Proposal For Noisebridge Electrical Work – Start-Date: June 24, 2014

Overview: NoiseBridge is preparing for a SF Building Inspector's Survey on July 8th. Below is an **Initial Scope of Electrical Work to be completed prior to the Survey**. Prior to this Survey, we'll eliminate obvious "red-flags" (ie major safety or code violations) in advance, to give the inspector less to order corrected. (For the Survey, we'll leave the power-rails in place, since they may be OK'd, letting the inspector tell us what she/he will allow or require regarding power outlets. During the Survey, the Inspector will likely issue a "**Corrections Notice"** specifying needed repairs or permits, & other code-violations. We will address this Notice as part of a 2nd (post-survey) Scope of Work.

Phase One – Initial (Pre-Survey-Inspection) Scope of Work

1. **Non-Code-Compliant Panels** Label all breakers in all panels; Decommission and remove **Panel A** (@Top of Stairs); Refeed existing 120 Volt branch circuits, as needed, from existing **Panels B or C** (@ Elevator or @Shop)
2. **Shop** (Panel C) Explore existing EMT to determine if it will pass inspection; Repair existing conduit-wiring as needed;
3. **Emergency/Exit Lighting** Explore existing system to validate functionality & make recommendations; Install new exit sign over door to stairs at rear egress; install new exit signs and emergency lighting at (2) locations @Turing & Church, extending existing emergency EMT-wiring as necessary. (Assumes existing circuit/system is functional)
4. **Egress Lighting** Explore existing egress lighting wiring to assess ability to reuse/re-power & make functional; Install 4-way switching for control at all entry/exit points, as required
5. **Turing & Church Classrooms** Remove non-code-compliant EMT & wiring;
6. **Kitchen** Add 2nd 20A GFI-protected branch circuit at existing receptacle outlet for refrigerator/MW/Toaster, from **Panel D**; Explore existing EMT & validate that it will pass inspection; remove non-code-compliant EMT or make needed repairs; Install (1) new 120 volt 20A GFI-protected circuit to power 4-plex receptacle at coffee station; remove & reinstall power feed to existing oven to meet code
7. **Pantry** Install new fused switch on existing water heater and re-feed to code; remove EMT at entry door; install new pull-chain light fixture at entry door; recommend any other needed enhancements to meet code
8. **Server Room** Install (1) new dedicated 120 volt 20A branch circuit from Panel B to ceiling junction box & refeed existing server room receptacle; Explore server room wiring to validate that it will pass inspection
9. **Member-shelving Area** Explore need for existing Panel E with members; Assess existing EMT & wiring from **Panel E** (@Member Shelving) to validate that it will pass inspection; remove any non-compliant EMT & wiring or make needed repairs; make Panel E accessible (volunteers to remove shelving in front of Panel E);
10. **Hackatorium Lighting & Central Switching** Make existing central switching functional; Install separate switch for ceiling lighting at Hackatorium; make recommendations for needed enhancements to provide for future receptacle branch circuits at workbenches, as needed per inspector's order;
11. **Hacker Alley** Install (3) new 120 volt 20A branch circuits in EMT from **Panel B** to power (3) new 4-plex receptacle outlets at workbenches, mounted on (2) 2'x4' studs from ceiling to workbenches (mounting studs to be installed by NB volunteers)
12. **Access Control** install (1) new 120 volt 4-plex receptacle, on existing branch circuit, at new shelf above bicycle rack (to be installed by NB volunteers) to power existing access-control devices; remove & re-install existing non-compliant EMT switch/receptacle at entry door
13. **Lounge Area** Remove existing non-compliant EMT switch & receptacle; install (1) new 4-plex receptacle on existing branch circuit;
14. **Library** Install 4-plex at existing pole in EMT from existing branch circuit at ceiling
15. **Permit & Inspection** (4) Provide Electrical Permit & Conduct Survey Inspection; Coordinate with inspector to identify needed corrections; review inspectors correction notice & make recommendations to address needed enhancements

Phase Two – Pre-Final-Inspection Scope of Additional Work (TBD)

16. **Ceiling Lighting** Install (6) 2'x4' 4-lamp dimmable LED fixtures with single-pole switching @ Lounge, Hackatorium, Kitchen & Member-shelves, Sewing Area, & 3D printer-world;
17. **Shop** Install new switch at shop entry door to control shop lighting; Provide (3) new 120 Volt 20A branch circuits in (3) new 4-plex receptacle outlets at workbench height for tool power
18. **Turing & Church Classrooms** Install (6) new 4-plex receptacles powered on (4) new 120 volt 20A branch circuits run in EMT from Panel C (@ shop) or Panel D (@Kitchen); Install (1) new 120 volt duplex receptacle at Church ceiling for projector power; Install (1) new switch for ceiling lighting & reinstall existing florescent fixture, as needed; Convert existing fixtures to 4-dimmable LED tube lamps each (20)
19. **Hackatorium** Install duplex receptacle at ceiling for projector screen powered on existing branch circuit from existing junction box, extending EMT from ceiling as needed; make recommendations for needed enhancements to provide for future receptacle branch circuits at workbenches, as needed per inspector's order (TBD);
20. **Inspector-Ordered Scope** Make a plan on how to address required repairs ordered by inspector
21. **Permit & Inspections** Most of these items will be specified on the original electrical permit; others may be added to address inspector's Correction Notice; Conduct final electrical inspection & receive electrical inspector's sign-off

You can Sign-up to Help NoiseBridge ReBoot!

Member Workgroup—Clean-up/Organize/Remove/Store Items For Inspection

- Clear debris at rear exit at top of stairs all the way to the front sidewalk
- Remove all items in area in front of shop Panel C
- Remove shelving in member-shelves area from in front of Panel E
- Remove door at member-shelves area
- Remove LED fixture in Shop
- Remove Laser Engraver Cutter
- Remove 3D Printer Etc.
- Remove LED fixture above Hackatorium
- Remove Plotter at Turing
- Remove Washing machine at Pantry
- Remove everything an inspector might view as a safety hazard (e.g. items with exposed high voltage wiring etc)

Member Workgroup—Electrical & Carpentry

- Provide **skilled assistance** to electricians, on request
- Remove track lighting fixtures
- Remove non-code-compliant EMT & wiring, after disconnected by electricians
- Remove Church Projector
- Remove old feeder (for range) from Panel D, after disconnected by electricians
- Install mounting studs at Hacker Alley per item 11
- Install new shelf at access-control equipment per item 12

Member Workgroup—Data-Communications Cable

- Re-route and re-support all data communications cable using cable trays or plastic-ties
- Support every 4-6 feet where wall or ceiling-mounted
- cable should not be run across walkways or along the floor for more than 6-10 feet without protection
- cable should not be run within 24” of electrical conduits for more than 36” linearly
- cable should cross electrical conduits at a ninety degree angle (ie perpendicularly)

Member Workgroup—Paint

- Paint all new electrical conduits and junction boxes
- new conduits shouldn't stand out, when compared with older, existing conduits;
- Using various colors is fine