

**CITY COUNCIL MEETING
TUESDAY, JANUARY 24, 2017**

DOCUMENTS RECEIVED AFTER PUBLISHED AGENDA

Item #5 WS 17-003

Comments from Brett Woollum

To: Hayward City Staff & Council Members

Subject: 2017 Hayward Fiber Optic Master Plan - Council Work Session Comments

Thank you to the Council for allowing me to speak for a few moments last night at the council work session regarding the fiber optic project. As I believe I mentioned last night, this project will provide an amazing resource for the Hayward business community and economy.

My Comments

- 1. Add lateral connections to BART.** As I mentioned yesterday, BART runs an extensive railside dark fiber network throughout the Bay Area. They already lease excess capacity to telecommunications providers, so connecting the new Hayward fiber backbone to one or both BART stations would be a very beneficial resource that would enable your private partners to connect the Hayward fiber network to the global internet. I believe BART's rates may potentially be more competitive than rates from carriers located at the proposed 25070 O'Neil Ave site. Having both connections (25070 O'Neil and BART) would add a lot of flexibility and redundancy to the Hayward fiber network.
- 2. Lack of Clarity in the Report.** While the report was chocked full of great information, it's not structured in a way that makes it clear what projects are being proposed. It appears that there are three elements - 1. existing City-owned fiber, 2. the new EDA-funded backbone fiber construction in 2017, and 3. a potential FTTP deployment to reach each business. The report should be structured in a way that makes it very clear that the recommended FTTP project is separate from the EDA-funded backbone project which will likely happen later this year.
- 3. Streamline Permitting Processes.** I recommend adding a review and streamlining of the existing City permitting processes and requirements for fiber construction in Hayward. Ensure that the process is quick and predictable for outside providers who want to build fiber networks in Hayward. Doing so would benefit carriers who are considering deploying additional fiber in any area in Hayward - not just within the Industrial Corridor. One key point would be the adoption of a Master Encroachment Permit program for communications providers deploying fiber optic networks within the City. MEP programs tend to fit communications deployments well due to the frequent nature of these smaller repetitive projects spread throughout the City.
- 4. Additional Fiber Strands.** Consider constructing the potential FTTP network to support more than 1 fiber strand per subscriber. Doing so would enable businesses to subscribe to more than one carrier at a time (perhaps purchase internet from one carrier and phone from another). The cost to add additional strands of glass is minimal.
- 5. Additional Conduit.** Consider installing extra conduit for leasing to communications providers. When pulling your new conduit underground, pull an additional 2-3 conduits for future use. These conduits are typically 1.25" to 2" in diameter. Future providers would then have the ability to pull their own fiber optic cable through these excess conduits in addition to whatever the city installs for itself, ensuring long-term system flexibility. The cost to pull a few additional conduits during the initial phase is relatively minimal.

6. Contracting Services. Consider contracting all operational and maintenance duties to your private partner and eliminate the proposed city staff requirement (2-3 FTE's) altogether. Your private partner will already be very involved with the daily network operation, and therefore it seems more efficient for the private partner to take responsibility for all operational and maintenance aspects as well. This would lower costs to the City (totaling \$10.5M over 20yrs as included in the models from CTC), and likely allow the City to modify the financial model slightly in favor of lower the per-passing lease rate from \$40/passing/month to \$20-\$25/passing/month.

7. Contracting for Lateral Construction. The consultant proposed various options for the construction and ownership of lateral connections from the City's network to connect each of the subscribing businesses. I recommend that the City install and own these lateral connections. Doing so will ensure the City's network usability long term. Having a private partner install and own these lateral connections would not make sense. City ownership of the fiber end-to-end would be the lowest risk for the City long-term since it would ensure a completely usable network through which it can reach the end users without regard to another entity owning and controlling the last 300ft to reach each customer. This also makes sense given the common multi-tenant nature of businesses in the Industrial Corridor. In an example scenario where one tenant in a building signs up for service initially, we wouldn't want them to have to bear the cost of connecting the building while future tenants in that building would receive their connection for a much lower cost (since we would have already connected their building at that point). Anything other than City-installed lateral connections may slow down the adoption of the service by businesses who wish to wait and let others bear the initial expense of connecting their building to the network. I recommend that the City pre-negotiate a contract with a communications construction company to install these laterals as customers subscribe to the services ("on-demand"). Once a customer orders service, the private network operator would notify the City's construction contractor to connect the subscriber's building to the network. This construction contractor would then install a lateral connection to reach the customer's building, and subsequently provide any necessary documentation to the City.

8. Number of Businesses. The consultant mentioned that there are 5,100 businesses in Industrial Corridor and 2,550 passings. Appendix A defined passings as "potential customer address (e.g., an individual home or business)". The definition of "passings" in Appendix A should be corrected to reflect "each building passed" or "each parcel passed".

9. Internal City Communications Services. The City should consider procuring its own data and telecommunications services from the private network operator. It's very likely that the City would be able to obtain a much higher speed connection to the internet at a lower rate. These recurring operational expense savings should be taken into consideration when analyzing the business models for this project. In addition, the City would likely benefit from the construction of this network by enabling the use of new technologies for the City that wouldn't have otherwise been implemented. Examples include connecting and coordinating more City traffic lights, adding traffic cameras, etc.

10. Expedite Existing Dark Fiber Availability. The City should consider expediting the process

of making it's *existing* fiber network assets available for lease. The City's current excess fiber capacity has value and could potentially serve to encourage broadband deployment in Hayward. As the City constructs more fiber assets, these would then also be made available for leasing by private carriers. There is no need to wait for the EDA-funded fiber backbone to be complete before making *existing* excess fiber capacity available for lease.

I strongly support the City's efforts in this matter. I believe a dark fiber model with a private partner operating the network would be a great choice and will provide significant value to Hayward's economy. As a Hayward resident and the owner of a Hayward business that is also an internet service provider, I have significant experience on this subject and would like to contribute that experience to the City in any way possible. Please don't hesitate to reach out to me if you have any questions about fiber networks in general or if you would like to discuss this project in greater detail.

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Council Reports, Referrals and Future Agenda Items

Council Member Zermeño




Reusable Bag Ordinance for Alameda County Expansion to All Stores - 2017


Starting May 1, 2017 for all retail establishments:




**No more
single-use
plastic bags**



**Charge
Minimum 10¢
for paper bags**



**Charge
Minimum 10¢
for compliant
reusable bags**



**Customers
Encouraged
to bring their
own bags**

Getting Your Store Ready for the New Law

Beginning **May 1, 2017**, stores can only distribute compliant reusable bags or bags made of recycled content paper. The store must charge a minimum price of 10 cents per bag, itemized on the receipt (stores keep the revenue from bag charges to offset costs of implementing the law).

1. **Start using up your existing supply** of single-use bags before the law takes effect May 1, 2017.
2. **Order compliant bags** and have them in place by May 1, 2017. Visit www.ReusableBagsAC.org for bag specifications and sources for compliant bags.
3. **Keep an eye out for a mailing** to arrive in March 2017 that will include outreach materials to inform customers of the new law.



Public Comments

Prasad Khandat

HINDU SWAYAMSEVAK SANGH USA



Siddha (Pranamasan)

- ❖ Stand erect with feet fully touching each-other
- ❖ Chest out, shoulders back and pressed below, neck straight
- ❖ Eyes fixed on the nose tip
- ❖ Palms together, touching each other in front of chest; fingers perpendicular to the ground, thumbs touching chest, i.e. "Namaskar-Mudra"
- ❖ Fore arms in line, parallel to the ground.

Surya Namaskar

<http://www.hssus.org/sny>

Email: Suryanamaskar@hssus.org

Starting Shloka

*dheyah sada savitrumandala madhyavarti |
narayanah sarasijasana sannivishtah ||
keyuravan makarakundalavan kiriti |
hari hiranmayavapurdruta shankhachakrah ||*

Ending Shloka

*adityasya namaskaran ye kurvanti dine dine |
ayuh pragnya balam veeryam tejas teshancha jayate ||*

Urdhvasan (Step 1)

- ❖ Palms engaged upwards together in "Namaskar Mudra" pointing towards the sky, i.e. "Nabho-Vandan"
- ❖ Arms and legs straightened
- ❖ Head well bent backwards
- ❖ Eyes fixed on the wrists, i.e. "Karamula"
- ❖ Spine bent backwards and body above the trunk in a graceful curved arch.

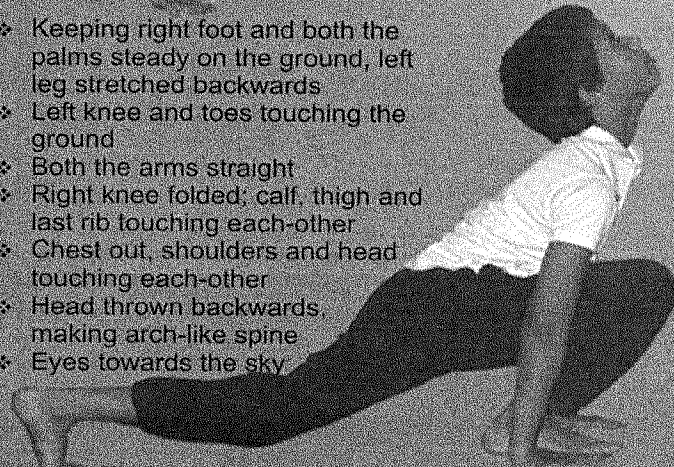


Uttanasan (Step 2)

- ❖ Hands downwards in continuous motion without bending in elbows
- ❖ Palms flat on the ground, just by the side of each foot
- ❖ Distance between palms equal to that of shoulders
- ❖ Big toes and palms in the line from the front
- ❖ Legs straight, knees straightened
- ❖ Chin touching the chest
- ❖ Fore head touching the knees



- ❖ Keeping right foot and both the palms steady on the ground, left leg stretched backwards
- ❖ Left knee and toes touching the ground
- ❖ Both the arms straight
- ❖ Right knee folded; calf, thigh and last rib touching each-other
- ❖ Chest out, shoulders and head touching each-other
- ❖ Head thrown backwards, making arch-like spine
- ❖ Eyes towards the sky



Ek Pad Prasarnasan (Step 3)

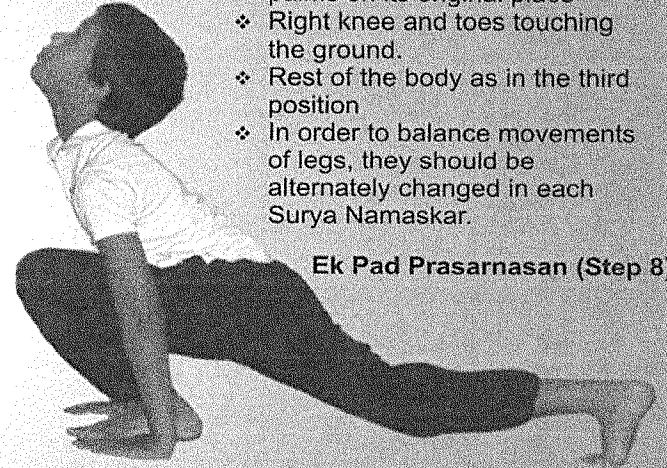
*aum mitraya namah
aum ravaye namah
aum suryaya namah
aum bhanave namah
aum khagaya namah
aum pushne namah
aum hiranyagarbhaya namah
aum marichaye namah
aum adityaya namah
aum savitre namah
aum arkaya namah
aum bhaskaraya namah
aum sri savitrusuryanarayanaya namah*

- ❖ Keeping palms fixed on ground, bring right foot forward in original place aligned with left leg
- ❖ Big toes and heels touching each other, i.e. "Sama-Carana"
- ❖ Legs and arms straight, knees and elbows straightened
- ❖ Chin touching chest
- ❖ Fore head touching knees
- ❖ Body vertically well balanced.

Uttanasan (Step 9)

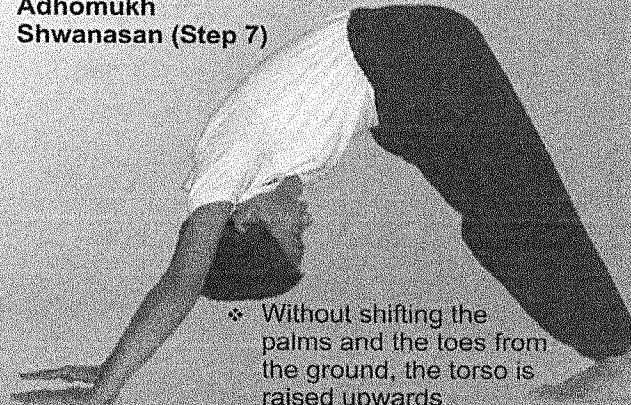


- ❖ Left knee forward, folded in knee, foot resting between palms on its original place
- ❖ Right knee and toes touching the ground.
- ❖ Rest of the body as in the third position
- ❖ In order to balance movements of legs, they should be alternately changed in each Surya Namaskar.

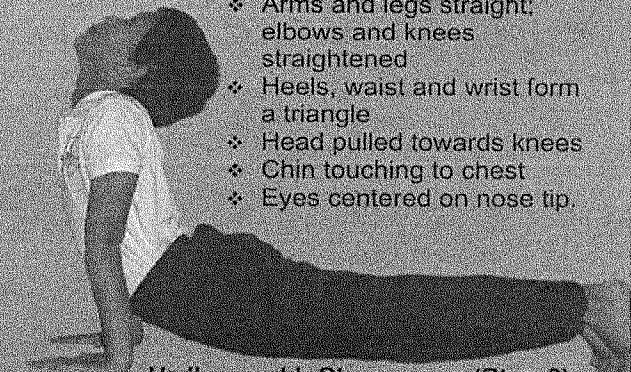


Ek Pad Prasarnasan (Step 8)

Adhomukh Shwanasan (Step 7)



- ❖ Without shifting the palms and the toes from the ground, the torso is raised upwards
- ❖ Both heels touching the ground
- ❖ Arms and legs straight; elbows and knees straightened
- ❖ Heels, waist and wrist form a triangle
- ❖ Head pulled towards knees
- ❖ Chin touching to chest
- ❖ Eyes centered on nose tip.



Urdhvamukh Shwanasan (Step 6)

- ❖ Arms straight, elbows straightened
- ❖ Chest pushed out
- ❖ Shoulders and head thrown back
- ❖ Eyes towards the sky
- ❖ Waist pulled towards the centre, between palms
- ❖ Spine fully arched
- ❖ Knees touching the ground; feet together; toes firm (N.B. They should be properly placed in the third and fourth positions)



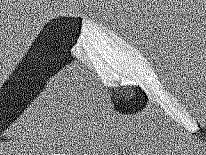
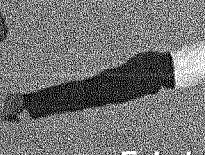
Sashtang Pranipatan (Step 5)

- ❖ Arms bent at elbows, without moving both the palms and toes
- ❖ Fore head, chest and knees simultaneously touching the ground, together with the palms and toes, to achieve "Sira-Sastanga Namaskar", at eight points
- ❖ Chin pressed on the chest
- ❖ Nose and pelvic region elevated
- ❖ Both the elbows drawn towards each other.

Chaturang Dandasan (Step 4)



- ❖ Right leg stretched back without moving both hands from their places
- ❖ Legs and arms straight, knees and elbows straightened
- ❖ Entire body in a straight line from head to heel, supported on fixed palms and toes only
- ❖ Eyes fixed on the ground, at right angle to the body
- ❖ Feet touching each other



Inhale

Exhale

Inhale

Exhale

Retain

Inhale

Exhale

Inhale

Exhale