

Appendix K-1

Traffic Construction Trip Calculations

Sunnyvale Channel Construction Trip Estimate

West Channel

Reach	Per Reach ¹						Sum of Adj Reach ²	
	Duration (Weeks)	Duration for Max daily trips (days)	Max trips/day	Max trips/hour ³	Weighted Ave of trips/day	Weighted Ave of max trips/hour	Weighted Ave of trips/day	Weighted Ave of max trips/hour
CONFLUENCE W/GUADALUPE SLOUGH to CARL ROAD	10.0	3	140	35	28	22		
CARL RD. to CARIBBEAN DR.	10.2	25	130	34	74	24	102	46
CARL ROAD (W1)	15.0	1	48	26	16	13	90	37
CARIBBEAN DRIVE (W2)	1.4	-	10	8	10	8	26	21
CARIBBEAN DR. to JAVA DR.	13.2	6	120	33	38	27	48	35
WEST JAVA DRIVE (W3)	2.4	-	14	12	14	12	52	39
W. JAVA DR. to BORDEAUX DR.	22.8	6	120	33	32	24	46	36
BORDEAUX DRIVE (W4)	1	-	10	8	10	8	42	32
BORDEAUX DR. to MATHILDA AVE.	13	2	104	33	31	24		
ROSS DR. to HWY 101	2.6	1	56	25	24	21	55	45
HWY 101 to ALMANOR	2.7	2.5	60	25	30	21	54	42

Note:

- The analysis use the calculated weighted average trips to evaluate the traffic impact because the maximum trips for each reach mostly only last for few days. The weighted average trips of a reach are calculated based on the trips and durations of every phases of the reach; therefore, the activity with higher trips is accounted in the weighted average.
- Sum of trips from two adjacent reaches to estimate the combined traffic impact on local streets (i.e. using the same local streets to access the two reaches).
- Maximum trips/hour = (daily truck trips / 8 hours) + (daily worker trips / 2). One worker consists of 2 daily trips: one commute trip in the morning commute hour and one in the afternoon commute hour.

Trip Summary

Trip Type	West Channel		East Channel		Project wide	
	Maximum trips/day	Maximum trips/hour	Maximum trips/day	Maximum trips/hour	Maximum trips/day	Maximum trips/hour
Channel Work	102	46	85	46	187	92
Caribbean Bridge (East Channel)			33	24	33	24
<i>Maximum Trip Increase on Arterials and Local Streets</i>	<i>102</i>	<i>46</i>	<i>85</i>	<i>46</i>		
<i>Total Project-wide Trip Increase</i>					<i>220</i>	<i>116</i>

East Channel

Reach	Per Reach ¹						Sum of Adj Reach ²	
	Duration (Weeks)	Duration for Max daily trips (days)	Max trips/day	Max trips/hour ³	Weighted Ave of trips/day	Weighted Ave of max trips/hour	Weighted Ave of trips/day	Weighted Ave of max trips/hour
CONFLUENCE W/GUADALUPE SLOUGH TO E. CARIBBEAN DR	18.2	6	140	35	40	23		
E. CARIBBEAN DR (E1)	22.4	5	114	35	33	24	73	47
E. CARIBBEAN DR to MOFFETT PARK DR	12.6	7	140	35	36	22	69	46
MOFFETT PARK DR (E2)	1	-	10	8	10	8	46	30
MOFFETT PARK DR to HWY 237	0.6	-	50	24	50	24	60	32
HWY 237 (E3)	1	-	10	8	10	8	60	32
HWY 237 to PERSIAN DR	0.6	-	50	24	50	24	60	32
PERSIAN DR (E4)	1	-	10	8	10	8	60	32
PERSIAN DR to TASMAN DR	16.6	11	56	25	30	21	40	29
TASMAN DR to HWY 101/AHWANEE AVE	22.4	6	120	33	29	21	59	42
AHWANEE AVE. to BLYTHE AVE	4.2	4	56	25	28	21		
BLYTHE AVE to E. DUANE AVE	7	2	60	25	27	21	55	42
E. DUANE AVE to N. WOLFE RD	2.2	1	140	35	55	25	82	46
N. WOLFE RD to E. ARQUES AVE	4.4	1	140	35	30	20	85	45
EAST ARQUES AVE (E5)	2.2	-	10	8	10	8	40	28
E. ARQUES AVE to CENTRAL EXPRESSWAY	6.8	1	80	28	22	18	32	26
CENTRAL EXPRESSWAY to KIFER RD	2.6	2	56	25	36	22	58	40
KIFER RD to UPRR/CALTRAIN	1.6	1	56	25	34	22	70	44
UPRR/CALTRAIN to E. EVELYN AVE	5.8	1	40	23	17	13	51	35
EAST EVELYN AVE (E6)	1	-	10	8	10	8	27	21
E. EVELYN AVE to OLD SF ROAD	17.4	2	56	25	21	16	31	24
OLD SF ROAD to IRIS AVE	6.2	2	32	22	19	18	40	34
IRIS AVE to EL CAMINO REAL	1.4	1	140	35	60	25	79	43
EL CAMINO REAL to CRESENT	6.2	2	56	25	25	21	85	46
CRESENT to E. FREEMONT AVE	5.4	1	56	25	22	20	47	41
E. FREEMONT AVE to ASHBOURNE DR	2	1	56	25	30	21	52	41
ASHBOURNE to CARLISIE	1.2	1	56	25	36	23	66	44
CARLISIE WAY to DUNHOLME WAY	8.2	3	32	22	25	21	61	44
DUNHOLME WAY to INVERNESS WAY	9	2	56	25	27	21	52	42

Sunnyvale East and West Channels Flood Protection Project

Construction Trip Impacts on CMP Freeways

CMP Freeway	Segment	Number of Mixed Lanes/ Direction	Peak Hour Directional LOS ⁽¹⁾	Peak Hour Capacity/ Direction ⁽²⁾	1% of Capacity ⁽³⁾	Maximum Construction Trips/hour ⁽⁴⁾	Project trips exceed 1% capacity
US-101	SR 85 - Lawrence Expressway	3	F	6,600	66	33	No
SR 237	SR 85 - Lawrence Expressway	2	F	4,400	44	33	No
SR 85	I-280 - SR 237	2	F	4,400	44	33	No
I-280	SR 85 - Lawrence Expressway	3	F	6,600	66	33	No

(1) VTA 2011 CMP Annual Monitoring & Conformance Report.

(2) Based on VTA Transportation Analysis Guidelines, freeway segment capacity is 2,200 vphpl for four-lane freeway segments.

(3) Based on TIA Guidelines, for freeway segments that operate at LOS F, the added vehicle trips by the Project should not be more than 1% of the freeway capacity.

(4) Maximum trip increase on each freeway is calculated by assuming 80% of total trips using freeways, 60% of the freeway trips on worst travel direction, and 60% of the directional trips on each freeway segment. (116 x 80% x 60% x 60% = 33)

SUNNYVALE WEST CHANNEL FLOOD PROTECTION PROJECT - SF BAY TO ALMANOR AVENUE

PROJECT ELEMENT	Construction Activity	Construction Equipment	By Activity				By Reach		By Reach	
			Proposed Type of Flood Protection Measure	Duration of Use (Weeks)	Worker trips/day	Haul trips/day	Total trips/day	Max trips/hour	Max total trips/day	Max trips/hour
CONFLUENCE W/GUADALUPE SLOUGH to CARL ROAD Left Bank: A1-Line STA 51+00 to 60+00 ± A2-Line STA 0+00 to 9+00 ± Right Bank: A1-Line STA 52+50 to 59+95 ± <u>Floodwall Limits:</u> Left Bank A1-Line STA 51+00 to 60+00 (OB ~900± ft) A2-Line STA 0+00 to 9+00 (OB ~900± ft) A2-Line STA 0+00 to 1+25 (IB ~125± ft) Right Bank A1-Line STA 51+00 to 60+00 (IB ~900± ft) A2-Line STA 0+00 to 0+69 (IB ~55± ft) <u>Levee Limits:</u> A2-Line STA -0+60 to 1+25 (IB ~185± ft)	Fill Material A2-Line STA -0+60 to 1+25 (~185± ft) A1-Line STA 25+50 to 59+70 (~120ft)	1.2	20	0	20	20	140	35	28	22
	Floodwall Excavation Total Length = 2,880± LF	1.2	12	0	12	12				
	Concrete Floodwalls (5 Ft Height - 12 SF/FT) Total Length (OB&IB) = 2,880±	0.6	20	120	140	35				
		6.6	24	2	26	24				
	OR Corten Steel/Vinyl Sheets	5	20	2	22	20				
	Resurface Maintenance Road (4-Inch x 18 FT) Total Length = 2,880± LF	0.4	20	32	52	24				
	CARL ROAD A1-Line STA 60+16 to 60+46 (Both banks ~60± ft)	RCB Demolition	0.4	20	8	28				
RCB Replacement Construction, including Headwalls		0.2	24	16	40	26				
		12	12	2	14	12				
U/S & D/S Concrete Wingwalls		0.2	24	8	32	25				
		1	12	2	14	12				
Sediment Removal (3.5FT depth x 60 FT length x 20 FT width = 155 CY)		0.2	12	36	48	17				
Carl Road Sub-base Restoration Class 3 Aggregate Baserock		0.2	20	6	26	21				
Carl Rd. Restoration Asphalt Concrete	0.8	20	6	26	21					

SUNNYVALE WEST CHANNEL FLOOD PROTECTION PROJECT - SF BAY TO ALMANOR AVENUE

PROJECT ELEMENT	Construction Activity	Construction Equipment	By Activity				By Reach		By Reach		
			Duration of Use (Weeks)	Worker trips/day	Haul trips/day	Total trips/day	Max trips/hour	Max total trips/day	Max trips/hour	Weighted Ave of total trips/day	Weighted Ave of max trips/hour
CARL RD. to CARIBBEAN DR. A1-Line STA 60+46 to 66+10± <u>Fill Material</u> Levee Limits: Left & Right Bank (~1128 ft) A1-Line STA 60+46 to 66+10 (~564± ft)	Fill Material Levees Left & Right Bank (1128± ft) A1-Line STA 60+46 to 62+10		5	20	110	130	34	130	34	74	24
	Ramps At 6 locations (~222± ft)										
	Floodwall Excavation Total Length = 333± LF	0.6	12	0	12	12					
	Concrete Floodwalls (7 Ft Height - 17 SF/FT) Total Length (OB&IB) = 333±LF	1	20	12	32	22					
		3	12	2	14	12					
	Sediment Removal A1-Line STA 60+46 to 66+10	0.2	12	36	48	17					
	Resurface Maintenance Road (Both Sides: 4-Inch x 20 FT) Total Length = 1,130± LF	0.4	20	14	34	22					
CARIBBEAN DRIVE A1-Line STA 66+10 to 67+03±	Existing Headwall Demolition	0.2	8	2	10	8	10	8	10	8	
	Concrete Headwalls	0.2	8	2	10	8					
		1	8	2	10	8					
CARIBBEAN DR. to JAVA DR. A1-Line STA 67+03 to 85+04±	Floodwall Excavation Total Length = 3,782± LF	1.2	12	30	42	16					
	Concrete Floodwalls (7.5 Ft Height - 18.6 SF/FT) Total Length (IB) = 3,782±	1.2	20	100	120	33					
		8.2	32	4	36	33					

SUNNYVALE WEST CHANNEL FLOOD PROTECTION PROJECT - SF BAY TO ALMANOR AVENUE

PROJECT ELEMENT	Construction Activity	Construction Equipme	By Activity				By Reach		By Reach	
			Proposed Type of Flood Protection Measure	Duration of Use (Weeks)	Worker trips/day	Haul trips/day	Total trips/day	Max trips/hour	Max total trips/day	Max trips/hour
Project Reach - Stationing (Looking Upstream) A1-Line STA 67+03 to 85+94± Floodwall Limits: Left Bank A1-Line STA 67+03 to 85+94 (IB ~1,891 ± ft) Right Bank A1-Line STA 67+03 to 85+94 (IB ~1,891 ± ft)	OR Corten Steel/Vinyl Sheets	4	20	2	22	20	120	33	38	27
	Resurface Maintenance Road (Both Sides: 4-Inch x 15 FT) Total Length = 3,800± LF	1	20	14	34	22				
	Trail (OPTIONAL) West Bank B-Line STA 67+03± to 85+94±	1.6	20	8	28	21				
WEST JAVA DRIVE A1-Line STA 85+94 to 86+99±	Extend Existing Box Culvert, Wingwalls, & Construct Concrete Headwalls <u>Culvert Extension</u> D/S & U/S by 10FT Wingwalls D/S & U/S by 20FT <u>Concrete Headwalls</u> (D/S - 1FTx5FTx12FT) (U/S - 1FTx5FTx45FT)	0.4	8	6	14	9	14	12	14	12
		2	12	2	14	12				
W. JAVA DR. to BORDEAUX DR. A1-Line STA 86+99 to 106+03±	Floodwall Excavation Total Length = 3,808± LF	2	12	28	40	16				
	Concrete Floodwalls (7.5FT Ht-18.6SF/FTx3,202±FT) (5.5 FT Ht-15 SF/FTx606±FT) Total Length (IB) = 3,808±LF	1.2	20	100	120	33				
		8.2	32	4	36	33				
	OR Corten Steel/Vinyl Sheets	4	20	2	22	20				
	Channel RSP Excavation	4.6	20	0	20	20				

SUNNYVALE WEST CHANNEL FLOOD PROTECTION PROJECT - SF BAY TO ALMANOR AVENUE

PROJECT ELEMENT	Construction Activity	Construction Equipment	By Activity				By Reach		By Reach	
			Duration of Use (Weeks)	Worker trips/day	Haul trips/day	Total trips/day	Max trips/hour	Max total trips/day	Max trips/hour	Weighted Ave of total trips/day
Project Reach - Stationing (Looking Upstream)	Proposed Type of Flood Protection Measure	Duration of Use (Weeks)	Worker trips/day	Haul trips/day	Total trips/day	Max trips/hour	Max total trips/day	Max trips/hour	Weighted Ave of total trips/day	Weighted Ave of max trips/hour
<u>Floodwall Limits:</u> Left Bank A1-Line STA 86+99 to 106+03 (IB ~1,904± ft) Right Bank A1-Line STA 86+99 to 106+03 (IB ~1,904± ft) <u>Rock Slope Protection (RSP)</u> A1-Line STA 87+14 to 105+86±	Rock Slope Protection (RSP) A1-Line STA 87+14 to 105+86± (40FT x 4FT x 1872FT= 11,093±CY)	4.6	20	0	20	20	120	33	32	24
	(A) Wing-wall: demo existing SCSP; construct 2ft concrete key, & slurry RSP at transition A1-Line STA 105+86	0.2	20	36	56	25				
	Resurface Maintenance Road (West Side Only: 4-Inch x 12 FT) Total Length = 1,900± LF	0.4	20	14	34	22				
	Trail (OPTIONAL) West Bank B-Line STA 86+99 to 106+03±	1.6	20	8	28	21				
BORDEAUX DRIVE A1-Line STA 106+03 to 106+49±	16' Driveway apron on U/S & D/S at RB	1	8	2	10	8	10	8	10	8
BORDEAUX DR. to MATHILDA AVE. A1-Line STA 106+68 to 114+73± <u>Floodwall Limits:</u> Left Bank A1-Line STA 106+68 to 114+73± (IB ~805± ft) Right Bank A1-Line STA 106+68 to 114+73± (IB ~805± ft)	Floodwall Excavation Total Length = 1,610± LF	1	12	24	36	15				
	Concrete Floodwalls (4.5 FT Height - 11.4 SF/FT) Total Length (OB) = 1,610±LF	0.4	20	84	104	31				
		4.6	32	4	36	33				
	OR Corten Steel/Vinyl Sheets	2	20	2	22	20				
	Channel RSP Excavation	2.4	20	0	20	20				
Rock Slope Protection (RSP) A1-Line STA 106+68 to 114+73± (30FT x 4FT x 805FT= 3,580±CY)	2.4	20	0	20	20	104	33	31	24	

SUNNYVALE WEST CHANNEL FLOOD PROTECTION PROJECT - SF BAY TO ALMANOR AVENUE

PROJECT ELEMENT	Construction Activity	Construction Equipme	By Activity				By Reach		By Reach	
			Duration of Use (Weeks)	Worker trips/day	Haul trips/day	Total trips/day	Max trips/hour	Max total trips/day	Max trips/hour	Weighted Ave of total trips/day
<u>Rock Slope Protection (RSP)</u> A1-Line STA 106+68 to 114+73±	(A) Wing-wall: demo existing SCSP; construct 2ft concrete key, & slurry RSP at transition A1-Line STA 106+68	0.2	20	36	56	25				
	Resurface Maintenance Road (West Side Only: 4-Inch x 10 FT) Total Length = 825± LF	0.4	20	10	30	21				
	Trail (OPTIONAL) West Bank B-Line STA 106+68 to 114+73±	1.6	20	12	32	22				
ROSS DR. to HWY 101 A1-Line STA 139+75 to 146+70± <u>Rock Slope Protection (RSP)</u> (A1-Line Sta. 139+95± to 140+20) (A1-Line Sta. 145+90 to 146+55±)	Channel RSP Excavation	1	20	0	20	20	56	25	24	21
	Rock Slope Protection (RSP) (A1-Line Sta. 139+95± to 140+20) (37LFx4FTx50±LF) (A1-Line Sta. 145+90 to 146+55±) (37LFx4FTx65±LF)	1	20	0	20	20				
	(5) Install slurry RSP transition at SCSP	0.2	20	36	56	25				
	Resurface Maintenance Rd (East Side Only: 4-Inch x 8 FT) Total Length = 695± LF	0.4	20	8	28	21				
HWY 101 to ALMANOR A1-Line STA 148+80 to 153+75 <u>Rock Slope Protection (RSP)</u>	Channel RSP Excavation	1	20	0	20	20	60	25	30	21
	Rock Slope Protection (RSP) A1-Line STA 148+80 to 150+62± (4FTx40FTx182LF) = 1,078 CY A1-Line STA 153+14 to 153+24 (4FTx40FTx10LF) = 60 CY	1	20	0	20	20				

SUNNYVALE WEST CHANNEL FLOOD PROTECTION PROJECT - SF BAY TO ALMANOR AVENUE

PROJECT ELEMENT	Construction Activity	Construction Equipment	By Activity				By Reach		By Reach	
			Worker trips/day	Haul trips/day	Total trips/day	Max trips/hour	Max total trips/day	Max trips/hour	Weighted Ave of total trips/day	Weighted Ave of max trips/hour
Project Reach - Stationing (Looking Upstream) A1-Line STA 148+80 to 150+62± A1-Line STA 153+14 to 153+24	(5) Install slurry RSP transition at SCSP	0.2	20	36	56	25				
	Devegetate the eastern bank and install 6 ft cyclone fence (~125± ft)	0.5	20	40	60	25				

SUNNYVALE EAST CHANNEL FLOOD PROTECTION PROJECT - SF BAY TO INVERNESS WAY

PROJECT ELEMENT	Construction Activity	Construction Equipment	By Activity				By Reach		By Reach	
			Duration of Use (Weeks)	Worker trips/day	Haul trips/day	Total trips/day	Max trips/hour	Max total trips/day	Max trips/hour	Weighted Ave of total trips/day
CONFLUENCE W/GUADALUPE SLOUGH TO E. CARIBBEAN DR Left Bank (~3,864± ft) New Control Line STA -2+70± to 0+00 B-Line STA 0+00 to 35+94± Right Bank (~1,344± ft) R-Line STA 1+00± to 2+50± B-Line STA 24+00± to 35+94± <u>Floodwall Limits</u> Left Bank (~2,940± ft) B-Line STA 8+00± to 35+60± (OB ~2,760 ft) B-Line STA 34+20± to 36+00± (IB ~180 ft) Right Bank (~1,580± ft) R-Line STA 1+00± to 2+50± (OB ~150± ft) B-Line STA 24+00± to 35+60± (OB ~1,160 ± ft) B-Line STA 34+20± to 36+00± (IB ~180± ft) <u>Levee Limits</u> Left Bank (~1,150± ft) New Control Line STA -2+70± to 0+00± (~270± ft) B-Line STA 0+00± to 8+80± (~880± ft)	Floodwall Excavation Total Length = 4,520± LF	2	12	0	12	12	140	35	40	23
	Concrete Floodwalls (7 Ft Height - 16.8 SF/FT) Total Length (OB&IB) = 4,520±LF	1.2	20	120	140	35				
		10	24	2	26	24				
	OR Corten Steel/Vinyl Sheets	5	20	2	22	20				
	Fill Material <u>Levees (~1,150± ft)</u> Left Bank (~1,150± ft) New Control Line STA -2+70± to 0+00± (~270± ft) B-Line STA 0+00± to 8+80± (~880± ft) <u>Ramps (~360± ft)</u> Left/Right Banks B-Line STA 34+20± to 35+60± (IB & OB ~140 ± ft)	4	20	60	80	28				
	Resurface Maintenance Road East & West Bank (4-Inch x 18 FT) Total Length = 5,208± LF	1	20	24	44	23				
E. CARIBBEAN DR B-Line STA 35+86± to 37+06± (~120± ft) (Bridge replacement; includes new 8ft sidewalks extension US & DS)	Bridge Demolition	2	20	24	44	23	114	35	33	24
	Bridge Replacement Construction	1	24	90	114	35				
		16	24	2	26	24				
	U/S & D/S Concrete Wingwall	0.2	24	8	32	25				
		1	12	2	14	12				
	Caribbean Dr. Restoration Class 3 Aggregate Baserock	1	20	30	50	24				

SUNNYVALE EAST CHANNEL FLOOD PROTECTION PROJECT - SF BAY TO INVERNESS WAY

PROJECT ELEMENT	Construction Activity	Construction Equipment	By Activity				By Reach		By Reach	
			Duration of Use (Weeks)	Worker trips/day	Haul trips/day	Total trips/day	Max trips/hour	Max total trips/day	Max trips/hour	Weighted Ave of total trips/day
Project Reach - Stationing (Looking Upstream)	Proposed Type of Flood Protection Measure									
	Caribbean Dr. Restoration Asphalt Concrete	1	20	30	50	24				
	Concrete Sidewalk, Curb and Gutter Restoration	0.2	16	24	40	19				
E. CARIBBEAN DR to MOFFETT PARK DR B-Line STA 37+06± to 62+29± (~2,523± ft) <u>Floodwall Limits</u> Right & Left Bank (2,710± ft/each) B-Line STA 37+06± to 61+50± (OB ~2,450± ft) B-Line STA 37+30± to 38+50± (IB ~120± ft) B-Line STA 60+10± to 61+50± (IB ~140± ft)	Floodwall Excavation Total Length = 5,420± LF	3	12	24	36	15	140	35	36	22
	Concrete Floodwalls (7 Ft Height - 16.8 SF/FT) Total Length (OB&IB) = 5,420± LF	1.4	20	120	140	35				
		6	24	2	26	24				
	OR Corten Steel/Vinyl Sheets	5	20	2	22	20				
	Fill Material <u>Ramps</u> East & West Banks B-Line STA 37+30± to 38+50± (~120± ft) B-Line STA 60+10± to 61+50± (~140± ft)	1.2	20	0	20	20				
Resurface Maintenance Road East & West Bank (4-Inch x 18 FT) Total Length (STA 37+06 to 62+29) = 2,523± LF	1	20	24	44	23					
MOFFETT PARK DR B-Line STA 62+29± to 62+70±	Concrete Headwall	1	8	2	10	8	10	8	10	8
MOFFETT PARK DR to HWY 237 B-Line STA 62+70± to 62+85±	Concrete Floodwalls (6 Ft Height - 13 SF/FT) Total Length = 30 LF	0.6	20	30	50	24	50	24	50	24
HWY 237 B-Line STA 62+85± to 64+00±	Concrete Headwalls	1	8	2	10	8	10	8	10	8

SUNNYVALE EAST CHANNEL FLOOD PROTECTION PROJECT - SF BAY TO INVERNESS WAY

PROJECT ELEMENT	Construction Activity	Construction Equipment	By Activity				By Reach		By Reach	
			Duration of Use (Weeks)	Worker trips/day	Haul trips/day	Total trips/day	Max trips/hour	Max total trips/day	Max trips/hour	Weighted Ave of total trips/day
Project Reach - Stationing (Looking Upstream)	Proposed Type of Flood Protection Measure	Duration of Use (Weeks)	Worker trips/day	Haul trips/day	Total trips/day	Max trips/hour	Max total trips/day	Max trips/hour	Weighted Ave of total trips/day	Weighted Ave of max trips/hour
HWY 237 to PERSIAN DR B-Line STA 64+00± to 64+15±	Concrete Floodwalls (6 Ft Height - 13 SF/FT) Total Length = 30 LF	0.6	20	30	50	24	50	24	50	24
PERSIAN DR B-Line STA 64+15± to 64+53±	Concrete Headwalls	1	8	2	10	8	10	8	10	8
PERSIAN DR to TASMAN DR B-Line STA 64+53± to 82+33± <u>Floodwall Limits</u> Right & Left Bank (1,973± ft/each) B-Line STA 65+50 to 82+33± (OB ~1,683± ft) B-Line STA 64+53 to 66+50 (IB ~200± ft) B-Line STA 81+43 to 82+33± (IB ~90± ft)	Floodwall Excavation Total Length = 3,946± LF	2	12	24	36	15	56	25	30	21
	Concrete Floodwalls (4.5 Ft Height - 11.4 SF/FT) Total Length (OB&IB) = 3,946±LF	2.2	20	36	56	25				
		5	24	2	26	24				
	OR Corten Steel/Vinyl Sheets	5	20	2	22	20				
	Fill Material <u>Ramps</u> East & West Banks B-Line STA 65+50± to 66+50± (~100 x 2 = 200± ft) B-Line STA 81+43± to 82+33± (~90 x 2 = 180± ft)	1.2	20	0	20	20				
	Sediment Removal B-Line STA 82+20 – 82+33 (~13± ft)	0.2	12	24	36	15				
	Resurface Maintenance Road East & West Bank (4-Inch x 18 FT) Total Length (STA 64+53 to 82+33) = 1,780± LF	1	20	16	36	22				
Floodwall Excavation Total Length = 4,304± LF	1.6	12	24	36	15					
Concrete Floodwalls (6 Ft Height - 15.6 SF/FT)	1.2	20	100	120	33					

SUNNYVALE EAST CHANNEL FLOOD PROTECTION PROJECT - SF BAY TO INVERNESS WAY

PROJECT ELEMENT	Construction Activity	Construction Equipment	By Activity				By Reach		By Reach	
			Worker trips/day	Haul trips/day	Total trips/day	Max trips/hour	Max total trips/day	Max trips/hour	Weighted Ave of total trips/day	Weighted Ave of max trips/hour
<p>Project Reach - Stationing (Looking Upstream)</p> <p>TASMAN DR to HWY 101/AHWANEE AVE B-Line STA 83+39± to 102+50±</p> <p><u>Floodwall Limits</u> Right & Left Banks (2,152± ft/each) B-Line STA 85+00 to 102+12 (OB ~1,712± ft) B-Line STA 83+39 to 86+40 (IB ~300± ft) B-Line STA 101+12 to 102+50 (IB ~140± ft)</p> <p><u>Rock Slope Protection (RSP)</u> B-Line STA 84+40 to 92+63± B-Line STA 93+90 to 102+12±</p>	<p>(1) Outfall: demo single row of SCSP; construct 2ft concrete key & slurry RSP transition B-Line STA 85+10 B-Line STA 85+50 B-Line STA 89+95 B-Line STA 91+95 B-Line STA 94+45</p>	5.4	24	2	26	24	120	33	29	21
	<p>Proposed Type of Flood Protection Measure</p> <p>Total Length (OB&IB) = 4,304±</p>	4	20	0	20	20				
	<p>OR</p> <p>Corten Steel/Vinyl Sheets</p>	5	20	2	22	20				
	<p>Channel RSP Excavation</p>	6	20	0	20	20				
	<p>Rock Slope Protection (RSP) B-Line STA 84+40 to 92+63± (43FT x 4FT x 823FT= 8,242 CY) B-Line STA 93+90 to 102+12± (46FT x 4FT x 822FT = 5,602 CY)</p>	1.6	20	0	20	20				
	<p>Fill Material <u>Ramps</u> East & West Banks B-Line STA 85+00± to 86+40± (~140± ft) B-Line STA 101+12± to 102+12± (~100± ft)</p>	0.2	20	36	56	25				
	<p>(A) Wing-wall: demo existing SCSP; construct 2ft concrete key, & slurry RSP at transition B-Line STA 84+40 to 84+45 B-Line STA 92+59 to 92+63 B-Line STA 93+90 to 93+95 B-Line STA 102+08 to 102+12</p>	0.2	20	36	56	25				

SUNNYVALE EAST CHANNEL FLOOD PROTECTION PROJECT - SF BAY TO INVERNESS WAY

PROJECT ELEMENT	Construction Activity	Construction Equipment	By Activity				By Reach		By Reach		
			Duration of Use (Weeks)	Worker trips/day	Haul trips/day	Total trips/day	Max trips/hour	Max total trips/day	Max trips/hour	Weighted Ave of total trips/day	Weighted Ave of max trips/hour
Project Reach - Stationing (Looking Upstream)	(2) Outfall: demo SCSP & replace with concrete apron w/2ft concrete key & slurry RSP transition B-Line STA 86+65 B-Line STA 89+00 B-Line STA 101+60		0.2	20	36	56	25				
	Trail (OPTIONAL) Left Bank B-Line STA 83+39± to 102+50±		1	20	12	32	22				
	Resurface Maint Rd East & West Bank (4-Inch x 12 FT) Total Length (STA 83+39 to 102+50) = 3,822± LF		1	20	12	32	22				
	Channel Bench/RSP Excavation (3,604 CY)		1	20	0	20	20				
	Rock Slope Protection (RSP) B-Line STA 112+80 to 120+28± (rock @ toe) (22FTx4FTx748LF) = 2,438 CY B-Line STA 120+28 to 120+63± (up to 10yr WSE) (49FTx4FTx35LF) = 254 CY B-Line STA 121+47 to 121+82± (up to 10yr WSE) (49FTx4FTx35LF) = 254 CY B-Line STA 121+82 to 123+06± (rock @ toe) (22FTx4FTx124LF) = 404 CY B-Line STA 123+06 to 123+41± (up to 10yr WSE) (49FTx4FTx34LF) = 254 CY		2	20	0	20	20				

SUNNYVALE EAST CHANNEL FLOOD PROTECTION PROJECT - SF BAY TO INVERNESS WAY

PROJECT ELEMENT	Construction Activity	Construction Equipment	By Activity				By Reach		By Reach	
			Duration of Use (Weeks)	Worker trips/day	Haul trips/day	Total trips/day	Max trips/hour	Max total trips/day	Max trips/hour	Weighted Ave of total trips/day
Project Reach - Stationing (Looking Upstream)	Proposed Type of Flood Protection Measure									
AHWANEE AVE. to BLYTHE AVE B-Line STA 111+72± to 123+68±	(A) Wing-wall: demo existing SCSP; construct 2ft concrete key, & slurry RSP at transition B-Line STA 120+58 to 120+63 B-Line STA 121+47 to 121+52 B-Line STA 123+36 to 123+41 B-Line STA 102+08 to 102+12	0.2	20	36	56	25	56	25	28	21
	(2) Outfall: demo SCSP & replace with concrete apron w/2ft concrete key & slurry RSP transition B-Line STA 119+50	0.2	20	36	56	25				
	(3) Outfall: outfall in good condition, leave as is. Slurry RSP transition B-Line STA 114+15	0.2	20	36	56	25				
	(4) Outfall: Demo existing and replace in-kind w/concrete key into bank 2ft. Slurry RSP transition B-Line STA 116+55	0.2	20	36	56	25				
	Resurface Maintenance Road (East Side Only) (4-Inch x 18 FT) Total Length (STA 111+72 to 123+68±) = 1,196± LF	0.4	20	12	32	22				
	Channel Bench/RSP Excavation 4,285 CY	2	20	0	20	20				

SUNNYVALE EAST CHANNEL FLOOD PROTECTION PROJECT - SF BAY TO INVERNESS WAY

PROJECT ELEMENT Project Reach - Stationing (Looking Upstream)	Construction Activity Proposed Type of Flood Protection Measure	Construction Equipment Duration of Use (Weeks)	By Activity				By Reach		By Reach	
			Worker trips/day	Haul trips/day	Total trips/day	Max trips/hour	Max total trips/day	Max trips/hour	Weighted Ave of total trips/day	Weighted Ave of max trips/hour
BLYTHE AVE to E. DUANE AVE B-Line STA 124+25± to 135+75±	Rock Slope Protection (RSP) B-Line STA 124+45 to 128+10± (West Bank) (20FTx4FTx365LF) = 1,081 CY B-Line STA 128+10 to 130+85± (Channel Invert) (10FTx4FTx275LF) = 407 CY B-Line STA 130+85 to 135+57± (40FTx4FTx472LF) = 2,797 CY	3	20	0	20	20	60	25	27	21
	(A) Wing-wall: demo existing SCSP; construct 2ft concrete key, & slurry RSP at transition B-Line STA 124+45 to 124+50 B-Line STA 135+52 to 135+57	0.2	20	36	56	25				
	(1) Outfall: demo single row of SCSP; construct 2ft concrete key & slurry RSP transition B-Line STA 125+50 B-Line STA 130+80 B-Line STA 131+00	0.2	20	36	56	25				
	(5) Install slurry RSP transition at SCSP	0.2	20	36	56	25				
	Resurface Maintenance Road (East Side Only) B-Line STA 124+25± to 135+75± (4-Inch x 30 FT x 1,150LF = 426 CY)	1	20	12	32	22				
	Remove Trees B-Line STA 132+00 to 135+37± (~337 ft)	0.4	20	40	60	25				
	Existing Concrete/SCSP & Dragons Tooth Removal	1	20	20	40	23				
E. DUANE AVE to N. WOLFE RD B-Line STA 147+73± to 151+00±	Channel Fill	1	20	32	52	24	140	35	55	25

SUNNYVALE EAST CHANNEL FLOOD PROTECTION PROJECT - SF BAY TO INVERNESS WAY

PROJECT ELEMENT	Construction Activity	Construction Equipment	By Activity				By Reach		By Reach	
			Duration of Use (Weeks)	Worker trips/day	Haul trips/day	Total trips/day	Max trips/hour	Max total trips/day	Max trips/hour	Weighted Ave of total trips/day
Project Reach - Stationing (Looking Upstream)	Proposed Type of Flood Protection Measure	Duration of Use (Weeks)	Worker trips/day	Haul trips/day	Total trips/day	Max trips/hour	Max total trips/day	Max trips/hour	Weighted Ave of total trips/day	Weighted Ave of max trips/hour
	Concrete Trapezoidal Channel	0.2	20	120	140	35				
N. WOLFE RD to E. ARQUES AVE B-Line STA 154+70± to 161+70±	Channel RSP Excavation 100 CY	2	20	0	20	20	140	35	30	20
	Rock Slope Protection (RSP) B-Line STA 161+58 to 161+73 (45FTx4FTx15LF) = 100 CY	1	20	0	20	20				
	A) Wing-wall: demo existing SCSP; construct 2ft concrete key, & slurry RSP at transition B-Line STA 154+85 to 154+95 B-Line STA 161+68 to 161+73	0.2	20	36	56	25				
	(1) Outfall: demo single row of SCSP; construct 2ft concrete key B-Line STA 156+80	0.2	20	36	56	25				
	(2) Outfall: demo SCSP & replace with concrete apron w/2ft concrete key B-Line STA 159+55	0.2	20	36	56	25				
	(6) Re-establish Maint. Rd: increase rd height by 1 ft with fill material B-Line STA 154+70 to 161+90	0.2	20	120	140	35				
	Retaining Wall B-Line STA 161+70 to 161+90 (1FTx3FTx20LF) = 5 CY	0.4	8	2	10	8				
	Resurface Maintenance Road (East Side Only) B-Line STA 154+70 to 161+90 (4-Inch x 12 FT) Total Length = 720± LF	0.2	20	12	32	22				
	Existing Sidewalk/Gutter Demolition/Removal	0.2	8	2	10	8				

SUNNYVALE EAST CHANNEL FLOOD PROTECTION PROJECT - SF BAY TO INVERNESS WAY

PROJECT ELEMENT Project Reach - Stationing (Looking Upstream)	Construction Activity Proposed Type of Flood Protection Measure	Construction Equipment Duration of Use (Weeks)	By Activity				By Reach		By Reach	
			Worker trips/day	Haul trips/day	Total trips/day	Max trips/hour	Max total trips/day	Max trips/hour	Weighted Ave of total trips/day	Weighted Ave of max trips/hour
EAST ARQUES AVE	(7) Install 16 FT Maintenance Driveway/Sidewalk	1	8	2	10	8	10	8	10	8
	Concrete Headwalls (H=3.5, W=1, L=20±)	1	8	2	10	8				
E. ARQUES AVE to CENTRAL EXPRESSWAY B-Line STA 163+94± to 170+00± <u>Floodwall Limits</u> Left & Right Banks B-Line STA 163+94 to 165+00 Length = (106±FTx2) = 212 LF	Channel RSP excavation (Export) 4,065± CY	1.2	20	0	20	20	80	28	22	18
	Rock Slope Protection (RSP) B-Line STA 164+10 to 169+70 (49FTx4FTx560LF) = 4,065 CY	2.4	20	0	20	20				
	Floodwall Excavation B-Line STA 163+94 to 165+00 Total length = 106 ft x 2 = 212 ft	0.2	12	0	12	12				
	Concrete Floodwalls (6 Ft Height - 15.6 SF/FT) Total Length = 106 ft x 2 = 212 LF	0.4	20	30	50	24				
		2	12	2	14	12				
	(6) Re-establish Maint. Rd: increase rd height by 1 ft with fill material B-Line STA 163+94 to 170+00 (1FTx12FTx606LF) = 270± CY	0.2	20	60	80	28				
	Resurface Maintenance Road (East Side Only) B-Line STA 163+94 to 170+00 (4-Inch x 12 FT) Total Length = 606± LF	0.4	20	6	26	21				
Sediment Removal B-Line STA 169+70 to 171+40 (20 FT x 3FT x 170 LF = 377 CY)	0.4	20	32	52	24					
Channel RSP excavation (Export) = 745± CY	0.4	20	0	20	20					

SUNNYVALE EAST CHANNEL FLOOD PROTECTION PROJECT - SF BAY TO INVERNESS WAY

PROJECT ELEMENT	Construction Activity	Construction Equipment	By Activity				By Reach		By Reach	
			Duration of Use (Weeks)	Worker trips/day	Haul trips/day	Total trips/day	Max trips/hour	Max total trips/day	Max trips/hour	Weighted Ave of total trips/day
CENTRAL EXPRESSWAY to KIFER RD B-Line STA 171+40± to 181+75±	Rock Slope Protection (RSP) = 745± CY B-Line STA 173+80 to 174+00 (49FTx4FTx20LF) = 146 CY B-Line STA 176+10 to 176+30 @ Channel Toe (10FTx4FTx20LF) = 30 CY B-Line STA 177+90 to 181+75 @ Toe of SCSP (10FTx4FTx385LF) = 570 CY	0.4	20	0	20	20	56	25	36	22
	Retaining Wall B-Line STA 181+70 to 181+80	0.4	20	30	50	24				
	A) Wing-wall: demo existing SCSP; construct 2ft concrete key, & slurry RSP at transition B-Line STA 173+80 to 173+85	0.2	20	36	56	25				
	(1) Outfall: demo single row of SCSP; construct 2ft concrete key B-Line STA 176+10 B-Line STA 176+30	0.2	20	36	56	25				
	Resurface Maintenance Road (East Side Only) (4-Inch x 12 FT) Total Length = 1,035± LF	0.6	20	6	26	21				
	Relocate Maintenance Rd Gate from STA 171+50 to 171+70									
	Channel RSP excavation (Export) = 712± CY	0.2	20	0	20	20				
Rock Slope Protection (RSP) B-Line STA 184+70 to 186+20 (40FTx4FTx120LF) = 712± CY	0.4	20	0	20	20					

SUNNYVALE EAST CHANNEL FLOOD PROTECTION PROJECT - SF BAY TO INVERNESS WAY

PROJECT ELEMENT	Construction Activity	Construction Equipment	By Activity				By Reach		By Reach	
			Duration of Use (Weeks)	Worker trips/day	Haul trips/day	Total trips/day	Max trips/hour	Max total trips/day	Max trips/hour	Weighted Ave of total trips/day
Project Reach - Stationing (Looking Upstream)	Proposed Type of Flood Protection Measure	Duration of Use (Weeks)	Worker trips/day	Haul trips/day	Total trips/day	Max trips/hour	Max total trips/day	Max trips/hour	Weighted Ave of total trips/day	Weighted Ave of max trips/hour
KIFER RD to UPRR/CALTRAIN B-Line STA 184+70± to 187+90±	(5 & 8) Install slurry RSP transition at SCSP/Geocell B-Line STA 186+10 to 186+20	0.2	20	36	56	25	56	25	34	22
	Retaining Wall (East Bank) B-Line STA 184+60 to 184+80	0.4	20	30	50	24				
	Resurface Maintenance Road (East Side Only) (4-Inch x 15 FT) Total Length = 320± LF	0.4	20	6	26	21				
UPRR/CALTRAIN to E. EVELYN AVE B-Line STA 189+79± to 193+95± <u>Concrete Curb Limits</u> Left & Right Banks (71± FT/each) B-Line STA 189+79 to 190+50 <u>Concrete Maintenance Ramp Limits</u> B-Line STA 192+50 to 194+00	Concrete Curb Excavation (1FTx1FTx142±LF)	0.4	8	2	10	8	40	23	17	13
	Concrete Curb (Caltans Type A1-12) @ Inboard TOB (1.56 SF/LF)	0.2	8	2	10	8				
		1	12	2	14	12				
	Maintenance Ramp Excavation (15FT x 2FT x 150FT)	0.4	12	18	30	14				
	Concrete Maintenance Ramp (15 FT x 1 FT x 150 FT)	0.2	20	20	40	23				
		2.8	12	2	14	12				
	Channel RSP excavation = 616± CY	0.2	20	0	20	20				
	Rock Slope Protection (RSP) B-Line STA 189+79 to 193+95	0.4	20	0	20	20				
	Resurface Maintenance Road (East Side Only) (4-Inch x 12 FT) B-Line STA 189+79 to 193+95 Total Length = 416± LF	0.2	20	6	26	21				

SUNNYVALE EAST CHANNEL FLOOD PROTECTION PROJECT - SF BAY TO INVERNESS WAY

PROJECT ELEMENT Project Reach - Stationing (Looking Upstream)	Construction Activity Proposed Type of Flood Protection Measure	Construction Equipment Duration of Use (Weeks)	By Activity				By Reach		By Reach	
			Worker trips/day	Haul trips/day	Total trips/day	Max trips/hour	Max total trips/day	Max trips/hour	Weighted Ave of total trips/day	Weighted Ave of max trips/hour
EAST EVELYN AVE	Concrete Headwalls (H=3.5, W=1, L=20±)	1	8	2	10	8	10	8	10	8
E. EVELYN AVE to OLD SF ROAD B-Line STA 195+83± to 216+55± <u>Concrete Floodwall Limits</u> (6 Ft Height – 13 SF/FT) Total Length (IB) = 834± FT B-Line STA 205+80 to 214+55 <u>Concrete Curb Limits</u> Left Bank (192± ft) B-Line STA 205+58 to 207+50 <u>Rock Slope Protection (RSP) Limits</u> West Only (B-Line Sta. 202+00 to 204+35±) East Only (B-Line Sta. 209+35 to 213+10±) Both Banks	Concrete Curb Excavation (1FTx1FTx192±LF)	0.2	8	6	14	9	56	25	21	16
	Concrete Curb (Caltans Type A1-12) @ Inboard TOB (1.56 SF/FT)	0.2	8	4	12	9				
		2.8	12	2	14	12				
	Floodwall Excavation B-Line STA 195+83 to 200+00 Total length = 834ft	0.4	12	30	42	16				
	Concrete Floodwall (6 Ft Height – 15.6 SF/FT) Total Length (IB) = 875± FT B-Line STA 205+58 to 214+55	1	20	30	50	24				
		5	12	2	14	12				
	Channel RSP excavation	2	20	0	20	20				
	Rock Slope Protection (RSP) Limits East Only (B-Line Sta. 205+80 to 206+40±) Both Banks (B-Line Sta. 206+40 to 214+35±)	5	20	0	20	20				
	(1) Outfall: demo single row of SCSP; construct 2ft concrete key B-Line STA 202+20	0.2	20	36	56	25				

SUNNYVALE EAST CHANNEL FLOOD PROTECTION PROJECT - SF BAY TO INVERNESS WAY

PROJECT ELEMENT Project Reach - Stationing (Looking Upstream)	Construction Activity Proposed Type of Flood Protection Measure	Construction Equipment Duration of Use (Weeks)	By Activity				By Reach		By Reach	
			Worker trips/day	Haul trips/day	Total trips/day	Max trips/hour	Max total trips/day	Max trips/hour	Weighted Ave of total trips/day	Weighted Ave of max trips/hour
(B-Line Sta. 213+10 to 214+35±)	(5) Install slurry RSP transition at SCSP B-Line STA 204+30 to 204+35 (west bank) B-Line STA 205+80 to 205+85 (east bank) B-Line STA 206+40 to 206+45 (west bank) B-Line STA 214+50 to 214+55	0.2	20	36	56	25				
	Resurface Maintenance Road (East Side Only) (4-Inch x 12 FT) Total Length = 2,072±	0.4	20	16	36	22				
OLD SF ROAD to IRIS AVE B-Line STA 217+50± to 231+80± <u>Concrete Curb Limits</u> Left Bank (385± ft) B-Line STA 218+50 to 221+40 <u>Rock Slope Protection (RSP) Limits</u> B-Line STA 218+50 to 223+20± B-Line STA 223+20 to 224+00± (West Bank) B-Line STA 228+50 to 229+70± (East Bank @ toe)	Concrete Curb Excavation (1FTx1FTx205±LF)	0.2	8	6	14	9				
	Concrete Curb (Caltans Type A1-12) @ Inboard TOB (1.56 SF/FT)	0.2	8	2	10	8				
		1.4	12	2	14	12				
	Channel RSP Excavation	1.4	20	0	20	20				
	Rock Slope Protection (RSP) Limits B-Line STA 218+25 to 223+20± (27FT x 4FT x 495LF = 1,980CY) B-Line STA 223+20 to 223+90± (West Bank) (13FT x 4FT x 70LF = 134CY) B-Line STA 227+75 to 231+15± (East Bank @ toe of SCSP) (2FT x 2FT x 340LF = 50CY)	2.6	20	0	20	20	32	22	19	18

SUNNYVALE EAST CHANNEL FLOOD PROTECTION PROJECT - SF BAY TO INVERNESS WAY

PROJECT ELEMENT	Construction Activity	Construction Equipment	By Activity				By Reach		By Reach	
			Duration of Use (Weeks)	Worker trips/day	Haul trips/day	Total trips/day	Max trips/hour	Max total trips/day	Max trips/hour	Weighted Ave of total trips/day
Project Reach - Stationing (Looking Upstream)	Proposed Type of Flood Protection Measure	Duration of Use (Weeks)	Worker trips/day	Haul trips/day	Total trips/day	Max trips/hour	Max total trips/day	Max trips/hour	Weighted Ave of total trips/day	Weighted Ave of max trips/hour
	Resurface Maintenance Road (East Side Only) B-Line Sta. 217+50± to 223+25± (4-Inch x 18FT x 575LF) B-Line Sta. 223+25± to 231+80± (4-Inch x 12FTx855LF)	0.4	20	12	32	22				
IRIS AVE to EL CAMINO REAL B-Line STA 232+40± to 243+80±	Rock Slope Protection (RSP) B-Line STA 233+10 to 236+05 (@ invert) (10FTx4FTx295LF) = 437 CY B-Line STA 237+00 to 238+50 (@ invert) (10FTx4FTx150LF) = 222 CY	0.8	20	36	56	25	140	35	60	25
	Coffer Dam Low Flow Notch (3 Locations) [(3ft x 1.5ft x 1ft) x 3] = 1 CY	0.2	20	120	140	35				
	Resurface Maintenance Road (East Side Only) (4-Inch x 12 FT) Total Length = 1,140±	0.4	20	8	28	21				
EL CAMINO REAL to CRESENT B-Line STA 245+00± to 262+50±	Channel RSP Excavation (including removal of sac-concrete at wingwall)	2	20	0	20	20				
	Rock Slope Protection (RSP) B-Line STA 249+55 to 253+45 (30FTx4FTx875LF = 3,889CY) B-Line STA 253+45 to 254+30 (West only) (18FTx4FTx85LF) = 227 CY B-Line STA 254+30 to 257+90 (30FTx4FTx360LF) = 1,600 CY B-Line STA 257+90 to 258+30 (East Only) (18FTx4FTx40LF) = 107 CY	3	20	0	20	20				

SUNNYVALE EAST CHANNEL FLOOD PROTECTION PROJECT - SF BAY TO INVERNESS WAY

PROJECT ELEMENT	Construction Activity	Construction Equipment	By Activity				By Reach		By Reach	
			Duration of Use (Weeks)	Worker trips/day	Haul trips/day	Total trips/day	Max trips/hour	Max total trips/day	Max trips/hour	Weighted Ave of total trips/day
Project Reach - Stationing (Looking Upstream)	Proposed Type of Flood Protection Measure									
Rock Slope Protection (RSP) B-Line STA 249+55 to 253+45 B-Line STA 253+45 to 254+30 (West only) B-Line STA 254+30 to 257+90 B-Line STA 257+90 to 258+30 (East Only)	Sediment Removal B-Line STA 261+50 to 262+40 (10 FT x 2 FT x + 90 LF = 67 CY)	0.4	20	32	52	24	56	25	25	21
	(1) Outfall: demo single row of SCSP; construct 2ft concrete key B-Line STA 250+90	0.2	20	36	56	25				
	(5) Install slurry RSP transition at SCSP B-Line STA 253+35 to 253+40 (east bank) B-Line STA 254+30 to 254+35 (east bank) B-Line STA 257+85 to 257+90 (west bank)	0.2	20	36	56	25				
	Resurface Maintenance Road (West Side Only) (4-Inch x 12 FT) Total Length = 1,300±	0.4	20	12	32	22				
CRESENT to E. FREEMONT AVE B-Line STA 263+20± to 271+35± Rock Slope Protection (RSP) B-Line STA 263+20± to 271+12±	Channel RSP Excavation (including removal of concrete rubble & chip seal)	2	20	0	20	20	56	25	22	20
	Rock Slope Protection (RSP) B-Line STA 263+20± to 271+12± (35FTx4FTx792±LF) = 4,106 CY	3	20	0	20	20				
	A) Wing-wall: demo existing SCSP; construct 2ft concrete key, & slurry RSP at transition B-Line STA 271+11 to 271+21	0.2	20	36	56	25				
	Resurface Maintenance Road (West Side Only) (4-Inch x 12 FT) Total Length = 815±	0.2	20	12	32	22				

SUNNYVALE EAST CHANNEL FLOOD PROTECTION PROJECT - SF BAY TO INVERNESS WAY

PROJECT ELEMENT	Construction Activity	Construction Equipment	By Activity				By Reach		By Reach	
			Duration of Use (Weeks)	Worker trips/day	Haul trips/day	Total trips/day	Max trips/hour	Max total trips/day	Max trips/hour	Weighted Ave of total trips/day
E. FREEMONT AVE to ASHBOURNE DR B-Line STA 272+70± to 273+90± <u>Rock Slope Protection (RSP)</u> B-Line STA 272+70± to 273+90±	Demo SCSP B-Line STA 272+70± to 273+90± (30FTx1FTx120LF = 134±CY)	0.4	20	24	44	23	56	25	30	21
	Channel RSP Excavation B-Line STA 272+70± to 273+90± (30FTx3FTx120LF = 400±CY)	0.6	20	0	20	20				
	Rock Slope Protection (RSP) B-Line STA 272+70± to 273+90± (30FTx4FTx120LF = 535±CY)	0.6	20	0	20	20				
	A) Wing-wall: demo existing SCSP; construct 2ft concrete key, & slurry RSP at transition B-Line STA 272+70 to 272+80 B-Line STA 273+80 to 273+90	0.2	20	36	56	25				
	Resurface Maintenance Road (West Side Only) (4-Inch x 12 FT) Total Length = 120±	0.2	20	12	32	22				
ASHBOURNE to CARLISIE B-Line STA 274+20± to 284+00±	A) Wing-wall: demo existing SCSP; construct 2ft concrete key B-Line STA 274+20 to 274+30 B-Line STA 283+90 to 284+00	0.2	20	36	56	25	56	25	36	23
	Resurface Maintenance Road (West Side Only) (4-Inch x 12 FT) Total Length = 980±	1	20	12	32	22				
	Sediment Removal B-Line STA 284+80 to 285+80 (10FT x 2FT x 100LF = 75 CY)	0.2	20	0	20	20				

SUNNYVALE EAST CHANNEL FLOOD PROTECTION PROJECT - SF BAY TO INVERNESS WAY

PROJECT ELEMENT Project Reach - Stationing (Looking Upstream)	Construction Activity Proposed Type of Flood Protection Measure	Construction Equipme Duration of Use (Weeks)	By Activity				By Reach		By Reach	
			Worker trips/day	Haul trips/day	Total trips/day	Max trips/hour	Max total trips/day	Max trips/hour	Weighted Ave of total trips/day	Weighted Ave of max trips/hour
CARLISIE WAY to DUNHOLME WAY B-Line STA 284+80 to 298+20 <u>Rock Slope Protection (RSP)</u> B-Line STA 287+70 to 287+85 (East only) B-Line STA 287+85 to 298+00	Channel RSP Excavation (30FT x 4FT x 1030LF = 4,578CY)	3	20	0	20	20	32	22	25	21
	Rock Slope Protection (RSP) B-Line STA 287+70 to 287+85 (East only) (15FTx4Ftx15LF) = 33 CY B-Line STA 287+85 to 298+00 (30FT x 4FT x 1015LF = 4,511 CY)	4.4	20	8	28	21				
	A) Wing-wall: demo existing SCSP; construct 2ft concrete key & slurry RSP transition B-Line STA 297+90 to 298+00	0.2	20	12	32	22				
	Resurface Maintenance Road (West Side Only) (4-Inch x 15 FT) Total Length = 1,350±	0.4	20	12	32	22				
DUNHOLME WAY to INVERNESS WAY B-Line STA 298+95± to 311+25±	Channel RSP Excavation = 4,370 CY	3	20	0	20	20	56	25	27	21
	Rock Slope Protection (RSP) B-Line STA 298+90 to 310+70± (20FTx4FTx1180LF = 3,496CY)	5	20	7	27	21				
	A) Wing-wall: demo existing SCSP; construct 2ft concrete key & slurry RSP transition B-Line STA 298+90 to 299+00 B-Line STA 310+60 to 310+70	0.2	20	36	56	25				
	(3) Outfall: outfall in good condition, leave as is. Slurry RSP transition B-Line STA 302+75 B-Line STA 305+10 B-Line STA 310+00	0.2	20	36	56	25				

SUNNYVALE EAST CHANNEL FLOOD PROTECTION PROJECT - SF BAY TO INVERNESS WAY

PROJECT ELEMENT	Construction Activity	Construction Equipment	By Activity				By Reach		By Reach	
			Worker trips/day	Haul trips/day	Total trips/day	Max trips/hour	Max total trips/day	Max trips/hour	Weighted Ave of total trips/day	Weighted Ave of max trips/hour
Project Reach - Stationing (Looking Upstream)	Maintenance Road Fill (Re-Establish Maintenance Rd) West/Right Bank B-Line STA 302+50± to 304+20± (1FTx12FTx170LF = 76CY)	0.2	20	32	52	24				
	Resurface Maintenance Road B-Line STA 298+95 to 311+25 (4-Inchx12FT) Total Length = 1,230LF	0.4	20	12	32	22				