Attachment 3

Written comments pertaining to the Initial Study and Proposed Mitigated Negative Declaration for the Humboldt Bay Trail South Project

List of Commenters Humboldt Bay Trail South Project February 27-March 30, 2018

No.	Date	Name	Туре
1	February 27, 2018	Paul Albert	Comment Form
2	February 27, 2018	Katherine Bettis	Comment Form
3	February 27, 2018	Carl Casale	Comment Form
4	February 27, 2018	Jim Clark	Comment Form
5	February 27, 2018	Paula Flannery and Steve Pope	Comment Form
6	February 27, 2018	Nicole Jean Hill	Comment Form
7	February 27, 2018	Rees Hughes	Comment Form
8	February 27, 2018	Korina Johnson	Comment Form
9	February 27, 2018	Paul Kinsey	Comment Form
10	February 27, 2018	Robin Kinsey	Comment Form
11	February 27, 2018	Michele McKeegan	Comment Form
12	February 27, 2018	Chet Ogan	Comment Form
13	February 27, 2018	J Reyes	Comment Form
14	February 27, 2018	Leah Stamper	Comment Form
15	February 27, 2018	Stephanie Tidwell	Comment Form
16	February 27, 2018	Brent Twoomey	Comment Form
17	February 27, 2018	Holly	Comment Form
18	February 27, 2018	[No name]	Comment Form
19	February 27, 2018	[No name]	Comment Form
20	February 27, 2018	Michael Van Hattem	Comment Form
21 February 28, 2018		Michael Van Hattem	E-mail
		Aldaron Laird	E-mail
23	March 2, 2018	Karen Underwood	Comment Form
24	March 3, 2018	Cynthia Noel	E-mail
25	March 4, 2018	Phil Perez	E-mail
26	March 5, 2018	Katherine Bettis	E-mail
27	March 6, 2018	Kimberly Tays	E-mail
28	March 11 and 13, 2018	Trisha Lee	E-mail
29	March 12, 2018	Ariana Siva	E-mail
30	March 12, 2018	E Nunez	E-mail
31	March 12, 2018	Bess Bair	E-mail
32	March 12, 2018	Pam Walatka	E-mail
33	March 16, 2018	Barbara Kennedy	E-mail
34	March 16, 2018	Michele McKeegan	E-mail
35	March 16, 2018	Kay Schaser	E-mail
36	March 17, 2018	Diane Ryerson	E-mail
37	March 17, 2018	Melanie Kasek	E-mail
38	March 17, 2018	Edge Gerring	E-mail
39	March 17, 2018	Jan Ostrom	E-mail
40	March 17, 2018	Judith Williamson	E-mail
41	March 17, 2018	Glenda Hesseltine	E-mail
42	March 17, 2018	Kathleen Pelley	E-mail

List of Commenters Humboldt Bay Trail South Project February 27-March 30, 2018

No.	Date	Name	Туре
43	March 17, 2018	Michael McLaughlin	E-mail
44	March 17, 2018	Dr. John	E-mail
45	March 17, 2018	Jud Ellinwood	E-mail
46	March 18, 2018	Kris Diamond	E-mail
47	March 18, 2018	Carol Conaway	E-mail
48	March 18, 2018	Robert Carmony	E-mail
49	March 18, 2018	Jan Derksen	E-mail
50	March 18, 2018	Siddiq Kilkenny	E-mail
51	March 18, 2018	Brittany Gribbin	Comment Form
52	March 18, 2018	Karen Dubaldi	Comment Form
53	March 18, 2018	Peter Dubaldi	Comment Form
54	March 18, 2018	Kemset Moore	Comment Form
55	March 19, 2018	Cindy Kuttner	E-mail
56	March 19, 2018	Minnie Wolf	E-mail
57	March 19, 2018	Dennis Houghton	E-mail
58	March 19, 2018	Richard Langford	E-mail
59	March 19, 2018	Elaine Astrue	E-mail
60	March 19, 2018	Ron Kuhnel, Melanie Kuhnel, Larry Glass	E-mail
61	March 19, 2018	Michele Kamprath	Comment Form
62	March 19, 2018	Elizabeth Murguia	Comment Form
63	March 19, 2018	Suzanne Langford	Comment Form
64	March 20, 2018	Cheri Beechel	E-mail
65	March 21, 2018	Nancy Lee	E-mail
66	March 22, 2018	Ruth Moon	E-mail
67	March 22, 2018	Adrienne Werth	E-mail
68	March 23, 2018	Gail Narum	E-mail
69	March 2018	[No name]	Comment Form
70	March 26, 2018	Ellen Taylor	Comment Form

1

Completing the Humboldt Bay Trail between Eureka and Arcata

("Humboldt Bay Trail South" Project)

COMMENT FORM – General Comments

Thank you for your interest in the Humboldt Bay Trail. Comments can be provided using this form or other formats such as letter or e-mail. Please provide comments by March 19, 2018. Here are some optional questions to consider when developing your comments:

- What are your impressions of the current design?
- · Do you have suggestions for improving the design?
- Are there aspects of Eureka's and Arcata's existing trail segments you especially like, or aspects you believe could be improved?
- Is this project still a regional priority?

Alfa good. GREAT. WORK.

Personal Information (Optional)	
Name PAU A/BERT	Rep.
Mailing Address or E-mail Address	I WALFINGER HI
Do you want a response?	□Yes □No

Return forms to:
Hank Seemann, Deputy-Director
Humboldt County Public Works Department
1106 Second Street, Eureka, CA, 95501
hseemann@co.humboldt.ca.us

("Humboldt Bay Trail South" Project)

COMMENT FORM - General Comments

Thank you for your interest in the Humboldt Bay Trail. Comments can be provided using this form or other formats such as letter or e-mail. Please provide comments by March 19, 2018. Here are some optional questions to consider when developing your comments:

- What are your impressions of the current design?
- Do you have suggestions for improving the design?
- Are there aspects of Eureka's and Arcata's existing trail segments you especially like, or aspects you believe could be improved?
- Is this project still a regional priority?

_		
	(Blidges do not need to match,	
	Make them non-slillery.	
	5) Bracut. No one is goly to d. this.	
	2) Bracul. No one is goly to d. this. J a driveray. Obchits will acthis.	>
(3 Dint remove any Encallptusif affects wildlife.	-
1	rather than meander around. This sesmi	
	rather than meander around. This segmin	ens
	would get no use.	
(3) get peale to actually use it. Byes, make it a regional privrity.	
Ĺ	(b) yes, make it a regional privrity.	

Personal Information (Optional) Name	Katherine Bettis
Mailing Address or E-mail Address	
Do you want a response?	₩Yes □No

Return forms to:

Hank Seemann, Deputy-Director
Humboldt County Public Works Department
1106 Second Street, Eureka, CA, 95501
hseemann@co.humboldt.ca.us

("Humboldt Bay Trail South" Project)

COMMENT FORM - General Comments

Thank you for your interest in the Humboldt Bay Trail. Comments can be provided using this form or other formats such as letter or e-mail. Please provide comments by March 19, 2018. Here are some optional questions to consider when developing your comments:

- What are your impressions of the current design?
- Do you have suggestions for improving the design?
- Are there aspects of Eureka's and Arcata's existing trail segments you especially like, or aspects you believe could be improved?
- Is this project still a regional priority?

Vo meandering.

(yclists don't want turns adder

meandering. I don't want to cross back

there had, litethe section

behind costco where I choose the riad instead.

Big Concern's Why am I the only person

who ride a vicy de to this meeting about
abite path?????? This is a major problem, No cars!!

Personal Information (Optional)	
Name	Katherino Rotti
Mailing Address or E-mail Address	
Do you want a response?	₽Yes □No

Return forms to:

Hank Seemann, Deputy-Director
Humboldt County Public Works Department
1106 Second Street, Eureka, CA, 95501
hseemann@co.humboldt.ca.us

("Humboldt Bay Trail South" Project)

COMMENT FORM - General Comments

Thank you for your interest in the Humboldt Bay Trail. Comments can be provided using this form or other formats such as letter or e-mail. Please provide comments by March 19, 2018. Here are some optional questions to consider when developing your comments:

- What are your impressions of the current design?
- Do you have suggestions for improving the design?
- Are there aspects of Eureka's and Arcata's existing trail segments you especially like, or aspects you believe could be improved?
- Is this project still a regional priority?
 - · GOOD DESIGN
- BRIDGE. HOVE TO BE CANTILEVERED OFF SIDE IF DORA, R.R. OFERATOR & EXCURSION TURBIN OPERATOR O.KS. CANNOT PAVE OVER RAILS AT CROSSINGS.
- · ARCATA SEGMENT NEED TO REMOVE PAVING -DVER TRACKS!
- , GET ER DONE.

Do you want a response?

Personal Information (Optional)	
Name CARL CASALC	
Mailing Address or E-mail Address	

Return forms to:

Hank Seemann, Deputy-Director
Humboldt County Public Works Department
1106 Second Street, Eureka, CA, 95501
hseemann@co.humboldt.ca.us

Completing the Humboldt Bay Trail between Eureka and Arcata ("Humboldt Bay Trail South" Project)

COMMENT FORM – General Comments

Thank you for your interest in the Humboldt Bay Trail. Comments can be provided using this form or other formats such as letter or e-mail. Please provide comments by March 19, 2018. Here are some optional questions to consider when developing your comments:

- What are your impressions of the current design?
- 2 Do you have suggestions for improving the design?
- 3 Are there aspects of Eureka's and Arcata's existing trail segments you especially like, or aspects you believe could be improved?
- 4. Is this project still a regional priority? YES

	<i>i</i> - <i>'</i>
2	-CURRENT DESIGN IS GOWD. EXPENIENCE ON OTHER TRAILS DIRECTS US TO CONSIDER MORE TURN OUTS FOR STOPPING TO BIRD, PHOTO GRAPH HOTHERWISE ENJOY THE TRAIL AS A DESTINATION AND A COMMECTION BETWEEN DESTINATIONS, CONSIDER NOO ON BE BUSINESS FUR SPONSOWING A SCENIC TURNOUTS,
	4. ATMAIL FROM MIKENIET VILLE THRUGH GUNDRA WOULD BE GREAT - ALL
	WAY TO PORTUMA WOUDBE AN STRACKIBARY DESTINATION

3,	MOMINOM	UECKED	DICIOGOS	ARE NOISEY!	PROFON	CONCRETE DOCK	SS.

Personal Information (Optional)

Name	JIM CLARK	
Mailing Address or E-mail Address		
Do you want a response?	⊠Yes □No	

Return forms to:

Hank Seemann, Deputy-Director
Humboldt County Public Works Department
1106 Second Street, Eureka, CA, 95501
hseemann@co.humboldt.ca.us

("Humboldt Bay Trail South" Project)

COMMENT FORM - General Comments

Thank you for your interest in the Humboldt Bay Trail. Comments can be provided using this form or other formats such as letter or e-mail. Please provide comments by March 19, 2018. Here are some optional questions to consider when developing your comments:

- What are your impressions of the current design?
- Do you have suggestions for improving the design?
- Are there aspects of Eureka's and Arcata's existing trail segments you especially like, or aspects you believe could be improved?
- Is this project still a regional priority?

My serveral comments are that	
the 200 trees are both for a wind borrak a astecties whither	
wind borrak & asterles was the	
Pail pool Right away for the track the threw that part al stad list week the threw that part all ced or sale (3) the pail paid well ced or sale (3)	2
the pail pad well ced or sales ()	
the pail pad well ced or mission / county	
Don't de strag our beautiful trees wer a made up softety issue	
mer a proces - of	

Personal Information (Optional)		10-0
Name	+arila	Flanners & Steve tops
Mailing Address or E-mail Address		Pac x dz , CH9 5524
Do you want a response?	□Yes □No_	

Return forms to:

Hank Seemann, Deputy-Director
Humboldt County Public Works Department
1106 Second Street, Eureka, CA, 95501
hseemann@co.humboldt.ca.us

("Humboldt Bay Trail South" Project)

COMMENT FORM – Comments on the CEQA Initial Study / Mitigated Negative Declaration Document

Thank you for your interest in the Humboldt Bay Trail. Comments can be provided using this form or other formats such as letter or e-mail. Please provide comments by March 19, 2018. Here are some optional questions to consider when developing your comments:

- Do you believe the analysis of environmental impacts in the document is complete?
- Do you believe the mitigation measures are sufficient?
- Do you have additional information regarding potential environmental impacts that should be evaluated?

myn	ame is PaulaFlanney. I
anasses	the pompal of and topo colono
The 10	corador. 200ters are Cruidant
(y) 40%	of trees. No wat You. The landowned by the Railroad Nords to used so be the Railroad Nords to used so trees are less alone. A canopy
that the	TREES are left along. It canopy
contan i	mez Hemings of branches eint
1	NI 11 MARCHINE (AMARCHINE)
The win	I still belows roce a most along with the solutions has a god willing, with a significant take our dear trees or the
I we pley	Jany take on gentuces or

Personal Information (Optional)		
Name	Paula Fle	nnove Tevetope
Mailing Address or E-mail Address		Parside, CH
Do you want a response?	□Yes ⊟No	96524

Return forms to:

Hank Seemann, Deputy-Director
Humboldt County Public Works Department
1106 Second Street, Eureka, CA, 95501
hseemann@co.humboldt.ca.us



("Humboldt Bay Trail South" Project)

COMMENT FORM - General Comments

Thank you for your interest in the Humboldt Bay Trail. Comments can be provided using this form or other formats such as letter or e-mail. Please provide comments by March 19, 2018. Here are some optional questions to consider when developing your comments:

- What are your impressions of the current design?
- Do you have suggestions for improving the design?
- Are there aspects of Eureka's and Arcata's existing trail segments you especially like, or aspects you believe could be improved?
- Is this project still a regional priority?

I thenk the elaction is thoroughly considered. I don't think the barrier between tout I highway is necessary. It sounds good for safety, but practically & fivewardly I don't believe it would accomplish much for example, a car traveling at his speed canks still fly through it. feeple that complain about the removal of the Gucalyphis trees clearly do NOT currently actually use the roadway UNDERWARD thom. They are dengerous danyerous & the romoval of just a small poster of them was a smart design officer decision, officering a strategic compranse. I believe they are dangerous his tracrais too. Overalle, I tank the dangerous are dangerous his tracrais too. Overalle, I tank the dangerous are support it 100% and the the should remain a regional proving until it is complete. Thanks for all your hard work!

Name	Nicole Jean Hill
Mailing Address or E-mail Address	
Do you want a response?	□Yes □No

Return forms to:

Hank Seemann, Deputy-Director
Humboldt County Public Works Department
1106 Second Street, Eureka, CA, 95501
hseemann@co.humboldt.ca.us

("Humboldt Bay Trail South" Project)

COMMENT FORM - General Comments

Thank you for your interest in the Humboldt Bay Trail. Comments can be provided using this form or other formats such as letter or e-mail. Please provide comments by March 19, 2018. Here are some optional questions to consider when developing vour comments:

- What are your impressions of the current design?
- Do you have suggestions for improving the design?
- Are there aspects of Eureka's and Arcata's existing trail seaments you especially like, or aspects you believe could be improved?
- Is this project still a regional priority?

- * Definitely remains a regional priority

 * I thought that you presented the rationale for the route
 choices very effectively ... even the loss of the ecalyptus.

 * The cost is rather breathtaking ... about \$4.5 million per
 mile. I think that it would be interesting to have a cost estimate of the project if the rail Good grism were available.
- * I am very excited about the segment that will follow the Bayerde of the Accata Red wood mill site.
- * Thank you for all of the time and effort you have
- committed to this project.

 * I appreciate the inclusion of the cable barrier and like the idea of a vegetative berrier (sound and visual)

Personal Information (Optional)

Name	Rees Hughes
Mailing Address or E-mail Address	
Do you want a response?	□Yes ⊠No

Return forms to:

Hank Seemann, Deputy-Director Humboldt County Public Works Department 1106 Second Street, Eureka, CA, 95501 hseemann@co.humboldt.ca.us



("Humboldt Bay Trail South" Project)

COMMENT FORM – Comments on the CEQA Initial Study / Mitigated Negative Declaration Document

Thank you for your interest in the Humboldt Bay Trail. Comments can be provided using this form or other formats such as letter or e-mail. Please provide comments by March 19, 2018. Here are some optional questions to consider when developing your comments:

- Do you believe the analysis of environmental impacts in the document is complete?
- Do you believe the mitigation measures are sufficient?
- Do you have additional information regarding potential environmental impacts that should be evaluated?

From the perspective of a general member of the public.
the CERA Initial Study / Mitigated Negative Doclaration,
this seems like an increditly thorough analysis. I
really don't have anything to add.

Personal Information (Optional)	
Name	Rees Hughes
Mailing Address or E-mail Address	
Do you want a response?	□Yes ⊠No

Return forms to:
Hank Seemann, Deputy-Director
Humboldt County Public Works Department
1106 Second Street, Eureka, CA, 95501
hseemann@co.humboldt.ca.us



("Humboldt Bay Trail South" Project)

COMMENT FORM - General Comments

Thank you for your interest in the Humboldt Bay Trail. Comments can be provided using this form or other formats such as letter or e-mail. Please provide comments by March 19, 2018. Here are some optional questions to consider when developing your comments:

- What are your impressions of the current design?
- Do you have suggestions for improving the design?
- Are there aspects of Eureka's and Arcata's existing trail segments you especially like, or aspects you believe could be improved?
- Is this project still a regional priority?

Short of buying the NCRA's right of way from Arcata to Willits I this is a rely good design.

Please build it soon, while I can still a ride my bike.

Thanks.

Personal	Information	(Optional)	
----------	-------------	------------	--

Name	Korina Johnson
Mailing Address or E-mail Address	
Do you want a response?	⊠Yes □No

Return forms to:

Hank Seemann, Deputy-Director
Humboldt County Public Works Department
1106 Second Street, Eureka, CA, 95501
hseemann@co.humboldt.ca.us

9

Completing the Humboldt Bay Trail between Eureka and Arcata

("Humboldt Bay Trail South" Project)

COMMENT FORM – General Comments

Thank you for your interest in the Humboldt Bay Trail. Comments can be provided using this form or other formats such as letter or e-mail. Please provide comments by March 19, 2018. Here are some optional questions to consider when developing your comments:

- What are your impressions of the current design?
- Do you have suggestions for improving the design?
- Are there aspects of Eureka's and Arcata's existing trail segments you especially like, or aspects you believe could be improved?
- Is this project still a regional priority?

Good Project: Make H hoppen!
The CRC Level is a servelcome refuge
from the southbound traffic and serves
as an opportunity for wildlife viewing.

Additionally, projects like this (completed
pedestrian/cyclis trails) serve as a
Stopever for people travelis and infuse
the local economy of tourist dollars.
Two Thumbs up!
Let's connect EIK River to CLAM Beach!

Personal Information (Optional)		
Name Paul Killsey		
Mailing Address or E-mail Address	11	
Do you want a response?	□Yes □No	

Return forms to:

Hank Seemann, Deputy-Director
Humboldt County Public Works Department
1106 Second Street, Eureka, CA, 95501
hseemann@co.humboldt.ca.us

("Humboldt Bay Trail South" Project)

COMMENT FORM – General Comments

Thank you for your interest in the Humboldt Bay Trail. Comments can be provided using this form or other formats such as letter or e-mail. Please provide comments by March 19, 2018. Here are some optional questions to consider when developing your comments:

- What are your impressions of the current design?
- Do you have suggestions for improving the design?
- Are there aspects of Eureka's and Arcata's existing trail segments you especially like, or aspects you believe could be improved?
- Is this project still a regional priority?
- 1. I like and support the current design. I particularly like the reroute toward the bay at CRC.
- 2. My only design suggestion would be making some parking available. This would probably be the result of improved signage at the Eureka or Arcata ends. In general, signage that would attract people traveling through the area would encourage visitors and positively impact local retail and services.
- 3. I support the removal of trees at the northern end of the eucalyptus trees. As someone that has had flat tires from euc. cones, I feel that they are incompatible with an alternative transportation corridor, <u>especially for a bike commuter path</u>.
- 4. This project is a regional priority. Connecting cities and providing a north-south alternative transportation route is a priority.

Personal Information (Optional)

Name paul kinsey	
Mailing Address or E-mail Address	
Do you want a response?	□Yes XNo

Return forms to:
Hank Seemann, Deputy-Director
Humboldt County Public Works Department
1106 Second Street, Eureka, CA, 95501
hseemann@co.humboldt.ca.us

(10)

Completing the Humboldt Bay Trail between Eureka and Arcata

("Humboldt Bay Trail South" Project)

COMMENT FORM - General Comments

Thank you for your interest in the Humboldt Bay Trail. Comments can be provided using this form or other formats such as letter or e-mail. Please provide comments by March 19, 2018. Here are some optional questions to consider when developing your comments:

- What are your impressions of the current design?
- Do you have suggestions for improving the design?
- Are there aspects of Eureka's and Arcata's existing trail segments you especially like, or aspects you believe could be improved?
- Is this project still a regional priority?

Do 4 1
This helps more humboldt
people to keep active-walking improves fitness and mental
health.
safe wastered to be the sent
Paths uts teme we tourist to
our commenties
our commentes S

Personal Information (Optional)	
Name Rober Kinger	
Mailing Address or E-mail Address	
Do you want a response?	□Yes □No

Return forms to:

Hank Seemann, Deputy-Director
Humboldt County Public Works Department
1106 Second Street, Eureka, CA, 95501
hseemann@co.humboldt.ca.us



("Humboldt Bay Trail South" Project)

COMMENT FORM - General Comments

Thank you for your interest in the Humboldt Bay Trail. Comments can be provided using this form or other formats such as letter or e-mail. Please provide comments by March 19, 2018. Here are some optional questions to consider when developing your comments: • What are your impressions of the current design? • Do you have suggestions for improving the design? • Are there aspects of Eureka's and Arcata's existing trail segments you especially like, or aspects you believe could be improved? • Is this project still a regional priority?	en
to see the encalyptics	te.

Personal Information (Optional)					
Name Winds The	Keaman				
Mailing Address or E-mail Address		-	1 1	10	1
Do you want a response?	∠Yes □No				

Return forms to:

Hank Seemann, Deputy-Director
Humboldt County Public Works Department
1106 Second Street, Eureka, CA, 95501
hseemann@co.humboldt.ca.us



("Humboldt Bay Trail South" Project)

COMMENT FORM – Comments on the CEQA Initial Study / Mitigated Negative Declaration Document

Thank you for your interest in the Humboldt Bay Trail. Comments can be provided using this form or other formats such as letter or e-mail. Please provide comments by March 19, 2018. Here are some optional questions to consider when developing your comments:

- Do you believe the analysis of environmental impacts in the document is complete?
- Do you believe the mitigation measures are sufficient?
- Do you have additional information regarding potential environmental impacts that should be evaluated?

I have not looked at the CEQA document.

I agree with using at 1. viry perrier between the bay and the railprism. However I anticipate Codifornia Coastal Commission needing to modify their stance on "fill" to allow a living shoretime project " Sult marsh closes help to modigate the effects of buy wave action.

Personal Information (Optional)	
Name Chet Ogan	
Mailing Address or E-mail Address	7,010
Do you want a response?	□Yes □No

Return forms to:
Hank Seemann, Deputy-Director
soldt County Public Works Departme

Humboldt County Public Works Department 1106 Second Street, Eureka, CA, 95501

hseemann@co.humboldt.ca.us

("Humboldt Bay Trail South" Project)

13

COMMENT FORM – General Comments

Thank you for your interest in the Humboldt Bay Trail. Comments can be provided using this form or other formats such as letter or e-mail. Please provide comments by March 19, 2018. Here are some optional questions to consider when developing your comments:

- What are your impressions of the current design?
- Do you have suggestions for improving the design?
- Are there aspects of Eureka's and Arcata's existing trail segments you especially like, or aspects you believe could be improved?
- Is this project still a regional priority?

AS A SHORT MEMBER OF THE COMMUNITY

I HAVE NOTICED THAT THE HEIGHT OF THE

BRIDGE RAIL BLOCKED MY VIEW OF THE

BAY ON THE ARCATA SECTION, I AM AWARE

STARDARDS ARE TO BE FORCOMED BUT I

WOULD RECOMMEND USING THE COMEST RILITME

POSSIBLE TO BE ABLE TO APPRECIATE THE

WOUNDERFOL AREA WE LIVE IN.

Personal Information (Optional)

Name

JIZUYES

Mailing Address or E-mail Address

ACLATA, CA 95521

Return forms to:

Hank Seemann, Deputy-Director
Humboldt County Public Works Department
1106 Second Street, Eureka, CA, 95501
hseemann@co.humboldt.ca.us



("Humboldt Bay Trail South" Project)

COMMENT FORM - General Comments

Thank you for your interest in the Humboldt Bay Trail. Comments can be provided using this form or other formats such as letter or e-mail. Please provide comments by March 19, 2018. Here are some optional questions to consider when developing your comments:

- What are your impressions of the current design?
- Do you have suggestions for improving the design?
- Are there aspects of Eureka's and Arcata's existing trail segments you especially like, or aspects you believe could be improved?
- Is this project still a regional priority?

THE MULTIUSE USE TRAIL OF THE CURRENT DESIGN IS FAIRLY WARROW, WHEN YOU CONSIDER BICKLUST & PEDESTRIANS TRAVELLAG IN BROSETE DIRRECTIONS IT IMPOLDES THE FREE FLOW OF TRAPPIC AS EXPERIANCED IN THE ACCATA SEGNETHY. I WOULD LIKE TO GET A WIDER PAVED SECTION THAT ACCOMPDATES PASSING FOR BICYCLIST & IMPROVES SAFETY FOR BOTH PEDESTRIAMS & CYCLIST THE LOCATION WOF BALLAIZOS 15 A SAFETY CONCERNOF MIKE, IN THE AREATA SECTION THE PLACEMENT OF BALLARDS ARE ALMOST WILINE WOTH THE BRIDGE RAIL THEREFORE THE BLINDSPOT BICYCLIST, AN # RUNNERS & WALKERS MAI MANNERS ACT AS BUND SPOTS CONTRING/BLOCKING THE VIEW OF THE BALLARDS, I RECOMMEND PLACING THE BALLARDS IN TANGEAUXT SECTIONS MINISTER TO MANIMED VISIBILITY.

Personal Information (Optional)		
Name	J REYES	
Mailing Address or E-mail Address	ARCATA, CA 95521	
Do you want a response?	⊠Yes □No	

Return forms to:

Hank Seemann, Deputy-Director
Humboldt County Public Works Department
1106 Second Street, Eureka, CA, 95501
hseemann@co.humboldt.ca.us



("Humboldt Bay Trail South" Project)

COMMENT FORM – General Comments

Thank you for your interest in the Humboldt Bay Trail. Comments can be provided using this form or other formats such as letter or e-mail. Please provide comments by March 19, 2018. Here are some optional questions to consider when developing your comments:

- What are your impressions of the current design?
- Do you have suggestions for improving the design?
- Are there aspects of Eureka's and Arcata's existing trail segments you especially like, or aspects you believe could be improved?
- Is this project still a regional priority?

I have just storted using the existing trails (Arcata) to commute from my house (waren cred) to St. Joes in Eureka on an ebike.

I definitely support removal of enealytype trees done the trail. In the 15 or so order I have done I have had several dangurs own institute the tree debris. Perhaps you should coiled dorter on have many cyclinates have damare to them/tur biles from the tree?

Improvements based of the Arcata trail.

Improvements based of the Arcata trail.

Personal Information (Optional)	
Name	Leah Stamver
Mailing Address or E-mail Address	
Do you want a response?	⊠Yes □No

Return forms to:

Hank Seemann, Deputy-Director
Humboldt County Public Works Department
1106 Second Street, Eureka, CA, 95501
hseemann@co.humboldt.ca.us

("Humboldt Bay Trail South" Project)

COMMENT FORM – Comments on the CEQA Initial Study / Mitigated Negative Declaration Document

Thank you for your interest in the Humboldt Bay Trail. Comments can be provided using this form or other formats such as letter or e-mail. Please provide comments by March 19, 2018. Here are some optional questions to consider when developing your comments:

- Do you believe the analysis of environmental impacts in the document is complete?
- Do you believe the mitigation measures are sufficient?
- Do you have additional information regarding potential environmental impacts that should be evaluated?

Ves	to fre	gustou	0				
Ans	Ami	st aw	tuy	to t.	ale	amo	
off	fre hu	ghway	150	(pb8	The	ano Innome	Aar
W	pact to	Ml.					

Personal Information (Optional)

Name

Mailing Address or E-mail Address

Do you want a response?

Yes \Boxed{No}

Return forms to:

Hank Seemann, Deputy-Director
Humboldt County Public Works Department
1106 Second Street, Eureka, CA, 95501
hseemann@co.humboldt.ca.us

(51)

Completing the Humboldt Bay Itail between Eureka and Arcata

("Humboldt Bay Trail South" Project)

COMMENT FORM - General Comments

Thank you for your interest in the Humboldt Bay Trail. Comments can be provided using this form or other formats such as letter or e-mail. Please provide comments by March 19, 2018. Here are some optional questions to consider when developing your comments:

- What are your impressions of the current design?
- Do you have suggestions for improving the designs
 Ate there aspects of FireNa's and Arcata's existing.
- Are there aspects of Eureka's and Arcata's existing trail segments you
 especially like, or aspects you believe could be improved?
- Is this project still a regional priority?

definet, crumbling rail line and folce thail construction of bebide it instead of an the old fine footprint. Hx more expansing in fact. The WCRA is never going to the concocted bebide it instead of an the old line post. It our local by people that are living in the past. It our local by people that are living in the past. It our local by people that are living in the past. It our local build 3-4 x more living in the past. It our local brilled 3-4 x more trails. I want more trails and port the trails. I want more trails and for the placest the portion of port the danger of a fixedly a more trails and the constitute of the danger of a fixedly a more alith is lost than and the constitute of the danger of a fixedly a more late to a fixedly a more late to locate the chilists a god estrians.

Its not too late to advance the orisinal plan.

	VVes □No	Do you want a response?
(Mailing Address or E-mail Address
		Name Stephanie Tiduel
		Personal Intormation (Optional)

Return forms to:
Hank Seemann, Deputy-Director
Humboldt County Public Works Department
1106 Second Street, Eureka, CA, 95501
hseemann@co.humboldt.ca.us

("Humboldt Bay Trail South" Project)

COMMENT FORM – Comments on the CEQA Initial Study / Mitigated Negative Declaration Document

Thank you for your interest in the Humboldt Bay Trail. Comments can be provided using this form or other formats such as letter or e-mail. Please provide comments by March 19, 2018. Here are some optional questions to consider when developing your comments: • Do you believe the analysis of environmental impacts in the document is complete? Do you believe the mitigation measures are sufficient? Do you have additional information regarding potential environmental impacts that should be evaluated? I will sobmit formal comments online Personal Information (Optional) Name Mailing Address or E-mail Address

Return forms to:

☐ Yes ☐ No

Do you want a response?

Hank Seemann, Deputy-Director
Humboldt County Public Works Department
1106 Second Street, Eureka, CA, 95501
hseemann@co.humboldt.ca.us

("Humboldt Bay Trail South" Project)

(16)

COMMENT FORM – General Comments

Thank you for your interest in the Humboldt Bay Trail. Comments can be provided using this form or other formats such as letter or e-mail. Please provide comments by March 19, 2018. Here are some optional questions to consider when developing your comments:

- What are your impressions of the current design?
- Do you have suggestions for improving the design?
- Are there aspects of Eureka's and Arcata's existing trail segments you especially like, or aspects you believe could be improved?
- Is this project still a regional priority?

Segment & Should go Belind the Bracut Industrial But on the Jety around the Bracut Marsh. Not Along the Freeway

Personal Information (Optional)				
Name Browt Two	ones			
Mailing Address or E-mail Address		Tou	ided	95570
Do you want a response?	□Yes □No	# sure		

Return forms to:

Hank Seemann, Deputy-Director

Humboldt County Public Works Department
1106 Second Street, Eureka, CA, 95501

hseemann@co.humboldt.ca.us

("Humboldt Bay Trail South" Project)

COMMENT FORM - General Comments

Thank you for your interest in the Humboldt Bay Trail. Comments can be provided using this form or other formats such as letter or e-mail. Please provide comments by March 19, 2018. Here are some optional questions to consider when developing your comments:

- What are your impressions of the current design?
- Do you have suggestions for improving the design?
- Are there aspects of Eureka's and Arcata's existing trail segments you especially like, or aspects you believe could be improved?
- Is this project still a regional priority?

My son has a disability which will preclude wim from ever being able to doine. what he can use, limits, is an ELF boy Organic Transit. It's got a solar powered motor & can be used without the motor running. I'veally like to be able to take if on the trail. I can explain more, but I'm really in a hung Transit for doing this!

Name 0 / 1/4			
Mailing Address or E-mail Address		1	
Do you want a response?	⊠Yes □No		

Return forms to:

Hank Seemann, Deputy-Director
Humboldt County Public Works Department
1106 Second Street, Eureka, CA, 95501
hseemann@co.humboldt.ca.us

For information about the Humboldt Bay Trail, visit: www.humboldtbaytrail.info

17)



("Humboldt Bay Trail South" Project)

COMMENT FORM - General Comments

Thank you for your interest in the Humboldt Bay Trail. Comments can be provided using this form or other formats such as letter or e-mail. Please provide comments by March 19, 2018. Here are some optional questions to consider when developing your comments:

- What are your impressions of the current design?
- Do you have suggestions for improving the design?
- Are there aspects of Eureka's and Arcata's existing trail segments you especially like, or aspects you believe could be improved?
- Is this project still a regional priority?

Segment 9 shows Segment B's path	BAT SUE OF REACUT?
*	

Personal Information (Optional)	
Name	
Mailing Address or E-mail Address	
Do you want a response?	□Yes □No

Return forms to:
Hank Seemann, Deputy-Director
Humboldt County Public Works Department
1106 Second Street, Eureka, CA, 95501
hseemann@co.humboldt.ca.us

("Humboldt Bay Trail South" Project)

19

COMMENT FORM - General Comments

Thank you for your interest in the Humboldt Bay Trail. Comments can be provided using this form or other formats such as letter or e-mail. Please provide comments by March 19, 2018. Here are some optional questions to consider when developing your comments:

- What are your impressions of the current design?
- Do you have suggestions for improving the design?
- Are there aspects of Eureka's and Arcata's existing trail segments you especially like, or aspects you believe could be improved?
- Is this project still a regional priority?

Breest	crossing pur fandem	ona	tandem

Personal Information (Optional)

Name

Mailing Address or E-mail Address

Do you want a response?

Yes
No

Return forms to:

Hank Seemann, Deputy-Director
Humboldt County Public Works Department
1106 Second Street, Eureka, CA, 95501
hseemann@co.humboldt.ca.us

("Humboldt Bay Trail South" Project)

20

COMMENT FORM - General Comments

Thank you for your interest in the Humboldt Bay Trail. Comments can be provided using this form or other formats such as letter or e-mail. Please provide comments by March 19, 2018. Here are some optional questions to consider when developing your comments:

- What are your impressions of the current design?
- Do you have suggestions for improving the design?
- Are there aspects of Eureka's and Arcata's existing trail segments you especially like, or aspects you believe could be improved?
- Is this project still a regional priority?

Sagment 1-21 perfect

" 5 CRC - Perfect location

" 6 - will be good for flow, avoid

90° turns.

HBTN - CABLE BARRIER 18 A great idea
especially once speed is increased to
65 mph

Segment 7-9 - good.

It all looks GREAT BUTLD IT

Name	M.Levan HATTEL (CYCLIST)
Mailing Address or E-mail Address	110 110
Do you want a response?	ØYes □No

Return forms to:

Hank Seemann, Deputy-Director Humboldt County Public Works Department 1106 Second Street, Eureka, CA, 95501 hseemann@co.humboldt.ca.us

Seemann, Hank

From:

Van Hattem, Michael@Wildlife

Sent:

Wednesday, February 28, 2018 1:56 PM

To:

Seemann, Hank

Subject:

RE: trail meeting

I really like the addition of the cable barriers, I think those are needed. The current separation is good but this will truly make it feel safe. I like that you are removing a portion of the eucalyptus (and not all of them). While there is no regulatory reason for keeping them, the reasons you explained are enough (mostly aesthetics). I like the bridge over the mud flat before the mill site to smooth out the angles. I really like that you are going out on the berm around the mill, that will make the trail much more scenic, and the smoothing out of the rail bridge seems like a great compromise.

I like the idea of staying with the same bridge types just for continuity between all three segments, although I do like a concrete platform just because its quiet when hard wheels go over them like roller blades or scooters, but I think that is minor.

Get a head start on your veg clearing to avoid bird season, mostly for the eucalyptus. The wax myrtle thicket that has volunteered along the railroad tracks is also a problem and is filled with trash from camps. Personally I'd rather see the bay, although I am a fan of wax myrtle, just not there. If you need to replace the wax myrtle we can help you find a place for them. We've been working with PG&E on a similar venture.

Keep up the good work.

m

From: Seemann, Hank [mailto:HSeemann@co.humboldt.ca.us]

Sent: Wednesday, February 28, 2018 11:09 AM

To: Van Hattem, Michael@Wildlife

Subject: RE: trail meeting

You're welcome, Mike. We're keeping you bike commuters in mind. Rick Knapp and Brett Gronemeyer do a good job representing.

Hank Seemann
Deputy Director - Environmental Services
Humboldt County Public Works Department
1106 Second Street
Eureka, CA 95501
707-268-2680

From: Van Hattem, Michael@Wildlife [mailto:

Sent: Wednesday, February 28, 2018 9:33 AM

To: Seemann, Hank < HSeemann@co.humboldt.ca.us>

Subject: trail meeting

Good job last night Hank, you explained it all very well and the powerpoint was straight forward. I didn't stay for questions since I had a meeting at 7:00, I hope that went well too. I scribbled some comments which are all favorable but no need to respond. THX

m

Michael G. van Hattem

Seemann, Hank

From:

Sent:

Thursday, March 01, 2018 9:58 AM

To:

Seemann, Hank

Subject:

RE: Caltrans grant application

Hank,

I do support the Bay Trail. I thought the public meeting was very informative. Your presentation was honest, objective, and pragmatic. There are couple of Bay Trail design issues I would like to address.

As a landscape photographer with a fondness for Humboldt Bay, those eucalyptus trees create a beautiful visual backdrop on Arcata Bay. Some of my best photographs of Humboldt Bay include those trees. I understand that the County does not want to locate the trail under those trees for public safety reasons and liability. I have not looked at the IS/MND yet, but it would be helpful to explain why has Caltrans not dealt with these trees, as they are a safety hazard to thousands of cars and people every day. That being said, the trees North of CRC property are exposed to the tides, and I would think that saltwater intrusion in their root zone will ultimately cause these trees to die. The trees to the South of CRC entrance are not as exposed and will likely live longer. Reducing the eucalyptus row by 40% will still retain the visual quality they provide us landscape photographers. Lastly, as one of few people that have been able to walk the CRC dike, locating the trail on the CRC dike will provide a great experience for the public.

The other issue, is the Bracut segment of the trail. Having the trail cross the entrance to Bracut just scares me, at some time someone is going to get hurt. You mentioned that the West-East dike that separates Bracut from the SCC property has issues. The western most portion of that segment could be enhanced to support a trail and then you could cut-diagonally north-east over the salt marsh and through the riparian grove that was planted. This would provide a better alignment for the trail/causeway and a different experience of walking through a riparian grove. This would will no doubt increase mitigation needs, but in the long run I think it will be safer.

As a CEQA practioner I will take a look at the IS/MND and provide you with any support I can to address these issues. I will take a look at the grant next and get back to you.

Thanks Aldaron

From: Seemann, Hank [mailto:HSeemann@co.humboldt.ca.us]

Sent: Wednesday, February 28, 2018 10:13 AM

To: Aldaron Laird +

Subject: Caltrans grant application

Aldaron-

The attached grant application was submitted last week. Funding decisions will be made in May and work could begin in October, with most work occurring in 2019. Interested in your thoughts on this proposal and the current efforts on the Bay Trail.

Hank

Hank Seemann
Deputy Director - Environmental Services
Humboldt County Public Works Department
1106 Second Street
Eureka, CA 95501
707-268-2680

("Humboldt Bay Trail South" Project)

COMMENT FORM – Comments on the CEQA Initial Study / Mitigated Negative Declaration Document

Thank you for your interest in the Humboldt Bay Trail. Comments can be provided using this form or other formats such as letter or e-mail. Please provide comments by <u>March 19, 2018</u>. Here are some optional questions to consider when developing your comments:

- Do you believe the analysis of environmental impacts in the document is complete?
- Do you believe the mitigation measures are sufficient?
- Do you have additional information regarding potential environmental impacts that should be evaluated?

Attended the meeting last night and also visited the document yesterday and I do feel that the analysis of the environmental impacts were addressed completely. The approximate 5 acres of mitigation will add significant cost to this project, but is necessary to counter any impact created by the trail.

That section of the bay is currently viewed by few people. I believe that this trail will enhance the environment of that part of the bay. The addition of the salt marsh would add more habitat. People's awareness of what is going on there will benefit the quality of the environment in that area.

Personal	Information	(Optional)

Name Karen Underwood	Humboldt Trail Council, board member	
Mailing Address or E-mail Address		

Do you want a response? NO	□Yes □No
----------------------------	----------

Return forms to:
Hank Seemann, Deputy-Director
Humboldt County Public Works Department
1106 Second Street, Eureka, CA, 95501
hseemann@co.humboldt.ca.us

("Humboldt Bay Trail South" Project)

COMMENT FORM - General Comments

Thank you for your interest in the Humboldt Bay Trail. Comments can be provided using this form or other formats such as letter or e-mail. Please provide comments by <u>March 19, 2018</u>. Here are some optional questions to consider when developing your comments:

- What are your impressions of the current design?
- Do you have suggestions for improving the design?
- Are there aspects of Eureka's and Arcata's existing trail segments you especially like, or aspects you believe could be improved?
- Is this project still a regional priority?

I attended the public meeting last night (2/27/18) and was really impressed with the current design. It was evident that a great deal of thought and time had gone into facing the obstacles of each section of this 4.2 mile trail. I really appreciate our county moving ahead with this project in connecting Eureka and Arcata, and do see this as a regional priority for our County. People can hardly wait for this next section to open. This trail will be enjoyed not only by residents, but also tourists. Having enjoyed a similar trail like this in Monterey, I feel this will be another asset to tourists.

The concern for safety was strongly emphasized. The cable barrier and concern over the Indianola crossing will save lives. I like how the cable barrier matches the one that already exists on 101 through Arcata. This type of barrier allows for wildlife crossings (unlike the cement ones). When Caltrans completes that section of our Highway 101 corridor between Arcata and Eureka it will be a huge safety improvement to our communities.

The current bridges in on the northern section are great. Some people prefer cement for the base. I like the idea of the bridges looking fairly similar, and really basing selection on the longevity of the structure. Wooden bases are too slippery in rain.

It is wonderful that the trail will travel around the California Redwood Company property on the bay side. This will enhance the ride, connect people more to the bay and its wildlife, and encourage people to travel on it more often.

As for the cutting of the eucalyptus I see no problem with that. They are dangerous. I don't know if it will appease anyone who does not want them cut, but it might be softened if they were replaced by native plants as someone last night suggested having more native plants along the trail. Not sure what native "trees" actually could grow along the bay. I

Also want to add my thanks to the Humboldt County Works for all their work and bringing this project forward to our community.

Personal Information (Optional)	
Name Karen Underwood	Humboldt Trail Council, Board Member
Mailing Address or E-mail Address	
Do you want a response? NO	□Yes □No

Return forms to:
Hank Seemann, Deputy-Director
Humboldt County Public Works Department
1106 Second Street, Eureka, CA, 95501
hseemann@co.humboldt.ca.us

Seemann, Hank

From:

Cynthia Noel

Sent:

Saturday, March 03, 2018 12:01 PM

To:

Seemann, Hank

Subject:

Re.: HumBayTrail

Hello Mr.Seemann!

It was a privilege to be at last week's HumBayTrail Wharfinger informational. It was a fine presentation. You conducted yourself with respect & consideration.

So much work has been done.

Other than "inserting coin" what else can the community-at-large do, please?

One thing that pops into my mind is the Bracut trail exchange.

Why not just go around it towards the Bay like the Mill Site, please?

Looking forward to your reply and thank you for the informational presentation.

Sincerely,

Cynthia M. "Syn-dee" Noel

March 4, 2018

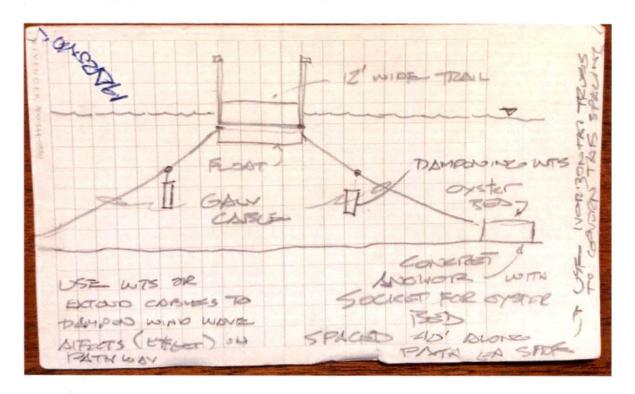
Hank Seemann
Deputy Director - Environmental Services
Humboldt County Public Works Department
1106 Second Street
Eureka, CA 95501

Dear Hank

I am addressing the seven points you raised in your February 23, 2018 e-mail to me in response to my submission of Schematic Design Report with Exhibits 1 through 11 dated 2/6 for the Tail on the Bay.

1. Stability. Concerns about the structure oscillating with wave action.

As described to in my January 13, 2018 letter to you, the Trail on the Bay structure would be stabilized by designing the length of the cables and sizing and locating weights on the cables to dampening motion of the structure. That designing would have to be done by the engineers to accommodate the anticipated wind waves in the bay. That language was in the graphic included in that letter. I will include that graphic for continuity of thought:



The Mooring Schematic and Stabilization Strategy are shown in Exhibit 13. As shown therein the Trail on the Bay structure is stabilized by altering it's period of vibration and dampening by way of a combination of varying mooring cable length's, cable weights, and by the number and placement of cables themselves. All of those decisions are under the control of the project design engineers who can make those decisions after designing the structure taking into account the anticipated wind waves of the bay.

Recently I have studied how 4-60' sections of the trail (as described in the Schematic Design Report) behave if connected as shown in Exhibit 12, the Joint Detail to Provide Controlled Rigidity between sections of the trail. The Joint is formed by making a loop with 3/4" diameter galvanized elevator cable which is secured by cable clamps (aka Crosby clamps) as shown in Exhibit 12. The loop of stiff elevator cable serves as a buffer and spring. The elevator cable is designed for extended service and will have a lifetime suitable for the application. At the edges of the sections (along the cords) smaller diameter cables will be used to maintain alignment of the sections. Based on my studies I believe the natural period of resonance of the 4 sections so joined will be less than 2 seconds. It is my understanding that the wind waves that will hit the structure will be in the range of 6 seconds and above so I do not believe the structure will resonate with the waves. The design engineers will have the time and resources to study this matter and design dampening if required. I believe that special dampening requirements will be minimal and can be accommodated by tuning the connection shown in Exhibit 12 by the Design Engineers.

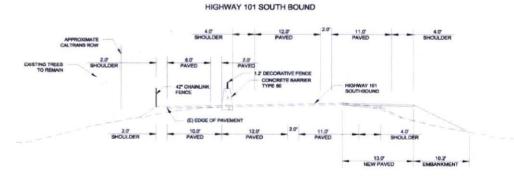
2. Safety. Concerns about trail users departing from the structure into open water or mudflat, especially when waves are present.

The Trail on the Bay should be thought of as a Bridge. People are used to using bridges. Bridges have railings that conform to standards. People would have to climb over railings to get off the Trail on the Bay structure. That risk is no greater than that posed by the bridges behind Target.

I believe this bridge is safe for the public to use. It is located close to the Planned Parenthood facility:

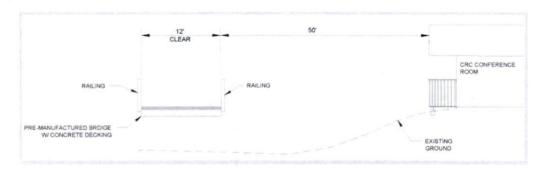


I believe that the possibility of the public climbing over the railing shown above is about as likely as that posed by the following configurations:



Page 3 of 5

C:\Users\Phil\Documents Folder\Trail on the Bay\Addressing The Countys Concerns.docx Printed: $3/4/2018 @ 8:02:20 \ PM$



I do not profess to have the ability to quantify and assess the likelihood that members of the public will climb over any one of the three railing systems shown in the preceding images more readily than the other two.

There are sections of the Trial, either land based, or the Trail on the Bay, that are on, or adjacent to the bay. If you sincerely believe the public cannot be trusted to not defeat the code compliant railings, then perhaps you should not proceed with the project. Fortunately, making that determination is not my responsibility. I can only tell you that the Trail on the Bay, as the Land Based Trails, can be designed with code compliant railings. If members of the public choose to defeat those safety features, they do so at their own peril.

3. Maintenance. Difficult access for maintenance vehicles, and challenging energy environment that would cause wear and tear.

There will be no greater wear and tear on the structure than is on the other wharfs and float structures currently on the bay.

4. Cost. Higher than the cost for the trail along the shoreline.

Admittedly it will be more expensive to construct the Trail on the Bay but you get what you pay for. I have yet to speak with someone who understands the Trail on the Bay concept who did not like it. Walking next to the freeway, protected by guardrails, is not an ethically, or elegant alternative to the Trail on the Bay proposal.

5. Environmental impacts. The structure would causing shading of eel grass habitat and bisect areas that are currently free from regular human presence.

These impacts can be mitigated. The percentage of bay eel grass impacted will be negligible and a fair biological assessment of that impact should be performed by the lead agency.

6. Permitting. Coastal Commission is very unlikely to permit such a structure. They mandate that projects are the lease environmentally damaging feasible alternative.

Construction of the land based trails will have significant impacts on the bay. I did not see a detailed estimate for those mitigation costs in the Initial Study. I believe that most of the work to construct the Tail on the Bay could be performed in fabrication shops which, if fairly assessed, would result in a lessor cumulative impact on the bay, than the land based trail alternative. The lead agency should make that fair assessment.

7. Conformance with standards. Note that Section 1.4.1 of the CEQA document identifies the design standards for the project. They include Caltrans Highway Design Manual Chapter 1000 and Chapter 11B of the California Building Code. We are designing for a Class I Bikepath that would meet ADA accessibility standards.

Likewise the Tail on the Bay could be designed to be fully code compliant. To the best of my knowledge what I have proposed to date is fully code compliant. As noted in the Schematic Design Report it was primarily governed by ASCE 7-10 & Costal Construction Manual, FEMA P-55. All of the Accessibility, and Caltrans Standards, will not pose unsolvable issues for the Project Designers in the following phase of the design.

Please keep in mind I have only provided what is commonly known as a conceptual design for the Trail on the Bay idea, at the Pre-Schematic Level, in the three step design process known by the Schematic, Preliminary, and Working Drawing progression of design steps. Please let me know if I can provide any clarifications, or additional information.



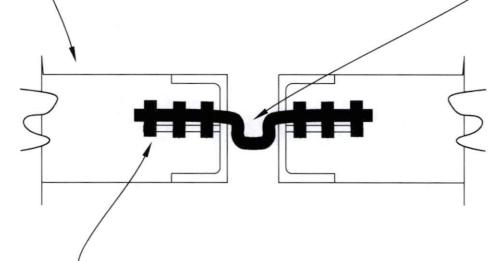
Attachments: Exhibits 12 & 13

Page 5 of 5

C:\Users\Phil\Documents Folder\Trail on the Bay\Addressing The Countys Concerns.docx Printed: 3/4/2018 @ 8:02:20 PM

DECKING AND SLIDING TRANSITION PLATE BETWEEN THE ADJOINING SECTIONS REMOVED FOR CLARITY

THERE ARE THREE CABLE CONNECTORS PER END;
ONE IN THE CENTER & ONE AT EACH SECTION
CORD. THE CENTER CABLE IS A LARGE DIAMETER
ELEVATOR CABLE WITH LOOP USED AS SHOCK
ABSORBER BETWEEN SECTIONS. SMALLER
DIAMETER CABLES USED ALONG CORDS OF
SECTIONS IS MAINTAIN SECTION ALIGNMENT.



CROSBY CLAMPS CONNECTING CABLE TO CONNECTOR PLATE

JOINT	DETAIL	TO PR	OVIDE
CON	TROLLEI	RIGI	DITY

TRAIL ON THE BAY SCHEMATIC PLAN Chk:

Scale:	NTS	
By:	PMP	
CLI		- 11

Date: 3/3/2018

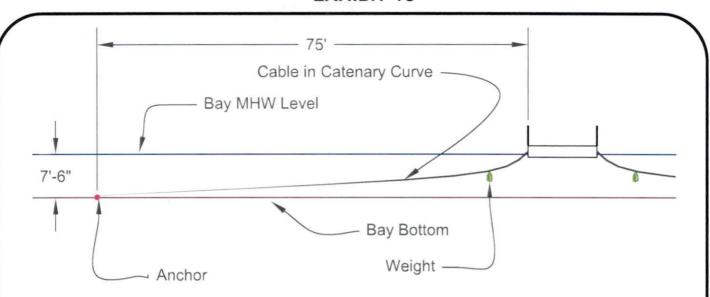
PROFESSIONA	
15 P. 1 2 2	1
S No. 32058 N	
Exp.12/31/2018	V
TATE OF CALLEGENIN	
CAL	

SHEET

1

of

1



The purpose of this drawing is to show

- · how the anchors would be deployed and
- how weights could be used to alter period of vibration of the Trail on the Bay structure thereby dampening the Trail on the Bay structure's response to wind wave activity.

To be conservative, anchors should be deployed with a "scope" of 10.

Accordingly, in an in an area of the bay where the mean high water (MHW) level is 7'-6" the anchors would be set 75' from the alignment from the Trail on the Bay as portrayed in the drawing.

As shown in the drawing the weight will retard motion vertical acceleration and movement of the trail on the bay by virtue of gravity's effect on the weights, and water drag on the weights.

The magnitude of the weight, and it's size and shape (as it affect the weights drag coefficient), will be specified by the Project's Design Engineers after an analysis of the Trail on the Bay Structure taking into consideration the characteristics of the anticipated Bay wind waves.

HIGH TIDE MOORING SCHEMATIC &		agOFESS/Q	SHEET
STABILIZATION STRATEGY	Scale: 1/16"=1'-0'	WILTON AL	1
	ву: РМР	5 Che 3 5	of
TRAIL ON THE BAY SCHEMATIC PLAN	Chk:	Exp.12/31/2018	
	Date: 3/4/2018	STAN CIVIL STITE	' <i> </i>
	Amount of the Control	OF CALLED	

Seemann, Hank

From:

Seemann, Hank

Sent:

Friday, February 23, 2018 1:51 PM

To:

'Phil Perez'

Subject:

feedback on Bay Trail concept

Phil-

I like your vision and I think it would have some excellent features. However I don't believe it is feasible, taking into account safety, technical, economic, and environmental factors.

Note that Section 1.4.1 of the CEQA document identifies the design standards for the project. They include Caltrans Highway Design Manual Chapter 1000 and Chapter 11B of the California Building Code. We are designing for a Class I Bikepath that would meet ADA accessibility standards.

The major issues with your design are:

- 1. Stability. Concerns about the structure oscillating with wave action.
- 2. Safety. Concerns about trail users departing from the structure into open water or mudflat, especially when waves are present.
- 3. Maintenance. Difficult access for maintenance vehicles, and challenging energy environment that would cause wear and tear.
- 4. Cost. Higher than the cost for the trail along the shoreline.
- 5. Environmental impacts. The structure would causing shading of eel grass habitat and bisect areas that are currently free from regular human presence.
- 6. Permitting. Coastal Commission is very unlikely to permit such a structure. They mandate that projects are the lease environmentally damaging feasible alternative.
- 7. Conformance with standards.

Hank

Hank Seemann
Deputy Director - Environmental Services
Humboldt County Public Works Department
1106 Second Street
Eureka, CA 95501
707-268-2680

From: Phil Perez [mailto:

Sent: Saturday, February 17, 2018 3:31 PM

To: Seemann, Hank <HSeemann@co.humboldt.ca.us>
Subject: Trail on the Bay Schematic Excel Cost Estimates;

Hank.

I'm giving you my Excel file for the cost estimates thinking that might (somehow) make it easier for you (or anyone who might be helping you) to review what I've done.

My goal is to nudge you into considering incorporating the two northerly loops into your planning.

If you used the Trial on the Bay concept your Mitigation Costs will be reduced. Phil On Fri, Feb 16, 2018 at 6:22 PM, Phil Perez wrote: Thanks for the update. On Fri, Feb 16, 2018 at 6:02 PM Seemann, Hank <HSeemann@co.humboldt.ca.us> wrote: Phil-I got jammed up and the week got away from me. It's still on my list to give you feedback on your submittal and I'll aim to do that early next week. Note that we just posted some documents to the web site: www.humboldtbaytrail.info Hank Hank Seemann Deputy Director - Environmental Services Humboldt County Public Works Department 1106 Second Street Eureka, CA 95501 707-268-2680 From: Seemann, Hank Sent: Tuesday, February 06, 2018 5:44 PM To: 'Phil Perez' Cc: Bohn, Rex <RBohn@co.humboldt.ca.us>; Bass, Virginia <VBass@co.humboldt.ca.us>; letters@times-standard.com; John Day ◀ >; Kay Johnson < ; Greg Bundros ; Gerry McGee >; Paul Goldammer < >; Gerry Fishbein < ; Steve Davidson >; Nancy Stumbaugh < ; Nick Appelmans ; Charlotte Cerny ; Charles M Anderson >; Beth Eschenbach < Gearheart < ; Dave Schneider < Subject: RE: Trail on the Bay Schematic Design and Cost Estimate S; Revisions & Addition

Since you have yet to secure project funding please consider it.

- 1) The Schematic Design includes this Report, drawings, and calculations (included RISA files and calculation sheets not included); Exhibits 1 through 10.
- 2) Schematic Routes; See Exhibit 10.
 - a) The shortest route is .8 miles long. It starts at the north terminus of the existing Trail from Arcata and goes around the old Mill Yard site. This option is attractive because it would get the Trail away from the Freeway without the necessity of purchasing right of way from the owners of the old Mill Yard site. It is likely the owner of the Mill Yard site will condition the easement of right of way to the County for a trail by requiring the County to maintain the breakwater and levee. Any cost analysis for that right of way must include the cost to the County to maintain the breakwater and levee and include provisions for the anticipated sea level rise. This option will eliminate the exposure of the County to those costs.
 - i) Costs; See Exhibit 5
 - (1) Bid Cost \$7,291,000.
 - (2) Total Project Cost \$9,194,000.
 - b) Moving South the next route would bypass both the Indianola Intersection tar pit and old Redwood Lumber Company site. This route is 1.8 miles long. It is likely the owner of the Mill Yard site will condition the easement of right of way to the County for a trail by requiring the County to maintain the breakwater and levee. Any cost analysis for that right of way must include the cost to the County to maintain the breakwater and levee and include provisions for the anticipated sea level rise. This option will eliminate the exposure of the County to those costs.
 - i) Costs; See Exhibit 6
 - (1) Bid Cost \$16,360,00.
 - (2) Total Project Cost \$20,627,000.
 - c) The final alternate is to remove the trail entirely from the freeway right of way and to eliminate all private property and right of way purchases by constructing 3 and 1/3 of Trail on the Bay.

- i) Costs; See Exhibit 7
 - (1) Bid Cost \$30,261,000.
 - (2) Total Project Cost \$38,155,000.
- 3) Governing Design Codes
 - a) ASCE 7-10
 - b) Costal Construction Manual, FEMA P-55
- 4) Design Loads
 - a) Live Load on Deck 90 pounds per square foot.
 - b) Wave Load on the Windward side of floating Trail Structure 700 pounds per foot. This load is given by the lateral wave slam equation of the CCM Equation 8.7 as shown in the attached Wave Slam Exhibit. Equation 8.7 provided 403 pounds per foot but to be conservative 700 pounds per foot was used in the RISA analysis of the floating Trail Structure.
 - Wind Load 20 pounds per square foot on projected area of floating Trail Structure.
- 5) Float Selection Criteria and Spring Constant
 - a) Rather than choosing to cost out floats that span the 12 width of the structure three 4-foot wide float were selected that were 3 foot long. Since each structure is 60 foot long, the resulting number of floats per structure is 90. That number of floats will provide sufficient redundancy for eventual float failure. The floats are warranted for a 15-year life and should last longer. They will be loaded to roughly 1/3 of their capacity at the design live loading so there is 2/3's of their capacity in reserve to accommodate their progressive failure beyond their warranted 15 year life. This provision should provide the structure a sufficiently long life before floats need replacement.
 - b) Floats used in the Schematic Design;
 - i) Den Hartog; Ace Roto Mold Float Drums, Foam filled, 15 year warranty, 24"x48"x36"; 1297 pounds of buoyancy. Displacement at full load 1297/62.4=20.7853=8d therefore d=2.5982=31.1779; spring constant 1297/2.5982=499.2lbs/ft.=.499kips/ft.

ii) Harbor Ware 2'x4'x32" Dock Float Drums. 924 pounds of buoyancy. \$140; displacement at full load 924/62.4=14.8=8d therefore d=1.85=22"; spring constant 924/ (22/12) =504lbs/ft.=.504kips/ft.

6) Structure Schematic Design

a) The structure was modeled in RISA using compression springs to model the floats for the live load and wave load. The wind load was incidental (in comparison of the 700 pound per linear foot wave loading) and not modeled at this Schematic Study because it was too much trouble.



b) The structure's horizontal truss is designed to withstand the 700 #/' wave loading while being constrained by the anchor cables at the ends of the structures 60' spans.

Anchors

a) Conceptually a cast concrete structures that would receive oyster beds for anchor is desired for the project. For the purposes to establish budget the commercially available Del Mor anchor has been used.

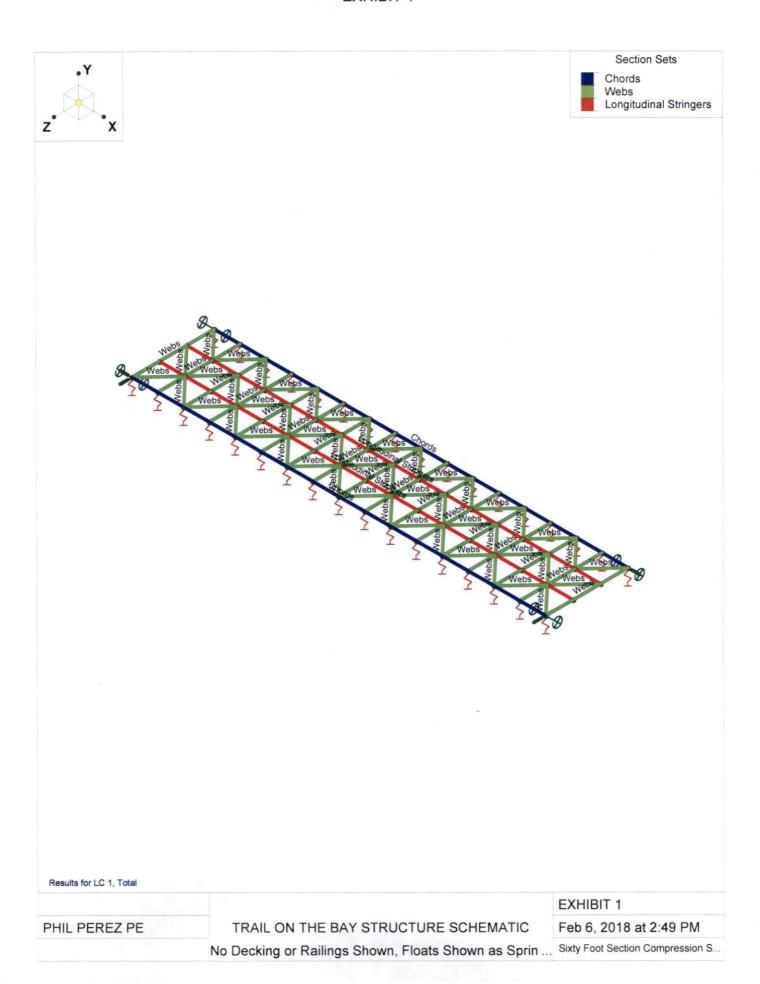
8) Abutments

a) Abutments would consist of "landing" the terminal trail structure on shore within concrete wall and wing walls. This cost has been included in the cost estimates.

9) Potential Cost Savings

a) There is a strong possibility for cost savings in the following:

- i) The decking and float material cost was taken from cost found on-line; Exhibit 8; that source showed a unit installed cost of \$6/s.f.; because of the uniqueness of the structure an installed unit cost of \$11/s.f. was used. That cost should be lowered by judicious bidding.
- ii) The cost for the "structure" is conservatively costed out at \$6 per pound. It is likely that cost can be lowered by bidding or using off the shelf bridge products.
- b) Cost could possibly be decreased by designing detailed trail abutments. The estimates use a standard 12' wide 1' thick concrete wall 4 feet tall with 1' thick 12' long wing walls; all walls are founded on a footing 1' thick 4' wide. The substantial design fees for the project (12%) will allow these walls to be more rigorously designed for a cost saving.
- c) The cost of the cabling was based on a mooring depth of 7 -1/2 foot. The routes should be surveyed and the actual mooring depths determined at each location and a "scope" of 10 used to layout the cabling. That procedure will lessen the length of cabling required. The design fees have been set to accommodate this work.
- d) Similarly the whole project can be reduced in construction scope by spending the substantial design fees for the project (12%) to reduce the weight of the aluminum trail structure, and to achieve other project efficiencies, which will result in overall project cost saving.





Feb	6,	201	8
-----	----	-----	---

Checked By:___

Global

Ciobai	
Display Sections for Member Calcs	5
Max Internal Sections for Member Calcs	97
Include Shear Deformation?	Yes
Include Warping?	Yes
Trans Load Btwn Intersecting Wood Wall?	Yes
Increase Nailing Capacity for Wind?	Yes
Area Load Mesh (in^2)	144
Merge Tolerance (in)	.12
P-Delta Analysis Tolerance	0.50%
Include P-Delta for Walls?	Yes
Automaticly Iterate Stiffness for Walls?	Yes
Maximum Iteration Number for Wall Stiffnes	ss3
Gravity Acceleration (ft/sec^2)	32.2
Wall Mesh Size (in)	12
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(Tau=1.0)
RISAConnection Code	AISC 14th(360-10): ASD
Cold Formed Steel Code	AISI S100-10: ASD
Wood Code	AF&PA NDS-12: ASD
Wood Temperature	< 100F
Concrete Code	ACI 318-11
Masonry Code	ACI 530-11: ASD
Aluminum Code	AA ADM1-10: ASD - Building
Number of Shear Regions	4
Region Spacing Increment (in)	4
Biaxial Column Method	Exact Integration
Parme 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 many particular property and the
Max % Steel for Column	8



Feb 6, 2018

Checked By:___

Global, Continued

ASCE 7-10 Not Entered Yes .02 .02
Yes .02
02
.02
Not Entered
Not Entered
3
3
.75
.75
1
1
1
5
lorII
1
1
1
1

Aluminum Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (.	Density[Table B.4	kt	Ftu[ksi]	Fty[ksi]	Fcy[ksi]	Fsu[ksi]	Ct
1	3003-H14	10100	3787.5	.33	1.3	.173	Table B	1	19	16	13	12	141
2	6061-T6	10100	3787.5	.33	1.3	.173	Table B	1	38	35	35	24	141
3	6063-T5	10100	3787.5	.33	1.3	.173	Table B	1	22	16	16	13	141
4	6063-T6	10100	3787.5	.33	1.3	.173	Table B	1	30	25	25	19	141
5	5052-H34	10200	3787.5	.33	1.3	.173	Table B	1	34	26	24	20	141
6	6061-T6 W	10100	3787.5	.33	1.3	.173	Table B	1	24	15	15	15	141

Aluminum Section Sets

	Label	Shape	Type	Design List Material	Design R	A [in2]	lyy [in4]	Izz [in4]	J [in4]
1	Chords	RT8X8X0.500	Beam	S Wide F 6063-T6	Typical	15	141	141	211
2	Webs	USS6X5.96	Beam	S Wide F 6063-T6	Typical	5.07	2.31	26.3	.306
3	Standards	USS12X17.3	Beam	S Wide F 6063-T6	Typical	14.7	15.7	305	2.279
4	Rail Cap	AACS4X2.33	Beam	AA Chan 6063-T6	Typical	1.98	1.02	5.21	.044
5	Deck	CSCS10X8.58	Beam	AA Chan 6063-T6	Typical	7.3	7.19	110	.491
6	Vertical Rails	L1.5X1.5X0.125	VBrace	A-N Tee 6063-T6	Typical	.36	.074	.074	.002
7	Longitudinal Stringers	RT8X8X0.500	Beam	A-N Wid 6063-T6	Typical	15	141	141	211

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From
1	N251	60	0	12	0	
2	N255	60	0	8	0	
3	N254	60	0	4	0	
4	N250	60	0	0	0	NEW PLANS



Feb 6, 2018	
Checked By:	

Joint Coordinates and Temperatures (Continued)

_	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From
5	N37	56.25	0	12	0	
6	N62	56.25	0	8	0	
7	N54	56.25	0	4	0	
8	N45	56.25	0	0	0	
9	N226	52.5	0	12	0	
10	N281	52.5	0	8	0	
11	N280	52.5	0	4	0	
12	N225	52.5	0	0	0	
13	N38	48.75	0	12	0	
14	N63	48.75	0	8	0	
15	N55	48.75	0	4	0	
16	N46	48.75	0	0	0	
17	N194	45	0	12	0	
18	N279	45	0	8	0	
19	N278	45	0	4	0	
20	N193	45	0	0	0	N Especial
21	N39	41.25	0	12	0	
22	N65A	41.25	0	8	0	S RECESSION
23	N56	41.25	Ö	4	Ō	
24	N47	41.25	Ö	Ö	Ö	
25	N162	37.5	0	12	0	
26	N277	37.5	Ö	8	Ö	U managara
27	N276	37.5	0	4	0	
28	N161	37.5	0	0	0	
29	N40	33.75		12		CERSON BOOLS
30	N66A		0	8	0	
		33.75				
31	N57	33.75	0	4	0	III BECKENINGE
32	N48	33.75	0		0	ALM HISTORY
33	N130	30	0	12	0	
34	N275	30	0	8	0	
35	N274	30	0	4	0	
36	N129	30	0	0	0	
37	N41	26.25	0	12	0	
38	N67	26.25	0	8	0	
39	N58	26.25	0	4	0	
40	N49	26.25	0	0	0	
41	N98	22.5	0	12	0	
42	N285	22.5	0	8	0	Z Atem Company
43	N284	22.5	0	4	0	
44	N97	22.5	0	0	0	
45	N42	18.75	0	12	0	
46	N68	18.75	0	8	0	
47	N59	18.75	0	4	0	
48	N50	18.75	0	0	0	MELLWARE
49	N66	15	0	12	0	
50	N273	15	0	8	0	
51	N272	15	0	4	0	
52	N65	15	0	Ó	0	
53	N43	11.25	0	12		
54	N69	11.25	0	8	0	M SECTION AND A



Feb 6, 2018

Checked By:___

Joint Coordinates and Temperatures (Con	tinued)
---	---------

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From
55	N60	11.25	0	4	0	
56	N51	11.25	0	0	0	
57	N34	7.5	0	12	0	
58	N283	7.5	0	8	0	
59	N282	7.5	0	4	0	
60	N33	7.5	0	0	0	
61	N44	3.75	0	12	0	
62	N70	3.75	0	8	0	
63	N61	3.75	0	4	0	
64	N52	3.75	0	0	0	
65	N2	0	0	12	0	
66	N253	0	0	8	0	
67	N252	0	0	4	0	
68	N1	0	0	0	0	N PALES OF THE

Joint Boundary Conditions

4	Joint Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot.[k-ft/rad]	Y Rot.[k-ft/rad]	Z Rot.[k-ft/rad]	Footing
1	N251		CS.504	Reaction	Reaction			
2	N250	Reaction	CS.504		Reaction	No.		
3	N226		CS.504					
4	N225		CS.504					
5	N194		CS504					
6	N193		CS504			S Act Service		
7	N162		CS.504					
8	N161		CS.504					
9	N130		CS504					
10	N129		CS504					
11	N98	:0	CS.504					
12	N97		CS.504					
13	N66		CS504					
14	N65		CS504	The state of the state of				
15	N52		CS504					
16	N51		CS.504				MARKET A	
17	N50		CS.504					
18	N49		CS.504					
19	N48		CS.504					
20	N47		CS.504		A PROPERTY OF THE PARTY OF THE	THE REAL PROPERTY.	HARMAN RESERVE	THE STREET
21	N46		CS.504					
22	N45		CS.504					
23	N44		CS504					
24	N43		CS.504					
25	N42		CS.504					
26	N41	101/15	CS.504				DATE OF THE PARTY	
27	N40		CS.504					
28	N39		CS.504			Market Anna		
29	N38		CS.504					
30	N37		CS.504	DOMESTIC STATE	Extra lateral	EAN ENGINEERS		
31	N34		CS.504					



~ 1	n 6	. 1	$\gamma \cap$	4	C

Checked By:___

Joint Boundary Conditions (Continued)

	Joint Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot.[k-ft/rad]	Y Rot.[k-ft/rad]	Z Rot.[k-ft/rad]	Footing
32	N33		CS.504		Travel 1		El Service	
33	N2	Reaction	CS.504	Reaction	Reaction			
34	N1		CS.504		Reaction	THE MEDICAL TARE	THE SHEET	

Aluminum	Docian	Paramo	tore
AIUIIIIIIIII	Desidii	raiaille	E13

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]		Lcomp bot[.	L-torq	Kyy	Kzz	Cb	Welde.	Functi
1	M3	Webs	12			Lbyy			_				Lateral
2	M12	Webs	12			Lbyy					-		Lateral
3	M14	Webs	12			Lbyy							Lateral
4	M16	Webs	12		4-12-6	Lbyy						Paylet	Lateral
5	M17	Webs	12			Lbyy							Lateral
6	M18	Webs	12			Lbyy					1		Lateral
7	M19	Webs	12			Lbyy							Lateral
8	M18A	Webs	12			Lbyy							Lateral
9	M19B	Webs	12			Lbyy							Lateral
10	M396	Longitudin		STATE OF		Lbyy							Lateral
11	M397	Longitudin	. 60			Lbyy			A.				Lateral
12	M2	Chords	60			Lbyy							Lateral
13	M19A	Chords	60			Lbyy							Lateral
14	M14A	Webs	12		and this or	Lbyy				Since	120		Lateral
15	M15	Webs	12			Lbyy							Lateral
16	M16A	Webs	12		AND THE	Lbyy		PER BAR	100	West &			Lateral
17	M17A	Webs	12			Lbyy							Lateral
18	M18B	Webs	12			Lbyy	THE RESERVE						Lateral
19	M19C	Webs	12			Lbyy							Lateral
20	M20	Webs	12			Lbyy					The Late		Lateral
21	M21	Webs	12			Lbyy							Lateral
22	M22	Webs	5.483		BUZ STATE	Lbyy	a to the law				1149.7		Lateral
23	M23	Webs	5.483			Lbyy							Lateral
24	M24	Webs	5.483			Lbyy		P/885			716.3	NAME OF	Lateral
25	M25	Webs	5.483			Lbyy							Lateral
26	M26	Webs	5.483		81874185 M	Lbyy		Malaki		FREUM	A COLOR		Lateral
27	M27	Webs	5.483			Lbyy							Lateral
28	M28	Webs	5.483			Lbyy		Para Maria	ME DEVE	MALE L	5027741	E	Lateral
29	M29	Webs	5.483			Lbyy							Lateral
30	M30	Webs	5.483		HORING ME	Lbyy					HARDY.		Lateral
31	M31	Webs	5.483			Lbyy							Lateral
32	M32	Webs	5.483	ALC: NO.	PS STATE	Lbyy	TOTAL VAN		J-5385		TO SE		Lateral
33	M33	Webs	5.483			Lbyy							Lateral
34	M34	Webs	5.483		TOTAL CASE	Lbyy				Control of	1000		Lateral
35	M35	Webs	5.483			Lbyy							Lateral
36	M36	Webs	5.483			Lbyy		1000		The Late	The same	TERRIT	Lateral
37	M37	Webs	5.483			Lbyy							Lateral
38	M38	Webs	5.483			Lbyy			Daniel Co.	2 5 7 7	11898		Lateral
39	M39	Webs	5.483			Lbyy							Lateral
40	M40	Webs	5.483		PRIVINGE IN	Lbyy	THE PLAN			District the second			Lateral
41	M41	Webs	5.483			Lbyy							Lateral
42	M44	Webs	5.483		DESIGNATION OF THE PERSON OF T	Lbyy	VIII VIII EEL	1991 11591		No. of the last	7,72372	N COLUMN	Lateral



Feb 6, 2018

Checked By:___

Aluminum Design Parameters (Continued)	Aluminum	Design I	Parameters	(Continued)
--	----------	----------	------------	-------------

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[.	Lcomp bot[.	L-torq	Kyy	Kzz	Cb	Welde.	Functi
43	M45	Webs	5.483			Lbyy	•						Lateral
44	M46	Webs	5.483			Lbyy							Lateral
45	M47	Webs	5.483			Lbyy							Lateral
46	M48	Webs	5.483			Lbyy	Land College	MOTOR STATE		THE SERVICES		SHEDULE.	Lateral
47	M49	Webs	5.483			Lbyy							Lateral
48	M50	Webs	5.483			Lbyy							Lateral
49	M51	Webs	5.483			Lbyy							Lateral
50	M52	Webs	5.483		Black Charles	Lbyy							Lateral
51	M53	Webs	5.483			Lbyy							Lateral
52	M54	Webs	5.483			Lbyy				E 158			Lateral
53	M55	Webs	5.483			Lbyy							Lateral
54	M54A	Webs	5.483			Lbyy	A STATE OF THE STA			N 5 524	4,538		Lateral
55	M55A	Webs	5.483			Lbyy							Lateral
56	M56	Webs	5.483		11 16 11	Lbyy				W 30 3			Lateral
57	M57	Webs	5.483			Lbyy	100						Lateral
58	M58	Webs	5.483			Lbyy				ALC: N			Lateral
59	M59	Webs	5.483			Lbyy							Lateral
60	M60	Webs	5.483			Lbyy		DOM:					Lateral
61	M61	Webs	5.483			Lbyy							Lateral
62	M62	Webs	5.483			Lbyy							Lateral
63	M63	Webs	5.483			Lbyy							Lateral
64	M64	Webs	5.483			Lbyy					AL SE	NEW YORK	Lateral
65	M65	Webs	5.483			Lbyy							Lateral
66	M66	Webs	5.483			Lbyy					STAL.		Lateral
67	M67	Webs	5.483			Lbyy							Lateral
68	M68	Webs	5.483			Lbyy	The state of the	10000					Lateral
69	M69	Webs	5.483			Lbyy							Lateral

Member Distributed Loads (BLC 2 : Uniform Deck Live Load)

	Member Label	Direction	Start Magnitude[k/ft,F]	End Magnitude[k/ft,F]	Start Location[ft,%]	End Location[ft,%]
1	M19A	Y	54	54	0	0
2	M2	Y	54	54	0	0

Member Distributed Loads (BLC 3 : Uniform Wave Impac Load)

	Member Label	Direction	Start Magnitude[k/ft,F	End Magnitude[k/ft,F]	Start Location[ft.%]	End Location[ft,%]
1	M19A	Z	7	7	0	0

Basic Load Cases

	BLC Description	Category	X Gravity Y Gravity Z Gravity	Joint	Point	Distribut	.Area(Me.	Surface(
1	Dead Load	DL	-1					
2	Uniform Deck Live Load	LL			100	2		
3	Uniform Wave Impac Load	OL1				1		



Company Designer Job Number Model Name

Feb 6, 2018

Checked By:____

Load Combinations

	Description	SolveP	D SR	BLC	Factor														
1	Total	Yes	Υ	DL	1	2	1	3	1										

Joint Deflections

	LC	Joint Label	X [in]	Y [in]	Z [in]	X Rotation [rad]	Y Rotation [rad]	Z Rotation [rac
1	1	N251	078	-2.474	0	0	-1.422e-3	-1.415e-2
2	1	N255	045	-2.472	009	-6.576e-6	-9.833e-4	-1.428e-2
3	1	N254	024	-2.469	019	1.112e-4	-7.868e-4	-1.427e-2
4	1	N250	0	-2.467	022	0	-7.112e-4	-1.408e-2
5	1	N37	075	-1.828	055	-5.306e-4	-9.764e-4	-1.466e-2
6	1	N62	045	-1.83	053	-1.069e-4	-8.866e-4	-1.421e-2
7	1	N54	025	-1.828	055	1.62e-4	-7.739e-4	-1.419e-2
8	1	N45	002	-1.825	055	5.39e-4	-7.338e-4	-1.459e-2
9	1	N226	073	-1.159	091	-1.525e-3	-7.596e-4	-1.485e-2
10	1	N281	045	-1.203	09	-6.681e-4	-7.752e-4	-1.339e-2
11	1	N280	025	-1.203	089	6.963e-4	-7.54e-4	-1.332e-2
12	1	N225	003	-1.158	088	1.532e-3	-7.644e-4	-1.479e-2
13	1	N38	068	509	125	-3.105e-3	-6.557e-4	-1.337e-2
14	1	N63	045	647	123	-1.574e-3	-6.544e-4	-1.089e-2
15	1	N55	028	649	122	1.563e-3	-6.663e-4	-1.091e-2
16	1	N46	007	51	122	3.11e-3	-6.563e-4	-1.336e-2
17	1	N194	064	023	15	-4.335e-3	-5.289e-4	-6.699e-3
18	1	N279	044	251	149	-1.708e-3	-5.082e-4	-6.709e-3
19	1	N278	028	253	149	1.674e-3	-4.988e-4	-6.674e-3
20	1	N193	012	025	147	4.334e-3	-5.22e-4	-6.622e-3
21	1	N39	058	.096	174	-3.216e-3	-4.131e-4	-1.776e-4
22	1	N65A	043	043	172	-1.631e-3	-4.161e-4	-2.569e-3
23	1	N56	031	047	172	1.527e-3	-4.214e-4	-2.506e-3
24	1	N47	018	.088	171	3.174e-3	-4.178e-4	-6.887e-5
25	1	N162	052	.063	187	-1.861e-3	-2.843e-4	9.673e-4
26	1	N277	041	.009	187	-8.766e-4	-2.836e-4	-1.113e-4
27	1	N276	033	.004	186	7.522e-4	-2.833e-4	-1.591e-4
28	1	N161	024	.054	185	1.791e-3	-2.853e-4	9.409e-4
29	1	N40	045	.025	2	-1.311e-3	-1.388e-4	6.587e-4
30	1	N66A	04	014	198	-5.596e-4	-1.384e-4	8.947e-4
31	1	N57	036	016	197	4.815e-4	-1.395e-4	8.414e-4
32	1	N48	031	.019	197	1.262e-3	-1.398e-4	5.494e-4
33	1	N130	038	014	2	-1.121e-3	3.272e-6	1.688e-3
34	1	N275	038	066	199	-4.81e-4	3.361e-6	1.337e-3
35	1	N274	038	066	199	4.517e-4	3.27e-6	1.277e-3
36	1	N129	038	014	197	1.124e-3	3.293e-6	1.535e-3
37	1	N41	031	121	199	-3.901e-4	1.444e-4	2.143e-3
38	1	N67	036	125	197	-1.105e-4	1.435e-4	1.104e-3
39	1	N58	04	123	197	2.138e-4	1.449e-4	1.089e-3
40	1	N49	045	114	196	4.591e-4	1.454e-4	2.023e-3
41	1	N98	025	171	187	7.008e-5	2.891e-4	-1.234e-4
42	1	N285	035	152	186	4.26e-5	2.899e-4	2.764e-5
43	1	N284	043	15	186	4.098e-5	2.892e-4	3.866e-5



Feb 6, 2018

Checked By:___

Joint Deflections (C	ontinued)
----------------------	-----------

	LC	Joint Label	X [in]	Y [in]	Z [in]	X Rotation [rad]	Y Rotation [rad]	Z Rotation [rad]
44	1	N97	051	162	184	4.503e-5	2.898e-4	-1.054e-4
45	1	N42	019	112	173	-5.645e-4	4.141e-4	-2.193e-3
46	1	N68	033	13	172	-2.695e-4	4.119e-4	-8.857e-4
47	1	N59	044	128	171	3.684e-4	4.162e-4	-8.796e-4
48	1	N50	057	106	17	6.256e-4	4.174e-4	-2.068e-3
49	1	N66	013	017	149	-1.318e-3	5.498e-4	-9.623e-4
50	1	N273	032	089	148	-6.426e-4	5.514e-4	-7.757e-4
51	1	N272	047	088	148	6.265e-4	5.488e-4	-7.467e-4
52	1	N65	063	017	146	1.317e-3	5.514e-4	-8.796e-4
53	1	N43	009	029	124	-8.949e-4	6.506e-4	5.77e-4
54	1	N69	031	065	122	-4.977e-4	6.44e-4	-3.254e-4
55	1	N60	048	065	121	5.062e-4	6.55e-4	-3.e-4
56	1	N51	067	03	121	8.802e-4	6.497e-4	5.79e-4
57	1	N34	004	036	09	-4.962e-4	7.514e-4	-3.601e-4
58	1	N283	032	052	089	-2.976e-4	7.69e-4	-2.895e-4
59	1	N282	051	052	088	2.751e-4	7.469e-4	-2.995e-4
60	1	N33	071	037	088	4.886e-4	7.561e-4	-3.779e-4
61	1	N44	002	01	055	-3.981e-4	9.683e-4	-2.017e-4
62	1	N70	032	038	053	-2.885e-4	8.747e-4	-2.801e-4
63	1	N61	05	038	054	3.046e-4	7.591e-4	-2.871e-4
64	1	N52	072	01	054	3.938e-4	7.175e-4	-2.199e-4
65	1	N2	0	024	0	0	1.411e-3	3.742e-4
66	1	N253	032	027	01	-1.652e-4	9.659e-4	-2.289e-4
67	1	N252	052	027	019	1.732e-4	7.636e-4	-2.236e-4
68	1	N1	073	023	023	0	6.829e-4	3.573e-4

Member AA ADM1-10: ASD - Building Aluminum Code Checks

	LC	Member	Shape	UC Max	Loc[ft]	Shear	Loc[ft]	Dir	Pnc/O	Pnt/Om	.Mny/O	Mnz/O	Vny/O	Vnz/O	Cb	Eqn
1	1	M3	USS6X5.96	.197	0	.004	0	Z	5.721	76.818	2.127	7.538	25.364	23.27	1.376	H.1-1
2	1	M12	USS6X5.96	.194	12	.003	8	y	5.721	76.818	2.127	7.968	25.364	23.27	1.668	H.1-1
3	1	M14	USS6X5.96	.401	8	.021	0	y	5.721	76.818	2.127	7.941	25.364	23.27	1.647	H.1-1
4	1	M16	USS6X5.96	.361	8	.013	0	y	5.721	76.818	2.127	7.816	25.364	23.27	1.555	H.1-1
5	1	M17	USS6X5.96	.360	12	.013	8	y	5.721	76.818	2.127	8.333	25.364	23.27	1.994	H.1-1
6	1	M18	USS6X5.96	.457	8	.008	12	Z	5.721	76.818	2.127	8.883	25.364	23.27	2.702	H.1-1
7	1	M19	USS6X5.96	.305	8	.012	8	y	5.721	76.818	2.127	8.179	25.364	23.27	1.846	H.1-1
8	1	M18A	USS6X5.96	.272	8	.004	4	y	5.721	76.818	2.127	8.201	25.364	23.27	1.866	H.1-1
9	1	M19B	USS6X5.96	.322	8	.014	4	y	5.721	76.818	2.127	8.662	25.364	23.27	2.379	H.1-1
10	1	M396	RT8X8X0	.258	48.75	.056	48.75	Z	13.967	227.273	44.508	44.508	59.091	59.091	2.734	H.1-1
11	1	M397	RT8X8X0	.590	41.25	.058	48.75	Z	13.967	227.273	44.508	44.508	59.091	59.091	2.944	H.1-1
12	1	M2	RT8X8X0	.621	45	.145	45	y	13.967	227.273	44.508	43.662	59.091	59.091	1.627	H.1-1
13	1	M19A	RT8X8X0	1.991	45	.142	45	y	13.967	227.273	44.508	43.625	59.091	59.091	1.606	H.1-1
14	1	M14A	USS6X5.96	.475	4	.010	0	y	5.721	76.818	2.127	7.972	25.364	23.27	1.671	H.1-1
15	1	M15	USS6X5.96	.392	4	.006	4	У	5.721	76.818	2.127	7.851	25.364	23.27	1.58	H.1-1
16	1	M16A	USS6X5.96	.404	0	.007	8	y	5.721	76.818	2.127	8.208	25.364	23.27	1.873	H.1-1
17	1	M17A	USS6X5.96	.562	4	.026	12	У	5.721	76.818	2.127	7.374	25.364	23.27	1.286	H.1-1
18	1	M18B	USS6X5.96	.615	4	.030	12	y	5.721	76.818	2.127	7.469	25.364	23.27	1.337	H.1-1
19	1	M19C	USS6X5.96	.472	0	.012	4	y	5.721	76.818	2.127	9.056	25.364	23.27	3.004	H.1-1
20	1	M20	USS6X5.96	.441	4	.005	0	y	5.721	76.818	2.127	7.484	25.364	23.27	1.345	H.1-1



Company Designer Job Number Model Name

Feb 6, 2018

Checked By:___

Member AA ADM1-10: ASD - Building Aluminum Code Checks (Continued)

	LC	Member	Shape	UC Max	Loc[ft]	Shear	Loc[ft]	Dir	Pnc/O	Pnt/Om.	.Mnv/O	Mnz/O	Vny/O	Vnz/O	Cb Eq
21	1	M21	USS6X5.96	.385	0	.010	4			76.818					2.782 H.1
22	1	M22	USS6X5.96	.208	5.483	.003	5.483								2.424 H.1-
23	1	M23	USS6X5.96	.197	5.483	.009	0			76.818					1.829 H.1-
24	1	M24	USS6X5.96	.325	5.483	.009	5.483			76.818			1 2 C 2 C 2 C 2 C 2 C 2 C 2 C 2 C 2 C 2	The second secon	1.158 H.1-
25	1	M25	USS6X5.96	.311	5.483	.041	CONTRACTOR AND ADDRESS OF THE PARTY AND ADDRES			76.818					2.243 H.1-
26	1	M26	USS6X5.96	.342	0	.041	0			76.818					2.249 H.1-
27	1	M27	USS6X5.96	.154	0	.011	0	-		76.818					1.42 H.1-
28	1	M28	USS6X5.96	.115	0	.011	5.483	-		76.818					2.111 H.1-
29	1	M29	USS6X5.96	.062	5.483	.009				76.818		333	25.364		
30	1	M30	USS6X5.96	.096	5.483	.007	0			76.818					1.921 H.1-
31	1	M31	USS6X5.96	.111	5.483	.010	0			76.818		9.843			2.126 H.1-
32	1	M32	USS6X5.96	.112	0	.009	5.483	-		76.818	A STATE OF THE PARTY OF THE PAR				2.162 H.1-
33	1	M33	USS6X5.96	.224	0	.013	5.483	V	27.402	76.818	2.127	9.861			2.157 H.1-
34	1	M34	USS6X5.96	.166	5.483	.013	0	٧	27.402	76.818	2.127	9.886	25.364	23.27	2.204 H.1-
35	1	M35	USS6X5.96	.270	5.483	.005	0			76.818		9.874	25.364	23.27	2.182 H.1-
36	1	M36	USS6X5.96	.117	0	.002	5.483			76.818		9.655	25.364	23.27	1.827 H.1
37	1	M37	USS6X5.96	.244	5.483	.004	5.483	У	27.402	76.818	2.127	9.687	25.364	23.27	1.873 H.1
38	1	M38	USS6X5.96	.200	0	.004	5.483	У	27.402	76.818	2.127	9.988	25.364	23.27	2.408 H.1
39	1	M39	USS6X5.96	.336	5.483	.009	0	У	27.402	76.818	2.127	9.612	25.364	23.27	1.767 H.1-
40	1	M40	USS6X5.96	.148	5.483	.009	5.483			76.818		9.021	25.364	23.27	1.177 H.1
41	1	M41	USS6X5.96	.420	5.483	.040	5.483	У	27.402	76.818	2.127	9.907	25.364	23.27	2.245 H.1
42	1	M44	USS6X5.96	.248	0	.011	0	y	27.402	76.818	2.127	9.291	25.364	23.27	1.403 H.1
43	1	M45	USS6X5.96	.089	0	.010	5.483	y	27.402	76.818	2.127	9.822	25.364		2.089 H.1
44	1	M46	USS6X5.96	.120	5.483	.009	5.483	y	27.402	76.818	2.127	9.94	25.364	23.27	2.309 H.1-
45	1	M47	USS6X5.96	.163	5.483	.008	0	У	27.402	76.818	2.127	9.676	25.364	23.27	1.858 H.1
46	1	M48	USS6X5.96	.075	5.483	.011	0	y	27.402	76.818	2.127	9.847	25.364	23.27	2.133 H.1
47	1	M49	USS6X5.96	.212	0	.010	5.483	y	27.402	76.818	2.127	9.869	25.364	23.27	2.172 H.1
48	1	M50	USS6X5.96	.125	0	.013	5.483	y	27.402	76.818	2.127	9.859	25.364		2.154 H.1
49	1	M51	USS6X5.96	.290	5.483	.014	0	У	27.402	76.818	2.127	9.89			2.212 H.1
50	1	M52	USS6X5.96	.079	5.483	.004	0	y	27.402	76.818	2.127	9.9	25.364	23.27	2.23 H.1
51	1	M53	USS6X5.96	.261	5.483	.002				76.818					1.786 H.1
52	1	M54	USS6X5.96	.235	5.483	.005	5.483			76.818					1.884 H.1
53	1	M55	USS6X5.96	.245	0	.040	0			76.818					2.244 H.1
54	1	M54A	USS6X5.96	.333	0	.002	5.483			76.818					1.41 H.1
55	1	M55A	USS6X5.96	.160	0	.005	0	У	27.402	76.818	2.127				2.442 H.1
56	1	M56	USS6X5.96	.108	0	.014	0			76.818					1.523 H.1
57	1	M57	USS6X5.96	.058	0	.011	5.483			76.818					2.053 H.1
58	1	M58	USS6X5.96	.035	2.456		0			76.818					1.039 H.1
59	1	M59	USS6X5.96	.153	0	.003	5.483			76.818		9.01			1.17 H.1
60	1	M60	USS6X5.96		5.483		0			76.818					1.307 H.1
61	1	M61	USS6X5.96	.359	0	.003				76.818					1.305 H.1
62	1	M62	USS6X5.96		0	.002	1000			76.818					1.274 H.1
63	1	M63	USS6X5.96	.158	5.483		0			76.818					1.048 H.1
64	1	M64	USS6X5.96		5.483					76.818				23.27	2.301 H.1
65	1	M65	USS6X5.96	.232	0	.014	0			76.818			25.364		1.636 H.1
66	1	M66	USS6X5.96	.124	5.483		0			76.818					1.497 H.1
67	1	M67	USS6X5.96	.022	5.483		0			76.818		9.041	25.364		1.192 H.1
68	1	M68	USS6X5.96	-	0	.003				76.818					1.291 H.1
69	1	M69	USS6X5.96	.108	5.483	.004	0	y	27.402	76.818	2.127	9.068	25.364	23.27	1.213 H.1



Feb 6, 2018

Checked By:____

Joint Reactions

LC	Joint Label	X [k]	Y [k]	Z [k]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
1 1	N251	0	1.247	20.663	.592	0	0
2 1	N250	1.684	1.244	0	724	0	0
3 1	N226	0	.584	0	0	0	0
4 1	N225	0	.584	0	0	0	0
5 1	N194	0	11.795	0	0	0	0
6 1	N193	0	12.691	0	0	0	0
7 1	N162	0	0	0	0	0	0
8 1	N161	0	0	0	0	0	0
9 1	N130	0	6.916	0	0	0	0
10 1	N129	0	6.942	0	0	0	0
11 1	N98	0	.086	0	0	0	0
12 1	N97	0	.081	0	0	0	0
13 1	N66	0	8.479	0	0	0	0
14 1	N65	0	8.423	0	0	0	0
15 1	N52	0	5.118	0	0	0	0
16 1	N51	0	.015	0	0	0	0
17 1	N50	0	.053	0	0	0	0
18 1	N49	0	.057	0	0	0	0
19 1	N48	0	0	0	0	0	0
20 1	N47	0	0	0	0	0	0
21 1	N46	0	.257	0	0	0	0
22 1	N45	0	.92	0	0	0	0
23 1	N44	0	5.1	0	0	0	0
24 1	N43	0	.014	0	0	0	0
25 1	N42	0	.056	0	0	0	0
26 1	N41	0	.061	0	0	0	0
27 1	N40	0	0	0	0	0	0
28 1	N39	0	0	0	0	0	0
29 1	N38	0	.256	0	0	0	0
30 1	N37	0	.921	0	0	0	0
31 1	N34	0	.018	0	0	0	0
32 1	N33	0	.019	0	0	0	0
33 1	N2	-1.684	.012	21.337	.953	0	0
34 1	N1	0	.012	0	977	0	0
35 1	Totals:	0	71.962	42	_		
36 1	COG (ft):	X: 30	Y: 0	Z: 6	White Edit		

EXHIBIT 3 DECKING LL AND WAVE SHOCK LOADING SHOWN

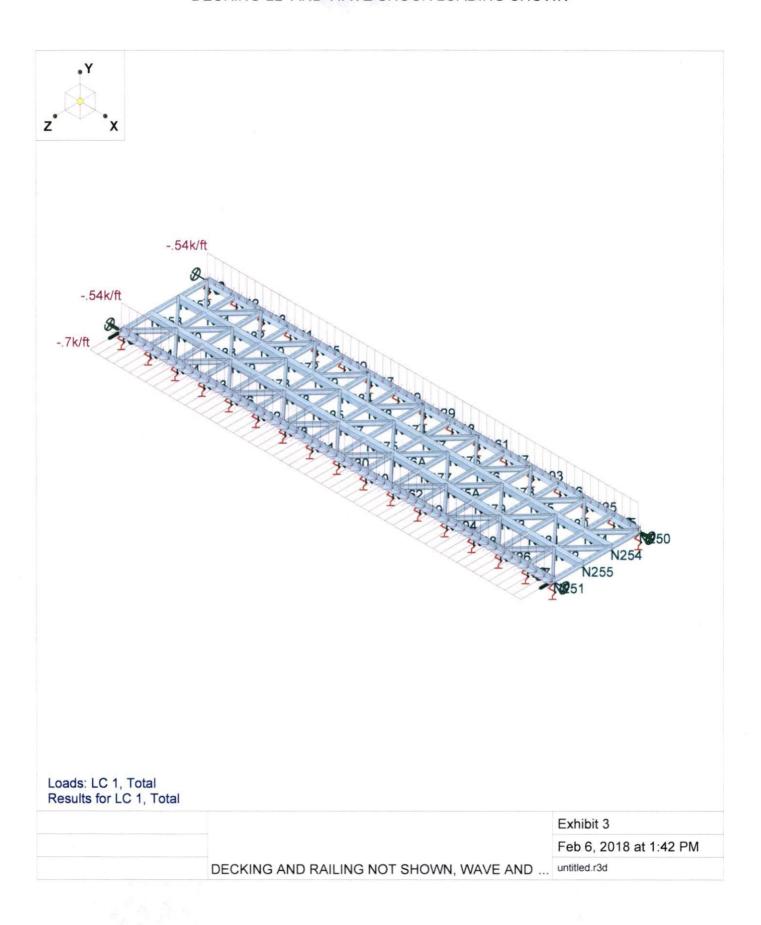
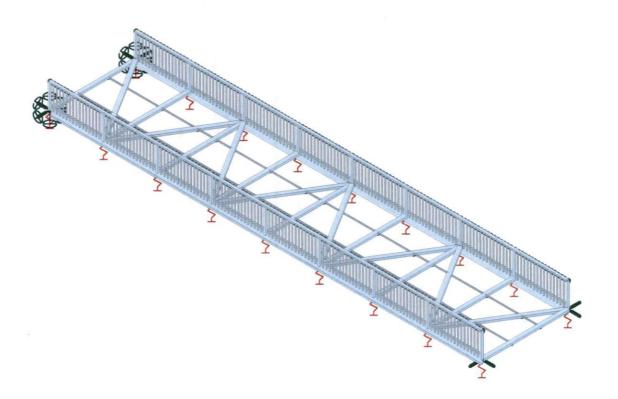


EXHIBIT 4 RAILING SCHEMATIC CONCEPT SHOWN





TRAIL ON THE BAY SCHEMATIC DESIGN SCHEMATIC RAILING COCEPT EXHIBIT 4

Feb 6, 2018 at 1:27 PM

Sixty Foot Section Compression S...

2/6/2018

SCHEMATIC PHASE TRAIL ON THE BAY PROJECT BUDGET

ength of causeway =	.8 miles	4,224	feet	
Spacing of anchors =	60	feet		
Number of Anchors groups =	70			
Number of Anchors=	141			
Del Mor Cast Iron Anchor; 400 lb	\$1,200	ea		
Shipping	\$500			
Handling and Placement	\$250			
Total cost anchors in place	\$274,560	Total		
•				
Length of Each Cable; based on 7.5 foot mooring				
depth and "scope" of 10 =	75	ft.		
Total Length of Cable Required =	10,560	ft.	2.0	miles
Unit cost of Cable =	\$3.75	per ft.		
Cable cost =	\$39,600			
Mallanen Shanahara Cost			\$69	
Walkway Structure Cost	0 200	pound:	\$09	3.1.
60 Foot Section Alumn. Wt. + k railing		pounds		
Number Required	70		-	
Total Weight	577,280			
Unit Cost Fabrication	\$6.00	-		
Cost of Structure	\$3,463,680			
Assemble and Installation Allowance	\$36,041			
Superstructure Cost =	\$3,499,721			
Abutment Cost Allowance				
Concrete unit cost, includes excavation, SWPP,				
Reinforcement	\$56	per ft ³	\$1,500	c.y.
End walls; 12'x1'x4'	\$2,667			
Wing walls; 2 @ 12'x1'x4'				
Footings; 36 If x 4' wide x 1' thick	\$8,000			
Cost per Abutment (1)				
,				
Decking Unit cost	\$72	per If	\$6	s.f.
Decking area	4,224		,-	
Decking cost	\$304,128	1000		
Decking cost Decking installation Allowance	\$253,440		\$5	s f
Total Decking	\$557,568	4	\$11	1,27, 0,03
Total Decking	\$331,300		311	3.1
Number of Floats per 60' Section	90			
Total number of Floats	6,336			
Assemble and Installation Allowance	\$36,004			
Float unit cost	\$300			
Total Float cost	\$1,936,804			
Construction Hard Cost =	\$6,340,364			
Contractor's O&P at 15% =	\$951,055			
Bid Price =	\$7,291,419			
PM @8% of Construction Hard Cost	\$507,229			
Design Fees @ 12% Construction Hard Cost	\$760,844			
Project Contingency 10% Construction Hard Cost	\$634,036	i		1
PM, Design Fees & Contingency =			\$1,902,109	
	\$9,193,528	1	\$2,176.50	1.5
Total Project Cost -			44,170.30	1.1.
Total Project Cost =	\$5,155,520		¢101 27	
Total Project Cost =	\$0,100,020		\$181.37	s.f.

2/6/2018

SCHEMATIC PHASE TRAIL ON THE BAY PROJECT BUDGET

Number of Anchors= Del Mor Cast Iron Anchor; 400 lb Shipping Handling and Placement Total cost anchors in place Length of Each Cable; based on 7.5 foot mooring depth and "scope" of 10 = Total Length of Cable Required = Unit cost of Cable = Cable cost = Walkway Structure Cost 60 Foot Section Alumn. Wt. + k railing Number Required Total Weight Unit Cost Fabrication Cost of Structure \$ Assemble and Installation Allowance Superstructure Cost = \$ Abutment Cost Allowance Concrete unit cost, includes excavation, SWPP, Reinforcement End walls; 12'x1'x4' Wing walls; 2 @ 12'x1'x4' Footings; 36 if x 4' wide x 1' thick Cost per Abutment (1) Decking Unit cost Decking area Decking cost Decking installation Allowance	158 317 \$1,200 \$500 \$250 \$617,760 75 23,760 \$3.75 \$89,100 8,200 158 1,298,880 \$6.00 67,793,280 \$81,092 67,874,372	ea Total ft. ft. per ft. pounds pounds per ft^3	\$69 \$1,500	
Number of Anchors groups = Number of Anchors= Del Mor Cast Iron Anchor; 400 lb Shipping Handling and Placement Total cost anchors in place Length of Each Cable; based on 7.5 foot mooring depth and "scope" of 10 = Total Length of Cable Required = Unit cost of Cable = Cable cost = Walkway Structure Cost 60 Foot Section Alumn. Wt. + k railing Number Required Total Weight Unit Cost Fabrication Cost of Structure Assemble and Installation Allowance Superstructure Cost = \$Abutment Cost Allowance Concrete unit cost, includes excavation, SWPP, Reinforcement End walls; 12°x1'x4' Wing walls; 2 @ 12'x1'x4' Footings; 36 lf x 4' wide x 1' thick Cost per Abutment (1) Decking unit cost Decking area Decking cost Decking installation Allowance	158 317 \$1,200 \$500 \$250 \$617,760 75 23,760 \$3.75 \$89,100 158 1,298,880 \$6.00 67,793,280 \$81,092 67,874,372 \$56 \$2,667 \$5,333 \$8,000	ea Total ft. ft. per ft. pounds pounds per ft^3	\$69	s.f.
Number of Anchors groups = Number of Anchors= Del Mor Cast Iron Anchor; 400 lb Shipping Handling and Placement Total cost anchors in place Length of Each Cable; based on 7.5 foot mooring depth and "scope" of 10 = Total Length of Cable Required = Unit cost of Cable = Cable cost = Walkway Structure Cost 60 Foot Section Alumn. Wt. + k railing Number Required Total Weight Unit Cost Fabrication Cost of Structure Assemble and Installation Allowance Superstructure Cost = \$Abutment Cost Allowance Concrete unit cost, includes excavation, SWPP, Reinforcement End walls; 12°x1'x4' Wing walls; 2 @ 12'x1'x4' Footings; 36 lf x 4' wide x 1' thick Cost per Abutment (1) Decking Unit cost Decking area Decking cost Decking installation Allowance	158 317 \$1,200 \$500 \$250 \$617,760 75 23,760 \$3.75 \$89,100 158 1,298,880 \$6.00 67,793,280 \$81,092 67,874,372 \$56 \$2,667 \$5,333 \$8,000	ea Total ft. ft. per ft. pounds pounds per ft^3	\$69	s.f.
Number of Anchors= Del Mor Cast Iron Anchor; 400 lb Shipping Handling and Placement Total cost anchors in place Length of Each Cable; based on 7.5 foot mooring depth and "scope" of 10 = Total Length of Cable Required = Unit cost of Cable = Cable cost = Walkway Structure Cost 60 Foot Section Alumn. Wt. + k railing Number Required Total Weight Unit Cost Fabrication Cost of Structure \$ Assemble and Installation Allowance Superstructure Cost = \$ Abutment Cost Allowance Concrete unit cost, includes excavation, SWPP, Reinforcement End walls; 12'x1'x4' Wing walls; 2 @ 12'x1'x4' Footings; 36 if x 4' wide x 1' thick Cost per Abutment (1) Decking Unit cost Decking area Decking cost Decking installation Allowance	317 \$1,200 \$500 \$250 \$617,760 75 23,760 \$3,75 \$89,100 8,200 158 1,298,880 \$6,00 67,793,280 \$81,092 67,874,372 \$56 \$2,667 \$5,333 \$8,000	ea Total ft. ft. per ft. pounds pounds per ft^3	\$69	s.f.
Del Mor Cast Iron Anchor; 400 lb Shipping Handling and Placement Total cost anchors in place Length of Each Cable; based on 7.5 foot mooring depth and "scope" of 10 = Total Length of Cable Required = Unit cost of Cable = Cable cost = Walkway Structure Cost 60 Foot Section Alumn. Wt. + k railing Number Required Total Weight Unit Cost Fabrication Cost of Structure \$ Assemble and Installation Allowance Superstructure Cost = \$ Abutment Cost Allowance Concrete unit cost, includes excavation, SWPP, Reinforcement End walls; 12'x1'x4' Wing walls; 2 @ 12'x1'x4' Footings; 36 if x 4' wide x 1' thick Cost per Abutment (1) Decking Unit cost Decking area Decking cost Decking installation Allowance	\$1,200 \$500 \$250 \$617,760 75 23,760 \$3.75 \$89,100 8,200 158 1,298,880 \$6.00 \$7,793,280 \$81,092 \$7,874,372 \$56 \$2,667 \$5,333 \$8,000	ea Total ft. ft. per ft. pounds pounds per ft^3	\$69	s.f.
Shipping Handling and Placement Total cost anchors in place Length of Each Cable; based on 7.5 foot mooring depth and "scope" of 10 = Total Length of Cable Required = Unit cost of Cable = Cable cost = Walkway Structure Cost 60 Foot Section Alumn. Wt. + k railing Number Required Total Weight Unit Cost Fabrication Cost of Structure Superstructure Cost = Shoutment Cost Allowance Concrete unit cost, includes excavation, SWPP, Reinforcement End walls; 12 'x1'x4' Wing walls; 2 @ 12'x1'x4' Footings; 36 if x 4' wide x 1' thick Cost per Abutment (1) Decking Unit cost Decking unit cost Decking installation Allowance	\$500 \$250 \$617,760 75 23,760 \$3.75 \$89,100 158 1,298,880 \$6.00 67,793,280 \$81,092 67,874,372 \$56 \$2,667 \$5,333 \$8,000	ft. ft. per ft. pounds pounds per ft^3	\$69	s.f.
Handling and Placement Total cost anchors in place Length of Each Cable; based on 7.5 foot mooring depth and "scope" of 10 = Total Length of Cable Required = Unit cost of Cable = Cable cost = Walkway Structure Cost 60 Foot Section Alumn. Wt. + k railing Number Required Total Weight Unit Cost Fabrication Cost of Structure Assemble and Installation Allowance Superstructure Cost = \$ Abutment Cost Allowance Concrete unit cost, includes excavation, SWPP, Reinforcement End walls; 12 x1'x4' Wing walls; 2 @ 12'x1'x4' Footings; 36 if x 4' wide x 1' thick Cost per Abutment (1) Decking Unit cost Decking unit cost Decking installation Allowance	\$250 \$617,760 75 23,760 \$3.75 \$89,100 158 1,298,880 \$6.00 \$7,793,280 \$81,092 \$7,874,372 \$56 \$2,667 \$5,333 \$8,000	ft. ft. per ft. pounds pounds per ft^3	\$69	s.f.
Total cost anchors in place Length of Each Cable; based on 7.5 foot mooring depth and "scope" of 10 = Total Length of Cable Required = Unit cost of Cable = Cable cost = Walkway Structure Cost 60 Foot Section Alumn. Wt. + k railing Number Required Total Weight Unit Cost Fabrication Cost of Structure Assemble and Installation Allowance Superstructure Cost = \$Abutment Cost Allowance Concrete unit cost, includes excavation, SWPP, Reinforcement End walls; 12°x1'x4' Wing walls; 2 @ 12°x1'x4' Footings; 36 If x 4' wide x 1' thick Cost per Abutment (1) Decking Unit cost Decking area Decking cost Decking installation Allowance	\$617,760 75 23,760 \$3,75 \$89,100 8,200 158 1,298,880 \$6,00 \$7,793,280 \$81,092 \$7,874,372 \$56 \$2,667 \$5,333 \$8,000	ft. ft. per ft. pounds pounds per ft^3	\$69	s.f.
Length of Each Cable; based on 7.5 foot mooring depth and "scope" of 10 = Total Length of Cable Required = Unit cost of Cable = Cable cost = Walkway Structure Cost 60 Foot Section Alumn. Wt. + k railing Number Required Total Weight Unit Cost Fabrication Cost of Structure Assemble and Installation Allowance Superstructure Cost = \$ Abutment Cost Allowance Concrete unit cost, includes excavation, SWPP, Reinforcement End walls; 12'x1'x4' Wing walls; 2 @ 12'x1'x4' Footings; 36 If x 4' wide x 1' thick Cost per Abutment (1) Decking Unit cost Decking area Decking cost Decking installation Allowance	75 23,760 \$3,75 \$89,100 8,200 158 1,298,880 \$6,00 \$7,793,280 \$81,092 57,874,372 \$56 \$2,667 \$5,333 \$8,000	ft. ft. per ft. pounds pounds per ft^3	\$69	s.f.
depth and "scope" of 10 = Total Length of Cable Required = Unit cost of Cable = Cable cost = Walkway Structure Cost 60 Foot Section Alumn. Wt. + k railing Number Required Total Weight Unit Cost Fabrication Cost of Structure Assemble and Installation Allowance Superstructure Cost = \$Abutment Cost Allowance Concrete unit cost, includes excavation, SWPP, Reinforcement End walls; 12 'x1'x4' Wing walls; 2 @ 12'x1'x4' Footings; 36 If x 4' wide x 1' thick Cost per Abutment (1) Decking Unit cost Decking area Decking cost Decking installation Allowance	23,760 \$3.75 \$89,100 8,200 158 1,298,880 \$6.00 87,793,280 \$81,092 \$7,874,372 \$56 \$2,667 \$5,333 \$8,000	ft. per ft. pounds pounds per ft^3	\$69	s.f.
depth and "scope" of 10 = Total Length of Cable Required = Unit cost of Cable = Cable cost = Walkway Structure Cost 60 Foot Section Alumn. Wt. + k railing Number Required Total Weight Unit Cost Fabrication Cost of Structure Assemble and Installation Allowance Superstructure Cost = Abutment Cost Allowance Concrete unit cost, includes excavation, SWPP, Reinforcement End walls; 12'x1'x4' Wing walls; 2 @ 12'x1'x4' Footings; 36 If x 4' wide x 1' thick Cost per Abutment (1) Decking Unit cost Decking area Decking cost Decking installation Allowance	23,760 \$3.75 \$89,100 8,200 158 1,298,880 \$6.00 87,793,280 \$81,092 \$7,874,372 \$56 \$2,667 \$5,333 \$8,000	ft. per ft. pounds pounds per ft^3	\$69	s.f.
Total Length of Cable Required = Unit cost of Cable = Cable cost = Walkway Structure Cost 60 Foot Section Alumn. Wt. + k railing Number Required Total Weight Unit Cost Fabrication Cost of Structure Assemble and Installation Allowance Superstructure Cost = \$Abutment Cost Allowance Concrete unit cost, includes excavation, SWPP, Reinforcement End walls; 12°x1'x4' Wing walls; 2 @ 12'x1'x4' Footings; 36 If x 4' wide x 1' thick Cost per Abutment (1) Decking Unit cost Decking unit cost Decking cost Decking installation Allowance	\$3.75 \$89,100 8,200 158 1,298,880 \$6.00 \$7,793,280 \$81,092 \$7,874,372 \$56 \$2,667 \$5,333 \$8,000	pounds pounds per ft^3	\$69	s.f.
Unit cost of Cable = Cable cost = Walkway Structure Cost 60 Foot Section Alumn. Wt. + k railing Number Required Total Weight Unit Cost Fabrication Cost of Structure Assemble and Installation Allowance Superstructure Cost = Shutment Cost Allowance Concrete unit cost, includes excavation, SWPP, Reinforcement End walls; 12'x1'x4' Wing walls; 2 @ 12'x1'x4' Footings; 36 If x 4' wide x 1' thick Cost per Abutment (1) Decking Unit cost Decking area Decking cost Decking installation Allowance	\$89,100 8,200 158 1,298,880 \$6,00 \$7,793,280 \$81,092 \$7,874,372 \$56 \$2,667 \$5,333 \$8,000	pounds pounds per ft^3	\$69	s.f.
Walkway Structure Cost 60 Foot Section Alumn. Wt. + k railing Number Required Total Weight Unit Cost Fabrication Cost of Structure Assemble and Installation Allowance Superstructure Cost = \$ Abutment Cost Allowance Concrete unit cost, includes excavation, SWPP, Reinforcement End walls; 12'x1'x4' Wing walls; 2 @ 12'x1'x4' Footings; 36 if x 4' wide x 1' thick Cost per Abutment (1) Decking Unit cost Decking unit cost Decking cost Decking installation Allowance	\$89,100 8,200 158 1,298,880 \$6,00 \$7,793,280 \$81,092 \$7,874,372 \$56 \$2,667 \$5,333 \$8,000	pounds pounds per ft^3		
60 Foot Section Alumn. Wt. + k railing Number Required Total Weight Unit Cost Fabrication Cost of Structure Assemble and Installation Allowance Superstructure Cost = \$ Abutment Cost Allowance Concrete unit cost, includes excavation, SWPP, Reinforcement End walls; 12'x1'x4' Wing walls; 2 @ 12'x1'x4' Footings; 36 If x 4' wide x 1' thick Cost per Abutment (1) Decking Unit cost Decking area Decking cost Decking installation Allowance	158 1,298,880 \$6.00 67,793,280 \$81,092 67,874,372 \$56 \$2,667 \$5,333 \$8,000	pounds per ft^3		
60 Foot Section Alumn. Wt. + k railing Number Required Total Weight Unit Cost Fabrication Cost of Structure Assemble and Installation Allowance Superstructure Cost = \$ Abutment Cost Allowance Concrete unit cost, includes excavation, SWPP, Reinforcement End walls; 12'x1'x4' Wing walls; 2 @ 12'x1'x4' Footings; 36 If x 4' wide x 1' thick Cost per Abutment (1) Decking Unit cost Decking area Decking cost Decking installation Allowance	158 1,298,880 \$6.00 67,793,280 \$81,092 67,874,372 \$56 \$2,667 \$5,333 \$8,000	pounds per ft^3		
60 Foot Section Alumn. Wt. + k railing Number Required Total Weight Unit Cost Fabrication Cost of Structure Assemble and Installation Allowance Superstructure Cost = \$ Abutment Cost Allowance Concrete unit cost, includes excavation, SWPP, Reinforcement End walls; 12'x1'x4' Wing walls; 2 @ 12'x1'x4' Footings; 36 If x 4' wide x 1' thick Cost per Abutment (1) Decking Unit cost Decking area Decking cost Decking installation Allowance	158 1,298,880 \$6.00 67,793,280 \$81,092 67,874,372 \$56 \$2,667 \$5,333 \$8,000	pounds per ft^3		
Number Required Total Weight Unit Cost Fabrication Cost of Structure Assemble and Installation Allowance Superstructure Cost = \$ Abutment Cost Allowance Concrete unit cost, includes excavation, SWPP, Reinforcement End walls; 12'x1'x4' Wing walls; 2 @ 12'x1'x4' Footings; 36 If x 4' wide x 1' thick Cost per Abutment (1) Decking Unit cost Decking area Decking cost Decking installation Allowance	158 1,298,880 \$6.00 67,793,280 \$81,092 67,874,372 \$56 \$2,667 \$5,333 \$8,000	pounds per ft^3	\$1,500	c.y.
Total Weight Unit Cost Fabrication Cost of Structure \$ Assemble and Installation Allowance Superstructure Cost = \$ Abutment Cost Allowance Concrete unit cost, includes excavation, SWPP, Reinforcement End walls; 12'x1'x4' Wing walls; 2 @ 12'x1'x4' Footings; 36 If x 4' wide x 1' thick Cost per Abutment (1) Decking Unit cost Decking area Decking cost Decking installation Allowance	\$56 \$2,667 \$5,333 \$8,000	pounds per ft^3	\$1,500	c.y.
Unit Cost Fabrication Cost of Structure Assemble and Installation Allowance Superstructure Cost = \$ Abutment Cost Allowance Concrete unit cost, includes excavation, SWPP, Reinforcement End walls; 12'x1'x4' Wing walls; 2 @ 12'x1'x4' Footings; 36 if x 4' wide x 1' thick Cost per Abutment (1) Decking Unit cost Decking area Decking cost Decking installation Allowance	\$6.00 \$7,793,280 \$81,092 \$7,874,372 \$56 \$2,667 \$5,333 \$8,000	per ft^3	\$1,500	c.y.
Cost of Structure \$ Assemble and Installation Allowance Superstructure Cost = \$ Abutment Cost Allowance Concrete unit cost, includes excavation, SWPP, Reinforcement End walls; 12'x1'x4' Wing walls; 2@ 12'x1'x4' Footings; 36 If x 4' wide x 1' thick Cost per Abutment (1) Decking Unit cost Decking area Decking cost Decking installation Allowance	\$7,793,280 \$81,092 \$7,874,372 \$56 \$2,667 \$5,333 \$8,000	per ft^3	\$1,500	c.y.
Assemble and Installation Allowance Superstructure Cost = \$ Abutment Cost Allowance Concrete unit cost, includes excavation, SWPP, Reinforcement End walls; 12'x1'x4' Wing walls; 2 @ 12'x1'x4' Footings; 36 If x 4' wide x 1' thick Cost per Abutment (1) Decking Unit cost Decking area Decking cost Decking installation Allowance	\$81,092 \$7,874,372 \$56 \$2,667 \$5,333 \$8,000	per ft^3	\$1,500	c.y.
Superstructure Cost = \$ Abutment Cost Allowance Concrete unit cost, includes excavation, SWPP, Reinforcement End walls; 12'x1'x4' Wing walls; 2 @ 12'x1'x4' Footings; 36 If x 4' wide x 1' thick Cost per Abutment (1) Decking Unit cost Decking area Decking cost Decking installation Allowance	\$56 \$2,667 \$5,333 \$8,000	per ft^3	\$1,500	c.y.
Abutment Cost Allowance Concrete unit cost, includes excavation, SWPP, Reinforcement End walls; 12'x1'x4' Wing walls; 2 @ 12'x1'x4' Footings; 36 If x 4' wide x 1' thick Cost per Abutment (1) Decking Unit cost Decking area Decking cost Decking installation Allowance	\$56 \$2,667 \$5,333 \$8,000	per ft^3	\$1,500	c.y.
Concrete unit cost, includes excavation, SWPP, Reinforcement End walls; 12'x1'x4' Wing walls; 2 @ 12'x1'x4' Footings; 36 If x 4' wide x 1' thick Cost per Abutment (1) Decking Unit cost Decking area Decking cost Decking installation Allowance	\$2,667 \$5,333 \$8,000		\$1,500	c.y.
Concrete unit cost, includes excavation, SWPP, Reinforcement End walls; 12'x1'x4' Wing walls; 2 @ 12'x1'x4' Footings; 36 If x 4' wide x 1' thick Cost per Abutment (1) Decking Unit cost Decking area Decking cost Decking installation Allowance	\$2,667 \$5,333 \$8,000		\$1,500	c.y.
Reinforcement End walls; 12'x1'x4' Wing walls; 2 @ 12'x1'x4' Footings; 36 If x 4' wide x 1' thick Cost per Abutment (1) Decking Unit cost Decking area Decking cost Decking installation Allowance	\$2,667 \$5,333 \$8,000		\$1,500	c.y.
End walls; 12'x1'x4' Wing walls; 2 @ 12'x1'x4' Footings; 36 If x 4' wide x 1' thick Cost per Abutment (1) Decking Unit cost Decking area Decking cost Decking installation Allowance	\$2,667 \$5,333 \$8,000		\$1,500	c.y.
Wing walls; 2 @ 12'x1'x4' Footings; 36 If x 4' wide x 1' thick Cost per Abutment (1) Decking Unit cost Decking area Decking cost Decking installation Allowance	\$5,333 \$8,000			
Footings; 36 If x 4' wide x 1' thick Cost per Abutment (1) Decking Unit cost Decking area Decking cost Decking installation Allowance	\$8,000			-
Cost per Abutment (1) Decking Unit cost Decking area Decking cost Decking installation Allowance				
Decking Unit cost Decking area Decking cost Decking installation Allowance	\$16,056			
Decking area Decking cost Decking installation Allowance				_
Decking area Decking cost Decking installation Allowance	\$72	per If	\$6	s.f.
Decking cost Decking installation Allowance	9,504		,	-
Decking installation Allowance	\$684,288	0000		
	\$570,240		\$5	s.f
Total Decking \$	1,254,528		\$11	
	.,			
Number of Floats per 60' Section	90			
Total number of Floats	14,256			
Assemble and Installation Allowance	\$81,009			
Float unit cost	\$300			
	4.357.809			
i star risut cost	11,007,000			
Company to the Cont	4 225 222			
Construction Hard Cost = \$1	4,225,680			
Contractor's O&P at 15% = \$	2,133,852			
Bid Price = \$1	6,359,533			
PM @8% of Construction Hard Cost \$	1,138,054			
Design Fees @ 12% Construction Hard Cost \$	1,707,082			
Project Contingency 10% Construction Hard Cost \$	1,422,568			
PM, Design Fees & Contingency =			\$4,267,704	
Total Project Cost = \$2	20,627,237		\$2,170.37	
			\$180.86	s.f.
Project Overhead =	26.09%			

2/6/2018

SCHEMATIC PHASE TRAIL ON THE BAY PROJECT BUDGET

Length of causeway =	3.33 miles	17,59	8 feet	
Sanaina of anahora -	60	feet	-	-
Spacing of anchors = Number of Anchors groups =	293	ieet		-
Number of Anchors=	587		-	-
Del Mor Cast Iron Anchor: 400 lb	\$1,200	63		
Shipping	\$500	11/2/2		
Handling and Placement	\$250		+	-
Total cost anchors in place	\$1,143,886		+	
Total cost alichors in place	\$1,143,000	Total		
Length of Each Cable; based on 7.5 foot mooring			-	
depth and "scope" of 10 =	75	ft.		
Total Length of Cable Required =	43.996		8.3	miles
Unit cost of Cable =	10-10-1-1-1	per ft.		
Cable cost =	\$164,984			
Walkway Structure Cost	0.000		\$69	s.f.
60 Foot Section Alumn. Wt. + k railing		pounds		
Number Required	293		_	
Total Weight	2,405,093			
Unit Cost Fabrication	\$6.00		-	
Cost of Structure	\$14,430,557		-	
Assemble and Installation Allowance	\$150,156			
Superstructure Cost =	\$14,580,712			
Abutment Cost Allowance				
Concrete unit cost, includes excavation, SWPP,				
Reinforcement	\$56	per ft^3	\$1,500	c.y.
End walls; 12'x1'x4'	\$2,667			
Wing walls; 2 @ 12'x1'x4'	\$5,333			
Footings; 36 If x 4' wide x 1' thick	\$8,000			
Cost per Abutment (1)	\$16,056			
Decking Unit cost	\$72	per If	\$6	s.f.
Decking area	17,598			
Decking cost	\$1,267,073	1000		
Decking installation Allowance	\$1,055,894	-	\$5	s.f
Total Decking	\$2,322,968		\$11	1001101
Number of Floats per 60' Section	90			
Total number of Floats	26,397			
Assemble and Installation Allowance	\$150,002			
Float unit cost	\$300			
Total Float cost	\$8,069,210			
Construction Hard Cost =	\$26,313,870			
Contractor's O&P at 15% =	\$3,947,081			
Bid Price =	\$30,260,951			
PM @8% of Construction Hard Cost	\$2,105,110			
Design Fees @ 12% Construction Hard Cost	\$3,157,664			
Project Contingency 10% Construction Hard Cost	\$2,631,387		45.5	
PM, Design Fees & Contingency =			\$7,894,161	
Total Project Cost =	\$38,155,112		\$2,168.12	l.f.
	,,		\$180.68	

Cost of Aluminum Decking - Calculate 2018 Prices & Install

Don't let your remodeling budget go over-board by hidden surprises — understand what the average installed costs for Aluminum Decking is in your zip code by using our handy calculator. If you're looking for 2018 breakdown for Cost of Aluminum Decking materials and what installation cost might be, you've come to the right place.

As an experienced licensed home improvement contractor, I know first hand what it should cost for various levels — from Basic, Better, and of course the best. The Aluminum Decking estimator will provide you with up to date pricing for your area. Simply enter your zip code and the square footage, next click update and you will see a breakdown on what it should cost to have Aluminum Decking installed onto your home.

Aluminum Decking Costs	Zip Code Basic	Sq. ft. Better	Best
Aluminum Decking – Material	\$47250.00 -	\$66150.00 -	\$75600.00 -
Prices	\$56700.00	\$73710.00	\$88830.00
Aluminum Decking – Installation	\$56700.00 -	\$75600.00 -	\$113400.00 -
Cost	\$66150.00	\$88830.00	\$189000.00
Aluminum Decking – Total	\$103950.00 -	\$141750.00 -	\$189000.00 -
	\$122850.00	\$162540.00	\$277830.00
Aluminum Decking – Total Average Cost per square foot	\$2.70	\$3.62	\$5.56

- Cost can add up quickly, especially if you're a novice and have never attempted a Aluminum Decking
 installation before. I would strongly recommend you hire a licensed and Insured aluminum decking
 contractor to perform the installation for you.
- Be sure to have a copy of the Aluminum Decking Manufacturer's recommended installation requirements before starting, to make sure your project doesn't end up costing you more money in the long-run.

Aluminum Decking - Pricing and Installation Cost Checklist

- Get at least 3-5 estimates before hiring a Aluminum Decking contractor estimates are typically free, unless it's a service call for a repair.
- Expect the Aluminum Decking prices to fluctuate between various companies each and every company
 have different operation expenses and over-head.
- Try to get prices in late Fall, early winter you should expect aggressive pricing discounts by waiting for a contractor's down season.
- Try to budget and additional 7-15% more on top of what our calculator gives out I.e; difficult
 configurations, patterns, the additional complexity of your home will add to the Aluminum Decking costs.
- Visit every supply house that sell your particular brand of Aluminum Decking and try to negotiate a better price with each supplier – I save on average 20%.
- Remember, there are multiple styled homes in the U.S from: Contemporary, colonial, cape-cod style, ranch, bungalow, victorian, etc. So keep that in mind and try to budget a little more, before starting your Aluminum Decking project.

EXHIBIT 9 Coastal Construction Manual

Equation 8.7. Lateral Wave Slam

Equation 8.7

$$F_s = f_s w = (1/2) \Upsilon_w C_s d_s hw$$

Eq. 8.7

where:

 F_s = lateral wave slam (lb)

 f_s = lateral wave slam (lb/ft)

 C_s = slam coefficient incorporating effect of slam duration and surface stiffness

for typical residential structure (recommended value is 2.0)

specific weight of water (62.4 lb/ft³ for fresh water and 64.0 lb/ft³ for

saltwater)

 d_s = design stillwater flood depth in ft (From Eq. 8.1)

h = vertical distance (ft) the wave crest extends above the bottom of the floor

joist or floor beam

w = length (ft) of the floor joist or floor beam struck by wave crest

Calculation

Input:

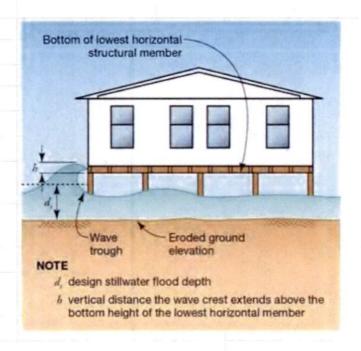
$$\gamma_{w} = 64.00 \text{ lb/ft}^{3}$$
 $C_{s} = 2.00 \text{ ft}$
 $d_{s} = 7.00 \text{ ft}$
 $h = 0.90 \text{ ft}$
 $w = 60.00 \text{ ft}$

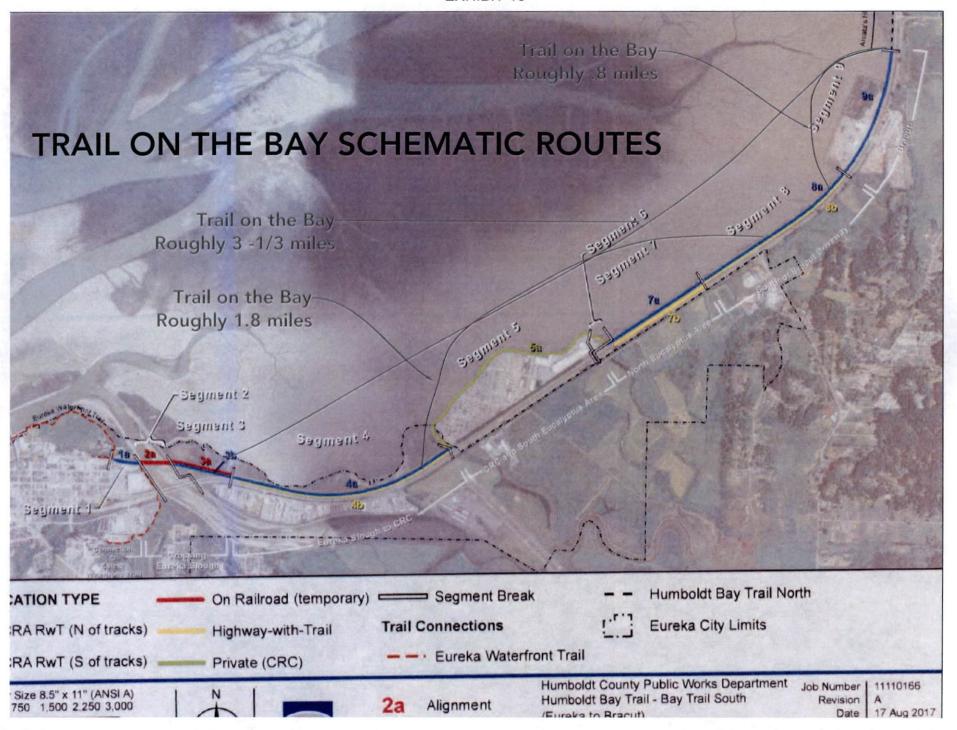
Output:

$$f_s = \frac{403.20}{\text{lb/ft}}$$

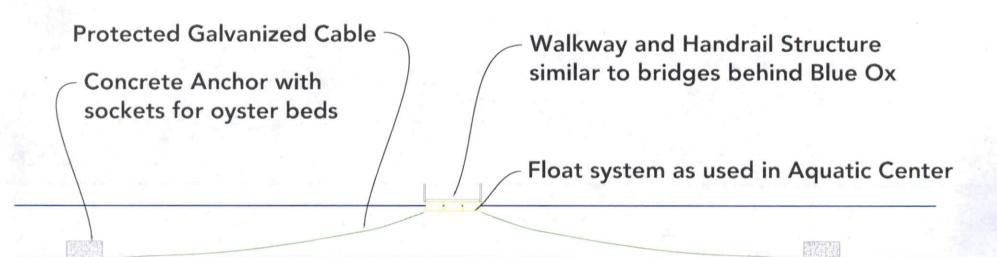
Eq. 8.7

Figure 8-12





TRAIL ON THE BAY SCHEMATIC DRAWING



Seemann, Hank

From:

Katherine Bettis <

Sent:

Monday, March 05, 2018 4:44 PM

To:

Seemann, Hank

Subject:

Bay Trail Comments

I'm an avid cyclist.

Regarding the possible removal of the Eucalyptus trees on 101.

Why are the trees considered dangerous? Is it because branches could fall on people? Cyclists and hikers ride under tress all the time. It is common sense that a branch might fall.

I often ride on the shoulder of the freeway next to those very trees, just as I would be if I were riding on the proposed path (but on the other side. of the trees). It doesn't make any sense to cut down those trees. Is this a liability issue? Instead of chopping down precious trees, how about putting up a warning sign for those lacking common sense?

Regarding the Levee Trail portion

Personally, I would never take this detour. I'd ride on the freeway.

Regarding the overall plan

As a cyclist, the Eureka Slough bridge connecting the freeway to the path in Eureka behind Target will be very useful. It will be wonderful to not fear the traffic on the bridge and through town.

The new trail from Herrick to Del Norte is useful and wonderful. I use it almost every day.

Katherine Bettis

Seemann, Hank

From:

Kimberly Tays

Sent:

Tuesday, March 06, 2018 11:27 AM

To:

Seemann, Hank

Subject:

Comments on the Humboldt Bay Trail (South)

Hi Hank,

You did a great job with the presentation the other evening on the Humboldt Bay Trail South project. Thank you for all of your hard work (and to the others involved with this effort).

Below are my comments, which I hope will be considered as this project moves forward.

- 1. My husband and I have been fortunate to do some extensive cycling in the Netherlands, Belgium, Germany, Austria, Denmark and France. We have also cycled in Central Oregon (Sunriver and Bend, to be exact), in Missouri (on the Katy Trail), in southern Wisconsin on their rails to trails system and along the Missouri River trails in Omaha, Nebraska and Council Bluffs, Iowa. In all of our cycling experiences (except perhaps in Copenhagen and Amsterdam), we have <u>never</u> seen trails in rural, natural areas (like the Marsh and Bay) that look like our trails with the intense "highway" yellow and white stripings/markings. Sadly, our trails look more like highways than bike trails. Not only does this design diminish the aesthetics of the trail, it also encourages speeding, which increases the likelihood of mishaps/accidents. You mentioned safety as the reason for these markings, but other countries and states have bike trails that are very heavily traveled and they seemed very safe and easy to navigate without making them look like highways. Instead of using "highway yellow" paint, PLEASE use white markings/stripings so the trail blends in better with the natural environment.
- 2. PLEASE reduce the amount and height of signage. Currently, the number of signs, and their height, is excessive and causes the trail to look cluttered and junky. Again, my husband and I have never seen such excessive or tall signage on any of the trails we have ridden in other countries and states—all of those places seemed very safe and easy to navigate without the excessive signage.
- 3. PLEASE consider rail bedding that section of trail with the Eucalyptus trees that are slated for removal. On a couple segments, it appeared that NCRA has agreed to grant exemptions to rail bedding the trail (i.e., the bridge behind Target). Perhaps, NCRA would grant one more exemption to allow us to save the trees. With some judicious limbing of the big trees and removal of the seedling trees, we could reduce the risk of falling debris and save these historic trees that provide natural beauty, bird habitat and wind breaks.
- 4. PLEASE use an alternative design for the bridges. The metal bridges with metal floors are too big, too industrial-looking and too noisy (especially the one by the Wastewater Treatment Facility in Arcata). The noise not only degrades the trail experience but disturbs wildlife, too.
- 5. PLEASE introduce more natural features between the highway and trail. Right now, the trail looks denuded since all of the vegetation was cut down. The trail would be much more pleasing, inviting and safe if more natural barriers, such as quarry boulders and native shrubs and wildflowers, were installed between the highway and trail. (P.S. I do not think the cable barrier is a sufficient safety barrier.)
- 6. PLEASE expand the trail stewards program for the Bay Trail, as invasives such as Pampas grass, fennel, etc. will take over the newly disturbed areas of the trail and impact the natural environment.

Thank you for considering my comments on the remaining section of this trail.

Kim Tays Arcata, CA

Seemann, Hank

From:

Trisha Lee

Sent:

Sunday, March 11, 2018 10:22 PM

To:

Seemann, Hank

Subject:

Comments for the Humbold Bay Trail regarding 200+ Eucalyptus trees to be logged

and killed by application of herbicides

Dear Deputy Director Hank Seemann,

These are my comments to be submitted to the Humboldt Bay Trail record. Please send me a reply to confirm that you received my comments in a timely manner.

Thank you,

Patricia Lotus

Here we go again. Now 200+ Eucalyptus trees are slated to be logged and have herbicides applied so they will NEVER grow again. This is for the last part of the Humboldt Bay trail, that is to begin building in 2021. Interesting fact is that these Eucalyptus were planted in 1921 as a wind block for the Devoy Dairy Ranch land, that is where Murray Air Field, Harper Tri City Motors, and Fey Slough Wildlife area is located today.

Those antiquated railroad tracks can be removed for the trail, keep the Eucalyptus Trees trimmed on both sides, and put a clever and artistic overhang as extra protection. Bicycle riders and walkers would be inside for extra protection from cars that crash and flip up on the side of the corridor when crashes occur. If the railroad starts up again, they can take back their railroad right of way land and put modern tracks in. This can be done by writing up a contract with the Railroad Authority people.

The Eucalyptus proposed for removal for the Humboldt Bay Trail are in Segment 7, which is north of Harper Ford Motor Company, looks to be starting midway through Fey Slough Wildlife Center and north to the Indianola Bypass proposed area. If they can build two over-sized bridges for this bike trail, they can build an overhang to protect the people walking or riding bicycles through that stretch.

Again, my suggestion is to take out the railroad tracks there, trim the trees on the bay side while trimming the road side as Caltrans does on a regular basis, and building a lovely overhang as an extra precaution.

HISTORY

In 1921, Great Grandfather Henry Mooney Devoy, a crew, and Northwestern Pacific Railroad Right of Way Agent, Grandfather M. Lee Gillogly (who bought up these railroad tracks for NWPR from this area down to the Bay Area, riding on horseback), assisted Great Grandfather Henry Devoy in planting these very Eucalyptus trees as a wind block on the edge of their Dairy Ranch land that ran from Murray Air Field north to Indianola where Caltrans is putting in an overpass...in a tsunami zone. The farm house is still there where my Great Grandparents lived. It is over by the Devoy Road side, off Old Arcata Road. These Eucalyptus trees still serve as a wind block today as they have for nearly 100 years.

In 1925, The Highway Commission (Caltrans) accused Henry Devoy of planting those trees illegally on their newly paved Eureka to Arcata Corridor. The Eucalyptus trees are still standing today. The year of Henry

Devoy's death in 1933, Caltrans cut down all the Eucalyptus trees saying they had died in a frost. The Eucalyptus grew back and have stood tall in our landscape for nearly 100 years.

Back in 2008 and 2009, Keep Eureka Beautiful, the citizens of Humboldt County, and concerned business people saved all the Eucalyptus trees Caltrans wanted to cut for a lead on for the lumber company that used to operate there. According to Trevor Harper, that lumber company can still lease this property to other companies. I am glad the Humboldt Bay Trail will go around that lumber company property to avoid talk of cutting those Eucalyptus trees as well. Think long term. Fifty years from now, these Eucalyptus trees will tower in our landscape and the corridor will be moved to higher grounds due to rising water levels.

Thank you for considering my comments.

Patricia Lotus Eureka, CA