

APPROACH SPEED (MPH)	TABLE A - MAXIMUM CHANNELIZER SPACING				
	TAPER (FT)	TANGENT (FT)	CONFLICT (FT)	1-LANE, 2-WAY	DOWN- STREAM (FT)
	15	15	30	7	20
	20	20	40	10	20
	25	25	50	12	20
	30	30	60	15	20
	35	35	70	17	20
	40	40	80	20	20
	45	45	90	22	20
	50	50	100	25	20
	55	50	100	25	20
	60	50	100	25	20
	65	50	100	25	20
	70	50	100	25	20
	75	50	100	25	20

TABLE B					
MINIMUM TAPER LENGTH FOR WIDTH OF OFFSET = 12 FT					
APPROACH SPEED (MPH)	MERGING L (FT)	SHIFTING L/2 (FT)	SHOULDER L/3 (FT)	ONE LANE, TWO-WAY (FT)*	DOWN- STREAM (FT)*
	15	45	23	15	50
	20	80	40	27	50
	25	125	63	42	50
	30	180	90	60	50
	35	245	123	82	50
	40	320	160	107	50
	45	540	270	180	50
	50	600	300	200	50
	55	660	330	220	50
	60	720	360	240	50
	65	780	390	260	50
	70	840	420	280	50
	75	900	450	300	50

* MAXIMUM TAPER LENGTH FOR ONE-LANE TWO WAY AND DOWNSTREAM
TAPERS IS 100 FT

TABLE C - ADVANCE WARNING SIGN SPACING	
ROAD TYPE	SIGN SPACING (FT)
	URBAN 25 MPH OR LESS
	URBAN MORE THAN 25 MPH TO 40 MPH
	URBAN MORE THAN 40 MPH
	RURAL
	EXPRESSWAY / FREEWAY

LEGEND

	WORK ZONE
	PAVEMENT MARKING
	BARRICADE (TYPE 1, 3, OR ADA AS NOTED)
	28", 10# REFLECTIVE CONE
	36" FIXED-MOUNT CHANNELIZER, ORANGE WITH WHITE RETRO-REFLECTOR, UON
	SIGN
	POST TEMP. TOW AWAY / NO STOPPING SIGNS
	PLAN VIEW FLASHING ARROW SIGN (FAS) OR CHANGEABLE MESSAGE SIGN (CMS)
	FLASHING ARROW SIGN
	SPEED RADAR TRAILER
	FLAGMAN
	UNIFORMED POLICE OFFICER
	WATER-FILLED LCD OR BARRIER AS NOTED
	ADA PLASTIC PEDESTRIAN BARRICADE / LCD
	CONCRETE K-RAIL BARRIER PER CALTRANS STANDARDS
	CRASH CUSHION, TL RATING AS NOTED
	TEMP PEDESTRIAN RAMP PER CALTRANS STD DRAWINGS T33 & T34
	TEMP STRIPING DETAIL PER CALTRANS STDs
	REMOVE CONFLICTING STRIPING

☒ NO EXCEPTIONS TAKEN
☐ MAKE CORRECTIONS NOTED
☐ REJECTED
☐ REVISE AND RESUBMIT
☐ SUBMIT SPECIFIED ITEM(S)

Review is only for general conformance with the design concept of the project and general compliance with the requirements of the contract documents. Any action shown is subject to the requirements of the plans and specifications. Contractor's responsibilities include, but are not limited to actual dimensions which shall be confirmed and correlated at the job site; preferred fabrication processes and techniques of construction; coordination of the contractor's work with that of all other trades; and the satisfactory performance of the contractor's work.

Sustainable Streets Division
San Francisco Municipal Transportation Agency
City and County of San Francisco

S. Wong / *S. Chan* Date: *4/11/2022*

INDEX OF TRAFFIC CONTROL PLAN SHEETS

SHEET NAME	REV	SCOPE	ISSUE DATE
TCP 013	0	NOTES AND CHARTS FOR SEWER TRAFFIC CONTROL PLANS – PART 2	3/14/2022
TCP 014	0	SEWER CIPL AND MANHOLE WORK ON 30TH ST FROM SAN JOSE AVE TO MISSION ST	3/14/2022
TCP 015	0	SEWER MAIN AND MANHOLE CONSTRUCTION ON EUGENIA AVE FROM ELSIE ST TO BONVIEW ST – SHEET 1 OF 2	3/14/2022
TCP 016	0	SEWER MAIN AND MANHOLE CONSTRUCTION ON EUGENIA AVE FROM ELSIE ST TO BONVIEW ST – SHEET 2 OF 2	3/14/2022
TCP 017	0	SEWER MAIN AND MANHOLE CONSTRUCTION ON ANDOVER ST FROM BENTON AVE TO END	3/14/2022
TCP 018	0	SEWER MAIN AND MANHOLE CONSTRUCTION ON ELLSWORTH ST FROM CRESCENT AVE TO OGDEN AVE	3/14/2022
TCP 019	0	SEWER MAIN AND MANHOLE CONSTRUCTION ON MANCHESTER ST FROM STONEMAN ST TO BESSIE ST	3/14/2022
TCP 020	0	SEWER MAIN AND MANHOLE CONSTRUCTION ON BESSIE ST AT MANCHESTER ST	3/14/2022
TCP 021	0	SEWER MAIN AND MANHOLE CONSTRUCTION ON BESSIE ST FROM MANCHESTER ST TO FOLSOM ST	3/14/2022
TCP 022	0	SEWER MAIN AND MANHOLE CONSTRUCTION ON MULLEN AVE FROM ALABAMA ST TO PERALTA AVE	3/14/2022
TCP 023	0	SEWER MAIN AND MANHOLE CONSTRUCTION ON PERALTA AVE AT MULLEN ST	3/14/2022
TCP 024	0	SEWER MAIN, LATERAL, CULVERT, MANHOLE, AND CATCH BASIN CONSTRUCTION ON PERALTA AVE FROM FLORIDA ST TO FRANCONIA ST	3/14/2022
TCP 025	0	SEWER CIPL AND MANHOLE MORTARING ON COSO AVE FROM PRECITA AVE TO MIRABEL AVE	3/14/2022
TCP 026	0	SEWER MAIN, LATERAL, AND MANHOLE CONSTRUCTION ON STONEMAN ST FROM BONVIEW ST TO SHOTWELL ST	3/14/2022

* The Contractor shall not prevent or delay the operation of mass transit vehicles at any time. TC = Trolley Coach, MC = Motor Coach, MM = SFMTA Metro. See Subsection 3.3 MASS TRANSIT VEHICLES for more information.

β The Contractor shall perform the appropriate measures to ensure the safety of bicyclists on ALL streets on which there is construction. Contractors shall pay special attention to streets that are on the Bicycle Route Network. See Blue Book Section 9: Bicycle Routes or on the internet at:

<https://www.sfmta.com/maps/san-francisco-bike-network-map>

The Contractor shall install "Bicyclists Allowed Use of Full Lane" signs, or other approved equal, on streets with bicycle lanes during construction.

© The Contractor may close this road to through traffic only during work hours. "Road Closed" signs shall be removed or covered during non-working hours. The Contractor shall set up detour signs in accordance with the approved traffic detour plans as deemed necessary. Local access must be maintained at all times.

↓ The Contractor shall designate the lane for two-way traffic with a flag person at each end of the two-way road segment to control the flow of traffic. This operation shall be restricted to one block at a time.

↑M The Contractor shall designate the lane for two-way traffic for Muni only with a flag person at each end of the two-way road segment to control the flow of traffic. The Contractor shall detour all other through traffic except the one way traffic designated heading northbound (or ↓ southbound, ➡ eastbound, ⬅ westbound). The Contractor shall set up detour signs in accordance with the approved traffic detour plans as deemed necessary and shall install/remove or cover/uncover the signs on a daily basis. This operation shall be restricted to one block at a time.

↑ The Contractor shall designate the lane for one way traffic heading northbound (or ↓ southbound, ➡ eastbound, ⬅ westbound) as specified during construction hours only with flag person at each end of the intersection to control the flow of traffic. The Contractor shall set up construction signs according to the approved traffic detour plans as deemed necessary and shall install/remove or cover/uncover the signs on a daily basis. Local access must be maintained at all times.

% The Contractor shall have one lane open at the specified width in one direction during the actual construction of the concrete street. The direction of this particular lane will depend on the side of the street that is not being reconstructed at that particular time. For example, if the south side of the street is under construction, then the north side of the street shall be open to one-way traffic westbound. The Contractor may only work on one-half of the street at any one time. The Contractor shall set up and maintain the detour and construction signs according to the approved Traffic Detour Plans as deemed necessary. The Detour Plans for these blocks must include a detour route for SFMTA buses. See Subsection 3.3 MASS TRANSIT VEHICLES for more information.

NOTES:

- WORK SCOPE: SEWER MAIN AND LATERAL REPLACEMENT, MANHOLE AND CATCH BASIN CONSTRUCTION, CULVERT CONSTRUCTION, AND CIP SEWER LINING
- WORK HOURS: SEE CHARTS
- PROVIDE FULL ROADWAY DURING NON-WORKING HOURS, UNLESS OTHERWISE NOTED.
- PROVIDE LOCAL ACCESS AT ALL TIMES.
- NOTIFY RESIDENTS, BUSINESSES, AND PROPERTY OWNERS WITH DATES AND TIMES THAT THEIR ACCESS WILL BE AFFECTED 2 WEEKS PRIOR TO START OF WORK.
- CONTRACTOR IS ALLOWED TO CLOSE 1 CROSSWALK AT ANY ONE TIME DURING WORKING HOURS AS LONG AS 1 FLAGPERSON IS PROVIDED TO DIRECT PEDESTRIANS TO THE OPEN CROSSWALKS.
- SEE CONTRACT SPECIFICATION SECTION 01 55 26 FOR ADDITIONAL NOTES
- ALL TRAFFIC CONTROL SHALL FOLLOW THE CA MUTCD, LATEST EDITION
- ALL TRAFFIC CONTROL DEVICES SHALL BE RETROREFLECTIVE AND CRASHWORTHY AS DEFINED IN THE CA MUTCD.
- FLAGGER STATIONS SHALL BE ILLUMINATED DURING HOURS OF DARKNESS
- MOUNT 2 ORANGE FLAGS ABOVE EACH SIGN. SEE TABLE 6F-1 IN CHAPTER 6 OF THE CA MUTCD FOR SIGN SIZES. MINIMUM SIGN HEIGHT FOR TEMPORARY SIGNS IS 1' FROM THE GROUND TO THE BOTTOM OF THE SIGN. IF A SIGN WILL BE IN PLACE FOR MORE THAN 3 DAYS, MINIMUM SIGN HEIGHT IS 7'.
- CONTRACTOR TO VERIFY ACCURACY OF EXISTING STRIPING PRIOR TO START OF WORK.
- IF TRENCH PLATES ARE USED, PLACE A W8-24 "STEEL PLATE AHEAD" SIGN IN ADVANCE.
- A C27 "OPEN TRENCH" SIGN SHALL BE USED IN ADVANCE OF OPEN TRENCHES IN/OR ADJACENT TO THE ROADWAY. ALL OPEN TRENCHES SHALL BE CLEARLY DELINEATED AND BARRICADED DURING WORKING HOURS AND FILLED OR PLATED DURING NON-WORKING HOURS.
- IF A STEP OR RIDGE IN THE PAVEMENT EXCEEDS $\frac{3}{8}$ " PARALLEL TO THE DIRECTION OF TRAVEL OR $\frac{3}{8}$ " PERPENDICULAR TO THE DIRECTION OF TRAVEL, POST A C46(CA) "UNEVEN PAVEMENT" SIGN (OR W8-11 "UNEVEN LANE" SIGN IF ALONG A LANE LINE). IF THE STEP EXCEEDS 3", DO NOT RE-OPEN THE ROADWAY UNTIL CORRECTED.
- PRIOR TO DIRECTING OR CHANNELIZING BICYCLES INTO AN AREA OF THE ROADWAY, CONTRACTOR SHALL VERIFY THAT ALL DRAIN INLET GRATES ARE BICYCLE-SAFE. REFER TO CALTRANS STANDARD PLAN D77B FOR EXAMPLES OF BICYCLE-SAFE GRATES.
- WHEN DIVERTING PEDESTRIANS FROM A SIDEWALK, CONTRACTOR SHALL DELINEATE A 5' (4' MINIMUM) SAFE PATH OF TRAVEL FOR PEDESTRIANS USING PLASTIC ADA-COMPLIANT PEDESTRIAN BARRICADES WITH A DETECTABLE AND CONTINUOUS TOE-BOARD. THE BOTTOM OF THE TOE BOARD SHALL BE NO MORE THAN 2" ABOVE GRADE AND THE TOP SHALL BE AT LEAST 6" ABOVE GRADE. THE SAFE PATH OF TRAVEL SHALL CONSIST OF A HARD, SMOOTH, CONTINUOUS SURFACE WITH A MAXIMUM SLOPE OF 5% AND CROSS SLOPE OF 2%. SURFACE DISCONTINUITIES MUST NOT EXCEED $\frac{1}{2}$ " AND VERTICAL DISCONTINUITIES BETWEEN $\frac{1}{4}$ " AND $\frac{1}{2}$ " MUST BE BEVELED AT A MAXIMUM OF 2:1 OR FLATTER. REFER TO THE CALTRANS TEMPORARY PEDESTRIAN ACCESS ROUTES HANDBOOK FOR ADDITIONAL DETAILS.
- TEMPORARY CURB RAMPS MUST NOT HAVE SURFACE DISCONTINUITIES. THE LONGITUDINAL SLOPE MUST BE NO GREATER THAN 8.3%. EDGE PROTECTION MUST BE AT LEAST 2" HIGH ON EACH SIDE IF IT DOES NOT HAVE FLARES AND THE RISE IS GREATER THAN 6". A DETECTABLE WARNING SURFACE MUST BE USED. REFER TO CALTRANS STANDARD PLANS T33 AND T34 FOR ADDITIONAL DETAILS.
- IF AN EXISTING SAFE PATH OF TRAVEL IS OBSTRUCTED BY A FLEXIBLE HOSE FOR SEWER DIVERSION, THE CONTRACTOR SHALL PROVIDE TEMPORARY PEDESTRIAN RAMPS OVER THE HOSES. IF THE FLEXIBLE HOSE IS LOCATED WITHIN A BIKE PATH, BIKE LANE, OR A STREET DESIGNATED AS AN OFFICIAL BIKE ROUTE, THE CONTRACTOR SHALL PROVIDE LONGITUDINAL AND/OR TRANSVERSE TRANSITIONS WITH A SLOPE OF 1:18 BETWEEN THE HOSE AND EXISTING PAVEMENT WHENEVER THE DIFFERENCE IN THE GRADE OF THE PAVEMENT AND THE HOSE EXCEEDS $\frac{3}{4}$ ". BEFORE OPENING THE LANES TO TRAFFIC.

ABBREVIATIONS:

ADA	AMERICAN WITH DISABILITIES ACT
ADAAG	ADA ACCESSIBILITY GUIDELINES
AFAD	AUTOMATED FLAGGER ASSISTANCE DEVICE
AVE	AVENUE
BW	BROKEN WHITE (STRIPE)
BY	BROKEN YELLOW (STRIPE)
CAL/OSHA	CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
CA MUTCD	CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS
CALTRANS	CALIFORNIA DEPARTMENT OF TRANSPORTATION
CHP	CALIFORNIA HIGHWAY PATROL
CMS	CHANGEABLE MESSAGE SIGN
COZEEP	CONSTRUCTION ZONE ENHANCED ENFORCEMENT PROGRAM
CVC	CALIFORNIA VEHICLE CODE
DOT	DEPARTMENT OF TRANSPORTATION
DY	DOUBLE YELLOW (STRIPE)
E	EAST
EB	EAST-BOUND
EP	EDGE OF PAVEMENT
ES	EDGE OF SHOULDER
ETW	EDGE OF TRAVELED WAY
EXP	EXPRESSWAY
FAS	FLASHING ARROW SIGN
FHWA	FEDERAL HIGHWAY ADMINISTRATION
FS	FAR SIDE
FWY	FREEWAY
LCD	LONGITUDINAL CHANNELIZING DEVICE
LF	LINEAR FOOT
LL	LIMIT LINE (12" SW)
LN	LANE
LOS	LEVEL OF SERVICE
MAX	MAXIMUM
MH	MAN-HOLE
MPH	MILES PER HOUR
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
N	NEW
NB	NORTH
NCHRP	NORTH-BOUND NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM
NS	NEAR SIDE
NTS	NOT TO SCALE
OH	OVERHEAD
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN
PE	PROFESSIONAL ENGINEER
PED	PEDESTRIAN
PM	POST MILE OR AFTERNOON
RD	ROAD
ROW	RIGHT OF WAY
RR	RAILROAD
RTE	ROUTE
RW	ROADWAY
R/W	RIGHT OF WAY
S	SOUTH
SB	SOUTH-BOUND
SR	STATE ROUTE
ST	STREET
STD	STANDARD
SW	SIDEWALK
SW	SOLID WHITE (STRIPE)
SY	SOLID YELLOW (STRIPE)
TA/NS	TOW AWAY / NO STOPPING
TC	TRAFFIC CONTROL
TCP	TRAFFIC CONTROL PLAN
TEMP	TEMPORARY
TS	TRAFFIC SIGNAL
TTC	TEMPORARY TRAFFIC CONTROL
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
W	WEST
WB	WEST-BOUND

IF THIS SHEET IS NOT 24"x36" , IT IS
A REDUCED PRINT – SCALE ACCORDINGLY

0 50 100 150
1" = 50' GRAPHIC SCALE

Revisions

No.	Revisions	By	Date	Appr.

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Key Plan

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3/14/2022

DESIGN DOCUMENTS
TEMPORARY TRAFFIC CONTROL

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Project
VARIOUS LOCATIONS NO. 52 PAVEMENT RENOVATION AND SEWER REPLACEMENT SAN FRANCISCO, CA
SOURCING ID NO. 0000003758

Sheet Title
NOTES AND CHARTS FOR SEWER TRAFFIC CONTROL PLANS – PART 2

BCI Job	146	
Drwn By	PM	Sheet
Chckd By	PM	
Issue Date	3/14/2022	TCP-013