

THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION



WILLIAM CASS, P.E. ASSISTANT COMMISSIONER

August 11, 2015

RECEIVED

AUG 1 2 2015

Lynne Blaisdell Sandown Town Administrator PO Box 1756 Sandown, NH 03873 SELECTMEN'S OFFICE TOWN OF SANDOWN NH

RE:

BIENNIAL INSPECTION OF MUNICIPALLY OWNED BRIDGES

TOWN OF SANDOWN

Dear Ms. Blaisdell:

Enclosed are copies of biennial bridge inspection reports for three municipally owned bridges in the Town of Sandown. Included are a bridge location map and bridge-listing sheet. Approved bridge railing options and details are available at:

http://www.nh.gov/dot/org/projectdevelopment/bridgedesign/detailsheets/index.htm Please note that Red List bridges are in bold type.

Bridge

Location

Recommended Posting

In order to be legal and enforceable, weight signs (black letters on a white background) and advisory width signs need to be located at each end of the bridge. At the Town's discretion, you may post a structure at a lower weight limit than the Department's recommended posting.

093/109

Phillips Road over

"Bridge Closed" & Barricaded

Exeter River

098/117

Fremont Road over

No Posting Required

Exeter River

110/120

Odell Road over

No Posting Required

Exeter River

Please note if there are any changes in the recommended weight posting or lack of postings for your bridges. Even though a bridge may be recommended for a weight posting or closure by the State, the decision to properly post or close the structure is the responsibility of the municipal officials. It is in the best interest of the municipality to post or sign your bridges in accordance with these recommendations. A failure to warn motorists of potential bridge hazards could result in tort liability claims. Also, if your bridges are not posted properly, it will result in forfeiture of any possible federal highway funds for projects in your municipality.

Lynne Blaisdell, Sandown Town Administrator August 11, 2015 Page 2 of 2

Our bridge inspectors have indicated that the bridges listed on page one of this letter are in compliance with DOT's recommendations; therefore <u>no action needs to be taken by the Town</u>. Please call if there are any questions.

Sincerely,

Nancy J. Mayville, P.E.

Municipal Highways Engineer

Bureau of Planning and Community Assistance Telephone: (603) 271-3344 / Fax: (603) 271-8093

NJM/sa Enclosures

c: Sandown Public Works Director

Commissioner, Department of Education

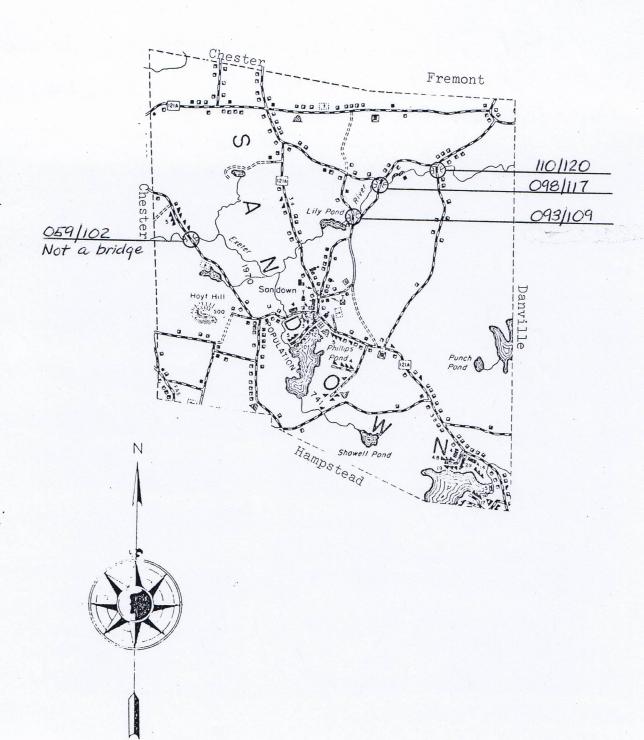
Risk Management Representative, Local Government Center S:\Planning\Community Assistance\1-Municipalities\Sandown\Bridge Insp\Biennial 8-11-15.doc

SANDOWN MUNICIPAL BRIDGES

RECOMMENDED POSTING	BRIDGE CLOSED	NO POSTING REQ'D	NO POSTING REQ'D
LENGTH (0-T-0)	16'-0"	16'-6"	16'-0"
OVER	EXETER RIVER	EXETER RIVER	EXETER RIVER
ROAD NAME	PHILLIPS ROAD EXETER RIVER	FREMONT ROAD EXETER RIVER	ODELL ROAD
ROAD INV.NO.	63	53	61
NO. SPANS	-	1	-
TYPE	MP-A	CS	MP
BRIDGE NO. ROAD NUMBER TYPE SPANS INV.NO	093/109	098/117	110/120

REMARKS: 093/109 SENT AS A CRITICAL DEFICIENCY ON 7/30/2015.

REVIEWED/REVISED: 7/15



Sandown 098/117

Date of Inspection: 07/30/2015 Date Report Sent: 8/6/2015

Picture taken during inspection

Owner: Municipality

RECEIVED

AUG 1 2 2015

FREMONT ROAD

Over

EXETER RIVER

SELECTMEN'S OFFICE TOWN OF SANDOWN NH

Recommended Postings:

Weight: No Posting Required

Width: Not Required

Primary Height Sign Recommendation:

Optional Centerline Height Sign Rec:

None None

Clearances: Over:

(Feet) Under: 0.00 Route:

✓ Height Signs OK

✓ Weight Sign OK

✓ Width Sign OK

Condition: Municipal Redlist

Deck: 8 Very Good Superstructure: 8 Very Good

Substructure: 4 Poor Culvert: N N/A (NBI) Structure Type and Materials:

Number of Spans Main Unit: 1 Number of Approach Spans: 0

Main Span Material and Design Type

Concrete Slab

Sufficiency Rating: 63.5%

NBI Status: Not Deficient

Bridge Rail: Meets Standards

Rail Transition: Meets Standards Bridge Approach Rail: Meets Standards

Approach Rail Ends: Meets Standards

NH Bridge Type: Concrete Slab

Deck Type: Concrete Precast Panel

Year Built: 1980

Wearing Surface: Bituminous

Membrane: Other

Deck Protection: Epoxy Coated Reinforcing

Pavement thickness: 3.0 in Curb Reveal: 6.0 in

Bridge Dimensions:

Length Maximum Span: 13.9 ft Left Curb/Sidewalk Width: 0.0 ft

Width Curb to Curb: 22.7 ft Approach Roadway Width (W/ Shoulders): 24.0 ft

Plan Location: M1-11-2-2 Total Bridge Length: 16.5 ft

Right Curb/Sidewalk Width: 0.0 ft

Total Bridge Width: 27.0 ft

Median: No median Bridge Skew: 0.00°

Bridge Service:

Type of Service on Bridge: Highway Type of Service under: Waterway

Lanes on bridge: 2

Year Rebuilt: 2006 Detour Length: 1.0 mi

Lanes Under: NA

AADT: 230 Future AADT: 340

Percent Trucks: 4%

Year of AADT: 2013

Year of Future AADT: 2035

Page 1 of 6

Sandown 098/117

Federal or State Definition Bridge: NH Definition Bridge

Roadway Functional Class: Rural Local

New Hampshire Highway System and Class: Municipal Highway

Eligibility for the National Register of Historic Places: Not Eligible

Traffic Direction: Two-way traffic

National Bridge Inventory (NBI) Appraisal Ratings:

Deck Geometry: Minimum Tolerable
Underclearances: Not Applicable (NBI)

Approach Alignment: Equal Minimum Criteria

Structural Evaluation: Minimum Tolerable

Channel/Channel Protection: Protection Undermined

Waterway Adequacy: Equal Desirable Criteria

Bridge Scour Critical Status: Stable, action needed

Riprap Condition: Fair Condition
Debris Present: Debris Present

WEST ABUTMENT UNDERMINED 20' LONG WITH 1' TO 2' PENETRATION AND UP TO 1' IN HEIGHT. LARGE RIPRAP

IN CHANNEL.

Date of Underwater Inspection: Not Applicable

AASHTO CoRe Element Condition State Data:

No.	Description	Env.	Material Notes and Condition Notes
52 Concrete Slab - Protected with Coated		Moderate	3 PRECAST CONCRETE SLABS. 9' W x 16.5' L x 12"D. TORCH APPLIED MEMBRANE W/ 3" PAVEMENT.
Bars	ASPHALT - 0	CRACKED AT DECK END. CURBS - CRACKS AND SPALLS.	
215	Reinforced Concrete	Moderate	
Abutment	FEET LONG	KS. TOEWALL AT EAST ABUTMENT. WEST ABUTMENT UNDERMINED FOR 20 WITH 1 TO 2 FEET OF PENETRATION AND UP TO 1 FOOT IN HEIGHT. T SOUTHEAST WING.	
334	3-	Moderate	**T-101**
Railing	W- BEAM RA	AIL HAS MINOR DAMAGE.	
361 Scour Condition Warning Flag	The state of the s	Moderate	
		MENT UNDERMINED 20 FEET LONG WITH 1 TO 2 FEET OF PENETRATION I IN HEIGHT.	

No.	Description	Env.	Quantity	Units	State 1	State 2	State 3	State 4	State 5
52	Concrete Slab - Protected with Coated E	Moderate	446	(SF)	0 %	100 %	0 %	0 %	0 %
215	Reinforced Concrete Abutment	Moderate	121	(LF)	0 %	75 %	25 %	0 %	
334	Coated Metal Bridge Railing	Moderate	43	(LF)	100 %	0 %	0 %	0 %	0 %
361	Scour Condition Warning Flag	Moderate	1	(EA)	0 %	100 %	0 %		

Bridge Notes:

ADDED TO MRL 7/13/11.

Approach and Roadway Notes: ASPHALT - (7) GOOD CONDITION, CRACKED AT DECK END

Sandown 098/117

W- BEAM - FEW SCRAPES, MINOR DAMAGE.

Unusual or experimental features:

Issues finishing the abutment stabilization work.

Inspection History:

Inspection Date: 07/30/2015

Inspector: KJT

Deck: 8 Very Good

Notes:

KJT inspection comments -

Super: 8 Very Good Substr: 4 Poor

DECK/SUPERSTRUCTURE: ASPHALT - CRACKED AT DECK END. CURBS - FINE CRACKS

Culvert: N N/A (NBI)

AND MINOR SPALLS. RAIL - MINOR DAMAGE. SOFFIT - GOOD CONDITION.

SUBSTRUCTURE: FINE CRACKS AND MINOR SPALLS. TOEWALL AT EAST ABUTMENT. WEST ABUTMENT ARE UNDERMINED FOR 20' LONG WITH 1' TO 2' OF PENETRATION AND

UP TO 1' IN HEIGHT.

Deck: 8 Very Good Super: 8 Very Good

Notes:

Inspection Date: 12/16/2014

Inspector: KJT

Substr: 4 Poor

KJT inspection comments -

Culvert: N N/A (NBI)

DECK / SUPERSTRUCTURE: ASPHALT - CRACKED AT DECK END. CURBS - FINE CRACKS

AND MINOR SPALLS. RAIL - MINOR DAMAGE. SOFFIT - GOOD CONDITION.

SUBSTRUCTURE: FINE CRACKS AND MINOR SPALLS. EAST AND WEST ABUTMENTS ARE UNDERMINED FOR 20' LONG WITH 1' TO 2' OF PENETRATION AND UP TO 1' IN

HEIGHT.

Substr: 4 Poor

Inspection Date: 07/17/2013

Inspector: MAS

Deck: 8 Very Good Super: 8 Very Good

Notes: MAS - inspection comments -

DECK / SUPERSTRUCTURE: ASPHALT - CRACKED AT DECK END. CURBS - FINE CRACKS Culvert: N N/A (NBI)

AND MINOR SPALLS. RAIL - MINOR DAMAGE. SOFFIT - GOOD CONDITION. SUBSTRUCTURE: FINE CRACKS AND MINOR SPALLS. EAST AND WEST ABUTMENTS ARE UNDERMINED FOR 20' LONG WITH 1' TO 2' OF PENETRATION AND UP TO 1' IN

HEIGHT.

Notes:

Inspector: MAS

Deck: 8 Very Good

MAS - inspection comments -

Inspection Date: 12/13/2012

Super: 8 Very Good Substr: 4 Poor Culvert: N N/A (NBI)

DECK / SUPERSTRUCTURE: ASPHALT - CRACKED AT DECK END. CURBS - FINE CRACKS

AND MINOR SPALLS. RAIL - MINOR DAMAGE. SOFFIT - GOOD CONDITION.

SUBSTRUCTURE: FINE CRACKS AND MINOR SPALLS. EAST AND WEST ABUTMENTS ARE UNDERMINED FOR 20 FEET LONG WITH 1' TO 2' OF PENETRATION (UNABLE TO

VERIFY SCOUR DIMENSIONS 12/13/2012 DUE TO HIGH WATER TABLE).

Inspection Date: 07/13/2011 Notes:

Inspector: KJT

Deck: 8 Very Good Super: 8 Very Good

KJT- inspection comments -

Substr: 4 Poor Culvert: N N/A (NBI)

DECK: CURBS SPALLED.

SUPERSTRUCTURE: FINE CRACKS. SUBSTRUCTURE: UNDERMINED AT EAST AND WEST ABUTMENTS 20 FEET LONG 1 TO 2 FEET PENETRATION NORTHEAST WING SPALLED.

PICTURES: C431. 49.WEST APPROACH. 50. SOUTH ELEVATION.

Inspection Date: 07/21/2009

Inspector: KJT

Deck: 8 Very Good

Notes:

Super: 8 Very Good Substr: 5 Fair

KJT- inspection comments -

DECK: ELEMENTS IN VERY GOOD CONDITION.

Culvert: N N/A (NBI)

SUPERSTRUCTURE: ELEMENTS IN VERY GOOD CONDITION.

SUBSTRUCTURE - ELEMENTS IN FAIR CONDITION. UNDERMINED AT ABUTMENTS.

Sandown 098/117

Inspection History:

Inspection Date: 06/27/2007

Inspector: DPC

Deck: 9 Excellent

Notes:

DPC- inspection comments -

Super: 9 Excellent

DECK: ELEMENTS IN EXCELLENT CONDITION.

Substr: 5 Fair

SUPERSTRUCTURE: ELEMENTS IN EXCELLENT CONDITION.

Culvert: N N/A (NBI)

SUBSTRUCTURE - ELEMENTS IN FAIR CONDITION. UNDERMINED AT ABUTMENTS.

PICTURES: C351-16 THRU 22

Inspection Date: 01/25/2007

Inspector: DPC

Deck: 9 Excellent

DPC - inspection comments -

Super: 9 Excellent Substr: 8 Very Good

DECK: ELEMENTS IN EXCELLENT CONDITION.

Culvert: N N/A (NBI)

SUPERSTRUCTURE: ELEMENTS IN EXCELLENT CONDITION.

SUBSTRUCTURE: ELEMENTS IN VERY GOOD CONDITION. NORTH ABUTMENT HAS SIX

FOOT DEPTH OF WATER. Inspection Date: 08/23/2006

Inspector: RLM

Deck: 9 Excellent

Notes:

RLM inspection comments -

Super: 9 Excellent

DECK: ELEMENTS IN EXCELLENT CONDITION.

Substr: 4 Poor

SUPERSTRUCTURE: ELEMENTS IN EXCELLENT CONDITION.

Culvert: N N/A (NBI)

SUBSTRUCTURE: ELEMENTS IN POOR CONDITION DUE TO SCOUR. NORTH ABUTMENT HAS SIX FOOT DEPTH OF WATER WITH TWO FOOT DEPTH OF SCOUR.

PIC(S): C322- 36- 39.

Inspection Date: 08/22/2005

Inspector: RLM

Deck: 0 Failed - Closed

Notes:

Super: 0 Failed - Closed Substr: 0 Failed - Closed

Sufficiency Rating Calculation Accepted by DMB at 3/8/2006 13:35:06 RLM inspection comments -

Culvert: N N/A (NBI)

DECK: TIMBER DECK PLANK ARE CRACKED, SPLIT, LOOSE AND MODERATELY DECAYED WITH HOLED AREAS.

SUPERSTRUCTURE: BEAM FLANGE HOLED AT NORTH. EXTERIOR DOWNSTREAM STRINGER SAGGED. STRINGERS #3, #4, #5 AND #6 ARE HEAVILY HOLED THROUGH WEBS. HEAVY RUST AND SCALE. TIMBER NAILER BOLTS ARE RUSTED OFF.

SUBSTRUCTURE: NORTH ABUTMENT HAS 6' OF SCOUR.

Inspector: DPC

Deck: 4 Poor

Inspection Date: 10/04/2004 Notes:

Super: 2 Critical

Substr: 4 Poor

Culvert: N N/A (NBI)

Sufficiency Rating Calculation Accepted by DEP at 06/07/2005 10:36:05 DPC inspection comments -DECK: TIMBER DECK PLANK ARE CRACKED, SPLIT, LOOSE AND MODERATELY DECAYED

WITH HOLED AREAS.

SUPERSTRUCTURE: BEAM FLANGE HOLED AT NORTH. EXTERIOR DOWNSTREAM STRINGER SAGGED. STRINGERS #3, #4, #5 AND #6 ARE HEAVILY HOLED THROUGH

WEBS. HEAVY RUST AND SCALE. TIMBER NAILER BOLTS ARE RUSTED OFF.

SUBSTRUCTURE: NORTH ABUTMENT HAS 6' OF SCOUR.

Sandown 098/117

Inspection History:

Inspection Date: 11/24/2003

Inspector: DPC

Deck: 4 Poor Super: 2 Critical

Notes:

Sufficiency Rating Calculation Accepted by DEP at 11/09/2004 10:23:49

DPC inspection comments

Substr: 4 Poor

DECK: TIMBER DECK PLANK ARE CRACKED, SPLIT, LOOSE AND MODERATELY DECAYED

Culvert: N N/A (NBI)

WITH HOLED AREAS.

SUPERSTRUCTURE: BEAM FLANGE HOLED AT NORTH. EXTERIOR DOWNSTREAM

STRINGER SAGGED. STRINGERS #3, #4, #5 AND #6 ARE HEAVILY HOLED THROUGH WEBS. HEAVY RUST AND SCALE. TIMBER NAILER BOLTS ARE RUSTED OFF.

SUBSTRUCTURE: NORTH ABUTMENT HAS 6' OF SCOUR.

PICTURE: C212-12.

Inspection Date: 08/28/2003

Inspector: RLM

Deck: 4 Poor

Notes:

Super: 2 Critical

Sufficiency Rating Calculation Accepted by DEP at 08/29/2003 11:29:49 RLM inspection comments -

Substr: 4 Poor

Culvert: N N/A (NBI)

DECK: TIMBER DECK PLANK ARE CRACKED, SPLIT, LOOSE AND MODERATELY DECAYED WITH HOLED AREAS.

SUPERSTRUCTURE: BEAM FLANGE HOLED AT NORTH. EXTERIOR DOWNSTREAM STRINGER SAGGED. STRINGERS #3, #4, #5 AND #6 ARE HEAVILY HOLED THROUGH WEBS. HEAVY RUST AND SCALE. TIMBER NAILER BOLTS ARE RUSTED OFF.

SUBSTRUCTURE: NORTH ABUTMENT HAS 6 FEET OF SCOUR.

PIC(S): C193-01 to 07.

Inspection Date: 11/27/2002

Inspector: RLM

Deck: 4 Poor

Notes:

Super: 3 Serious

Sufficiency Rating Calculation Accepted by DEP at 07/02/2003 15:02:11 RLM inspection comments -

Substr: 4 Poor

Culvert: N N/A (NBI)

DECK: TIMBER DECK PLANK ARE CRACKED, SPLIT, LOOSE AND MODERATELY DECAYED WITH HOLED AREAS.

SUPERSTRUCTURE: BEAM FLANGE HOLED AT NORTH. EXTERIOR DOWNST

Inspection Date: 02/07/2002

Inspector: RLM

Deck: 4 Poor

Sufficiency Rating Calculation Accepted by DEP at 06-07-2002 13:25:39

Super: 3 Serious Substr: 5 Fair

RLM inspection comments -

Culvert: N N/A (NBI)

DECK: TIMBER DECK PLANK ARE CRACKED, SPLIT, LOOSE AND MODERATELY DECAYED.

SUPERSTRUCTURE: BEAM FLANGE HOLED AT NORTH. EXTERIOR DOWNSTREAM

STRINGER SAG

Inspection Date: 08/29/2001

Inspector: RLM

Deck: 3 Serious

Notes:

Super: 3 Serious

Sufficiency Rating Calculation Accepted by DEP at 10-31-2001 14:14:14

Substr: 5 Fair

RLM inspection comments -

Culvert: N N/A (NBI)

DECK: TIMBER DECK PLANK ARE CRACKED, SPLIT, LOOSE AND MODERATELY DECAYED. SEVERAL PLANK HOLED AND BROKEN.

SUPERSTRUCTURE: BEAM FLANGE HOLED AT NORTH.

Inspection Date: 12/11/2000

Inspector: RLM

Deck: 4 Poor

Notes:

Super: 4 Poor

Sufficiency Rating Calculation Accepted by DEP at 06-29-2001 13:32:59 RLM inspection comments -

DECK: TIMBER DECK PLANK ARE CRACKED, SPLIT, LOOSE AND MODERATELY

Substr: 5 Fair

DECAYED. SEVERAL NEW PLANK INSTALLED.

SUPERSTRUCTURE: BEAM FLANGE HOLED AT NORTH. TIMB

Culvert: N N/A (NBI)

Sandown 098/117

Inspection Date:	11/20/2000	Inspector: RLM	Deck:	4 Poor
Notes:				4 Poor
RLM inspection c	omments -			6 Satisfactory
DECK: TIMBER AREAS HOLED T SUPERSTRUCTU LOSS OVERALL		N N/A (NBI)		
Inspection Date:	03/01/1999	Inspector: DPC	Deck:	4 Poor
Notes:			Super:	4 Poor
Sufficiency Rating	Calculation Accepted	by DEP at 05-12-1999 13:35:48	Substr:	6 Satisfactory
DPC inspection co	omments - ocked, split, broken, hol	lad Madarata dana	Culvert:	N N/A (NBI)
Super stringers-	- 60 to 70% section los	s overall. Moderate deflections.		
Sub- concrete ab		,		
nspection Date:	03/01/1998	Inspector: Not Available	Deck:	4 Poor
Notes:			Super:	
Sufficiency Rating	Calculation Accepted	by DEP at 12-23-98 08:12:51		6 Satisfactory
			Culvert:	N N/A (NBI)
Inspection Date: 01	01/01/1997	Inspector: Not Available	Deck:	4 Poor
Notes:			Super:	4 Poor
			Substr:	6 Satisfactory
				N N/A (NBI)
nspection Date:	03/01/1996	Inspector: Not Available	Deck:	5 Fair
Notes:			Super:	4 Poor
			Substr:	6 Satisfactory
				N N/A (NBI)
nspection Date:	02/01/1994	Inspector: Not Available	Deck:	6 Satisfactory
Notes:			Super:	4 Poor
			Substr:	5 Fair
			Culvert:	N N/A (NBI)
Inspection Date:	08/01/1991	Inspector: Not Available	Deck:	4 Poor
Notes:			Super:	4 Poor
			Substr:	5 Fair
			Culvert:	N N/A (NBI)
opy Distributi	on:	Border State Dent	of Poo	nd Foor Day
				nd Econ. Dev.
Table 4	funicipal Hghways		A Forest S	nmental Service
Bureau of Turnpikes				
		Burea	au of Traffi	C

N.H. D.O.T.

TOWN Sandown

BRIDGE CAPACITY SUMMARY

BRIDGE NUMBER 098/117 RATED BY DESIGN METHOD LFD NG METHOD LFD GN LOAD HS25

PLAN FILE -

TE Fremont Road

CHECKED BY

DATE 12-10-2006

DATE 12/12/06

OVER Exeter River

	ED	POSTING	HS47.3			
AVAILABLE CAPACITY	SINGLE LANE LOADED	OPERATING	HS52.6			
	SINGL	INVENTORY OPERATING POSTING	HS31.5			
	MULTIPLE LANES LOADED	POSTING	HS42.9			-
		INVENTORY OPERATING	HS47.7			
	MULTI		HS28.6			
REQUIRED CAPACITY	CERTIFIED VEHICLES	MULTIPLE	HS24.0			
	CERTIFIED	SINGLE	HS26.7			
	CURRENT		HS21.9			
LONGITUDINAL EFFECTIVE SPAN LENGTH			15'-2"			
RATED MEMBER			cast Deck Panel iment Capacity)			

OMMENDED POSTING: No Posting Required

MATTHEW HAILING NEW HAILING NEW HAILING NEW HAILING NO. 9293

NO. 9293

NO. 9293

NO. 9293

METRIC TONS

ENGLISH TONS

RATING METHOD

63. (Op) LFD 65. (Inv.) LFD

64. (Op) 85.9 66. (Inv.) 51.5

77.9 46.7

1\data\bridge rating\FORM4.doc