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Memorandum of Agreement

Between the

Federal Transit Administration, and the California State Historic Preservation Officer

Regarding the

Transbay Terminal/Caltrain Downtown Extension/Redevelopment Project in San Francisco County, California

WHEREAS, the Federal Transit Administration (FTA) may assist the Transbay Joint Powers Authority (TJPA), the City and County of San Francisco (CCSF), the Peninsula Corridor Joint Powers Board (JPB), and the San Francisco Redevelopment Agency (SFRA) with construction of a new multi-modal Terminal (Terminal) on the site of the present Transbay Transit Terminal (TTT), extension of the Peninsula Corridor Service (Caltrain) from its current San Francisco terminus at Fourth and Townsend Streets to a new underground terminus beneath the new Terminal, and establishment of a Redevelopment Area Plan with related development projects, including transit-oriented development on publicly-owned land in the vicinity of the new multi-modal Terminal (Undertaking); and

WHEREAS, on March 28, 2003, TJPA selected a Locally Preferred Alternative (LPA) for the Undertaking that includes the West Ramp Transbay Terminal Alternative, Full Build Redevelopment Alternative, and Second-to-Main Tunneling Alternative; and

WHEREAS, TJPA, as a Responsible Agency, intends to become the project sponsor, a grantee for federal grant receipt purposes, and the recipient of any FTA assistance for the Undertaking; and

WHEREAS, the California Department of Transportation (Department) has indicated that it will transfer to TJPA title to the historic property known as the TTT, which is a component of the San Francisco – Oakland Bay Bridge (Bay Bridge), a multi-component structure that is listed on the National Register of Historic Places (NRHP), and that such transfer of title will occur after the Department has received satisfactory proof that FTA has issued a Record of Decision pursuant to NEPA for construction of the Undertaking; and

WHEREAS, FTA, in consultation with the California State Historic Preservation Officer (SHPO), has determined that the Undertaking will adversely affect properties listed or eligible for listing in the NRHP (historic properties), including components of the Bay Bridge and the Second and Howard Streets Historic District, and may affect archaeological properties that have not yet been identified; and

WHEREAS, the Bay Bridge East Span Seismic Safety Project in San Francisco and Alameda counties is a separate undertaking from the subject Undertaking; and

WHEREAS, FTA has consulted with SHPO in accordance with 36 CFR Part 800, regulations implementing Section 106 of the National Historic Preservation Act (16 U.S.C. 470f), and has notified the Advisory Council on Historic Preservation (ACHP) of the adverse effect finding pursuant to 36 CFR §800.6 (a) (1); and

WHEREAS, FTA, TJPA, CCSF, JPB, SFRA have consulted with the Department; the City of Oakland, the San Francisco Architectural Heritage; the San Francisco Planning & Urban Research Association (SPUR); the National Park Service (Western Regional Office); the National Trust for Historic

1 Preservation; the American Institute of Architects Preservation Committee; San Francisco Beautiful;
2 Transbay Citizens' Advisory Committee; the Oakland Heritage Alliance; the San Francisco Landmarks
3 Preservation Advisory Board; and San Francisco Tomorrow, regarding the Undertaking and its effects on
4 historic properties, and have taken all comments received from these parties into account;
5

6 **NOW, THEREFORE**, FTA and SHPO agree that if the Undertaking proceeds with FTA assistance,
7 the Undertaking shall be implemented in accordance with the following stipulations in order to take into
8 account the effects of the Undertaking on historic properties, and further agree that these stipulations
9 shall govern the Undertaking and all of its parts until this Memorandum of Agreement (MOA) expires or is
10 terminated.
11

12 **STIPULATIONS**

13
14 If FTA provides funding assistance or a loan guarantee for the Undertaking, FTA will ensure that the
15 following stipulations, which are applicable to the Locally Preferred Alternative (LPA), are implemented:
16

17 **I. Professional Standards**

18 **A. Professional Qualifications**

19
20 All activities regarding history, historic preservation, historic architecture, architectural history,
21 historic and prehistoric archaeology, that are carried out pursuant to this MOA will be carried
22 out by or under the direct supervision of persons meeting, at a minimum, the Secretary of the
23 Interior's professional qualifications standards (48 FR 44738-9) (PQS) in these disciplines.
24 However, nothing in this stipulation may be interpreted to preclude any signatory or any agent
25 or contractor thereof from using the properly supervised services of persons who do not meet
26 the PQS.
27

28 **B. Historic Preservation Standards**

29
30 All activities regarding history, historic preservation, historic architecture, architectural history,
31 historic and prehistoric archaeology that are carried out pursuant to this MOA shall reasonably
32 conform to the Secretary of Interior's Standards and Guidelines for Archaeology and Historic
33 Preservation (48 FR 44716-44740) as well as to applicable standards and guidelines
34 established by SHPO.
35

36 **C. Curation and Curation Standards.**

37
38 FTA and TJPA shall ensure that, to the extent permitted under §§ 5097.98 and 5097.991. of
39 the California Public Resources Code, materials and records resulting from any archaeological
40 treatment or data recovery that may be carried out pursuant to this MOA, are curated in
41 accordance with 36 CFR Part 79.
42
43

44 **II. Mitigation of Effects on Components of the San Francisco-Oakland Bay Bridge** 45 **(Bay Bridge)**

46 **A. Salvage**

47
48 TJPA, in consultation with the Department, will identify elements of the existing TTT that may
49 be suitable for salvage and interpretive use by museums. Within two years following
50 execution of this MOA by FTA and SHPO, TJPA will offer any elements identified as suitable for
51 salvage and interpretive use to San Francisco Architectural Heritage, the California State
52

1 Railroad Museum, Sacramento, the Western Railway Museum, the Oakland Museum, and any
2 other interested parties. Interested parties must accept these elements at least 90 days prior
3 to demolition of the TTT. TJPA will remove any elements selected in a manner that minimizes
4 damage and will deliver them with legal title to the recipient. Items not accepted by
5 interested parties for salvage or interpretive use within the time frame specified herein will
6 receive no further consideration under this MOA.
7

8 **B. Permanent Interpretive Exhibit at the Terminal**
9

10 TJPA will direct the design and engineering team for the Undertaking to integrate into the
11 design of the new Terminal a dedicated space for an interpretive exhibit. The interpretive
12 exhibit will include at a minimum, but is not necessarily limited to: plaques or markers, a
13 mural or other depiction of the historic TTT, ramps, or Key System, or other interpretive
14 material.
15

16 TJPA will consult with the Department regarding the availability of historical documentary
17 materials for the creation of the permanent interpretive display of the history of the original
18 TTT and its association with the San Francisco-Oakland Bay Bridge.
19

20 The Department will assist TJPA in planning the scope and content of the proposed
21 interpretive exhibit. In addition, TJPA will invite the Oakland Heritage Alliance, San Francisco
22 Architectural Heritage, the California State Railroad Museum, and the Western Railway
23 Museum to participate. TJPA, while retaining responsibility for the development of the exhibit,
24 will consider, jointly with the Department, the participating invitees' recommendations when
25 finalizing the exhibit design. TJPA will produce, install, and maintain the exhibit.
26

27 TJPA will also consult with the City of Oakland about its possible interest in having a similar
28 interpretive exhibit in the East Bay. If agreement is reached prior to completion of final design
29 of the Terminal, TJPA will provide and deliver exhibit materials to a venue that is mutually
30 satisfactory to TJPA and the City of Oakland.
31

32 **C. Oakland Museum of California Exhibit**
33

34 TJPA will consult with the Department and the Oakland Museum about contributing to the
35 Department's exhibit and the production of an interpretive video at the Oakland Museum
36 relating to the history and engineering of the major historic state bridges of the San Francisco
37 Bay Area. TJPA will propose contributions to such an exhibit and video that would be related
38 to the history of the TTT, bus ramp loop structures, and the Key System. Items contributed
39 by TJPA to such an exhibit may include photographs, drawings, videotape, models, oral
40 histories, and salvaged components from the TTT. In addition, TJPA will assist the Oakland
41 Museum by contributing up to \$50,000 toward the cost of preparing and presenting the exhibit
42 and preparing an exhibit catalog or related museum publication in conjunction with the
43 exhibit, in a manner and to an extent that is mutually satisfactory to TJPA, the Department,
44 and the Oakland Museum. A separate agreement will outline the negotiated financial
45 contributions.
46

47 TJPA will work with the Oakland Museum and assist in the preparation of an exhibit and
48 interpretive video if consultation results in agreement between TJPA and the Oakland Museum
49 prior to demolition of the existing TTT.
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1 **D. Documentation**

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3 Prior to the start of any work that would have an adverse effect on components of the Bay
4 Bridge that are historic properties, TJPA will request SHPO to determine whether these
5 components, including the TTT and associated ramps, have been adequately recorded in
6 existing documents. If SHPO determines that collectively, such documents, which include the
7 Department's past recordation of a series of remodeling and seismic retrofit projects that have
8 occurred since 1993, adequately document the TTT and ramps, then no further
9 documentation will be necessary. In addition, TJPA, assisted by the Department, will seek to
10 obtain the original drawings of the TTT by architect T. Pflueger. If SHPO determines that
11 existing documentation is adequate, then TJPA will compile such documentation into a
12 comprehensive record. Components to be included in the review of past documentation are:

- 13
14
- 15 • 425 Mission Transbay Transit Terminal (APN 3719-003, 3720-001, 3721-006),
 - 16 • Upper Deck San Francisco Approaches or North Connector, Bridge #34-116F,
 - 17 • Upper Deck San Francisco Approaches or Center Ramps, Bridge #34-118L,
 - 18 • San Francisco Approaches or Lower Deck On-Ramp, Bridge #34-118R,
 - 19 • Transbay Terminal Loop ramp, Bridge #34-119Y, and
 - 20 • Harrison Street over-crossing, Bridge #34-120Y.

21 If SHPO determines that existing documentation does not constitute adequate recordation of
22 the Bay Bridge components addressed hereunder, then TJPA and SHPO will consult further
23 and SHPO will determine what level and type of additional documentation is necessary. Upon
24 a written determination by SHPO that all documentation prescribed hereunder is satisfactory,
25 TJPA will provide copies of this documentation to SHPO and the Department Headquarters
26 Library, with xerographic copies to the History Center at the San Francisco Public Library, San
27 Francisco Architectural Heritage, the Oakland History Room of the Oakland Public Library, the
28 Oakland Museum of California, the Western Railway Museum, and Department District 4
29 Office. Thereafter, TJPA may proceed with that aspect of the Undertaking that will adversely
30 affect the historic properties documented hereunder.

31
32 If SHPO does not respond within 45 days of receipt of each submittal of documentation
33 prescribed herein, TJPA may assume that SHPO has determined that said documentation is
34 adequate and may proceed with that aspect of the Undertaking that will adversely affect the
35 historic properties documented hereunder.
36

37 **III. Mitigation of Effects on Second and Howard Streets Historic District and Protective**
38 **Measures for Rincon Point/South Beach Historic Warehouse Industrial District**

39
40 **A. Protective Measures**

41
42 TJPA, in consultation with the owners of historic properties immediately adjoining the
43 construction sites, will develop and implement measures to protect the contributing elements
44 of the Second and Howard Streets Historic District and the Rincon Point/South Beach Historic
45 Warehouse Industrial District from damage by any aspect of the Undertaking. Such measures
46 will include, but are not necessarily limited to, those identified in Appendix A to this MOA. The
47 protective measures herein stipulated will be developed and implemented by TJPA prior to the
48 commencement of any aspect of the Undertaking that could have an adverse effect on historic
49 properties immediately adjoining the construction sites herein identified. In addition, TJPA will
50 monitor the effectiveness of the protective measures herein stipulated and will supplement or
51 modify these measures as and where necessary in order to ensure that they are effective.
52 The historic properties covered by the terms of this paragraph are shown in the following
53 table.

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Affected Historic Properties During construction					
Address/ Assessors Number	Parcel	NRHP Status	Contributing Element of	Const. Date	Type of Impact
589-591 Howard Street / 3736-098		1D	Second & Howard District & New Montgomery/ Second Street	1906	Cut-and-cover construction nearby
163 Second Street / 3721-048		1D		1907	
166-78 Townsend Street / 3788-012		3D	Rincon Point/South Beach District & South End District.	1910 [1] 1888[2]	Cut-and cover Construction nearby. Need construction easement
640 Second Street / 3788-002		2S2	Rincon Point/South Beach District & South End District.	1926	Tunnel under or near property
650 Second Street / 3788-049 through 3788- 073		2S2		1922	
670-680 Second Street / 3788-043, 3788-044		2S2 (670), 3D (680)		1913	
301-321 Brannan Street / 3788-037		3D		1909	
130 Townsend Street / 3788-008		3D		1910 [1] 1895-6 [2]	
136 Townsend Street / 3788-009		3D		1902 [1] 1913 [2]	
144-46 Townsend Street / 3788-009A		3D		1922	
148-54 Townsend Street / 3788-010		3D		1922	
162-164 Townsend Street / 3788-081		3D		1919	
Notes: National Register Status Codes are as follows: 1 Listed on the NRHP 2S1 Determined eligible for listing by the Keeper of the Register 2S2 Determined eligible for listing by consensus of the SHPO and a federal agency. 1D Listed on National Register as a contributor to a district or multi-resource property 2D2 Determined eligible as a contributor by consensus determination 3D Appears eligible as a contributor to a fully documented district [1] Caltrans, 1983, [2] Corbett and Bradley, 1996 Source: JRP Historical Consulting, Parsons Transportation Group, 2001.					

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B. Documentation

TJPA will take the effect of the Undertaking on the three historic properties listed below into account by recording these properties in accordance with the terms herein set forth. These properties are:

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- 191 2nd Street, (APN: 3721-022),
 - 580-586 Howard Street, (APN: 3721-092 through 3721-106), and
 - 165-173 2nd Street, (APN: 3721-025).

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Prior to taking any action that could adversely affect these properties, TJPA will consult SHPO and SHPO will determine the type and level of recordation that is necessary for these properties. Upon a written determination by SHPO that all documentation prescribed hereunder is complete and satisfactory, TJPA will submit a copy of this documentation to SHPO, with xerographic copies to the History Center at the San Francisco Public Library, San Francisco Architectural Heritage, and the Oakland History Room of the Oakland Public Library. Thereafter, TJPA may proceed with that aspect of the Undertaking that will adversely affect the historic properties documented hereunder.

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If SHPO does not respond within 45 days of receipt of each submittal of documentation for prescribed herein, TJPA may assume that SHPO has determined that said documentation is adequate and may proceed with that aspect of the Undertaking that will adversely affect the historic properties documented hereunder.

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C. Repair of Inadvertent Damage

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TJPA will ensure that any damage to contributing elements of the Second and Howard Streets Historic District and the Rincon Point/South Beach Historic Warehouse Industrial District resulting from the Undertaking will be repaired by TJPA in accordance with the Secretary of the Interior's Standards for Rehabilitation. The condition of the contributing elements will be photographed by TJPA prior to the start of the Undertaking to establish the baseline condition for assessing any damage. To document these existing conditions, TJPA will consult with property owner(s) about the appropriate level of photographic documentation of building interiors and exteriors. A copy of this photographic documentation will be provided to the property owner(s), and will be retained on file by TJPA. If repair of inadvertent damage resulting from the Undertaking is necessary, TJPA will submit repair plans and specifications to SHPO for review and comment to ensure that the work conforms to the Secretary of the Interior's Standards for Rehabilitation. TJPA and SHPO will consult to establish a mutually satisfactory time frame for the SHPO's review. TJPA will carry out any repairs required hereunder in accordance with the comments of SHPO.

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IV. Consideration of Potential Effects on and Prospective Development and Implementation of a Treatment Plan for Archaeological Properties

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A. Consultation

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Within 45 days following execution of this MOA by FTA and SHPO, FTA, SHPO, TJPA, JPB and CCSF will consult to initiate the process of determining how archaeological properties that may be affected by the Undertaking will be identified, whether and how the NRHP eligibility of such properties may be addressed, and whether and how the Undertaking's effects, if any, on those archaeological properties that may be considered historic properties for purposes of this MOA, may be taken into account. FTA and TJPA shall invite Caltrans to participate in this consultation. The time frame for this consultation shall be determined by the consulting parties through consensus. The consultation herein prescribed will at a minimum be informed by, and take into account, the following documents:

- 1 1. Attachment 6, "Standard Treatment of Archaeological Sites: Data Recovery Plan", of the
2 "Programmatic Agreement among the Federal Highway Administration, the Advisory
3 Council on Historic Preservation, the California State Historic Preservation Office, and the
4 California Department of Transportation Regarding Compliance with Section 106 of the
5 National Historic Preservation Act, as it pertains to the Administration of the Federal Aid
6 Highway Program in California."
7
- 8 2. "Archaeological Research Design and Treatment Plan for SF-480 Terminal Separation
9 Rebuild (Praetzellis and Praetzellis, 1993)" and "The San Francisco-Oakland Bay Bridge,
10 West Approach Replacement: Archaeological Research Design and Treatment Plan
11 (Ziesing, 2000)".
12
- 13 3. "Revised Historical Archaeology Research Design for the Central Freeway Replacement
14 Project (Thad M. Van Bueren, Mary Praetzellis, Adrian Praetzellis, Frank Lortie, Brian
15 Ramos, Meg Scantlebury and Judy D. Tordoff)."
16

17 **B. Treatment Plan**

18
19 If the consulting parties agree that a plan for treatment of archaeological properties
20 (Treatment Plan) should be prepared, then TJPA will prepare a Treatment Plan that provides
21 for the identification, evaluation and treatment of archaeological properties that may be
22 affected by the Undertaking. The Treatment Plan shall conform to the requirements of item 1.,
23 above, of this stipulation, take into account the information contained in items 2. and 3.,
24 above, of this stipulation, and conform to any other standards, documentation, or guidance
25 that the consulting parties may specify. If the consulting parties agree that the Treatment
26 Plan will address historic archaeological properties as well as prehistoric archaeological
27 properties, then with respect to consideration of historic archaeological properties, TJPA shall
28 ensure that appropriately qualified historians prepare a historic context(s) that will be used by
29 an interdisciplinary team consisting at a minimum, of historians and historic archaeologists, to:
30

- 31 1. Identify any significant research themes and topics that relate to the historic period(s)
32 addressed by the historic context(s);
33
- 34 2. Determine what types of historic archaeological properties, if any, may usefully and
35 significantly contribute to research themes and topics deemed by the historic context(s)
36 study to be important;
37
- 38 3. Identify the specific components and constituents (features, artifacts, etc.), if any, of
39 historic archaeological property types that can factually and directly, rather than
40 speculatively, contribute data important to our understanding of significant historic
41 research themes and topics;
42
- 43 4. Determine the amount (sample size, etc.) of archaeological excavation and related activity
44 that is needed to provide the range and type of factual data that will contribute to our
45 understanding of significant historic research themes and topics.
46

47 Upon completion, TJPA, on behalf of FTA, will submit the draft Treatment Plan to the other
48 consulting parties for review and comment. The consulting parties shall have 45 days from
49 receipt of the draft Treatment Plan to comment in writing to FTA and TJPA. Failure of the
50 consulting parties to respond within this time frame shall not preclude FTA and TJPA from
51 finalizing the draft Treatment Plan to their satisfaction. Before finalizing the draft Treatment
52 Plan, FTA and TJPA will provide the consulting parties with written documentation indicating
53 whether and how the draft Treatment Plan will be modified. Unless any consulting party

1 objects to this documentation in writing to FTA and TJPA within 15 days following receipt, FTA
2 and TJPA may finalize the draft Treatment Plan as they deem appropriate, and proceed to
3 implement the final Treatment Plan. If FTA and TJPA propose to modify the final Treatment
4 Plan, TJPA, on behalf of FTA, will notify the consulting parties concurrently in writing about the
5 proposed modifications. The consulting parties will have 15 days from receipt of notification
6 to comment in writing to FTA and TJPA. Failure of the consulting parties to respond within
7 this time frame shall not preclude FTA and TJPA from modifying the final Treatment Plan to
8 their satisfaction. Before modifying the final Treatment Plan, FTA and TJPA will provide the
9 consulting parties with written documentation indicating whether and how the final Treatment
10 Plan will be modified. Unless any consulting party objects to this documentation in writing to
11 FTA and TJPA within 15 days following receipt, FTA and TJPA may modify the final Treatment
12 Plan as they deem appropriate, and proceed to implement the modified final Treatment Plan.
13

14 **C. Treatment Plan Reporting Requirements**

- 15
16 1. If pursuant to section B., above, of this stipulation, a Treatment Plan has been
17 implemented, then within two years after FTA, in consultation with TJPA, has determined
18 that all fieldwork required by the Treatment Plan has been completed, FTA will ensure that
19 TJPA prepares a draft technical report that documents the results of implementing the
20 Treatment Plan and distributes this draft technical report to the other MOA signatories for
21 review. The reviewing parties will be afforded 60 days following receipt of the draft
22 technical report to submit any written comments to FTA and TJPA. Failure of the
23 reviewing parties to respond within this time frame shall not preclude FTA from
24 authorizing TJPA to revise to the draft technical report as FTA and TJPA may deem
25 appropriate. FTA will provide the reviewing parties with written documentation indicating
26 whether and how the draft technical report will be modified in accordance with any
27 reviewing party comments. Unless the reviewing parties object to this documentation in
28 writing to FTA and TJPA within 30 days following receipt, FTA and TJPA may modify the
29 draft technical report as they may deem appropriate. Thereafter, FTA and TJPA may issue
30 the technical report in final form and distribute this document in accordance with
31 paragraph C.2 of this stipulation.
32
- 33 2. Copies of the final technical report documenting the results of Treatment Plan
34 implementation will be distributed by TJPA to the other signatory parties, to any consulting
35 Native American Tribe if prehistoric, protohistoric or ethnographic period archaeological
36 properties were located and addressed under the Treatment Plan, and to the appropriate
37 California Historical Resources Information Survey (CHRIS) Regional Information Center,
38 subject to the terms of stipulation IV.E.
39
- 40 3. FTA will ensure that TJPA prepares a written draft document that communicates in lay
41 terms the results of Treatment Plan implementation to members of the interested public.
42 TJPA will distribute this written draft document for review and comment concurrently with
43 and in the same manner as that prescribed for the draft written technical report
44 prescribed by paragraph C.1. of this stipulation. If the draft document prescribed
45 hereunder is a publication such as a report or brochure, then such publication shall upon
46 completion be distributed by TJPA to the other signatory parties, to any consulting Native
47 American Tribe as applicable, and to any other entity that the signatory parties and, as
48 applicable, any consulting Native American Tribe, through consultation may deem
49 appropriate, subject to the terms of Stipulation IV.E.
50
- 51 4. TJPA will prepare a written annual report describing the status of its efforts to comply with
52 the terms of stipulations II. – IV., inclusive, of this MOA. The annual report will be
53 prepared following the end of each fiscal year (July 1 to June 30) that this MOA is in effect

1 and will be distributed by TJPA to all MOA signatories by July 30 of each year until FTA
2 and the SHPO through consultation determine that the requirements of stipulations II. -
3 IV., inclusive, of this MOA have been satisfactorily completed.
4

5 **D. Treatment Plan Not Developed -- Addressing Discoveries**
6

7 If the consulting parties agree that a plan for treatment of archaeological properties will not be
8 prepared, then any archaeological properties discovered during implementation of any aspect
9 of the Undertaking will be addressed by TJPA pursuant to 36 CFR § 800.13(b)(3).
10

11 **E. Confidentiality**
12

13 The signatories to this MOA acknowledge that historic properties covered by this MOA are
14 subject to the provisions of § 304 of the National Historic Preservation Act of 1966, as
15 amended, and § 6254.10 of the California Government Code (Public Records Act), relating to
16 the disclosure of archaeological site information and, having so acknowledged, will ensure that
17 all actions and documentation prescribed by this MOA are consistent with § 304 of the
18 National Historic Preservation Act of 1966, as amended, and § 6254.10 of the California
19 Government Code.
20

21 **F. Treatment of Human Remains of Native American Origin**
22

23 The parties to this MOA agree that Native American burials and related items discovered
24 during implementation of the terms of the MOA and of the Undertaking will be treated in
25 accordance with the requirements of § 7050.5(b) of the California Health and Safety Code. If,
26 pursuant to § 7050.5(c) of the California Health and Safety Code, the county coroner/medical
27 examiner determines that the human remains are, or may be of Native American origin, then
28 the discovery shall be treated in accordance with the provisions of § 5097.98(a)-(d) of the
29 California Public Resources Code. TJPA will ensure that to the extent permitted by applicable
30 law and regulation, the views of any consulting Native American Tribe and the Most Likely
31 Descendant(s) are taken into consideration when decisions are made about the disposition of
32 other Native American archaeological materials and records.
33

34 **V. Resolving Objections**
35

36 **A.** Should any party to this MOA object at any time to the manner in which the terms of this MOA
37 are implemented, or to any action carried out or proposed with respect to implementation of
38 the MOA (other than the Undertaking itself) or to any documentation prepared in accordance
39 with and subject to the terms of this MOA, FTA shall immediately notify the other parties to
40 this MOA of the objection and consult with the objecting party and the other parties to the
41 MOA for no more than 21 days to resolve the objection. FTA shall reasonably determine when
42 this consultation will commence. If the objection is resolved through such consultation, the
43 action in dispute may proceed in accordance with the terms of that resolution. If, after
44 initiating such consultation, FTA determines that the objection cannot be resolved through
45 consultation, then FTA shall forward all documentation relevant to the objection to the ACHP,
46 including FTA's proposed response to the objection, with the expectation that the ACHP will,
47 within thirty (30) days after receipt of such documentation:
48

- 49 1. Advise FTA that the ACHP concurs in FTA's proposed response to the objection,
50 whereupon FTA will respond to the objection accordingly; or
- 51 2. Provide FTA with recommendations, which FTA will take into account in reaching a final
52 decision regarding its response to the objection; or
53

1
2 3. Notify FTA that the objection will be referred for comment pursuant to 36 CFR §
3 800.7(a)(4), and proceed to refer the objection and comment. FTA shall take the
4 resulting comments into account in accordance with 36 CFR 800.7(c)(4) and Section
5 110(1) of the National Historic Preservation Act.
6

7 **B.** Should the ACHP not exercise one of the foregoing options within 30 days after receipt of all
8 pertinent documentation, FTA may assume the ACHP's concurrence in its proposed response
9 to the objection.
10

11 **C.** FTA shall take into account any ACHP recommendation or comment provided in accordance
12 with this stipulation with reference only to the subject of the objection. FTA's responsibility to
13 carry out all other actions under this MOA that are not the subject of the objection will remain
14 unchanged.
15

16 **D.** FTA shall provide all other parties to this MOA, any consulting Native American Tribe, and the
17 ACHP when the ACHP has issued comments hereunder, with a copy of its final written decision
18 regarding any objection addressed pursuant to this stipulation.
19

20 **E.** FTA may authorize any action subject to objection under this stipulation to proceed after the
21 objection has been resolved in accordance with the terms of this stipulation.
22

23 **F.** At any time during implementation of the measures stipulated in this MOA, should an objection
24 pertaining to such implementation be raised by a member of the public, FTA shall notify the
25 parties to the MOA, and any Native American Tribe, in writing of the objection and take the
26 objection into consideration. FTA shall consult with the objecting party and, if the objecting
27 party so requests, with any of the other MOA signatories and any consulting Native American
28 Tribe, for no more than 30 days. Within 10 days following closure of this consultation period,
29 FTA will render a decision regarding the objection and notify all consulting parties of its
30 decision in writing. In reaching its decision, FTA will take into account any comments from the
31 consulting parties regarding the objection, including the objecting party. FTA's decision
32 regarding the resolution of the objection will be final. FTA may authorize any action subject to
33 objection under this paragraph to proceed after the objection has been resolved in accordance
34 with the terms of this paragraph.
35

36 **G.** Disputes pertaining to the National Register eligibility of properties covered by this MOA will be
37 addressed by FTA in accordance with 36 CFR § 800.4(c)(2).
38

39 **VI. Amendments**

40
41 Any party to this MOA, or any consulting Native American Tribe, may propose that this MOA be amended,
42 whereupon the parties to this MOA and, as applicable, any consulting Native American Tribe, will consult
43 to consider such amendment. The amendment process shall comply with 36 CFR §§ 800.6(c)(1) and
44 800.6(c)(7). The time frame for such consultation shall be determined by FTA, in consultation with SHPO
45 and TJPA. This MOA may be amended only upon the written agreement of the signatory parties. If it is
46 not amended, this MOA may be terminated by either signatory party in accordance with Stipulation VII.
47

48 **VII. Termination**

49
50 **A.** If this MOA is not amended as provided for in Stipulation VI., or if either signatory party
51 proposes termination of this MOA for other reasons, the signatory party proposing termination
52 shall in writing, notify the other parties to this MOA and any consulting Native American Tribe,

1 explain the reasons for proposing termination, and consult with the other parties and any
2 consulting Native American Tribe to seek alternatives to termination. The time frame for such
3 consultation shall be determined by FTA, in consultation with SHPO and TJPA. Such
4 consultation shall not be required if FTA proposes termination because the Undertaking no
5 longer meets the definition set forth in 36 CFR § 800.16(y).
6

- 7 **B.** Should such consultation result in an agreement on an alternative to termination, then the
8 parties and any consulting Native American Tribe shall proceed in accordance with the terms of
9 that agreement.
10
11 **C.** Should such consultation fail, the signatory party proposing termination may terminate this MOA
12 by promptly notifying the other parties to this MOA and any consulting Native American Tribe in
13 writing. Termination hereunder shall render this MOA without further force or effect.
14
15 **D.** If this MOA is terminated hereunder, and if FTA determines that the Undertaking will
16 nonetheless proceed, then FTA shall proceed in accordance with 36 CFR § 800.6 to develop a
17 new MOA.
18

19 **VIII. Duration of the MOA**

- 20
21 **A.** Unless terminated pursuant to Stipulation VII., or unless it is superseded by an amended MOA,
22 this MOA will be in effect following execution by SHPO until FTA, in consultation with the other
23 parties and any consulting Native American Tribe, determines that all of its stipulations have
24 been satisfactorily fulfilled. This MOA will terminate and have no further force or effect on the
25 day that FTA notifies the other parties and any consulting Native American Tribe in writing of
26 its determination that all stipulations of this MOA have been satisfactorily fulfilled.
27
28 **B.** The terms of this MOA shall be satisfactorily fulfilled within 12 years following the date of
29 execution by SHPO. If FTA determines that this requirement cannot be met, the parties to this
30 MOA and any consulting Native American Tribe will consult to reconsider its terms.
31 Reconsideration may include continuation of the MOA as originally executed, amendment or
32 termination. In the event of termination, FTA will comply with Stipulation VII.D. if it determines
33 that the Undertaking will proceed notwithstanding termination of this MOA.
34
35 **C.** If the Undertaking has not been implemented within 12 years following execution of this MOA
36 by the SHPO, this MOA shall automatically terminate and have no further force or effect. In
37 such event, FTA shall notify the other parties and any consulting Native American Tribe in
38 writing and, if it chooses to continue with the Undertaking, shall reinstate review of the
39 Undertaking in accordance with 36 CFR Part 800.
40

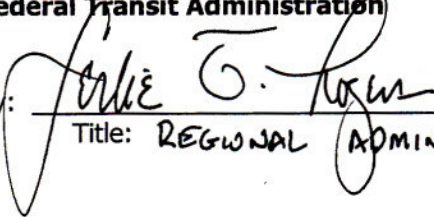
41 **IX. EFFECTIVE DATE**

42 This MOA will take effect on the date that it has been executed by SHPO.
43
44


45 Execution of this MOA by FTA and SHPO, its transmittal by FTA to the ACHP in accordance with 36 CFR
46 § 800.6(b)(1)(iv), and subsequent implementation of its terms, shall evidence, pursuant to 36 CFR
47 § 800.6(c), that this MOA is an agreement with the ACHP for purposes of Section 110(1) of the National
48 Historic Preservation Act, and shall further evidence that FTA has afforded the ACHP an opportunity to
49 comment on the Undertaking and its effects on historic properties, and that FTA has taken into account
50 the effects of the Undertaking on historic properties.
51
52

1
2 **SIGNATORY PARTIES:**

3
4 **Federal Transit Administration**

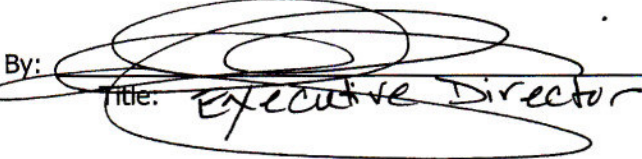
5
6 By:  Date: 6/21/04
7
8 Title: REGIONAL ADMINISTRATOR
9

10
11
12 **California State Historic Preservation Officer**


13
14 By:  Date: 6/23/04
15
16 Title: Deputy SHPO
17
18

19 **Concurring Signatories:**

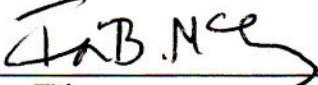
20
21
22 **Transbay Joint Powers Authority**

23
24 By:  Date: 6/4/04
25
26 Title: Executive Director
27
28

29
30 **City and County of San Francisco**

31
32 By:  Date: 6/4/04
33
34 Title: Environmental Review officer
35
36

37
38 **Peninsula Corridor Joint Powers Board**

39
40 By:  Date: 6/3/04
41
42 Title: CHIEF DEVELOPMENT OFFICER
43
44

45
46 **California Department of Transportation**

47
48 By:  Date: 6/7/04
49
50 Title: Deputy District & Director
51
52
53

Appendix A: Protective Measures:

Following are mitigation measures to be implemented to protect properties eligible for on in the National Register of Historic Places. The measures described would be implemented by a combination of construction contract specifications, drawings, and provisions, as well as public affairs programs. TJPA and JPB staff would be assigned to work directly with the public to provide project information and to resolve construction-related problems. The TJPA and JPB will work with community residents, elected officials, local businesses, and community organizations to tailor the mitigation program to best meet community needs. Contractors will be monitored to assure that mitigation measures are met.

I. Preconstruction Activities

- **Undertake building data survey.** A pre-construction structural survey would be completed to determine the integrity of existing buildings adjacent to and over the proposed extension. This survey would be used to finalize detailed construction techniques along the alignment and as the baseline for monitoring construction impacts during and following construction. During construction, the TJPA and JPB would monitor adjacent buildings for movement and, if movement is detected, take immediate action to control the movement.
- **Complete detailed geotechnical investigation.** During final design, additional sampling (drilling and core samples) and analyses of subsurface soil/rock conditions would be used to detail and finalize the excavation and its support system to be used in the retained cut, cut-and-cover and tunnel portions of the extension. Current data, including subsurface sampling conducted in 1995 and 1996 for the 1997 Caltrain DEIS/DEIR have been used to identify the proposed construction techniques presented in the following sections, which form the basis for the impact analysis that follows in Section 5.21.

II. General Construction Measures

- **Provide signage.** The TJPA and JPB would work with establishments affected by construction activities. Appropriate signage would be developed and displayed to direct both pedestrian and vehicular traffic to businesses via alternate routes.
- **Install level deck.** Decking at the under-street cut-and-cover sections would be installed flush with the existing street or sidewalk levels.
- **Provide for efficient sidewalk design and maintenance.** Wherever feasible, sidewalks would be maintained at the existing width during construction. Where a sidewalk must be temporarily narrowed during construction (e.g., deck installation), it would be restored to its original width during the majority of construction period. In some places this may require placing the temporary sidewalk actually on the deck. Each sidewalk design should be of good quality and approved by the Resident Engineer prior to construction. Handicapped access would be maintained during construction where feasible.

III. Soils/Geology

- **Underpin existing buildings, where deemed necessary, to protect existing structures from potential damage that could result from excessive ground movements during construction.** The design of the tunneling and the excavation procedures (and construction sequence), and the design of the temporary support system will be developed with the objective of controlling ground deformations within small enough levels to avoid damage to adjacent structures.

1 Where the risk of damage to adjacent structures is too great, special measures may be implemented
2 such as: (1) underpinning, (2) ground improvement, and/or (3) strengthening of existing structures
3 to mitigate the risks.
4

5 The cut-and-cover alignment passes near settlement-sensitive structures in the vicinity of the
6 intersection of Second and Townsend streets, including buildings in the Rincon Point / South
7 Beach Historic Warehouse – Industrial District (i.e., 166-178, 180, , and 350-360 Townsend
8 Street).
9

10 The tunnel alignment passes under a number of old and settlement-sensitive structures in the
11 vicinity of the intersection of Second and Townsend streets, including buildings in the Rincon
12 Point / South Beach Historic Warehouse – Industrial District (i.e., 130, 136, 144-146, 148-154,
13 and 162-164 Townsend Street; 634, 640, 650, and 670-680 Second Street; and 301-321
14 Brannan Street).
15

16 Even though the tunnel will be excavated using the stacked drift method, and even though the
17 tunnel will be excavated in the Franciscan Rock formation, the risk of potential adverse impacts
18 of tunneling on the existing buildings must be assessed, because the rock cover over the tunnel
19 is rather shallow.
20

21 As part of the initial studies performed in 1996, preliminary plans were developed to
22 protect/strengthen existing structures to mitigate the risk of adverse impacts of tunneling on
23 existing structures. Underpinning, if it is deemed necessary, is one of the options for mitigating
24 adverse effects of tunneling on the existing buildings. Underpinning involves modification of the
25 foundations of the building so that the superstructure loads can be transferred beyond the zone
26 of influence of tunneling. Underpinning may include internal strengthening of the superstructure,
27 bracing, reinforcing the existing foundations, or replacing the existing foundations with deep
28 foundations that are embedded outside the zone of influence of tunneling.
29

30 Other alternatives, in lieu of underpinning, involve strengthening of the rock between the building
31 and the crown of the tunnel. Grouting in combination with inclined pin piles can be used not only
32 to strengthen the rock but to make the rock mass over the tunnel act as a rigid beam, which
33 would allow construction of the tunnels with no adverse effects on the buildings that are
34 supported on shallow foundations over the tunnel.
35

36 Preliminary plans for underpinning have been developed that allow cost estimates to be made for
37 underpinning. During the detailed design phase of the Project, underpinning plans will be
38 developed specific to each of the buildings that may require it. It is not necessary at this stage
39 of the Project to develop detailed underpinning plans.
40

41 These issues will be addressed on a case by case basis, along the alignment, during the detailed
42 design phase of the Project. The methodology that is proposed for the Caltrain Downtown
43 Extension, i.e. to design the support system to control ground deformations within tolerances,
44 and selectively strengthen structures that may be too weak to resist even small deformations,
45 was successfully used for the Muni Metro Turnback project, and should be effective for the
46 Caltrain Downtown Extension Project as well.
47

- 48 • Assure proper design and construction of pile supported foundations for structures to control
49 potential settlement of the surface. Stability of excavations resultant impacts on adjacent structures
50 can be controlled within tolerable limits by proper design and implementation of the excavation
51 shoring systems.

1 **IV. Air Emissions**

- 2
- 3 • Upon completion of the construction phase, buildings with visible signs of dirt and debris from the
4 construction site shall be power washed and/or painted (given that permission is obtained from the
5 property owner to gain access to and wash the property with no fee charged by the owner).
6

7 **V. Vibration**

- 8
- 9 • **Limit or prohibit use of construction techniques that create high vibration levels.** At a
10 minimum, processes such as pile driving would be prohibited at distances less than 250 feet from
11 residences.
12
- 13 • **Restrict procedures that contractors can use in vibration sensitive areas.** It is often
14 possible to employ alternative techniques that create lower vibration levels. For example,
15 unrestricted pile driving is one activity that has considerable potential for causing annoying vibration.
16 Using the cast-in-drilled-hole piling method instead will eliminate most potential for vibration impact
17 from the piling.
18
- 19 • Require vibration monitoring during vibration intensive activities.
20
- 21 • Restrict the hours of vibration intensive activities such as pile driving to weekdays during daytime
22 hours.
23
- 24 • Investigate alternative construction methods and practices to reduce the impacts in coordination
25 with the construction contractor if resident annoyance from vibration becomes a problem.
26
- 27 • Include specific limits, practices and monitoring and reporting procedures for the use of controlled
28 detonation. Controlled detonation may be required during tunnel construction through rock for both
29 the cut-and-cover and stacked-drift construction methods, subject to additional geotechnical
30 investigations and other considerations that would be determined during the final design and
31 construction phases of the project. Any use of controlled detonation would be closely controlled and
32 monitored to avoid damage to existing structures. Specific limits, practices, and monitoring and
33 reporting procedures would be included within the contract documents to ensure that such
34 construction methods, if used, would not exceed safety criteria.
35
- 36 • **Use high-resilience track fasteners or a resiliently supported tie system** for the Caltrain
37 downtown extension for areas projected to exceed vibration criteria.
38