



Office of the
BOARD OF SELECTMEN
272 Main Street, Townsend, Massachusetts 01469

Sue Lisio, *Chairman*
James M. Kreidler, Jr.,
Town Administrator

Cindy King, *Vice-Chairman*

Wayne Miller, *Clerk*
(978) 597-1701

MEETING MINUTES FOR FEBRUARY 5, 2019 6:00 P.M.
SELECTMEN'S CHAMBERS, TOWN HALL, IN STREET, TOWNSEND, MA

I. PRELIMINARIES - VOTES MAY BE TAKEN:

1.1 SL called the meeting to order at 6:00P.M.

Roll call vote showed 3 members present: Chairman, Sue Lisio (SL) Vice-Chairman, Cindy King (CK) Clerk, Wayne Miller (WM).

1.2 Pledge of Allegiance

1.3 SL announce the meeting is being tape recorded and queried the audience.

1.4 SL moved to amend 4.8 Add additional \$2,400.00 for Senior Education.

1.5 Public Comment Period

Lisa Lewand voiced concerned about public records requests. Lisa Lewand voiced concern with meeting minutes not being online prior to 2017.

SL moved to address 3.2 and other Public Safety agenda items first so the first responders could get home and rest due to the recent emergency with the fire at Pine Ridge.

II. APPOINTMENTS AND HEARINGS - VOTES MAY BE TAKEN:

2.1 6:10P.M. Shirley Coit, TEMA Director, RE: FY20 Budget

TEMA Director, Shirley Coit thanked all the volunteers for their assistance with the shelter, she acknowledged Brian Kennedy and Kym Craven working through the night to assist the families. Continued discussion regarding the relocation and recovery efforts ensued. SL mentioned the town did put an announcement on the website as to how folks can get involved and help those affected by the fire.

Mr. Kreidler reviewed TEMA's budget request with the Board, (please see attached). SL relayed a TEMA member mentioned there might be some additional budgetary needs. SL would like to leave the budget open as it was a learning experience with the structural fire of this size and some additional funding should be discussed.

SL moved to address the executive session 7.2 & 7.3

7.2 WM moved to enter into executive session pursuant to GL c. 30A, s. 21(a)(3) to discuss strategy with respect to collective bargaining or litigation if an open meeting may have a detrimental effect on the bargaining position or litigating position and the chair so declares AFSCME Police Union Grievance and to return to open session. SL declared. CK seconded. Roll call vote SL (YES), CK (YES) and WM (YES).

7.3 WM moved to enter into executive session pursuant to GL c. 30A, s. 21(a)(2) to conduct strategy sessions in preparation for negotiations with nonunion personnel or to conduct collective

bargaining sessions or contract negotiations with nonunion personnel, RE: MOU Paramedic. SL seconded. Roll call SL (YES) CK (YES) WM (YES).

III. APPOINTMENTS OF OFFICIALS/PERSONNEL - VOTES MAY BE TAKEN:

- 3.1 WM moved to appoint Jonathan Ryan Moore as a paid-for-call Firefighter for the Townsend Fire-EMS Department contingent upon the passing of medical exam and CORI check with a one-year probationary period for a term effective February 5, 2019 to June 30, 2019.
- 3.2 WM moved to appoint Cheyenne Harrington as a full-time Police Officer to the Townsend Police Department for term effective February 5, 2019 to June 30, 2019 contingent upon the passing a background check and medical exam with a one-year probationary period. CK seconded. Unanimous vote.
- 3.3 WM moved to appoint Kimberly Clark as the Records Clerk for the Townsend Police Department effective February 5, 2019 contingent upon the passing of a background check and medical exam. CK seconded. WM amended motion to include one year probationary period and CORI check. Unanimous vote.

SL questioned the reference to part time when the position is 32 hours which is full time. Chief Bailey explained the need for the 32 hours and that the position is funded within the budget.

- 3.4 WM moved to appoint James Marchand as a Reserve Police Officer for the Townsend Police Department effective February 24, 2019 to June 30, 2019. CK seconded. Unanimous vote. The Board congratulated Mr. Marchand on his retirement.

IV. MEETING BUSINESS - VOTES MAY BE TAKEN:

- 4.1 Review/Comment draft report for Turnpike Village cost examination.

Mr. Kreidler reviewed the draft report with the Board (please see attached). Mr. Kreidler explained the Board has the right to have an Accountant review the report. Town Counsel's opinion was explained (please see attached). Mr. Kreidler read an email from a ZBA member in the record (please see attached). The Board agreed no comment was needed nor a review by an Accountant.

- 4.2 WM moved to approve and sign a 2019 renewal for a Common Victualler license application for Paul Panagiotis, dba The Ice Cream Factory, 7 Elm Street, Townsend, MA. CK seconded. Unanimous vote.
- 4.3 WM moved to approve and sign a one day Special license for Jennifer Climo, Townsend Congregational Church in conjunction with an auction on May 4, 2019 with sale hours from 6:00P.M. to 9:00P.M. CK seconded. Unanimous vote.
- 4.4 Discuss/Review request to adjust Reserve Police Officers pay rate.
The Board reviewed the request (please see attached). Chief Bailey explained a survey was done of the surrounding communities and this change would make the job competitive in terms of wages.

WM moved to approve the pay rate adjustment for Reserve Officers to match the dayshift patrolman rate range from \$23.10 to \$28.46 per hour depending on years of service. WM amended

the motion to approve the pay rate for Reserve Officers to match the dayshift patrolman rate depending on years of service. CK seconded. Unanimous vote.

- 4.5 Clarification of Board's position on cross staffing of personnel, police, fire-ems, and facilities as requested by the Fire-Ems Chief, Mark Boynton.

Chief Boynton asked for clarification of the Board's position on the matter. Mr. Kreidler clarified and explained the following: overtime issues, liability issues, FLSA requirements, budgetary constraints, financial impact on the employee in the event of injury. WM recommended in the future we include the ability for the employee to purchase additional disability insurance through the town to help offset any losses in the event of an injury.

WM moved to approve the cross functional job between fire and police department with an addendum to the letter that is currently being sent out to include supplemental insurance availability. CK seconded. Unanimous vote.

- 4.6 Clarification of authority to set policy and procedures for the Fire-EMS Department.

The Board met with the Fire-EMS Chief, Mark Boynton. Mr. Kreidler explained there were questions regarding policy setting ability as charged in the Strong Chief law compared with the Charter outlining the responsibility resting with the Selectmen. The Board reviewed the letter from Counsel (please see attached). Mr. Kreidler suggested the Board designate the responsibility with the Fire-EMS Chief to create policy similar with the Police Department, the policies are reviewed and approved by the Board of Selectmen and if no action is taken in 30 days they automatically go into effect. Discussion included: Policy for clarification, discussion for Charter Review and background information. SL asked Mr. Kreidler to draft a policy. Chief Boynton asked to understand the process, concerned with public review of policies regarding confidential matter. Mr. Kreidler stated to the extent an executive session exemption applies, the policy would be reviewed in executive session. Chief Boynton asked if the policies should be sent in for approval. Mr. Kreidler suggested the Chief submit the entire packet of policies to the Board for review and approval.

- 4.7 Review/Approve/Sign letter of support for the DTLA grant to fund a feasibility study for Ashby, Pepperell, and Townsend Regional Dispatch as submitted by the Fire-EMS Chief.

WM moved to approve and sign the letter of support for the DTLA grant to fund a feasibility study for Ashby, Pepperell, and Townsend Regional Dispatch as submitted by the Fire-EMS Chief. SL would like to revise the letter. SL amended motion to say "as written with edits by the Town Administrator" CK seconded. Unanimous vote.

- 4.8 Accept a grant in the amount of 3,754.00 for Student Awareness Fire Education and \$2,400.00 for Senior Education from the State Fire Marshall's office.

The Board reviewed the request (please see attached). WM moved to accept a grant in the amount of \$3,754.00 for Student Awareness Fire Education and \$2,400.00 for Senior Education from the State Fire Marshall's office. CK seconded. Unanimous vote.

- 4.9 Accept a grant in the amount of \$14,993.00 from the Community Foundation of North Central Massachusetts and the Greater Lowell Community Foundation for the purpose of Advanced Life Support Training.

The Board reviewed the request (please see attached). WM moved to accept a grant in the amount of \$14,993.00 from the Community Foundation of North Central Massachusetts and the Greater Lowell Community Foundation for the purpose of Advanced Life Support Training. WM amended to accept the grant electronically. CK seconded. Unanimous vote.

The Board thanked all of public safety for the work involved with the recent structure fire. Chief Boynton acknowledged all that have helped with the effort to help the families and the public safety departments in other communities for their assistance. Police Chief Rick Bailey also acknowledged and thanked all those involved with the recovery efforts.

CK asked the Board review TEMA's budget before entering executive session as the Director has been up all night as well. The Board agreed to address 2.1.

- 4.10 Review/Approve/Sign a contract for the Water Department Bridge Replacement project as recommended by Town Counsel.

Mr. Kreidler reviewed the contract and Town Counsel's review and recommendation. WM moved to approve and sign the contract for the Water Department Bridge as recommended by Town Counsel. CK seconded. Unanimous vote.

V. OLD BUSINESS - VOTES MAY BE TAKEN:

- 5.1 Review/Approve Use of Legal Counsel Policy - First Reading

The Board reviewed the drafted policy. SL reminded the Board this is to revise in accordance with the changed billing agreement. WM moved to approve the Use of Legal Counsel Policy first reading. CK seconded. Unanimous vote.

- 5.2 Discussion Re: Hart Library and future plans (ex. \$500,000 Capital Bond)

Mr. Kreidler explained a citizen did inquire as to the status of the bond. Mr. Kreidler stated the town did apply for an earmark and it was brought forward by Senator Tran and approved. At a previous meeting the Board supported the earmark request for funds for the sidewalks at the Common and not the Library. Mr. Kreidler state the citizen would like to know the Board's plan for the Hart Library. WM would like to form a Committee to decide. CK strongly supported requesting the funds and talked of how the decision was made to make the plans for the Hart Library. CK stated the town lost an opportunity to receive a \$250,000.00 disability grant for compliance with ADA, relying almost \$1,000,000.00 is lost because of the decision making process.

SL asked another letter be sent to the Governor regarding the sidewalk repair. SL would like to use for economic development. CK stated we need to have a cable studio.

- 5.3 Board discussion to review and/or revise/approve the Town Administrator job description consistent with the Town Charter.

SL asked her Board members if they put together a list of proposed expectations. WM suggested waiting until the next meeting to discuss. Mr. Kreidler explained some of the inconsistencies in the job description such as the Town Administrator ability to discipline or hire employees, noting previous Town Administrators did perform those function absent the authorization to do so. SL asked this be added to the next agenda.

- 5.4 Board discussion and development of a list of specific expectations for the Town Administrator position. See 5.3

- 5.5 WM moved to approve and sign an addendum to the personal services contract agreement between the town of Townsend and the Town Accountant. CK seconded. Unanimous vote.

Mr. Kreidler explained this was negotiated in executive session and has to be voted and signed in open session. SL read the addendum into the record.

- 5.6 Approve/Sign a personal services contract between the town of Townsend and the Treasurer/Collector.

Mr. Kreidler stated the version presented (please see attached) does have some edits provided by Labor Counsel. WM moved to approve and sign a personal services contract between the town of Townsend and the Treasurer/Collector. CK seconded Unanimous vote.

VI. WORK SESSION - VOTES MAY BE TAKEN:

6.1 Town Administrator updates and report

1. FY20 Budget Update
 - a. NMRSD and Nashoba Tech Preliminary Budgets
 - b. Saturday Meeting Dates
2. Nashoba Dispatch Updates
3. DLS/OSHA Training Update
4. Cable
5. Unregistered Motor Vehicle Update
6. Library-Meeting Hall-Senior Center Facilities Discussion

Mr. Kreidler read and reviewed the above items as his written report outlines (please see attached). Additional review of the attachments to the report included training slides. SL requested a meeting be scheduled for the cable extension with Town Counsel and gave the other members of copy of Town Counsel's response (please see attached).

6.2 Board of Selectmen announcements, updates, and reports.

Sue Lisio: Meeting Schedule. The Board reviewed the tentative schedule (please see attached). WM asked to cancel the meeting scheduled for February 19th and make the next meeting February 26, 2019 and if possible March 5th. SL stated that would depend on the business. SL stated she would like to be sure the members are available for the Saturday meeting. Mr. Kreidler to mail the draft budget documentations to be reviewed at the meeting. SL suggested the work session state it's a budget walkthrough. SL inquired if the Board was available for the 12th. The Board confirmed the date would be a continuation if needed.

6.3 Clerk of the Board announcements for events - None.

6.4 Board Correspondence- None.

- 6.5 WM moved to approve the meeting minutes for January 8th and 22nd, 2019. CK seconded. Unanimous vote.
- 6.6 WM moved to review and sign the bills payable warrant out of session. CK seconded. Unanimous vote.

VII: EXECUTIVE SESSION - VOTES MAY BE TAKEN:

- 7.1 WM moved to enter into executive session pursuant to GL c. 30A, s. 21(a)(3) to discuss strategy with respect to collective bargaining or litigation if an open meeting may have a detrimental effect on the bargaining position or litigating position and the chair so declares and to adjourn from executive session. Normington. The Chair declare. CK seconded. Roll call vote: SL (YES) CK (YES) WM (YES).

Agenda item 7.2 & 7.3 under 2.1.

Respectfully submitted by,



Carolyn Smart, Executive Assistant to the Town Administrator

Voted to approve the meeting minutes for the meeting of February 5, 2019 by the Board of Selectmen this 5th day of March, 2019.

**TOWN OF TOWNSEND
272 MAIN STREET, TOWNSEND, MA 01469**

NOTICE OF APPROVAL OF SPECIAL PERMIT

This is to certify that: **JENNIFER CLIMO**

Townsend Congregational Church 3 Brookline Street Townsend, MA

**THE ABOVE NAMED NON PROFIT ORGANIZATION IS HEREBY
GRANTED A SPECIAL LICENSE FOR THE SALE OF ALL
ALCOHOLIC BEVERAGES, TO BE DRUNK ON THE PREMISES**

Under Chapter 138, Section 14, of the Liquor Control Act.

In conjunction with an "Auction" to be held on **May 4, 2019** with sale hours
from **6:00P.M. to 9:00P.M.**

The license is granted in conformity with the Statutes and ordinances relating
thereto, and expires **05/04/2019** unless sooner suspended or revoked.

Date: *2-5-19*

THE LOCAL LICENSING AUTHORITIES

Sue Lisio
[Signature]
[Signature]

TOWNSEND WATER DEPARTMENT
TOWN OF TOWNSEND, MASSACHUSETTS

AGREEMENT

THIS AGREEMENT made this 1 day of October, 2018 by and between the TOWN of Townsend Water Department

540 Main Street

West Townsend, Massachusetts 01474

a municipal corporation duly organized under the laws of Massachusetts, hereinafter referred to as the "TOWN",

and

Name of Company/Business Shepco

Address 55 Main Street

Townsend, MA 01469

doing business as an (individual) or (partnership) or (corporation), hereinafter referred to as the "CONTRACTOR".

WITNESSETH:

Whereas, the TOWN invited the submission of proposals for the **MAIN STREET ACCESS PUMP STATION BRIDGE REPLACEMENT**, hereinafter "the Project"; and

WHEREAS, the CONTRACTOR submitted a Proposal to perform the work required to complete the Project, and the TOWN has decided to award the contract therefor to the CONTRACTOR.

NOW, THEREFORE, the TOWN and the CONTRACTOR agree as follows:

1. Contract Documents. The Contract Documents consist of this Agreement, the Paragon Bridge Works contract, the White Paper Installation "Plan A", "the Project" Plans and, the CONTRACTOR's Proposal, the "Scope of Work by Contractor". The Contract Documents constitute the entire Agreement between the parties concerning the work, and all are as fully a part of this Agreement as if attached hereto.
2. The Work. The Work consists of See attached "Scope of Work By Contractor".

3. **Term of Contract.** This Agreement shall be in effect from October 1, 2018 and shall expire on December 1 2018, unless mutually agreed to in writing between the Owner and Contractor..
4. **Compensation.** The TOWN shall pay, as full compensation for the work performed in carrying out this Agreement. Total Bid Price \$ 44,000.00 .
5. **Payment of Compensation.** The TOWN shall make payments within thirty (30) days after its receipt of Invoice.
6. **Liability of the TOWN.** The TOWN's liability hereunder shall be to make all payments when they shall become due, and the TOWN shall be under no further obligation or liability. Nothing in this Agreement shall be construed to render the TOWN or any elected or appointed official or employee of the TOWN, or their successors in office, personally liable for any obligation under this Agreement.
7. **Independent CONTRACTOR.** The CONTRACTOR acknowledges and agrees that it is acting as an independent CONTRACTOR for all work and services rendered pursuant to this Agreement, and shall not be considered an employee or agent of the TOWN for any purpose.
8. **Indemnification.** The CONTRACTOR shall indemnify, defend, and hold the TOWN harmless from and against any and all claims, demands, liabilities, actions, causes of actions, costs and expenses, including attorney's fees, arising out of the CONTRACTOR's breach of this Agreement or the negligence or misconduct of the CONTRACTOR, or the CONTRACTOR's agents or employees.
9. **Insurance.** A. The CONTRACTOR shall obtain and maintain during the term of this Agreement the insurance coverage in companies licensed to do business in the Commonwealth of Massachusetts, and acceptable to the TOWN.

B. All policies shall identify the TOWN as an additional insured (except Workers' Compensation) and shall provide that the TOWN shall receive written notification at least 30 days prior to the effective date of any amendment or cancellation. Certificates evidencing all such coverages shall be provided to the TOWN upon the execution of this Agreement. Each such certificate shall specifically refer to this Agreement and shall state that such insurance is as required by this Agreement. Failure to provide or to continue in force such insurance shall be deemed a material breach of this Agreement and shall be grounds for immediate termination.
10. **Assignment.** The CONTRACTOR shall not assign, sublet or otherwise transfer this Agreement, in whole or in part, without the prior written consent of the TOWN, and

shall not assign any of the moneys payable under this Agreement, except by and with the written consent of the TOWN.

11. Termination. A. Termination for Cause. If at any time during the term of this Agreement the TOWN determines that the CONTRACTOR has breached the terms of this Agreement by negligently or incompetently performing the work, or any part thereof, or by failing to perform the work in a timely fashion, or by failing to perform the work to the satisfaction of the TOWN, or by not complying with the direction of the TOWN or its agents, or by otherwise failing to perform this Agreement in accordance with all of its terms and provisions, the TOWN shall notify the CONTRACTOR in writing stating therein the nature of the alleged breach and directing the CONTRACTOR to cure such breach within ten (10) days. The CONTRACTOR specifically agrees that it shall indemnify and hold the TOWN harmless from any loss, damage, cost, charge, expense or claim arising out of our resulting from such breach regardless of its knowledge or authorization of the actions resulting in the breach. If the CONTRACTOR fails to cure said breach within ten (10) days, the TOWN may, at its election at any time after the expiration of said ten (10) days, terminate this Agreement by giving written notice thereof to the CONTRACTOR specifying the effective date of the termination. Upon receipt of said notice, the CONTRACTOR shall cease to incur additional expenses in connection with this Agreement. Upon the date specified in said notice, this Agreement shall terminate. Such termination shall not prejudice or waive any rights or action which the TOWN may have against the CONTRACTOR up to the date of such termination, and the CONTRACTOR shall be liable to the TOWN for any amount which it may be required to pay in excess of the compensation provided herein in order to complete the work specified herein in a timely manner. Upon such termination, the CONTRACTOR shall be entitled to compensation for all satisfactory work completed prior to the termination date, as determined by the TOWN.
- B. Termination for Convenience. The TOWN may terminate this Agreement at any time for convenience by providing the CONTRACTOR written notice specifying therein the termination date which shall not be sooner than ten days from the issuance of said notice. Upon receipt of said notice, the CONTRACTOR shall cease to incur additional expenses in connection with this Agreement. Upon such termination, the CONTRACTOR shall be entitled to compensation for all satisfactory work completed prior to the termination date, as determined by the TOWN, such payment not to exceed the fair value of the services provided hereunder.
12. Inspection and Reports. The TOWN shall have the right at any time to inspect the work of the CONTRACTOR, including the right to enter upon any property owned or occupied by CONTRACTOR, whether situated within or beyond the limits of the TOWN. Whenever requested, CONTRACTOR shall immediately furnish to the TOWN full and complete written reports of his operation under this Contract in such detail and with such information as the TOWN may request.

13. **Successor and Assigns.** This Agreement is binding upon the parties hereto, their successors, assigns and legal representatives. Neither the TOWN nor the CONTRACTOR shall assign or transfer any interest in the Agreement without the written consent of the other.
14. **Compliance with Laws.** The CONTRACTOR shall comply with all Federal, State and local laws, rules, regulations and orders applicable to the work provided pursuant to this Agreement, such provisions being incorporated herein by reference, and shall be responsible for obtaining all necessary licenses, permits, and approvals required for the performance of such work.
15. **Notice.** Any and all notices, or other communications required or permitted under this Agreement, shall be in writing and delivered by hand or mailed postage prepaid, return receipt requested, by registered or certified mail or by other reputable delivery service, to the parties at the addresses set forth on Page 1 or furnished from time to time in writing hereafter by one party to the other party. Any such notice or correspondence shall be deemed given when so delivered by hand, if so mailed, when deposited with the U.S. Postal Service or, if sent by private overnight or other delivery service, when deposited with such delivery service.
16. **Severability.** If any term or condition of this Agreement or any application thereof shall to any extent be held invalid, illegal or unenforceable by the court of competent jurisdiction, the validity, legality, and enforceability of the remaining terms and conditions of this Agreement shall not be deemed affected thereby unless one or both parties would be substantially or materially prejudiced.
17. **Governing Law.** This Agreement shall be governed by, construed and enforced in accordance with the laws of the Commonwealth of Massachusetts and the CONTRACTOR submits to the jurisdiction of any of its appropriate courts for the adjudication of disputes arising out of this Agreement.
18. **Entire Agreement.** This Agreement, including all documents incorporated herein by reference, constitutes the entire integrated agreement between the parties with respect to the matters described. This Agreement supersedes all prior agreements, negotiations and representations, either written or oral, and it shall not be modified or amended except by a written document executed by the parties hereto.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the day and year first above written.

I certify that an appropriation is available in the amount of this Contract.

Town Accountant

Board Of Water Commissioners


Chairman, Lance Lewand


Vice Chairman, Michael MacEschern


Clerk, Nathan Mattila

CONTRACTOR:

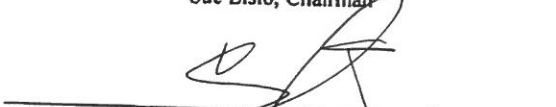

(Signature)

Gary Shephard president
(Name and Title)

Board of Selectmen


Sue Lisio, Chairman

DATE: 2/5/19


Cindy King, Vice Chairman

DATE: 2/5/19


Wayne Miller, Clerk

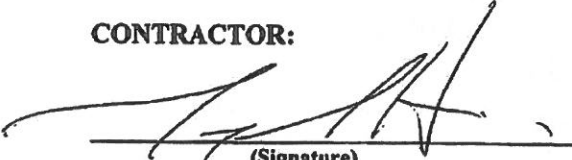
DATE: 2/5/2019

CONTRACT EXTENSION AGREEMENT


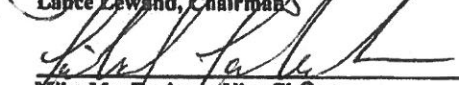

CONTRACT: MAIN STREET ACCESS PUMP STATION BRIDGE REPLACEMENT

In accordance with the terms of the contract dated October 1, 2018, Section 3. Term of Contract: The undersigned parties representing the TOWN and the CONTRACTOR agree to extend the expiration date of the contract 60 days until January 30, 2019.

CONTRACTOR:


(Signature)
Gary Shepherd, president
(Name and Title)

BOARD OF WATER COMMISSIONERS


Lance Lewand, Chairman

Mike MacEachern, Vice Chairman

Nathan Mattila, Clerk

SCOPE OF WORK FOR THE INSTALLATION OF A TEMPORARY BRIDGE

Location: Main St. Pumping Station, 540 Main St., West Townsend

- Excavation for abutments (2 holes, approximately 8.5' deep x 29' wide)
- Place 12" crushed stone leveling pad for each abutment
- Install concrete modular-block abutments (approx. 33-blocks per abutment) and backfill. Blocks to be furnished by Paragon.
- Remove and dispose existing bridge superstructure (steel beams, timbers, rails)
- Chip-down/demolish existing abutments down to the grade line
 - Avoid demo materials from entering stream
- Install two 8'x40' rail car structures.
 - Max pick weight of approx. 12,000-lb
 - Minor welding to attach rail car structures together
 - Rail car structures should arrive to site from Paragon with guardrails already secured to them
- Touch-up paint over welds and other scraped areas
- Drill and anchor rail car structures to abutments using anchor rods
- Provide 2x and 4x timber decking (cutting to length, and installing with screws)
- Shimming driveway with gravel to meet the grade of the new bridge (approx. 10" grade change)



CERTIFICATE OF LIABILITY INSURANCE

SHEPC-1

OP ID: 19

DATE (MM/DD/YYYY)

01/31/2019

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Dennis F. Murphy - Harvard PO Box 190 276 Ayer Road Harvard, MA 01451 Maria Millikin	CONTACT NAME: Maria Millikin	
	PHONE (A/C, No, Ext): 978-772-0070	FAX (A/C, No): 978-772-2920
INSURED Shepco, Inc. Gary Shepherd 55 Main St Townsend, MA 01469	E-MAIL ADDRESS:	
	INSURER(S) AFFORDING COVERAGE	
	INSURER A: NGM Insurance Company	
	INSURER B:	
	INSURER C:	
	INSURER D:	
INSURER E:		
INSURER F:		
NAIC #		
14788		

COVERAGES**CERTIFICATE NUMBER:****REVISION NUMBER: 1**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL SUBR INSD WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:	Y	MPM29553	04/27/2018	04/27/2019	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 500,000 MED EXP (Any one person) \$ 10,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000
A	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input checked="" type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS	Y	M1M29553	04/27/2018	04/27/2019	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
	UMBRELLA LIAB <input type="checkbox"/> OCCUR EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED <input type="checkbox"/> RETENTION \$					EACH OCCURRENCE \$ AGGREGATE \$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N <input type="checkbox"/> N/A	WCM29553	04/21/2018	04/21/2019	<input checked="" type="checkbox"/> PER STATUTE <input checked="" type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 500,000 E.L. DISEASE - EA EMPLOYEE \$ 500,000 E.L. DISEASE - POLICY LIMIT \$ 500,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

see attached note page

CERTIFICATE HOLDER

TOWNS-2

Town of Townsend
Water Department
272 Main Street
Townsend, MA 01469

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

© 1988-2014 ACORD CORPORATION. All rights reserved.

NOTEPAD:HOLDER CODE TOWNS-2
INSURED'S NAME Shepco, Inc.SHEPC-1
OP ID: 19PAGE 2
Date 01/31/2019

All policies except workers' compensation include the TOWN as an additional insured as required by the agreement between the Named Insured and the Town.

Contract

PARAGON BRIDGE WORKS

Phone: 661-577-4371 Fax: 661-577-4372 www.ParagonBridgeWorks.com

AGREEMENT made on the date that Paragon's estimate &/or invoice was signed by Client, between:

1. **Paragon Bridge Works, Inc** located at 8739 DeSwan Court, Bakersfield, CA 93314 United States ("Paragon") and;
2. The "Buyer", indicated as "Sold To" on Paragon's estimate &/or invoice, also referred to as the "Client".

Paragon's primary business is in converting railroad equipment into bridges. In general, Paragon buys and sells railroad equipment. Paragon also provides new bridges as well as bridge components.

1. **Sale of Goods.** All goods sold, including quantity, shall be described in Paragons quote/invoice.
2. **Sale of Services:** From time to time Paragon may offer the following services.
 - (a) **Engineering:** See Schedule A for complete details.
 - (b) **Installation Service.** See Schedule C for complete details.
 - (c) **Consultation Service** See Schedule D for complete details.
 - (d) **Delivery.** See Schedule E for complete details.
3. **Price.** The price for goods sold shall be described on Paragons invoice, payable in currency of the United States of America. Estimates and verbal prices given shall not be considered definitive. Any (quotes, estimate, invoices, etc) prices given on deliveries to and installations upon locations which Paragon has not inspected in person are to be construed as estimates only, and subject to further adjustment at the mutual agreement of the Parties. All engineering, installation, consultation, and delivery prices hereunder are conditioned upon the accuracy of the Client's representations, including without limit the ease of ingress and egress and the nature of the installation site. Irrespective of the Conflicting Terms section in this Agreement, all prices for delivery of goods sold are estimates only, and Client shall be solely responsible for any and all additional expenses of delivery. Payment terms shall be per Schedule B.
4. **Customs Duties, Fees, Charges, Taxes.** All Customs duties, fees, taxes, charges and other like costs assessed by the United States (Federal, State, City, County, etc) or any foreign Governments are the sole responsibility of Client. Paragon may be obligated to collect a certain portion of sales tax but this should not be considered to be an "all inclusive" tax collection. Client is responsible in ensuring all applicable taxes are paid.
5. **Insurance.** In no case does the purchase, delivery or installation price cover the cost of any insurance; Client shall be solely responsible for insuring all goods purchased during transportation, including the delivery from Paragons facility to installation location. Paragon may offer or arrange such insurance coverage at an additional cost to Client.
6. **Contingencies.** Paragon shall not be liable for any delay in manufacture delivery or installation due to fires, tornadoes, earthquakes, strikes, labor disputes, war, terrorism, civil commotion, and delays in transportation, shortages of labor or material, undisclosed, unknown or unanticipated conditions or character of installation site, or other causes beyond Paragon's control. The existence of such causes of delay shall justify the suspension of manufacture, delivery and or installation, and shall extend the time of performance on Paragon's part to the extent necessary to enable it to perform its duties in the exercise of reasonable diligence after the causes of delay have been removed. The above justifications are non-exclusive and are in addition to the Force Majeure provisions below.
7. **Warranty.** Paragon warrants goods sold and installation only to the extent required by Jurisdictional Law or as described in Schedule F. **THE WARRANTIES SPECIFIED IN SUCH SCHEDULE ARE IN LIEU OF ANY AND ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE. UNLESS OTHERWISE PROVIDED IN SCHEDULE F, GOODS SOLD AND INSTALLATION ARE SOLD STRICTLY AS-IS. Buyer accepts all liability for goods purchased and installed and agreed to indemnify and hold Paragon harmless for any claims made.**
8. **Client Supplied Warnings.** Clients shall affix conspicuously upon or place conspicuously nearby Bridge, so as to be visible to users of Bridge in each direction, a Warning in the relevant language concerning all foreseeable risks of use to which the Bridge may be put, including without limit any risk as to weight, use, railings, trespassing, and risks to livestock and children, in addition to any warnings or signage otherwise required by Jurisdictional Laws.
9. **Frustration.** If Client fails timely to make any purchases required, necessary or desired for completion of any part of the work under this Agreement, or fails to facilitate or permit Paragon's completion of such work, including but not limited to,

- obstructing or closing the work site, such shall be deemed a contingency suspending Paragon's obligations and liabilities hereunder until such frustration is eliminated.
10. *Notice Regarding Use of Proceeds.* Funds paid in anticipation of, concomitant with, or due under this Agreement are not deposits and shall be placed in Paragon's general business accounts for disbursement at Paragon's sole and absolute discretion, including portions of payment to be expended by Paragon on Delivery and Installation. Paragon shall apply any proceeds payable under this agreement to its various business needs at its absolute and sole choice, whether on behalf of the Client directly, indirectly, or not at all, and need not segregate such into trust or any other special accounts.
 11. *Waiver of Statutory Disbursement, Allocation, and Trust Provisions.* No funds collected under this Agreement shall be considered as held in trust for the Client or any other party or subcontractor. **CLIENT HEREBY WAIVES AND RELEASES PARAGON FROM THE PROVISIONS OF ANY REGULATORY LAW AND PROVISIONS THEREOF, INCLUDING ANY PROVISIONS INVOKING, AS PERMITTED. CLIENT AFFIRMS THAT THEY UNDERSTAND AND KNOW THE EFFECTS OF SUCH WAIVER ON THEIR RIGHTS, AND THAT NO CLAIM FOR THEFT CAN ARISE FROM ACTIONS REGARDING THE DISBURSEMENT AND ALLOCATION OF FUNDS RECEIVED BY PARAGON UNDER THIS AGREEMENT.**
 12. *Materiality of Deadlines.* No breach of any Deadline under this agreement shall be deemed a material breach unless:
 - (a) the deadline is specifically enumerated on, and not merely implied by, this Contract and its Schedules attached hereto,
 - (b) it relates to the payment of funds under this agreement, or
 - (c) the Client notifies Paragon in writing at the above address of the breach of deadline, making specific reference to the part of this Agreement specifying the deadline.
 13. *Subcontractors.* Paragon may engage the services of subcontractors for portions of the Installation, Consultation, and Delivery contemplated hereunder. Paragon need not obtain written approval from Client as to any subcontractor before using such subcontractor's services.
 14. *Safety of Jobsite/Warranty/Comparative Negligence.* Client warrants that its jobsite will be free from all dangerous conditions and hazards, except those specifically enumerated in writing and received by Paragon prior to commencement of Installation, Consultation, and Delivery. Client agrees to be strictly liable for the costs, including without limitation medical costs plus attorney's fees and costs, arising from any physical injuries to Paragon, its employees, owners, agents, or assigns, resulting from unsafe or dangerous condition of the jobsite or premises at which Client directs Paragon to perform under this agreement. The rule of comparative negligence shall govern this provision of this Agreement, but not any other provisions of this Agreement.
 15. *Licenses.* Client understands that Paragon makes no representations other than those contained in the Schedules attached hereto, if any, that Paragon is or will be licensed, or otherwise in compliance with, the contracting, construction, and other licensure requirements of Client's locale and/or installation site. Paragon may obtain any and all licenses and other compliance certifications and requirements requested in writing by Client at Client's cost. Such requests may introduce delays beyond Paragon's control, and Client agrees to suspend for the period of any such delay any performance due by Paragon under this Agreement which is delayed during or because of the pendency of any licensure, registration or compliance application or initiative. Client waives all rights to proceed in law or equity against Paragon on account of any deficiency of licensure on the part of Paragon.
 16. *Claims for Delivered goods.* Any unaccepted aspect shall be a "Claim." Paragon shall not be liable for any claims unless they are received in writing by Paragon within seven (7) business days after Delivery of goods, with photographic evidence included, and 30 days has been given for investigation by Paragon's representatives. If Paragon accepts the claim, Paragon shall determine at its sole discretion whether to repair, replace, refund, or issue credit for, any portion covered by a claim.
 17. *Claims for goods Installed.* Refer to Schedule C.
 18. *Maintenance.* Client shall inspect, repair and maintain Bridge, and otherwise keep Bridge in good working condition in perpetuity, and not permit such to become unsafe or fall into any type of dilapidation or disrepair. Client shall execute quarterly inspections.
 19. *Future Alterations and Modifications.* As long as Bridge remains property of Client, Client shall not alter or change the design, structure, decking, or other aspect of the Bridge or its Installation in any manner without the express written consent of Paragon, signed by Paragon. Failure to do so will release Paragon from all liability and void any applicable warranties defined in Schedule F. Client shall indemnify and hold Paragon harmless for any claims related to alterations and/or modifications.
 20. *Indemnification and Covenants as to Subsequent Owners.* Client agrees to indemnify, defend, and hold Paragon harmless against any and all claims, whether filed or not, arising against Paragon from future owners of the Bridge and/or the land upon which Bridge is installed. Client agrees that upon its selling Bridge, it will covenant with subsequent owners that such

new owners shall waive all claims against, and further indemnify, defend, and hold harmless both Client and Paragon against any claim arising out of the ongoing use or existence of the Bridge and not alter or change the design, structure or other aspect of the Bridge or its Installation in any manner without the express written consent of Paragon, signed by Paragon;

21. *Termination.* Paragon may refuse to sell, deliver, or complete construction of, Bridge at any time that Paragon, in the exercise of its sole discretion, shall deem itself insecure with respect to the condition of Client's ability to pay amounts owing under this agreement, or considers that Client's financial standing does not warrant sale, delivery, or installation, it being understood that in such event the Bridge and Installation shall remain Paragon's property.
22. *General Right To Cure.* If the Client alleges any breach of this agreement, Paragon shall have forty-five days during which time to attempt to cure any such alleged breach. No effort to cure shall be considered an admission of breach or wrongdoing on the part of Paragon.
23. *Indemnification/Wiaver.* Client shall indemnify, defend, and hold Paragon harmless for and against any third party claim relating to the Bridge, its use, presence, delivery and installation, including without limit claims of products liability, construction defect and negligence, and any claims against Paragon by any constituted government authority or non-governmental-organization. Client shall also waive, and indemnify, defend, and hold Paragon harmless for and against, any claim relating to actions or inactions of any sub-contractor pursuant to work done by sub-contractor with respect to Bridge, delivery and installation. Client's sole remedy against such sub-contractors shall be against them directly, and Client agrees to waive any and all claims under respondeat superior or any other theory of law or equity against Paragon for the acts and/or omissions of such sub-contractors.
24. *Cancellation by Client.* Client may cancel a Bridge or Bridge Project, only if Bridge is not manufactured and not in process of manufacture at the time Client's notice of cancellation is received by Paragon. Any cancellations beyond this point are not permitted, and Paragon shall be entitled to all amounts due under this Agreement as if Paragon's obligations hereunder were fully performed and accepted. Regardless of when and why cancellation is made, Paragon reserves the right to keep any deposits made.
25. *Assignment of Patent, Trademark, Copyrights.* In the event that Client on its own or through any affiliate or agent acquires any intellectual property rights in the Bridge, including without limitation rights in the name, brand, plans, schematics, design, visual depictions, verbal descriptions, construction, manufacturing and assembly processes, Paragon's name, including any and all patents, trademarks, copyrights, URL, or any other intellectual property rights, irrespective of the country in which such rights exist or apply, such rights shall automatically be and hereby are assigned by Client unconditionally and forever to Paragon and Paragon's assigns. Client agrees to execute and deliver any further documents which are necessary or proper to perfect such rights, as Paragon may request. Client waives any and all rights to assert or claim an interest in such rights, and agrees to defend Paragon against all claims in derogation of Paragon's rights in such property.
26. **PERSONAL GUARANTY.** THE PARTY WHOSE SIGNATURE APPEARS HEREUNDER ON BEHALF OF CLIENT AGREES TO BE PERSONALLY LIABLE FOR ANY AND ALL OBLIGATIONS AND SUMS DUE FROM CLIENT UNDER THIS AGREEMENT, AS IF HE OR SHE WERE CLIENT.
27. **LIMITATION OF DAMAGES.** NOTWITHSTANDING ANYTHING TO THE CONTRARY IN THIS AGREEMENT, IF CLIENT BRINGS ANY ACTION CONCERNING THIS AGREEMENT AT LAW OR EQUITY AGAINST PARAGON, ITS EMPLOYEES, OWNERS, AGENTS, OR ASSIGNS, NO SUCH CAUSE OF ACTION SHALL INCLUDE A CLAIM, NOR MAY RECOVERY BE HAD, FOR ANY PUNITIVE, INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO, DAMAGES FOR LOSS OF USE, LOSS OF TIME, LOSS OF PROFITS OR INCOME, BY CLIENT, CLIENT'S GUESTS, OR ANY THIRD PARTY, EVEN IF PARAGON, ITS EMPLOYEES, OWNERS, AGENTS, OR ASSIGNS ARE ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. NOTWITHSTANDING ANYTHING TO THE CONTRARY IN THIS AGREEMENT, PARAGON'S TOTAL LIABILITY FOR DAMAGES ARISING IN CONNECTION WITH THIS AGREEMENT SHALL IN NO EVENT EXCEED THE TOTAL AMOUNTS THEN PAID BY CLIENT UNDER THIS AGREEMENT. NOTHING IN THIS SECTION SHALL OPERATE TO LIMIT THE AMOUNT OR THEORY OF DAMAGES WHICH ARE AVAILABLE TO PARAGON IN CONNECTION WITH THIS AGREEMENT OR ANY CLAIM ARISING THEREFROM, INCLUDING PARAGON'S POSSIBLE COUNTERCLAIMS IN SUITS CONCERNING THIS AGREEMENT.
28. *Security Interest.* Paragon shall have a security interest in goods and services sold as security for any and all payments due under this Agreement, and such shall be primary to any other lien or security interest in such items.
29. *Attorney's Fees.* If any dispute arises between the parties under this Agreement, even if such dispute is not litigated, the prevailing party shall be entitled to their reasonable attorney's fees and costs, payable by the other party.

30. *Severability/Enforceability.* In the event that any paragraph or provision of this Agreement is held to be illegal, invalid or unenforceable by any court of competent jurisdiction, such holding will not affect the validity or enforceability of the remaining paragraphs or provisions. To the extent that any paragraph or provision is rendered unenforceable because it is overly broad or unduly narrow, that paragraph or provision shall be limited or expanded to the extent required by applicable law in order to become enforceable, and shall be construed as having originally been so drafted.
31. *Late Payments.* Time is of the essence relating to any deadline concerning the payment of funds under this Agreement. A late fee of \$100, plus annualized interest of 18%, or the legal maximum, shall be assessed in the event of any late payment by Client to Paragon. This shall also apply to any amounts withheld pursuant to a dispute regarding this Agreement or work performed hereunder. This fee shall be as liquidated damages, not as a penalty, and is not in lieu of any other legal option available to Paragon. If any Client payment fails due to insufficient funds, the above interest and late fee shall be applied with an additional \$50 returned check fee, or the maximum amount otherwise allowed under Jurisdictional Law.
32. *Governing Law/Equitable Remedies/Jury Waiver.* This Agreement and the performance of obligations hereunder will be governed by the laws of the State of California, without reference to California's Conflicts of Laws provisions. The parties agree that any damages under this agreement will be of a nature which might not be remedied by monetary damages alone, and that additional equitable remedies shall be permitted for such, and that any such equitable remedies shall be non-exclusive and without bond. The Parties hereby waive the right to trial by jury of any matters arising out of this Agreement or the conduct of the relationship between the Parties.
33. *Arbitration.* Refer to Schedule G.
34. *Interpretation.* Both parties have participated in the drafting of this agreement. No presumption shall arise owing to one party having drafted this agreement. Titles and captions here are for courtesy only and shall not have any interpretive weight in any dispute regarding this agreement. All schedules, appendices and exhibits referred to herein are expressly incorporated by reference and are a part of this agreement.
35. *Conflicting Terms.* In the event of an explicit conflict between the details of a mutually signed Schedule and those of this Agreement, the terms of the Schedule shall govern. In all other cases, including without limit instances where the Schedule is silent, this Agreement shall govern.
36. *Venue/Binding Effect.* The Parties consent to the jurisdiction and venue of the State District Court in Bakersfield, California. This agreement shall inure to the benefit of, and be binding upon, the parties hereto and their respective successors, assigns, executors, administrators, and nominees.
37. *Limitation of Actions/Materiality.* Time is of the essence in this Agreement. No claim or action concerning, related to, or arising out of this Agreement or any breach of or default under this Agreement, may be commenced by Client more than twelve (12) months after the occurrence of any such breach or default, or events giving rise to claim. Client agrees to indemnify, defend, and hold Paragon harmless against any and all claims from others, whether filed or not, arising against Paragon.
38. *Modification/Effect of Waiver.* No waiver or modification of this Agreement, in whole or in part, will be valid unless in writing and duly executed by each of the parties. Any waiver of any term, condition or provision of this Agreement will not constitute a waiver of any other term, condition or provision hereof, nor will a waiver of any breach of any term, condition or provision constitute a waiver of any subsequent or succeeding breach.
39. *Force Majeure.* If by reason of acts of God, floods, storms, explosion, fires, labor troubles, strikes, insurrection, riots, acts of the public enemy, terrorism, or federal, state or local law, order, rule, or regulation, either party is prevented from complying with any term or condition of this agreement, or from complying with any express or implied term in the agreement, then while so prevented the term or condition shall be suspended and the party shall be relieved of the obligation of complying with such covenant and shall not be liable for damages for failure to comply with it. Any obligation of either party shall be extended for as long as it is so prevented from complying with any condition or covenant in the agreement.
40. *Counterparts.* This Agreement may be executed in two or more counterparts, each of which shall be deemed an original but all of which together shall constitute one and the same instrument. Facsimile signatures shall count as originals.
41. **ENTIRE AGREEMENT. THIS AGREEMENT AND ITS SCHEDULES, HEREBY REFERED TO AS "THE CONTRACT" AND/OR "AGREEMENT", CONTAIN THE COMPLETE AGREEMENT OF THE PARTIES REGARDING ITS SUBJECT MATTER AND WILL SUPERSEDE ANY AND ALL OTHER AGREEMENTS, UNDERSTANDINGS AND REPRESENTATIONS BY AND BETWEEN THE PARTIES RELATING TO SUCH, WRITTEN OR VERBAL. THE PARTIES AFFIRM THAT THEY ARE SOPHISTICATED, THAT THIS IS A FULLY-INTEGRATED AGREEMENT, THAT IT IS NOT A CONTRACT OF ADHESION, THAT IT WAS FREELY NEGOTIATED FOR VALUE, THAT EACH PARTY HAD AMPLE BARGAINING POWER, THAT NO PAROL EVIDENCE SHALL BE ADMISSIBLE OR USEABLE FOR ANY PURPOSE IN ANY DISPUTE ARISING UNDER THIS AGREEMENT, THAT THE PARTIES HAVE BEEN URGED TO SEEK INDEPENDENT COUNSEL REGARDING THE PROPRIETY OF ENTERING THIS AGREEMENT, AND**

THAT THE PARTIES HAVE HAD AMPLE TIME TO ATTAIN SUCH COUNSEL AND HAVE EITHER OBTAINED SUCH OR FREELY ELECTED TO PROCEED WITHOUT IT. CLIENT SHALL INDICATE THEY HAVE READ, UNDERSTOOD, AND HAVE AGREED TO THIS CONTRACT BY SIGNING PARAGON'S ESTIMATE &/OR INVOICE.

42. *Warnings:* This is not intended to be an all inclusive list of warnings and is only provided as a courtesy. It is Buyers responsibility to check all local, regional, state, and federal laws that pertain to various warnings.

(a) *CA Proposition 65:* Drilling, sawing, sanding or machining wood products generates wood dust, a substance known to the State of California to cause cancer. Avoid inhaling wood dust or use a dust mask or other safeguards for personal protection.

43. *Schedules.* Client has read all applicable Schedules & Forms and hereby agrees with those provisions. Available schedules & Forms:

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| • Schedule A: Specifications | • Form 01: Maintenance Inspection |
| • Schedule B: Payment | • Form 02: Visitors Log |
| • Schedule C: Installation Services | • Form 03: Complications Log |
| • Schedule D: Consultation Services | • Form 04: Person Credit Application |
| • Schedule E: Delivery | • Form 05: Business Credit Application |
| • Schedule F: Warranty | • Form 06: Punch List & Final Inspection |
| • Schedule G: Arbitration | |

Schedule A Specifications

Phone: 661-577-4371 Fax: 661-577-4372 www.ParagonBridgeWorks.com

This document was created to better communicate what details or specifications Paragon has understood Client is expecting when goods &/or services are purchased. If a detail or specification is not listed on this document or on Paragon's quote/invoice then it shall be accepted that such detail or specification is not required.

Goods sold:

1. **Measurements:** All measurements shown shall be considered estimates only.
2. **Condition:** All goods are sold in used condition, unless specifically stated otherwise on quote/invoice. Paragon recommends Client purchase a new bridge if perfectly straight or perfectly defect free steel is desired. It should be assumed that there will be some degree of damage or defect that may need to be repaired prior to usage. Additional parts, pieces, modifications and alterations may be needed in order to meet Client's needs at an additional cost to Client.
3. **Paint:** Most secondhand/reconditioned bridge decks/railcars will already have existing paint. Color and condition of existing paint varies. Painting services include prep work to goods sold. Such prep work may include: pressure washing, wire wheel grinding, and sandblasting. Paragon shall determine, at its sole discretion, which prep methods are to be used. Paragon shall make reasonable effort to get goods to a condition to accept paint. Painting is usually performed outdoors. As such, delivery schedules may need to be revised.
 - a. **Definition:**
 - i. **Paint:** This is a very generic term used by Paragon that is used to describe any coating that is applied to materials. Please refer to your quote/invoice to see what type of coating is included.
 - ii. **Primer:** Paragon uses primers that are suitable for use with or without a "top coat". While the performance of the primer is not affected by weather, the primer will chalk and fade as it does not have any UV protection. Primer is usually a very flat coating with little to no sheen.
 - iii. **DTM:** "Direct To Metal" coatings are sometimes touted by some manufacturers as a combination of a primer and a top coat but Paragon believes they are generally closer to a primer. Paragon may at times use DTM coatings.
 - iv. **Top Coat:** This is applied over a primer or a DTM coating. It gives a higher gloss and provides UV protection. It has a higher sheen than the primer or DTM.
 - v. **Clear Coat:** This is applied over the top coat to give it a higher gloss and better UV protection.
 - b. **Paint Manufacturers:** Paragon's primary provider of paint is Sherwin Williams. However, Paragon may use alternative paint manufacturers.
 - c. **Colors:** Unless specified on quote/invoice, Paragon's default paint color is a reddish brown referred by Paragon as "boxcar brown".
 - d. **What gets painted:** Paint service generally only applies to the sides of the bridge deck / railcar that is visible beyond the bridge/railcar. Ends, top, and bottoms are generally not included. Refer to quote/invoice to see how many square feet of new paint is being included.
4. **Handrails/guardrails:** Paragon strongly encourages Client to apply handrails/guardrails to any bridge project. Refer to drawings of specific guardrails to see what standards they comply with. It is Client's responsibility to determine if Jurisdictional Laws require handrails or guardrails.
5. **Decking:** Bridge decks sold may or may not have a deck, unless specifically noted on quote/invoice. It shall be Client's responsibility to repair/replace/remove any decking that does not meet Client's desired use.
6. **Abutments:** Paragon may offer abutment designs that may or may not work for Client's particular job site. Such designs are only considered to give Client a general idea of what can be built. Paragon does not guarantee that any or all abutment designs will work for any or all job sites.

Schedule B Payment

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This document was created to better communicate what payment policies Paragon has in place when Client is purchasing goods or services. Paragon shall, at its sole discretion, determine which Class to categorize Client as. It shall be assumed Client is classified as Class A unless specified on invoice.

Unless mutually approved, in written, when quotes/invoices are short paid by Client, regardless of reason, such delinquencies shall be primarily attributed to failure to pay for warranties, if purchased, and shall relieve Paragon from such warranty coverages. Paragon still retains the rights under this Contract to collect moneys due.

1. **Class A:** Full payment for all items and services sold will be required before order will be accepted.
2. **Class B:** Fifty percent (50%) of all items and services sold is required before order will be accepted/started. Balance of all unpaid items:
 - a. Is due at the time of delivery if Paragon is not installing items or;
 - b. Is due within fifteen (15) calendar days after installation is complete per "Paragon Sales and Installation" contract if Paragon installs items.
3. **Class C:** Full payment is due fifteen (15) calendar days after:
 - a. Items and/or services are delivered or;
 - b. After installation is complete per "Paragon Sales and Installation" contract if Paragon installs items.
4. **Class D:** Payment schedule:
 - a. 10% to start project
 - b. 20% when abutments are completed
 - c. 30% when bridge is set in place (not necessary "installed", just set in place)
 - d. Balance due no later than 15 days after installation is complete per "Paragon Sales and Installation" contract.
5. **Class E:** Fifty percent (50%) of all items and services sold will be required before Paragon starts the job. Balance is due before goods sold are shipped out.
6. **Class F:** Special consideration. Details shall be listed on quote/invoice.

While Paragon discourages the use of change orders, Paragon understands that at times it may be necessary or desirable for Client to request various changes in original work order. Any change to original order shall be subject to a minimum change order fee of \$500 in addition to the cost of the actual change order.

Payment methods

1. Cash
2. Check (personal or company)
3. ACH (similar to wire transfer)

--END OF SCHEDULE B--

Engineering:

7. **PE:** Paragon utilizes third party professional engineering firms for all engineering. Any information provided to Client that is not stamped/sealed by a professional engineer shall be considered to be only an opinion and should be verified by a professional engineer.
8. **Standard Construction Drawings:** Paragon has developed "standard" construction drawings which were designed to accommodate a broad range of sites. Such drawings may be modified at an additional charge and are not guaranteed to be applicable for all sites. The Client is responsible for verifying all the design loads and foundation assumptions are applicable to the bridge specific site requirements. Drawings may be stamped/sealed by a Colorado PE or any other stamp/seal that is available to Paragon at the time.
9. **Engineering Assumptions:** Client should verify Paragon's assumptions are appropriate for their specific project. Assumptions include:
 - a. Maximum design loading: AASHTO H20 (unless delineated on quote/invoice)
 - b. AASHTO Prescribed wind load: 300plf on girders
 - c. AASHTO Seismic Specification
 - d. Assumed Soil Parameters:
 - Type: Sands
 - Phi (angle of internal friction): 30 degrees
 - Maximum soil bearing pressure: 1,500 psf
10. **Custom designed drawings:** If the Standard drawings do not meet Client's site specific requirements, Paragon recommends site specific "custom" designed for an additional fee.
11. **Optional features:** All drawings (standard or custom) may illustrate additional features, options, additions, or up-grades that may not necessarily be included in this sale that may be required in order to achieve Client's desired usage. Paragon is not responsible for all such features, options, additions or upgrades unless contracted for such by Paragon.
12. **Delivery of Drawings:** All drawings and supporting documentation shall be sent via electronic files.

General

13. **Modifications:** Paragon shall not be responsible for any modifications or alterations made by others.
14. **Storage of goods sold:** Unless otherwise noted on estimate/invoice, Paragon shall store goods sold for a period of up to 3 months after initial payment has been received at no additional cost to Client. After the allotted time, Paragon shall charge Client monthly storage and handling fees. Such fees shall be reasonable for the type and location of goods being stored. Paragon shall deduct fees from any deposits made if Client fails to pay for such fees.
15. **Specifications:** It shall be Client's responsibility to advise Paragon what Jurisdictional Laws the bridge needs to meet. Known specifications shall be included in Paragon's drawings, if included, or on Paragon's quote/invoice. No other details or specifications are known, and are not to be attributed as provided by Paragon.

--END OF SCHEDULE A--

Schedule C Installation Services

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This document was created to better communicate what specifications, provisions, and performances should be expected when Installation services are purchased. If a detail or specification is not listed or mentioned on this document or on the invoice then it shall be accepted that such detail or specification is not required by Client.

Paragon may offer installation services. Such installations shall be according to available drawings. All known specifications, provisions, and performance expectations related to the installation of bridge structure shall be listed here.

1. **Scope:** Paragon shall build bridge in a safe and environmentally sensitive manner. Unless specified on Paragons invoice, Paragon shall only be responsible for building items specifically listed as "installed" on Paragons invoice. Paragon shall install bridge per drawings, if available. Otherwise, Paragon will build bridge based on practical experience. In general, Paragon wishes not to be a dirt contractor and encourages Clients to find other contractors to build ramps/approaches and other dirt work.
2. **Limited Work Option:** One option Paragon may offer is a limited installation option or a cursory installation. This should not be considered to be a full or complete installation. Client has only purchased a limited amount of time. Paragon will do all it can, as best as it can within the allowed time frame for such a quick installation. Client should expect a considerable amount of work to be left undone by Paragon. Completing such work will be the Clients responsibility.
3. **Timetable:** Timetable shall be listed on invoice, otherwise no specific timetable has been set, therefore Paragon shall commence at its earliest convenience.
4. **Materials:** See Schedule A for material specifications.
5. **Inspection/testing:** Paragon shall allow Client, or its agents, to make necessary inspections or testing so long as such activities do not interfere with Paragons progress. Any persons making such inspections or testing shall fax their certificates to Paragon and shall direct any and all concerns, comments or problems to assigned Project Manager in writing. Paragon reserves the right to invoice Client for any time delays or materials damaged during Clients inspection/testing. Client shall give written notice to Paragon 24 hours in advance prior to any inspection/testing.
6. **Modifications:** Paragon reserves the right to make certain modifications or alterations to drawings, without Clients approval, so long as such modifications are not detrimental to the structural capacity of the bridge. Client may also request certain modifications, at Clients expense.
7. **Delivery:** See Schedule E for delivery specifications.
8. **Landscaping:** Paragon shall make reasonable effort to minimize damage to landscaping, however, Paragon shall not be responsible for any facet of landscaping repair whatsoever regardless of where damages occur. Client should expect a certain amount of landscaping damage. Client is responsible to take reasonable measures to minimize damage made by Paragon such as covering or removing sensitive plants, turning off sprinklers, and trimming trees back.
9. **Worksite:** Client shall provide a clean, safe, and fully accessible staging site and installation site, including fully useable routes of ingress and egress for delivery of goods, supplies, tools, and machinery. Paragon shall be allowed to section off the entire work site. No one other than Paragon and its agents shall be allowed to enter the work site unless prior approval is given by Paragon. Safety in the work site is always a priority and as such Paragon will provide an escort to any visitors coming into work site regardless of whom they are or who they represent. This includes any government agencies such as law enforcement and EPA. Such escorting will be at Clients expense and will be billed at an hourly rate. It shall be Clients responsibility to prevent unwanted visitors from coming onto work site. Client agrees to indemnify, defend, and hold Paragon harmless against any and all accident claims, whether filed or not, arising against Paragon.
10. **Complications:** Paragon reserves the right to charge Client for any additional time or materials required due to any unforeseen circumstances such as, but not limited to: Water entering

excavated trench(s), removing or working around rocks, especially during excavation, Correcting or amending soil conditions, especially during excavation. Client understands that it is not practical for Paragon to stop working in order to allow Client time to investigate such conditions. Instead, Paragon is required to take pictures of any such condition and make them available to Client along with a detailed report of the problem, the corrective action, and a list of time and materials needed to correct problem.

11. **Change orders.** Paragon shall be under no obligation to accept change orders after the Parties have entered into this Agreement. However, where Paragon agrees to accept a change order, it may demand full payment for the cost of making such change at the time of its acceptance of the change order. Any change order must be in writing and signed by the Parties. Paragon reserves the right to charge a minimum processing fee for any and all change orders.
12. **Cost of Materials.** All materials necessary for Installation as per this Contract, including accepted punch lists related thereto, shall be purchased and paid for by Paragon so long as they are included in Paragon's written scope of work.
13. **Risk of Impeded Installation.** Client agrees to bear any and all risks of delay and impediment in installation of bridge hereunder, and shall owe Paragon the relevant installation fees each time Paragon's installation crew attempts installation, irrespective of whether or not installation was completed, so long as the delay or impediment is caused through no fault of Paragon.
14. **Punch Lists.** Paragon shall notify Client of the expected installation completion date. Client shall have (3) days from the expected installation completion date to inspect the work and create a written list of unfinished items, missing items, and/or items requiring repair or "touch-up". This list shall be considered the Punch List. Such list shall be provided to Paragon. Paragon shall remedy the items on the Punch List as quickly as possible so long as not contrary to any term of Paragon's Contract and such items are included in Paragon's written scope of work. Paragon shall be granted time to obtain any materials necessary to complete the Punch List.

Failure of Client to comply with this section within the allotted three day period listed herein shall operate as a forfeiture of any rights to Punch List work and will be deemed an admission that the work is completed to Client's entire satisfaction and within the scope of this agreement. This Punch List inspection shall be considered a Final Inspection should there be no items to include on a Punch List or no Punch List was created.
15. **Final Inspection.** Client shall inspect the bridge to ensure Punch List items have been satisfactorily remedied within 1 week of notification of completion of Punch List work, and such inspection and acceptance shall be final. If Client fails timely to inspect the items on the Punch List, the failure shall be deemed an acceptance of the bridge, delivery, and installation, and any acceptance shall be deemed a waiver of any right to revoke acceptance at some future date with respect to any defect that a proper inspection would have revealed. Client may cancel Final Inspection should they physically find items on Punch List, per the terms set forth under the Punch List section of this agreement, that still remain unfinished. Paragon would then be required to complete Punch List items before (re)scheduling a Final Inspection.
16. **Bump.** Unless otherwise agreed to, in writing, the bridge shall be considered to be satisfactorily completed and Paragon's scope of work satisfactorily fulfilled should Client start using the bridge before Paragon has declared it is finished. All Punch List items, if a Punch List was created, shall be deemed waived, completed, or void. Client declares an acceptance of the bridge, delivery, and installation, and shall be deemed a waiver of any right to revoke acceptance at some future date. Client agrees to indemnify, defend, and hold Paragon harmless against any and all claims, whether filed or not, arising against Paragon from incomplete work.
17. **Claims.** Any unaccepted aspect shall be a "Claim." Paragon shall not be liable for any claims unless they are received in writing by Paragon within seven (7) business days after Installation of the Bridge, with photographic evidence included, and 30 days has been given for investigation by Paragon's representatives. If Paragon accepts the claim, Paragon shall determine at its sole discretion whether to repair, replace, refund, or issue credit for, any portion of Bridge Project covered by a claim.
18. **Specifications.** It is Clients responsibility to advise Paragon as to any Jurisdictional Law need to be followed. Paragon is not liable for any work left incomplete that is outside of Paragon's written scope of work, nor for any work performed by others. Any work performed on the bridge by

others shall release Paragon of any liability from the entire bridge project. Client shall indemnify and hold Paragon harmless for any and all claims arising therefrom. Known special or specific specifications shall be included in Paragon's drawings, if included per Paragon's Invoice. No other details or specifications are known by Paragon unless expressly included in this document and accepted by Paragon.

--END OF SCHEDULE C--

Schedule D Consulting Services

Phone: 661-577-4371 Fax: 661-577-4372 www.ParagonBridgeWorks.com

This document was created to better communicate what provisions and performances should be expected when Consultation services are purchased. If a detail or specification is not listed or mentioned on this document or on the invoice then it shall be accepted that such detail or specification is not required or otherwise within the scope of work to be performed by Paragon. Paragon may offer consultation services. These services should not be considered to be "installation services" whatsoever.

1. **Scope:** A detailed list of services included shall be listed on Paragons invoice. Paragon may send at least one of its agents to the job site at specific events or times as noted on invoice. Such events are usually:

- a. **Prior to any work done to site:** This will give Paragon the opportunity to advise Client where bridge could be installed. The pros and cons with various building sites, obstacles to avoid, etc.
- b. **After abutments are excavated:** This will give Paragon the opportunity to ensure excavated site is as intended. Errors should be caught early in order to avoid delays.
- c. **After abutments are erected:** This is a good time to ensure the abutments were poured, erected, and/or build properly. If there are any errors at this point it will give Client the opportunity to make changes before the bridge arrives. It also gives Paragon the opportunity to possibly make modifications to the bridge structure before the structure leaves Paragons facility.
- d. **When bridge is being set in place:** Paragon may be there to provide technical assistance and historical advice such as where the lift points are at on the bridge structure, how to properly set the bridge on the abutments, how to properly secure the bridge to the abutments, and any other finish work that may be necessary.

Other services offered include assisting Client to locate and schedule vendors and contractors who will do the actual building of the bridge. Paragon may make itself available to answer questions or concerns vendors/contractor may have. Client shall pay such vendors/contractors directly. Paragon shall not be responsible for the craftsmanship, reliability, or final product of such vendors/contractors. Paragon will do its best to find the most cost effective vendors/contractors but it is ultimately the Clients responsibility to ensure vendors/contractors meets their expectations.

2. **Included:** Only services clearly detailed on invoice are included. This shall supersede any other service details implied or verbally communicated.
3. **Additional Charges:** Any time worked at the job site over hours specified on invoice will be billable at an hourly rate plus any additional travel expenses such as hotel, meals, and car rental as well as any other re-booking/re-scheduling fees. Keeping Paragon's employees/agents at job site for just an extra 30 minutes may put that employee/agent into a situation where he/she is required to stop working for the day and stay the night at a hotel due to cumulative hours worked in that day or week. Such unexpected expenses shall be billable to Client. It shall be the Clients responsibility to advise when Paragon may leave site.
4. **Excluded:** Paragon shall not be expected or allowed to perform any physical work whatsoever. Paragon shall only give recommendations based on experience and should not be expected to be the single source of information Client is relying on. Other exclusions may apply per state, county, and city law.
5. **Timetable:** Timetable shall be listed on invoice, otherwise no specific timetable has been set, therefore Paragon shall commence at its earliest convenience.
6. **Materials:** No materials are included in "consultation services".
7. **Modifications:** Paragon shall not be responsible for any modifications or alterations.
8. **Specifications:** Paragon's consultation services is based on experience and, unless specifically included in quote/invoice, does NOT include professional engineering services. Client shall indemnify and hold Paragon harmless for any and all claims arising therefrom. Known special or specific specifications shall be included in Paragons drawings, if included per Paragons Invoice. No other details or specifications are known by Paragon unless expressly included in this document and accepted by Paragon.

--END OF SCHEUDLE D--

Schedule E Delivery

Phone: 661-577-4371 Fax: 661-577-4372 www.ParagonBridgeWorks.com

This document was created to better communicate what specifications, provisions, and performances should be expected when delivery services are purchased. If a detail or specification is not listed or mentioned on this document or on the invoice then it shall be accepted that such detail or specification is not required.

1. **Timetable:** Paragon to work with Client in determining a reasonable delivery schedule. It should be known that Paragon utilizes third party delivery carriers and their schedule is beyond Paragons control.
2. **Materials:** Materials included to be delivered shall be listed on Paragons quote/invoice. Various materials usually arrive at different times. Paragon will communicate with Client to advise what is scheduled to be delivered.
3. **Truck Delivery:** Goods delivered via truck shall, at a minimum, have wheels, trucks, and couplers removed. Additional parts, pieces, components or section may need to be removed, at Clients expenses, before such equipment is ready to be set in place. Paragon recommends that Client inspect equipment prior to deliver to ensure all necessary parts/pieces are as needed. Goods shall be considered delivered to Client when truck gets as close to Clients desired drop off site as driver feels prudent. Client shall be given two hours to unload delivery truck.

Paragon shall make every reasonable attempt to deliver items on schedule and as close to Clients delivery site as practical utilizing Paragons own equipment or Paragons authorized agent(s) equipment. Client shall be responsible for:

- a. Any and all additional expenses incurred by Paragon due to:
 - i. Poor directions given by Client.
 - ii. Inability to access Clients delivery or job site.
 - iii. Federal or State required re-routing.
 - iv. Federal or State required closures.
 - v. Delivery equipment getting stuck while trying to deliver goods.
 - vi. Government issued permits
 - b. Such expenses are generally incurred due to poor weather conditions, road construction, or required by various government agencies. Paragon shall make reasonable effort to communicate with Client if such additional expenses are expected but such communication is not required.
4. **Inspection while on Truck:** Client shall be allowed the opportunity to thoroughly inspect delivered goods prior to unloading goods. Any defects shall be documented and signed by Client and delivery driver and Paragon notified before good are unloaded. A second inspection shall be performed immediately after being unloaded, but before delivery truck leaves. Any defects shall be documented and Paragon notified immediately. If Client fails timely to inspect the delivered goods or fails timely to note unacceptable elements of the delivered goods, in signed writing delivered to Paragon, the failure shall be deemed an acceptance of the delivered goods and any acceptance shall be deemed a waiver of any right to revoke acceptance at some future date with respect to any defect that a proper inspection would have revealed. It shall be the responsibility of Client to load unacceptable goods back onto Paragons delivery truck, at Clients expense. Client shall be responsible for freight expense to ship goods back to Paragon. Paragon is not responsible for any damages caused to good while goods are being unloaded.

5. **Railroad delivery:** Quoted prices are only an estimate and will adjust based on the actual number of miles railcar is moved. When goods are delivered via railroad Paragon is only responsible for communicating to delivering railroad(s) where equipment is to be delivered to. Paragon has no control of railroad timelines. It is Clients responsibility to ensure railroad is willing to deliver to desired railroad site and to get permission to perform needed dismantling work at that site. Railcar is considered "delivered" to Client when railcar is spotted in the area the railroad deems most appropriate and not necessarily where Client would like the railcar spotted. Client is purchasing the railcar moving on its own wheels and is responsible for all facets of dismantling and cleaning site up. Paragon may retain ownership of railcar wheels/truck sets and other railcar components. Client is responsible to load such retained parts onto a Paragon supplied truck at Clients expense within 60 days of delivery. Client agrees to purchase parts for a sum equal to 50% of railcar's purchase price should there be a failure to return parts within allotted time frame. Client is responsible for any fees charged by railroad, such (but not limited to) as storage fees, clean up fees, and access fees. Paragon is not responsible for any damages caused to good while goods are being unloaded. Client agrees to indemnify, defend, and hold Paragon harmless against any and all claims, whether filed or not, arising from any facet of railroad delivery and inspections.
6. **Inspection while on railroad:** Client shall be allowed the opportunity to thoroughly inspect delivered goods prior to removing goods from railroad tracks. It shall be Clients responsibility to obtain any necessary permission to perform such inspections. Client has 48 hours from the time goods arrive via railroad to reject goods. If Client fails timely to inspect the delivered goods or fails timely to note unacceptable elements of the delivered goods, in signed writing delivered to Paragon, the failure shall be deemed an acceptance of the delivered goods and any acceptance shall be deemed a waiver of any right to revoke acceptance at some future date with respect to any defect that a proper inspection would have revealed. Railcars shall be deemed acceptable to Client once ANY work is done to railcar. Client shall be responsible for freight expense to ship goods back to Paragon.
7. **Property damage:** Paragon or its agents shall not be responsible for any damages to property, landscaping or fixtures caused by delivery equipment. Paragon shall make reasonable attempt to minimize such damages. Furthermore, a certain amount of landscaping damage should be expected. Client agrees to indemnify, defend, and hold Paragon harmless against any and all claims, whether filed or not, arising from delivery of goods.
8. **Special requests:** All special requests shall be submitted to Paragon, in writing, at least 7 calendar days before goods ship out.

--END OF SCHEUDLE E--

Schedule F Warranty

Phone: 661-577-4371 Fax: 661-577-4372 www.ParagonBridgeWorks.com

This document was created to better communicate what warranties Paragon may offer to Client. Type A warranty is the default unless expressly included, and paid for in full, on invoice. All goods and/or services sold and performed under this Agreement are Warranted as follows:

Type A: (AS-IS) Paragon expressly limits any and all warranties to the minimum amount required by law in the controlling jurisdiction. Paragon makes no warranty, express or implied, as to suitability, specifications, and fitness of any materials or service for any specific purpose. Client agrees to indemnify and hold Paragon harmless for any and all claims arising therefrom. All sales are final.

Type B: (AS-IS WITH DANGERS AND RISKS) All terms of Type A plus: Paragon discloses, and Client acknowledges, that the items sold and/or installation is materially damaged, potentially dangerous, and may contain and leech noxious and hazardous chemical residue and waste. Client agrees to assume any and all risks associated with the presence and use of item(s) sold and/or Installation, and specifically indemnifies and holds Paragon harmless for such liabilities risks and dangers, including without limit any liabilities relating to environmental cleanup necessitated by the presence or use of the item(s)/Installation. All sales are final.

Type C: (ONE YEAR LIMITED BRIDGE WARRANTY) The Bridge and/or Installation are expressly warranted to Client for a period of one year from original date of construction completion to be merchantable and fit for use as a bridge as defined in Paragon's Schedules and/or Paragon's engineering details, if included or available. Components covered under this warranty include the main bridge super structure itself (excluding the decking), its abutments and connection fittings so long as they are all supplied &/or built by Paragon or its agents under Paragon's control and are not tampered with or altered and are properly maintained by Client, at Client's expense. Warranty does not cover normal wear and tear, abuse, vandalism, cracks in concrete, cracks in wood, settlement, or damages arising from overloading or traveling at excessive speeds. Other items not covered in warranty include handrails, guardrails, signage, approaches, grading, drainage, dirt work, and erosion control. Proper maintenance includes, but not limited to, removing all debris from water way immediately and should not be allowed to contact the bridge super structure, including abutments/piers, whatsoever or allow water to backup in the water way, as well as performing routine inspections. Any defects with the bridge structure or any of its components shall immediately be reported to Paragon and bridge shall be taken out of service by Client. Paragon shall not be responsible for indirect or associated damaged caused by failure(s) or damage caused while repairing defects.

Routine bridge inspections shall be performed by qualified individuals. Routine inspections, at a minimum, shall be conducted 6 months after initial bridge installation then 12 months thereafter for a period of 3 years then 36 months thereafter in perpetuity unless there are more stringent Jurisdictional Laws which will supersede these minimum requirements. Such inspections shall be sent to Paragon within 1 month after each inspection. Bridge inspectors shall be familiar with the following publications:

- AASHTO Manual for bridge evaluation
- FHWA Bridge Inspector's Reference Manual
- FHWA Specifications for the National Bridge Inventory Bridge Elements
- FHWA Recording and coding guide for the structural inventory and appraisal of the nation's bridges.
- State specific element inspection manual, such as: CalTrans Element Inspection Manual, or equivalent.
- State specific bridge specifications, such as: CalTrans Bridge Design Specifications, or equivalent.

Type D: (THREE YEAR LIMITED BRIDGE WARRANTY) Such warranty shall be identical to warranty "Type C" except where the term is lengthened to a total of three years instead of one.

Type E: (FIVE YEAR LIMITED BRIDGE WARRANTY) Such warranty shall be identical to warranty "Type C" except where the term is lengthened to a total of five years instead of one.

Type F: (SPECIAL) Such warranty shall be identical to warranty "Type C" except where the term is lengthened as per terms on quote/invoice.

--END OF SCHEDULE F--

Schedule G Arbitration

Phone: 661-577-4371 Fax: 661-577-4372 www.ParagonBridgeWorks.com

This document was created to better communicate how legal disputes will be handled.

Paragon and Client hereby agree that any right or dispute arising under this Agreement shall be resolved by binding arbitration, performed by the American Arbitration Association. Either party shall have the right to end Arbitration at any time prior to resolution and refer such dispute in part or whole to the proper court of law under the other terms and provisions of Paragon's contractual terms.

--END OF SCHEDULE G--



PARAGONBRIDGEWORKS

WHITE PAPER

INSTALLATION

"PLAN A"

Phone: 661-577-4371

Fax: 661-577-4372

CA General Engineering: 957465

www.ParagonBridgeWorks.com

This document covers the essential elements of installing a Paragon bridge using Paragon's BKES bearing kits.

B	K	E	S
Bearing	Kit	End	Sill

This bearing kit was designed to be applied to the bridge's END SILL. The "end sill" is, essentially, the first transverse (or latitudinal) crossmember on the bridge superstructure. Refer to drawing "BKES.pdf" for more details.

Step 1: Prepare

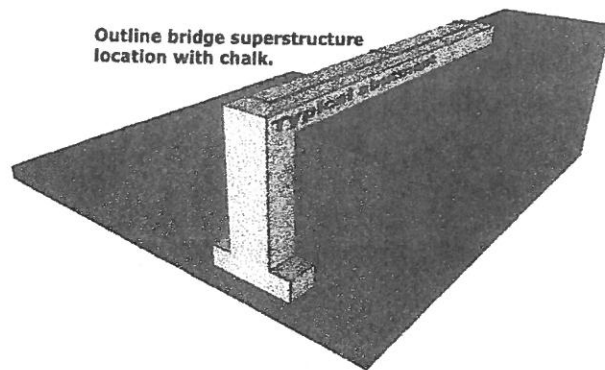
Tools/Supplies needed:

- Broom to sweep concrete clean.
- Chalk & chalk line. Preferably two different colors of chalk & line.
- Paint stick or marker that can write on neoprene. Preferably yellow or white.
- Measuring tape & large framing square.

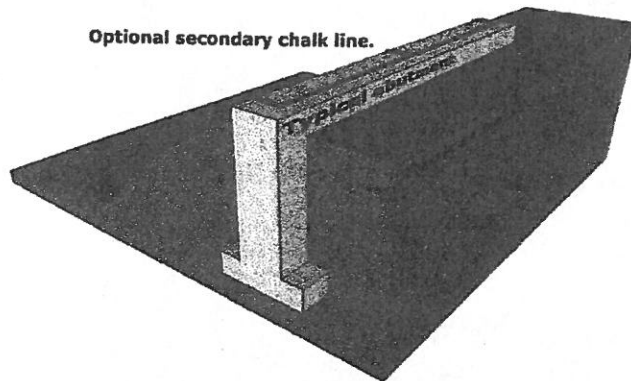
1.1 At this point, the abutments are completed and ready for the bridge. This includes proper cure time for concrete and any special inspections for the abutments have already been completed.

1.2 Sweep off the top of concrete in order to achieve a clean surface.

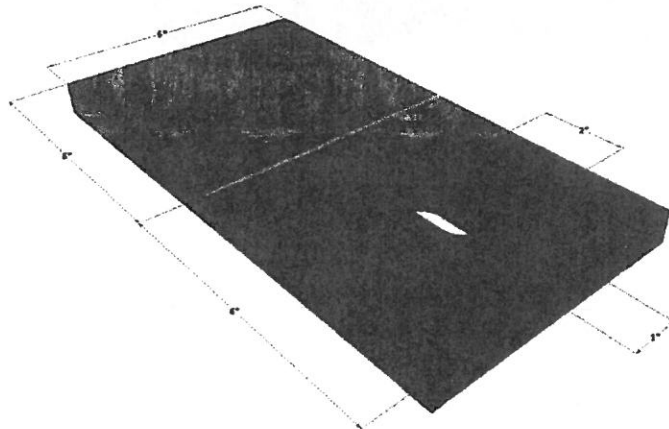
1.3 Make a chalk line where the bridge should land on abutments. Measure from the **center** of the abutment. In a perfect world, your bridge should sit right on these lines. The illustration below shows a chalk line for two bridge decks placed side by side.



1.4 Create a secondary chalk line 1" away from the first chalk line. This secondary line will help you to know when you are close to perfect. Ideally, we want to be as close to perfect as possible but getting to ½" of perfect is usually acceptable.



1.5 Mark all the neoprene pads, as indicated by the yellow, in this illustration.



Step 2: Picking

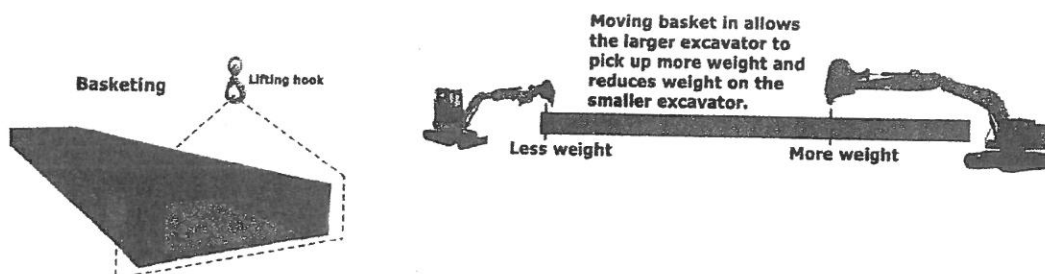
This step involves picking the bridge up off of the delivery truck/trailer and getting the bridge deck swung into place. There are a number of methods to connect and lift up on a bridge deck, including:

2.1 Existing pick points: Several well experienced installation contractors will find an existing bracket, pocket, or component on the bridge deck to hook on to. This option will vary greatly depending on the style of bridge deck used and can be used in conjunction with any of the options listed below.



2.2 Basketing: This method does not require any lifting hooks or rings. Instead, a chain/sling/cable (shown as the dotted red line) is wrapped around the entire bridge structure. Each end of the bridge is basketed in the same way in order to have the bridge supported at two locations.

One benefit of this method is that it allows the installation contractor the ability to move the location of each basket in order to transfer weight of each basket as needed if, for example, the contractor is using two excavators of varying capacities to lift the bridge. The basket can be arranged so that the larger capacity excavator can lift more of the bridge weight than the smaller excavator. By simply moving the basket away from the end of the bridge you will increase how much that basket is supporting.



While basketing might work well when placing a single bridge deck, it does not work very well when placing a second bridge deck next to the first as the chains, straps, or cables will prevent the second bridge deck from abutting the first bridge deck.

2.3 Deck windows: This option provides for cutting holes in the deck of the bridge in order to wrap a chain/sling/cable around a bridge crossmember that is being covered up by the bridge decking. The size of window and the location of window will be determined by the type of bridge deck used and the equipment that the contractor plans on using. The contractor can cut windows in themselves at the job site or the contractor can work with Paragon to have the windows cut at Paragon's facility.

More detailed videos can be found here:

- <https://youtu.be/ORrX3m5Elpo>
- <https://youtu.be/XrHHWHPrmwww>

2.4 Lifting lugs: This is the most traditional way of lifting a bridge. A lifting lug is placed at each corner of the bridge. These lugs are usually around 1" X 5" X 5" steel plates with a single hole in them. The steel plates are welded to the bridge deck then a shackle's pin is ran through the lifting lug hole.

The bridge installation contractor will need to discuss with Paragon where the lifting lug should be applied in order to suite each application best. Not all of Paragon's facilities has a certified welder which limits which one of Paragon's distribution points offers lifting lugs. Alternatively, the installation contractor can install their own lifting lugs while the bridge is waiting to be off-loaded at the delivery site. The installation contractor should discuss this option with Paragon should they feel lifting lugs are the best solution.

A more detailed video can be found here: <https://youtu.be/ju05WlYdBbs>

2.5 Dragging: The process of dragging a bridge deck involves...pushing, pulling, and dragging the bridge bridge deck off of the delivery truck/trailer then push/pulling/dragging the bridge deck into position. While there have been many experienced bridge installation contractors who have

successfully done this, Paragon does not recommend it due to the potential damages caused to the bridge deck, delivery equipment, and possible injuries.

Installation contractors who wish to undertake this approach will need to arrange their own delivery trucks/trailers, as severe damage to the delivery truck/trailer may be caused. When performing this operation, method 2.1 "Existing pick points", and/or method 2.3 "Deck windows" is how most contractors grab onto the bridge deck.

Step 3: Setting

By this point the bridge is up in the air and now needs to be landed on the abutments. Paragon's approach to setting the bridge has been developed over the course of hundreds of bridge installations since 1999. The abutment should still have all the chalk lines mentioned above. No bolts are installed in the concrete yet.

Tools/supplies needed:

- 4 pieces of 1" X 2" X 12" wooden stick.
 - Large pry bars, at least 3' long (used to nudge bridge in place).
 - Oxygen/acetylene torch or other means to cut metal.
 - Sawzall, or other wood cutting tool, to trim wood that might be needed.
 - Measuring tape and small framing square.
 - BKES bearing kits with fasteners.
 - Vacuum, air compressor, or other means to extract concrete dust from bolt hole (if working with a concrete abutment).
 - Drill and appropriate drill bit for anchor bolts.
 - Welding equipment
 - Tool(s) to tighten down BKES fasteners.
-

3.1 When placing more than one bridge deck side by side, choose which bridge deck will be installed first.

3.1.1: When two bridge decks are installed side by side, there generally is not a preference of which bridge deck is installed first. Each bridge deck can be used on either side since they are identical (unless some special feature has been installed, such as uni-struts or pipe hanger brackets).

3.1.2: When placing more than two bridge decks side by side, work from the center of the abutment outwards. For example, on a three pack, the middle bridge deck would be set first followed by the outside decks.

3.2 Set the bridge down directly on the concrete abutment, at or near the "perfect" chalk lines. It is not uncommon for one end of the bridge to be perfect but the other end of the bridge to be off by about 1/2". This is perfectly normal and acceptable. Set the bridge down so that only a small

amount of the bridge's weight is bearing on the concrete. Do not put all the weight of the bridge on the abutments yet.

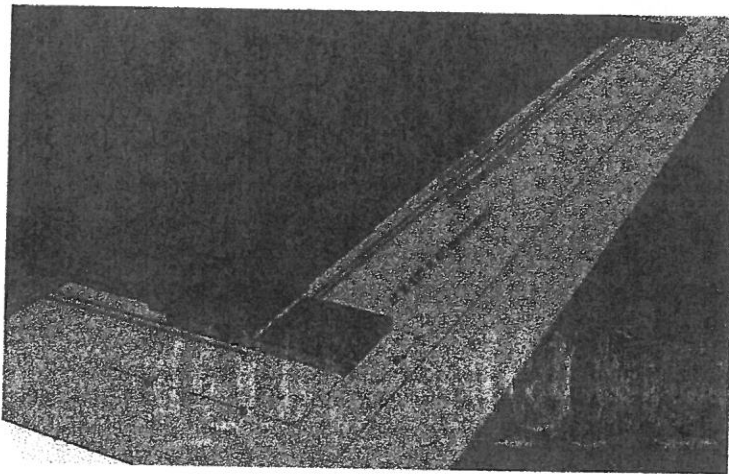
3.3 Lift the bridge deck straight up by about 1 ½", then slip the neoprene pad under the corners of the bridge deck, as illustrated below. Use a stick or other tool to nudge the neoprene pad into place in order to keep fingers/hand clear of any pinch points. Line up the previously applied line on the neoprene with the corner of the bridge deck as illustrated below.

<<< USE EXTREME CAUTION TO NOT PINCH FINGERS/HAND UNDER BRIDGE >>>

3.4 Lower the bridge deck onto the neoprene pads, ensuring:

- 12" long edge of the neoprene is flush with the side of the bridge deck with a ¼" tolerance allowance.
- 6" X 6" of neoprene should be under the bridge.
- 6" X 6" extending beyond the bridge.

At this point you can release all the weight of the bridge deck onto the neoprene and unhook the chains/cables/slugs used to set the bridge.



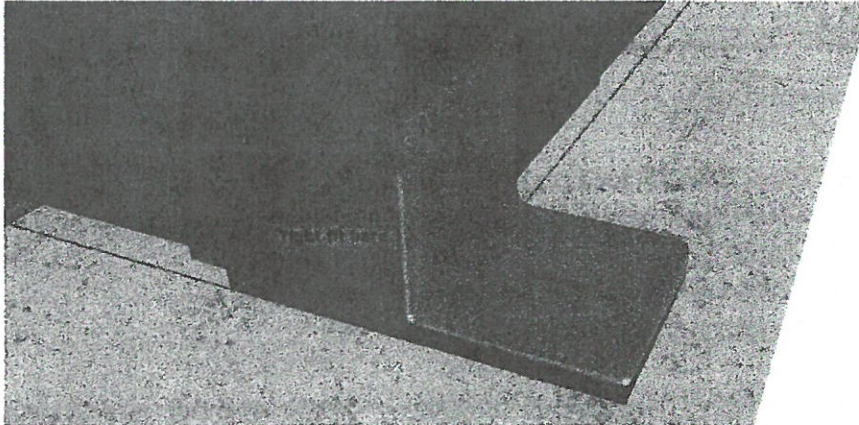
3.5 Follow the same steps for any additional bridge decks. Refer to section 4 for common complications that may arise.

3.6 At this point, all the bridge decks are set in place with neoprene under them. The crane (or whatever equipment used to set the bridge) is no longer needed.

3.7 Set the steel portion of the bearing kit on top of the neoprene. Note: some bridge decks may be shipped with this steel bearing kit pre-installed by Paragon.

- Vertical leg of steel bearing kit (leg without a slot) is tight up against bridge deck.
Note: A gap between the top of the steel bearing kit and the bridge deck is normal.

- Horizontal leg of steel bearing kit (leg with slot) is tight up against neoprene.
- Slot in steel bearing kit aligns with slot in neoprene with a $\frac{3}{8}$ " variation tolerance.



3.8 Weld bearing kit to bridge deck, usually a 3/16" fillet weld all the way around, however, follow engineered plans when available.

- Fill in gap as needed to weld.
- Reduce heat by waiting long periods between weld passes in order to prevent damage to neoprene pad due to overheating.

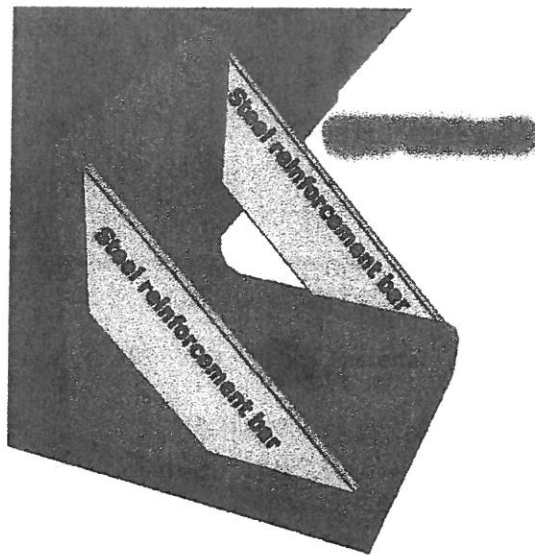
3.9 Locate the securement bolts. They are usually $\frac{3}{4}$ " X 10" concrete anchor expansion bolts, but they may vary depending on engineered plans or special conditions. Paragon normally only supplies Powers SD1 or SD2 anchor bolts. Any other fastener will need to be supplied by others. Drill appropriately sized hole through bearing kit slot to a depth recommended per anchor bolt manufacturer's specifications.

3.10 Clean hole.

3.11 Install anchor bolt per bolt manufacturer's specifications.

3.12 Install flat washer and nut. Nut should be installed finger tight plus half a turn.

3.13 If shipped loose, install steel reinforcement bars onto steel bearing kit. Weld per engineering plans or 3/16" fillet weld if no plans are available.



Step: 4 Correcting Imperfections

Paragon's primary product line consists of converting railroad flat cars into bridges. Hence, this is a used product that will not be perfect. Installation contractor should expect to make certain modifications, alterations, and adaptations. Installation contractor should request and review pictures of the bridge deck in order to become familiar with what will be delivered. This is a list of the most common issues that come up:

4.1 Camber variances: This occurs when installing multiple bridge decks side by side. The goal is to get the two bridge decks within a maximum of $\frac{3}{4}$ " in height difference. Otherwise, some pushing, pulling, and nudging will be needed. This is best explained in this video:

<https://youtu.be/CcfDKwYson4>

4.2 Bridge height differences: Sometimes one bridge deck will be slightly thicker than the other. This can be easily corrected by shimming under the neoprene bearing pad. Shim should have the same footprint size as neoprene, and be no greater than 1" thick.

4.3 Steel deck irregularities: Paragon's goal when preparing the deck before shipment is to get the deck clean enough to drive over without damaging a vehicular tire. Often times the steel deck will have some remnants from where something was welded to the deck. A completely smooth deck is not common and should not be expected. Installation contractor can use whatever means necessary to achieve their desired use being careful to not damage the steel deck itself. Additionally, there may be some holes in the deck as well that the installation contractor will need to patch up if they so desire. Patch material should be of the same thickness as the steel deck or thicker.

4.4 Wood deck irregularities: Wood is never perfect. Used wood is less perfect. Installation contractor should be prepared to replace wooden deck planks if they are buying a bridge with no new decking. New decking planks may become loosened during transportation and bridge installation. Installation contractor should expect to tighten some loose boards as needed.

Step 5: Finishing

The installation portion of the project is essentially completed, and now just a few more items to complete.

5.1 Wooden seam cover plates: When placing multiple bridge decks side by side, the addition of a seam cover plate is needed. Wood seam cover plates are usually applied over a bridge with wood decking. The wood seam cover consists of wooden planks, usually 2" X 10" pressure treated boards. These are screwed to the bridge's wooden deck. Use as many screws as needed to securely fasten the seam cover boards.

5.2 Steel seam cover plates: When placing multiple bridge decks side by side, the addition of a seam cover plate is needed. A steel seam cover can either be applied over a bridge with wood or steel decking.

When applying a steel seam cover plate over wood, the seam cover plate will need to have holes drilled in it in order to run wood screws through them then into the wooden deck below.

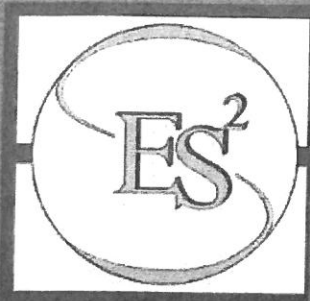
When applying a steel seam cover plate over a steel deck, a simple fillet weld can be used. Sometimes a seam cover plate shim is used between the seam cover plate and the steel decking. A video can be found here that discusses this topic further:

<https://youtu.be/u6IJ6DJWACM>

5.3 Paint touch up: All new metal should be painted with a high quality, durable paint. You can also get Paragon's "box car brown" paint in an aerosol spray paint can. Make sure to mask off the area being painted for a more professional finish.

5.4 Bridge inspection: Per federal bridge rules, the completed bridge must be inspected within three months of being put into service by trained inspectors. Additional routine inspections must be made in order to ensure a safe bridge, to satisfying any bridge warranty coverage, as well as complying with various state and federal bridge regulations. Bridge inspection reports must be submitted to Paragon within 30 days of inspection.

Finished.



Engineering System Solutions

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3632 North Rancho Drive
Las Vegas, Nevada 89130

4943 North 29th East, Suite A
Idaho Falls, Idaho 83401

1677 Eureka Road, Suite 102
Roseville, California 95661

STRUCTURAL CALCULATIONS

FOR

Paragon Bridge Works

Townsend Bridge

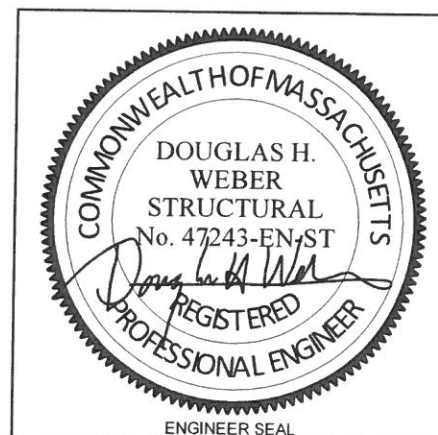
Townsend, MA

ES² Project #: 18.2614

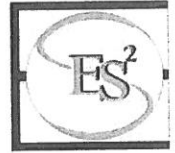
June 18, 2018

SHEET INDEX

Basis For Design.....	B1
Gravity Design.....	G1
Lateral Design.....	L1
Abutment Design.....	A1
Guardrail Design.....	R1



ENGINEER SEAL



BASIS FOR DESIGN

DESIGN LOADS

BRIDGE DEAD LOAD:

Bridge Longitudinal Members	360.3
Bridge Transverse Members	222.8
Rails	80.1
Miscellaneous	120.8
DC=	<u>784.0</u> plf

Wearing Surface	130.6
Miscellaneous	100.4
DW=	<u>231.0</u> plf

BRIDGE LIVE LOAD:

HS25

DESIGN LOAD COMBINATIONS

STRENGTH I = 1.25 DC + 1.5 DW + 1.75 (m) (IM) LL

m = 1.20

IM = 1.33

DEFLECTION LOAD COMBINATIONS

SERVICE I = 1.00 DC + 1.00 DW + 1.00 (m) (IM) LL

MAX DEFLECTION: SPAN/800

SNOW LOAD:

Ground snow load: 60.0 psf
Not included in bridge dead load above.

ICE LOADS:

Ice thickness: 1.0 in
Included in Wearing Surface Miscellaneous load (DW) above.

DESIGN LOADS

BRIDGE LONGITUDINAL MEMBERS

Description	Quantity	Area (in ²)	Weight (plf)
Side Sill	4	22.1	300.7
Original Deck	25	10.4	59.6
DC=			360.3 plf

BRIDGE TRANVERSE MEMBERS

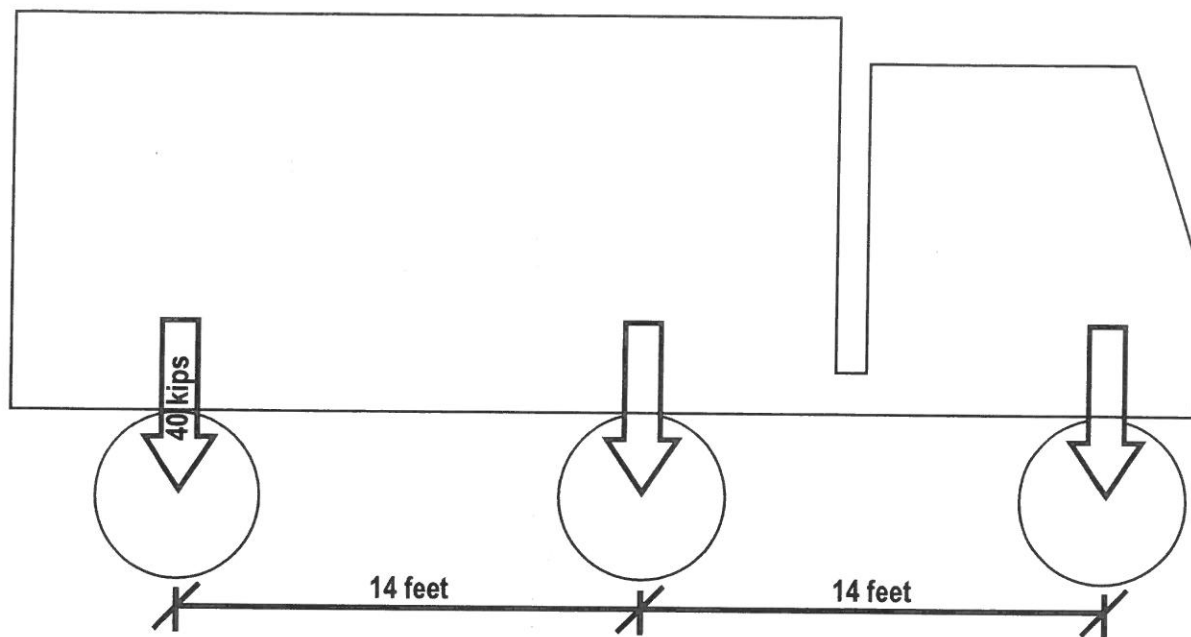
Description	Spacing (ft)	Unit Weight (lbs)	Weight (plf)
End Plate	20.0	446.3	22.3
Support Beam	1.9	94.4	49.6
Support Plate	5.0	157.6	31.5
Small Channel	10.0	207.5	20.8
Large Channel	20.0	381.1	19.1
Support Channel 1	13.3	354.8	26.6
Support Channel 2	40.0	287.5	7.2
L6x6x1/2	5.7	39.3	6.9
L4x4x3/8	4	155.7	38.9
DC=			222.8 plf

BRIDGE RAILS

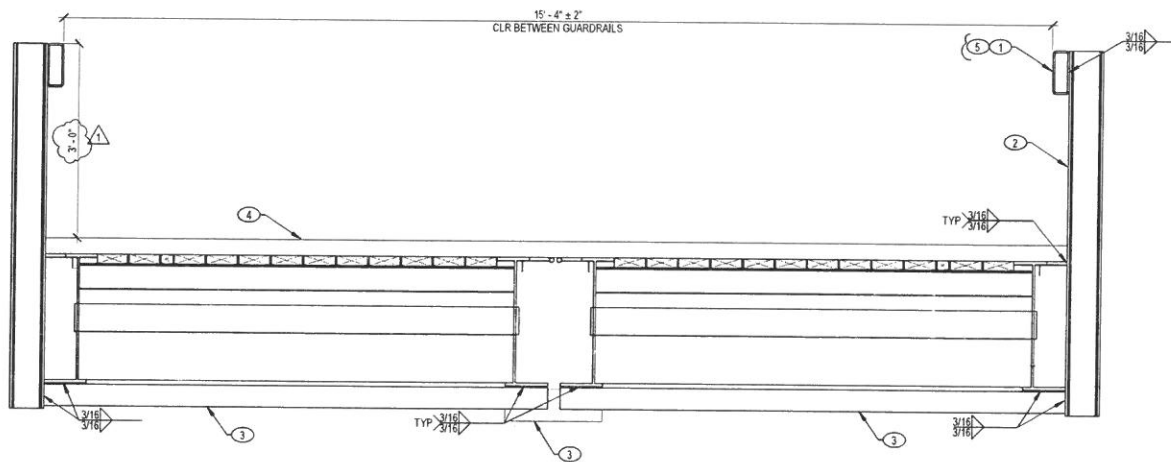
Description	Quantity	Area (in ²)	Weight (plf)
Top Rail (HSS8x3x5/16)	2	5.9	39.8
Description	Spacing (ft)	Unit Weight (lbs)	Weight (plf)
Posts (W6x16)	4.5	181.4	40.3
DC=			80.1 plf

WEARING SURFACE

Description	Spacing (ft)	Unit Weight (lbs)	Weight (plf)
3x Deck	1.0	130.6	130.6
DW=			130.6 plf



HS25-44 TRUCK LOADING WITH REAR AXLES SPACED AT 14 FEET

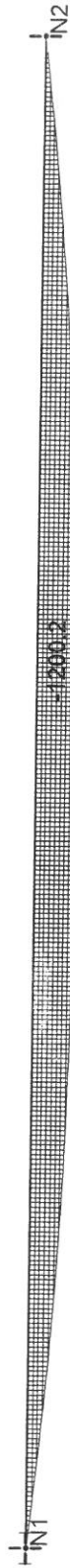


1 BRIDGE SECTION
62/ NO SCALE

The bridge consists of (2) 40'-0" long MATU rail cars placed side by side. Because of the infrequent use of the bridge it is considered a one-lane bridge for heavy vehicles. Therefore, the design will analyze one rail car with 60% of the HS25-44 load placed on it. This assumes the heavy trucks will drive over the bridge near the middle of, but not quite centered on, the section. The design parameters calls for a 40 ton vehicle. The HS25 is a 45 ton design vehicle so this analysis and design is conservative.



GRAVITY DESIGN



Envelope Only Solution
Member z Bending Moments (k-ft) (Enveloped)

Engineering System Solutions	Townsend, MA Bridge		SK - 1
SCG			May 30, 2018 at 8:41 AM
18.2614			AMFU.60 Percent Load.r3d

Y
Z, X

138.4

N1

N2 38.4



Envelope Only Solution
Member y Shear Forces (k) (Enveloped)

Engineering System Solutions

SCG

18.2614

SK - 2

May 30, 2018 at 8:42 AM

AMFU.60 Percent Load.r3d

Townsend, MA Bridge

G3

(Global) Model Settings

Display Sections for Member Calcs	5
Max Internal Sections for Member Calcs	97
Include Shear Deformation?	Yes
Increase Nailing Capacity for Wind?	Yes
Include Warping?	Yes
Trans Load Btwn Intersecting Wood Wall?	Yes
Area Load Mesh (in^2)	144
Merge Tolerance (in)	.12
P-Delta Analysis Tolerance	0.50%
Include P-Delta for Walls?	Yes
Automatically Iterate Stiffness for Walls?	Yes
Max Iterations for Wall Stiffness	3
Gravity Acceleration (ft/sec^2)	32.2
Wall Mesh Size (in)	24
Eigensolution Convergence Tol. (1.E-)	4
Vertical Axis	Y
Global Member Orientation Plane	XZ
Static Solver	Sparse Accelerated
Dynamic Solver	Accelerated Solver
Hot Rolled Steel Code	AISC 14th(360-10): ASD
Adjust Stiffness?	Yes(Iterative)
RISAConnection Code	AISC 14th(360-10): ASD
Cold Formed Steel Code	AISI S100-12: ASD
Wood Code	AWC NDS-15: ASD
Wood Temperature	< 100F
Concrete Code	ACI 318-14
Masonry Code	ACI 530-13: ASD
Aluminum Code	AA ADM1-15: ASD - Building
	AISC 14th(360-10): ASD
Number of Shear Regions	4
Region Spacing Increment (in)	4
Biaxial Column Method	Exact Integration
Parame Beta Factor (PCA)	.65
Concrete Stress Block	Rectangular
Use Cracked Sections?	Yes
Use Cracked Sections Slab?	Yes
Bad Framing Warnings?	No
Unused Force Warnings?	Yes
Min 1 Bar Diam. Spacing?	No
Concrete Rebar Set	REBAR SET ASTMA615
Min % Steel for Column	1
Max % Steel for Column	8

(Global) Model Settings, Continued

Seismic Code	ASCE 7-10
Seismic Base Elevation (ft)	Not Entered
Add Base Weight?	Yes
Ct X	.02
Ct Z	.02
T X (sec)	Not Entered
T Z (sec)	Not Entered
R X	3
R Z	3
Ct Exp. X	.75
Ct Exp. Z	.75
SD1	1
SDS	1
S1	1
TL (sec)	5
Risk Cat	I or II
Drift Cat	Other
Om Z	1
Om X	1
Cd Z	4
Cd X	4
Rho Z	1
Rho X	1

General Material Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (1E5 F)	Density[k/ft^3]
1	gen Conc3NW	3155	1372	.15	.6	.145
2	gen Conc4NW	3644	1584	.15	.6	.145
3	gen Conc3LW	2085	906	.15	.6	.11
4	gen Conc4LW	2408	1047	.15	.6	.11
5	gen Alum	10100	4077	.3	1.29	.173
6	gen Steel	29000	11154	.3	.65	.49
7	gen Plywood	1800	38	0	.3	.035
8	RIGID	1e+6		.3	0	0

General Section Sets

	Label	Shape	Type	Material	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Rail	AMZU	Beam	gen Steel	44.189	77400	4133.11	5.654

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	N1	0	0	0	0	
2	N2	40	0	0	0	

Basic Load Cases

	BLC Descripti...	Category	X Gra...	Y Gra...	Z Gra...	Joint	Point	Distri...	Area(... Surfa...
1	DC	None						1	
2	DW	None						1	
3	SNOW	SL						1	

[illegible]

	Joint		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N1	max	0	1-1	142.16	1-29	0	1-1	NC	NC	0	1-1	0	1-1
2		min	0	1-1	20.3	2-69	0	1-1	NC	NC	0	1-1	0	1-1
3	N2	max	0	1-1	142.16	1-98	0	1-1	0	1-1	0	1-1	0	1-1
4		min	0	1-1	20.3	2-1	0	1-1	0	1-1	0	1-1	0	1-1
5	Totals:	max	0	1-1	203.882	1-39	0	1-1			0	1-1	0	1-1
6		min	0	1-1	50.176	2-10	0	1-1						

	Member	Sec		Axial[k]	LC	y Shear[k]	LC	z Shear...	LC	Torque[...	LC	y-y Mo...	LC	z-z Moment[k-ft]	LC
1	M1	1	max	0	1-1	138.39	1-30	0	1-1	0	1-1	0	1-1	0	1-1
2			min	0	1-1	20.3	2-1	0	1-1	0	1-1	0	1-1	0	1-1
3		2	max	0	1-1	87.419	1-40	0	1-1	0	1-1	0	1-1	-152.25	2-1
4			min	0	1-1	-3.493	1-128	0	1-1	0	1-1	0	1-1	-978.222	1-39
5		3	max	0	1-1	40.219	1-50	0	1-1	0	1-1	0	1-1	-203	2-1
6			min	0	1-1	-43.571	1-118	0	1-1	0	1-1	0	1-1	-1186.99	1-104
7		4	max	0	1-1	1.817	1-60	0	1-1	0	1-1	0	1-1	-152.25	2-1
8			min	0	1-1	-91.19	1-108	0	1-1	0	1-1	0	1-1	-978.222	1-108
9		5	max	0	1-1	-20.3	2-1	0	1-1	0	1-1	0	1-1	0	1-1
10			min	0	1-1	-138.39	1-99	0	1-1	0	1-1	0	1-1	0	1-1

	LC	Joint Label	X [k]	Y [k]	Z [k]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
1	3	N1	0	20.3	0	NC	0	0
2	3	N2	0	20.3	0	0	0	0
3	3	Totals:	0	40.6	0			
4	3	COG (ft):	X: 20	Y: 0	Z: 0			

	LC	Joint Label	X [k]	Y [k]	Z [k]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
1	5	N1	0	55.08	0	NC	0	0
2	5	N2	0	55.08	0	0	0	0
3	5	Totals:	0	110.16	0			
4	5	COG (ft):	X: 20	Y: 0	Z: 0			

The dead + snow load reactions are less than the AASHTO design reactions so the bridge is adequate under a design snow load. Driving heavy vehicles over the bridge while covered in snow will be prohibited.

Envelope Joint Reactions (LIVE LOAD ONLY)

	Joint		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N1	max	0	4-1	69	4-29	0	4-1	NC	NC	0	4-1	0	4-1
2		min	0	4-1	0	4-69	0	4-1	NC	NC	0	4-1	0	4-1
3	N2	max	0	4-1	69	4-98	0	4-1	0	4-1	0	4-1	0	4-1
4		min	0	4-1	0	4-138	0	4-1	0	4-1	0	4-1	0	4-1
5	Totals:	max	0	4-1	90	4-29	0	4-1						
6		min	0	4-1	10	4-8	0	4-1						

Envelope Member Section Deflections (LIVE LOAD ONLY)

	Member	Sec		x [in]	LC	y [in]	LC	z [in]	LC	x Rotate [r...]	LC	(n) L/y Rat...	LC	(n) L/z Rat...	LC
1	M1	1	max	0	4-1	0	4-1	0	4-1	0	4-1	NC	4-1	NC	4-1
2			min	0	4-1	0	4-1	0	4-1	0	4-1	NC	4-1	NC	4-1
3		2	max	0	4-1	0	4-1	0	4-1	0	4-1	NC	4-1	NC	4-1
4			min	0	4-1	-.929	4-39	0	4-1	0	4-1	516.835	4-39	NC	4-39
5		3	max	0	4-1	0	4-1	0	4-1	0	4-1	NC	4-1	NC	4-1
6			min	0	4-1	-1.288	4-42	0	4-1	0	4-1	372.616	4-42	NC	4-42
7		4	max	0	4-1	0	4-1	0	4-1	0	4-1	NC	4-1	NC	4-1
8			min	0	4-1	-.929	4-1...	0	4-1	0	4-1	516.835	4-1...	NC	4-108
9		5	max	0	4-1	0	4-1	0	4-1	0	4-1	NC	4-1	NC	4-1
10			min	0	4-1	0	4-1	0	4-1	0	4-1	NC	4-1	NC	4-1

The live load deflection of L/372 is more than the AASHTO deflection requirement of L/800. This requirement is optional for this type of bridge based on it's intended use, location and construction.

SIDE SILL CAPACITY CHECK

AMFU

$\phi M_n = \phi F_y Z$ $\phi V_n = \phi 0.58 F_y A_w$

Side Sill

$F_y =$	50 ksi			
$Z =$	388.11 in ³	Capacity	Load	Unity
$t_w =$	0.625 in	Moment	1617 k•ft	1187 k•ft 0.734 OK
$h_w =$	23.87 in	Shear	433 kips	138.4 kips 0.320 OK



SECTION PROPERTIES

Company :
 Designer :
 Job Number:

May 31, 2018
 17:16 PM
 Checked By: _____

Section Properties: MATU Transverse

Section Information:

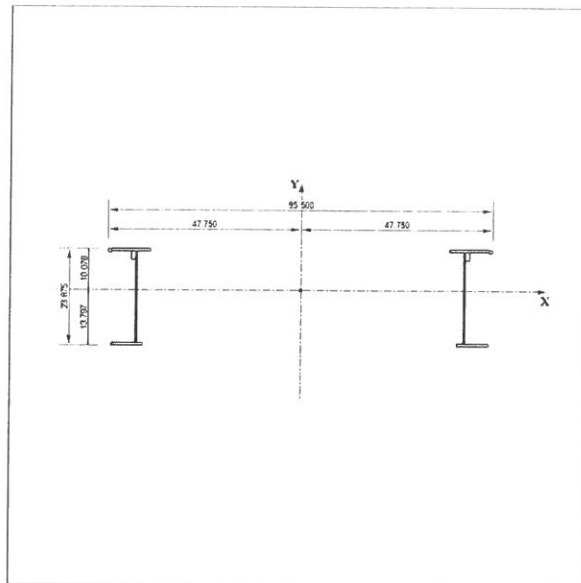
Material Type	=	General
Shape Type	=	Arbitrary
Number of Shapes	=	6

Basic Properties:

Total Width	=	95.500	in
Total Height	=	23.875	in
Centroid, X _o	=	-48.000	in
Centroid, Y _o	=	-14.883	in
X-Bar (Right)	=	47.750	in
X-Bar (Left)	=	47.750	in
Y-Bar (Top)	=	10.078	in
Y-Bar (Bot)	=	13.797	in
Max Thick	=	23.875	in

Equivalent Properties:

Area, A _x	=	44.189	in ²
Inertia, I _{xx}	=	4133.11	in ⁴
Inertia, I _{yy}	=	7.740E+004	in ⁴
Inertia, I _{xy}	=	-0.011	in ⁴
S _x (Top)	=	410.11	in ³
S _x (Bot)	=	299.57	in ³
S _y (Left)	=	1620.85	in ³
S _y (Right)	=	1620.86	in ³
r _x	=	9.671	in
r _y	=	41.850	in
Plastic Z _x	=	388.11	in ³
Plastic Z _y	=	1846.68	in ³
Torsional J	=	4.654	in ⁴
As-xx Def	=	1.000	
As-yy Def	=	1.000	
As-xx Stress	=	1.000	
As-yy Stress	=	1.000	



Section Diagram

Company :
 Designer :
 Job Number:

May 31, 2018

17:16 PM

Checked By: _____

Section Properties: MATU Longitudinal

Section Information:

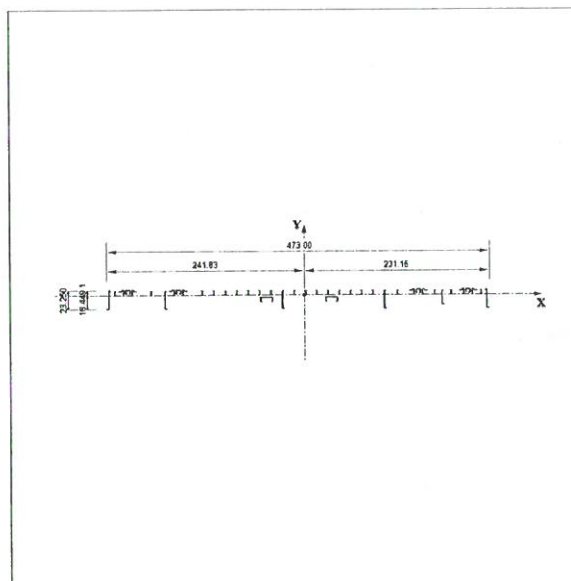
Material Type	=	General
Shape Type	=	Arbitrary
Number of Shapes	=	63

Basic Properties:

Total Width	=	473.00	in
Total Height	=	23.250	in
Centroid, X _o	=	5.336	in
Centroid, Y _o	=	-10.606	in
X-Bar (Right)	=	231.16	in
X-Bar (Left)	=	241.84	in
Y-Bar (Top)	=	6.801	in
Y-Bar (Bot)	=	16.449	in
Max Thick	=	23.250	in

Equivalent Properties:

Area, A _x	=	130.44	in ²
Inertia, I _{xx}	=	5091.20	in ⁴
Inertia, I _{yy}	=	3.121E+006	in ⁴
Inertia, I _{xy}	=	788.08	in ⁴
S _x (Top)	=	748.65	in ³
S _x (Bot)	=	309.51	in ³
S _y (Left)	=	1.290E+004	in ³
S _y (Right)	=	1.350E+004	in ³
r _x	=	6.247	in
r _y	=	154.67	in
Plastic Z _x	=	610.04	in ³
Plastic Z _y	=	1.768E+004	in ³
Torsional J	=	2.309	in ⁴
As-xx Def	=	1.000	
As-yy Def	=	1.000	
As-xx Stress	=	1.000	
As-yy Stress	=	1.000	



Section Diagram

Section Properties: MATU End Plate

Section Information:

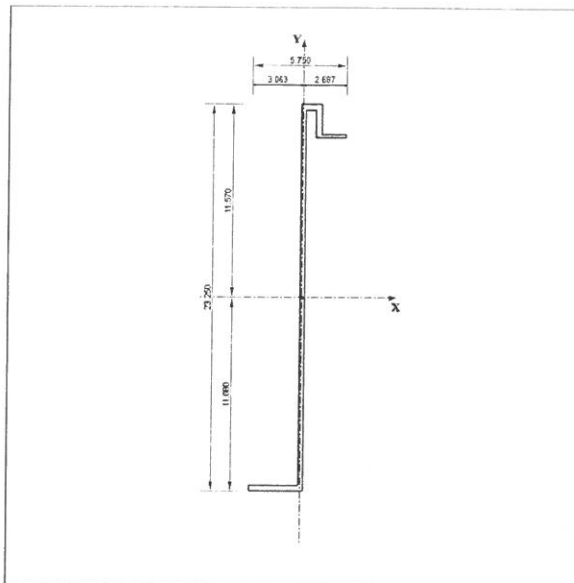
Material Type	=	General
Shape Type	=	Arbitrary
Number of Shapes	=	1

Basic Properties:

Total Width	=	5.750	in
Total Height	=	23.250	in
Centroid, X _o	=	-233.01	in
Centroid, Y _o	=	-15.804	in
X-Bar (Right)	=	2.687	in
X-Bar (Left)	=	3.063	in
Y-Bar (Top)	=	11.570	in
Y-Bar (Bot)	=	11.680	in
Max Thick	=	23.250	in

Equivalent Properties:

Area, A _x	=	8.197	in ²
Inertia, I _{xx}	=	550.52	in ⁴
Inertia, I _{yy}	=	5.552	in ⁴
Inertia, I _{xy}	=	34.589	in ⁴
S _x (Top)	=	47.583	in ³
S _x (Bot)	=	47.133	in ³
S _y (Left)	=	1.812	in ³
S _y (Right)	=	2.066	in ³
r _x	=	8.195	in
r _y	=	0.823	in
Plastic Z _x	=	59.954	in ³
Plastic Z _y	=	3.512	in ³
Torsional J	=	0.232	in ⁴
As-xx Def	=	1.000	
As-yy Def	=	1.000	
As-xx Stress	=	1.000	
As-yy Stress	=	1.000	



Section Diagram

Company :
 Designer :
 Job Number:

May 31, 2018
 17:16 PM
 Checked By: _____

Section Properties: MATU Support Beam

Section Information:

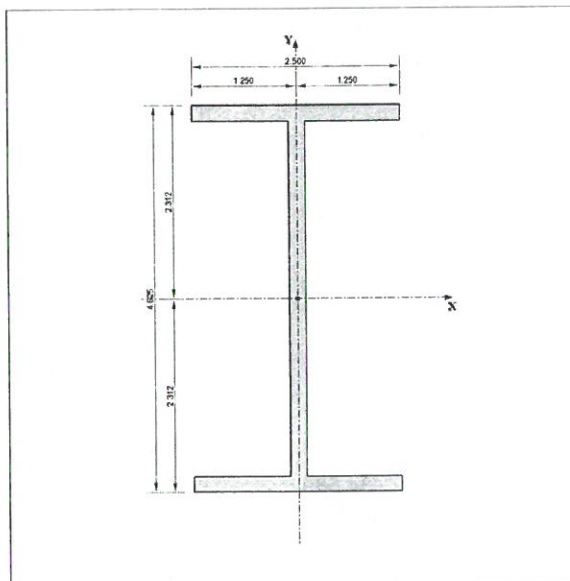
Material Type	=	General
Shape Type	=	Arbitrary
Number of Shapes	=	2

Basic Properties:

Total Width	=	2.500	in
Total Height	=	4.625	in
Centroid, X _o	=	-225.73	in
Centroid, Y _o	=	-8.359	in
X-Bar (Right)	=	1.250	in
X-Bar (Left)	=	1.250	in
Y-Bar (Top)	=	2.312	in
Y-Bar (Bot)	=	2.312	in
Max Thick	=	4.621	in

Equivalent Properties:

Area, A _x	=	1.734	in ²
Inertia, I _{xx}	=	5.817	in ⁴
Inertia, I _{yy}	=	0.491	in ⁴
Inertia, I _{xy}	=	0.000	in ⁴
S _x (Top)	=	2.516	in ³
S _x (Bot)	=	2.516	in ³
S _y (Left)	=	0.392	in ³
S _y (Right)	=	0.392	in ³
r _x	=	1.831	in
r _y	=	0.532	in
Plastic Z _x	=	2.927	in ³
Plastic Z _y	=	0.623	in ³
Torsional J	=	0.020	in ⁴
As-xx Def	=	1.000	
As-yy Def	=	1.000	
As-xx Stress	=	1.000	
As-yy Stress	=	1.000	



Section Diagram

Company :
 Designer :
 Job Number:

May 31, 2018
 17:16 PM
 Checked By: _____

Section Properties: MATU Support Plate

Section Information:

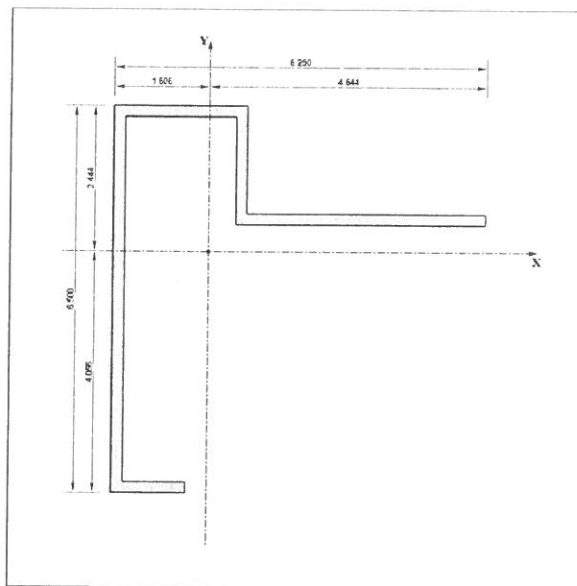
Material Type	=	General
Shape Type	=	Arbitrary
Number of Shapes	=	1

Basic Properties:

Total Width	=	6.250	in
Total Height	=	6.500	in
Centroid, X _o	=	-202.65	in
Centroid, Y _o	=	-6.678	in
X-Bar (Right)	=	4.644	in
X-Bar (Left)	=	1.606	in
Y-Bar (Top)	=	2.444	in
Y-Bar (Bot)	=	4.056	in
Max Thick	=	6.500	in

Equivalent Properties:

Area, A _x	=	2.895	in ²
Inertia, I _{xx}	=	11.280	in ⁴
Inertia, I _{yy}	=	9.508	in ⁴
Inertia, I _{xy}	=	3.153	in ⁴
S _x (Top)	=	4.615	in ³
S _x (Bot)	=	2.781	in ³
S _y (Left)	=	5.920	in ³
S _y (Right)	=	2.048	in ³
r _x	=	1.974	in
r _y	=	1.812	in
Plastic Z _x	=	4.229	in ³
Plastic Z _y	=	4.196	in ³
Torsional J	=	0.035	in ⁴
As-xx Def	=	1.000	
As-yy Def	=	1.000	
As-xx Stress	=	1.000	
As-yy Stress	=	1.000	



Section Diagram

Company :
 Designer :
 Job Number:

May 31, 2018
 17:16 PM
 Checked By: _____

Section Properties: MATU Small Channel

Section Information:

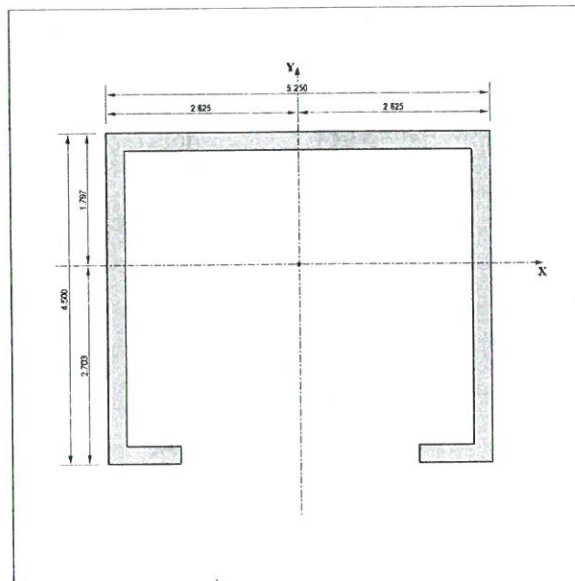
Material Type	=	General
Shape Type	=	Arbitrary
Number of Shapes	=	1

Basic Properties:

Total Width	=	5.250	in
Total Height	=	4.500	in
Centroid, X _o	=	-209.57	in
Centroid, Y _o	=	-6.031	in
X-Bar (Right)	=	2.625	in
X-Bar (Left)	=	2.625	in
Y-Bar (Top)	=	1.797	in
Y-Bar (Bot)	=	2.703	in
Max Thick	=	5.250	in

Equivalent Properties:

Area, A _x	=	3.813	in ²
Inertia, I _{xx}	=	10.079	in ⁴
Inertia, I _{yy}	=	17.824	in ⁴
Inertia, I _{xy}	=	0.000	in ⁴
S _x (Top)	=	5.608	in ³
S _x (Bot)	=	3.729	in ³
S _y (Left)	=	6.790	in ³
S _y (Right)	=	6.790	in ³
r _x	=	1.626	in
r _y	=	2.162	in
Plastic Z _x	=	5.521	in ³
Plastic Z _y	=	7.785	in ³
Torsional J	=	0.081	in ⁴
As-xx Def	=	1.000	
As-yy Def	=	1.000	
As-xx Stress	=	1.000	
As-yy Stress	=	1.000	



Section Diagram

Section Properties: MATU Large Channel

Section Information:

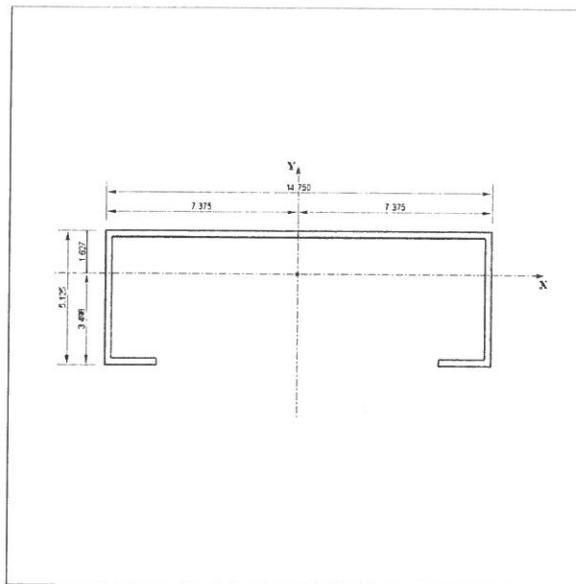
Material Type	=	General
Shape Type	=	Arbitrary
Number of Shapes	=	1

Basic Properties:

Total Width	=	14.750	in
Total Height	=	5.125	in
Centroid, X _o	=	-39.946	in
Centroid, Y _o	=	-15.111	in
X-Bar (Right)	=	7.375	in
X-Bar (Left)	=	7.375	in
Y-Bar (Top)	=	1.627	in
Y-Bar (Bot)	=	3.498	in
Max Thick	=	14.750	in

Equivalent Properties:

Area, A _x	=	7.000	in ²
Inertia, I _{xx}	=	25.867	in ⁴
Inertia, I _{yy}	=	229.39	in ⁴
Inertia, I _{xy}	=	0.000	in ⁴
S _x (Top)	=	15.901	in ³
S _x (Bot)	=	7.394	in ³
S _y (Left)	=	31.104	in ³
S _y (Right)	=	31.104	in ³
r _x	=	1.922	in
r _y	=	5.725	in
Plastic Z _x	=	10.556	in ³
Plastic Z _y	=	36.738	in ³
Torsional J	=	0.147	in ⁴
As-xx Def	=	1.000	
As-yy Def	=	1.000	
As-xx Stress	=	1.000	
As-yy Stress	=	1.000	



Section Diagram

Company :
 Designer :
 Job Number:

May 31, 2018
 17:16 PM
 Checked By: _____

Section Properties: MATU Support Channel

Section Information:

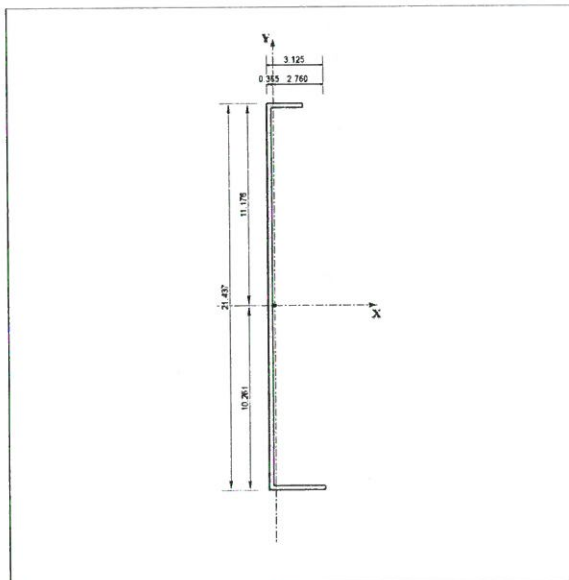
Material Type	=	General
Shape Type	=	Arbitrary
Number of Shapes	=	1

Basic Properties:

Total Width	=	3.125	in
Total Height	=	21.438	in
Centroid, X _o	=	-20.268	in
Centroid, Y _o	=	-17.223	in
X-Bar (Right)	=	2.760	in
X-Bar (Left)	=	0.365	in
Y-Bar (Top)	=	11.176	in
Y-Bar (Bot)	=	10.262	in
Max Thick	=	21.438	in

Equivalent Properties:

Area, A _x	=	6.516	in ²
Inertia, I _{xx}	=	333.66	in ⁴
Inertia, I _{yy}	=	2.453	in ⁴
Inertia, I _{xy}	=	-6.549	in ⁴
S _x (Top)	=	29.855	in ³
S _x (Bot)	=	32.515	in ³
S _y (Left)	=	6.730	in ³
S _y (Right)	=	0.889	in ³
r _x	=	7.156	in
r _y	=	0.614	in
Plastic Z _x	=	40.893	in ³
Plastic Z _y	=	1.880	in ³
Torsional J	=	0.136	in ⁴
As-xx Def	=	1.000	
As-yy Def	=	1.000	
As-xx Stress	=	1.000	
As-yy Stress	=	1.000	



Section Diagram

Company :
 Designer :
 Job Number:

May 31, 2018
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 Checked By: _____

Section Properties: MATU Support Channel 2

Section Information:

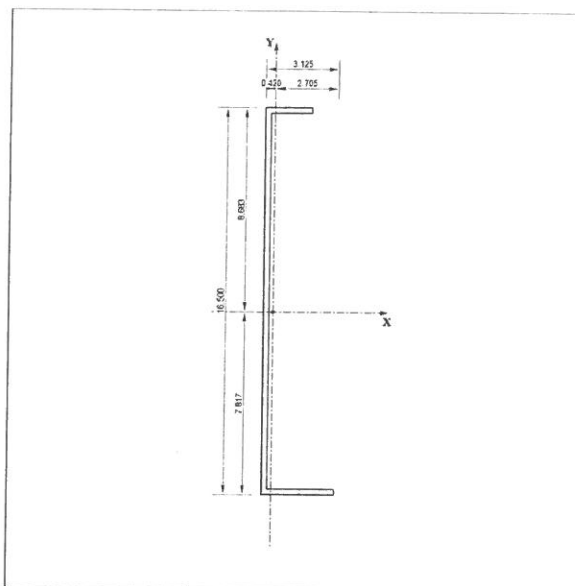
Material Type	=	General
Shape Type	=	Arbitrary
Number of Shapes	=	1

Basic Properties:

Total Width	=	3.125	in
Total Height	=	16.500	in
Centroid, X _o	=	178.79	in
Centroid, Y _o	=	-14.729	in
X-Bar (Right)	=	2.705	in
X-Bar (Left)	=	0.420	in
Y-Bar (Top)	=	8.683	in
Y-Bar (Bot)	=	7.817	in
Max Thick	=	16.500	in

Equivalent Properties:

Area, A _x	=	5.281	in ²
Inertia, I _{xx}	=	168.93	in ⁴
Inertia, I _{yy}	=	2.359	in ⁴
Inertia, I _{xy}	=	-4.895	in ⁴
S _x (Top)	=	19.456	in ³
S _x (Bot)	=	21.610	in ³
S _y (Left)	=	5.611	in ³
S _y (Right)	=	0.872	in ³
r _x	=	5.656	in
r _y	=	0.668	in
Plastic Z _x	=	26.331	in ³
Plastic Z _y	=	1.798	in ³
Torsional J	=	0.110	in ⁴
As-xx Def	=	1.000	
As-yy Def	=	1.000	
As-xx Stress	=	1.000	
As-yy Stress	=	1.000	



Section Diagram

Company :
 Designer :
 Job Number:

May 31, 2018
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 Checked By: _____

Section Properties: MATU Side Sill

Section Information:

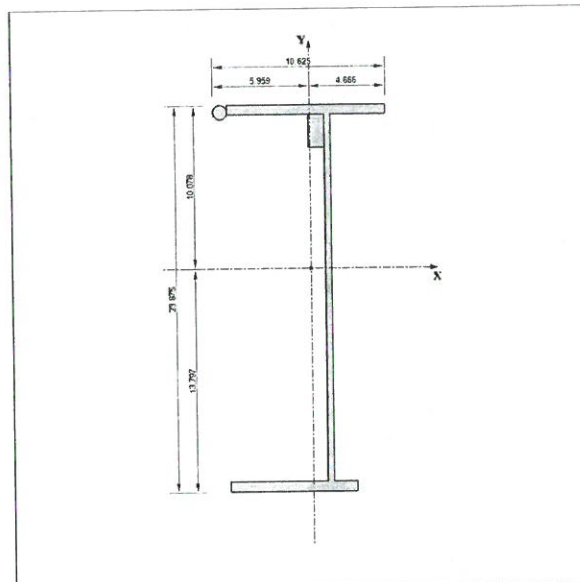
Material Type	=	General
Shape Type	=	Arbitrary
Number of Shapes	=	3

Basic Properties:

Total Width	=	10.625	in
Total Height	=	23.875	in
Centroid, X _o	=	-89.362	in
Centroid, Y _o	=	-15.312	in
X-Bar (Right)	=	4.666	in
X-Bar (Left)	=	5.959	in
Y-Bar (Top)	=	10.078	in
Y-Bar (Bot)	=	13.797	in
Max Thick	=	23.875	in

Equivalent Properties:

Area, A _x	=	22.094	in ²
Inertia, I _{xx}	=	2066.55	in ⁴
Inertia, I _{yy}	=	109.54	in ⁴
Inertia, I _{xy}	=	21.635	in ⁴
S _x (Top)	=	205.05	in ³
S _x (Bot)	=	149.78	in ³
S _y (Left)	=	18.383	in ³
S _y (Right)	=	23.476	in ³
r _x	=	9.671	in
r _y	=	2.227	in
Plastic Z _x	=	194.05	in ³
Plastic Z _y	=	34.373	in ³
Torsional J	=	2.327	in ⁴
As-xx Def	=	1.000	
As-yy Def	=	1.000	
As-xx Stress	=	1.000	
As-yy Stress	=	1.000	



Section Diagram

Company :
 Designer :
 Job Number:

May 31, 2018
 17:16 PM
 Checked By: _____

Summary of Section Properties

Section Information:

Sn.No.	1	2	3	4	5	6	7
Section	MATU Tra...	MATU Lon...	MATU En...	MATU Su...	MATU Su...	MATU Sma...	MATU Lar...

Basic Properties:

Total Width (in)	95.500	473.00	5.750	2.500	6.250	5.250	14.750
Total Height (in)	23.875	23.250	23.250	4.625	6.500	4.500	5.125
Centroid, Xo (in)	-48.000	5.336	-233.01	-225.73	-202.65	-209.57	-39.946
Centroid, Yo (in)	-14.883	-10.606	-15.804	-8.359	-6.678	-6.031	-15.111
X-Bar (Right) (in)	47.750	231.16	2.687	1.250	4.644	2.625	7.375
X-Bar (Left) (in)	47.750	241.84	3.063	1.250	1.606	2.625	7.375
Y-Bar (Top) (in)	10.078	6.801	11.570	2.312	2.444	1.797	1.627
Y-Bar (Bot) (in)	13.797	16.449	11.680	2.312	4.056	2.703	3.498

Equivalent Properties:

Area, Ax (in^2)	44.189	130.44	8.197	1.734	2.895	3.813	7.000
Inertia, Ixx (in^4)	4133.11	5091.20	550.52	5.817	11.280	10.079	25.867
Inertia, Iyy (in^4)	7.740E+004	3.121E+006	5.552	0.491	9.508	17.824	229.39
Inertia, Ixy (in^4)	-0.011	788.08	34.589	0.000	3.153	0.000	0.000
Sx (Top) (in^3)	410.11	748.65	47.583	2.516	4.615	5.608	15.901
Sx (Bot) (in^3)	299.57	309.51	47.133	2.516	2.781	3.729	7.394
Sy (Left) (in^3)	1620.85	1.290E+004	1.812	0.392	5.920	6.790	31.104
Sy (Right) (in^3)	1620.86	1.350E+004	2.066	0.392	2.048	6.790	31.104
rx (in)	9.671	6.247	8.195	1.831	1.974	1.626	1.922
ry (in)	41.850	154.67	0.823	0.532	1.812	2.162	5.725
Plastic Zx (in^3)	388.11	610.04	59.954	2.927	4.229	5.521	10.556
Plastic Zy (in^3)	1846.68	1.768E+004	3.512	0.623	4.196	7.785	36.738
Torsional J (in^4)	4.654	2.309	0.232	0.020	0.035	0.081	0.147

Summary of Section Properties

Section Information:

Sn.No.	8	9	10
Section	MATU Su...	MATU Su...	MATU Sid...

Basic Properties:

Total Width (in)	3.125	3.125	10.625
Total Height (in)	21.438	16.500	23.875
Centroid, Xo (in)	-20.268	178.79	-89.362
Centroid, Yo (in)	-17.223	-14.729	-15.312
X-Bar (Right) (in)	2.760	2.705	4.666
X-Bar (Left) (in)	0.365	0.420	5.959
Y-Bar (Top) (in)	11.176	8.683	10.078
Y-Bar (Bot) (in)	10.262	7.817	13.797

Company :
Designer :
Job Number:

May 31, 2018
17:16 PM
Checked By: _____

Equivalent Properties:

Area, A_x (in ²)	6.516	5.281	22.094
Inertia, I_{xx} (in ⁴)	333.66	168.93	2066.55
Inertia, I_{yy} (in ⁴)	2.453	2.359	109.54
Inertia, I_{xy} (in ⁴)	-6.549	-4.895	21.635
S_x (Top) (in ³)	29.855	19.456	205.05
S_x (Bot) (in ³)	32.515	21.610	149.78
S_y (Left) (in ³)	6.730	5.611	18.383
S_y (Right) (in ³)	0.889	0.872	23.476
r_x (in)	7.156	5.656	9.671
r_y (in)	0.614	0.668	2.227
Plastic Z_x (in ³)	40.893	26.331	194.05
Plastic Z_y (in ³)	1.880	1.798	34.373
Torsional J (in ⁴)	0.136	0.110	2.327

AASHTO WOOD BEAMS

Existing Deck Doug-Fir No. 2 Visually Graded Lumnber

Beam section: 2x6
Depth, d = 1.5 in
Width, b = 5.5 in
Span, L = 16 in
Section Modulus, S = 2.06 in³

Wheel Load 20 kips Contact Area: 10 x 20 (inches)

Bending Capacity

Fbo =	0.90	ksi
Ø =	0.85	
CKF =	2.94	
CM =	1.00	
CF =	1.20	
CV =	1.00	
Cfu =	1.15	
Ci =	1.00	
Cd =	1.00	
Cλ =	0.80	

Fb = 2.92 ksi

ØMn = 0.50 k-ft

Shear Capacity

Fvo =	0.18	ksi
Ø =	0.75	
CKF =	3.33	
CM =	0.97	
Ci =	1.00	
Cλ =	0.80	

Fv = 0.47 ksi

ØVr = 2.56 kips

New planking added as a wearing coarse on bridge

Planking Depth:	2x	3x	4x	
-----------------	----	----	----	--

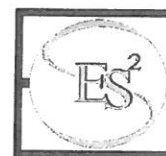
Mr =	0.51	0.47	0.43	k-ft
Unity	1.01	0.93	0.86	
	NG	OK	OK	

Vr =	1.52	1.40	1.30	kips
Unity	0.59	0.55	0.51	
	OK	OK	OK	

**MOMENT AND SHEAR ON EXISTING DECKING BASED ON VARIOUS NEW
PLANK THICKNESSES**

Tire Area			
Width	10	inches	
Length	20	inches	
Existing Deck Span	16	inches	
Wheel Load	20	kips	
S	0.50		
Wheel Distribution Factor	0.125	= S/4	
Live Load Factor	1.75	(Table 3.4.1-1)	

	2x Planking	3x Planking	4x Planking	
Plank Depth	1.5	2.5	3.5	inches
Contact Perimeter (assumes the load distributes out in each direction at a 1:1 slope)				
Width'	13	15	17	inches
Length'	23	25	27	inches
Area	299	375	459	sq. in.
Uniform load along bridge (wheel load/contact length)				
	10.43	9.60	8.89	klf
Factored load at plank bottom	2.28	2.10	1.94	klf
M and V in existing decking:				
Mr =	0.51	0.47	0.43	k-ft
Vr =	1.52	1.40	1.30	kips



LATERAL DESIGN

ASCE 7 Hazards Report

Address:

512 Main St
West Townsend, Massachusetts
01474

Standard:

ASCE/SEI 7-10

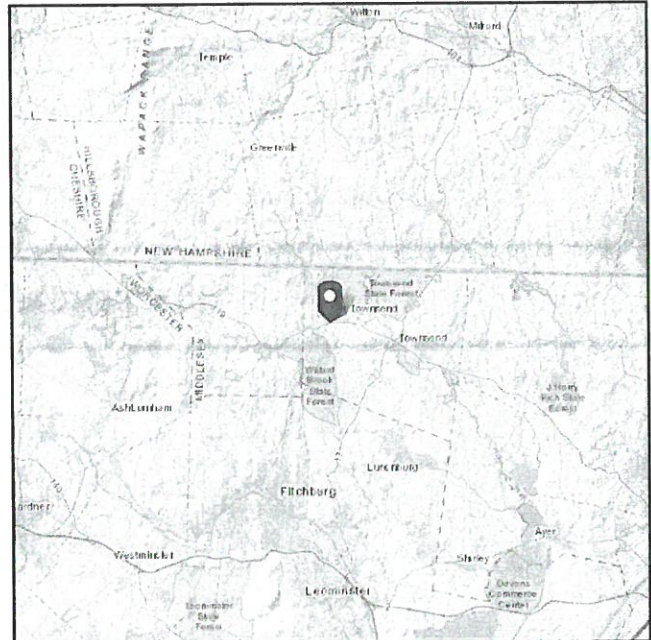
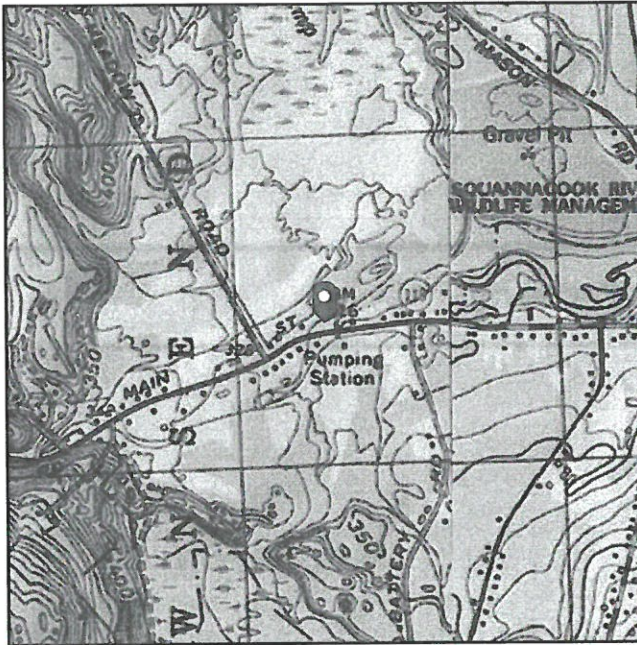
Risk Category: I**Soil Class:**

D - Stiff Soil

Elevation: 314.89 ft (NAVD 88)

Latitude: 42.6771

Longitude: -71.754268



Wind

Results:

Wind Speed:	109 Vmph
10-year MRI	76 Vmph
25-year MRI	86 Vmph
50-year MRI	92 Vmph
100-year MRI	98 Vmph

Data Source:

ASCE/SEI 7-10, Fig. 26.5-1C and Figs. CC-1–CC-4, incorporating errata of March 12, 2014

Date Accessed:

Wed May 09 2018

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-10 Standard. Wind speeds correspond to approximately a 15% probability of exceedance in 50 years (annual exceedance probability = 0.00333, MRI = 300 years).

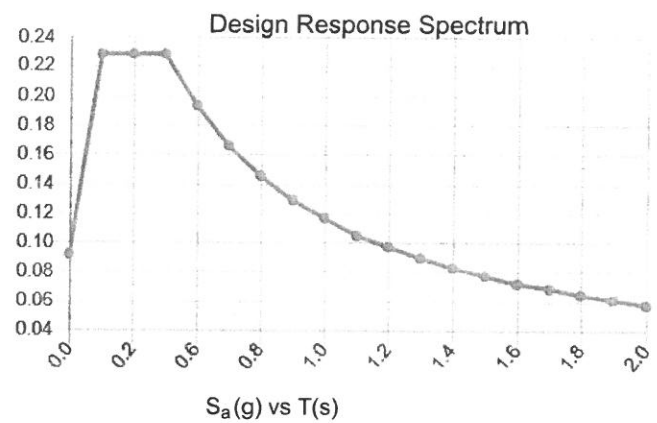
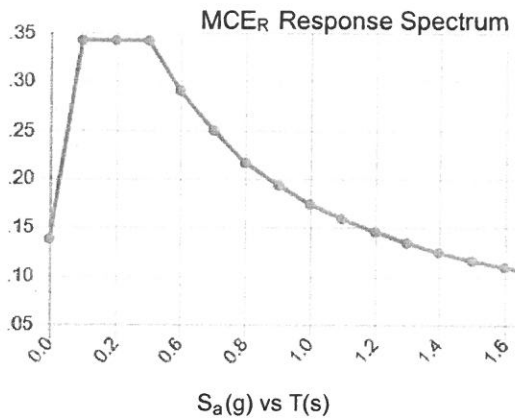
Mountainous terrain, gorges, ocean promontories, and special wind regions should be examined for unusual wind conditions.

Site Soil Class: D - Stiff Soil

Results:

S_s :	0.214	S_{DS} :	0.228
S_1 :	0.072	S_{D1} :	0.116
F_a :	1.600	T_L :	6.000
F_v :	2.400	PGA :	0.110
S_{MS} :	0.342	PGA _M :	0.174
S_{M1} :	0.174	F_{PGA} :	1.579
		I_e :	1

Seismic Design Category B



Data Accessed:

Wed May 09 2018

Date Source:

USGS Seismic Design Maps based on ASCE/SEI 7-10, incorporating Supplement 1 and errata of March 31, 2013, and ASCE/SEI 7-10 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-10 Ch. 21 are available from USGS.

Ice

Results:

Ice Thickness: 1.00 in. Ice weighs 56 pcf, therefore, 1" of ice weighs $56/12 = 4.7$ psf
Concurrent Temperature: 5 F
Gust Speed: 50 mph

Data Source: Standard ASCE/SEI 7-10, Figs. 10-2 through 10-8

Date Accessed: Wed May 09 2018

Ice thicknesses on structures in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 50-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Snow

Results:

Ground Snow Load, p_g : 60 lb/ft² Bridge will be analyzed for snow load but not concurrently with the moving traffic loads.

Elevation: 314.9 ft

Data Source: ASCE/SEI 7-10, Fig. 7-1.

Date Accessed: Wed May 09 2018

Values provided are ground snow loads. In areas designated "case study required," extreme local variations in ground snow loads preclude mapping at this scale. Site-specific case studies are required to establish ground snow loads at elevations not covered.

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SEISMIC LOADS (3.10.9)

Per AASHTO, single span bridge needs only be analyzed for anchorage (4.7.4.2)

Temporary Bridge?: No

PGA = 0.110 g
Ss = 0.214 g
S1 = 0.072 g
Site Class = D
Seismic Zone = 1
FPGA = 1.579
Fa = 1.600
Fv = 2.400
As = 0.174 g
SDS = 0.228 g
SD1 = 0.115 g
Ts = 0.505 s
T0 = 0.101 s
Tm = 0.052 s
Csm = 0.202 g

$$T_m = 2\pi \sqrt{\frac{W}{gk}}$$

$$k = \frac{384EI}{5l^3}$$

E = 29000 ksi
I = 77400 in⁴
L = 480 in
k = 1558.8 k/in
W = 40.6 kips

WIND

Check Uplift

Width of bridge = 16 ft
DC = 784 plf
WS = 320 plf

$0.9DC + 1.4WS = 257.6 \text{ plf}$
No Uplift

Lateral Wind Force

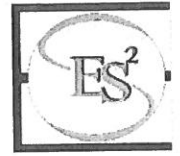
Length of bridge = 40 ft
Height of bridge = 2.95 ft
Windward Load = 50 psf (AASHTO Table 3.8.1.2.1-1)
Wind Force = 8.3 kips

COMPARISON OF LATERAL FORCES

Wind Force = 8.3 kips ← ***governs***
Seismic Force = 8.2 kips

LATERAL FORCES TO ABUTMENTS

Wind Force = 4.1 kips ← ***governs***
Seismic Force = 4.1 kips



ABUTMENT DESIGN

Analysis of Redi Rock wall

Input data

Project

Task : Townsend MA Bridge
Part : Vehicle load on bridge
Description : Abutment
Date : 5/31/2018

Settings

ASD - Skewed Back - NCMA 3rd Edition Table 5-2 Factors (2)
Materials and standards

AASHTO - reduce parameters of friction soil/soil by 2/3 ϕ

Wall analysis

Active earth pressure calculation : Coulomb
Passive earth pressure calculation : Mazindrani (Rankine)
Earthquake analysis : Mononobe-Okabe
Shape of earth wedge : Calculate as skew
Allowable eccentricity : 0.333
Internal stability : Standard - straight slip surface
Reduction coeff. of contact first block - base : 1.00
Verification methodology : Safety factors (ASD)
Reduce parameters of contact base - soil

Safety factors			
Permanent design situation			
Safety factor for overturning :	$SF_o =$	1.50	[-]
Safety factor for sliding resistance :	$SF_s =$	1.50	[-]
Safety factor for bearing capacity :	$SF_b =$	1.00	[-]
Safety factor for sliding along geo-reinforcement :	$SF_{sl} =$	1.50	[-]
Safety factor for geo-reinforcement strength :	$SF_{st} =$	1.50	[-]
Safety factor for pull out resistance of geo-reinf. :	$SF_{po} =$	1.50	[-]
Safety factor for connection strength :	$SF_{con} =$	1.50	[-]
Reduction coefficients			
Permanent design situation			
Reduction coeff. of contact base - soil :	$\mu =$	1.00	[-]

Blocks

No.	Description	Height h [in]	Width w [in]	Unit weight γ [pcf]
1	Block 28	18.00	28.00	120.00
2	Block 41	18.00	40.50	120.00
3	Block 60	18.00	60.00	130.00
4	Top block 24 straight	18.00	24.00	108.00
5	Planter 41	18.00	40.50	120.00
6	Planter 60	18.00	60.00	112.00
7	Top block 28	18.00	28.00	120.00
8	Top block 41	18.00	40.50	120.00
9	Top block 24 straight garden	18.00	24.00	80.00

No.	Description	Min. shear strength F_{min} [lb/ft]	Max. shear strength F_{max} [lb/ft]	Friction μ [%]
1	Block 28	6061.00	11276.00	44.00
2	Block 41	6061.00	11276.00	44.00
3	Block 60	6061.00	11276.00	44.00
4	Top block 24 straight	6061.00	11276.00	44.00
5	Planter 41	6061.00	11276.00	44.00
6	Planter 60	6061.00	11276.00	44.00
7	Top block 28	6061.00	11276.00	44.00
8	Top block 41	6061.00	11276.00	44.00
9	Top block 24 straight garden	6061.00	11276.00	44.00

Setbacks

No.	Setback s [in]
1	0.010
2	0.375
3	1.625
4	9.375
5	16.625

Geometry

No. group	Description	Count	Setback s [in]
1	Block 41	4	1.62
2	Top block 41	1	-

Base

Geometry

Upper setback $a_1 = 0.00$ ft

Lower setback $a_2 = 1.64$ ft

Height $h = 1.64$ ft

Width $b = 6.56$ ft



Material

Concrete self-weight $\gamma = 159.15$ pcf

Shear cub (key) capacity = 0.00 lb/ft

Friction angle concrete-concrete = 30.00 °

Basic soil parameters

No.	Name	Pattern	ϕ_{ef} [°]	c_{ef} [psf]	γ [pcf]	γ_{sat} [pcf]	δ [°]
1	Silty Sand		29.00	100.0	115.00	55.50	29.00
2	Well Graded Gravel		41.50	0.0	133.00	70.50	29.00

All soils are considered as cohesionless for at rest pressure analysis.

Soil parameters


Silty Sand

Unit weight : $\gamma = 115.0$ pcf
 Stress-state : effective
 Angle of internal friction : $\phi_{ef} = 29.00^\circ$
 Cohesion of soil : $c_{ef} = 100.0$ psf
 Angle of friction struc.-soil : $\delta = 29.00^\circ$
 Saturated unit weight : $\gamma_{sat} = 118.0$ pcf

Well Graded Gravel

Unit weight : $\gamma = 133.0$ pcf
 Stress-state : effective
 Angle of internal friction : $\phi_{ef} = 41.50^\circ$
 Cohesion of soil : $c_{ef} = 0.0$ psf
 Angle of friction struc.-soil : $\delta = 29.00^\circ$
 Saturated unit weight : $\gamma_{sat} = 133.0$ pcf

Geological profile and assigned soils

No.	Layer [ft]	Assigned soil	Pattern
1	-	Silty Sand	

Terrain profile

Terrain behind the structure is flat.

Water influence

Ground water table is located below the structure.

Input surface surcharges

No.	Surchage		Action	Mag.1 [lb/ft ²]	Mag.2 [lb/ft ²]	Ord.x x [ft]	Length l [ft]	Depth z [ft]
	new	change						
1	Yes		permanent	282.5				on terrain

Resistance on front face of the structure

Resistance on front face of the structure is not considered.

Applied forces acting on the structure

No.	Force new edit	Name	Action	F_x [lb/ft]	F_z [lb/ft]	M [lb/ft/ft]	x [ft]	z [ft]
1	Yes	Bridge dead load	permanent	0.00	752.00	0.0	1.17	0.00
2	Yes	Bridge Live Load	variable	0.00	2556.00	0.0	1.17	0.00

Settings of the stage of construction

Design situation : permanent

Verification No. 1

Forces acting on construction

Name	F_{hor} [lb/ft]	App.Pl. z [ft]	F_{vert} [lb/ft]	App.Pl. x [ft]	Design coefficient
Weight - wall	0.0	-3.61	4617.7	3.47	1.000
Weight - earth wedge	0.0	-2.40	202.4	5.60	1.000
Weight - earth wedge	0.0	-8.93	135.9	4.02	1.000
Active pressure	905.4	-2.22	845.9	6.04	1.000
Surch. 1 - surface	665.4	-3.80	601.1	5.80	1.000
Bridge dead load	0.0	-9.14	752.0	3.77	1.000
Bridge Live Load	0.0	-9.14	2556.0	3.77	1.000

Verification of complete wall

Check for overturning stability

Resisting moment $M_{res} = 38777.3$ lbft/ft

Overturning moment $M_{ovt} = 4538.4$ lbft/ft

Safety factor = 8.54 > 1.50

Wall for overturning is SATISFACTORY

Check for slip

Resisting horizontal force $H_{res} = 6038.99$ lb/ft

Active horizontal force $H_{act} = 1570.78$ lb/ft

Safety factor = 3.84 > 1.50

Wall for slip is SATISFACTORY

Overall check - WALL is SATISFACTORY

Dimensioning No. 1

Forces acting on construction

Name	F_{hor} [lb/ft]	App.Pl. z [ft]	F_{vert} [lb/ft]	App.Pl. x [ft]	Design coefficient
Weight - wall	0.0	-3.61	2904.6	1.95	1.000
Weight - earth wedge	0.0	-7.29	135.9	2.38	1.000
Active pressure	270.6	-1.46	119.6	3.51	1.000
Surch. 1 - surface	434.4	-3.27	288.2	3.72	1.000
Bridge dead load	0.0	-7.50	752.0	2.13	1.000
Bridge Live Load	0.0	-7.50	2556.0	2.13	1.000

Verification of block No. 1

Check for overturning stability

Resisting moment $M_{res} = 14506.5$ lbft/ft

Overturning moment $M_{ovt} = 1812.3$ lbft/ft

Safety factor = 8.00 > 1.50

Joint for overturning stability is SATISFACTORY

Check for slip

Resisting horizontal force $H_{res} = 3900.71$ lb/ft
Active horizontal force $H_{act} = 705.04$ lb/ft

Safety factor = 5.53 > 1.50
Joint for verification is SATISFACTORY

Bearing capacity of foundation soil

Design load acting at the center of footing bottom

No.	Moment [lb/ft/ft]	Norm. force [lb/ft/ft]	Shear Force [lb/ft/ft]	Eccentricity [-]	Stress [psf]
1	-2379.2	9710.87	1570.78	0.000	1479.9

Service load acting at the center of footing bottom

No.	Moment [lb/ft/ft]	Norm. force [lb/ft/ft]	Shear Force [lb/ft/ft]
1	-2379.2	9710.87	1570.78

Verification of foundation soil

Stress in the footing bottom : rectangle

Eccentricity verification

Max. eccentricity of normal force $e = 0.000$

Maximum allowable eccentricity $e_{allow} = 0.333$

Eccentricity of the normal force is SATISFACTORY

Verification of bearing capacity

Max. stress at footing bottom $\sigma = 1479.9$ psf

Bearing capacity of foundation soil $R_d = 1500.0$ psf

Safety factor = 1.01 > 1.00

Bearing capacity of foundation soil is SATISFACTORY

Overall verification - bearing capacity of found. soil is SATISFACTORY

Analysis of Redi Rock wall

Input data

Project

Task : Townsend MA Bridge
Part : Vehicle load on soil
Description : Abutment
Date : 5/31/2018

Settings

ASD - Skewed Back - NCMA 3rd Edition Table 5-2 Factors (2)
Materials and standards

AASHTO - reduce parameters of friction soil/soil by 2/3 ϕ

Well analysis

Active earth pressure calculation : Coulomb
Passive earth pressure calculation : Mazindrani (Rankine)
Earthquake analysis : Mononobe-Okabe
Shape of earth wedge : Calculate as skew
Allowable eccentricity : 0.333
Internal stability : Standard - straight slip surface
Reduction coeff. of contact first block - base : 1.00
Verification methodology : Safety factors (ASD)
Reduce parameters of contact base - soil

Safety factors			
Permanent design situation			
Safety factor for overturning :	$SF_o =$	1.50	[-]
Safety factor for sliding resistance :	$SF_s =$	1.50	[-]
Safety factor for bearing capacity :	$SF_b =$	1.00	[-]
Safety factor for sliding along geo-reinforcement :	$SF_{sr} =$	1.50	[-]
Safety factor for geo-reinforcement strength :	$SF_{st} =$	1.50	[-]
Safety factor for pull out resistance of geo-reinf. :	$SF_{po} =$	1.50	[-]
Safety factor for connection strength :	$SF_{con} =$	1.50	[-]
Reduction coefficients			
Permanent design situation			
Reduction coeff. of contact base - soil	$\mu =$	1.00	[-]

Blocks

No.	Description	Height h [in]	Width w [in]	Unit weight γ [pcf]
1	Block 28	18.00	28.00	120.00
2	Block 41	18.00	40.50	120.00
3	Block 60	18.00	60.00	130.00
4	Top block 24 straight	18.00	24.00	108.00
5	Planter 41	18.00	40.50	120.00
6	Planter 60	18.00	60.00	112.00
7	Top block 28	18.00	28.00	120.00
8	Top block 41	18.00	40.50	120.00
9	Top block 24 straight garden	18.00	24.00	80.00

No.	Description	Min. shear strength F_{min} [lb/ft]	Max. shear strength F_{max} [lb/ft]	Friction μ [%]
1	Block 28	6061.00	11276.00	44.00
2	Block 41	6061.00	11276.00	44.00
3	Block 60	6061.00	11276.00	44.00
4	Top block 24 straight	6061.00	11276.00	44.00
5	Planter 41	6061.00	11276.00	44.00
6	Planter 60	6061.00	11276.00	44.00
7	Top block 28	6061.00	11276.00	44.00
8	Top block 41	6061.00	11276.00	44.00
9	Top block 24 straight garden	6061.00	11276.00	44.00

Setbacks

No.	Setback s [in]
1	0.010
2	0.375
3	1.625
4	9.375
5	16.625

Geometry

No. group	Description	Count	Setback s [in]
1	Block 41	4	1.62
2	Top block 41	1	-

Base

Geometry

Upper setback $a_1 = 0.00$ ft

Lower setback $a_2 = 1.64$ ft

Height $h = 1.64$ ft

Width $b = 6.56$ ft

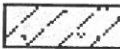
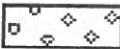
Material

Concrete self-weight $\gamma = 159.15$ pcf

Shear cub (key) capacity = 0.00 lb/ft

Friction angle concrete-concrete = 30.00 °

Basic soil parameters

No.	Name	Pattern	φ_{ef} [°]	c_{ef} [pcf]	γ [pcf]	γ_{sat} [pcf]	δ [°]
1	Silty Sand		29.00	100.0	115.00	55.50	29.00
2	Well Graded Gravel		41.50	0.0	133.00	70.50	29.00

All soils are considered as cohesionless for at rest pressure analysis.

Soil parameters


Silty Sand

Unit weight : $\gamma = 115.0$ pcf
 Stress-state : effective
 Angle of internal friction : $\phi_{ef} = 29.00^\circ$
 Cohesion of soil : $c_{ef} = 100.0$ psf
 Angle of friction struc.-soil : $\delta = 29.00^\circ$
 Saturated unit weight : $\gamma_{sat} = 118.0$ pcf

Well Graded Gravel

Unit weight : $\gamma = 133.0$ pcf
 Stress-state : effective
 Angle of internal friction : $\phi_{ef} = 41.50^\circ$
 Cohesion of soil : $c_{ef} = 0.0$ psf
 Angle of friction struc.-soil : $\delta = 29.00^\circ$
 Saturated unit weight : $\gamma_{sat} = 133.0$ pcf

Geological profile and assigned soils

No.	Layer [ft]	Assigned soil	Pattern
1	-	Silty Sand	

Terrain profile

Terrain behind the structure is flat.

Water influence

Ground water table is located below the structure.

Input surface surcharges

No.	Surcharge		Action	Mag.1	Mag.2	Ord.x x [ft]	Length l [ft]	Depth
	new	change		[lb/ft ²]	[lb/ft ²]			z [ft]
1	Yes		permanent	282.5				on terrain
2	Yes		variable	240.0				on terrain
No.	Name							
1	Bridge							
2	Vehicle							

Resistance on front face of the structure

Resistance on front face of the structure is not considered.

Applied forces acting on the structure

No.	Force new edit	Name	Action	F_x [lb/ft]	F_y [lb/ft]	M [lb/ft ²]	x [ft]	z [ft]
1	Yes	Bridge dead load	permanent	0.00	752.00	0.0	1.17	0.00

Settings of the stage of construction

Design situation : permanent

Verification No. 1

Forces acting on construction

Name	F_{hor} [lb/ft]	App.Pl. z [ft]	F_{vert} [lb/ft]	App.Pl. x [ft]	Design coefficient
Weight - wall	0.0	-3.61	4617.7	3.47	1.000
Weight - earth wedge	0.0	-2.40	202.4	5.60	1.000
Weight - earth wedge	0.0	-8.93	135.9	4.02	1.000
Active pressure	905.4	-2.22	845.9	6.04	1.000
Bridge	665.4	-3.80	601.1	5.80	1.000
Vehicle	663.1	-4.42	510.7	5.80	1.000
Bridge dead load	0.0	-9.14	752.0	3.77	1.000

Verification of complete wall

Check for overturning stability

Resisting moment $M_{res} = 32108.0$ lbft/ft

Overturning moment $M_{ovr} = 7467.2$ lbft/ft

Safety factor = 4.30 > 1.50

Wall for overturning is SATISFACTORY

Check for slip

Resisting horizontal force $H_{res} = 4891.97$ lb/ft

Active horizontal force $H_{act} = 2233.86$ lb/ft

Safety factor = 2.19 > 1.50

Wall for slip is SATISFACTORY

Overall check - WALL is SATISFACTORY

Dimensioning No. 1

Forces acting on construction

Name	F_{hor} [lb/ft]	App.Pl. z [ft]	F_{vert} [lb/ft]	App.Pl. x [ft]	Design coefficient
Weight - wall	0.0	-3.61	2904.6	1.95	1.000
Weight - earth wedge	0.0	-7.29	135.9	2.38	1.000
Active pressure	270.6	-1.46	119.6	3.51	1.000
Bridge	434.4	-3.27	288.2	3.72	1.000
Vehicle	466.9	-3.91	244.8	3.72	1.000
Bridge dead load	0.0	-7.50	752.0	2.13	1.000

Verification of block No. 1

Check for overturning stability

Resisting moment $M_{res} = 9976.7$ lbft/ft

Overturning moment $M_{ovr} = 3637.7$ lbft/ft

Safety factor = 2.74 > 1.50

Joint for overturning stability is SATISFACTORY

Check for slip

Resisting horizontal force $H_{res} = 2566.34$ lb/ft
Active horizontal force $H_{ad} = 1171.91$ lb/ft

Safety factor = 2.19 > 1.50
Joint for verification is SATISFACTORY

Bearing capacity of foundation soil

Design load acting at the center of footing bottom

No.	Moment [lb/ft/ft]	Norm. force [lb/ft/ft]	Shear Force [lb/ft/ft]	Eccentricity [-]	Stress [psf]
1	508.6	7665.52	2233.86	0.010	1192.3

Service load acting at the center of footing bottom

No.	Moment [lb/ft/ft]	Norm. force [lb/ft/ft]	Shear Force [lb/ft/ft]
1	508.6	7665.52	2233.86

Verification of foundation soil

Stress in the footing bottom : rectangle

Eccentricity verification

Max. eccentricity of normal force $e = 0.010$
Maximum allowable eccentricity $e_{allw} = 0.333$

Eccentricity of the normal force is SATISFACTORY

Verification of bearing capacity

Max. stress at footing bottom $\sigma = 1192.3$ psf
Bearing capacity of foundation soil $R_d = 1500.0$ psf

Safety factor = 1.26 > 1.00
Bearing capacity of foundation soil is SATISFACTORY

Overall verification - bearing capacity of found. soil is SATISFACTORY

No.	Name
2	Vehicle

Water

Water type : No water

Tensile crack

Tensile crack not input.

Earthquake

Earthquake not included.

Settings of the stage of construction

Design situation : permanent

Results (Stage of construction 1)

Analysis 1

Circular slip surface

Slip surface parameters					
Center:	x =	-0.98 [ft]	Angles:	$\alpha_1 =$	-37.88 [°]
	z =	2.39 [ft]		$\alpha_2 =$	79.00 [°]
Radius:	R =	12.53 [ft]			
The slip surface after optimization.					

Slope stability verification (Bishop)

Sum of active forces : $F_a = 8570.8$ lb/ft

Sum of passive forces : $F_p = 12696.4$ lb/ft

Sliding moment : $M_a = 107392.5$ lbft/ft

Resisting moment : $M_p = 159086.5$ lbft/ft

Factor of safety = 1.48 < 1.50

Slope stability NOT ACCEPTABLE

Bearing kits:

$$P_p/\Omega_c = 0.85 \cdot f_c \cdot A_1/\Omega_c$$

$$20.3k + 69.0k = 0.85 \cdot (2.5 \text{ ksi}) \cdot A_1/2.31$$

$$206.3k = 0.85 \cdot (2.5 \text{ ksi}) \cdot A_1$$

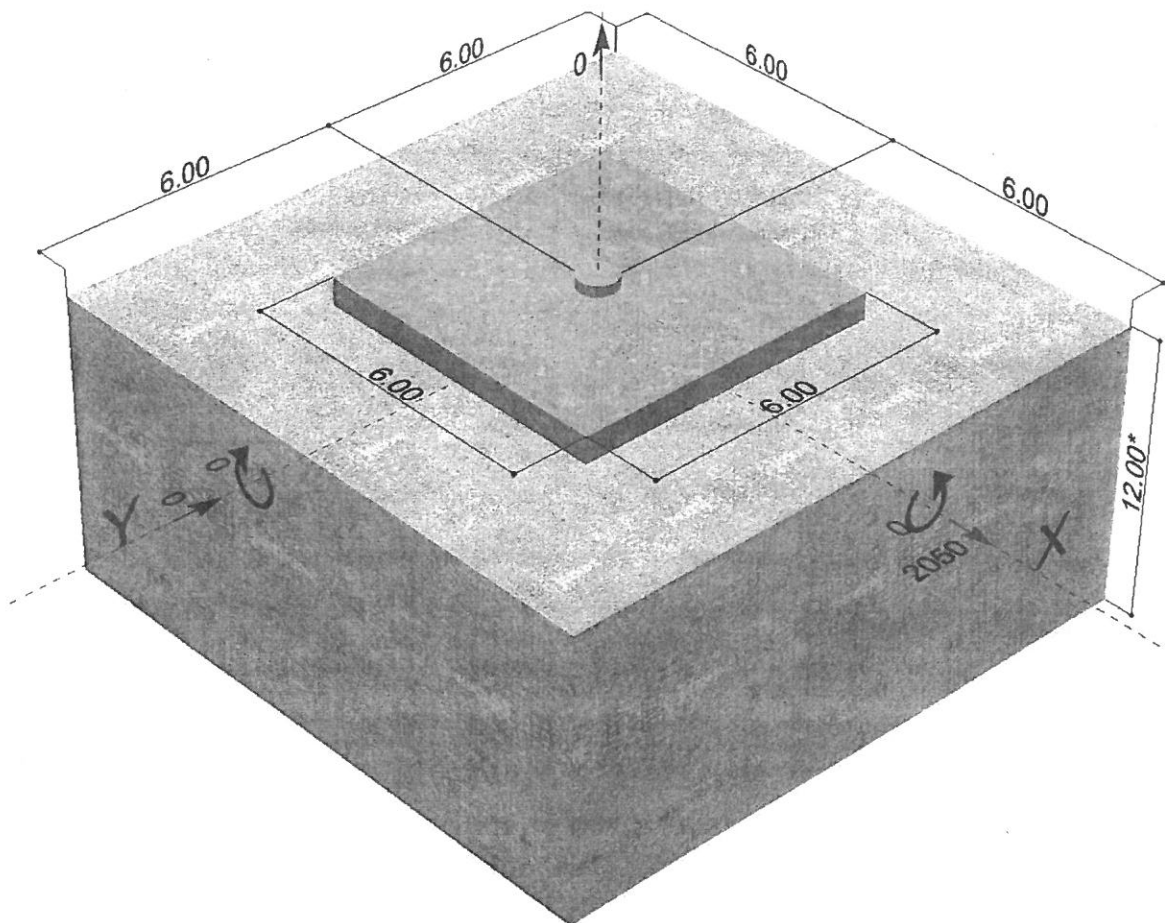
$$A_1 = 97.1 \text{ in}^2 \text{ is required}$$

$$\text{Bearing kits are } 6" \times 6" \text{ ---> } A = 36 \text{ in}^2$$

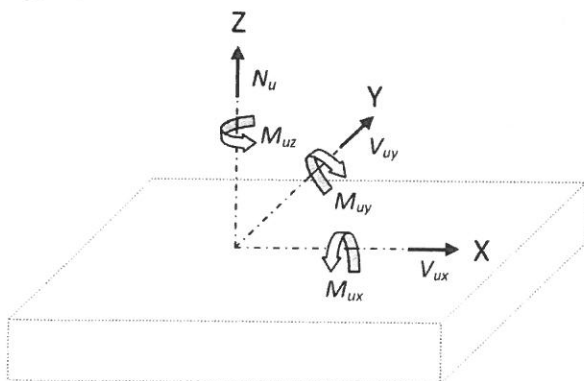
1" thick sill plate will need to be used to provide sufficient bearing area.

$$\text{PEP pad needs to be } 10" \times 10" \text{ minimum ---> } A = 100 \text{ in}^2$$

GEOMETRY:



LOAD ACTIONS: [lb], [ft-lb]



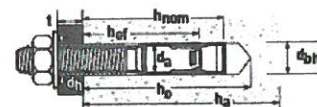
Design loads / actions		
N_u	0	lb
V_{ux}	2050	lb
V_{uy}	0	lb
M_{ux}	0	ft-lb
M_{uy}	0	ft-lb
M_{uz}	-	

Eccentric profile		
$e_x = 0.00$ inch; $e_y = 0.00$ inch		
Load reversal	100	%
X-direction		
Load reversal	100	%
Y-direction		

Input data and results must be checked for agreement with the existing circumstances, the standards and guidelines and must be checked for plausibility.

SUMMARY:

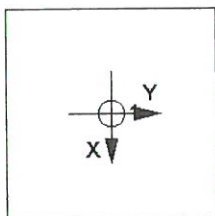
Selected anchor: Power-Stud+ SD2
 3/4" Ø; hnom 4-1/2" (114mm), Grade 2
 Effective embedment: $h_{ef} = 3.750$ inch
 Approval: ICC-ES ESR-2502



Basic principles of design:

Design method:	ACI 318-11 (Appendix D)		
Concrete:	Normal weight concrete	cracked concrete	$f'_c = 2500$ psi
Load combinations:	from Section 9.2		
	Factored loads		
	$\Omega_0 =$ User enters load		
Anchor parameters:	$c_{min} = 5.00$ inch	$s_{min} = 6.00$ inch	$h_{min} = 7.00$ inch
	$c_{ac} = 12.00$ inch	$s_{cr} = 11.25$ inch	Anchor ductility: yes
Reinforcement:	none edge reinforcement or < #4 bar		
	Tension: Condition B	Shear:	Condition B
Stand-off:	not existent		
Seismic loads:	yes		
	Tension load	yes (D.3.3.4.3(c))	
	Shear load	yes (D.3.3.5.3(b))	

Resulting anchor forces / load distribution:



Anchor No.	Tension load	Shear load
#1	0 lb	2050 lb
Maximum	0 lb	2050 lb

Max. concrete compression strain: 0.00 ‰
 Max. concrete compression stress: 0 psi
 Resulting tension force: 0 lb
 Resulting compression force: 0 lb

Calculations:	Design proof:	Demand	Capacity	Status
	Tension load	-	-	-
	Shear load	2050 lb	2581 lb	$0.79 \leq 1.0$
	Interaction	-	-	-

Anchor plate: Material: $f_{yk} = 36000$ psi
 Length x width: 6.00 inch x 6.00 inch
 Actual plate thickness: 0.500 inch
 Calculated plate thickness: - inch not calculated

Profile: none selected

Input data and results must be checked for agreement with the existing circumstances, the standards and guidelines and must be checked for plausibility.



Company name:

Project: Townsend MA Bridge

Date: 5/31/2018

Version: 2.4.6290.27783

Project number: 18.2614

Page: 4/5

DESIGN PROOF SHEAR LOADING:

Reference

Steel strength (without lever arm):

$$V_{sa,eq} = 8060 \text{ lb}$$

D.6.1

$$\begin{aligned} \Phi * V_{sa,eq} &= \Phi * V_{sa,eq} \\ &= 0.65 * 8060 \text{ lb} = 5239 \text{ lb} \end{aligned}$$

D.6.1.2

$$V_{ua} = 2050 \text{ lb}$$

$$\text{Design proof: } V_{ua} / (\Phi * V_{sa,eq}) = 2050 \text{ lb} / 5239 \text{ lb} = 0.39 \leq 1.00$$

Concrete breakout strength, direction x+:

$$l_e = 3.75 \text{ inch}$$

$$d_a = 0.750 \text{ inch}$$

$$c_{a1} = 6.00 \text{ inch}$$

$$\begin{aligned} V_b &= \lambda_a * 7 * (l_e / d_0)^{0.2} * d_a^{0.5} * f'_c{}^{0.5} * c_{a1}^{1.5} \\ &= 1.00 * 7 * 1.380 * 0.866 * 50.000 * 14.70 = 6146 \text{ lb} \end{aligned}$$

D.6.2.2

$$A_{Vc0} = 162.00 \text{ inch}^2$$

$$A_{Vc} = 108.00 \text{ inch}^2$$

$$\psi_{ec,V} = 1.000$$

D.6.2.5

$$\psi_{ed,V} = 0.900$$

D.6.2.6

$$\psi_{a,V} = 1.000$$

D.6.2.1c

$$\psi_{c,V} = 1.000$$

D.6.2.7

$$\psi_{h,V} = 1.000$$

D.6.2.8

$$\begin{aligned} \Phi * V_{cb} &= \Phi_{seis} * \Phi * (A_{Vc} / A_{Vc0}) * \psi_{ec,V} * \psi_{ed,V} * \psi_{a,V} * \psi_{c,V} * \psi_{h,V} * V_b \\ &= 1.0 * 0.70 * (108.00 / 162.00) * 1.000 * 0.900 * 1.000 * 1.000 * 1.000 * 6146 \text{ lb} \\ &= 2581 \text{ lb} \end{aligned}$$

D.6.2.1

$$V_{ua} = 2050 \text{ lb}$$


$$\text{Design proof: } V_{ua} / (\Phi * V_{cbg}) = 2050 \text{ lb} / 2581 \text{ lb} = 0.79 \leq 1.00$$

Input data and results must be checked for agreement with the existing circumstances, the standards and guidelines and must be checked for plausibility.

PDA - Powers Design Assist®

Bearing Kit Support.pcp2

A16

		Company name:		Date:	5/31/2018
Version: 2.4.6290.27783		Project:	Townsend MA Bridge	Page:	5/5
		Project number:	18.2614		

Pryout strength:

$$\begin{aligned}
 h_{ef} &= 3.750 && \text{inch} \\
 k_c &= 17.0 \\
 N_b &= k_c * f'_c{}^{0.5} * \lambda_a * h_{ef}{}^{1.5} && \text{D.5.2.2} \\
 &= 17.0 * 2500^{0.5} * 1.00 * 3.750^{1.5} = 6173 \text{ lb} \\
 A_{Nc} &= 126.56 && \text{inch}^2 \\
 A_{Nc0} &= 126.56 && \text{inch}^2 \\
 c_{a,min} &= 6.00 && \text{inch} \\
 \psi_{ed,N} &= 1.000 && \text{D.5.2.5} \\
 \psi_{cp,N} &= 1.000 && \text{D.5.2.7} \\
 \psi_{c,N} &= 1.000 && \text{D.5.2.6} \\
 k_{cp} &= 2.0 && \text{D.6.3.1} \\
 \Phi * V_{cp} &= \Phi_{seis} * \Phi * (A_{Nc} / A_{Nc0}) * \psi_{ed,N} * \psi_{cp,N} * \psi_{c,N} * N_b * k_{cp} \\
 &= 1.0 * 0.70 * (126.56 / 126.56) * 1.000 * 1.000 * 1.000 * 6173 \text{ lb} * 2.0 \\
 &= 8642 && \text{lb} \\
 V_{ua} &= 2050 && \text{lb} \\
 \text{Design proof: } V_{ua} / (\Phi * V_{cp}) &= 2050 \text{ lb} / 8642 \text{ lb} = 0.24 \leq 1.00
 \end{aligned}$$

Fastening ok!

WARNINGS / REMARKS:

Calculations including seismic design requirements in accordance with ACI 318 D.3.3/CSA A23.3 D4.3 are required for anchors in structures assigned to seismic design categories C, D, E and F. Under these seismic conditions, the direction of shear may not be predictable. As default and in accordance with ACI 318 D.3.3/CSA A23.3 D4.3 the full shear force is assumed also in reverse direction for a safe design. This may influence the direction of the controlling concrete breakout strength.

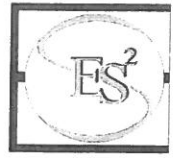
Per ACI 318-11, Part D.3.3.5.3(a) the anchor or group of anchors shall be designed for the maximum shear that can be transmitted to the anchor or group of anchors based on the development of a ductile yield mechanism in the attachment in flexure, shear, or bearing, or a combination of those conditions, and considering both material overstrength and strain hardening effects for the attachment. Per ACI 318-11, Part D.3.3.5.3(b) the anchor or group of anchors shall be designed for the maximum shear that can be transmitted to the anchors by a non-yielding attachment. Per ACI 318-11, Part D.3.3.5.3(c) the anchor or group of anchors shall be designed for the maximum shear obtained from design load combinations that include E, with E increased by Ω_o . The anchor design shear strength shall satisfy the shear strength requirements of D.4.1.1.

Input data and results must be checked for agreement with the existing circumstances, the standards and guidelines and must be checked for plausibility.

PDA - Powers Design Assist®

Bearing Kit Support.pcp2

A17



GUARDRAIL DESIGN

RAILS

AASHTO A13.2

Project: 18.2614 Townsend, MA Bridge

Railing Test Level TL-1

F_t 13.5 kips
 H_e 18 in
 h_a 3 in
 M_a 23.625 k*ft
 V_a 13.5 kips

Post W6x16

Spacing 4.5 ft
 F_y 50 ksi
 Z 11.7 in³
 A 4.74 in²
 d 6.28 in
 t_w 0.26 in
 h/t_w 24.15
Check h/t_w 53.95 OK
 C_v 1.0
 M_n/Ω_b 29.2 k*ft OK $\Omega_b = 1.67$
 V_n/Ω_v 32.7 kips OK $\Omega_v = 1.50$

Railing HSS8x3x5/16 (weak axis)

Span 4.5 ft
 F_y 46 ksi
 Z 6.84 in³
 A 5.85 in²
 H_t 32 in OK
 M_{max} 15.2 k*ft
 V_{max} 13.5 kips
 M_n/Ω_b 15.7 k*ft OK
 V_n/Ω_v 107.6 kips OK

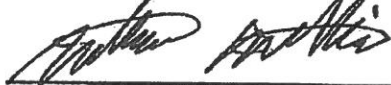
Client Supplied Addendum A

On behalf of the Townsend Water Department and the Town of Townsend, we have read, considered, and agree to the terms listed on the documents referenced below as well as Paragon's Sales Contract. We have the ability to access all necessary documents online or otherwise have been offered a printed copy.

Reference Documents

- (1) ParagonBridgeWorks Quote #PBWI3249-01 Dated January 30, 2018
- (2) ParagonBridgeWorks Quote #PBWQ3249 Dated January 2, 2018

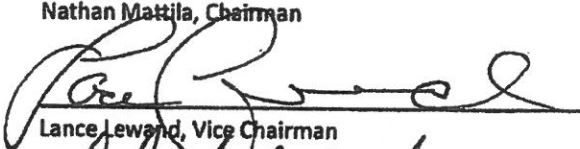
Board of Water Commissioners:



Nathan Mattila, Chairman

3/14/18

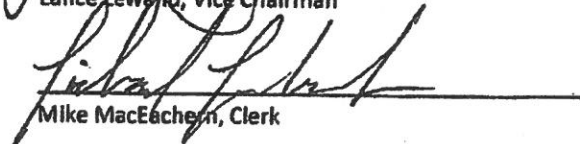
Date



Lance Lewand, Vice Chairman

3/14/18

Date



Mike MacEachern, Clerk

3-14-18

Date

Board of Selectmen:



Cindy King, Chairman

3/20/18

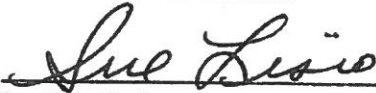
Date



Gordon Clark, Vice Chairman

3-20-18

Date



Sue Lisio, Clerk

3/20/18

Date



QUOTE

California "A" General Engineering #957465
POB 22431, Bakersfield, CA 93390
t. 6615774374 f. 6615774372
www.ParagonBridgeWorks.com

PARAGONBRIDGEWORKS

Number PBWQ3249

Date Jan 2, 2018

Sold To

Townsend Water Dept.
Nathan Mattila
Townsend, MA

Ship To

Townsend Water Dept.
Nathan Mattila
Townsend, MA

Phone
Fax

Phone
Fax

Salesperson	P.O. Number	Good through	Bridge Rating
-------------	-------------	--------------	---------------

Christian

Line	Qty	Description	Unit Price	Ext. Price
1		Payment due upon delivery of bridge		
2	1	Bare bridge deck (S40X16)	\$16,000.00	\$16,000.00
3	8	Bearing kit for End Sill applications (BKES)	\$247.81	\$1,982.48
4	2	PreCast concrete abutment kit (2W3R)	\$6,558.52	\$13,117.04

SubTotal \$31,099.52

Tax (7.5% CA) \$0.00

Deposit required to start: \$0.00

Total \$31,099.52

I have read, considered, and agree to the terms listed on this document as well as Paragon's Sales Contract. I have the ability to access all necessary documents online or otherwise have been offered a printed copy.

Document	Download Link
Drawings	www.ParagonBridgeWorks.com/drawings
	www.ParagonBridgeWorks.com/contract
Sales Contract	Master Contract: 5 pages Schedule A: 2 pages // Schedule B: 1 page Schedule C: 3 pages // Schedule D: 1 page Schedule E: 2 pages // Schedule F: 1 page Schedule G: 1 page

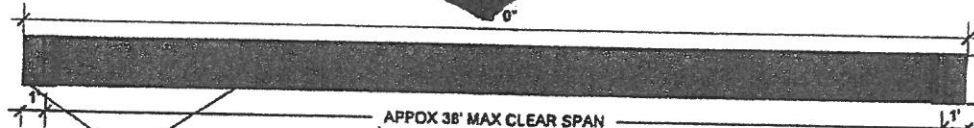
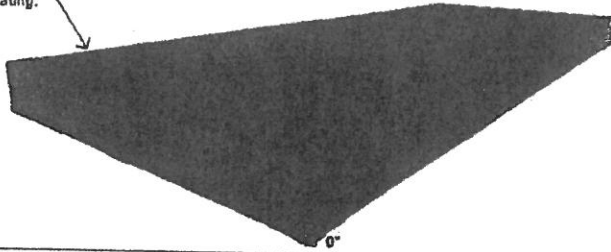
Signature:

Date:

Password: ixoye

By: Nathan Mattila, Townsend Water Dept.

Optional secondary decking
to be applied over this existing
decking. Material type/size
depends on desired load rating.

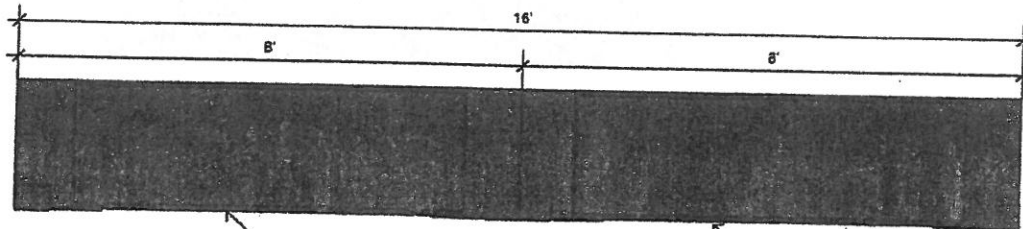


SIDE VIEW
(3/16" = 1')

Alternative bearings can be
placed anywhere in this area.



Shown without
standard
bearing kit



See S40X8 for additional details

See S40X8 for additional details

END VIEW
(1/2" = 1')



DRAWING NUMBER
S40X16

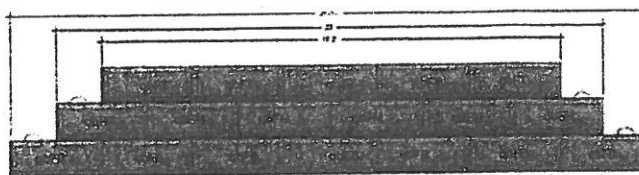
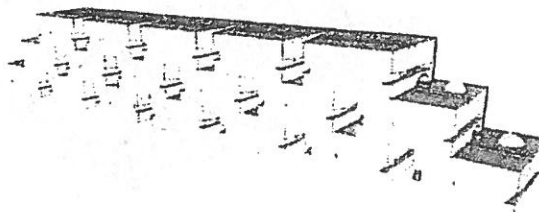
ORIGINAL ISSUE
07-10-13
REVISED
07-10-13

DRAWING NAME:
40' X 16' X 2' basic
Generic plans
Weight = Approx 24,000 lbs
(12,000 lbs per section)

DRAWN BY
NOAH FIGUEROA
PARAGON
BRIDGE WORKS

A

01/01



Yehuda Kuperman, 67, was born in the town of Krasnodar, in the Caucasus region of the Soviet Union. He was a member of the KGB for 20 years, and was involved in the Soviet invasion of Czechoslovakia in 1968. He was also involved in the Soviet invasion of Poland in 1981. He was a member of the KGB's "Special Operations" division, and was involved in the Soviet invasion of Afghanistan in 1979. He was a member of the KGB's "Special Operations" division, and was involved in the Soviet invasion of Afghanistan in 1979. He was a member of the KGB's "Special Operations" division, and was involved in the Soviet invasion of Afghanistan in 1979.

1. I or my family are being harmed (physically or sexually) by the person(s) I am talking to. I am afraid for my safety or the safety of my family.

Scale: 1:1000

2w3r

Parsons Bridge Works
2319 Freeway Ave
Bakersfield, California 93311
204-3-331-331
204-3-331-331

QUESTIONS

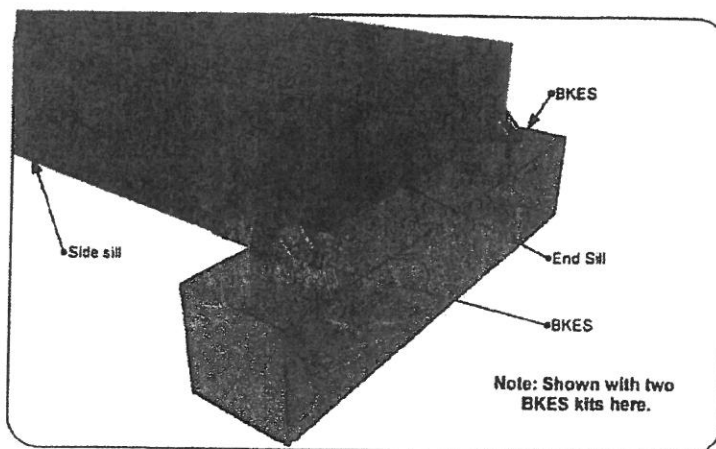
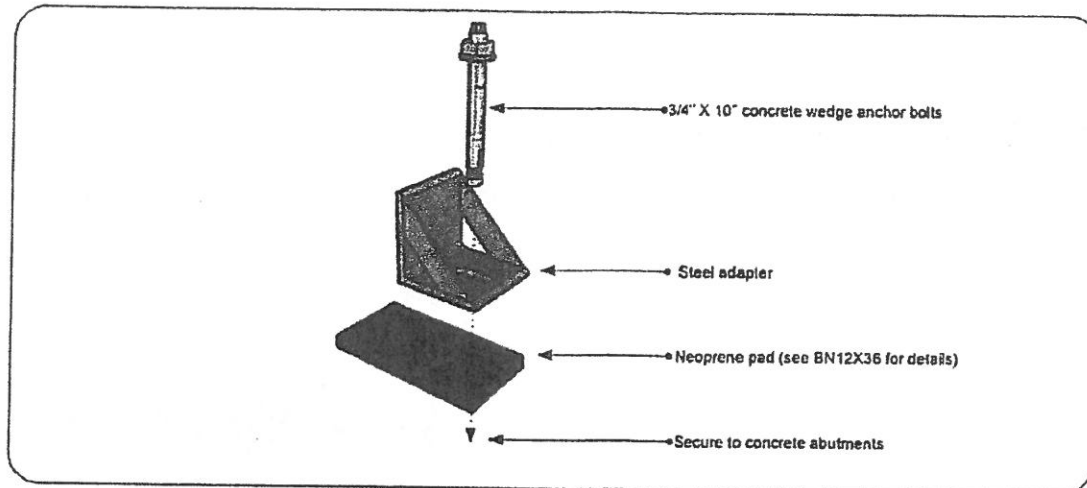
13-0002
04-00-1)

RECEIVED 199.

ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED

Q

1



Kit includes:

- (1) bolt
- (1) steel adapter
- (1) Neoprene (BN6X12)

Kit is shipped loose and NOT attached to bridge. All parts shipped "best way", either with bridge deck or separate. Size/location of slots based on approved structural drawings or Paragon's recommended practices.

DRAWING NUMBER
BKES

ORIGINAL ISSUE
07-15-13
REVISED
07-15-13

DRAWING NAME:
Bearing Kit @
End Sill

DRAWN BY
NOAH FIGUEROA
PARAGON
BRIDGE WORKS

A

01/01



QUOTE

California "A" General Engineering #957465
POB 22431, Bakersfield, CA 93390
t. 6615774374 f. 6615774372
www.ParagonBridgeWorks.com

PARAGONBRIDGEWORKS

Number PBWI3249-01

Date Jan 30, 2018

Sold To

Townsend Water Department
Nathan Mattila
Townsend, MA

Ship To

Townsend Water Department
Nathan Mattila
Townsend, MA

Phone
Fax

Phone
Fax

Salesperson	P.O. Number	Good through	Bridge Rating
-------------	-------------	--------------	---------------

Christian

Line	Qty	Description	Unit Price	Ext. Price
1		Payment due upon delivery of engineered plans. Client signatures will be on addendum A		
2		Structural Engineering & Warranty package (Schedule F, Type C @ 1 year).	\$9,000.00	\$9,000.00

SubTotal	\$9,000.00
Tax (7.5% CA)	\$0.00
Total	\$9,000.00

Deposit required to start: \$0.00

I have read, considered, and agree to the terms listed on this document as well as Paragon's Sales Contract. I have the ability to access all necessary documents online or otherwise have been offered a printed copy.

Document	Download Link
Drawings	www.ParagonBridgeWorks.com/drawings
Sales Contract	www.ParagonBridgeWorks.com/contract Master Contract: 5 pages Schedule A: 2 pages // Schedule B: 1 page Schedule C: 3 pages // Schedule D: 1 page Schedule E: 2 pages // Schedule F: 1 page Schedule G: 1 page

Signature:

Date:

Password: **ixoye**

By: Nathan Mattila, Townsend Water Department

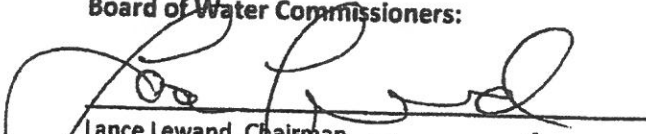
Client Supplied Addendum A

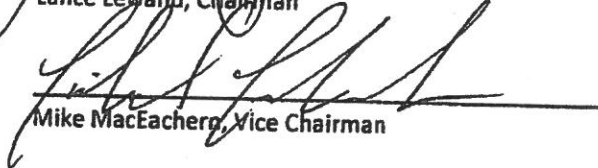
On behalf of the Townsend Water Department and the Town of Townsend, we have read, considered, and agree to the terms listed on the documents referenced below as well as Paragon's Sales Contract. We have the ability to access all necessary documents online or otherwise have been offered a printed copy.


Reference Documents

(1) ParagonBridgeWorks Quote #PBWQ3263 Dated July 13, 2018

Board of Water Commissioners:


Lance Lewand, Chairman


Mike MacEachern, Vice Chairman



7/30/18
Date

7-31-18
Date

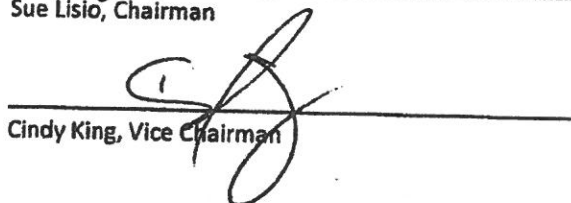
Nathan Matilla, Clerk

Date

Board of Selectmen:


Sue Lisio, Chairman

7/31/18
Date


Cindy King, Vice Chairman

7/31/18
Date

Wayne Miller, Clerk

Date



QUOTE

California "A" General Engineering #957465
POB 22431, Bakersfield, CA 93390
t. 6615774374 f. 6615774372

www.ParagonBridgeWorks.com

PARAGONBRIDGEWORKS

Number PBWQ3263

Date Jul 13, 2018

Sold To

Townsend water dept.
Lance Lewand, Chairman
Townsend, MA

Ship To

Townsend water dept.
Lance Lewand, Chairman
Townsend, MA

Phone
Fax

Phone
Fax

Salesperson		P.O. Number	Good through	Bridge Rating	
Christian					
Line	Qty	Description	Unit Price	Ext. Price	
1	1	Amount already quoted for 2w3r abutments	-\$13,117.04	-\$13,117.04	
2	2	PreCast concrete abutment kit (2W5R)	\$12,165.62	\$24,331.24	
3	8	Guardrail: Vehicular only, sold in 10' sections (GV10)	\$1,896.75	\$15,174.00	
4	80	Primer coating, priced per linear foot (boxcar brown).	\$5.50	\$440.00	
5	640	Primer coating entire bridge deck, including the underframe of bridge, priced per square foot (boxcar brown).	\$14.99	\$9,593.60	
6	640	Top coating, priced per square foot (boxcar brown).	\$7.35	\$4,704.00	
7	80	Top coating, priced per linear foot (boxcar brown).	\$2.25	\$180.00	
			SubTotal	\$41,305.80	
			Tax (7.5% CA)	\$0.00	
Deposit required to start:			\$0.00	Total \$41,305.80	

I have read, considered, and agree to the terms listed on this document as well as Paragon's Sales Contract. I have the ability to access all necessary documents online or otherwise have been offered a printed copy.

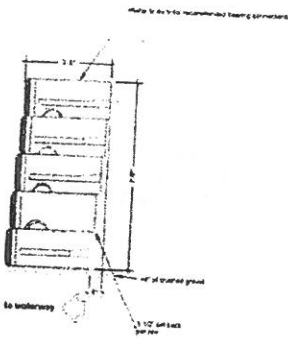
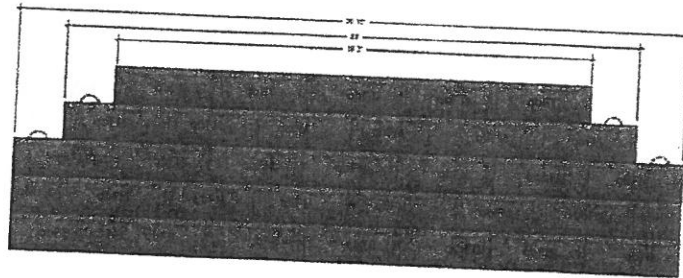
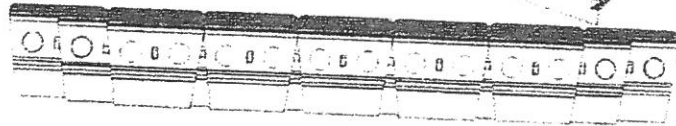
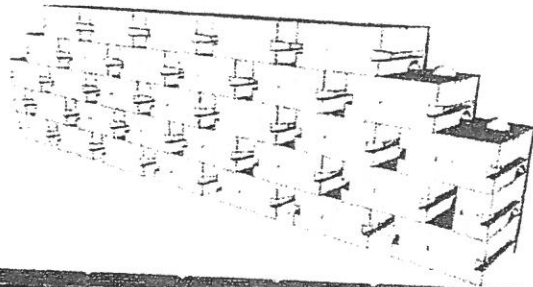
Document	Download Link
Drawings	www.ParagonBridgeWorks.com/drawings
Sales Contract	www.ParagonBridgeWorks.com/contract Master Contract: 5 pages Schedule A: 2 pages // Schedule B: 1 page Schedule C: 3 pages // Schedule D: 1 page Schedule E: 2 pages // Schedule F: 1 page Schedule G: 1 page

Signature:

Date:

Password: ixoye

By: See Client Supplied Addendum A



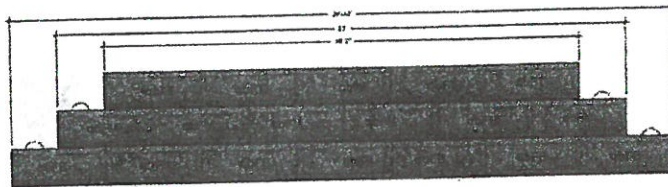
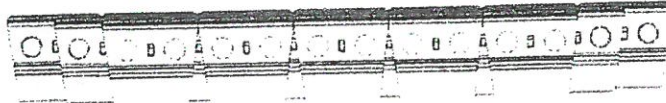
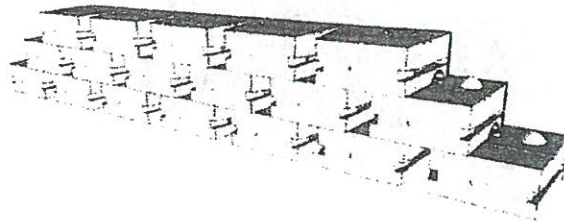
SECRET

Please contact your Paragon BridgeMedia representative to determine what party of hold is most appropriate for your situation. All events are by invitation and are NOT required to be purchased through Paragon.

[illegible]

Scale: 3/8" = 1'

[illegible]



Paragon Bridge Works
2349 Franklin Ave
Indianapolis, California 92208
(61) 653-577-4371
(7) 941-577-4377

2025

NO.

PAGE

As

10

21

Signature _____
Page _____

STATIONERY STORE, 100 N. 1st St.,
12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100, 102, 104, 106, 108, 110, 112, 114, 116, 118, 120, 122, 124, 126, 128, 130, 132, 134, 136, 138, 140, 142, 144, 146, 148, 150, 152, 154, 156, 158, 160, 162, 164, 166, 168, 170, 172, 174, 176, 178, 180, 182, 184, 186, 188, 190, 192, 194, 196, 198, 200, 202, 204, 206, 208, 210, 212, 214, 216, 218, 220, 222, 224, 226, 228, 230, 232, 234, 236, 238, 240, 242, 244, 246, 248, 250, 252, 254, 256, 258, 260, 262, 264, 266, 268, 270, 272, 274, 276, 278, 280, 282, 284, 286, 288, 290, 292, 294, 296, 298, 300, 302, 304, 306, 308, 310, 312, 314, 316, 318, 320, 322, 324, 326, 328, 330, 332, 334, 336, 338, 340, 342, 344, 346, 348, 350, 352, 354, 356, 358, 360, 362, 364, 366, 368, 370, 372, 374, 376, 378, 380, 382, 384, 386, 388, 390, 392, 394, 396, 398, 400, 402, 404, 406, 408, 410, 412, 414, 416, 418, 420, 422, 424, 426, 428, 430, 432, 434, 436, 438, 440, 442, 444, 446, 448, 450, 452, 454, 456, 458, 460, 462, 464, 466, 468, 470, 472, 474, 476, 478, 480, 482, 484, 486, 488, 490, 492, 494, 496, 498, 500, 502, 504, 506, 508, 510, 512, 514, 516, 518, 520, 522, 524, 526, 528, 530, 532, 534, 536, 538, 540, 542, 544, 546, 548, 550, 552, 554, 556, 558, 560, 562, 564, 566, 568, 570, 572, 574, 576, 578, 580, 582, 584, 586, 588, 590, 592, 594, 596, 598, 600, 602, 604, 606, 608, 610, 612, 614, 616, 618, 620, 622, 624, 626, 628, 630, 632, 634, 636, 638, 640, 642, 644, 646, 648, 650, 652, 654, 656, 658, 660, 662, 664, 666, 668, 670, 672, 674, 676, 678, 680, 682, 684, 686, 688, 690, 692, 694, 696, 698, 700, 702, 704, 706, 708, 710, 712, 714, 716, 718, 720, 722, 724, 726, 728, 730, 732, 734, 736, 738, 740, 742, 744, 746, 748, 750, 752, 754, 756, 758, 760, 762, 764, 766, 768, 770, 772, 774, 776, 778, 780, 782, 784, 786, 788, 790, 792, 794, 796, 798, 800, 802, 804, 806, 808, 810, 812, 814, 816, 818, 820, 822, 824, 826, 828, 830, 832, 834, 836, 838, 840, 842, 844, 846, 848, 850, 852, 854, 856, 858, 860, 862, 864, 866, 868, 870, 872, 874, 876, 878, 880, 882, 884, 886, 888, 890, 892, 894, 896, 898, 900, 902, 904, 906, 908, 910, 912, 914, 916, 918, 920, 922, 924, 926, 928, 930, 932, 934, 936, 938, 940, 942, 944, 946, 948, 950, 952, 954, 956, 958, 960, 962, 964, 966, 968, 970, 972, 974, 976, 978, 980, 982, 984, 986, 988, 990, 992, 994, 996, 998, 1000, 1002, 1004, 1006, 1008, 1010, 1012, 1014, 1016, 1018, 1020, 1022, 1024, 1026, 1028, 1030, 1032, 1034, 1036, 1038, 1040, 1042, 1044, 1046, 1048, 1050, 1052, 1054, 1056, 1058, 1060, 1062, 1064, 1066, 1068, 1070, 1072, 1074, 1076, 1078, 1080, 1082, 1084, 1086, 1088, 1090, 1092, 1094, 1096, 1098, 1100, 1102, 1104, 1106, 1108, 1110, 1112, 1114, 1116, 1118, 1120, 1122, 1124, 1126, 1128, 1130, 1132, 1134, 1136, 1138, 1140, 1142, 1144, 1146, 1148, 1150, 1152, 1154, 1156, 1158, 1160, 1162, 1164, 1166, 1168, 1170, 1172, 1174, 1176, 1178, 1180, 1182, 1184, 1186, 1188, 1190, 1192, 1194, 1196, 1198, 1200, 1202, 1204, 1206, 1208, 1210, 1212, 1214, 1216, 1218, 1220, 1222, 1224, 1226, 1228, 1230, 1232, 1234, 1236, 1238, 1240, 1242, 1244, 1246, 1248, 1250, 1252, 1254, 1256, 1258, 1260, 1262, 1264, 1266, 1268, 1270, 1272, 1274, 1276, 1278, 1280, 1282, 1284, 1286, 1288, 1290, 1292, 1294, 1296, 1298, 1300, 1302, 1304, 1306, 1308, 1310, 1312, 1314, 1316, 1318, 1320, 1322, 1324, 1326, 1328, 1330, 1332, 1334, 1336, 1338, 1340, 1342, 1344, 1346, 1348, 1350, 1352, 1354, 1356, 1358, 1360, 1362, 1364, 1366, 1368, 1370, 1372, 1374, 1376, 1378, 1380, 1382, 1384, 1386, 1388, 1390, 1392, 1394, 1396, 1398, 1400, 1402, 1404, 1406, 1408, 1410, 1412, 1414, 1416, 1418, 1420, 1422, 1424, 1426, 1428, 1430, 1432, 1434, 1436, 1438, 1440, 1442, 1444, 1446, 1448, 1450, 1452, 1454, 1456, 1458, 1460, 1462, 1464, 1466, 1468, 1470, 1472, 1474, 1476, 1478, 1480, 1482, 1484, 1486, 1488, 1490, 1492, 1494, 1496, 1498, 1500, 1502, 1504, 1506, 1508, 1510, 1512, 1514, 1516, 1518, 1520, 1522, 1524, 1526, 1528, 1530, 1532, 1534, 1536, 1538, 1540, 1542, 1544, 1546, 1548,

Please confirm your Pearson Bridge Works commitment to ensure your listing is added to our database for your school. All listing info is subject and we NOT agree to be bound by our terms.

Other perturbations that are referenced in the drawing include:

- For shift based on drawing number offset
- For shift based on drawing number offset
- For shift based on drawing number offset

Scale: 1/8" = 1'

 $\frac{1}{\sqrt{e}} \approx 0.69$

Q

1

EMERGENCY MANAGEMENT												
001-02-291-5191-0000-000	TEMA- DIRECTOR SALARY (NU)	0	2,000	2,091	2,186	2,186	95	4.6%				
	PERSONNEL	0	2,000	2,091	2,186	2,186	95	4.6%				
							0					
001-02-291-5245-0000-000	TEMA - REPAIR & MAINT - EQUIPMENT	691	691	691	691	691	0	0.0%				
001-02-291-5420-0000-000	TEMA - OFFICE SUPPLIES	109	109	109	109	109	0	0.0%				
	TEMA- COMMUNICATIONS			800	800	800	0	0.0%			Mobile Phone	
001-02-291-5580-0000-000	TEMA - OTHER TRAVEL AND TRAINING	200	200	1,500	1,500	1,500	0	0.0%			Historically self paid	
	EXPENSES	1,000	1,000	3,100	3,100	3,100	0	0.0%				
							0					
TOTAL EMERGENCY MANG.		1,000	3,000	5,191	5,286	5,286	95	1.8%				



RICHARD B. BAILEY
CHIEF OF POLICE

TOWNSEND POLICE DEPARTMENT

70 BROOKLINE STREET • TOWNSEND, MASSACHUSETTS
TEL. 978-597-6214 FAX. 978-597-2176

3.2 +
3.4

COPY

DATE: January 30, 2019

TO: James M. Kreidler, Jr. – Town Administrator
Board of Selectmen

FROM: Richard B. Bailey
Chief of Police

RE: Request to Appoint Cheyenne Harrington Probationary Full-Time Police Officer
Request to Appoint James Marchand as Reserve Officer

Dear Mr. Kreidler and Board of Selectmen:

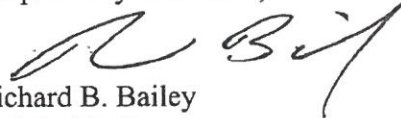
On February 5, 2018 we posted a job announcement for both full-time and reserve patrol officers. The application deadline was March 5, 2018.

After a substantial testing/vetting process and careful consideration of the applicants remaining in the process, I am requesting the appointment of Cheyenne Harrington for the position of Probationary Police Officer. Ms. Harrington is scheduled to attend the Recruit Officer Full Time Police Academy in Reading on March 4, 2019. We anticipate a February 25, 2019 hire date.

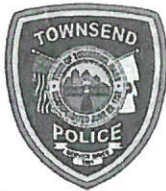
As you are aware, Officer James Marchand after more than 30 years of service tendered his intention to retire from full time duties effective February 23, 2019. Given Officer Marchand's honorable and effective service to the town of Townsend and his vast institutional knowledge, we respectfully request that Board appoint him a reserve officer effective February 24, 2019.

If you have any questions or concerns, please feel free to contact me. Thank you in advance for your considerations in these matters.

Respectfully submitted,


Richard B. Bailey
Chief of Police

Cc: Appointment files



RICHARD B. BAILEY
CHIEF OF POLICE

TOWNSEND POLICE DEPARTMENT

70 BROOKLINE STREET • TOWNSEND, MASSACHUSETTS 01469

TEL. 978-597-6214 FAX. 978-597-2176

3.3

COPY

DATE: January 30, 2019

TO: James M. Kreidler, Jr. – Town Administrator
Board of Selectmen

FROM: Richard B. Bailey
Chief of Police

RE: Request to Hire Kimberly Clark as Records Clerk

Dear Mr. Kreidler and Board of Selectmen:

As you know, our attempt to hire a part-time records clerk earlier in the year fell through when our candidate withdrew from consideration for health reasons. On October 22, 2018 the job was reposted and advertised on Massachusetts Municipal Association's website with an application deadline of November 5, 2018. More than a dozen resumes/letters of interest were received and several applicants from the previous process were contacted to gauge interest as well.

After a substantial testing/vetting process and careful consideration of the applicants, I am recommending we extend an offer of part-time employment to Kimberly Clark of Ashby, Massachusetts. Ms. Clark is well qualified, performed exceptionally well during the process, and we feel confident that she will make an excellent employee. This position is compensated at 16.92 per hour (T3 Level 1) and has been budgeted for 32 hours a week.

If you have any questions or concerns, please feel free to contact me. Thank you in advance for your considerations in these matters.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "R. Bailey".

Richard B. Bailey
Chief of Police

Cc: Appointment file

Carolyn Smart

From: Carolyn Smart <csmart@townsend.ma.us>
Sent: Monday, February 04, 2019 10:39 AM
To: 'Carolyn Smart'
Subject: FW: Message from KM_454e

From: Beth Faxon [mailto:bfaxon@townsend.ma.us]
Sent: Monday, February 04, 2019 10:25 AM
To: Carolyn Smart <csmart@townsend.ma.us>
Cc: Bill Cadogan <>wjc@percep-tech.com>
Subject: FW: Message from KM_454e

Hi Carolyn,

Please note and share the feedback, per request, from David Chenelle, ZBA re: the cost analysis proposal from MassHousing. Bill Cadogan, Chairman is cc'd on this email for communication purposes.

Thank you,

Beth Faxon
Hi Beth,

Given that we have limited impact on the cost certification and even if we were to hire a consultant to review the impact statement, there is still little that can be done in challenging MassHousing's numbers. As Adam's email below indicates even with a challenge, MassHousing is under no obligation to clarify or fix a suspected issue.

My vote would be to save the Town the \$1,000.00 or so it would cost for the review and put it to better use.

Just my 2 cents.

Best,
David Chenelle



6 Lyberty Way, Suite 201
Westford, MA 01886
Main (978) 496-2000
Fax (978) 496-2077

DChenelle@perkinslawpc.com
www.perkinslawpc.com

David R. Chenelle, Esq.
Director

We invite you to visit our website to sign up to receive our newsletter and link to our Facebook page, Twitter, and Blog.

If the Federal Fair Debt Collection Practices Act applies then, to the extent it applies, Perkins & Anttil, P.C. is acting as a debt collector for the creditor named above to collect the debt referenced above. Any information obtained will be used for that purpose. A debtor has the right to seek advice of legal counsel.

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From: Beth Faxon [<mailto:bfaxon@townsend.ma.us>]
Sent: Monday, January 28, 2019 2:43 PM
To: bfaxon@townsend.ma.us
Subject: FW: Message from KM_454e

Dear Board members,

Please see the Board of Selectmen's request for feedback on the draft of the cost analysis captioned in the emails below. A letter from MassHousing accompanied by its draft report on the cost certification submitted for the Turnpike Village rental development is attached. Documents re: the Comprehensive permit are also attached. Please come in to the office to view any print copies.

Let me know if there are any questions.

Thank you,

Beth Faxon
Planning and Zoning Board of Appeals Administrator, Town of Townsend
[*bfaxon@townsend.ma.us*](mailto:bfaxon@townsend.ma.us)
Land Use Department
272 Main St.
Townsend, MA 01469
978-597-1722
Office Hours: Mon. – Thur. 9am - 4pm
[**www.townsend.ma.us**](http://www.townsend.ma.us)

If this email is received by a multi-member public board, commission or committee please take care to never "respond to all" as you may inadvertently create a violation of the open meeting law. Thank you.

In Massachusetts, the term "public record" is broadly defined to include all documentary materials or data created or received by any officer or employee of any governmental unit, regardless of physical form or characteristics, unless it falls under one of the statutory exemptions to the Public Records Law. G.L.c. 4, 7(26). Consequently, email is subject to the disclosure, retention, and maintenance provisions as required by law. G.L.c. 66

From: Carolyn Smart [<mailto:csmart@townsend.ma.us>]
Sent: Friday, January 25, 2019 1:55 PM
To: 'Beth Faxon' <bfaxon@townsend.ma.us>
Subject: FW: Message from KM_454e

Hi Beth: I had Counsel review a draft of the cost analysis sent to the Selectmen, with the ability for the Board to comment by Feb 13th.

Could you please forward Counsel's comments to the Zoning Board for feedback. This will be on the Selectmen's agenda on February 5th.

From: Adam J. Costa [<mailto:adam@mtclawyers.com>]
Sent: Friday, January 25, 2019 1:36 PM
To: Carolyn Smart <csmart@townsend.ma.us>
Cc: 'Jim Kreidler' <jkreidler@townsend.ma.us>
Subject: RE: Message from KM_454e

Carolyn:

In response to your e-mail below and in furtherance of our conversation yesterday, I've reviewed the document you e-mailed me below. It is a letter from MassHousing accompanied by its draft report on the cost certification submitted for the Turnpike Village rental development. I am not especially familiar with the project; but the correspondence identifies it as a 48-unit rental development originally permitted under Chapter 40B, a.k.a. the Comprehensive Permit Law, in 2007 as an ownership project, later modified in 2011 whereby it was converted from an ownership to a rental project. (MassHousing's correspondence states that the modification was made in 2012, but the permit itself says otherwise.) I've located online (via the Registry of Deeds website) and attached hereto, if only for your information, copies of the original and modified comprehensive permits.

Former Town Counsel was involved in both reviews of the project: participating in the first by attending the public hearings and providing other advice; and from afar during the second, i.e. the modification, according to the decisions. The Town also engaged a Chapter 40B consultant to assist with its review of the original project but, so far as I can tell, not the modification.

The Comprehensive Permit Law includes a limited dividend requirement: permittees' profits cannot exceed certain limitations. Application of the requirement is rather complex; and a permittee may also collect, in addition to an annual limited dividend for a rental project, a so-called developer's fee. I do note that the limitations on profit and the aforesaid fee are addressed in the Regulatory Agreement signed by Turnpike Village, LLC, also of record and attached hereto for your information. See Pages 10 through 15. It is not the role of the Town to monitor or determine compliance; and, indeed, since the 2010 decision of the Housing Appeals Committee (HAC) in Amesbury v. HAC, the Town has few rights and responsibilities vis-à-vis Chapter 40B's programmatic requirements. But the Town is provided a copy of MassHousing's cost certification review for its own review and feedback, if the Town wishes to provide it. (Indeed the 2011 modification of the comprehensive permit, at Condition C.8, requires that the Board be provided with a copy of any audit completed by the limited dividend monitoring agent.)

To do so, the Town would need to procure the services of a financial consultant qualified to analyze MassHousing's report and advise as to any error(s) or other concern(s). The scope of the review is limited; and MassHousing may or may not opt to address any issues brought forward by the Town. I can recommend a consultant if the Town wishes to proceed in that manner. The following is a snippet from a consultant I've worked with previously, describing what he'd do (from another project where he'd provided a review a couple of years ago):

The purpose of the Cost Certification is to calculate the maximum allowable annual limited dividend the developer may receive as a return... on the value of their equity in the development. *Equity* is calculated as the difference between the *total value* of the project and the *total cost* of the project. The total value of the project is determined in two ways: 1. the Cost Method which is the sum of certified recognized costs in place, and 2. the Value Method which is the total market value of the development as completed as determined by the appraised value opinion of an independent appraiser engaged by the Subsidizing Agency. Under Chapter 40B the owner's equity is recognized as the *greater* of the amounts recognized by the Cost Method and the Value Method respectively. Project costs are provided by the developer to an independent accountant who performs certain tests to support their opinion that the schedules prepared by the developer fairly represent, in all material respects, the actual cost of the development. Chapter 40B provides that *the municipality may evaluate the Cost Certification report for accuracy (e.g. absence of material errors)*, and submit any accuracy concerns to the Subsidizing Agency...

[I]n evaluating the Cost Certification I can look behind neither the Cost Certification nor the appraisal of market value that together establish the developer's equity on which the maximum allowable annual limited dividend distribution is based. I propose to review the information submitted to me and provide a letter opinion as to whether the formulas included in the Inter-agency 40B Rental Cost Certification Guidance have been correctly applied to the cost and market value data supplied in the Cost Certification.

I don't know the exact cost of the above review, but I believe it will be somewhere between \$750.00 and \$1,000.00, plus or minus.

Let me know if you, Jim or the Selectmen have further question(s).



Adam J. Costa
Mead, Talerman & Costa, LLC
30 Green Street · Newburyport, Massachusetts · 01950
Phone 978.463.7700 · Fax 978.463.7747
adam@mtclawyers.com · www.mtclawyers.com

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If you have received the above transmittal in error, please delete the message and any attachment(s) hereto from your e-mail system and notify us immediately.

✿ Think before you print.

From: Carolyn Smart <csmart@townsend.ma.us>

Sent: Friday, January 18, 2019 9:59 AM

To: Adam J. Costa <adam@mtclawyers.com>

Cc: 'Jim Kreidler' <jkreidler@townsend.ma.us>

Subject: FW: Message from KM_454e

Good Morning Adam, when you have a moment, could you please review.

I have this scheduled for the 2.5.19 meeting of the Board for discussion and comment and I know they will want your input.

Thank you



5.1

Office of the
BOARD OF SELECTMEN
272 Main Street Townsend, Massachusetts 01469

Sue Lisio, Chairman

Cindy King, Vice-Chairman

Wayne Miller, Clerk

James M. Kreidler, Jr.,
Town Administrator

Office (978) 597-1701
Fax (978) 597-1719

POLICY #1-2019

REPLACE POLICY: #4-2018

BOARD OF SELECTMEN

Purpose: The Board of Selectmen and Town Administrator agree to establish a consistent process for use of Legal Counsel.

Policy: USE OF LEGAL COUNSEL

General Legal Services: In an effort to provide broader access to legal services, general Town Counsel services, with the exception of labor and litigation matters, are covered under a monthly retainer. This retainer covers telephone and email communication with counsel, monthly office hours held in the Town Hall and occasional attendance at Board or Commission meetings. This access is available to all town department heads, employees with prior approval of their supervisor and individual members of Boards and Commissions.

For a formal written legal opinion, Boards and Commissions, other than the Board of Selectmen, must have a vote authorizing the request before authorization will be provided.

A request for legal services form must be filled out and returned to the Selectmen's office before legal counsel can be accessed on any general Town Counsel matter.

This process for general Town Counsel access is not an approval but is necessary in order to track usage and for budgeting purposes.

This form must be submitted to the Board of Selectmen's office and authorization must be obtained from the Town Administrator and/or their designee.

Labor and Litigation Legal Services: A request for legal services form must be filled out and returned to the Selectmen's office before legal counsel can be accessed on any labor or litigation Town Counsel matter.

This process for labor or litigation Town Counsel access is an approval and is necessary in order to track usage and for budgeting purposes.

This form must be submitted to the Board of Selectmen's office and authorization must be obtained from the Town Administrator and/or their designee.

The sole exceptions to this policy are for the Board of Selectmen and are as follow:

1. The Chair of the Board of Selectmen, or the Board of Selectmen through a majority vote, shall have direct access to request Town Counsel to attend a meeting of the Board.
2. Any member seeking legal advice on a matter shall have direct access to Town Counsel.
3. All members of the Board of Selectmen requesting Ethics Opinions (Conflict of Interest Law) shall have direct access to Town Counsel. They do not need to copy the Chair of the Board of Selectmen on such inquires and Town Counsel shall respond to the member directly without copies to other members of the Board.
4. Members of the Board shall notify the Town Administrator of each contact for budget purposes, however are not required to explain content.

ADOPTED BY THE BOARD OF SELECTMEN ON _____, 2019.

Sue Lisio, Chairman

Cindy King, Vice-Chair

Wayne Miller, Clerk

REQUEST FOR LEGAL SERVICES TOWN OF TOWNSEND

Name: _____ Title: _____ Date: _____

Committee or Department: _____

☐ Emergency/Same Day ☐ Urgent/24 Hours ☐ Important ☐ Routine

GENERAL LEGAL SERVICES REQUEST

- ☐ General Legal Services: Call or email to town counsel for discussion
re: _____
- ☐ General Legal Services: Office hours¹ with town counsel for discussion
re: _____
- ☐ General Legal Services: Formal written opinion department head or authorized employee
re: _____
- ☐ General Legal Services: Written opinion for a Board or Commission with authorizing vote
re: _____
- ☐ General Legal Services: Attendance at Board or Commission meeting with authorizing vote
re: _____ meeting date: _____

Request for general legal services was received. You may contact counsel.

James Kreidler, Town Administrator

LABOR OR LITIGATION LEGAL SERVICES REQUEST

- ☐ Labor /Litigation Legal Services: Call or email to town counsel for discussion
re: _____
- ☐ Labor/Litigation Legal Services: Office hours² with town counsel for discussion
re: _____
- ☐ Labor/Litigation Legal Services: Formal written opinion dept. head/authorized employee
re: _____
- ☐ Labor/Litigation Legal Services: Written opinion for Board or Commission w/authorizing vote
re: _____
- ☐ Labor/Litigation Legal Services: Attend a Board or Commission meeting with authorizing vote
re: _____ meeting date: _____

Request for labor/litigation legal services was/was not approved. You may contact counsel.

James Kreidler, Town Administrator

¹ Schedule for office hours kept in Selectmen's office.

² Schedule for office hours kept in Selectmen's office.



TOWNSEND FIRE-EMS DEPARTMENT

Proudly serving the citizens of Townsend since 1875

PO Box 530 – 13 Elm St.
Townsend, MA 01469

Mark R. Boynton
Chief of Department

Headquarters: 978-597-8150

Fax: 978-597-2711

MEMORANDUM

To: James Kreidler, Town Administrator
From: Mark R. Boynton, Fire – EMS Chief *MRB*
Subject: Student Awareness of Fire Education Grant Award (SAFE)
Date: January 31, 2019

On behalf of the Townsend Fire-EMS Department a grant request was submitted to continue our SAFE program to educate students and seniors on fire safety. I am pleased to announce we have been awarded a 2019 grant in the amount of \$3,754 for Student awareness of fire education and \$2,400 for senior education from the State Fire Marshal's Office.

I respectfully request the Board of Selectmen accept the grant so we may continue to educate our students and senior on safety and the dangers of fire.



CHARLES D. BAKER
GOVERNOR

KARYN E. POLITO
LT. GOVERNOR

THOMAS A. TURCO, III
SECRETARY

*The Commonwealth of Massachusetts
Executive Office of Public Safety and Security
Department of Fire Services*

P.O. Box 1025 ~ State Road

Stow, Massachusetts 01775

(978) 567-3100 Fax: (978) 567-3121

www.mass.gov/dfs



PETER J. OSTROSKY
STATE FIRE MARSHAL

December 28, 2018

Chief Mark Boynton
Townsend Fire-EMS Department
P.O. Box 530
Townsend, MA 01469

Dear Chief Boynton:

I am pleased to inform you that your FY 2019 Student Awareness of Fire Education (S.A.F.E.) and Senior SAFE grant applications have been approved for funding. The Townsend Fire-EMS Department has been awarded \$3,754.00 for your S.A.F.E. grant and \$2,400.00 for Senior SAFE.

Be sure to alert your treasurer and to check with them to ensure receipt of the funds. We expect the funds to be electronically distributed on or about January 18, 2019.

All grantees are required to submit the FY 2018 year-end report to DFS by January 31, 2019. If there are any unexpended funds, the grantee may apply for a one-time 6-month extension, which will be part of the year-end report form. At the close of the single 6-month extension, all unexpended funds must be returned to the Commonwealth. At this time, any prior year remaining funds must be returned to the Commonwealth.

Twenty-four years ago, the Administration advocated for the creation of the S.A.F.E. Program. Since that time average annual child fire deaths have been reduced by 74%. Four years ago, the S.A.F.E. program was expanded to offer funds to local communities in support of senior fire prevention training. Seniors are the most vulnerable of populations at risk of fire related deaths. Senior SAFE is aimed at educating seniors on fire prevention, general home safety and how to be better prepared in the event of a fire. It is our hope that with this opportunity we can recreate the success with our older population that we have had with children.

I thank you for your commitment to the S.A.F.E. program and for your continuing efforts to promote fire prevention for all citizens. If you have any questions, please feel free to contact Cynthia Ouellette at (978) 567-3381 or the S.A.F.E. staff at (978) 567-3388.

Sincerely,

Peter J. Ostroskey
State Fire Marshal

*Administrative Services • Division of Fire Safety
Hazardous Materials Response • Massachusetts Firefighting Academy*



TOWNSEND FIRE-EMS DEPARTMENT

Proudly serving the citizens of Townsend since 1875

PO Box 530 – 13 Elm St.
Townsend, MA 01469

Mark R. Boynton
Chief of Department

Headquarters: 978-597-8150

Fax: 978-300-5786

MEMORANDUM

To: James Kreidler, Town Administrator
From: Mark R. Boynton, Fire – EMS Chief *MRB*
Subject: Nashoba Valley Community Healthcare Fund Paramedic Grant
Date: January 31, 2019

In November a grant application was submitted to the Nashoba Valley Community Healthcare Fund for “advanced life support training”. The grants application requested high tech ALS adult and child manikins. These manikins allow paramedics to perform ALS procedure on manikin which provide feedback for paramedics to master and stay proficient at lifesaving skills.

I am delighted to inform you Townsend Fire-EMS has been selected to receive an award of \$14,993 for advanced life support training. I respectfully request the Board of Selectmen accept and authorize me to electronically accept the grant from Nashoba Valley Community Healthcare Fund and accept checks from Community Foundation of North Central Massachusetts and Greater Lowell Community Foundation totaling \$14,993

There are no matching fund required for this grant and no cost to Townsend Fire-EMS.



February 6, 2019

Chief Mark Boynton
Townsend Fire-EMS Department
13 Elm Street
Townsend, MA 01469

Dear Chief Boynton,

Congratulations!

On behalf of the Nashoba Valley Community Healthcare Fund Advisory Committee, the Community Foundation of North Central Massachusetts (CFNCM) and the Greater Lowell Community Foundation (GLCF) is delighted to inform you that your organization has been selected to receive an award of **\$14,993.00** from the 2018-19 Nashoba Valley Healthcare Fund grant cycle for your "Advanced Life Support Training" Program.

Please see the accompanying Grant Acceptance Terms and Conditions. Please review this document completely. After proper review, where indicated, please follow the instructions on the document to provide the necessary signature to indicate acceptance of this grant and agreement to terms and conditions detailed within the document.

Upon receipt of this document by each Foundation, a check will be processed by each for the proportionate share of the total award. These checks will be disbursed at the earliest opportunity of each organization's finance procedures. The break out of the amounts to be distributed are:

Community Foundation of North Central Massachusetts: \$8,812.89
Greater Lowell Community Foundation: \$6,180.11

An electronic copy of the fully executed agreement will be sent to your organization for your records.

We wish you every success as you implement this project and look forward to hearing of your progress towards your anticipated outcomes.

Sincerely,

*The staff of Community Foundation of North Central Massachusetts and
Greater Lowell Community Foundation.*

2018-2019 Nashoba Valley Community Health Fund
Grant Award Terms and Conditions

Agreement between *Townsend Fire-EMS Department*
And
Community Foundation of North Central Massachusetts & Greater Lowell Community Foundation

This grant is contingent upon Agency agreement to the following:

1. Combined Foundation funds as listed on page 2 will be expended only for the project submitted, as detailed in Agency application for *Advanced Life Support Training*
2. Ongoing financial oversight will be such that:
 - a. Frequency will provide for timely assessment of project/programs progress
 - b. As needed allow to give proper notification to the Combined Foundations of any delays or issues that will require a change to the original proposal.
 - i. Acknowledge that any requests in a change of use of funds, extension of deadlines or other matters regarding the awarded funds must be approved by the NVHCF Advisory Committee and/or management of both Foundations.
3. Should the project not be completed for any reason without proper notification to both Foundations and/or the unauthorized use of funds will require all funds will be returned in equal shares to the CFNCM and the GLCF.
4. The CFNCM and the GLCF will be recognized as a source of support in communications to the public - such as in annual reports, press releases and other presentations.
5. Two reports must be submitted annually –
 - an interim report- due **September 30, 2019**
 - a final report- due **March 30, 2020**

Reporting forms will be available on the CommunityForce software. Forms will be available no later than 30 days prior to their respective deadlines.

6. Report to both Foundations any change to the status of your as a duly recognized charitable institution under section 501(c)3 of the Internal Revenue Code
7. Certify by ratification of this agreement that no material goods or services have been provided to either Foundations as a result of this grant.
8. Certify that your organization does not discriminate based on age, handicap, gender, race, religion, national origin or sexual orientation.
9. Certify that your organization complies with national anti-terrorism compliance measures.



2018-2019 Nashoba Valley Community Health Fund
Grant Award Terms and Conditions

As a condition of receipt of this grant, Townsend Fire-EMS Department agrees to the statements, terms and conditions outlined in this document.

Program Name: *Advanced Life Support Training*

Award Amount: *\$14,993.00*

CHIEF PROFESSIONAL OFFICER

Signature _____ **Date:** _____

Name: Mark R. Boynton

Title: Fire-EMS Chief

FOR COMMUNITY FOUNDATION OF NORTH CENTRAL MASSACHUSETTS:

Philip M. Grzewinski
President & CEO
Community Foundation of North Central MA

FOR GREATER LOWELL COMMUNITY FOUNDATION:

James F. Linnehan, Jr., Esq.
President/CEO
Greater Lowell Community Foundation





RICHARD B. BAILEY
CHIEF OF POLICE

TOWNSEND POLICE DEPARTMENT

70 BROOKLINE STREET • TOWNSEND, MASSACHUSETTS 01469
TEL. 978-597-6214 FAX. 978-597-2176

DATE: January 30, 2019

TO: James M. Kreidler, Jr. – Town Administrator
Board of Selectmen

FROM: Richard B. Bailey
Chief of Police

RE: Request to Adjust Reserve Officer Pay

Dear Mr. Kreidler and Board of Selectmen:

Please consider this a request to adjust the wages of Reserve Police Officers at the Townsend Police Department. Despite hours of research on the topic, it is unknown when these wages have last been reviewed or adjusted to account for changes in the economy and profession. As you are well aware, we are utilizing these positions to enhance operations and the wages are in dire need of adjustment to become consistent with neighboring agencies and the expectations of the position.

The current hourly rate for a reserve officer in Townsend is \$18.80 per hour. A review of ten area towns indicated the average hourly rate to be \$23.18 per hour. As such, we respectfully request that the hourly rate for reserves be adjusted to the Day Shift Patrolmen Rate which currently ranges from 23.10 per hour to 28.46 per hour depending on years of service. It should be noted that the FY20 annual budget was prepared with this change in mind.

If you have any questions or wish to discuss the issue, please feel free to contact me. Thank you in advance for your considerations in these matters.

Respectfully submitted,

Richard B. Bailey
Chief of Police

Cc: Appointment file



Office of the
BOARD OF SELECTMEN
272 Main Street -Townsend, Massachusetts 01469

4.5

Sue Lisio, *Chairman*

Cindy King, *Vice-Chairman*

Wayne Miller, *Clerk*

James M. Kreidler, Jr.,
Town Administrator

Office (978) 597-1701
Fax (978) 597-1719

June 27, 2018

Officer Michael Marchand
Townsend Police Department
70 Brookline Road
Townsend MA 01469

RE: Appointment of Police Officer and Firefighter

Greetings Officer Marchand:

I'm writing this letter on behalf of the Board of Selectmen. At a regularly scheduled meeting held on June 19, 2018, the Board unanimously voted to appoint you as both a Police Officer and a Firefighter for the town of Townsend.

The Board wanted to remind you, prior to acceptance of such appointment, of the potential risk to yourself financially if you are ever injured as a Firefighter.

Townsend's injured on duty benefits are in accordance with Chapter 41, Section 111f. If you're injured as a Firefighter, the town has contracted with VFIS insurance to compensate you in the amount of \$600.00 per week. If your income as a Police Officer is higher than that amount, this could cause some financial loss.

With that said, it is your choice to accept the appointment of a Firefighter, the Board just wanted to remind you of the potential risk associated with the position.

The Selectmen would like to thank you for your service and expressed their sincere appreciation for your commitment to public safety.

Sincerely yours,

Carolyn Smart
Executive Assistant

c.f. Chief Mark Boynton, Townsend Fire-EMS Department
Chief Richard Bailey, Townsend Police Department
Barbara Tierney, Treasurer/Collector



Office of the
BOARD OF SELECTMEN
272 Main Street
Townsend, Massachusetts 01469

4.7

Sue Lisio, Chairman
James M. Kreidler, Jr.,
Town Administrator

Cindy King, Vice-Chairman

wayne Miller, Clerk
Office (978) 597-1700
Fax (978) 597-1719

January 29th 2019

MRPC
464 Abbott Avenue
Leominster, MA 01453

RE: DLTA Grant Submission

To Whom It May Concern:

The Townsend Board of Selectmen Strongly supports the grant application being submitted for a feasibility study to explore regional 911 dispatch between the towns of Ashby, Pepperell and Townsend.

Given the difficulty's we have had with Nashoba Valley Regional Dispatch (NVRD) a feasibility study explaining the pros and cons of staying with NVRDD vs. forming a regional dispatch with neighboring towns who share a regional school will help us choose the best option for the residents of Townsend.

We hope that you will act favorably on the grant application for improved public safety. If you need further information from the Town, please feel free to contact the Selectman's office at 978-597-1700.

Sincerely,

Townsend Board of Selectmen

Sue Lisio, Chairman

Cindy King, Vice Chairman

Wayne Miller, Clerk

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TOWN ADMINISTRATOR

Position Purpose:

Performs professional management work overseeing activities of town departments under the jurisdiction of the Board of Selectmen and in accordance with federal, state, local laws and regulations. Is responsible to the Board of Selectmen for the administration of all town affairs placed in his/her; provides executive leadership for the Town in areas of policy formulation, fiscal affairs, labor relations, and organizational development. Performs all other related work as required.

Supervision:

Supervision Scope: Performs highly responsible work of a complex nature, requiring the exercise of considerable independent judgment. Provides professional advice to a variety of officials, departments, boards and committees concerning the development, implementation and administration of the policies, goals, regulations, and statutory requirements related to the administration and operation of the Town. Analyzes difficult administrative problems and recommends solutions, managing diverse projects, recommending long and short range goals, motivating and coaching managers, and coordinating the activities of many independent boards, commissions, and departments.

Supervision Received: Works under the policy direction of the Board of Selectmen with considerable latitude for independent judgment and action. Assumes responsibility for developing and achieving the department's goals and objectives. Questions are referred to supervisor only when clarification of town policy is needed. Works under the jurisdiction of federal, state and local laws and procedures. Works under the orders and directives received from town meeting.

Supervision Given: Supervises and directs the administration of town departments and offices for whose function he/she is responsible. Incumbent is responsible for the day-to-day management of the entire work force under the control of the Board of Selectmen and as otherwise authorized by Board. Hires staff, provides daily direction, and counsels and disciplines staff consistent with town policies.

Job Environment:

Work is generally performed under typical office conditions. Required to work outside of normal business hours and attend frequent evening meetings. Also, may be contacted at home at any time to respond to important situations and emergencies. Incumbent is required to attend numerous meetings with various town boards and committees and is expected to attend social and civic events to represent the Town.

Operates an automobile, computer, telephone, and standard office machines.

Makes frequent and direct contact with local, county, state, regional and federal agencies and officials, the media, community leaders, town employees and department heads, local civic and

Townsend, MA
Town Administrator
FLSA: Exempt
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special interest groups, and the general public. Contacts are in person, by telephone, in writing and via internet. Contacts require considerable persuasiveness, resourcefulness, discretion, and negotiating skills to influence the decisions and behavior of other parties. Contacts involve attendance at meetings and conferences. Incumbent is recognized as a spokesperson for the Town.

Has access to an extensive amount of highly confidential information relating to the Town of Townsend, the disclosure of which may cause serious repercussions. Confidential information may include, but is not limited to, police investigations, labor negotiations, personnel records, contract development, and information about citizens.

Errors in judgment could have continuing adverse effect on the Town's ability to deliver services, result in loss of municipal revenues, have far-reaching legal and financial ramifications, and cause significant adverse public relations.

Essential Functions:

(The essential functions or duties listed below are intended only as illustrations of the various types of work that may be performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related or a logical assignment to the position.)

Is Chief Administrative Officer of the Town of Townsend, directly responsible to the Board of Selectmen for the administration of all town affairs placed in his/her charge by the Board. Assists the Board of Selectmen with the formulation of policy and execution of its directives. Manages and supervises departments and offices of the Town to achieve goals within available resources. Plans and organizes workloads and staff assignments. Exercises administrative authority over town departments, commissions, boards, committees, and officers under the jurisdiction of the Board. Trains, motivates and evaluates assigned staff.

Supervises department heads appointed by the Board of Selectmen; provides assistance in program planning, grantsmanship, personnel management, and budget development; makes recommendations to the Board of Selectmen in conjunction with department heads regarding departmental operations.

Establishes and maintains appropriate administrative procedures for the conduct of all affairs under the Board of Selectmen's jurisdiction, and when appropriate, to facilitate the coordination of all town activities.

Provides leadership and direction in the development of short and long range plans; gathers, interprets, and prepares data for studies, reports, and recommendations; coordinates department activities with other departments as needed.

Attends all regular meetings of the Board of Selectmen, and has a voice but not a vote in all of its deliberations. Prepares agendas, sets meetings and correspondence priorities. Brings to the

Townsend, MA
Town Administrator
FLSA: Exempt
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attention of the Board all information relevant to the performance of the Office of the Selectmen. Provides professional advice to the Board of Selectmen and department heads. Makes presentations to boards, commissions, civic groups and the general public. Communicates official plans, policies and procedures to staff and the general public.

Administers the Selectmen's Office by receiving and making appropriate disposition of all correspondence and communications. In conjunction with the Chairperson of the Board, makes all procedural and substantive preparation for the meetings of the Board. Anticipates the needs of the Board for information and background material for setting policy and decisions made by the Board. Ascertains that all decisions of the Board are carried out.

Responds to inquiries, complaints and problems, and provides assistance to department directors, town staff, local and state officials, and business and community leaders, citizens, the news media, and the general public. Resolves the more difficult customer service requests.

Acts as the Board of Selectmen's liaison to town building committees on town-wide construction and other capital projects. Coordinates and supervises the employees and processes of municipal departments under the jurisdiction of the Board of Selectmen who have direct responsibility and accountability in municipal construction projects. Those municipal departments may include, but is not limited to, procurement, public safety, public works, planning, zoning, and inspectional services. May also coordinate efforts with Town Counsel and Town Accountant.

Informs the Board and any other appropriate boards/committees of all relevant statutory and regulatory changes.

May serve as Chairperson of many statutory and *ad hoc* committees; may serve as the Board of Selectmen's designee on other committees and boards.

Engages in a variety of public relations and town-wide coordination activities to ensure support from appropriate public and private constituencies and other institutions and government entities; works with local, county, state, and federal officials to identify and resolve problems, gain support or exchange information.

Informs and advises the Board of Selectmen of trends, problems and activities as appropriate to facilitate policy making; recommends policy, guidelines and operational strategies to board; implements policy options as directed by the Board.

Shapes the policies of the Town's financial plan. Prepares the budget and presents the financial plan to the Board of Selectmen and Finance Committee. Responsible for the development and updating of the capital improvement program. Maintains policy boards' awareness of the Town's financial condition and financial needs. Serves as the Board of Selectmen's representative to the Finance Committee.

CONTRACT

Responsible for the preparation of annual and special town meeting warrants and annual town report. Attends all sessions of the town meeting and provides Selectmen with information to address questions from voters of the Town.

Supervises, directs and coordinates town services under the jurisdiction of the Board of Selectmen; coordinates and cooperates with the Planning Board, Appeals Board, Conservation Commission, Board of Health, and other boards, commissions, and committees.

Coordinates all labor negotiations and grievance procedures as directed by the Board of Selectmen, acts as collective bargaining agent; evaluates and renders advisory decisions to the Board on grievances by employees as required. Mediates grievances and complaints from town employees; represents the Town in grievances and lawsuits.

Serves as the Town's personnel officer; consults with the department heads regarding personnel issues and policies; may propose modifications to Personnel Policies. Makes recommendations regarding vacancies in town offices, department head positions, committees, commissions and boards to be filled by the Board of Selectmen; in cooperation with department heads, recommends hiring and firing and disciplining of town employees.

Works with town boards and commissions in an advisory capacity; provides reports on various town projects; works with regional and state agencies.

Administers procedures for licenses and permits issued by the Board of Selectmen.

Coordinates departmental operational policies, rules, regulations, and procedures, and submits them to the Selectmen for approval.

Coordinates litigation and legal opinions between the Selectmen, Town Counsel, and various boards, departments, committees, and commissions.

Ensures that projects and programs are effectively coordinated by supervising the projects and programs, ensuring that communications are defined amongst officials and employees involved, and reporting to Selectmen on problems encountered.

Conducts regular staff meetings with department heads; reviews program goals and objectives with department heads.

Sees to it that the provisions of general laws, votes of town meetings and of the selectmen, which require enforcement by him/her or officers subject to his/her direction and supervision are faithfully carried out.

CONTRACT

Reviews budget reports, financial statements, requests for proposals, and other documents; makes recommendations and forwards documents for further action as required. Composes letters, memos, e-mail documents and other materials; writes reports.

Attends county, regional, state, and federal meetings as the representative of the Selectmen.

Maintains knowledge of practices and trends in local government management by attending professional seminars and conferences.

Performs similar or related work as required.

Recommended Minimum Qualifications:

Education, Training and Experience:

Master's degree in public administration, business management or closely related field; five years of experience as a municipal administrator; experience with town meeting process; or any equivalent combination of education, training and experience.

Special Requirements:

Valid Massachusetts driver's license.

Knowledge, Ability and Skill:

Knowledge: Thorough knowledge of the principles and practices of public finance, budget management, personnel management, collective bargaining, and intergovernmental relations. Comprehensive knowledge of the functions of municipal government. General understanding of the interaction between local government, state government, and federal government. General knowledge of Massachusetts General Laws as they apply to municipal government. Working knowledge of public administration, practices, and general office procedures. Sufficient knowledge of emerging technologies to recognize its value to the Town.

Ability: Ability to plan, organize and direct the preparation of reports, analyze problems, and formulate recommendations. Ability to speak and write effectively. Ability to establish and maintain effective working relationships with all town employees, board/committee members, officials and the general public. Ability to conceptualize and put into operation department and town-wide goals and objectives. Ability to plan, organize, evaluate and control the administration of town programs.

Skill: Excellent fiscal and supervisory skills. Skill as a strategic thinker experienced in bringing divergent perspectives to agreement around key public policies and programs. Professional skills related to customer services. Basic skill in utilizing personal computers.

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Physical Requirements:

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions. Lifts/moves objects weighing up to 10 pounds, files, and types on a keyboard at a moderate speed. Operates automobile to perform in-town and out-of-town travel to transact town business; travel to night meetings are common place in order to confer with the Board of Selectmen and other town bodies. Regularly conveys information to the public.

(This job description does not constitute an employment agreement between the employer and employee and is subject to change by the employer as the needs of the employer and requirements of the job change.)

Chapter C. Charter

Article 4. Town Administrator

Section 4-1. Appointment; Qualification; Term

The Selectmen shall appoint a Town Administrator and shall fix the compensation for such person, annually, within the amount appropriated by the Town. The Town Administrator shall be appointed solely on the basis of demonstrated executive and administrative qualifications. The Town Administrator shall be a person especially fitted by education, training and or previous experience in public administration to perform the duties of the office. The Town Administrator need not be a resident of the Town at the time of appointment or at any time during the period of such service. The Town Administrator shall not have served in an elective position in Town government for at least twelve months prior to appointment. The Town may from time to time establish by By-law such additional qualifications as seem necessary and appropriate. The Town Administrator shall not hold any other public office, elective or appointive. The Board of Selectmen shall provide for an annual review of the job performance of the Town Administrator which shall, at least in summary form, be a public record.

Section 4-2. Powers and Duties

The Town Administrator shall be the chief administrative officer of the Town, directly responsible to the Board of Selectmen for the administration of all Town affairs for which the office of Town Administrator is given responsibility by or under this Charter. The powers and duties of the Town Administrator shall include, but are not intended to be limited to, the following:

- (a) To supervise, direct and be responsible for the efficient administration of all functions and activities for which the office of Town Administrator is given authority, responsibility or control by this Charter, by By-law, Town Meeting vote, vote of the Board of Selectmen, or otherwise.
- (b) To see that the personnel policies and practices, rules and regulations are equally administered for all Town employees. If a union or other personnel contract differs from the general policies, the Town Administrator will see that these are administered according to the contract, with the exception of the Town Administrator's contract which will be overseen and administered by the Board of Selectmen.
- (c) To attend all regular and special meetings of the Board of Selectmen, unless unavailable for reasonable cause, and shall have a voice, but no vote, in all proceedings.
- (d) To keep the Board of Selectmen fully advised at a public meeting or in writing as to the needs of the Town and all Agencies and to make recommendations to the Board of Selectmen of actions required to resolve the situation.
- (e) To prepare the budgets which fall directly under the Board of Selectmen. To oversee the budgets for the Agencies under the supervision of the Selectmen, and in addition the Town Administrator will present to the Selectmen the budgets of elected Agencies and the Capital Plan in such a manner that the Selectmen have an understanding of the total budget. The Town Administrator will also work with the Finance Committee, the Accountant and the Treasurer to develop a plan for the funding of appropriations.
- (f) The Town Administrator will be responsible for Central Purchasing.
- (g) To see that all of the provisions of the laws of the Commonwealth, of this Charter, Town Bylaws, other votes of Town Meeting, and votes of the Board of Selectmen which require enforcement by the Town Administrator or other officers subject to the direction and supervision of the Town Administrator, are faithfully executed, performed or otherwise carried out.
- (h) To inquire, at any time, into the conduct and operation of any office or the performance of any Agency, its officers or employees under the jurisdiction of the Board of Selectmen.
- (i) To attend all sessions of all Town Meetings and to be prepared to answer all questions raised by voters which relate to warrant articles and to matters over which the Town Administrator exercises any supervision.
- (j) To coordinate the activities of all Town agencies serving under the office of Town Administrator and the office of the Board of Selectmen with those under the control of other officers and multiple member bodies elected directly by the voters. For this purpose the Town Administrator shall have the authority to require the persons so elected, or their representatives, to meet

agencies of the Town.

- (k) To perform any other duties that are required to be performed by the Town Administrator by By-laws, Administrative Code, vote of the Town Meeting or votes of the Selectmen, or otherwise.

Section 4-3. Delegation of Authority

The Town Administrator may authorize any subordinate officer or employee to exercise any power or perform any function or duty which is assigned to the office of Town Administrator, provided, however, that all acts performed under any such delegation shall at all times be deemed to be the acts of the Town Administrator.



TOWN OF TOWNSEND BOARD OF SELECTMEN Operating Policies & Procedures

Adopted by its Board of Selectmen

Chairman, Carolyn Smart

Date

Vice-Chair, Gordon Clark

Date

Clerk, Cindy King

Date

RECORD OF CHANGES

Revision	Date	Change Authority	Change/Affected Sections	Initial of Authority
#1	7.10.18	BOS	16-18 Chairman in consultation with the Town Administrator	

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16-01: PURPOSE:

The Board of Selectmen of the Town of Townsend, recognizing the need to codify the traditional and accepted working relationships among the members of the Board, between the Board and the Town Administrator, supporting staff and between the Board and other Town boards, committees, officials and citizens, and also recognizing the need to systemize and reduce to writing the Board's operating procedures, hereby adopt the following policies.

16-02: PROCEDURE TO ESTABLISH POLICIES AND PROCEDURES:

Draft policies and procedures shall be placed on the agenda for any regularly scheduled meeting of the Board. Drafts should be in writing, and may be introduced by a member of the Board, Town Administrator, or by request of a department. Upon receipt of a draft, the Board may choose to discuss the policy immediately or schedule the discussion for a future meeting. The Board may schedule any hearings or meetings it deems necessary for discussion. The Board should encourage the Town Administrator to distribute a draft policy for comment to appropriate officials as it deems necessary.

The Board shall not vote on a policy at the same meeting that it is first introduced. This rule may be waived if the Board unanimously votes that prompt action is necessary.

The Town Administrator shall be responsible for the maintenance and distribution of all policies and procedures.

16-03: AUTHORITY:

The Board of Selectmen is an elected Board and derives its authority and responsibilities from the statutes of the Commonwealth of Massachusetts, the Charter, and the bylaws of the Town of Townsend.

16-04: ROLE OF THE BOARD OF SELECTMEN:

The Board is the chief executive body of the town. The Board sets the community's vision and provides the leadership required to assure that the mission is followed. The Board is responsible for appointing personnel as identified in the Townsend Charter, developing and implementing policy and reviewing for compliance with said policies. The Town Administrator supports the Board with appointments and policy formulation, implementation, and compliance.

The Board is responsible for supervising the departments of the general government that are not supervised by the other elected officials. This responsibility is delegated to the Town Administrator, and the Board agrees to allow the Town Administrator to provide administrative direction to the departments that fall under the Board's jurisdiction to

assure that the Board's policies are implemented in the course of the town's day to day operations. Department heads shall receive policy direction from the Board through the Town Administrator. Department Heads report to the Board but do so through the Town Administrator. This policy is not intended to limit or otherwise exclude a Department Head from expressing concerns or issues directly to the Board if said concern still exists after first expressing such concerns to the Town Administrator, but rather it is intended to provide a framework for an effective and efficient operation utilizing an appropriate chain of command. If any concerns or issues are brought to the attention of the Board directly, the Board shall report them to the Town Administrator as soon as it is practicable and shall work proactively with the Town Administrator to address the concern or issue. Complaints, concerns and questions about the operation of departments, and suggestions for improvements should be addressed to the Town Administrator, who shall forthwith inform all members of the Board. The responsibility for addressing these issues is thus carried out through the Town Administrator. Selectmen may be called upon to resolve disputes that are unable to be resolved at the staff level.

No individual Board member shall be allowed to direct a Department Head in the methods or manners in which the department's day to day business is to be conducted, unless through the Town Administrator and only if authorized by vote of the entire Board, however, this policy is not intended to limit or restrict the rights of an individual Board member to communicate with any Department Head.

16-05: ROLE OF THE TOWN ADMINISTRATOR:

The Board appoints a Town Administrator who functions as the Town's Chief Administrative Officer. The primary duties of the Town Administrator shall be the day-to-day administration of the general government as outlined in the Townsend Charter section 4-2. The Town Administrator shall also assist and work under the direction of the Selectmen in the formulation, implementation, and compliance of policy.

The Town Administrator shall be the chief administrative officer of the Town, directly responsible to the Board of Selectmen for the administration of all Town affairs for which the Town Administrator is given responsibility the powers and duties of the Town Administrator shall include the following:

- To supervise, direct and be responsible for the efficient administration of all functions and activities for which the Town Administrator is given authority.

- To see that the personnel policies and practices, rules and regulations are equally administered for all Town employees.

- To attend all regular and special meetings of the Board of Selectmen, unless unavailable for reasonable cause, and shall have a voice, but no vote, in all proceedings.

To keep the Board of Selectmen fully advised at a public meeting, in person, or in writing as to the needs of the Town and all Departments and to make recommendations to the Board of Selectmen of actions required to resolve the situation.

To prepare the budgets which fall directly under the Board of Selectmen. To oversee the budgets for the Departments under the supervision of the Selectmen, and in addition the Town Administrator will present to the Selectmen the budgets of elected Officials and the Capital Plan in such a manner that the Selectmen have an understanding of the total budget. The Town Administrator will also work with the Finance Committee, the Accountant and the Treasurer to develop a plan for the funding of appropriations.

The Town Administrator will be responsible for Central Purchasing.

To see that all of the provisions of the laws of the Commonwealth, of this Charter, Town Bylaws, other votes of Town Meeting, and votes of the Board of Selectmen which require enforcement by the Town Administrator or other officers subject to the direction and supervision of the Board of Selectmen, are faithfully executed, performed or otherwise carried out.

To inquire, at any time, into the conduct and operation of any office or any Department, its officers or employees under the jurisdiction of the Board of Selectmen.

To attend all sessions of all Town Meetings and to be prepared to answer all questions raised by voters which relate to warrant articles and to matters over which the Town Administrator exercises any supervision.

To coordinate the activities of all Town departments serving under the Office of the Board of Selectmen with those under the control of other officers and multiple member bodies elected directly by the voters. For this purpose, the Town Administrator shall have the authority to require the persons so elected, or their representatives, to meet with the Town Administrator, at reasonable times, for the purpose of effecting coordination and cooperation among all departments of the Town.

To perform any other duties that are required to be performed by the Town Administrator by By-laws, vote of the Town Meeting or votes of the Selectmen, or otherwise.

The Town Administrator must strive to maintain a close working relationship with all members of the Board. He/she shall regularly brief all the Board members on all important issues.

In order to provide the town with continuity of management and the Town Administrator with job security, the Selectmen are committed to maintaining an employment contract with the Town Administrator, as permitted by statute.

16-06: ROLE OF SUPPORT STAFF OF THE OFFICE OF THE BOARD OF SELECTMEN:

The Board hires support staff, said hiring shall be made by recommendation from the Town Administrator.

The support staff functions as a support for the Town Administrator. Support staff must strive to maintain a close working relationship with all members of the Board and the Town Administrator. Support staff reports to and takes direction from the Town Administrator.

16-07: BOARD RULES AND ETHICS:

1. Member of the Board of Selectmen, in relation to his or her community should:

Realize that he or she is one of a team and should abide by, and carry out, all board decisions once they are made.

Be well informed concerning the duties of a board member on both local and state levels and pursuant to the Charter.

Remember that he/she represents the entire community at all times.

Accept the Office of Selectman as a means of unselfish service and not benefit personally or politically from his/her board activities.

In all appointments, avoid political patronage by judging all candidates on merit, experience, and qualifications only.

Abide by the ethics regulations established by the State and not use the position to obtain inside information on matters which may benefit someone personally.

At all times carry and conduct him/herself in a manner that is appropriate and becoming of a Chief Elected Executive Official of the Town of Townsend.

2. A member of the Board of Selectmen, in his/her relations with fellow board members, should:

Support all Board decisions once they are made.

Recognize that only an action taken at official and legal selectmen's meetings is binding, and that he/she alone cannot bind the board outside of such meetings.

Recognize that he/she should not make any representation to anyone on behalf of the board unless and until the board takes a formal position on the matter.

Uphold the intent of executive session and respect the privileged communication that exists in executive session.

Make decisions only after all facts on a question have been presented and discussed.

Treat with respect the rights of all members of the board despite differences of opinion.

Be responsible and address the concerns and complaints of the citizens, employees, Appointed and Elected Town Officials in Town of Townsend consistent with these policies.

Demonstrate leadership by raising issues and encouraging debate regarding said issues both within the Board and within the community at large.

16-08: TOWN ADMINISTRATOR RULES AND ETHICS:

1. The Town Administrator, in relation to the Board and the community should:

Realize that his/her basic function is to carry out the policies of the Board through day to day administration of the town's business.

Realize that he/she represents the Board and should abide by, and carry out, all lawful Board decisions once they are made.

Be well informed concerning the duties of a Town Administrator on both local and state levels.

Remember that in representing the Board that he/she represents the entire community at all times and that he/she must treat the public in a courteous and respectful manner.

Accept the position of the Town Administrator as a means of unselfish service and not benefit personally or politically from his or her activities.

In recommendations for all appointments or in making appointments, avoid political patronage by judging all candidates on merit, experience, and qualifications only.

Abide by the ethics regulations established by the State and not use the position to obtain inside information on matters which may benefit someone personally.

Participate in discussion at Board Meetings and Town Meetings as required or as requested by the Board.

2. The Town Administrator, in his/her relations with other Administrative Officers, Boards and Committees of the Town should:

Endeavor to establish sound, clearly defined policies that will support the mission statement and practices of good leadership as established by the Board of Selectmen for the benefit of the people of the community.

Recognize and support the administrative chain of command.

3. The Town Administrator, in his/her relations with the board members, should:

Uphold the intent of executive session and respect the privileged communication that exists in executive session.

Treat with respect all members of the Board of Selectmen, be available when requested by members to discuss and/or advise all matters under the authority of the Town Administrator.

Consistent with the law, the Town Administrator should make available all correspondence, mail, emails or other related materials submitted to the office.

16-09: ORGANIZATION OF THE BOARD:

The Chairman shall be elected annually at the first regular meeting following the Annual Town Election. If a vacancy occurs, the Board shall elect a successor. The Board shall further appoint a Vice-Chairman and Clerk under the same provisions stated for the Chairman.

16-10: RESPONSIBILITIES OF THE CHAIRMAN:

The Chairman of the Board shall:

Preside at all meetings of the Board. In doing so, he/she shall maintain order in the meeting room, recognize speakers, call for votes and preside over the discussion of agenda items.

Sign official documents that require the signature of the Chairman.

Call special meetings in accordance with the Open Meeting Law.

Set agenda items with the Town Administrator subject to acceptance of the board when the meeting convenes.

Make liaison assignments and assign overview responsibilities for project and tasks to Board members subject to acceptance of said assignment by the Board members.

The Chairman shall have the same rights as other members to offer and second motions and resolutions, to discuss questions and to vote thereon.

16-11: RESPONSIBILITIES OF THE VICE CHAIRMAN:

The Vice Chairman of the Board shall act in the place of the Chairman during his/her absence at meetings. Should the Chairman leave office, the Vice Chairman shall assume the duties of Chairman until the Board elects a new Chairman.

16-12: RESPONSIBILITIES OF THE CLERK:

In general although not limited, the Clerk's primary responsibility is to make motions and sign documentation needing the Clerk signature as authorized by the entire Board. In absence of the Town Administrator or staff members it is the duty of the Clerk to record meeting minutes.

16-13: REGULAR BOARD MEETINGS:

Regular Board Meetings are held on a schedule voted by the Board. Unless in the case of an emergency, the Board shall not meet on days designated as legal holidays.

16-14: EMERGENCY MEETINGS:

A meeting that is called for any time other than the regular meetings and that is called without the required forty-eight (48) hour posting shall be known as a "Special Emergency Meeting". The same rules as those established for regular meetings will apply. Special Emergency meetings may be called by any member provided that the subject matter is of an emergency nature, a majority of the members agree to meet, due diligence is used in notifying all Board members and the meeting is posted as is required by the Open Meeting Law.

16-15: WORKING MEETINGS:

The Board may conduct informal "working sessions" from time to time as the situation warrants. At such meetings, which will be posted in accordance with the Open Meeting Law, any official action will be taken. A synopsis of transactions of informal meetings will be made a part of the minutes of the following regular meeting.

16-16: MEETING PROCEDURES:

Meetings are to be conducted in accordance with generally accepted rules of parliamentary procedure and the Open Meeting Law. It is the practice that application of such procedures be on a relatively informal basis, due to the size of the group and the desirability of flexibility in the expression of opinion. Robert's Rule of Order is used as a guide in matters requiring clarification.

Although the public and the press have a right to be present at open meetings of the Board of Selectmen, they do not have the right to participate unless they are recognized by the Chair.

A quorum shall consist of two members of the Board. As a practical courtesy, action on critical or controversial matters, such as the adoption of policy or appointments, shall be taken, whenever practicable, with the full Board in attendance.

The Town Administrator is expected to be in attendance at all meetings of the Board. The Town Administrator shall attend in order to keep the Board informed and advised on all matters that fall within the jurisdiction of his/her office. In accordance with the law, he/she shall carry out the actions of the Board as they relate to the conduct and administration of Town affairs under his/her jurisdiction.

16-17: EXECUTIVE SESSION:

Executive Sessions of the Board shall only be held in accordance with the provisions of Massachusetts General Law Chapter 30A, section 21A.

If practicable, executive sessions, other than a few minutes in duration, will be scheduled only at the end of the open meeting. Only items clearly allowed under the Open Meeting Law shall be included in Executive Session. The motion must specify when entering the executive session and the exemption under which the session is sought. A majority of the members present must vote to enter executive session by roll call vote. The motion must state whether or not the Board will reconvene into open session.

16-18: AGENDA PROCEDURES:

The responsibility for coordinating and planning the meeting agenda is that of the Chairman in consultation with the Town Administrator. Each of the Board Members and the Town Administrator may place items on the agenda. The Chairman, in consultation with the Town Administrator, shall schedule a realistic time period for each appointment, interview, conference or other scheduled item of business.

All items for the agenda are expected to be submitted to the Town Administrator by the close of business on the Wednesday before Tuesday Board meeting. Items of emergency or strictly routine nature that develop after closing of the agenda may be considered under "Chairman's additions to the agenda".

The Town Administrator prepares background material for the meeting and should make an effort to have such material available at least four days before any regularly scheduled meeting. If background information is insufficient or complicated or if complex memos or motions are presented at the meeting which were not in the Board's meeting packet, any member should feel free to request the tabling of the item to allow careful study of the material presented or the motion proposed.

The agenda shall be available to the public and the press at the Selectmen's office at least two days before the meeting date and shall be posted with the Town Clerk in accordance with the charter on the town's posting board and the town website.

Copies of the minutes of the previous meeting and all important correspondence, reports and other pertinent background materials shall be forwarded with the agenda to Board members.

16-19: MINUTES:

The Town Administrator and/or their designee shall record open meetings of the Board unless no such persons are available, then the responsibility will rest with the Clerk of the Board. The minutes of the Board of Selectmen constitute the official record of the Board under Federal, State and Local Law.

Minutes shall be circulated to the members of the Board before the meeting for approval by the Board. By unanimous consent, minor corrections may be made to the minutes without advance circulation of such corrections.

Minutes shall contain a full statement of all motions made and voted by the Board and of the disposition of all proposals for action. Approved minutes with all attached documentation and materials presented and/or discussed will be forwarded forthwith to the Office of the Town Clerk and uploaded to the town's website. No such material discussed or presented will include any confidential or sensitive matters before redacting such in order to protect and respect the rights of individuals.

16-20: APPOINTMENTS:

The Board makes numerous appointments each year. Appointments are generally made for one or three years in length. In no case, may appointments be made for more than three years unless specifically allowed by statute. Appointments generally are made on or before June 30th of each year.

Committee Appointments: Whenever possible the Board will seek variety in backgrounds, interests, ages, sex and geographic areas of residents, so that a true cross section of the community will be reflected. In order to attract qualified and interested persons, vacancies will be made public as far in advance of appointment as practicable.

It is the practice of the Board to accept the recommendation of the sitting committee members for appointment of new members.

16-21: ADVISORY COMMITTEES OF THE BOARD OF SELECTMEN:

The Board may appoint standing or ad hoc advisory committees to aid on matters under the Board's jurisdiction. The use of such advisory committees provides greater expertise and more widespread citizen participation in the operation of government. Charges to advisory committees shall be in writing and shall include the work to be undertaken, the time in which it is to be accomplished and the procedures for reporting to the Selectmen.

Each committee must report in writing at least annually to the Selectmen. The Board will discharge committees upon the completion of their work. In addition, each Committee shall be provided with a Committee Handbook addressing issues such as conduct and law. This Committee Handbook should be reviewed every two (2) years.

16-22: RELATIONS WITH TOWN BOARDS, COMMITTEES AND COMMISSIONS:

The Board of Selectmen is aware that coordination and cooperation is needed among the Town's Boards, Committees and Commissions not only in the day to day operations but also to:

- A. Set town wide goals and priorities,
- B. Identify and anticipate major problems and working together towards their resolution, and
- C. Develop a process for dealing with federal, state and county government.

Therefore, as the executive board that is historically responsible for the overall leadership and coordination of town affairs, the Selectmen will require that the Town Administrator to:

At least two times each year schedule meetings with Boards, Committees, and Commissions to carry out functions listed above. One meeting, shall, if possible, be held between the annual election and the start of town meeting for the purpose of reviewing the warrant and expediting town meeting.

On behalf of the Board, the Town Administrator is responsible for inter-board communications in the day to day operations of government. The Town Administrator shall develop a process for exchange of information and the provision for advice and recommendations among the Boards, Committees and Commissions with common interest, which shall include but not be limited to the exchange of minutes, the establishment of a central repository for data, studies and reports and the appointment of members or staff of boards, committees or commissions as liaison with one another around common projects.

16-23: RELATIONS WITH CITIZENS:

The Board recognizes that it both represents and is accountable to all the citizens of the town. It is the Board's policy to make every effort to strengthen communications with its citizens. Measures will be instituted to increase citizen participation, encourage citizen input into governmental decisions and to keep citizens informed of all actions contemplated or taken by the Board and the town meeting which will affect them.

Persons who will be directly affected by proposed Board discussion and/or action will be notified by the Town Administrator of the date and time of meeting at which the matter will be discussed or acted upon by the Board.

In considering matters of citizen concern at a regular meeting, the public will be allowed to ask questions or make statements relative to the matter under consideration at the discretion of the Chairman or upon request of any member of the Board.

All citizen questions and complaints are to be answered promptly. Questions and concerns relating solely to the Office of Selectmen shall be answered promptly by the Town Administrator. Those needing prompt attention by the Board should be referred to the Chairman for consideration and possible inclusion on the next meeting agenda.

16-24: EMPLOYEE GRIEVANCES:

Employee grievances are to be handled as outlined in the Town's Personnel Policies and Procedures or through the conditions set forth in a union contract for those employees covered by such agreements. If employee grievances are brought to the attention of a Board member it shall be Board policy to proceed as follows:

The employee will be shown the administrative process to be followed. A meeting with the Board may be requested by any employee; the Board shall defer such meeting until other remedies available to the employee under the Personnel Policies and/or collective bargaining agreements have been exhausted.

16-25: HEARINGS BEFORE THE BOARD:

Hearings before the Board of Selectmen generally shall be conducted in accordance with the statutory requirements applicable to the particular matter.

16-26: INSPECTION OF PUBLIC RECORDS:

This section complies with 950 CMR 32.00: Public Records Access for the guidance of supervisory and administrative personnel, and to insure that disputes regarding access to particular records are resolved expeditiously and fairly.

Every person has the right to inspect or receive copies of public records in the custody of the Selectmen's departments without unreasonable delay. Every effort shall be made to provide such public records in a timely fashion and in accordance with the law.

16-27: DEPARTMENTAL MEETINGS AND REPORTING:

In an effort to keep the Board of Selectmen informed and to provide Department Heads with an opportunity to communicate departmental activities in a more efficient and formalized fashion, the Board of Selectmen requires the following:

Each Department Head shall be required to submit a monthly written report to the Selectmen's office. This report shall describe all activities undertaken by that Department Head and his/her department employees during the prior month. Particular attention should be paid to how the department head's actions during the prior month fit in with the department's annual goals and objectives. These written reports are intended to help keep the Board of Selectmen informed, to relieve Department Heads from the obligation of attending the meetings on a regular basis, and to free up valuable time at Selectmen's meetings for non-routine matters.

The Town Administrator shall coordinate and schedule monthly Department Head meetings on the first Tuesday of the month and report all agenda topics and discussions to the Board of Selectmen at their regular scheduled meeting. OML? All monthly reports should be submitted to the Town Administrator at the monthly department meetings with discussion regarding the reports to be held at the meetings with other departments to ensure open communication and cooperation with all departments in conducting the work needed to ensure the success of the community needs and objectives.

While this policy is a requirement for all Department Heads under the jurisdiction of the Board of Selectmen, it is also an open opportunity for other Elected or Appointed Officials, Boards and Commissions to keep the lines of communication open.

Report of the Town Administrator

February 5, 2019

1. Personnel Updates-

- a. Trainings- On January 23, 2019 we conducted a specialized training session for the new requirements that municipalities follow OSHA regulations through the Office of Workplace Safety and Health Program. Monitoring is done through the Massachusetts Department of Labor Standards. The training was being performed, free of charge, by a local resident who is a certified trainer. This was a general overview and we will be seeking training funds in the FY20 budget to be able to provide the more specialized trainings by department. I am attaching the slide deck that was used during the presentation.

• **Board Action Requested-** None requested.

- b. Landuse Coordinator- Applicants for the position of Landuse Coordinator are now at 10. Consistent with the discussion before the Board at the last meeting by mid-February I will begin screening down the applicants to reach a preferred candidate or short list of candidates. At that time I will schedule an opportunity for related board and committee members to meet with and discuss matters with the candidate(s). Lastly, I will present a candidate or short list of candidates to the Board for your consideration of appointment.

• **Board Action Requested-** None Requested.

- c. New Treasurer-Collector- The contract that you negotiated with Anna Noyes, our new Treasurer Collector, is enclosed and it would be appropriate to have a vote to affirm the contract and execute it.

Board Action Requested- If it would please the Board, a vote to affirm the contract and execute it.

2. Financial Updates-

- a. FY20 Budget- All departmental budgets are in hand. The finance team has been working on keeping the revenue-expense tool updated with each new piece of information as we receive it. House 1, the Governor's budget, was released last week. Our portion of Local Aid is projected to increase from \$1,358,888 to \$1,395,578, an increase by 2.7%, or roughly \$38k for next fiscal year.

The process of having department's presenting their budgets before you has begun as of tonight. Over the next several weeks I will be holding individual meetings with departments, primarily the big budget ones like police, fire and highway.

It is important that we finalize our budget work session sooner than later.

Board Action Requested- None requested.

- b. FY20 North Middlesex Regional School Budget- The Superintendent presented his preliminary budget last Monday. It contemplates a 2.81% total increase of which our share here in Townsend would be a roughly \$1,000,000.00 increase. This is an extraordinary

number for us to consider. I look forward to engaging with the Superintendent and School Committee members in this matter over the next weeks and months in an effort at assuring that our local obligation to fund the schools is met but in a manner that is cognizant of the real limitations on our ability to spend.

Board Action Requested- None requested.

- c. FY20 Nashoba Regional Vocational School Budget- The Superintendent presented her preliminary budget last week. It reflects a level funded or perhaps even slightly reduced budget for us here in Townsend. I expect to know more specifically once the official assessment letter is received.

Board Action Requested- None requested.

3. **Project Updates-**

- a. Library-Meeting Hall-Senior Center Facilities Update- As you are no doubt aware, we have been experiencing some difficulties with the HVAC system in the referenced building. The extremely low temperatures have only exacerbated the issues. Additionally, we had a pipe/coil burst in the entryway heating unit at the Senior Center which caused significant flooding. We have Serve-Pro coming in Tuesday to do an assessment of the water damage to enable us to make the repairs required.

These matters bring into focus something that we have spoken about offline and unofficially for a little while now that I judge we need to formalize.

I look to you for your concurrence to hire a building systems expert firm to come in and give us a complete site assessment. I judge it best if we do so with a firm that is completely disassociated from any of the building's current vendors or installers and that the firm not be a vendor itself.

Once we have a top to bottom assessment of the condition of and needs for the building we can best seek to address it through capital.

Board Action Requested- Your thoughts, please?

- b. Nashoba Regional Dispatch- I have enclosed a copy of the minutes of the NRDD Administrative Board from the most recent meeting. In it you will find an update on a number of matters currently at play in the district. I will be happy to speak to these issues at your pleasure.

Board Action Requested- None requested.

- c. Pavement Management Plan Update- The target deliverable date for the Updated Pavement management Plan is mid-March.

Board Action Requested- None requested.

4. **Miscellaneous Updates**

- a. Unregistered Motor Vehicle Update- I will have the most updated information for you on Tuesday night.

Board Action Requested- None requested.

- b. Cable Corporation and Extension- As last reported, we have finally secured responsive counsel to assist the Cable Commission in its work toward the creation of a Non-profit Cable Corporation and the long awaited system extension project. Pending final scheduling details, counsel will be in attendance at you next meeting.

Board Action Requested- None requested.

WHY ARE WE HERE?

...shall jointly adopt regulations that shall provide at least the level of protection to employees as are provided under the federal Occupational Safety and Health Act of 1970, 29 U.S.C. chapter 15, including standards and provisions of the general duty clause contained in said chapter 15. In the absence of a state regulation, the department shall apply the applicable provisions of that act.

1



2

EXEMPT
(well, maybe)



3

Hazard Communications

4

Employer Responsibilities

Employer responsibilities under the HCS:

- Ensure labels are on incoming labels and not defaced
- Maintain SDSs from shipments
- Obtain SDSs if not received
- Ensure SDSs are readily accessible
- Ensure chemicals in workplace are properly labeled, tagged, or marked
- Provide information and training to employees
- Provide information/access for employees in multi-employer workplaces
- Develop, implement, and maintain a written hazard communication program

5

Hazard Communication Program

Requirements for a written program:

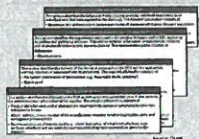
- Develop, implement, and maintain a written hazard communication program
- Lists of hazardous chemicals present at worksite
- Availability of SDSs to employees and downstream employers
- Labeling of chemical containers
- Training programs regarding hazards of chemicals and protective measures

6

Hazard Communication Program

Safety data sheet (SDS):

- Available and accessible to workers
- Required for all hazardous chemical used
- Do not use hazardous chemicals if there is no SDS available
- 16-section format



7

Hazard Communication Program

Labeling:

- All containers of hazardous materials must be labeled
- Immediate warning
- Snapshot of hazards and protective information

8

Hazard Communication Labels

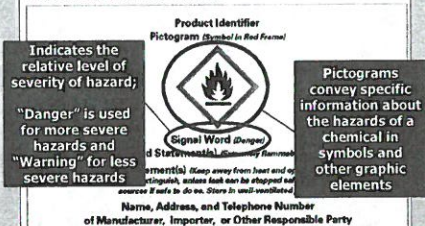
Figure 6: Example of Required HCS Label Elements



9

Hazard Communication Labels

Figure 6: Example of Required HCS Label Elements



10

Hazard Communication Labels

Exclamation Mark



Figure 3: HazCom 2012 Pictograms

Health Hazard	Flame	Exclamation Mark
<ul style="list-style-type: none"> Corrosive Flammable Highly flammable Extremely flammable Target Organ Toxicity Reproductive Toxicity 	<ul style="list-style-type: none"> Flammable Highly flammable Extremely flammable Gas Reproductive Toxicity 	<ul style="list-style-type: none"> Acute Toxicity Chronic Toxicity Environmental Corrosive Reproductive Toxicity
Gas Cylinder	Corrosion	Explosion
<ul style="list-style-type: none"> Acute Toxicity Chronic Toxicity 	<ul style="list-style-type: none"> Corrosive Reproductive Toxicity Chronic Toxicity 	<ul style="list-style-type: none"> Explosion Reproductive Toxicity Chronic Toxicity
Flame Over Circle	Environment	Skull and Crossbones
<ul style="list-style-type: none"> Acute Toxicity 	<ul style="list-style-type: none"> Acute Toxicity 	<ul style="list-style-type: none"> Acute Toxicity

11

Hazard Communication Labels

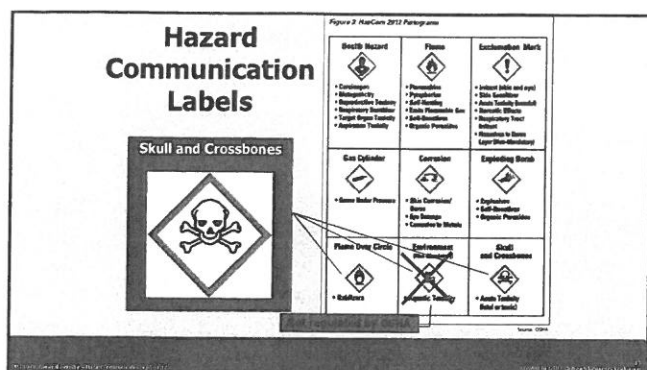
Exploding Bomb



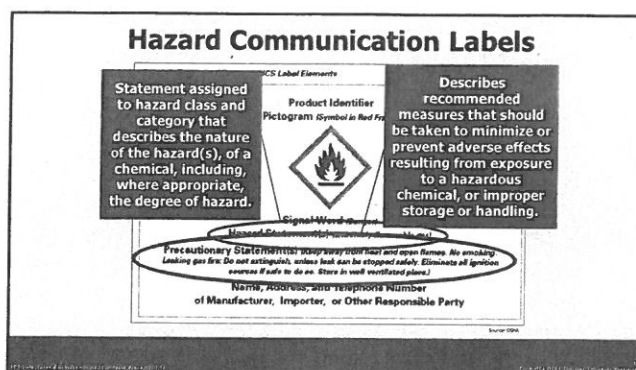
Figure 3: HazCom 2012 Pictograms

Health Hazard	Flame	Exclamation Mark
<ul style="list-style-type: none"> Corrosive Flammable Highly flammable Extremely flammable Target Organ Toxicity Reproductive Toxicity 	<ul style="list-style-type: none"> Flammable Highly flammable Extremely flammable Gas Reproductive Toxicity 	<ul style="list-style-type: none"> Acute Toxicity Chronic Toxicity Environmental Corrosive Reproductive Toxicity
Gas Cylinder	Corrosion	Explosion
<ul style="list-style-type: none"> Acute Toxicity Chronic Toxicity 	<ul style="list-style-type: none"> Corrosive Reproductive Toxicity Chronic Toxicity 	<ul style="list-style-type: none"> Explosion Reproductive Toxicity Chronic Toxicity
Flame Over Circle	Environment	Skull and Crossbones
<ul style="list-style-type: none"> Acute Toxicity 	<ul style="list-style-type: none"> Acute Toxicity 	<ul style="list-style-type: none"> Acute Toxicity

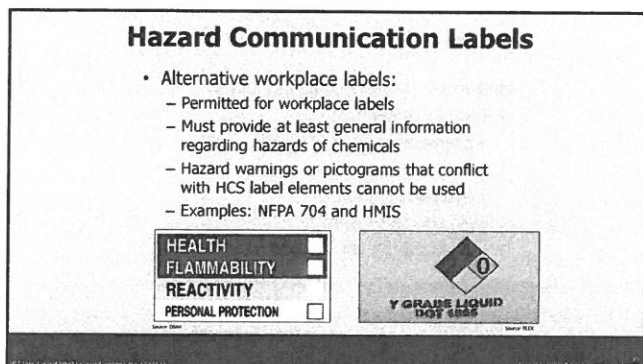
12



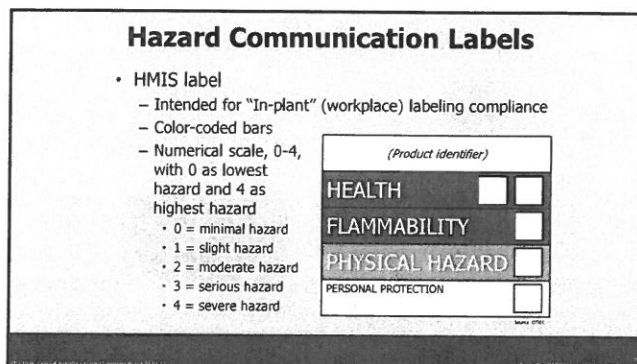
13



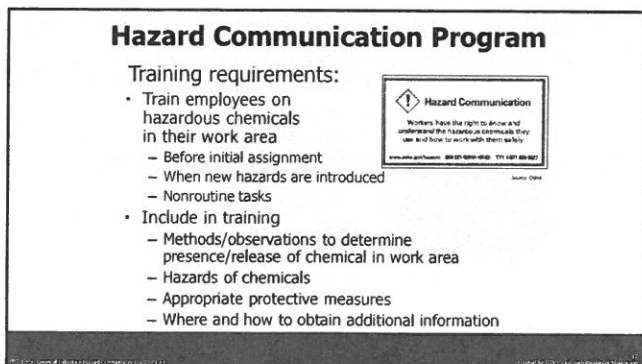
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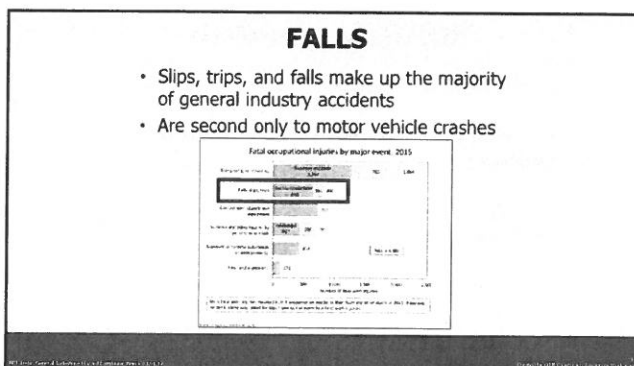
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17



18

Introduction

- Unless working on a ladder, scaffold or scissor lift, OSHA requires fall protection when exposed to a 4-foot fall or greater.



19

Common Fall Hazards

- Floor Openings/Pits
- Wall Openings
- Shelving Units



20

Common Fall Hazards

- Stairs
- Floors
- Chairs



21

Fall Hazard Controls

Hierarchy of Fall Hazard Control:

- First line of defense
 - **Eliminate** the fall hazard
- Second line of defense
 - **Prevent** the fall
- Third and last resort
 - **Control** the fall

22

Fall Hazard Controls

Eliminate fall hazards – hole covers/grates

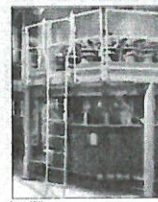
Eliminate fall hazards – work from the ground

Eliminate fall hazards – Use a ladder instead of a chair/bucket

Eliminate fall hazards – Don't reach!!!

23

Fall Hazard Controls



Prevent the fall – guardrails

- Standard railing
 - Top rail, mid rail, and posts
 - Height from upper surface of top rail to floor level is 42" (+/- 3")
 - Mid-rail height is 21"
- Standard toeboard
 - 3.5" high
 - Not more than 1/4" clearance above the floor

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Fall Hazard Controls

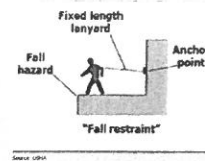


Prevent the fall – fences and barricades

- Prevents unauthorized employee exposure to fall hazard
- Employer authorizes access
- Authorized personnel must then be protected from the fall hazards within

25

Fall Hazard Controls



Prevent the fall – personal fall restraint

- Prevent falls by keeping worker from reaching fall hazard
- Comprised of a body belt or body harness, an anchorage, connectors
- Often used when section of guardrail or hole cover is temporarily removed

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Fall Hazard Controls



Know the A, B, Cs of Personal Fall Arrest Systems

- Anchorages
- Body harness
- Components (connectors like snaphooks or Dee-rings, connection points, lanyards, deceleration devices, lifelines, etc.)

Installed, used, and maintained according to the manufacturer

27

Fall Hazard Controls

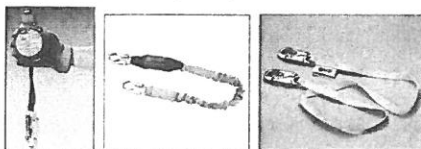
PFAS – full-body harness



28

Fall Hazard Controls

PFAS – connecting components



Source: OSHA, National Institute for Occupational Safety and Health

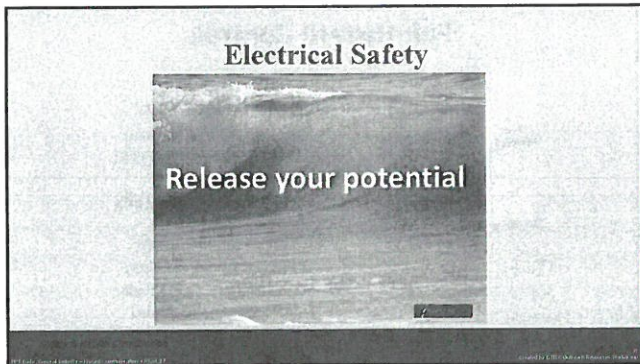
29

Employer Requirements

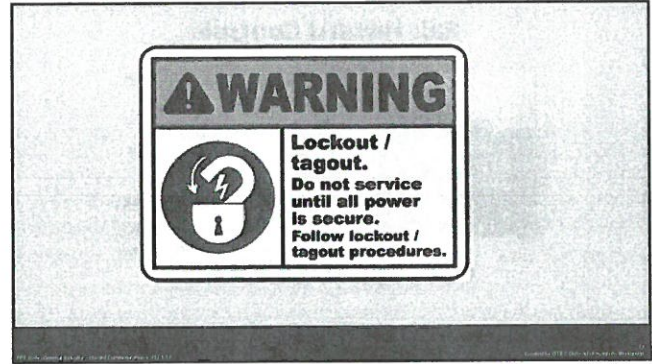
Training – your employer must train you on the following:

- Fall hazards associated with your facility and your work
- Methods used to protect you from those hazards
- Proper and safe use of any personal fall arrest, positioning, or fall restraint systems
- Applicable OSHA standards

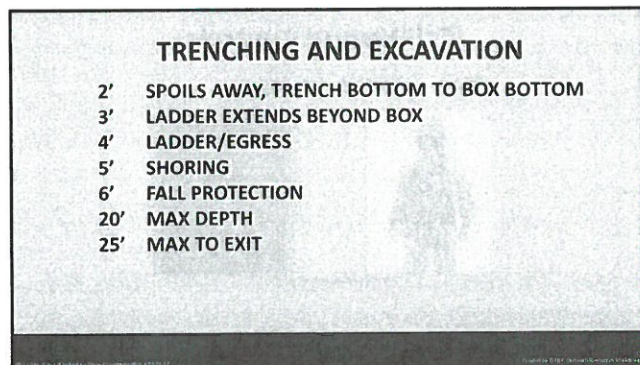
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33



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Nashoba Valley Regional Dispatch District

Administration Board

Meeting Minutes

December 19, 2018

ATTENDEES

Board Members:

Chair Don Lowe, Bolton; Vice Chair Marie Sobalvarro, Harvard; Christine Keefe, Berlin; Orlando Pacheco, Lancaster; Heather Lemieux, Lunenburg; Jim Kreidler, Townsend

Other Participants:

Ross Klun, NVRDD Director; Berlin Police Chief Tom Galvin; and Townsend Police Chief Richard Bailey.

Chair Lowe called the meeting to order at 9:30 a.m. with a quorum present and acting.

Approval of Meeting Minutes

Mr. Lowe presented open session minutes from May 16, June 13, July 25, September 18 and November 15, 2018 and executive session minutes from September 27, October 10, October 25, November 8, and December 6, 2017, and March 21, April 4, May 16, June 13, July 25 and November 15, 2018. On a motion made by Pacheco and seconded by Keefe the minutes were approved. Motion made by Mr. Pacheco for approval, and seconded by Christine Keefe. All in favor

Scheduled meetings on June 27 and October did not take place due to lack of a quorum, therefore there aren't any minutes.

Update from the Chairman

Mr. Lowe advised that as of last week the available balance is \$195,041.28.

There are thirteen (13) people in the Dispatch function – Eleven (11) trained dispatchers and two (2) trainees.

Update from Lancaster

Mr. Pacheco reported that Cheryl Gariepy, Lancaster Finance Director has requested an update from MUNIS and will forward any information received to Mr. Klun. Mr. Klun would like the Lancaster Town Administrator's office to do be responsible for managing NVRDD financials and reconcile with Mr. Klun.

Next Meeting Date

The Town of Bolton will host the next Board meeting on January 23, 2019 at 9:30 a.m. in the Bolton Town Hall.

Executive Director Update

Mr. Klun reported that two (2) new trainees were hired and one has already resigned. The NVRDD is faced with candidates for most part that don't have a strong public safety background. Mr. Klun has reached out to the Fitchburg State Criminal Justice Program to see if there is any interest and will advertise for a second trainee.

Mr. Klun met with Murphy, Hesse, Toomey and Lehane to review a draft agreement for legal services at a standard rate of \$230.00 per hour. Attorney Kier Wachterhauser will be the primary contact. Mr. Lowe stated that Attorney Wachterhauser worked with the Nashoba Regional School district and did a good job.

Third quarter assessments have been received. Grants received included \$25,000 for professional development; \$3,500 for child passenger safety car seats and the department has two technicians that provide child safety services to the community; \$1,979 for an automatic shut off valve for the water heater. An insurance claim in the amount of \$9,000 was also received.

Operations Committee Meeting Update

The Operations Committee didn't meet as scheduled on December 18, 2018 due to not meeting posting requirements. The next Operations Committee meeting is scheduled for January 15, 2019.

Mr. Klun would like to find a more efficient way to streamline the process for scheduling police details. A situation took place where a scheduled detail was not canceled as requested and the Bolton officer showed up for the detail and is looking to be paid. Mr. Lowe stated that there is no mechanism to pay the officer although unfortunate and will try to minimize mistakes such as this.

The Board discussed using IMC to log in the police detail schedule and keeping these calls separate to avoid inflating the call volume. Mr. Klun stated that everyone needs to be mindful that it has to be all or nothing, and each municipality will need to agree on the process or it won't work.

Officer Galvin stated that the second issue to be addressed is network security and is a result of the audit. The goal is to work toward meeting the standards of the FBI which would include the amount of access from home and complex passwords. Everyone will talk with their respective Police and Fire Chiefs regarding this matter.

Other Business

Mr. Lowe stated that when union negotiations are complete and a contract is in place it may attract more experienced people.

Ms. Lemieux and Mr. Klun have both reached out to Jim Powers at Powers and Sullivan. After Mr. Klun contacted Mr. Sullivan he received a call from Mr. Powers who was very apologetic but has not heard from him again and is very concerned. NVRDD has not paid any invoices at this point. Mr. Klun will try reaching out again.

The Board agreed to Mr. Klun's recommendation to create a section on the NVRDD website for posting the meetings.

Executive Session

None

Pacheco moved to adjourn at 10:10 a.m. Lemieux seconded. All in favor.

Respectfully submitted by Linda L. Day

**TOWN OF TOWNSEND
CONTRACT OF EMPLOYMENT
TREASURER/COLLECTOR**

This Contract of employment (Contract) made this 29th day of **January 2019** by and between the Town of Townsend (Town) and Anna Noyes, Treasurer/Collector,

WITNESSETH THAT:

EMPLOYMENT: The Town, by and through its Board of Selectmen (the Board) hereby contracts Anna Noyes as Treasurer/Collector of the Town, pursuant to Massachusetts General Laws, Chapter 41, Section 108N

1. **TERM:** The term of this Contract shall be for a three year period commencing January 14, 2019 and ending January 13, 2022.
2. **HOURS OF WORK:** The Treasurer/Collector agrees to devote that amount of time that is reasonably necessary for the Treasurer/Collector to faithfully perform the duties of the position of the Treasurer/Collector.
3. **COMPENSATION:** The Treasurer/Collector and the Board agree that the position of Treasurer/Collector is currently recognized within the Town's non-union compensation and classification plan in Grade 9, and further recognizes, like all positions in the compensation and classification plan, that the position may be reclassified in the future. The Town shall, subject to appropriation, pay the Treasurer/Collector during the term of this Contract on the following basis:
 - a) **The Remainder of Fiscal Year 2019:** Annual Base Salary of **\$60,197.04**
 - b) **Salary Increase:** Salary increases in subsequent years, if any, are to be determined as follows:
 - a. If the Treasurer/Collector receives an annual performance evaluation of at least "Meets Expectations" her annual salary shall be increased by one step in the compensation plan within the positions' grade.
4. **INSURANCE BENEFITS:** The Treasurer/Collector shall be entitled to all health and life insurance benefits to which other Town employees are entitled.
5. **INDEMNIFICATION:** To the extent allowed by law, the Town shall defend, save harmless and indemnify the Treasurer/Collector against any tort, professional liability, claim or demand, or other legal action, whether groundless or otherwise arising out of an alleged act or omission occurring in the performance of her duties as Treasurer/Collector, even if said claim has been made following her termination from employment, except an intentional violation of the civil rights of any person, provided that the Treasurer/Collector acted within the scope of her duties. The Town shall pay

the amount of any settlement or judgment rendered thereon. The Town may compromise and settle any claim or suit and will pay the amount of any settlement or judgment rendered thereon without recourse to the Treasurer/Collector.

The Town shall reimburse the Treasurer/Collector for reasonable attorney's fees and cost incurred by the Treasurer/Collector in connection with such claims or suits involving the Treasurer/Collector in her professional capacity.

The Town shall not be required to indemnify or pay legal expenses or costs incurred for any proceeding, hearing or appeal related to any action brought by either party to enforce this agreement.

This section shall survive the termination of this Agreement.

6. ANNUAL VACATION, SICK, PERSONAL AND BEREAVEMENT LEAVE:

- a) The Treasurer/Collector shall be entitled to a grant of fifteen (15) days annual vacation leave per fiscal year. In recognition of the demands serving as Treasurer/Collector and due to unforeseen circumstances, with approval of the Town Administrator, the Treasurer/Collector may carry forward or be paid for her unused vacation time, not to exceed ten (10) days. Remaining unused vacation time shall be forfeited.
- b) The Treasurer/Collector shall be entitled to a grant of four (4) personal days per year, non-cumulative, for the purpose of transacting or attending to personal, business, or household matters.
- c) The Treasurer/Collector shall be entitled to a grant of sick leave in the amount of 15 days per fiscal year. Sick time is accrued each pay period and is carried over from prior fiscal Years, up to 150 days. Further, this contract acknowledges that sick time has no monetary value, and as such, any sick time remaining at the time of the Treasurer/Collector's retirement will be forfeited at no cost to the Town.
- d) If the Treasurer/Collector is sick for three (3) or more days, the Town Administrator may require a doctor's certificate at the Town's expense.
- e) The Treasurer/Collector shall receive up to three (3) consecutive working days leave with full pay for making arrangements and attending the funeral upon the death of a family member of her or her immediate family, which shall include the following persons: husband, wife, children, mother, father, brother, sister, mother-in-law, father-in-law, grandparents. All other relatives who do not fall into this category, bereavement time shall be one (1) day.

7. HOLIDAYS: The Treasurer/Collector shall have holiday leave for those holidays recognized as paid Holidays by the Town.

If the holiday falls on a day off, the Treasurer/Collector will receive an additional day off.

If the Treasurer/Collector is required by the Town Administrator to work on a holiday, she will receive the holiday pay plus normal pay or compensatory time for all hours worked.

If the holiday falls within the vacation period of the Treasurer/Collector, she shall receive an additional day of vacation.

8. **PROFESSIONAL DEVELOPMENT:** The TOWN recognizes its obligations to the professional development of the Treasurer/Collector, and agrees that the Treasurer/Collector shall be given adequate opportunities to develop her skills. The Treasurer/Collector will be allowed to attend the Annual MCTA School and Summer conference each year without loss of vacation or other leave, and will be reimbursed by the TOWN for all expenses (including travel expenses) incurred while attending or traveling to the aforementioned conferences.

The TOWN also agrees to budget an amount of \$1,290.00, subject to appropriation each year, and pay for travel and subsistence expense of the Treasurer/Collector for short courses, institutes, and seminars that, in the Treasurer/Collector's reasonable judgment, are necessary for her professional development.

9. **DISCIPLINE - REMOVAL - TERMINATION:** The Town may discipline the Treasurer/Collector by oral reprimand, written reprimand or removal. The Treasurer/Collector shall not be removed, reprimanded or otherwise disciplined in any way, except for good cause. The principle of progressive discipline will apply and the Town recognizes its obligation to provide the Treasurer/Collector with periodic performance evaluations.

- a) The Town may suspend the Treasurer/Collector with or without benefits only for good cause.
- b) The Town may remove the Treasurer/Collector for good cause, by majority vote of the Board after a hearing. The Treasurer/Collector shall have the option of choosing whether or not any such hearing shall be closed to the public or held as an open or public hearing. A right of appeal shall exist to the Superior Court of the Commonwealth of Massachusetts.
- c) In all phases of disciplinary action, the Treasurer/Collector shall have the right to be represented by counsel at her own expense.
- d) In all phases of disciplinary action, the Treasurer/Collector shall be given at least ten (10) business days prior written notice, which will include an explanation of the action being taken, the cause therefore, the date(s) and time(s) of all alleged offenses or violations of the contract, and the date and time of the hearing. After

any hearing, the Board must make a written report of the evidence presented and its findings of fact. No evidence may be relied upon which was not produced at the hearing.

e) Good cause as used in this paragraph shall mean:

i) Conviction of the Treasurer/Collector of any crime (whether a felony or misdemeanor) involving moral turpitude, malfeasance, misfeasance or misprision in office;

ii) Failure to administer and manage the Treasurer/Collectors office in an efficient, competent and responsible manner;

iii) Failure after written warning to carry out the duties and responsibilities of the Treasurer/Collector;

iv) Any other good cause.

f) Either party as provided below may terminate this Contract.

i) By mutual written agreement, signed by the Board and the Treasurer/Collector, upon such terms and conditions as may be acceptable to both parties at the time of termination.

Unless either party provides written notice to the other of its intention to renegotiate and/or not to renew this contract no less than six (6) months prior to the end of its initial or any extended terms, this Contract shall automatically be extended on the then applicable terms and conditions for an additional one (1) year period.

It is expressly understood that a decision not to renew this Agreement shall not be construed as a dismissal, require a hearing, or trigger the removal procedures specified herein."

In the event the Treasurer/Collector resigns following a formal suggestion by the TOWN that she resign before the expiration of the then applicable term of employment under the contract, the TOWN agrees to pay the Treasurer/Collector a lump sum severance payment equal to three (3) months' salary and benefits.

In the event the Treasurer/Collector intends to resign voluntarily she shall give the TOWN thirty (30) days written notice in advance, unless the parties otherwise agree in writing. Provided such notice is given, the Treasurer/Collector will be entitled to receive pay for any accrued but unused vacation leave in accordance with 11 a) below.

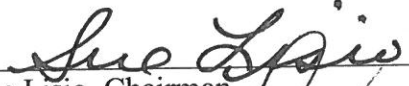
10. OTHER TERMS AND CONDITIONS OF EMPLOYMENT:

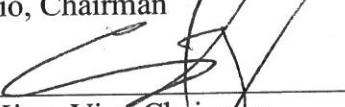
- a) The Treasurer/Collector shall be paid on a per diem basis for all accrued but unused vacation leave of the year upon separation from service.
- b) The Treasurer/Collector shall perform her duties in accordance with the town approved job description a copy of which is attached to this contract, entitled, "Job Description – Treasurer/Collector", and incorporated herein.


11. GENERAL PROVISIONS:

- a) The TOWN agrees that it shall not at any time during the term of this Contract reduce the salary, compensation or other benefits of the Treasurer/Collector, except to the extent that such reduction is evenly applied across-the-board for all employees of the TOWN.
- b) This writing constitutes the complete agreement of the parties as of the date of execution, and any supplemental or additional agreement or amendment to this Contract shall be effective only if in writing and signed by the Board and the Treasurer/Collector.
- c) If any provision of this contract or any portion thereof is held unconstitutional, invalid, or unenforceable, the remainder of this Contract shall not be affected and shall remain in full force and effect.
- d) For any clause of this contract which provides that a certain benefit to the Treasurer/Collector shall be subject to appropriation, the Town understands and acknowledges that it shall be responsible to budget and support any such appropriation at any and all Town meetings.
- e) This Agreement may not be modified, altered, or changed except by mutual agreement of the parties contained in a written instrument signed by both parties.
- f) For the purposes of the Fair Labor Standards Act, 29 U.S. C., Section 201, *et seq.*, the Treasurer/Collector shall be a salaried, exempt employee.
- g) No waiver of satisfaction of a condition or nonperformance of an obligation under this agreement will be effective unless it is in writing and signed by the party granting the waiver.
- h) This Agreement will be interpreted and construed for all purposes under the laws of the Commonwealth of Massachusetts, without giving effect to the principles of conflicts of laws of such state. All disputes arising under or out of this Agreement will be brought in courts of competent jurisdiction located within the Commonwealth of Massachusetts.

FOR THE TOWN OF TOWNSEND
By Its Board of Selectmen:


Sue Lisio, Chairman


Cindy King, Vice-Chairman


Wayne Miller, Clerk

By: Treasurer/Collector


Anna Noyes

Date Signed: 2/7/19

ADDENDUM TO THE
CONTRACT AGREEMENT BETWEEN
THE TOWN OF TOWNSEND AND
THE TOWN ACCOUNTANT

5.5

This Agreement shall constitute an addendum to the Contract Agreement between the Town of Townsend and the Town Accountant.

WHEREAS: The Town Accountant performed duties outside of those regularly required of her under her job description in the absence of a Treasurer Collector; and

WHEREAS: Those additional duties extended from August 1, 2018 to January 31, 2019;

NOW THEREFORE:


1. The Board of Selectmen and the Town Accountant hereby agree that a one-time, non-precedent setting stipend of \$4,000.00 shall be paid to the Town Accountant for said additional services; and
2. This Addendum shall be considered a part of the existing contract agreement between the parties.

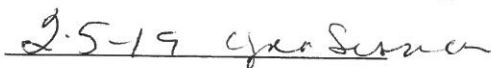

Laurie Plourde, Town Accountant

**FOR THE TOWN OF TOWNSEND
BY ITS BOARD OF SELECTMEN¹:**


Sue Lisio, Chair


Cindy King, Vice-Chair


Wayne Miller, Clerk



¹ As per Board vote taken on 1/22/19.

BOS Meeting Calendar 2019

Date	Meeting	Time	Hearings Confirmed	Work Session topics
Tuesday, February 05, 2019	BOS	6:00 PM		
Saturday, February 09, 2019	Budget Work Session	9:00 AM		
Tuesday, February 12, 2019	Budget Work Session	6:00 PM		
Tuesday, February 19, 2019	BOS	6:00 PM	Town Clerk, Fire-EMS, Hwy	
Tuesday, February 26, 2019	Budget Work Session	6:00 PM		
Tuesday, March 05, 2019	BOS	6:00 PM	Recreation	
Tuesday, March 12, 2019	Budget Work Session	6:00 PM		
Tuesday, March 19, 2019	BOS	6:00 PM	Library, COA	
Tuesday, March 26, 2019	Budget Work Session	6:00 PM		
Tuesday, April 02, 2019	BOS	6:00 PM		
Tuesday, April 09, 2019	Budget Work Session	6:00 PM		Finalize?

6.2

