DEPARTMENT OF TRANSPORTATION
DISTRICT 4
OFFICE OF MAINTENANCE SERVICES
P.O. BOX 23660, MS– MS4A
OAKLAND, CA 94623-0660
PHONE (510) 286-4446
TTY 711
www.dot.ca.gov

Making Conservation a California Way of Life.

November 9, 2018

Ms. Shannon Cairns
Project Manager
San Francisco Department of Public Works
30 Van Ness Ave. 5th floor
San Francisco, CA 94102

Dear Ms. Cairns:

Please find enclosed: one original executed Amendment 2 document to the Maintenance Agreement given effect by the State and CCSF.

Thank you for your involvement in bringing this matter to a successful close.

If you have any questions, feel free to contact me at (510) 286-4446 or my staff at (510) 286-4458.

Sincerely,

Waddah Al-Zireeni
Branch Chief
Caltrans District 4

Enclosures

(1) One original Amendment No.2 to Agreement for Maintenance of State Highways in the City of San Francisco.

AMENDMENT No. 2 TO AGREEMENT FOR MAINTENANCE OF STATE HIGHWAYS IN THE CITY OF SAN FRANCISCO

This second amendment ("AMENDMENT No. 2") is dated October 19, 2018 and is made to the Agreement for Maintenance of State Highways in the City and County of San Francisco dated July 2, 2009, and its First Amendment thereto dated October 27, 2011 ("AGREEMENT"), and entered into by and between the State of California, acting by and through the Department of Transportation, hereinafter referred to as ("STATE"), and the City and County of San Francisco, a municipal corporation, hereinafter referred to as ("CITY"), acting by and through its Public Works Director. CITY and STATE together are hereafter referred as ("PARTIES").

RECITALS:

"WHEREAS, the High-Intensity Activated Crosswalk pedestrian beacon system ("HAWK System") has been or will be installed on Sloat Boulevard (SR 35) at: Forest View Drive, 23rd Avenue, 36th Avenue, Constanso Way, El Mirasol Place, 26th Avenue, 21st Avenue; and on San Jose Avenue (SR 82) at: Goethe Street, Rice Street;

WHEREAS, Contract No. 1294, M-Ocean View Track Replacement Project at 19th Avenue (SR1) and Rossmoor Drive installed signals, low profile speed bumps, steel bollards, pedestrian barrier rail, signage, red concrete;

WHEREAS, Contract No. installed a trench for water, sewer and Auxiliary Water Supply System utilities; compliant with CITY standards, as shown in Exhibit C ("CITY Trench Details"), but not compliant with STATE standard specifications;

WHEREAS, PARTIES hereto now agree to amend AGREEMENT to specify the allocation of maintenance responsibilities, liability and indemnity regarding the construction and use of the CITY Trench Details.

NOW, THEREFORE, PARTIES agree to amend AGREEMENT as follows:

1. The AGREEMENT; page 3, dated May 4, 2009 is hereby deleted and replaced by page 3a and page 3b (REVISED).

2. EXHIBIT "A"; page 5, dated July 2, 2009 of AGREEMENT is hereby deleted and replaced by EXHIBIT "A" (REVISED); page 5.

3. EXHIBIT "A"; page 8, dated July 2, 2009 of AGREEMENT is hereby deleted and replaced by EXHIBIT "A" (REVISED); page 8.

4. EXHIBIT "B"; page 1, dated July 2, 2009 of AGREEMENT is hereby deleted and replaced by EXHIBIT "B" (REVISED); page 1.

5. EXHIBIT "B"; page 4, dated July 2, 2009 of AGREEMENT is hereby deleted and replaced by EXHIBIT "B"; page 4a and 4b (REVISED).

6. EXHIBIT "B"; page 5, dated July 2, 2009 of AGREEMENT is hereby deleted and replaced by EXHIBIT "B"; page 5a and 5b (REVISED).

7. New EXHIBIT "C" is hereby added to and made a part of AGREEMENT.

8. All other terms and conditions of AGREEMENT shall remain in full force and effect.

9. AMENDMENT No. 2 is hereby deemed to be included and is made a part of AGREEMENT.

IN WITNESS WHEREOF, PARTIES hereto have set their hands and seals the day and year first above written.

THE CITY AND COUNTY OF
SAN FRANCISCO

By: _____
MOHAMMED NURU
Director of Public Works

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

LAURIE BERMAN
Director of Transportation

By: _____
DAVID AMBUEH
Deputy District Director
District 4 Maintenance

Approved as to form:

DENNIS J. HERRERA
City Attorney

By: _____
CHRISTOPHER TOM
Deputy City Attorney

ATTEST:

By: _____
Clerk of the Board

As to Form and Procedure:

By: _____
Attorney
Department of Transportation

XI. Neither CITY nor any officer or employee thereof is responsible for any injury, damage or liability occurring by reason of anything done or omitted to be done by STATE under or in connection with any work expressly conferred upon STATE by this Agreement. It is understood and agreed that STATE shall fully defend, indemnify and save harmless CITY and all its officers and employees from all claims, suits or actions of every name, kind and description brought forth under, including, but not limited to tortious, contractual, inverse condemnation and other theories or assertions of liability occurring by reason of anything done or omitted to be done by STATE under or in connection with any work expressly conferred upon STATE by this Agreement.

XII. STATE costs and expenses pledged to pay CITY under the terms of this Agreement are conditioned upon the passage of the Annual State Budget Act by the Legislature, the allocation of funding by the California Transportation Commission as appropriate, and the encumbrance of STATE funding to pay CITY's invoices.

XIII.

A. This Agreement shall remain in full force and effective until amended by the mutual consent of the parties thereto or terminated by either party upon thirty (30) days' notice to the other party.

B. Notwithstanding, paragraph XIII (A), all provisions of this Agreement relating to SPECIFIED STATE ROUTES, including but not limited to, any duties under paragraphs III, VI, X, XI, XV, XVI, and XVII, shall remain in full force and effect, until amended or terminated upon mutual consent of the CITY and STATE.

XIV. Pursuant to Board of Supervisors Resolution No. 380-15, the CITY executed that certain Operations and Maintenance Agreement with the City and County of San Francisco for Bus Rapid Transit Facilities on State Route 101 (the "BRT Operations and Maintenance Agreement"). As acknowledged in the BRT Operations and Maintenance Agreement, this Agreement is separate from, and does not modify the terms of the BRT Operations and Maintenance Agreement.

XV.

A. CITY will not accept STATE standard slurry cement backfill requirements for water, sewer, and Auxiliary Water Supply System (AWSS) utilities ("STATE Trench Detail") due to concerns that the material is not compatible with CITY's future maintenance and servicing of new connections. The STATE Trench Detail will cost utility companies more to perform maintenance and service new connections and will cause more disruption to the public due to longer lane closures needed to remove and replace slurry concrete.

Pursuant to the terms of the applicable encroachment permits issued by the STATE and the terms of this agreement the CITY may use CITY Water, Sewer, and AWSS Trench Detail ("CITY Trench Details"), attached as Exhibit C, as specified on projects 04-3A270, 04-4J790, 04-0G350, on SPECIFIED STATE ROUTES.

B. Notwithstanding any other provision of this Agreement, the CITY shall be responsible for performing the maintenance and repair of SPECIFIED STATE ROUTES for all failures or defects of the roadway infrastructure resulting from the construction and use of the CITY- Trench Details (Exhibit C).

STATE shall provide reimbursements for routine maintenance of SPECIFIED STATE ROUTES as provided for in Exhibit A, but shall not reimburse CITY for maintenance and repair of conditions resulting from the construction and use of the CITY Trench Details.

XVI. Notwithstanding any other provision of this Agreement, the CITY shall be solely responsible for all costs for the reconstruction of SPECIFIED STATE ROUTES for all failures or defects resulting from the construction and use of the CITY Trench Details, attached as Exhibit C, including but not limited to sinkholes, failure of compacted soils, and structural failure of the roadway resulting from the construction and use of the CITY Trench Details.

XVII. CITY shall fully defend, indemnify, and save harmless, STATE its officers, directors, agents, and employees for any injury, claim, damage, or liability occurring as the result of any condition or defect of SPECIFIED STATE ROUTES, resulting from the construction and use of the CITY Trench Details (Exhibit C), including but not limited to, failures of the compacted soils, sinkholes, potholes, cracking, and structural failure of the roadway resulting from the construction and use of the CITY Trench Details. It is understood by and between CITY and STATE that the CITY's duty to defend, indemnify and save harmless under this section extends to any injury, claim, damage, or liability whether said injury, claim, damage, or liability is alleged to have been caused by a failure to maintain or a failure of design and construction.

XVIII. SPECIFIED STATE ROUTES shall be defined as the locations identified on Exhibit C. For all locations listed on Exhibit C, this agreement shall apply to all portions of the STATE's right-of-way between the listed post miles.

A. DELEGATION OF MAINTENANCE

The specific maintenance function indicated below (and on "EXHIBIT B and C") is hereby delegated to CITY. This Delegation of maintenance function set forth herein does not include the Control and maintenance areas and functions which rest with CITY under the terms of other executed Freeway Agreements and /or Freeway Maintenance Agreements.

Route No	Length Miles		Program Delegated	Maximum Annual Authorized Expenditure
1(a)	5.93	Junipero Serre Boulevard, from south city limits near Interstate 280 Interchange to Nineteenth Avenue along Nineteenth Avenue from Junipero Serra Boulevard to Cross-Over Drive; along Cross-Over Drive from Nineteenth Avenue to By-Pass Drive; along By-Pass Drive from Cross-Over Drive to Park Presidio Boulevard; along Park Presidio Boulevard From By-Pass Drive to Lake Street, a total length of 5.93 miles. (See footnotes 1, 7, 8, 9*, and 11*)	HM1A, 1B HM2C HM2D HM2E HM4K	92,900.00 2,300.00 69,707.00 10,500.00 62,000.00
		Total authorized, Route 1(a)		**$237,407.00**
1(b)	1.44	Park Presidio Boulevard from Lake Street to Golden Gate Bridge approach, a total length of 1.44 miles	None	0.00
		Total authorized, Route 1(b)		0.00
35(a)	2.00	Skyline Boulevard, from south city limits to Sloat Boulevard, a total length of 2.00 miles (See footnotes 2, 8)	HM2D HM4K	7,921.00 3,500.00
		Total authorized, Route 35(a)		**11,421.00**

*Added by Amendment No. 1 and 2.

Route No	Length Miles		Program Delegated	Maximum Annual Authorized Expenditure
280	9.03	Southern Freeway from the San Mateo County Line at the St. Charles Avenue Overcrossing to the end of constructed freeway at Brannan Street, a length of 7.54 miles; also, freeway on and off-ramps from Mission Street to Route 80, a length of 0.76 mile; total length 9.03 miles. (See footnote 8)	HM2C(R/W) HM4K	8,200.00 9,200.00
		Total authorized Route 280		17,400.00
		TOTAL AUHORIZED EXPENDITURE		**$827,468.00**

Footnotes:

1. Length of street to be cleaned - 18.6 cure miles,
2. Length of street to be cleaned - 4.0 curb miles.
3. Length of street to be cleaned - 4.7 curb miles.
4. Length of street to be cleaned - 0.4 curb miles.
5. Length of street to be cleaned - 10.8 curb miles.
6. Length of street to be cleaned - 5.4 curb miles.
7. CITY shall maintain sidewalks and shall be responsible for any costs therein.
8. CITY will maintain signals and safety lighting on CITY streets at freeway on and off-ramps. STATE will maintain safety lighting of intersections connected to STATE circuits. CITY and STATE will participate in maintenance cost as provided under Program HM4K.
9. Maintenance of landscape areas or other ornamental plantings in the median area will be performed by CITY at no expense to STATE.
10. Adopted as a State highway by California Transportation Commission (Resolution HRA 01-2, December 6, 2000).
11. City shall own and maintain and be responsible for the costs of low profile speed bumps, steel bollards, pedestrian barrier rail, signage, red concrete built on CITY streets, within State Right of Way (19th Avenue/ Rossmoor Drive); as authorized under encroachment permit 04-17-N-OP2259.

EXHIBIT "B" (REVISED) Page 1

Amendment No.2
DMA

MAINTENANCE AND OPERATION OF ELECTRICAL EQUIPMENT BY
THE CITY OF SAN FRANCISCO
IN ACCORDANCE WITH MAINTENANCE AGREEMENT
EFFECTIVE _____

Rte	PM	Intersection	Rate	Equipment	Int or Pole No	Units	% State	% City
1	0.00	Alemany-Junipero Serra	SF	200W HP-Sodium	153, 161E	1	66.67	33.33
1	0.10	Alemany O/C	SF	70W HP-Sodium	1-8	8	100.00	0.00
1	0.18	Palmetto-Alemany	SF	150WHPS	401D, 402D	4	33.33	66.67
1	0.33	Brotherhood Way	SF	200W HP-Sodium	132D,133E,142D,143D	7	50.00	50.00
1	0.43	Font Blvd	SF	200W HP-Sodium	131W, 132W	2	66.67	33.33
1	0.68	Junipero Serra	SF	200W HP-Sodium	112D, 114D, 121D, 122D	8	50.00	50.00
			SF	250W HP-Sodium	389D	2	50.00	50.00
				Signals-FT			50.00	50.00
1	0.88	Crespi Dr	SF	250W HP-Sodium	372D, 373D, 376E	5	66.67	33.33
			SF	100W HP-Sodium	02D	2	66.67	33.33
			SF	150W HP-Sodium	145D	2	50.00	50.00
				Signals-FT			66.67	33.33
1	0.94	Holloway Ave	SF	200W HP-Sodium	151D	2	50.00	50.00
			SF	250W HP-Sodium	368D, 371D	4	50.00	50.00
				Signals-FT			50.00	50.00
1	1.35	Winston Dr	SF	70W HP-Sodium	21D	2	50.00	50.00
			SF	250W HP-Sodium	327D, 331D	4	50.00	50.00
				Signals-FT			50.00	50.00
1	1.55	M St Car Track/Buckingham Way extension	SF	200W HP-Sodium	322	1	66.67	33.33
				Signals-FT & Light [See			66.67	33.33
				Footnote (a)]				
1	1.60	Rossmoor Dr	SF	70W HP-Sodium	314	1	0.00	100.00
1	1.66	Eucalyptus Dr	SF	200W HP-Sodium	305D, 311D	4	50.00	50.00
			SF	100W HP-Sodium	21, 22	2	50.00	50.00
				Signals-FT			50.00	50.00
1	1.74	Ocean Ave	SF	200W HP-Sodium	297D, 301D	4	50.00	50.00
			SF	150W HPS	26/6	1	50.00	50.00
				Signals-FT			50.00	50.00
1	1.89	Sloat Blvd	SF	200W HP-Sodium	286D, 291D	4	75.00	25.00
			SF	150W HP-Sodium	23D, 31D	4	50.00	50.00
				Signals-FT			75.00	25.00

EXHIBIT "B" (REVISED) Page 4a
MAINTENANCE AND OPERATION OF ELECTRICAL EQUIPMENT
BY THE CITY OF SAN FRANCISCO
IN ACORDANCE WITH MAINTENANCE AGREEMENT; EFFECTIVE _____

Rte	PM	Intersection	Rate	Equipment	Int or Pole No	Units	% State	% City
35	1.37	Harding Blvd	SF	150W HP-Sodium	32,31W,01	3	66.67	33.33
35	1.73	Zoo-Lake Merced Blvd, [See Footnote (c)]	SF	150W HP-Sodium Signals-TA	11, 13, 16	3	50.00	50.00
35	1.83	Sloat-Skyline Conn	SF	150W HP-Sodium	12, 14	2	66.67	33.33
35	1.99	39th Ave/Skyline Blvd	SF	150W HP-Sodium	211,213,01D,03D,203N,205N	8	66.67	33.33
35	2.06	Sunset Blvd Ramps	SF	150W HP-Sodium	175,177,191	3	50.00	50.00
35	2.15	36th Ave	SF	HAWK Beacon		2	50.00	50.00
		[See Footnote (a)]						
35	2.25	34th Ave/Clearfield Drive,	SF	200W HPS		4	50.00	50.00
		[See Footnote (a)]		Signals-TA			50.00	50.00
35	2.32	Lakeshore Plaza/Sloat Blvd,	SF	200W HPS		3	66.67	33.33
		[See Footnote (a)]		Signals-TA			66.67	33.33
35	2.39	Constanso/Everglade Dr	SF	150W HP-Sodium	142,151	2	50.00	50.00
35	2.39	Constanso/Everglade Dr	SF	HAWK Beacon		2	50.00	50.00
		[See Footnote (a)]						
35	2.56	Mirasol Place	SF	150W HP-Sodium	128D, 131D	4	66.67	33.33
35	2.56	Mirasol Place	SF	HAWK Beacon		2	50.00	50.00
		[See Footnote (a)]						
35	2.67	Forest View Drive	SF	150W HP-Sodium	112D, 121D	4	66.67	33.33
35	2.67	Forest View Drive	SF	HAWK Beacon		2	50.00	50.00
		[See Footnote (a)]						
35	2.78	26th Ave	SF	150W HP-Sodium	92D, 121D	4	66.67	33.33
35	2.78	26th Ave	SF	HAWK Beacon		2	50.00	50.00
		[See Footnote (a)]						
35	2.93	23rd Ave/Crestlake Dr	SF	150W HP-Sodium	72S,71D,64D,63N	6	50.00	50.00
35	2.93	23rd Ave/Crestlake Dr	SF	HAWK Beacon		2	50.00	50.00
		[See Footnote (a)]						

EXHIBIT "B" (REVISED) Page 4b
MAINTENANCE AND OPERATION OF ELECTRICAL EQUIPMENT
BY THE CITY OF SAN FRANCISCO
IN ACORDANCE WITH MAINTENANCE AGREEMENT; EFFECTIVE _____

Rte	PM	Intersection	Rate	Equipment	Int or Pole No	Units	% State	% City
35	3.06	21st Ave	SF	150W HP-Sodium	42D,51D,41N	5	66.67	33.33
35	3.06	21st Ave	SF	HAWK Beacon		2	50.00	50.00
35	3.16	19th Ave	SF	150W HP-Sodium	32N	1	75.00	25.00
80	4.39	7th St/Bryant St. Ramp	SF	200W HPS	814	1	20.00	80.00
			SF	200W HP-Sodium	46,48	2	20.00	80.00
				Signals-FT			20.00	80.00
80	4.40	7th St near Bryant St.	SF	200W HP-Sodium	41,43,45	3	50.00	50.00
				Signals-FT			20.00	80.00
80	4.49	8th St./Bryant St.	SF	200W HP-Sodium	96	1	50.00	50.00
				Signals-FT			20.00	80.00
80	4.51	8th St./Harrison St Ramp	SF	200W HP-Sodium	115, 122,35,42	4	20.00	80.00
				Signals-FT			20.00	80.00
80	4.51	7th St/Harrison Ramp	SF	200W HP-Sodium	43,44	2	50.00	50.00
				Signals-FT			20.00	80.00
80	4.52	8th St near Harrison	SF	200W HP-Sodium	37,42,107,112	4	50.00	50.00
				Signals-FT			20.00	80.00

EXHIBIT "B" (REVISED) Page 5a
MAINTENANCE AND OPERATION OF ELECTRICAL EQUIPMENT
BY THE CITY OF SAN FRANCISCO
IN ACCORDANCE WITH MAINTENANCE AGREEMENT; EFFECTIVE _____

Rte	PM	Intersection	Rate	Equipment	Int or Pole No	Units	% State	% City
80	4.91	5th St/Harrison St Ramp	SF	150W HPS	814	3	20.00	80.00
			SF	200W HP Sodium	36, 41	2	20.00	80.00
			SF	250W HP-Sodium	42	1	20.00	80.00
				Signals-FT			20.00	80.00
80	4.92	4th St/Harrison St Ramp	SF	250W HP-Sodium	33	1	20.00	80.00
			SF	150W HPS	82	1	20.00	80.00
				Signals-FT			20.00	80.00
80	4.93	4th St/Bryant St Ramp	SF	150W HP-Sodium		5	20.00	80.00
				Signals-FT			20.00	80.00
80	5.04	Bryant-Sterling St Ramp	SF	175W MV Lights	33	1	25.00	75.00
80	5.05	5th St/ Bryant St Ramp	SF	200W HP-Sodium	47, 51, 410, 71	4	20.00	80.00
			SF	150W HP-Sodium	67	1	20.00	80.00
80	5.54	Harrison-Essex St On-Ramp	SF	150W HP-Sodium	55, 53	2	25.00	75.00
				Signals-FT			25.00	75.00
80	5.56	1st-Harrison St Ramp	SF	150W HP-Sodium	41, 43, 52	3	25.00	75.00
				Signa Is-FT			25.00	75.00
80	5.58	Fremont-Harrison St Ramp	SF	100W HPS	33, 42	2	25	75.00
			SF	200W HP Sodium	35	1	25	75.00
				Signals-FT			25	75.00
82	0.04	Goethe St	SF	150W HP-Sodium	321	1	50.00	50.00
82	0.04	Goethe St	SF	HAWK Beacon		2	50.00	50.00
82	0.08	Rice Ave	SF	150W HP-Sodium	315	1	50.00	50.00
82	0.08	Rice Ave	SF	HAWK Beacon		2	50.00	50.00
82	0.13	Liebig-De Long St	SF	150W HP-Sodium	311	1	50.00	50.00
82	0.16	Alemany Blvd - San Jose Ave	SF	150W HP-Sodium	315D, 318, 3010	4	44.44	55.56
			SF	150W HP-Sodium	309D, 3011D	4	44.44	55.56

EXHIBIT "B" (REVISED) Page 5b

MAINTENANCE AND OPERATION OF ELECTRICAL EQUIPMENT

BY THE CITY OF SAN FRANCISCO

IN ACCORDANCE WITH MAINTENANCE AGREEMENT; EFFECTIVE _____

Rte	PM	Intersection	Rate	Equipment	Int or Pole No	Units	% State	% City
82	0.17	Sagamore-Sickles	SF	150W HP-Sodium	12D, 294D, 11, 02,	8	28.57	71.43
82	0.20	Sadowa Off-Ramp	SF	250W MV Lights	292	1	50.00	50.00
101	0.56	Bayshore Blvd NB Ramp	SF	200W HP-Sodium	192	1	33.33	66.67
101	0.57	3rd St NB Ramp	SF	150W HP-Sodjum	674	1	33.00	67.00
101	0.69	Bayshore Blvd NB Ramp	SF	200W HP::sodium	184	1	50.00	50.00
101	0.84	3rd St Ramp Merges	SF	100W HP-Sodium	19, 20	2	50.00	50.00

EXHIBIT C

Amendment No. 2
DMA

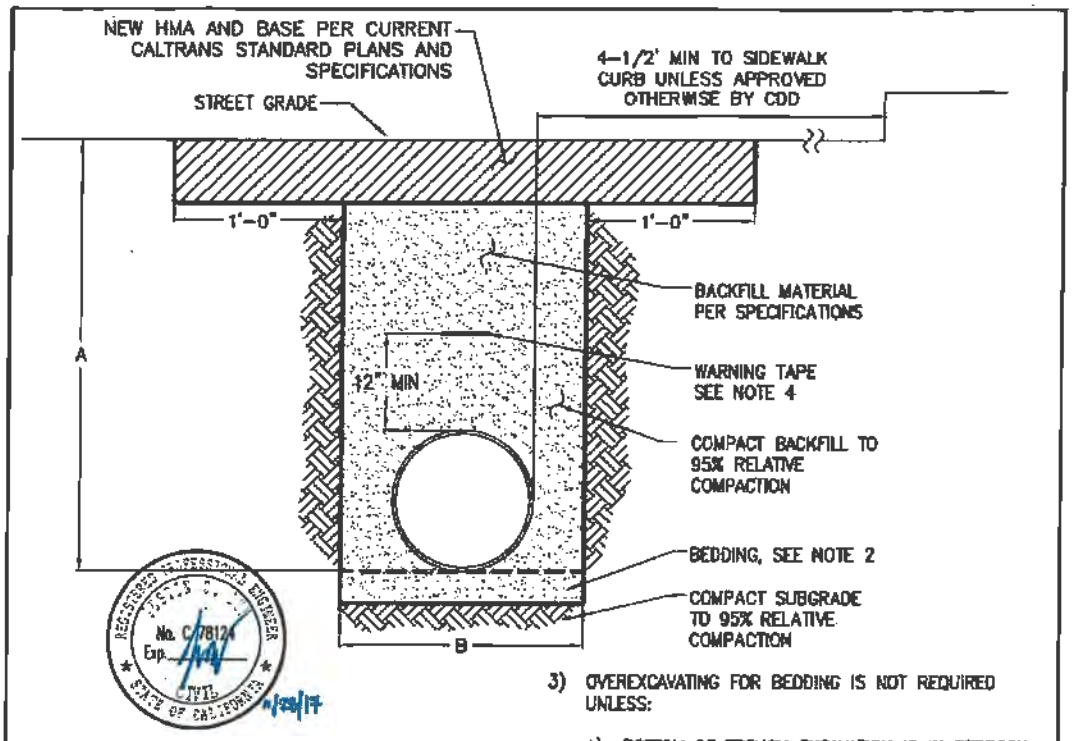
SPECIFIED STATE ROUTES
AND
CITY WATER, SEWER, AND AWSS TRENCH DETAILS

SPECIFIED STATE ROUTES

State Route/ Project Expenditure Authorization Number (EA)	Street Name	Post Mile (longitudinal limits)		Lateral limits	Effective date
		Begin PM	End PM		
SR-101 EA 04-3A270	Van Ness Avenue	4.71	6.71	Entire width of street from back of curb east side to back of curb west side.	January 1, 2018
SR-101 EA 04-4J790	Lombard Street	6.71	8.02		January 1, 2018
SR-1 EA 04-0G350	19th Avenue	R0.94	4.05		January 1, 2018

EXHIBIT C

CITY WATER, SEWER, AND AWSS TRENCH DETAILS



NOMINAL PIPE DIAMETER	MINIMUM TRENCH DEPTH A	MINIMUM TRENCH WIDTH B
1", 2"	24"	12"
4", 6", 8"	36"	18"
12"	44"	24"
16"	54"	30"
20"	54"	36"
24"	55"	44"
36"	72"	60"
48"	84"	72"

NOTES:

1) MINIMUM TRENCH DEPTHS AND TRENCH WIDTHS MUST BE ADHERED TO UNLESS APPROVED OTHERWISE BY THE CITY DISTRIBUTION DIVISION.

2) TRENCH CONSTRUCTION SHALL CONFORM TO OSHA AND CAL OSHA.

3) OVEREXCAVATING FOR BEDDING IS NOT REQUIRED UNLESS:

   A) BOTTOM OF TRENCH EXCAVATION IS IN BEDROCK, WHERE BEDDING SHALL BE 6" THICK.
   B) FOR 20" AND 24" DIA. PIPE, WHERE BEDDING SHALL BE 4" THICK.
   C) FOR 36" AND 48" DIA. PIPE, WHERE BEDDING SHALL BE 6" THICK.
   D) REQUIRED BY THE CITY REPRESENTATIVE.

   BEDDING SHALL BE THE SAME AS BACKFILL MATERIAL PER SPECIFICATIONS AND SHALL BE COMPACTED TO 95% RELATIVE COMPACTION.

4) WARNING TAPE SHALL BE 6" WIDE, BLUE COLORED FOR LPW AND PURPLE FOR RW, NON-DETECTABLE TYPE. INSCRIPTION MESSAGE, USING 1.5" MINIMUM HEIGHT BLACK TEXT, SPACED AT 3-FT MAXIMUM INTERVALS, SHALL READ "CAUTION: WATER LINE BELOW" FOR LPW AND "CAUTION: RECYCLED WATER LINE BELOW" FOR RW. WARNING TAPE SHALL OVERLAP 12" MINIMUM AT SPLICES.

San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission

WATER ENTERPRISE – CITY DISTRIBUTION DIVISION STANDARD PLANS

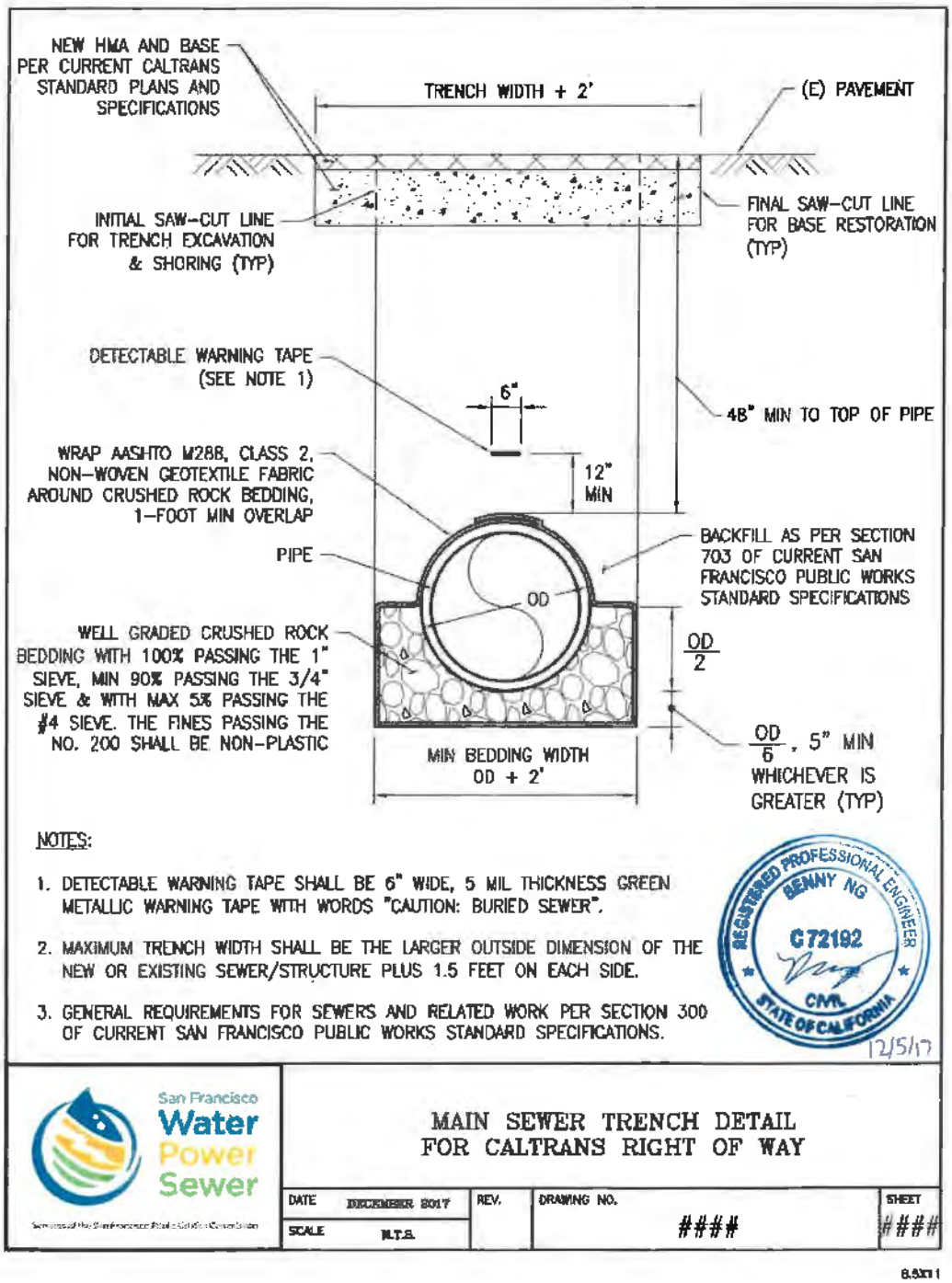
WATER WORK TRENCH DETAIL
FOR CALTRANS RIGHT OF WAY

DATE	NOV 2017	REV.	DRAWING NO.	SHEET
SCALE	N.T.S.	0	####	####

CITY shall be responsible for performing the maintenance and repair for all failures or defects of the roadway infrastructure resulting from the construction and use of the CITY-Trench Details.

EXHIBIT C

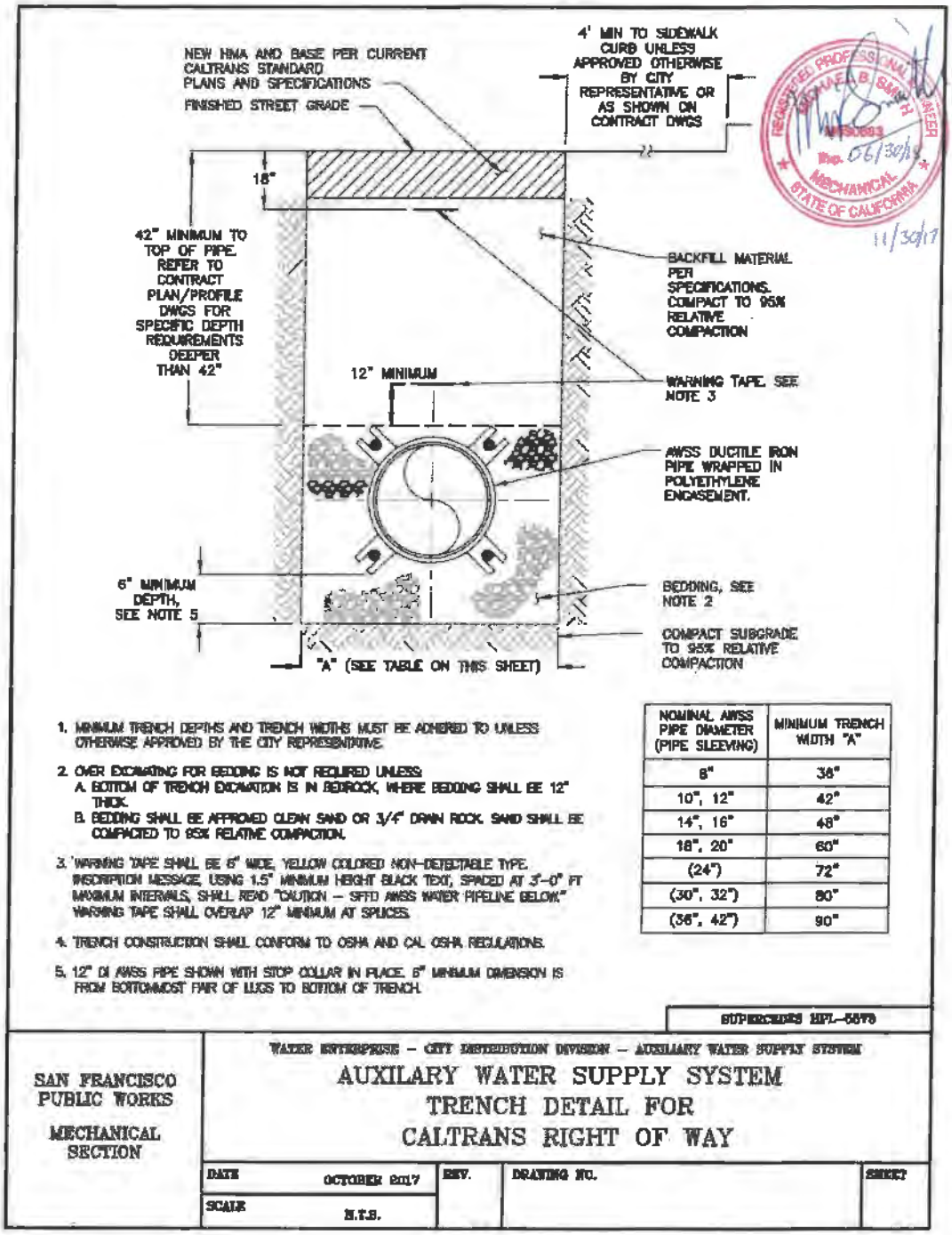
CITY WATER, SEWER, AND AWSS TRENCH DETAILS



CITY shall be responsible for performing the maintenance and repair for all failures or defects of the roadway infrastructure resulting from the construction and use of the CITY- Trench Details.

EXHIBIT C

CITY WATER, SEWER, AND AWSS TRENCH DETAILS



1. MINIMUM TRENCH DEPTHS AND TRENCH WIDTHS MUST BE ADHERED TO UNLESS OTHERWISE APPROVED BY THE CITY REPRESENTATIVE.
2. OVER EXCAVATING FOR BEDDING IS NOT REQUIRED UNLESS:
   A. BOTTOM OF TRENCH EXCAVATION IS IN BEDROCK, WHERE BEDDING SHALL BE 12" THICK.
   B. BEDDING SHALL BE APPROVED CLEAN SAND OR 3/4" DRAIN ROCK. SAND SHALL BE COMPACTED TO 95% RELATIVE COMPACTION.
3. WARNING TAPE SHALL BE 6" WIDE, YELLOW COLORED NON-DETECTABLE TYPE. INSCRIPTION MESSAGE, USING 1.5" MINIMUM HEIGHT BLACK TEXT, SPACED AT 3'-0" FT MAXIMUM INTERVALS, SHALL READ "CAUTION – SFFD AWSS WATER PIPELINE BELOW." WARNING TAPE SHALL OVERLAP 12" MINIMUM AT SPLICES.
4. TRENCH CONSTRUCTION SHALL CONFORM TO OSHA AND CAL OSHA REGULATIONS.
5. 12" DI AWSS PIPE SHOWN WITH STOP COLLAR IN PLACE. 6" MINIMUM DIMENSION IS FROM BOTTOMMOST PAIR OF LUGS TO BOTTOM OF TRENCH.

NOMINAL AWSS PIPE DIAMETER (PIPE SLEEVING)	MINIMUM TRENCH WIDTH "A"
8"	36"
10", 12"	42"
14", 16"	48"
18", 20"	60"
(24")	72"
(30", 32")	80"
(36", 42")	90"

SUPERCEDES HPL-6878

SAN FRANCISCO PUBLIC WORKS
MECHANICAL SECTION

WATER ENTERPRISE – CITY DISTRIBUTION DIVISION – AUXILIARY WATER SUPPLY SYSTEM

AUXILARY WATER SUPPLY SYSTEM
TRENCH DETAIL FOR
CALTRANS RIGHT OF WAY

DATE	OCTOBER 2017	REV.	DRAWING NO.	SHEET
SCALE	N.T.S.			

CITY shall be responsible for performing the maintenance and repair for all failures or defects of the roadway infrastructure resulting from the construction and use of the CITY- Trench Details.