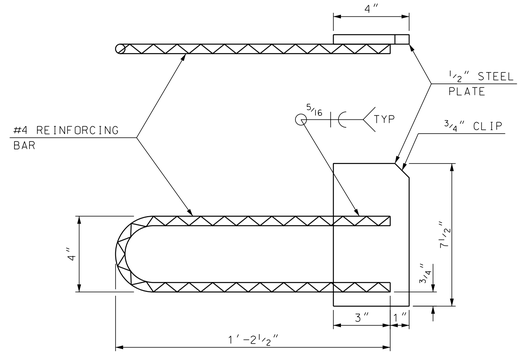
PLAN VIEW

SCALE: 1" = 1'-0"



BACKWALL ANCHORAGE DETAIL (90° CROSSING)

SCALE: 3" = 1'-0"



DECK ANCHORAGE DETAIL (90° CROSSING)

SCALE: 3" = 1'-0"

EXPANSION JOINT NOTES

(1) ALL EXPANSION JOINT STEEL, INCLUDING ANCHORS, SHALL BE GALVANIZED. STEEL ANGLES SHALL BE ASTM A572 GRADE 50. MINOR STEEL PLATES MAY CONFORM TO ASTM A36. THE ENTIRE ASSEMBLY, INCLUDING STRIP SEAL, SHALL BE PAID FOR AS ITEM 561.1002, PREFABRICATED STRIP SEAL EXPANSION JOINT (F).

(2) SPLICES FOR STEEL ANGLES SHALL DEVELOP FULL STRENGTH.

(3) EXPANSION JOINT OPENING SHALL BE ADJUSTED TO TEMPERATURE ANTICIPATED JUST PRIOR TO POURING DECK BLOCKOUT. FINAL SETTING IN THE FIELD SHALL BE DETERMINED BY THE CONTRACT ADMINISTRATOR. SEE TEMPERATURE ADJUSTMENT TABLE & NOTES.

(4) STRIP SEAL SHALL BE FURNISHED IN ONE CONTINUOUS LENGTH. NO SPLICES WILL BE ALLOWED. SEAL SHALL BE INSTALLED IN THE FIELD BY THE CONTRACTOR, IN ACCORDANCE WITH THE MANUFACTURER OF THE SEAL, USING AN APPROVED TOOL THAT WILL NOT DAMAGE THE SEAL.

(5) JOINT SUPPORT PLATES AND CURB PLATES SHALL BE SHOP WELDED TO EXPANSION JOINT STEEL AND SHALL BE NORMAL TO GRADE AFTER JOINT ASSEMBLY HAS BEEN ADJUSTED FOR ROADWAY CROSS-SLOPE AND GRADE. STEEL ANGLES AND EXTRUSIONS SHALL BE ASSEMBLED WITH A CONSTANT JOINT OPENING TO ENSURE PROPER PERFORMANCE AND WATER TIGHTNESS.

(6) IMMEDIATELY AFTER THE JOINT HAS BEEN SECURED TO THE STRUCTURAL STEEL AND BACKWALL, REMOVE SHIPPING DEVICES AND GRIND SMOOTH ANY WELDS ON EXPOSED SURFACES. REPAIR ANY DAMAGE TO GALVANIZED SURFACES IN ACCORDANCE WITH SECTION 550.

(7) PROTECT TOP OF EXPANSION JOINT DURING PLACEMENT OF CONCRETE.

(8) THE STRIP SEAL HAS BEEN DESIGNED FOR A TOTAL FACTORED MOVEMENT OF 2 3/4 INCHES. DESIGN INCLUDES MOVEMENT DUE TO TEMPERATURE, SKEW, SHRINKAGE AND MINIMUM INSTALLATION WIDTH. THE CONTRACTOR SHALL USE AN SE-400 SEAL BY WATSON BOWMAN OR A2R-400 BY D.S. BROWN, AS NOTED IN THE QPL.

(9) NO "LOW PROFILE" STEEL EXTRUSIONS SHALL BE ALLOWED. SEE QPL FOR APPROVED PRODUCTS.

(10) PRIOR TO INSTALLING THE SEAL, ALL TEMPORARY FORM WORK SHALL BE REMOVED. STEEL ANGLES AND EXTRUSIONS SHALL BE MAINTAINED FREE FROM DIRT, WATER AND ANY OTHER LOOSE DEBRIS, WITH THE USE OF COMPRESSED AIR, TO ENSURE PROPER FIT OF THE SEAL. CARE SHALL BE TAKEN NOT TO DAMAGE GALVANIZED SURFACES.

Stantec

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC	43_Backwall	AS NOTED

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN LYME, NH & THETFORD, VT BRIDGE NO. 053\112 STATE PROJECT 14460

LOCATION VT ROUTE 113 & EAST THETFORD ROAD OVER THE CONNECTICUT RIVER

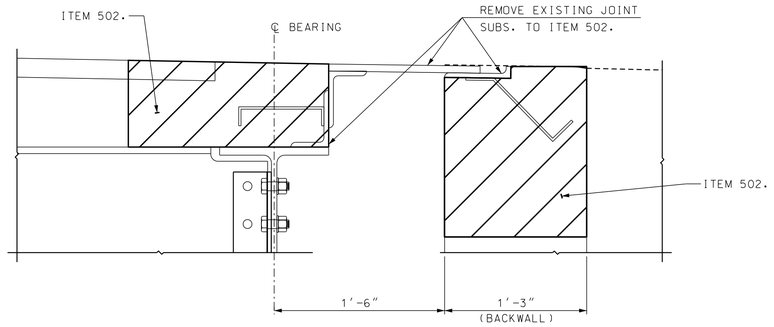
ABUT. B STRIP SEAL EXPANSION JOINT (SHEET 1 OF 2)

BRIDGE SHEET: 32 OF 38

REVISIONS AFTER PROPOSAL			BY	DATE		BY	DATE
		DESIGNED	KLW	04/2021	CHECKED	DDT	04/2021
		DRAWN	KLW	04/2021	CHECKED	DDT	04/2021
		QUANTITIES	KLW	04/2021	CHECKED	JDG	04/2021

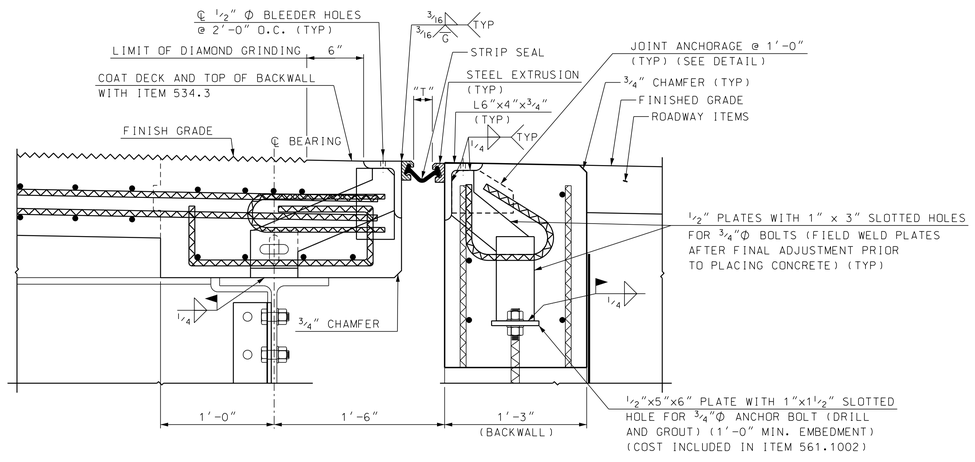
FILE NUMBER: 1-14-2-6

ISSUE DATE	FEDERAL PROJECT NO.	SHEET NO.	TOTAL SHEETS
REV. DATE	A000(394)	43	67



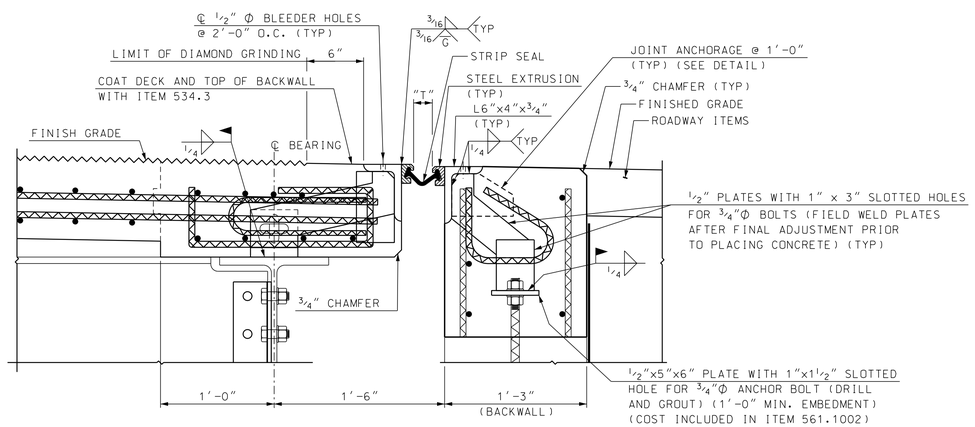
SECTION A-A REMOVAL

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



SECTION A-A CONSTRUCTION

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



SECTION B-B CONSTRUCTION

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

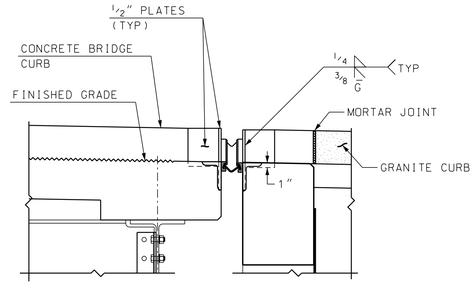
TEMPERATURE ADJUSTMENT TABLE	
TEMPERATURE	"T"
20°F	2 1/16"
35°F	2 9/16"
50°F	2 1/4"
65°F	2"
80°F	1 3/4"
95°F	1 7/16"

TEMPERATURE ADJUSTMENT NOTES

(1) "T" DIMENSIONS ARE PERPENDICULAR TO FACE OF BACKWALL.

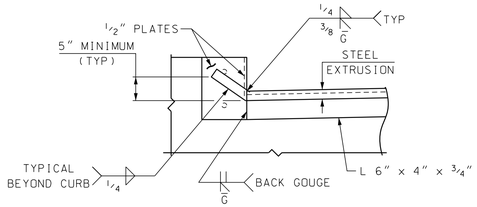
(2) MINIMUM "T" WIDTH FOR SEAL INSTALLATION = 2" (APPROXIMATELY 65°F OR LESS).

(3) VALUES IN THE TEMPERATURE ADJUSTMENT TABLE ARE FOR SETTING THE EXPANSION JOINT ASSEMBLY IMMEDIATELY PRIOR TO POURING THE DECK BLOCKOUT.



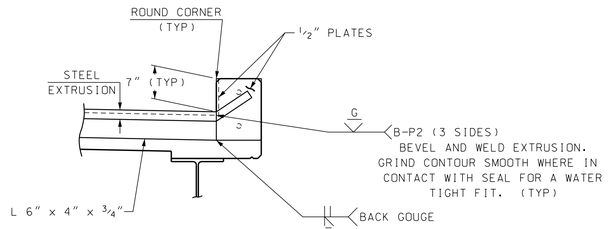
SECTION C-C

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



SECTION D-D

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



SECTION E-E

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

Stantec

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC	44_Backwall_Detail	AS NOTED

STATE OF NEW HAMPSHIRE

DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN LYME, NH & THETFORD, VT BRIDGE NO. 053\112 STATE PROJECT 14460

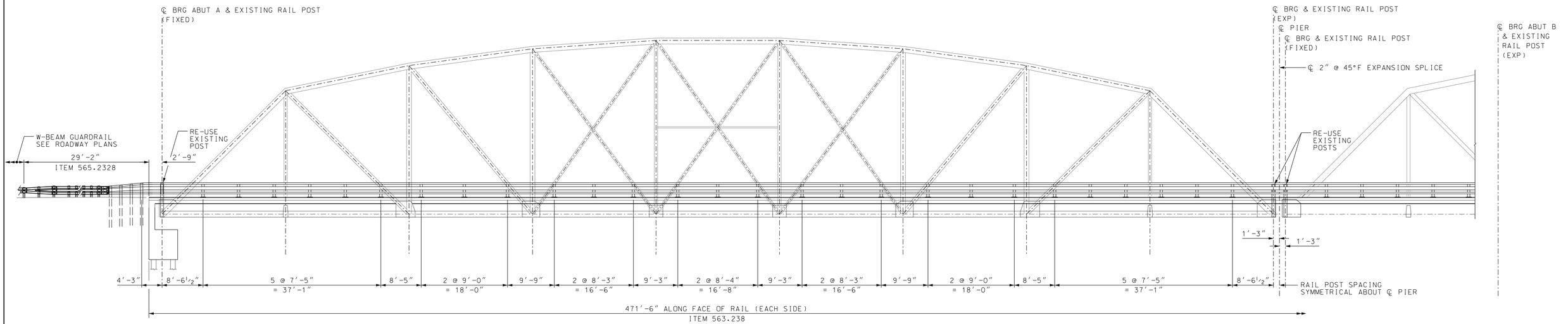
LOCATION VT ROUTE 113 & EAST THETFORD ROAD OVER THE CONNECTICUT RIVER

ABUT. B STRIP SEAL EXPANSION JOINT (SHEET 2 OF 2)

BRIDGE SHEET: 33 OF 38

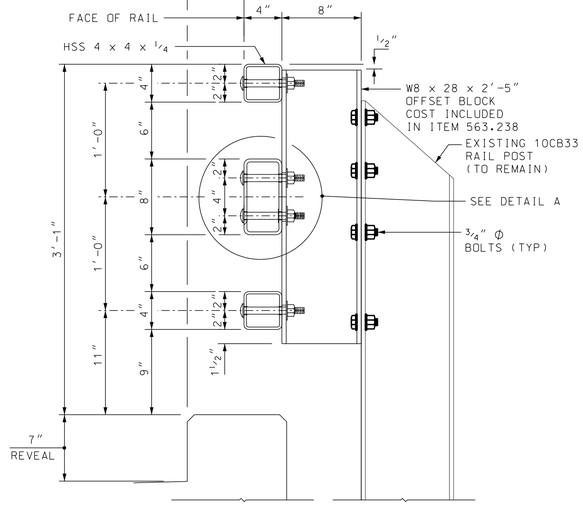
REVISIONS AFTER PROPOSAL			BY	DATE		BY	DATE
		DESIGNED	KLW	04/2021	CHECKED	DDT	04/2021
		DRAWN	KLW	04/2021	CHECKED	DDT	04/2021
		QUANTITIES	KLW	04/2021	CHECKED	JDG	04/2021
		ISSUE DATE			FEDERAL PROJECT NO.	SHEET NO.	TOTAL SHEETS
		REV. DATE			A000(394)	44	67

FILE NUMBER: 1-14-2-6



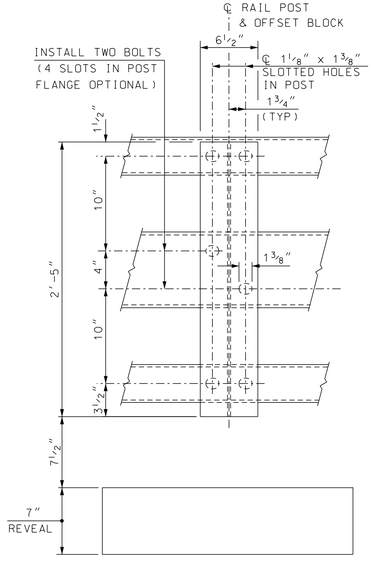
BRIDGE RAIL ELEVATION

SCALE: 1" = 10'-0"



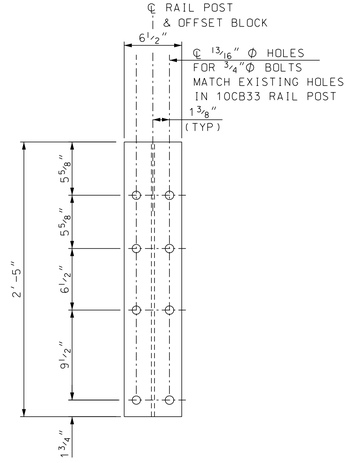
EXISTING POST SECTION

SCALE: 1½" = 1'-0"
(AT ℄ BEARINGS ABUTMENTS AND PIER)



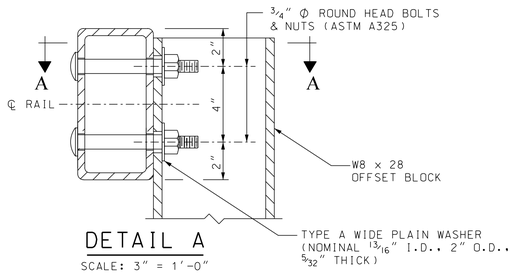
OFFSET BLOCK RAIL CONNECTION

SCALE: 1½" = 1'-0"
NOTE: SEE BRIDGE SHEET 35 OF 38 FOR ADDITIONAL DETAILS.



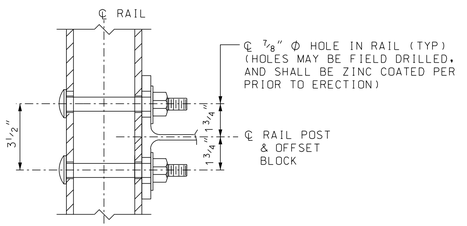
OFFSET BLOCK POST CONNECTION

SCALE: 1½" = 1'-0"



DETAIL A

SCALE: 3" = 1'-0"



SECTION A-A

SCALE: 3" = 1'-0"

Stantec

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC	45_BrgRail_elev	AS NOTED

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN LYME, NH & THETFORD, VT — BRIDGE NO. 053\112 — STATE PROJECT 14460

LOCATION VT ROUTE 113 & EAST THETFORD ROAD OVER THE CONNECTICUT RIVER

BRIDGE RAIL LAYOUT

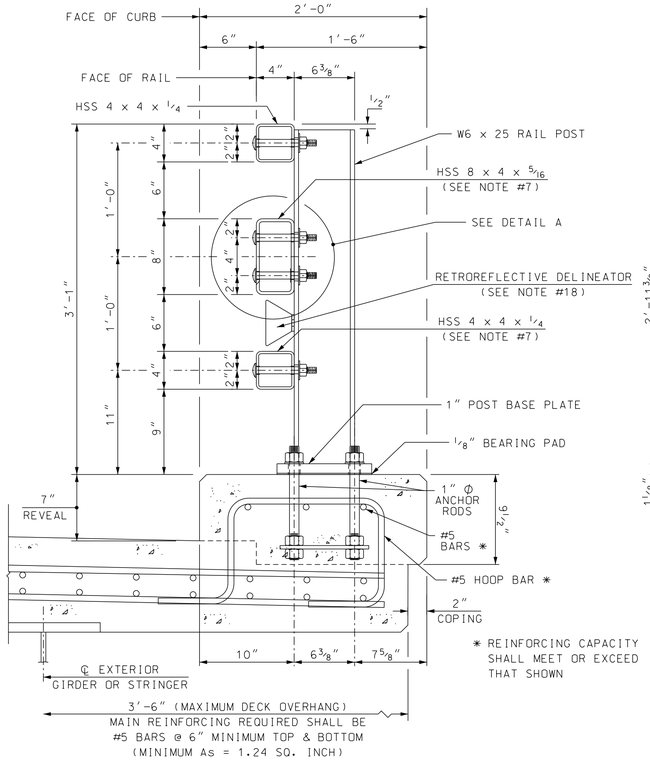
BRIDGE SHEET: 34 OF 38

REVISIONS AFTER PROPOSAL	BY	DATE

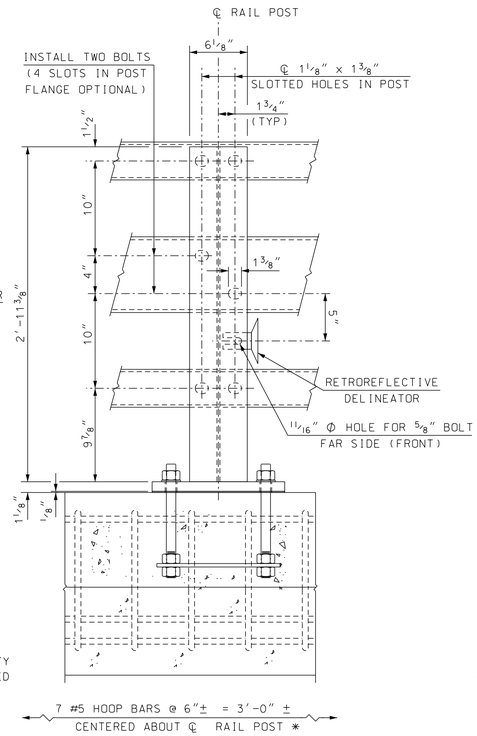
	BY	DATE		BY	DATE
DESIGNED	JDG	01/2019	CHECKED	JGS	03/2019
DRAWN	LRB	02/2019	CHECKED	JGS	03/2019
QUANTITIES	JDG	03/2019	CHECKED	TEK	03/2019

ISSUE DATE	FEDERAL PROJECT NO.	SHEET NO.	TOTAL SHEETS
REV. DATE	A000(394)	45	67

FILE NUMBER: 1-14-2-6



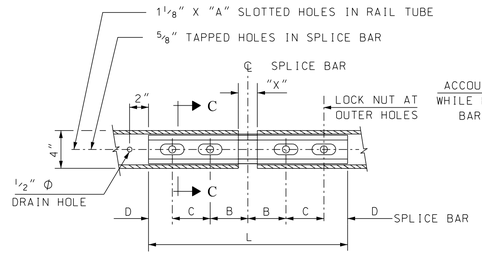
SECTION VIEW



BACK ELEVATION VIEW

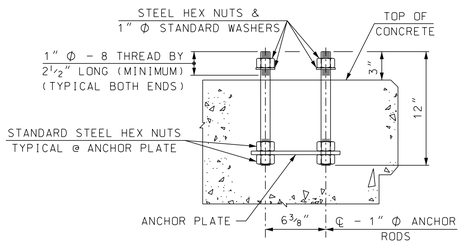
POST ASSEMBLY

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



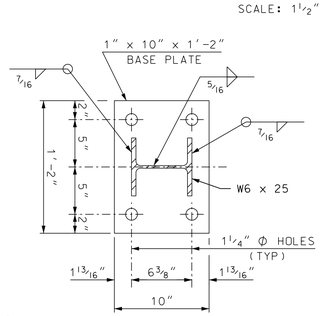
RAIL SPLICE (BOTTOM VIEW)

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



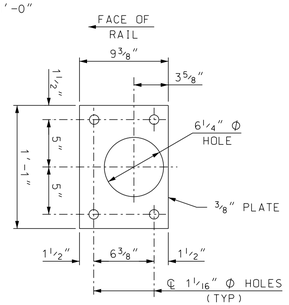
POST ANCHOR ASSEMBLY

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



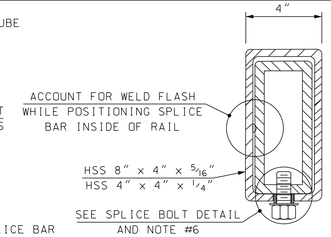
POST BASE PLATE

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

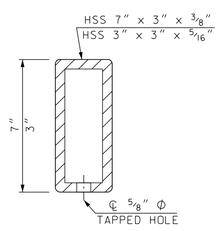


ANCHOR PLATE

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



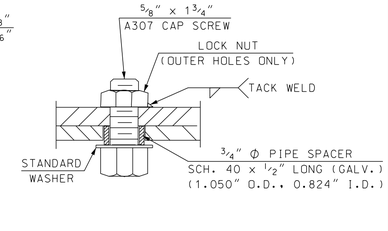
SECTION C-C



SPLICE BAR SECTION

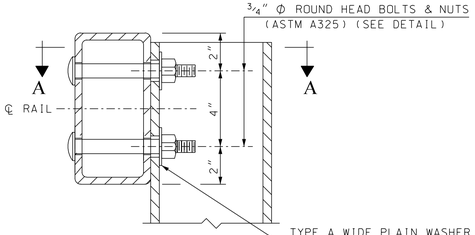
RAIL SPLICE DETAILS

SCALE: 3" = 1'-0"



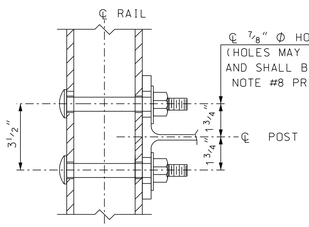
SPLICE BOLT DETAIL

SCALE: 6" = 1'-0"



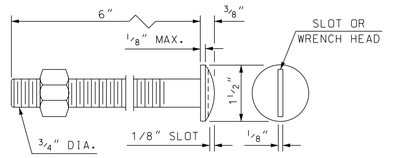
DETAIL A

SCALE: 3" = 1'-0"



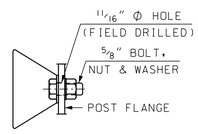
SECTION A-A

SCALE: 3" = 1'-0"



A325 ROUND HEAD BOLT DETAIL

SCALE: 6" = 1'-0"

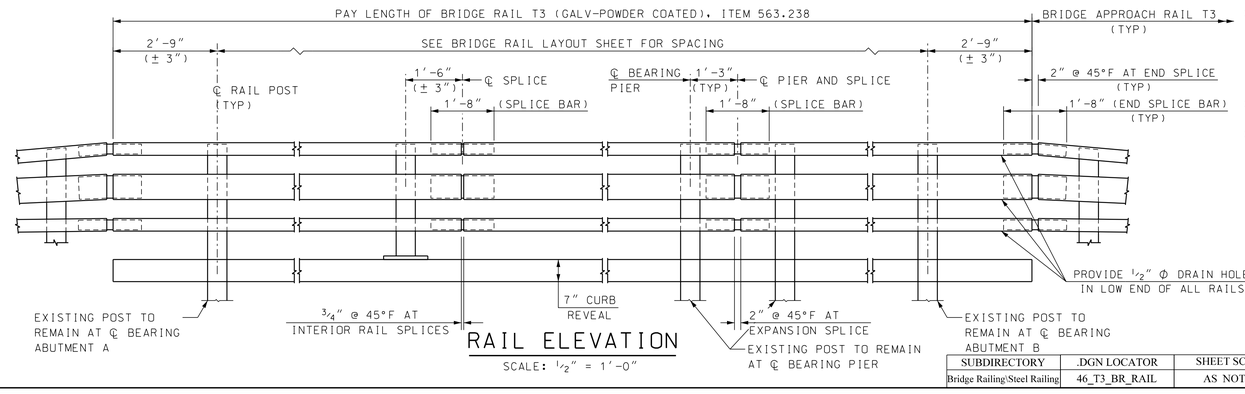


DELINEATOR MOUNTING

NOT TO SCALE

SPLICE BAR DIMENSION TABLE						
T	A	B	C	D	X	L
INTERIOR	2 1/2"	4"	4"	2"	3/4"	1'-8"
** ≤ 3 1/4"	2 1/2"	4"	4"	2"	2"	1'-8"

T = TOTAL MOVEMENT OF BRIDGE
** = END SPLICE BAR AND EXPANSION SPLICE BAR



RAIL ELEVATION

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

RAIL NOTES

(1) ITEM 563.238, BRIDGE RAIL T3 (GALV-POWDER COATED), SHALL INCLUDE POSTS, BASE PLATES, OFFSET BLOCKS, ANCHOR PLATES, ANCHOR RODS, PREFORMED PADS, RAIL ASSEMBLY BOLTS, NUTS, WASHERS, STUDS, STRUCTURAL TUBING, SPLICE BARS, PIPE SPACERS, ALL APPURTENANCES, GALVANIZING AND POWDER COATING.

(2) BRIDGE RAIL POSTS SHALL BE SET NORMAL (90 DEGREES) TO THE PROFILE GRADE, EXCEPT ON GRADES OVER 5% WHERE POSTS SHALL BE SET VERTICAL.

(3) ENDS OF RAIL TUBE SECTIONS SHALL BE SAWED OR MILLED AND SHALL BE TRUE AND SMOOTH. ALL CUT EDGES OF ALL MATERIAL SHALL BE GROUND SMOOTH.

(4) EACH PIECE OF RAIL TUBING SHALL BE ATTACHED TO A MINIMUM OF THREE (3) POSTS.

(5) BOLT HOLES SHALL BE DRILLED OR PUNCHED. FLAME CUTTING MAY BE USED TO FINISH SLOTTED HOLES IF MECHANICALLY GUIDED.

(6) AT INTERIOR SPLICES, PIPE SPACERS SHALL BE USED ON ONLY ONE SIDE OF THE SPLICE TO ALLOW MOVEMENT ON THAT SIDE. ALL RAILS IN A SPLICE SHALL RECEIVE THE SAME TREATMENT. AT END SPLICES AT ABUTMENTS, AND EXPANSION SPLICES AT PIER, PIPE SPACERS SHALL BE USED ON BOTH SIDES OF THE SPLICE TO ALLOW MOVEMENT ON EACH SIDE.

(7) MILL OR SHOP TRANSVERSE WELDS SHALL NOT BE PERMITTED ON ANY RAIL ELEMENT. RAIL ELEMENTS USED ON CURVES SHALL USE 3/8" WALL TUBES AND SHALL BE SHOP FORMED TO THE REQUIRED CURVATURE (SEE SECTION 563.3.2.1).

(8) NO PUNCHING, DRILLING, CUTTING OR WELDING SHALL BE PERMITTED AFTER GALVANIZING,EXCEPT AS ALLOWED IN DETAIL A, AND FOR INSTALLATION OF DELINEATORS. DAMAGED AREAS OF GALVANIZING SHALL BE THOROUGHLY CLEANED, PRETREATED, AND PAINTED WITH TWO COATS OF ORGANIC ZINC-RICH GALVANIZING REPAIR PAINT, HAVING A MINIMUM 92% ZINC BY WEIGHT, TO A THICKNESS EQUAL TO THE ORIGINAL COATING, ACCORDING TO SECTION 550.2.9.1 AND ASTM A780.

(9) NUTS FOR 1" Ø THREADED ANCHOR RODS CONNECTING THE BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL 1/8 TURN.

(10) THREADS FOR ANCHOR RODS MAY BE ROLLED OR CUT. IF CUT THREADS ARE USED, BOLT DIAMETER SHALL NOT BE LESS THAN NOMINAL DIAMETER. IF ROLLED THREADS ARE USED, ROD DIAMETER SHALL NOT BE LESS THAN ROOT DIAMETER OF THREADS.

(11) THIS BRIDGE RAIL SYSTEM IS IN COMPLIANCE WITH T2 STEEL BRIDGE RAIL WHICH WAS SUCCESSFULLY CRASH TESTED FOR AASHTO PL2 IN 1994 BY THE NEW ENGLAND TRANSPORTATION CONSORTIUM AND ACCEPTED AS NCHRP 350 TL-4 PER FHWA LETTER HMHS-B50, MARCH 11, 1999.

MATERIAL NOTES

(12) STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500, GRADE B, STRUCTURAL STEEL TUBING. RAIL TUBING SHALL MEET THE LONGITUDINAL CHARPY V-NOTCH REQUIREMENTS OF 15 FT. LBS. AT 0°F. FOR ASTM A500, GRADE B, THE TEST SAMPLES SHALL BE TAKEN AFTER FORMING THE TUBES. CHARPY V-NOTCH IS NOT REQUIRED FOR SPLICE TUBES.

(13) RAIL POSTS AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A572 GR 50, EXCEPT ANCHOR PLATES MAY BE ASTM A36.

(14) DETAIL A BOLTS SHALL BE ASTM A325 OR A449. ALL OTHER BOLTS AND NUTS SHALL CONFORM TO ASTM A307 AND ASTM 563 GRADE A RESPECTIVELY OR BETTER, EXCEPT THAT ASTM A307 NUTS MAY BE USED ON THE BOTTOM OF ANCHOR ASSEMBLY. WASHERS SHALL BE HARDENED STEEL COMMERCIAL TYPE A PLAIN WIDE WASHERS AND SHALL MEET THE DIMENSIONAL REQUIREMENTS OF A.N.S.I. B18.22. ANCHOR RODS SHALL CONFORM TO ASTM A449.

(15) ALL STEEL COMPONENTS (EXCEPT STAINLESS) SHALL BE GALVANIZED AFTER FABRICATION IN COMPLIANCE WITH AASHTO M232 (ASTM A153) AND AASHTO M111 (ASTM A123). THE GALVANIZING KETTLE SHALL HAVE 0.05 TO 0.09 PERCENT NICKEL. GALVANIZED SURFACES SHALL HAVE A UNIFORM APPEARANCE AND GALVANIZED MATERIAL SHALL BE PROPERLY STORED. IF DUPLEX COATING IS REQUIRED SEE SPECIAL PROVISION FOR 708.

(16) PREFORMED BEARING PADS (1/8" THICK) SHALL CONFORM TO AASHTO M251.

(17) RETROREFLECTIVE DELINEATORS, BOLTS, NUTS, WASHERS AND FIELD DRILLING OF POSTS, INCLUDING GALVANIZING TOUCH-UP, SHALL BE SUBSIDIARY TO ITEM 563.238. SEE STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION (DL-1) FOR ADDITIONAL DETAILS AND SPACING.

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN LYME, NH-THETFORD, VT BRIDGE NO. 053/112 STATE PROJECT 14460

LOCATION EAST THETFORD ROAD OVER THE CONNECTICUT RIVER

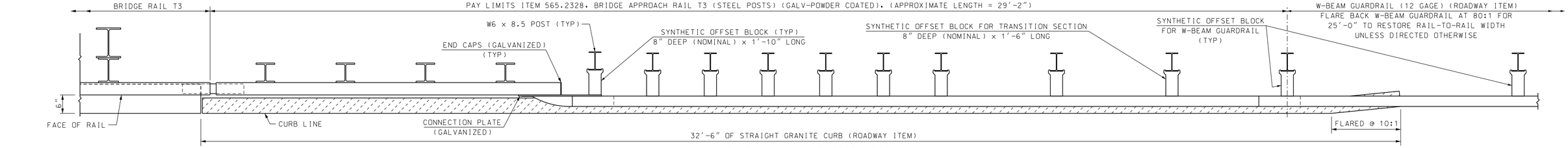
T3 STEEL BRIDGE RAIL

BRIDGE SHEET 35 OF 38

REVISIONS AFTER PROPOSAL	BY	DATE		BY	DATE
	DESIGNED NETC/JSZ	3/02	CHECKED NHDOT		
	DRAWN PJP	10/05	CHECKED JSZ	10/05	
	QUANTITIES		CHECKED		
	ISSUE DATE 11/15/05		FEDERAL PROJECT NO.	SHEET NO.	TOTAL SHEETS
	REV. DATE 8/29/19		A000(394)	46	67

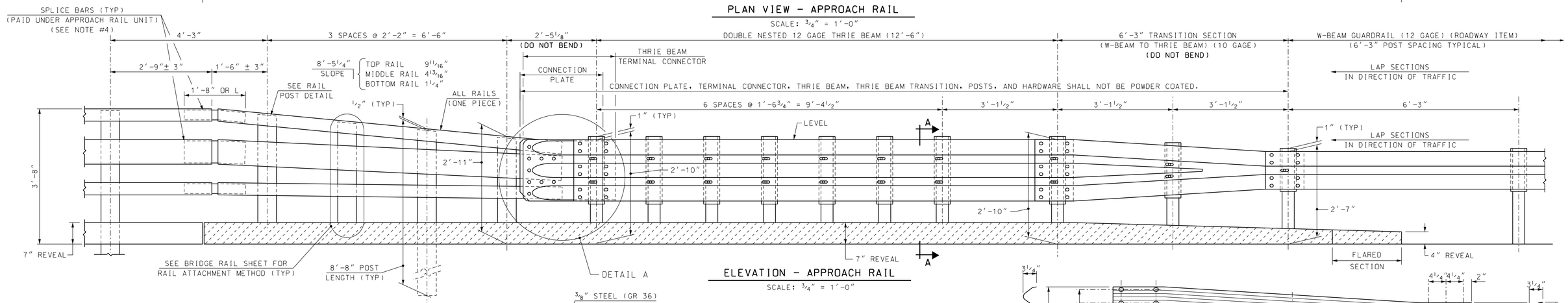
FILE NUMBER 1-14-2-6

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
Bridge Railing\Steel Railing	46_T3_BR_RAIL	AS NOTED



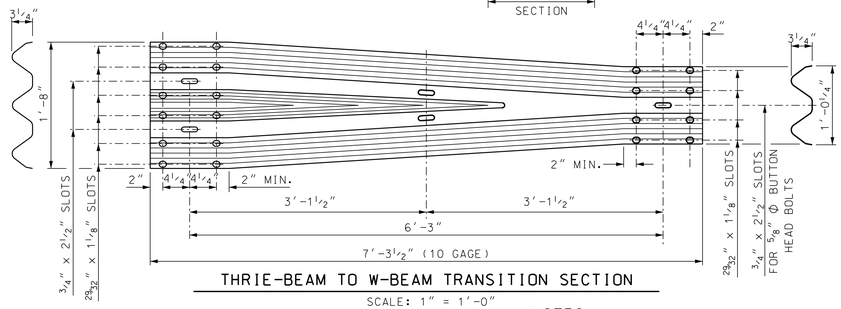
PLAN VIEW - APPROACH RAIL

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



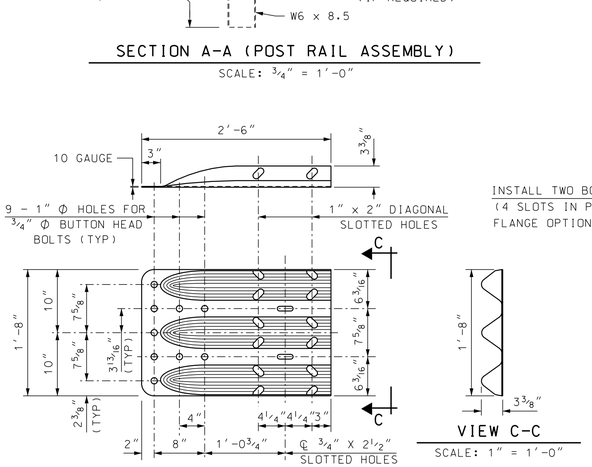
ELEVATION - APPROACH RAIL

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



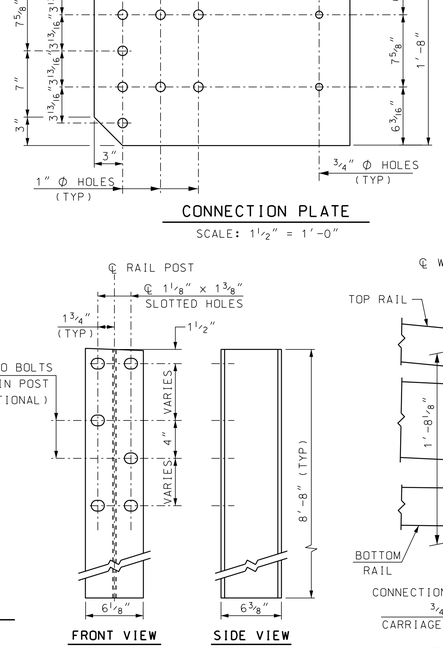
THRIE-BEAM TO W-BEAM TRANSITION SECTION

SCALE: 1" = 1'-0"



SECTION A-A (POST RAIL ASSEMBLY)

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

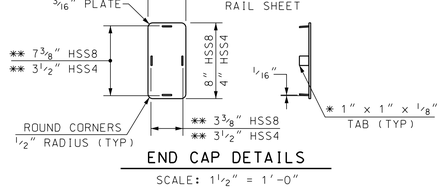


CONNECTION PLATE

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

* WELD TABS TO END CAP PLATE IN TAPERED POSITION SO CAP CAN BE JAMMED INTO END OF RAIL TUBE

** SEE RAIL NOTES ON BRIDGE RAIL SHEET



END CAP DETAILS

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

THRIE-BEAM TERMINAL CONNECTOR

SCALE: 1" = 1'-0"

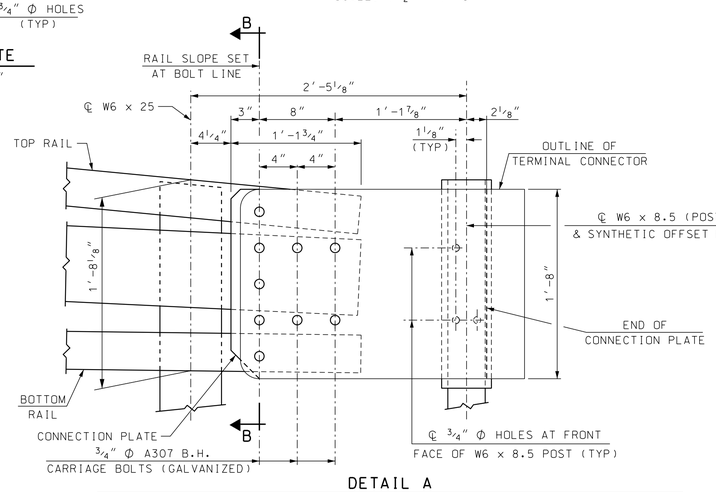
VIEW C-C

SCALE: 1" = 1'-0"

FRONT VIEW — SIDE VIEW

RAIL POST (W6 x 25)

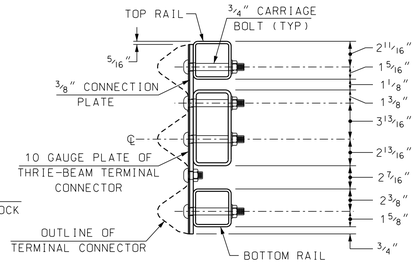
SCALE: 1 1/2" = 1'-0"



DETAIL A

OVERLAPPING OF DOUBLE NESTED THRIE-BEAM NOT SHOWN FOR CLARITY

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



SECTION B-B (CONNECTION PLATE)

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

NOTES

(1) ALL BRIDGE APPROACH RAIL MATERIALS, DIMENSIONS, SIZES, AND NOTES SHALL BE THE SAME AS THOSE OF THE BRIDGE RAIL, UNLESS OTHERWISE NOTED. SEE BRIDGE RAIL SHEET FOR NOTES AND ADDITIONAL INFORMATION.

(2) W6 x 25 POSTS SHALL BE THE SAME MATERIAL AS THE BRIDGE RAIL POSTS. W6 x 8.5 POSTS SHALL BE THE SAME AS W-BEAM GUARDRAIL POSTS.

(3) CARRIAGE BOLTS SHALL BE ASTM A307, AND NUTS SHALL BE ASTM A563 GRADE A OR BETTER (GALVANIZED).

(4) WELD BARS ADJUSTED FOR SLOPE & BEND. USE COMPLETE JOINT PENETRATION BUTT WELD (B-U2).

(5) THIS BRIDGE RAIL TRANSITION SYSTEM WAS SUCCESSFULLY CRASH TESTED IN APRIL 2005 BY THE NEW ENGLAND TRANSPORTATION CONSORTIUM AND ACCEPTED AS NCHRP 350 TL-3 PER FHWA LETTER HSSD/B-146.

(6) ALL COMPONENTS, EXCEPT TUBULAR RAIL, SHALL CONFORM TO SECTION 606 OF NHDOT SPECIFICATIONS.

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN LYME, NH-THETFORD, VT BRIDGE NO. 053/112 STATE PROJECT 14460

LOCATION EAST THETFORD ROAD OVER THE CONNECTICUT RIVER

T3 STEEL BRIDGE APPROACH RAIL (STEEL POSTS)

BRIDGE SHEET 36 OF 38

REVISIONS AFTER PROPOSAL		BY	DATE		BY	DATE
	DESIGNED	NETC/JSZ	3/02	CHECKED	NHDOT	
	DRAWN	PJP	10/05	CHECKED	JSZ	10/05
	QUANTITIES			CHECKED		
	ISSUE DATE	11/15/05	FEDERAL PROJECT NO.		SHEET NO.	TOTAL SHEETS
	REV. DATE	6/25/19	A000(394)		47	67

FILE NUMBER 1-14-2-6

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
Bridge Railing/Steel Railing	47_T3SP_APPRAIL	AS NOTED

ABUTMENT A BRIDGE SHEET 11 OF 38

Mark	Size	Length	# Pieces	Type	A	B	C	D	E	F	G	H	J	K	R	O	Coating
A1	#5	28.58	4	—													EPOXY
A2	#5	2.71	8	—													EPOXY
A3	#5	1.96	4	—													EPOXY
A4	#5	6.17	8	—													EPOXY
A5	#5	5.83	6	—													EPOXY
A6	#5	2.63	4	—													EPOXY
A7	#5	2.33	2	—													EPOXY
A1	#4	4.60	4	S5	1.50	0.60	1.83	0.67			0.00						EPOXY

SECTION SUMMARY TOTAL WEIGHT (lbs):

ITEM #	DESCRIPTION	#3	#4	#5	#6	#7	#8	#9	#10	#11	#14	#18	TOTAL
544	REINFORCING STEEL	0	0	0	0	0	0	0	0	0	0	0	0
544.11	MECH. CONNECTOR	0	0	0	0	0	0	0	0	0	0	0	0
544.2	EPOXY COATED	0	12	254	0	0	0	0	0	0	0	0	266
544.21	EPOXY MECH. CON.	0	0	0	0	0	0	0	0	0	0	0	0
544.43	CONTINUOUSLY GALV	0	0	0	0	0	0	0	0	0	0	0	0
544.51	STAINLESS STEEL	0	0	0	0	0	0	0	0	0	0	0	0

ABUTMENT B BRIDGE SHEET 14 OF 38

Mark	Size	Length	# Pieces	Type	A	B	C	D	E	F	G	H	J	K	R	O	Coating
B1	#5	28.58	4	—													EPOXY
B2	#5	3.13	4	—													EPOXY
B3	#5	3.58	4	—													EPOXY
B1	#4	4.67	4	S5	0.00	1.83	0.33	1.83			0.67						EPOXY

SECTION SUMMARY TOTAL WEIGHT (lbs):

ITEM #	DESCRIPTION	#3	#4	#5	#6	#7	#8	#9	#10	#11	#14	#18	TOTAL
544	REINFORCING STEEL	0	0	0	0	0	0	0	0	0	0	0	0
544.11	MECH. CONNECTOR	0	0	0	0	0	0	0	0	0	0	0	0
544.2	EPOXY COATED	0	12	147	0	0	0	0	0	0	0	0	160
544.21	EPOXY MECH. CON.	0	0	0	0	0	0	0	0	0	0	0	0
544.43	CONTINUOUSLY GALV	0	0	0	0	0	0	0	0	0	0	0	0
544.51	STAINLESS STEEL	0	0	0	0	0	0	0	0	0	0	0	0

PIER BRIDGE SHEET 16 OF 38

Mark	Size	Length	# Pieces	Type	A	B	C	D	E	F	G	H	J	K	R	O	Coating
P1	#5	3.75	56	N8		2.75	1.00										
P2	#5	4.75	32	N8		3.75	1.00										
P3	#5	4.83	96	—													
P4	#5	37.00	10	—													
P5	#5	19.67	10	N6		3.58	6.25	3.58				4.42		4.42			

SECTION SUMMARY TOTAL WEIGHT (lbs):

ITEM #	DESCRIPTION	#3	#4	#5	#6	#7	#8	#9	#10	#11	#14	#18	TOTAL
544	REINFORCING STEEL	0	0	1453	0	0	0	0	0	0	0	0	1453
544.11	MECH. CONNECTOR	0	0	0	0	0	0	0	0	0	0	0	0
544.2	EPOXY COATED	0	0	0	0	0	0	0	0	0	0	0	0
544.21	EPOXY MECH. CON.	0	0	0	0	0	0	0	0	0	0	0	0
544.43	CONTINUOUSLY GALV	0	0	0	0	0	0	0	0	0	0	0	0
544.51	STAINLESS STEEL	0	0	0	0	0	0	0	0	0	0	0	0

STANDARD INDUSTRY BENDS, STIRRUPS, & TIES

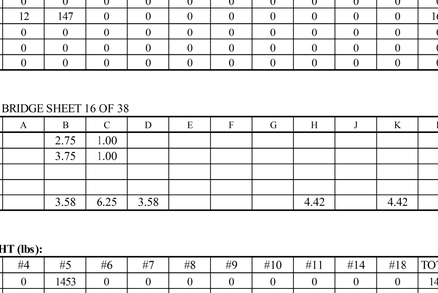
RECOMMENDED END HOOKS ALL GRADES (IN)

BAR SIZE	D Ø	180° HOOKS A,G	180° HOOKS J	90° HOOKS A,G
#3	$2^1/_4$	5	3	6
#4	3	6	4	8
#5	$3^3/_4$	7	5	10
#6	$4^1/_2$	8	6	12
#7	$5^1/_4$	10	7	14
#8	6	11	8	16
#9	$9^1/_2$	15	$11^3/_4$	19
#10	$10^3/_4$	17	$13^1/_4$	22
#11	12	19	$14^3/_4$	24
#14	$18^1/_4$	27	$21^3/_4$	31

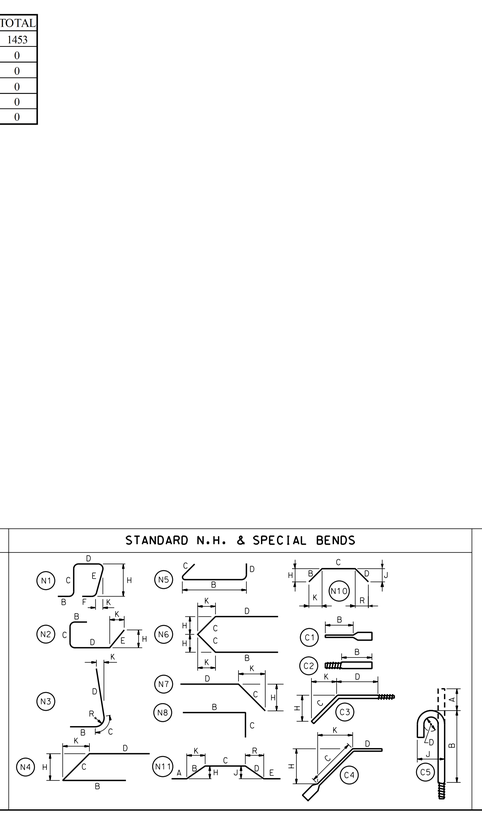
STIRRUP & TOE HOOK DIMENSIONS ALL GRADES (IN)

BAR SIZE	D Ø	90° HOOKS A,G	135° HOOKS A,G	135° HOOKS H(appr)
#3	$1^1/_2$	4	4	$2^1/_2$
#4	2	$4^1/_2$	$4^1/_2$	3
#5	$2^1/_2$	6	$5^1/_2$	$3^3/_4$
#6	$4^1/_2$	12	$7^3/_4$	$4^1/_2$
#7	$5^1/_4$	14	9	$5^1/_4$
#8	6	16	$10^1/_4$	6

NOTE: D = finished inside bend d of hook. For additional data on standard bar bends not shown on this sheet see current CRSI Manual.



STANDARD N.H. & SPECIAL BENDS



NOTES:
1. FIGURES IN CIRCLE SHOW TYPE OF BEND.
2. UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING #18 SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET - STEEL BARS FOR CONCRETE REINFORCEMENT".AASHTO M 31-94 (ASTM A615).
3. FOR TYPICAL BENDING DETAILS, RECOMMENDED PIN DIAMETER "D" OF BENDS AND HOOKS AND OTHER STANDARD PRACTICE REFER TO THE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE".
4. BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
5. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180° AND 135° HOOKS.
6. "J" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHEN NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE STANDARD HOOKS ARE TO BE USED.
7. "H" DIMENSION ON STIRRUPS TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
8. WHERE SLOPE DIFFERS FROM 45° DIMENSIONS "H" AND "K" MUST BE SHOWN.

▲ DENOTES BARS TO BE CUT IN FIELD, AS REQUIRED.
Δ DENOTES BARS TO BE BENT IN FIELD.

ASTM STANDARD REINFORCING BARS

BAR SIZE	WEIGHT LBS/FT	DIAM IN	CROSS SECT AREA IN²
#3	0.376	0.375	0.11
#4	0.668	0.500	0.20
#5	1.043	0.625	0.31
#6	1.502	0.750	0.44
#7	2.044	0.875	0.60
#8	2.670	1.000	0.79
#9	3.400	1.128	1.00
#10	4.303	1.270	1.27
#11	5.313	1.410	1.56
#14	7.650	1.693	2.25
#18	13.600	2.257	4.00

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC	14460Rebar_Sch_01	AS NOTED

Stantec

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN LYME, NH & THETFORD, VT BRIDGE NO. 053\112 STATE PROJECT 14460

LOCATION VT ROUTE 113 & EAST THETFORD ROAD OVER THE CONNECTICUT RIVER

REINFORCING SCHEDULE (SHEET 1 OF 2)

BRIDGE SHEET 37 OF 38

FILE NUMBER 1-14-2-6

REVISIONS AFTER PROPOSAL		BY	DATE		BY	DATE
	DESIGNED	KLW	04/2021	CHECKED	LSF	04/2021
	DRAWN	KLW	04/2021	CHECKED	LSF	04/2021
	QUANTITIES	KLW	04/2021	CHECKED	JDG	04/2021
	ISSUE DATE		FEDERAL PROJECT NO.		SHEET NO.	TOTAL SHEETS
	REV. DATE		A000(394)		48	67

DECK

Mark	Size	Length	# Pieces	Type	A	B	C	D	E	F	G	H	J	K	R	O	Coating
D1	#4	3.27	52	S5	0.00	1.06	0.31	1.06			0.83						CG
D1	#5	41.25	576	—													CG
D2	#5	19.67	32	—													CG
D3	#5	20.08	32	—													CG
D4	#5	20.67	32	—													CG
D5	#5	18.92	32	—													CG
D6	#5	19.08	16	—													CG
D7	#5	5.00	23	S5	0.83	0.42	3.33	0.42			0.00						CG
D8	#5	6.53	216	19		2.50	1.53	2.50				1.77		1.77		5.07	CG
D9	#5	6.67	8	—													CG
D10	#5	10.33	8	—													CG
D11	#5	11.83	8	—													CG
D12	#5	11.42	8	—													CG
D14	#5	3.63	69	S5	0.83	0.58	1.63	0.58			0.00						CG
D15	#5	22.17	106	—													CG
D16	#5	24.25	1412	—													CG
D17	#5	22.75	360	—													CG
D18	#5	4.00	96	—													CG
D19	#5	5.21	1032	S5	0.83	1.06	1.42	1.06			0.83						CG
D20	#5	3.98	180	S5	0.42	1.06	0.60	1.06			0.83						CG

SECTION SUMMARY TOTAL WEIGHT (lbs):

ITEM #	DESCRIPTION	#3	#4	#5	#6	#7	#8	#9	#10	#11	#14	#18	TOTAL
544	REINFORCING STEEL	0	0	0	0	0	0	0	0	0	0	0	0
544.11	MECH. CONNECTOR	0	0	0	0	0	0	0	0	0	0	0	0
544.2	EPOXY COATED	0	0	0	0	0	0	0	0	0	0	0	0
544.21	EPOXY MECH. CON.	0	0	0	0	0	0	0	0	0	0	0	0
544.43	CONTINUOUSLY GALV	0	114	83396	0	0	0	0	0	0	0	0	83510
544.51	STAINLESS STEEL	0	0	0	0	0	0	0	0	0	0	0	0

GRAND SUMMARY TOTAL WEIGHT (lbs):

ITEM #	DESCRIPTION	#3	#4	#5	#6	#7	#8	#9	#10	#11	#14	#18	TOTAL
544	REINFORCING STEEL	0	0	1453	0	0	0	0	0	0	0	0	1453
544.11	MECH. CONNECTOR	0	0	0	0	0	0	0	0	0	0	0	0
544.2	EPOXY COATED	0	24	401	0	0	0	0	0	0	0	0	426
544.21	EPOXY MECH. CON.	0	0	0	0	0	0	0	0	0	0	0	0
544.43	CONTINUOUSLY GALV	0	114	83396	0	0	0	0	0	0	0	0	83510
544.51	STAINLESS STEEL	0	0	0	0	0	0	0	0	0	0	0	0

STANDARD INDUSTRY BENDS, STIRRUPS, & TIES

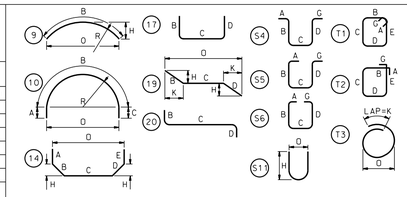
RECOMMENDED END HOOKS ALL GRADES (IN)

BAR SIZE	D Φ	180° HOOKS A,G	180° HOOKS J	90° HOOKS A,G
#3	2 1/4	5	3	6
#4	3	6	4	8
#5	3 3/4	7	5	10
#6	4 1/2	8	6	12
#7	5 1/4	10	7	14
#8	6	11	8	16
#9	9 1/2	15	11 3/4	19
#10	10 3/4	17	13 1/4	22
#11	12	19	14 3/4	24
#14	18 1/4	27	21 3/4	31

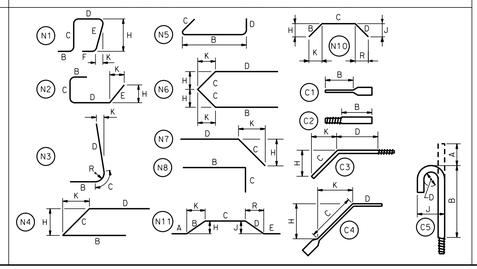
STIRRUP & TOE HOOK DIMENSIONS ALL GRADES (IN)

BAR SIZE	D Φ	90° HOOKS A,G	135° HOOKS A,G	135° HOOKS H(appr)
#3	1 1/2	4	4	2 1/2
#4	2	4 1/2	4 1/2	3
#5	2 1/2	6	5 1/2	3 3/4
#6	4 1/2	12	7 3/4	4 1/2
#7	5 1/4	14	9	5 1/4
#8	6	16	10 1/4	6

NOTE: D = finished inside bend d of hook. For additional data on standard bar bends not shown on this sheet see current CRSI Manual.



STANDARD N.H. & SPECIAL BENDS



NOTES:
1. FIGURES IN CIRCLE SHOW TYPE OF BEND.
2. UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING #18 SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET - STEEL BARS FOR CONCRETE REINFORCEMENT".AASHTO M 31-94 (ASTM A615).
3. FOR TYPICAL BENDING DETAILS, RECOMMENDED PIN DIAMETER "D" OF BENDS AND HOOKS AND OTHER STANDARD PRACTICE REFER TO THE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE".
4. BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
5. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180° AND 135° HOOKS.
6. "J" DIMENSION ON 180° HOOKS TO BE SHOWN ONLY WHEN NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE STANDARD HOOKS ARE TO BE USED.
7. "H" DIMENSION ON STIRRUPS TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
8. WHERE SLOPE DIFFERS FROM 45° DIMENSIONS "H" AND "K" MUST BE SHOWN.

▲ DENOTES BARS TO BE CUT IN FIELD, AS REQUIRED.
Δ DENOTES BARS TO BE BENT IN FIELD.

ASTM STANDARD REINFORCING BARS

BAR SIZE	WEIGHT LBS/FT	DIAM IN	CROSS SECT AREA IN²
#3	0.376	0.375	0.11
#4	0.668	0.500	0.20
#5	1.043	0.625	0.31
#6	1.502	0.750	0.44
#7	2.044	0.875	0.60
#8	2.670	1.000	0.79
#9	3.400	1.128	1.00
#10	4.303	1.270	1.27
#11	5.313	1.410	1.56
#14	7.650	1.693	2.25
#18	13.600	2.257	4.00

SUBDIRECTORY	.DGN LOCATOR	SHEET SCALE
BRC	14460Rebar_Sch_02	AS NOTED

Stantec

STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION * BUREAU OF BRIDGE DESIGN

TOWN LYME, NH & THETFORD, VT BRIDGE NO. 053\112 STATE PROJECT 14460

LOCATION VT ROUTE 113 & EAST THETFORD ROAD OVER THE CONNECTICUT RIVER

REINFORCING SCHEDULE (SHEET 2 OF 2)

BRIDGE SHEET 38 OF 38

REVISIONS AFTER PROPOSAL		BY	DATE		BY	DATE
	DESIGNED	KLW	04/2021	CHECKED	LSF	04/2021
	DRAWN	KLW	04/2021	CHECKED	LSF	04/2021
	QUANTITIES	KLW	04/2021	CHECKED	JDG	04/2021

FILE NUMBER 1-14-2-6

ISSUE DATE	FEDERAL PROJECT NO.	SHEET NO.	TOTAL SHEETS
REV. DATE	A000(394)	49	67

DAVID E. CHAPMAN

DAVID E. CHAPMAN

CLAUDIA HENRION

LOUIS R. PETERS

STA. 14+22.00
BEGIN CONSTRUCTION

STA. 13+50.00
BEGIN APPROACH
MATCH EXISTING

VT ROUTE 113

EAST THETFORD RD - CURVE 1
PI Sta. 11+50.62
N = 478487.73
E = 847354.94
Δ = 2°37'58.20"
R = 3500.00'
T = 80.43'
L = 160.83'

EAST THETFORD RD - CURVE 2
PI Sta. 13+62.95
N = 478505.69
E = 847566.54
Δ = 17°38'40.99"
R = 850.00'
T = 131.93'
L = 261.76'

PCC 12+31.03
PI 13+36.35
PT 14+92.79

EAST THETFORD RD - CURVE 1
EAST THETFORD RD - CURVE 2
EXIST. R.O.W.
RELOCATE TELECOMMUNICATION LINES (BY OTHERS)
PROPOSED ELECTRIC & TELECOMMUNICATION LINE RELOCATION (BY OTHERS)
R (BY OTHERS)
DO NOT CLEAR BEYOND R.O.W.
CLEARING LINE (TYP.)
LIMIT SLOPE ROUNDING TO R.O.W. (TYP.)
DO NOT CLEAR BEYOND R.O.W.
R (BY OTHERS)
P (BY OTHERS)
GUY ANCHORS (BY OTHERS)
℄ BRG ABUT A STA 15+25
SCUPPER (TYP)
BRIDGE 053/112
EAST THETFORD RD CONSTRUCTION ℄
PROPOSED TELECOMMUNICATION DUCT BANK
(3 TELECOMMUNICATION LINES)
MATCH TO SHEET 51

NOTE:
STATE BOUNDARY LINE SHOWN FOR QUANTITY PURPOSES (STA. 16+01.00)

STATE THETFORD, VT | LINE LYME, NH

GRID

Connecticut River

GUARDRAIL NOTES

GR1
STA. 13+50.00 TO STA. 14+05.58, RT
CONSTRUCT EAGRT PLATFORM ALTERNATE
STA. 13+55.58 TO STA. 14+18.08, RT.
CONSTRUCT TERMINAL UNIT TYPE EAGRT, TL 2 (STEEL POST)
STA. 14+18.08 TO STA. 14+93.08, RT.
CONSTRUCT 31" W-BEAM GUARDRAIL WITH 8" OFFSET BLOCK (STEEL POST)
STA. 14+93.08 TO STA. 15+22.25, RT.
CONSTRUCT BRIDGE APPROACH RAIL T3 (STEEL POST)

GR2
STA.14+16.00 TO STA. 14+80.58, LT.
CONSTRUCT EAGRT PLATFORM ALTERNATE
STA. 14+30.58 TO STA. 14+93.08, LT
CONSTRUCT TERMINAL UNIT TYPE EAGRT, TL 2 (STEEL POST)
STA. 14+93.08 TO STA. 14+93.08, LT.
CONSTRUCT 31" W-BEAM GUARDRAIL WITH 8" OFFSET BLOCK (STEEL POST)
STA. 14+93.08 TO STA. 15+22.25, LT.
CONSTRUCT BRIDGE APPROACH RAIL T3 (STEEL POST)

INVASIVE SPECIES KEY

I	MH	MORROW'S HONEYSUCKLE (LONICERA MORROWII)
I	CB	COMMON BUCKTHORN (RHAMNUS CATHARTICA)
II	JK	JAPANESE KNOTWEED (REYNOUTRIA JAPONICA)
II	PL	PURPLE LOOSESTRIFE (LYTHRUM SALICARIA)

20 0 20 40
SCALE IN FEET

Stantec

REVISIONS AFTER PROPOSAL

NUMBER	DESCRIPTION	DATE	STATION

SDR PROCESSED NHDOT DATE -
NEW DESIGN TJG DATE 06/21
SHEET CHECKED DEM DATE 06/21
AS BUILT DETAILS DATE

STATE OF NEW HAMPSHIRE
LYME, NH & THETFORD, VT
DEPARTMENT OF TRANSPORTATION ∘ BUREAU OF HIGHWAY DESIGN

GENERAL PLAN
(1 OF 2)

DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
14460GEN01	14460	50	67

DRAINAGE NOTES

D1 STA. 20+25.0, LT. 9.5' TO STA. 21+13.0, LT. 14.5'
CONSTRUCT 85' x 18" RCP
RECONSTRUCT DI @ +13.0, LT. 14.5'
GRATE ELEV. = 403.33
EXIST. 15" INV. IN = 398.96
18" INV. OUT = 398.71
PLUG EXIST. 15" INV. OUT (W) (SUBSIDIARY)
REMOVE 10' x 15" CMP (SUBSIDIARY)

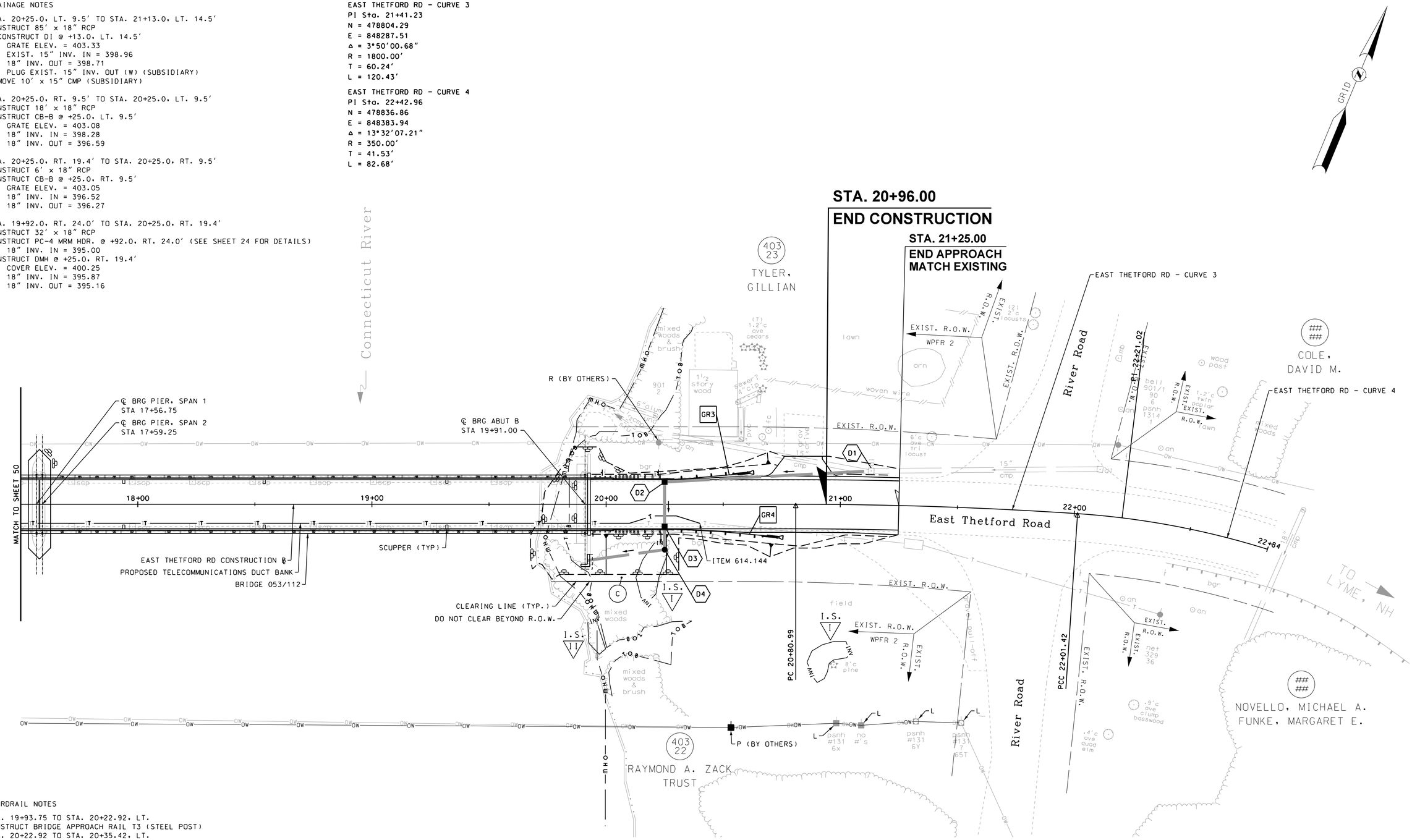
D2 STA. 20+25.0, RT. 9.5' TO STA. 20+25.0, LT. 9.5'
CONSTRUCT 18' x 18" RCP
CONSTRUCT CB-B @ +25.0, LT. 9.5'
GRATE ELEV. = 403.08
18" INV. IN = 398.28
18" INV. OUT = 396.59

D3 STA. 20+25.0, RT. 19.4' TO STA. 20+25.0, RT. 9.5'
CONSTRUCT 6' x 18" RCP
CONSTRUCT CB-B @ +25.0, RT. 9.5'
GRATE ELEV. = 403.05
18" INV. IN = 396.52
18" INV. OUT = 396.27

D4 STA. 19+92.0, RT. 24.0' TO STA. 20+25.0, RT. 19.4'
CONSTRUCT 32' x 18" RCP
CONSTRUCT PC-4 MRM HDR. @ +92.0, RT. 24.0' (SEE SHEET 24 FOR DETAILS)
18" INV. IN = 395.00
CONSTRUCT DMH @ +25.0, RT. 19.4'
COVER ELEV. = 400.25
18" INV. IN = 395.87
18" INV. OUT = 395.16

EAST THETFORD RD - CURVE 3
PI Sta. 21+41.23
N = 478804.29
E = 848287.51
Δ = 3°50'00.68"
R = 1800.00'
T = 60.24'
L = 120.43'

EAST THETFORD RD - CURVE 4
PI Sta. 22+42.96
N = 478836.86
E = 848383.94
Δ = 13°32'07.21"
R = 350.00'
T = 41.53'
L = 82.68'



GUARDRAIL NOTES

GR3 STA. 19+93.75 TO STA. 20+22.92. LT.
CONSTRUCT BRIDGE APPROACH RAIL T3 (STEEL POST)
STA. 20+22.92 TO STA. 20+35.42. LT.
CONSTRUCT 31" W-BEAM GUARDRAIL WITH 8" OFFSET BLOCK (STEEL POST)
STA. 20+35.42 TO STA. 20+60.42. LT.
CONSTRUCT TERMINAL UNIT TYPE EAGRT, TL 2 - 25' (STEEL POST)
STA. 20+35.42 TO STA. 20+87.50. LT.
CONSTRUCT EAGRT PLATFORM ALTERNATE, TL 2 - 25'

GR4 STA. 19+93.75 TO STA. 20+22.92. RT.
CONSTRUCT BRIDGE APPROACH RAIL T3 (STEEL POST)
STA. 20+22.92 TO STA. 20+47.92. RT.
CONSTRUCT 31" W-BEAM GUARDRAIL WITH 8" OFFSET BLOCK (STEEL POST)
STA. 20+47.92 TO STA. 20+72.92. RT.
CONSTRUCT TERMINAL UNIT TYPE EAGRT, TL 2 - 25' (STEEL POST)
STA. 20+47.92 TO STA. 21+00.00. RT.
CONSTRUCT EAGRT PLATFORM ALTERNATE, TL 2 - 25'

INVASIVE SPECIES KEY

I	MH	MORROW'S HONEYSUCKLE (LONICERA MORROWII)
I	CB	COMMON BUCKTHORN (RHAMNUS CATHARTICA)
II	JK	JAPANESE KNOTWEED (REYNOUTRIA JAPONICA)
II	PL	PURPLE LOOSESTRIFE (LYTHRUM SALICARIA)

REVISIONS AFTER PROPOSAL

NUMBER	DATE	DESCRIPTION	STATION

SDR PROCESSED NHDOT DATE -
NEW DESIGN TJG DATE 06/21
SHEET CHECKED DEM DATE 06/21
AS BUILT DETAILS DATE

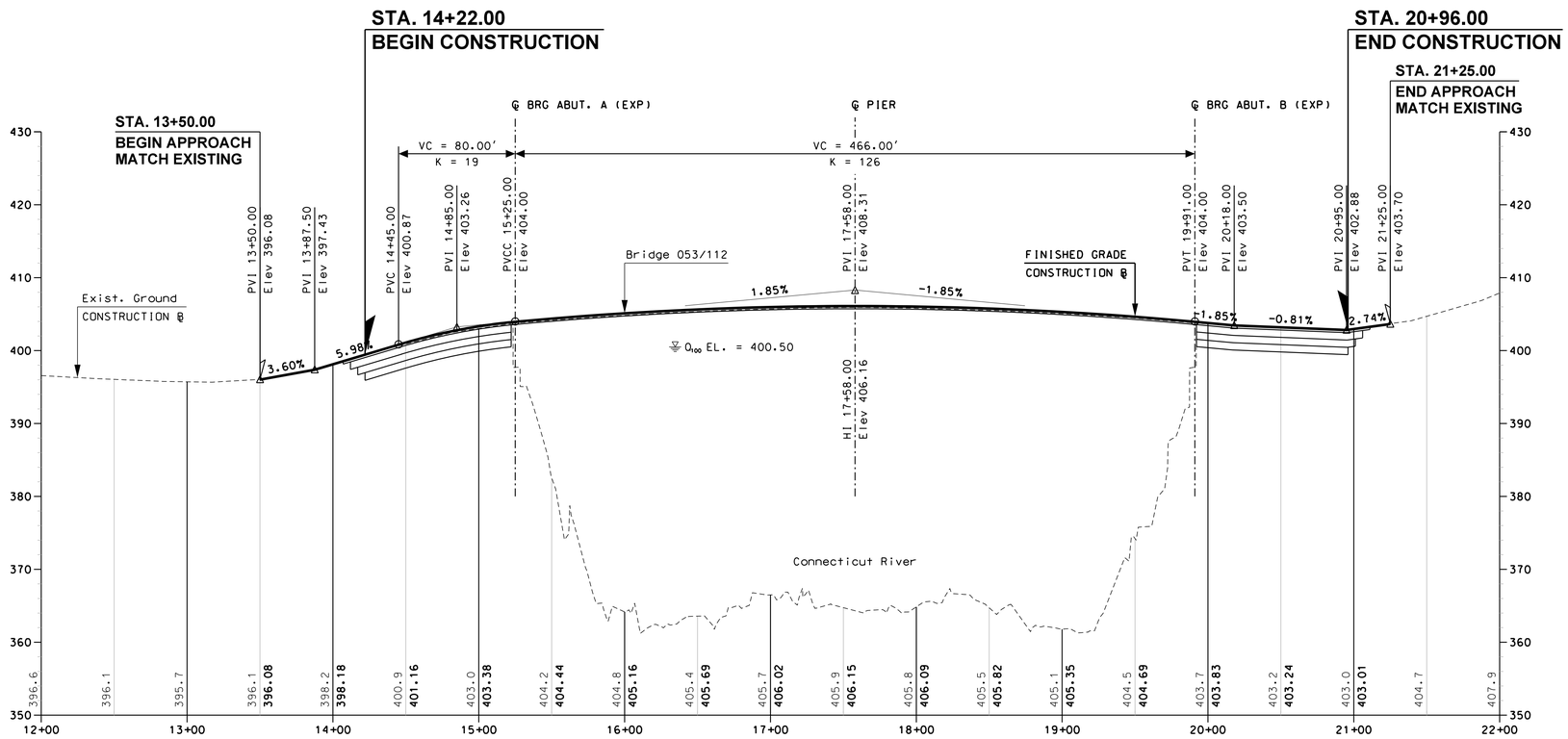
20 0 20 40
SCALE IN FEET

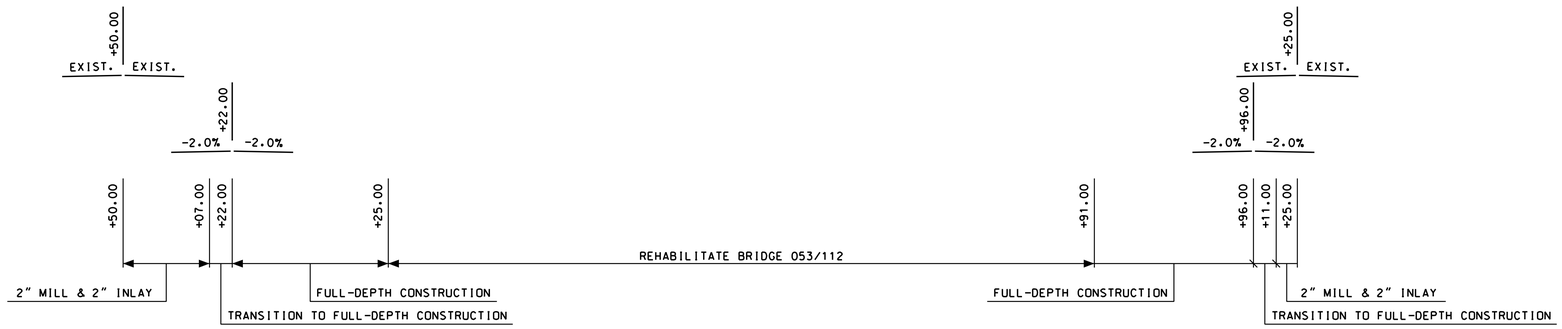
Stantec

STATE OF NEW HAMPSHIRE
LYME, NH & THETFORD, VT
DEPARTMENT OF TRANSPORTATION ∘ BUREAU OF HIGHWAY DESIGN

GENERAL PLAN
(2 OF 2)

DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
14460GEN02	14460	51	67





REVISIONS AFTER PROPOSAL

NUMBER	DATE	DESCRIPTION	STATION

SDR PROCESSED	NHDOT	DATE -
NEW DESIGN	TJG	DATE 06/21
SHEET CHECKED	DEM	DATE 06/21
AS BUILT DETAILS		DATE

SCALE:
1"= 50' HORIZ.
1"= 10' VERT.

Stantec

STATE OF NEW HAMPSHIRE
LYME, NH & THETFORD, VT
DEPARTMENT OF TRANSPORTATION ∘ BUREAU OF HIGHWAY DESIGN

EAST THETFORD ROAD PROFILE

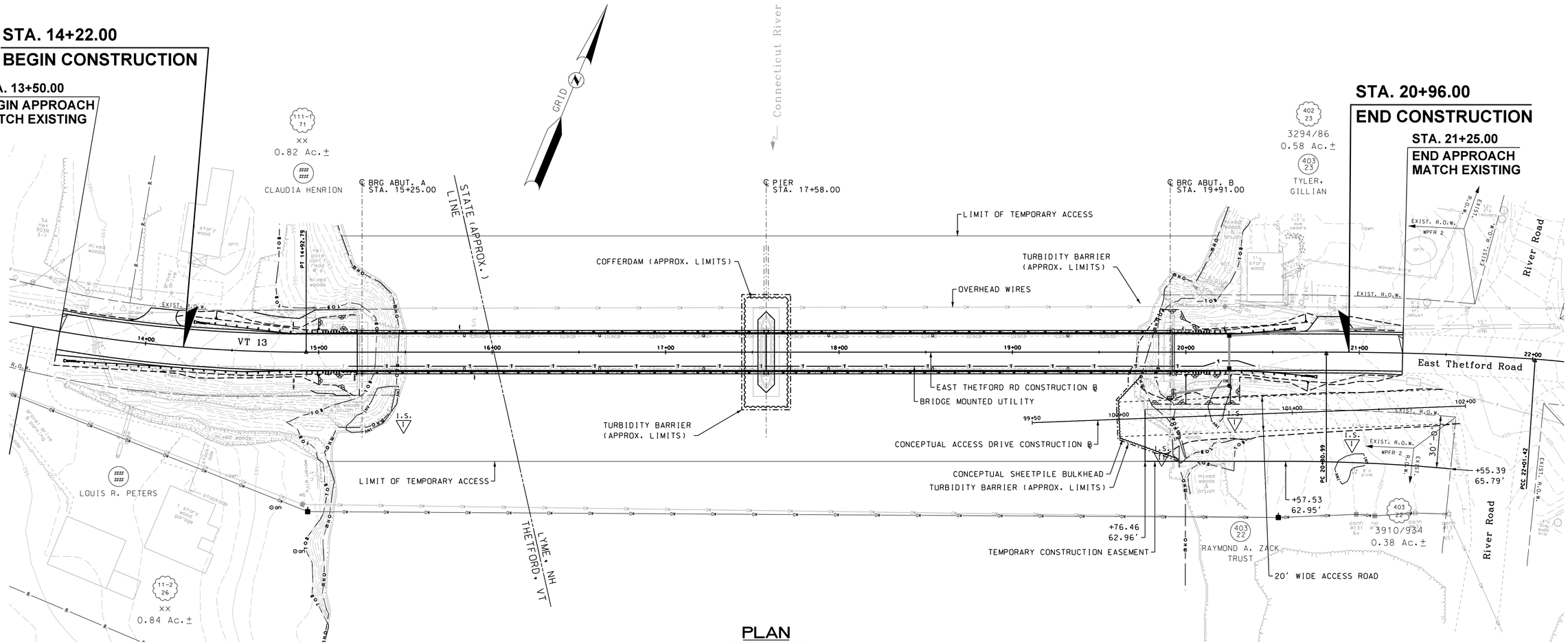
DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
14460P01	14460	52	67

STA. 14+22.00
BEGIN CONSTRUCTION

STA. 13+50.00
BEGIN APPROACH
MATCH EXISTING

STA. 20+96.00
END CONSTRUCTION

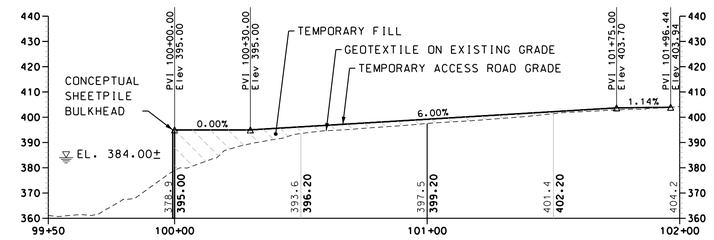
STA. 21+25.00
END APPROACH
MATCH EXISTING



PLAN
SCALE: 1" = 30'

PAR. NO.	PROPERTY OWNER	TOTAL AREA OF PARCEL	TAKE	REMAINDER		EASEMENT					CAROW ACCESS PTS.		REV. NO.
				LEFT	RIGHT	PERMANENT		TEMPORARY					
		AC.	AC.	AC.	AC.	SF	TYPE	SF	TYPE	EXPIRES*	LT.	RT.	
403/22	RAYMOND A. ZACK TRUST	0.38	–	–	–	–	–	5000	CONSTRUCTION	10/04/2031	–	–	–

* DURATION OF TEMPORARY EASEMENTS WILL BE FOR 36 MONTHS - BEGINNING WITH THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES.



ACCESS ROAD PROFILE
SCALE: 1" = 30'

30 0 30 60
SCALE IN FEET

Stantec

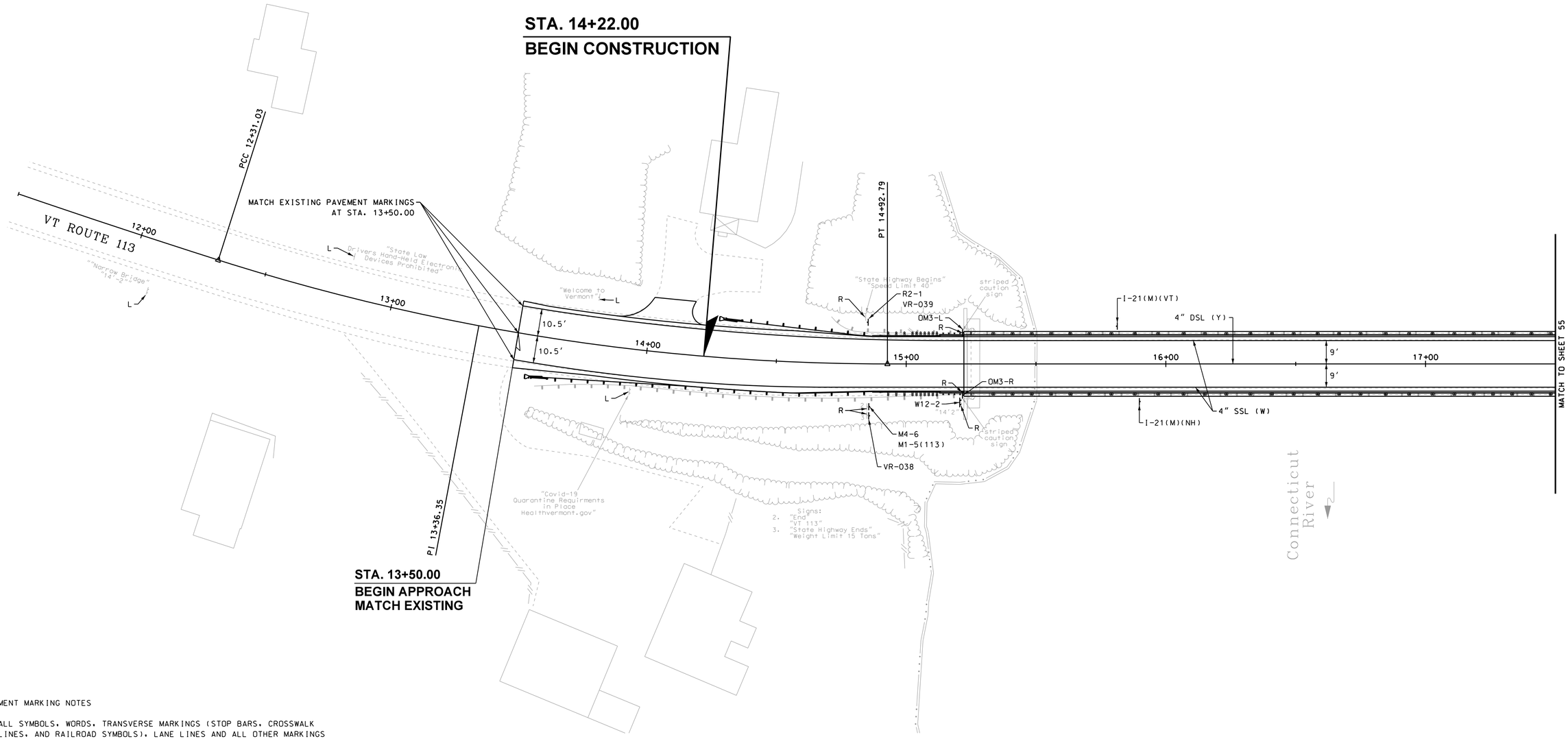
STATE OF NEW HAMPSHIRE
LYME, NH & THETFORD, VT
DEPARTMENT OF TRANSPORTATION ∘ BUREAU OF HIGHWAY DESIGN

CONSTRUCTION ACCESS & RIGHT-OF-WAY PLAN

DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
14460CA01	14460	53	67

		DATE
SDR PROCESSED	NHDOT	-
NEW DESIGN	DDT	06/21
SHEET CHECKED	DEM	06/21
AS BUILT DETAILS		DATE

NUMBER	DATE	STATION	DESCRIPTION
		STATION	REVISIONS AFTER PROPOSAL



REVISIONS AFTER PROPOSAL

NUMBER	DESCRIPTION	DATE	STATION

SDR PROCESSED	NHDOT	DATE -
NEW DESIGN	TJG	DATE 06/21
SHEET CHECKED	DEM	DATE 06/21
AS BUILT DETAILS		DATE

PAVEMENT MARKING NOTES

1. ALL SYMBOLS, WORDS, TRANSVERSE MARKINGS (STOP BARS, CROSSWALK LINES, AND RAILROAD SYMBOLS), LANE LINES AND ALL OTHER MARKINGS NOTED WITH (T) SHALL BE THERMOPLASTIC.
2. CONTACT BUREAU OF TRAFFIC TO REVIEW ALL PASSING ZONES PRIOR TO STRIPING OR INSTALLING W14-3 SIGNS.
3. THE CONTRACTOR SHALL CONTACT JULIE MATHEWS AT THE NHDOT BUREAU OF TRAFFIC AT (603)271-8011 TWO WEEKS PRIOR TO PAVEMENT MARKING.
4. REPLACE WORDS/SYMBOLS PER LATEST NHDOT STANDARD PLAN SHEETS.
5. PAVEMENT MARKINGS SHALL EXTEND BEYOND PROJECT PAVING LIMITS TO OVERLAP EXISTING MARKINGS DISTURBED BY CONSTRUCTION.

20 0 20 40
SCALE IN FEET

Stantec

STATE OF NEW HAMPSHIRE
LYME, NH & THETFORD, VT
DEPARTMENT OF TRANSPORTATION ∘ BUREAU OF HIGHWAY DESIGN

PAVEMENT MARKING & SIGNING PLAN (1 OF 2)

DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
14460PVM01	14460	54	67

REVISIONS AFTER PROPOSAL

NUMBER	DATE	DESCRIPTION
		STATION

SDR PROCESSED NHDOT DATE -
NEW DESIGN DEM DATE 06/21
SHEET CHECKED TJG DATE 06/21
AS BUILT DETAILS DATE

GRID N

Connecticut River

MATCH TO SHEET 54

18+00 19+00 20+00 21+00 22+00

9′ 9′ 10.5′ 11′

4" DSL (Y)

4" SSL (W)

W12-2
OM-3R
R
OM-3L

Signs:
4. "Weight Limit 15 Tons"
5. striped caution sign

striped caution signs

STA. 20+96.00
END CONSTRUCTION

STA. 21+25.00
END APPROACH
MATCH EXISTING

MATCH EXISTING PAVEMENT MARKINGS AT STA. 21+25

PC 20+80.99

PCC 22+01.42

PI 22+21.02

22+84

East Thetford Road

River Road

River Road

curve "River Road" "25 mph"

"speed limit 30"

"stop" "River Road" East Thetford"

"Sponsor a Highway" Faith Catlin, Psychotherapist"

"Breakfast on the Connecticut B&B 3 mi Berway and Creamery"

L

20 0 20 40
SCALE IN FEET

Stantec

STATE OF NEW HAMPSHIRE
LYME, NH & THETFORD, VT
DEPARTMENT OF TRANSPORTATION ∘ BUREAU OF HIGHWAY DESIGN

PAVEMENT MARKING & SIGNING PLAN (2 OF 2)

DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
14460PVM02	14460	55	67

ITEM #	IDENT #	SIGN SIZE WIDTH (inch)	SIGN SIZE HEIGHT (inch)	TEXT	TEXT DIMENSIONS LETTER HEIGHT (inch) UC	LC	CAPS	SHIELD SIZE (inch)	ARROW (inch)	NUMERAL (inch)	# SIGNS REQ'D	SIGN AREA (SQ. FT.) NOM AREA	TOTAL AREA	POSTS PER SIGN BREAKAWAY	STEEL I-BEAM	CONCRETE BASE	4" ALUMINUM	U-CHANNEL-GALV.	REMARKS
615.0501	I-21 (M) (NH)	48	24	STATE LINE LYME NEW HAMPSHIRE		4D 4D	4D				1	8.00	8.00						GREEN / WHITE (SEE NOTE 8)
615.0501	I-21 (M) (VT)	48	24	STATE LINE THETFORD VERMONT		4D 4D	4D				1	8.00	8.00						GREEN / WHITE (SEE NOTE 8)
615.0301	VM1-5	30	24	VERMONT 113			4D			12D	1	5.00	5.00					1	GREEN / WHITE
615.0601	M4-6	24	12	END			6D				1	2.00	2.00						GREEN / WHITE MOUNT ABOVE M1-5(113)
615.0301	OM3-L	12	36								2	3.00	6.00					1	BLACK / YELLOW
615.0301	OM3-R	12	36								2	3.00	6.00					1	BLACK / YELLOW
615.0301	R2-1 (40)	24	30	SPEED LIMIT 40			4E 4E			10E	1	5.00	5.00					1	BLACK / WHITE
615.0301	VR-038	24	18	STATE HIGHWAY ENDS			XX XX XX				1	3.00	3.00					1	BLACK / WHITE
615.0301	VR-039	24	18	STATE HIGHWAY BEGINS			XX XX XX				1	3.00	3.00					1	BLACK / WHITE
615.0301	W12-2	36	36	14'-2"			12D				2	9.00	9.00					1	BLACK / YELLOW

GENERAL NOTES

1. REFER TO THE 2016 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION PUBLISHED BY THE NHDOT.
2. NOTE NEW REFLECTIVITY REQUIREMENTS IN THE 2016 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SECTION 718 PUBLISHED BY THE NHDOT.
3. REFER TO THE 2010 STANDARD PLANS FOR ROAD CONSTRUCTION AS PUBLISHED BY THE NHDOT FOR EXACT DETAILS OF PERMANENT SIGNING STANDARDS AND NHDOT SPECIFIC SIGNS.
4. REFER TO THE LATEST EDITION OF THE STANDARD HIGHWAY SIGNS MANUAL AS PUBLISHED BY THE USDOT-FHWA FOR EXACT DETAILS OR BORDERS, ETC.
5. THE ALUMINUM OR U- CHANNEL POST SHALL BE FLUSH WITH THE TOP OF THE SIGN ON ALL SINGLE POST ASSEMBLIES.
6. REFER TO 'ROUTE MARKER POST ASSEMBLY DETAIL' LOCATED IN THE PROPOSAL FOR SIDE BY SIDE ROUTE MARKER SIGN INSTALLATIONS.
7. DIGITALLY PRINTED SIGNS SHALL NOT BE PERMITTED.
8. MOUNT SIGN TO BRIDGE ITEM 615.30691, BRIDGE MOUNTED TRAFFIC SIGN STRUCTURE (MODIFIED), REFER TO BRIDGE-MOUNTED SIGN SUPPORT DETAIL SHEETS FOR SIGN INSTALLATION.

Stantec

STATE OF NEW HAMPSHIRE

DEPARTMENT OF TRANSPORTATION ∘ BUREAU OF TRAFFIC

SIGN TEXT LAYOUT

DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
14460SSM01	14460	56	67

ITEM #	IDENT #	SIGN SIZE WIDTH (inch)	SIGN SIZE HEIGHT (inch)	TEXT	TEXT DIMENSIONS LETTER HEIGHT (inch) UC	LC	CAPS	SHIELD SIZE (inch)	ARROW (inch)	NUMERAL (inch)	# SIGNS REQ'D	SIGN AREA (SQ. FT.) NOM AREA	SIGN AREA (SQ. FT.) TOTAL AREA	POSTS PER SIGN BREAKAWAY	STEEL I-BEAM	CONCRETE BASE	4" ALUMINUM	U-CHANNEL-GALV.	REMARKS
619.1	VM1-5(S)	30	24	VERMONT 113			XX XX			XX XX	22	5.00	110.00					1	GREEN / WHITE
	VM1-5(L)	45	36								15	11.25	168.75					2	
619.1	M3-2(S)	24	12	EAST			6C				21	2.00	42.00						GREEN / WHITE MOUNT ABOVE M1-5
	M3-2(L)	36	18				8C				15	4.50	67.50						
619.1	M3-4(S)	24	12	WEST			6C				22	2.00	44.00						GREEN / WHITE MOUNT ABOVE W16-8P
	M3-4(L)	36	18				8C				9	4.50	40.50						
619.1	M4-8(S)	24	12	DETOUR			6B				43	2.00	86.00						BLACK / ORANGE MOUNT ABOVE M3-2 OR M3-4
	M4-8(L)	30	15				8B				24	3.13	75.00						
619.1	M4-8a	24	18	END DETOUR			4D 4D				2	3.00	6.00						BLACK / ORANGE
619.1	M6-1(L)	21	15								9	2.19	19.69						BLACK / ORANGE MOUNT ABOVE M1-5 OR W16-8P
619.1	M6-1(R)	21	15								12	2.19	26.25						BLACK / ORANGE MOUNT ABOVE M1-5 OR W16-8P
619.1	M6-2(R)	21	15								4	2.19	8.75						BLACK / ORANGE MOUNT ABOVE M1-5 OR W16-8P
619.1	M6-3(S)	21	15								22	2.19	48.13						BLACK / ORANGE MOUNT ABOVE M1-5 OR W16-8P
	M6-3(L)	30	21								20	4.38	87.50						
619.1	R11-2	48	30	ROAD CLOSED			8D 8D				3	10.00	30.00						BLACK / WHITE MOUNT ON TYPE 3 BARRICADE

ITEM #	IDENT #	SIGN SIZE WIDTH (inch)	SIGN SIZE HEIGHT (inch)	TEXT	TEXT DIMENSIONS LETTER HEIGHT (inch) UC	LC	CAPS	SHIELD SIZE (inch)	ARROW (inch)	NUMERAL (inch)	# SIGNS REQ'D	SIGN AREA (SQ. FT.) NOM AREA	SIGN AREA (SQ. FT.) TOTAL AREA	POSTS PER SIGN BREAKAWAY	STEEL I-BEAM	CONCRETE BASE	4" ALUMINUM	U-CHANNEL-GALV.	REMARKS
619.1	R11-3b (MOD-1)	60	30	EAST VT ROUTE 113 BRIDGE CLOSED 2 MILES AHEAD			6C 5C 4C				3	12.50	37.50					2	BLACK / WHITE
619.1	R11-3b (MOD-2)	60	30	EAST VT ROUTE 113 BRIDGE CLOSED 5 MILES AHEAD			6C 5C 4C				5	12.50	62.50					2	BLACK / WHITE
619.1	R11-3b (MOD-3)	60	30	EAST VT ROUTE 113 BRIDGE CLOSED 10 MILES AHEAD			6C 5C 4C				3	12.50	37.50					2	BLACK / WHITE
619.1	R11-3b (MOD-4)	60	30	EAST VT ROUTE 113 BRIDGE CLOSED 12 MILES AHEAD			6C 5C 4C				2	12.50	25.00					2	BLACK / WHITE
	R11-3b (MOD-5)	60	30	E. Thetford Rd WEST BRIDGE CLOSED 2 MILES AHEAD			6C 5C 4C				3	12.50	37.50					2	BLACK / WHITE
	R11-3b (MOD-6)	60	30	E. Thetford Rd WEST BRIDGE CLOSED 5 MILES AHEAD			6C 5C 4C				2	12.50	25.00					2	BLACK / WHITE
	R11-3b (MOD-7)	60	30	E. Thetford Rd WEST BRIDGE CLOSED 10 MILES AHEAD			6C 5C 4C				3	12.50	37.50					2	BLACK / WHITE
	R11-3b (MOD-8)	60	30	E. Thetford Rd WEST BRIDGE CLOSED 12 MILES AHEAD			6C 5C 4C				1	12.50	12.50					2	BLACK / WHITE

GENERAL NOTES

1. REFER TO THE 2016 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION PUBLISHED BY THE NHDOT.
2. NOTE NEW REFLECTIVITY REQUIREMENTS IN THE 2016 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SECTION 718 PUBLISHED BY THE NHDOT.
3. REFER TO THE 2010 STANDARD PLANS FOR ROAD CONSTRUCTION AS PUBLISHED BY THE NHDOT FOR EXACT DETAILS OF PERMANENT SIGNING STANDARDS AND NHDOT SPECIFIC SIGNS.
4. REFER TO THE LATEST EDITION OF THE STANDARD HIGHWAY SIGNS MANUAL AS PUBLISHED BY THE USDOT-FHWA FOR EXACT DETAILS OR BORDERS, ETC.
5. THE ALUMINUM OR U- CHANNEL POST SHALL BE FLUSH WITH THE TOP OF THE SIGN ON ALL SINGLE POST ASSEMBLIES.
6. REFER TO 'ROUTE MARKER POST ASSEMBLY DETAIL' LOCATED IN THE PROPOSAL FOR SIDE BY SIDE ROUTE MARKER SIGN INSTALLATIONS.
7. DIGITALLY PRINTED SIGNS SHALL NOT BE PERMITTED.
8. MOUNT SIGN TO BRIDGE ITEM 615.30691, BRIDGE MOUNTED TRAFFIC SIGN STRUCTURE (MODIFIED), REFER TO BRIDGE-MOUNTED SIGN SUPPORT DETAIL SHEETS FOR SIGN INSTALLATION.

Stantec

STATE OF NEW HAMPSHIRE

DEPARTMENT OF TRANSPORTATION ◦ BUREAU OF TRAFFIC

TEMPORARY SIGN TEXT LAYOUT

DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
14460SSM02	14460	57	67

ITEM #	IDENT #	SIGN SIZE WIDTH (inch)	SIGN SIZE HEIGHT (inch)	TEXT	TEXT DIMENSIONS LETTER HEIGHT (inch) UC	LC	CAPS	SHIELD SIZE (inch)	ARROW (inch)	NUMERAL (inch)	# SIGNS REQ'D	SIGN AREA (SQ. FT.) NOM AREA	TOTAL AREA	POSTS PER SIGN BREAKAWAY	STEEL I-BEAM	CONCRETE BASE	4" ALUMINUM	U-CHANNEL-GALV.	REMARKS
619.1	W16-8P	36	12	E Thetford Rd			6D				32	3.00	96.00					1	BLACK / ORANGE
619.1	W20-2	48	48	DETOUR AHEAD			8D 8D				2	16.00	32.00					2	BLACK / ORANGE
619.1	CS-01	144	120	VERMONT 113 EAST TO NEW HAMPSHIRE BRIDGE CLOSED USE EXIT 13			7D 7D 7D				2	12.00	240.00					2	BLACK / WHITE / ORANGE
619.1	CS-02	144	120	VERMONT 113 EAST TO NEW HAMPSHIRE BRIDGE CLOSED USE EXIT 15			7D 7D 7D				2	120.00	240.00					2	BLACK / WHITE / ORANGE

ITEM #	IDENT #	SIGN SIZE WIDTH (inch)	SIGN SIZE HEIGHT (inch)	TEXT	TEXT DIMENSIONS LETTER HEIGHT (inch) UC	LC	CAPS	SHIELD SIZE (inch)	ARROW (inch)	NUMERAL (inch)	# SIGNS REQ'D	SIGN AREA (SQ. FT.) NOM AREA	TOTAL AREA	POSTS PER SIGN BREAKAWAY	STEEL I-BEAM	CONCRETE BASE	4" ALUMINUM	U-CHANNEL-GALV.	REMARKS

GENERAL NOTES

1. REFER TO THE 2016 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION PUBLISHED BY THE NHDOT.
2. NOTE NEW REFLECTIVITY REQUIREMENTS IN THE 2016 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SECTION 718 PUBLISHED BY THE NHDOT.
3. REFER TO THE 2010 STANDARD PLANS FOR ROAD CONSTRUCTION AS PUBLISHED BY THE NHDOT FOR EXACT DETAILS OF PERMANENT SIGNING STANDARDS AND NHDOT SPECIFIC SIGNS.
4. REFER TO THE LATEST EDITION OF THE STANDARD HIGHWAY SIGNS MANUAL AS PUBLISHED BY THE USDOT-FHWA FOR EXACT DETAILS OR BORDERS, ETC.
5. THE ALUMINUM OR U- CHANNEL POST SHALL BE FLUSH WITH THE TOP OF THE SIGN ON ALL SINGLE POST ASSEMBLIES.
6. REFER TO 'ROUTE MARKER POST ASSEMBLY DETAIL' LOCATED IN THE PROPOSAL FOR SIDE BY SIDE ROUTE MARKER SIGN INSTALLATIONS.
7. DIGITALLY PRINTED SIGNS SHALL NOT BE PERMITTED.
8. MOUNT SIGN TO BRIDGE ITEM 615.30691, BRIDGE MOUNTED TRAFFIC SIGN STRUCTURE (MODIFIED), REFER TO BRIDGE-MOUNTED SIGN SUPPORT DETAIL SHEETS FOR SIGN INSTALLATION.

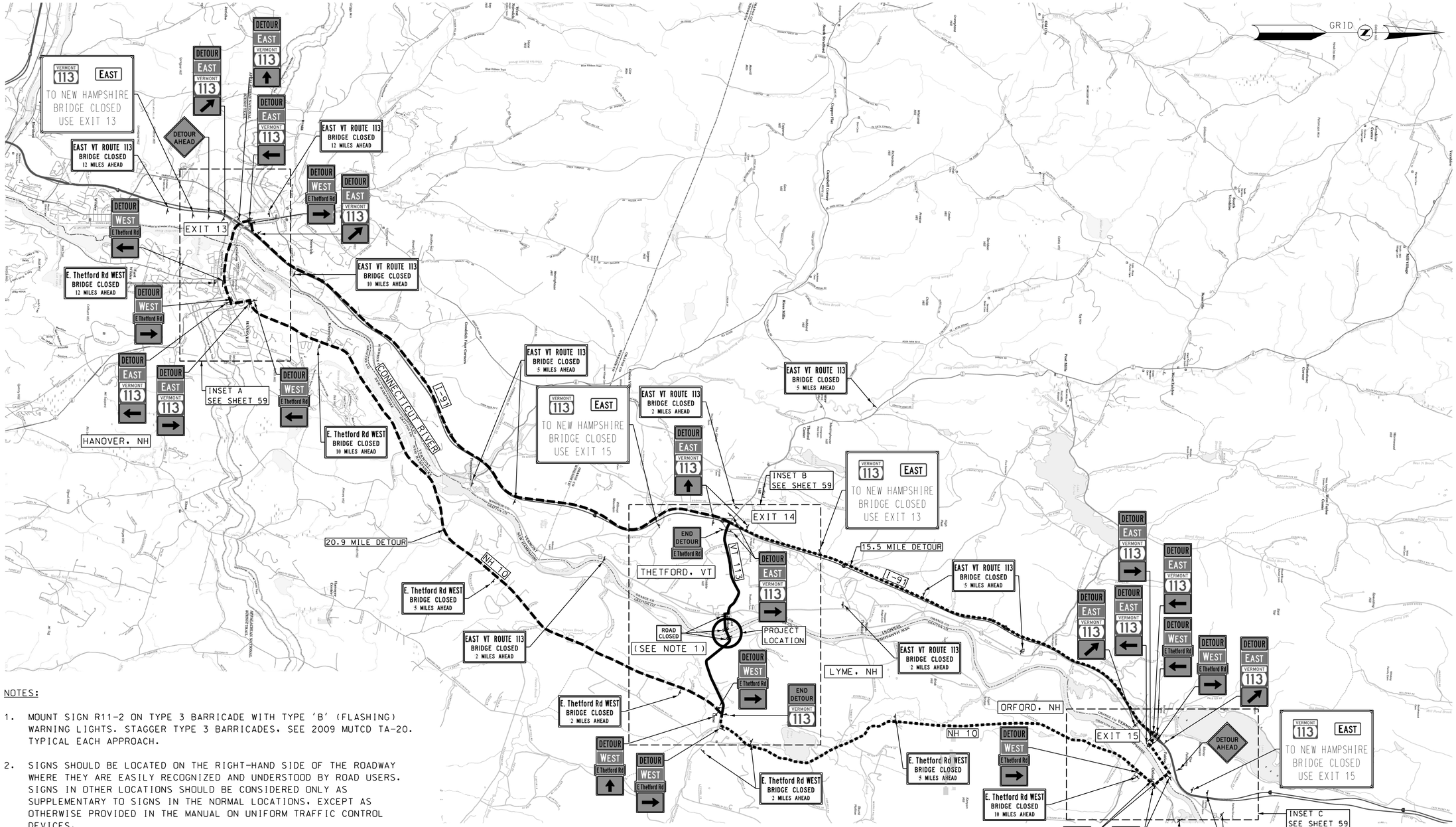
Stantec

STATE OF NEW HAMPSHIRE

DEPARTMENT OF TRANSPORTATION ◦ BUREAU OF TRAFFIC

TEMPORARY SIGN TEXT LAYOUT

DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
14460SSM03	14460	57A	67



NOTES:

1. MOUNT SIGN R11-2 ON TYPE 3 BARRICADE WITH TYPE 'B' (FLASHING) WARNING LIGHTS. STAGGER TYPE 3 BARRICADES. SEE 2009 MUTCD TA-20. TYPICAL EACH APPROACH.

2. SIGNS SHOULD BE LOCATED ON THE RIGHT-HAND SIDE OF THE ROADWAY WHERE THEY ARE EASILY RECOGNIZED AND UNDERSTOOD BY ROAD USERS. SIGNS IN OTHER LOCATIONS SHOULD BE CONSIDERED ONLY AS SUPPLEMENTARY TO SIGNS IN THE NORMAL LOCATIONS, EXCEPT AS OTHERWISE PROVIDED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

3. DETOUR CONFIRMATION SIGNS TO BE INSTALLED EVERY TWO MILES ALONG THE DETOUR ROUTE IN BOTH DIRECTIONS OF TRAVEL. PACKAGE INCLUDES M4-8, M3-X, VM1-5 OR W16-8P, AND M6-3.

4. WHEN EXISTING ROUTE MARKER ASSEMBLIES ARE LOCATED AT INTERSECTIONS OR ALONG THE DETOUR ROUTE, THE DETOUR ROUTE MARKER ASSEMBLIES SHALL BE INSTALLED ADJACENT TO EXISTING ROUTE MARKER ASSEMBLIES.

5. SEE TEMPORARY SIGN TEXT LAYOUT FOR SIZING OF SIGNS ON THE INTERSTATE (I) OR SECONDARY ROADS (S).

4000 0 4000 8000
SCALE IN FEET

Stantec

STATE OF NEW HAMPSHIRE
LYME, NH & THETFORD, VT
DEPARTMENT OF TRANSPORTATION ∘ BUREAU OF HIGHWAY DESIGN

DETOUR PLAN (1 OF 2)

DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
14460DET01	14460	58	67

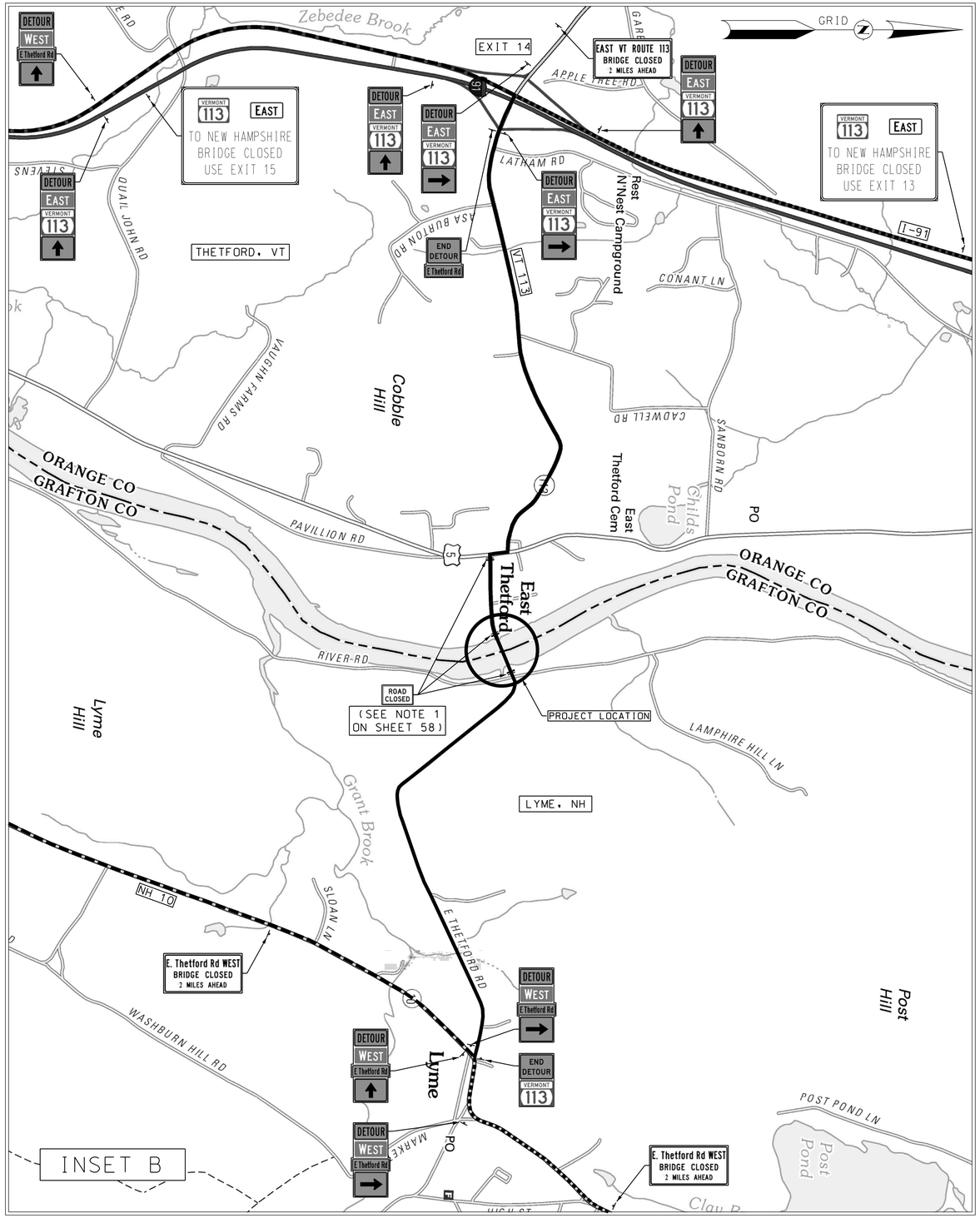
NUMBER	DESCRIPTION	DATE	STATION
	REVISIONS AFTER PROPOSAL		

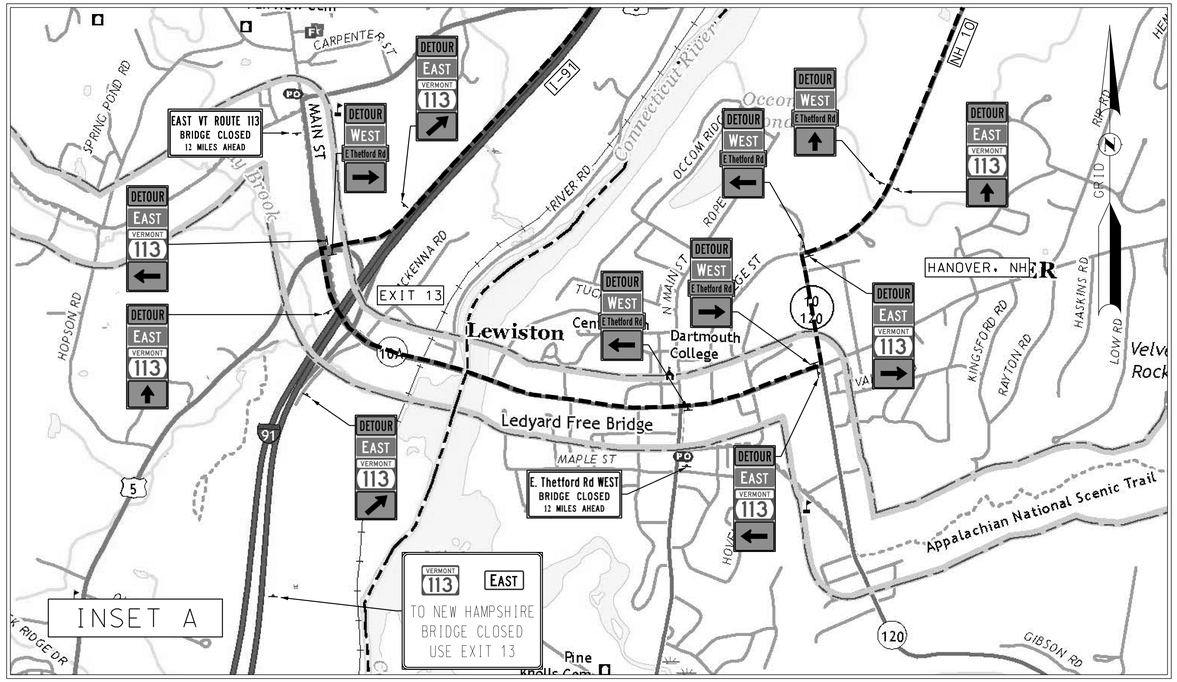
		DATE
SDR PROCESSED	NHDOT	-
NEW DESIGN	TJG	06/21
SHEET CHECKED	DEM	06/21
AS BUILT DETAILS		DATE

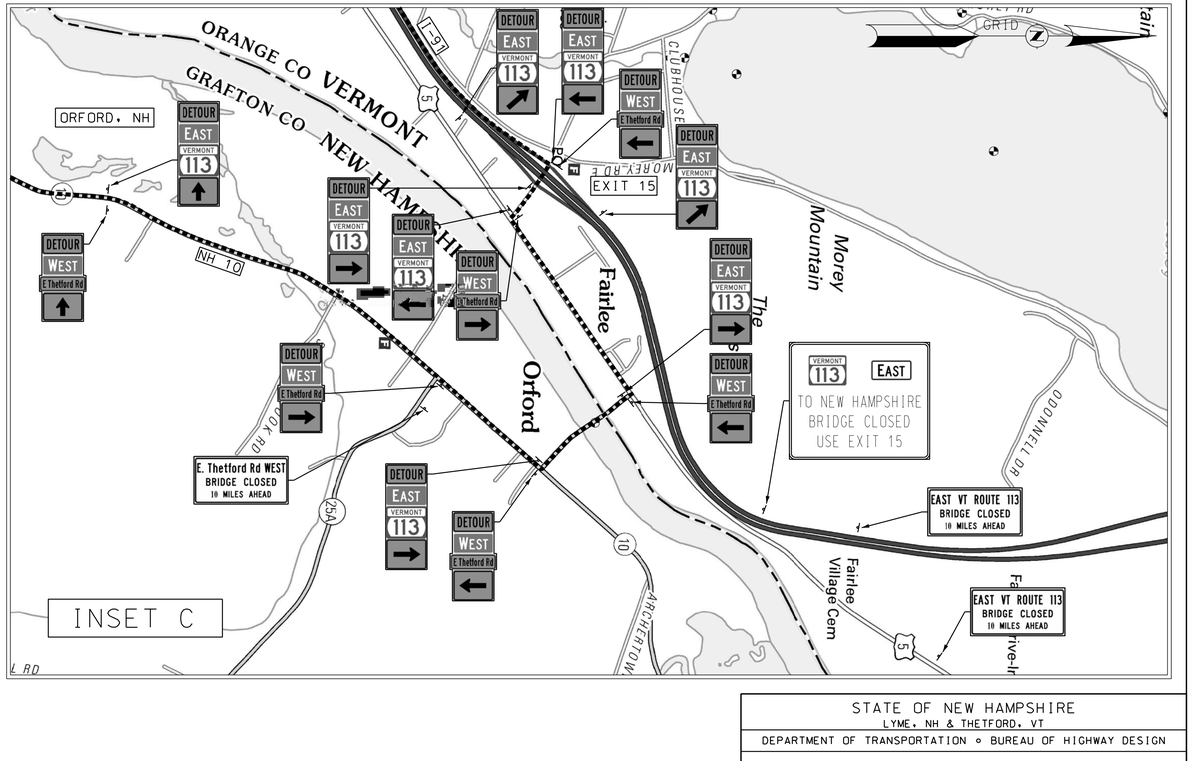
REVISIONS AFTER PROPOSAL

NUMBER	DESCRIPTION	DATE	STATION

SDR PROCESSED	NHDOT	DATE	-
NEW DESIGN	TJG	DATE	06/21
SHEET CHECKED	DEM	DATE	06/21
AS BUILT DETAILS		DATE	







1000 0 1000 2000
SCALE IN FEET

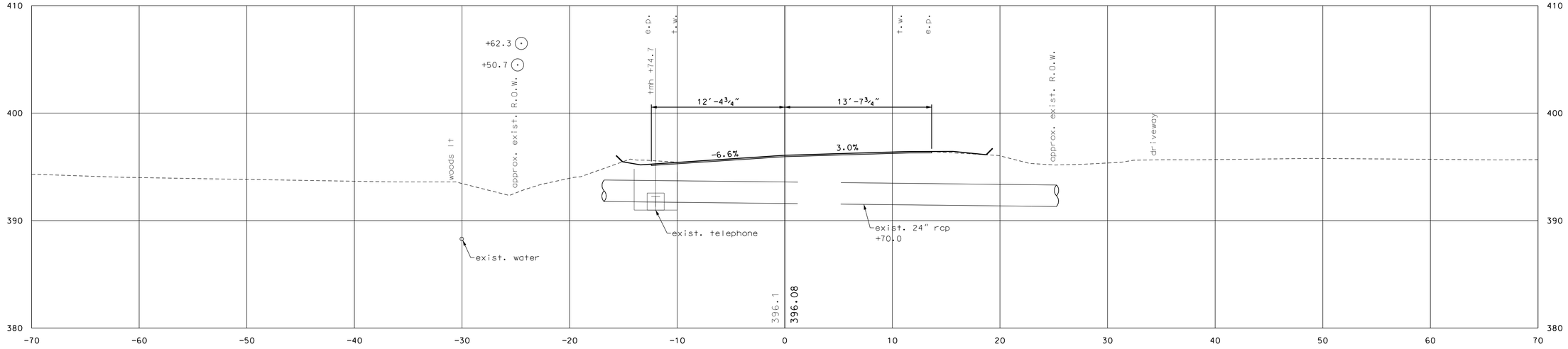
Stantec

STATE OF NEW HAMPSHIRE
LYME, NH & THETFORD, VT
DEPARTMENT OF TRANSPORTATION ∘ BUREAU OF HIGHWAY DESIGN

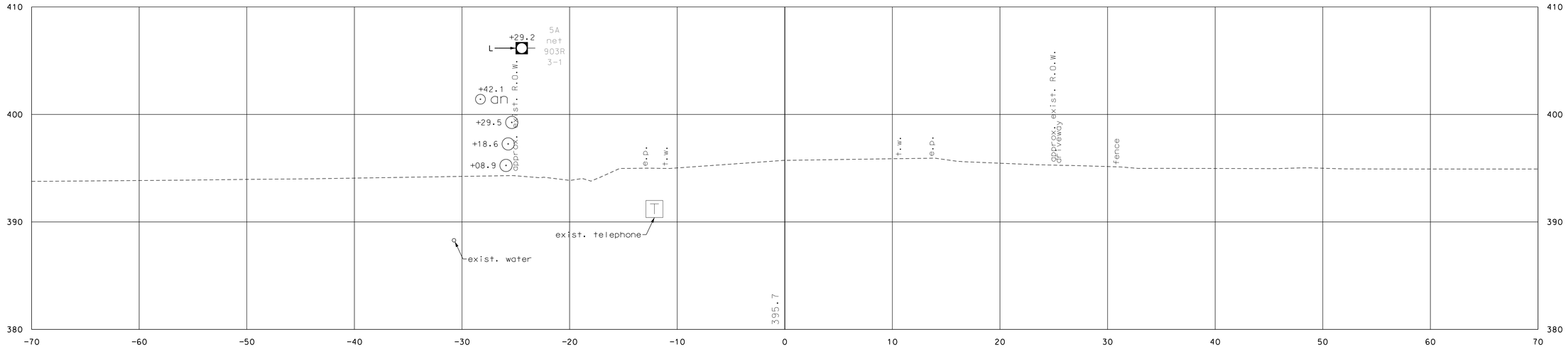
DETOUR PLAN (2 OF 2)

DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
14460DET02	14460	59	67

STA. 13+50.00
BEGIN APPROACH



13+50



13+00

EAST THETFORD ROAD

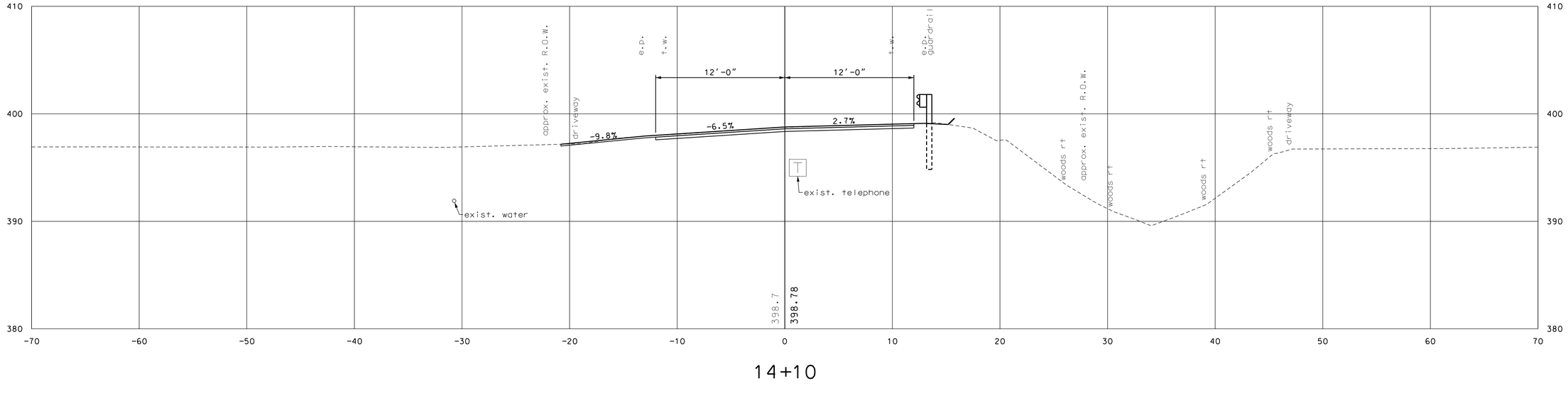
Stantec

LYME, NH & THETFORD, VT	SHEET TOTALS			
COMMON EXCAV.	– C.Y.	ROCK EXCAV.	– C.Y.	
FILL	– C.Y.	MUCK EXCAV.	– C.Y.	
DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS	
14460xs	14460	60	67	

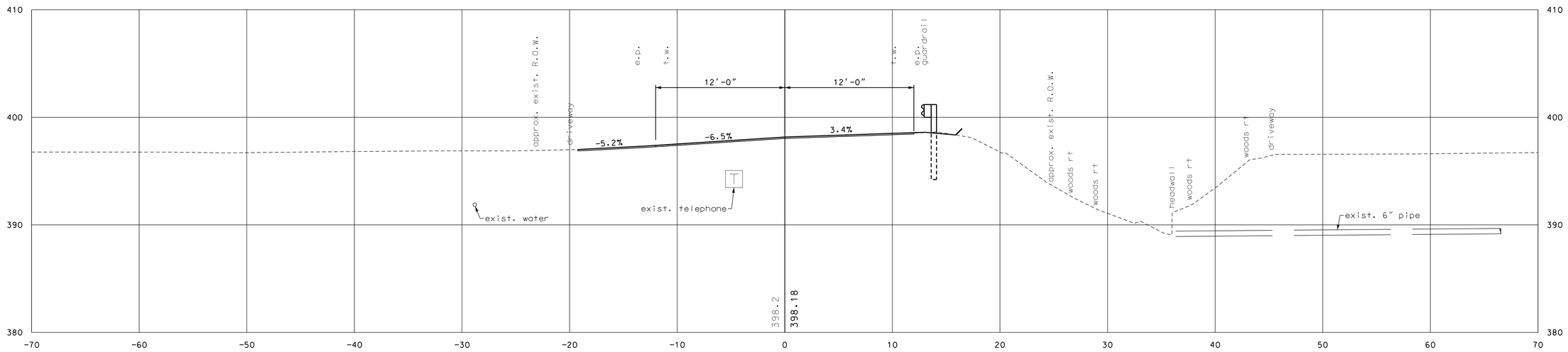
REVISIONS AFTER PROPOSAL

NUMBER	DESCRIPTION	DATE	STATION

SDR PROCESSED	NHDOT	DATE –
NEW DESIGN	TJG	DATE 02/21
SHEET CHECKED	DEM	DATE 02/21
AS BUILT DETAILS		DATE



14+10



14+00

REVISIONS AFTER PROPOSAL

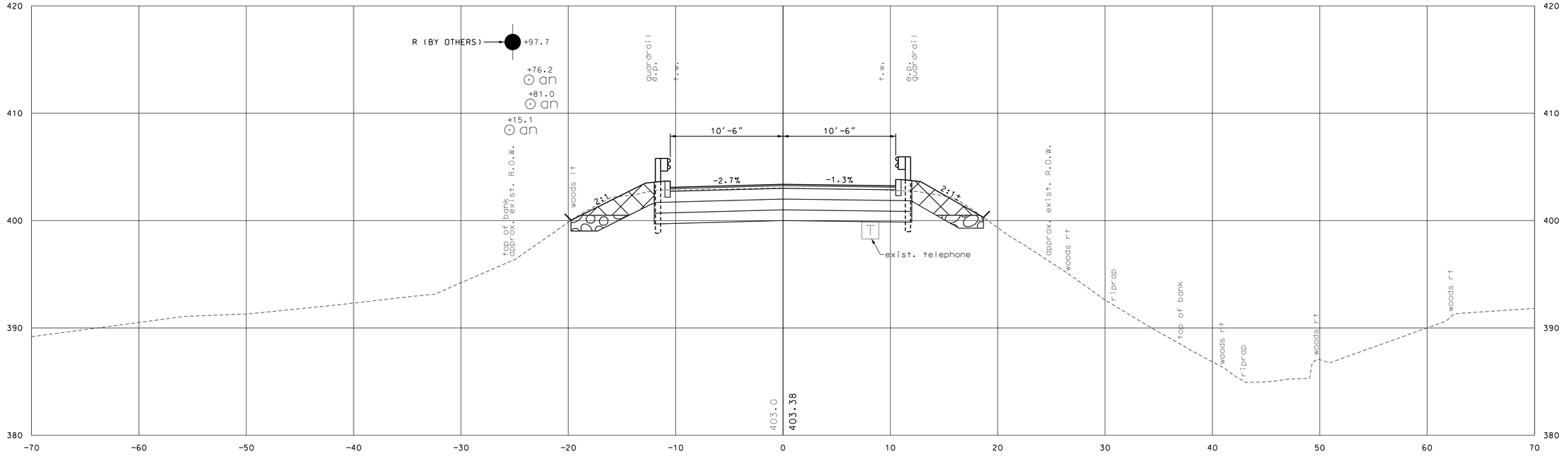
NUMBER	DATE	DESCRIPTION	STATION	STATION

SDR PROCESSED	NHDOT	DATE -
NEW DESIGN	TJG	DATE 02/21
SHEET CHECKED	DEM	DATE 02/21
AS BUILT DETAILS		DATE

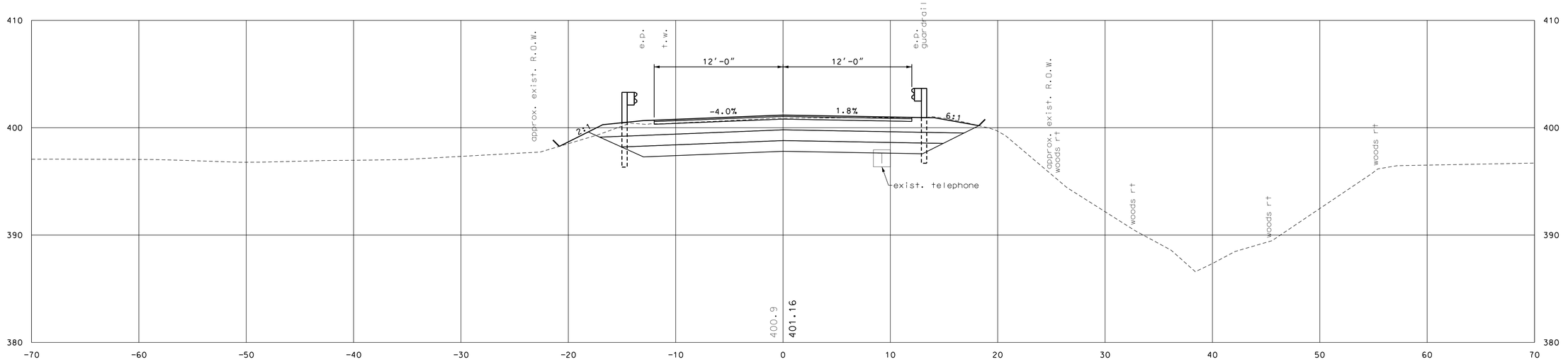
EAST THETFORD ROAD

Stantec

LYME, NH & THETFORD, VT	SHEET TOTALS		
COMMON EXCAV. – C.Y.	ROCK EXCAV. – C.Y.		
FILL – C.Y.	MUCK EXCAV. – C.Y.		
DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
14460xs	14460	61	67



15+00



14+50

REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	DESCRIPTION

SDR PROCESSED	NHDOT	DATE -
NEW DESIGN	TJG	DATE 02/21
SHEET CHECKED	DEM	DATE 02/21
AS BUILT DETAILS		DATE

EAST THETFORD ROAD

Stantec

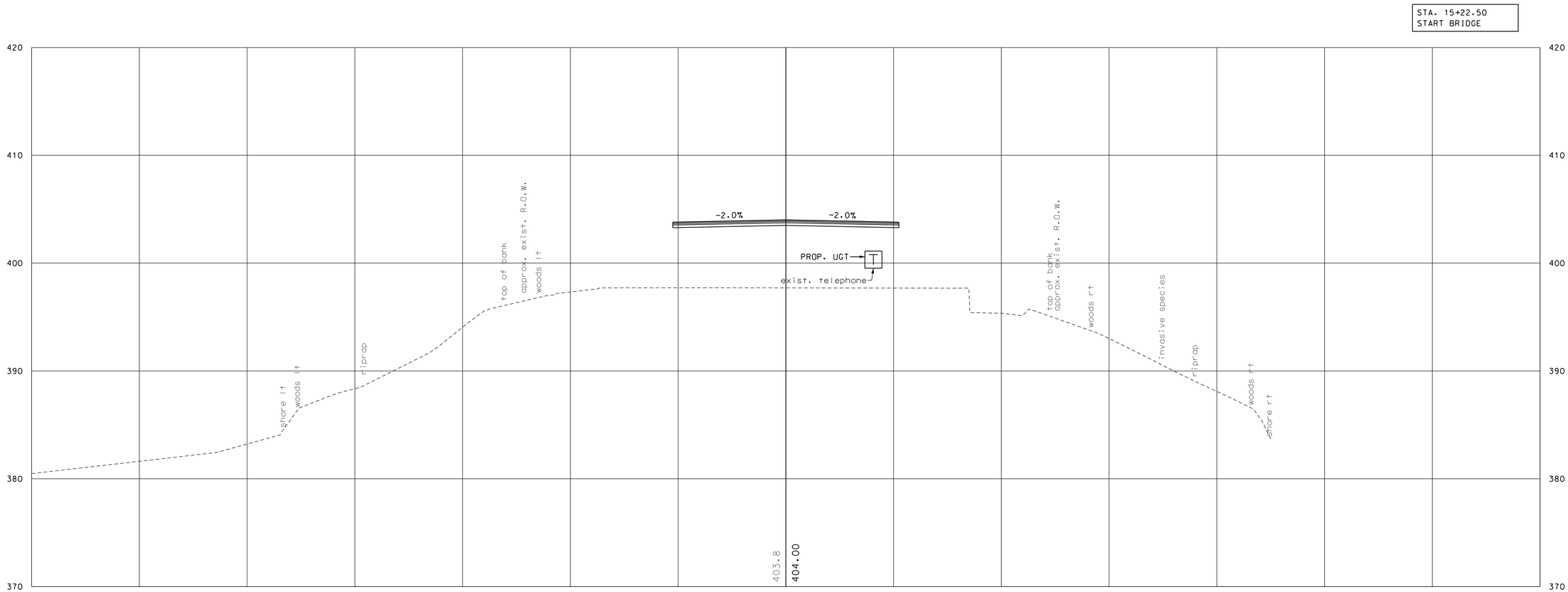
LYME, NH & THETFORD, VT — SHEET TOTALS
COMMON EXCAV. – C.Y. ROCK EXCAV. – C.Y.
FILL – C.Y. MUCK EXCAV. – C.Y.

DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
14460xs	14460	62	67

REVISIONS AFTER PROPOSAL

STATION	DESCRIPTION	STATION	NUMBER	DATE

SDR PROCESSED	NHDOT	DATE -
NEW DESIGN	TJG	DATE 02/21
SHEET CHECKED	DEM	DATE 02/21
AS BUILT DETAILS		DATE



15+25

EAST THETFORD ROAD

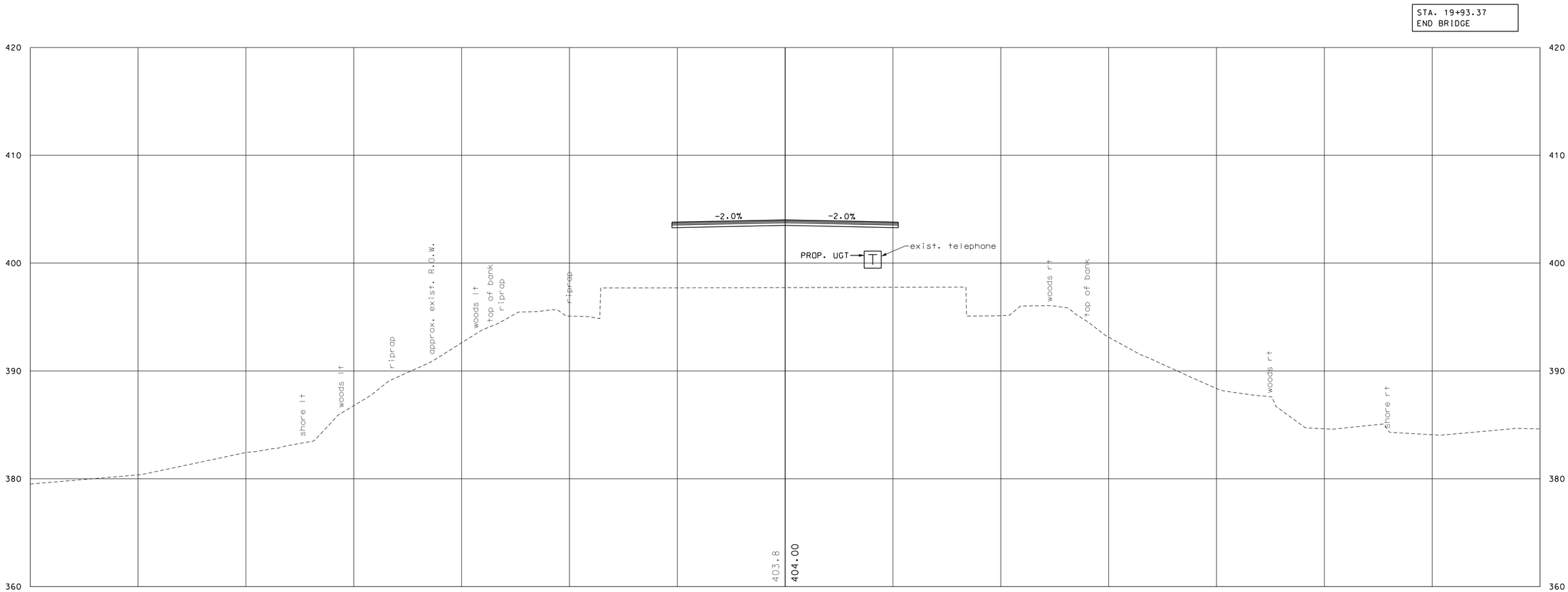
Stantec

LYME, NH & THETFORD, VT	SHEET TOTALS			
COMMON EXCAV.	- C.Y.	ROCK EXCAV.	- C.Y.	
FILL	- C.Y.	MUCK EXCAV.	- C.Y.	
DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS	
14460xs	14460	63	67	

REVISIONS AFTER PROPOSAL

STATION	STATION	DESCRIPTION	NUMBER	DATE

SDR PROCESSED	NHDOT	DATE -
NEW DESIGN	TJG	DATE 02/21
SHEET CHECKED	DEM	DATE 02/21
AS BUILT DETAILS		DATE

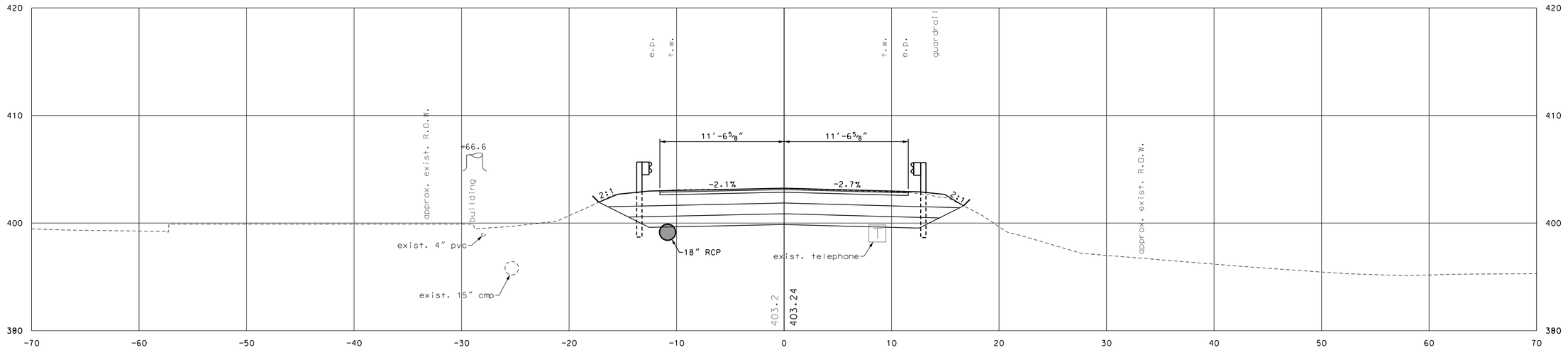


19+91

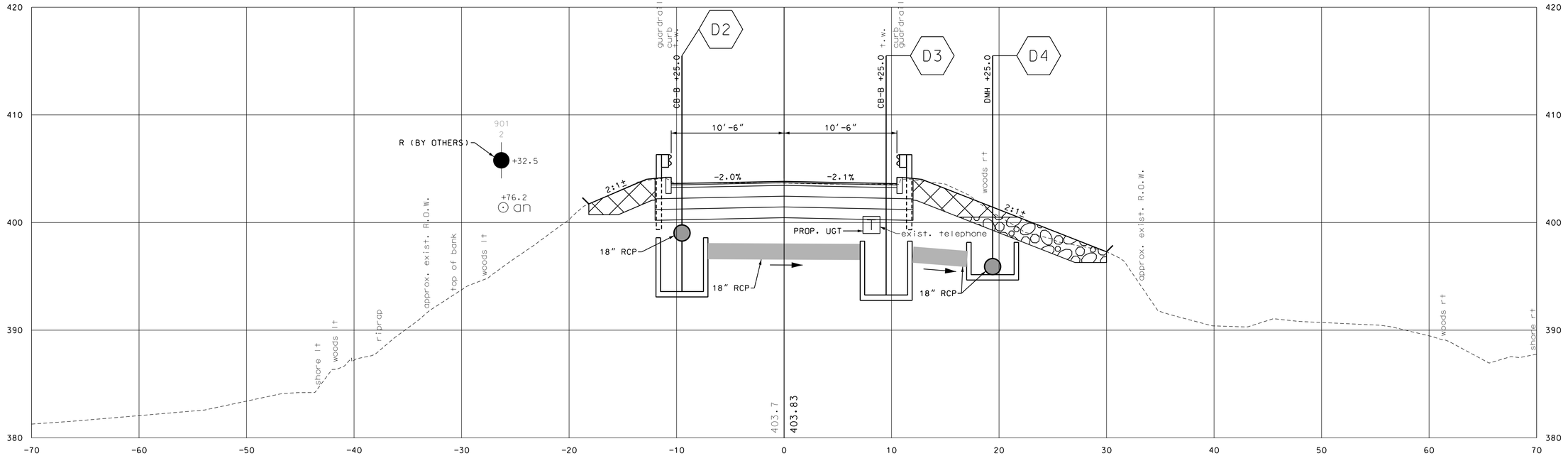
EAST THETFORD ROAD

Stantec

LYME, NH & THETFORD, VT	SHEET TOTALS			
COMMON EXCAV. – C.Y.		ROCK EXCAV. – C.Y.		
FILL – C.Y.		MUCK EXCAV. – C.Y.		
DGN	STATE PROJECT NO.		SHEET NO.	TOTAL SHEETS
14460xs	14460		64	67



20+50



20+00

EAST THETFORD ROAD

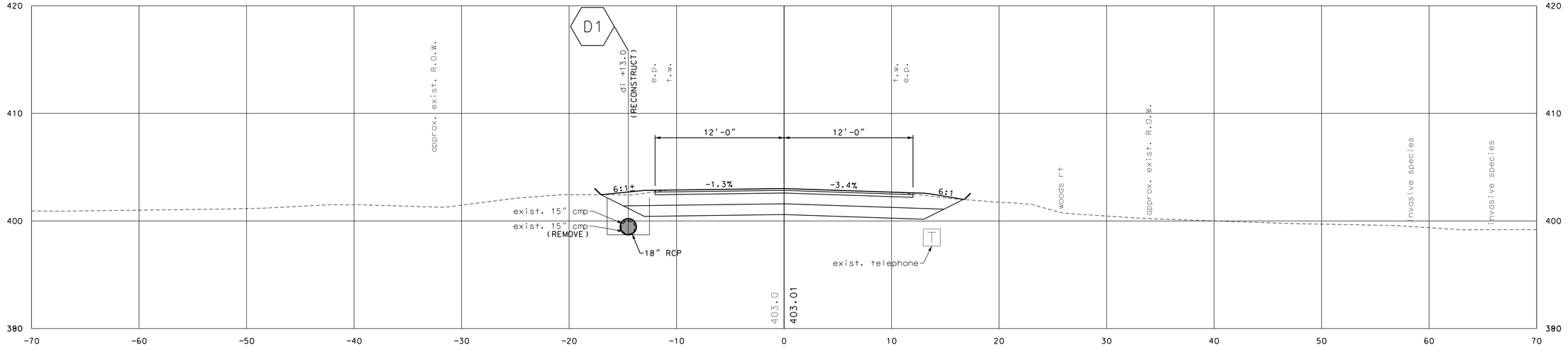
Stantec

LYME, NH & THETFORD, VT	SHEET TOTALS			
COMMON EXCAV. – C.Y.		ROCK EXCAV. – C.Y.		
FILL – C.Y.		MUCK EXCAV. – C.Y.		
DGN	STATE PROJECT NO.		SHEET NO.	TOTAL SHEETS
14460xs	14460		65	67

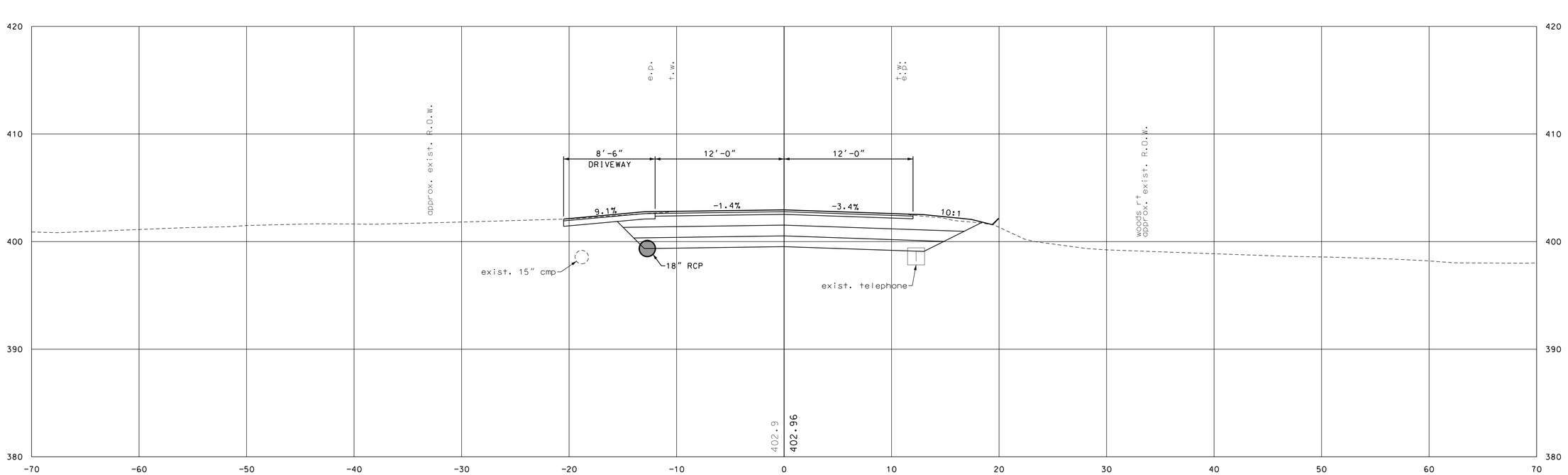
REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	DESCRIPTION

SDR PROCESSED	NHDOT	DATE –
NEW DESIGN	TJG	DATE 02/21
SHEET CHECKED	DEM	DATE 02/21
AS BUILT DETAILS		DATE



21+00



20+85

REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	DESCRIPTION

SDR PROCESSED	NHDOT	DATE -
NEW DESIGN	TJG	DATE 02/21
SHEET CHECKED	DEM	DATE 02/21
AS BUILT DETAILS		DATE

EAST THETFORD ROAD

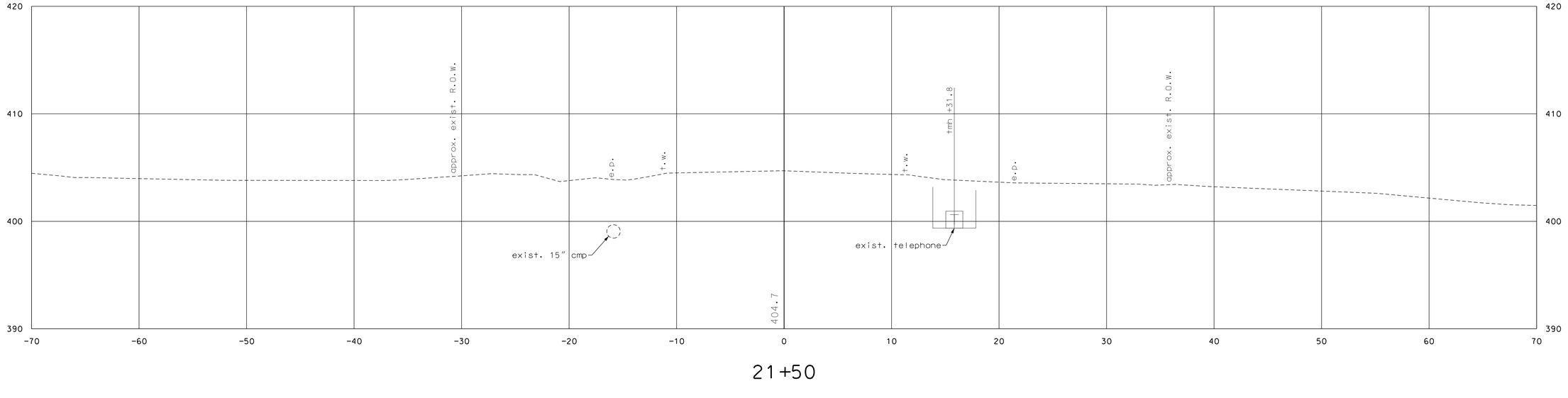
Stantec

LYME, NH & THETFORD, VT — SHEET TOTALS

COMMON EXCAV. – C.Y. ROCK EXCAV. – C.Y.

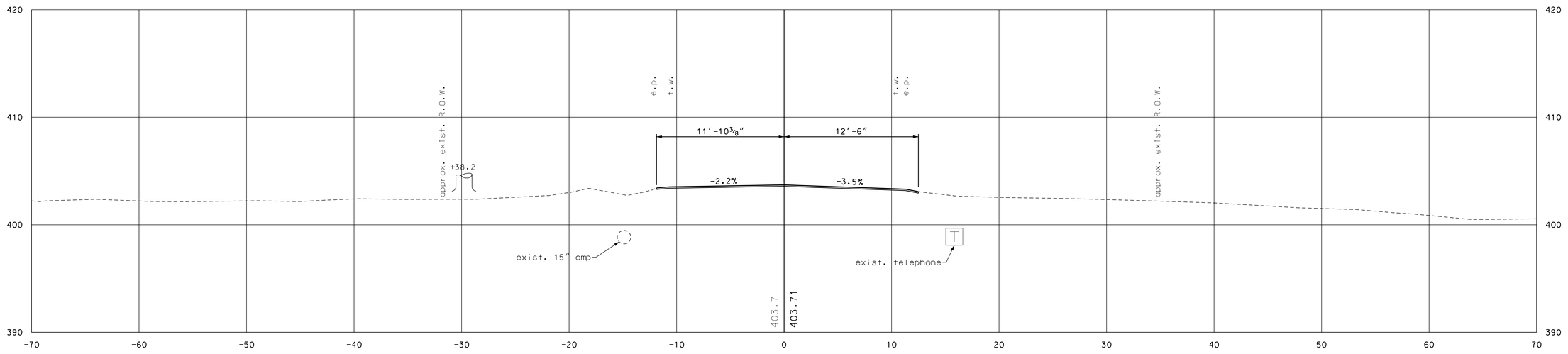
FILL – C.Y. MUCK EXCAV. – C.Y.

DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
14460xs	14460	66	67



21+50

STA. 21+25.00
END APPROACH



21+25

REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	STATION	DESCRIPTION

SDR PROCESSED	NHDOT	DATE -
NEW DESIGN	TJG	DATE 02/21
SHEET CHECKED	DEM	DATE 02/21
AS BUILT DETAILS		DATE

EAST THETFORD ROAD

Stantec

LYME, NH & THETFORD, VT	SHEET TOTALS		
COMMON EXCAV. – C.Y.	ROCK EXCAV. – C.Y.		
FILL – C.Y.	MUCK EXCAV. – C.Y.		
DGN	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
14460xs	14460	67	67