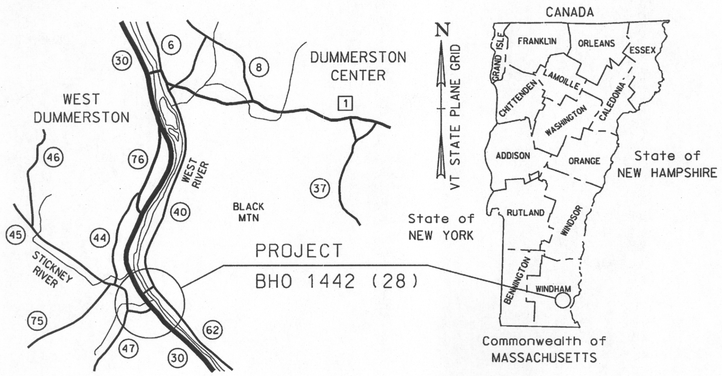
STATE OF VERMONT
AGENCY OF TRANSPORTATION

PROPOSED IMPROVEMENT



LOCATION MAP

0 500 1000 1500 2000
SCALE IN METERS

TOWN OF DUMMERSTON
COUNTY OF WINDHAM

TH 62 (CLASS III-LOCAL ROAD) OVER WEST RIVER, BRIDGE NO. 37

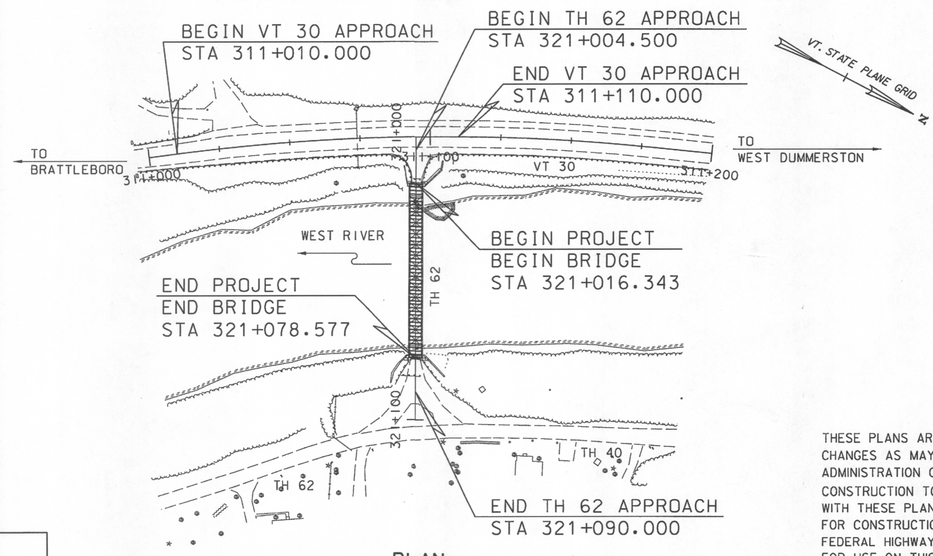
PROJECT LOCATION: THE PROJECT BEGINS 0.016 km EAST OF THE INTERSECTION OF VT 30 AND TH 62 (RICE FARM ROAD) AND CONTINUES EASTERLY FOR 0.062 km

PROJECT DESCRIPTION: REHABILITATION OF BRIDGE NO. 37 INCLUDING MINOR SUBSTRUCTURE REPAIR, AND THE WIDENING OF THE VT 30 NORTHBOUND SHOULDER

LENGTH OF STRUCTURE: 62.234 m

LENGTH OF ROADWAY: ——

LENGTH OF PROJECT: 62.234 m



PLAN
SCALE: 1:1000

0 20 40 60
SCALE IN METERS

INDEX OF SHEETS

1	TITLE SHEET
2	PRELIMINARY INFORMATION SHEET
3	QUANTITY SHEET
4	TIE SHEET
5	ROADWAY PLAN
6	TH 62 PROFILE
7	TRAFFIC CONTROL PLAN
8	PLAN & ELEVATION
9	EPSC NARRATIVE
10	EPSC EXISTING CONDITIONS SITE PLAN
11	EPSC CONSTRUCTION SITE PLAN
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14	EPSC DETAILS (SHEET 2 OF 3)
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21	TRUSS END DETAILS
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23	BOTTOM LATERAL BRACING DETAILS
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27	BRIDGE RAIL END TRANSITION DETAILS
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34	SIGN PLAN
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STANDARDS

A-76	3-3-03	E-120	8-8-95
B-5	6-1-94	E-121	8-8-95
D-1	6-1-94	E-143	6-15-04
D-11	6-1-94	E-146	9-20-95
E-100A	1-2-04	E-160	5-20-99
E-102A	5-1-04	E-164	5-20-99
E-102	6-30-03	G-1d	1-3-00
E-106	3-1-04	G-1	1-3-00
E-107A	8-8-95	G-4	6-1-94
E-108	12-8-08	G-16	6-1-94
E-111	3-11-97	G-18	6-1-94

CONVENTIONAL SYMBOLS

COUNTY LINE
TOWN LINE
LIMITS OF ACCESS
POINT OF ACCESS
FENCE LINE
WETLAND
STONE WALL
TRAVELED WAY
GUARD RAIL
RAILROAD
SURVEY LINE
CULVERT
POWER POLE
TELEPHONE POLE
TREES
CONTROL OF ACCESS
R.O.W. LINE
PROPERTY LINE
R.O.W. TAKING LINE
SLOPE RIGHTS (SR SR SR)
CLEAR ZONE (CZ — CZ)
TOP OF CUT
TOE OF SLOPE

SURVEYED BY : VAOT
SURVEYED DATE : 8/98

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

RECORD PLANS

CONTRACTOR:	RENAUD BROTHERS, INC. - VERNON, VT
RESIDENT ENGINEER:	CHAD GREENWOOD
CONSTRUCTION BEGAN:	AUGUST 7, 2009
CONSTRUCTION COMPLETE:	NOVEMBER 2, 2011
RECORD PLANS BY:	CHAD GREENWOOD & J. HYDE

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

BY _____ RESIDENT ENGINEER

DATE 6/26/13

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

STATE OF VERMONT
STEVEN M. HODGDON
NO. 8853
Structural
LICENSED PROFESSIONAL ENGINEER
12/31/2009

VAOT Metric

UNLESS NOTED OTHERWISE
STATIONS ARE IN KILOMETERS
ELEVATIONS ARE IN METERS
DIMENSIONS ARE IN MILLIMETERS

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT. CONSTRUCTION TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JUNE 15, 2006 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

DIRECTOR OF PROGRAM DEVELOPMENT
APPROVED Steven V. Burke DATE 4-6-2009

PROJECT MANAGER : MARTHA EVANS-MONGEON

PROJECT NAME : DUMMERSTON
PROJECT NUMBER : BHO 1442 (28)

SHEET 1 OF 49 SHEETS

VANASSE HANGEN BRUSTLIN, INC.

SOIL CLASSIFICATION

WINDSOR (WEST OF RIVER ONLY)
LOAMY FINE SAND
2% TO 8% SLOPES (GENERALLY)
"K FACTOR" 0.17
CLASSIFIED LOW EROSION POTENTIAL

VT STATE PLANE GRID

Metric

HARDWOOD/
SOFTWOOD TREES

STATE OF VERMONT

HARDWOOD/SOFTWOOD TREES

GRASS

EXISTING DRAINAGE

TO BRATTLEBORO

VT 30

TO WEST DUMMERSTON

311+000 311+020 311+040 311+060 311+080 311+100 311+120 311+140 311+160 311+180

FLOW

375 CMP

GRAVEL

STONE

FLOOD PLAIN

RIPARIAN BUFFER

HARDWOOD/SOFTWOOD TREES

APPROXIMATE
ORDINARY HIGH WATER

HISTORIC THROUGH
TRUSS BRIDGE

LEDGE
OUTCROP

LIMITS OF
RIPARIAN BUFFER

R30WZ

WEST RIVER

TH 62

321+000 321+020 321+040 321+060 321+080 321+100

PROPOSED ALIGNMENT

CHANNEL ALIGNMENT

400+000 400+020 400+040 400+060 400+080 400+100 400+120 400+140 400+160 400+180

LEGEND

AERIAL E&T — AERIAL ELECTRIC & TELEPHONE

— — — — RIPARIAN BUFFER ZONE

0 10 20

SCALE 1:250

SOIL CLASSIFICATION

QUONSET AND WARWICK
(EAST OF RIVER ONLY)
FINE SANDY LOAM
2% TO 8% SLOPES (GENERALLY)
"K FACTOR" 0.20
CLASSIFIED LOW EROSION POTENTIAL

526 MOMANEY, FRANCIS & JEAN

527 EAMES, SHEILA

528 KOHOUT MICHAEL & DIAMONDSTONE, JESS

KOHOUT MICHAEL & DIAMONDSTONE, JESSICA

TH 40 (QUARRY ROAD)

GRAVEL TH 62 (RICE FARM ROAD)

EXISTING R.O.W.

HARDWOOD/
SOFTWOOD TREES

GRASS

GRAVEL

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VANASSE HANGEN BRUSTLIN, INC.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of DUMMERSTON	Bridge No. 37
Highway No. TH 62	Log Sta. / Surv. Sta.

TH 62 OVER WEST RIVER

EPSC EXISTING CONDITIONS SITE PLAN

Designed By C.L. CILLEY	Drawn By C.L. CILLEY
Checked By S.M. HODGDON Date 4/09	Bridge Design Supervisor S.M. HODGDON Date 4/09
PROJECT DUMMERSTON	PROJECT NO. BHO 1442(28)
I.G.C. Info.	
Bridge Sheet No. ZJ080EC2	Sheet 10 of 49

VHB NO. 51192

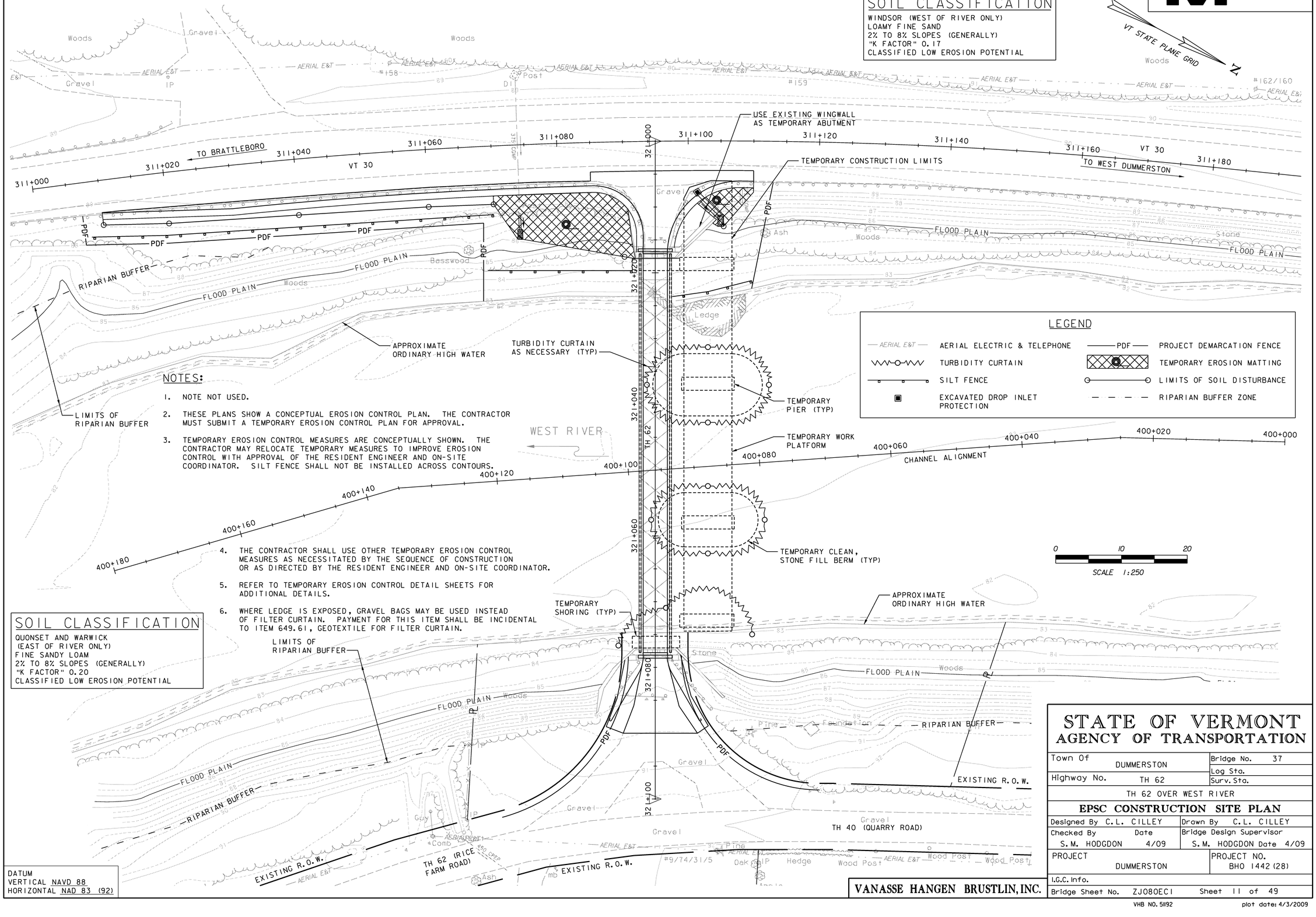
plot date: 4/3/2009

Metric

SOIL CLASSIFICATION

WINDSOR (WEST OF RIVER ONLY)
LOAMY FINE SAND
2% TO 8% SLOPES (GENERALLY)
"K FACTOR" 0.17
CLASSIFIED LOW EROSION POTENTIAL

VT STATE PLANE GRID N



LEGEND

AERIAL E&T	AERIAL ELECTRIC & TELEPHONE	PDF	PROJECT DEMARCATION FENCE
	TURBIDITY CURTAIN		TEMPORARY EROSION MATTING
	SILT FENCE		LIMITS OF SOIL DISTURBANCE
	EXCAVATED DROP INLET PROTECTION		RIPARIAN BUFFER ZONE

NOTES:

1. NOTE NOT USED.
2. THESE PLANS SHOW A CONCEPTUAL EROSION CONTROL PLAN. THE CONTRACTOR MUST SUBMIT A TEMPORARY EROSION CONTROL PLAN FOR APPROVAL.
3. TEMPORARY EROSION CONTROL MEASURES ARE CONCEPTUALLY SHOWN. THE CONTRACTOR MAY RELOCATE TEMPORARY MEASURES TO IMPROVE EROSION CONTROL WITH APPROVAL OF THE RESIDENT ENGINEER AND ON-SITE COORDINATOR. SILT FENCE SHALL NOT BE INSTALLED ACROSS CONTOURS.
4. THE CONTRACTOR SHALL USE OTHER TEMPORARY EROSION CONTROL MEASURES AS NECESSITATED BY THE SEQUENCE OF CONSTRUCTION OR AS DIRECTED BY THE RESIDENT ENGINEER AND ON-SITE COORDINATOR.
5. REFER TO TEMPORARY EROSION CONTROL DETAIL SHEETS FOR ADDITIONAL DETAILS.
6. WHERE LEDGE IS EXPOSED, GRAVEL BAGS MAY BE USED INSTEAD OF FILTER CURTAIN. PAYMENT FOR THIS ITEM SHALL BE INCIDENTAL TO ITEM 649.61, GEOTEXTILE FOR FILTER CURTAIN.

SOIL CLASSIFICATION

QUONSET AND WARWICK
(EAST OF RIVER ONLY)
FINE SANDY LOAM
2% TO 8% SLOPES (GENERALLY)
"K FACTOR" 0.20
CLASSIFIED LOW EROSION POTENTIAL

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of DUMMERSTON	Bridge No. 37
Highway No. TH 62	Log Sta. / Surv. Sta.
TH 62 OVER WEST RIVER	

EPSC CONSTRUCTION SITE PLAN

Designed By C.L. CILLEY	Drawn By C.L. CILLEY
Checked By S.M. HODGDON Date 4/09	Bridge Design Supervisor S.M. HODGDON Date 4/09
PROJECT DUMMERSTON	PROJECT NO. BHO 1442 (28)
I.G.C. Info.	
Bridge Sheet No. ZJ080EC1	Sheet 11 of 49

VANASSE HANGEN BRUSTLIN, INC.

VHB NO. 51192 plot date: 4/3/2009

Metric

VT STATE PLANE GRID

N

Woods
Gravel
AERIAL E&T
IP
#158
Post
#159
#162/160
311+000
311+020
311+040
311+060
311+080
311+100
311+120
311+140
311+160
311+180
VT 30
TO WEST DUMMERSTON
375 COMP
Gravel
Ash
Woods
Stone
FLOOD PLAIN
Basswood
RIPARIAN BUFFER
APPROXIMATE
ORDINARY HIGH WATER
LIMITS OF
RIPARIAN BUFFER
Ledge
321+000
321+020
321+040
321+060
321+080
321+100
TH 62
WEST RIVER
400+000
400+020
400+040
400+060
400+080
400+100
400+120
400+140
400+160
400+180
CHANNEL ALIGNMENT

LEGEND

- AERIAL E&T — AERIAL ELECTRIC & TELEPHONE
- LIMITS OF SOIL DISTURBANCE
- DISTURBED AREAS REQUIRING RE-VEGETATION
- RIPARIAN BUFFER
- TEMPORARY EROSION MATTING

NOTE: FINAL CONTOURS NOT SHOWN FOR CLARITY.
SEE CROSS SECTIONS FOR ADDITIONAL INFORMATION.

0 10 20

SCALE 1:250

Pine
Foundation
EXISTING R.O.W.
Guy
Comb
450 CONIF
TH 62 (RICE FARM ROAD)
#9/74/31/5
Oak
Hedge
Wood Post
Apple
TH 40 (QUARRY ROAD)

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VANASSE HANGEN BRUSTLIN, INC.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of DUMMERSTON	Bridge No. 37
	Log Sta.
Highway No. TH 62	Surv. Sta.

TH 62 OVER WEST RIVER

EPSC FINAL CONDITIONS SITE PLAN

Designed By C.L. CILLEY	Drawn By C.L. CILLEY
Checked By S.M. HODGDON Date 4/09	Bridge Design Supervisor S.M. HODGDON Date 4/09
PROJECT DUMMERSTON	PROJECT NO. BHO 1442 (28)
I.G.C. Info.	
Bridge Sheet No. ZJ080EC3	Sheet 12 of 49

VHB NO. 5II92

plot date: 4/3/2009

VAOT Metric

BEGIN VT 30 APPROACH
STA 311+010.000
MATCH EXISTING

VT 30 P.O.C. STA 311+095.000 =
TH 62 STA 321+000.000

BEGIN TH 62 APPROACH
STA 321+004.500
MATCH EXISTING

END VT 30 APPROACH
STA 311+110.000
MATCH EXISTING

CURVE DATA
Δ = 13°18'57.9"
R = 725.000
T = 84.630
L = 168.497
E = 4.923
BANK = MATCH EXISTING

VT STATE PLANE GRID N

PI
STA 311+093.887 BK
STA 311+093.124 AHD

POB Sta 311+000.000

PC Sta 311+009.257

PT Sta 311+177.754

TO BRATTLEBORO

TO WEST DUMMERSTON

C VT 30

VT 30

"STATE OF VERMONT"

ADDED STOP BAR

BENCHMARK #2 EL. = 89.09
STAMPED STICKNEY 1988
DISK ON BRIDGE ABUTMENT

TRAVERSE 3

TRAVERSE 4

BEGIN PROJECT
BEGIN BRIDGE
STA 321+016.343
F.G. EL. 89.835

END PROJECT
END BRIDGE
STA 321+078.577
F.G. EL. 89.820

END TH 62 APPROACH
STA 321+090.000
MATCH EXISTING

TH 62 STA 321+050.000 =
CHANNEL STA 400+095.901
Δ = 86°00'00" RT

CHANNEL ALIGNMENT

S31°59'01.0"E
S44°12'17.2"E
S26°29'21.5"E
N62°00'59.0"E
N35°26'40.9"W
N22°07'43.0"W

TH 62

Sta 321+100.000

TREATED TIMBER CURB
STA 321+016 LT ~ 311+010 RT

WEST RIVER

TH 40 (QUARRY ROAD)

TH 62 (RICE FARM ROAD)

EXISTING R.O.W.

Woods
Gravel
Stone
Basswood
Ash
Pine
Foundation
Guy
Comb
Oak
Hedge
Wood Post
Apple
Ledge

#158
#159
#162/160
#9/74/31/5

DRAINAGE NOTES

(1) STA 311+074, LT - RT
RETAIN EXISTING 375x21m CGMP
STA 311+074, RT 10.7 - RT 12.7
INSTALL NEW 2m 375 CSP 1.63 (68x12) 4m
(EXTEND EXISTING CULVERT)
INSTALL STONE FILL, TYPE I
750x1500x300 DEEP AT OUTLET

(2) STA 311+102, RT 8.1
INSTALL PRECAST REINFORCED CONCRETE
PIPE DI WITH CAST IRON GRATE (TYPE E)
RIM EL. 89.136
INV. OUT = ~~87.260~~ 87.206
STA 311+102, RT 8.1 - STA 311+105, RT 11.2
INSTALL NEW ~~5m~~ 450 CSP 1.63 (68x12) OR
450 RCP CLASS III OR 450 CPEP
INV. OUT = ~~86.300~~ 86.637
INSTALL STONE FILL, TYPE I
900x1800x300 DEEP AT OUTLET

(3) STA 311+108, RT 7.1 - 9.8
REMOVE EXISTING 375x4m CGMP
(PAY ITEM 204.20)

REMOVAL AND DISPOSAL OF GUARDRAIL

STA 311+084, RT - STA 321+016, RT
STA 321+017, LT - STA 311+110, RT

STA 321+084, RT - STA 321+085, LT

POE Sta 400+180.000

PAVED SHOULDER & GUARDRAIL TAPER

STA 311+010, RT (1370 mm) TO
STA 311+030, RT (3000 mm)

REMOVE AND RESET GUARDRAIL

STA 311+010, RT - STA 311+084, RT

P1 Sta 400+135.000

EXISTING BRIDGE DATA

QUADRUPLE INTERSECTION
WARREN THROUGH TRUSS
DECK - OPEN STEEL GRID
DRY STONE ABUTMENTS
BUILT CIRCA 1892
CLEAR SPAN 59.63 m
WIDTH 3660 CLEAR

SPECIAL PROVISION (BRIDGE RAILING, TRUSS)

STA 321+017.033 - STA 321+077.887, RT & LT

HD STEEL BEAM GUARDRAIL, GALVANIZED

STA 321+009.0, RT 4.0 - STA 321+016.0, RT 1.9
STA 321+009.4, LT 5.0 - STA 321+016.0, LT 1.9
STA 321+078.9, RT 1.9 - STA 321+~~087.7~~, RT 6.5090.0
STA 321+078.9, LT 1.9 - STA 321+~~087.7~~, LT 6.5090.0

STEEL BEAM GUARDRAIL, GALVANIZED

STA 311+084.0, RT 6.6 - STA 321+009.0, RT 4.0
STA 321+009.4, LT 5.0 - STA 311+110.0, RT 6.1

ANCHOR FOR STEEL BEAM RAIL

STA 311+085, RT
STA 311+~~105~~, RT 112
STA 321+086.6, RT & LT

P1 Sta 400+025.000

POB Sta 400+000.000

YIELDING MARKER POSTS

STA 311+074, RT
STA 311+102, RT

COLD PLANING, BITUMINOUS PAVEMENT

STA 311+010 - STA 311+110, RT

0 10 20
SCALE 1:250

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of DUMMERSTON	Bridge No. 37
Highway No. TH 62	Log Sta.
	Surv. Sta.

TH 62 OVER WEST RIVER

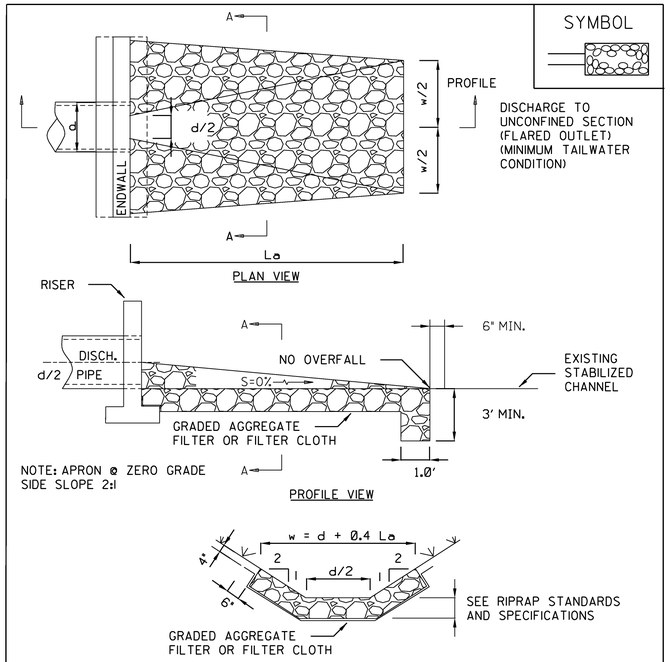
ROADWAY PLAN

Designed By J.C. WEALE	Drawn By C.L. CILLEY
Checked By S.M. HODGDON Date 4/09	Bridge Design Supervisor S.M. HODGDON Date 4/09
PROJECT DUMMERSTON	PROJECT NO. BHO 1442 (28)
I.G.C. Info.	
Bridge Sheet No. ZJ080PN1	Sheet 5 of 49

VANASSE HANGEN BRUSTLIN, INC.

VHB NO. 51192

plot date: 4/3/2009

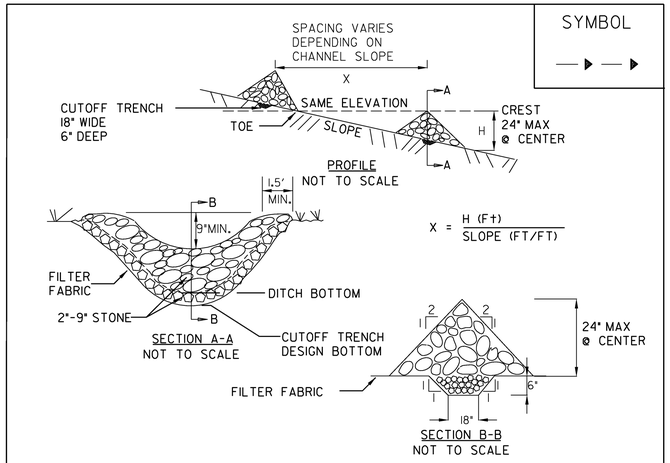


NOTE:
SEE RIPRAP STANDARDS AND SPECIFICATIONS
MINIMUM TAILWATER CONDITIONS

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION	RIPRAP OUTLET PROTECTION EXAMPLE

NOTES:
REFER TO 'THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- 'FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS ITEM SHALL BE PAID FOR UNDER ITEM 613.10, STONE FILL, TYPE I.



CONSTRUCTION SPECIFICATIONS

1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION.
2. SET SPACING OF CHECK DAMS SO THAT THE ELEVATION OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION AS THE TOE OF THE UPSTREAM DAM.
3. EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
4. PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
5. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.

MAXIMUM DRAINAGE AREA 2 ACRES.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC ORIGINALLY DEVELOPED BY USDA-NRCSVERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION	CHECK DAM

NOTES:
REFER TO 'THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- 'FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS ITEM SHALL BE PAID FOR UNDER ITEM 653.25 TEMPORARY STONE CHECK DAM, TYPE I

REVISIONS	
MARCH 8, 2007	JMF

STATE OF VERMONT
AGENCY OF TRANSPORTATION

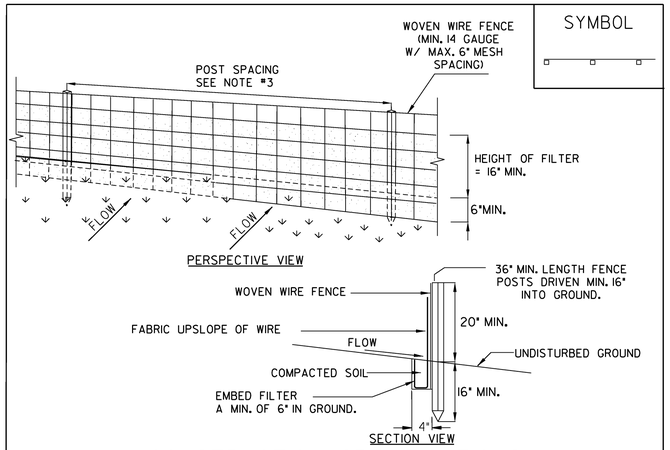
Town Of DUMMERSTON	Bridge No. 37
Highway No. TH 62	Log Sta.
	Surv. Sta.
TH 62 OVER WEST RIVER	
EPSC DETAILS (SHEET 2 OF 3)	
Designed By VTRANS	Drawn By VTRANS
Checked By Date VTRANS 5/07	Bridge Design Supervisor S. M. HODGDON Date 4/09
PROJECT DUMMERSTON	PROJECT NO. BHO 1442(28)
I.G.C. Info.	
Bridge Sheet No. ZJ080ERODET Sheet 14 of 49	

VANASSE HANGEN BRUSTLIN, INC.

VHB NO. 5192

plot date: 4/3/2009

SYMBOL



CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE FENCE REINFORCEMENT IS ONLY REQUIRED WITHIN 100 FT UPSLOPE OF RECEIVING WATERS.

2. WHERE REQUIRED FENCE SHALL BE WOVEN WIRE, MIN. 14 GAUGE WITH A 6" MAXIMUM MESH OPENING. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI100X, STABILINKA T140N OR APPROVED EQUIVALENT.

3. POST SPACING FOR WIRE-BACKED FENCE SHALL BE 10' MAXIMUM. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS >50%, POST SPACING SHALL NOT EXCEED 4'. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS <50%, POST SPACING SHALL NOT EXCEED 6'.

4. WOVEN WIRE FENCE IS TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES. FILTER CLOTH IS TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.

5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED.

6. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.

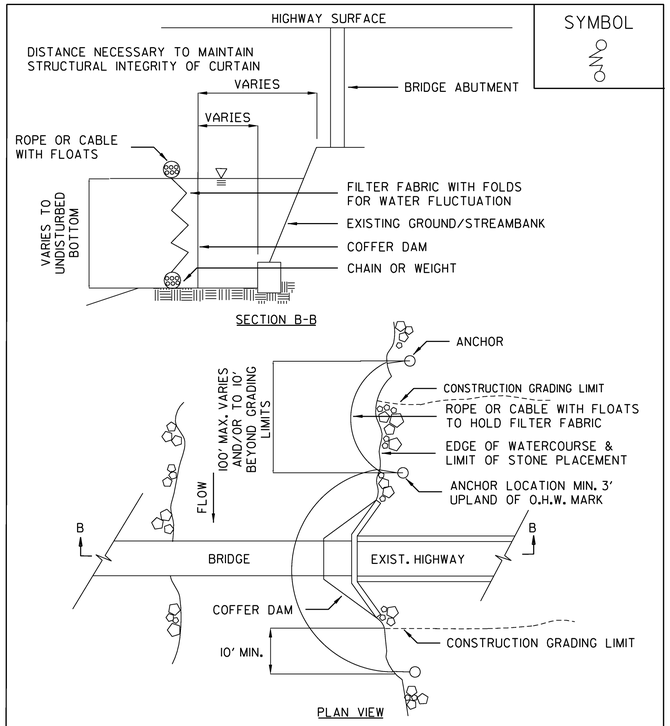
7. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN SEDIMENT REACHES HALF OF FABRIC HEIGHT.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION	SILT FENCE

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.

THIS ITEM SHALL BE PAID FOR UNDER
STANDARD SPECIFICATION ~~649.5I GEOTEXTILE FOR SILT FENCE OR~~
ITEM 649.515 GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED

SYMBOL



ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT AGENCY OF TRANSPORTATION	TURBIDITY CURTAIN

NOTES:
THIS ITEM SHALL BE PAID FOR UNDER ITEM
649.61 GEOTEXTILE FOR FILTER CURTAIN

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of DUMMERSTON	Bridge No. 37
	Log Sta.
Highway No. TH 62	Surv. Sta.
TH 62 OVER WEST RIVER	
EPSC DETAILS (SHEET 3 OF 3)	
Designed By VTRANS	Drawn By VTRANS
Checked By Date VTRANS 5/07 }	Bridge Design Supervisor S. M. HODGDON Date 4/09
PROJECT DUMMERSTON	PROJECT NO. BHO 1442 (28)
I.G.C. Info.	
Bridge Sheet No. ZJ080ERODET2 Sheet 15 of 49	

VANASSE HANGEN BRUSTLIN, INC.

GENERAL NOTES:

1. DIMENSIONS, ANGLES, BEARINGS, AND ELEVATIONS SHOWN ON THESE CONTRACT PLANS HAVE BEEN OBTAINED FROM LIMITED FIELD INVESTIGATION AND FIELD SURVEY, AND MAY NOT ACCURATELY REFLECT ACTUAL FIELD CONDITIONS. ACCORDINGLY, THE CONTRACTOR WILL BE RESPONSIBLE FOR MAKING FIELD MEASUREMENTS OF ALL EXISTING CONDITIONS AFFECTING OR IMPACTED BY THE NEW WORK TO ASSURE CONSISTENCY WITH THE PROPOSED CONSTRUCTION. ANY DISCREPANCIES IN DIMENSIONS, CHARACTER OR EXTENT OF THE EXISTING FEATURES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE ADVANCING THE WORK. THE CONTRACTOR SHALL FIELD VERIFY DIMENSIONS SHOWN IN THESE PLANS PRIOR TO ANY FABRICATION.

2. THE GENERAL SCOPE OF THE PROJECT INCLUDES, BUT IS NOT LIMITED TO:
   - IMPROVEMENTS TO THE APPROACH ROADWAYS AT BOTH ENDS OF BRIDGE
   - REHABILITATION OF THE EXISTING STEEL TRUSS, INCLUDING BOTTOM CHORD REPLACEMENT AND END POST AND SELECTIVE DIAGONAL REPLACEMENT
   - REPLACEMENT OF THE BRIDGE FLOOR SYSTEM
   - CLEANING AND PAINTING THE EXISTING STEEL TRUSS
   - INSTALLATION OF NEW STEEL BRIDGE RAIL
   - REMOVAL OF EXISTING BACKWALLS AND CONSTRUCTION OF NEW CONCRETE BACKWALLS AT BOTH ABUTMENTS
   - CONSTRUCTION OF NEW DECK END JOINTS AT BOTH ABUTMENTS
   - REPAIRS TO END SECTIONS OF BOTH EXISTING STONE MASONRY WINGWALLS AT ABUTMENT 1
   - MINOR CHINKING OF JOINTS IN BOTH DRY-LAID STONE MASONRY ABUTMENTS

3. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006, AND ITS LATEST REVISIONS, AND THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 17TH EDITION, INCLUDING INTERIMS, BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO).

4. DESIGN LIVE LOAD FOR EXISTING STRUCTURE IS UNKNOWN. DESIGN LIVE LOAD FOR NEW COMPONENTS OF STRUCTURE IS AASHTO M9 (H10) UNLESS OTHERWISE NOTED.

5. NO PLANS ARE AVAILABLE OF THE EXISTING BRIDGE.

6. WORKING DRAWINGS REQUIRED FOR VARIOUS ITEMS OF THE WORK SHALL BE BASED ON ACTUAL FIELD MEASUREMENTS TAKEN BY THE CONTRACTOR, AND THE DRAWINGS SHALL BE SO NOTED.

7. THE BRIDGE IS CURRENTLY CLOSED TO TRAFFIC. TRAFFIC ON VT 30 AND TH 62 (RICE FARM ROAD) AND TH 40 (QUARRY ROAD) SHALL BE MAINTAINED AS SHOWN ON SHEET 7.

8. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO PREVENT DEBRIS FROM FALLING INTO THE WEST RIVER DURING CONSTRUCTION.

9. ALL DIMENSIONS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 20 DEGREES CELSIUS UNLESS OTHERWISE NOTED.

10. THE METHOD OF SHORING AND THE SEQUENCING OF TRUSS MEMBER REMOVAL PROPOSED BY THE CONTRACTOR SHALL BE SUBSTANTIATED WITH DESIGN CALCULATIONS PERFORMED AND STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF VERMONT. DETAILS AND CALCULATIONS OF PROPOSED SHORING, INCLUDING THE PROPOSED TRUSS MEMBER REMOVAL SEQUENCE, SHALL BE SUBMITTED TO THE STRUCTURES ENGINEER AT LEAST TWO WEEKS PRIOR TO INSTALLATION OF THE SHORING. ALL COSTS FOR DESIGN, MATERIALS, INSTALLATION, AND REMOVAL OF SHORING SHALL BE INCLUDED IN ITEM 502.10, SHORING SUPERSTRUCTURE.

11. ITEM 529.20, PARTIAL REMOVAL OF STRUCTURE, SHALL INCLUDE REMOVAL AND PROPER DISPOSAL OF:
   - STEEL BRIDGE RAIL
   - STEEL GRID DECK
   - FLOORBEAMS
   - BOTTOM LATERAL BRACING
   - BOTTOM CHORD AND END POSTS OF BOTH TRUSSES
   - TRUSS BEARINGS
   - THE LOWER SECTION OF THE TRUSS ENDPOST AT ALL 4 CORNERS OF THE BRIDGE
   - SELECTED TRUSS DIAGONAL MEMBERS FROM BOTH TRUSSES
   - RIVETS
   - TOP PLATE OF TOP CHORD SPLICE PLATE AT PANEL POINT U13 ON THE DOWNSTREAM TRUSS ONLY

12. THE EXISTING STRUCTURAL STEEL ON THIS PROJECT WAS PAINTED WITH A MATERIAL THAT MAY CONTAIN LEAD. THE REMOVED STRUCTURAL STEEL IS THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE STATE, ITS OFFICERS, AND EMPLOYEES HARMLESS CONCERNING THE CONTRACTOR'S USE OR DISPOSITION OF THE STRUCTURAL STEEL.

13. ITEM 529.25, REMOVAL OF CONCRETE OR MASONRY, SHALL INCLUDE:
   - REMOVAL AND PROPER DISPOSAL OF THE EXISTING CONCRETE AND STONE MASONRY BACKWALLS AT BOTH ABUTMENTS
   - REMOVAL AND STOCKPILING OF STONE MASONRY FROM PORTIONS OF WINGWALLS #1 AND #2 IF THEY ARE RECONSTRUCTED

14. OPERATIONS SHALL BE PERFORMED SO THAT ALL PORTIONS OF THE EXISTING STRUCTURE THAT ARE TO REMAIN ARE NOT DAMAGED. ANY PORTION OF THE EXISTING STRUCTURE THAT IS TO REMAIN THAT IS DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER AT THE CONTRACTOR'S EXPENSE.

15. EXCAVATION BEHIND EXISTING ABUTMENT BACKWALLS TO THE LIMITS SHOWN IN THE PLANS SHALL BE PAID AS ITEM 204.25, STRUCTURE EXCAVATION. THIS ITEM SHALL ALSO BE USED TO PAY FOR THE EXCAVATION REQUIRED TO REMOVE AND RECONSTRUCT PORTIONS OF WINGWALLS #1 AND #2.

16. THE EXISTING ABUTMENTS AND WINGWALLS ARE CONSTRUCTED OF DRY-LAID STONE MASONRY. STONES AT THE TOPS OF THE WINGWALLS AND BRIDGE SEATS THAT HAVE SHIFTED OUT FROM THE FACE OF WINGWALL OR ABUTMENT SHALL BE RESET AS DIRECTED BY THE ENGINEER. LARGE (APPROXIMATELY 50mm OR GREATER) JOINTS AND GAPS BETWEEN STONES SHALL BE FILLED WITH CHINKING STONES AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE PAID UNDER ITEM 602.20, DRY MASONRY. MORTAR MAY BE USED SELECTIVELY, WITH THE APPROVAL OF THE ENGINEER, TO SEAT CHINKING STONES, BUT IT SHALL NOT BE USED TO REPOINT THE EXISTING OPEN JOINTS. THE ESTIMATED QUANTITY FOR ITEM 602.20 ASSUMES 10% OF THE EXPOSED AREA WILL REQUIRE REPAIR. WINGWALL AREAS SPECIFICALLY IDENTIFIED FOR REPAIR IN THESE PLANS ARE NOT INCLUDED IN THIS QUANTITY.

17. RIVETS SHALL BE REMOVED BY MECHANICAL MEANS (NO FLAME CUTTING ALLOWED) THAT SHALL NOT DAMAGE OR SCORE MEMBERS TO REMAIN.

18. ONLY A TWO ROD (33 FEET) RIGHT-OF-WAY (R.O.W.) IS AVAILABLE FOR CONSTRUCTION AT THE EAST END OF THE PROJECT ALONG TH 62 AND TH 40. IF ADDITIONAL R.O.W. IS NEEDED FOR CONSTRUCTION OR STAGING PURPOSES, THE CONTRACTOR SHALL SECURE ALL NECESSARY EASEMENTS. COST SHALL BE INCIDENTAL TO ALL CONTRACT ITEMS.

19. A TEMPORARY WORK PLATFORM AREA HAS BEEN INCLUDED IN THE PERMITS FOR THIS PROJECT AND IS SCHEMATICALLY SHOWN IN THE PLANS. THIS PLATFORM IS INTENDED TO FUNCTION AS STAGING AREA AND TO FACILITATE THE TRUSS REHABILITATION BY ALLOWING THE CONTRACTOR THE OPTION OF TEMPORARILY MOVING THE EXISTING TRUSS TO THIS WORK PLATFORM. ONCE THE REHABILITATION IS COMPLETE, THE TRUSS MUST BE RELOCATED TO THE POSITION SHOWN IN THE PLANS AND THE TEMPORARY WORK PLATFORM, ASSOCIATED TEMPORARY SUPPORTS, AND STONE FILL BERMS MUST BE COMPLETELY REMOVED. ALL COSTS FOR THE TEMPORARY WORK PLATFORM INCLUDING STRUCTURAL DESIGN, EXISTING BRIDGE DISPLACEMENT PROCEDURES, PLATFORM CONSTRUCTION, AND REMOVAL SHALL BE INCLUDED IN ITEM 900.645, SPECIAL PROVISION (TEMPORARY WORK PLATFORM). IF A TEMPORARY WORK PLATFORM IS NOT CONSTRUCTED, THIS ITEM SHALL NOT BE USED OR MEASURED FOR PAYMENT AND NO COMPENSATION WILL BE PROVIDED FOR THIS ALTERATION IN THE CONTRACT.

STRUCTURAL STEEL NOTES:

1. ALL NEW STRUCTURAL STEEL SHALL BE AASHTO M 270M, GRADE 345 PAINTED UNLESS OTHERWISE NOTED AND SHALL CONFORM TO ALL APPLICABLE SUBSECTIONS OF SECTION 506.

2. ITEM 506.50 STRUCTURAL STEEL, ROLLED BEAM, SHALL INCLUDE NEW FLOORBEAMS AND REQUIRED FASTENERS. THESE MEMBERS SHALL BE GALVANIZED AND PAINTED PER SECTION 513.

3. ITEM 506.60, STRUCTURAL STEEL, SHALL INCLUDE:
   - NEW BOTTOM LATERAL BRACING AND CONNECTION PLATES
   - NEW BOTTOM CHORD FOR BOTH TRUSSES, INCLUDING SPLICES
   - NEW TRUSS END POSTS
   - SELECTED NEW TRUSS DIAGONAL MEMBERS IN BOTH TRUSSES AS IDENTIFIED ON SHEET 17
   - NEW TOP PLATE OF TOP CHORD SPLICE PLATE AT PANEL POINT U13 ON THE DOWNSTREAM TRUSS ONLY
   - REPLACEMENT OF RIVETS WITH BOLTS IN TRUSS DIAGONAL MEMBER CONNECTIONS TO TOP CHORD AT LOCATIONS IDENTIFIED ON SHEET 17
   - ALL REQUIRED FASTENERS FOR THE ABOVE ITEMS.

4. THE NEW GALVANIZED STEEL GRID FLOORING SHALL BE PAID UNDER ITEM 900.675 SPECIAL PROVISION (STEEL GRID FLOORING).

5. ALL BOLTED CONNECTIONS IN NEW AND EXISTING STEEL SHALL BE MADE WITH 19 mm DIAMETER AASHTO M 164M TYPE 1 HEX HEAD BOLTS UNLESS OTHERWISE NOTED. BOLT HOLES IN NEW MATERIAL SHALL BE 21mm DIAMETER STANDARD HOLES UNLESS OTHERWISE NOTED. ORIENT BOLTS AS SHOWN IN THE PLANS UNLESS OTHERWISE PERMITTED BY THE ENGINEER.

6. FIELD CONNECTION BOLTS FOR ALL STRUCTURAL COMPONENTS THAT HAVE BEEN PAINTED PRIOR TO BEING ERECTED SHALL BE ZINC COATED IN ACCORDANCE WITH AASHTO M298, CLASS 50, TYPE 1. FIELD PAINTING OF BOLTS SHALL INCLUDE BOTH THE INTERMEDIATE AND FINAL COATING SYSTEMS AFTER APPROVAL OF THE CONNECTIONS.

7. DIMENSIONS OF STRUCTURAL STEEL SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO THE PREPARATION OF FABRICATION DRAWINGS TO ENSURE THAT THE NEW TRUSS MEMBERS CONNECT PROPERLY TO THE EXISTING TRUSS MEMBERS. FABRICATION DRAWINGS REQUIRED FOR VARIOUS ITEMS OF WORK SHALL INDICATE THE ACTUAL FIELD MEASUREMENTS AND SHALL BE SO NOTED. TO ENSURE PROPER FIT ALL HOLES REQUIRING FIELD DRILLING AND MEMBERS REQUIRING FIELD CUTTING SHALL BE CLEARLY SHOWN. FABRICATION DRAWINGS SUBMITTED WITHOUT THE CONTRACTOR'S FIELD MEASUREMENTS CLEARLY NOTED ARE NOT ACCEPTABLE AND WILL BE RETURNED WITHOUT REVIEW. ALL COSTS FOR FIELD MEASUREMENTS REQUIRED TO PREPARE THE STRUCTURAL STEEL FABRICATION DRAWINGS SHALL BE INCLUDED IN ITEMS 506.50 AND 506.60 AND WILL NOT BE PAID SEPARATELY.

8. ALL REQUIRED CONNECTIONS NOT DESIGNATED IN THESE PLANS SHALL BE DETAILED BY THE FABRICATOR AND SUBMITTED TO THE ENGINEER FOR APPROVAL.

9. SOME CONNECTIONS HAVE LIMITED CLEARANCE WHICH MAY REQUIRE CLIPPED WASHERS AND PRECLUDE TIGHTENING OF BOLTS WITH POWER TOOLS OR TORQUE WRENCHES.

10. IF THE CONTRACTOR CAN DEMONSTRATE TO THE AGENCY THAT HE/SHE CAN PROPERLY CUT AND DRILL/PUNCH NEW TRUSS STEEL MEMBERS IN THE FIELD TO IMPROVE FIT-UP AND ALIGNMENT DURING REHABILITATION, THIS WILL BE PERMITTED.

STRUCTURAL STEEL PAINTING NOTES:

1. ALL NEW AND EXISTING STRUCTURAL STEEL SHALL BE PAINTED UNLESS OTHERWISE NOTED. SURFACE PREPARATION, CONTAINMENT, AND PAINTING SHALL BE IN CONFORMANCE WITH SECTION 513. THE SURFACE PREPARATION FOR THE REPAINTING OF THE EXISTING STEEL SHALL INCLUDE 100% REMOVAL OF THE EXISTING PAINT SYSTEM.

2. PAINTING OF NEW STEEL SHALL BE PAID FOR UNDER ITEM 513.40, SURFACE PREPARATION, SHOP, AND ITEM 513.25, STRUCTURAL PAINTING, SHOP APPLIED. ALL AREAS OF SHOP PAINTED ELEMENTS THAT ARE DAMAGED FROM TRANSPORTATION, HANDLING, OR ERECTION SHALL BE REPAINTED AS DIRECTED BY THE ENGINEER AT THE CONTRACTOR'S EXPENSE.

3. PAINTING OF EXISTING STEEL SHALL BE PAID FOR UNDER ITEM 513.36, CONTAINMENT & ENVIRONMENTAL PROTECTION, FIELD; ITEM 513.41, SURFACE PREPARATION, FIELD; AND ITEM 513.30, STRUCTURAL PAINTING, FIELD APPLIED.

4. THE COLOR OF THE FINAL COAT OF PAINT SHALL BE GREEN AND SHALL CONFORM TO FEDERAL COLOR STANDARD NO. 595, COLOR CHIP NO. 14062 IN ACCORDANCE WITH SUBSECTION 708.03.

5. THE CONTRACTOR SHALL ENSURE THAT CONTAINMENT AND ENVIRONMENTAL PROTECTION MEASURES USED FOR PAINTING AND PAINT REMOVAL DO NOT COMPROMISE THE STABILITY OF THE BRIDGE OR OVERSTRESS ANY OF THE TRUSS MEMBERS OR CONNECTIONS. AS SUCH, IT MAY BE NECESSARY TO PERFORM THE PROTECTIVE COATING WORK IN DISCRETE AREAS AND LIMIT THE AMOUNT OF BRIDGE SUBJECT TO CONTAINMENT AT ANY ONE TIME. IN ADDITION TO THE REQUIREMENTS OF SUBSECTION 513.03, THE CONTRACTOR'S CONTAINMENT AND ENVIRONMENTAL PROTECTION PROPOSAL SHALL INCLUDE NECESSARY PLANS AND CALCULATIONS PERFORMED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF VERMONT THAT SUBSTANTIATE THE STABILITY OF THE BRIDGE AND TRUSS MEMBER STRESSES DURING THE CONTAINMENT AND ENVIRONMENTAL PROTECTION OPERATIONS. ALL COST SHALL BE INCLUDED IN ITEM 513.36, CONTAINMENT AND ENVIRONMENTAL PROTECTION, FIELD.

DECK END JOINT NOTES:

1. ITEM 516.11, BRIDGE EXPANSION JOINT, VERMONT, SHALL INCLUDE THE FABRICATION AND ERECTION OF COMPLETE JOINT ASSEMBLIES AT BOTH ENDS OF THE BRIDGE DECK. ITEM 516.11 SHALL INCLUDE ALL STEEL PLATES, ANGLES, ANCHOR STUDS, EXTRUSIONS, BOLTS, ELASTOMERIC STRIP SEAL AND ANY OTHER MISCELLANEOUS MATERIAL NECESSARY TO INSTALL THE JOINT.

2. THE FINAL FINISH OF THE JOINT SHALL BE COVERED AND PROTECTED DURING PLACEMENT OF CONCRETE IN THE STEEL GRID DECK.

3. ALL STEEL COMPONENTS SHALL BE AASHTO M 270M GRADE 250 GALVANIZED OR METALIZED PER SECTION 506.

4. NO 'LOW PROFILE' STEEL EXTRUSIONS SHALL BE ALLOWED.

5. THE ELASTOMERIC STRIP SEAL SHALL BE FURNISHED AS ONE CONTINUOUS PIECE AT EACH JOINT. NO SPLICES WILL BE ALLOWED.

6. THE ANGLES AND VERTICAL PLATES FOR THE JOINTS SHALL BE FURNISHED AS CONTINUOUS PIECES.

7. EACH DECK END JOINT SHALL BE SHOP ASSEMBLED AND SHIPPED AS ONE UNIT.

VAOT Metric

CONCRETE NOTES:

1. CONCRETE IN GRID DECK SHALL BE ITEM 501.32, CONCRETE, HIGH PERFORMANCE CLASS AA, WITH A DESIGN STRENGTH OF f'c = 30 MPa. CONCRETE IN ABUTMENT BACKWALLS SHALL BE ITEM 501.34, CONCRETE, HIGH PERFORMANCE CLASS B, WITH A DESIGN STRENGTH OF f'c = 25 MPa.

2. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 25 MILLIMETERS BY 25 MILLIMETERS, UNLESS OTHERWISE NOTED.

3. ITEM 514.10, WATER REPELLENT, SILANE, SHALL BE APPLIED TO THE TOP AND FRONT FACE OF EACH ABUTMENT BACKWALL.

4. MINIMUM CLEAR COVER FOR REINFORCING STEEL IN THE ABUTMENT BACKWALLS SHALL BE 80 MILLIMETERS.

5. REINFORCING STEEL PLACEMENT TOLERANCES SHALL BE +/- 25 MILLIMETERS FOR SPACING, AND +/- 5 MILLIMETERS FOR CLEARANCE.

6. REINFORCING STEEL IN THE ABUTMENT BACKWALLS SHALL BE EPOXY COATED AND SHALL BE PAID AS ITEM 507.17, EPOXY COATED REINFORCING STEEL. DRILL AND GROUT BARS SHALL BE UNCOATED AND SHALL BE PAID AS ITEM 507.15, REINFORCING STEEL.

BEARING NOTES:

1. BEARINGS SHALL BE PREFORMED FABRIC PAD TYPE AS DETAILED, AND SHALL BE PAID AS ITEM 531.10, BEARING DEVICE ASSEMBLY, PREFORMED FABRIC PAD.

2. ALL STEEL IN BEARING DEVICES, EXCEPT STAINLESS STEEL SLIDING SURFACES, SHALL BE AASHTO M 270M, GRADE 250.

3. DRILL AND SET ANCHOR BOLTS WITH A MINIMUM OF 400 MILLIMETERS EMBEDMENT INTO EXISTING STONE MASONRY BRIDGE SEATS. HOLES SHALL BE 25 MILLIMETERS LARGER IN DIAMETER THAN THE ANCHOR BOLTS. BOLTS SHALL BE SET IN A TYPE IV MORTAR. ALL COSTS FOR ANCHOR BOLTS, DRILLING OR CORING HOLES, AND MORTAR SHALL BE INCLUDED UNDER ITEM 531.10.

4. ANCHOR BOLTS SHALL BE SWEDGED WITH 100 MILLIMETERS OF THREAD. EXPANSION BEARING NUTS ARE TO BE DRAWN UP FINGER TIGHT AND THEN BACKED OFF 5 MILLIMETERS. THREADS SHALL BE BURRED ABOVE NUT TO PREVENT NUT REMOVAL. TOUCH UP ANY DAMAGED AREAS WITH A ZINC-RICH PAINT AS NECESSARY.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

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TH 62 OVER WEST RIVER

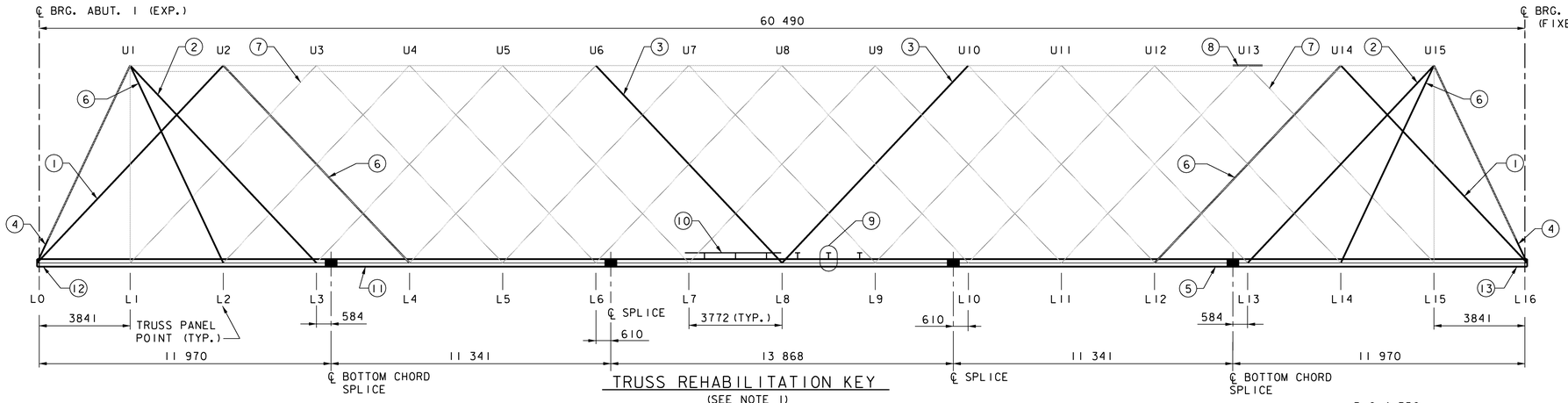
CONSTRUCTION NOTES

Designed By T. S. BRYANT	Drawn By C. L. CILLEY
Checked By S. M. HODGDON Date 4/09	Bridge Design Supervisor S. M. HODGDON Date 4/09
PROJECT DUMMERSTON	PROJECT NO. BHO 1442 (28)
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VANASSE HANGEN BRUSTLIN, INC.

VHB NO. 5192

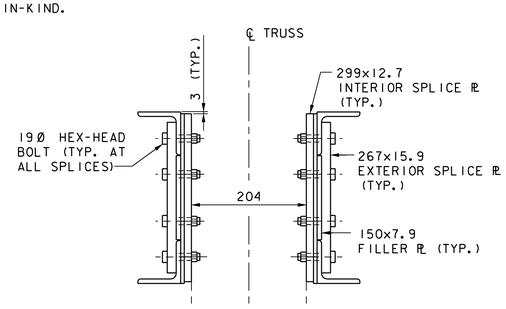
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TRUSS REHABILITATION KEY

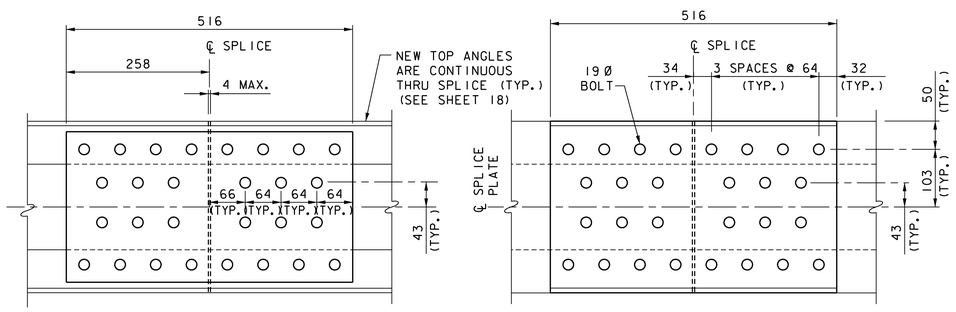
(SEE NOTE 1)
NOT TO SCALE

1. REPLACE EXISTING MEMBER CONSISTING OF 2-L 89x64x6.4 AND 51x6.4 SINGLE LACING WITH NEW MEMBER CONSISTING OF 2-L 89x76x9.5 AND 64x6.4 SINGLE LACING.
2. REPLACE EXISTING MEMBER CONSISTING OF 2-L 51x51x6.4 AND 352x12lx6.4 STAY PLATES, WITH NEW MEMBER CONSISTING OF 2-L 76x76x6.4 AND 394x216x6.4 STAY PLATES.
3. REPLACE EXISTING MEMBERS CONSISTING OF 2-L 51x51x6.4 AND 352x12lx6.4 STAY PLATES, WITH NEW MEMBERS CONSISTING OF 2-L 76x76x6.4 AND 64x6.4 SINGLE LACING.
4. REPLACE ALL TRUSS END POSTS.
5. REPLACE ENTIRE BOTTOM CHORD.
6. REPLACE EXISTING MEMBER CONSISTING OF 2-L 51x51x6.4 AND 352x12lx6.4 STAY PLATES IN-KIND.
7. REPLACE ALL RIVETS WITH HEX-HEAD H.S. BOLTS IN L1-U3 AND L15-U13 TO TOP CHORD CONNECTIONS.
8. REPLACE EXISTING 159x356x6.4 TOP PLATE OF TOP CHORD SPLICE PLATE AT U13 IN-KIND, DOWNSTREAM TRUSS ONLY.
9. REPLACE ALL FLOORBEAMS WITH NEW W 250x67 FLOORBEAMS.
10. REPLACE EXISTING 64 STEEL GRID DECK WITH NEW 89 STEEL GRID DECK.
11. REPLACE ALL BOTTOM LATERAL BRACING.
12. INSTALL NEW EXPANSION BEARINGS.
13. INSTALL NEW FIXED BEARINGS.



NEW TYPICAL SECTION AT SPLICE

SCALE: 1:5

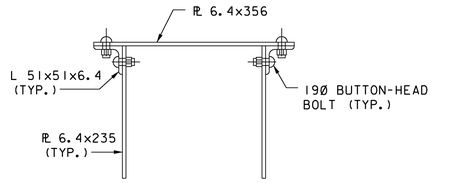


EXTERIOR SPLICE PLATE

INTERIOR SPLICE PLATE

NEW BOTTOM CHORD SPLICE DETAILS

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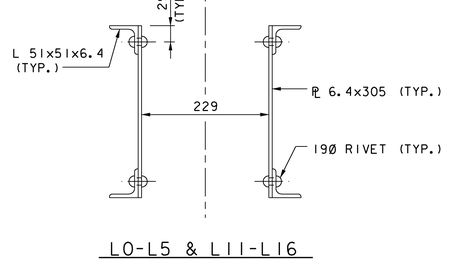


U1-U4 & U12-U15

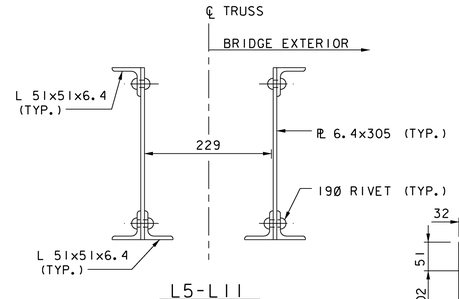
U5-U11

EXISTING TOP CHORD SECTION

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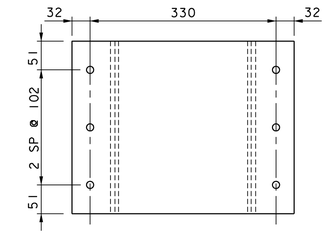
L0-L5 & L11-L16



L5-L11

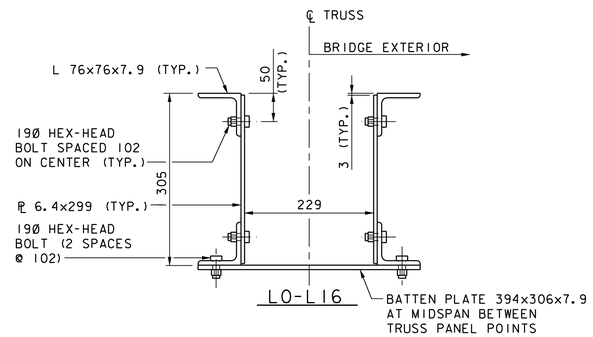
EXISTING BOTTOM CHORD SECTIONS

SCALE: 1:5



NEW BATTEN PLATE ON BOTTOM CHORD

SCALE: 1:5



L0-L16

NEW BOTTOM CHORD SECTION

SCALE: 1:5

0 100 200 300 400 500

NOTES:

1. DOWNSTREAM TRUSS ELEVATION (LOOKING UPSTREAM) SHOWN. ALL REHABILITATION ITEMS APPLY TO BOTH TRUSSES UNLESS OTHERWISE NOTED.
2. TRUSS IS SYMMETRICAL ABOUT PANEL POINT L8.
3. IN TRUSS REHABILITATION KEY:

   (X) = REHABILITATION ITEMS

   BOLD LINES INDICATE TRUSS MEMBER REPLACEMENTS

DIMENSIONS PROVIDED IN THESE PLANS SHALL NOT BE USED FOR FABRICATION PURPOSES. ALL NECESSARY DIMENSIONS AND CONFIGURATIONS SHALL BE DETERMINED FROM ACTUAL FIELD MEASUREMENTS.

STATE OF VERMONT
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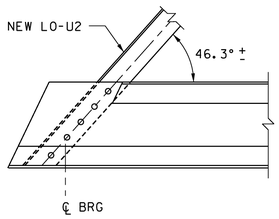
TRUSS REHABILITATION KEY & DETAILS

Designed By T. S. BRYANT	Drawn By C. L. CILLEY
Checked By S. M. HODGDON Date 4/09	Bridge Design Supervisor S. M. HODGDON Date 4/09
PROJECT DUMMERSTON	PROJECT NO. BHO 1442 (28)
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VANASSE HANGEN BRUSTLIN, INC.

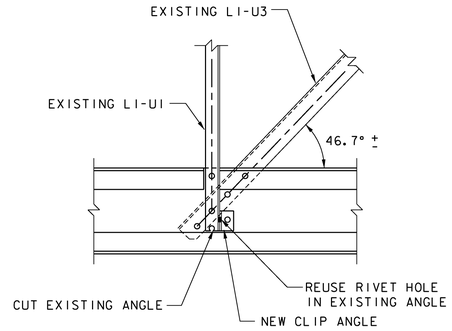
VHB NO. 51192

plot date: 4/3/2009

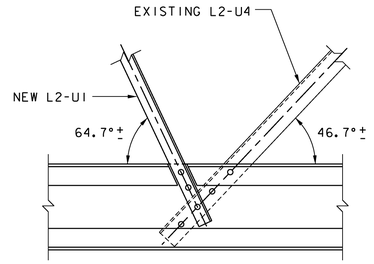


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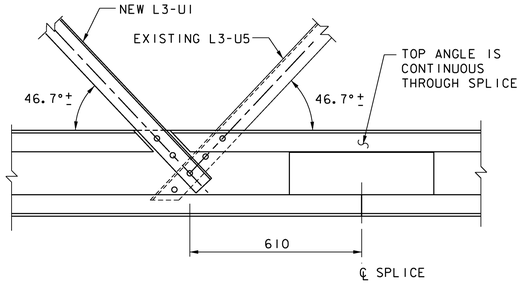
PANEL POINT L0



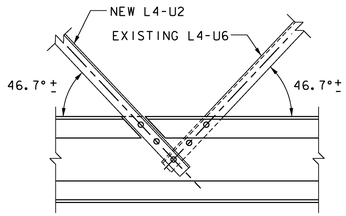
PANEL POINT L1



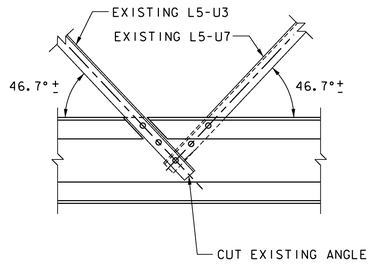
PANEL POINT L2



PANEL POINT L3



PANEL POINT L4

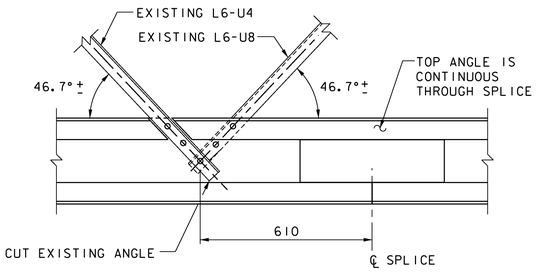


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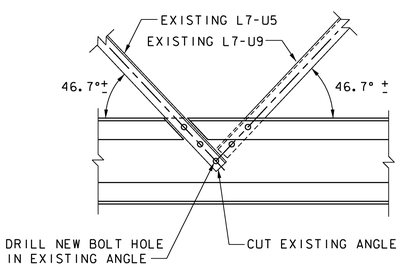
DIMENSIONS PROVIDED IN THESE PLANS SHALL NOT BE USED FOR FABRICATION PURPOSES. ALL NECESSARY DIMENSIONS AND CONFIGURATIONS SHALL BE DETERMINED FROM ACTUAL FIELD MEASUREMENTS.

NOTES:

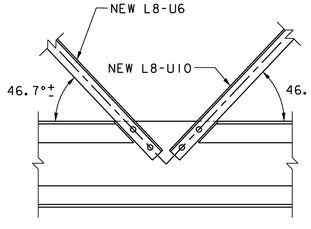
1. TRUSS IS SYMMETRICAL ABOUT PANEL POINT L8. PANEL POINT L9 TO L16 OPPOSITE HAND.
2. BOTTOM CHORD CONNECTIONS TO TRUSS DIAGONALS SHALL BE MADE WITH 19 Ø HEX-HEAD BOLTS.
3. EXISTING RIVET HOLES IN TRUSS DIAGONAL MEMBERS THAT ARE TO REMAIN SHALL BE USED IN CONNECTIONS TO NEW BOTTOM CHORD.
4. BOLT HOLES IN BOTTOM CHORD NOT SHOWN EXCEPT WHERE TRUSS DIAGONALS CONNECT.
5. CLIP ANGLES SHALL BE THE SAME SIZE AS THE ANGLES THEY CONNECT.



PANEL POINT L6



PANEL POINT L7



PANEL POINT L8

TRUSS BOTTOM CHORD CONNECTIONS

SCALE: 1:10

0 200 400 600 800 1000

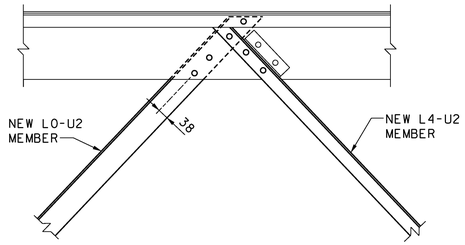
VANASSE HANGEN BRUSTLIN, INC.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of DUMMERSTON	Bridge No. 37
Highway No. TH 62	Log Sta. / Surv. Sta.
TH 62 OVER WEST RIVER	
TRUSS BOTTOM CHORD DETAILS	
Designed By A. J. CRAWFORD	Drawn By B. J. MASSE
Checked By T. S. BRYANT Date 4/09	Bridge Design Supervisor S. M. HODGDON Date 4/09
PROJECT DUMMERSTON	PROJECT NO. BHO 1442 (28)
I.G.C. Info.	
Bridge Sheet No. ZJ080DT2	Sheet 18 of 49

VHB NO. 51192

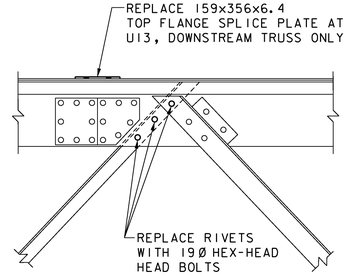
plot date: 4/3/2009



(BATTEN PLATES AND LATTICE BARS
NOT SHOWN FOR CLARITY)

PANEL POINT U2

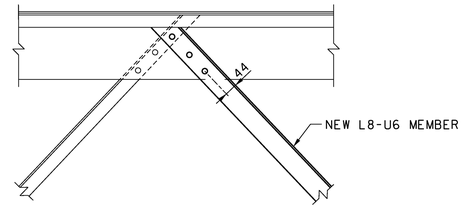
(U14 SIMILAR, OPPOSITE HAND)



(BATTEN PLATES AND LATTICE BARS
NOT SHOWN FOR CLARITY)

PANEL POINT U3

(U13 SIMILAR, OPPOSITE HAND)



(BATTEN PLATES AND LATTICE BARS
NOT SHOWN FOR CLARITY)

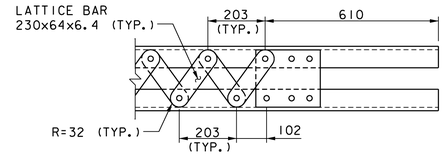
PANEL POINT U6

(U10 SIMILAR, OPPOSITE HAND)

TRUSS TOP CHORD CONNECTIONS

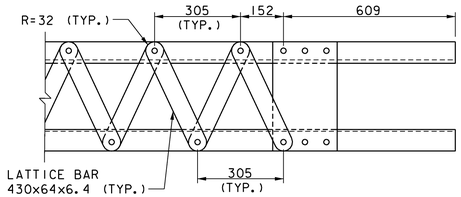
SCALE: 1:10

0 200 400 600 800 1000



DETAIL A

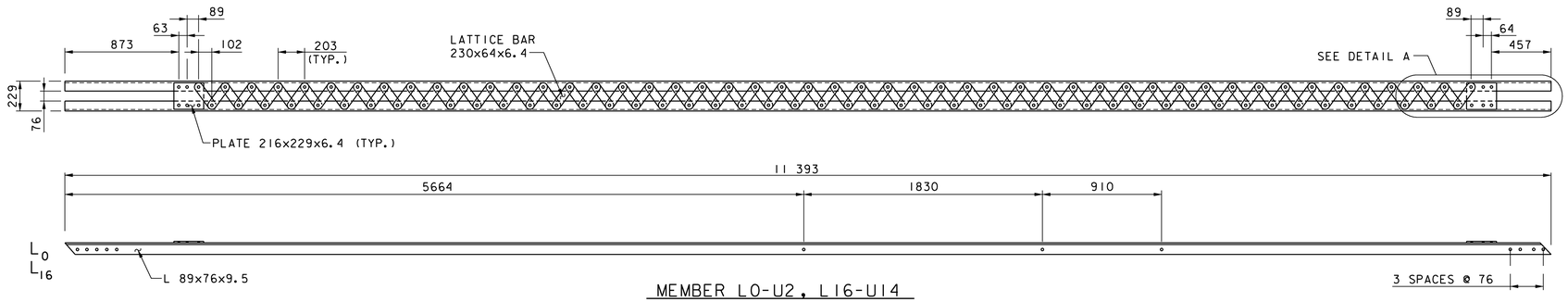
N.T.S.



DETAIL B

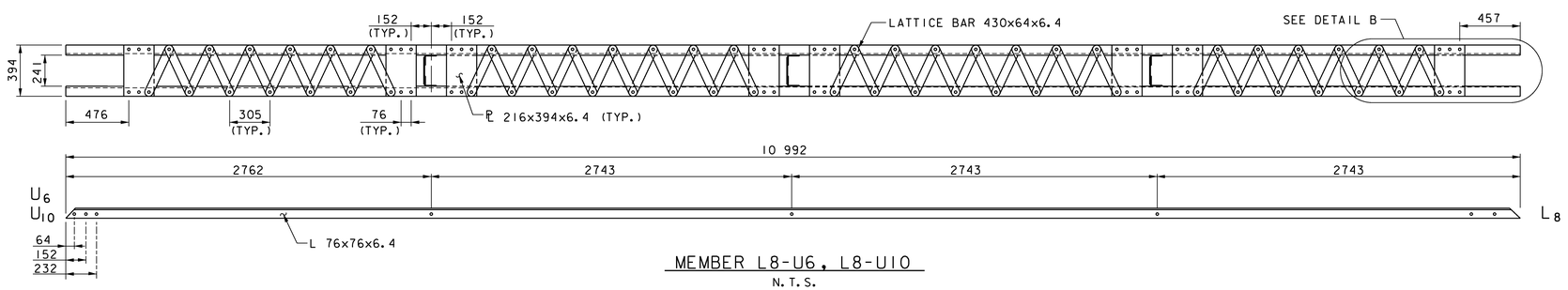
N.T.S.

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MEMBER L0-U2, L16-U14

N.T.S.



MEMBER L8-U6, L8-U10

N.T.S.

NOTES:

1. NEW TRUSS DIAGONAL MEMBERS SHALL BE CONNECTED TO TRUSS TOP CHORD WITH 19Ø HEX-HEAD BOLTS IN EXISTING RIVET HOLES.
2. BATTEN PLATES AND LATTICE BARS SHALL BE CONNECTED WITH 19Ø SLOTTED BUTTON HEAD BOLTS.

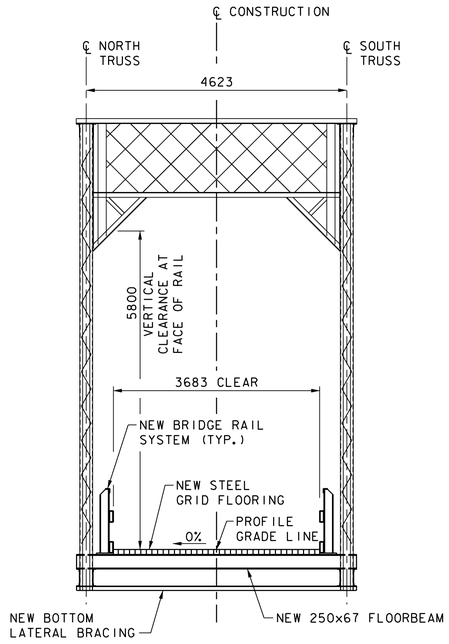
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of DUMMERSTON	Bridge No. 37
Highway No. TH 62	Log Sta. / Surv. Sta.
TH 62 OVER WEST RIVER	
TRUSS DIAGONAL DETAILS (SHEET 1 OF 2)	
Designed By T.S. BRYANT	Drawn By B.J. MASSE
Checked By S.M. HODGDON Date 4/09	Bridge Design Supervisor S.M. HODGDON Date 4/09
PROJECT DUMMERSTON	PROJECT NO. BHO 1442(28)
I.G.C. Info.	
Bridge Sheet No. ZJ080DT3	Sheet 19 of 49

VANASSE HANGEN BRUSTLIN, INC.

VHB NO. 5II92

plot date: 4/3/2009



BRIDGE TYPICAL SECTION

SCALE: 1:50

SEEDING FORMULA
RURAL AREAS

% MASS	kg/ha	NAME	PUR %	GERM %
37.5	26.0	CREEPING RED FESCUE	98	85
37.5	26.0	TALL FESCUE	95	90
5.0	4.0	RED TOP	95	90
15.0	10.0	BIRDSFOOT TREFOIL	98	85
5.0	4.0	ANNUAL RYE GRASS	95	85
100.0	70.0			

GENERAL NOTES

SEED MIXTURE: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY MASS AND SHALL BE FREE OF ALL NOXIOUS SEED.

SEED: TO BE APPLIED PER SEEDING FORMULA OR AS DIRECTED BY THE ENGINEER.

FERTILIZER: FORMULA 10-20-10, TO BE USED WITH SEED, APPLIED AT THE RATE OF 560 kg/ha. (HYDRO SEEDERS MAY USE 19-19-19 FORMULA).

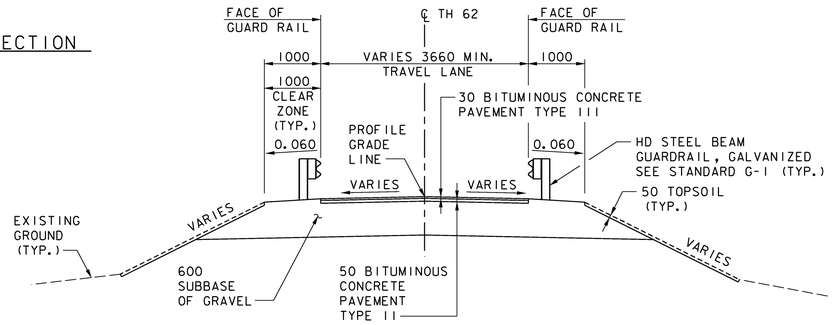
AGRICULTURAL LIMESTONE: TO BE APPLIED AT THE RATE OF 4500 kg/ha, OR AS DIRECTED BY THE ENGINEER.

TOPSOIL: TO BE USED WITH SEED AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

MARKER POSTS: TO BE PLACED AS INDICATED OR AS DIRECTED BY THE ENGINEER.

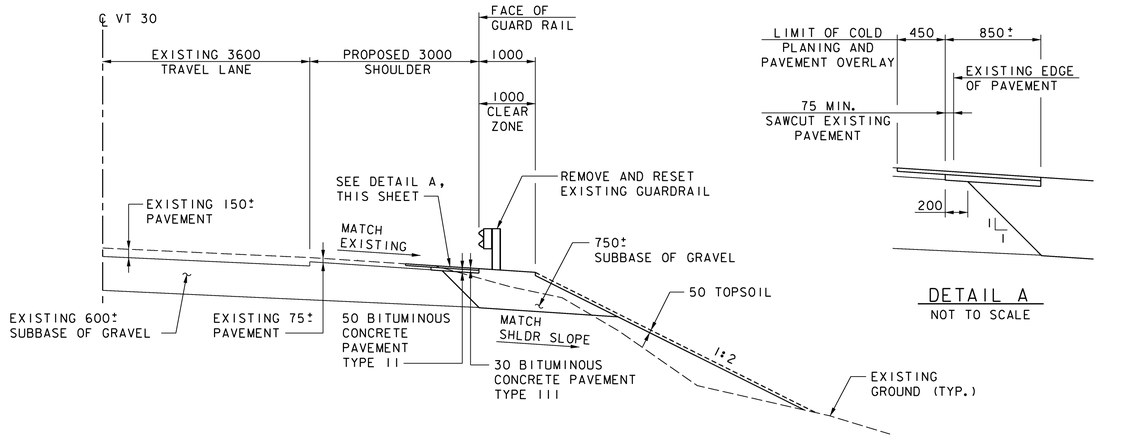
SLOPE ROUNDING: ALL CUT SLOPES TO BE ROUNDED IN ACCORDANCE WITH STANDARD SHEET B-5.

MATERIAL ITEM	THICKNESS TOLERANCES (mm)
PAVEMENT	+/- 5 (TOTAL DEPTH)
SUBBASE	+/- 30



TH 62 TYPICAL SECTION

SCALE: 1:50



VT 30 TYPICAL SECTION

SCALE: 1:50

DETAIL A

NOT TO SCALE

FINAL HYDRAULICS REPORT

HYDROLOGIC DATA

DRAINAGE AREA= 1050 km^2
CHARACTER OF TERRAIN: ROLLING STEEP-SIDED VALLEYS
CHARACTER & TYPE OF STREAM: GRAVEL AND COBBLE BOTTOM
NATURE OF STREAMBED:

Q2.33= Q50= 566 CMS
Q10= 340 CMS Q100= 849 CMS
Q25= Q500= 1500 CMS

DATE OF FLOOD OF RECORD: SEPTEMBER 1938
WATER SURFACE ELEV.: ESTIMATED DISCHARGE:
NATURAL STREAM VELOCITY @ Q
ICE CONDITIONS: UNKNOWN DEBRIS: UNKNOWN
DOES THE STREAM REACH MAXIMUM HIGHWATER ELEVATION RAPIDLY? UNKNOWN
IS ORDINARY RISE RAPID? UNKNOWN
IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? NO
IF YES, DESCRIBE.

WATERSHED STORAGE ____ HEADWATERS ____ UNIFORM THROUGHOUT WATERSHED ____ IMMEDIATELY ABOVE SITE ____

EXISTING STRUCTURE

STRUCTURE TYPE: QUADRUPLE WARREN TRUSS (THROUGH) YEAR BUILT: CIRCA 1892
CLEAR SPAN (NORMAL TO STREAM): 59.63 m
VERTICAL CLEARANCE ABOVE STREAMBED: 7.92 m
WATERWAY OF FULL OPENING:
DISPOSITION OF STRUCTURE: REHABILITATE

TYPE OF MATERIAL UNDER SUBSTRUCTURE: UNKNOWN

WATER SURFACE ELEV. @ Q2.33= VELOCITY=
Q10= 83.6 "
Q25= "
Q50= 84.4 "
Q100= 85.4 "

LONG TERM STREAM BED CHANGES: UNKNOWN

IS THE ROADWAY OVERTOPPED BELOW THE Q100? NO FREQUENCY: -
RELIEF ELEVATION: - DISCHARGE OVER ROAD @ Q100: -

UPSTREAM STRUCTURE: TOWN: DUMMERSTON DISTANCE:
HIGHWAY NO.: TH 1 STRUCTURE NO.: CB 35
STRUCTURE TYPE: TIMBER COVERED BRIDGE
CLEAR SPAN: CLEAR HEIGHT:
YEAR BUILT: FULL WATERWAY:

DOWNSTREAM STRUCTURE: TOWN: DISTANCE:
HIGHWAY NO.: STRUCTURE NO.:
STRUCTURE TYPE:
CLEAR SPAN: CLEAR HEIGHT:
YEAR BUILT: FULL WATERWAY:

PROPOSED STRUCTURE

STRUCTURE TYPE: SEE NOTE 2

CLEAR SPAN (NORMAL TO STREAM):
VERTICAL CLEARANCE ABOVE STREAMBED:
WATERWAY OF FULL OPENING:

WATER SURFACE ELEV. @ Q2.33= VELOCITY=
Q10= " =
Q25= " =
Q50= " =
Q100= " =

IS THE ROADWAY OVERTOPPED BELOW THE Q100? FREQUENCY:
RELIEF ELEVATION: DISCHARGE OVER ROAD @ Q100:

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE:
VERTICAL CLEARANCE @ Q

SCOUR:
REQUIRED CHANNEL PROTECTION:

PERMIT INFORMATION

AVERAGE DAILY FLOW:
ORDINARY LOW WATER: DEPTH:
ORDINARY HIGH WATER: DEPTH:

ADDITIONAL COMMENTS

1. HYDRAULIC AND HYDROLOGIC INFORMATION IS FROM THE TOWN OF DUMMERSTON FLOOD INSURANCE STUDY, JUNE 1991. ELEVATIONS WERE CALCULATED USING THE SURVEYED STREAMBED ELEVATION AND THE WATER DEPTHS FROM THE FEMA REPORT. ADDITIONAL ANALYSES WERE NOT CONDUCTED FOR THIS SITE.

2. HYDRAULIC CONDITIONS WILL NOT CHANGE FOR THE REHABILITATED STRUCTURE.

DESIGN CRITERIA:
1. DESIGN LIVE LOAD AASHTO M9 (WITH 10% IMPACT ALLOWANCE)
2. DESIGN SPAN 60.490 m
3. ALLOWABLE LOAD FOR SPREAD FOOTINGS ON SOIL N/A ON LEDGE N/A
4. ALLOWABLE LOAD FOR PILING N/A TYPE - ESTIMATED LENGTH -
5. STRUCTURAL STEEL NEW STEEL AASHTO M 270M GRADE 345 (PAINTED) 6. EXISTING STEEL UNKNOWN Fy = 179 MPa (ASSUMED) Fu = 358 MPa (ASSUMED)
7. REINFORCING STEEL GRADE 420
8. CONCRETE HIGH PERFORMANCE CLASS AA f'_c 30 MPa
CLASS A f'_c
CLASS B f'_c 25 MPa

TRAFFIC MAINTENANCE:
1. IS TRAFFIC TO BE MAINTAINED? NO IF YES, ON EXISTING STRUCTURE - OR ON TEMPORARY BRIDGE -
2. TEMPORARY BRIDGE REQUIREMENTS: ONE OR TWO WAY - TRAFFIC CONTROL SIGNALS REQUIRED -
MINIMUM CLEAR SPAN (NORMAL TO STREAM): - VERTICAL CLEARANCE ABOVE STREAMBED: -
WATERWAY OF FULL OPENING: -
ARE SIDEWALKS REQUIRED? - IF SO, ON WHAT SIDE? -
STRUCTURE TYPE: -

WORKING STRESS LOAD RATING (METRIC TONNES)

LANE LOADING:
INVENTORY STRESS LEVEL = M7.6
OPERATING STRESS LEVEL = M9.5

SINGLE UNIT:
INVENTORY STRESS LEVEL = M11.1
POSTED STRESS LEVEL = M13.5
OPERATING STRESS LEVEL = M15.1

TOP CHORD MEMBER U7-U9 COMPRESSION GOVERNS LANE LOADING
VERTICAL MEMBERS L1-U1 & L15-U15 TENSION GOVERN SINGLE UNIT LOADING

TRAFFIC DATA - TH 62

2004 ADT = 230 2024 ADT = 270 DESIGN SPEED = N/A
2004 DHV = 32 2024 DHV = 38
2004 ADTT = N/A 2024 ADTT = N/A
2004 %D = N/A 2024 %D = N/A
2004 %T = N/A 2024 %T = N/A

VANASSE HANGEN BRUSTLIN, INC.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

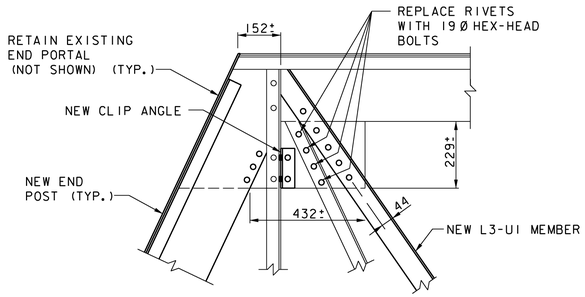
Town Of DUMMERSTON	Bridge No. 37
Highway No. TH 62	Log Sta. / Surv. Sta.

TH 62 OVER WEST RIVER

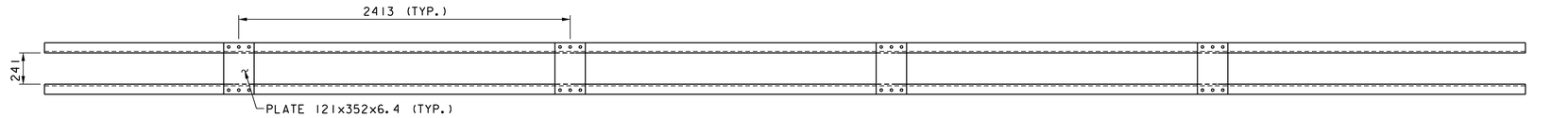
PRELIMINARY INFORMATION SHEET

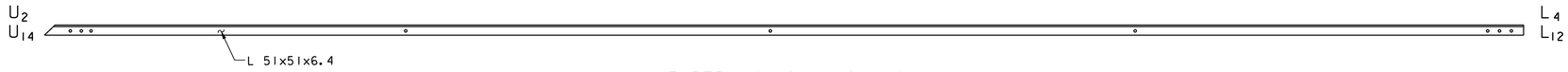
Designed By T.S. BRYANT	Drawn By C.L. CILLEY
Checked By S.M. HODGDON Date 4/09	Bridge Design Supervisor S.M. HODGDON Date 4/09
PROJECT DUMMERSTON	PROJECT NO. BHO 1442(28)
I.G.C. Info.	
Bridge Sheet No. ZJ080P1	Sheet 2 of 49

VHB NO. 5192 plot date: 4/3/2009



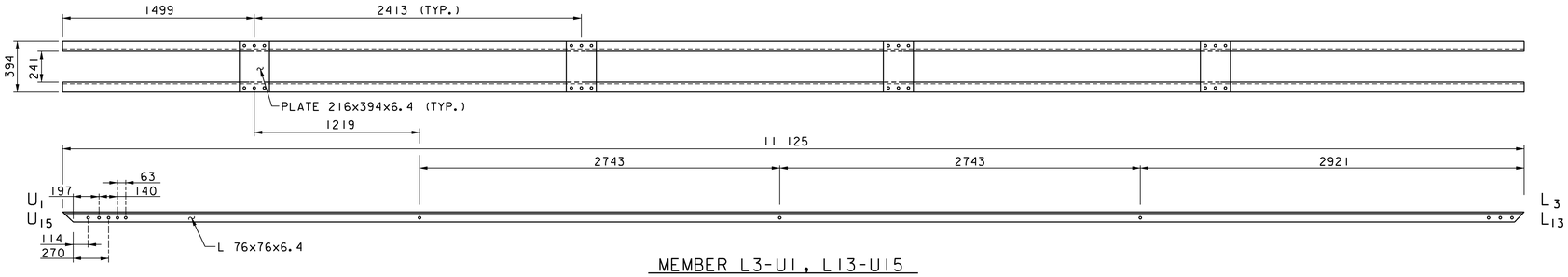
PANEL POINT U1
(U15 OPPOSITE HAND)





MEMBER L4-U2, L12-U14
N.T.S.

DIMENSIONS PROVIDED IN THESE PLANS SHALL NOT BE USED FOR FABRICATION PURPOSES. ALL NECESSARY DIMENSIONS AND CONFIGURATIONS SHALL BE DETERMINED FROM ACTUAL FIELD MEASUREMENTS.



MEMBER L3-U1, L13-U15
N.T.S.

NOTES:

1. NEW TRUSS DIAGONAL MEMBERS SHALL BE CONNECTED TO TRUSS TOP CHORD WITH 19Ø HEX-HEAD BOLTS IN EXISTING RIVET HOLES.
2. BATTEN PLATES AND LATTICE BARS SHALL BE CONNECTED WITH 19Ø SLOTTED BUTTON HEAD BOLTS.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of DUMMERSTON	Bridge No. 37
Highway No. TH 62	Log Sta. / Surv. Sta.
TH 62 OVER WEST RIVER	

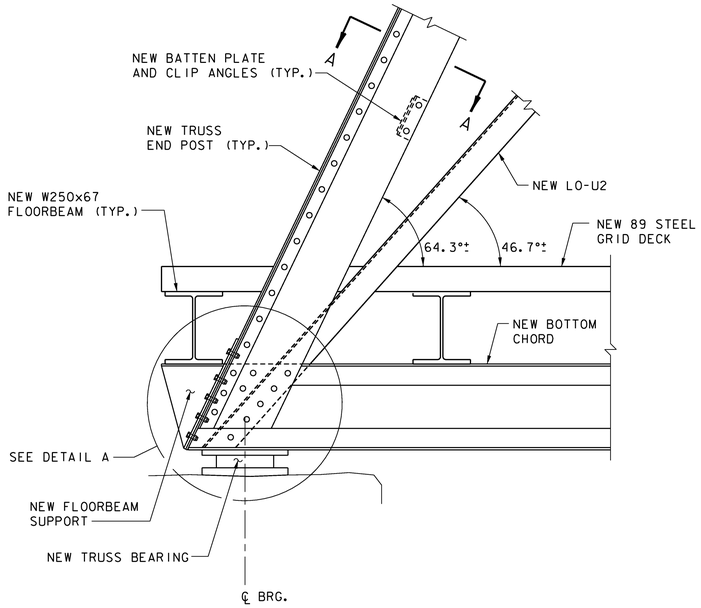
TRUSS DIAGONAL DETAILS (SHEET 2 OF 2)

Designed By T.S. BRYANT	Drawn By C.L. CILLEY
Checked By S.M. HODGDON Date 4/09	Bridge Design Supervisor S.M. HODGDON Date 4/09
PROJECT DUMMERSTON	PROJECT NO. BHO 1442(28)
I.G.C. Info.	
Bridge Sheet No. ZJ080DT3	Sheet 20 of 49

VANASSE HANGEN BRUSTLIN, INC.

VHB NO. 51192

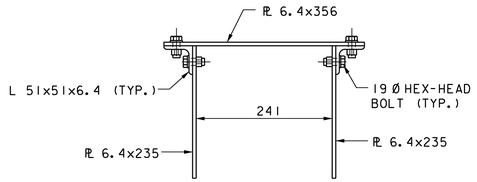
plot date: 4/3/2009



TYPICAL TRUSS END DETAIL

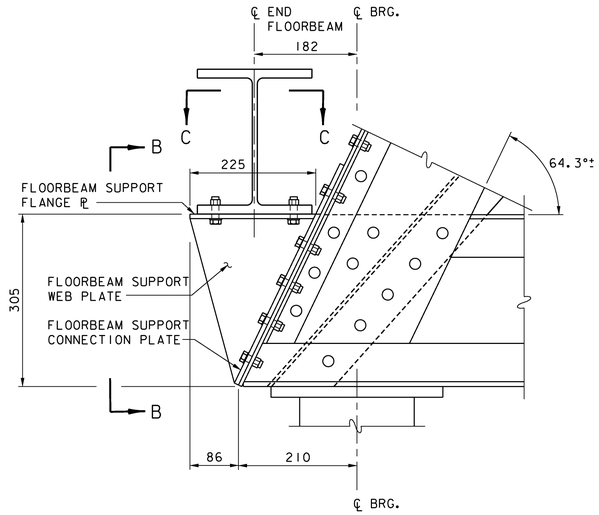
SCALE: 1:10

0 500 1000



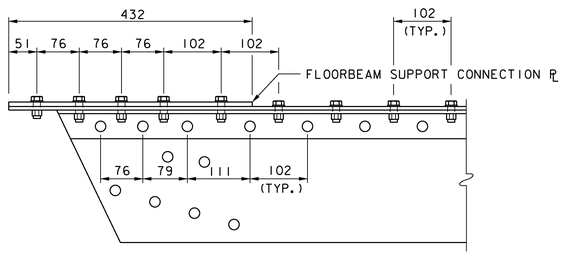
SECTION A-A

(BATTEN PLATE NOT SHOWN)
SCALE: 1:5



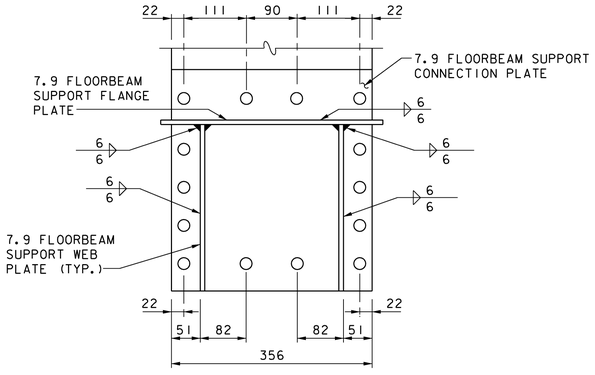
DETAIL A

SCALE: 1:5



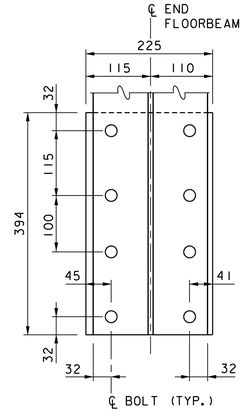
LOWER END POST DETAIL

SCALE: 1:5



VIEW B-B

SCALE: 1:5



SECTION C-C

SCALE: 1:5

NOTES:

1. BOLT HOLES IN BOTTOM CHORD NOT SHOWN EXCEPT FOR CONNECTIONS TO TRUSS DIAGONALS.

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0 250 500

SCALE = 1:5

VANASSE HANGEN BRUSTLIN, INC.

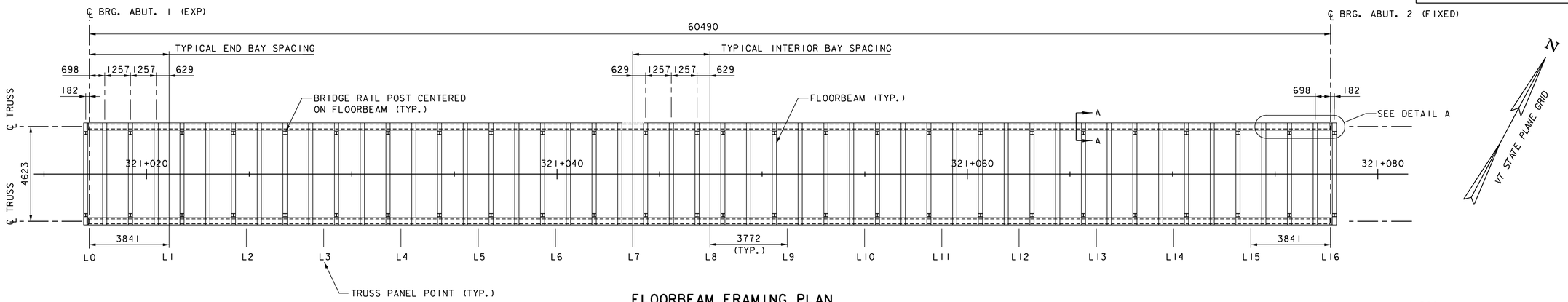
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of DUMMERSTON	Bridge No. 37
	Log Sta.
Highway No. TH 62	Surv. Sta.
TH 62 OVER WEST RIVER	
TRUSS END DETAILS	
Designed By T.S. BRYANT	Drawn By M.M LANDRY
Checked By S.M. HODGDON Date 4/09	Bridge Design Supervisor S.M. HODGDON Date 4/09
PROJECT DUMMERSTON	PROJECT NO. BHO 1442(28)
I.G.C. Info.	
Bridge Sheet No. ZJ080SS2	Sheet 21 of 49

VHB NO. 51192

plot date: 4/3/2009

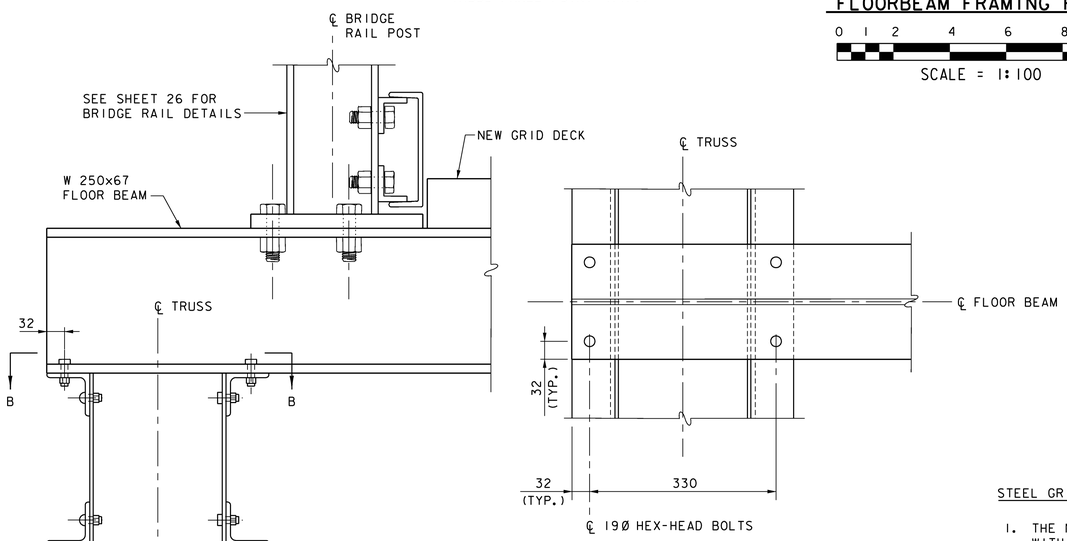
Metric



FLOORBEAM FRAMING PLAN

0 1 2 4 6 8 10

SCALE = 1:100

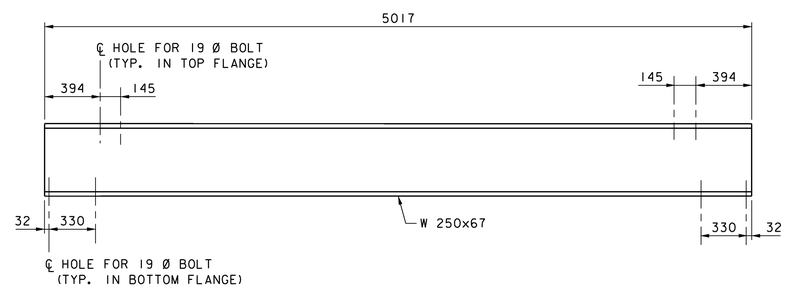


SECTION A-A

SECTION B-B

0 0.25 0.5

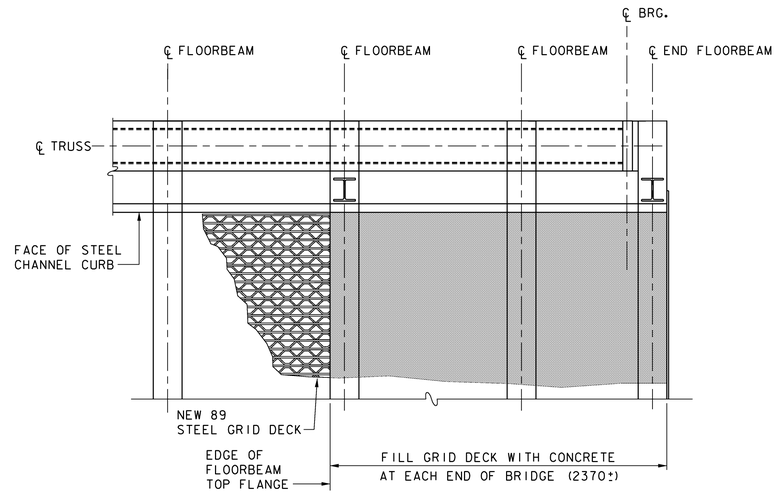
SCALE = 1:5



TYPICAL FLOORBEAM ELEVATION

0 1 2

SCALE = 1:20



DETAIL A

0 1 2

SCALE = 1:20

STEEL GRID DECK NOTES:

1. THE NEW BRIDGE DECK SHALL BE STEEL GRID FLOORING WITH 89 mm HIGH BEARING BARS. THE GRID DECK SHALL BE DESIGNED FOR AASHTO MI3.5 LIVE LOAD AND SHALL SPAN BETWEEN FLOORBEAMS. THE WIDTH, LENGTH, AND LAYOUT OF THE GRID DECK PANELS SHALL BE DETERMINED BY THE CONTRACTOR. DESIGN CALCULATIONS FOR THE STEEL GRID DECK SHALL BE STAMPED BY A LICENSED PROFESSIONAL ENGINEER AND SUBMITTED, ALONG WITH DETAILS OF PANEL SIZES AND LAYOUT, TO THE ENGINEER FOR REVIEW. SEE SECTION 900 OF THE SPECIAL PROVISIONS FOR STEEL GRID FLOORING.
2. THE MAIN BEARING BARS OF THE GRID DECK SHALL BE ATTACHED TO THE TOP FLANGE OF EACH FLOORBEAM WITH 6 mm X 40 mm LONG FILLET WELDS, SPACED AT 300 mm MAXIMUM ALONG THE FLOORBEAM. EACH GRID DECK PANEL SHALL HAVE A MINIMUM OF 4 ATTACHMENTS TO EACH FLOORBEAM.
3. THE ENTIRE WIDTH OF STEEL GRID DECK SHALL BE FILLED WITH CONCRETE, HIGH PERFORMANCE CLASS AA AT EACH END OF THE BRIDGE AS SHOWN ON THIS SHEET. THE CONCRETE SHALL BE PAID UNDER ITEM 501.32, CONCRETE, HIGH PERFORMANCE CLASS AA. THE CONCRETE SHALL BE STRUCK SMOOTH WITH THE TOP OF THE STEEL GRID DECK AND GIVEN A BROOM FINISH.
4. SEE SHEET 25 FOR DETAILS OF OPENINGS IN GRID DECK REQUIRED AT DECK END JOINTS.
5. THE GRID DECK SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH THE REQUIREMENTS OF AASHTO M 111M/M 111.

DIMENSIONS PROVIDED IN THESE PLANS SHALL NOT BE USED FOR FABRICATION PURPOSES. ALL NECESSARY DIMENSIONS AND CONFIGURATIONS SHALL BE DETERMINED FROM ACTUAL FIELD MEASUREMENTS.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of DUMMERSTON	Bridge No. 37
	Log Sta.
Highway No. TH 62	Surv. Sta.
TH 62 OVER WEST RIVER	

FLOOR SYSTEM DETAILS

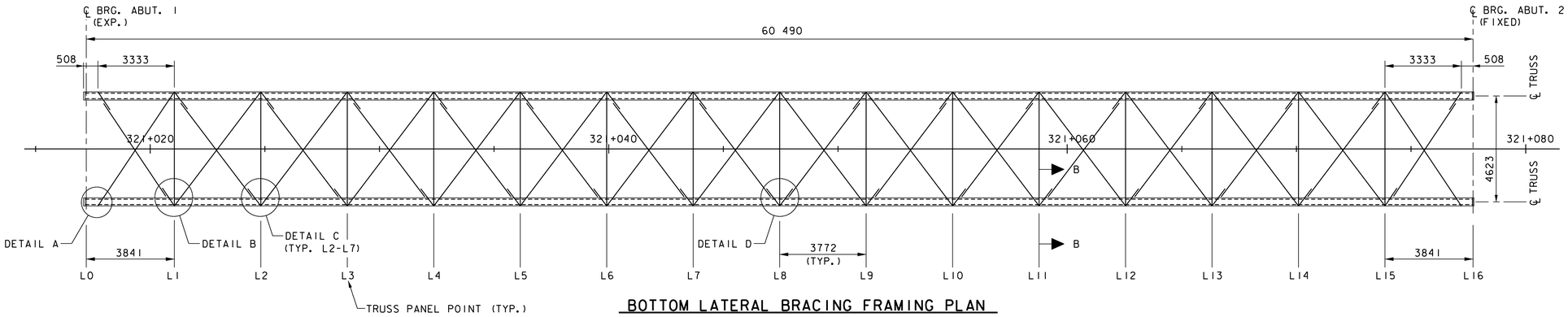
Designed By T. S. BRYANT	Drawn By B. J. MASSE
Checked By Date S. M. HODGDON 4/09	Bridge Design Supervisor S. M. HODGDON Date 4/09
PROJECT DUMMERSTON	PROJECT NO. BHO 1442 (28)
I.G.C. Info.	
Bridge Sheet No. ZJ080DT1	Sheet 22 of 49

VANASSE HANGEN BRUSTLIN, INC.

VHB NO. 51192

plot date: 4/3/2009

Metric

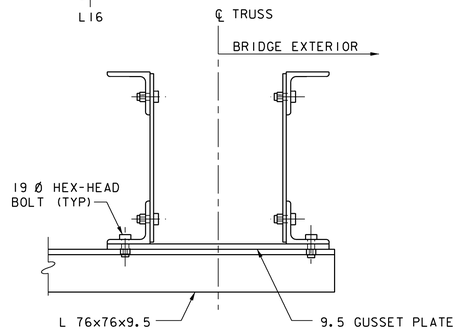


BOTTOM LATERAL BRACING FRAMING PLAN

SCALE: 1:100

0 4000 8000 12000

DIMENSIONS PROVIDED IN THESE PLANS SHALL NOT BE USED FOR FABRICATION PURPOSES. ALL NECESSARY DIMENSIONS AND CONFIGURATIONS SHALL BE DETERMINED FROM ACTUAL FIELD MEASUREMENTS.



SECTION B-B

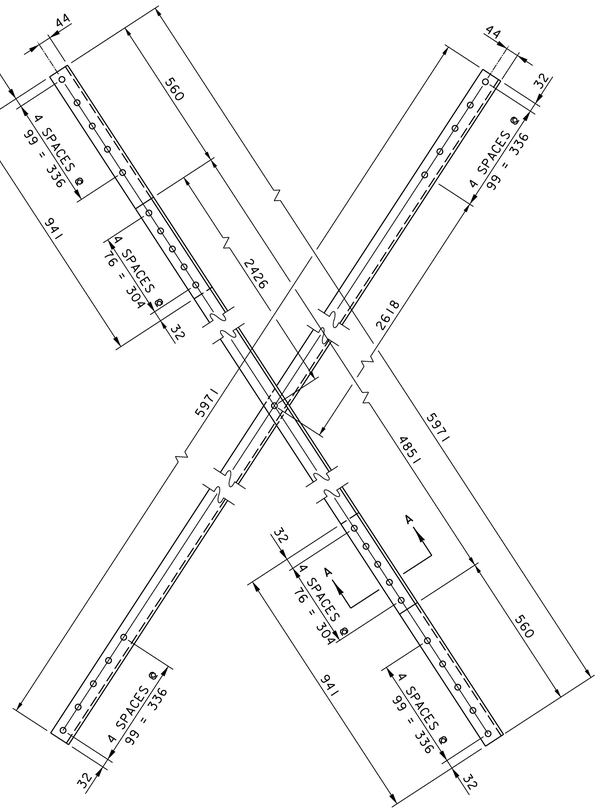
SCALE: 1:5



SECTION A-A

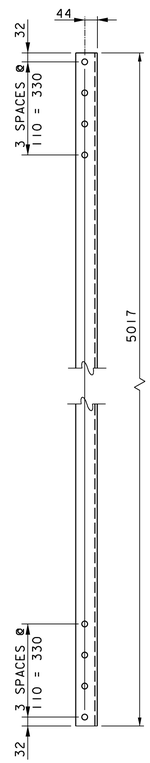
SCALE: 1:5

0 250 500



TYPICAL END BAY DIAGONAL LATERAL BRACING PLAN

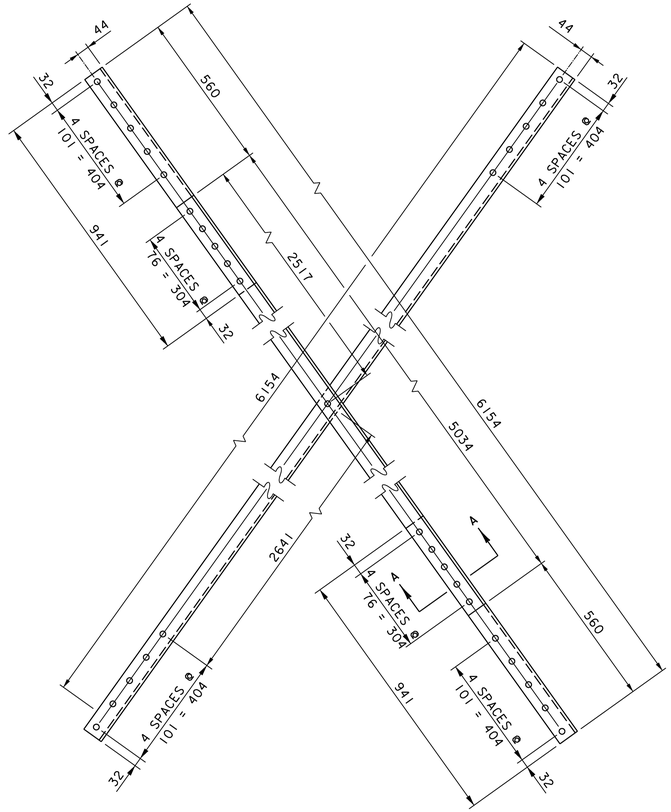
SCALE: 1:10



TYPICAL TRANSVERSE LATERAL BRACING PLAN

SCALE: 1:10

0 500 1000



TYPICAL INTERIOR BAY DIAGONAL LATERAL BRACING PLAN

SCALE: 1:10

NOTES:

1. THE BOTTOM LATERAL BRACING LAYOUT IS SYMMETRICAL ABOUT TRUSS PANEL POINT L8.
2. ALL LATERAL BRACING ANGLES SHALL BE L 76x76x9.5. ALL GUSSET PLATES SHALL BE 9.5 mm THICK.
3. ALL LATERAL BRACING CONNECTIONS SHALL BE MADE WITH 19 DIAMETER AASHTO M164 TYPE I HEX-HEAD BOLTS.
4. SEE SHEET 24 FOR DETAILS A, B, C, & D.

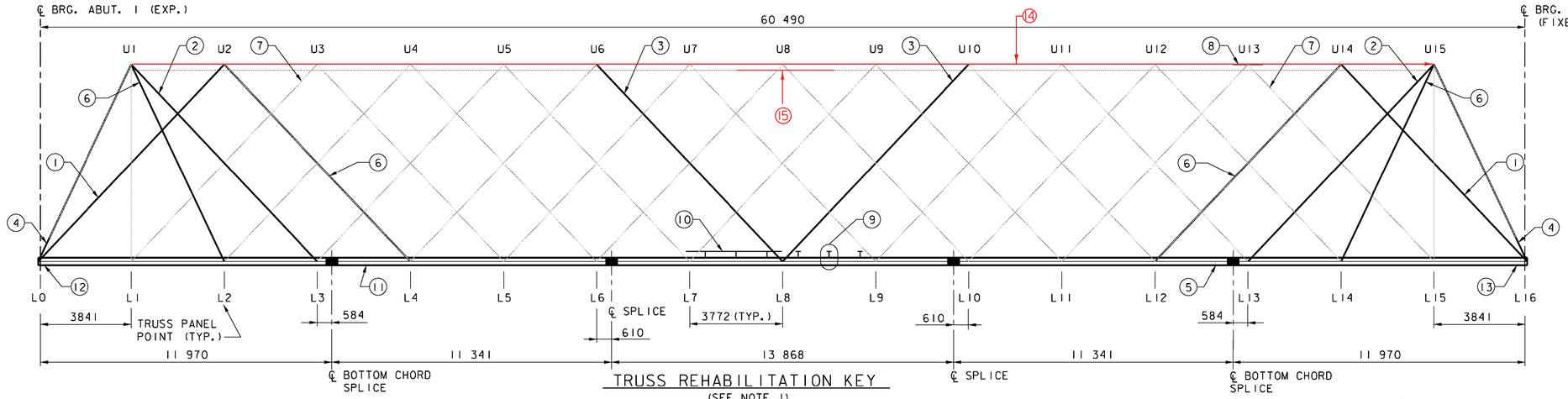
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of DUMMERSTON	Bridge No. 37
Highway No. TH 62	Log Sta. / Surv. Sta.
TH 62 OVER WEST RIVER	
BOTTOM LATERAL BRACING DETAILS	
Designed By T. S. BRYANT	Drawn By B. J. MASSE
Checked By T. S. BRYANT Date 4/09	Bridge Design Supervisor S. M. HODGDON Date 4/09
PROJECT DUMMERSTON	PROJECT NO. BHO 1442(28)
I.C.C. Info.	
Bridge Sheet No. ZJ080DT4	Sheet 23 of 49

VANASSE HANGEN BRUSTLIN, INC.

VHB NO. 5192

plot date: 4/3/2009



TRUSS REHABILITATION KEY

(SEE NOTE 1)
NOT TO SCALE

1. REPLACE EXISTING MEMBER CONSISTING OF 2-L 89x64x6.4 AND 51x6.4 SINGLE LACING WITH NEW MEMBER CONSISTING OF 2-L 89x76x9.5 AND 64x6.4 SINGLE LACING.
2. REPLACE EXISTING MEMBER CONSISTING OF 2-L 51x51x6.4 AND 352x121x6.4 STAY PLATES, WITH NEW MEMBER CONSISTING OF 2-L 76x76x6.4 AND 394x216x6.4 STAY PLATES.
3. REPLACE EXISTING MEMBERS CONSISTING OF 2-L 51x51x6.4 AND 352x121x6.4 STAY PLATES, WITH NEW MEMBERS CONSISTING OF 2-L 76x76x6.4 AND 64x6.4 SINGLE LACING.
4. REPLACE ALL TRUSS END POSTS.
5. REPLACE ENTIRE BOTTOM CHORD.
6. REPLACE EXISTING MEMBER CONSISTING OF 2-L 51x51x6.4 AND 352x121x6.4 STAY PLATES IN-KIND.
7. REPLACE ALL RIVETS WITH HEX-HEAD H.S. BOLTS IN L1-U3 AND L15-U13 TO TOP CHORD CONNECTIONS.
8. REPLACE EXISTING 159x356x6.4 TOP PLATE OF TOP CHORD SPLICE PLATE AT U13 IN-KIND, DOWNSTREAM TRUSS ONLY.
9. REPLACE ALL FLOORBEAMS WITH NEW W 250x67 FLOORBEAMS.
10. REPLACE EXISTING 64 STEEL GRID DECK WITH NEW 89 STEEL GRID DECK.
11. REPLACE ALL BOTTOM LATERAL BRACING.
12. INSTALL NEW EXPANSION BEARINGS.
13. INSTALL NEW FIXED BEARINGS.
14. ADDITION OF NEW 1/4" TOP PLATE, UPSTREAM + DOWNSTREAM TRUSS.
15. NEW ANGLES ADDED TOP AND BOTTOM OF TOP CHORD, UPSTREAM TRUSS TO HELP STABLIZE/REPAIR BUCKLED AREA.

(SEE SHEET 17A)

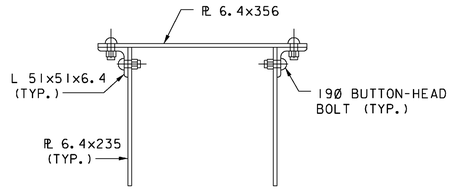
NOTES:

1. DOWNSTREAM TRUSS ELEVATION (LOOKING UPSTREAM) SHOWN. ALL REHABILITATION ITEMS APPLY TO BOTH TRUSSES UNLESS OTHERWISE NOTED.
2. TRUSS IS SYMMETRICAL ABOUT PANEL POINT L8.
3. IN TRUSS REHABILITATION KEY:

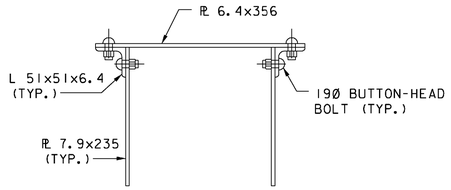
   (X) = REHABILITATION ITEMS

   BOLD LINES INDICATE TRUSS MEMBER REPLACEMENTS

DIMENSIONS PROVIDED IN THESE PLANS SHALL NOT BE USED FOR FABRICATION PURPOSES. ALL NECESSARY DIMENSIONS AND CONFIGURATIONS SHALL BE DETERMINED FROM ACTUAL FIELD MEASUREMENTS.



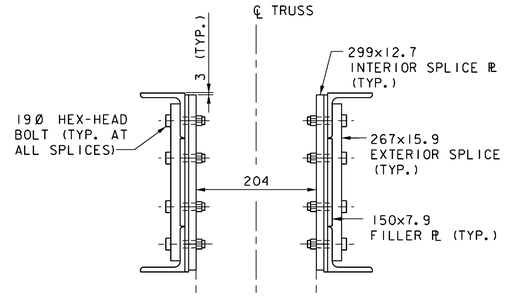
U1-U4 & U12-U15



U5-U11

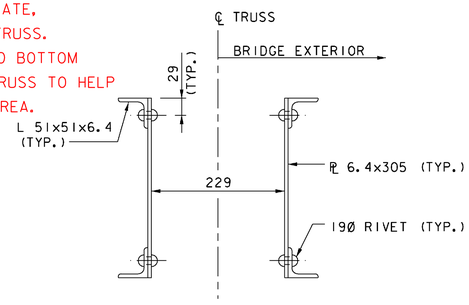
EXISTING TOP CHORD SECTION

SCALE: 1:5

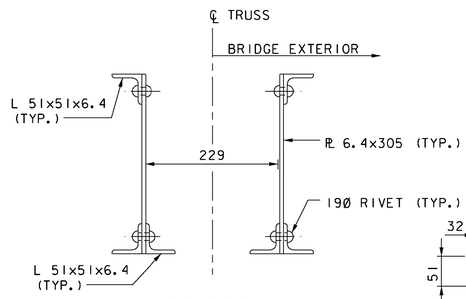


NEW TYPICAL SECTION AT SPLICE

SCALE: 1:5



L0-L5 & L11-L16



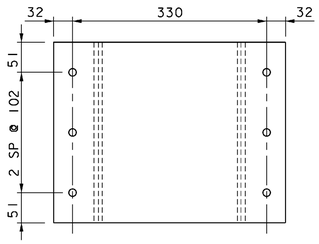
L5-L11

EXISTING BOTTOM CHORD SECTIONS

SCALE: 1:5

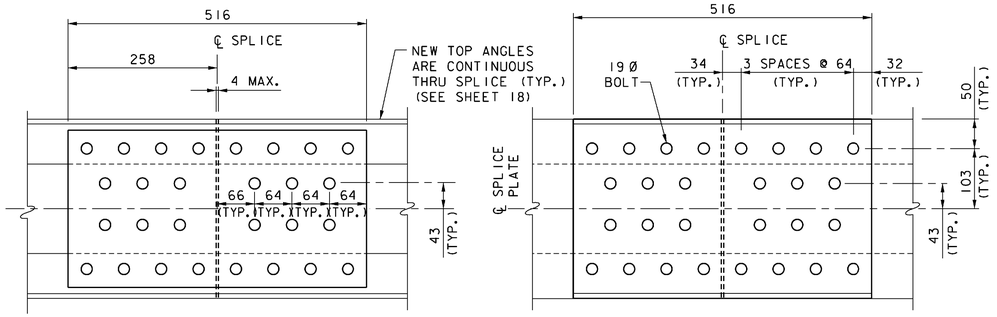
NEW STEEL MEMBERS ADDED TO PORTAL PIECES LOCATED AT PANEL POINT U1, AND U15. (CONNECTING UPSTREAM AND DOWNSTREAM TRUSS)

SEE SHEET 17B AND 17C FOLDER FOR PIECE SIZES



NEW BATTEN PLATE ON BOTTOM CHORD

SCALE: 1:5

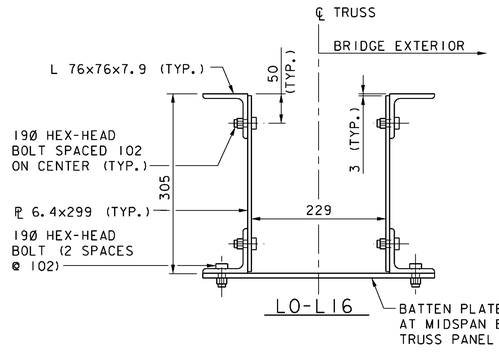


EXTERIOR SPLICE PLATE

INTERIOR SPLICE PLATE

NEW BOTTOM CHORD SPLICE DETAILS

SCALE: 1:5



NEW BOTTOM CHORD SECTION

SCALE: 1:5

0 100 200 300 400 500

VANASSE HANGEN BRUSTLIN, INC.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

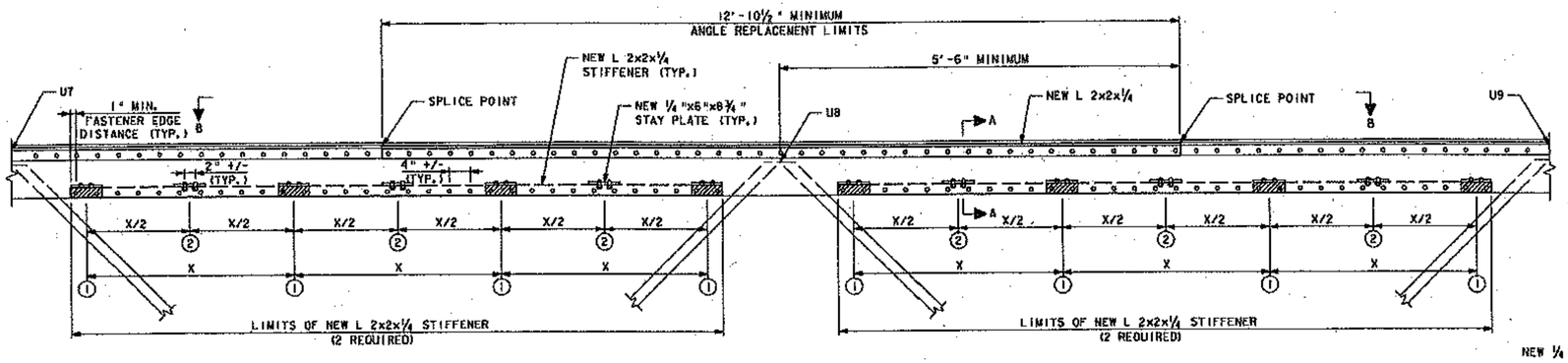
Town Of DUMMERSTON	Bridge No. 37
	Log Sta.
Highway No. TH 62	Surv. Sta.
TH 62 OVER WEST RIVER	

TRUSS REHABILITATION KEY & DETAILS

Designed By T. S. BRYANT	Drawn By C. L. CILLEY
Checked By S. M. HODGDON Date 4/09	Bridge Design Supervisor S. M. HODGDON Date 4/09
PROJECT DUMMERSTON	PROJECT NO. BHO 1442 (28)
I.G.C. Info.	
Bridge Sheet No. ZJ080SS1	Sheet 17 of 49

VHB NO. 51192

plot date: 4/3/2009



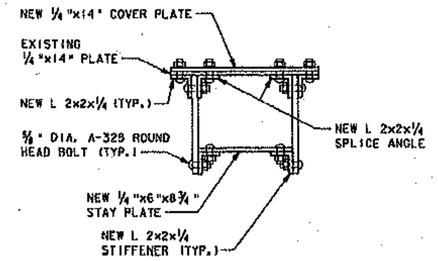
▨ EXISTING STAY PLATE LOCATION

① EXISTING L 2x2x¼ WITH ¼"x6" STAY PLATE TO BE REMOVED AND REPLACED WITH NEW ¼"x6"x8¾" STAY PLATE ON CONTINUOUS L 2x2x¼ STIFFENER.

② NEW ¼"x6"x8¾" STAY PLATE ON CONTINUOUS L 2x2x¼ STIFFENER.

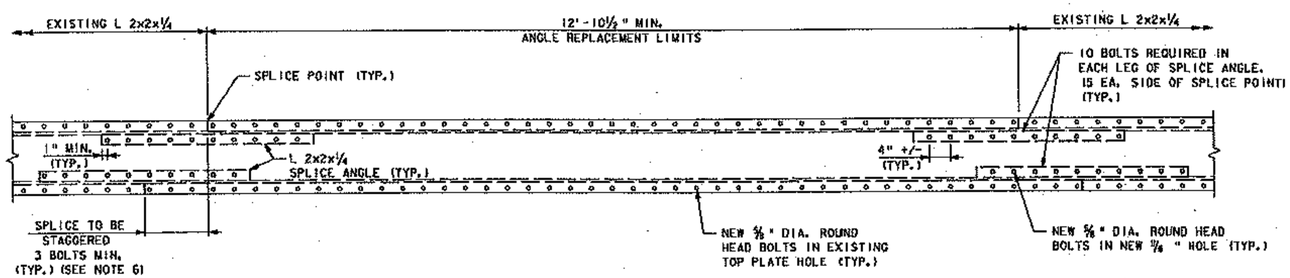
TOP CHORD REHABILITATION DETAIL

(NEW TOP COVER PLATE NOT SHOWN)
UPSTREAM TRUSS PANEL, LOOKING UPSTREAM
NOT TO SCALE



SECTION A-A

NOT TO SCALE



VIEW B-B

(NEW TOP COVER PLATE NOT SHOWN)
NOT TO SCALE

NOTES:

1. ALL NEW BOLTS SHALL BE ⅞" DIAMETER A-325 (OR EQUIVALENT) HIGH STRENGTH ROUND HEAD BOLTS.
2. NEW ANGLES AND PLATES SHALL BE ASTM A-709, GR. 36 MINIMUM.
3. ALL DIMENSIONS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED.
4. REUSE EXISTING HOLES AND DRILL NEW HOLES FOR SPLICE ANGLES AND STIFFENER ANGLES AS APPROPRIATE. ALL NEW HOLES SHALL BE ⅞" DIAMETER.
5. INSTALL NEW STIFFENER ANGLES BETWEEN PANEL POINTS U7-U8, AND U8-U9 AS SHOWN. TERMINATE ANGLES AT EXISTING STAY PLATE LOCATIONS NEAREST TO TRUSS PANEL POINTS.
6. ANGLE SPLICES SHALL BE STAGGERED BY A MINIMUM OF 3 BOLTS. STAGGERED SPLICE SHALL EXTEND BEYOND THE MINIMUM LIMITS OF ANGLE REPLACEMENT SHOWN.
7. THE METHOD OF SHORING AND THE SEQUENCE OF TRUSS MEMBER REMOVAL PROPOSED BY THE CONTRACTOR SHALL BE SUBSTANTIATED WITH DESIGN CALCULATIONS PERFORMED AND STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF VERMONT. DETAILS AND CALCULATIONS OF PROPOSED SHORING, INCLUDING THE TRUSS MEMBER REMOVAL SEQUENCE, SHALL BE SUBMITTED TO THE RESIDENT ENGINEER FOR APPROVAL BEFORE ADVANCING THE WORK.

VHB Vanasse Hangen Brustlin, Inc.

PROJECT NAME: DUMMERSTON TRUSS BRIDGE NO. 37

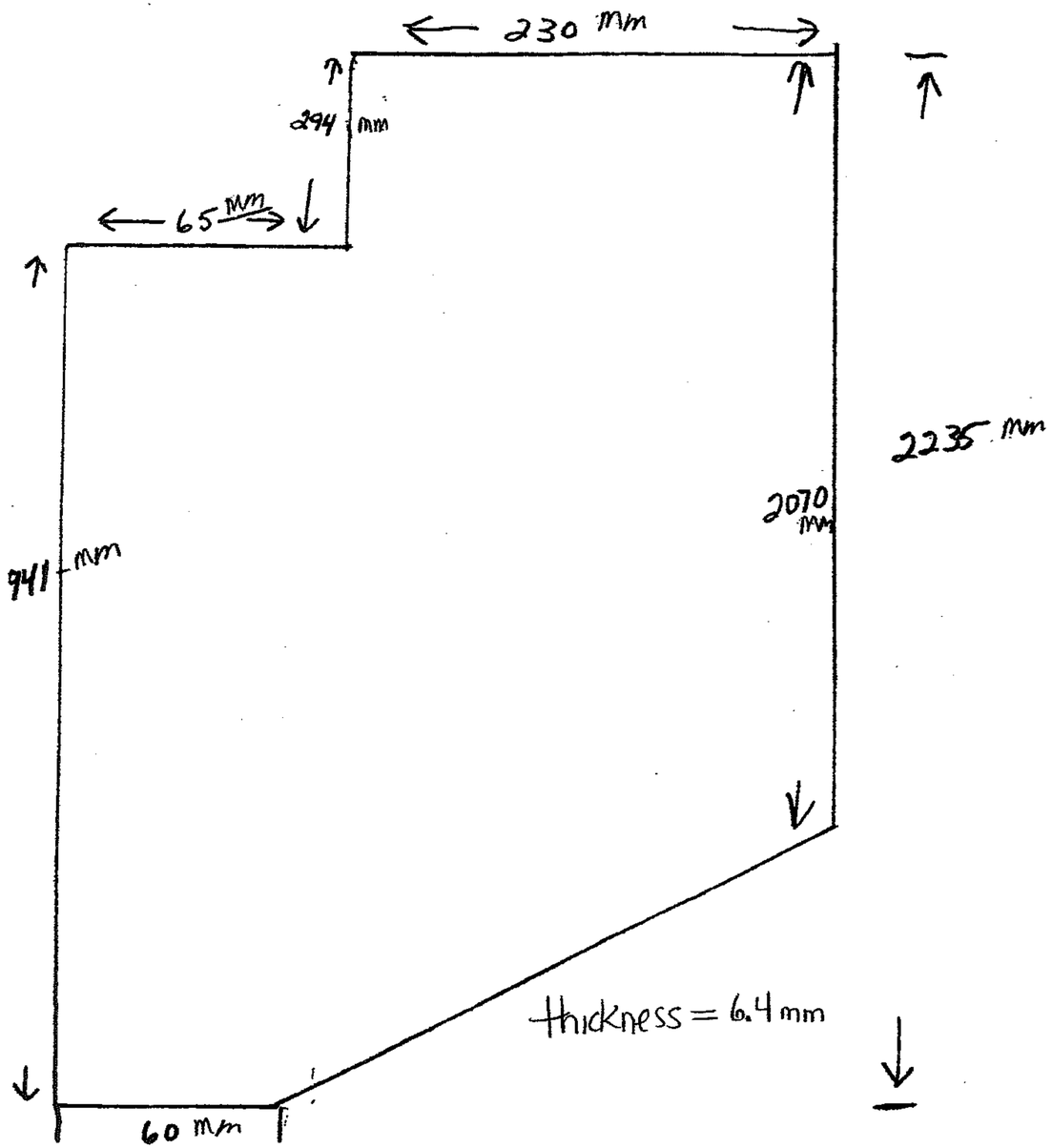
PROJECT NUMBER: 51192.02

FILE NAME: 51192chordd1.dgn	PLOT DATE: 5/20/2011
PROJECT LEADER: S. M. HODGDON	DRAWN BY: B. J. MASSE
DESIGNED BY: M. A. CHERVINCKY	CHECKED BY: G. S. GOODRICH
TOP CHORD REHABILITATION	SHEET [illegible]

SHT. 17A

10 of 59

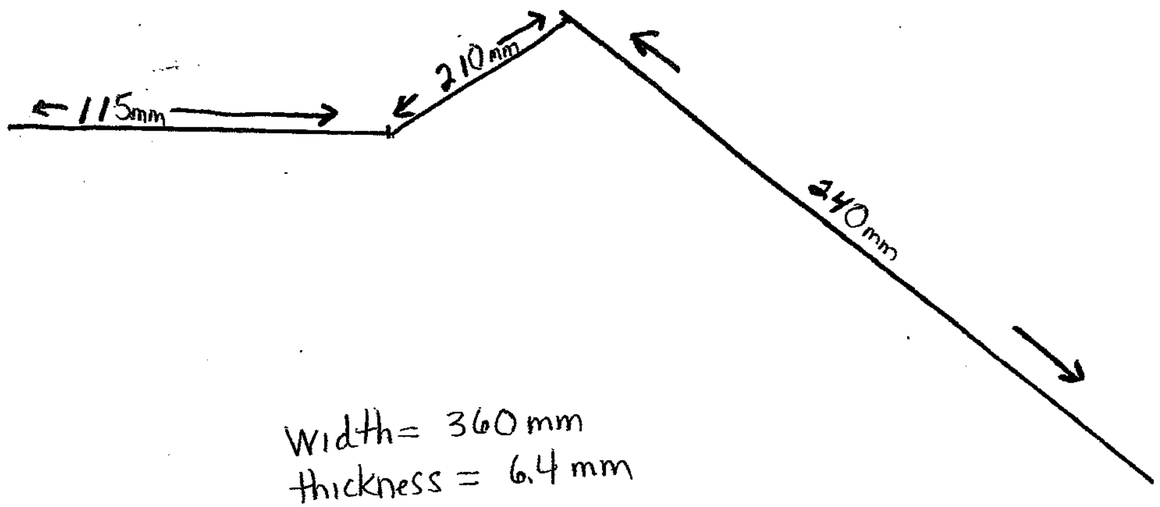
PORTAL – 4 Plates



each – 76.58 lbs
34.77 Kg

TOTAL – 306.32 lbs
139.09 Kg

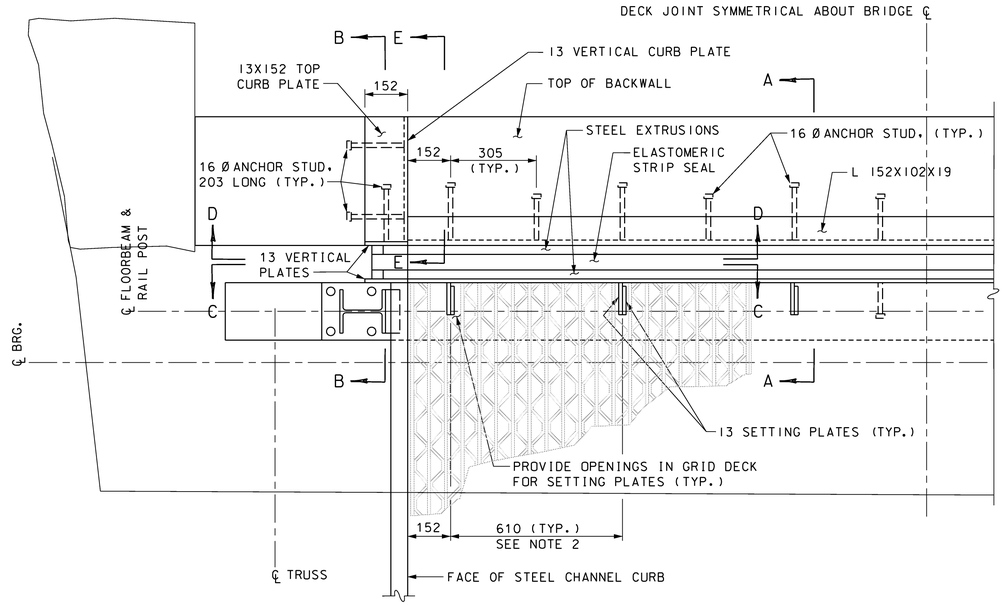
Top. Plates — 4 Plates



Width = 360 mm
thickness = 6.4 mm

each- 23.82 lbs
10.83 kg

TOTAL = 95.26 lbs
43.30 kgs



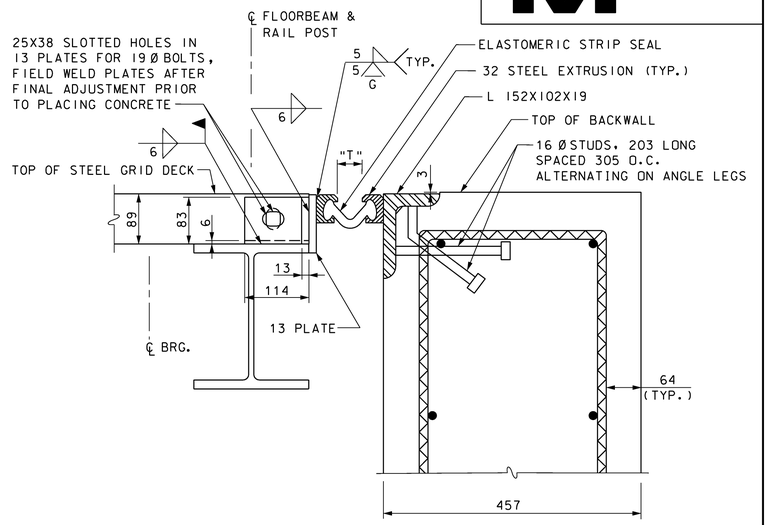
DECK END JOINT PLAN

SCALE: 1:10

0 0.5 1

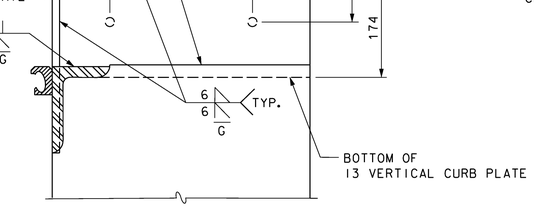
SCALE = 1:10

TEMPERATURE ADJUSTMENT TABLE	
TEMPERATURE	"T"
-18°C	73
-9°C	67
-1°C	61
7°C	55
16°C	49
24°C	43
32°C	37
41°C	31



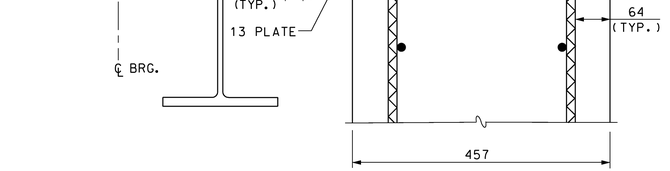
SECTION A-A

SCALE: 1:5



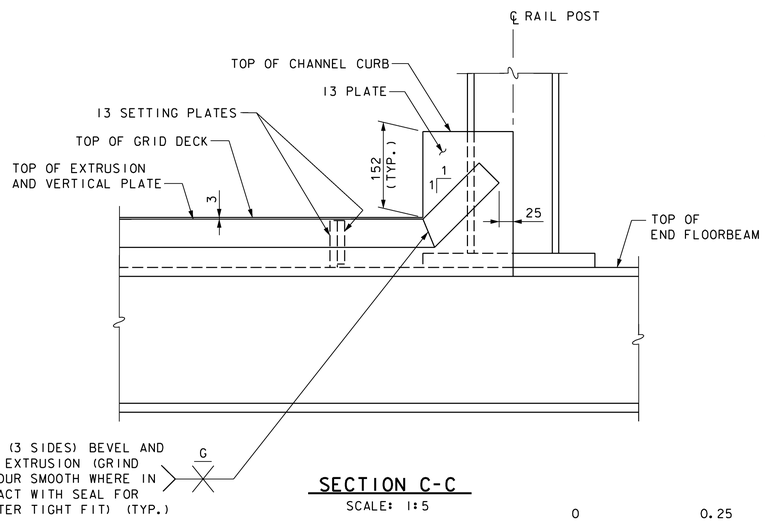
SECTION E-E

SCALE: 1:5



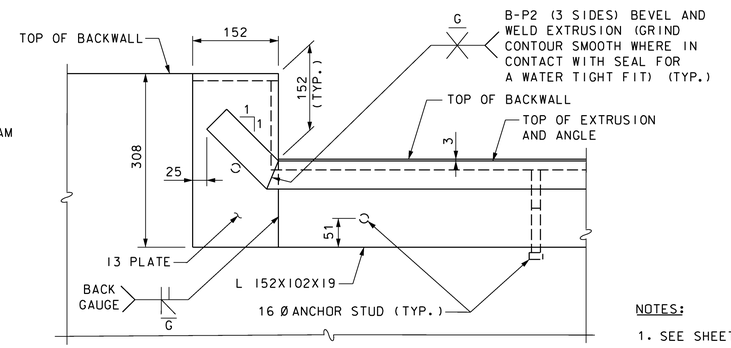
SECTION B-B

SCALE: 1:5



SECTION C-C

SCALE: 1:5



SECTION D-D

SCALE: 1:5

0 0.25 0.5

SCALE = 1:5

NOTES:

1. SEE SHEET 16 FOR DECK END JOINT NOTES.
2. SPACING OF SETTING PLATES MAY BE ADJUSTED UP TO 51 MAX. TO BETTER FIT BETWEEN GRID DECK BEARING BARS.

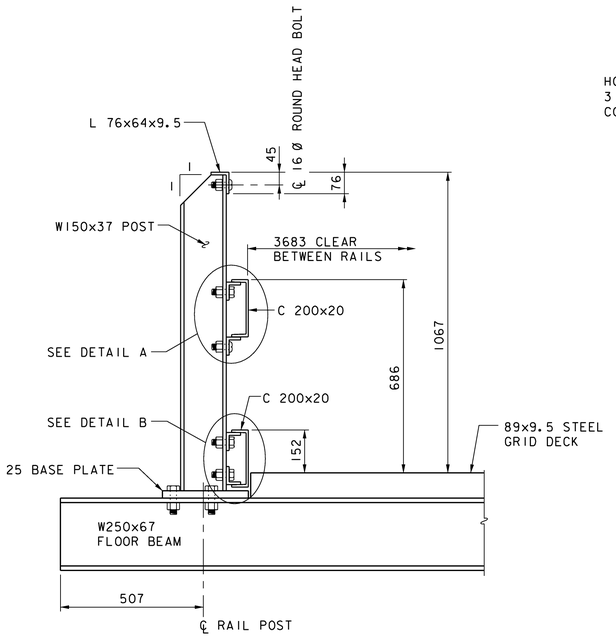
VANASSE HANGEN BRUSTLIN, INC.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of DUMMERSTON	Bridge No. 37
	Log Sta.
Highway No. TH 62	Surv. Sta.
TH 62 OVER WEST RIVER	
DECK END JOINT DETAILS	
Designed By T. S. BRYANT	Drawn By B. J. MASSE
Checked By S. M. HODGDON Date 4/09	Bridge Design Supervisor S. M. HODGDON Date 4/09
PROJECT DUMMERSTON	PROJECT NO. BHO 1442(28)
I.G.C. Info.	
Bridge Sheet No. ZJ080JT1	Sheet 25 of 49

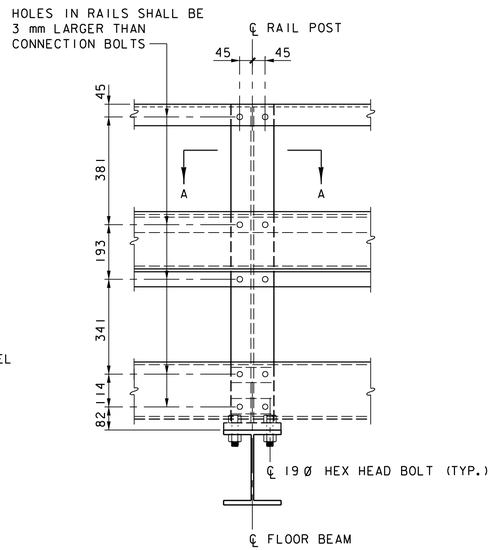
VHB NO. 5II92

plot date: 4/3/2009



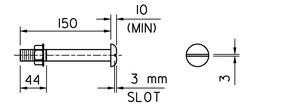
TYPICAL SECTION

SCALE: 1:10



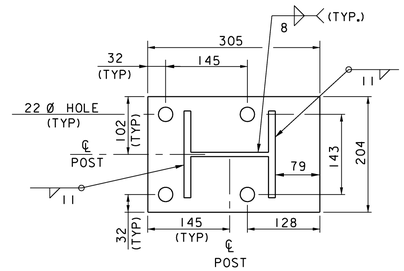
ELEVATION VIEW

SCALE: 1:10



16 DIA M164 (TYPE 1) ROUND HEAD BOLT

(WITH WASHER AND PREVAILING TORQUE TYPE LOCK NUT)
ONLY FULL DIAMETER BODY BOLTS WILL BE ALLOWED.
NOT TO SCALE

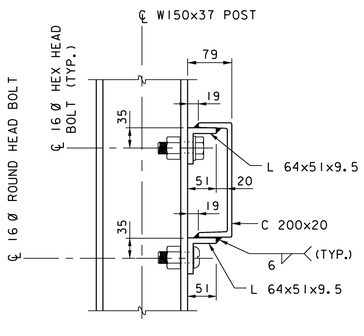


POST & BASE PLATE

SCALE: 1:5

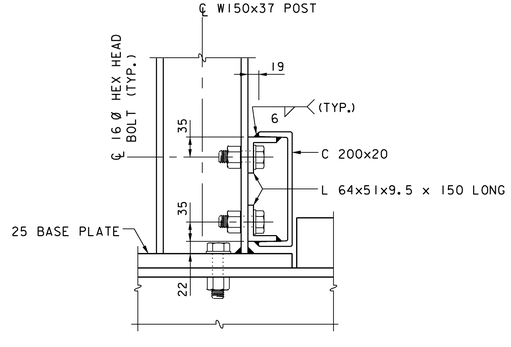
BRIDGE RAIL NOTES:

1. ALL BRIDGE RAIL STRUCTURAL STEEL SHALL CONFORM TO AASHTO M270M, GRADE 345 PAINTED, EXCEPT FOR THE TOP HANDRAIL ANGLE WHICH MAY BE GRADE 250 PAINTED AT THE FABRICATOR'S OPTION. ALL BRIDGE RAIL STRUCTURAL STEEL SHALL CONFORM TO ALL APPLICABLE SUBSECTIONS OF SECTION 506. ALL BRIDGE RAIL STRUCTURAL STEEL SHALL BE PAID FOR UNDER ITEM 900.640,SPECIAL PROVISION (BRIDGE RAILING, TRUSS).
2. ALL BRIDGE RAIL CONNECTIONS SHALL BE MADE WITH TYPE 1 HIGH STRENGTH BOLTS MEETING AASHTO M164M. BOLT DIAMETERS SHALL BE AS SHOWN ON THE PLANS. HOLES IN L64x51 CONNECTION ANGLES AND L76x64 TOP RAILS SHALL BE FIELD MARKED AND DRILLED TO ENSURE PROPER FIT UP OF RAIL SECTIONS.
3. ALL EXPOSED CUT, SHEARED OR ROLLED EDGES ON ALL RAIL MEMBERS EXCEPT THE FASCIA FLANGE OF THE RAIL POST SHALL BE ROUNDED TO A 2 mm RADIUS AND SHALL BE FREE OF BURRS.
4. RAIL POSTS SHALL BE SET NORMAL TO GRADE.
5. SECTIONS OF RAIL AND CURB SHALL BE ATTACHED TO A MINIMUM OF TWO RAIL POSTS AND PREFERABLY TO AT LEAST FOUR POSTS. JOINTS BETWEEN RAIL AND CURB SECTIONS SHALL BE LOCATED ONLY AT RAIL POSTS.
6. SEE SHEET 22 FOR BRIDGE RAIL POST LAYOUT. LAYOUT IS SYMMETRIC ABOUT TRUSS PANEL POINT L8.
7. SEE SHEET 27 FOR BRIDGE RAIL END TRANSITION DETAILS.



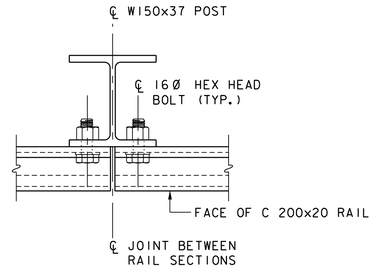
DETAIL A

SCALE: 1:5



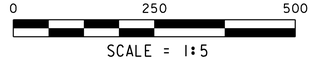
DETAIL B

SCALE: 1:5

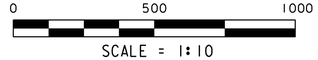


SECTION A-A

SCALE: 1:5



SCALE = 1:5



SCALE = 1:10

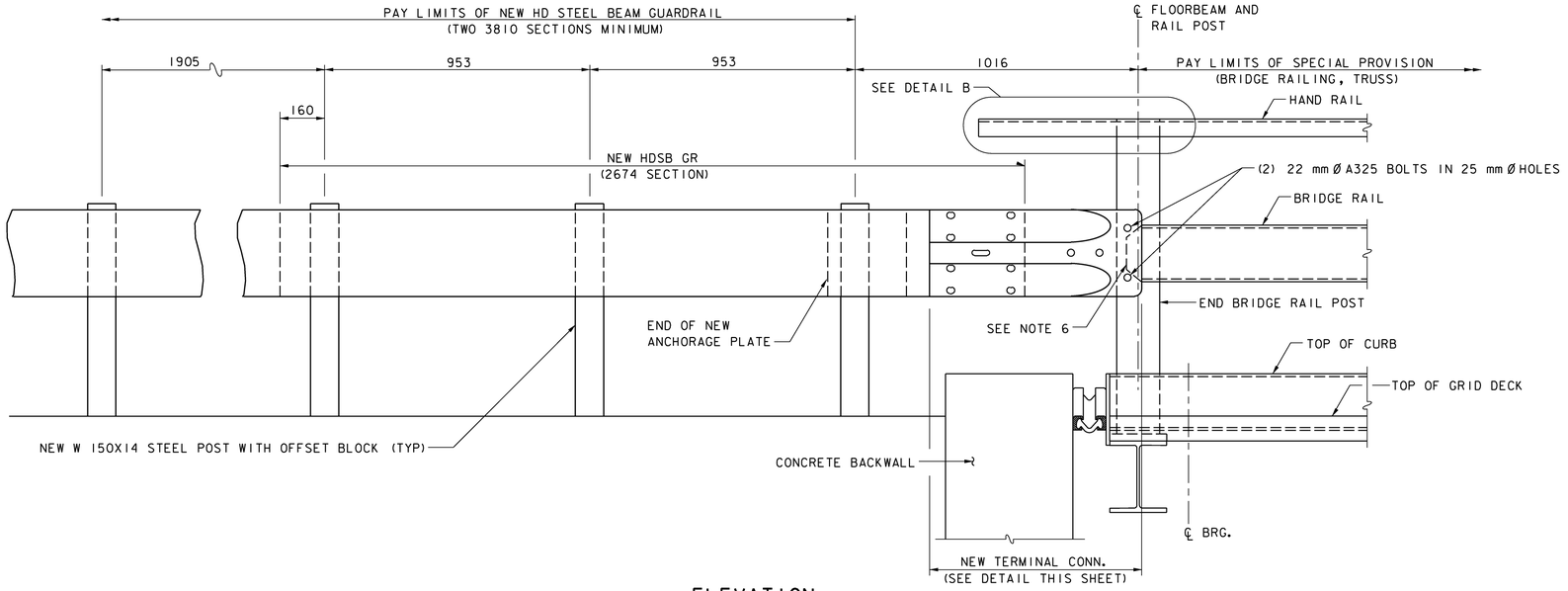
VANASSE HANGEN BRUSTLIN, INC.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of DUMMERSTON	Bridge No. 37
Highway No. TH 62	Log Sta. / Surv. Sta.
TH 62 OVER WEST RIVER	
BRIDGE RAIL DETAILS	
Designed By A. J. CRAWFORD	Drawn By K. D. WENTWORTH
Checked By T. S. BRYANT Date 4/09	Bridge Design Supervisor S. M. HODGDON Date 4/09
PROJECT DUMMERSTON	PROJECT NO. BHO 1442 (28)
I.G.C. Info.	
Bridge Sheet No. ZJ080BRL	Sheet 26 of 49

VHB NO. 51192

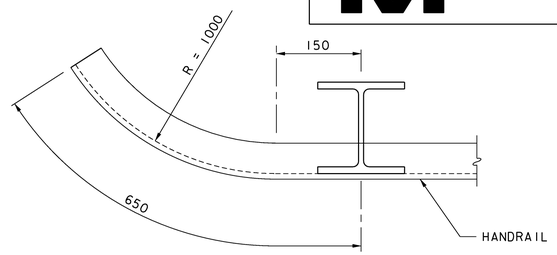
plot date: 4/3/2009



ELEVATION

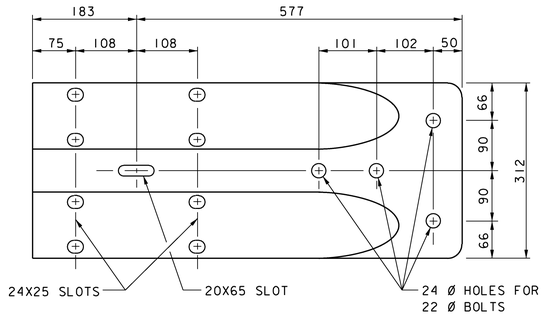
0 500 1000

SCALE = 1:10



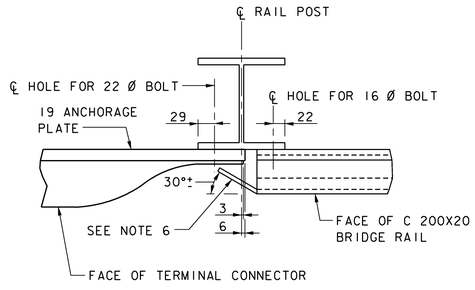
DETAIL B

SCALE: 1:5



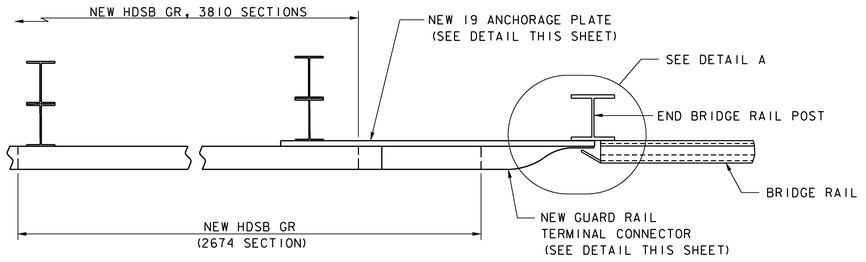
RWE02 TERMINAL CONNECTOR DETAIL

SCALE: 1:5



DETAIL A

SCALE: 1:5



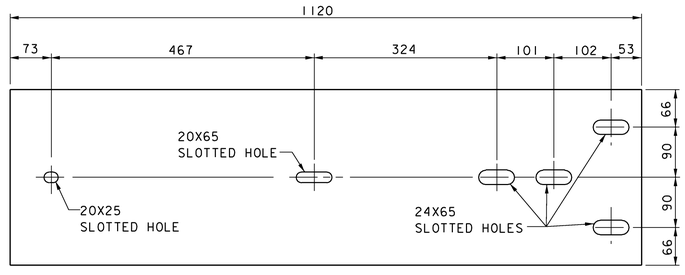
PLAN

0 250 500

SCALE = 1:5

BRIDGE RAIL END TRANSITION DETAILS

SCALE: 1:10



ANCHORAGE PLATE DETAIL

SCALE: 1:5

NOTES:

1. GUARD RAIL TO BRIDGE RAIL TRANSITION DETAILS SHOWN ARE TYPICAL AT ALL 4 CORNERS OF THE BRIDGE.
2. THE PRICE BID PER METER FOR ITEM 621.21, HD STEEL BEAM GUARDRAIL, GALVANIZED, SHALL INCLUDE MATERIAL AND INSTALLATION OF BOTH THE FOUR (4) NEW ANCHORAGE PLATES AND THE FOUR (4) NEW 2674 SECTIONS OF HEAVY DUTY STEEL BEAM GUARD RAIL AT BRIDGE ENDS, AS WELL AS THE FURNISHING OF ALL LABOR, TOOLS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION OF THE HEAVY DUTY STEEL BEAM GUARD RAIL AS SHOWN ON SHEET 5.
3. THE 19 mm ANCHORAGE PLATES SHALL BE ASTM A36 STEEL, GALVANIZED TO ASTM A123 AFTER FABRICATION.
4. THE PRICE BID EACH FOR ITEM 621.53, TERMINAL CONNECTOR FOR STEEL BEAM GUARDRAIL, SHALL INCLUDE MATERIALS AS WELL AS THE FURNISHING OF ALL LABOR, TOOLS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION OF EACH TERMINAL CONNECTOR AS DETAILED ON THIS SHEET.
5. SEE STANDARDS G-1, G-1d, AND G-16 FOR ADDITIONAL DETAILS.
6. COPE FLANGES AND CUT AND BEND WEB AT END OF C 200X20 CHANNEL RAIL AS SHOWN ON THIS SHEET. AT THE FABRICATOR'S OPTION A 8 mm THICK PLATE SIMILARLY SHAPED MAY BE WELDED TO THE END OF THE CHANNEL RAIL INSTEAD.
7. THE BID PRICE PER METER FOR ITEM 900.640 SPECIAL PROVISION (BRIDGE RAILING, TRUSS) SHALL INCLUDE PAYMENT FOR HAND RAIL EXTENSION AS DETAILED ON THIS SHEET.

VANASSE HANGEN BRUSTLIN, INC.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

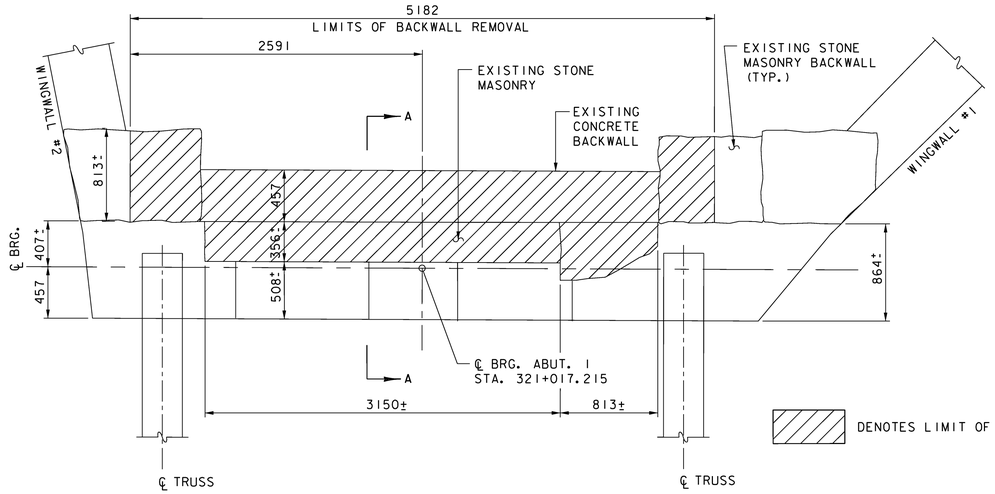
Town Of DUMMERSTON	Bridge No. 37
	Log Sta.
Highway No. TH 62	Surv. Sta.
TH 62 OVER WEST RIVER	

BRIDGE RAIL END TRANSITION DETAILS

Designed By A. J. CRAWFORD	Drawn By B. J. MASSE
Checked By T. S. BRYANT Date 4/09	Bridge Design Supervisor S. M. HODGDON Date 4/09
PROJECT DUMMERSTON	PROJECT NO. BHO 1442 (28)
I.G.C. Info.	
Bridge Sheet No. ZJ080RD1	Sheet 27 of 49

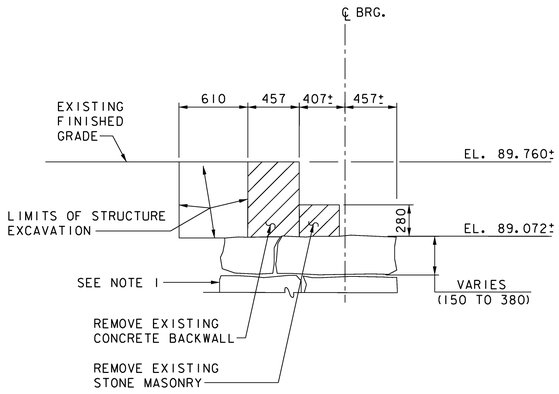
VHB NO. 5119Z

plot date: 4/3/2009



EXISTING ABUTMENT 1 PLAN

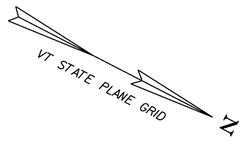
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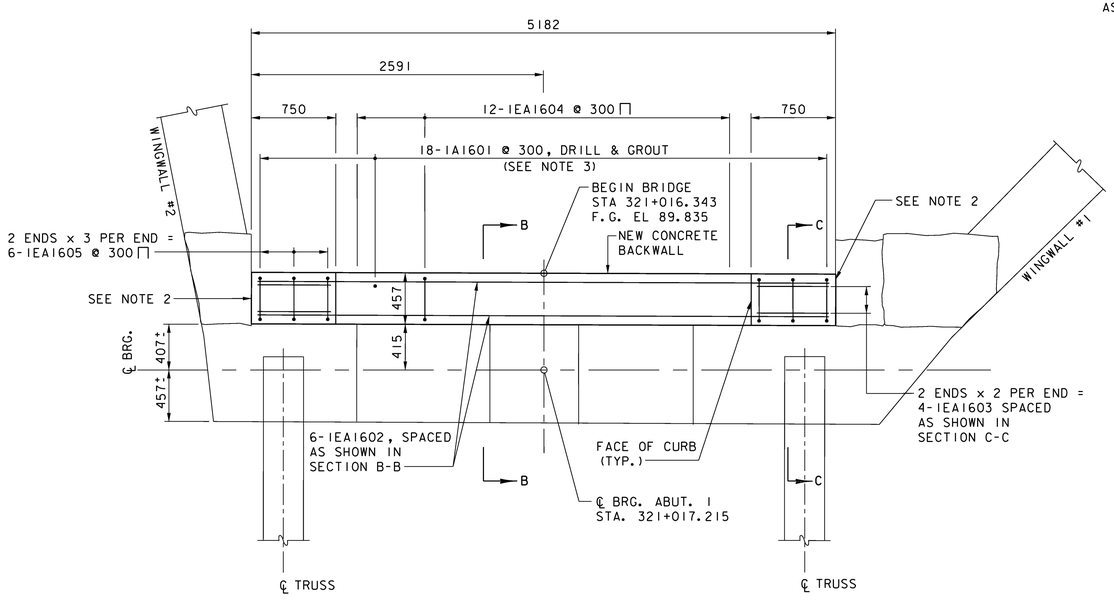


SECTION A-A

SCALE: 1:25

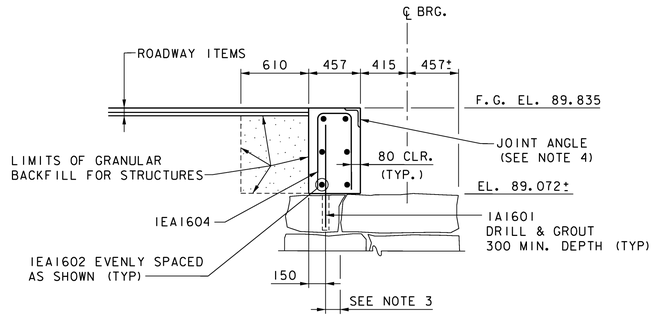
DENOTES LIMIT OF REMOVAL





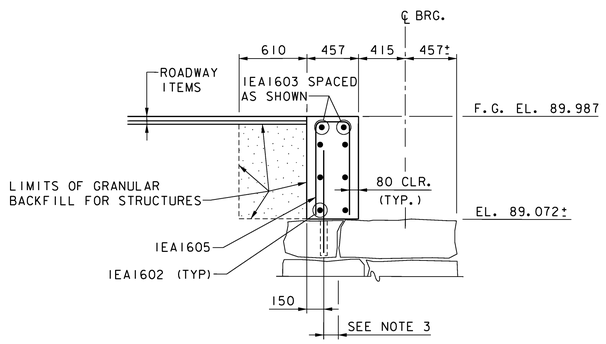
PROPOSED ABUTMENT 1 MODIFICATIONS PLAN

SCALE: 1:25



SECTION B-B

SCALE: 1:25



SECTION C-C

SCALE: 1:25

0 1000 2000 3000

SCALE = 1:25

NOTES:

1. AN ASSUMED CONFIGURATION OF THE BACK OF BACKWALL AND ABUTMENT IS SHOWN IN THE SECTIONS ON THIS SHEET. THE ACTUAL CONFIGURATION IS UNKNOWN.
2. SHAPE AND RESET EXISTING STONE MASONRY IN BACKWALL TO FORM A VERTICAL JOINT FOR THE NEW BACKWALL CONCRETE TO BE CAST AGAINST. ALL COSTS FOR THIS WORK SHALL BE INCLUDED IN ITEM 620.20, DRY MASONRY.
3. ADJUST SPACING BETWEEN DRILL AND GROUT BARS 150 MAX. TO AVOID LOCATING BARS WITHIN 100 OF MASONRY EDGES. DRILL AND GROUT BARS MAY BE PLACED MORE THAN 150 FROM THE BACK FACE OF BACKWALL TO MAINTAIN CLEARANCE FROM JOINTS. COST INCLUDED IN ITEM 507.16, DRILLING AND GROUTING DOWELS.
4. SEE SHEET 25 FOR DECK END JOINT DETAILS AND NOTE 1 ON SHEET 30..

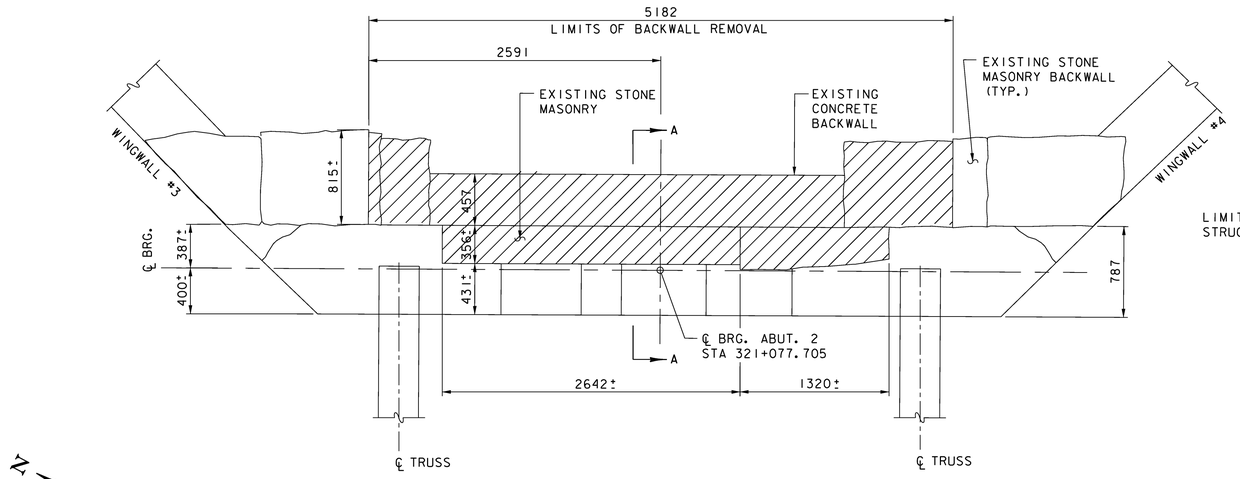
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of DUMMERSTON	Bridge No. 37
	Log Sta.
Highway No. TH 62	Surv. Sta.
TH 62 OVER WEST RIVER	
ABUTMENT 1 MODIFICATIONS	
Designed By T.S. BRYANT	Drawn By B.J. MASSE
Checked By Date S.M. HODGDON 4/09	Bridge Design Supervisor S.M. HODGDON Date 4/09
PROJECT DUMMERSTON	PROJECT NO. BHO 1442 (28)
I.G.C. Info.	
Bridge Sheet No. ZJ080MA1	Sheet 28 of 49

VANASSE HANGEN BRUSTLIN, INC.

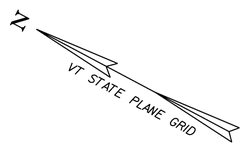
VHB NO. 51192

plot date: 4/3/2009

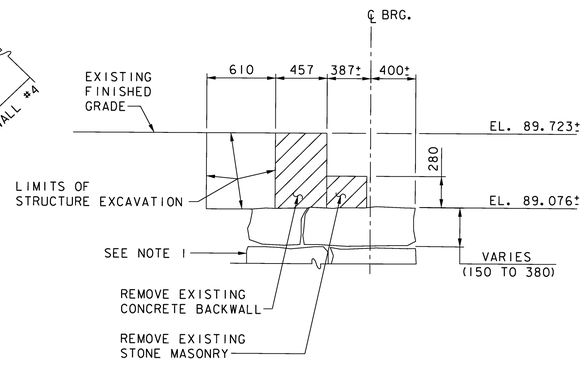


EXISTING ABUTMENT 2 PLAN

SCALE: 1:25

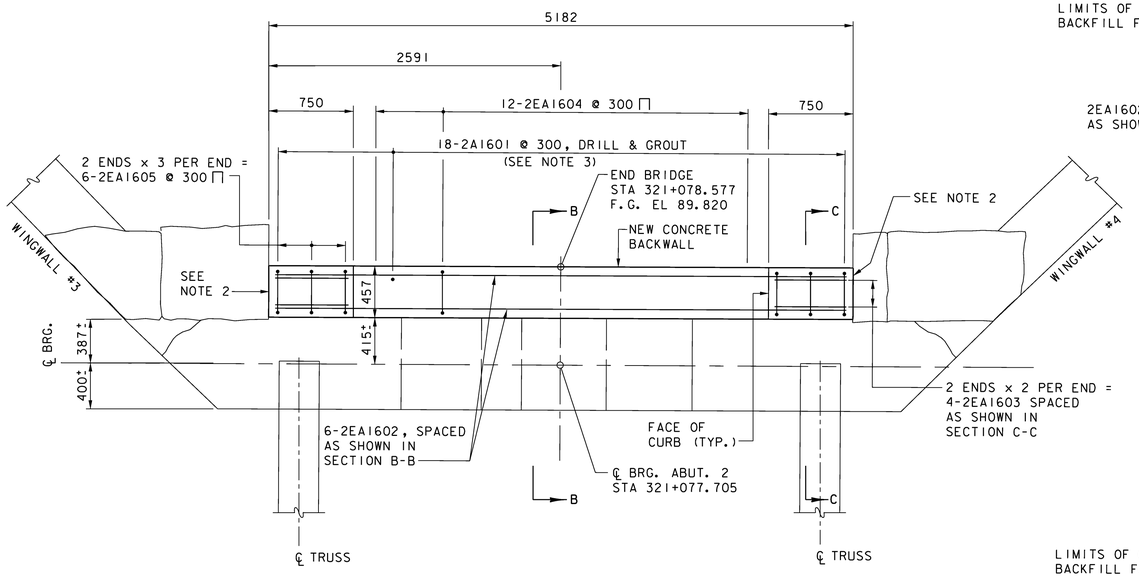


DENOTES LIMIT OF REMOVAL



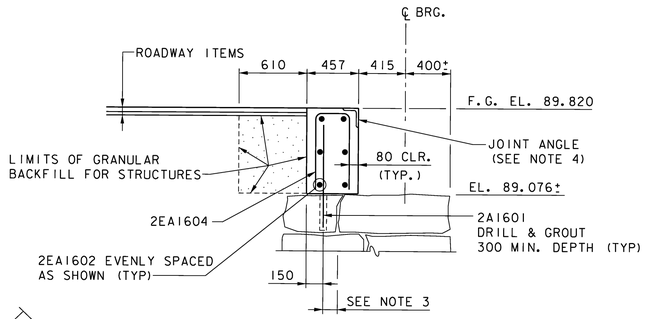
SECTION A-A

SCALE: 1:25



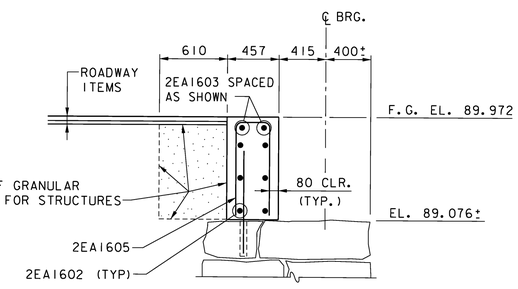
PROPOSED ABUTMENT 2 MODIFICATION PLAN

SCALE: 1:25



SECTION B-B

SCALE: 1:25



SECTION C-C

SCALE: 1:25

NOTES:

1. AN ASSUMED CONFIGURATION OF THE BACK OF BACKWALL AND ABUTMENT IS SHOWN IN THE SECTIONS ON THIS SHEET. THE ACTUAL CONFIGURATION IS UNKNOWN.
2. SHAPE AND RESET EXISTING STONE MASONRY IN BACKWALL TO FORM A VERTICAL JOINT FOR THE NEW BACKWALL CONCRETE TO BE CAST AGAINST. ALL COSTS FOR THIS WORK SHALL BE INCLUDED IN ITEM 620.20, DRY MASONRY.
3. ADJUST SPACING BETWEEN DRILL AND GROUT BARS 150 MAX. TO AVOID LOCATING BARS WITHIN 100 OF MASONRY EDGES. DRILL AND GROUT BARS MAY BE PLACED MORE THAN 150 FROM THE BACK OF BACKWALL TO MAINTAIN CLEARANCE FROM JOINTS. COST INCLUDED IN ITEM 507.16, DRILLING AND GROUTING DOWELS.
4. SEE SHEET 25 FOR DECK END JOINT DETAILS AND NOTE 1 ON SHEET 30.

0 1000 2000 3000

SCALE = 1:25

VANASSE HANGEN BRUSTLIN, INC.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of DUMMERSTON	Bridge No. 37
Highway No. TH 62	Log Sta. / Surv. Sta.
TH 62 OVER WEST RIVER	
ABUTMENT 2 MODIFICATIONS	
Designed By T.S. BRYANT	Drawn By B.J. MASSE
Checked By S.M. HODGDON Date 4/09	Bridge Design Supervisor S.M. HODGDON Date 4/09
PROJECT DUMMERSTON	PROJECT NO. BHO 1442(28)
I.G.C. Info.	
Bridge Sheet No. ZJ080MA2	Sheet 29 of 49

VHB NO. 51192

plot date: 4/3/2009

ITEM NO.	ITEM DESCRIPTION	UNIT	CHANNEL	SUPER-STRUCTURE	ABUTMENT 1	ABUTMENT 2	BRIDGE SUBTOTAL	ROADWAY	EROSION CONTROL	FULL E & C	TRAINING	TOTAL	FINAL	REMARKS
201.10	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	LS						1				1		
203.15	COMMON EXCAVATION	CM						190				190		
204.20	TRENCH EXCAVATION OF EARTH	CM						30				30		
204.25	STRUCTURE EXCAVATION	CM			35	5	40					40		
204.30	GRANULAR BACKFILL FOR STRUCTURES	CM			35	5	40					40		
210.10	COLD PLANING, BITUMINOUS PAVEMENT	SM						45				45		
301.15	SUBBASE OF GRAVEL	CM						170				170		
404.65	EMULSFIED ASPHALT	KG						15				15		
406.25	BITUMINOUS CONCRETE PAVEMENT	T						53				53		
406.50	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	LU						1				1		
501.32	CONCRETE, HIGH PERFORMANCE CLASS AA	CM		1.5			1.5					1.5		
501.34	CONCRETE, HIGH PERFORMANCE CLASS B	CM			2	2	4					4		
502.10	SHORING SUPERSTRUCTURE	LS		1			1					1		
506.50	STRUCTURAL STEEL, ROLLED BEAM	KG		16810			16810					16810		
506.60	STRUCTURAL STEEL	KG		18700			18700					18700		
507.15	REINFORCING STEEL	KG			30	30	60					60		
507.16	DRILLING AND GROUTING DOWELS	M			6	6	12					12		
507.17	EPOXY COATED REINFORCING STEEL	KG			115	115	230					230		
513.25	STRUCTURAL PAINTING, SHOP APPLIED	LS		1			1					1		
513.30	STRUCTURAL PAINTING, FIELD APPLIED	LS		1			1					1		
513.36	CONTAINMENT & ENVIRONMENTAL PROTECTION, FIELD	LS		1			1					1		
513.40	SURFACE PREPARATION, SHOP	LS		1			1					1		
513.41	SURFACE PREPARATION, FIELD	LS		1			1					1		
514.10	WATER REPELLENT, SILANE	L			2.5	2.5	5					5		
516.11	BRIDGE EXPANSION JOINT, VERMONT	M		8			8					8		
529.20	PARTIAL REMOVAL OF STRUCTURE	EACH		1			1					1		
529.25	REMOVAL OF CONCRETE OR MASONRY	CM			7	3	10					10		
531.10	BEARING DEVICE ASSEMBLY, PREFORMED FABRIC PAD	EACH		4			4					4		
601.0010	375 CSP 1.63 (68 X 12)	M						2				2		
	•• BEGIN OPTION AA													
601.0015	450 CSP 1.63 (68 X 12)	M						5				5		
601.0815	450 RCP CLASS III	M						5				5		
601.0915	450 CPEP	M						5				5		
	•• END OPTION AA													
602.20	DRY MASONRY	CM			15	1	16					16		
604.25	PRECAST REINFORCED CONCRETE PIPE DI WITH CAST IRON GRATE	EACH						1				1		
613.10	STONE FILL, TYPE I	CM							5			5		
619.17	YIELDING MARKER POSTS	EACH						2				2		
621.20	STEEL BEAM GUARDRAIL, GALVANIZED	M						20				20		
621.21	HD STEEL BEAM GUARDRAIL, GALVANIZED	M						36				36		
621.53	TERMINAL CONNECTOR FOR STEEL BEAM GUARDRAIL	EACH						4				4		
621.56	ENERGY ABSORPTION ATTENUATOR	EACH						3				3		
621.60	ANCHOR FOR STEEL BEAM RAIL	EACH						4				4		
621.75	REMOVE AND RESET GUARDRAIL	M						74				74		
621.80	REMOVAL AND DISPOSAL OF GUARDRAIL	M						63				63		
621.90	TEMPORARY TRAFFIC BARRIER	M						100				100		
630.10	UNIFORMED TRAFFIC OFFICERS	HR						20				20		
630.15	FLAGGERS	HR						100				100		
631.10	FIELD OFFICE, ENGINEERS	LS								1		1		
631.16	TESTING EQUIPMENT, CONCRETE	LS								1		1		
631.17	TESTING EQUIPMENT, BITUMINOUS	LS								1		1		
631.18	TESTING EQUIPMENT, PROTECTIVE COATINGS	LS								1		1		
631.25	FIELD OFFICE TELEPHONE (N.A.B.I.)	LU								1		1		
635.11	MOBILIZATION/DEMOBILIZATION	LS						1				1		
641.10	TRAFFIC CONTROL	LS						1				1		
649.31	GEOTEXTILE UNDER STONE FILL	SM							133			133		
649.515	GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED	SM							90			90		
649.61	GEOTEXTILE FOR FILTER CURTAIN	SM							160			160		
651.15	SEED	KG							8			8		
651.18	FERTILIZER	KG							40			40		
651.20	AGRICULTURAL LIMESTONE	T							0.3			0.3		
651.25	HAY MULCH	T							0.5			0.5		
651.35	TOPSOIL	CM							35			35		
652.10	EPSC PLAN	LS							1			1		
652.20	MONITORING EPSC PLAN	HR							60			60		
652.30	MAINTENANCE OF EPSC PLAN (N.A.B.I.)	LU							1			1		
653.20	TEMPORARY EROSION MATTING	SM							230			230		
653.25	TEMPORARY STONE CHECK DAM, TYPE I	CM							25			25		
653.40	INLET PROTECTION DEVICE, TYPE I	EACH							1			1		
653.55	PROJECT DEMARCATION FENCE	M						170				170		
675.20	TRAFFIC SIGNS, TYPE A	SM						6				6		
675.341	SQUARE TUBE SIGN POST AND ANCHOR	M						58				58		
675.50	REMOVING SIGNS	EACH						4				4		
900.640	SPECIAL PROVISION (BRIDGE RAILING, TRUSS)	M		122			122					122		
• 900.645	SPECIAL PROVISION (TEMPORARY WORK PLATFORM)	LS		1			1					1		
900.675	SPECIAL PROVISION (STEEL GRID FLOORING)	SM		225			225					225		

• IF TEMPORARY WORK PLATFORM IS NOT USED OR REQUIRED, THIS ITEM SHALL NOT BE USED OR MEASURED FOR PAYMENT.

VANASSE HANGEN BRUSTLIN, INC.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of DUMMERSTON	Bridge No. 37
	Log Sta.
Highway No. TH 62	Surv. Sta.

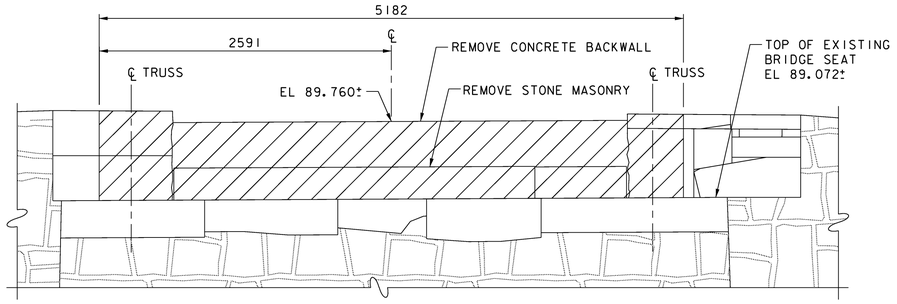
TH 62 OVER WEST RIVER

QUANTITY SHEET

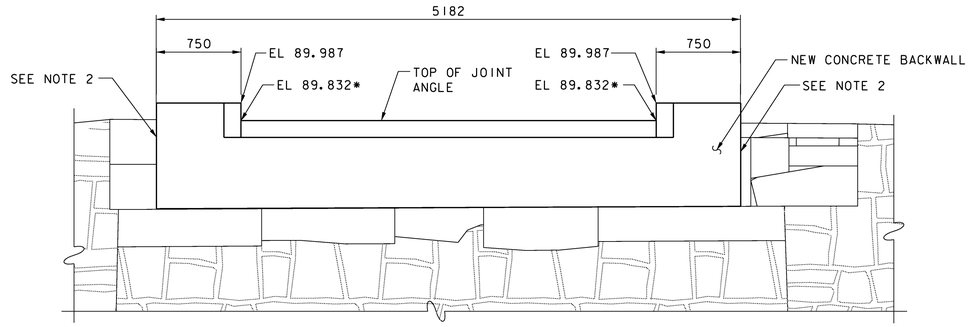
Designed By T. S. BRYANT	Drawn By C. L. CILLEY
Checked By S. M. HODGDON Date 4/09	Bridge Design Supervisor S. M. HODGDON Date 4/09
PROJECT DUMMERSTON	PROJECT NO. BHO 1442 (28)
I.G.C. Info.	
Bridge Sheet No. ZJ0800S1	Sheet 3 of 49

VHB NO. 51192 plot date: 4/3/2009

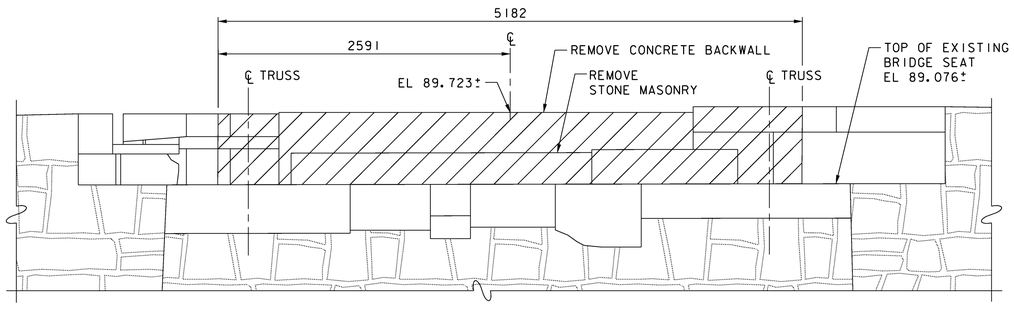
Metric



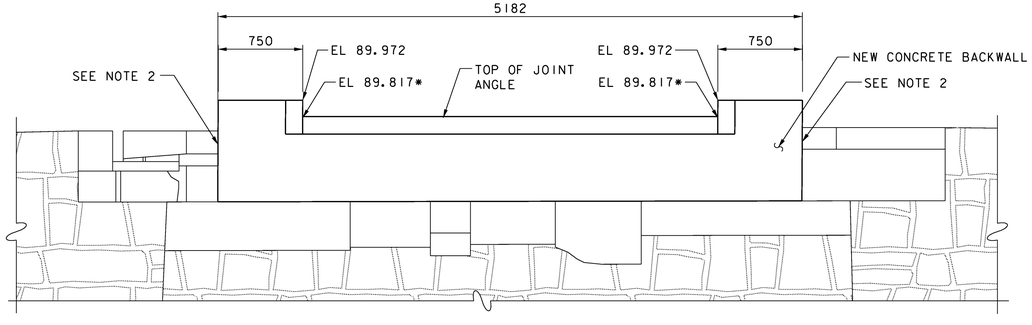
EXISTING ABUTMENT 1 ELEVATION
SCALE: 1:25



PROPOSED ABUTMENT 1 ELEVATION
SCALE: 1:25



EXISTING ABUTMENT 2 ELEVATION
SCALE: 1:25



PROPOSED ABUTMENT 2 ELEVATION
SCALE: 1:25

NOTES:

1. ELEVATIONS ARE GIVEN AT FACE OF BACKWALL. ELEVATIONS MARKED * ARE AT TOP OF JOINT ANGLE, WHICH IS 3 mm LOWER THAN TOP OF BACKWALL ELEVATION.
2. SHAPE AND RESET EXISTING STONE MASONRY IN BACKWALL TO FORM A VERTICAL JOINT FOR THE NEW BACKWALL CONCRETE TO BE CAST AGAINST. ALL COSTS FOR THIS WORK SHALL BE INCLUDED IN ITEM 620.20, DRY MASONRY.
3. SEE SHEET 25 FOR DECK END JOINT DETAILS.

DENOTES LIMIT OF REMOVAL

0 500 1000 1500 2000 2500
SCALE 1:25

VANASSE HANGEN BRUSTLIN, INC.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

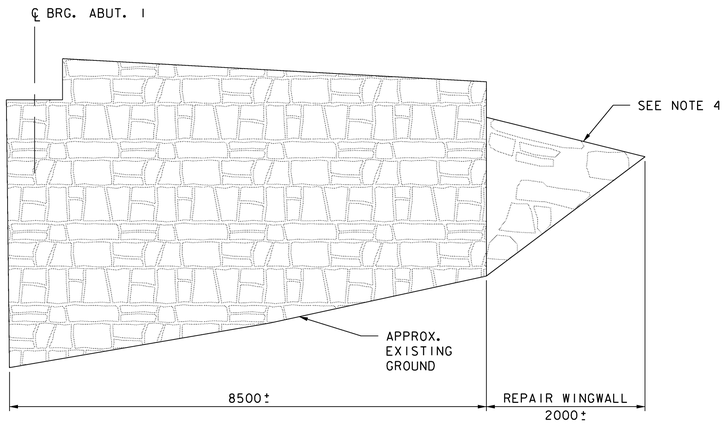
Town Of DUMMERSTON	Bridge No. 37
Highway No. TH 62	Log Sta. / Surv. Sta.
TH 62 OVER WEST RIVER	

ABUTMENT ELEVATIONS

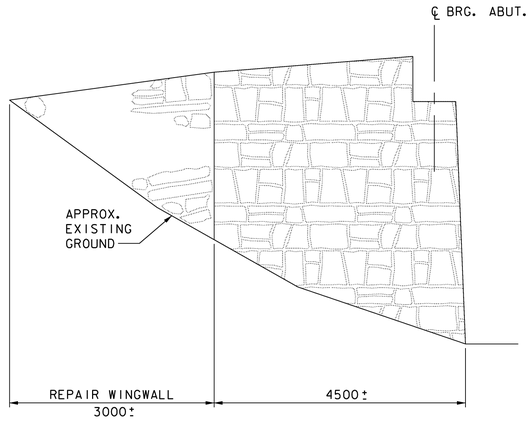
Designed By T. S. BRYANT	Drawn By B. J. MASSE
Checked By S. M. HODGDON Date 4/09	Bridge Design Supervisor S. M. HODGDON Date 4/09
PROJECT DUMMERSTON	PROJECT NO. BHO 1442 (28)
I.G.C. Info.	
Bridge Sheet No. ZJ080MA5	Sheet 30 of 49

VHB NO. 51192

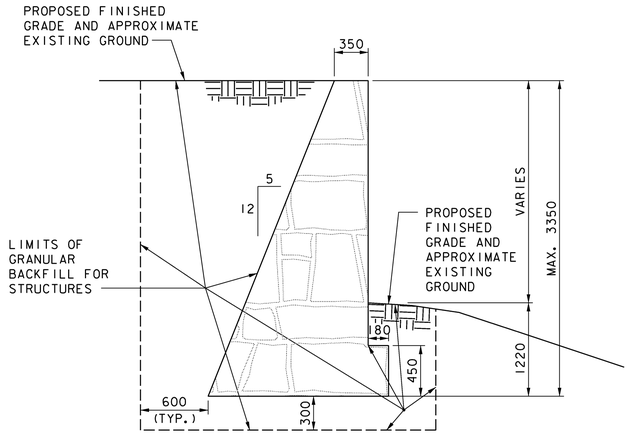
plot date: 4/3/2009



WINGWALL #1
SCALE: 1:50

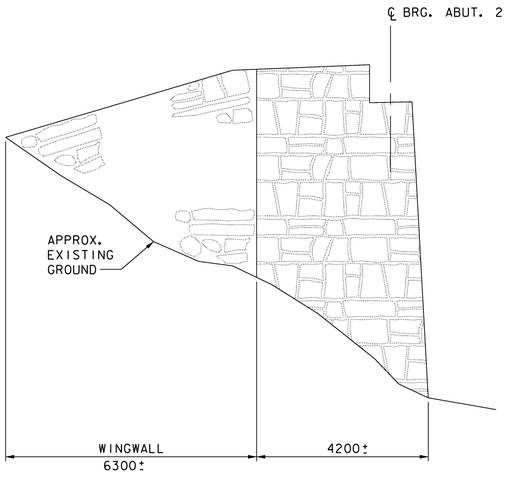


WINGWALL #2
SCALE: 1:50

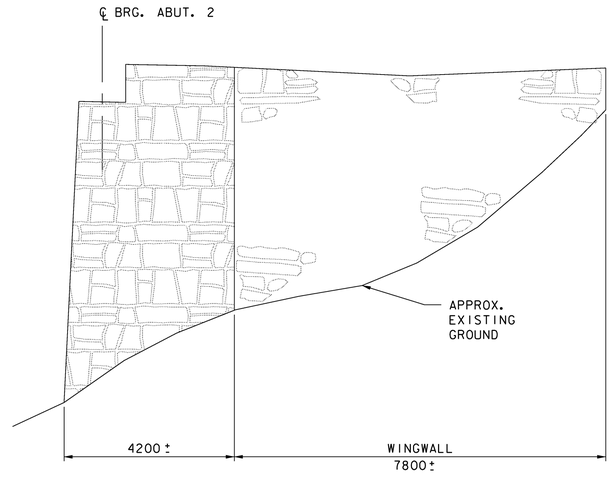


TYPICAL
RECONSTRUCTED SECTION
NOT TO SCALE

0 500 1000 1500 2000 2500



WINGWALL #3
SCALE: 1:50



WINGWALL #4
SCALE: 1:50

0 1000 2000 3000 4000 5000

WINGWALL REPAIR NOTES:

1. THE PORTIONS OF ABUTMENT NO. 1 WINGWALLS IDENTIFIED FOR REPAIR ON THIS SHEET SHALL BE REPAIRED BY ONE OR A COMBINATION OF THE FOLLOWING METHODS AS DIRECTED BY THE ENGINEER. REGARDLESS OF THE METHOD USED, ALL WINGWALL REPAIRS WITHIN THE IDENTIFIED AREAS SHALL BE PAID AS ITEM 602.20, DRY MASONRY.

   A. THE WINGWALLS MAY BE REPAIRED BY RECONSTRUCTING ALL OR PART OF THE WALL AS SHOWN IN THE TYPICAL RECONSTRUCTED SECTION ON THIS SHEET. THE MAXIMUM ALLOWABLE HEIGHT OF THE SECTION SHOWN IS 3350 MILLIMETERS WITHOUT ADDITIONAL ANALYSIS BY THE ENGINEER.

   B. ALTERNATIVELY THE WINGWALLS MAY BE REPAIRED BY RESETTING SELECTED STONES THAT HAVE SHIFTED, AND BY CHINKING GAPS BETWEEN THE STONES WITH SMALL STONES. MORTAR MAY BE USED SELECTIVELY, WITH THE APPROVAL OF THE ENGINEER, TO SEAT CHINKING STONES, BUT IT SHALL NOT BE USED TO REPOINT EXISTING OPEN JOINTS. THE QUANTITY TO BE PAID FOR REPAIR OF THE WINGWALLS BY THIS METHOD SHALL BE EQUIVALENT TO THE QUANTITY FOR RECONSTRUCTING THE SAME AREA OF WALL AS SHOWN IN THE TYPICAL RECONSTRUCTION SECTION ON THIS SHEET.

2. ITEM 204.25, STRUCTURE EXCAVATION SHALL BE USED TO PAY FOR EXCAVATION BEHIND THE ABUTMENT NO. 1 WINGWALLS IF THEY ARE RECONSTRUCTED. THE PAY LIMITS OF ITEM 204.25 SHALL BE FROM TOP OF EXISTING GROUND TO THE OUTER LIMITS OF GRANULAR BACKFILL FOR STRUCTURES SHOWN IN THE TYPICAL RECONSTRUCTED SECTION ON THIS SHEET, LESS THE VOLUME OF THE EXISTING WALL.

3. COSTS FOR REMOVING AND STOCKPILING EXISTING STONE MASONRY SHALL BE PAID AS ITEM 529.25, REMOVAL OF CONCRETE OR MASONRY, IF THE ABUTMENT NO. 1 WINGWALLS ARE RECONSTRUCTED. THE EXISTING STONE MASONRY MAY BE REUSED FOR RECONSTRUCTING THE WINGWALLS. ANY ADDITIONAL STONE REQUIRED TO COMPLETE THE RECONSTRUCTION SHALL BE GRANITE APPROXIMATELY SIMILAR TO THE EXISTING IN SIZE AND APPEARANCE.

4. SEE SHEET 5 FOR THE LOCATION OF NEW 450 MILLIMETER DIAMETER DRAINAGE PIPE THAT WILL OUTLET THROUGH THE SECTION OF WINGWALL #1 THAT REQUIRES REPAIR.

5. SEE GENERAL NOTE 16 ON SHEET 16 FOR REQUIREMENTS FOR WINGWALL REPAIRS BEYOND THE LIMITS IDENTIFIED FOR REPAIRS ON THIS SHEET.

VANASSE HANGEN BRUSTLIN, INC.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of DUMMERSTON	Bridge No. 37
Highway No. TH 62	Log Sta. / Surv. Sta.
TH 62 OVER WEST RIVER	

WINGWALL REPAIR DETAILS

Designed By T.S. BRYANT	Drawn By B.J. MASSE
Checked By S.M. HODGDON Date 4/09	Bridge Design Supervisor S.M. HODGDON Date 4/09
PROJECT DUMMERSTON	PROJECT NO. BHO 1442(28)
I.G.C. Info.	
Bridge Sheet No. ZJ080MA3	Sheet 31 of 49

VHB NO. 5192

plot date: 4/3/2009

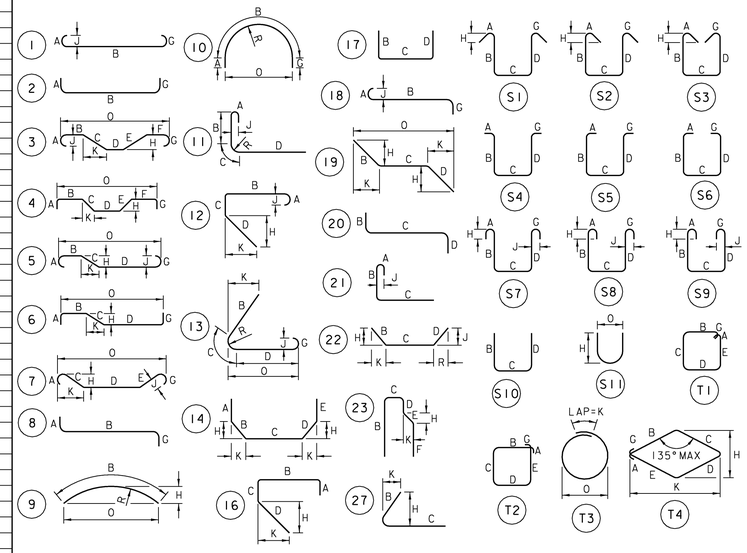
	ITEM	NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
△	1	20	16	900	1A1601													
△	2	8	16	5020	1EA1602													
	3	4	16	580	1EA1603													
	4	12	16	1500	1EA1604	17		600	300	600								
	5	6	16	1800	1EA1605	17		750	300	750								
	6																	
△	7	20	16	900	2A1601													
△	8	8	16	5020	2EA1602													
	9	4	16	580	2EA1603													
	10	12	16	1460	2EA1604	17		580	300	580								
	11	6	16	1760	2EA1605	17		730	300	730								
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ITEM	NO. PIECES	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	G	H	J	K	R	O
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VAST Metric

NOTES

1. UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING 55M SHALL CONFORM TO THE REQUIREMENT OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31M (ASTM A 615M-S1). ALL BARS SHALL BE GRADE 400, UNLESS OTHERWISE DESIGNATED.
2. FOR TYPICAL BENDING DETAILS, RECOMMENDED PIN DIAMETER "D" OF BENDS AND HOOKS, AND OTHER STANDARD PRACTICE, SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE".
3. BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180 DEGREE AND 135 DEGREE HOOKS.
5. "J" DIMENSION ON 180 DEGREE HOOKS ARE TO BE SHOWN ONLY WHEN NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE, STANDARD HOOKS ARE TO BE USED.
6. "H" DIMENSION ON STIRRUPS ARE TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
7. WHERE SLOPE DIFFERS FROM 45 DEGREES, DIMENSIONS "H" AND "K" MUST BE SHOWN.
8. ▲ DENOTES BARS TO BE CUT IN FIELD.
9. ✱ DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
10. △ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.
11. "E" IN PREFIX DENOTES EPOXY COATED REINFORCING STEEL.



ASTM STANDARD REINFORCING BARS

BAR SIZE DESIGNATION	NOMINAL MASS kg/m	NOMINAL DIMENSIONS ROUND SECTION: DIAMETER mm	CROSS SECTIONAL AREA mm²	PERIMETER mm
10	0.560	9.5	71	29.84
13	0.994	12.7	129	39.90
16	1.552	15.9	199	49.95
19	2.235	19.1	284	60.00
22	3.042	22.2	387	69.74
25	3.973	25.4	510	79.80
29	5.060	28.7	645	90.16
32	6.404	32.3	819	101.47
36	7.907	35.8	1006	112.47
43	11.380	43.0	1452	135.09
57	20.240	57.3	2581	180.01

VANASSE HANGEN BRUSTLIN, INC.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

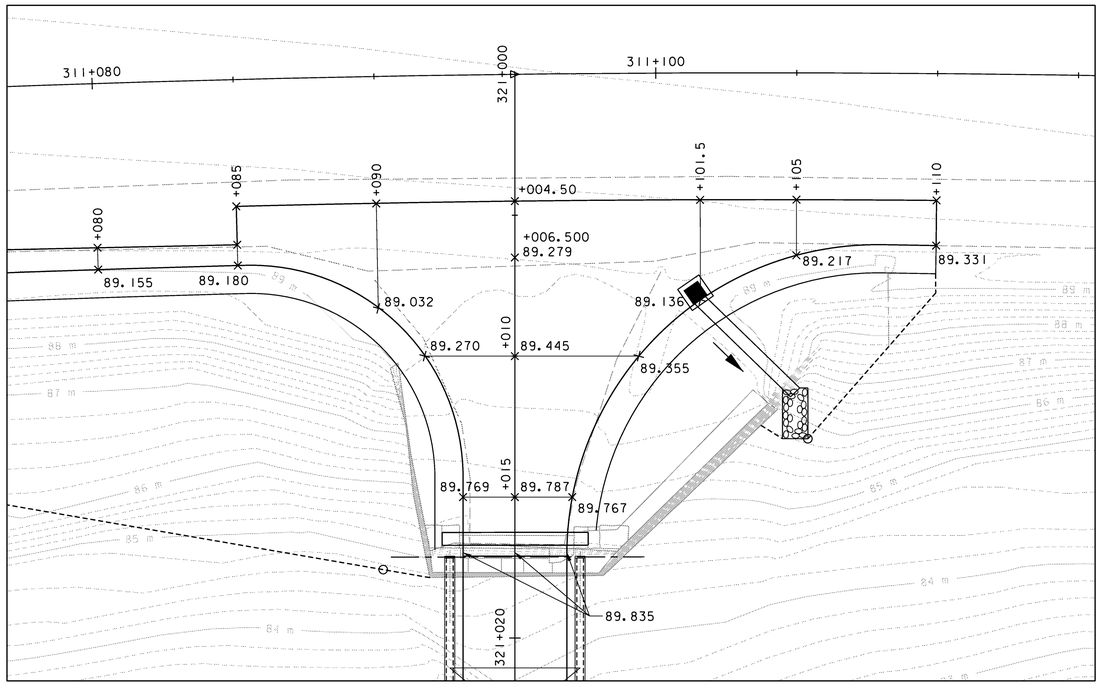
Town Of DUMMERSTON	Bridge No. 37
	Log Sta.
Highway No. TH 62	Surv. Sta.
TH 62 OVER WEST RIVER	

REINFORCING STEEL SCHEDULE

Designed By T. S. BRYANT	Drawn By M. M. LANDREY
Checked By S. M. HODGDON Date 4/09	Bridge Design Supervisor S. M. HODGDON Date 4/09
PROJECT DUMMERSTON	PROJECT NO. BHO 1442 (28)
I.G.C. Info.	
Bridge Sheet No. ZJ080RS1	Sheet 32 of 49

VHB NO. 51192 plot date: 4/3/2009

Metric

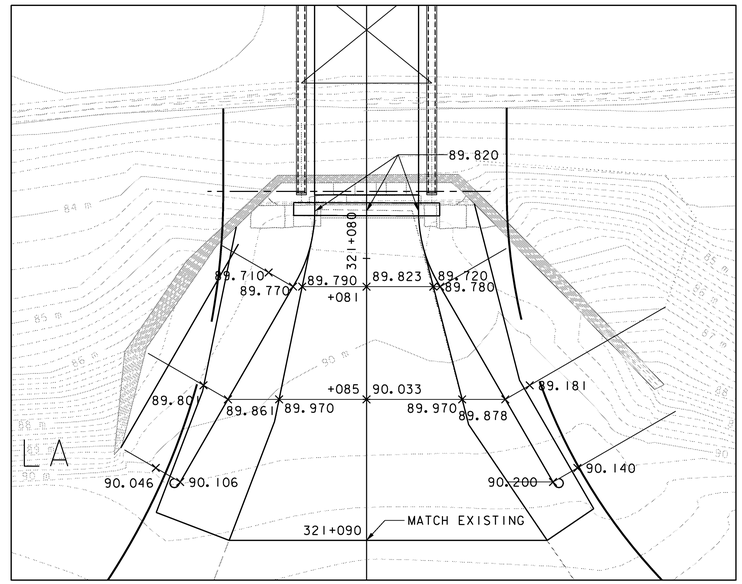


VT 30/TH 62 INTERSECTION GRADING PLAN

SCALE: 1:100

VT STATE PLANE GRID

N



END BRIDGE/TH 62 GRADING PLAN

SCALE: 1:100

0 100 200 400 600 800 1000

SCALE = 1:100

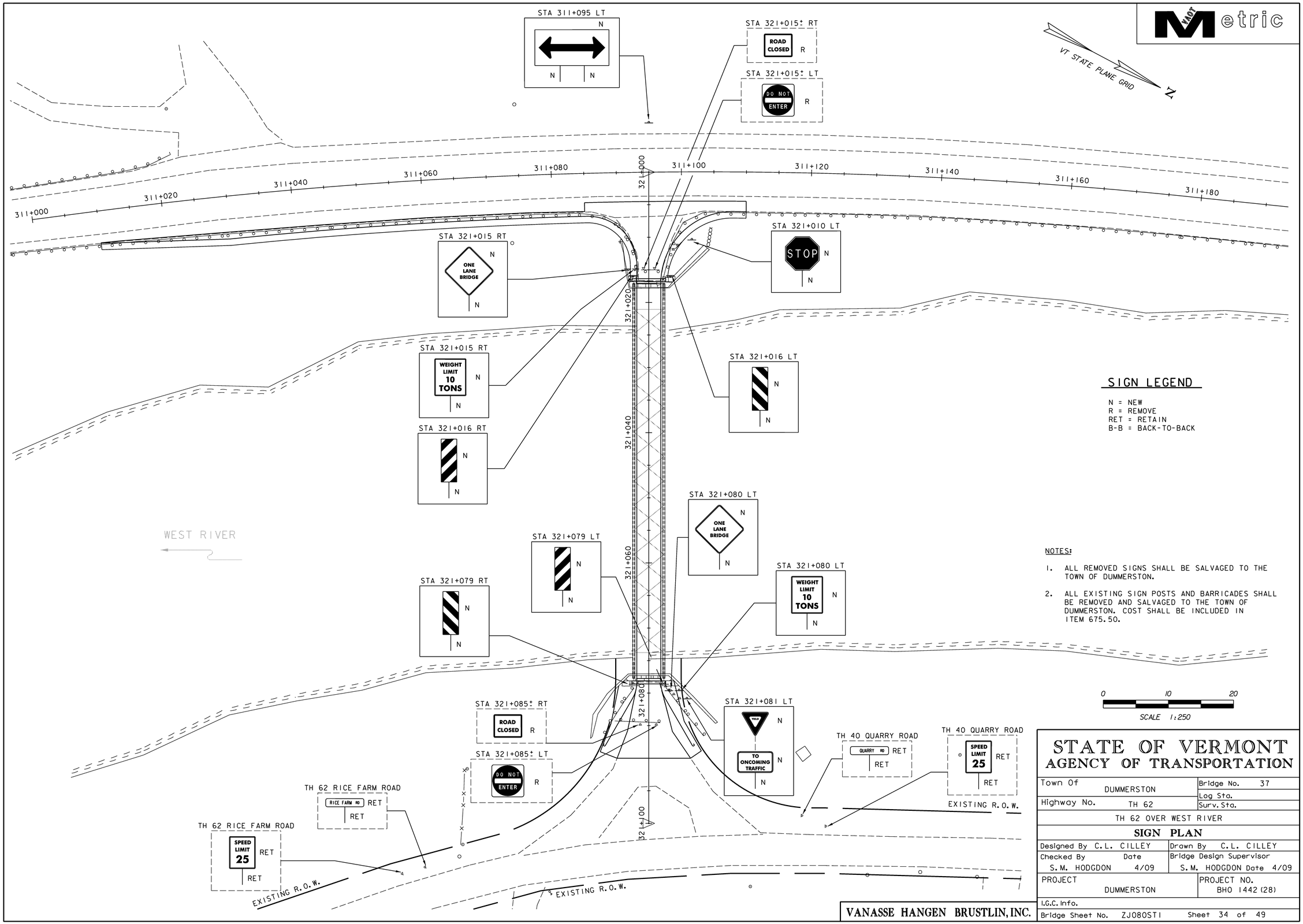
VANASSE HANGEN BRUSTLIN, INC.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of DUMMERSTON	Bridge No. 37
	Log Sta.
Highway No. TH 62	Surv. Sta.
TH 62 OVER WEST RIVER	
ROADWAY GRADING PLAN	
Designed By C.L. CILLEY	Drawn By C.L. CILLEY
Checked By Date S.M. HODGDON 4/09	Bridge Design Supervisor S.M. HODGDON Date 4/09
PROJECT DUMMERSTON	PROJECT NO. BHO 1442(28)
I.G.C. Info.	
Bridge Sheet No. ZJ080GR1	Sheet 33 of 49

VHB NO. 51192

plot date: 4/3/2009



SIGN LEGEND

N = NEW
R = REMOVE
RET = RETAIN
B-B = BACK-TO-BACK

NOTES:

1. ALL REMOVED SIGNS SHALL BE SALVAGED TO THE TOWN OF DUMMERSTON.
2. ALL EXISTING SIGN POSTS AND BARRICADES SHALL BE REMOVED AND SALVAGED TO THE TOWN OF DUMMERSTON. COST SHALL BE INCLUDED IN ITEM 675.50.

0 10 20

SCALE 1:250

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of DUMMERSTON	Bridge No. 37
Highway No. TH 62	Log Sta. / Surv. Sta.
TH 62 OVER WEST RIVER	
SIGN PLAN	
Designed By C.L. CILLEY	Drawn By C.L. CILLEY
Checked By S.M. HODGDON Date 4/09	Bridge Design Supervisor S.M. HODGDON Date 4/09
PROJECT DUMMERSTON	PROJECT NO. BHO 1442(28)
I.G.C. Info.	
Bridge Sheet No. ZJ080ST1	Sheet 34 of 49

VANASSE HANGEN BRUSTLIN, INC.

VHB NO. 51192

plot date: 4/3/2009

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

Metric

KILOMETER MARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST		NEW SIGN POSTS																						REMARKS	SIGN DETAIL	
		EA	WIDTH (mm)	HEIGHT (mm)	"A"	"B"	SALV SIGN	SALV TIS	RETAIN	SALVAGE	NO. OF POSTS	FLANGED CHANNEL kg/m			SQUARE STEEL (mm) kg/m			ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (mm) kg/m			FOUNDATION	TUBULAR STEEL Ø (mm) kg/m				W-SHAPE STEEL FTG. SIZE		WEIGHT	POST SIZE	SIGN FRAME REQUIRED		DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
															45	51	64			75	100	100 MOD		75	89	100	125	600 mm	750 mm						
												1.7	3.0	4.5	2.8	3.6	5.0			1.9	2.5	2.5		11.3	13.4	16.1	21.7								
TH 62																																			
321+010 LT	STOP	1	750	750	0.56						1					X		X															USE TYPE IX FLUORESCENT YELLOW SIGN SHEETING		MUTCD R1-1
321+015 RT	ONE LANE BRIDGE	1	900	900	0.81						1					X		X																	MUTCD W5-3
321+015 RT	WEIGHT LIMIT 10 TONS	1	600	750	0.45						1					X		X																	MUTCD R12-1
321+016 RT		1	300	900	0.27						1					X		X														OBJECT MARKER		MUTCD OM-3R
321+016 LT		1	300	900	0.27						1					X		X														OBJECT MARKER		MUTCD OM-3L
321+079 RT		1	300	900	0.27						1					X		X														OBJECT MARKER		MUTCD OM-3L
321+079 LT		1	300	900	0.27						1					X		X														OBJECT MARKER		MUTCD OM-3R
321+080 LT	WEIGHT LIMIT 10 TONS	1	600	750	0.45						1					X		X																	MUTCD R12-1
321+080 LT	ONE LANE BRIDGE	1	900	900	0.81						1					X		X														USE TYPE IX FLUORESCENT YELLOW SIGN SHEETING		MUTCD W5-3
321+081 LT	YIELD TO ONCOMING TRAFFIC	1 1	900 600	900 450	0.81 0.27						1					X		X																	MUTCD R1-2 MUTCD R1-2a
VT 30																																			
311+095 LT		1	1200	600	0.72						2					X		X														USE TYPE IX FLUORESCENT YELLOW SIGN SHEETING		MUTCD W1-7
												m	m	m	m	m 43.2		EA	kg	kg	kg		kg	kg	kg	kg								
TOTALS					m^2 5.96	m^2	EA.	m^2				m			m 57.6					kg			EA.	kg				EA.	EA.						

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

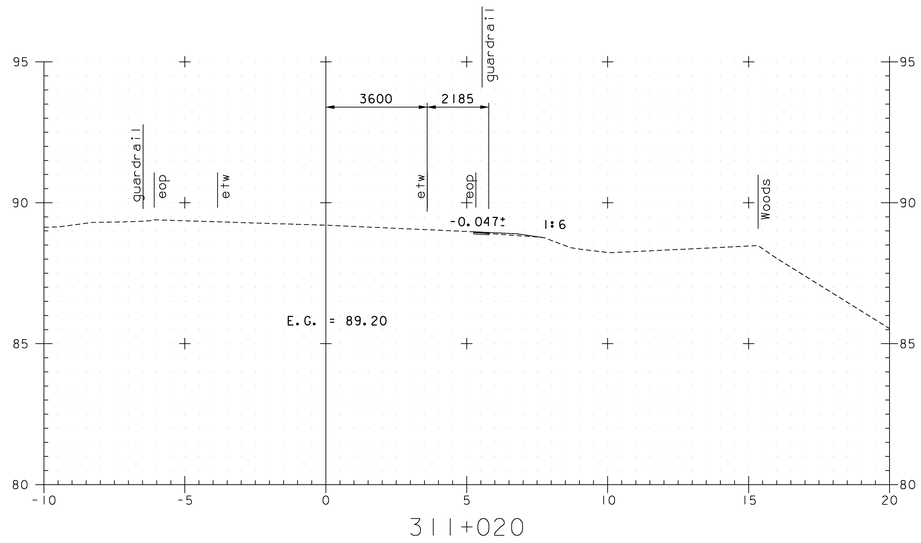
AVERAGE SQUARE STEEL POST LENGTH = 3.6 m
ANCHOR LENGTH = 1.2 m

VANASSE HANGEN BRUSTLIN, INC.

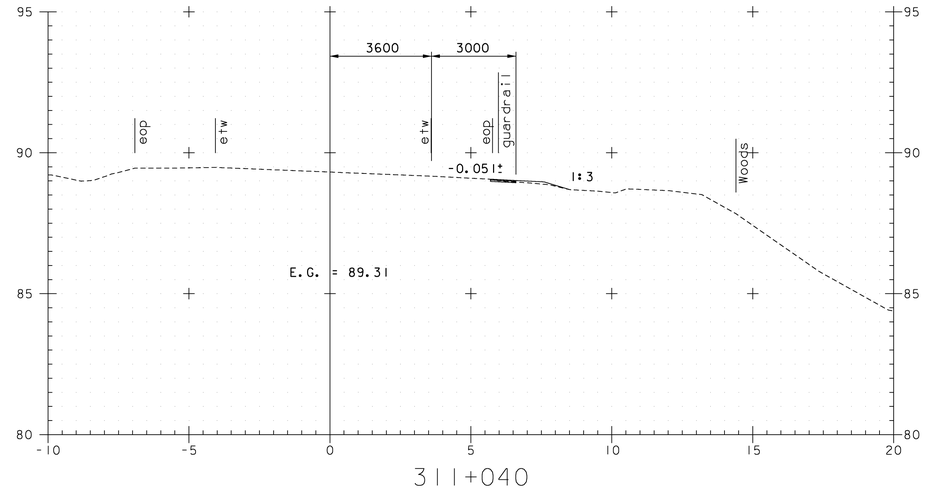
STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of DUMMERSTON	Bridge No. 37
Highway No. TH 62	Log Sta.
	Surv. Sta.
TH 62 OVER WEST RIVER	
TRAFFIC SIGN SUMMARY SHEET	
Designed By C.L. CILLEY	Drawn By C.L. CILLEY
Checked By S.M. HODGDON Date 4/09	Bridge Design Supervisor S.M. HODGDON Date 4/09
PROJECT DUMMERSTON	PROJECT NO. BHO 1442(28)
I.G.C. Info.	
Bridge Sheet No. ZJ080TS1	Sheet 35 of 49

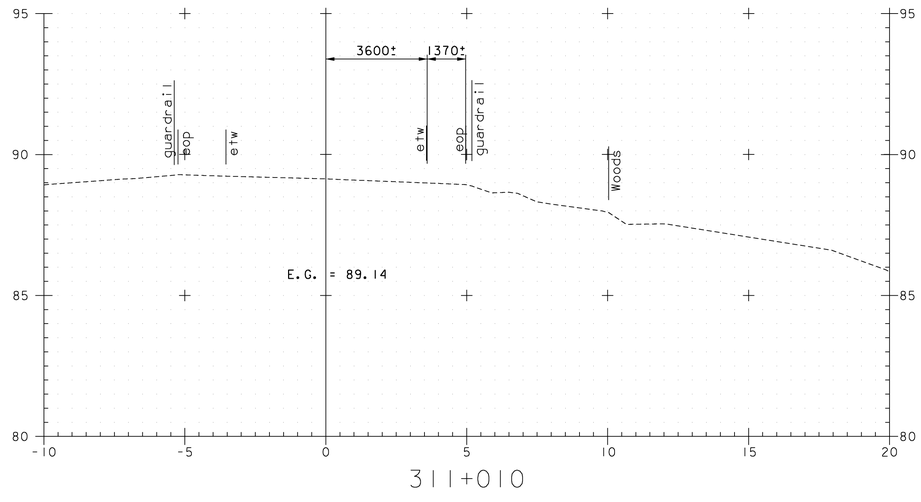
VHB NO. 51192 plot date: 4/3/2009



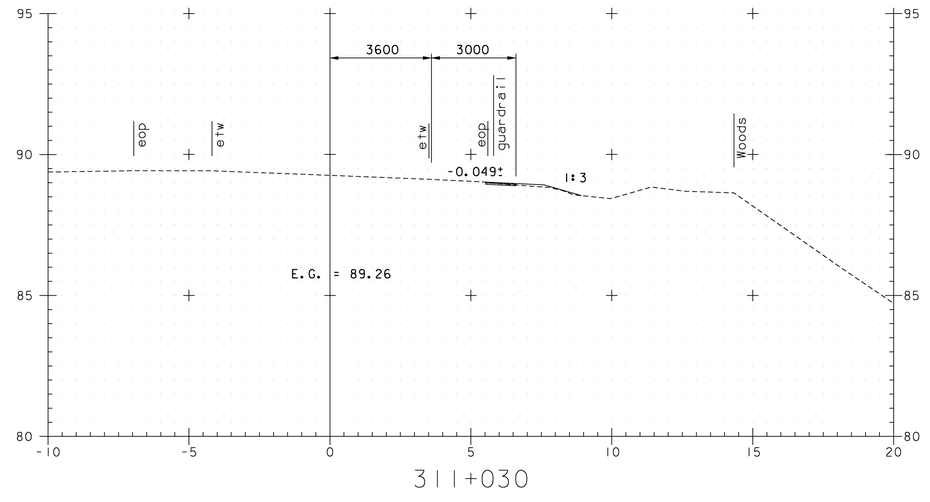
311+020



311+040



311+010



311+030

BEGIN VT 30 APPROACH
STA 311+010
MATCH EXISTING

0 2 4 6 8 10
SCALE 1:100

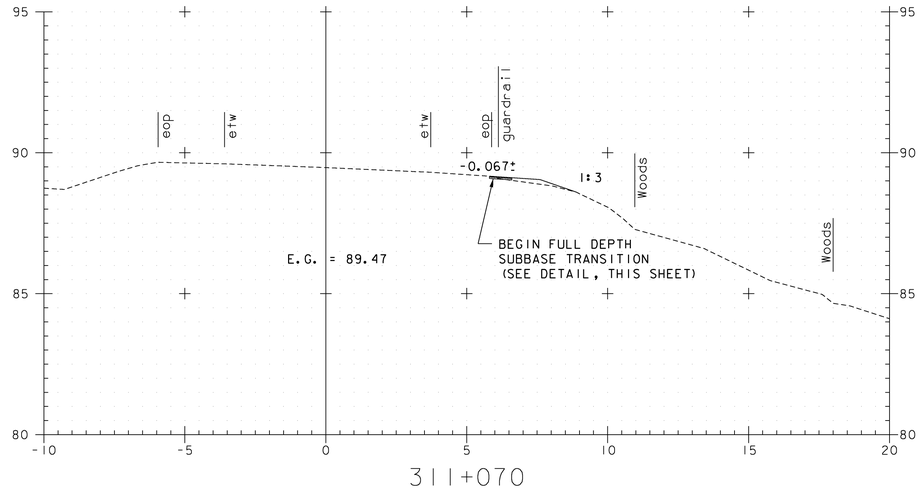
VT 30

ROADWAY CROSS SECTION FROM STA 311+010 TO STA 311+040
PROJECT NAME DUMMERSTON
PROJECT NO. BHO 1442 (28)
SURVEYED BY VAOT 8/98
SHEET 36 OF 49

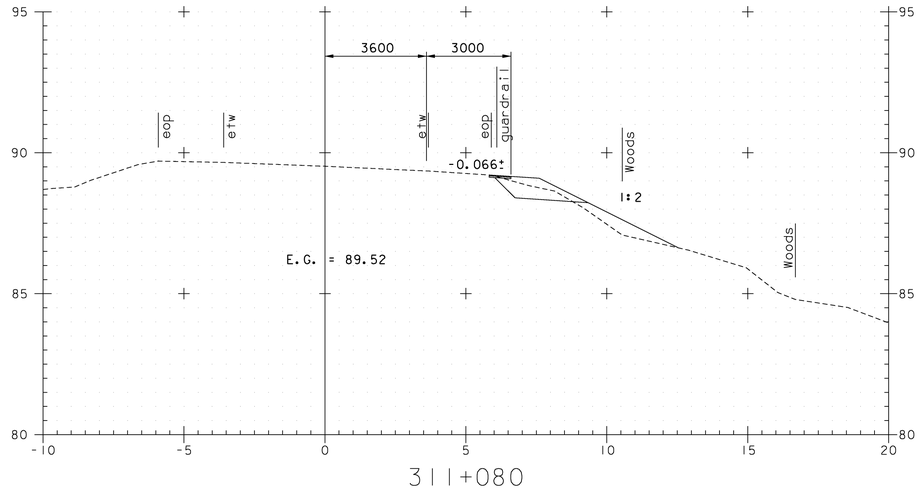
VANASSE HANGEN BRUSTLIN, INC.

VHB NO. 51192

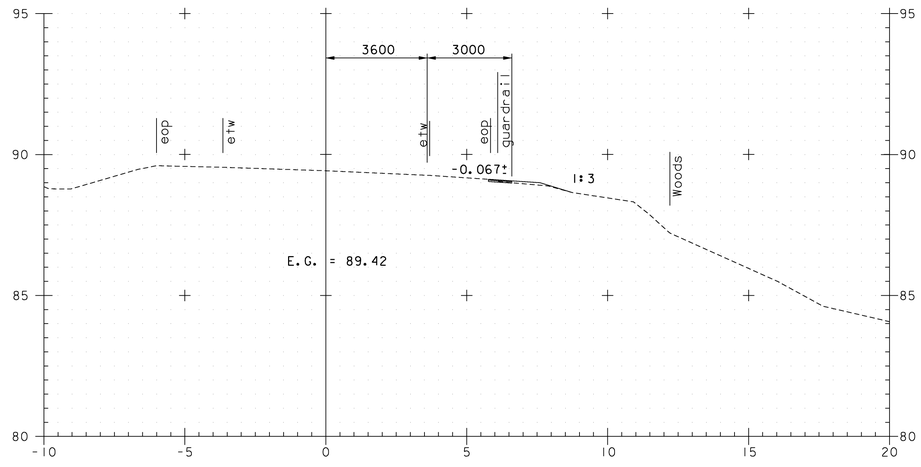
plot date: 4/3/2009



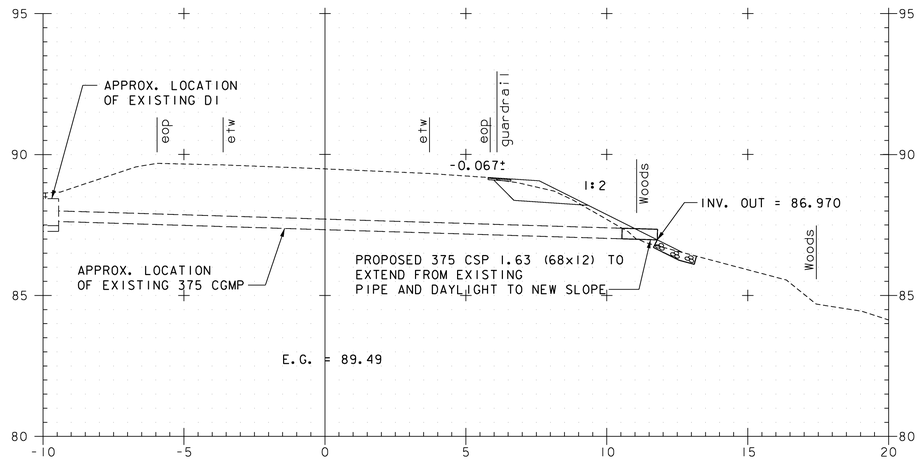
311+070



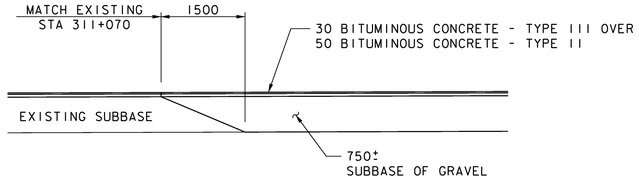
311+080



311+060



311+074



VT 30 MATERIAL TRANSITION DETAIL

NOT TO SCALE

0 2 4 6 8 10

SCALE 1:100

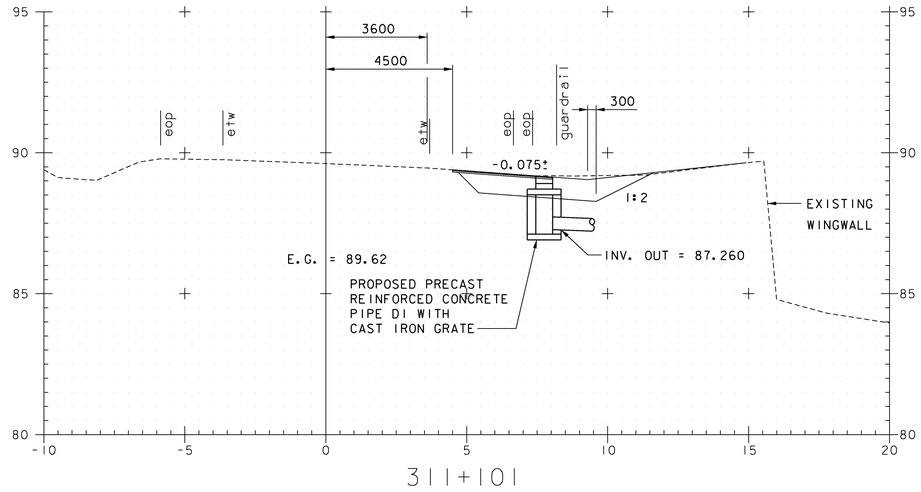
VT 30

ROADWAY CROSS SECTION FROM STA 311+060 TO STA 311+080
PROJECT NAME DUMMERSTON
PROJECT NO. BHO 1442 (28)
SURVEYED BY VAOT 8/98
SHEET 37 OF 49

VANASSE HANGEN BRUSTLIN, INC.

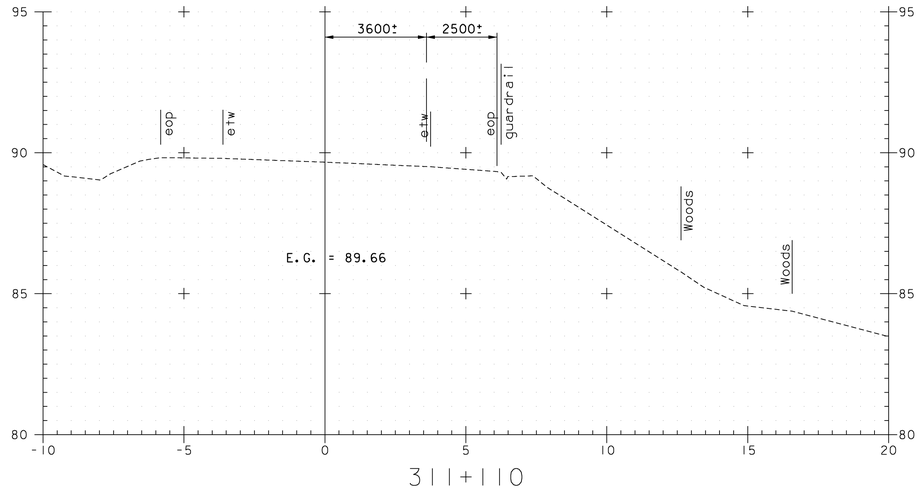
VHB NO. 51192

plot date: 4/3/2009

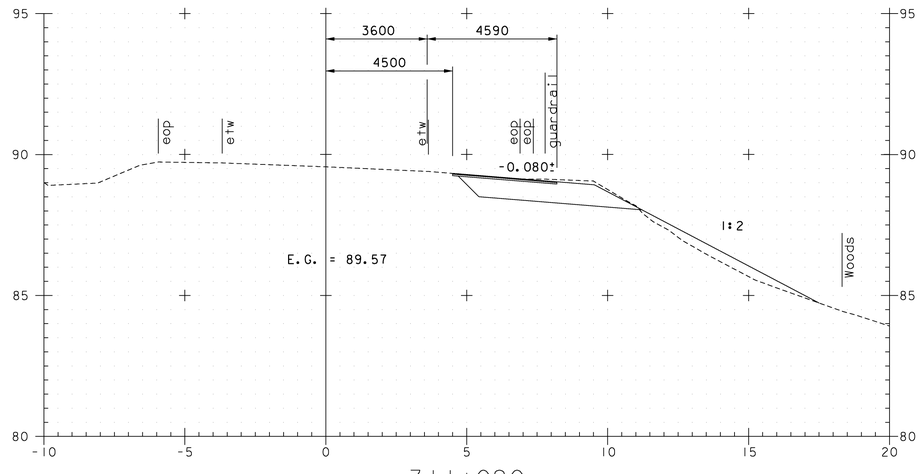


311+101

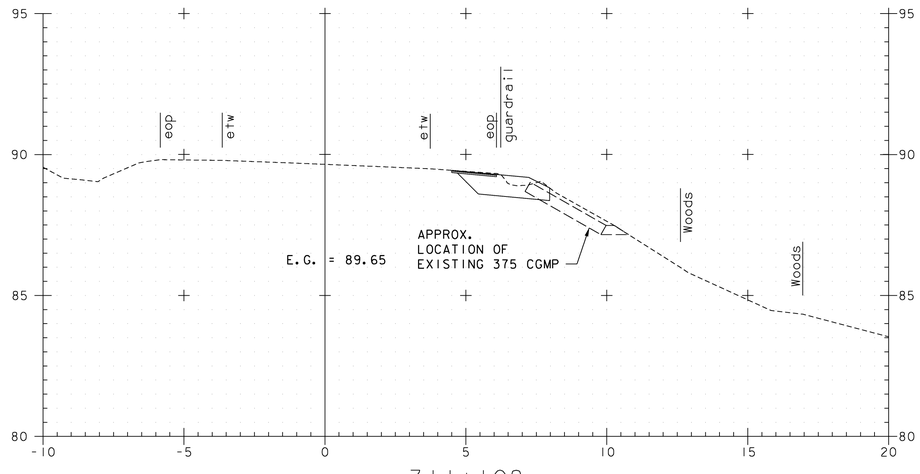
END TH 30 APPROACH
STA 311+110
MATCH EXISTING



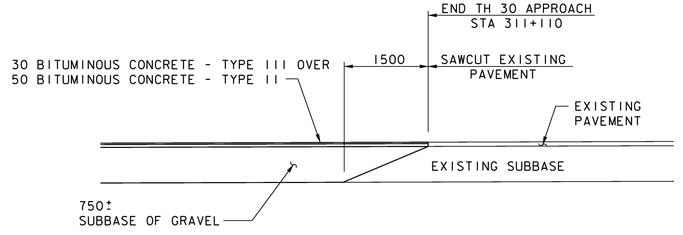
311+110



311+090



311+108



VT 30 MATERIAL TRANSITION DETAIL
NOT TO SCALE

0 2 4 6 8 10
SCALE 1:100

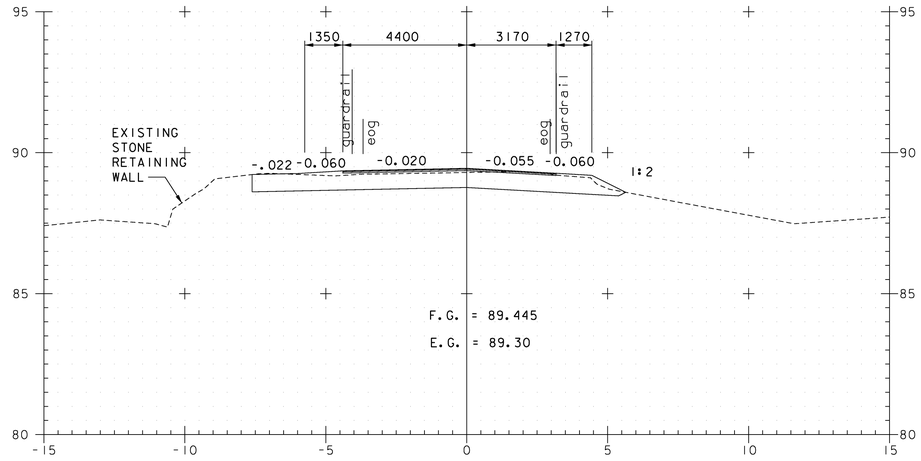
VT 30

ROADWAY CROSS SECTION FROM STA	311+090 TO STA 311+110
PROJECT NAME	DUMMERSTON
PROJECT NO.	BHO 1442 (28)
SURVEYED BY	VAOT 8/98
SHEET	38 OF 49

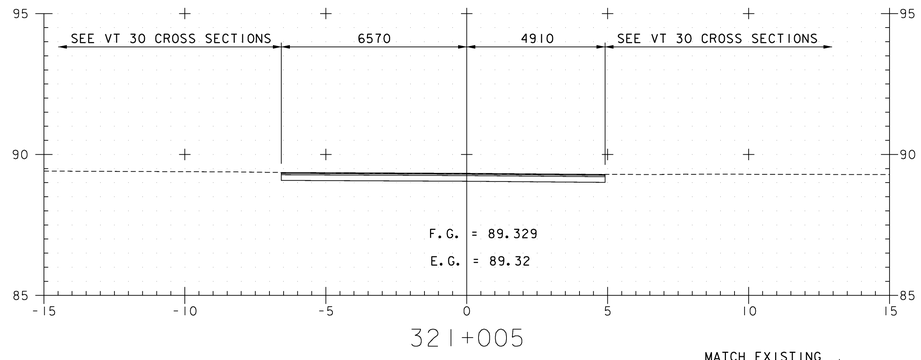
VANASSE HANGEN BRUSTLIN, INC.

VHB NO. 51192

plot date: 4/3/2009

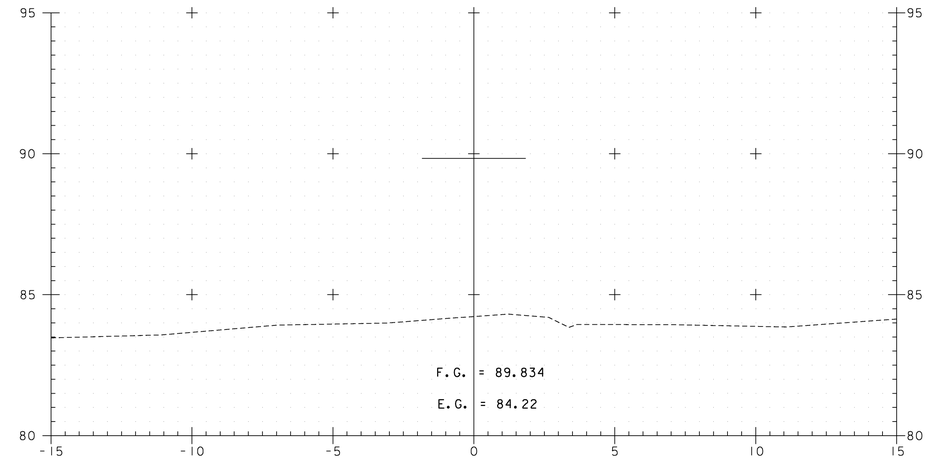


321+010



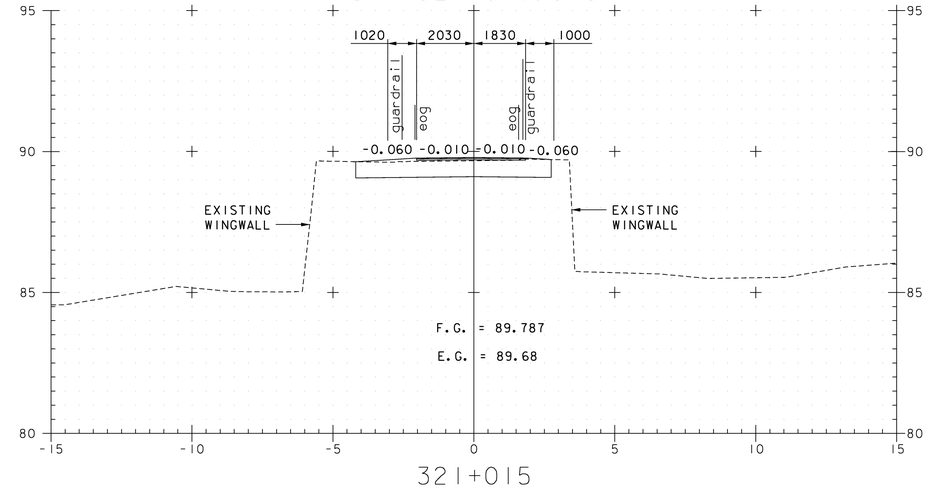
321+005

BEGIN TH 62 APPROACH
STA 321+004.500
MATCH EXISTING

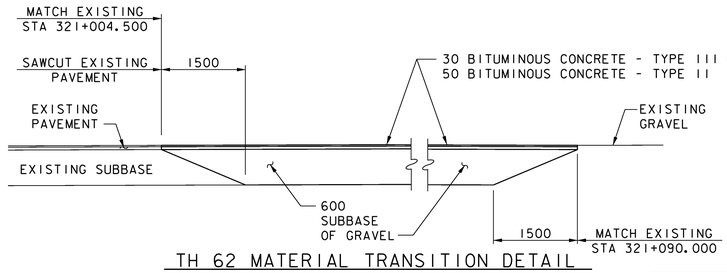


321+020

BEGIN BRIDGE
STA 321+016.343



321+015



TH 62 MATERIAL TRANSITION DETAIL
NOT TO SCALE

0 2 4 6 8 10
SCALE 1:100

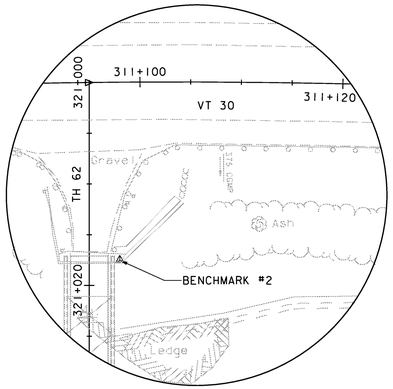
TH 62

ROADWAY CROSS SECTION FROM STA	321+005 TO STA 321+020
PROJECT NAME	DUMMERSTON
PROJECT NO.	BHO 1442 (28)
SURVEYED BY	VAOT 8/98
SHEET	39 OF 49

VANASSE HANGEN BRUSTLIN, INC.

VHB NO. 51192

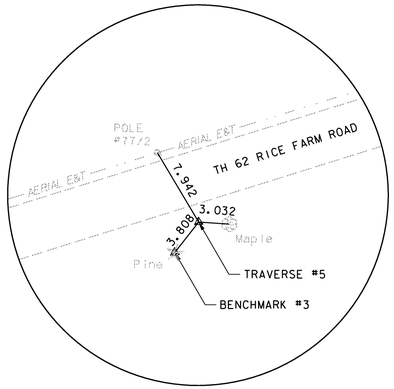
plot date: 4/14/2009



SURVEY DISC STAMPED STICKNEY 1988
DISC SET ON BRIDGE ABUTMENT

BENCHMARK #2
NORTHING = 46238.9390
EASTING = 490731.3521
ELEVATION = 89.09

BENCHMARK #2
NOT TO SCALE

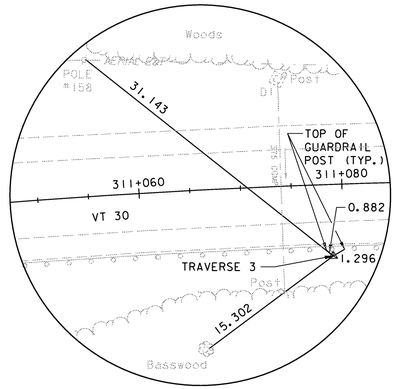


LAG BOLT IN LARGE PINE

BENCHMARK #3
NORTHING = 46169.3250
EASTING = 490922.6800
ELEVATION = 91.90

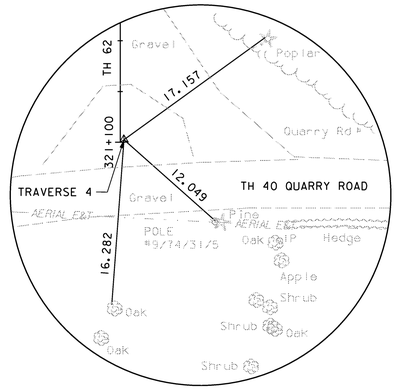
TRAVERSE #5
NORTHING = 46169.9890
EASTING = 490918.9343
ELEVATION = 91.39

BENCHMARK #3
NOT TO SCALE



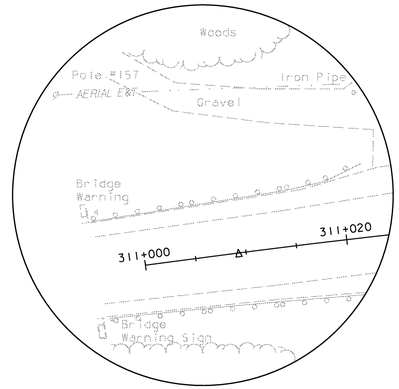
TRAVERSE #3
NORTHING = 46217.5503
EASTING = 490731.2791
ELEVATION = 88.9226

TRAVERSE #3
NOT TO SCALE



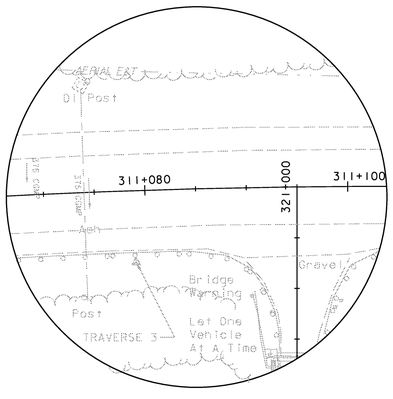
TRAVERSE #4
NORTHING = 46275.1862
EASTING = 490805.2115
ELEVATION = 91.6137

TRAVERSE #4
NOT TO SCALE



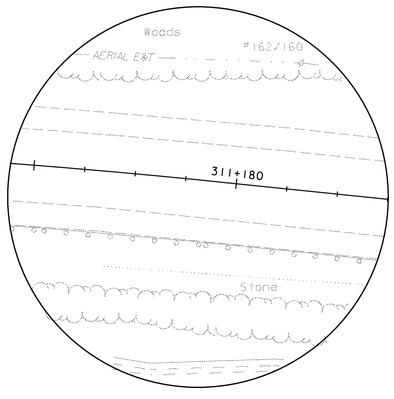
VT 30 PC STA 311+009.257
NORTHING = 46155.4258
EASTING = 490762.7801

VT 30 PC STA 311+009.257
NOT TO SCALE



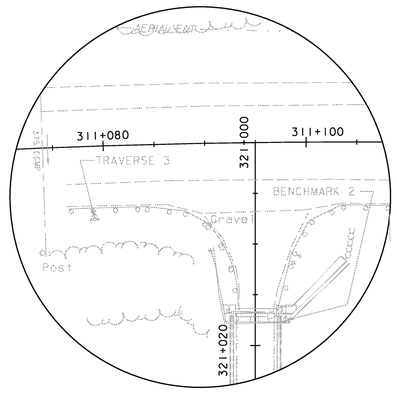
VT 30 PI STA 311+093.887 BK
STA 311+093.124 AHD
NORTHING = 46224.3715
EASTING = 490713.7020

VT 30 PI STA 311+093.887 BK
NOT TO SCALE



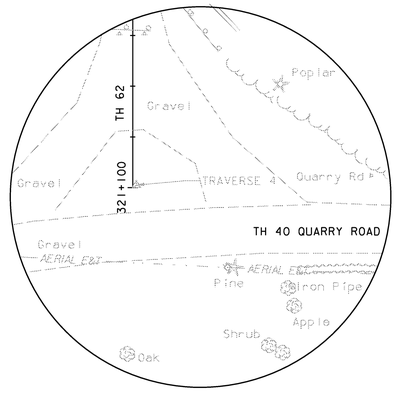
VT 30 PT STA 311+177.754
NORTHING = 46302.7674
EASTING = 490681.8231

VT 30 PT STA 311+177.754
NOT TO SCALE



TH 62 PI STA 321+000
NORTHING = 46228.0524
EASTING = 490717.2982

TH 62 PI STA 321+000
NOT TO SCALE



TH 62 PI STA 321+100
NORTHING = 46274.9744
EASTING = 490805.6066

TH 62 PI STA 321+100
NOT TO SCALE

NOTE:

1. SURVEY PROVIDED BY VERMONT SURVEY AND ENGINEERING, INC. (1998).

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VANASSE HANGEN BRUSTLIN, INC.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of DUMMERSTON	Bridge No. 37
Highway No. TH 62	Log Sta. / Surv. Sta.
TH 62 OVER WEST RIVER	
TIE SHEET	
Designed By VHB	Drawn By C.L. CILLEY
Checked By S.M. HODGDON Date 4/09	Bridge Design Supervisor S.M. HODGDON Date 4/09
PROJECT DUMMERSTON	PROJECT NO. BHO 1442 (28)
I.G.C. Info.	
Bridge Sheet No. ZJ080TIE	Sheet 4 of 49

VHB NO. 5192

plot date: 4/3/2009

STATE OF VERMONT
AGENCY OF TRANSPORTATION

TRAFFIC SIGN SUMMARY SHEET

VAOT Metric

KILOMETER MARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS EA	WIDTH (mm)	HEIGHT (mm)	NEW & SALVAGED SIGNS "A"	"B"	SALV SIGN	SALV TIS	EXIST POST RETAIN	EXIST POST SALVAGE	NEW SIGN POSTS NO. OF POSTS	FLANGED CHANNEL kg/m 1.7	3.0	4.5	SQUARE STEEL (mm) 45 kg/m 2.8	51 kg/m 3.6	64 kg/m 5.0	ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (mm) 75 kg/m 1.9	100 kg/m 2.5	100 MOD kg/m 2.5	TUBULAR STEEL Ø (mm) FOUNDATION	75 kg/m 11.3	89 kg/m 13.4	100 kg/m 16.1	125 kg/m 21.7	W-SHAPE STEEL FTG. SIZE 600 mm	750 mm	WEIGHT	POST SIZE	SIGN FRAME REQUIRED	REMARKS	SIGN DETAIL DETAIL ON SHEET NUMBER	STD. SHEET NUMBER
TH 62																																			
321+010 LT	STOP	1	750	750	0.56						1					4.01 X		X																USE TYPE IX FLUORESCENT YELLOW SIGN SHEETING		MUTCD R1-1
321+015 RT	ONE LANE BRIDGE	1	900	900	0.81						1					~~X~~		X																	MUTCD W5-3
321+015 RT	WEIGHT LIMIT 10 TONS	1	600	750	0.45						1					5.18 X		X																	MUTCD R12-1
321+016 RT		1	300	900	0.27						1					3.05 X		X																OBJECT MARKER		MUTCD OM-3R
321+016 LT		1	300	900	0.27						1					3.28 X		X																OBJECT MARKER		MUTCD OM-3L
321+079 RT		1	300	900	0.27						1					3.28 X		X																OBJECT MARKER		MUTCD OM-3L
321+079 LT		1	300	900	0.27						1					3.28 X		X																OBJECT MARKER		MUTCD OM-3R
321+080 LT	WEIGHT LIMIT 10 TONS	1	600	750	0.45						1					5.18 X		X																	MUTCD R12-1
321+080 LT	ONE LANE BRIDGE	1	900	900	0.81						1					~~X~~		X																USE TYPE IX FLUORESCENT YELLOW SIGN SHEETING		MUTCD W5-3
321+081 LT	YIELD TO ONCOMING TRAFFIC	1 1	900 600	900 450	0.81 0.27						1					4.57 X		X																	MUTCD R1-2 MUTCD R1-2a
VT 30																																			
311+095 LT		1	1200	600	0.72						2					4.34 X 4.39		X																USE TYPE IX FLUORESCENT YELLOW SIGN SHEETING		MUTCD W1-7
												m	m	m	m	m ~~43.2~~ 40.56			EA	kg	kg	kg		kg	kg	kg	kg							
TOTALS					m^2 5.96	m^2	EA.	m^2				m			m	m ~~57.6~~ 40.6				kg			EA.	kg				EA.	EA.	kg				

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

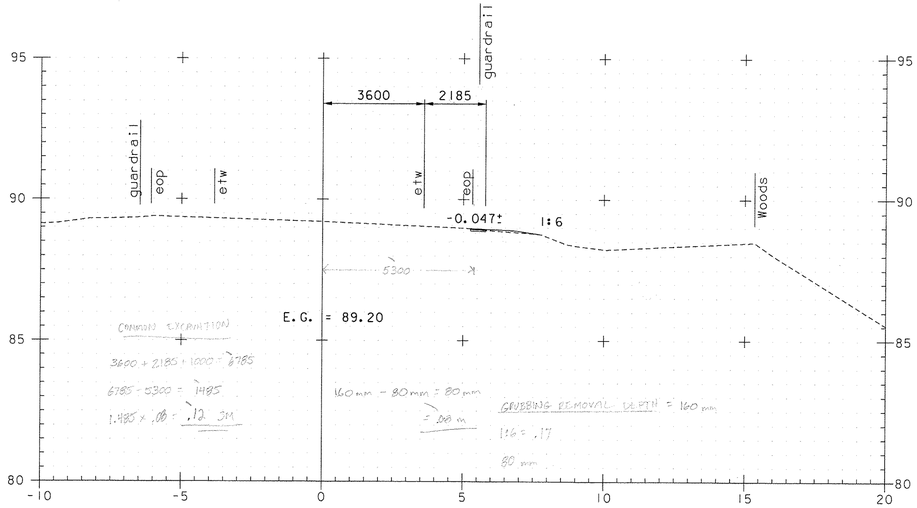
AVERAGE SQUARE STEEL POST LENGTH = 3.6 m
ANCHOR LENGTH = 1.2 m

VANASSE HANGEN BRUSTLIN, INC.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

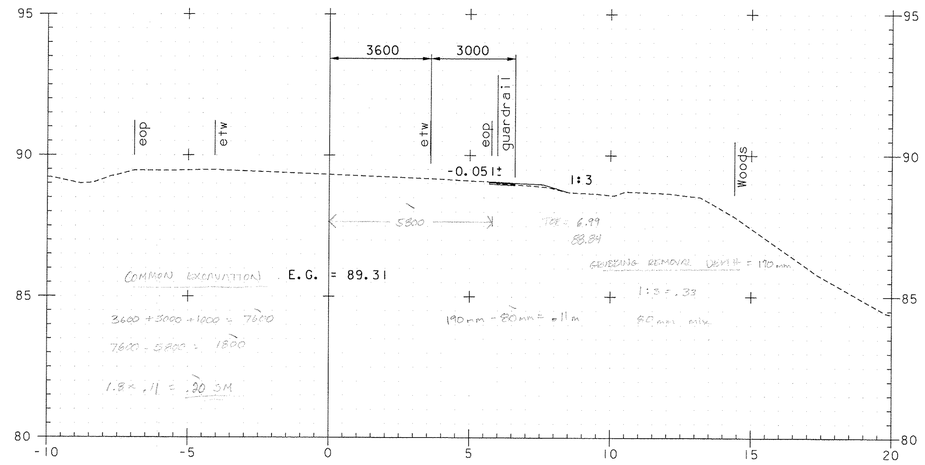
Town Of DUMMERSTON	Bridge No. 37
Highway No. TH 62	Log Sta.
	Surv. Sta.
TH 62 OVER WEST RIVER	
TRAFFIC SIGN SUMMARY SHEET	
Designed By C.L. CILLEY	Drawn By C.L. CILLEY
Checked By Date S.M. HODGDON 4/09	Bridge Design Supervisor S.M. HODGDON Date 4/09
PROJECT DUMMERSTON	PROJECT NO. BHO 1442(28)
I.G.C. Info.	
Bridge Sheet No. ZJ080TS1	Sheet 35 of 49

VHB NO. 51192 plot date: 4/3/2009

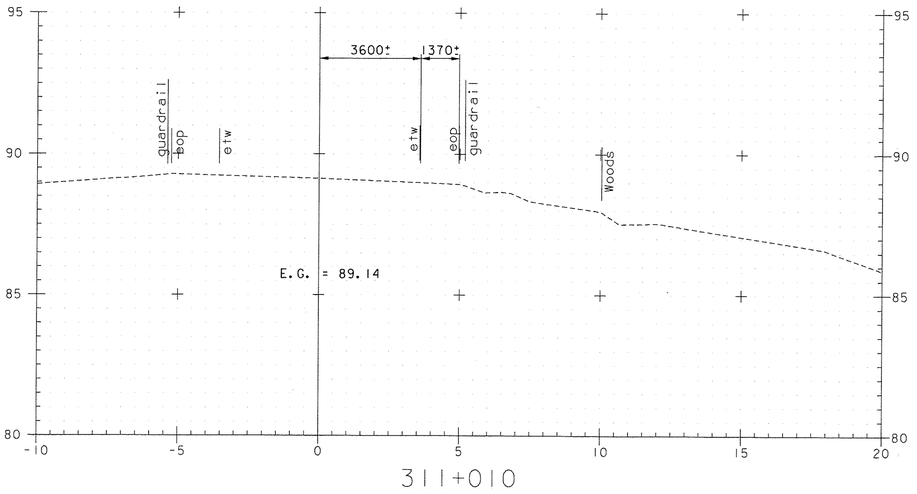


311+020

GRUBBING REMOVAL DEPTH
FIELD MEASURED BY M. LEWIS



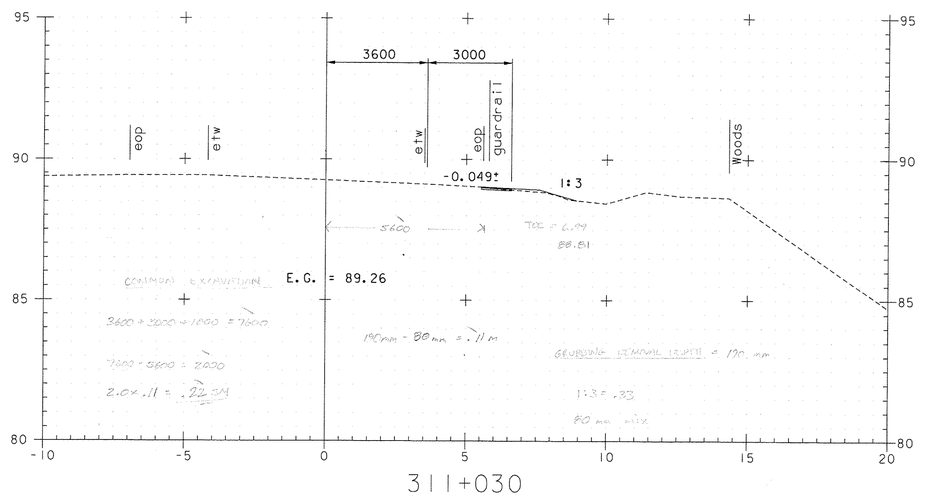
311+040



311+010

MTL
3/9/12

BEGIN VT 30 APPROACH
STA 311+010
MATCH EXISTING



311+030

CEF
3/9/12

0 2 4 6 8 10
SCALE 1:100

VT 30

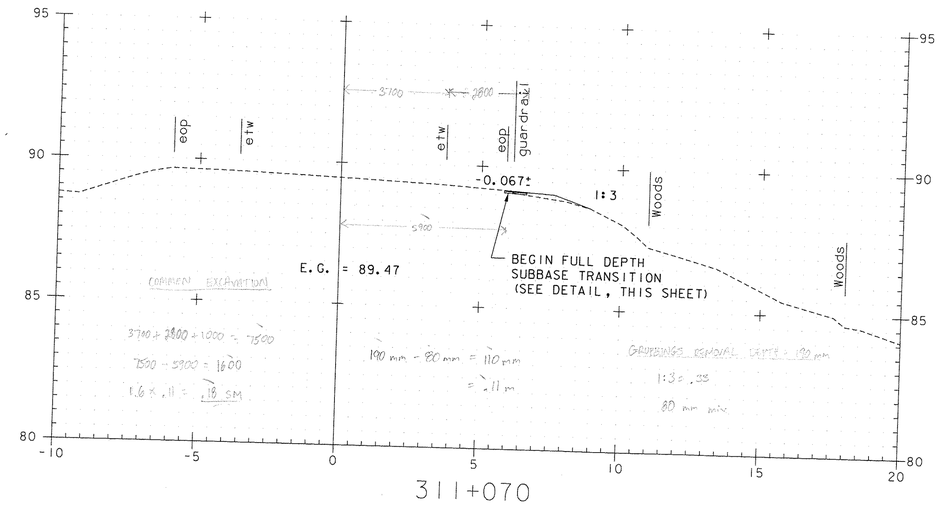
ROADWAY CROSS SECTION FROM STA	311+010	TO STA	311+040
PROJECT NAME	DUMMERSTON		
PROJECT NO.	BHO 1442 (28)		
SURVEYED BY	VAOT 8/98		
SHEET 36 OF 49			

VANASSE HANGEN BRUSTLIN, INC.

VHB NO. 51192

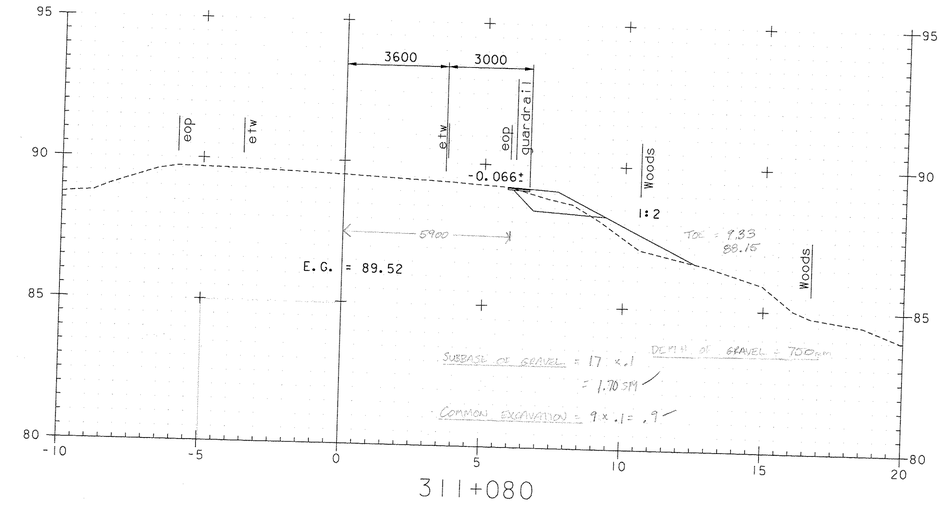
plot date: 4/3/2009

Metric

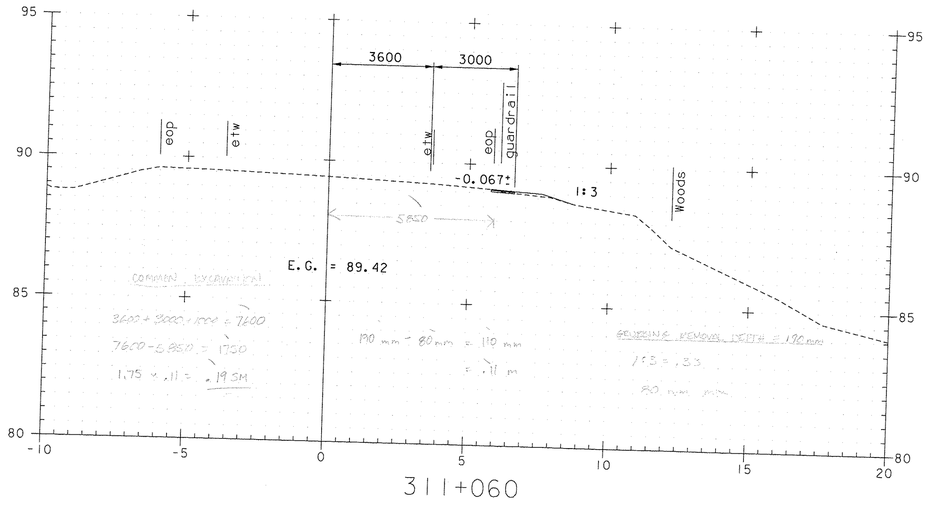


311+070

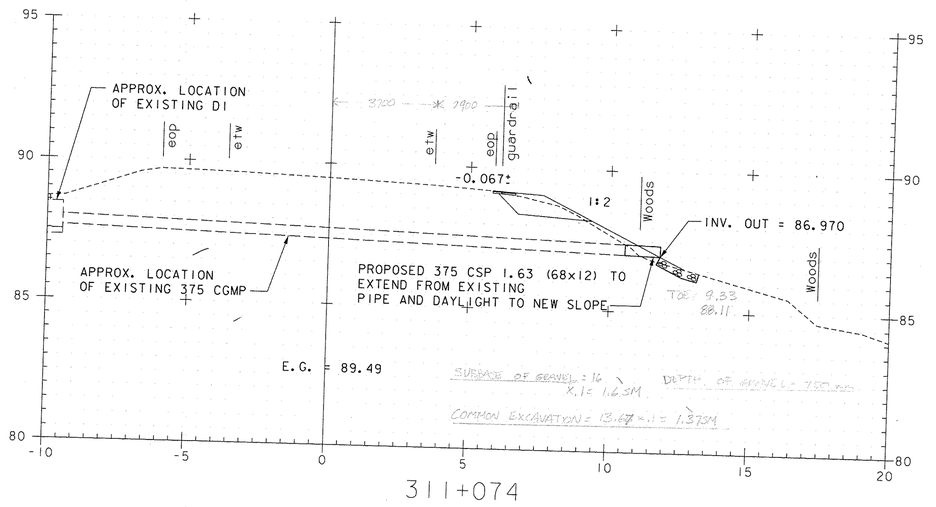
GRUBBING REMOVAL DEPTH FIELD MEASURED BY M. LEWIS



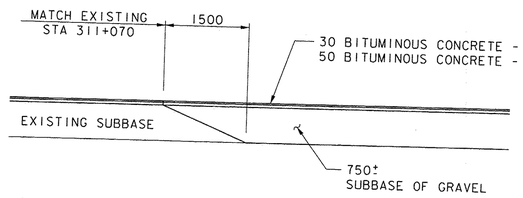
311+080



311+060



311+074



VT 30 MATERIAL TRANSITION DETAIL

NOT TO SCALE

CGE 3/9/12

MTL 3/8/12

0 2 4 6 8 10

SCALE 1:100

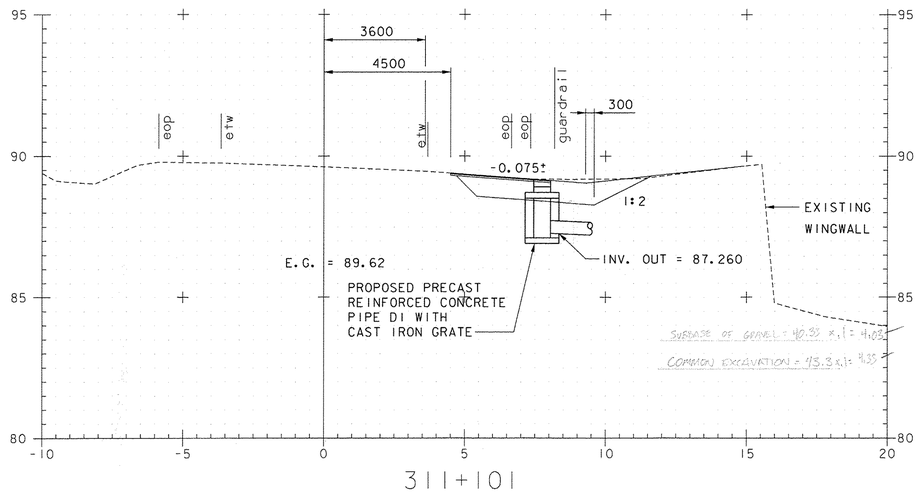
VT 30

ROADWAY CROSS SECTION FROM STA 311+060 TO STA 311+080
PROJECT NAME DUMMERSTON
PROJECT NO. BHO 1442 (28)
SURVEYED BY VAOT 8/98
SHEET 37 OF 49

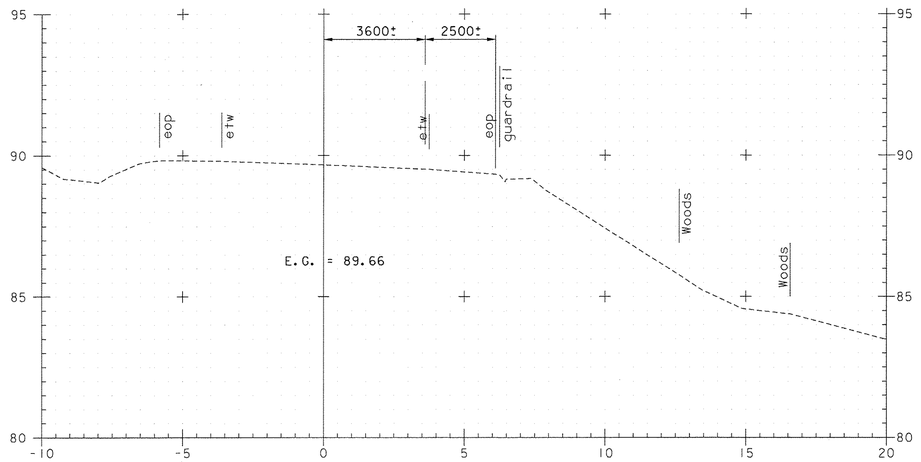
VANASSE HANGEN BRUSTLIN, INC.

VHB NO. 5192

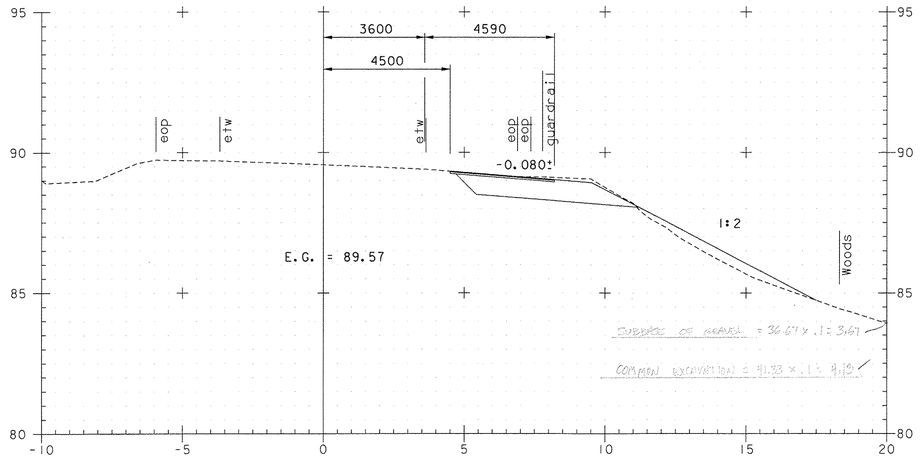
END TH 30 APPROACH
STA 311+110
MATCH EXISTING



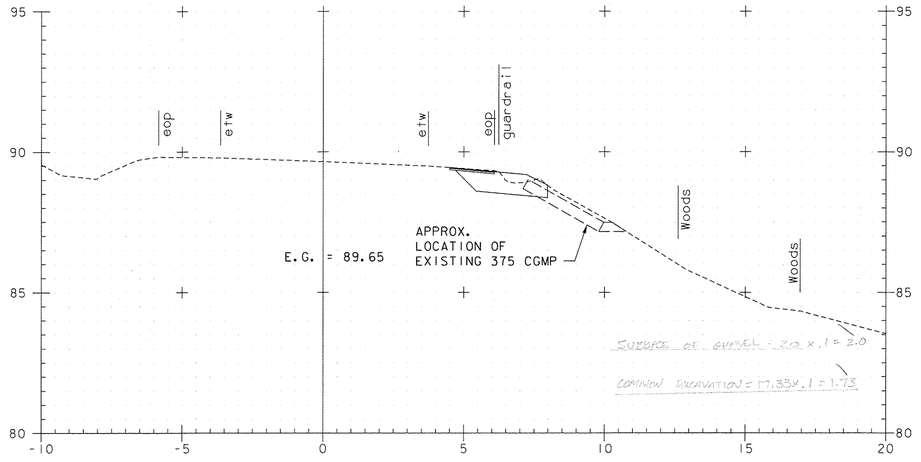
311+101



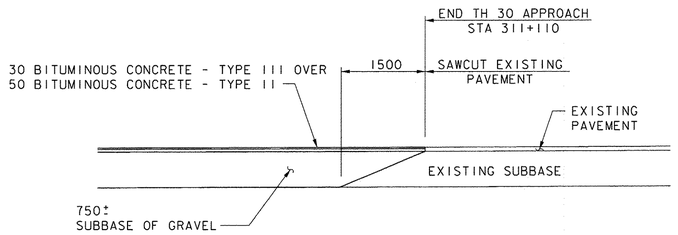
311+110



311+090



311+108



VT 30 MATERIAL TRANSITION DETAIL
NOT TO SCALE

MPL 3/9/12

CBF 3/9/12

0 2 4 6 8 10
SCALE 1:100

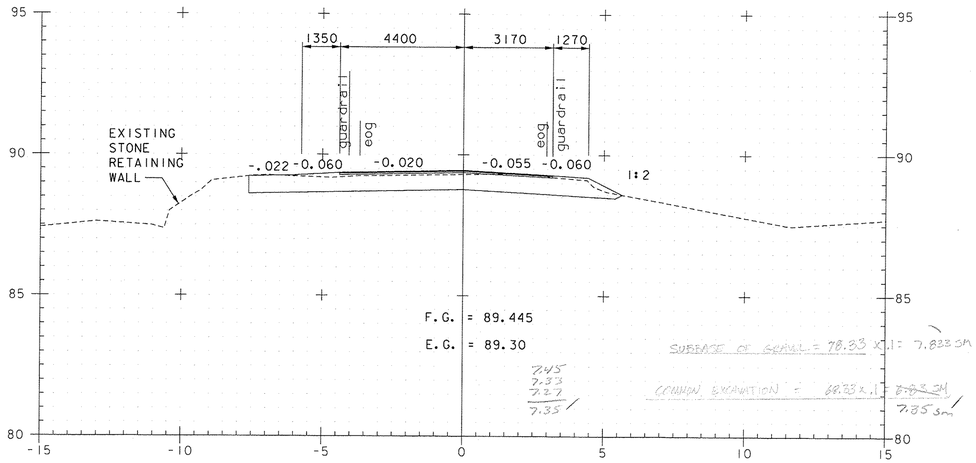
VT 30

VANASSE HANGEN BRUSTLIN, INC.

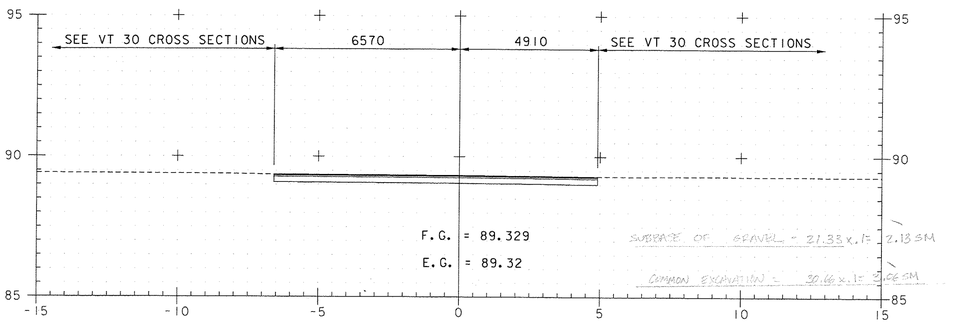
ROADWAY CROSS SECTION FROM STA 311+090 TO STA 311+110
PROJECT NAME DUMMERSTON
PROJECT NO. BHO 1442 (28)
SURVEYED BY VAOT 8/98
SHEET 38 OF 49

VHB NO. 51192 plot date: 4/3/2009

VAOT Metric

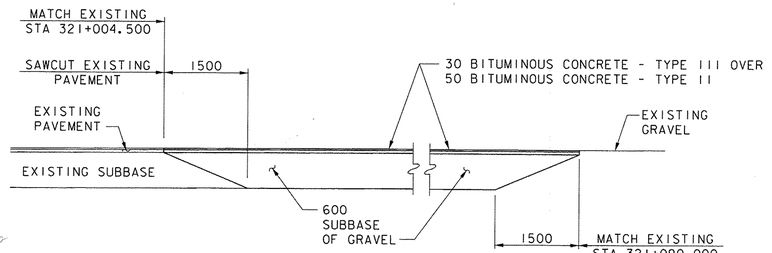


321+010

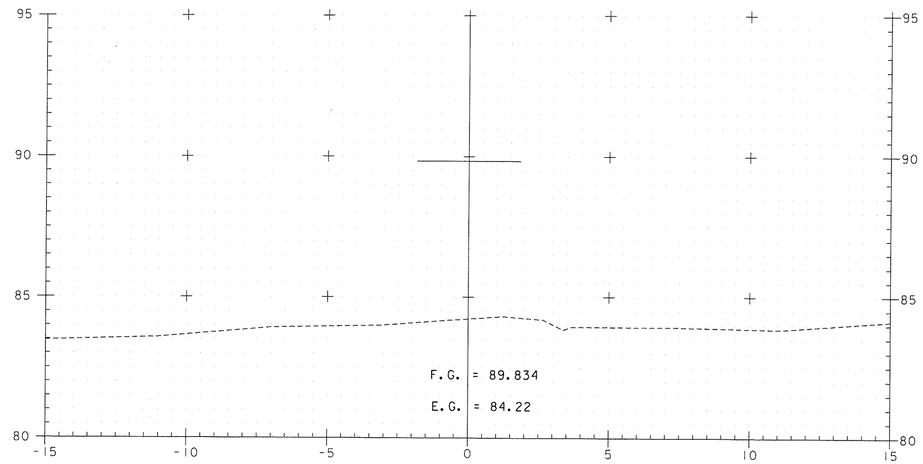


321+005

BEGIN TH 62 APPROACH
STA 321+004.500
MATCH EXISTING

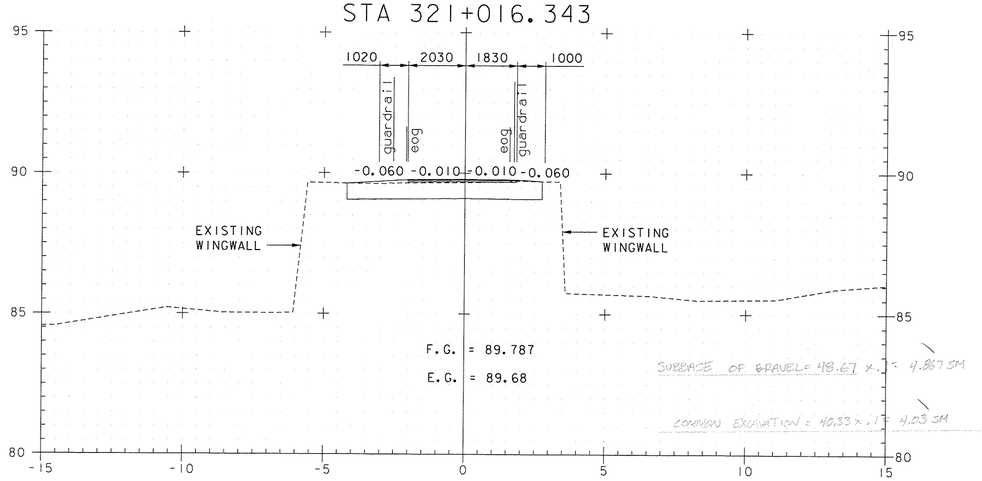


TH 62 MATERIAL TRANSITION DETAIL
NOT TO SCALE



321+020

BEGIN BRIDGE
STA 321+016.343



321+015

℄ BEARING REST #1 = 321+016.343
– 1482 (FROM SHEET #8 THESE PLANS)
321+014.861 (END SUBBASE OF GRAVEL)

0 2 4 6 8 10
SCALE 1:100

TH 62

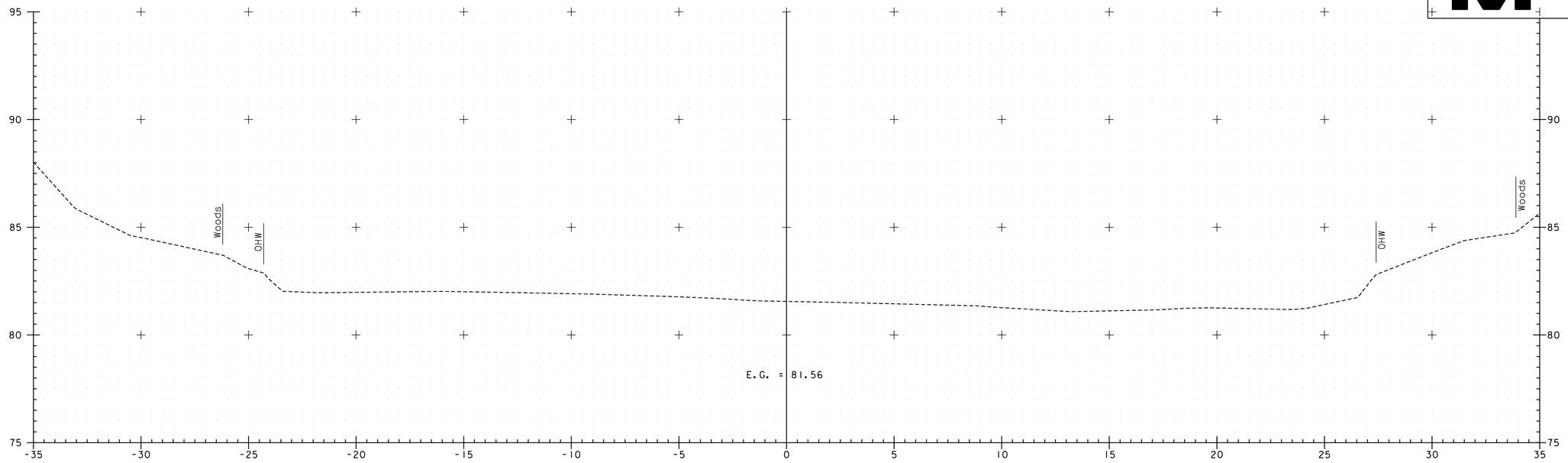
ROADWAY CROSS SECTION FROM STA 321+005 TO STA 321+020
PROJECT NAME DUMMERSTON
PROJECT NO. BHO 1442 (28)
SURVEYED BY VAOT 8/98
SHEET 39 OF 49

VANASSE HANGEN BRUSTLIN, INC.

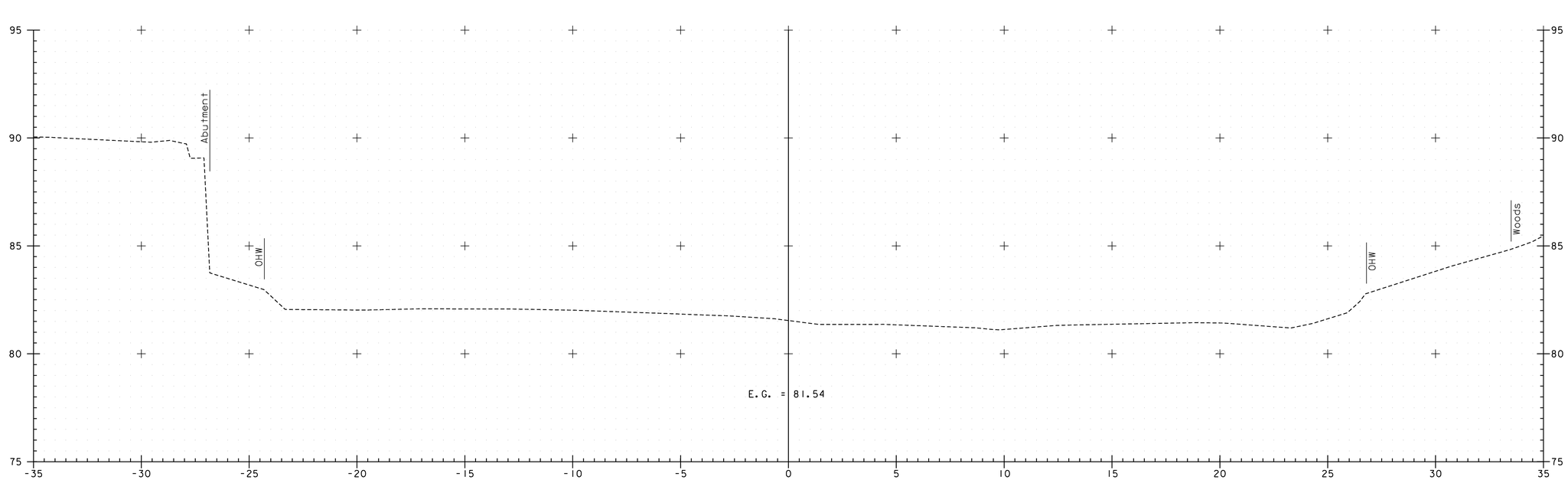
VHB NO. 51192

plot date: 4/14/2009

Metric



400+110



400+100

0 2 4 6 8 10
SCALE 1:100

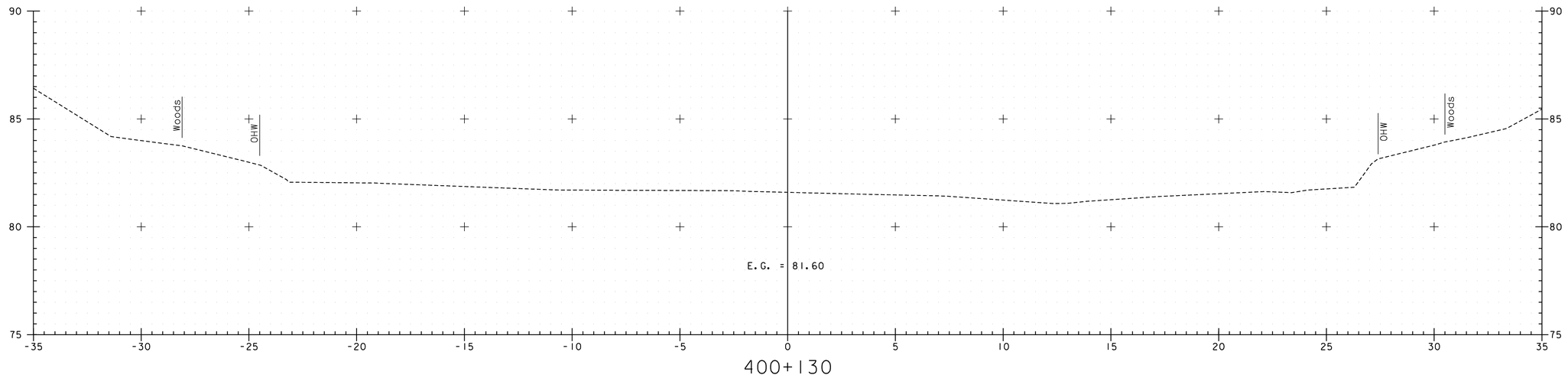
CHANNEL CROSS SECTION FROM STA 400+100 TO STA 400+110
PROJECT NAME DUMMERSTON
PROJECT NO. BHO 1442 (28)
SURVEYED BY VAOT 8/98
SHEET 45 OF 49

VANASSE HANGEN BRUSTLIN, INC.

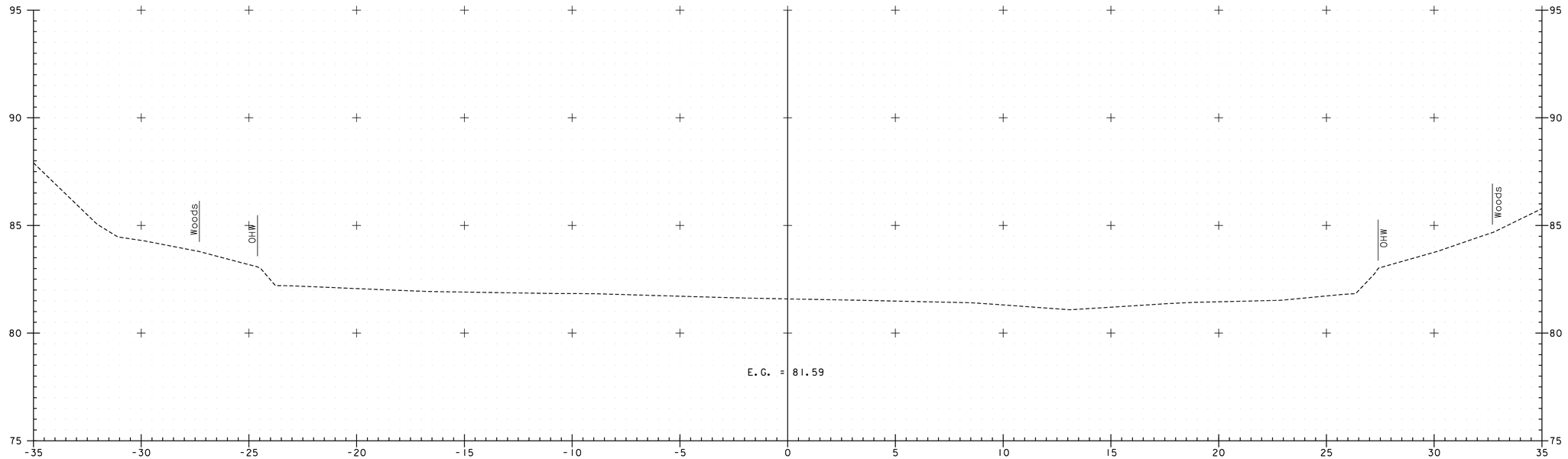
VHB NO. 5119Z

plot date: 4/3/2009

Metric



400+130



400+120

0 2 4 6 8 10

SCALE 1:100

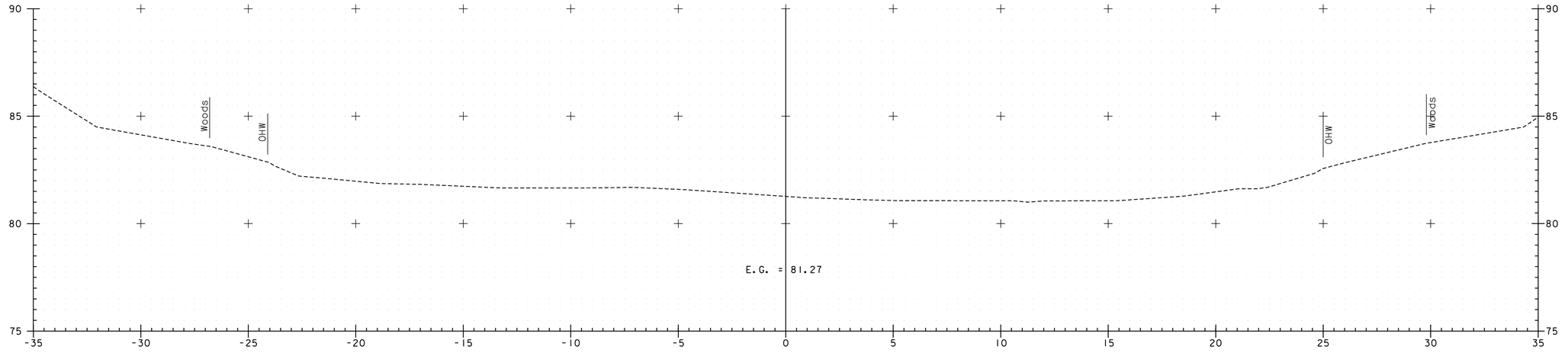
VANASSE HANGEN BRUSTLIN, INC.

CHANNEL CROSS SECTION FROM STA 400+120 TO STA 400+130
PROJECT NAME DUMMERSTON
PROJECT NO. BHO 1442 (28)
SURVEYED BY VAOT 8/98
SHEET 46 OF 49

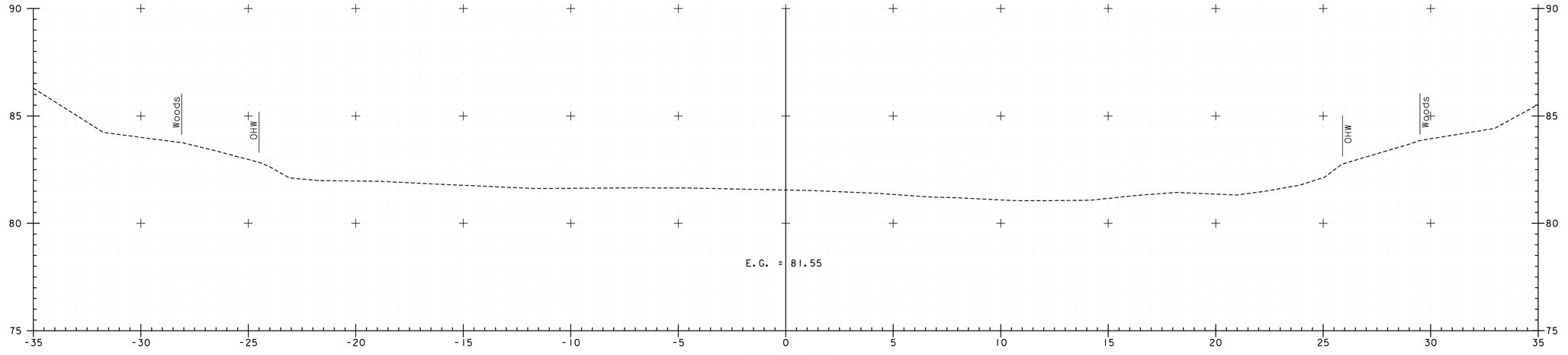
VHB NO. 5119Z

plot date: 4/3/2009

Metric



400+150



400+140

0 2 4 6 8 10
SCALE 1:100

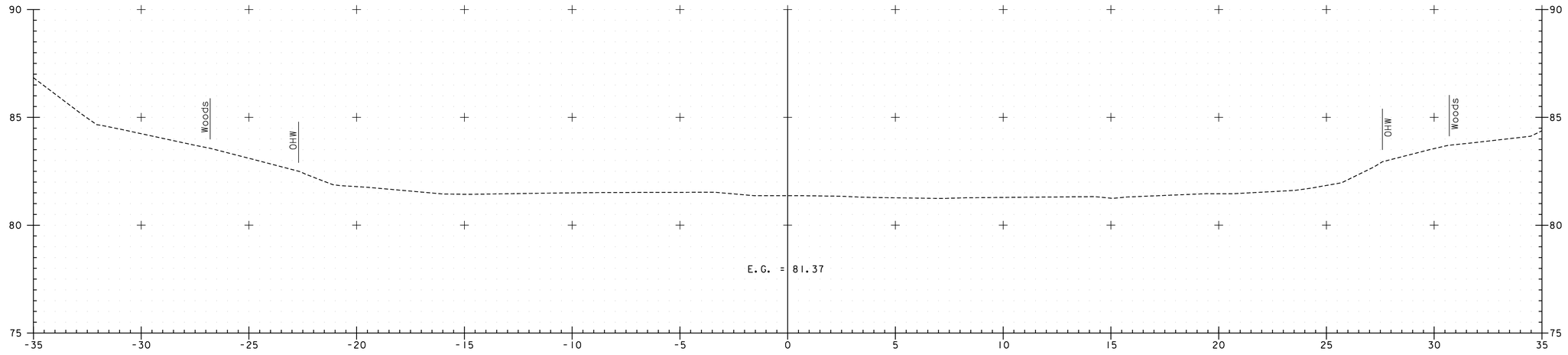
CHANNEL CROSS SECTION FROM STA 400+140 TO STA 400+150
PROJECT NAME DUMMERSTON
PROJECT NO. BHO 1442 (28)
SURVEYED BY VAOT 8/98
SHEET 47 OF 49

VANASSE HANGEN BRUSTLIN, INC.

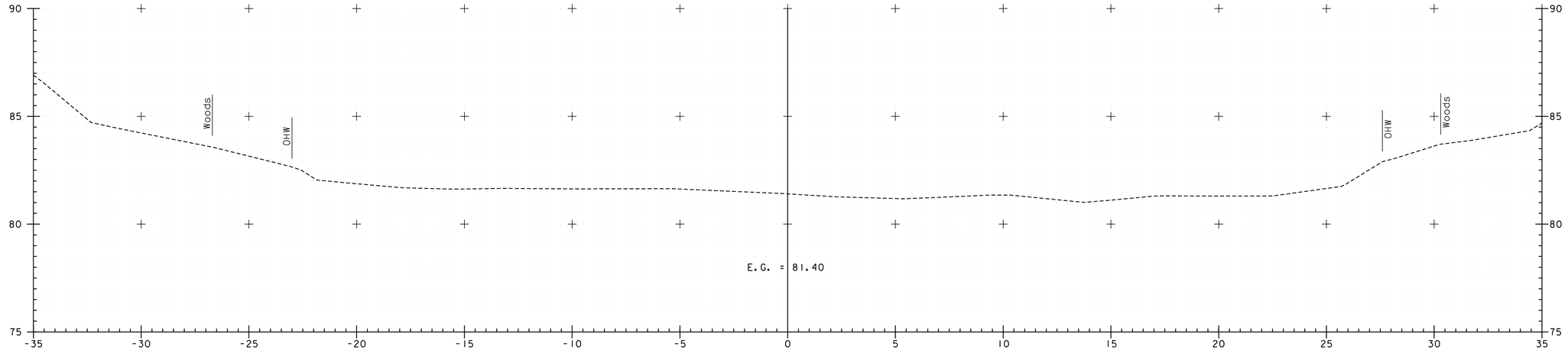
VHB NO. 51192

plot date: 4/3/2009

Metric



400+170



400+160

0 2 4 6 8 10
SCALE 1:100

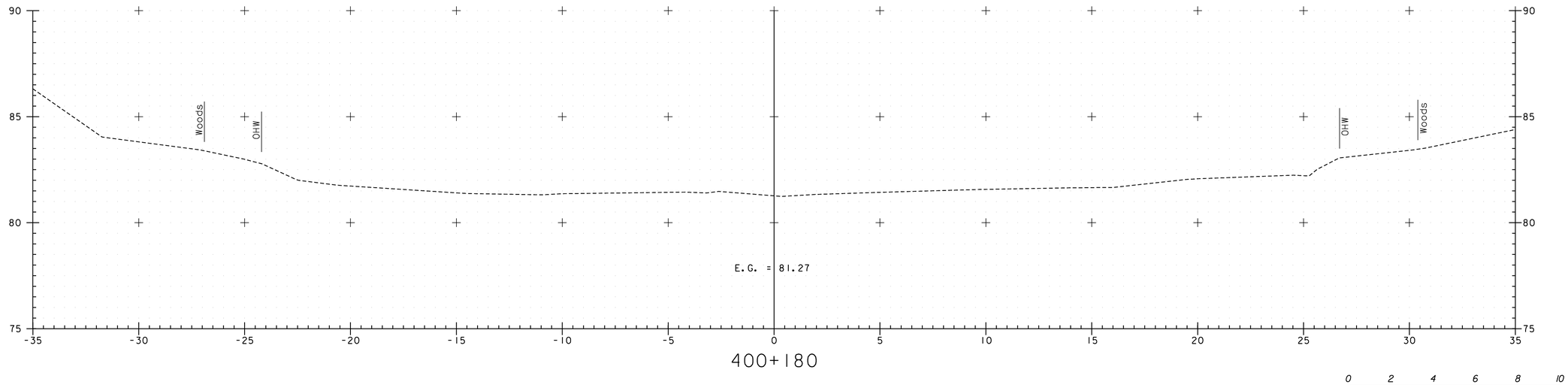
CHANNEL CROSS SECTION FROM STA 400+160 TO STA 400+170
PROJECT NAME DUMMERSTON
PROJECT NO. BHO 1442 (28)
SURVEYED BY VAOT 8/98
SHEET 48 OF 49

VANASSE HANGEN BRUSTLIN, INC.

VHB NO. 51192

plot date: 4/3/2009

VAOT Metric



400+180

0 2 4 6 8 10
SCALE 1:100

VANASSE HANGEN BRUSTLIN, INC.

CHANNEL CROSS SECTION FROM STA 400+180 TO STA 400+180
PROJECT NAME DUMMERSTON
PROJECT NO. BHO 1442 (28)
SURVEYED BY VAOT 8/98
SHEET 49 OF 49

VHB NO. 5119Z

plot date: 4/3/2009

VAOT Metric

BEGIN VT 30 APPROACH
STA 311+010.000
MATCH EXISTING

PI
STA 311+093.887 BK
STA 311+093.124 AHD

VT 30 P.O.C. STA 311+095.000 =
TH 62 STA 321+000.000

BEGIN TH 62 APPROACH
STA 321+004.500
MATCH EXISTING

END VT 30 APPROACH
STA 311+110.000
MATCH EXISTING

CURVE DATA
Δ = 13°18'57.9"
R = 725.000
T = 84.630
L = 168.497
E = 4.923
BANK = MATCH EXISTING

VT STATE PLANE GRID

Woods
Gravel
AERIAL E&T
IP
#158
#159
#162/160
Post
DI
POB Sta 311+000.000
311+000
311+020
311+040
311+060
311+080
311+100
311+120
311+140
311+160
311+180
N35°26'40.9"W
N22°07'43.0"W
TO BRATTLEBORO
TO WEST DUMMERSTON
VT 30
℄ VT 30
375 CGMP
15" CMP
"STATE OF VERMONT"
R=7.5 m
R=11 m
Basswood
Ash
Stone
TRAVERSE 3
PC Sta 311+009.257
PT Sta 311+177.754
BENCHMARK #2 EL. = 89.09
STAMPED ST ICKNEY 1988
DISK ON BRIDGE ABUTMENT

SPECIAL PROVISION
(BRIDGE RAILING, TRUSS)
STA 321+017.033 - STA 321+077.887, RT & LT

HD STEEL BEAM GUARDRAIL, GALVANIZED
STA 321+009.0, RT 4.0 - STA 321+016.0, RT 1.9
STA 321+009.4, LT 5.0 - STA 321+016.0, LT 1.9
STA 321+078.9, RT 1.9 - STA 321+087.7, RT 6.5
STA 321+078.9, LT 1.9 - STA 321+087.7, LT 6.5

STEEL BEAM GUARDRAIL, GALVANIZED
STA 311+084.0, RT 6.6 - STA 321+009.0, RT 4.0
STA 321+009.4, LT 5.0 - STA 311+110.0, RT 6.1

ANCHOR FOR
STEEL BEAM RAIL
STA 311+085, RT
STA 311+105, RT
STA 321+086.6, RT & LT

YIELDING MARKER POSTS
STA 311+074, RT
STA 311+102, RT

COLD PLANING, BITUMINOUS PAVEMENT
STA 311+010 - STA 311+110, RT

BEGIN PROJECT
BEGIN BRIDGE
STA 321+016.343
F.G. EL. 89.835

END PROJECT
END BRIDGE
STA 321+078.577
F.G. EL. 89.820

END TH 62 APPROACH
STA 321+090.000
MATCH EXISTING

DRAINAGE NOTES

① STA 311+074, LT - RT
RETAIN EXISTING 375x21m CGMP
STA 311+074, RT 10.7 - RT 12.7
INSTALL NEW 2m 375 CSP 1.63 (68x12)
(EXTEND EXISTING CULVERT)
INSTALL STONE FILL, TYPE I
750x1500x300 DEEP AT OUTLET

② STA 311+102, RT 8.1
INSTALL PRECAST REINFORCED CONCRETE
PIPE DI WITH CAST IRON GRATE (TYPE E)
RIM EL. 89.136
INV. OUT = 87.260
STA 311+102, RT 8.1 - STA 311+105, RT 11.2
INSTALL NEW 5m 450 CSP 1.63 (68x12) OR
450 RCP CLASS III OR 450 CPEP
INV. OUT = 86.300
INSTALL STONE FILL, TYPE I
900x1800x300 DEEP AT OUTLET

③ STA 311+108, RT 7.1 - 9.8
REMOVE EXISTING 375x4m CGMP
(PAY ITEM 204.20)

WEST RIVER

TH 62 STA 321+050.000 =
CHANNEL STA 400+095.901
Δ = 86°00'00" RT

400+000
400+020
400+040
400+060
400+080
400+100
400+120
400+140
400+160
400+180
S26°29'21.5"E
S31°59'01.0"E
S44°12'17.2"E
CHANNEL ALIGNMENT
Sta 400+025.000 PI
Sta 400+000.000 POB
Sta 400+135.000 PI
Sta 400+180.000 POE

℄ TH 62
TH 62
321+040
321+060
321+080
321+100
N62°00'59.0"E
Sta 321+100.000
TRAVERSE 4
TH 40 (QUARRY ROAD)
TH 62 (RICE FARM ROAD)
EXISTING R.O.W.
EXISTING BRIDGE DATA
QUADRUPLE INTERSECTION
WARREN THROUGH TRUSS
DECK - OPEN STEEL GRID
DRY STONE ABUTMENTS
BUILT CIRCA 1892
CLEAR SPAN 59.63 m
WIDTH 3660 CLEAR

Woods
Gravel
Ledge
Stone
Pine
Foundation
Guy
Comb
Ash
Oak
Hedge
Wood Post
Apple
IP
RL
AERIAL E&T
#9/74/31/5
mb
450 CMP

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

0 10 20
SCALE 1:250

STATE OF VERMONT
AGENCY OF TRANSPORTATION

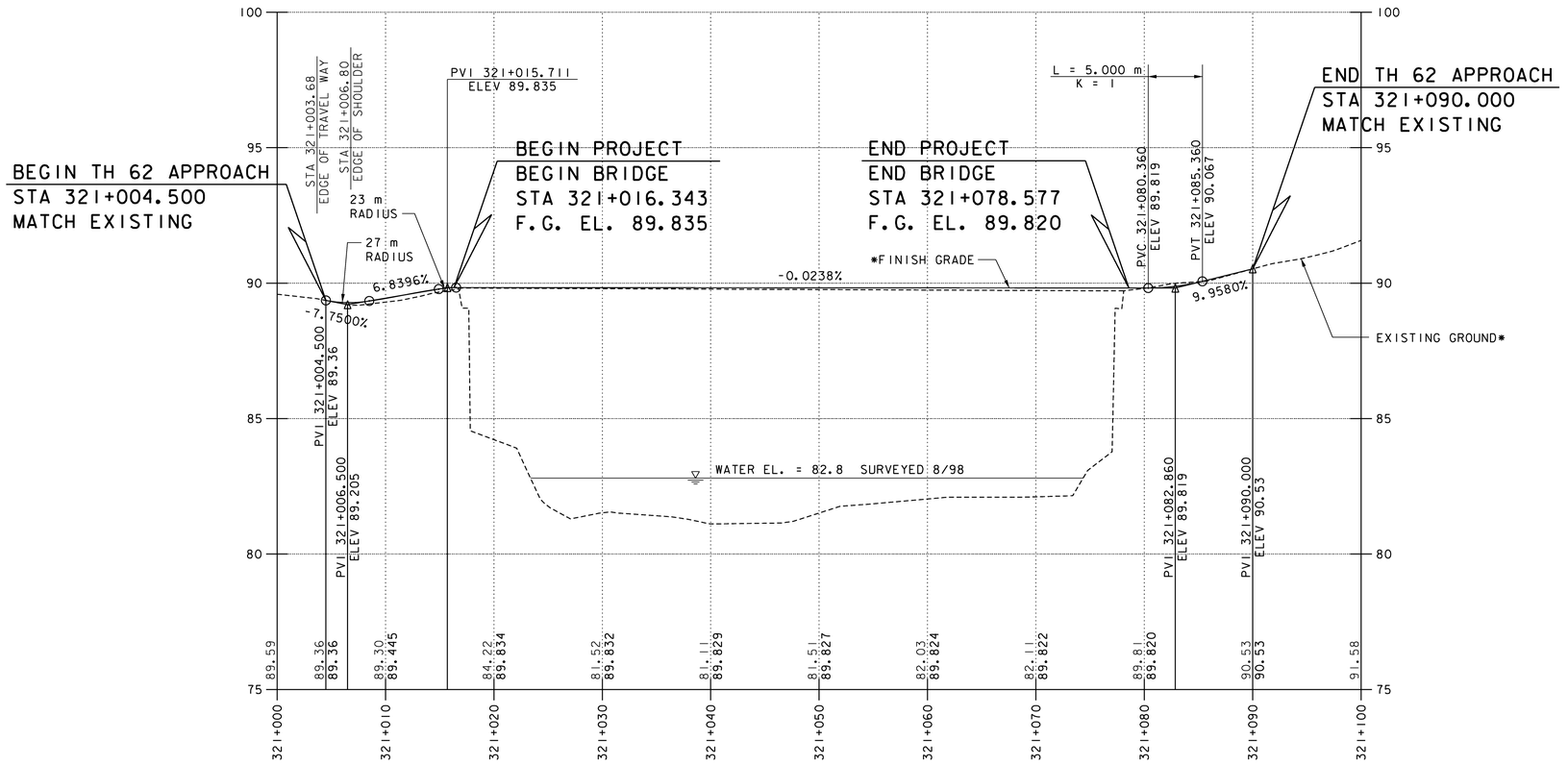
Town Of DUMMERSTON	Bridge No. 37
Highway No. TH 62	Log Sta. / Surv. Sta.
TH 62 OVER WEST RIVER	
ROADWAY PLAN	
Designed By J.C. WEALE	Drawn By C.L. CILLEY
Checked By S.M. HODGDON Date 4/09	Bridge Design Supervisor S.M. HODGDON Date 4/09
PROJECT DUMMERSTON	PROJECT NO. BHO 1442 (28)
I.G.C. Info.	
Bridge Sheet No. ZJ080PN1	Sheet 5 of 49

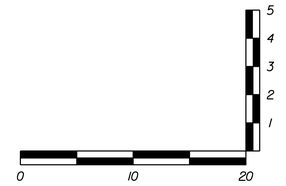
VANASSE HANGEN BRUSTLIN, INC.

VHB NO. 51192

plot date: 4/3/2009

TH 62





* ELEVATIONS SHOWN TO THREE DECIMAL PLACES ARE FINISH GRADE ALONG ℄ TH 62. ELEVATIONS SHOWN TO TWO DECIMAL PLACES ARE EXISTING GROUND ALONG ℄ TH 62.

DATUM
VERTICAL NAVD 88
HORIZONTAL NAD 83 (92)

VANASSE HANGEN BRUSTLIN, INC.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of DUMMERSTON	Bridge No. 37
Highway No. TH 62	Log Sta.
	Surv. Sta.

TH 62 OVER WEST RIVER

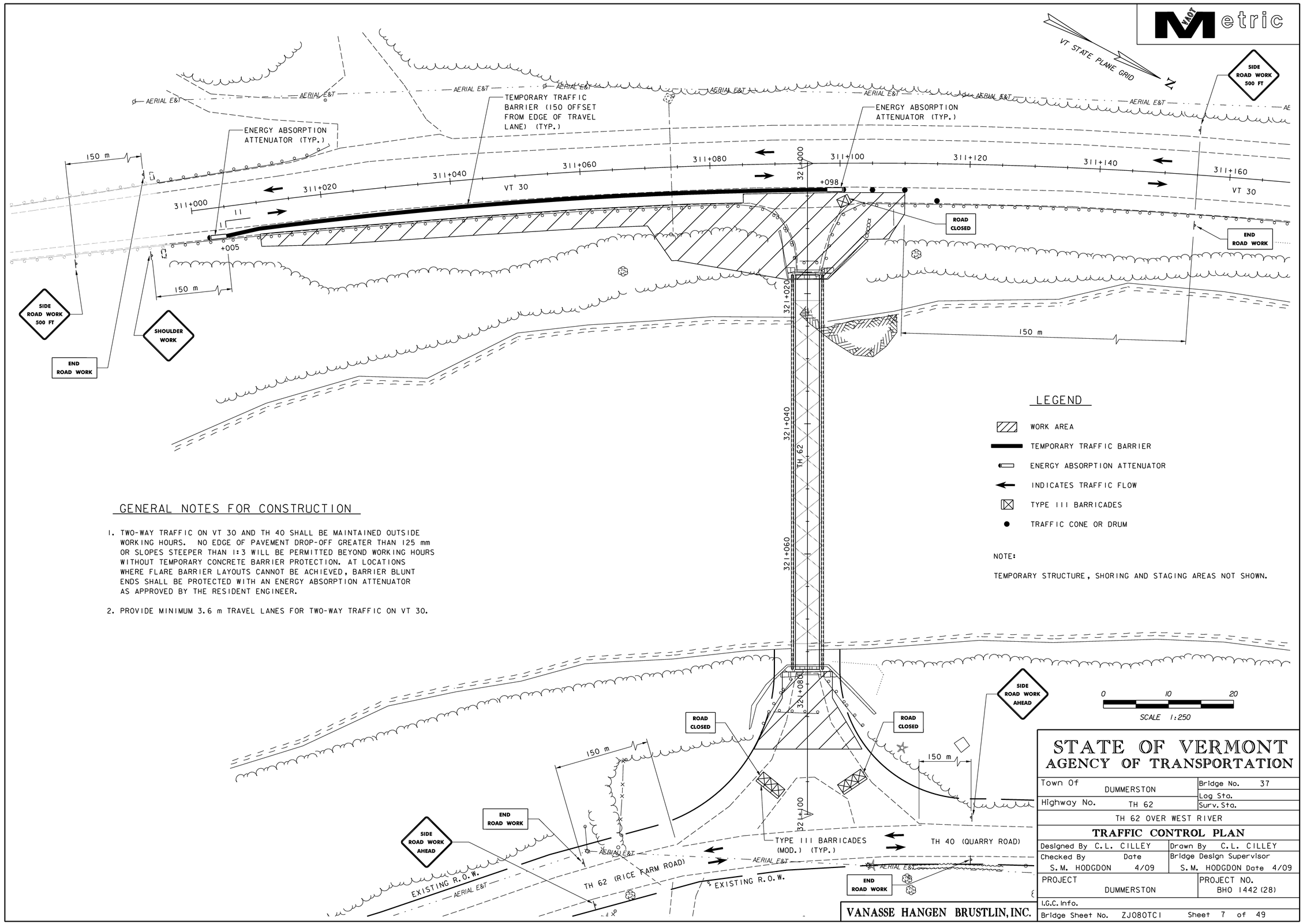
TH 62 PROFILE

Designed By C.L. CILLEY	Drawn By C.L. CILLEY
Checked By S.M. HODGDON Date 4/09	Bridge Design Supervisor S.M. HODGDON Date 4/09
PROJECT DUMMERSTON	PROJECT NO. BHO 1442(28)
I.G.C. Info.	
Bridge Sheet No. ZJ080PR1	Sheet 6 of 49

VHB NO. 51192

plot date: 4/3/2009

VTrans Metric



LEGEND

- WORK AREA
- TEMPORARY TRAFFIC BARRIER
- ENERGY ABSORPTION ATTENUATOR
- INDICATES TRAFFIC FLOW
- TYPE III BARRICADES
- TRAFFIC CONE OR DRUM

NOTE:

TEMPORARY STRUCTURE, SHORING AND STAGING AREAS NOT SHOWN.

GENERAL NOTES FOR CONSTRUCTION

1. TWO-WAY TRAFFIC ON VT 30 AND TH 40 SHALL BE MAINTAINED OUTSIDE WORKING HOURS. NO EDGE OF PAVEMENT DROP-OFF GREATER THAN 125 mm OR SLOPES STEEPER THAN 1:3 WILL BE PERMITTED BEYOND WORKING HOURS WITHOUT TEMPORARY CONCRETE BARRIER PROTECTION. AT LOCATIONS WHERE FLARE BARRIER LAYOUTS CANNOT BE ACHIEVED, BARRIER BLUNT ENDS SHALL BE PROTECTED WITH AN ENERGY ABSORPTION ATTENUATOR AS APPROVED BY THE RESIDENT ENGINEER.

2. PROVIDE MINIMUM 3.6 m TRAVEL LANES FOR TWO-WAY TRAFFIC ON VT 30.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of DUMMERSTON	Bridge No. 37
Highway No. TH 62	Log Sta. / Surv. Sta.
TH 62 OVER WEST RIVER	

TRAFFIC CONTROL PLAN

Designed By C.L. CILLEY	Drawn By C.L. CILLEY
Checked By S.M. HODGDON Date 4/09	Bridge Design Supervisor S.M. HODGDON Date 4/09
PROJECT DUMMERSTON	PROJECT NO. BHO 1442(28)
I.G.C. Info.	
Bridge Sheet No. ZJ080TC1	Sheet 7 of 49

VANASSE HANGEN BRUSTLIN, INC.

VHB NO. 5119Z

plot date: 4/3/2009

Metric

VT 30

311+100

311+080

321+000

321+020

321+040

321+060

321+080

400+080

400+100

N

VT STATE PLANE GRID

WEST RIVER

Ledge

Gravel

Stone

Gravel

875 Coop

1:2

1:6

WW #1

R = 11 m

BEGIN PROJECT
BEGIN BRIDGE
STA 321+016.343
F.G. EL. 89.835

TH 62 STA 321+050.000 =
CHANNEL STA 400+095.901
Δ = 86° 00' 00" RT

℄ BRG. ABUT. 1
STA 321+017.215
F.G. EL. 89.835

WW #2

1:1.9

R = 7.5 m

BEGIN TH 62 APPROACH
STA 321+004.500
MATCH EXISTING

VT 30 P.O.C. STA 311+095.000 =
TH 62 STA 321+000.000

1:2

86° 00' 00"

END TH 62 APPROACH
STA 321+090.000
MATCH EXISTING

R = 5 m

END PROJECT
END BRIDGE
STA 321+078.577
F.G. EL. 89.820

WW #3

1

1.7

90° 00' 00"
(TYP.)

℄ BRG. ABUT. B
STA 321+077.705
F.G. EL. 89.821

1.7

1

WW #4

R = 5 m

PLAN
SCALE: 1:125

℄ BRIDGE RAIL POST

60 854
(SEE SHEET 22 FOR BRIDGE RAIL POST LAYOUT)
(PAY LIMIT SPECIAL PROVISION (BRIDGE RAILING, TRUSS))

℄ BRG. ABUT. 1
(EXP.)

60 490

℄ BRIDGE RAIL POST

℄ BRG. ABUT. B
(FIXED)

95

90

85

80

HD STEEL BEAM
GUARDRAIL,
GALVANIZED

HD STEEL BEAM
GUARDRAIL,
GALVANIZED

Q50 = 84.4

ELEVATION
SCALE: 1:125

0 5 10 15

SCALE IN METERS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of DUMMERSTON	Bridge No. 37
	Log Sta.
Highway No. TH 62	Surv. Sta.

TH 62 OVER WEST RIVER

PLAN & ELEVATION

Designed By T.S. BRYANT	Drawn By C.L. CILLEY
Checked By S.M. HODGDON Date 4/09	Bridge Design Supervisor S.M. HODGDON Date 4/09
PROJECT DUMMERSTON	PROJECT NO. BHO 1442(28)
I.G.C. Info.	
Bridge Sheet No. ZJ080GPE	Sheet 8 of 49

VANASSE HANGEN BRUSTLIN, INC.

VHB NO. 5192

plot date: 4/3/2009

EROSION CONTROL NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE REHABILITATION OF THE HISTORIC TRUSS BRIDGE (NO. 37) CARRYING TOWN HIGHWAY 62 OVER THE WEST RIVER IN THE TOWN OF DUMMERSTON. THE BRIDGE IS CURRENTLY CLOSED TO TRAFFIC. THE BRIDGE IS APPROXIMATELY 63 METERS LONG AND 4.7 METERS WIDE. THE TOTAL LENGTH OF THE APPROACH WORK IS APPROXIMATELY 112 METERS. IT ALSO INCLUDES WIDENING THE NORTHBOUND APPROACH SHOULDER OF VERMONT ROUTE 30, REPLACING GUARDRAIL AND REPLACING AN EXISTING CULVERT ON VERMONT ROUTE 30 WITH A DROP INLET AND A NEW PIPE OUTLET.

DURING THIS CONTRACT, IT IS ANTICIPATED THAT A TEMPORARY WORK PLATFORM WILL BE CONSTRUCTED ALONG SIDE AND UPSTREAM OF THE EXISTING TRUSS BRIDGE. TEMPORARY SHORING WILL BE REQUIRED AT THE EXISTING ABUTMENTS AND TEMPORARY SHORING WILL BE REQUIRED FOR THE WORK PLATFORM IN THE RIVER. THE CONTRACTOR SHALL PREVENT ANY DEBRIS FROM FALLING INTO THE WEST RIVER FROM THE EXISTING TRUSS BRIDGE OR THE TEMPORARY WORK PLATFORM. THE EXISTING ABUTMENT BACKWALLS WILL BE RECONSTRUCTED AND PORTIONS OF THE EXISTING DRY MASONRY WILL BE REPAIRED AS NOTED IN THE PLANS. THE APPROACH SHOULDER ON VERMONT ROUTE 30 WILL BE WIDENED AND TOWN HIGHWAY 62 WILL BE REGRADED.

THE SITE IS LOCATED AT LATITUDE 42 DEGREES 54.9 MINUTES, LONGITUDE 72 DEGREES 36.8 MINUTES.

AREA OF DISTURBANCE WITHIN THE PROJECT AREA (INCLUDING WASTE, BORROW, SHORING AND STAGING AREAS): 610 SM (0.061 HECTARES) (0.15 ACRES).
NO WETLANDS HAVE BEEN IDENTIFIED AT THE PROJECT SITE. NO OTHER SENSITIVE RESOURCE AREAS HAVE BEEN IDENTIFIED AT THE PROJECT (EXCEPT THE HISTORIC TRUSS BRIDGE ITSELF).

1.2 SITE INVENTORY

1.2.1 OFFSITE DRAINAGE CHARACTERISTICS (UP AND DOWN GRADIENT)

THE LAND SURROUNDING THE PROJECT SITE CONSISTS OF A WELL ESTABLISHED FOREST WITH RELATIVELY STEEP SLOPES. OFFSITE DRAINAGE FROM THE EAST IS COLLECTED ALONG THE EAST EDGE OF A NORTH-SOUTH GRAVEL ROAD (TH 62 & TH 40) AND CONVEYED INTO A CULVERT AND A WELL-DEFINED, DEEP DITCH THAT DISCHARGES TO THE RIVER VIA OVERLAND FLOW THROUGH THE WOODS. OFFSITE DRAINAGE ALONG THE WEST EDGE OF THE NORTH-SOUTH GRAVEL ROAD GENERALLY DRAINS TO THE RIVER VIA OVERLAND FLOW THROUGH THE WOODS. ON PAVED VERMONT ROUTE 30, THE ROADWAY DRAINAGE IS COLLECTED AND CONVEYED ALONG THE NORTHBOUND CURB AND DISCHARGES THRU A CULVERT TO THE RIVER VIA OVERLAND FLOW. THE SOUTHBOUND SIDE OF PAVED VERMONT ROUTE 30 COLLECTS OFFSITE DRAINAGE IN GRASS LINED SWALES, CONVEYS IT INTO A CULVERT AND DISCHARGES IT TO THE RIVER VIA OVERLAND FLOW.

1.2.2 DRAINAGE, WATERWAYS, BODIES OF WATER, AND PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES

THE WEST RIVER IS THE ONLY WATER SOURCE ON THE PROJECT SITE. THE DRAINAGE BASIN FOR THIS RIVER IS GENERALLY CHARACTERIZED BY ROCKY, STEEP SLOPES WITH A WIDE FLOODPLAIN. THE TRIBUTARY DRAINAGE AREA AT THE BRIDGE IS APPROXIMATELY 104,960 HECTARES (259,354 ACRES). DURING FLOOD EVENTS, THE RIVER RISES RAPIDLY AND THE FLOW IS MODERATE. THE CHANNEL BED MATERIAL CONSISTS OF MEDIUM-SIZED COBBLES WITH FINE SAND AND THE BANKS ARE ROCKY AND RELATIVELY RESISTANT TO EROSION. PREVIOUSLY DISTURBED SOILS ARE LOCATED ALONG THE EXISTING ROADWAYS AND ABUTMENTS AT BOTH SIDES OF THE RIVER AT THE TOP OF BANK. THERE ARE SEVERAL DROP INLETS AND CULVERTS ONSITE DRAINING FROM THE ROADWAY TO THE RIVER.

1.2.3 TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES

THE TOPOGRAPHY OF THE PROJECT IS GENERALLY CHARACTERIZED BY THE WEST RIVER AND ITS BANKS. THE RIVER IS WIDE WITH RELATIVELY STEEP BANKS THAT ARE WELL VEGETATED AND WOODED.

VERMONT ROUTE 30 IS A NORTH-SOUTH PAVED ROAD THAT RUNS PARALLEL TO THE WEST RIVER AT THE WEST END OF THE BRIDGE. IT IS RELATIVELY FLAT AND TRAFFIC IS MODERATE WITH A POSTED SPEED OF 80 KM/H (50 MPH).

TH 62 AND TH 40 ARE SINGLE LANE GRAVEL ROADS THAT RUN PARALLEL TO THE WEST RIVER. TH 62 BEGINS AT THE WEST END OF THE BRIDGE, AT VERMONT ROUTE 30, WHERE IT CROSSES THE RIVER AND THEN TURNS AND RUNS SOUTH. THERE IS A "Y" INTERSECTION AT THE EAST END OF THE BRIDGE WHERE TH 40 BEGINS AND THEN RUNS NORTH. SEVERAL HOUSES WITH GRAVEL DRIVES ARE IN THE VICINITY OF THIS INTERSECTION.

EXISTING OVERHEAD UTILITIES RUN ALONG THE WEST SIDE OF VERMONT ROUTE 30. THE SOUTH APPROACH OF TOWN HIGHWAY 62 HAS UTILITIES ON THE WEST SIDE. AT THE "Y" INTERSECTION, EAST OF THE BRIDGE, THE UTILITIES CROSS THE ROAD AND CONTINUE NORTH ON THE EAST SIDE OF TOWN HIGHWAY 40.

1.2.4 VEGETATION

IN GENERAL, THE WEST BANK OF THE RIVER CONSISTS OF SMALL GRASS AREAS, ASSORTED BRUSH AND A NARROW STRIP OF MIXED HARDWOOD AND SOFTWOOD TREES. THE EAST BANK OF THE RIVER CONSISTS OF A WIDE STRIP OF WOODS THAT CONSIST OF A DENSE MIX OF HARDWOOD AND SOFTWOOD TREES WITH ASSORTED BRUSH. THE RESIDENCES EAST OF THE PROJECT HAVE LANDSCAPED AREAS WITH LAWN AND ASSORTED TREES.

ALL TREES AND AREAS OF BRUSH WILL BE REMOVED WITHIN THE EXISTING, NARROW RIGHT-OF-WAY OF TH 62 AND THE WORK PLATFORM AREA WITHIN THE PROJECT LIMITS. ALL AREAS OF DISTURBED VEGETATION WILL BE REESTABLISHED WITH STANDARD SEED AND MULCH.

1.2.5 SOILS

ALL SOIL DATA WAS OBTAINED FROM MAPPING CREATED BY THE NATURAL RESOURCES CONSERVATION SERVICE FOR THE COUNTY OF WINDHAM, VERMONT. "WINDSOR" SOIL IS LOCATED ON THE WEST SIDE OF THE BRIDGE. THE SOIL IS LOAMY FINE SAND WITH GENERALLY 2% TO 8% SLOPES. THE SOIL IS NOT CONSIDERED HIGHLY ERODIBLE (K=0.17). "QUONSET" AND "WARWICK" SOILS ARE LOCATED ON THE EAST SIDE OF THE BRIDGE. THESE SOILS ARE FINE SANDY LOAM WITH GENERALLY 2% TO 8% SLOPES. THESE SOILS ARE NOT CONSIDERED HIGHLY ERODIBLE (K=0.20).

NOTE: K-VALUES GENERALLY INDICATE THE FOLLOWING: 0.0 - 0.23 = LOW EROSION POTENTIAL;
0.24 - 0.36 = MODERATE EROSION POTENTIAL; 0.37 AND HIGHER = HIGH EROSION POTENTIAL.

1.2.6 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: NO
HISTORICAL AREAS: EXISTING TRUSS BRIDGE ONLY
ARCHEOLOGICAL AREAS: NO
PRIME AGRICULTURAL LAND: NO
THREATENED AND ENDANGERED SPECIES: NO
WATER RESOURCE: WEST RIVER (REFER TO PROJECT PERMIT CONDITIONS FOR IN-STREAM WORK RESTRICTIONS)
WETLANDS: NO

1.3 RISK EVALUATION

THIS PROJECT DOES NOT FALL UNDER THE JURISDICTION OF CONSTRUCTION GENERAL PERMIT 3-9020 BASED ON THE PROJECT IMPACT AREA. SHOULD CHANGES PRIOR TO OR DURING CONSTRUCTION RESULT IN ONE OR MORE ACRES OF EARTH DISTURBANCE (INCLUDING ANY WASTE, BORROW, SHORING AND STAGING AREAS) OR SHOULD THE PROJECT BECOME PART OF A LARGER PLAN OF DEVELOPMENT, THEN THE SELECTED CONTRACTOR WILL BE RESPONSIBLE FOR ADDITIONAL PERMITTING WITH VANR VIA FILING OF THE APPROPRIATE NOTICE OF INTENT UNDER THE CONSTRUCTION GENERAL PERMIT PROCESS.

1.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION CONTROL PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE WORK OUTLINED IN THIS NARRATIVE CONSISTS OF APPLYING MEASURES THROUGHOUT THE LIFE OF THE PROJECT MINIMIZING SEDIMENT TRANSPORT TO THE RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLUTION PREVENTION CONTROLS.

PREVENTING INITIAL SOIL EROSION IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. MAINTAINING VEGETATED BUFFERS ALONG STREAM BANKS, WETLANDS OR OTHER SENSITIVE AREAS IS A CRUCIAL EROSION AND SEDIMENT CONTROL MEASURE THAT SHOULD BE ESTABLISHED WHEREVER POSSIBLE.

ALL MEASURES SHALL BE REGULARLY MAINTAINED AND SHALL BE CHECKED FOR SEDIMENT BUILD-UP. SEDIMENT SHALL BE DISPOSED AT AN APPROVED SITE WHERE IT WILL NOT BE SUBJECT TO EROSION.

REFER TO THE LOW RISK SITE HANDBOOK AND APPROPRIATE DETAIL SHEETS FOR EACH PRACTICE REQUIRED ON THE PROJECT TO INCLUDE BUT NOT LIMITED TO THE FOLLOWING:

1.4.1 MARK SITE BOUNDARIES

PROJECT DEMARCATION FENCE, DENOTED -PDF- ON THE PLANS, IS USED TO DELINEATE THE LIMITS THE CONTRACTOR CAN ACCESS WITH CONSTRUCTION EQUIPMENT. THIS MEASURE LIMITS THE AREA THAT CAN BE DISTURBED AND EXPOSED TO EROSION.

1.4.2 LIMIT DISTURBANCE AREA

EMPLOY TEMPORARY STABILIZATION PRACTICES IN INCREMENTAL STAGES (PHASING) AS CONSTRUCTION PROCEEDS. ADDITIONAL MEASURES MAY BE NEEDED DUE TO THE PHASING OF THE PROJECT AND AS DIRECTED BY THE ENGINEER.

INSTALL TURBIDITY CURTAIN WITH ADEQUATE ANCHORAGE AND GUIDE DEVICES TO ACCOMMODATE RIVER FLOWS FOR ALL CONSTRUCTION IN OR ADJACENT TO THE RIVER.

1.4.3 STABILIZE CONSTRUCTION ENTRANCE/EXIT

STABILIZED CONSTRUCTION ENTRANCES AND EXITS ARE NOT ANTICIPATED FOR THIS PROJECT.

1.4.4 INSTALL SILT FENCE

SILT FENCE SHALL BE INSTALLED PRIOR TO ANY UP SLOPE WORK AS SHOWN ON THE PLANS OR AS NECESSARY.

1.4.5 DIVERT UPLAND RUNOFF

COLLECT AND ROUTE CLEAN OFFSITE RUNOFF AROUND OR THROUGH THE PROJECT SITE USING DIVERSION BERMS, DIVERSION TO SWALES, CULVERTS AND/OR TEMPORARY PIPES.

USE EXCAVATED DROP INLET PROTECTION DURING CONSTRUCTION UNTIL CONTRIBUTING DRAINAGE AREAS ARE STABILIZED.

1.4.6 SLOW DOWN CHANNELIZED RUNOFF

TEMPORARY STONE CHECK DAM, TYPE I SHALL BE UTILIZED AS NECESSARY.

1.4.7 CONSTRUCT PERMANENT CONTROLS

SEED AND HAY MULCH
DRAINAGE INLETS AND PIPING

RIPRAP PROTECTION WILL BE INSTALLED AT CULVERT OUTLETS.

1.4.8 STABILIZE EXPOSED SOILS

SEED AND HAY MULCH
TEMPORARY EROSION MATTING

TRACKING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, WILL BE UTILIZED ON A REGULAR BASIS. SLOPES SHALL BE STABILIZED WITHIN 48 HOURS OF FORECASTED RAIN. SEEDING, MULCHING AND BIODEGRADABLE EROSION CONTROL MATTING OR EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1:3. THESE SLOPES SHALL BE STABILIZED WITHIN 48 HOURS OF REACHING INTERMITTENT PHASES OF CONSTRUCTION.

1.4.9 WINTER STABILIZATION

IF CONSTRUCTION CONTINUES THRU THE WINTER, USE VARIOUS MEASURES SPECIFIED FOR WINTER (SEE LOW RISK SITE HANDBOOK).

1.4.10 STABILIZE SOIL AT FINAL GRADE

SEED AND HAY MULCH
TEMPORARY EROSION MATTING

SEEDING, MULCHING AND BIODEGRADABLE EROSION CONTROL MATTING OR EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1:3. THESE SLOPES SHALL BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE.

1.4.11 DE-WATERING ACTIVITIES

DE-WATERING IS NOT ANTICIPATED FOR THIS PROJECT.

1.4.12 INSPECT YOUR SITE

INSPECT SITE BASED ON PERMIT AUTHORIZATION OR SPECIAL PROVISION REQUIREMENTS.

VANASSE HANGEN BRUSTLIN, INC.

STATE OF VERMONT
AGENCY OF TRANSPORTATION

Town Of DUMMERSTON	Bridge No. 37
Highway No. TH 62	Log Sta. / Surv. Sta.
TH 62 OVER WEST RIVER	
EPSC NARRATIVE	
Designed By C.L. CILLEY	Drawn By C.L. CILLEY
Checked By S.M. HODGDON Date 4/09	Bridge Design Supervisor S.M. HODGDON Date 4/09
PROJECT DUMMERSTON	PROJECT NO. BHO 1442 (28)
I.G.C. Info.	
Bridge Sheet No. ZJ080ERONAR Sheet 9 of 49	

VHB NO. 51192 plot date: 4/3/2009

Production Joint Welding Procedure Specification (D1.5-02)

DSBROWN

Procedure No: A-GTF-01 Date Issued: 1-9-04 Revision No: 0 Rev. Date: _____

Contractor (Fabricator) D.S. Brown Company Prepared by: James R. Connor, Quality Assurance Manager

1. Non-Fracture Critical [X] Fracture Critical [ ] WPS Expiration Date: _____
2. Qualified in accordance with: AWS D1.5- 2002 , AWS D1.6-99
   Referenced PQR No(s). PQR-GTAW-01-(03) __ , __ , ____
   Referenced FWST No(s). PQR-GTAW-01(03) , _____ , __ , ____
3. Material specification(s) ASTM A709 Gr. 36, 50, 50W, 304SS, 316SS
4. Material Thickness (es) Unlimited
5. Welding process GTAW
6. Manual [X] , machine [ ] , or semiautomatic [ ]
7. Position(s) of welding 1F, 2F
8. Filler metal specification AWS A5.9
9. Filler metal class and brand name ER309L (Murrex)
10. Flux class & brand N/A , Type N/A
11. Shielding gas 100% Argon Flow rate 20 CFH
12. Single pass [X] Or multiple pass [ ]
13. Single arc [X] Or multiple arc [ ]
14. Welding Current DCEN
15. Polarity Straight
16. Welding progression stringers
17. Root treatment Clean to bright sound metal or per AWS D1.5 (3.2.1 & 3.11)
18. Postheat treatment N/A
19. Calculated Heat Input (KJ/In) Min 10.9 KJ Max 20.4 KJ
20. Electrode extension (electrical stickout) N/A

For DOT Approval

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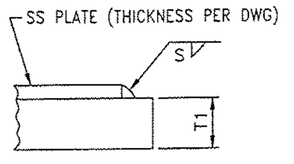
OK'D BY _____ OK'D BY Jwc

R. WRIGHT _____ APPROVED ✓

BY: _____ DATE 12/29/09

Weld size (In)	Pass No(s).	Electrode Size (In)	Welding Process Variables AMPS/WFS*	VOLTS	Travel Speed (IPM)
20 ga.	1	1/8"	170-200	15-17	10-14
16 ga.	1	1/8"	170-200	15-17	10-14
14 ga.	1	1/8"	170-200	15-17	10-14
12 ga.	1	1/8"	170-200	15-17	10-14
11 ga.	1	1/8"	170-200	15-17	10-14
10 ga.	1	1/8"	170-200	15-17	10-14
8 ga.	1	1/8"	170-200	15-17	10-14
3/16"	1	1/8"	170-200	15-17	10-14

Joint Detail (Flare Bevel)
Show all dimensions, weld sizes, passes, and AWS symbols



T_1 = Varies
S = Fillet Weld Size (Fillet weld must not exceed thickness of stainless steel)

* Wire feed speed may be used along with amperage (include chart)

Prepared By: James R. Connor DSB QA Manager

Project: _____

DSB Job: 27177-1106

Preheat and Interpass Temperature Chart

Base Metal Thickness range	Minimum Preheat (°F)	Max Preheat & Interpass (°F)
≤3/4"	50°F	450°F
>3/4" to ≤1.5"	70°F	450°F
>1.5" to ≤2.5"	150°F	450°F
>2.5"	225°F	450°F

Note: When this procedure is used for A709Gr50W materials, it shall be limited to 5/16" single pass or material be coated.

Production Joint Welding Procedure Specification (D1.5-02)

Procedure No: **A-(MC)GF-01** Date Issued: 9-28-04 Revision No: 1 Rev. Date: 2-5-09

Contractor (Fabricator) D. S. Brown Company Prepared by: James R. Connor, Quality Assurance Manager

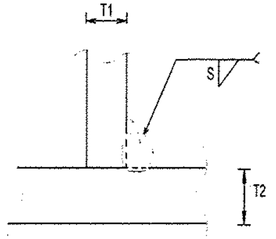
1. Non-Fracture Critical [X] Fracture Critical [ ] WPS Expiration Date: 9-28-09
2. Qualified in accordance with: AWS D1.5- 2002 (5.12.1)
   Referenced PQR No(s). PQR-(MC)GMAW-01(04) __ , __ , ____
   Referenced FWST No(s). PQR-(MC)GMAW-FWST-01A(04) , PQR-(MC)GMAW-FWST-01B(04) , __ , __
3. Material specification(s) ASTM A709 Gr. 36, 50, 50W
4. Material Thickness (es) Unlimited
5. Welding process GMAW
6. Manual [ ] , machine [X] , or semiautomatic [X]
7. Position(s) of welding 1F, 2F
8. Filler metal specification AWS A5.18
9. Filler metal class and brand name E70C-6M Corex Metal-Core Maxim
10. Flux class & brand N/A , Type N/A
11. Shielding gas 75% Ar / 25% CO2 Flow rate 45 CFH
12. Single pass [X] Or multiple pass [X]
13. Single arc [X] Or multiple arc [ ]
14. Welding Current DCEP
15. Polarity Reverse
16. Welding progression stringers
17. Root treatment Clean to bright sound metal or per AWS D1.5 (3.2.1 & 3.11)
18. Postheat treatment N/A
19. Calculated Heat Input (KJ/In) Min 30.6 Kj/in Max 51.1 Kj/in
20. Electrode extension (electrical stickout) 3/4"

For DOT Approval

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BY DATE 12/29/09

Weld size (In)	Pass No(s).	Electrode Size (In)	Welding Process Variables AMPS/WFS*	VOLTS	Travel Speed (IPM)
**1/4"	1	.052"	265-320	31-34.5	13-16
5/16"	1	.052"	265-320	31-34.5	13-16
3/8"	1-3	.052"	265-320	31-34.5	13-16
7/16"	2-4	.052"	265-320	31-34.5	13-16
1/2"	4-6	.052"	265-320	31-34.5	13-16
5/8"	5-7	.052"	265-320	31-34.5	13-16
3/4"	6-8	.052"	265-320	31-34.5	13-16

Joint Detail (Fillet)
Show all dimensions, weld sizes, passes, and AWS symbols



T1 = Varies
T2 = Varies
S = Weld Size

**** T1 & T2 equal to or less than 3/4" for 1/4" welds.**

* Wire feed speed may be used along with amperage (include chart)

Prepared By: James R. Connor DSB QA Manager

Project: TH 62 OVER WEST RIVER

DSB Job: 27177-1011

Preheat and Interpass Temperature Chart

Base Metal Thickness range	Minimum Preheat (°F)	Max Preheat & Interpass (°F)
≤ 3/4"	50°F	450°F
>3/4" to ≤1.5"	70°F	450°F
>1.5" to ≤2.5"	150°F	450°F
>2.5"	225°F	450°F

Note: When this procedure is used for A709Gr50W materials, it shall be limited to 5/16" single pass or material be coated.

Production Joint Welding Procedure Specification (D1.5-02)

Procedure No: **A-(MC)GSB-01** Date Issued: 9-28-04 Revision No: 0 Rev. Date: _____

Contractor (Fabricator) D. S. Brown Company Prepared by: James R. Connor, Quality Assurance Manager

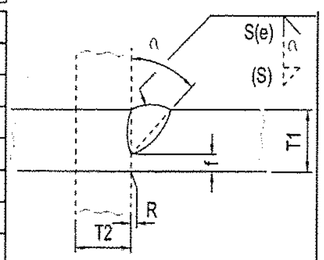
1. Non-Fracture Critical [X] Fracture Critical [ ] WPS Expiration Date: _____
2. Qualified in accordance with: AWS D1.5- 2002 (5.12.1)
   Referenced PQR No(s). PQR-(MC)GMAW-01(04) __ , __ , ____
   Referenced FWST No(s). PQR-(MC)GMAW-FWST-01A(04) , PQR-(MC)GMAW-FWST-01B(04) , __ , __
3. Material specification(s) ASTM A709 Gr. 36, 50, 50W
4. Material Thickness (es) Unlimited
5. Welding process GMAW
6. Manual [ ] , machine [ ] , or semiautomatic [X]
7. Position(s) of welding 1G, 2G, 1F, 2F
8. Filler metal specification AWS A5.18
9. Filler metal class and brand name E70C-6M Corex Metal-Core Maxim
10. Flux class & brand N/A , Type N/A
11. Shielding gas 75% Ar / 25% CO2 Flow rate 45 CFH
12. Single pass [X] Or multiple pass [X]
13. Single arc [X] Or multiple arc [ ]
14. Welding Current DCEP
15. Polarity Reverse
16. Welding progression stringers
17. Root treatment Clean to bright sound metal or per AWS D1.5 (3.2.1 & 3.11)
18. Postheat treatment N/A
19. Calculated Heat Input (KJ/In) Min 30.6 Kj/in Max 51.1 Kj/in
20. Electrode extension (electrical stickout) 3/4"

For DOT Approval

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BY DATE 12/29/09

Weld size (E&S) (In)	Pass No(s).	Electrode Size (In)	Welding Process Variables AMPS/WFS*	VOLTS	Travel Speed (IPM)
1/4"	1	.052"	265-320	31-34.5	13-16
5/16"	1	.052"	265-320	31-34.5	13-16
3/8"	1-2	.052"	265-320	31-34.5	13-16
1/2"	3-4	.052"	265-320	31-34.5	13-16
5/8"	4-6	.052"	265-320	31-34.5	13-16
3/4"	5-7	.052"	265-320	31-34.5	13-16
7/8"	6-9	.052"	265-320	31-34.5	13-16
1"	7-10	.052"	265-320	31-34.5	13-16

Joint Detail (TC-P4-GF)
Show all dimensions, weld sizes, passes, and AWS symbols



For Butt Joints see AWS 2.14

T1 = ¼" min.
T2 = Varies
(E) = S-1/8"
f = 1/8" min.
R = 0
α = 45°
S = size groove
(S) = size of reinforcing fillet(if required) not to exceed ¼" in corner & T jts.

* Wire feed speed may be used along with amperage (include chart)

Prepared By: James R. Connor DSB QA Manager

Project: TH 62 OVER WEST RIVER

DSB Job: 27177-1011

Preheat and Interpass Temperature Chart

Base Metal Thickness range	Minimum Preheat (°F)	Max Preheat & Interpass (°F)
≤ 3/4"	50°F	450°F
>3/4" to ≤1.5"	70°F	450°F
>1.5" to ≤2.5"	150°F	450°F
>2.5"	225°F	450°F

Note: When this procedure is used for A709Gr50W materials, it shall be limited to 5/16" single pass or material be coated.

DSBROWN

Production Joint Welding Procedure Specification (D1.5-02)

Procedure No: **A-(MC)GSB-105** Date Issued: 2-16-05 Revision No: 0 Rev. Date: _____

Contractor (Fabricator) D. S. Brown Company Prepared by: James R. Connor, Quality Assurance Manager

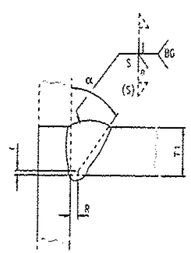
1. Non-Fracture Critical [X] Fracture Critical [ ] WPS Expiration Date: _____
2. Qualified in accordance with: AWS D1.5- 2002 (5.12.1)
   Referenced PQR No(s). PQR-(MC)GMAW-01(04) __ , __ , _____
   Referenced FWST No(s). PQR-(MC)GMAW-FWST-01A(04) , PQR-(MC)GMAW-FWST-01B(04) , __ , __
3. Material specification(s) ASTM A709 Gr. 36, 50, 50W
4. Material Thickness (es) Unlimited
5. Welding process GMAW
6. Manual [ ] , machine [ ] , or semiautomatic [X]
7. Position(s) of welding 1G, 2G, 1F, 2F
8. Filler metal specification AWS A5.18
9. Filler metal class and brand name E70C-6M Corex Metal-Core Maxim
10. Flux class & brand N/A , Type N/A
11. Shielding gas 75% Ar / 25% CO2 Flow rate 45 CFH
12. Single pass [X] Or multiple pass [X]
13. Single arc [X] Or multiple arc [ ]
14. Welding Current DCEP
15. Polarity Reverse
16. Welding progression stringers
17. Root treatment Clean to bright sound metal or per AWS D1.5 (3.2.1 & 3.11)
18. Postheat treatment N/A
19. Calculated Heat Input (KJ/In) Min 30.6 Kj/in Max 51.1 Kj/in
20. Electrode extension (electrical stickout) 3/4"

For DOT Approval

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APPROVED
BY DATE 12/29/09

Weld size (In) (E)&(S)	Pass No(s).	Electrode Size (In)	Welding Process Variables AMPS/WFS*	VOLTS	Travel Speed (IPM)
1/4"	1	.052"	265-320	31-34.5	13-16
5/16"	1	.052"	265-320	31-34.5	13-16
3/8"	1-2	.052"	265-320	31-34.5	13-16
1/2"	3-4	.052"	265-320	31-34.5	13-16
5/8"	4-6	.052"	265-320	31-34.5	13-16
3/4"	5-7	.052"	265-320	31-34.5	13-16
7/8"	6-8	.052"	265-320	31-34.5	13-16
1"	7-9	.052"	265-320	31-34.5	13-16

Joint Detail (TC-P5-GF)
Show all dimensions, weld sizes, passes, and AWS symbols



T1 = Varies
T2 = Varies
f = 0 to 1/8" min.
R = 0 to 1/8"
α = 45°
(S)=Fillet Reinforcement (If Necessary)
Note: Backgouge root to clean sound metal before welding second side.

* Wire feed speed may be used along with amperage (include chart)

Prepared By: James R. Connor DSB QA Manager

Project: TH 62 OVER WEST RIVER

DSB Job: 27177-1011

Preheat and Interpass Temperature Chart		
Base Metal Thickness range	Minimum Preheat (°F)	Max Preheat & Interpass (°F)
≤ 3/4"	50°F	450°F
>3/4" to ≤1.5"	70°F	450°F
>1.5" to ≤2.5"	150°F	450°F
>2.5"	225°F	450°F

Note: When this procedure is used for A709Gr50W materials, it shall be limited to 5/16" single pass or material be coated.

Production Joint Welding Procedure Specification (D1.5-02)

Procedure No: A-(MC)G-SEALWELD-01 Date Issued: 9-29-04 Revision No: 0 Rev. Date: _____

Contractor (Fabricator) D. S. Brown Company Prepared by: James R. Connor, Quality Assurance Manager

1. Non-Fracture Critical [X] Fracture Critical [ ] WPS Expiration Date: _____
2. Qualified in accordance with: AWS D1.5- 2002 (5.12.1)
   Referenced PQR No(s). PQR-(MC)GMAW-01(04) __ , __ , _____
   Referenced FWST No(s). PQR-(MC)GMAW-FWST-01A(04) , PQR-(MC)GMAW-FWST-01B(04) , __ , __
3. Material specification(s) ASTM A709 Gr. 36, 50, 50W
4. Material Thickness (es) Unlimited
5. Welding process GMAW
6. Manual [ ] , machine [ ] , or semiautomatic [X]
7. Position(s) of welding 1G, 2G, 1F, 2F
8. Filler metal specification AWS A5.18
9. Filler metal class and brand name E70C-6M Corex Metal-Core Maxim
10. Flux class & brand N/A , Type N/A
11. Shielding gas 75% Ar / 25% CO2 Flow rate 45 CFH
12. Single pass [X] Or multiple pass [X]
13. Single arc [X] Or multiple arc [ ]
14. Welding Current DCEP
15. Polarity Reverse
16. Welding progression stringers
17. Root treatment Clean to bright sound metal or per AWS D1.5 (3.2.1 & 3.11)
18. Postheat treatment N/A
19. Calculated Heat Input (KJ/In) Min 30.6 Kj/in Max 51.1 Kj/in
20. Electrode extension (electrical stickout) 3/4"

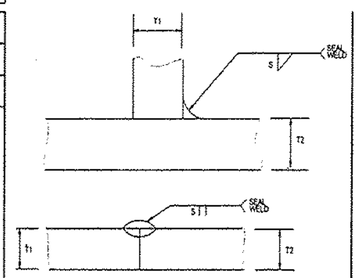
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Weld size (In)	Pass No(s).	Electrode Size (In)	Welding Process Variables AMPS	Welding Process Variables VOLTS	Travel Speed (IPM)
**1/8"	1	.052"	265-320	31-34.5	13-16
**3/16"	1	.052"	265-320	31-34.5	13-16

NOTE:
THIS JOINT DETAIL TO BE ONLY USED FOR SEALING NON-STRUCTURAL APPLICATIONS WHERE FULL SIZED WELDMENTS ARE NOT DESIGNED, DETAILED OR ARE NOT PRACTICAL.

Joint Detail (Fillet)
Show all dimensions, weld sizes, passes, and AWS symbols



T1 = Varies
T2 = Varies
S = Weld Size

Prepared By: James R. Connor DSB QA Manager

Project: TH 62 OVER WEST RIVER

DSB Job: 27177-1011

Preheat and Interpass Temperature Chart

Base Metal Thickness range	Minimum Preheat (°F)	Max Preheat & Interpass (°F)
≤ 3/4"	50°F	450 ° F
>3/4" to ≤1.5"	70°F	450 ° F
>1.5" to ≤2.5"	150°F	450 ° F
>2.5"	225°F	450 ° F

Note: When this procedure is used for A709Gr50W materials, it shall be limited to 5/16" single pass or material be coated.

Production Joint Welding Procedure Specification (D1.5-02)

Procedure No: **A-(MC)GSV-01** Date Issued: 9-29-04 Revision No: 0 Rev. Date: _____

Contractor (Fabricator) D. S. Brown Company Prepared by: James R. Connor, Quality Assurance Manager

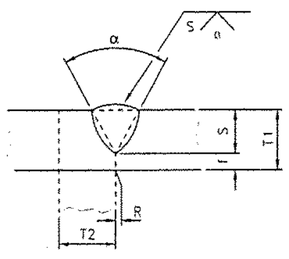
1. Non-Fracture Critical [X] Fracture Critical [ ] WPS Expiration Date: _____
2. Qualified in accordance with: AWS D1.5- 2002 (5.12.1)
   Referenced PQR No(s). PQR-(MC)GMAW-01(04) __ , __ , ____
   Referenced FWST No(s). _____ , _____ , __ , __
3. Material specification(s) ASTM A709 Gr. 36, 50, 50W
4. Material Thickness (es) Unlimited
5. Welding process GMAW
6. Manual [ ] , machine [ ] , or semiautomatic [X]
7. Position(s) of welding 1G, 2G
8. Filler metal specification AWS A5.18
9. Filler metal class and brand name E70C-6M Corex Metal-Core Maxim
10. Flux class & brand N/A , Type N/A
11. Shielding gas 75% Ar / 25% CO2 Flow rate 45 CFH
12. Single pass [X] Or multiple pass [X]
13. Single arc [X] Or multiple arc [ ]
14. Welding Current DCEP
15. Polarity Reverse
16. Welding progression stringers
17. Root treatment Clean to bright sound metal or per AWS D1.5 (3.2.1 & 3.11)
18. Postheat treatment N/A
19. Calculated Heat Input (KJ/In) Min 30.6 Kj/in Max 51.1 Kj/in
20. Electrode extension (electrical stickout) 3/4"

For DOT Approval

VTRANS RECEIVED OK'D BY _____ OK'D BY JWC NOV 17 20.. APPROVED BY _____ DATE 12/29/09

Weld size (In)	Pass No(s).	Electrode Size (In)	Welding Process Variables AMPS	Welding Process Variables VOLTS	Travel Speed (IPM)
1/4"	1	.052"	265-320	31-34.5	13-16
5/16"	1-2	.052"	265-320	31-34.5	13-16
3/8"	1-3	.052"	265-320	31-34.5	13-16
1/2"	3-4	.052"	265-320	31-34.5	13-16
5/8"	4-6	.052"	265-320	31-34.5	13-16
3/4"	5-8	.052"	265-320	31-34.5	13-16

Joint Detail (C-P2-GF)
Show all dimensions, weld sizes, passes, and AWS symbols



For Butt Joints see AWS 2.14

T1 = 1/4" min.
T2 = Unlimited
f = 1/8" min.
R = 0
α = 60°
S = Groove Prep Depth

Prepared By: James R. Connor DSB QA Manager

Project: TH 62 OVER WEST RIVER

DSB Job: 27177-1011

Preheat and Interpass Temperature Chart

Base Metal Thickness range	Minimum Preheat (°F)	Max Preheat & Interpass (°F)
≤ 3/4"	50°F	450 ° F
>3/4" to ≤1.5"	70°F	450 ° F
>1.5" to ≤2.5"	150°F	450 ° F
>2.5"	225°F	450 ° F

Note: When this procedure is used for A709Gr50W materials, it shall be limited to 5/16" single pass or material be coated.

Production Joint Welding Procedure Specification (D1.5-02)

DSBROWN

Procedure No: **A-SM-STUD-REP-01** Date Issued: 8/6/04 Revision No: 0 Rev. Date: _____

Contractor (Fabricator) D. S. Brown Company Prepared by: James R. Connor, Quality Assurance Manager

1. Non-Fracture Critical [X] Fracture Critical [ ] WPS Expiration Date: N/A
2. Qualified in accordance with: AWS D1.5- 2002
   Referenced PQR No(s). N/A __ , __ , ____
   Referenced FWST No(s). N/A , N/A , __ , ____
3. Material specification(s) ASTM A709 Gr. 36, 50, 50W, A108 Stud
4. Material Thickness (es) Unlimited
5. Welding process SMAW
6. Manual [X] , machine [ ] , or semiautomatic [ ]
7. Position(s) of welding 1F, 2F
8. Filler metal specification AWS A5.1
9. Filler metal class and brand name LINCOLN JET LH-78-MR E7018
10. Flux class & brand N/A , Type N/A
11. Shielding gas N/A Flow rate N/A
12. Single pass [X] Or multiple pass [X]
13. Single arc [X] Or multiple arc [ ]
14. Welding Current DCEP
15. Polarity Reverse
16. Welding progression stringers
17. Root treatment Clean to bright sound metal or per AWS D1.5 (3.2.1 & 3.11)
18. Postheat treatment N/A
19. Calculated Heat Input (KJ/In) Min 20.28 Kj/In Max 30.6 Kj/In
20. Electrode extension (electrical stickout) Varies

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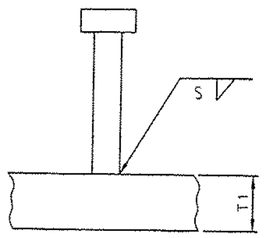
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Weld size (In)	Pass No(s).	Electrode Size (In)	Welding Process Variables		Travel Speed (IPM)
			AMPS/WFS*	VOLTS	
1/4"	1	5/32"	130-170	26-30	10
5/16"	1	5/32"	130-170	26-30	10
3/8"	2-3	5/32"	130-170	26-30	10

As per AWS D1.5 Sec. 7 (Table 7.2)

Stud Diameter	Minimum Fillet
≤ 3/8"	1/4"
3/8" ≤ 1"	5/16"
> 1"	3/8"

Joint Detail (Fillet)
Show all dimensions, weld sizes, passes, and AWS symbols



T1 = Varies
Stud = Varies
S = Weld Size

Weld must cover and extend beyond missing flash at least 3/8" in each direction

(see AWS D1.5 Table 7.2 for required weld size)

Prepared By: James R. Connor DSB QA Manager

Project: TH 62 OVER WEST RIVER

DSB Job: 27177-1011

Preheat and Interpass Temperature Chart

Base Metal Thickness range	Minimum Preheat (°F)	Max Preheat & Interpass (°F)
≤ 3/4"	50°F	450°F
>3/4" to ≤1.5"	70°F	450°F
>1.5" to ≤2.5"	150°F	450°F
>2.5"	225°F	450°F

Note: When this procedure is used for A709Gr50W materials, it shall be limited to 5/16" single pass or material be coated.

Production Joint Welding Procedure Specification (D1.5-02)

Procedure No: **B-FF-01** Date Issued: 3-28-08 Revision No: 0 Rev. Date: _____

Contractor (Fabricator) D. S. Brown Company Prepared by: Brad Streeter, Quality Assurance Manager

1. Non-Fracture Critical [X] Fracture Critical [ ] WPS Expiration Date: 3-6-13
2. Qualified in accordance with: AWS D1.5- 2002 (5.13)
   Referenced PQR No(s). PQR-FCAW-01-(08) __ , __ , ____
   Referenced FWST No(s). N/A , N/A , __ , ____
3. Material specification(s) ASTM A709 Gr. 36, 50, 50W
4. Material Thickness (es) Unlimited
5. Welding process FCAW
6. Manual [ ] , machine [ ] , or semiautomatic [X]
7. Position(s) of welding 1F, 2F
8. Filler metal specification AWS A5.20
9. Filler metal class and brand name E71T-1CH8 (UltraCore71C)
10. Flux class & brand N/A , Type N/A
11. Shielding gas 100% CO2 Flow rate 45 CFH
12. Single pass [X] Or multiple pass [X]
13. Single arc [X] Or multiple arc [ ]
14. Welding Current DCEP
15. Polarity Reverse
16. Welding progression stringers
17. Root treatment Clean to bright sound metal or per AWS D1.5 (3.2.1 & 3.11)
18. Postheat treatment N/A
19. Calculated Heat Input (KJ/In) Min 32.2 Kj/in Max 45.8 Kj/in
20. Electrode extension (electrical stickout) 3/4"

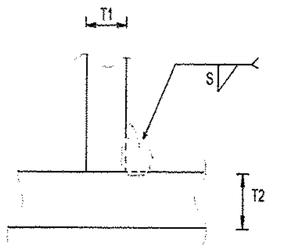
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Weld size (In)	Pass No(s).	Electrode Size (In)	Welding Process Variables AMPS/WFS*	VOLTS	Travel Speed (IPM)
**1/4"	1	1/16"	257-295	26.1-29.5	11.4-12.5
5/16"	1	1/16"	257-295	26.1-29.5	11.4-12.5
3/8"	2-3	1/16"	257-295	26.1-29.5	11.4-12.5
7/16"	3-5	1/16"	257-295	26.1-29.5	11.4-12.5
1/2"	4-6	1/16"	257-295	26.1-29.5	11.4-12.5
5/8"	5-7	1/16"	257-295	26.1-29.5	11.4-12.5
3/4"	6-8	1/16"	257-295	26.1-29.5	11.4-12.5

Joint Detail (Fillet)

Show all dimensions, weld sizes, passes, and AWS symbols



T1 = Varies
T2 = Varies
S = Weld Size

**** T1 & T2 equal to or less than 3/4" for 1/4" welds.**

* Wire feed speed may be used along with amperage (include chart)

Prepared By: _____ DSB QA Manager

Project: TH 62 OVER WEST RIVER

DSB Job: 27177-1011

Preheat and Interpass Temperature Chart		
Base Metal Thickness range	Minimum Preheat (°F)	Max Preheat & Interpass (°F)
≤ 3/4"	50°F	450°F
>3/4" to ≤1.5"	70°F	450°F
>1.5" to ≤2.5"	150°F	450°F
>2.5"	225°F	450°F

Note: When this procedure is used for A709Gr50W materials, it shall be limited to 5/16" single pass or material be coated.

Production Joint Welding Procedure Specification (D1.5-02)

DSBROWN

Procedure No: **B-FSB-105** Date Issued: 3-28-08 Revision No: 0 Rev. Date: _____

Contractor (Fabricator) D. S. Brown Company Prepared by: Brad Streeter, Quality Assurance Manager

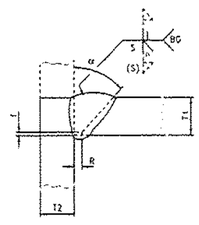
1. Non-Fracture Critical [X] Fracture Critical [ ] WPS Expiration Date: 3-6-13
2. Qualified in accordance with: AWS D1.5- 2002 (5.13)
   Referenced PQR No(s). PQR-FCAW-01-(08) __ , __ , ____
   Referenced FWST No(s). N/A , N/A , __ , __
3. Material specification(s) ASTM A709 Gr. 36, 50, 50W
4. Material Thickness (es) Unlimited
5. Welding process FCAW
6. Manual [ ] , machine [ ] , or semiautomatic [X]
7. Position(s) of welding 1G,2G, 1F, 2F
8. Filler metal specification AWS A5.20
9. Filler metal class and brand name E71T-1CH8 (UltraCore71C)
10. Flux class & brand N/A , Type N/A
11. Shielding gas 100% CO2 Flow rate 45 CFH
12. Single pass [X] Or multiple pass [X]
13. Single arc [X] Or multiple arc [ ]
14. Welding Current DCEP
15. Polarity Reverse
16. Welding progression Stringers
17. Root treatment Clean to bright sound metal or per AWS D1.5 (3.2.1 & 3.11)
18. Postheat treatment N/A
19. Calculated Heat Input (KJ/In) Min 32.2 Kj/in Max 45.8 Kj/in
20. Electrode extension (electrical stickout) 3/4"

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Weld size (In) (E)&(S)	Pass No(s).	Electrode Size (In)	Welding Process Variables AMPS/WFS*	VOLTS	Travel Speed (IPM)
1/4"	CJP	1/16"	257-295	26.1-29.5	11.4-12.5
5/16"	CJP	1/16"	257-295	26.1-29.5	11.4-12.5
3/8"	CJP	1/16"	257-295	26.1-29.5	11.4-12.5
1/2"	CJP	1/16"	257-295	26.1-29.5	11.4-12.5
5/8"	CJP	1/16"	257-295	26.1-29.5	11.4-12.5
3/4"	CJP	1/16"	257-295	26.1-29.5	11.4-12.5
7/8"	CJP	1/16"	257-295	26.1-29.5	11.4-12.5
1"	CJP	1/16"	257-295	26.1-29.5	11.4-12.5

Joint Detail (TC-U4b-GF)
Show all dimensions, weld sizes, passes, and AWS symbols



T1 = Varies
T2 = Varies
f = 0 to 1/8" min.
R = 0 to 1/8"
α = 45°
(S)=Fillet Reinforcement (If Necessary)
Note: Backgouge root to clean sound metal before welding second side.

* Wire feed speed may be used along with amperage (include chart)

Prepared By: _____ DSB QA Manager

Project: TH 62 OVER WEST RIVER

DSB Job: 27177-1011

Preheat and Interpass Temperature Chart		
Base Metal Thickness range	Minimum Preheat (°F)	Max Preheat & Interpass (°F)
≤ 3/4"	50°F	450°F
>3/4" to ≤1.5"	70°F	450°F
>1.5" to ≤2.5"	150°F	450°F
>2.5"	225°F	450°F

Note: When this procedure is used for A709Gr50W materials, it shall be limited to 5/16" single pass or material be coated.

Production Joint Welding Procedure Specification (D1.5-02)

Procedure No: **B-F-SEALWELD-01** Date Issued: 3-28-08 Revision No: 0 Rev. Date: _____

Contractor (Fabricator) D. S. Brown Company Prepared by: Brad Streeter, Quality Assurance Manager

1. Non-Fracture Critical [X] Fracture Critical [ ] WPS Expiration Date: 3-6-13
2. Qualified in accordance with: AWS D1.1- 2004 Sec. 4
   Referenced PQR No(s). PQR-FCAW-01-(08) __ , __ , ____
   Referenced FWST No(s). N/A , N/A , __ , ____
3. Material specification(s) ASTM A709 Gr. 36, 50, 50W
4. Material Thickness (es) Unlimited
5. Welding process FCAW
6. Manual [ ] , machine [ ] , or semiautomatic [X]
7. Position(s) of welding 1G,1F, 2F
8. Filler metal specification AWS A5.20
9. Filler metal class and brand name E71T-1CH8 (UltraCore71C)
10. Flux class & brand N/A , Type N/A
11. Shielding gas 100% CO2 Flow rate 45 CFH
12. Single pass [X] Or multiple pass [ ]
13. Single arc [X] Or multiple arc [ ]
14. Welding Current DCEP
15. Polarity Reverse
16. Welding progression stringers
17. Root treatment Clean to bright sound metal and per AWS D1.5 (3.2.1 & 3.11)
18. Postheat treatment N/A
19. Calculated Heat Input (KJ/In) Min 32.2 Kj/in Max 45.8 Kj/in
20. Electrode extension (electrical stickout) 3/4"

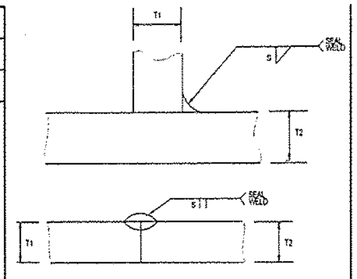
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BY _____ DATE 12/29/09

Weld size (In)	Pass No(s).	Electrode Size (In)	Welding Process Variables AMPS	Welding Process Variables VOLTS	Travel Speed (IPM)
1/8"	1	1/16"	257-295	26.1-29.5	11.4-12.5
3/16"	1	1/16"	257-295	26.1-29.5	11.4-12.5

NOTE:
THIS JOINT DETAIL TO BE USED FOR SEALING NON-STRUCTURAL GALVANIZED OR PAINTED APPLICATIONS WHERE FULL SIZED WELDMENTS ARE NOT DESIGNED, DETAILED OR ARE NOT PRACTICAL.

Joint Detail (Fillet)
Show all dimensions, weld sizes, passes, and AWS symbols



T1 = Varies
T2 = Varies
S = Weld Size

Prepared By: _____ DSB QA Manager

Project: TH 62 OVER WEST RIVER

DSB Job: 27177-1011

Preheat and Interpass Temperature Chart

Base Metal Thickness range	Minimum Preheat (°F)	Max Preheat & Interpass (°F)
≤ 3/4"	50°F	450°F
>3/4" to ≤1.5"	70°F	450°F
>1.5" to ≤2.5"	150°F	450°F
>2.5"	225°F	450°F

Note: When this procedure is used for A709Gr50W materials, it shall be limited to 5/16" single pass or material be coated.

Production Joint Welding Procedure Specification (D1.5-02)

DSBROWN

Procedure No: **B-FSB-01** Date Issued: 3-28-08 Revision No: 0 Rev. Date: ____

Contractor (Fabricator) D. S. Brown Company Prepared by: Brad Streeter, Quality Assurance Manager

1. Non-Fracture Critical [X] Fracture Critical [ ] WPS Expiration Date: 3-6-13
2. Qualified in accordance with: AWS D1.5- 2002 (5.13)
   Referenced PQR No(s). PQR-FCAW-01-(08) __ , __ , ____
   Referenced FWST No(s). N/A , N/A , __ , __
3. Material specification(s) ASTM A709 Gr. 36, 50, 50W
4. Material Thickness (es) Unlimited
5. Welding process FCAW
6. Manual [ ] , machine [ ] , or semiautomatic [X]
7. Position(s) of welding 1G, 2G,(1F,2F)
8. Filler metal specification AWS A5.20
9. Filler metal class and brand name E71T-1CH8 (UltraCore71C)
10. Flux class & brand N/A , Type N/A
11. Shielding gas 100% CO2 Flow rate 45 CFH
12. Single pass [X] Or multiple pass [X]
13. Single arc [X] Or multiple arc [ ]
14. Welding Current DCEP
15. Polarity Reverse
16. Welding progression Stringers
17. Root treatment Clean to bright sound metal or per AWS D1.5 (3.2.1 & 3.11)
18. Postheat treatment N/A
19. Calculated Heat Input (KJ/In) Min 32.2 Kj/in Max 45.8 Kj/in
20. Electrode extension (electrical stickout) 3/4"

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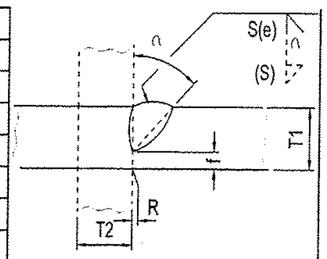
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BY DATE 12/29/09

Weld size (In) (E)&(S)	Pass No(s).	Electrode Size (In)	Welding Process Variables AMPS/WFS*	VOLTS	Travel Speed (IPM)
**1/4"	1	1/16"	257-295	26.1-29.5	11.4-12.5
5/16"	1	1/16"	257-295	26.1-29.5	11.4-12.5
3/8"	2-3	1/16"	257-295	26.1-29.5	11.4-12.5
1/2"	3-4	1/16"	257-295	26.1-29.5	11.4-12.5
5/8"	4-6	1/16"	257-295	26.1-29.5	11.4-12.5
3/4"	5-7	1/16"	257-295	26.1-29.5	11.4-12.5
7/8"	6-8	1/16"	257-295	26.1-29.5	11.4-12.5
1"	7-9	1/16"	257-295	26.1-29.5	11.4-12.5

Joint Detail (TC-P4-GF)

Show all dimensions, weld sizes, passes, and AWS symbols

** **T1 & T2 equal to or less than 3/4" for 1/4" welds**



For Butt Joints see AWS 2.14

T1 = ¼" min.
T2 = Varies
(E) = S-1/8"
f = 1/8" min.
R = 0
α = 45°
S = size groove
(S) = size of reinforcing fillet(if required) not to exceed ¼" in corner & T jts.

* Wire feed speed may be used along with amperage (include chart)

Prepared By: _____ DSB QA Manager

Project: TH 62 OVER WEST RIVER

DSB Job: 27177-1011

Preheat and Interpass Temperature Chart

Base Metal Thickness range	Minimum Preheat (°F)	Max Preheat & Interpass (°F)
≤ 3/4"	50°F	450°F
>3/4" to ≤1.5"	70°F	450°F
>1.5" to ≤2.5"	150°F	450°F
>2.5"	225°F	450°F

Note: When this procedure is used for A709Gr50W materials, it shall be limited to 5/16" single pass or material be coated.

Production Joint Welding Procedure Specification (D1.5-02)

Procedure No: **B-FF-STUD-REP-01** Date Issued: 3-28-08 Revision No: 0 Rev. Date: ____

Contractor (Fabricator) D. S. Brown Company Prepared by: Brad Streeter, Quality Assurance Manager

1. Non-Fracture Critical [X] Fracture Critical [ ] WPS Expiration Date: 3-6-13
2. Qualified in accordance with: AWS D1.5- 2002 (5.13)
   Referenced PQR No(s). PQR-FCAW-01-(08) __ , __ , ____
   Referenced FWST No(s). N/A , N/A , __ , ____
3. Material specification(s) ASTM A709 Gr. 36, 50, 50W, A500B to A108 Stud
4. Material Thickness (es) Unlimited
5. Welding process FCAW
6. Manual [ ] , machine [ ] , or semiautomatic [X]
7. Position(s) of welding 2F
8. Filler metal specification AWS A5.20
9. Filler metal class and brand name E71T-1CH8 (UltraCore71C)
10. Flux class & brand N/A , Type N/A
11. Shielding gas 100% CO2 Flow rate 45 CFH
12. Single pass [X] Or multiple pass [X]
13. Single arc [X] Or multiple arc [ ]
14. Welding Current DCEP
15. Polarity Reverse
16. Welding progression stringers
17. Root treatment Clean to bright sound metal and per AWS D1.5 (3.2.1 & 3.11)
18. Postheat treatment N/A
19. Calculated Heat Input (KJ/In) Min 32.2 Kj/in Max 45.8 Kj/in
20. Electrode extension (electrical stickout) 3/4"

For DOT Approval

VTRANS RECEIVED
OK'D BY ____ OK'D BY JUC
NOV 17 2...
APPROVED
BY 12/29/09

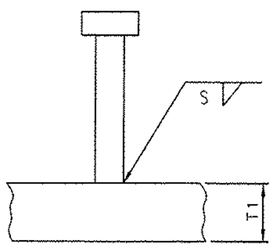
Weld size (In)	Pass No(s).	Electrode Size (In)	Welding Process Variables AMPS	VOLTS	Travel Speed (IPM)
**1/4"	1	1/16"	257-295	26.1-29.5	11.4-12.5
5/16"	1	1/16"	257-295	26.1-29.5	11.4-12.5
3/8"	2-3	1/16"	257-295	26.1-29.5	11.4-12.5

Table 7.2

STUD DIAMETER	MIN. SIZE FILLET
3/8""(13MM)	1/4(6MM)
½", 5/8,3/4,7/8(13,16,19,22MM)	5/16(8MM)
1"(25MM)	3/8(10MM)

PROCEDURE:
1) REPAIR WELDMENT SHALL BE OF THE SIZE LISTED BELOW AND EXTEND AT LEAST 3/8" (9MM) BEYOND THE END OF EACH DISCONTINUITY BEING REPAIRED.

Joint Detail (Fillet)
Show all dimensions, weld sizes, passes, and AWS symbols



T_1 =VARIES
S =VARIES PER TABLE 7.2
(AS SHOWN LEFT OF PAGE).

APPLICATION:
REPAIR OF STUD WELDMENTS, WHICH DO NOT EXHIBIT A FULL 360° FLASH

**** T1 & T2 equal to or less than 3/4" for 1/4" welds**

Prepared By: _____ DSB QA Manager

Project: TH 62 OVER WEST RIVER

DSB Job: 27177-1011

Preheat and Interpass Temperature Chart		
Base Metal Thickness range	Minimum Preheat (°F)	Max Preheat & Interpass (°F)
≤ 3/4"	50°F	450°F
>3/4" to ≤1.5"	70°F	450°F
>1.5" to ≤2.5"	150°F	450°F
>2.5"	225°F	450°F

Note: When this procedure is used for A709Gr50W materials, it shall be limited to 5/16" single pass or material be coated.

Production Joint Welding Procedure Specification (D1.5-02)

Procedure No: **B-FSV-01** Date Issued: 3-28-08 Revision No: 0 Rev. Date: _____

Contractor (Fabricator) D. S. Brown Company Prepared by: Brad Streeter, Quality Assurance Manager

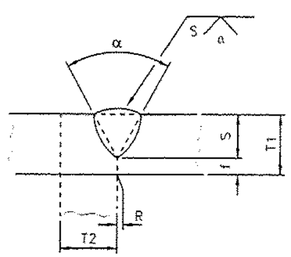
1. Non-Fracture Critical [X] Fracture Critical [ ] WPS Expiration Date: 3-6-13
2. Qualified in accordance with: AWS D1.5- 2002 (5.13)
   Referenced PQR No(s). PQR-FCAW-01-(08) __ , __ , ____
   Referenced FWST No(s). N/A , __ , __ , ___
3. Material specification(s) ASTM A709 Gr. 36, 50, 50W
4. Material Thickness (es) Unlimited
5. Welding process FCAW
6. Manual [ ] , machine [ ] , or semiautomatic [X]
7. Position(s) of welding 1G
8. Filler metal specification AWS A5.20
9. Filler metal class and brand name E71T-1CH8 (UltraCore71C)
10. Flux class & brand N/A , Type N/A
11. Shielding gas 100% CO2 Flow rate 45 CFH
12. Single pass [X] Or multiple pass [X]
13. Single arc [X] Or multiple arc [ ]
14. Welding Current DCEP
15. Polarity Reverse
16. Welding progression Stringers
17. Root treatment Clean to bright sound metal and per AWS D1.5 (3.2.1 & 3.11)
18. Postheat treatment N/A
19. Calculated Heat Input (KJ/In) Min 32.2 Kj/in Max 45.8 Kj/in
20. Electrode extension (electrical stickout) 3/4"

For DOT Approval

VTRANS RECEIVED
NOV 17 2009
OK'D BY _____ OK'D BY Jec
APPROVED
BY
DATE 12/29/09

Weld size (In)	Pass No(s).	Electrode Size (In)	Welding Process Variables AMPS	Welding Process Variables VOLTS	Travel Speed (IPM)
**1/4"	1	1/16"	257-295	26.1-29.5	11.4-12.5
5/16"	1-2	1/16"	257-295	26.1-29.5	11.4-12.5
3/8"	2-3	1/16"	257-295	26.1-29.5	11.4-12.5
1/2"	4-5	1/16"	257-295	26.1-29.5	11.4-12.5
5/8"	5-6	1/16"	257-295	26.1-29.5	11.4-12.5
3/4"	5-8	1/16"	257-295	26.1-29.5	11.4-12.5

Joint Detail (C-P2-GF)
Show all dimensions, weld sizes, passes, and AWS symbols



For Butt Joints see AWS 2.14

T1 = 1/4" min.
T2 = Unlimited
f = 1/8" min.
R = 0
α = 60°
S = Groove Prep Depth
**** T1 & T2 equal to or less than 3/4" for 1/4" welds.**

Prepared By: _____ DSB QA Manager

Project: TH 62 OVER WEST RIVER

DSB Job: 27177-1011

Preheat and Interpass Temperature Chart

Base Metal Thickness range	Minimum Preheat (°F)	Max Preheat & Interpass (°F)
≤ 3/4"	50°F	450°F
>3/4" to ≤1.5"	70°F	450°F
>1.5" to ≤2.5"	150°F	450°F
>2.5"	225°F	450°F

Note: When this procedure is used for A709Gr50W materials, it shall be limited to 5/16" single pass or material be coated.

Casco Bay Steel Structures, Inc.

75 Spring Hill Road
Saco, Maine 04072

Phone: (207) 282-7360 Fax: (207) 282-1179

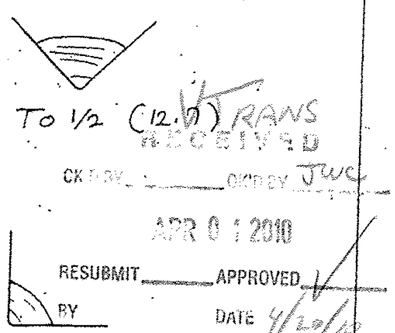
WELDING PROCEDURE SPECIFICATION

Material specification ASTM A709/A709M - Grade 36(250) 50(345) 50W(345W)
Welding process Flux Cored Arc welding (FCAW)
Manual or machine Semi Auto
Position of welding Flat (1F) Horizontal (2F)
Filler metal specification AWS A5.20
Filler metal classification E71T-1
Flux NA
Shielding gas 75% AR 25% CO2 Flow rate 40CFH ±5
Single or multiple pass Single and Multiple - Electrode Extension 5/8 ±1/4 (15.87 ± 6.35)
Single or multiple arc Single
Welding current DC
Polarity Reverse
Welding progression
Root treatment To meet AWS specification
Preheat and interpass temperature To 3/4 (19) = 50°(10°) - 3/4 (19+) To 1 1/2 (38) = 70°(20) - 1 1/2 (38) To 2 1/2 (63) 150°(65°) over 2 1/2 (63) = 225° (110°)
Postheat temperature NA
Heat Input Min NA Max NA

ST OF Vermont
DUMMERSTON
Proj BHO 1442(28)
CBSS NO

(METRIC) WELDING PROCEDURE

Pass no.	Electrode size	Welding current: Amperes	Welding current: Volts	Travel speed	AWS D1.5 Joint detail: Fillet
	1/16.	275 247.5 To 302.5	28.8 26.8 To 30.8	11.6 10.4 To 12.8	1F
	1.6	275 247.5 To 302.5	28.8 26.8 To 30.8	294.6 264.2 To 325.12	2F



VTRANS RECEIVED APR 0 1 2010 CK BY JWS

RESUBMIT ____ APPROVED ✓ BY DATE 4/29/10

This procedure may vary due to fabrication sequence, fit-up, pass size, etc., within the limitation of variables given in applicable A.W.S. codes or contract specifications

Procedure no. 101
Revision no.
Form III-2

AWS QC 1 PAUL E. GOODALE 05100201 CWI

Contractor Casco Bay Steel
Authorized By Paul E Goodale
Date 3/23/00

VERMONT

State of Vermont
PDD/Structures Design Section
National Life Building – Drawer 33
Montpelier, VT 05633-5001
www.aot.state.vt.us

[phone] 802-828-2621
[fax] 802-828-3566
[ttd] 800-253-0191

Agency of Transportation

Casco Bay Steel Structures
75 Spring Hill Road
Saco, Maine 04072

DATE: April 28, 2010

Project Name: Dummerston **Project #: BHO 1442 (28)**

Structure Identification: Town Highway 62, Bridge 37 over the West River

The following Bridge Railing details Item #900.640, Special Provision (Bridge Railing, Truss) for the above project, transmitted with your letter dated March 31, 2010, have been reviewed and are being returned herewith.

Sheets: 20 through 26 and E6

are approved

You must provide notice to our fabrication inspector, Jeff Clark, as to the date fabrication represented by these drawings will begin. That notice must be received and acknowledged at least seven days prior to that date, as per Specification 506.03. Jeff may be contacted by phone at (802)828-0044 or email at jeff.clark@state.vt.us. Any material fabricated prior to the notification date is subject to rejection without further cause.

Sincerely,

Martha Evans-Mongeon
Project Manager

Attachments
cc: [X] Resident Engineer w/prints, Chad Greenwood
[X] Shop Inspector w/prints, Jeff Clark
[X] Contractor w/prints, Renaud Brothers
[ ] Subcontractor – letter only _____
[X] Construction Divison – letter only
[X] Materials & Research Section (C&IA Unit) – letter only
[X] Files, MEM, w/ prints

VTrans Working to Get You There
Vermont Agency of Transportation

CASCO BAY STEEL STRUCTURES, INC.
75 Spring Hill Rd.
SACO, MAINE 04072

(207) 282-7360 FAX (207) 282-1179

LETTER OF TRANSMITTAL

TO VT Agency of Transportation
1 National Life Dr., Drawer 33
Montpelier, VT 05633

DATE 3/31/10	JOB NO. BHO 1442 (78)
ATTENTION MARTHA EVANS	
RE:	
Dummerston Bridge Railings Shop Drawings	

WE ARE SENDING YOU ☐ Attached ☐ Under separate cover via _____ the following items:

☒ Shop drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications

☐ Copy of letter ☐ Change order ☐ _____

COPIES	DATE	NO.	DESCRIPTION
7	3/31/10		DUMMERSTON BRIDGE RAIL SHOP DRAWINGS
7	3/31/10		FCAW WELDING PROCEDURE

THESE ARE TRANSMITTED as checked below:

☒ For approval ☐ Approved as submitted ☐ Resubmit _____ copies for approval

☐ For your use ☐ Approved as noted ☐ Submit _____ copies for distribution

☐ As requested ☐ Returned for corrections ☐ Return _____ corrected prints

☐ For review and comment ☐ _____

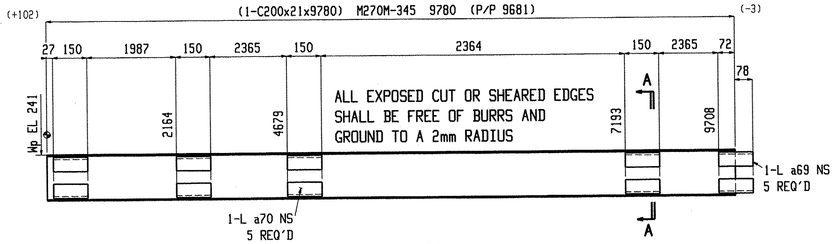
☐ FOR BIDS DUE _____ ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS ANY QUESTONS CONTACT: BRIAN TUPPER

COPY TO _____

SIGNED: BT/CAR

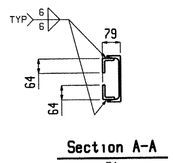
If enclosures are not as noted, kindly notify us at once.



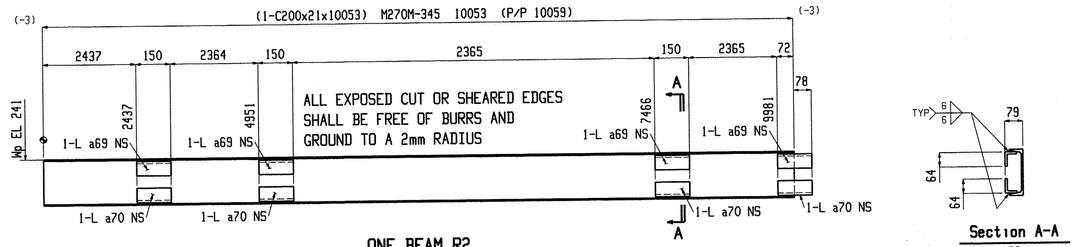
ONE BEAM R1

W	203x7.5
F	59.5x10
K	24x18

SHOP NOTE:
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Section A-A
R1

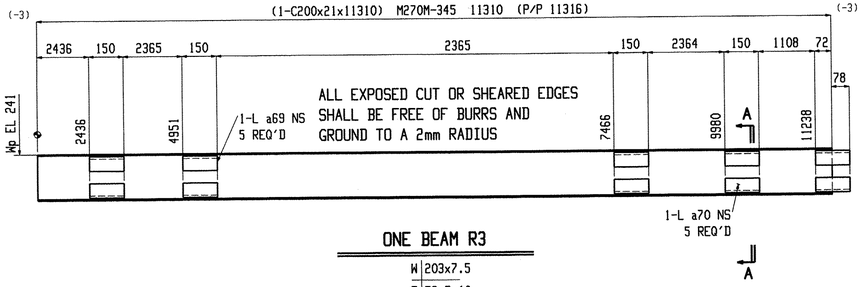


ONE BEAM R2

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F	59.5x10
K	24x18

SHOP NOTE:
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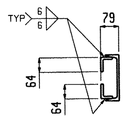
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R2



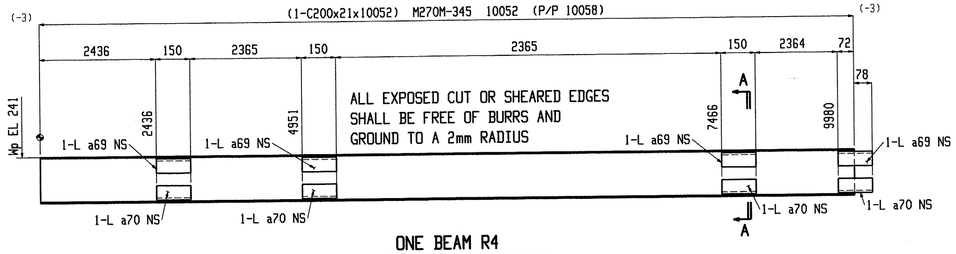
ONE BEAM R3

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F	59.5x10
K	24x18

SHOP NOTE:
TOE DIRECTION NEAR SIDE



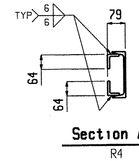
Section A-A
R3



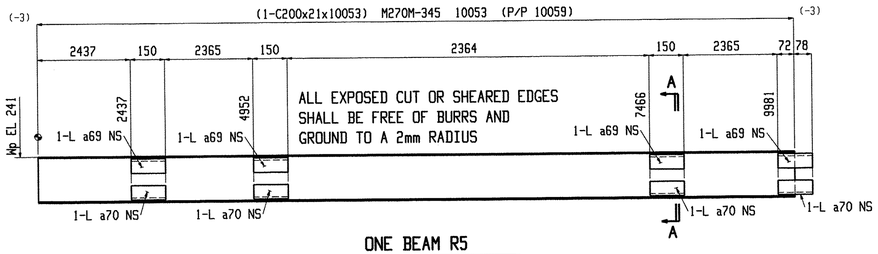
ONE BEAM R4

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F	59.5x10
K	24x18

SHOP NOTE:
TOE DIRECTION NEAR SIDE



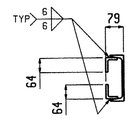
Section A-A
R4



ONE BEAM R5

W	203x7.5
F	59.5x10
K	24x18

SHOP NOTE:
TOE DIRECTION NEAR SIDE



Section A-A
R5

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
ONE	R1	BEAM		2	1			
1	R1	C200x21	9780				M270M-345	
5	a69	L64x51x9.5	150				M270M-345	
5	a70	L64x51x9.5	150				M270M-345	
ONE	R2	BEAM		2	1			
1	R2	C200x21	10053				M270M-345	
4	a69	L64x51x9.5	150				M270M-345	
4	a70	L64x51x9.5	150				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
ONE	R3	BEAM		2	1			
1	R3	C200x21	11310				M270M-345	
5	a69	L64x51x9.5	150				M270M-345	
5	a70	L64x51x9.5	150				M270M-345	
ONE	R4	BEAM		2	1			
1	R4	C200x21	10052				M270M-345	
4	a69	L64x51x9.5	150				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
4	a70	L64x51x9.5	150				M270M-345	
ONE	R5	BEAM		2	1			
1	R5	C200x21	10053				M270M-345	
4	a69	L64x51x9.5	150				M270M-345	
4	a70	L64x51x9.5	150				M270M-345	

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CK'D BY _____ OK'D BY
APR 0 1 2010
RESUBMIT _____ APPROVED
BY DATE 4/28/10

ITEMS ON THIS SHEET ARE PAY ITEM: 900.640 (UN)

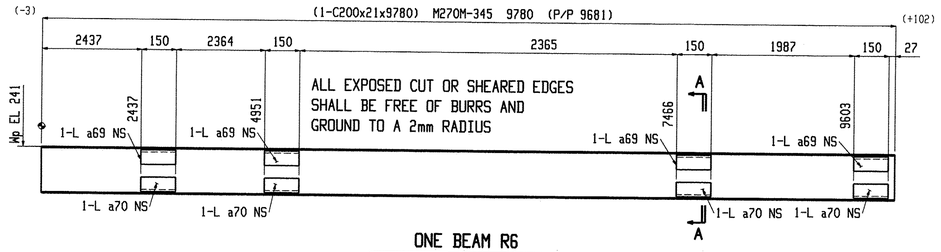
Casco Bay Steel Structures
75 Spring Hill Rd
Saco, ME, 04072
207-282-7360

		Holes:	21mm UNO
		BOLTS:	19mm DIA. M164M-I GALV UNO
		Steel GR:	M270M-GR345 UNO
⚠ APPR.	3-17-10	Paint:	PER SPECS (GREEN) UNO
Rev.No:	Date:	Surface Prep:	PER SPECS

Project:
DUMMERSTON RAILS
DUMMERSTON, VT

Date: 9-9-09		Job No.
DWN. BY: EG	Checked: MRS	Sheet No. 20

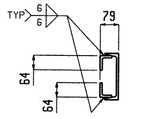
Mar 18 2010 03:41:54 PM



ONE BEAM R6

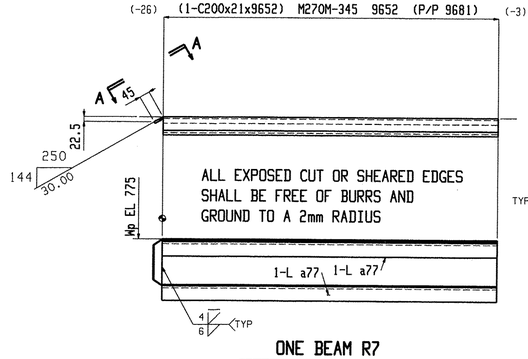
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F	59.5x10
K	24x18

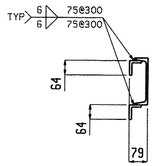
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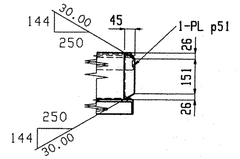


Section A-A

R6







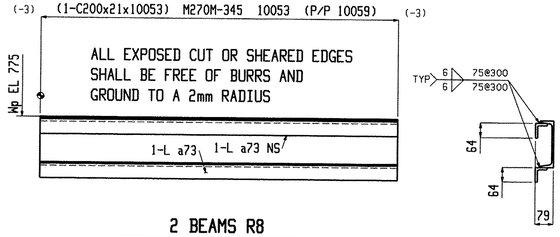
Section A-A

R7

ONE BEAM R7

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F	59.5x10
K	24x18

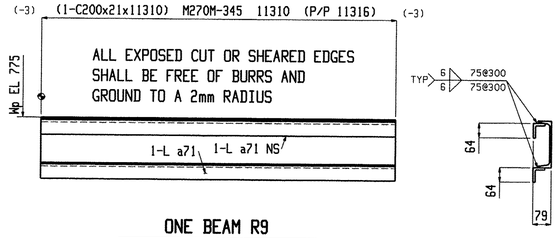
SHOP NOTE:
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2 BEAMS R8

W	203x7.5
F	59.5x10
K	24x18

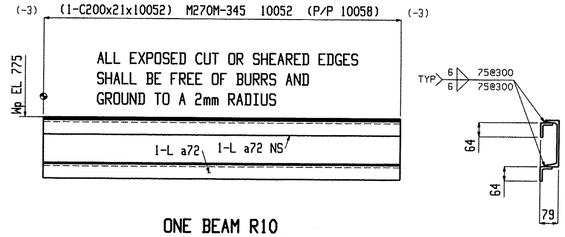
SHOP NOTE:
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ONE BEAM R9

W	203x7.5
F	59.5x10
K	24x18

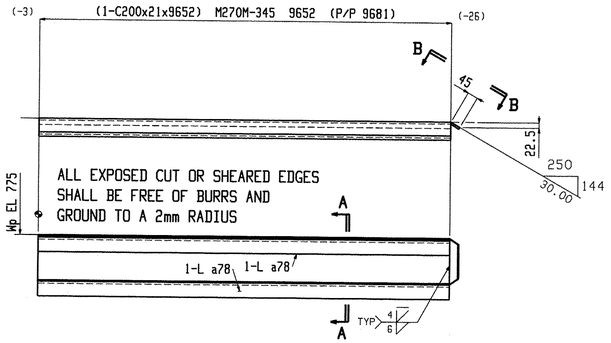
SHOP NOTE:
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ONE BEAM R10

W	203x7.5
F	59.5x10
K	24x18

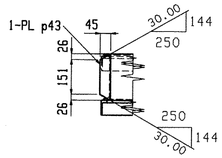
SHOP NOTE:
TOE DIRECTION NEAR SIDE



ONE BEAM R11

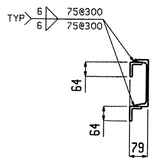
W	203x7.5
F	59.5x10
K	24x18

SHOP NOTE:
TOE DIRECTION NEAR SIDE



Section B-B

R11



Section A-A

R11

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
ONE	R6	BEAM		2	1			
1	R6	C200x21	9780				M270M-345	
4	a69	L64x51x9.5	150				M270M-345	
4	a70	L64x51x9.5	150				M270M-345	
ONE	R7	BEAM		2	1			
1	R7	C200x21	9652				M270M-345	
2	a77	L64x51x9.5	9652				M270M-345	
1	p51	PL8x45	203				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
2	R8	BEAM		2	2			
2	R8	C200x21	10053				M270M-345	
4	a73	L64x51x9.5	10053				M270M-345	
ONE	R9	BEAM		2	1			
1	R9	C200x21	11310				M270M-345	
2	a71	L64x51x9.5	11310				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
ONE	R10	BEAM		2	1			
1	R10	C200x21	10052				M270M-345	
2	a72	L64x51x9.5	10052				M270M-345	
ONE	R11	BEAM		2	1			
1	R11	C200x21	9652				M270M-345	
2	a78	L64x51x9.5	9652				M270M-345	
1	p43	PL8x45	203				M270M-345	

Mar 18 2010 03:42:01 PM

RECEIVED
CK'D BY _____ OK'D BY MRM
APR 0 1 2010
RESUBMIT _____ APPROVED ✓
BY _____ DATE 4/28/10

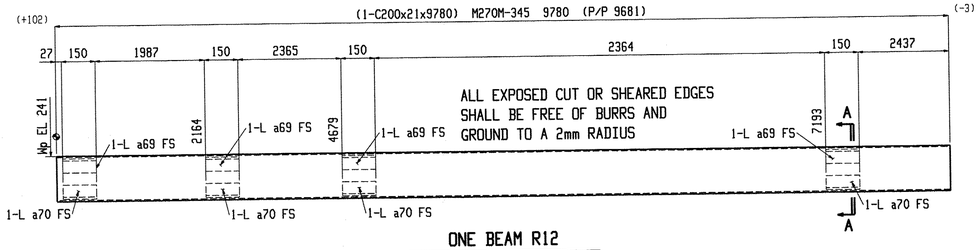
ITEMS ON THIS SHEET ARE PAY ITEM: 900.640 (UN)

Casco Bay Steel Structures
75 Spring Hill Rd
Saco, ME, 04072
207-282-7360

		Holes: 21mm UNO
		BOLTS: 19mm DIA. M164M-I GALV UNO
		Steel GR: M270M-GR345 UNO
⚠ APPR.	3-17-10	Paint: PER SPECS (GREEN) UNO
Rev.No:	Date:	Surface Prep: PER SPECS

Project:
DUMMERSTON RAILS
DUMMERSTON, VT

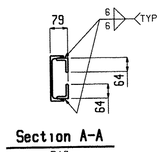
Date: 9-9-09		Job No.
DWN. BY: EG	Checked: MRS	Sheet No. 21



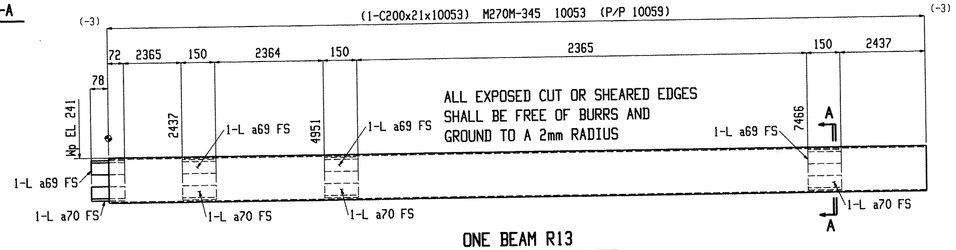
ONE BEAM R12

W	203x7.5
F	59.5x10
K	24x18

SHOP NOTE:
TOE DIRECTION FAR SIDE



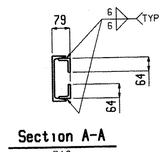
Section A-A
R12



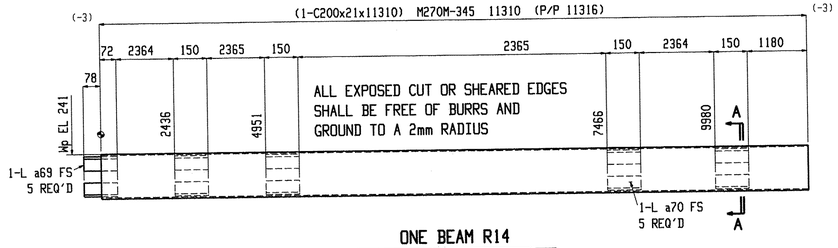
ONE BEAM R13

W	203x7.5
F	59.5x10
K	24x18

SHOP NOTE:
TOE DIRECTION FAR SIDE



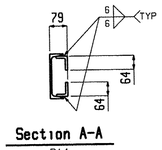
Section A-A
R13



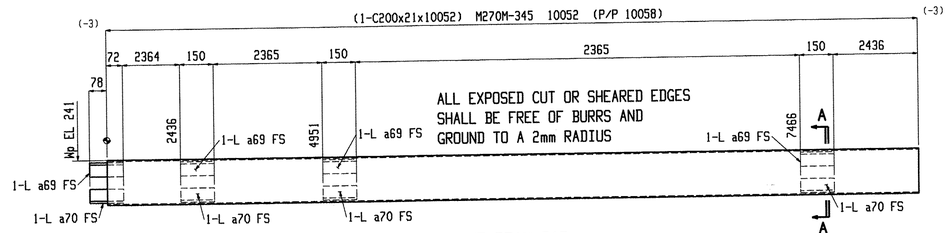
ONE BEAM R14

W	203x7.5
F	59.5x10
K	24x18

SHOP NOTE:
TOE DIRECTION FAR SIDE



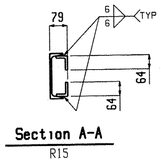
Section A-A
R14



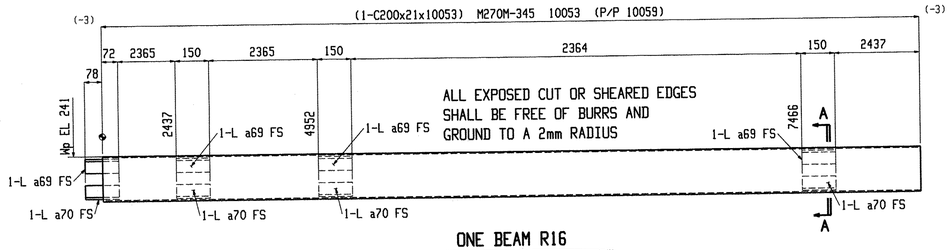
ONE BEAM R15

W	203x7.5
F	59.5x10
K	24x18

SHOP NOTE:
TOE DIRECTION FAR SIDE



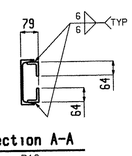
Section A-A
R15



ONE BEAM R16

W	203x7.5
F	59.5x10
K	24x18

SHOP NOTE:
TOE DIRECTION FAR SIDE



Section A-A
R16

RECEIVED
CK'D BY _____ OK'D BY Mem
APR 0 1 2010
RESUBMIT _____ APPROVED ✓
BY _____ DATE 4/23/10

ITEMS ON THIS SHEET ARE PAY ITEM: 900.640 (UN)

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
ONE	R12	BEAM		2	1		M270M-345	
1	R12	C200x21	9780				M270M-345	
4	a69	L64x51x9.5	150				M270M-345	
4	a70	L64x51x9.5	150				M270M-345	
ONE	R13	BEAM		2	1			
1	R13	C200x21	10053				M270M-345	
4	a69	L64x51x9.5	150				M270M-345	
4	a70	L64x51x9.5	150				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
ONE	R14	BEAM		2	1			
1	R14	C200x21	11310				M270M-345	
5	a69	L64x51x9.5	150				M270M-345	
5	a70	L64x51x9.5	150				M270M-345	
ONE	R15	BEAM		2	1			
1	R15	C200x21	10052				M270M-345	
4	a69	L64x51x9.5	150				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
4	a70	L64x51x9.5	150				M270M-345	
ONE	R16	BEAM		2	1			
1	R16	C200x21	10053				M270M-345	
4	a69	L64x51x9.5	150				M270M-345	
4	a70	L64x51x9.5	150				M270M-345	

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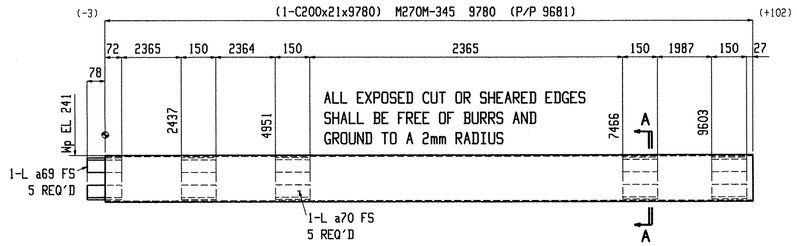
Casco Bay Steel Structures
75 Spring Hill Rd
Saco, ME, 04072
207-282-7360

Rev.No:	Date:
1 APPR.	3-17-10

Project:
DUMMERSTON RAILS
DUMMERSTON, VT

Holes: 21mm UNO
BOLTS: 19mm DIA. M164M-I GALV UNO
Steel GR: M270M-GR345 UNO
Paint: PER SPECS (GREEN) UNO
Surface Prep: PER SPECS

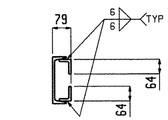
Date: 9-9-09
Job No.
DWN. BY: EG
Checked: MRS
Sheet No. 22



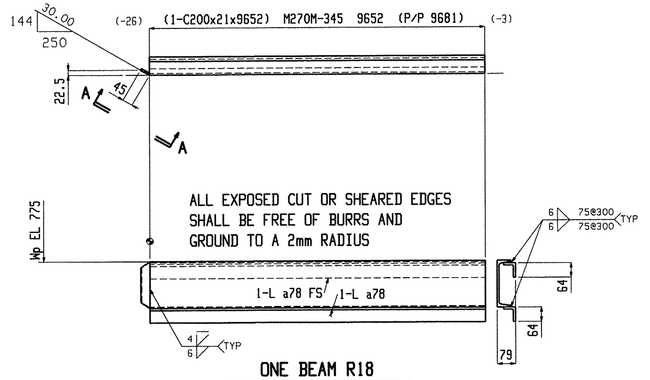
ONE BEAM R17

W	203x7.5
F	59.5x10
K	24x18

SHOP NOTE:
TOE DIRECTION FAR SIDE



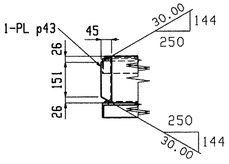
Section A-A
R17



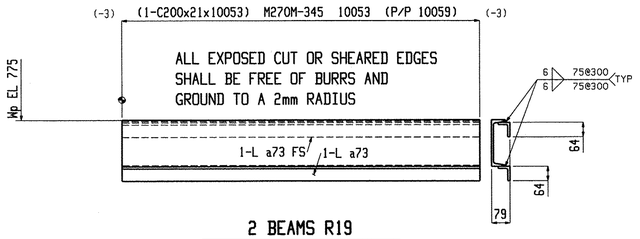
ONE BEAM R18

W	203x7.5
F	59.5x10
K	24x18

SHOP NOTE:
TOE DIRECTION FAR SIDE



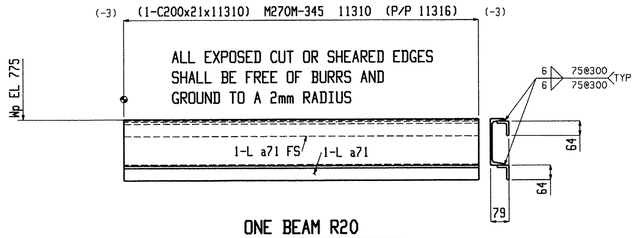
Section A-A
R18



2 BEAMS R19

W	203x7.5
F	59.5x10
K	24x18

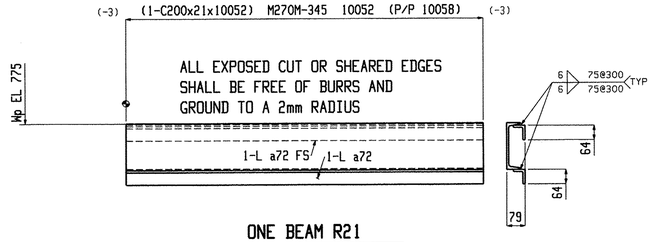
SHOP NOTE:
TOE DIRECTION FAR SIDE



ONE BEAM R20

W	203x7.5
F	59.5x10
K	24x18

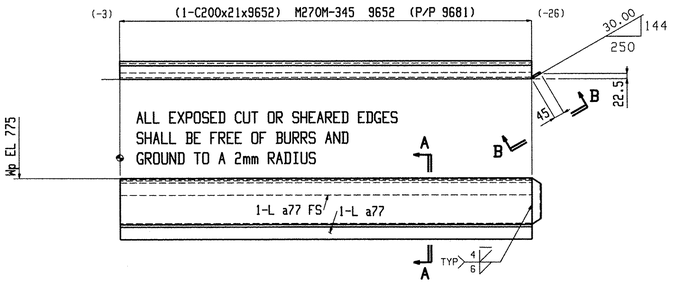
SHOP NOTE:
TOE DIRECTION FAR SIDE



ONE BEAM R21

W	203x7.5
F	59.5x10
K	24x18

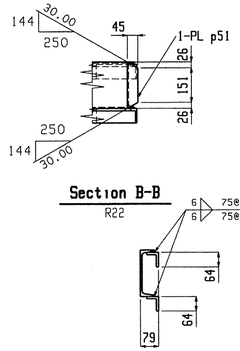
SHOP NOTE:
TOE DIRECTION FAR SIDE



ONE BEAM R22

W	203x7.5
F	59.5x10
K	24x18

SHOP NOTE:
TOE DIRECTION FAR SIDE



Section B-B
R22

Section A-A
R22

RECEIVED
CK'D BY MRM
APR 0 1 2010
RESUBMIT APPROVED ✓
BY DATE 4/28/10

ITEMS ON THIS SHEET ARE PAY ITEM: 900.640 (UN)

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
ONE	R17	BEAM		2	1			
1	R17	C200x21	9780				M270M-345	
5	a69	L64x51x9.5	150				M270M-345	
5	a70	L64x51x9.5	150				M270M-345	
ONE	R18	BEAM		2	1			
1	R18	C200x21	9652				M270M-345	
2	a78	L64x51x9.5	9652				M270M-345	
1	p43	PL8x45	203				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
2	R19	BEAM		2	2			
2	R19	C200x21	10053				M270M-345	
4	a73	L64x51x9.5	10053				M270M-345	
ONE	R20	BEAM		2	1			
1	R20	C200x21	11310				M270M-345	
2	a71	L64x51x9.5	11310				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
ONE	R21	BEAM		2	1			
1	R21	C200x21	10052				M270M-345	
2	a72	L64x51x9.5	10052				M270M-345	
ONE	R22	BEAM		2	1			
1	R22	C200x21	9652				M270M-345	
2	a77	L64x51x9.5	9652				M270M-345	
1	p51	PL8x45	203				M270M-345	

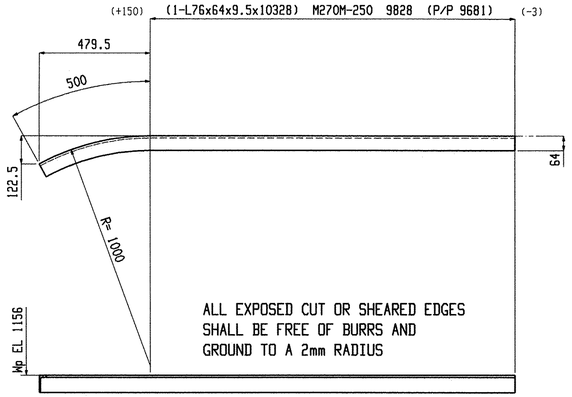
Mar 18 2010 03:42:14 PM

Casco Bay Steel Structures
75 Spring Hill Rd
Saco, ME, 04072
207-282-7360

Rev.No:	Date:	
1 APPR.	3-17-10	Paint: PER SPECS (GREEN) UNO
		Surface Prep: PER SPECS
		Holes: 21mm UNO
		BOLTS: 19mm DIA. M164M-I GALV UNO
		Steel GR: M270M-GR345 UNO

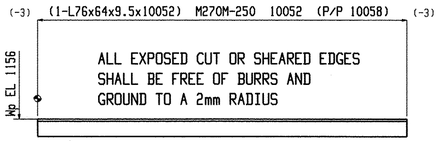
Project:
DUMMERSTON RAILS
DUMMERSTON, VT

Date: 9-9-09
Job No.
DWN. BY: EG
Checked: MRS
Sheet No. 23



ONE BEAM R23

SHOP NOTE:
TOE DIRECTION NEAR SIDE

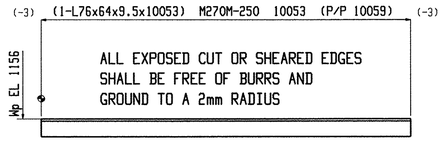


ONE BEAM R26

SHOP NOTE:
TOE DIRECTION NEAR SIDE

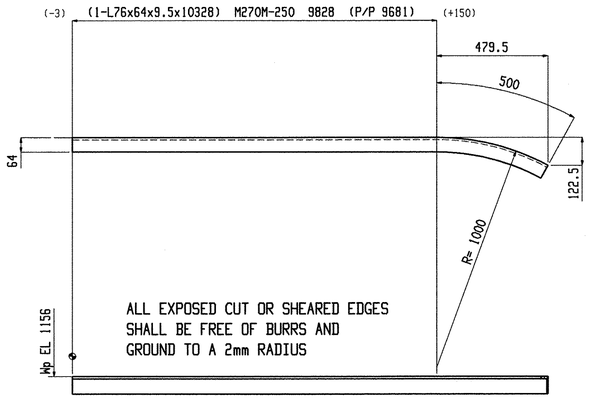
2 BEAMS R29

SHOP NOTE:
TOE DIRECTION FAR SIDE



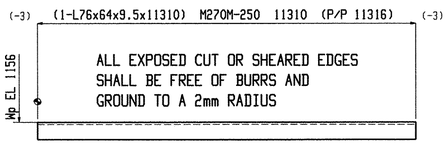
2 BEAMS R24

SHOP NOTE:
TOE DIRECTION NEAR SIDE



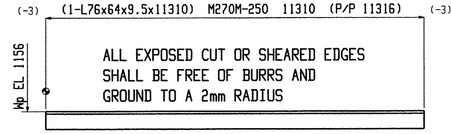
ONE BEAM R27

SHOP NOTE:
TOE DIRECTION NEAR SIDE



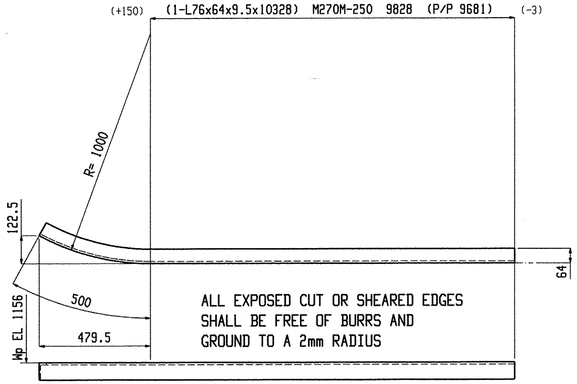
ONE BEAM R30

SHOP NOTE:
TOE DIRECTION FAR SIDE



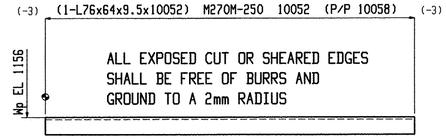
ONE BEAM R25

SHOP NOTE:
TOE DIRECTION NEAR SIDE



ONE BEAM R28

SHOP NOTE:
TOE DIRECTION FAR SIDE



ONE BEAM R31

SHOP NOTE:
TOE DIRECTION FAR SIDE

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BY _____ ORDER _____
APR 0 1 2010
RESUBMIT _____ APPROVED _____
BY _____ DATE 4/28/10

ITEMS ON THIS SHEET ARE PAY ITEM: 900.640 (UN)

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
ONE	R23	BEAM		2	1			
1	R23	L76x64x9.5	10328				M270M-250	
2	R24	BEAM		2	2			
2	R24	L76x64x9.5	10053				M270M-250	
ONE	R25	BEAM		2	1			
1	R25	L76x64x9.5	11310				M270M-250	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
ONE	R26	BEAM		2	1			
1	R26	L76x64x9.5	10052				M270M-250	
ONE	R27	BEAM		2	1			
1	R27	L76x64x9.5	10328				M270M-250	
ONE	R28	BEAM		2	1			
1	R28	L76x64x9.5	10328				M270M-250	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
2	R29	BEAM		2	2			
2	R29	L76x64x9.5	10053				M270M-250	
ONE	R30	BEAM		2	1			
1	R30	L76x64x9.5	11310				M270M-250	
ONE	R31	BEAM		2	1			
1	R31	L76x64x9.5	10052				M270M-250	

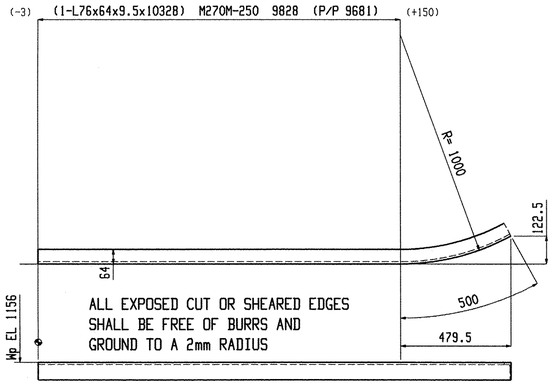
Mar 18 2010 03:42:20 PM

Casco Bay Steel Structures
75 Spring Hill Rd
Saco, ME, 04072
207-282-7360

Rev.No:	Date:	
1 APPR.	3-17-10	Paint: PER SPECS (GREEN) UNO
		Surface Prep: PER SPECS
		Holes: 21mm UNO
		BOLTS: 19mm DIA. M164M-I GALV UNO
		Steel GR: M270M-GR345 UNO

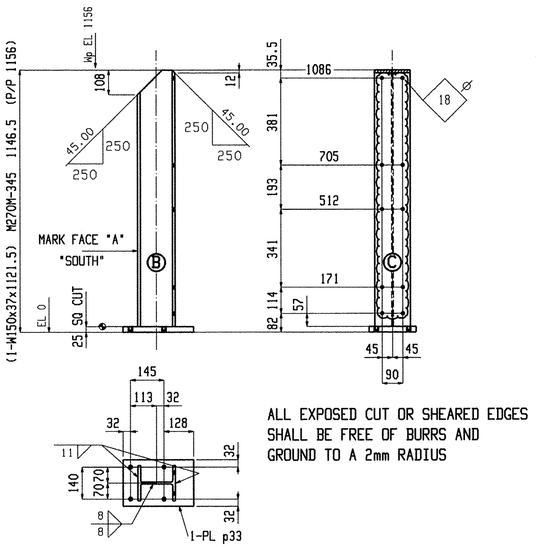
Project:
DUMMERSTON RAILS
DUMMERSTON, VT

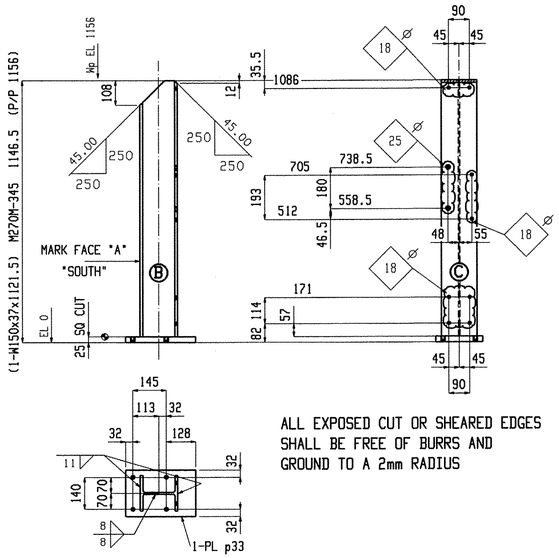
Date:	Job No.
9-9-09	
DWN. BY: EG	Checked: MRS
Sheet No.	24

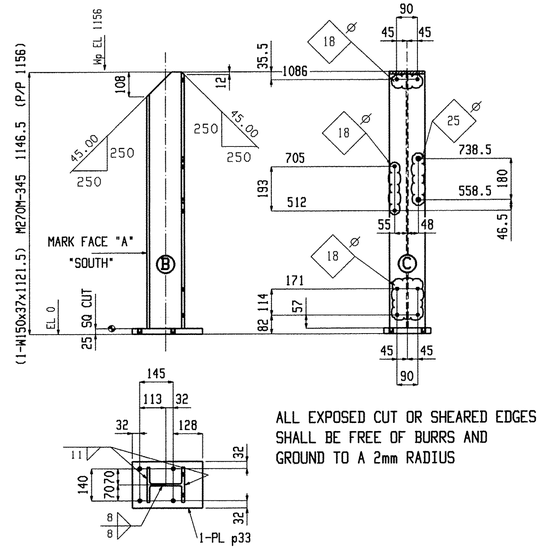


ONE BEAM R32

SHOP NOTE:
TOE DIRECTION FAR SIDE

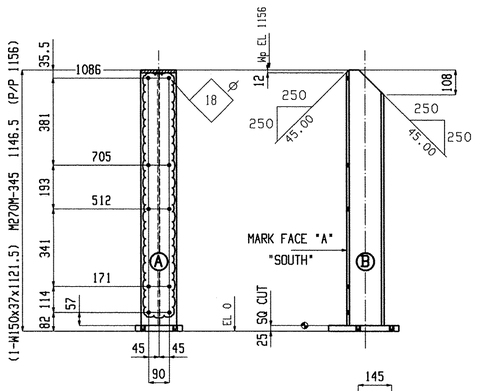






24 COLUMNS C1

W	162x8
F	154.5x11.5
K	20.5x13

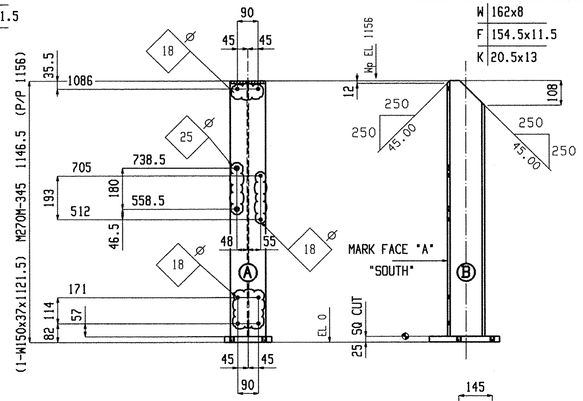


24 COLUMNS C4

W	162x8
F	154.5x11.5
K	20.5x13

ONE COLUMN C2

W	162x8
F	154.5x11.5
K	20.5x13

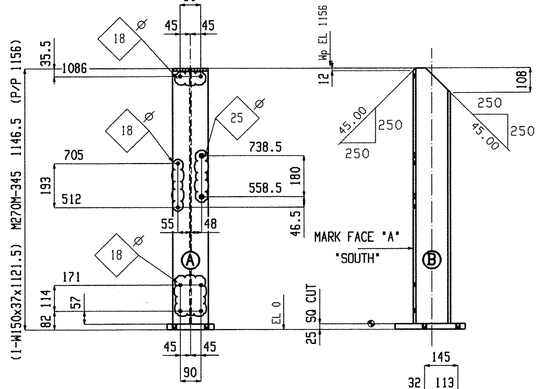


ONE COLUMN C5

W	162x8
F	154.5x11.5
K	20.5x13

ONE COLUMN C3

W	162x8
F	154.5x11.5
K	20.5x13



ONE COLUMN C6

W	162x8
F	154.5x11.5
K	20.5x13

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CK'D BY ORDER
APR 0 1 2010
RESUBMIT APPROVED
BY DATE 4/28/10

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
ONE	R32	BEAM		2	1			
1	R32	L76x64x9.5	10328				M270M-250	
24	C1	COLUMN		2	24			
24	C1	W150x37	1121				M270M-345	SIE
24	p33	PL25x204	305				M270M-345	
ONE	C2	COLUMN		2	1			
1	C2	W150x37	1121				M270M-345	SIE
1	p33	PL25x204	305				M270M-345	
ONE	C3	COLUMN		2	1			
1	C3	W150x37	1121				M270M-345	SIE
1	p33	PL25x204	305				M270M-345	
24	C4	COLUMN		2	24			
24	C4	W150x37	1121				M270M-345	SIE
24	p33	PL25x204	305				M270M-345	
ONE	C5	COLUMN		2	1			
1	C5	W150x37	1121				M270M-345	SIE
1	p33	PL25x204	305				M270M-345	
ONE	C6	COLUMN		2	1			
1	C6	W150x37	1121				M270M-345	SIE
1	p33	PL25x204	305				M270M-345	

ITEMS ON THIS SHEET ARE PAY ITEM: 900.640 (UN)

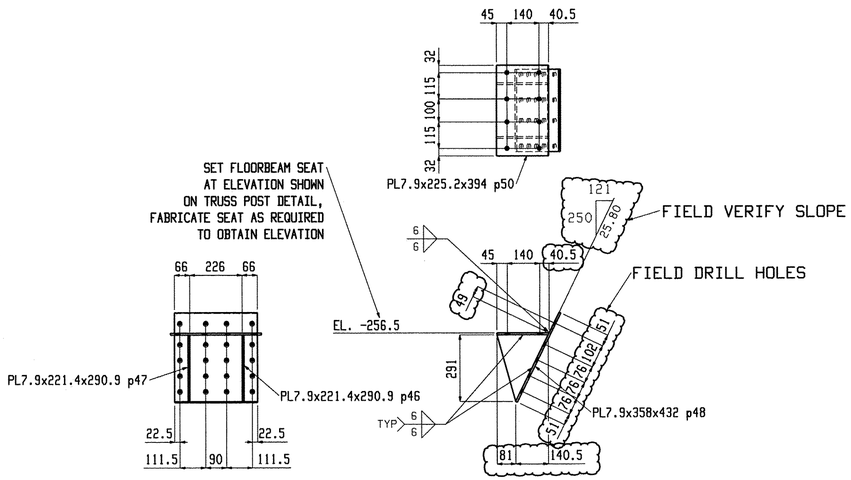
Casco Bay Steel Structures
75 Spring Hill Rd
Saco, ME, 04072
207-282-7360

		Holes:	21mm UNO
		BOLTS:	19mm DIA. M164M-I GALV UNO
		Steel GR:	M270M-GR345 UNO
APPR.	3-17-10	Paint:	PER SPECS (GREEN) UNO
Rev.No:	Date:	Surface Prep:	PER SPECS

Project:
DUMMERSTON RAILS
DUMMERSTON, VT

Date:	9-9-09	Job No.	
DWN. BY:	Checked:	Sheet No.	25
EG	MRS		

Mar 18 2010 03:42:24 PM



4 MISCS M9

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
4	M9	MISC		1	4			
4	p48	PL7.9x358	432				M270M-345	
4	p50	PL7.9x225.2	394				M270M-345	
4	p46	PL7.9x221.4	291				M270M-345	
4	p47	PL7.9x221.4	291				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks

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BY DATE 4/28/10

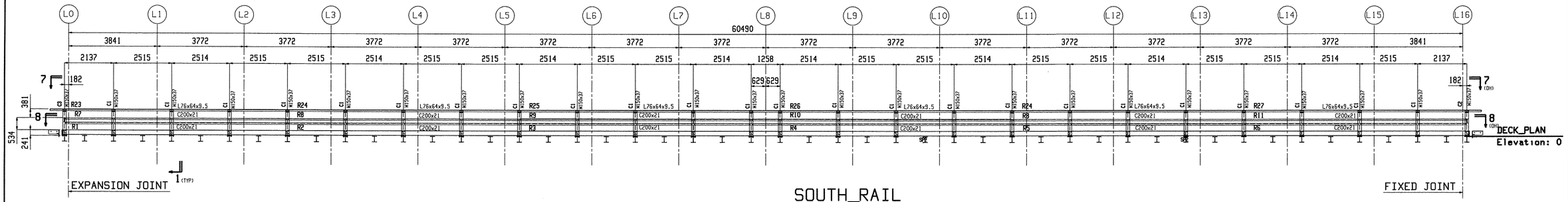
ITEMS ON THIS SHEET ARE PAY ITEM: 900.640 (UN)

Casco Bay Steel Structures
75 Spring Hill Rd
Saco, ME. 04072
207-282-7360

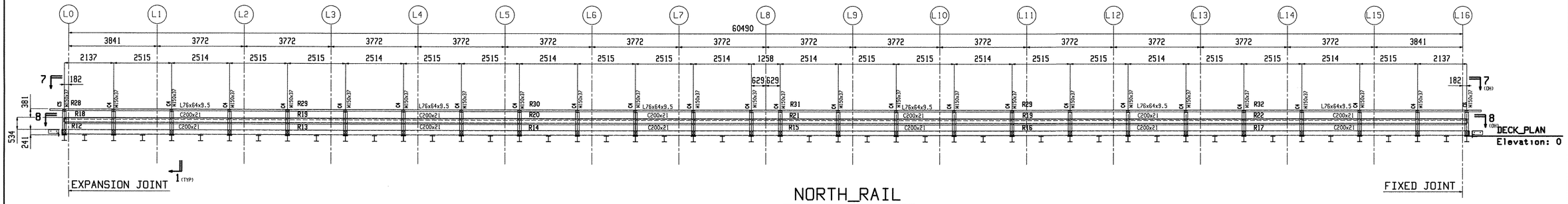
Rev.No:	Date:	
		Holes: 21mm UNO
		BOLTS: 19mm DIA. M164M-I GALV UNO
		Steel GR: M270M-GR345 UNO
1 APPR.	3-17-10	Paint: PER SPECS (GREEN) UNO
		Surface Prep: PER SPECS

Project:
DUMMERSTON RAILS
DUMMERSTON, VT

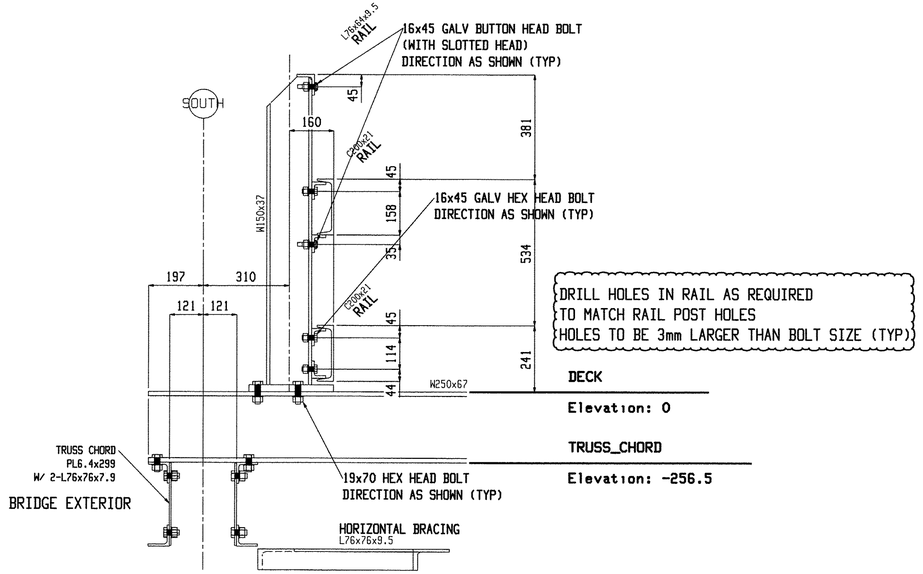
Date: 3-17-10
Job No.
DWN. BY: EG
Checked: MRS
Sheet No. 26



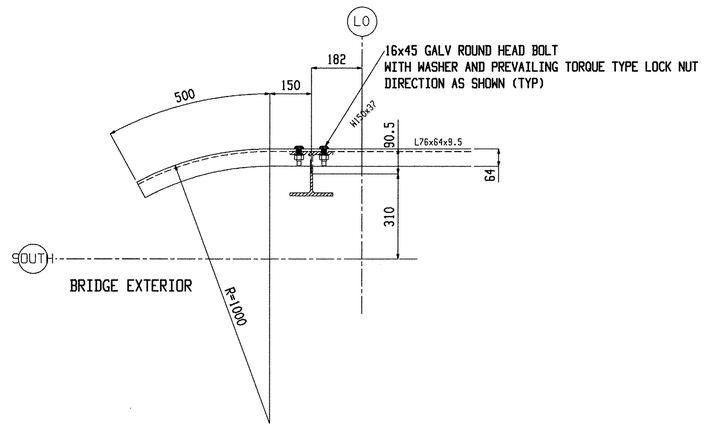
SOUTH_RAIL



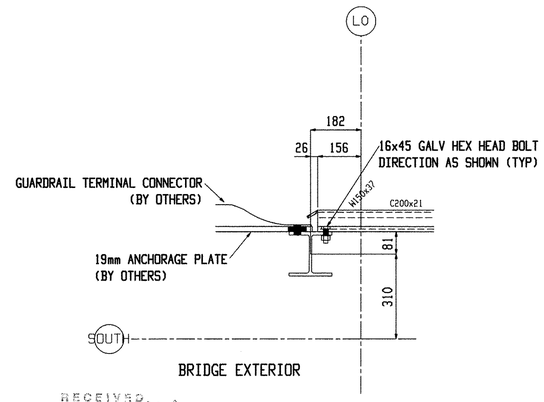
NORTH_RAIL



SECTION_1



SECTION_7
Elevation: 1156 (U.N.)



SECTION_8
Elevation: 775 (U.N.)

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CK'D BY MRS ORDER BY MRS
APR 0 1 2010
RESUBMIT APPROVED
BY DATE 4/23/10

Casco Bay Steel Structures 75 Spring Hill Rd Saco, ME, 04072 207-282-7360			Holes: 21mm UNO
			BOLTS: 19mm DIA. M164M-I GALV UNO
			Steel GR: M270M-GR345 UNO
	1 APPR.	3-17-10	Paint: PER SPECS (GREEN) UNO
	Rev.No:	Date:	Surface Prep: PER SPECS
Project: DUMMERSTON RAILS DUMMERSTON, VT		Date: 9-9-09	Job No. BHO 1442 (28)
		DWN. BY: EG / Checked: MRS	Sheet No. E6

Mar 18 2010 03:42:37 PM

VERMONT

State of Vermont
PDD/Structures Design Section
National Life Building – Drawer 33
Montpelier, VT 05633-5001
www.aot.state.vt.us

Agency of Transportation

[phone] 802-828-2621
[fax] 802-828-3566
[ttd] 800-253-0191

Renaud Brothers, Inc.
283 Fort Bridgeman Road #2
Vernon, VT 05354

DATE:October 22, 2010

Project Name: Dummerston **Project #: BHO 1442 (28)**

Structure Identification: Bridge 37 on TH 62 over the West River

The following Additional Structural Steel details [Item # 506.60, Structural Steel] for the above project transmitted with your letter dated October 21, 2010, have been reviewed and are being returned herewith.

Sheets: 1 and 2 of 2

are approved

Please notify our fabrication inspector, Jeff Clark, as to the date fabrication represented by these drawings will begin. You may contact Jeff by phone at (802)828-0044 or email at jeff.clark@state.vt.us. Any material fabricated prior to the notification date is subject to rejection without further cause.

Sincerely,

Martha Evans-Mongeon
Project Manager

Attachments
cc: [X] Resident Engineer w/prints , Chad Greenwood
[X] Shop Inspector w/prints, Jeff Clark
[ ] Contractor w/prints
[X] Construction Division – letter only
[X] Materials & Research Section (C&IA Unit) – letter only
[X] Files (Structures)

VTrans Working to Get You There
Vermont Agency of Transportation

RENAUD BROS., INC.
283 Fort Bridgeman Road #2, Vernon, VT 05354
phone (802) 257-7383
fax (802) 257-7308

October 21, 2010

Martha Evans-Mongeon, Project Manager
Structures Section
Vermont Agency of Transportation
1 National Life Drive, Drawer 33
Montpelier, VT 05633-5001

RE: Dummerston BHO 1442(28)
Top Chord Repair & Shoring Plans

Dear Martha:

Enclosed for review please find five (5) copies of the revised Top Chord Plate Plans and the Shoring Plan for the above-referenced project.

Please review and comment as soon as possible.

If you have any questions or require additional information, please do not hesitate to contact us.

Very truly yours,

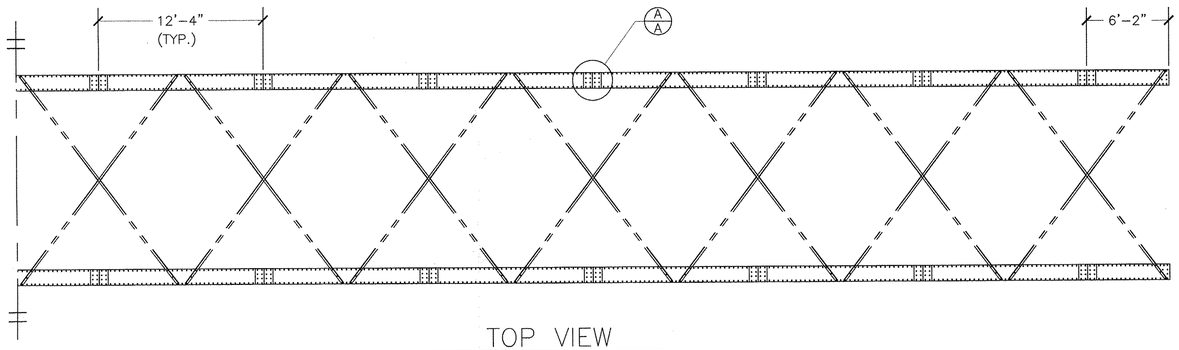
RENAUD BROS., INC.

Michael J Renaud (CAE)

Michael J. Renaud, V.P.

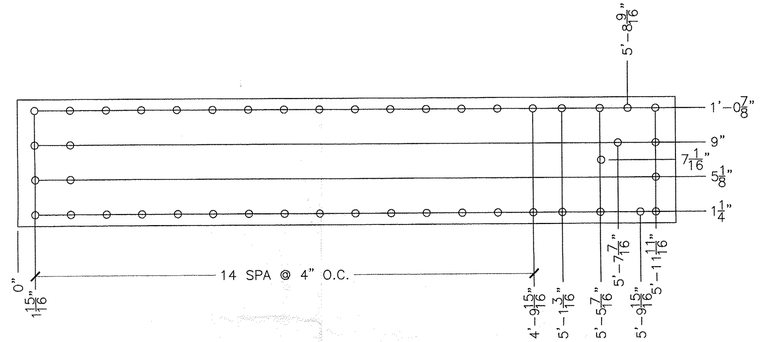
MJR:car

Enclosures



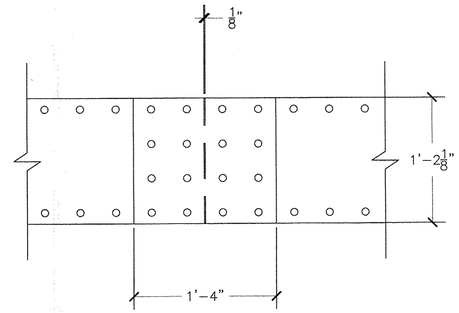
TOP VIEW

SCALE: 3/16"=1'-0"



END COVER PLATE

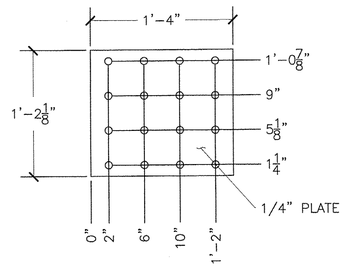
SCALE: 1 1/2"=1'-0" QTY. 4
MAT'L A572-50 PL. HOLES 13/16 ø TYP.



SPLICE DETAIL

A
A

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



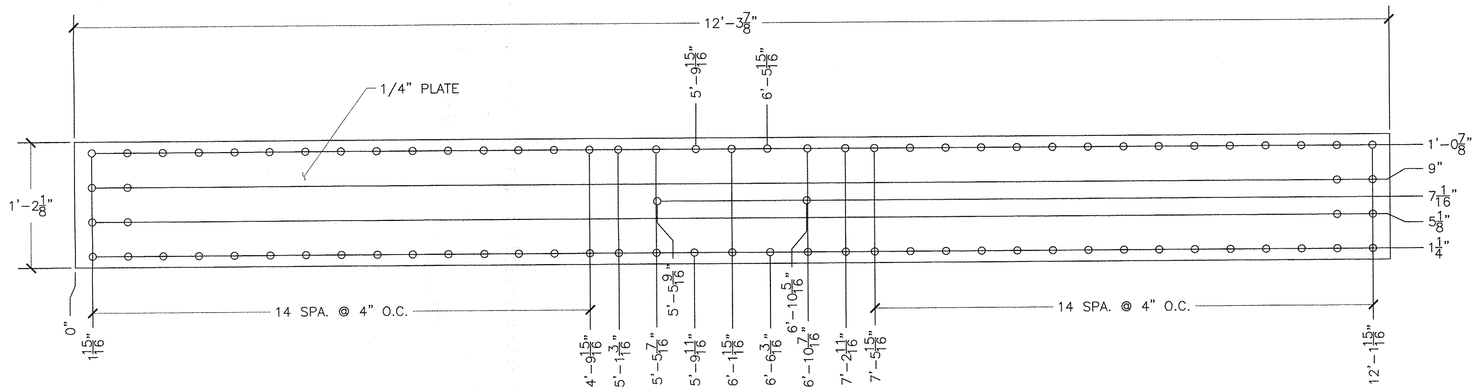
SPLICE PLATE

SCALE: 1 1/2"=1'-0" QTY. 28
MAT'L A572-50 PL. HOLES 13/16 ø TYP.

NOTES:

*ALL MATERIAL TO BE A572-50 DOMESTIC
*BACKING AND SPLICE PLATES TO BE 1/4" THCK.
*ONLY ONE SECTION SHALL BE COMPLETED AT A TIME
*PLATE TO BE GALVANIZED, THEN FINISHED OUT WITH MID AND FINISH COAT OF PAINT.
*ALL EXISTING HOLES TO BE REAMED TO 3/4"ø
*ALL 5/8"ø RIVETS SHALL BE REPLACED WITH 3/4"ø T.C. BOLTS GR. A325 M.G.
*ALL MEASUREMENTS TO BE FIELD VERIIFIED
*ALL CUT EDGES SHALL BE GROUND TO A 1/16" RADIUS

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BY DATE 10/22/10



TOP COVER PLATE

SCALE: 1 1/2"=1'-0" QTY. 26
MAT'L A572-50 PL. HOLES 13/16 ø TYP.

BILL OF MATERIALS

QTY.	DESCRIPTION	THICKNESS	SIZE
26	TOP REPL. PL.	0'-0 1/4"	1'-2 1/8"X12'-3 7/8"
4	END REPL. PLATE	0'-0 1/4"	1'-2 1/8"X6'-1 15/16"
26	SPLICE PLATE	0'-0 1/4"	1'-2 1/8"X1'-4"
2024	A325 T.C. BOLT M.G.	3/4" DIA.	2"
344	A325 T.C. BOLT M.G.	3/4" DIA.	2 1/4"

REV. NO.	DATE:
1	10/19/2010

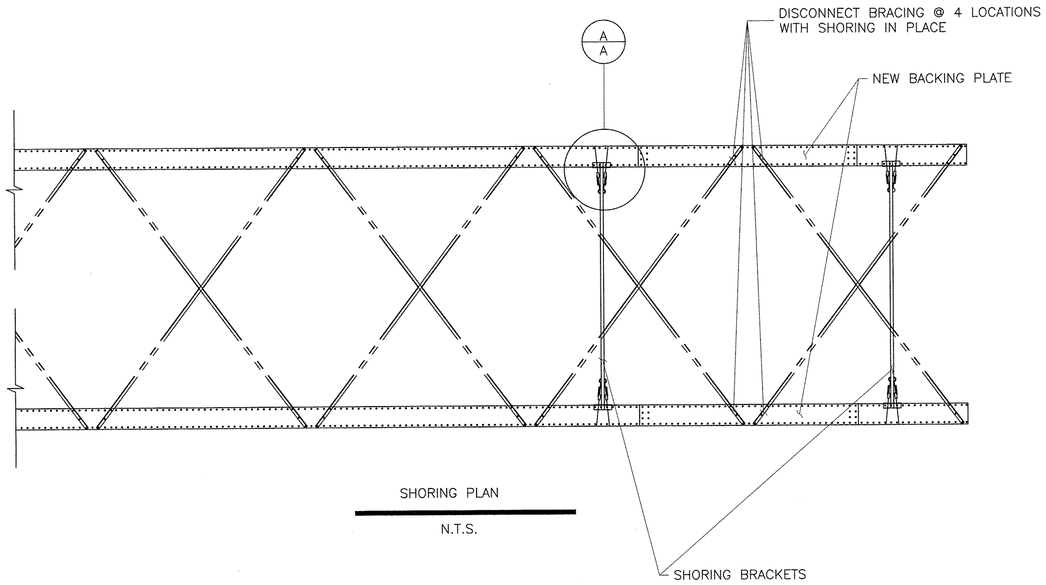
Renaud Bros. Inc.
283 FT BRIDGMAN RD.
VERNON VT. 05354
PH. 802-257-7383 FAX 802-257-7308

SHEET NAME: TOP CHORD PLATES

PROJECT NAME: DUMMERSTON
PROJECT NO: BHO 1442(28)

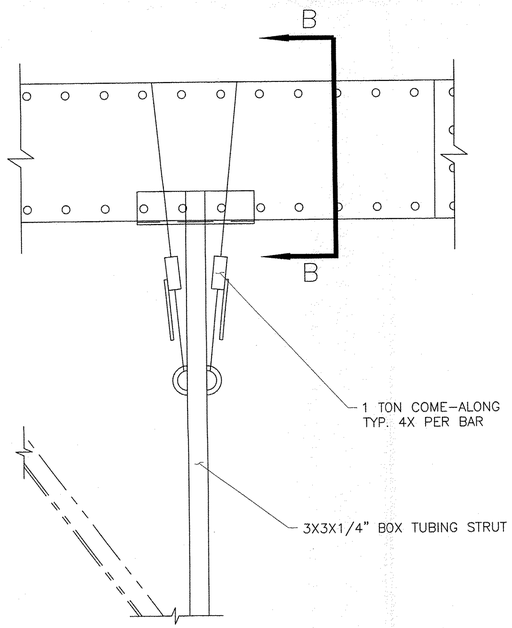
DRAWN BY:	CHK'D BY:	DATE:
A.D.	M.R.	10/12/10

SHEET NO. 1 OF 2



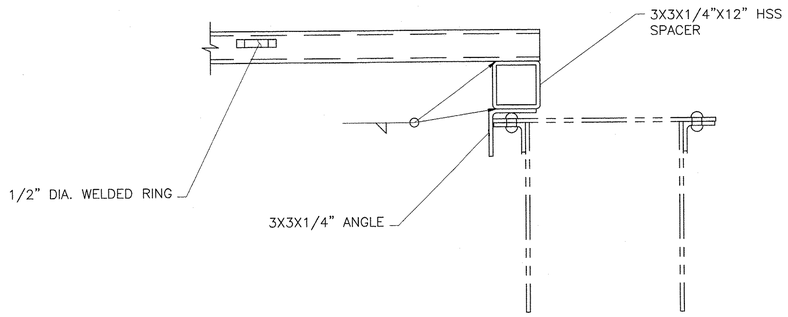
SHORING PLAN

N.T.S.



A
A COME–ALONG DETAIL

N.T.S.



B
B CONNECTION SECTION

N.T.S. (COME–ALONG REMOVED FOR CLARITY)

[NEW PLATE AND H.S. BOLTS NOT SHOWN]

NOTES:

*STRUTS WILL BE PLACED ON EITHER SIDE OF WHERE THE SPLICE WILL BE LOCATED, BEFORE ANY LATERAL BRACING IS DISCONNECTED. (EXCEPTION; ON THE ENDS OF THE BRIDGE ONLY ONE STRUT WILL BE NEEDED, PORTAL WILL ACT AS SECOND STRUT.
*TENSION WILL BE PULLED ON THE COME–ALONGS, TO ENSURE THAT CONTACT IS BETWEEN CHORD, AND ANGLE LOCATED ON BOTTOM OF STRUT, TO ENSURE THAT NO MOVEMENT IS ALLOWED IN OR OUT.
*NO MORE THAN ONE BAY OF LATERAL BRACING SHALL BE REMOVED AT A TIME. (UPSTREAM AND DOWNSTREAM TOP CHORD).
*CONTAINMENT WILL BE PROVIDED TO ENSURE THAT NO SHAVINGS WILL FALL ONTO FRESHLY PAINTED SURFACES, IN AN EFFORT TO AVOID RUST STAINS.

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CK'D BY VTrans DIST BY
OCT 22 2010
RESUBMIT APPROVED
BY DATE 10/22/10

SHEET NAME: SHORING PLAN

REV. NO.	DATE:
1	10/19/2010

Renaud Bros. Inc.
283 FT BRIDGMAN RD.
VERNON VT. 05354
PH. 802–257–7383 FAX 802–257–7308

PROJECT NAME: DUMMERSTON

PROJECT NO: BHO 1442(28)

DRAWN BY:	CHK'D BY:	DATE:
A.D.	M.R.	10/12/10

SHEET NO. 2 OF 2

VERMONT

State of Vermont
PDD/Structures Design Section
National Life Building – Drawer 33
Montpelier, VT 05633-5001
www.aot.state.vt.us

[phone] 802-828-2621
[fax] 802-828-3566
[ttd] 800-253-0191

Agency of Transportation

D. S. Brown
302 East Cherry Street
North Baltimore, OH 45872

DATE: December 31, 2009

Project Name: Dummerston **Project #: BHO 1442 (28)**

Structure Identification: Bridge # 37 On TH 62 over the West River

The following Expansion Joint details, Item # 516.11, Bridge Expansion Joint, Vermont , for the above project (Vendor's Job # 27177), transmitted with your letter dated November 12, 2009 have been reviewed and are being returned herewith.

Sheet: 2 of 3
is approved X]

Sheets: 1 and 3 of 3
are approved "as noted"[X]

Sheets: _____
Are to be reconsidered (note comments in red) and resubmitted for final approval.

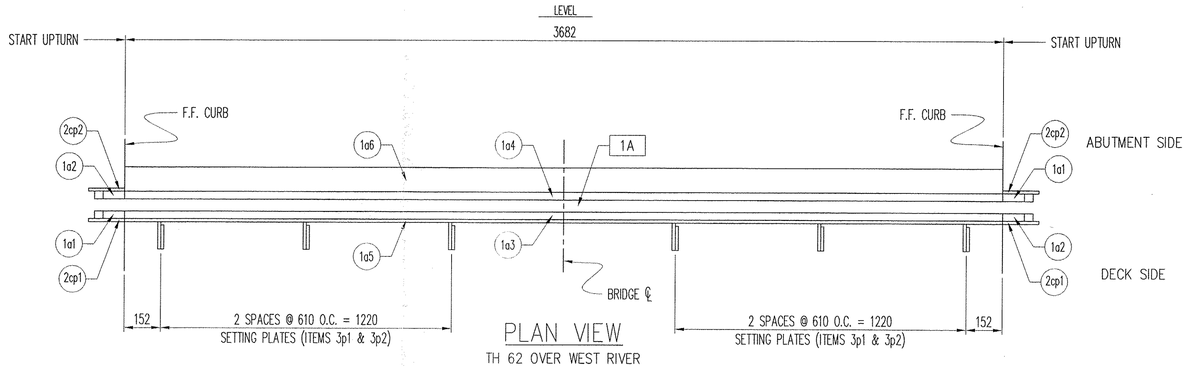
You must provide notice to our fabrication inspector, Jeff Clark, as to the date fabrication represented by these drawings will begin. That notice must be received and acknowledged at least seven days prior to that date, as per Specification 506.03. Jeff may be contacted by phone at (802)828-0044 or email at jeff.clark@state.vt.us. Any material fabricated prior to the notification date is subject to rejection without further cause.

Sincerely,

Martha Evans-Mongeon
Project Manager

Attachments
cc: [X] Resident Engineer w/prints, Chad Greenwood
[X] Shop Inspector w/prints, Jeff Clark
[X] Contractor w/prints, Renaud Brothers, Inc
[] Subcontractor – letter only _____
[X] Construction Division – letter only
[X] Materials & Research Section (C&IA Unit) – letter only
[X] Files, Structures

VTrans Working to Get You There
Vermont Agency of Transportation



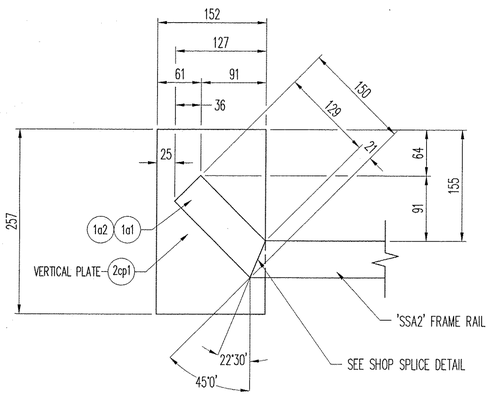
PLAN VIEW

TH 62 OVER WEST RIVER
BRIDGE NO. 37
ABUTMENT 1 (LOOKING DOWNSTATION)
ABUTMENT 2 (LOOKING UPSTATION)
'SSA2'-400 EXP. JOINT (M.R.= 102mm)
(2) JOINTS TOTAL

NOTE: ONLY VERTICAL PLATES SHOWN FOR CLARITY. SEE SHEET 2 FOR FULL COVER PLATE DETAILS.

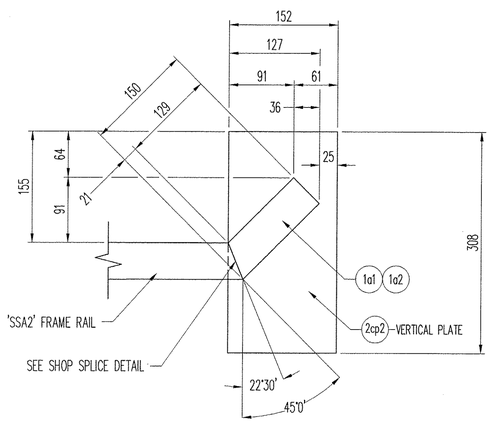
MK	QTY	DESCRIPTION	MATERIAL	LENGTH	REMARKS	REV
1A	2	EXPANSION JOINT ASSEMBLY			3986MM	-
1a1	4	SSA2 FRAME RAIL	M270 GR 250 (A709)	150.0	A123-HDG	-
1a2	4	SSA2 FRAME RAIL	M270 GR 250 (A709)	150.0	A123-HDG	-
1a3	2	SSA2 FRAME RAIL	M270 GR 250 (A709)	3724.0	A123-HDG	-
1a4	2	SSA2 FRAME RAIL	M270 GR 250 (A709)	3724.0	A123-HDG	-
1a5	2	12.7 X 102.0	M270 GR 250 (A709)	3682.0	A123-HDG	-
1a6	2	W10X45	M270 GR 250 (A709)	3682.0	A123-HDG	-
2cp1	4	12.7 X 152.0	M270 GR 250 (A709)	257.0	A123-HDG	-
2cp2	4	12.7 X 152.0	M270 GR 250 (A709)	308.0	A123-HDG	-
2cp3	4	12.7 X 152.0	M270 GR 250 (A709)	444.0	A123-HDG	-
2cp4	2	12.7 X 161.0	M270 GR 250 (A709)	444.0	A123-HDG	-
2cp5	2	12.7 X 161.0	M270 GR 250 (A709)	444.0	A123-HDG	-
3h1	36	Ø15.9 X 203.2 WELD STUD	M169 (A108)		A123-HDG	-
3h2	24	Ø15.9 X 203.2 WELD STUD	M169 (A108)		BENT 45° @ 50MM; A123-HDG	-
3p1	12	12.7 X 77.0	M270 GR 250 (A709)	114.0	A123-HDG	-
1XA	12	VERTICAL SUPPORT PLATE				-
3p2	12	12.7 X 83.0	M270 GR 250 (A709)	101.0	A123-HDG	-
1XC	12	STIFFENER BOLT				-
3h3	12	Ø19.1 X 57.2 HEX HEAD BOLT	M164 (A325)		A153-HDG	-
1XF	12	SUPPORT NUT				-
3h4	12	Ø19.1 HEX NUT	M291-DH (A563-DH)		A153-HDG	-
1XG	24	SUPPORT WASHER				-
3h5	24	Ø19.1 FLAT WASHER	M293 (F436)		A153-HDG	-
1YA	1	LUBRICANT-ADHESIVE				-
1h19	1	LUBRICANT ADHESIVE (1 GAL. UNIT)	D4070			-
1YB	2	STRIP SEAL GLAND				-
1g1	2	A2R-400 GLAND	NEOPRENE	4550.0		-
					11/11/2009 9:33:29 AM	

L152x102x19



UPTURN DETAIL

DECK SIDE



UPTURN DETAIL

ABUTMENT SIDE

RECEIVED
NOV 17 2009
RESUBMIT _____ APPROVED As Noted
BY _____ DATE 12/31/09

REV.	DESCRIPTION	DATE	DET.	CKD.

D.S. BROWN
THE D.S. BROWN COMPANY
300 E. CHERRY STREET
NORTH BALTIMORE, OHIO 45872
419.257.3561
FAX: 419.257.0332
WWW.DSBROWN.COM

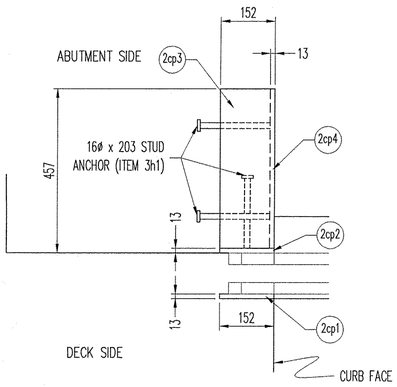
LOCATION — TH 62 OVER WEST RIVER
BRIDGE — 37
PROJECT NO. — BHO 1442 (28)
—
—
DESIGNER — VANASSE HANGEN BRUSTLIN, INC.
CUSTOMER — RENAUD BROTHERS

ITEM	QUANTITY

DESCRIPTION:
'SSA2' PLAN VIEW
WINDHAM COUNTY, VERMONT

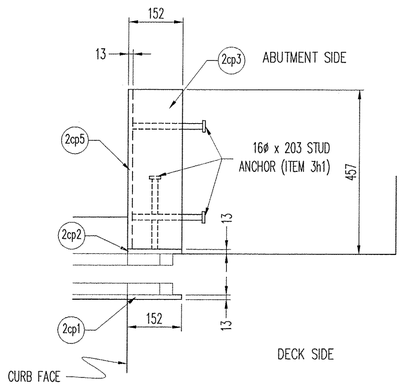
SCALE:	DRAWN BY:	CHECKED BY:	DATE:	SHEET
N.T.S.	MJS	DAE	11/05/09	1 OF 3

PROJECT NUMBER	PRODUCT CODE	RELEASE	SHEET
27177	1011	-	1



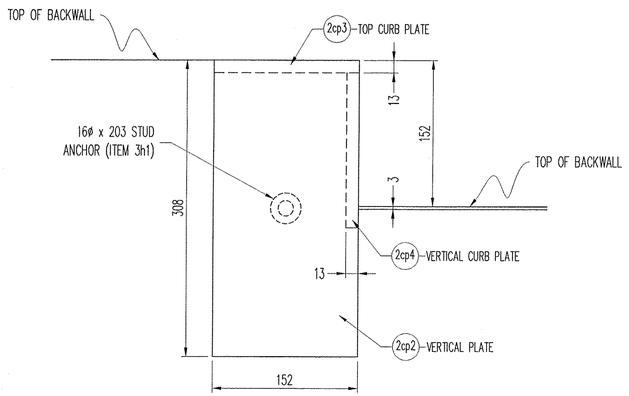
COVER PLATE PLAN VIEW

TH 62 OVER WEST RIVER
(BRIDGE NO. 37)
ABUTMENT 1 (LOOKING DOWNSTATION)
ABUTMENT 2 (LOOKING UPSTATION)



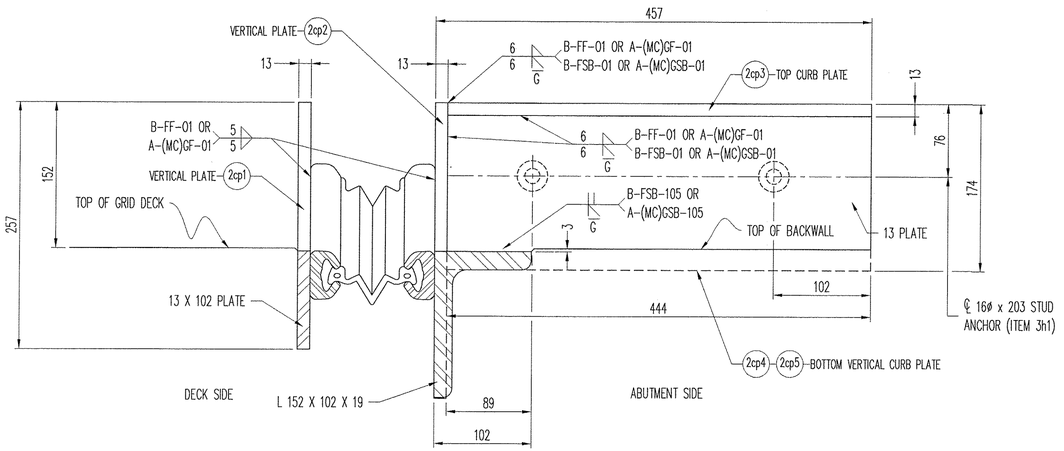
COVER PLATE PLAN VIEW

TH 62 OVER WEST RIVER
(BRIDGE NO. 37)
ABUTMENT 1 (LOOKING DOWNSTATION)
ABUTMENT 2 (LOOKING UPSTATION)

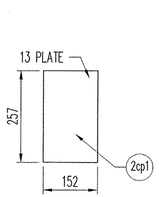


COVER PLATE PROFILE

ABUTMENT SIDE

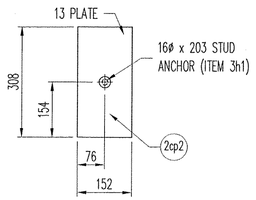


COVER PLATE ELEVATION



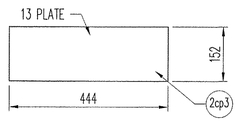
VERTICAL PLATE

ITEM NO. 2cp1
(4) REQ'D
ATTACH TO UPTURN ON DECK SIDE



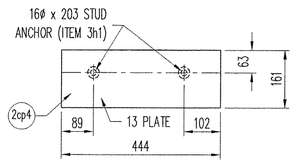
VERTICAL PLATE

ITEM NO. 2cp2
(4) REQ'D
ATTACH TO UPTURN ON ABUTMENT SIDE



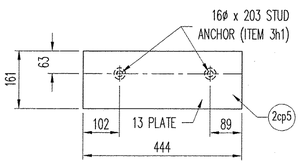
TOP CURB PLATE

ITEM NO. 2cp3
(4) REQ'D



VERTICAL CURB PLATE

ITEM NO. 2cp4
(2) REQ'D



VERTICAL CURB PLATE

ITEM NO. 2cp5
(2) REQ'D

RECEIVED
NOV 17 2009
APPROVED ✓
DATE 12/31/09

REV.	DESCRIPTION	DATE	DET.	CKD.

D.S. BROWN
THE D.S. BROWN COMPANY
300 E. CHERRY STREET
NORTH BALTIMORE, OHIO 45872
419.257.3561
FAX: 419.257.0332
WWW.DSBROWN.COM

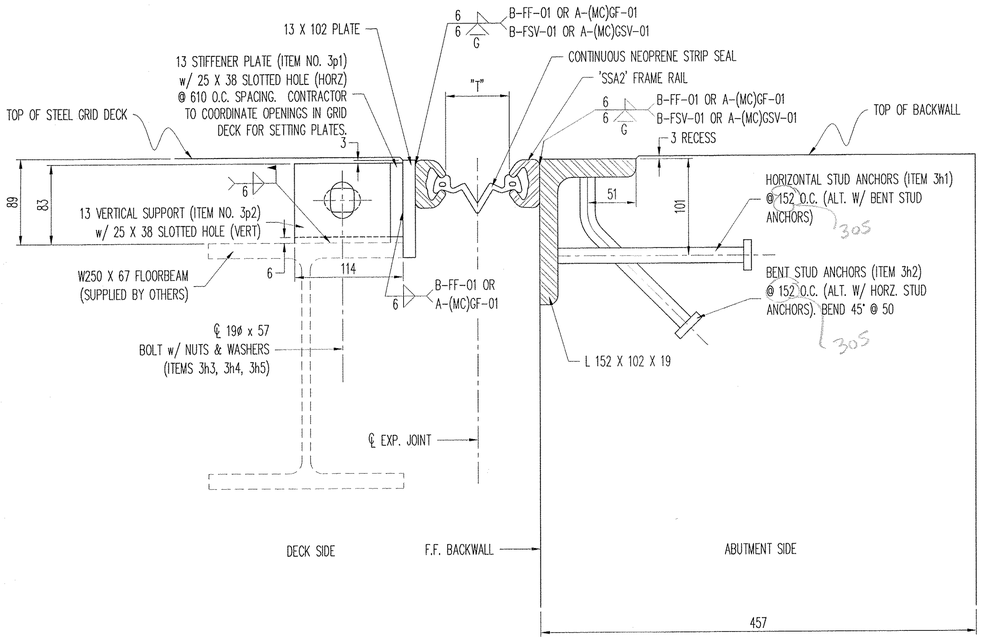
LOCATION — TH 62 OVER WEST RIVER
BRIDGE — 37
PROJECT NO. — BHO 1442 (28)
—
—
DESIGNER — VANASSE HANGEN BRUSTLIN, INC.
CUSTOMER — RENAUD BROTHERS

ITEM	QUANTITY

DESCRIPTION:
COVER PLATE DETIALS
WINDHAM COUNTY, VERMONT

SCALE:	DRAWN BY:	CHECKED BY:	DATE:	SHEET
N.T.S.	MJS	DAE	11/05/09	2 OF 3

PROJECT NUMBER	PRODUCT CODE	RELEASE	SHEET
27177	1011	–	2



SECTION THRU JOINT @ SETTING PLATES

OPERATING DIMENSIONS	
STRUCT. TEMP.	"T" (mm)
-18°C	73
-9°C	67
-1°C	61
7°C	55
16°C	49
24°C	43
32°C	37
41°C	31

TEMPERATURE ADJUSTMENT CHART

NOTE: ADJUSTMENTS PER CONTRACT PLANS

GENERAL NOTES

MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE VERMONT AGENCY OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION, 2006 EDITION" AS MODIFIED BY THE CONTRACT PLANS.
GENERAL SHOP PRACTICES, STRUCTURAL FABRICATION, WELDING AND ASSEMBLY SHALL BE GOVERNED BY ANSI/AASHTO/AWS D1.5 BRIDGE WELDING CODE

"SSA2" FRAME RAILS SHALL BE ASTM-A36 STEEL.

ALL OTHER STEEL SHALL BE ASTM-A36, UNLESS OTHERWISE NOTED.

ALL STUD ANCHORS SHALL BE ASTM-A108 STEEL AND AUTOMATIC END-WELDED w/ COMPLETE FUSION.
B-FF-STUD-REP-01 OR A-SM-STUD-REP-01 WILL BE USED, AS REQUIRED, TO REPAIR STUD WELDS.

EXPANSION JOINT SHALL BE HOT-DIPPED GALVANIZED TO ASTM-A123 AFTER FABRICATION.

ANY TIGHTLY ADHERENT WELD SPATTER NEED NOT BE REMOVED IN COATED AREAS TO BE CAST IN CONCRETE.
ANY GALVANIZED COATING DAMAGED DURING FIELD WELDING OR FROM OTHER CAUSES MUST BE REPAIRED IN ACCORDANCE WITH ASTM-A780.

RAILS SHALL BE SHIPPED IN PAIRS, BLOCKED AND BANDED.

ALL ASSEMBLIES TO BE PIECE MARKED.

EXPANSION JOINTS TO FOLLOW ROADWAY CROSS SLOPE AND GRADE.

REMOVE ALL BURRS WHICH MAY BE IN CONTACT WITH THE SEAL PRIOR TO MAKING SPLICE.

GASKETING SHALL BE PLACED IN THE SEAL CAVITY OF THE STEEL RETAINER RAILS AND REMOVED JUST PRIOR TO STRIP SEAL INSTALLATION.

NEOPRENE SEAL SHALL BE CONTINUOUS AND FIELD INSTALLED UTILIZING LUBRICANT/ADHESIVE.

CONTRACTOR TO POUR AND VIBRATE CONCRETE INTO BLOCKOUT TO ENSURE PROPER CONSOLIDATION AROUND ALL EMBEDDED COMPONENTS.

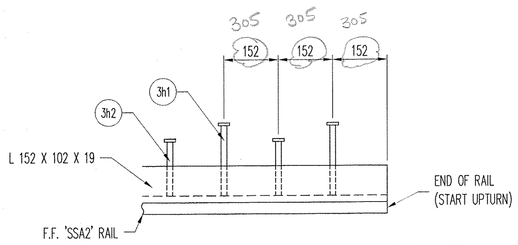
THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO FABRICATION TO ENSURE ACCURACY OF THE EXPANSION JOINT. STAMPED APPROVED DRAWINGS ASSUME LENGTHS HAVE BEEN VERIFIED BY CONTRACTOR.

ALL ANGLES AND VERTICAL PLATES SHALL BE FURNISHED AS CONTINUOUS PIECES.

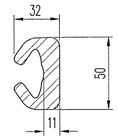
* ALL EDGES OF STEEL PLATES, SHAPES, ETC. SHALL BE GROUND TO A 1/16" RADIUS

* SEAL WELD ALL CONNECTIONS WHERE POSSIBLE

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BY mem
NOV 17 2009
RESUBMIT ____ APPROVED As Noted
BY ____ DATE 12/31/09



TYP. 16ø STUD ANCHOR LAYOUT



"SSA2" FRAME RAIL

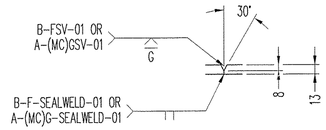
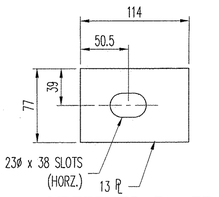
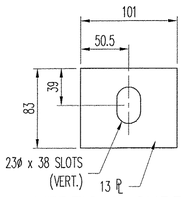


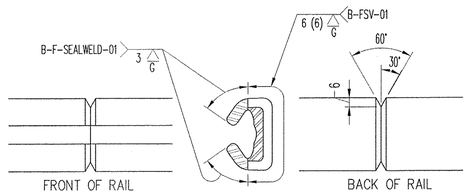
PLATE SHOP SPLICE DETAIL



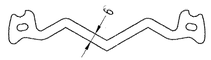
STIFFENER PLATE
ITEM NO. 3p1
(12) REQ'D



VERTICAL SUPPORT
ITEM NO. 3p2
(12) REQ'D



"SSA2" SHOP SPLICE DETAIL



"A2R" SERIES STRIP SEAL

MINIMUM JOINT OPENING FOR EASE OF INSTALLATION = 50

STRIP SEAL MOVEMENT RATINGS	
TEMPERATURE	A2R-400
MAXIMUM	13
MID	64
MINIMUM	114

REV.	DESCRIPTION	DATE	DET.	CKD.

ITEM	QUANTITY

D.S. BROWN
THE D.S. BROWN COMPANY
300 E. CHERRY STREET
NORTH BALTIMORE, OHIO 45872
419.257.3561
FAX: 419.257.0332
WWW.DSBROWN.COM

LOCATION — TH 62 OVER WEST RIVER
BRIDGE — 37
PROJECT NO. — BHO 1442 (28)
—
—
DESIGNER — VANASSE HANGEN BRUSTLIN, INC.
CUSTOMER — RENAUD BROTHERS

DESCRIPTION: 'SSA2' STANDARD DETAILS
WINDHAM COUNTY, VERMONT

SCALE:	DRAWN BY:	CHECKED BY:	DATE:	SHEET
N.T.S.	MJS	DAE	11/05/09	3 OF 3

PROJECT NUMBER	PRODUCT CODE	RELEASE	SHEET
27177	1011	—	3

VERMONT

Agency of Transportation

State of Vermont
PDD/Structures Design Section
National Life Building – Drawer 33
Montpelier, VT 05633-5001
www.aot.state.vt.us

[phone] 802-828-2621
[fax] 802-828-3566
[ttd] 800-253-0191

Renaud Brothers
283 Fort Bridgeman Road #2
Vernon, Vermont 05354

DATE: January 12, 2010

Project Name: Dummerston **Project #: BHO 1442 (28)**

Structure Identification: TH 62, Bridge #37 over the West River

The following Structural Steel details [Item #506.50, Structural Steel, Rolled Beam and Item 506.60, Structural Steel,] for the above project (Vendor's Job # none given) have been reviewed and are being returned herewith.

Sheets: "GM1, GM2", "GM3, GM4", "GM5, GM6" , "GM7, GM8" ,"GM9, GM10", "GM11, GM12", "GM13, GM14", "GM15, GM16", 2, 3, 5-19, E1-E6

are approved "as noted"

Sheets: 1, 4, 20-25

are to be reconsidered (note comments in red) and resubmitted for final approval

Please make appropriate changes as indicated on these "as noted" or "approved" drawings and submit white prints for our use in the record plans for this project. Also, please submit extended weights for item # 506.50 for our approval.
Partial payment for this item will be withheld until extended weights are received and approved.

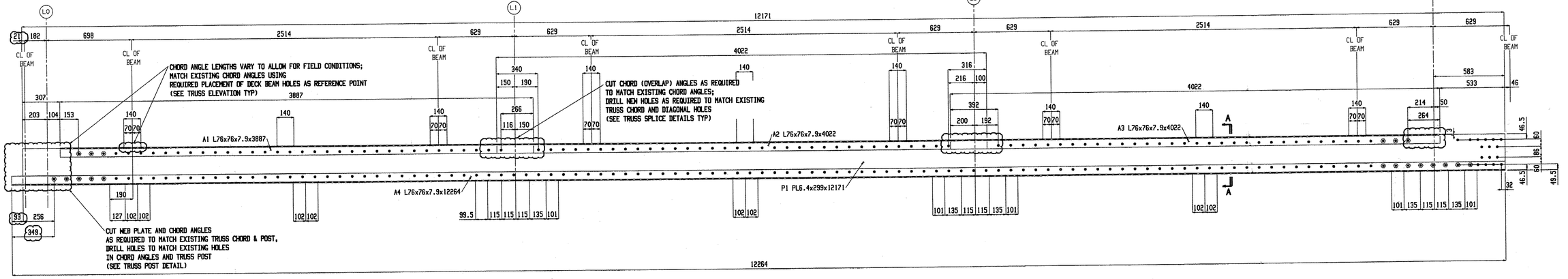
You must provide notice to our fabrication inspector, Jeff Clark, as to the date fabrication represented by these drawings will begin. Jeff must receive and acknowledge your notice at least seven days prior to that date, as per Specification 506.03. You may contact Jeff by phone at (802)828-0044 or email at jeff.clark@state.vt.us. Any material fabricated prior to the notification date is subject to rejection without further cause.

Sincerely,

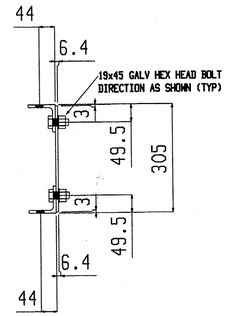
Martha Evans-Mongeon
Project Manager

Attachments
cc: [X] Resident Engineer w/prints, Chad Greenwood
[X] Shop Inspector w/prints, Jeff Clark
[X] Construction Division – letter only
[X] Materials & Research Section (C&IA Unit) – letter only
[X] Files (Structures)

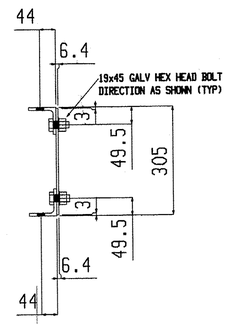
VTrans Working to Get You There Vermont Agency of Transportation



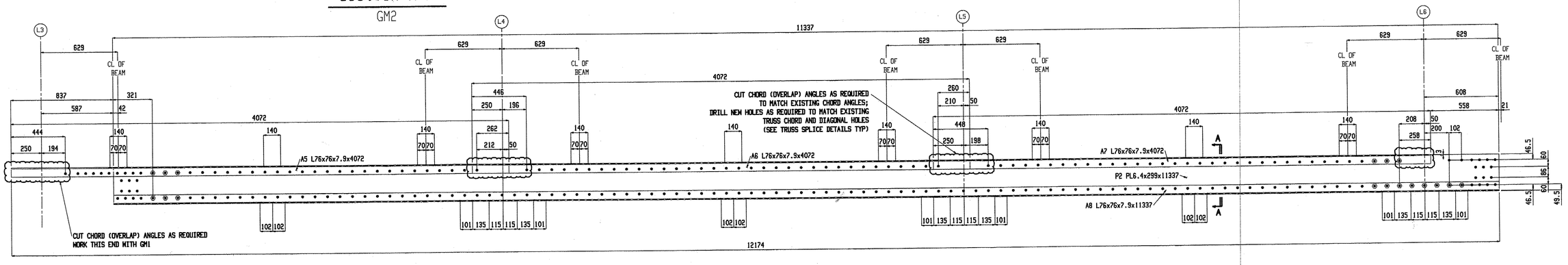
2 GROUP MEMBERS GM1



Section A-A
GM2



Section A-A
GM1



2 GROUP MEMBERS GM2

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
2	GM1	GROUP MEMBER						
2	P1 .	PL6.4x299	12171				M270M-345	
2	A4 .	L76x76x7.9	12264				M270M-345	
2	A3 .	L76x76x7.9	4022				M270M-345	
2	A2 .	L76x76x7.9	4022				M270M-345	
2	A1 .	L76x76x7.9	3887				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
2	GM2	GROUP MEMBER						
2	P2 .	PL6.4x299	11337				M270M-345	
2	A8 .	L76x76x7.9	11337				M270M-345	
2	A5 .	L76x76x7.9	4072				M270M-345	
2	A6 .	L76x76x7.9	4072				M270M-345	
2	A7 .	L76x76x7.9	4072				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks

Nov 06 2009 10:53:54 AM

Total weight : 1565

Paid as lump sum

What print system is being used?

product?

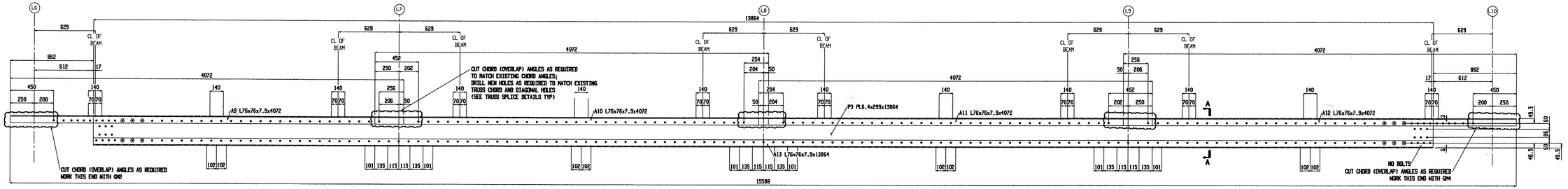
RECEIVED
CKD BY mpm
NOV 17 2009
ACCEPTED APPROVED As Noted
BY DATE 11/12/2010

Renaud Bros. Inc.
283 Fort Bridgeman Rd. #2
Vernon, VT. 05354
Phone 1-802 257-7383

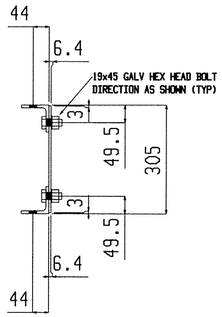
Project:
DUMMERSTON BRIDGE
DUMMERSTON, VT

Holes:	21mm UNO
BOLTS:	19mm DIA. M164M-I GALV UNO
Steel GR:	M270M-GR345 UNO
Paint:	PER SPECS (GREEN) UNO
Surface Prep:	PER SPECS
Rev.No:	
Date:	9-9-09
Job No.	BHO 1442 (ZE)
DWN. BY:	EG
Checked:	MRS
Sheet No.	GM1, GM2

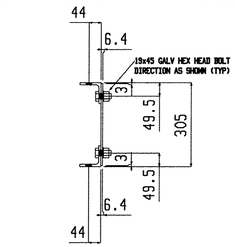
These are parts numbers, not a Sheet Number.



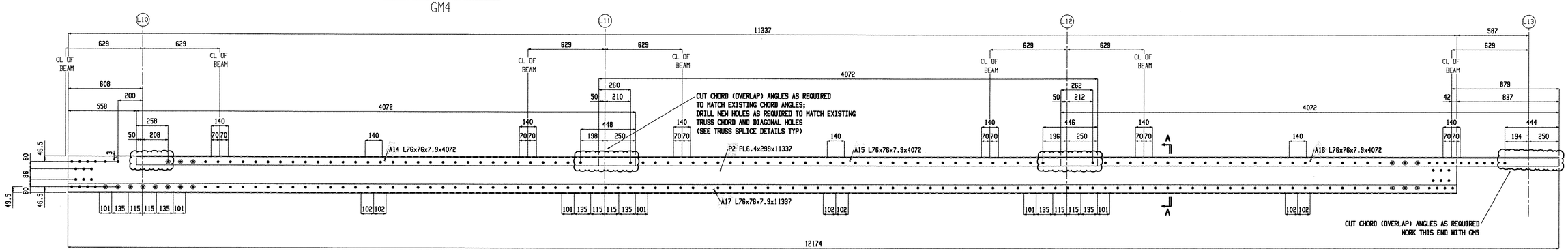
2 GROUP MEMBERS GM3



Section A-A
GM3



Section A-A
GM4



2 GROUP MEMBERS GM4

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
2	GM3	GROUP MEMBER						
2	P3 .	PL6.4x299	13864				M270M-345	
2	A13 .	L76x76x7.9	13864				M270M-345	
2	A9 .	L76x76x7.9	4072				M270M-345	
2	A10 .	L76x76x7.9	4072				M270M-345	
2	A11 .	L76x76x7.9	4072				M270M-345	
2	A12 .	L76x76x7.9	4072				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
2	GM4	GROUP MEMBER						
2	P2 .	PL6.4x299	11337				M270M-345	
2	A17 .	L76x76x7.9	11337				M270M-345	
2	A16 .	L76x76x7.9	4072				M270M-345	
2	A15 .	L76x76x7.9	4072				M270M-345	
2	A14 .	L76x76x7.9	4072				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks

Total weight : 1722

RECEIVED
OK'D BY_____ OK'D BY_____
NOV 17 2009
RESUBMIT_____ APPROVED_____ AS NOTED
BY DATE

Renaud Bros. Inc.
283 Fort Bridgeman Rd. #2
Vernon, VT. 05354
Phone 1-802 257-7383

Rev.No: Date:

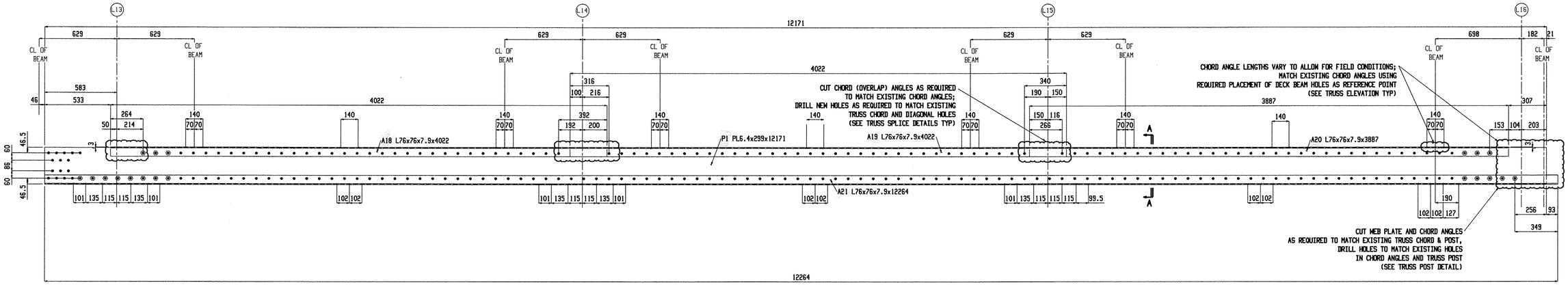
Holes: 21mm UNO
BOLTS: 19mm DIA. M164M-I GALV UNO
Steel GR: M270M-GR345 UNO
Paint: PER SPECS (GREEN) UNO
Surface Prep: PER SPECS

Project:
DUMMERSTON BRIDGE
DUMMERSTON, VT

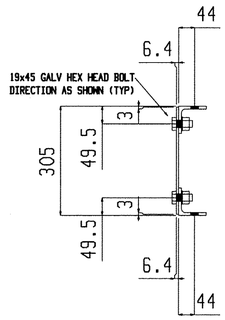
Date: 9-9-09
Job No. BHO 1442(28)
DWN. BY: EG
Checked: MRS
Sheet No. ~~GM3, GM4~~ Sheet #

Product?

Nov 06 2009 10:53:58 AM

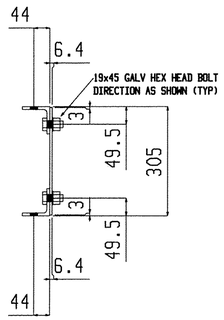


2 GROUP MEMBERS GM5



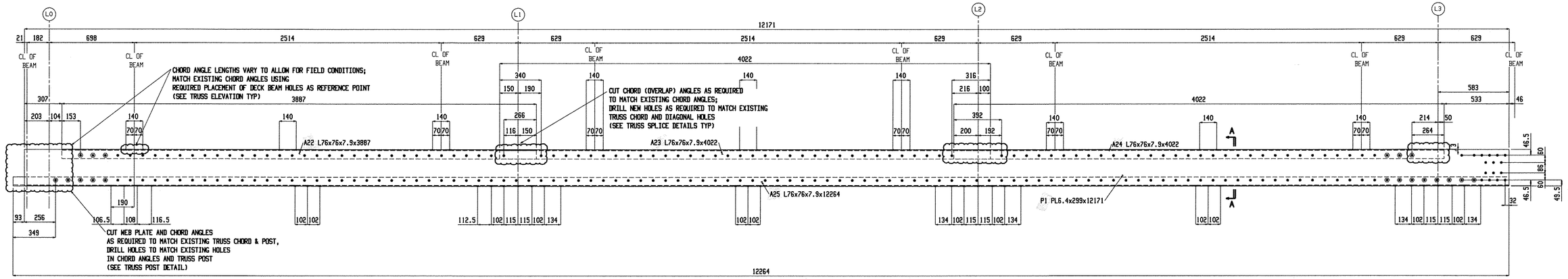
Section A-A

GM6



Section A-A

GM5



2 GROUP MEMBERS GM6

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
2	GM5	GROUP MEMBER						
2	P1 .	PL6.4x299	12171				M270M-345	
2	A21 .	L76x76x7.9	12264				M270M-345	
2	A18 .	L76x76x7.9	4022				M270M-345	
2	A19 .	L76x76x7.9	4022				M270M-345	
2	A20 .	L76x76x7.9	3887				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
2	GM6	GROUP MEMBER						
2	P1 .	PL6.4x299	12171				M270M-345	
2	A25 .	L76x76x7.9	12264				M270M-345	
2	A24 .	L76x76x7.9	4022				M270M-345	
2	A23 .	L76x76x7.9	4022				M270M-345	
2	A22 .	L76x76x7.9	3887				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks

Total weight : 1602

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Phone 1-802 257-7383

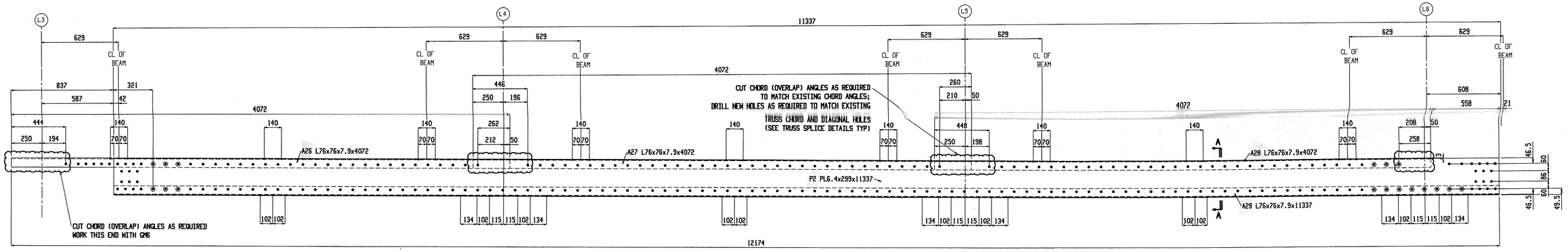
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BOLTS:	19mm DIA. M164M-I GALV UNO
Steel GR:	M270M-GR345 UNO
Paint:	PER SPECS (GREEN) UNO
Surface Prep:	PER SPECS

Rev.No: Date:

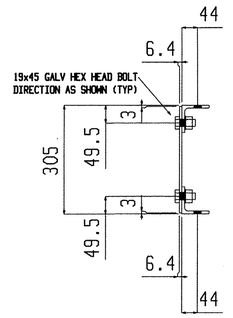
Project:
DUMMERSTON BRIDGE
DUMMERSTON, VT

Date: 9-9-09		Job No. BHO 1442(28)
DWN. BY: EG	Checked: MRS	Sheet No. GM5, GM6

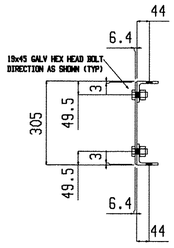
3 product
Sheet #



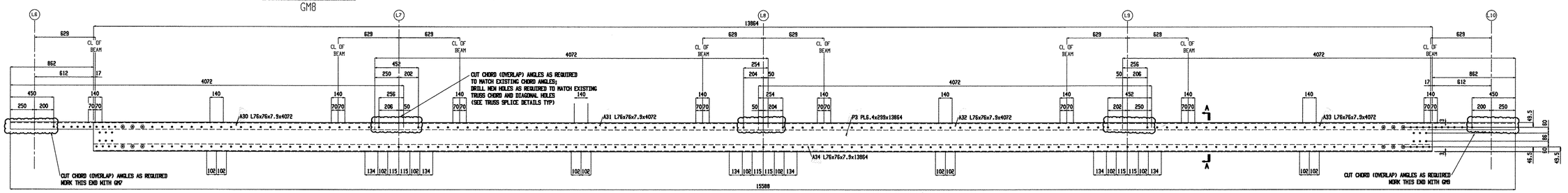
2 GROUP MEMBERS GM7



Section A-A
GM7



Section A-A
GM8



2 GROUP MEMBERS GM8

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
2	GM7	GROUP MEMBER						
2	P2 .	PL6.4x299	11337				M270M-345	
2	A29 .	L76x76x7.9	11337				M270M-345	
2	A26 .	L76x76x7.9	4072				M270M-345	
2	A27 .	L76x76x7.9	4072				M270M-345	
2	A28 .	L76x76x7.9	4072				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
2	GM8	GROUP MEMBER						
2	P3 .	PL6.4x299	13864				M270M-345	
2	A34 .	L76x76x7.9	13864				M270M-345	
2	A30 .	L76x76x7.9	4072				M270M-345	
2	A31 .	L76x76x7.9	4072				M270M-345	
2	A32 .	L76x76x7.9	4072				M270M-345	
2	A33 .	L76x76x7.9	4072				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks

Total weight : 1722

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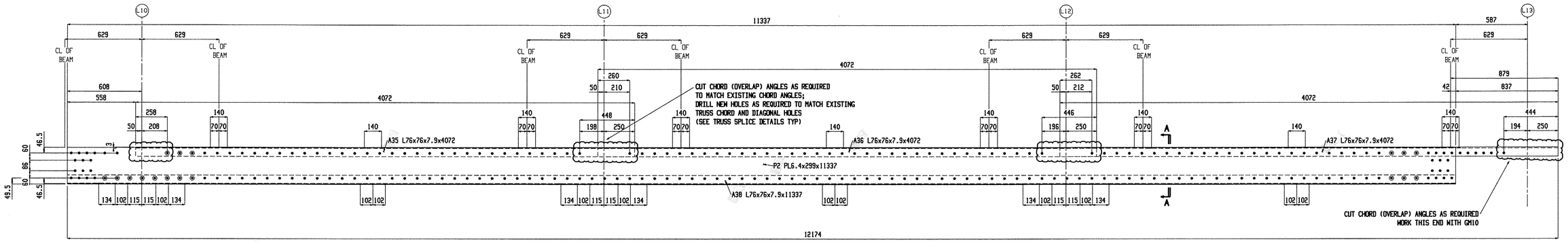
Rev.No: | Date:

Holes: 21mm UNO
BOLTS: 19mm DIA. M164M-I GALV UNO
Steel GR: M270M-GR345 UNO
Paint: PER SPECS (GREEN) UNO
Surface Prep: PER SPECS

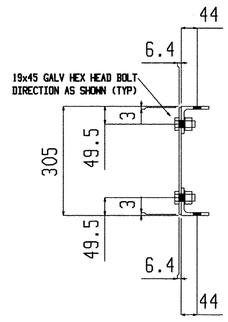
Project:
DUMMERSTON BRIDGE
DUMMERSTON, VT

Date: 9-9-09
Job No. BHO 1442(28)
DWN. BY: EG
Checked: MRS
Sheet No. ~~GM7, GM8~~ Sheet#

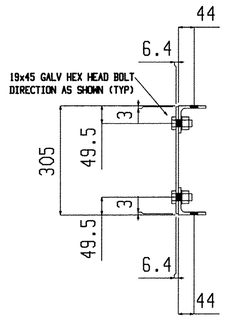
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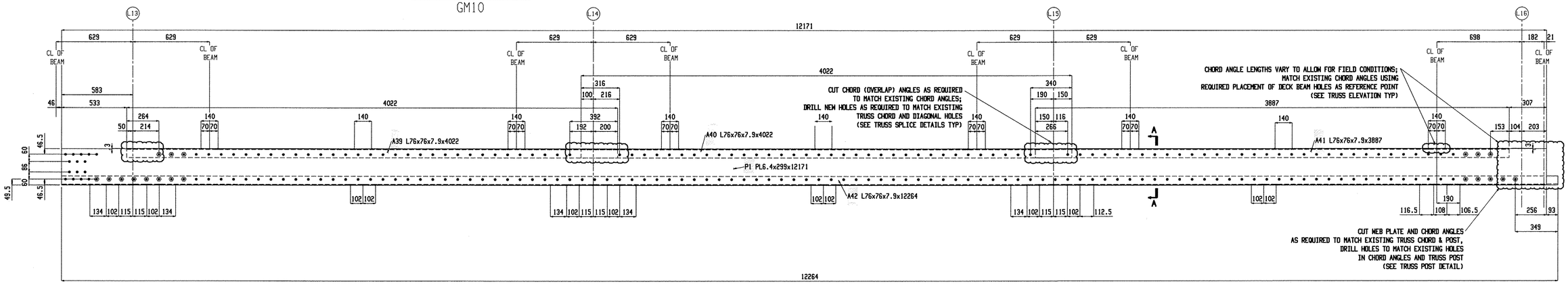
2 GROUP MEMBERS GM9



Section A-A
GM10



Section A-A
GM9



2 GROUP MEMBERS GM10

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
2	GM9	GROUP MEMBER						
2	P2 .	PL6.4x299	11337				M270M-345	
2	A38 .	L76x76x7.9	11337				M270M-345	
2	A37 .	L76x76x7.9	4072				M270M-345	
2	A36 .	L76x76x7.9	4072				M270M-345	
2	A35 .	L76x76x7.9	4072				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
2	GM10	GROUP MEMBER						
2	P1 .	PL6.4x299	12171				M270M-345	
2	A42 .	L76x76x7.9	12264				M270M-345	
2	A39 .	L76x76x7.9	4022				M270M-345	
2	A40 .	L76x76x7.9	4022				M270M-345	
2	A41 .	L76x76x7.9	3887				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks

Total weight : 1565

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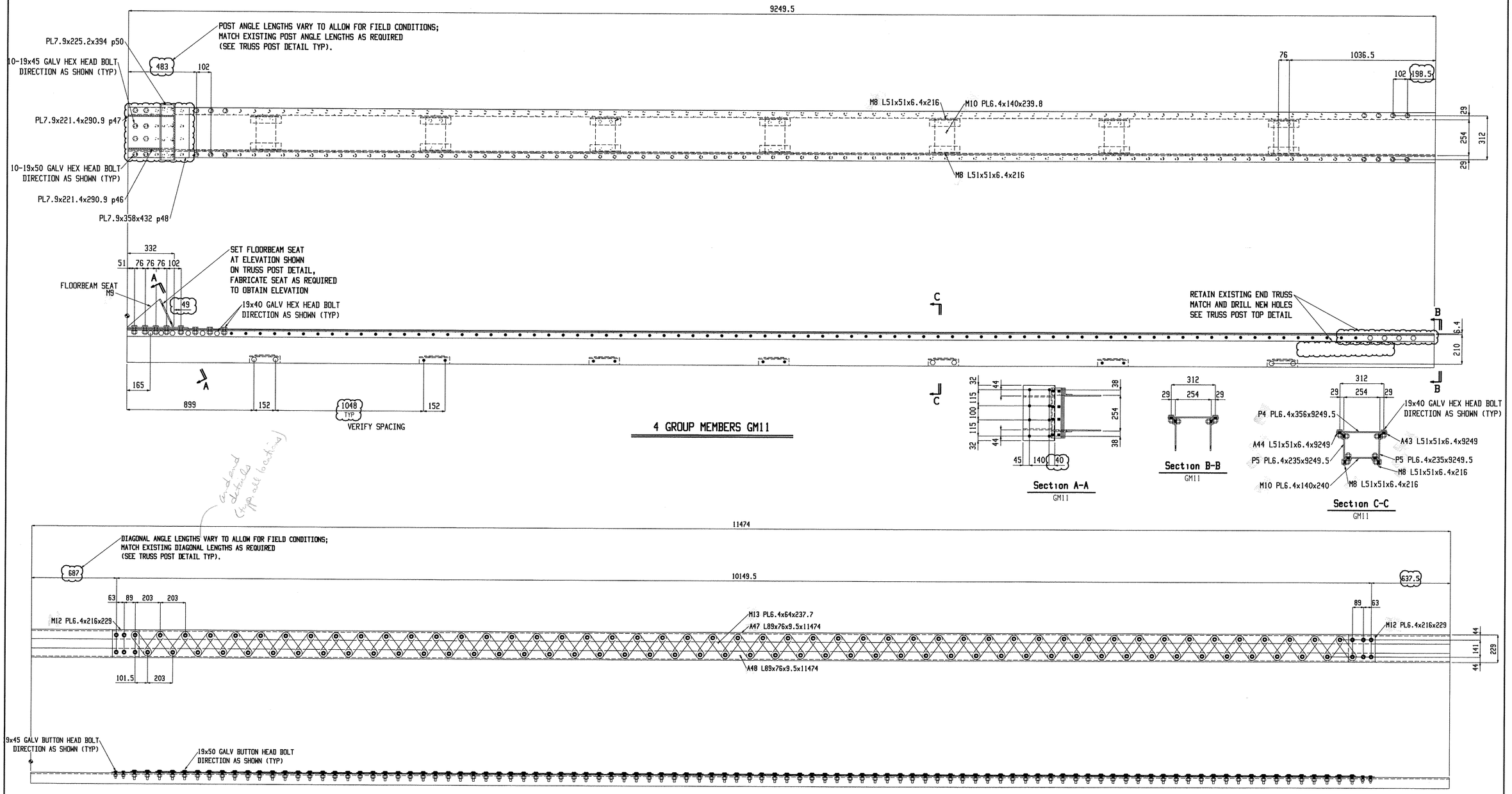
Renaud Bros. Inc.
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Vernon, VT. 05354
Phone 1-802 257-7383

Holes: 21mm UNO
BOLTS: 19mm DIA. M164M-I GALV UNO
Steel GR: M270M-GR345 UNO
Paint: PER SPECS (GREEN) UNO
Surface Prep: PER SPECS

Rev.No: Date:

Project:
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Date: 9-9-09
Job No. BHO 1442(28)
DWN. BY: EG
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Sheet No. ~~GM9, GM10~~ Sheet #



4 GROUP MEMBERS GM12

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
4	GM11 .	GROUP MEMBER					M270M-345	
56	M8 .	L51x51x6.4	216				M270M-345	
28	M10 .	PL6.4x140	240				M270M-345	
4	p48	PL7.9x358	432				M270M-345	
8	P5 .	PL6.4x235	9249.5				M270M-345	
4	P4 .	PL6.4x356	9249.5				M270M-345	
4	A43 .	L51x51x6.4	9249				M270M-345	
4	A44 .	L51x51x6.4	9249				M270M-345	
4	p50	PL7.9x225.2	394				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
4	p46	PL7.9x221.4	291				M270M-345	
4	p47	PL7.9x221.4	291				M270M-345	
4	GM12	GROUP MEMBER						
8	M12 .	PL6.4x216	229				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
388	M13 .	PL6.4x64	237.5				M270M-345	
4	A48 .	L89x76x9.5	11474				M270M-345	
4	A47 .	L89x76x9.5	11474				M270M-345	

Total weight : 3450

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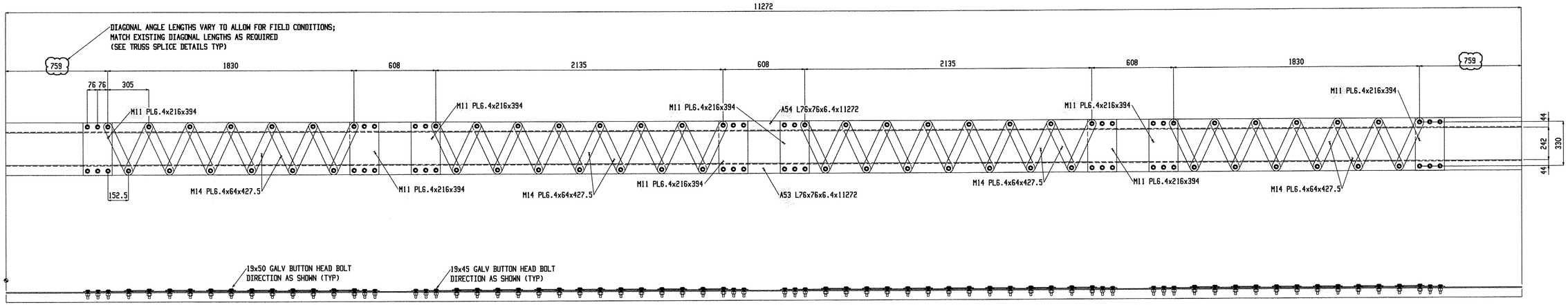
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Project:
DUMMERSTON BRIDGE
DUMMERSTON, VT

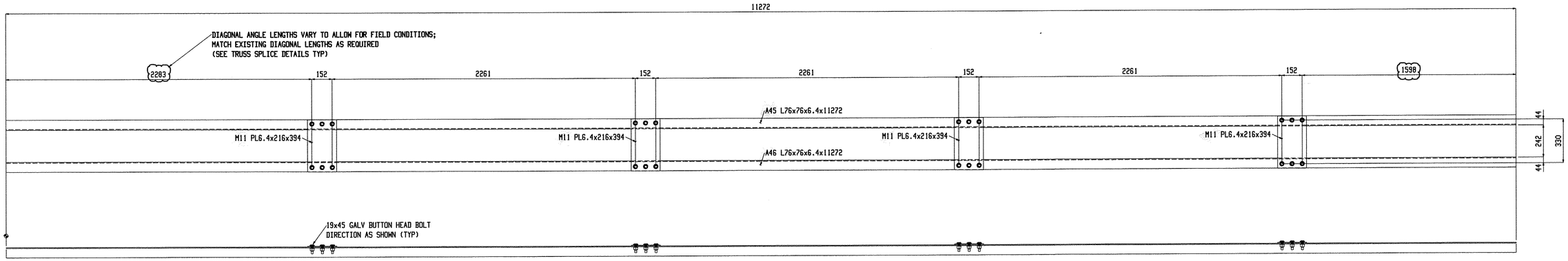
Holes: 21mm UNO
BOLTS: 19mm DIA. M164M-I GALV UNO
Steel GR: M270M-GR345 UNO
Paint: PER SPECS (GREEN) UNO
Surface Prep: PER SPECS

Date: 9-9-09
Job No. BHO 1442 (29)
DWN. BY: EG
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Sheet No. GM11, GM12

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4 GROUP MEMBERS GM13



4 GROUP MEMBERS GM14

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
4	GM13	GROUP MEMBER						
208	M14 .	PL6.4x64	427.5				M270M-345	
32	M11 .	PL6.4x216	394				M270M-345	
4	A53 .	L76x76x6.4	11272				M270M-345	
4	A54 .	L76x76x6.4	11272				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
4	GM14	GROUP MEMBER						
16	M11 .	PL6.4x216	394				M270M-345	
4	A46 .	L76x76x6.4	11272				M270M-345	
4	A45 .	L76x76x6.4	11272				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks

Total weight : 1803

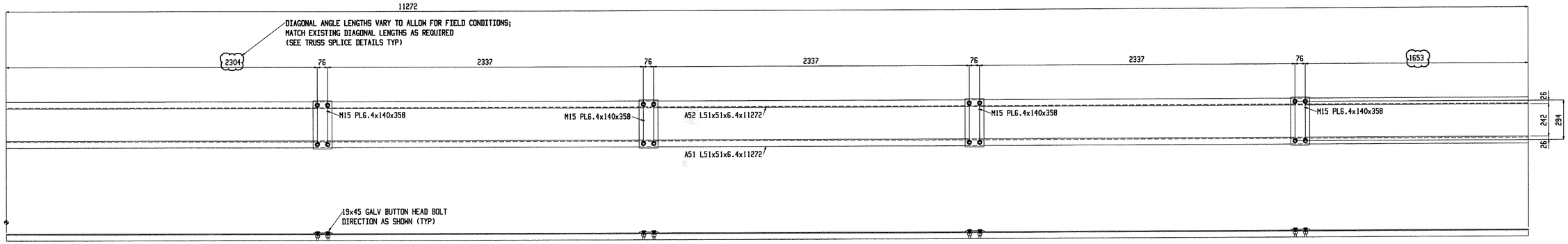
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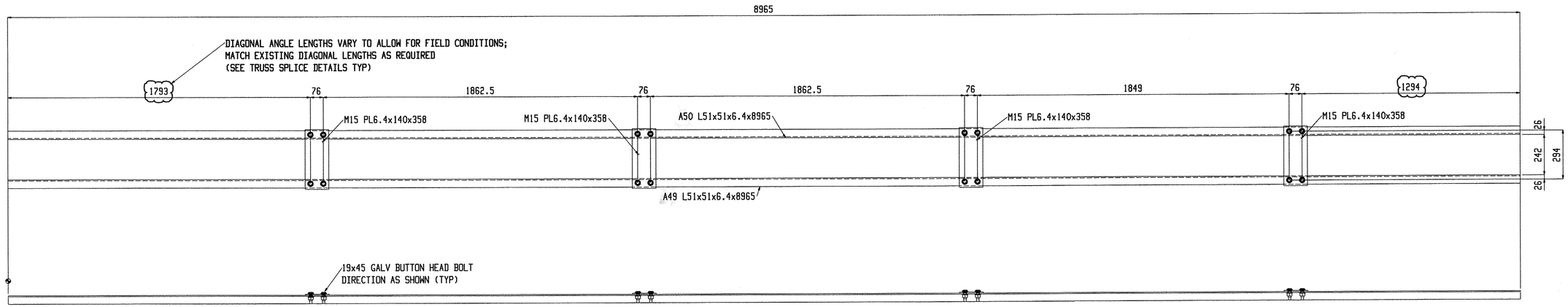
Project:
DUMMERSTON BRIDGE
DUMMERSTON, VT

Holes:	21mm UNO
BOLTS:	19mm DIA. M164M-I GALV UNO
Steel GR:	M270M-GR345 UNO
Paint:	PER SPECS (GREEN) UNO ? Product?
Surface Prep:	PER SPECS
Date:	9-9-09
Job No.	BHo 1442(28)
DWN. BY:	EG
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Sheet No.	~~GM13, GM14~~ Sheet #

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4 GROUP MEMBERS GM15



4 GROUP MEMBERS GM16

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
4	GM15	GROUP MEMBER						
16	M15 .	PL6.4x140	358				M270M-345	
4	A51 .	L51x51x6.4	11272				M270M-345	
4	A52 .	L51x51x6.4	11272				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
4	GM16	GROUP MEMBER						
16	M15 .	PL6.4x140	358				M270M-345	
4	A49 .	L51x51x6.4	8965				M270M-345	
4	A50 .	L51x51x6.4	8965				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks

Total weight : 848

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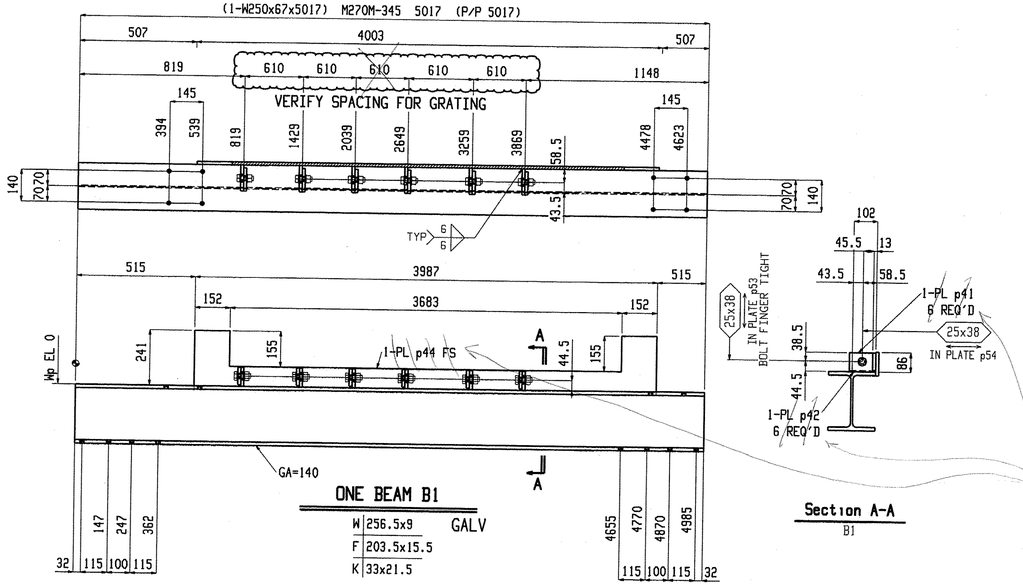
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Steel GR: M270M-GR345 UNO
Paint: PER SPECS (GREEN) UNO
Surface Prep: PER SPECS

Project:
DUMMERSTON BRIDGE
DUMMERSTON, VT

Date: 9-9-09
Job No. BHO 1442(28)
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Sheet No. GM15, GM16

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Product Sheet



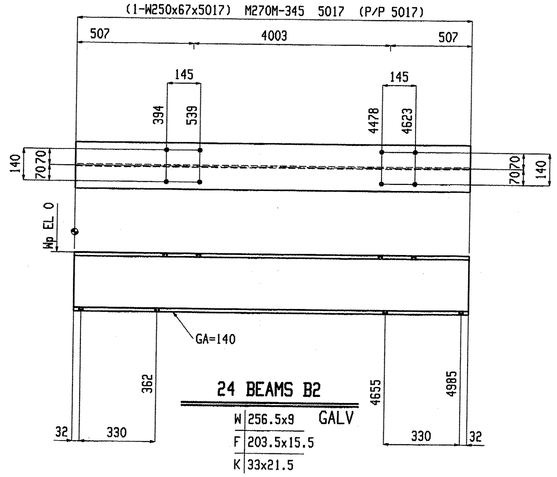
ONE BEAM B1

W	256.5x9
F	203.5x15.5
K	33x21.5

GALV

SHOP BOLTS:
6-19x60 M164M-I

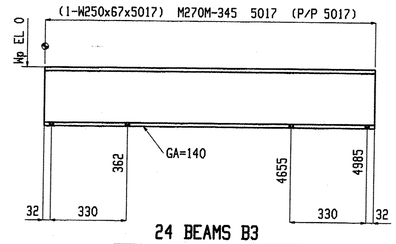
Section A-A
B1



24 BEAMS B2

W	256.5x9
F	203.5x15.5
K	33x21.5

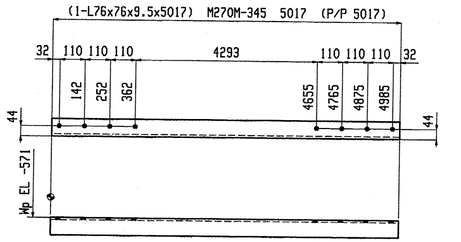
GALV



24 BEAMS B3

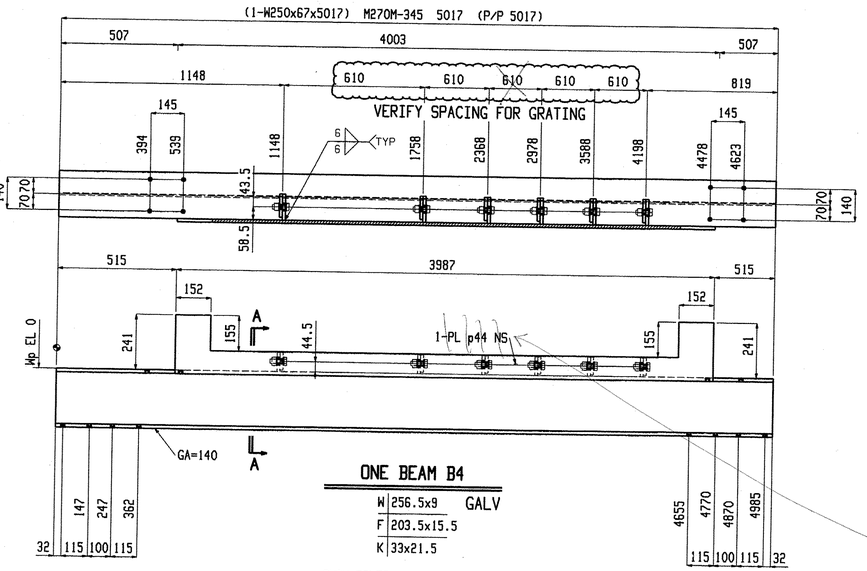
W	256.5x9
F	203.5x15.5
K	33x21.5

GALV



7 HORIZONTAL BRACES HB1

SHOP NOTE:
TOE DIRECTION FAR SIDE

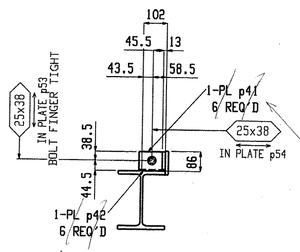


ONE BEAM B4

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F	203.5x15.5
K	33x21.5

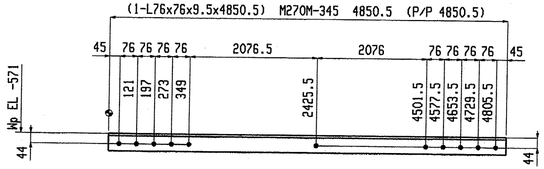
GALV

SHOP BOLTS:
6-19x60 M164M-I



Section A-A
B4

These pieces are part of expansion joint item and drawings



2 HORIZONTAL BRACES HB2

SHOP NOTE:
TOE DIRECTION NEAR SIDE

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
ONE	B1	BEAM		1	1			GALV
1	B1	W250x67	5017				M270M-345	
1	p44	PL13x257	3987				M270M-345	
6	p42	PL13x83	101				M270M-345	
6	p41	PL13x77	114				M270M-345	
6		19 Dia M164M-I	60					2HD WASH
24	B2	BEAM		1	24			GALV
24	B2	W250x67	5017				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
24	B3	BEAM		1	24			GALV
24	B3	W250x67	5017				M270M-345	
1	p44	PL13x257	3987				M270M-345	
6	p42	PL13x83	101				M270M-345	
6	p41	PL13x77	114				M270M-345	
ONE	B4	BEAM		1	1			GALV
1	B4	W250x67	5017				M270M-345	
1	p44	PL13x257	3987				M270M-345	
6	p42	PL13x83	101				M270M-345	
6	p41	PL13x77	114				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
6		19 Dia M164M-I	60					2HD WASH
7	HB1	HORIZONTAL BRACE		1	7			
7	HB1	L76x76x9.5	5017				M270M-345	
2	HB2	HORIZONTAL BRACE		1	2			
2	HB2	L76x76x9.5	4850.5				M270M-345	

Need to separate out beams as they are paid by weight. other pieces are lump sum payment

Total weight : 17512

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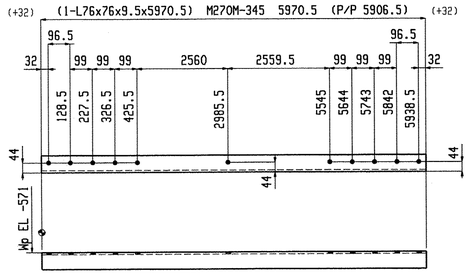
Rev.No: | Date:

Holes: 21mm UNO
BOLTS: 19mm DIA. M164M-I GALV UNO
Steel GR: M270M-GR345 UNO
Paint: PER SPECS (GREEN) UNO
Surface Prep: PER SPECS

Project:
DUMMERSTON BRIDGE
DUMMERSTON, VT

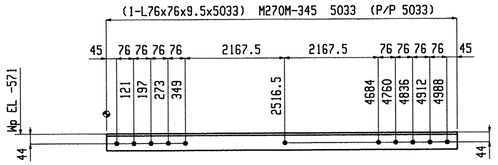
Date: 9-9-09
Job No. BHO 1442(28)
DWN. BY: EG
Checked: MRS
Sheet No. 1

Nov 06 2009 10:54:28 AM



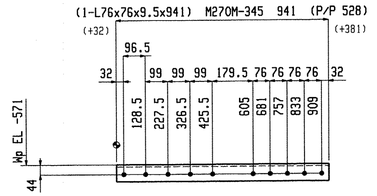
2 HORIZONTAL BRACES HB3

SHOP NOTE:
TOE DIRECTION FAR SIDE



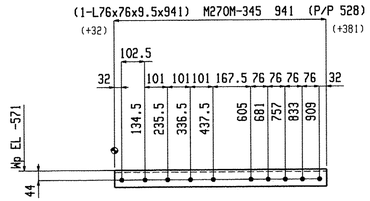
14 HORIZONTAL BRACES HB4

SHOP NOTE:
TOE DIRECTION NEAR SIDE



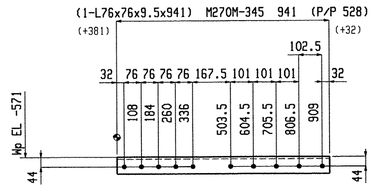
ONE HORIZONTAL BRACE HB5

SHOP NOTE:
TOE DIRECTION FAR SIDE



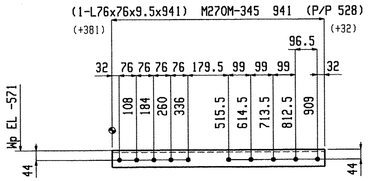
14 HORIZONTAL BRACES HB6

SHOP NOTE:
TOE DIRECTION FAR SIDE



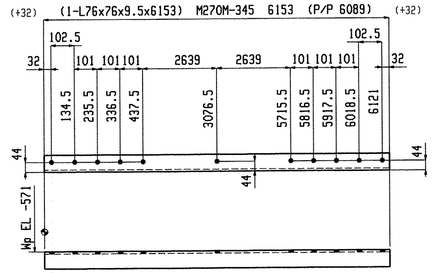
14 HORIZONTAL BRACES HB7

SHOP NOTE:
TOE DIRECTION FAR SIDE



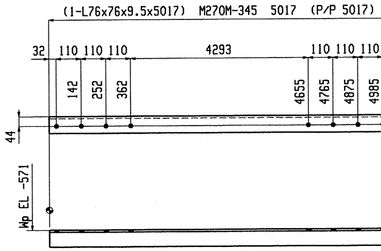
ONE HORIZONTAL BRACE HB8

SHOP NOTE:
TOE DIRECTION FAR SIDE



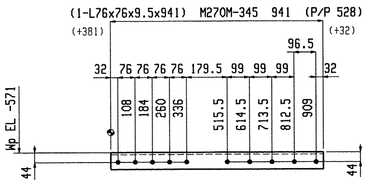
14 HORIZONTAL BRACES HB9

SHOP NOTE:
TOE DIRECTION FAR SIDE



8 HORIZONTAL BRACES HB10

SHOP NOTE:
TOE DIRECTION NEAR SIDE



ONE HORIZONTAL BRACE HB11

SHOP NOTE:
TOE DIRECTION FAR SIDE

RECEIVED
CK'D BY_____ CK'D BY_____
NOV 17 2009
REQUEST_____ APPROVED_____
BY DATE

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
2	HB3	HORIZONTAL BRACE		1	2			
2	HB3	L76x76x9.5	5970.5				M270M-345	
14	HB4	HORIZONTAL BRACE		1	14			
14	HB4	L76x76x9.5	5033				M270M-345	
ONE	HB5	HORIZONTAL BRACE		1	1			
1	HB5	L76x76x9.5	941				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
14	HB6	HORIZONTAL BRACE		1	14			
14	HB6	L76x76x9.5	941				M270M-345	
14	HB7	HORIZONTAL BRACE		1	14			
14	HB7	L76x76x9.5	941				M270M-345	
ONE	HB8	HORIZONTAL BRACE		1	1			
1	HB8	L76x76x9.5	941				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
14	HB9	HORIZONTAL BRACE		1	14			
14	HB9	L76x76x9.5	6153				M270M-345	
8	HB10	HORIZONTAL BRACE		1	8			
8	HB10	L76x76x9.5	5017				M270M-345	
ONE	HB11	HORIZONTAL BRACE		1	1			
1	HB11	L76x76x9.5	941				M270M-345	

Total weight : 2545

Nov 06 2009 10:54:32 AM

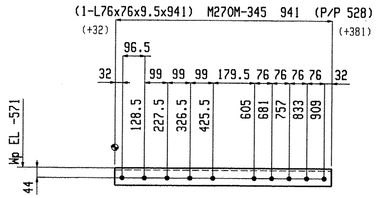
Renaud Bros. Inc.
283 Fort Bridgeman Rd. #2
Vernon, VT. 05354
Phone 1-802 257-7383

Rev.No: Date:

Holes: 21mm UNO
BOLTS: 19mm DIA. M164M-I GALV UNO
Steel GR: M270M-GR345 UNO
Paint: PER SPECS (GREEN) UNO
Surface Prep: PER SPECS

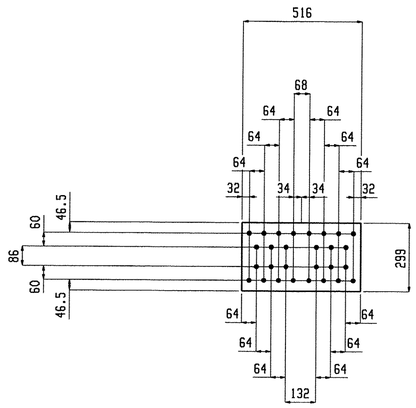
Project:
DUMMERSTON BRIDGE
DUMMERSTON, VT

Date: 9-9-09
Job No. BHO 1442 (28)
DWN. BY: EG
Checked: MRS
Sheet No. 2

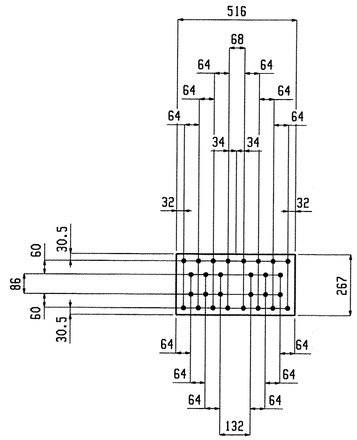


ONE HORIZONTAL BRACE HB12

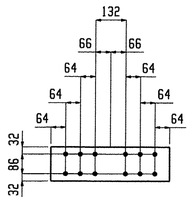
SHOP NOTE:
TOE DIRECTION FAR SIDE



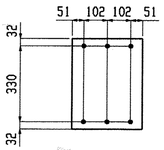
16 MISCS SP1



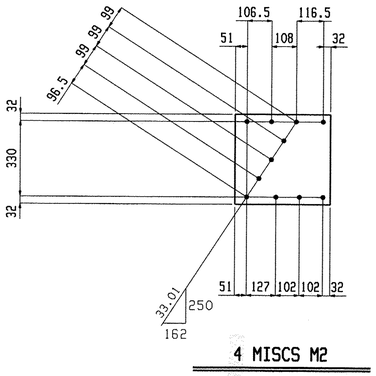
16 MISCS SP2



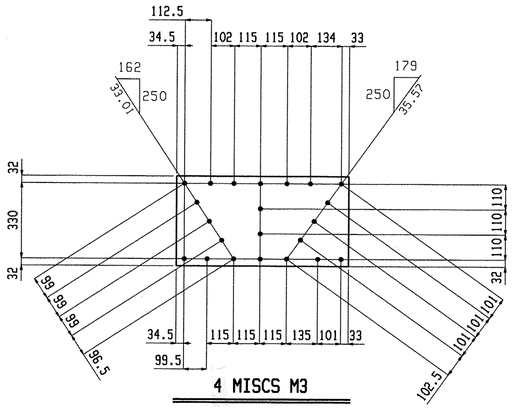
16 MISCS SP3



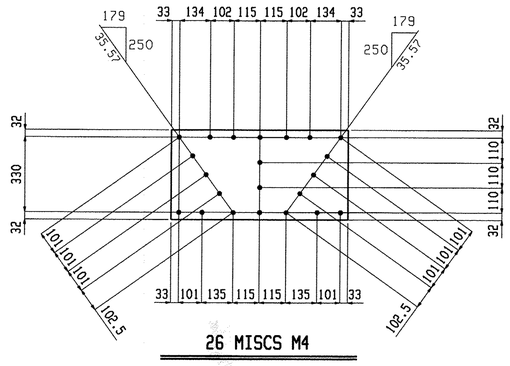
32 MISCS M1



4 MISCS M2



4 MISCS M3



26 MISCS M4



8 MISCS M5

4?

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
ONE	HB12	HORIZONTAL BRACE		1	1			
1	HB12	L76x76x9.5	941				M270M-345	
16	SP1	MISC		1	16			
16	SP1	PL12.7x299	516				M270M-345	
16	SP2	MISC		1	16			
16	SP2	PL15.9x267	516				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
16	SP3	MISC		1	16			
16	SP3	PL7.9x150	516				M270M-345	
32	M1	MISC		1	32			
32	M1	PL7.9x306	394				M270M-345	
4	M2	MISC		1	4			
4	M2	PL9.5x394	414				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
4	M3	MISC		1	4			
4	M3	PL9.5x394	748				M270M-345	
26	M4	MISC		1	26			
26	M4	PL9.5x394	768				M270M-345	
8	M5	MISC		1	8			
8	M5	L51x51x6.4	90				M270M-345	

Total weight : 1574

product?

RECEIVED
CK'D BY _____ CK'D BY _____
NOV 17 2009
REQUEST _____ APPROVED As Noted
BY DATE

Renaud Bros. Inc.
283 Fort Bridgeman Rd. #2
Vernon, VT. 05354
Phone 1-802 257-7383

Rev.No: | Date:

Holes: 21mm UNO
BOLTS: 19mm DIA. M164M-I GALV UNO
Steel GR: M270M-GR345 UNO
Paint: PER SPECS (GREEN) UNO
Surface Prep: PER SPECS

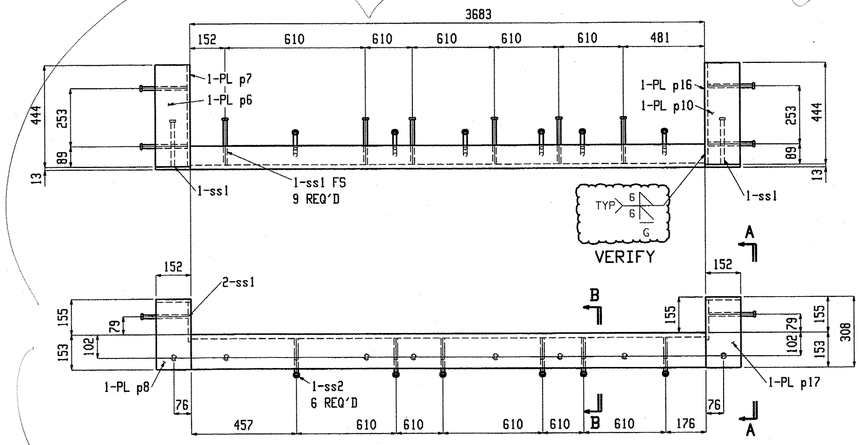
Project:
DUMMERSTON BRIDGE
DUMMERSTON, VT

Date: 9-9-09
Job No. BHO 1442 (28)
DWN. BY: EG
Checked: MRS
Sheet No. 3

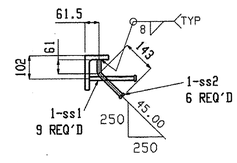
Nov 06 2009 10:54:35 AM



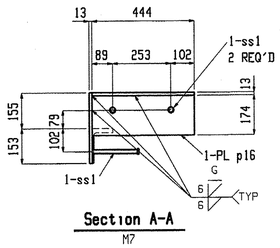
24 MISCS M6



2 MISCS M7



Section B-B
M7



Section A-A
M7

These pieces are part of expansion joint item and drawings

2 MISCS BRG1

2 MISCS BRG2

These pieces are part of the bearing device item and drawings

Need to separate cut beams as they are paid by weight other pieces are lump sum payment

Total weight : 482

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
24	M6	MISC		1	24			
24	M6	L51x51x6.4	140				M270M-345	
2	M7	MISC		1	2			
2	M7 ✓	L152x102x19	3683				M270M-345	
2	p7 ✓	PL13x174	444				M270M-345	
2	p16 ✓	PL13x174	444				M270M-345	
2	p6 ✓	PL13x152	444				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
2	p10	PL13x152	444				M270M-345	
2	p8	PL13x152	308				M270M-345	
2	p17	PL13x152	308				M270M-345	
18	ss1	CP16	203				A108	
6	ss3	CP16	203				A108	
12	ss2	CP16	103				A108	
2	BRG1	MISC		1	2			

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
2	BRG1	PL20x290	640				M270M-345	
2	BRG2	MISC		1	2			
2	BRG2	PL20x290	640				M270M-345	

Nov 06 2009 10:54:37 AM

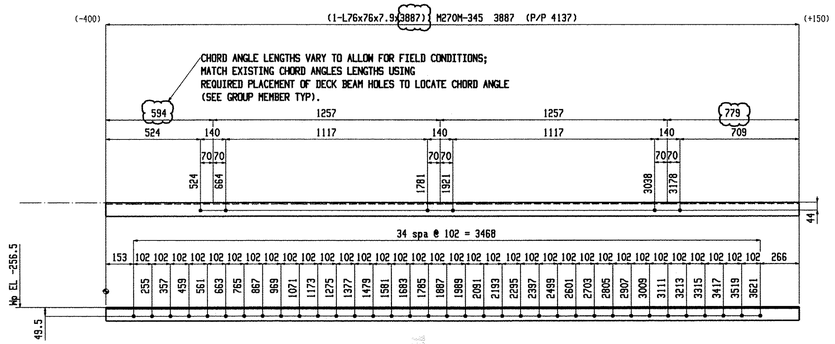
MRM
NOV 17 2010
RECOMMENDED ✓ APPROVED
BY DATE 1/12/2010

Renaud Bros. Inc.
283 Fort Bridgeman Rd. #2
Vernon, VT. 05354
Phone 1-802 257-7383

Rev.No:	Date:	
		Holes: 21mm UNO
		BOLTS: 19mm DIA. M164M-I GALV UNO
		Steel GR: M270M-GR345 UNO
		Paint: PER SPECS (GREEN) UNO
		Surface Prep: PER SPECS

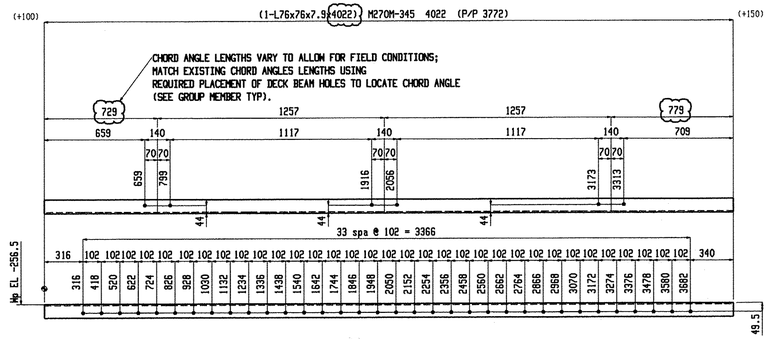
Project:
DUMMERSTON BRIDGE
DUMMERSTON, VT

Date:	Job No.
9-9-09	BHO 1412(28)
DWN. BY: EG / Checked: MRS	Sheet No. 4



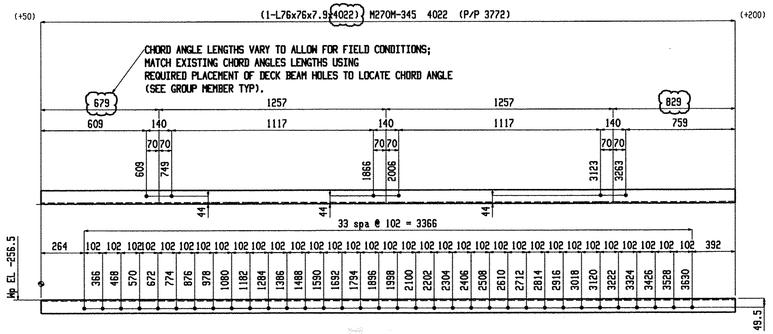
2 ANGLES A1

SHOP NOTE:
TOE DIRECTION NEAR SIDE



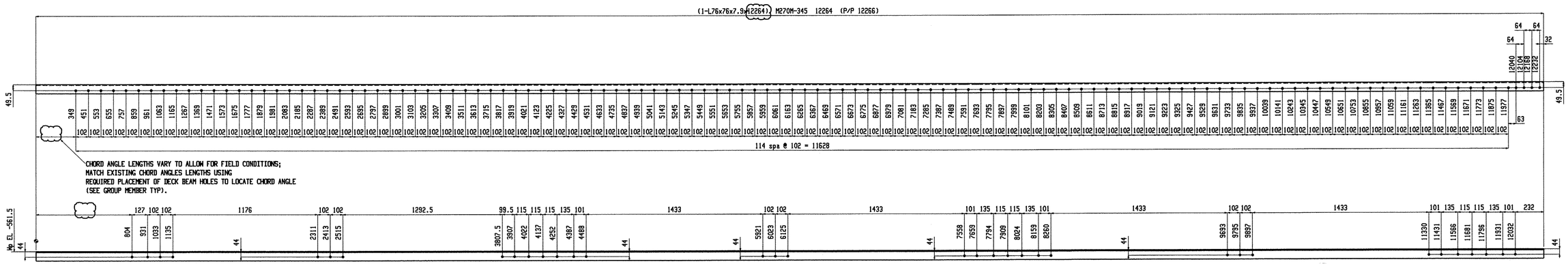
2 ANGLES A2

SHOP NOTE:
TOE DIRECTION FAR SIDE



2 ANGLES A3

SHOP NOTE:
TOE DIRECTION FAR SIDE



2 ANGLES A4

SHOP NOTE:
TOE DIRECTION NEAR SIDE

RECEIVED
CK'D BY _____ CK'D BY _____
NOV 17 2009
BY _____ DATE _____
APPROVED ✓ NS Jones

NOTE: WORK THIS DRAWING WITH GROUP MEMBER GM1

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
2	A1	ANGLE		1	2			
2	A1	L76x76x7.9	3887				M270M-345	
2	A2	ANGLE		1	2			
2	A2	L76x76x7.9	4022				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
2	A3	ANGLE		1	2			
2	A3	L76x76x7.9	4022				M270M-345	
2	A4	ANGLE		1	2			
2	A4	L76x76x7.9	12264				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks

Total weight : 435

Nov 06 2009 10:54:40 AM

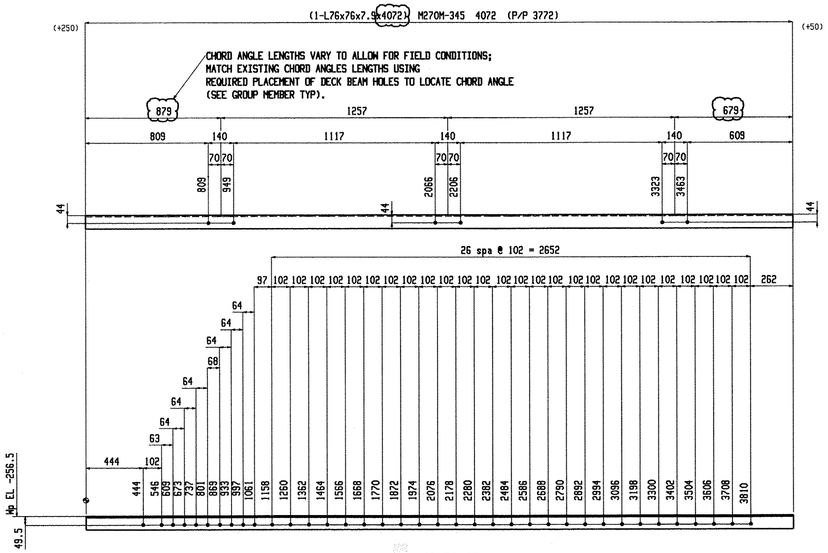
Renaud Bros. Inc.
283 Fort Bridgeman Rd. #2
Vernon, VT. 05354
Phone 1-802 257-7383

Project:
DUMMERSTON BRIDGE
DUMMERSTON, VT

Rev.No:	Date:	
		Holes: 21mm UNO
		BOLTS: 19mm DIA. M164M-I GALV UNO
		Steel GR: M270M-GR345 UNO
		Paint: PER SPECS (GREEN) UNO
		Surface Prep: PER SPECS

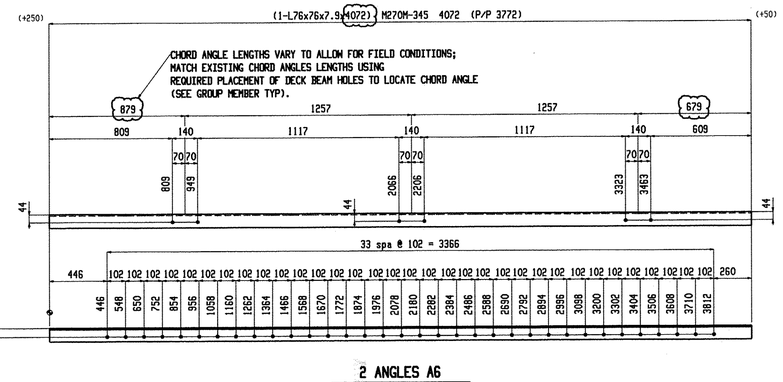
Date: 9-9-09
Job No. BHO 1442(28)
DWN. BY: EG
Checked: MRS
Sheet No. 5

3 Product?



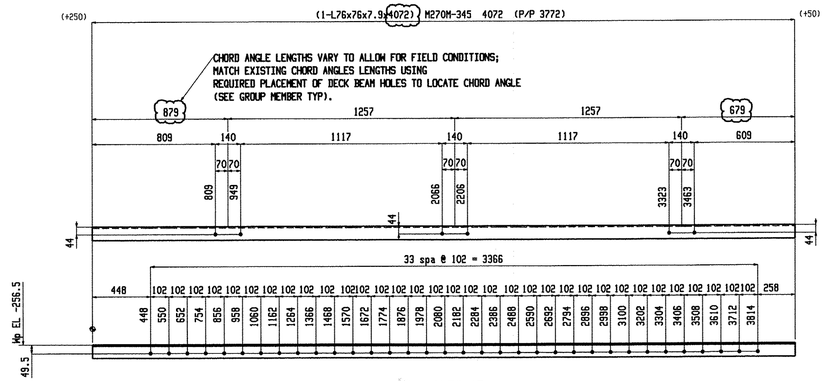
2 ANGLES A5

SHOP NOTE:
TOE DIRECTION NEAR SIDE



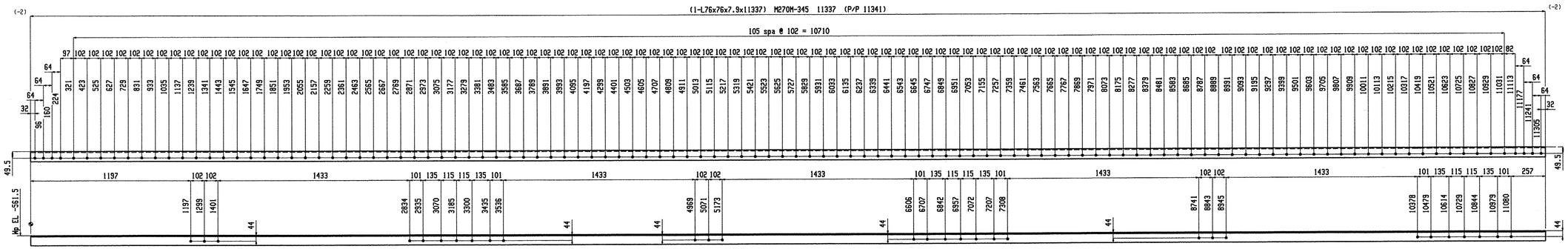
2 ANGLES A6

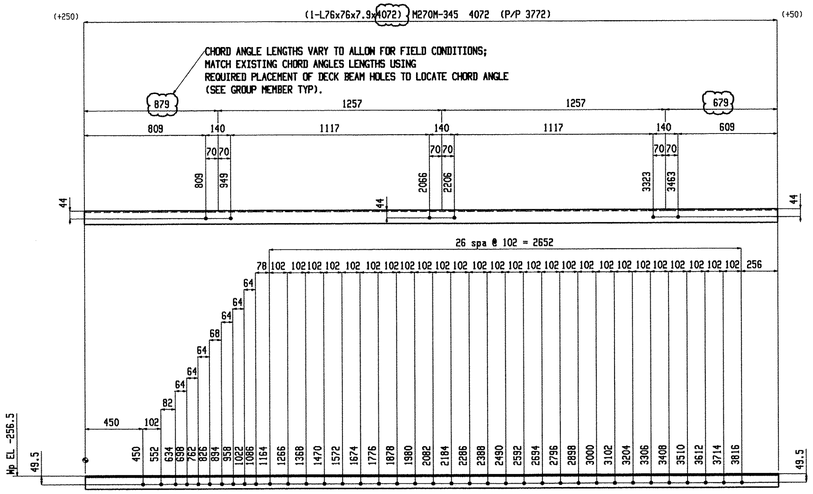
SHOP NOTE:
TOE DIRECTION NEAR SIDE



2 ANGLES A7

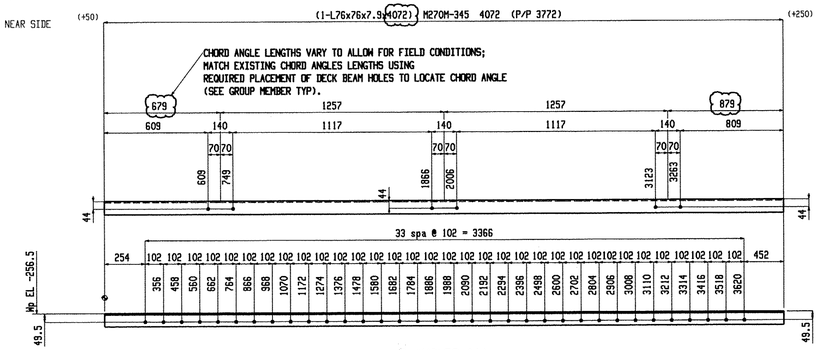
SHOP NOTE:
TOE DIRECTION NEAR SIDE


(1-L76x76x7.9x11337) M270M-345 11337 (P/P 11341)
(-2)
105 spa @ 102 = 10710
97 102 102 102 102 102 102 102 102 102 102 102 102 102 102 102 102 102 102 102



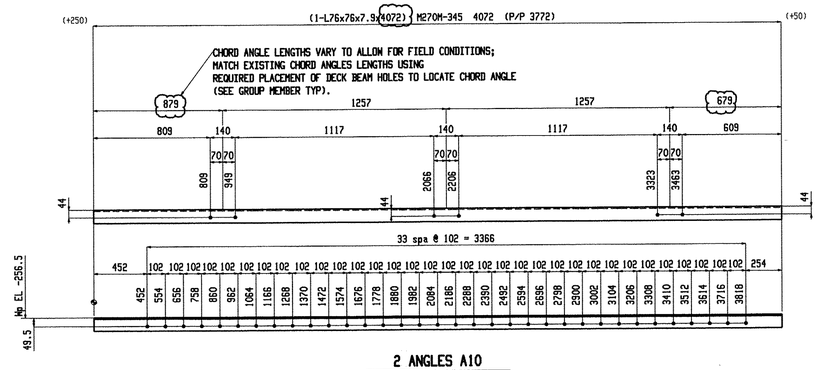
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SHOP NOTE:
TOE DIRECTION NEAR SIDE



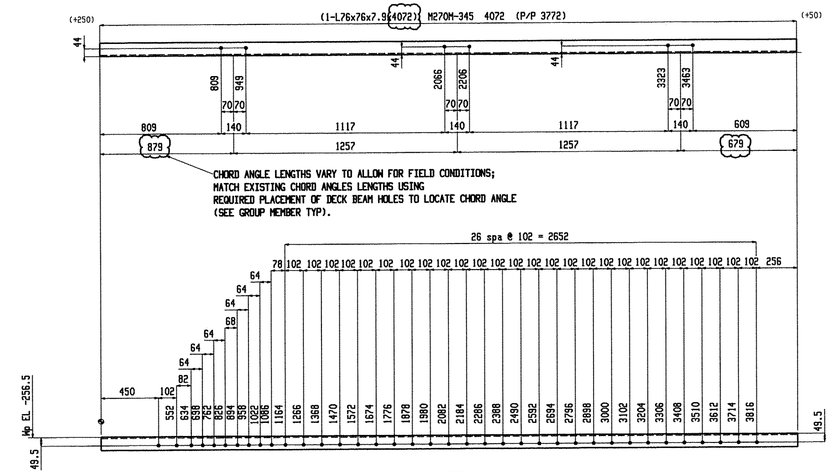
2 ANGLES A11

SHOP NOTE:
TOE DIRECTION NEAR SIDE



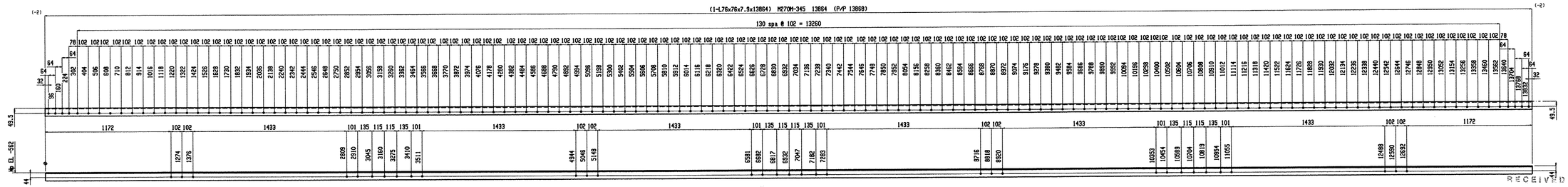
2 ANGLES A10

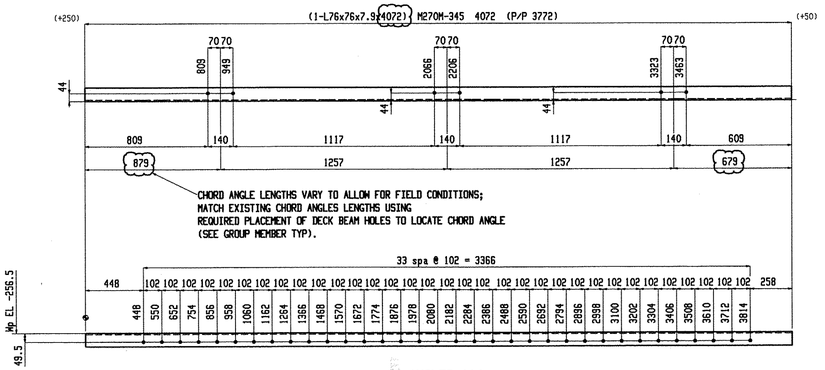
SHOP NOTE:
TOE DIRECTION NEAR SIDE



2 ANGLES A12

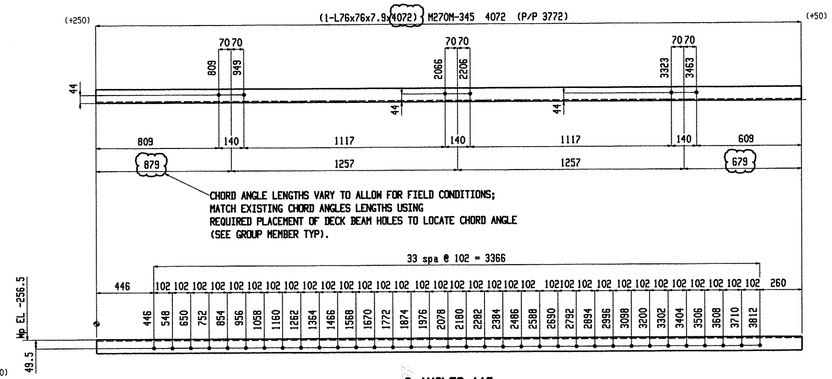
SHOP NOTE:
TOE DIRECTION FAR SIDE


(1-L76x76x7.9x13864) M270M-345 13864 (P/P 13668)
(-2)
130 spa @ 102 = 13260
78 102 102 102 102 102 102 102 102 102 102 102 102 102 102 102 102 102 102 102



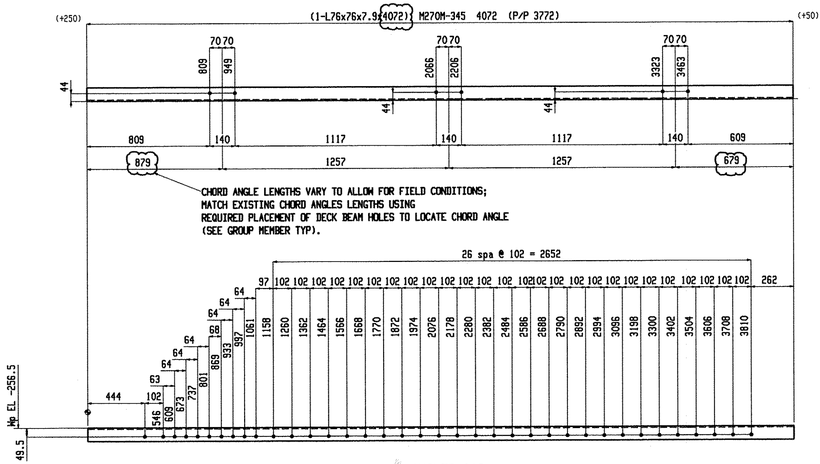
2 ANGLES A14

SHOP NOTE:
TOE DIRECTION FAR SIDE



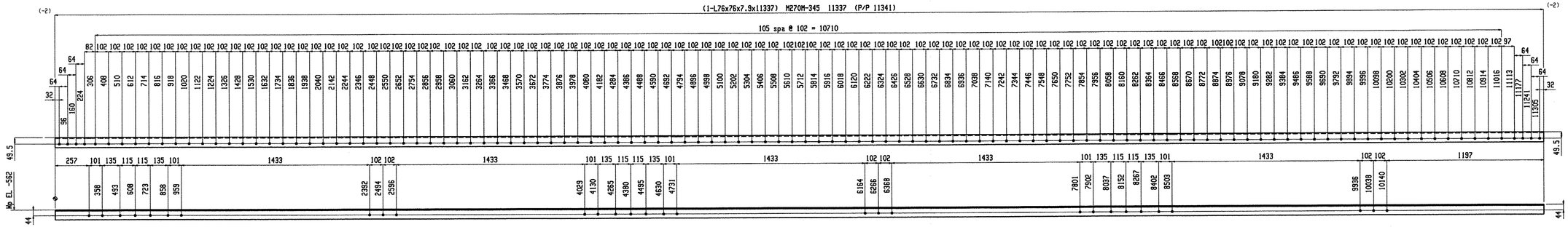
2 ANGLES A15

SHOP NOTE:
TOE DIRECTION FAR SIDE



2 ANGLES A16

SHOP NOTE:
TOE DIRECTION FAR SIDE



2 ANGLES A17

SHOP NOTE:
TOE DIRECTION NEAR SIDE

RECEIVED
CK'D BY _____ CK'D BY _____
NOV 17 2009
RECEIVED _____ APPROVED As Noted
BY DATE

NOTE: WORK THIS DRAWING WITH GROUP MEMBER GM4

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
2	A14	ANGLE		1	2			
2	A14	L76x76x7.9	4072				M270M-345	
2	A15	ANGLE		1	2			
2	A15	L76x76x7.9	4072				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
2	A16	ANGLE		1	2			
2	A16	L76x76x7.9	4072				M270M-345	
2	A17	ANGLE		1	2			
2	A17	L76x76x7.9	11337				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks

Total weight : 423

Nov 06 2009 10:54:53 AM

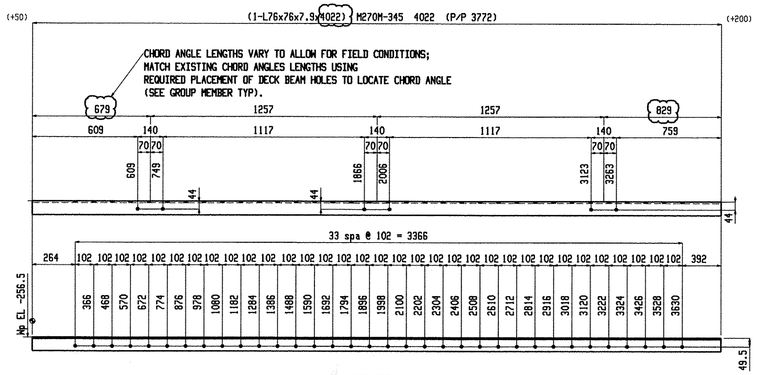
Renaud Bros. Inc.
283 Fort Bridgeman Rd. #2
Vernon, VT. 05354
Phone 1-802 257-7383

Rev.No: | Date:

Holes: 21mm UNO
BOLTS: 19mm DIA. M164M-I GALV UNO
Steel GR: M270M-GR345 UNO
Paint: PER SPECS (GREEN) UNO
Surface Prep: PER SPECS

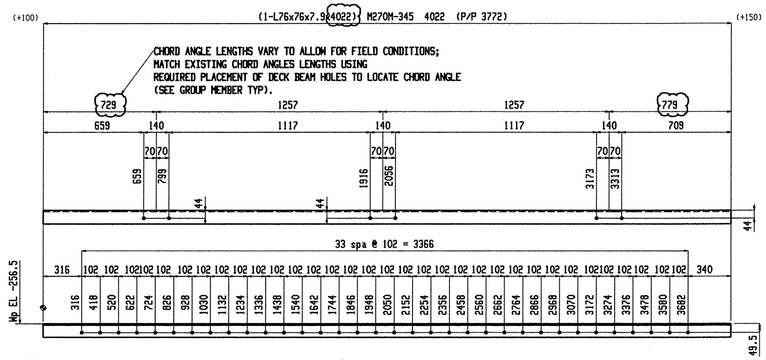
Project:
DUMMERSTON BRIDGE
DUMMERSTON, VT

Date: 9-9-09
Job No. BHO 1442 (28)
DWN. BY: EG
Checked: MRS
Sheet No. 8



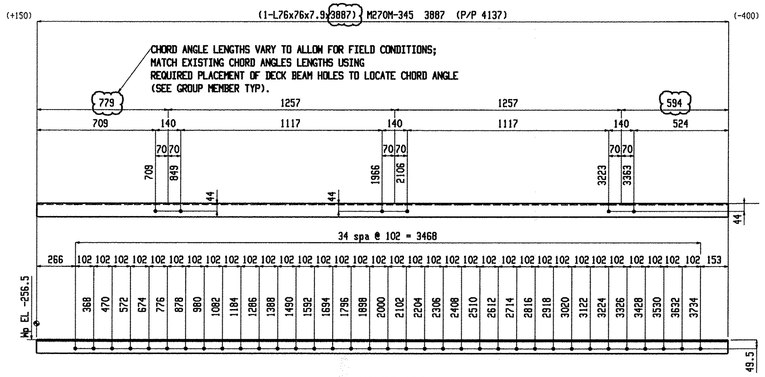
2 ANGLES A18

SHOP NOTE:
TOE DIRECTION NEAR SIDE



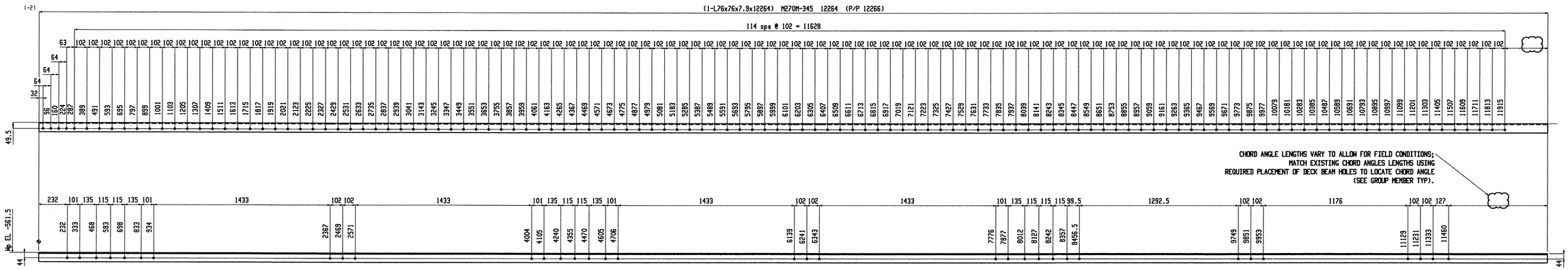
2 ANGLES A19

SHOP NOTE:
TOE DIRECTION NEAR SIDE



2 ANGLES A20

SHOP NOTE:
TOE DIRECTION NEAR SIDE



2 ANGLES A21

SHOP NOTE:
TOE DIRECTION NEAR SIDE

RECEIVED
CK'D BY_____ CK'D BY_____
NOV 17 2009
RENAUD APPROVED AS NOTED
BY DATE

NOTE: WORK THIS DRAWING WITH GROUP MEMBER GM5

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
2	A18	ANGLE		1	2			
2	A18	L76x76x7.9	4022				M270M-345	
2	A19	ANGLE		1	2			
2	A19	L76x76x7.9	4022				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
2	A20	ANGLE		1	2			
2	A20	L76x76x7.9	3887				M270M-345	
2	A21	ANGLE		1	2			
2	A21	L76x76x7.9	12264				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks

Total weight: 435

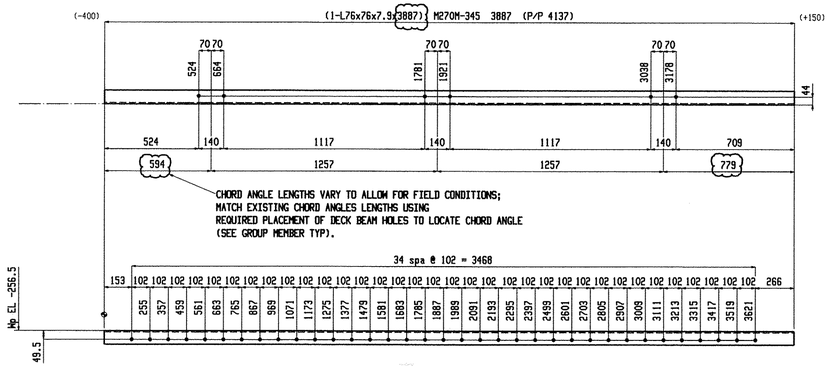
Nov 06 2009 10:54:57 AM

Renaud Bros. Inc.
283 Fort Bridgeman Rd. #2
Vernon, VT. 05354
Phone 1-802 257-7383

Rev.No:	Date:	
		Holes: 21mm UNO
		BOLTS: 19mm DIA. M164M-I GALV UNO
		Steel GR: M270M-GR345 UNO
		Paint: PER SPECS (GREEN) UNO
		Surface Prep: PER SPECS

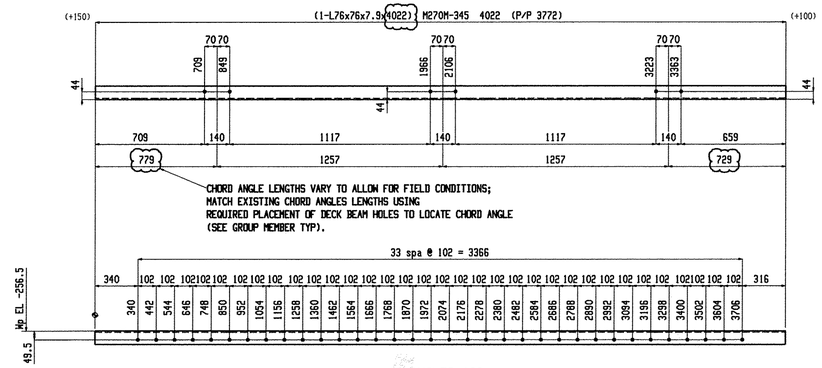
Project:
DUMMERSTON BRIDGE
DUMMERSTON, VT

Date:	Job No.
9-9-09	BHn 1442 (28)
DWN. BY: EG / Checked: MRS	Sheet No. 9



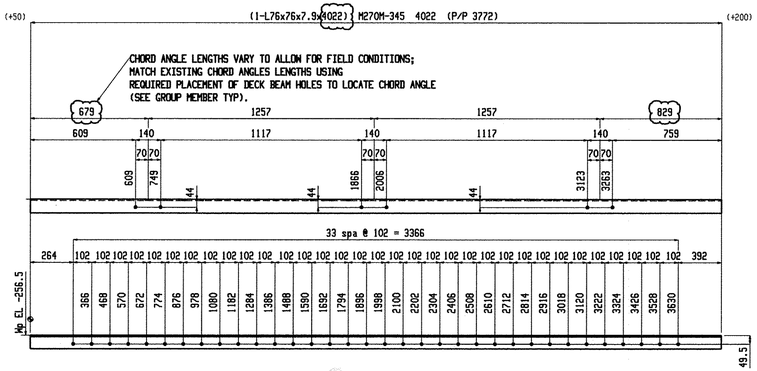
2 ANGLES A22

SHOP NOTE:
TOE DIRECTION FAR SIDE



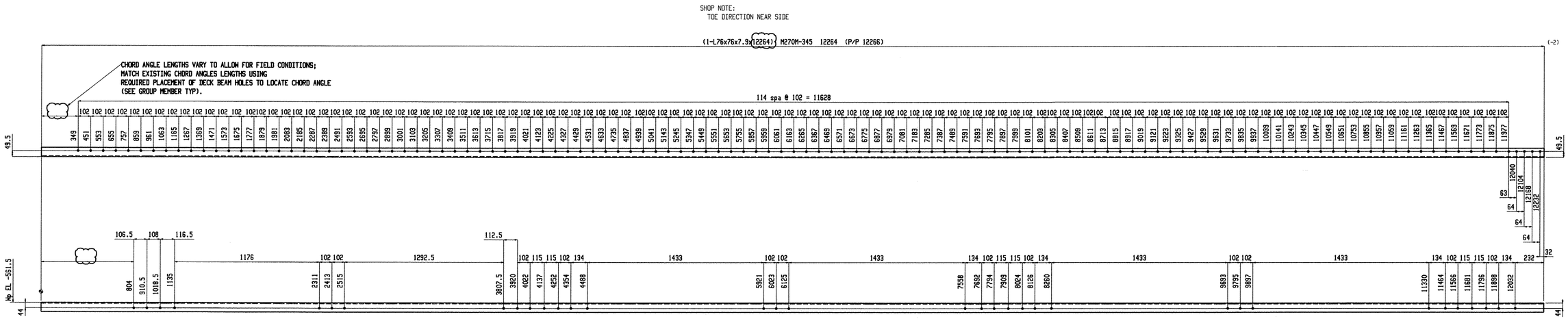
2 ANGLES A23

SHOP NOTE:
TOE DIRECTION FAR SIDE



2 ANGLES A24

SHOP NOTE:
TOE DIRECTION NEAR SIDE



2 ANGLES A25

SHOP NOTE:
TOE DIRECTION FAR SIDE

RECEIVED
CK'D BY _____ CK'D BY _____
NOV 17 2009
REVIEWED _____ APPROVED _____
BY _____ DATE _____

NOTE: WORK THIS DRAWING WITH GROUP MEMBER GM6

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
2	A22	ANGLE		1	2			
2	A22	L76x76x7.9	3887				M270M-345	
2	A23	ANGLE		1	2			
2	A23	L76x76x7.9	4022				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
2	A24	ANGLE		1	2			
2	A24	L76x76x7.9	4022				M270M-345	
2	A25	ANGLE		1	2			
2	A25	L76x76x7.9	12264				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks

Total weight : 435

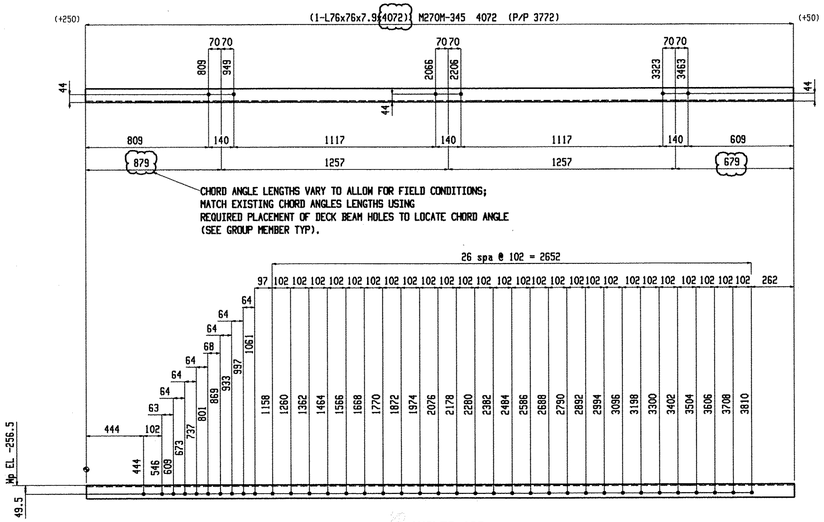
Nov 06 2009 10:55:01 AM

Renaud Bros. Inc.
283 Fort Bridgeman Rd. #2
Vernon, VT. 05354
Phone 1-802 257-7383

Rev.No:	Date:	
		Holes: 21mm UNO
		BOLTS: 19mm DIA. M164M-I GALV UNO
		Steel GR: M270M-GR345 UNO
		Paint: PER SPECS (GREEN) UNO
		Surface Prep: PER SPECS

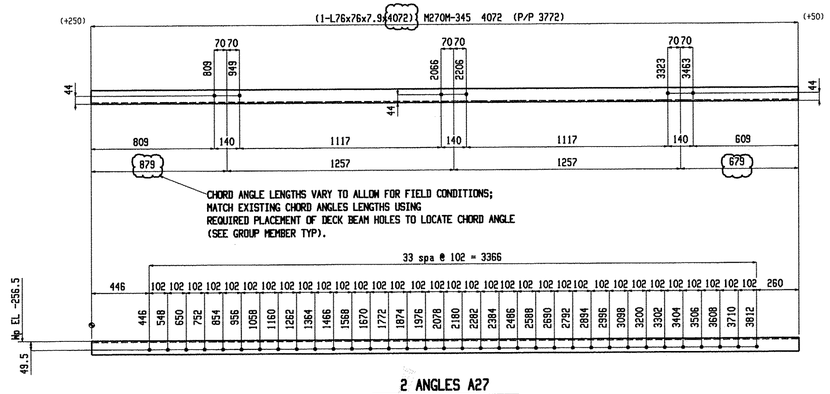
Project:
DUMMERSTON BRIDGE
DUMMERSTON, VT

Date:	Job No.
9-9-09	240 1442(28)
DWN. BY: EG / Checked: MRS	Sheet No. 10



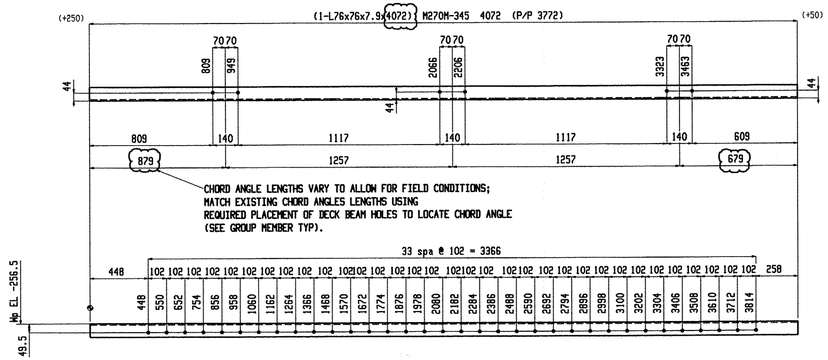
2 ANGLES A26

SHOP NOTE:
TOE DIRECTION FAR SIDE



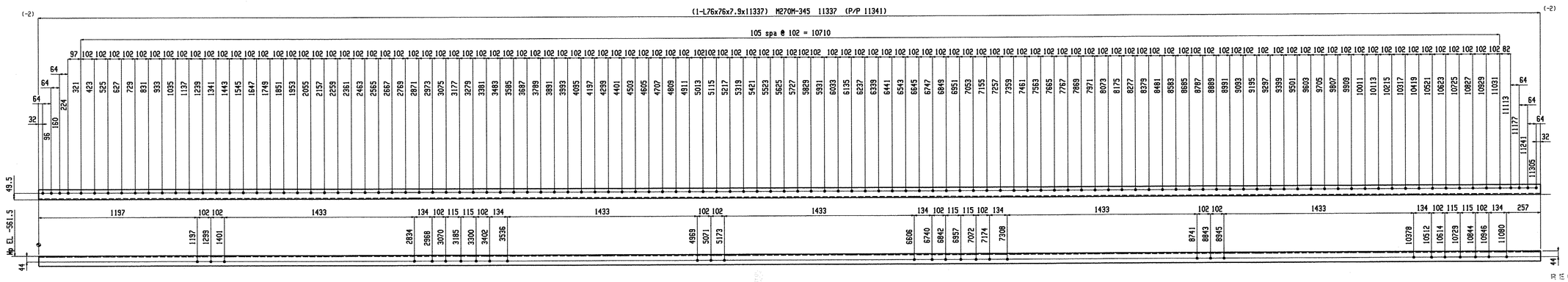
2 ANGLES A27

SHOP NOTE:
TOE DIRECTION FAR SIDE



2 ANGLES A28

SHOP NOTE:
TOE DIRECTION FAR SIDE



2 ANGLES A29

SHOP NOTE:
TOE DIRECTION FAR SIDE

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CK'D BY _____ CK'D BY _____
NOV 17 2009
APPROVED AS NOTED
BY DATE

NOTE: WORK THIS DRAWING WITH GROUP MEMBER GM7

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
2	A26	ANGLE		1	2			
2	A26	L76x76x7.9	4072				M270M-345	
2	A27	ANGLE		1	2			
2	A27	L76x76x7.9	4072				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
2	A28	ANGLE		1	2			
2	A28	L76x76x7.9	4072				M270M-345	
2	A29	ANGLE		1	2			
2	A29	L76x76x7.9	11337				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks

Total weight : 423

Nov 06 2009 10:55:05 AM

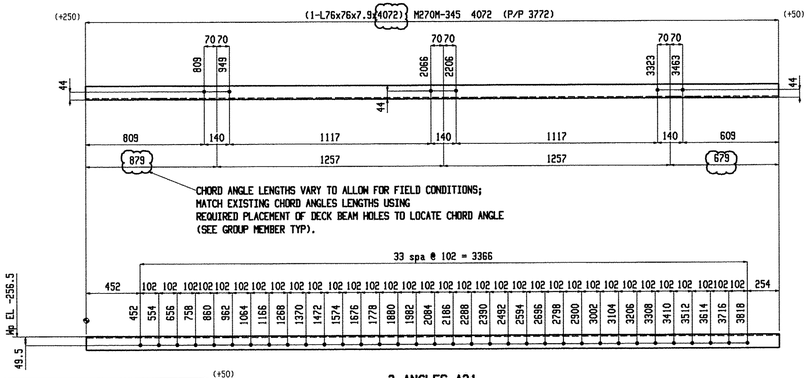
Renaud Bros. Inc.
283 Fort Bridgeman Rd. #2
Vernon, VT. 05354
Phone 1-802 257-7383

Rev.No: | Date:

Holes: 21mm UNO
BOLTS: 19mm DIA. M164M-I GALV UNO
Steel GR: M270M-GR345 UNO
Paint: PER SPECS (GREEN) UNO ? product?
Surface Prep: PER SPECS

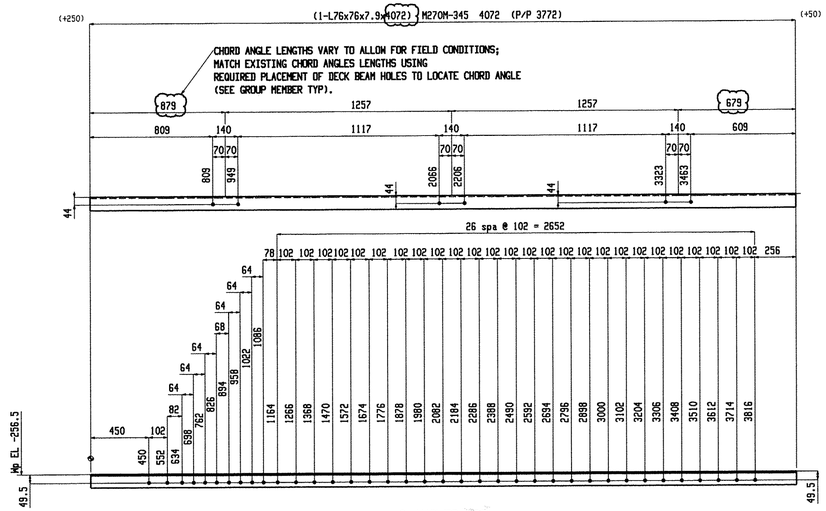
Project:
DUMMERSTON BRIDGE
DUMMERSTON, VT

Date: 9-9-09
Job No. BHO 1442(28)
DWN. BY: EG
Checked: MRS
Sheet No. 11



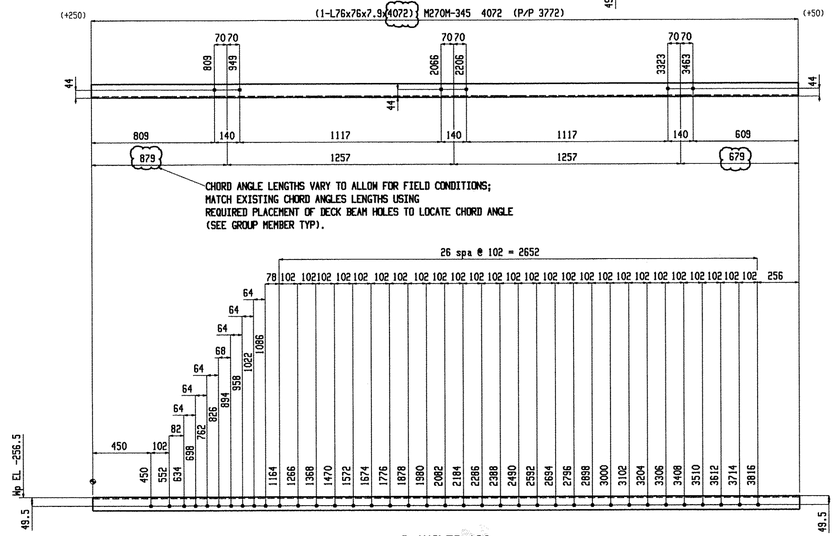
2 ANGLES A31

SHOP NOTE:
TOE DIRECTION FAR SIDE



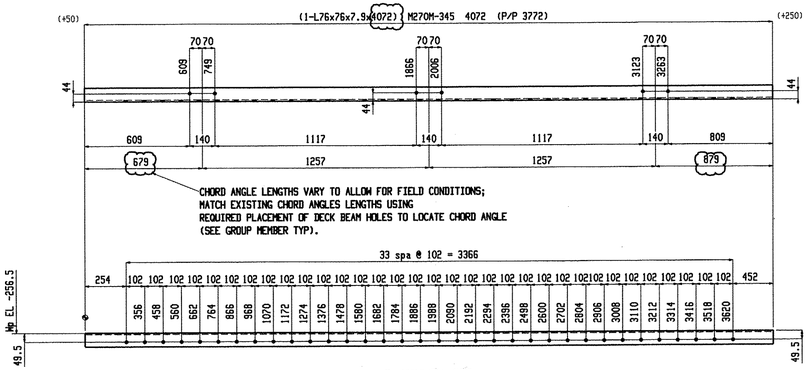
2 ANGLES A33

SHOP NOTE:
TOE DIRECTION NEAR SIDE



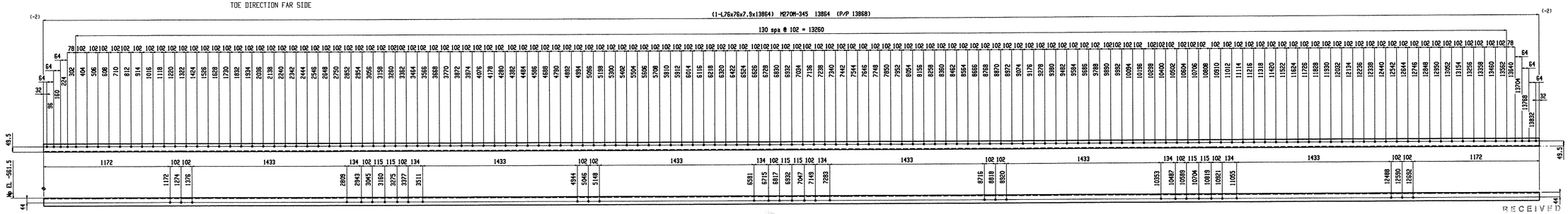
2 ANGLES A30

SHOP NOTE:
TOE DIRECTION FAR SIDE



2 ANGLES A32

SHOP NOTE:
TOE DIRECTION FAR SIDE



2 ANGLES A34

SHOP NOTE:
TOE DIRECTION FAR SIDE

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CK'D BY _____ CK'D BY _____
NOV 17 2009
APPROVED
BY _____ DATE _____

NOTE: WORK THIS DRAWING WITH GROUP MEMBER GM8

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
2	A30	ANGLE		1	2			
2	A30	L76x76x7.9	4072				M270M-345	
2	A31	ANGLE		1	2			
2	A31	L76x76x7.9	4072				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
2	A32	ANGLE		1	2			
2	A32	L76x76x7.9	4072				M270M-345	
2	A33	ANGLE		1	2			
2	A33	L76x76x7.9	4072				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
2	A34	ANGLE		1	2			
2	A34	L76x76x7.9	13864				M270M-345	

Total weight : 542

Nov 06 2009 10:55:09 AM

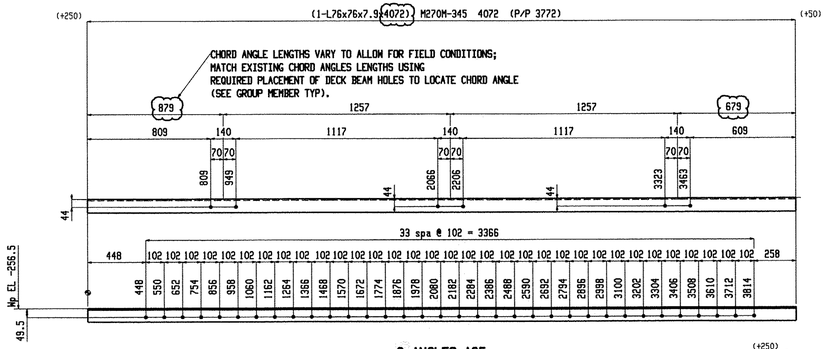
Renaud Bros. Inc.
283 Fort Bridgeman Rd. #2
Vernon, VT. 05354
Phone 1-802 257-7383

Rev.No:	Date:	
		Holes: 21mm UNO
		BOLTS: 19mm DIA. M164M-I GALV UNO
		Steel GR: M270M-GR345 UNO
		Paint: PER SPECS (GREEN) UNO
		Surface Prep: PER SPECS

Project:
DUMMERSTON BRIDGE
DUMMERSTON, VT

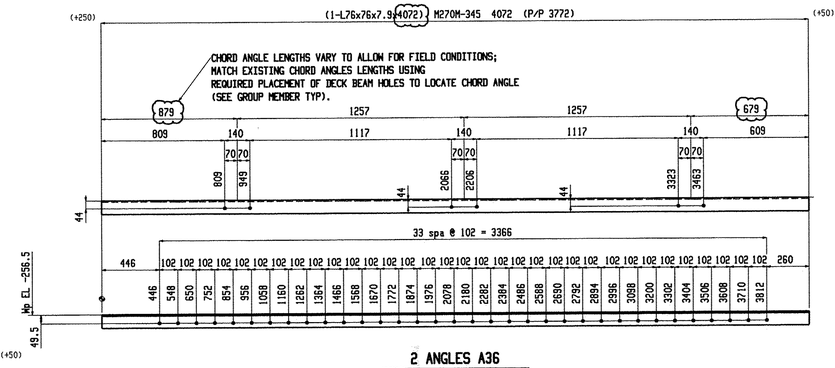
Date:	Job No.
9-9-09	BHO 1442(28)
DWN. BY: EG	Checked: MRS
	Sheet No. 12

Product?



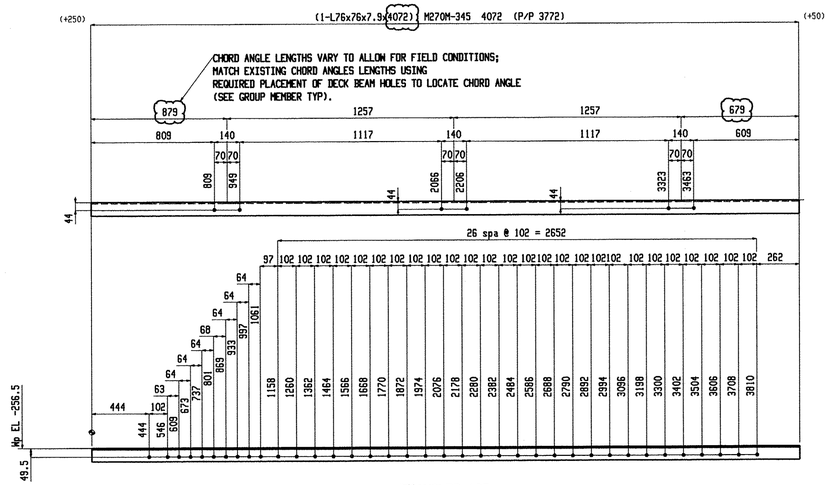
2 ANGLES A35

SHOP NOTE:
TOE DIRECTION NEAR SIDE



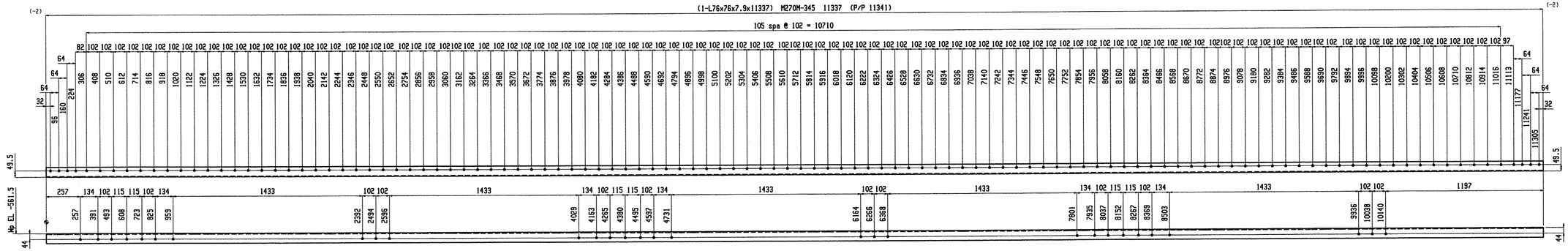
2 ANGLES A36

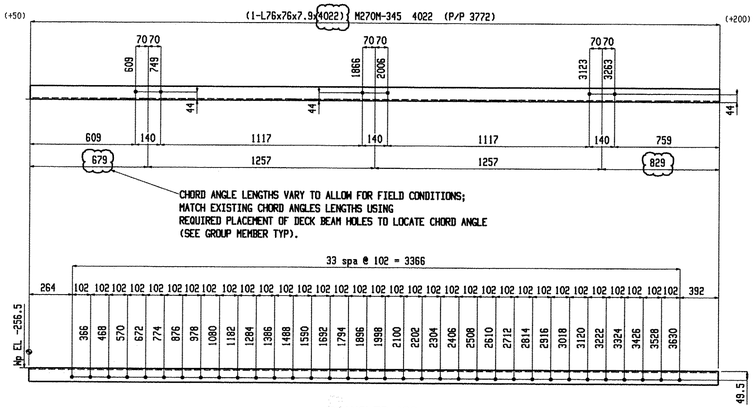
SHOP NOTE:
TOE DIRECTION NEAR SIDE



2 ANGLES A37

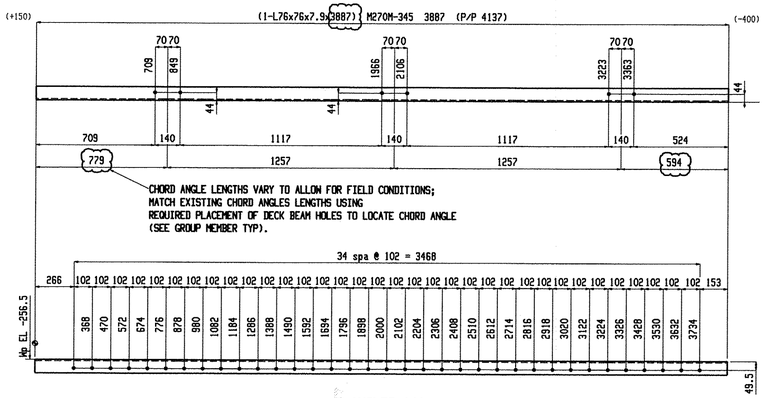
SHOP NOTE:
TOE DIRECTION NEAR SIDE


(-2)
(1-L76x76x7.9x11337) M270M-345 11337 (P/P 11341)
(-2)
105 spa @ 102 = 10710
82 102 102 102 102 102 102 102 102 102 102 102 102 102 102 102 102 102 102 102



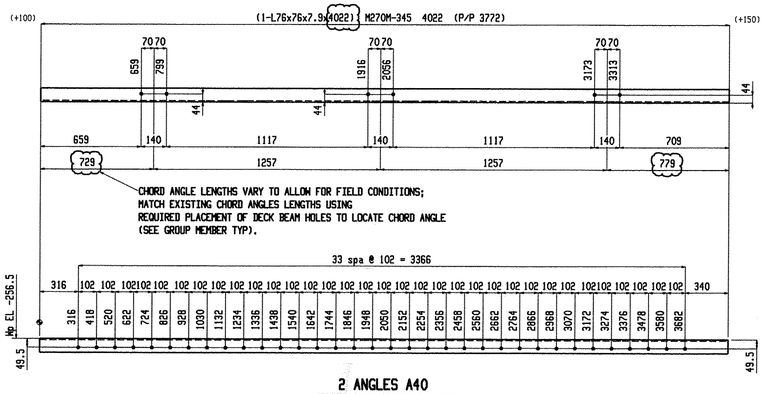
2 ANGLES A39

SHOP NOTE:
TOE DIRECTION FAR SIDE



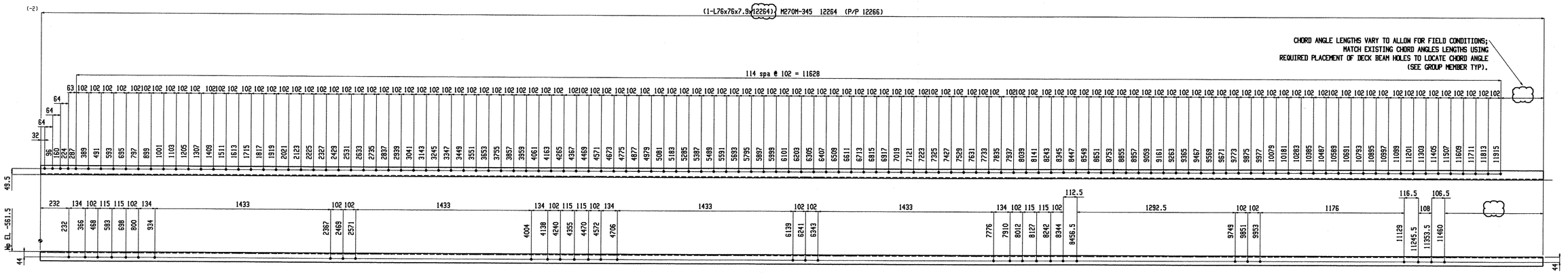
2 ANGLES A41

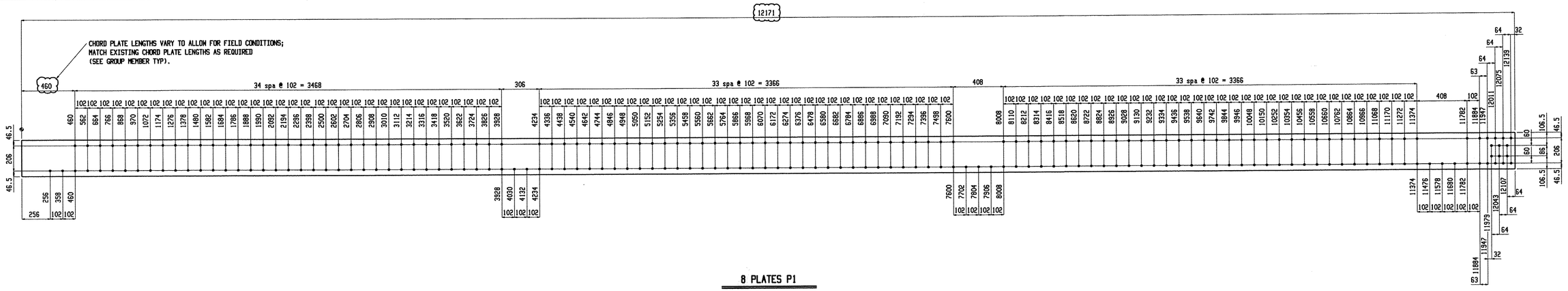
SHOP NOTE:
TOE DIRECTION FAR SIDE



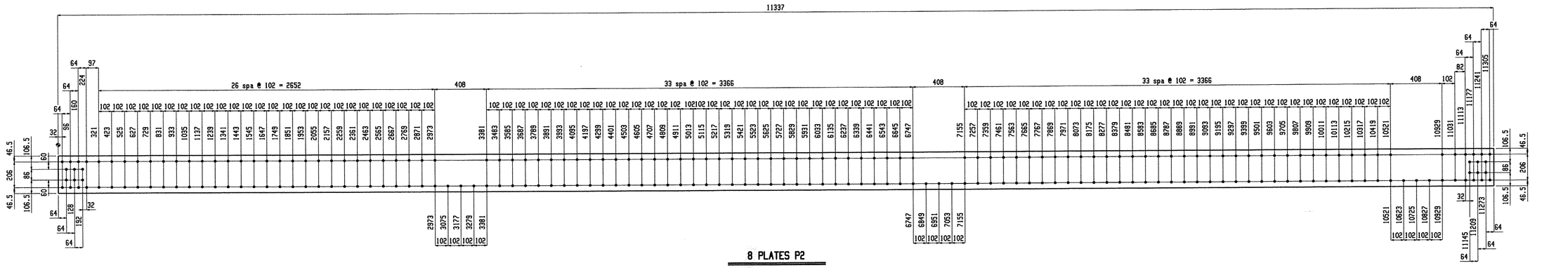
2 ANGLES A40

SHOP NOTE:
TOE DIRECTION FAR SIDE

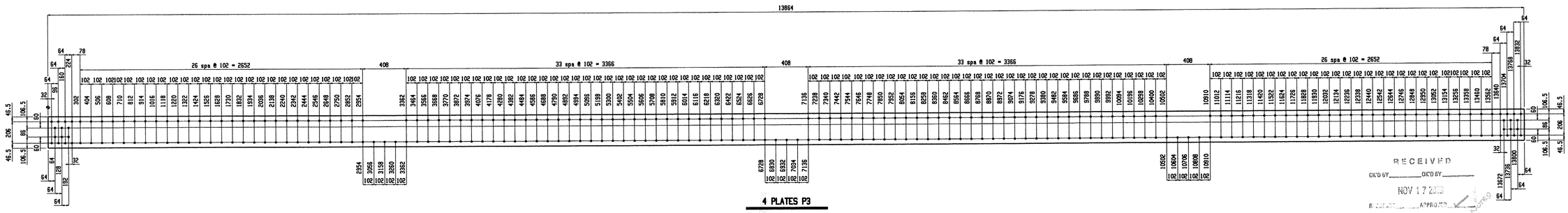

(-2)
(1-L76x76x7.9x12264) M270M-345 12264 (P/P 12266)
CHORD ANGLE LENGTHS VARY TO ALLOW FOR FIELD CONDITIONS;
MATCH EXISTING CHORD ANGLES LENGTHS USING
REQUIRED PLACEMENT OF DECK BEAM HOLES TO LOCATE CHORD ANGLE
(SEE GROUP MEMBER TYP).
114 spa @ 102 = 11628
63 102 102 102 102 102 102 102 102 102 102 102 102 102 102 102 102 102 102 102



8 PLATES P1



8 PLATES P2



4 PLATES P3

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CK'D BY _____ CK'D BY _____
NOV 17 2009
APPROVED
BY DATE

NOTE: WORK THIS DRAWING WITH GROUP MEMBER GM1-GM10

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
8	P1	PLATE		1	8			
8	P1	PL6.4x299	12171				M270M-345	
8	P2	PLATE		1	8			
8	P2	PL6.4x299	11337				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
4	P3	PLATE		1	4			
4	P3	PL6.4x299	13864				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks

Total weight : 3657

Nov 06 2009 10:55:22 AM

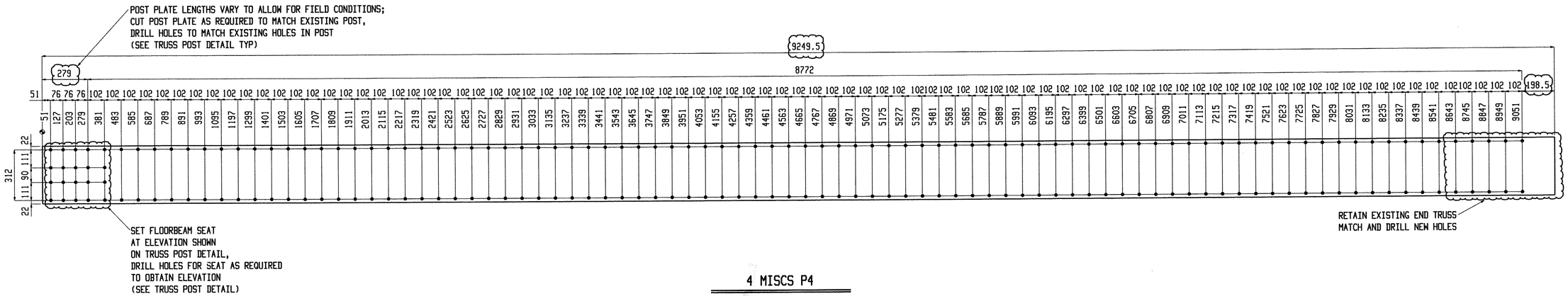
Renaud Bros. Inc.
283 Fort Bridgeman Rd. #2
Vernon, VT. 05354
Phone 1-802 257-7383

Project:
DUMMERSTON BRIDGE
DUMMERSTON, VT

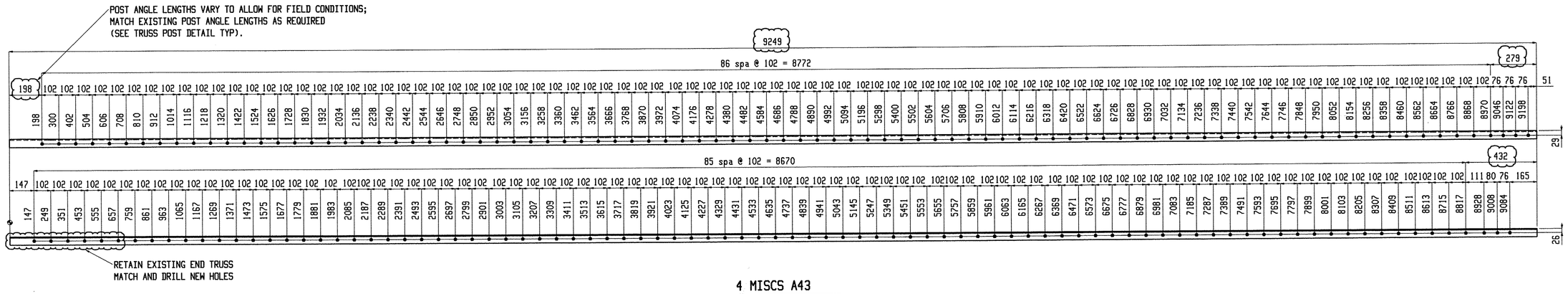
Rev.No:	Date:

Holes: 21mm UNO
BOLTS: 19mm DIA. M164M-I GALV UNO
Steel GR: M270M-GR345 UNO
Paint: PER SPECS (GREEN) UNO
Surface Prep: PER SPECS

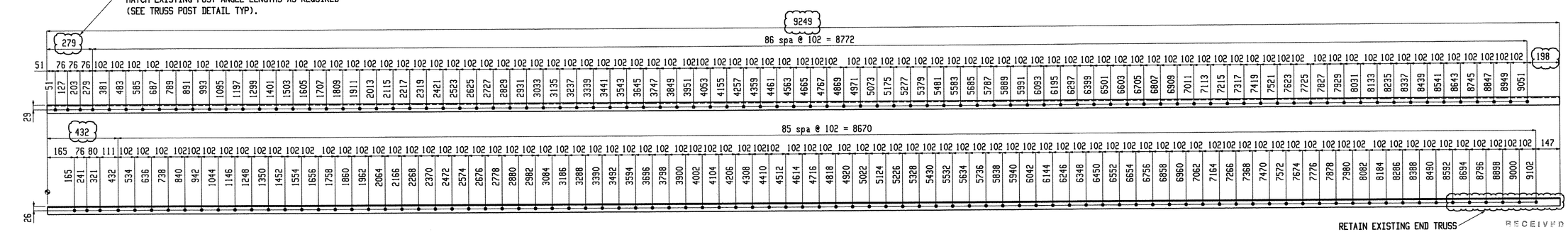
Date: 9-9-09
Job No. 840 1442 (78)
DWN. BY: EG
Checked: MRS
Sheet No. 15



4 MISCS P4



4 MISCS A43



4 MISCS A44

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NOV 17 2009
REVIEWED - AS NOTED
BY _____ DATE _____

NOTE: WORK THIS DRAWING WITH GROUP MEMBER GM11

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
4	P4	MISC		1	4			
4	P4	PL6.4x356	9249.5				M270M-345	
4	A43	MISC		1	4			
4	A43	L51x51x6.4	9249				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
4	A44	MISC		1	4			
4	A44	L51x51x6.4	9249				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks

Total weight : 1014

Nov 06 2009 10:55:25 AM

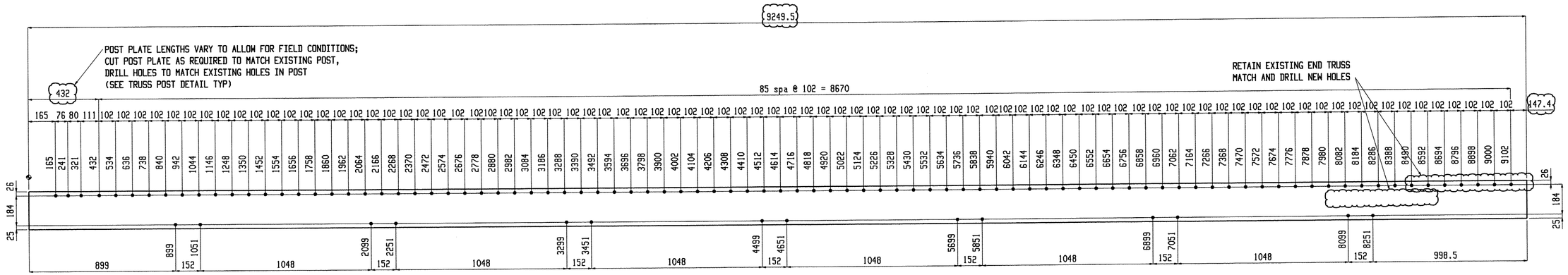
Renaud Bros. Inc.
283 Fort Bridgeman Rd. #2
Vernon, VT. 05354
Phone 1-802 257-7383

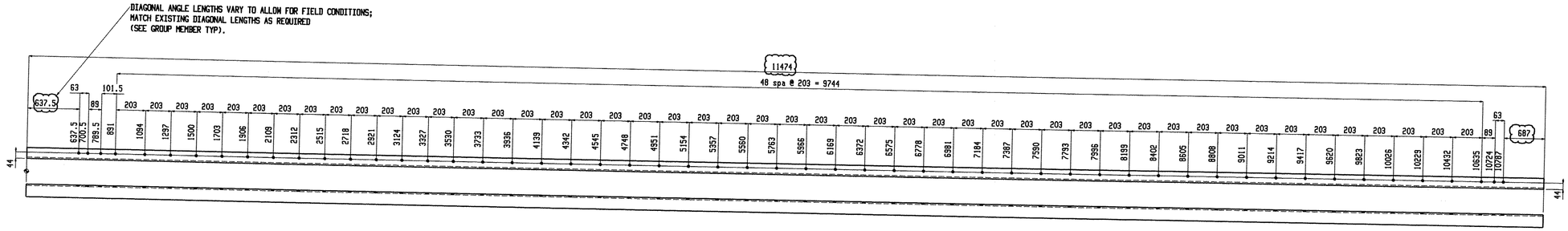
Rev.No: | Date:

Holes: 21mm UNO
BOLTS: 19mm DIA. M164M-I GALV UNO
Steel GR: M270M-GR345 UNO
Paint: PER SPECS (GREEN) UNO product?
Surface Prep: PER SPECS

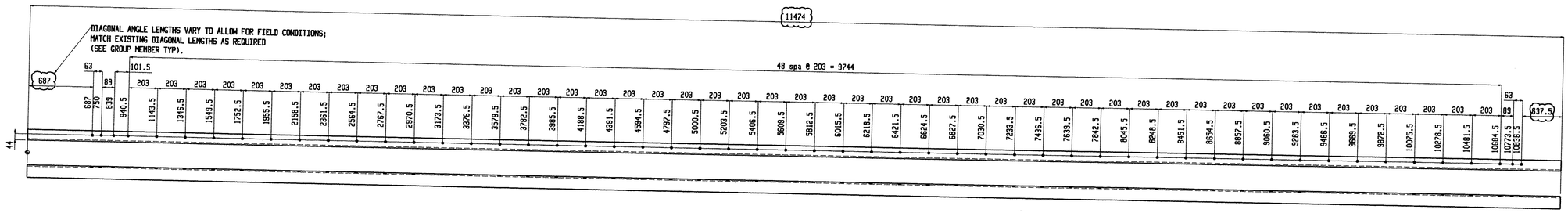
Project:
DUMMERSTON BRIDGE
DUMMERSTON, VT

Date: 9-9-09
Job No. BHO 1442(28)
DWN. BY: EG
Checked: MRS
Sheet No. 16

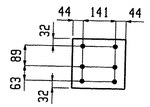

9249.5
POST PLATE LENGTHS VARY TO ALLOW FOR FIELD CONDITIONS;
CUT POST PLATE AS REQUIRED TO MATCH EXISTING POST,
DRILL HOLES TO MATCH EXISTING HOLES IN POST
(SEE TRUSS POST DETAIL TYP)
432
85 spa @ 102 = 8670
RETAIN EXISTING END TRUSS
MATCH AND DRILL NEW HOLES
147.4
165 76 80 111 102 102 102



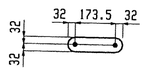
4 MISCS A47



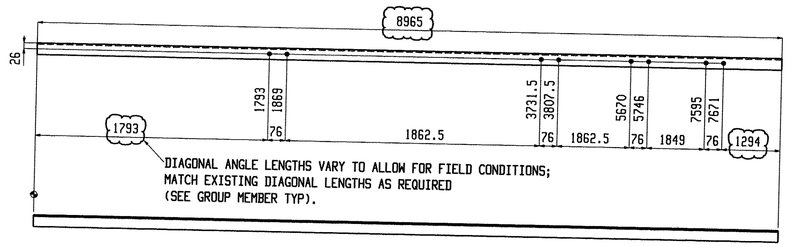
4 MISCS A48



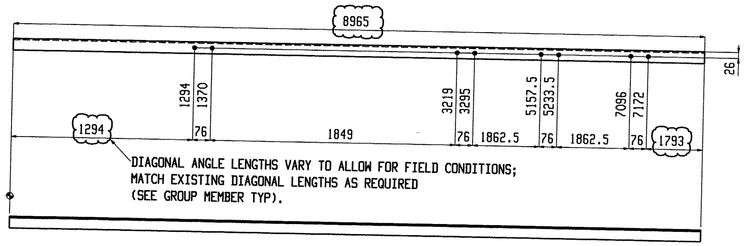
8 MISCS M12



388 MISCS M13



4 MISCS A49



4 MISCS A50

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
4	A47	MISC		1	4			
4	A47	L89x76x9.5	11474				M270M-345	
4	A48	MISC		1	4			
4	A48	L89x76x9.5	11474				M270M-345	
8	M12	MISC		1	8			

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
8	M12	PL6.4x216	229				M270M-345	
388	M13	MISC		1	388			
388	M13	PL6.4x64	237.5				M270M-345	
4	A49	MISC		1	4			
4	A49	L51x51x6.4	8965				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
4	A50	MISC		1	4			
4	A50	L51x51x6.4	8965				M270M-345	

Total weight : 1721

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GK'D BY _____ GK'D BY _____
NOV 17 2009
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BY DATE

NOTE: WORK THIS DRAWING WITH GROUP MEMBER GM12&GM16

Renaud Bros. Inc.
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Vernon, VT. 05354
Phone 1-802 257-7383

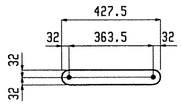
Project:
DUMMERSTON BRIDGE
DUMMERSTON, VT

Rev.No:	Date:	
		Holes: 21mm UNO
		BOLTS: 19mm DIA. M164M-I GALV UNO
		Steel GR: M270M-GR345 UNO
		Paint: PER SPECS (GREEN) UNO
		Surface Prep: PER SPECS

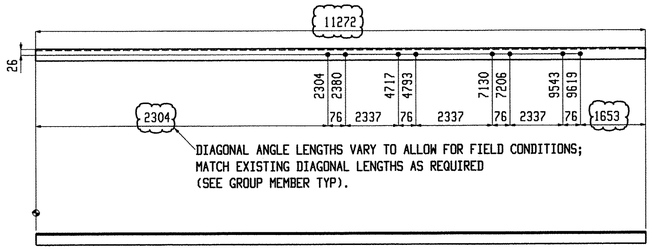
Date: 9-9-09
Job No. BHO 1442(28)
DWN. BY: EG
Checked: MRS
Sheet No. 18

Nov 06 2009 10:55:34 AM

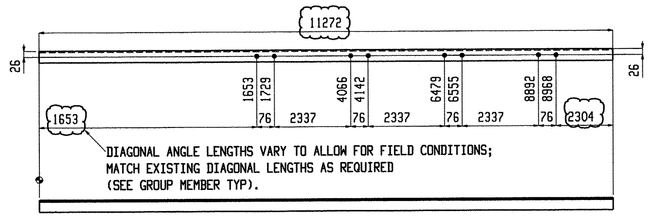
product?



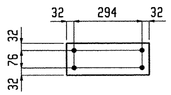
208 MISCS M14



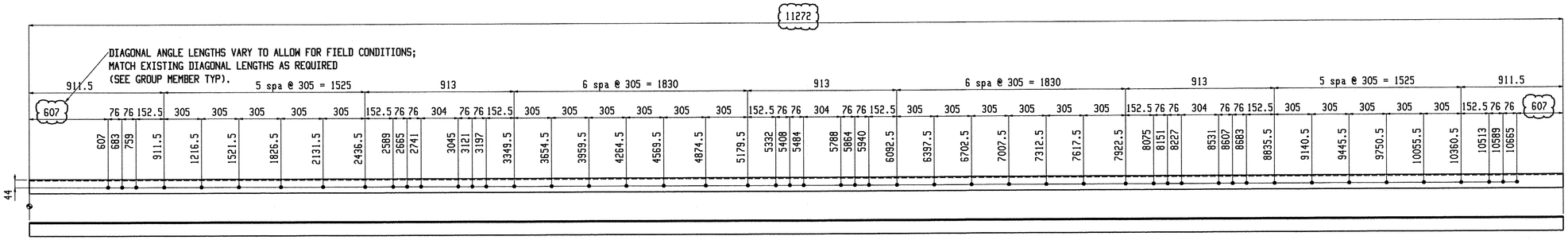
4 MISCS A51



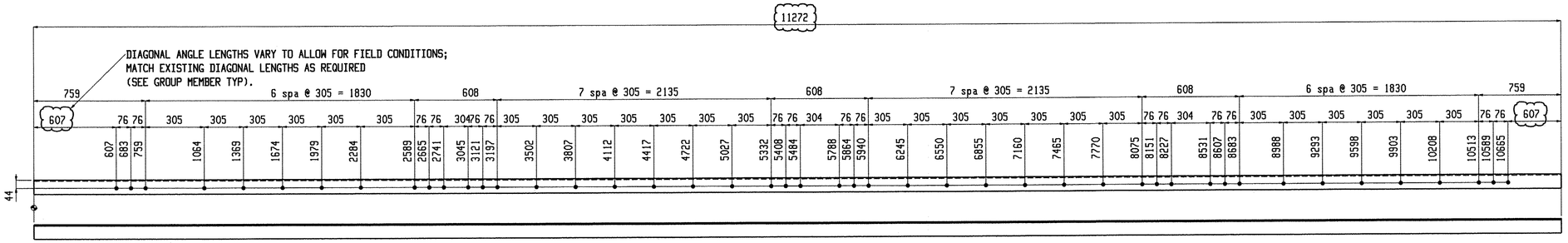
4 MISCS A52



32 MISCS M15



4 MISCS A53



4 MISCS A54

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
208	M14	MISC		1	208			
208	M14	PL6.4x64	427.5				M270M-345	
32	M15	MISC		1	32			
32	M15	PL6.4x140	358				M270M-345	
4	A51	MISC		1	4			

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
4	A51	L51x51x6.4	11272				M270M-345	
4	A52	MISC		1	4			
4	A52	L51x51x6.4	11272				M270M-345	
4	A53	MISC		1	4			
4	A53	L76x76x6.4	11272				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
4	A54	MISC		1	4			
4	A54	L76x76x6.4	11272				M270M-345	

Total weight : 1451

RECEIVED
CK'D BY _____ OK'D BY _____
NOV 17 2009
APPROVED AS NOTED
BY DATE

NOTE: WORK THIS DRAWING WITH GROUP MEMBER GM13,GM15&GM16

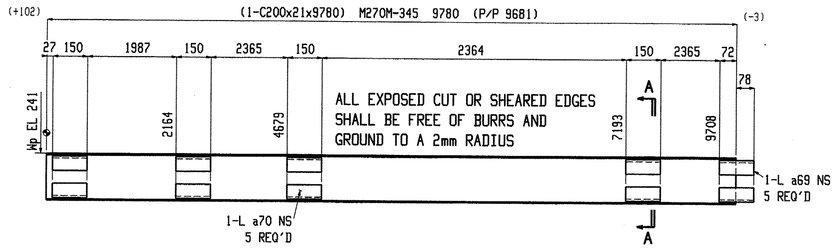
Renaud Bros. Inc.
283 Fort Bridgeman Rd. #2
Vernon, VT. 05354
Phone 1-802 257-7383

Rev.No:	Date:	
		Holes: 21mm UNO
		BOLTS: 19mm DIA. M164M-I GALV UNO
		Steel GR: M270M-GR345 UNO
		Paint: PER SPECS (GREEN) UNO
		Surface Prep: PER SPECS

Project:
DUMMERSTON BRIDGE
DUMMERSTON, VT

Date:	Job No.
9-9-09	BHO 1442(28)
DWN. BY: EG	Checked: MRS
	Sheet No. 19

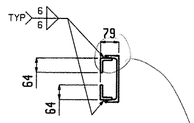
Nov 06 2009 10:55:37 AM



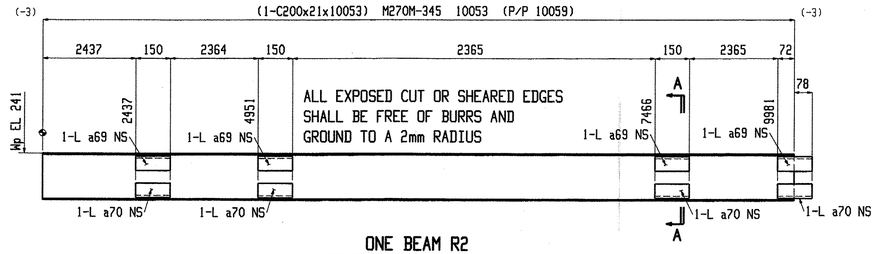
ONE BEAM R1

W	203x7.5
F	59.5x10
K	24x18

SHOP NOTE:
TOE DIRECTION NEAR SIDE



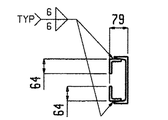
Section A-A
R1



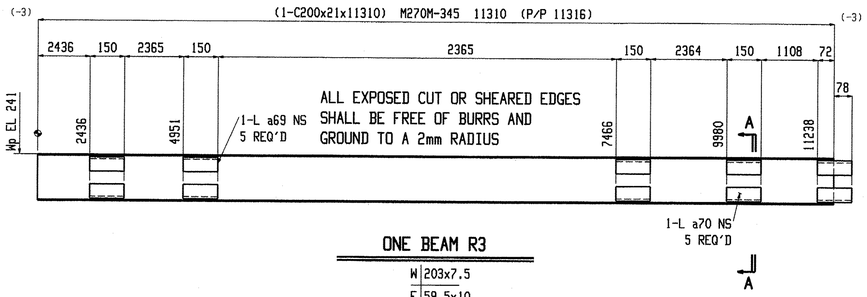
ONE BEAM R2

W	203x7.5
F	59.5x10
K	24x18

SHOP NOTE:
TOE DIRECTION NEAR SIDE



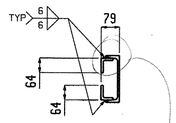
Section A-A
R2



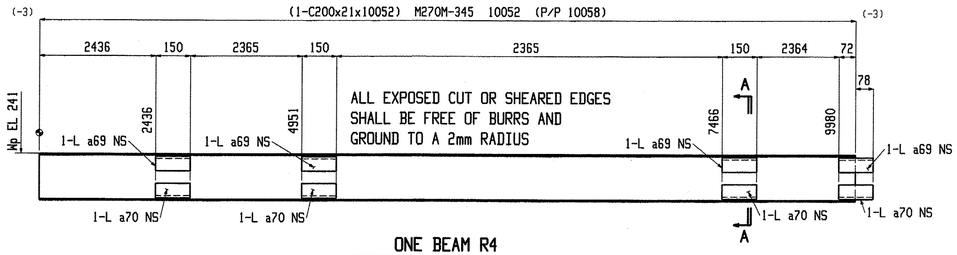
ONE BEAM R3

W	203x7.5
F	59.5x10
K	24x18

SHOP NOTE:
TOE DIRECTION NEAR SIDE



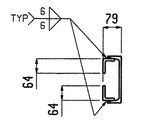
Section A-A
R3



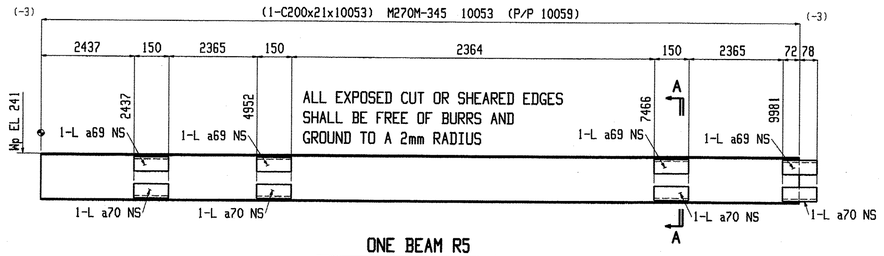
ONE BEAM R4

W	203x7.5
F	59.5x10
K	24x18

SHOP NOTE:
TOE DIRECTION NEAR SIDE



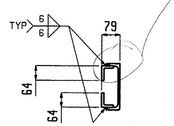
Section A-A
R4



ONE BEAM R5

W	203x7.5
F	59.5x10
K	24x18

SHOP NOTE:
TOE DIRECTION NEAR SIDE



Section A-A
R5

will this be a fillet weld?

weld type?

Fabrication is not to be done by Renaud Bros. Have fabricator resubmit with name of fabricator on sheets.

MRN
DESIGNED
APPROVED
BY
DATE 1/12/2010

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
ONE	R1	BEAM		2	1			
1	R1	C200x21	9780				M270M-345	
5	a69	L64x51x9.5	150				M270M-345	
5	a70	L64x51x9.5	150				M270M-345	
ONE	R2	BEAM		2	1			
1	R2	C200x21	10053				M270M-345	
4	a69	L64x51x9.5	150				M270M-345	
4	a70	L64x51x9.5	150				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
ONE	R3	BEAM		2	1			
1	R3	C200x21	11310				M270M-345	
5	a69	L64x51x9.5	150				M270M-345	
5	a70	L64x51x9.5	150				M270M-345	
ONE	R4	BEAM		2	1			
1	R4	C200x21	10052				M270M-345	
4	a69	L64x51x9.5	150				M270M-345	
4	a70	L64x51x9.5	150				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
4	a70	L64x51x9.5	150				M270M-345	
ONE	R5	BEAM		2	1			
1	R5	C200x21	10053				M270M-345	
4	a69	L64x51x9.5	150				M270M-345	
4	a70	L64x51x9.5	150				M270M-345	

Total weight : 1100

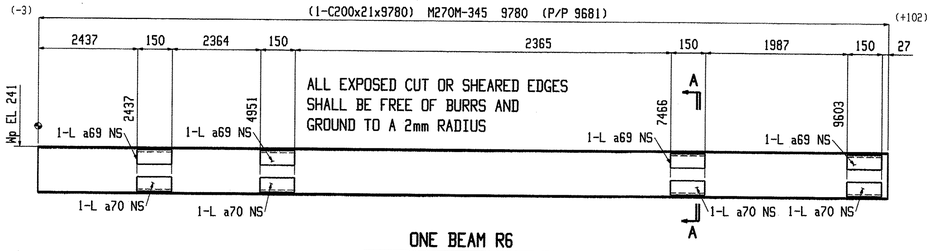
Nov 06 2009 10:55:40 AM

Renaud Bros. Inc.
283 Fort Bridgeman Rd. #2
Vernon, VT. 05354
Phone 1-802 257-7383

Project:
DUMMERSTON BRIDGE
DUMMERSTON, VT

Rev.No:	Date:	
		Holes: 21mm UNO
		BOLTS: 19mm DIA. M164M-I GALV UNO
		Steel GR: M270M-GR345 UNO
		Paint: PER SPECS (GREEN) UNO
		Surface Prep: PER SPECS

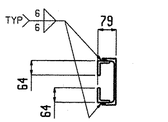
Date: 9-9-09	Job No. BHO 1442(28)
DWN. BY: EG	Checked: MRS
	Sheet No. 20



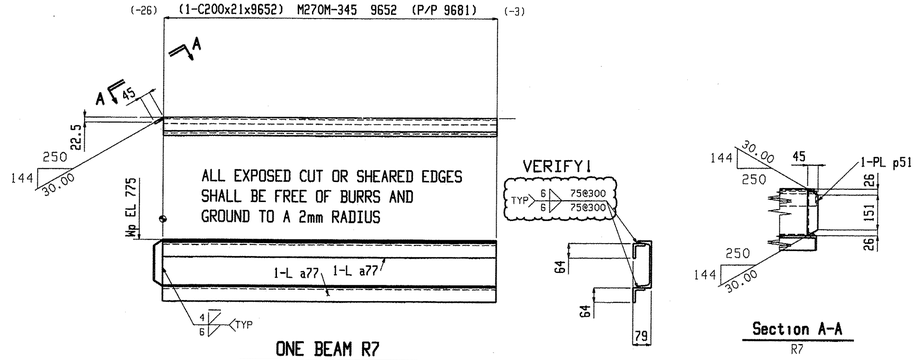
ONE BEAM R6

W	203x7.5
F	59.5x10
K	24x18

SHOP NOTE:
TOE DIRECTION NEAR SIDE



Section A-A
R6

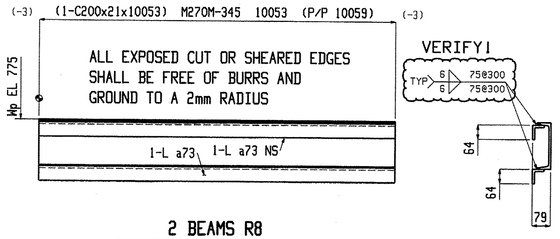


ONE BEAM R7

W	203x7.5
F	59.5x10
K	24x18

SHOP NOTE:
TOE DIRECTION NEAR SIDE

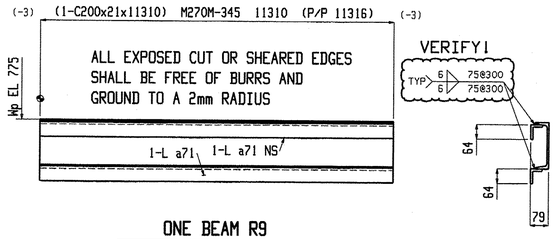
Section A-A
R7



2 BEAMS R8

W	203x7.5
F	59.5x10
K	24x18

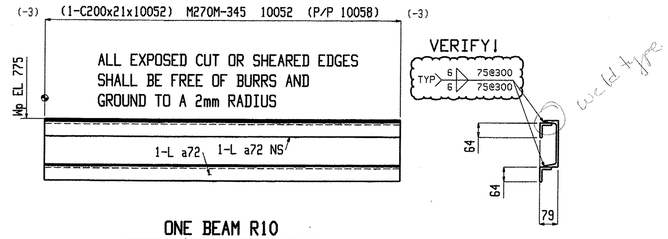
SHOP NOTE:
TOE DIRECTION NEAR SIDE



ONE BEAM R9

W	203x7.5
F	59.5x10
K	24x18

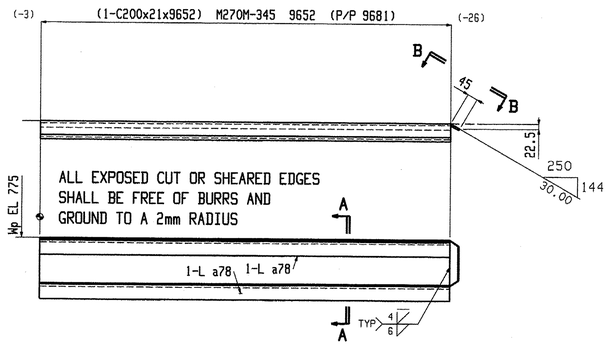
SHOP NOTE:
TOE DIRECTION NEAR SIDE



ONE BEAM R10

W	203x7.5
F	59.5x10
K	24x18

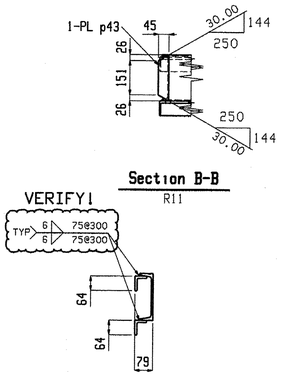
SHOP NOTE:
TOE DIRECTION NEAR SIDE



ONE BEAM R11

W	203x7.5
F	59.5x10
K	24x18

SHOP NOTE:
TOE DIRECTION NEAR SIDE



Section B-B
R11

Section A-A
R11

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
ONE	R6	BEAM		2	1			
1	R6	C200x21	9780				M270M-345	
4	a69	L64x51x9.5	150				M270M-345	
4	a70	L64x51x9.5	150				M270M-345	
ONE	R7	BEAM		2	1			
1	R7	C200x21	9652				M270M-345	
2	a77	L64x51x9.5	9652				M270M-345	
1	p51	PL8x45	203				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
2	R8	BEAM		2	2			
2	R8	C200x21	10053				M270M-345	
4	a73	L64x51x9.5	10053				M270M-345	
ONE	R9	BEAM		2	1			
1	R9	C200x21	11310				M270M-345	
2	a71	L64x51x9.5	11310				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
ONE	R10	BEAM		2	1			
1	R10	C200x21	10052				M270M-345	
2	a72	L64x51x9.5	10052				M270M-345	
ONE	R11	BEAM		2	1			
1	R11	C200x21	9652				M270M-345	
2	a78	L64x51x9.5	9652				M270M-345	
1	p43	PL8x45	203				M270M-345	

Total weight : 2407

Fabrications not to be done by Renaud Bros. Have fabricator resubmit with name of fabricator on drawings

mem
APPROVED ✓
DATE 1/12/2010

Renaud Bros. Inc.
283 Fort Bridgeman Rd. #2
Vernon, VT. 05354
Phone 1-802 257-7383

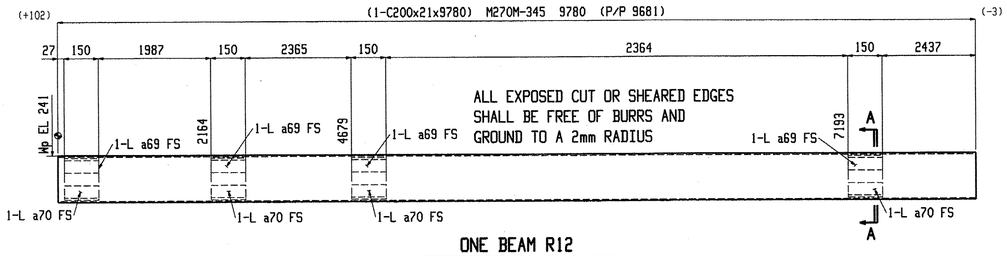
Rev.No: | Date:

Holes: 21mm UNO
BOLTS: 19mm DIA. M164M-I GALV UNO
Steel GR: M270M-GR345 UNO
Paint: PER SPECS (GREEN) UNO
Surface Prep: PER SPECS

Project:
DUMMERSTON BRIDGE
DUMMERSTON, VT

Date: 9-9-09
Job No. BHO1442(28)
DWN. BY: EG
Checked: MRS
Sheet No. 21

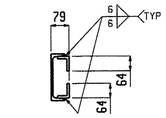
Nov 06 2009 10:55:13 AM



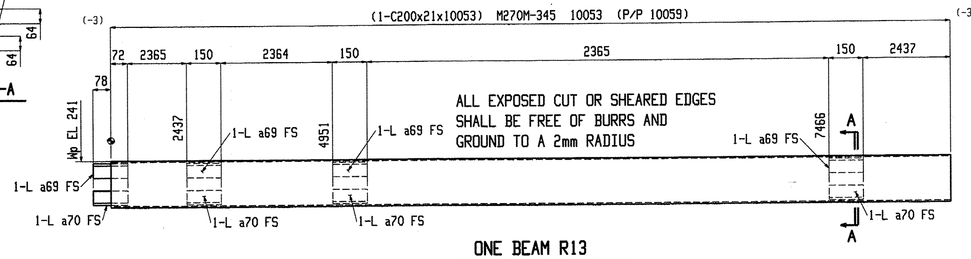
ONE BEAM R12

W	203x7.5
F	59.5x10
K	24x18

SHOP NOTE:
TOE DIRECTION FAR SIDE



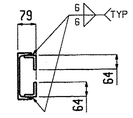
Section A-A
R12



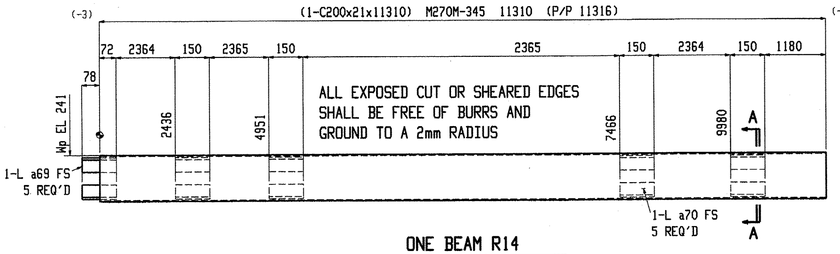
ONE BEAM R13

W	203x7.5
F	59.5x10
K	24x18

SHOP NOTE:
TOE DIRECTION FAR SIDE



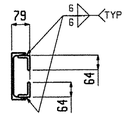
Section A-A
R13



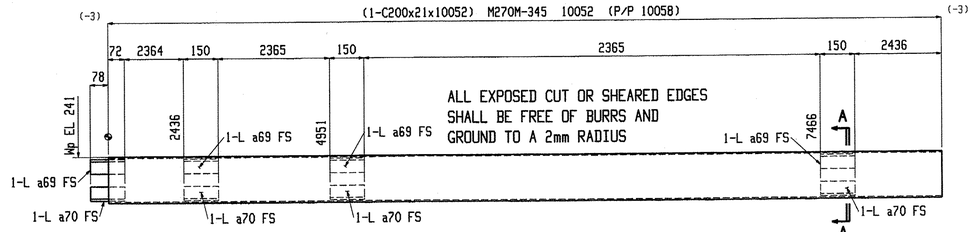
ONE BEAM R14

W	203x7.5
F	59.5x10
K	24x18

SHOP NOTE:
TOE DIRECTION FAR SIDE



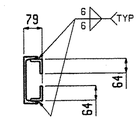
Section A-A
R14



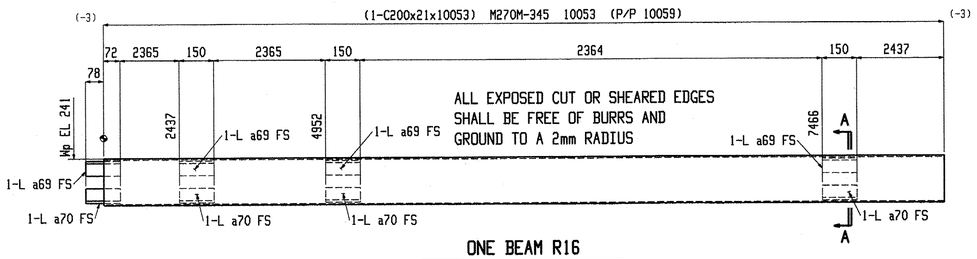
ONE BEAM R15

W	203x7.5
F	59.5x10
K	24x18

SHOP NOTE:
TOE DIRECTION FAR SIDE



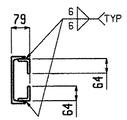
Section A-A
R15



ONE BEAM R16

W	203x7.5
F	59.5x10
K	24x18

SHOP NOTE:
TOE DIRECTION FAR SIDE



Section A-A
R16

Fabrication is not to be done by Renaud Bros. Have fabricator resubmit with name of fabricator on the drawings.

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
ONE	R12	BEAM		2	1			
1	R12	C200x21	9780				M270M-345	
4	a69	L64x51x9.5	150				M270M-345	
4	a70	L64x51x9.5	150				M270M-345	
ONE	R13	BEAM		2	1			
1	R13	C200x21	10053				M270M-345	
4	a69	L64x51x9.5	150				M270M-345	
4	a70	L64x51x9.5	150				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
ONE	R14	BEAM		2	1			
1	R14	C200x21	11310				M270M-345	
5	a69	L64x51x9.5	150				M270M-345	
5	a70	L64x51x9.5	150				M270M-345	
ONE	R15	BEAM		2	1			
1	R15	C200x21	10052				M270M-345	
4	a69	L64x51x9.5	150				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
4	a70	L64x51x9.5	150				M270M-345	
ONE	R16	BEAM		2	1			
1	R16	C200x21	10053				M270M-345	
4	a69	L64x51x9.5	150				M270M-345	
4	a70	L64x51x9.5	150				M270M-345	

Total weight : 1098

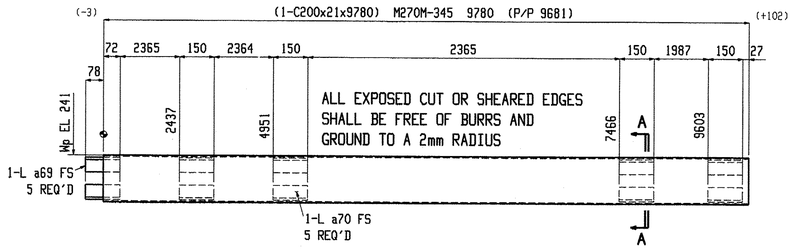
Renaud Bros. Inc.
283 Fort Bridgeman Rd. #2
Vernon, VT. 05354
Phone 1-802 257-7383

Rev.No:	Date:	
		Holes: 21mm UNO
		BOLTS: 19mm DIA. M164M-I GALV UNO
		Steel GR: M270M-GR345 UNO
		Paint: PER SPECS (GREEN) UNO
		Surface Prep: PER SPECS

Project:
DUMMERSTON BRIDGE
DUMMERSTON, VT

Date: 9-9-09
Job No. BHO 1442 (28)
DWN. BY: EG
Checked: MRS
Sheet No. 22

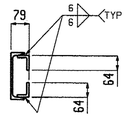
Nov 06 2009 10:55:46 AM



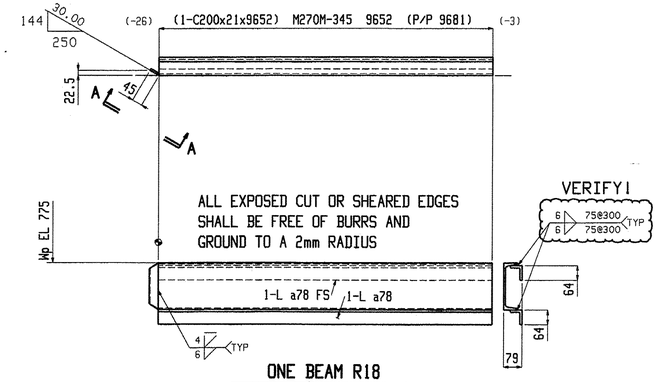
ONE BEAM R17

W	203x7.5
F	59.5x10
K	24x18

SHOP NOTE:
TOE DIRECTION FAR SIDE



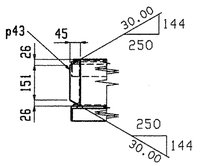
Section A-A
R17



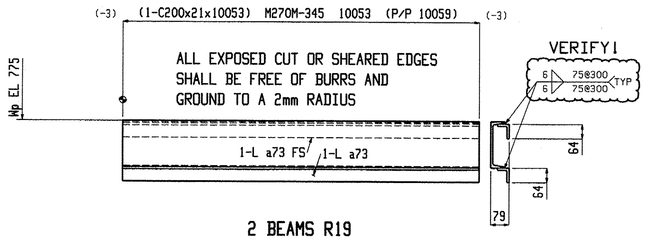
ONE BEAM R18

W	203x7.5
F	59.5x10
K	24x18

SHOP NOTE:
TOE DIRECTION FAR SIDE



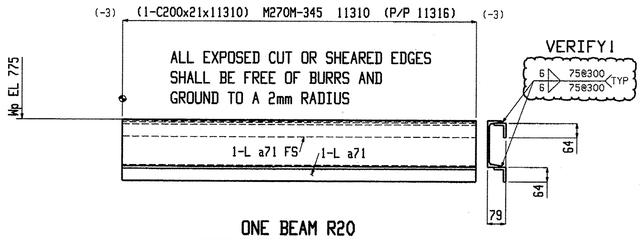
Section A-A
R18



2 BEAMS R19

W	203x7.5
F	59.5x10
K	24x18

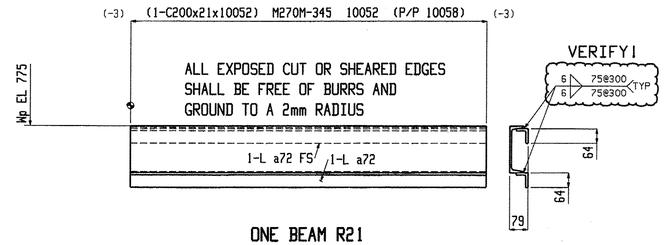
SHOP NOTE:
TOE DIRECTION FAR SIDE



ONE BEAM R20

W	203x7.5
F	59.5x10
K	24x18

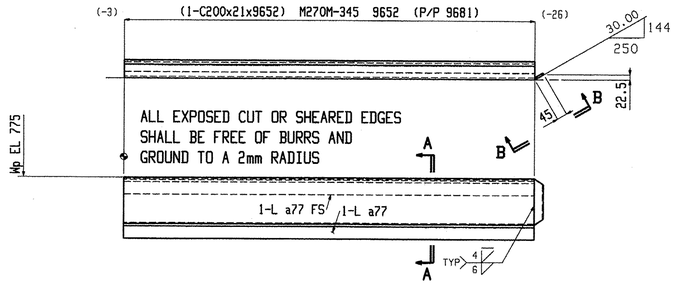
SHOP NOTE:
TOE DIRECTION FAR SIDE



ONE BEAM R21

W	203x7.5
F	59.5x10
K	24x18

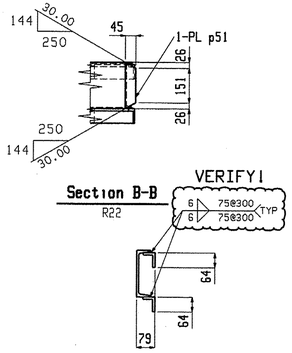
SHOP NOTE:
TOE DIRECTION FAR SIDE



ONE BEAM R22

W	203x7.5
F	59.5x10
K	24x18

SHOP NOTE:
TOE DIRECTION FAR SIDE



Section B-B
R22

Section A-A
R22

Fabrication is not to be done by Renaud Bros Have fabricator resubmit with name of fabricator on the drawings

Nov 06 2009 10:55:49 AM

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
ONE	R17	BEAM		2	1			
1	R17	C200x21	9780				M270M-345	
5	a69	L64x51x9.5	150				M270M-345	
5	a70	L64x51x9.5	150				M270M-345	
ONE	R18	BEAM		2	1			
1	R18	C200x21	9652				M270M-345	
2	a78	L64x51x9.5	9652				M270M-345	
1	p43	PL8x45	203				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
2	R19	BEAM		2	2			
2	R19	C200x21	10053				M270M-345	
4	a73	L64x51x9.5	10053				M270M-345	
ONE	R20	BEAM		2	1			
1	R20	C200x21	11310				M270M-345	
2	a71	L64x51x9.5	11310				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
ONE	R21	BEAM		2	1			
1	R21	C200x21	10052				M270M-345	
2	a72	L64x51x9.5	10052				M270M-345	
ONE	R22	BEAM		2	1			
1	R22	C200x21	9652				M270M-345	
2	a77	L64x51x9.5	9652				M270M-345	
1	p51	PL8x45	203				M270M-345	

Total weight : 2409

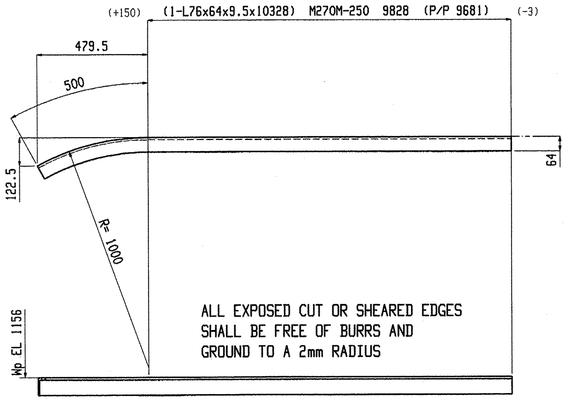
Renaud Bros. Inc.
283 Fort Bridgeman Rd. #2
Vernon, VT. 05354
Phone 1-802 257-7383

Rev.No:	Date:	
		Holes: 21mm UNO
		BOLTS: 19mm DIA. M164M-I GALV UNO
		Steel GR: M270M-GR345 UNO
		Paint: PER SPECS (GREEN) UNO
		Surface Prep: PER SPECS

Project:
DUMMERSTON BRIDGE
DUMMERSTON, VT

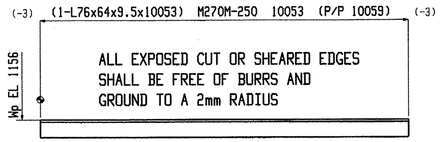
Date:	Job No.
9-9-09	BHO 1442 (28)
DWN. BY: EG / Checked: MRS	Sheet No. 23

APPROVED
DATE 4/12/2010



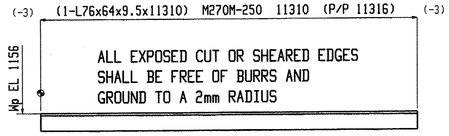
ONE BEAM R23

SHOP NOTE:
TOE DIRECTION NEAR SIDE



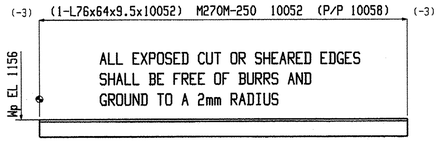
2 BEAMS R24

SHOP NOTE:
TOE DIRECTION NEAR SIDE



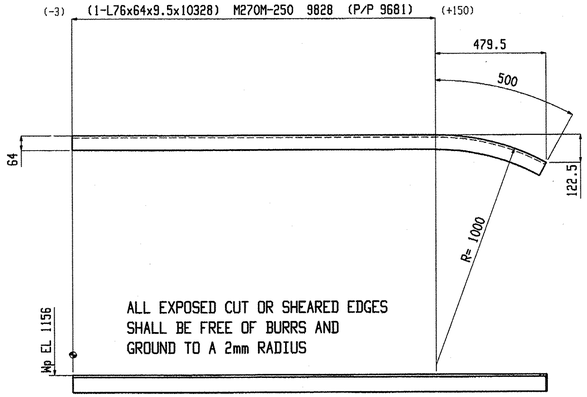
ONE BEAM R25

SHOP NOTE:
TOE DIRECTION NEAR SIDE



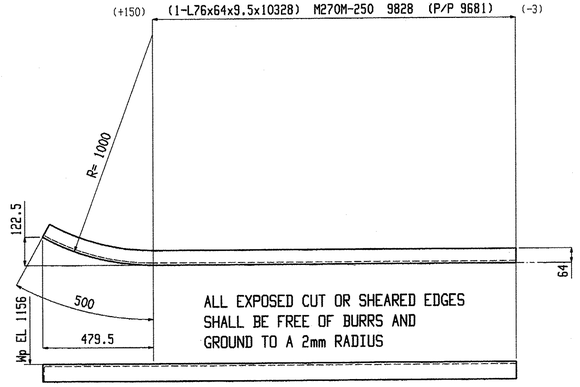
ONE BEAM R26

SHOP NOTE:
TOE DIRECTION NEAR SIDE



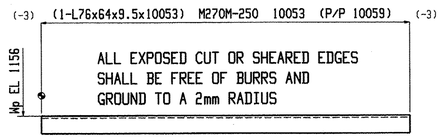
ONE BEAM R27

SHOP NOTE:
TOE DIRECTION NEAR SIDE



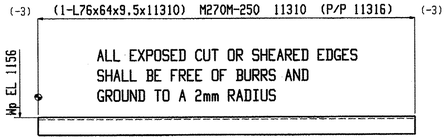
ONE BEAM R28

SHOP NOTE:
TOE DIRECTION FAR SIDE



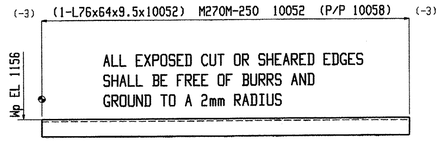
2 BEAMS R29

SHOP NOTE:
TOE DIRECTION FAR SIDE



ONE BEAM R30

SHOP NOTE:
TOE DIRECTION FAR SIDE



ONE BEAM R31

SHOP NOTE:
TOE DIRECTION FAR SIDE

Fabrication is not to be done by Renaud Bros. Have fabricator resubmit with name of fabricator on the drawings.

APPROVED
Date 1/12/2010

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
ONE	R23	BEAM		2	1			
1	R23	L76x64x9.5	10328				M270M-250	
2	R24	BEAM		2	2			
2	R24	L76x64x9.5	10053				M270M-250	
ONE	R25	BEAM		2	1			
1	R25	L76x64x9.5	11310				M270M-250	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
ONE	R26	BEAM		2	1			
1	R26	L76x64x9.5	10052				M270M-250	
ONE	R27	BEAM		2	1			
1	R27	L76x64x9.5	10328				M270M-250	
ONE	R28	BEAM		2	1			
1	R28	L76x64x9.5	10328				M270M-250	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
2	R29	BEAM		2	2			
2	R29	L76x64x9.5	10053				M270M-250	
ONE	R30	BEAM		2	1			
1	R30	L76x64x9.5	11310				M270M-250	
ONE	R31	BEAM		2	1			
1	R31	L76x64x9.5	10052				M270M-250	

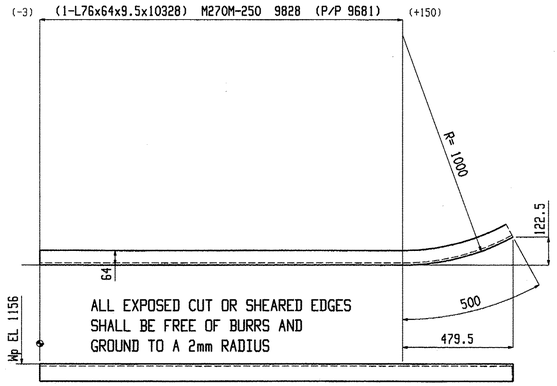
Total weight : 1110

Nov 06 2009 10:55:52 AM

Renaud Bros. Inc.
283 Fort Bridgeman Rd. #2
Vernon, VT. 05354
Phone 1-802 257-7383

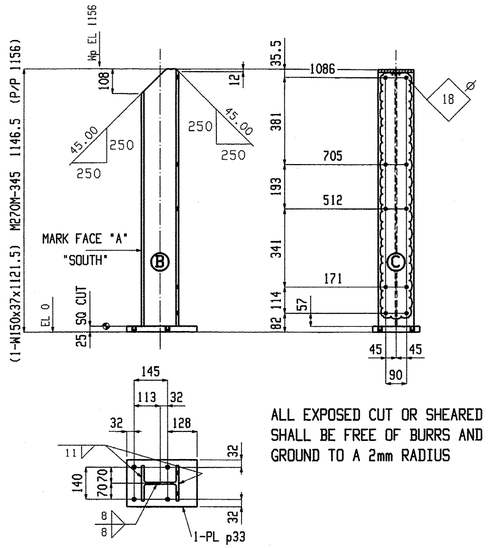
Project:
DUMMERSTON BRIDGE
DUMMERSTON, VT

Rev.No:	Date:		
		Holes:	21mm UNO
		BOLTS:	19mm DIA. M164M-I GALV UNO
		Steel GR:	M270M-GR345 UNO
		Paint:	PER SPECS (GREEN) UNO
		Surface Prep:	PER SPECS
	Date: 9-9-09	Job No.	BHO 1942(28)
	DWN. BY: EG / Checked: MRS	Sheet No.	24



ONE BEAM R32

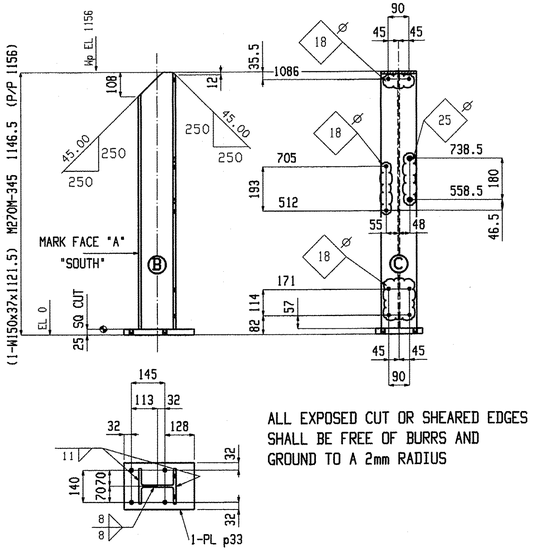
SHOP NOTE:
TOE DIRECTION FAR SIDE



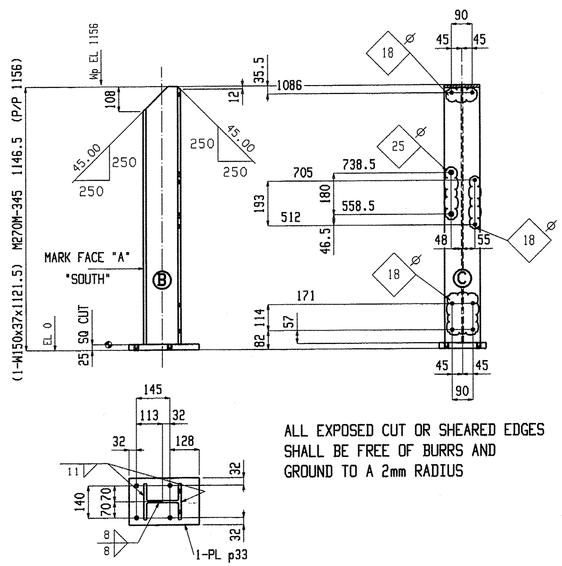
ALL EXPOSED CUT OR SHEARED EDGES
SHALL BE FREE OF BURRS AND
GROUND TO A 2mm RADIUS

24 COLUMNS C1

W	162x8
F	154.5x11.5
K	20.5x13



ALL EXPOSED CUT OR SHEARED EDGES
SHALL BE FREE OF BURRS AND
GROUND TO A 2mm RADIUS



ALL EXPOSED CUT OR SHEARED EDGES
SHALL BE FREE OF BURRS AND
GROUND TO A 2mm RADIUS

ONE COLUMN C2

W	162x8
F	154.5x11.5
K	20.5x13

ALL EXPOSED CUT OR SHEARED EDGES
SHALL BE FREE OF BURRS AND
GROUND TO A 2mm RADIUS

24 COLUMNS C4

W	162x8
F	154.5x11.5
K	20.5x13

ALL EXPOSED CUT OR SHEARED EDGES
SHALL BE FREE OF BURRS AND
GROUND TO A 2mm RADIUS

ONE COLUMN C3

W	162x8
F	154.5x11.5
K	20.5x13

ONE COLUMN C5

W	162x8
F	154.5x11.5
K	20.5x13

ALL EXPOSED CUT OR SHEARED EDGES
SHALL BE FREE OF BURRS AND
GROUND TO A 2mm RADIUS

ONE COLUMN C6

W	162x8
F	154.5x11.5
K	20.5x13

Fabrication is not to be done by Renaud Bros. Have Fabricator resubmit with name of Fabricator on drawings

APPROVED

DATE 1/12/2010

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
ONE	R32	BEAM		2	1			
1	R32	L76x64x9.5	10328				M270M-250	
24	C1	COLUMN		2	24			
24	C1	W150x37	1121.5				M270M-345	SIE
24	p33	PL25x204	305				M270M-345	
ONE	C2	COLUMN		2	1			
1	C2	W150x37	1121.5				M270M-345	SIE

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
1	p33	PL25x204	305				M270M-345	
ONE	C3	COLUMN		2	1			
1	C3	W150x37	1121.5				M270M-345	SIE
1	p33	PL25x204	305				M270M-345	
24	C4	COLUMN		2	24			
24	C4	W150x37	1121.5				M270M-345	SIE
24	p33	PL25x204	305				M270M-345	

BILL OF MATERIAL

Qty Tot.	Piece Mark	Description	Length	Seq NO.	Seq Qty	Adv ABM #	Steel Grade	Remarks
ONE	C5	COLUMN		2	1			
1	C5	W150x37	1121.5				M270M-345	SIE
1	p33	PL25x204	305				M270M-345	
ONE	C6	COLUMN		2	1			
1	C6	W150x37	1121.5				M270M-345	SIE
1	p33	PL25x204	305				M270M-345	

Total weight : 2905

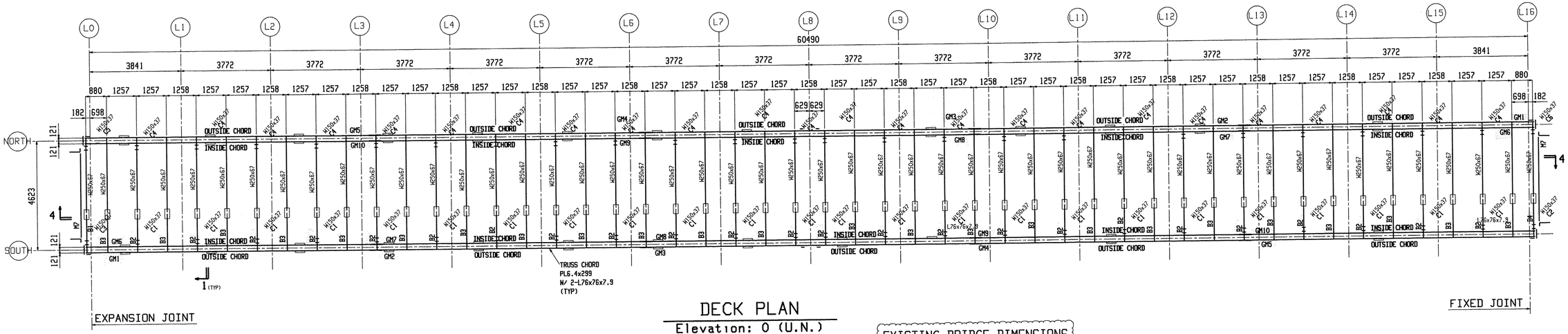
Renaud Bros. Inc.
283 Fort Bridgeman Rd. #2
Vernon, VT. 05354
Phone 1-802 257-7383

Project:
DUMMERSTON BRIDGE
DUMMERSTON, VT

Holes:	21mm UNO
BOLTS:	19mm DIA. M164M-I GALV UNO
Steel GR:	M270M-GR345 UNO
Paint:	PER SPECS (GREEN) UNO
Surface Prep:	PER SPECS
Date:	9-9-09
Job No.	BHO 1442(28)
DWN. BY:	EG
Checked:	MRS
Sheet No.	25

Rev.No: Date:

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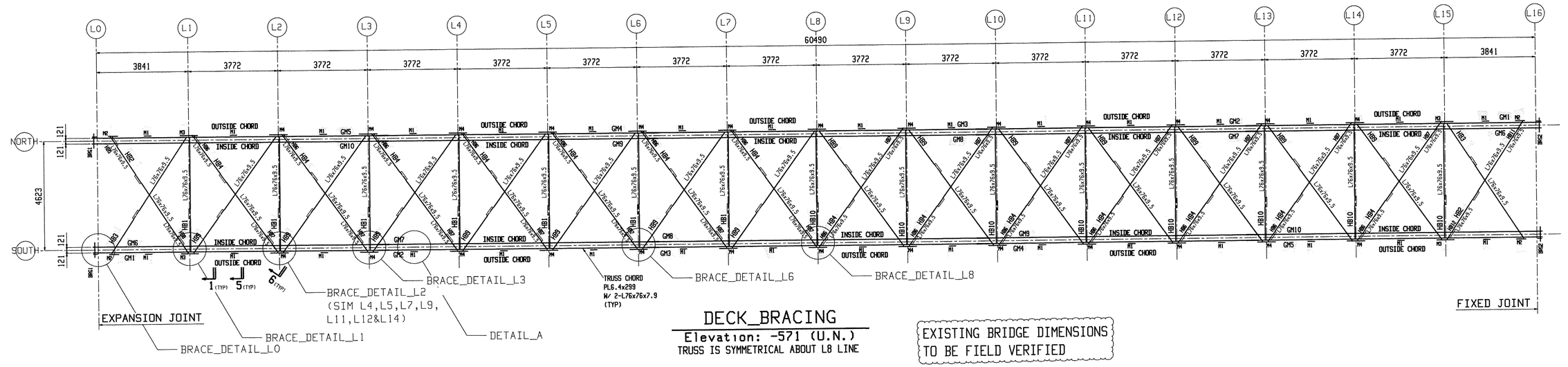


DECK PLAN

Elevation: 0 (U.N.)

TRUSS IS SYMMETRICAL ABOUT L8 LINE

EXISTING BRIDGE DIMENSIONS TO BE FIELD VERIFIED



DECK_BRACING

Elevation: -571 (U.N.)

TRUSS IS SYMMETRICAL ABOUT L8 LINE

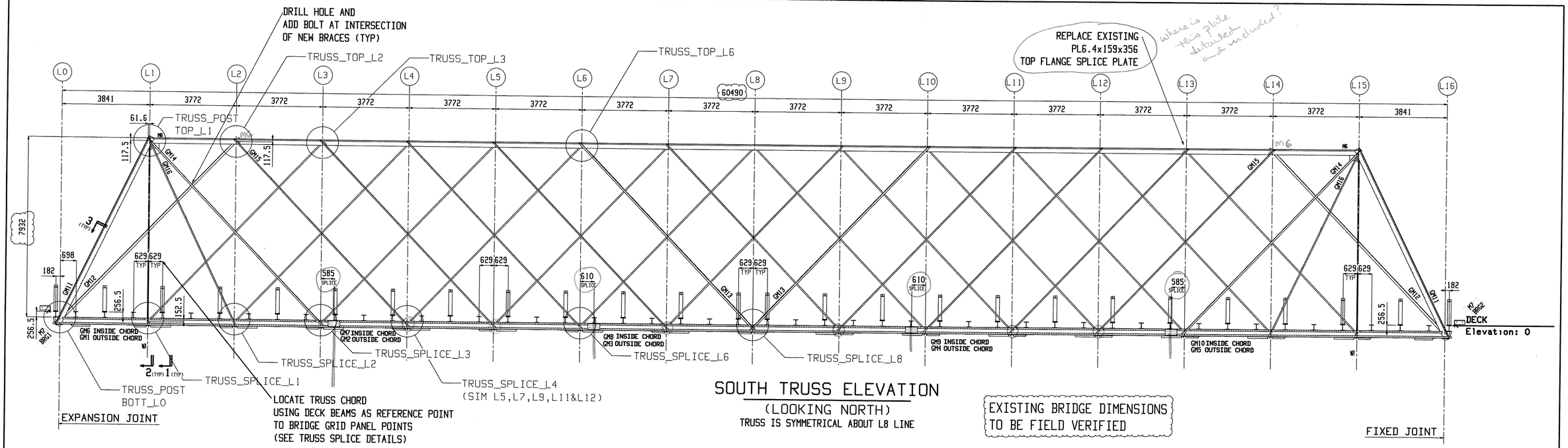
EXISTING BRIDGE DIMENSIONS TO BE FIELD VERIFIED

CALLED

RECEIVED
CK'D BY_____ CK'D BY_____
NOV 17 2...
APPROVED
BY DATE

Renaud Bros. Inc. 283 Fort Bridgeman Rd. #2 Vernon, VT. 05354 Phone 1-802 257-7383			Holes: 21mm UNO
			BOLTS: 19mm DIA. M164M-I GALV UNO
			Steel GR: M270M-GR345 UNO
			Paint: PER SPECS (GREEN) UNO
	Rev.No:	Date:	Surface Prep: PER SPECS
Project: DUMMERSTON BRIDGE DUMMERSTON, VT		Date: 9-9-09	Job No. BHO 1442(28)
		DWN. BY: EG / Checked: MRS	Sheet No. E1

Nov 06 2009 10:55:58 AM

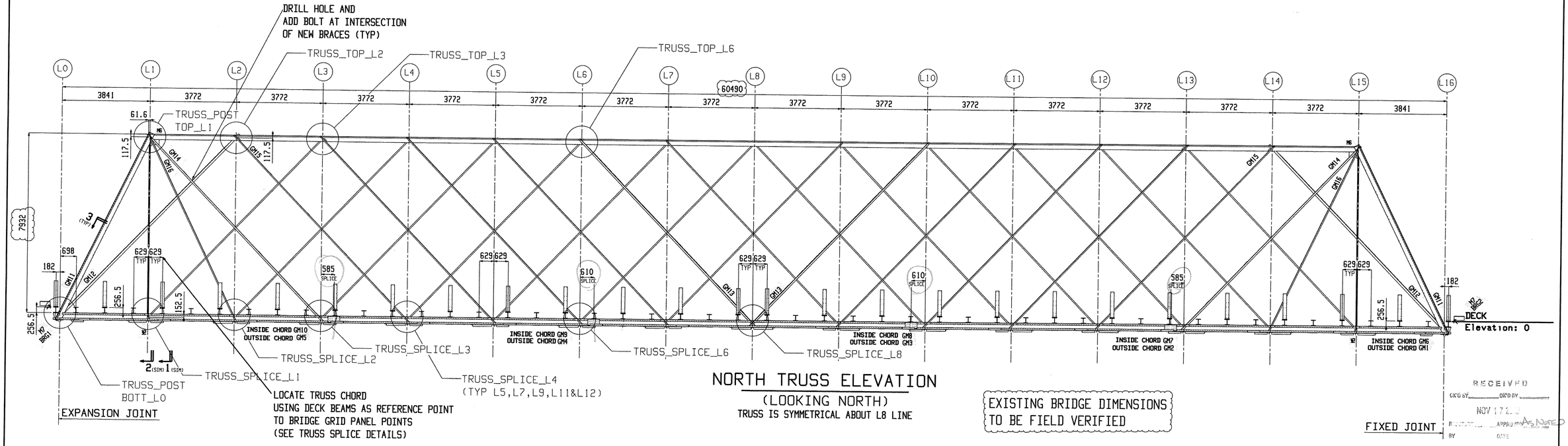


SOUTH TRUSS ELEVATION

(LOOKING NORTH)

TRUSS IS SYMMETRICAL ABOUT L8 LINE

EXISTING BRIDGE DIMENSIONS
TO BE FIELD VERIFIED



NORTH TRUSS ELEVATION

(LOOKING NORTH)

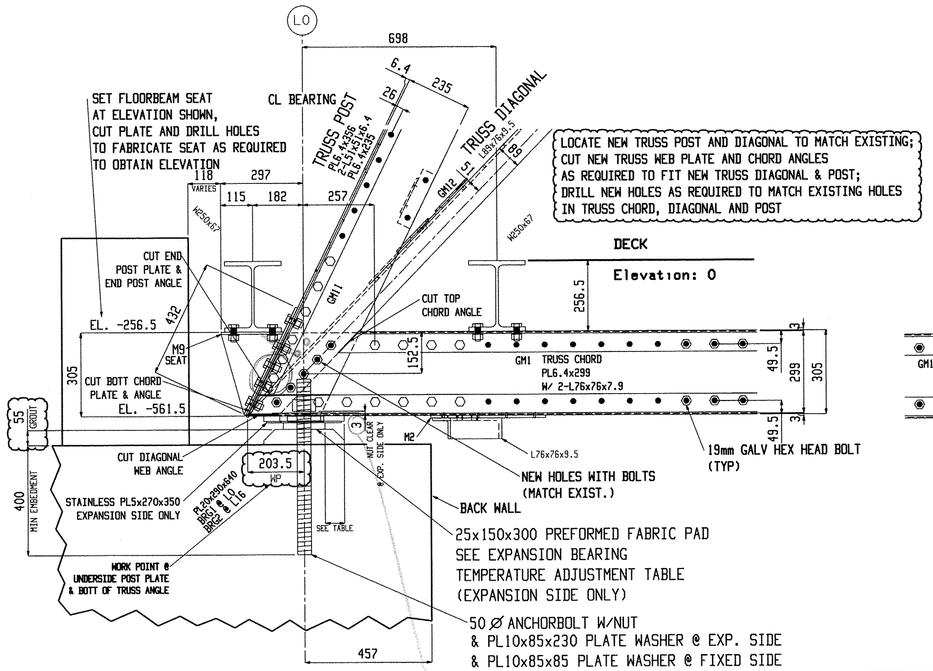
TRUSS IS SYMMETRICAL ABOUT L8 LINE

EXISTING BRIDGE DIMENSIONS
TO BE FIELD VERIFIED

RECEIVED
CKD BY ____ ORD BY ____
NOV 17 2009
APPROVED AS NOTED
BY ____ DATE ____

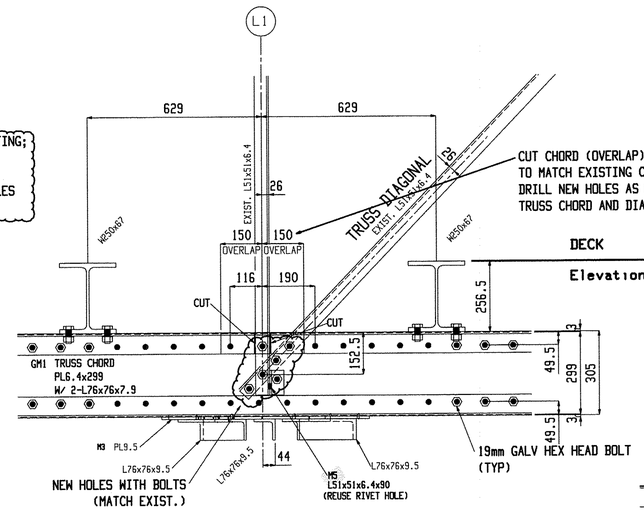
Nov 06 2009 10:56:03 AM

Renaud Bros. Inc. 283 Fort Bridgeman Rd. #2 Vernon, VT. 05354 Phone 1-802 257-7383			Holes:	21mm UNO
			BOLTS:	19mm DIA. M164M-I GALV UNO
			Steel GR:	M270M-GR345 UNO
			Paint:	PER SPECS (GREEN) UNO ? product?
	Rev.No:	Date:	Surface Prep:	PER SPECS
Project: DUMMERSTON BRIDGE DUMMERSTON, VT		Date: 9-9-09	Job No.	BHO 1442(28)
		DWN. BY: EG	Checked: MRS	Sheet No. E2



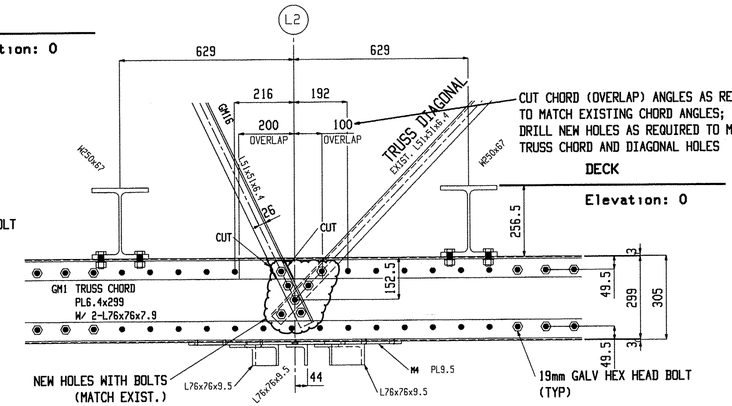
TRUSS_POST_BOTT_L0

(SIM L16)



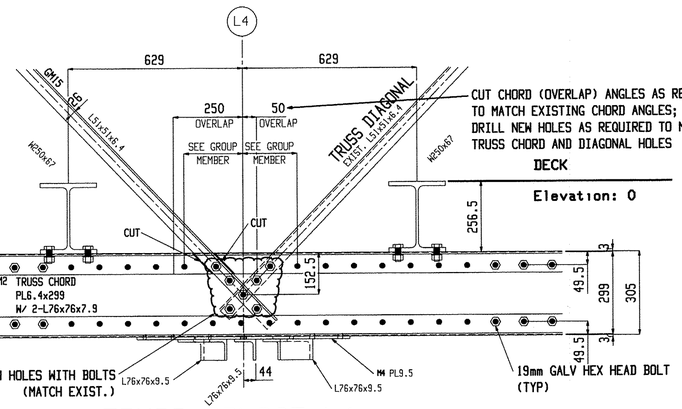
TRUSS_SPLICE_L1

(SIM L15)



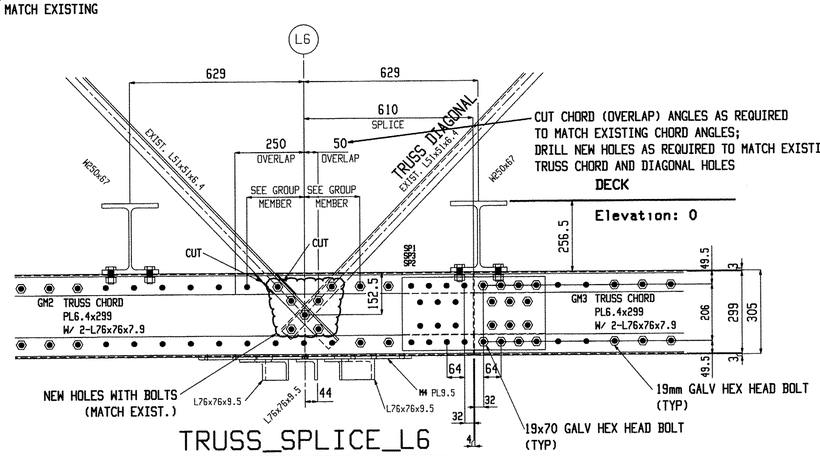
TRUSS_SPLICE_L2

(SIM L14)



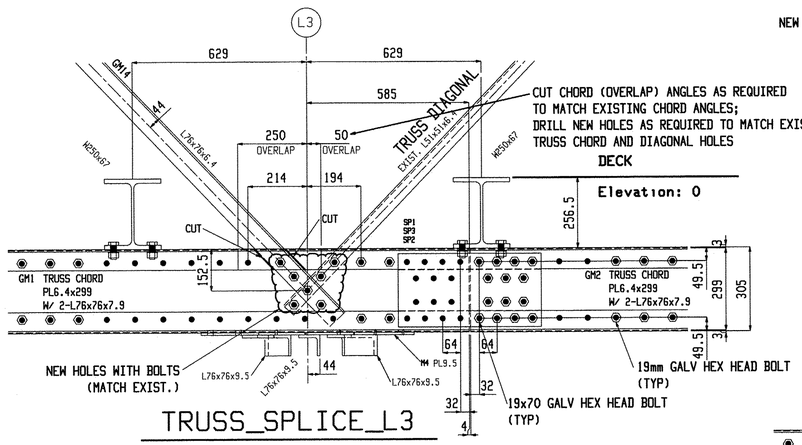
TRUSS_SPLICE_L4

(SIM L5,L7,L9,L11&L12)



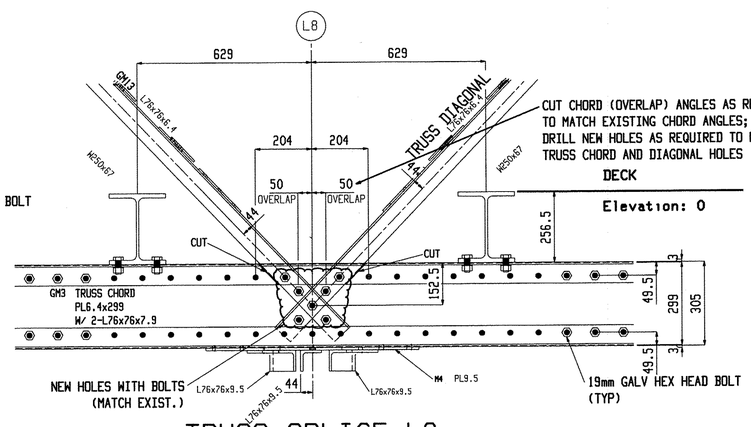
TRUSS_SPLICE_L6

(SIM L10)



TRUSS_SPLICE_L3

(SIM L13)

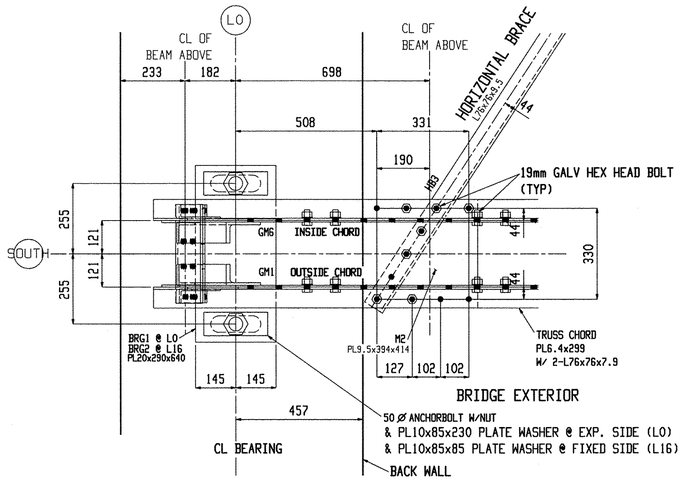


TRUSS_SPLICE_L8

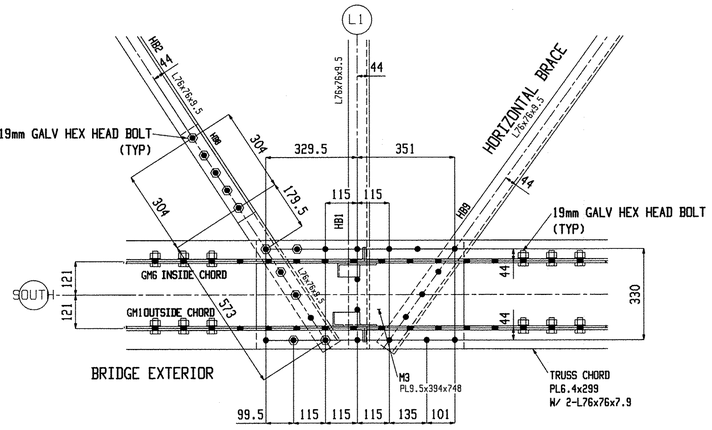
RECEIVED
CK'D BY _____ CK'D BY _____
NOV 17 2009
BY _____ DATE _____ APPROVED AS NOTED

Renaud Bros. Inc. 283 Fort Bridgeman Rd. #2 Vernon, VT. 05354 Phone 1-802 257-7383			Holes:	21mm UNO
			BOLTS:	19mm DIA. M164M-I GALV UNO
			Steel GR:	M270M-GR345 UNO
			Paint:	PER SPECS (GREEN) UNO
	Rev.No:	Date:	Surface Prep:	PER SPECS
Project: DUMMERSTON BRIDGE DUMMERSTON, VT		Date: 9-9-09	Job No.	BHO 1442 (28)
		DWN. BY: EG	Checked: MRS	Sheet No. E3

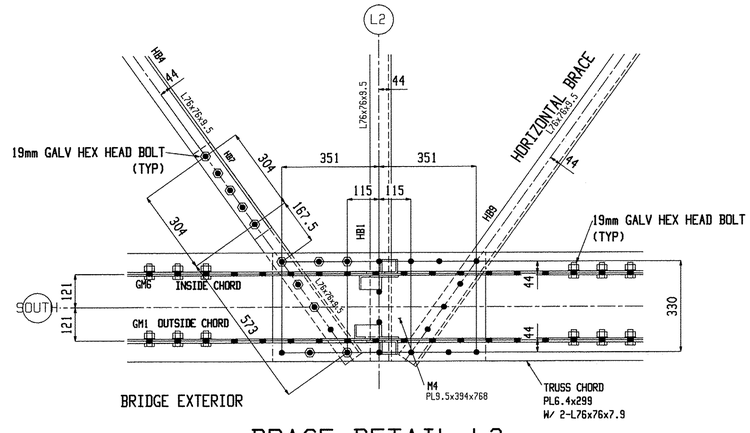
Nov 06 2009 10:56:11 AM



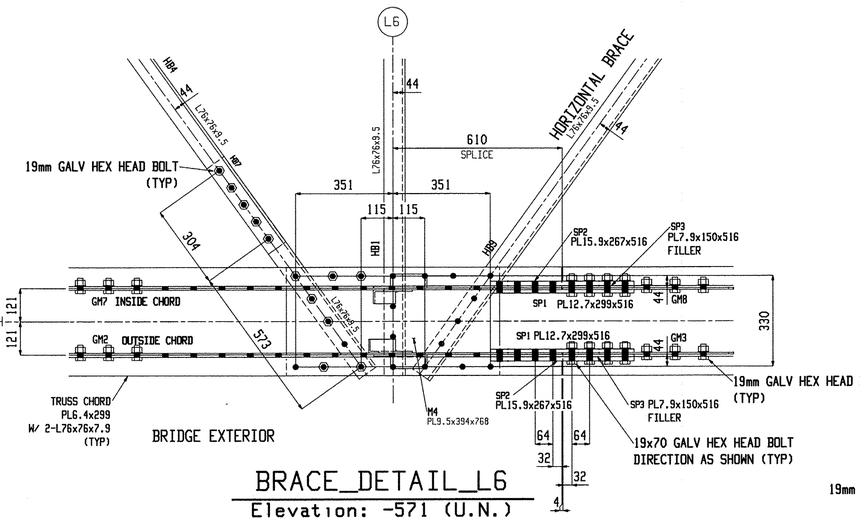
BRACE_DETAIL_L0
Elevation: -571 (U.N.)
(SIM L16)



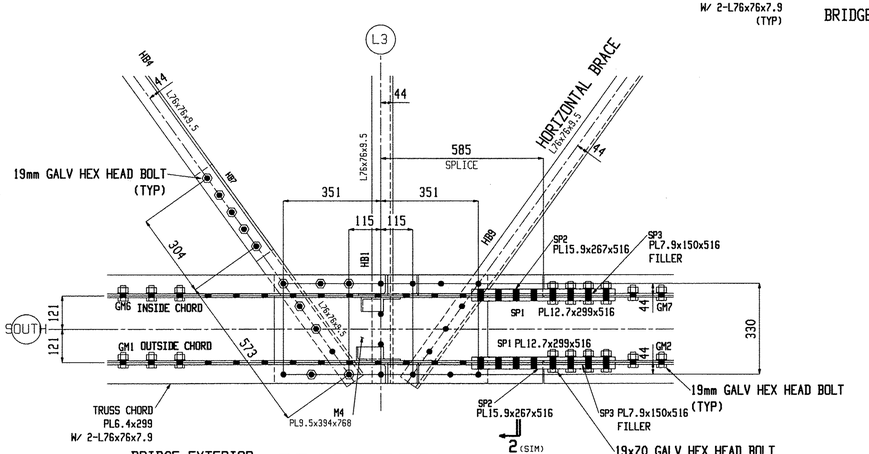
BRACE_DETAIL_L1
Elevation: -571 (U.N.)
(SIM L15)



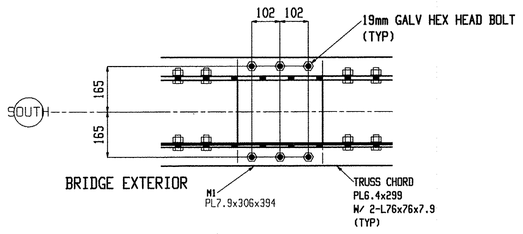
BRACE_DETAIL_L2
Elevation: -571 (U.N.)
(SIM L4,L5,L7,L9,
L11,L12&L14)



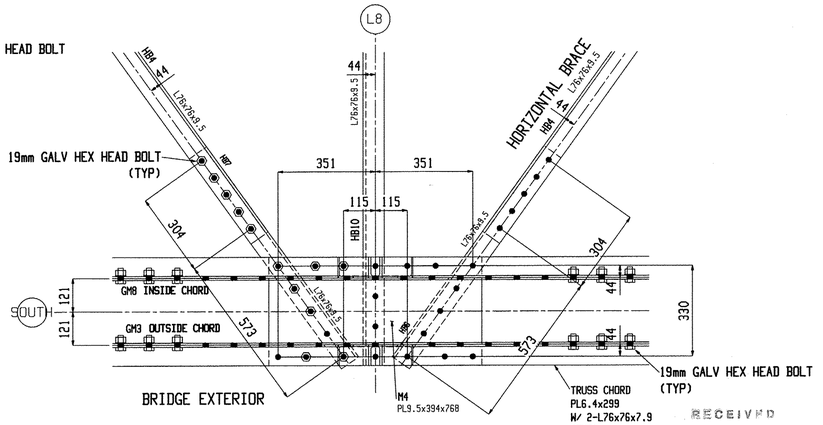
BRACE_DETAIL_L6
Elevation: -571 (U.N.)
(SIM L10)



BRACE_DETAIL_L3
Elevation: -571 (U.N.)
(SIM L13)



DETAIL_A
Elevation: -571 (U.N.)



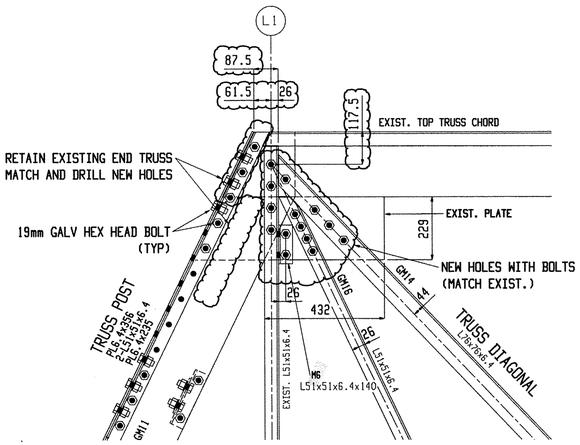
BRACE_DETAIL_L8
Elevation: -571 (U.N.)

RECEIVED
GKD BY _____ GKD BY _____
NOV 17 2009
APPROVED
BY DATE

Renaud Bros. Inc. 283 Fort Bridgeman Rd. #2 Vernon, VT. 05354 Phone 1-802 257-7383			Holes: 21mm UNO
			BOLTS: 19mm DIA. M164M-I GALV UNO
			Steel GR: M270M-GR345 UNO
			Paint: PER SPECS (GREEN) UNO (product?)
	Rev.No:	Date:	Surface Prep: PER SPECS

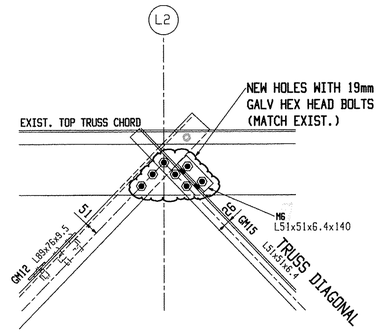
Project: DUMMERSTON BRIDGE DUMMERSTON, VT	Date: 9-9-09	Job No. BHO 1442(28)
	DWN. BY: EG / Checked: MRS	Sheet No. E4

Nov 06 2009 10:56:15 AM



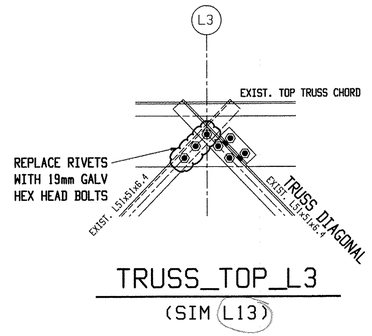
TRUSS_POST_TOP_L1

(SIM L15)



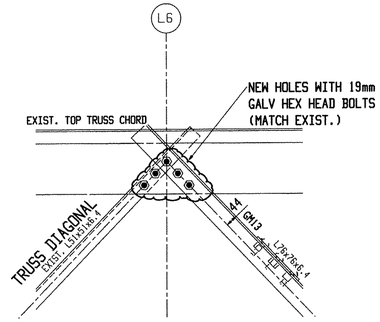
TRUSS_TOP_L2

(SIM L14)



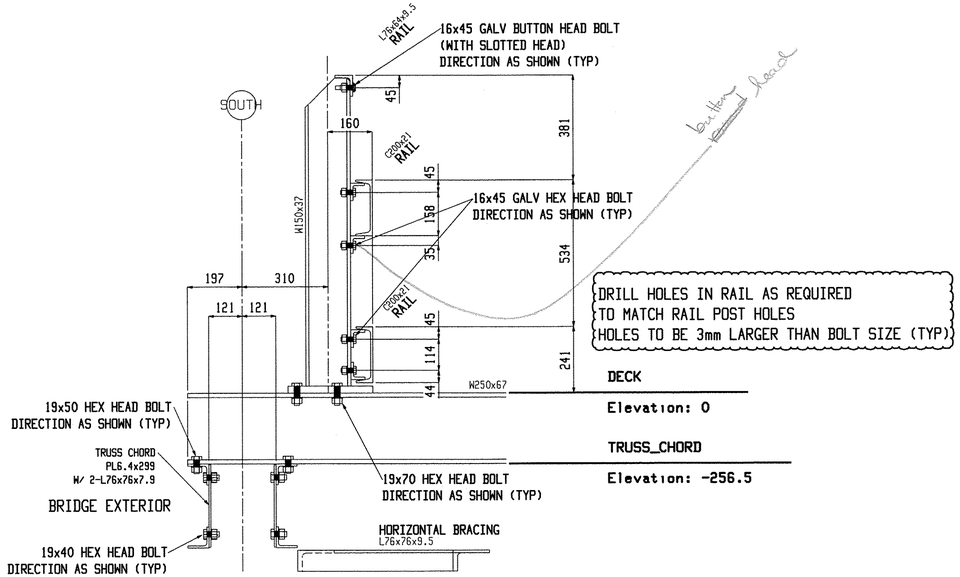
TRUSS_TOP_L3

(SIM L13)

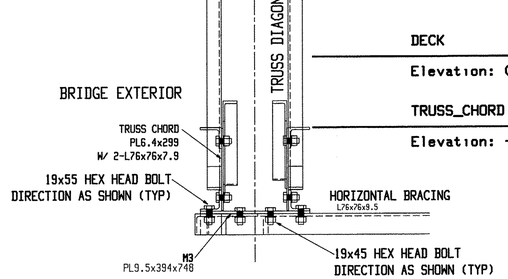


TRUSS_TOP_L6

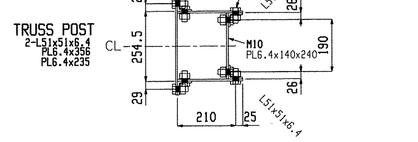
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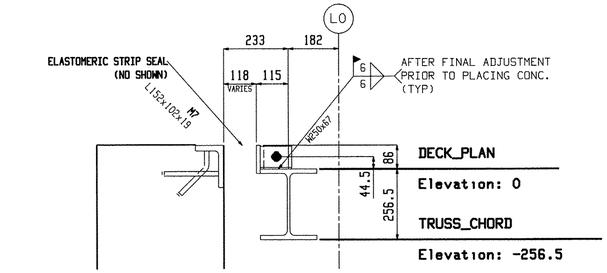
SECTION_1



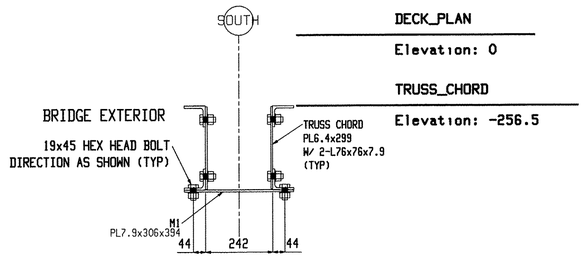
SECTION_2



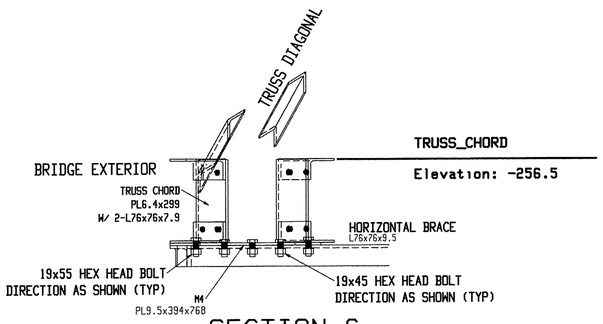
SECTION_3



SECTION_4



SECTION_5



SECTION_6

RECEIVED
GK'D BY ____ ON'D BY ____
NOV 17 2009
APPROVED As Noted
BY DATE

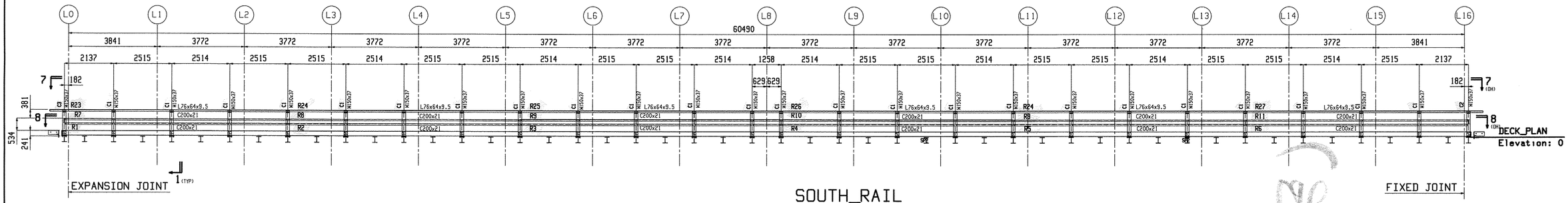
Renaud Bros. Inc.
283 Fort Bridgeman Rd. #2
Vernon, VT. 05354
Phone 1-802 257-7383

Rev.No:	Date:	
		Holes: 21mm UNO
		BOLTS: 19mm DIA. M164M-I GALV UNO
		Steel GR: M270M-GR345 UNO
		Paint: PER SPECS (GREEN) UNO
		Surface Prep: PER SPECS

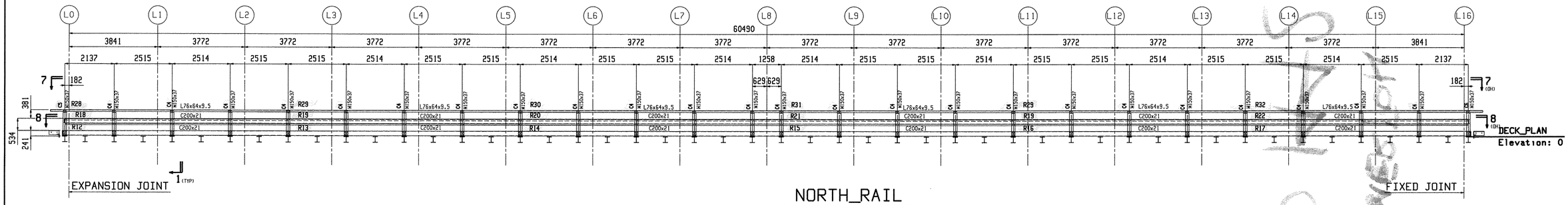
Project:
DUMMERSTON BRIDGE
DUMMERSTON, VT

Date: 9-9-09
Job No. BHO 1442 (28)
DWN. BY: EG
Checked: MRS
Sheet No. E5

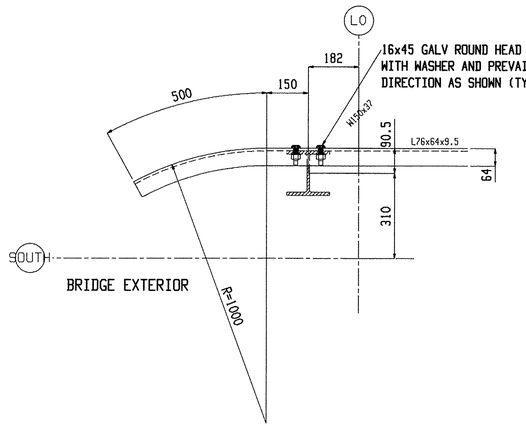
Nov 06 2009 10:56:19 AM



SOUTH_RAIL

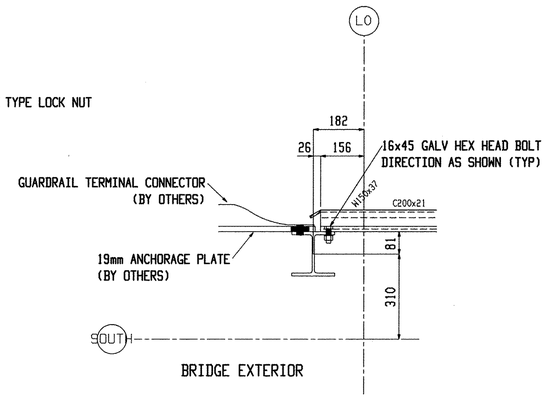


NORTH_RAIL



SECTION_7

Elevation: 1156 (U.N.)



SECTION_8

Elevation: 775 (U.N.)

RECEIVED
CK'D BY _____ CK'D BY _____
NOV 17 2009
APPROVED ✓ AS NOTED
BY DATE

Renaud Bros. Inc. 283 Fort Bridgeman Rd. #2 Vernon, VT. 05354 Phone 1-802 257-7383			Holes:	21mm UNO
			BOLTS:	19mm DIA. M164M-I GALV UNO
			Steel GR:	M270M-GR345 UNO
			Paint:	PER SPECS (GREEN) UNO (product?)
	Rev.No:	Date:	Surface Prep:	PER SPECS

Project: DUMMERSTON BRIDGE DUMMERSTON, VT	Date: 9-9-09		Job No. BHO 1942(26)
	DWN. BY: EG	Checked: MRS	Sheet No. E6

Nov 06 2009 10:56:23 AM

VERMONT

State of Vermont
PDD/Structures Design Section
National Life Building – Drawer 33
Montpelier, VT 05633-5001
www.aot.state.vt.us

[phone] 802-828-2621
[fax] 802-828-3566
[ttd] 800-253-0191

Agency of Transportation

D. S. Brown
302 East Cherry Street
North Baltimore, OH 45872

DATE: December 31, 2009

Project Name: Dummerston **Project #: BHO 1442 (28)**

Structure Identification: Bridge # 37 On TH 62 over the West River

The following Bearing Device details Item # 531.10, Bearing Device Assembly, Preformed Fabric Pad, for the above project Vendor's Job # 27177, transmitted with your letter dated November 10, 2009, have been reviewed and are being returned herewith.

Sheets: GN1, 01 and 02

are approved "as noted"[X]

You must provide notice to our fabrication inspector, Jeff Clark, as to the date fabrication represented by these drawings will begin. That notice must be received and acknowledged at least seven days prior to that date, as per Specification 506.03. Jeff may be contacted by phone at (802)828-0044 or email at jeff.clark@state.vt.us. Any material fabricated prior to the notification date is subject to rejection without further cause.

Sincerely,

Martha Evans-Mongeon
Project Manager

Attachments
cc: [X] Resident Engineer w/prints, Chad Greenwood
[X] Shop Inspector w/prints, Jeff Clark
[X] Contractor w/prints, Renaud Brothers, Inc
[] Subcontractor – letter only _____
[X] Construction Divison – letter only
[X] Materials & Research Section (C&IA Unit) – letter only
[X] Files, Structures

VTrans Working to Get You There
Vermont Agency of Transportation

RENAUD BROS., INC.
283 Fort Bridgeman Road #2, Vernon, VT 05354
phone (802) 257-7383
fax (802) 257-7308

November 13, 2009

Martha Evans-Mongeon, Project Manager
Structures Section
Vermont Agency of Transportation
1 National Life Drive, Drawer 33
Montpelier, VT 05633-5001

RE: Dummerston BHO 1442(28)
Preformed Fabric Bearing Shop Drawings

Dear Martha:

Enclosed for review please find five (5) sets of the Preformed Fabric Bearing Shop Drawings as well as five (5) copies of the Welding Procedure for the same on the above-referenced project.

Please review and comment as soon as possible.

If you have any questions or require additional information, please do not hesitate to contact us or LuAnn Hayfield at D.S. Brown, phone number on enclosed Letter of Transmittal. Thank you.

Very truly yours,

RENAUD BROS., INC.

Michael Renaud (CAR)

Michael J. Renaud, V.P.

MJR:car

Enclosures

RECEIVED
CK'D BY_____ OK'D BY_____
NOV 17 2009
RESUBMIT_____ APPROVED_____
BY DATE

DS Brown Company
300 East Cherry Street
North Baltimore, OH 45872
(419) 257-3561
(419) 257-0332 [Engineering Fax #]

Date: November 10, 2009

Renaud Brothers
Mike Renaud
283 Fort Bridgeman Road #2
Vernon, VT 05354
Telephone #: (802) 257-7383

Project #	27177-1106
Description:	TH 62 over West River
Project #:	BHO 1442(28)
County, State:	Windham County, VT

The following documents are being submitted for:

- ☒ ***Approval***
- ☐ Distribution
- ☐ Per your Request
- ☐ Information

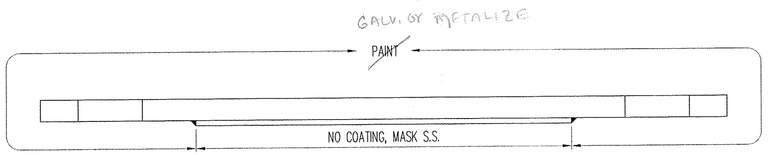
# of Copies	Sheet #s	Document Size	Description
9	GN1, 1 & 2	22" x 36"	"Preformed Fabric Bearing" Shop Drawings
3	1	8 ½" x 11"	Welding Procedure [A-GTF-01]

Please forward the enclosed documents to the appropriate party for review. Return the reviewed documents to DS Brown as soon as possible. Note that once drawings are returned, 10-12 weeks will be required for product fabrication. Your assistance in expediting the approval process would be appreciated.

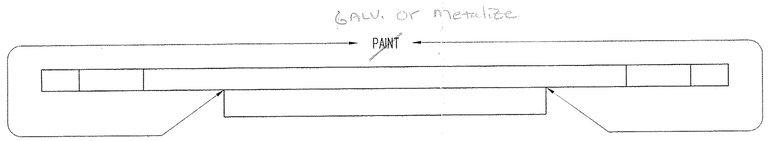
Remarks:
If you have any comments or concerns, please contact LuAnn Hayfield, Engineering Administrator @ (419) 257-3561 or lhayfield@dsbrown.com.

RECEIVED
CK'D BY_____ OK'D BY_____
NOV 17 2009
RECEIVED_____ APPROVED_____
BY DATE

Copies to: Folder
Drawings to: Folder, da, dt, QC
File Name: 27177-1106 Transmittal Letter
Signed By: Dan Evans/lah



EXPANSION BEARING COATING LIMITS



FIXED BEARING COATING LIMITS

PROTECTIVE COATING NOTES:

1. ALL STRUCTURAL STEEL SURFACES TO BE PAINTED SHALL BE CLEANED IN ACCORDANCE WITH SSPC-SP10.

2. ALL SPECIFIED EXTERNAL STEEL TO BE PAINTED WITH:
   PRIMER COAT – CARBOZINC 859 @ 75-225 µm (3-10 MILS) D.F.T.
   SECOND COAT – CARBOGUARD 888 @ 75-225 µm (3-10 MILS) D.F.T.
   FINISH COAT – CARBOTHANE 133 LH @ 75-175 µm (3-7 MILS) D.F.T.
   DRY FILM THICKNESS – 225-625 µm (9-25 MILS)
   PLEASE VERIFY COATING SYSTEM. DSB WILL FABRICATE AS SHOWN IF NOT MARKED.
   FINISH COAT FEDERAL STANDARD COLOR NO. 14062 (GREEN).
   INTERMEDIATE COAT SHALL OF A CONTRASTING COLOR TO THE PRIMER AND TOP COAT COLORS.

3. SEE COATING LIMIT DETAILS FOR PAINT LOCATIONS.

No PAINT
ALL METAL COMPONENTS OF BEARING DEVICES SHALL BE GALVANIZED OR METALIZED. GALVANIZING SHALL BE APPLIED IN ACCORDANCE WITH AASHTO M111M/M111 OR AASHTO M232M/M232, METALIZING SHALL CONFORM TO SECTION 506.15(b)

GENERAL NOTES

1. MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE VERMONT AGENCY OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION, 2006 EDITION", INCLUDING ITS LATEST REVISIONS, THE SPECIAL PROVISIONS, THE CONTRACT PLANS AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17TH EDITION, AND ITS LATEST REVISIONS. GENERAL SHOP PRACTICES, STRUCTURAL FABRICATION, WELDING AND ASSEMBLY SHALL BE GOVERNED BY ANSI/AASHTO/AWS D1.5 BRIDGE WELDING CODE.

2. THESE SHOP DRAWINGS WERE PREPARED IN ACCORDANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS. THE D.S. BROWN COMPANY DOES NOT ACCEPT LIABILITY FOR THE DESIGN OF THE PRODUCTS DETAILED IN THESE SHOP DRAWINGS.

3. THE D.S. BROWN COMPANY TO SUPPLY ONLY THE PARTS SHOWN ON THIS DRAWING.

4. ALL STEEL SHALL BE PRODUCED IN THE UNITED STATES OF AMERICA.

5. PTFE (TEFLON) SHALL BE VIRGIN, UNFILLED POLYTETRAFLUOROETHYLENE SATISFYING THE REQUIREMENTS OF ASTM D4894.

6. PTFE IS TO BE PURCHASED ETCHED ON ONE SIDE FOR BONDING. THE BONDING PROCESS FOR LAMINATING PTFE TO THE FABRIC PAD IS AS FOLLOWS: THE FABRIC PAD SURFACE TO BE BONDED IS PREPARED FOR LAMINATION. A TWO-PART STRUCTURAL GRADE EPOXY IS THEN APPLIED PER THE MANUFACTURE'S INSTRUCTIONS. THE PTFE IS CUT SLIGHTLY OVERSIZE TO ACCOUNT FOR POSSIBLE DRIFT. THE PTFE IS THEN APPLIED TO THE FABRIC PAD AND PUT INTO A VACUUM PRESS AT THE APPROPRIATE PRESSURE FOR THE NECESSARY TIME PERIOD. ONCE THE FABRIC PAD AND PTFE IS REMOVED FROM THE PRESS, THE PTFE IS TRIMMED TO PLAN SIZE AND THE PADS ARE SUBMITTED FOR QUALITY CONTROL REVIEW.

7. STAINLESS STEEL SHALL CONFORM TO ASTM A240 – TYPE 304 AND SHALL BE 6GA. (4.8). STAINLESS STEEL SLIDING SURFACES IN CONTACT WITH PTFE SHALL HAVE A NO. 8 MIRROR FINISH AND ALL OTHERS SHALL HAVE A 2B FINISH.

8. ALL CORNERS AND EDGES OF STEEL PLATES SHALL BE GROUND TO A 1.6 RADIUS FOR ~~PAINTING~~.

9. THE TEMPERATURE OF THE STEEL SHALL NOT EXCEED 250°F (121°C) FOR SURFACES IN CONTACT WITH THE PTFE, WHERE APPLICABLE. TEMPERATURE SHALL BE CONTROLLED BY THE USE OF TEMPERATURE INDICATING CRAYON OR OTHER DEVICES APPROVED BY THE ENGINEERS.

11. DS BROWN MAY SUBSTITUTE A709 GR. 345W FOR A709 GR. 345 DUE TO AVAILABILITY AT NO ADDITIONAL COST TO THE OWNER OR CONTRACTOR.

TOLERANCE TABLE	
SOLE PL. PLAN DIMENSIONS	± 1.6
SOLE PL. THICKNESS	± 1.6
HOLE LOCATION	± 1.6
PTFE THICKNESS	± 1.6
PTFE PLAN DIMENSION, TOTAL DESIGN AREA	± 1.6
STAINLESS STEEL FINISH	≤20µ" RMS #8 MIRROR

TOLERANCE NOTES

BEARING SURFACES SHALL BE FLAT WITH A MAXIMUM PERMISSIBLE VARIATION OF 0.25mm FROM A PLANE DETERMINED BY ANY THREE CORNERS OF THE PLATE.

FOR STAINLESS STEEL MATING TO PTFE BONDED TO FABRIC BEARING PAD MATERIAL THE TOLERANCE SHALL BE 0.25mm FROM A PLANE DETERMINED BY ANY THREE CORNERS OF THE PLATE.

3b

RECEIVED
CK'D BY _____ CK'D BY mem
NOV 17 2009
APPROVED AS NOTED
BY DATE 12/31/09

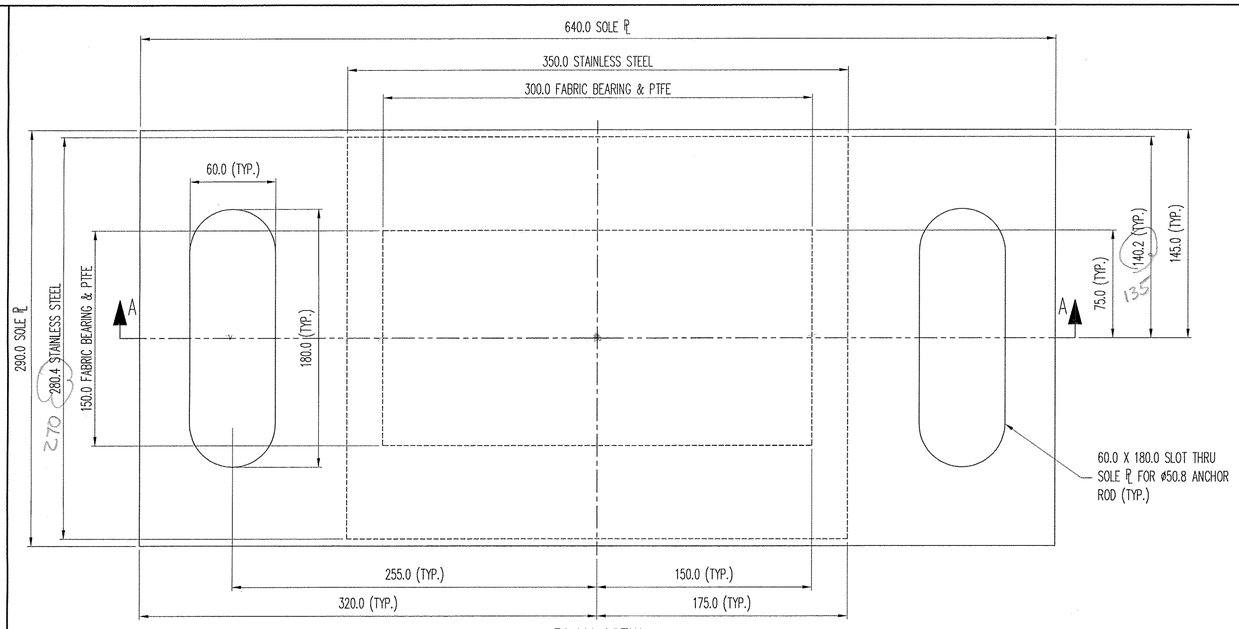
REV.	DESCRIPTION	DATE	DET.	CK'D.

D.S. BROWN
THE D.S. BROWN COMPANY
300 E. CHERRY STREET
NORTH BALTIMORE, OHIO 45872
419.257.3561
FAX: 419.257.0332
WWW.DSBROWN.COM

	ITEM	QUANTITY
LOCATION — TH 62 OVER WEST RIVER	–	–
BRIDGE — 37	–	–
PROJECT — BHO 1442 (28)	–	–
PROJECT — DUMMERSTON	–	–
—	–	–
DESIGNER — VANASSE HANGEN BRUSTLIN, INC.	–	–
CUSTOMER — RENAUD BROTHERS	–	–
	–	–

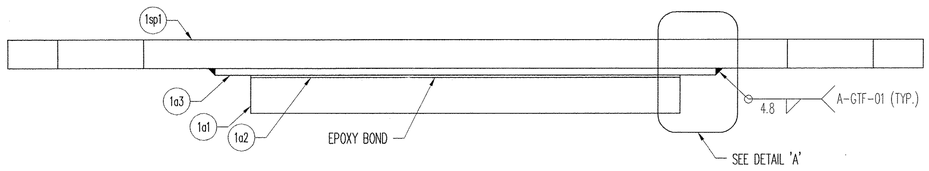
DESCRIPTION: GENERAL NOTES & COATING LIMITS
WINDHAM CO., VT

SCALE:	DRAWN BY:	CHECKED BY:	DATE:	
N.T.S.	DA	DAE	11/3/09	–
PROJECT NUMBER	PRODUCT CODE	RELEASE	SHEET	
27177	1106	1	GN1	

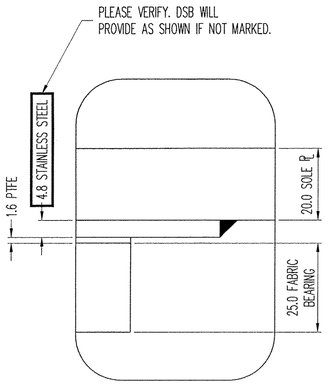


PLAN VIEW

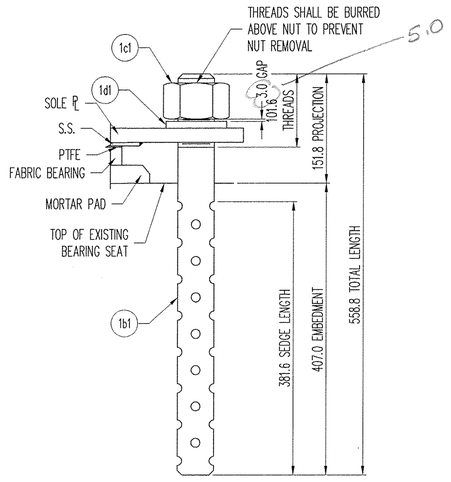
PREFORM FABRIC BEARING
(2) REQ'D @ ABUT. 1



SECTION 'A-A'



DETAIL 'A'



ANCHOR ROD DETAIL

MK	QTY	DESCRIPTION	MATERIAL	LENGTH	REMARKS	REV
1A	2	EXPANSION FABRIC BEARING				-
1a1	2	25.0 X 300.0	VT 731.01	150.0		-
1a2	2	1.6 X 300.0	PTFE	150.0	PURE VIRGIN UNFILLED	-
1a3	2	4.8 X 350.0	A240 T304, #8 & 2B	280.4	PLAIN	-
1sp1	2	20.0 X 640.0	A709 GR 250 OR 345	290.0	PAINT	-
1B	4	SWEDGED ROD				-
1b1	4	Ø50.8 X 558.8 SWEDGED ROD	F1554 GR 250		101.6 THREADS, 381.6 SWEDGE; A153-HDG	-
1C	4	HEAVY HEX NUT				-
1c1	4	Ø50.8 HEX NUT	A563-DH OR A194-2H		A153-HDG	-
1D	4	WASHER PLATE				-
1d1	4	9.5 X 85.7	A36 AASHTO M270M/M270 GR250	228.6	52.4 DIA HOLE CENTERED; A123-HDG	-
					11/9/2009 5:43:56 AM	

PLEASE VERIFY. DSB WILL PROVIDE AS SHOWN IF NOT MARKED.

LOAD TABLE	
LIVE LOAD (KN)	89.0
DEAD LOAD (KN)	222.0

RECEIVED
CK'D BY _____ OK'D BY MMM
NOV 17 2009
APPROVED AS NOTED
BY _____ DATE 12/21/09

SEE SHT. GN1 FOR GENERAL NOTES & COATING LIMITS.

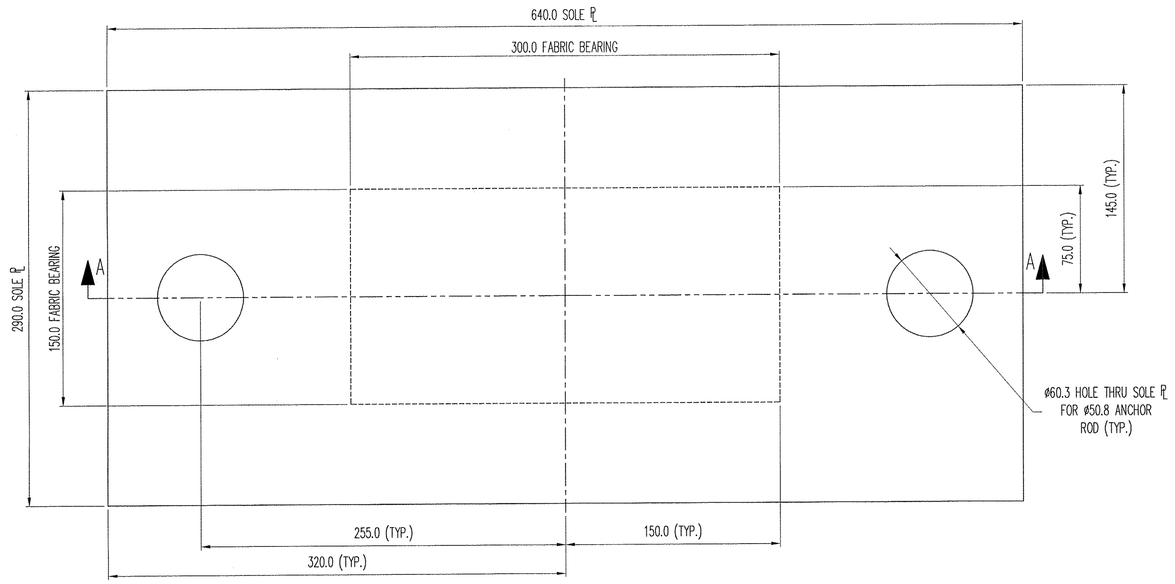
REV.	DESCRIPTION	DATE	DET.	CK'D.

D.S. BROWN
THE D.S. BROWN COMPANY
300 E. CHERRY STREET
NORTH BALTIMORE, OHIO 45872
419.257.3561
FAX: 419.257.0332
WWW.DSBROWN.COM

	ITEM	QUANTITY
LOCATION — TH 62 OVER WEST RIVER	27177-1106-1	2 OF 2
BRIDGE — 37	-	-
PROJECT — BHO 1442 (28)	-	-
PROJECT — DUMMERSTON	-	-
—	-	-
DESIGNER — VANASSE HANGEN BRUSTLIN, INC.	-	-
CUSTOMER — RENAUD BROTHERS	-	-
	-	-

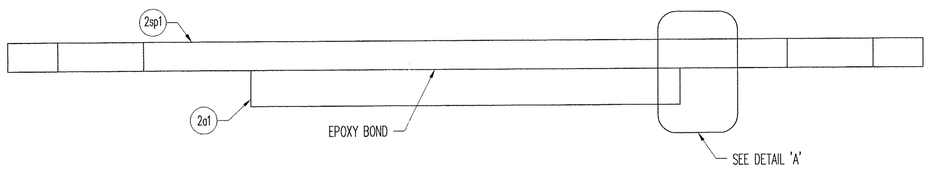
DESCRIPTION:
PREFORMED FABRIC PAD
WINDHAM CO., VT

SCALE:	DRAWN BY:	CHECKED BY:	DATE:	
N.T.S.	DA	DAE	11/3/09	-
PROJECT NUMBER	PRODUCT CODE	RELEASE	SHEET	
27177	1106	1	01	

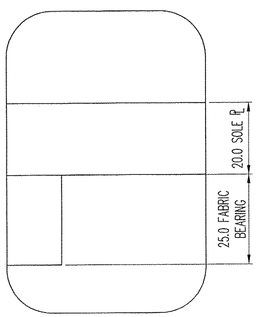


PLAN VIEW

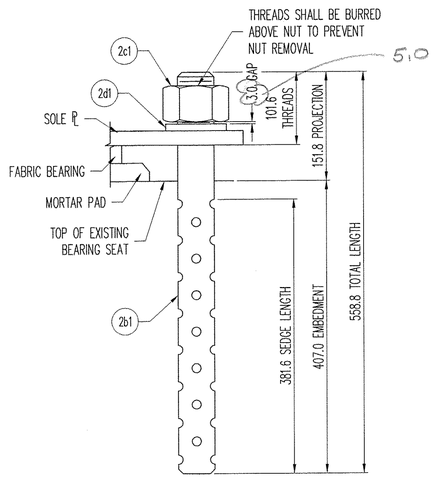
PREFORM FABRIC BEARING
(2) REQ'D @ ABUT. 2



SECTION 'A-A'



DETAIL 'A'



ANCHOR ROD DETAIL

MK	QTY	DESCRIPTION	MATERIAL	LENGTH	REMARKS	REV
2A	2	FIXED FABRIC BEARING				-
2a1	2	25.0 X 300.0	VT 731.01	150.0		-
2sp1	2	20.0 X 640.0	A709 GR 250 OR 345	290.0	~~PAINT~~	-
2B	4	SWEDGED ROD				-
2b1	4	Ø50.8 X 558.8 SWEDGED ROD	F1554 GR 250		101.6 THREADS, 381.6 SWEDGE; A153-HDG	-
2C	4	HEAVY HEX NUT				-
2c1	4	Ø50.8 HEX NUT	A563-DH OR A194-2H		A153-HDG	-
2D	4	WASHER PLATE				-
2d1	4	9.5 X 85.7	A36 A563 HVY M270M/M270 GR 250	85.7	52.4 DIA HOLE CENTERED; A123-HDG	-
					11/9/2009 5:43:56 AM	

LOAD TABLE	
LIVE LOAD (KN)	89.0
DEAD LOAD (KN)	222.0

RECEIVED
CK'D BY _____ CK'D BY MEM
NOV 17 2009
BY _____ APPROVED As Noted
BY _____ DATE 12/31/09

SEE SHT. GN1 FOR GENERAL NOTES & COATING LIMITS.

REV.	DESCRIPTION	DATE	DET.	CKD.

D.S. BROWN
THE D.S. BROWN COMPANY
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NORTH BALTIMORE, OHIO 45872
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LOCATION — TH 62 OVER WEST RIVER
BRIDGE — 37
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—
DESIGNER — VANASSE HANGEN BRUSTLIN, INC.
CUSTOMER — RENAUD BROTHERS

ITEM	QUANTITY
27177-1106-2	2 OF 2
–	–
–	–
–	–
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DESCRIPTION:
PREFORMED FABRIC PAD
WINDHAM CO., VT

SCALE:	DRAWN BY:	CHECKED BY:	DATE:	
N.T.S.	DA	DAE	11/3/09	–
PROJECT NUMBER	PRODUCT CODE	RELEASE	SHEET	
27177	1106	1	02	