Д. Э	Project Information			Date:	10/18/2018
	TCIF # (Segment):	75.1	Other Project Identifier (EA, P	roject #, PPNO, etc):	PPNO 11-2101
	Project Title:	Southline Mainline Phase 1	1		
	Delivery Report:		months of project becoming on the conclusion of all project in		
	Location: County:	San Diego	City:	San Diego, National Ci	ty, Chula Vista
	Project Description:		ation of a communication and r an Ysidro Yard, establishing the loatlon with the Central Control	e communication link r	
В.	Contact Information				
	Implementing Agency:	San Diego Association of Gov	ernments	Caltrans District Numb	er: <u>11</u>
,	Contact Person:	Pete d'Ablaing		Phone: (619) 699-190	6
	Email Address:	pete.dablaing@sandag.org			

C. Cost			Actual Expended	Net Difference
	Adopted Program Amount (\$)	Current Approved Amount (\$)	Amount (\$)	(Dollars)
Environmental	Section of the second			
Total Amount .	\$0	\$0	\$0	\$0
<u>Design</u>	And the second second	Section Section Conference		14
Total Amount	\$0.	\$0	\$0	\$0
Right of Way	Company of the Compan			
Total Amount	\$0	\$0	\$0	. \$0
Construction	400			7 7 6 1 1
TCIF	\$10,500,000	\$4,457,960	\$4,457,960	\$0
Local	\$0	\$0	\$0	\$0
Federal	\$0	\$0	\$0	\$0
Other	\$0	\$0	\$0	- \$0
	With the second second			
<u>Totals</u>	\$10,500,000	\$4,457,960	\$4,457,960	\$0

D. Schedule	-			
	Adopted Program Date	Current Approved Date	Actual Begin/End Date	Net Difference (Months)
Environmental Phase				
Begin	07/01/08	07/01/08	07/01/08	0
End	04/01/10	04/01/10	04/01/10	D
Design (PS&E) Phase	All between the same of the sa			State (1977)
Begin	08/21/09	08/21/09	08/21/09	Ō
End	12/15/09	12/15/09	12/15/09	0 .
Right of Way Phase				
Begin	N/A	N/A	. N/A	0
End	N/A	. N/A	N/A	Q
Construction Phase			reserve of	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Begin	06/02/10	06/02/10	06/02/10	0
End	11/01/11	03/02/12	07/15/12	4
Closeout Date	的 的是有 用 数数量的	(CVIX) (A) (A) (A) (A) (A) (A) (A) (A) (A) (14 (14) A (14)	·扩充4.20亿字。
Begin	11/02/11	. 03/05/12	07/15/12	4
End	12/01/11	09/07/12	07/16/14	22

E. Amendments	1	V	
List approved a	mendments		
Amendment #	CTC Meeting	Summary of Changes (Scope, Cost, Schedule)	
1	October 2011	Split project into 3 phases and updated delivery schedule	
2	April 2012	Split Phase 3 Into Phase 3 and Phase 4 and updated Schedules	
Alloc. Amend	March 2013	Deallocated contract award savings	2
Alloc, Amend	March 2014	Deallocated additional construction sayings	

Outcomes	Adopted Program	Current Approved	Actual *
Safety	to 31,800 truck trips annually on the regional highway system, with an estimated reduction of two injury accidents per year	Project provides for the rail transportation of goods allowing for a reduction of up to 31,800 truck trips annually on the regional highway system, with an estimated reduction of two injury accidents per year	The increase in capacity has reduced truck trips by 31,800 per year, which in turn is expected to reduce injury collisions by 2/year
Velocity	The Centralized Train Control and reverse approach signaling will allow freight trains to move on the South Line at greater operating speeds. During perlods of track maintenance, reverse train speeds will increase from 10 mph to 40 mph.	The Centralized Train Control and reverse approach signaling will allow freight trains to move on the South Line at greater operating speeds. During periods of track maintenance, reverse train speeds will increase from 10 mph to 40 mph.	During track maintenance, train speeds incresed to 40 mph while operating on 'normal' rail and 30 mph while operating on 'reverse' rail
Throughput	Implementation of the Mainline Track Improvements project is expected to povide capacity to double the number of freight train movements from two to four trains per day. The mainline project provides for a potential increase in yearly track carload capacity from 12,375 to over 23,600. In conjunction with the San Ysidro Yard Improvements project, the Mainline Track Improvements project will help increase total system capacity from 10,000 to 19,600 carloads transported per year.	Implementation of the Mainline Track Improvements project is expected to povide capacity to double the number of freight train movements from two to four trains per day. The mainline project provides for a potential increase in yearly track carload capacity from 12,375 to over 23,600. In conjunction with the San Ysidro Yard Improvements project, the Mainline Track Improvements project will help increases total system capacity from 10,000 to 19,600 carloads transported per year.	Capacity in total system has increased from allowing 10,0000 carloads per year to now 19,600 carloads per year due to a 96% increase of the capacity of the Yard and Improvements on the Main Line

	I		
Reliability	Reliability of freight delivery is increased with two additional train operations per day. The project also reduces canceled train movements because of scheduled and unscheduled track maintenance and reduces the variability and unpredictability of train travel times.	Reliability of freight delivery is increased with two additional train operations per day. The project also reduces canceled train movements because of scheduled and unscheduled track maintenance and reduces the variability and unpredictability of train travel times.	Improvements allow for 4 train operations per day (2 each direction) and reverse running has reduced Impacts of track maintenance. Allows for increase from 2 train operations per day to 4. Reduce canceled train movements and/or variability of travel times due to track maintenance.
Congestion Reduction	The increased rail capacity will eliminate up to 31,800 truck rips annually, reducing congestion on the highway network and at the U.S. – Mexico border crossing.	The increased rail capacity will eliminate up to 31,800 truck rips annually, reducing congestion on the highway network and at the U.S. – Mexico border crossing.	The increase in rail freight capacity has, upon completion of TCIF 74 & 75.1-75.4, reduced the amount of trucks on the highway network by 31,800/yr and reduced calculated VMT by approx. 3,800,000
Emissions Reductions	320 pounds/day; CO2 1.36	The reduction of 31,800 trucks by 2030 is projected to result in the following emissions reductions: NOx: 320 pounds/day; CO2 1.36 million pounds/day; PM10; 260 pounds/day; CO: 540 pounds/day.	The NOX/SOX/PM/CO2/CO estimates were derived from the 2007 EMFAC model assuming a potential 31,800 diverted truck trips based on the added capacity. Using that same model, and the fact the project has provided the intended capacity enhancements, the potential emissions reduction goals can be acheived by 2030.

* Please note: All 4 phases of Southline Main Line (75.1-75.4) and SY Yard project (74) were needed to acheives benefits listed above

G. Differences/Variances

Describe differences/variances (if any) and reason for, between approved scope, cost, schedule, and actual.

The end of construction was delayed as a result of unanticipated field conditions that resulted in additional work.

The project experienced a savings of over \$5 Million as a result of being constructed in conjunction with MTS Trolley imporvements, but the end of the close-out was delayed as a result of the need to close out the Trolley portion of the project and reconcile finances so that an accurate accounting of applicable and final TCIF construction support and operational costs could be made.

H. Lessons-Learned/Best Practices

Describe lessons-learned and best practices for future projects.

The overall project was split into 4 phases to enhance the delivery of the project. The phased approach allowed for the following: -- Better integration with a concurrent Trolley improvement program on the same corridor (the project could not have been delivered on-time without being split)

-- Less impact to existing Freight and Trolley operations during construction

-- Large costs savings - the original project budget was \$107 Million and the final cost for the project will be ~\$48 Million. A portion of this was due to other factors, such as the slow down of the economy during the early phases of the project, but the phasing of the project was the largest factor

-- By constructing the freight and trolley projects concurrently, the system received consistent, compatible upgrades to the signal communication and rail in the corridor which will benefit freight operations in the overall corridor.

hereby certify to the best of my knowledge and belief, the information in this report is a true and accurate record. The work	į.
Pete d'Ablaing (Print name) Project Manager	
(Print name) Project Wanager	
Tête d'alle 10/26/18 (Signature) Project Manager Date	
(Signature) Project Manager Date	
Caltrans	
The TCIF Division Program Coordinator and/or the Project Manager from the California Department of Transportation has reviewed the information contained in this report and has verified the information presented is correct.	
Phillip D. Hoebeke	
(Print Name) TCIF Division Program Coordinator/Project Manager	
PUM 10/26/18 (Signature)TCIF Division Program Coordinator/Project Manager Date	
(Signature)TCIF Division Program Coordinator/Project Manager Date	
The TCIF Program Lead from the California Department of Transportation has reviewed the information contained in the rep	port
(Print Name) TCIF Program Lead	
(Print Name) TCIF Program Lead	
10/201.0	
(Signature) TCIF Pogram Lead Date	
Colginature) Toli Typegram Lead	

Distribution: 1) Local Agency, 2) Division Program Coordinator/Project Manager, 3) TCIF Program Lead, 4) CTC

Implementating Agency

A. Project Information		W	Date:10/18/2018
TCIF# (Segment):	75.2	Other Project Identifier (EA, Project #	, PPNO, etc): <u>PPNO 11-2102</u>
Project Title:	Southline Mainline Phase 2		
Delivery Report:	Final- Due within six r	months of project becoming operable	3.
		the conclusion of all project activitie	
Location: County:	San Diego C	lity: San Di	ego, National City, Chula Vista
Project Description:	The project consists of the follor running including; 10 at-grade of modifications to the Palomar sides.	wing: improvements of the signaling rossings, new interlockings and sign ling.	system to allow for reverse als; a powered crossover; and
B. Contact Information			S
Implementing Agency:	San Diego Association of Gove	rnments Caltran	s District Number:11
Contact Person:	Pete d'Ablaing	Phone:	(619) 699-1906
Email Address:	pete.dablaing@sandag.org	1:	#1

C. Cost	Adopted Program Amount (\$)	Current Approved Amount (\$)	Actual Expended Amount (\$)	Net Difference (Dollars)
Environmental				
Total Amount	, \$0	\$0 .	\$0	\$0
Design-	Control of the Contro		SACAR OF SELECTION	35.3.45.65V
Total Amount	\$0	\$O	\$0	\$0
Right of Way				2.5
Total Amount	\$0	\$0	\$0	\$0
Construction				7
TCIF	\$15,500,000	. \$10,010,000	\$10,009,528	\$472
Local	\$0	\$0	\$0	\$0
Federal	\$0	\$0	\$0	\$0
Other	\$0	\$0	- \$0	\$0
				Edding To
<u>Totals</u>	\$10,500,000	\$10,010,000	\$10,009,528	\$472

D. Schedule			- TANDANI - TAND	
	Adopted Program Date	Current Approved Date	Actual Begin/End Date	Net Difference (Months)
Environmental Phase				1974 - 70
Begin	07/01/08	07/01/08	07/01/08	0
End	04/01/10	04/01/10	04/01/10	0
Design (PS&E) Phase	The law 1			
Begin	06/19/09	06/19/09	06/19/09	0
. End	07/01/10	07/01/10	07/01/10	0
Right of Way Phase				
Begin	N/A	N/A	N/A	0
End	N/A	N/A	N/A	0
Construction Phase				
Begin	10/15/10	03/24/11	03/24/11	. 0
End	08/15/12	03/30/13	06/30/14	15
Closeout Date	and the second second second			
Begin	08/16/12	04/02/13	07/01/14	15
End	09/19/12	10/01/13	07/30/15	22

E. Amendments							
List approved ar	List approved amendments						
Amendment #	CTC Meeting	Summary of Changes (Scope, Cost, Schedule)					
1	October 2011	' Split project into 3 phases and updated delivery schedule					
2	April 2012	Split Phase 3 Into Phase 3 and Phase 4 and updated Schedules	5 1				
Alloc. Amend	March 2013	Deallocated contract award savings					
Alloc. Amend	March 2014	Deallocated additional construction savings					
Alloc. Amend	January 2016	Deallocated additional construction savings					
and the same of th	· · · · · · · · · · · · · · · · · · ·		N. Carlotte				

F. Project Benefits Describe and compare project benefits with those included in the approved Baseline Agreement.				
Outcomes	Adopted Program	Current Approved	Actual *	
Safety	to 31,800 truck trips annually on the regional highway system, with an estimated reduction of two injury accidents per year	Project provides for the rail transportation of goods allowing for a reduction of up to 31,800 truck trips annually on the regional highway system, with an estimated reduction of two injury accidents per year	The increase in capacity has reduced truck trips by 31,800 per year, which in turn is expected to reduce injury collisions by 2/year	
Velocity	The Centralized Train Control and reverse approach signaling will allow freight trains to move on the South Line at greater operating speeds. During periods of track maintenance, reverse train speeds will increase from 10 mph to 40 mph.	The Centralized Train Control and reverse approach signaling will allow freight trains to move on the South Line at greater operating speeds. During periods of track maintenance, reverse train speeds will increase from 10 mph to 40 mph.	During track maintenance, train speeds incresed to 40 mph while operating on 'normal' rail and 30 mph whlle operating on 'reverse' rall	
Throughput	Implementation of the Mainline Track improvements project is expected to povide capacity to double the number of freight train movements from two to four trains per day. The mainline project provides for a potential increase in yearly track carload capacity from 12,375 to over 23,600. In conjunction with the San Ysidro Yard Improvements project, the Mainline Track Improvements project will help increase total system capacity from 10,000 to 19,600 carloads transported per year.	Implementation of the Mainline Track Improvements project is expected to povide capacity to double the number of freight train movements from two to four trains per day. The mainline project provides for a potential increase in yearly track carload capacity from 12,375 to over 23,600. In conjunction with the San Ysidro Yard Improvements project, the Mainline Track Improvements project will help increaes total system capacity from 10,000 to 19,600 carloads transported per year.	Capacity in total system has increased from allowing 10,0000 carloads per year to now 19,600 carloads per year due to a 96% increase of the capacity of the Yard and improvements on the Main Line	

Relíability	Reliability of freight delivery is increased with two additional train operations per day. The project also reduces canceled train movements because of scheduled and unscheduled track maintenance and reduces the variability and unpredictability of train travel times.		Improvements allow for 4 train operations per day (2 each direction) and reverse running has reduced impacts of track maintenance. Allows for increase from 2 train operations per day to 4. Reduce canceled train movements and/or variability of travel times due to track maintenance.
Congestion Reduction	The increased rail capacity will eliminate up to 31,800 truck rips annually, reducing congestion on the highway network and at the U.S. – Mexico border crossing.	The increased rail capacity will eliminate up to 31,800 truck rips annually, reducing congestion on the highway network and at the U.S. — Mexico border crossing.	The increase in rail freight capacity has, upon completion of TCIF 74 & 75.1-75.4, reduced the amount of trucks on the highway network by 31,800/yr and reduced calculated VMT by approx. 3,800,000
Emissions Reductions	The reduction of 31,800 trucks by 2030 is projected to result in the following emissions reductions: NOx: 320 pounds/day; CO2 1.36 million pounds/day; PM10: 260 pounds/day; CO: 540 pounds/day.	The reduction of 31,800 trucks by 2030 is projected to result in the following emissions reductions: NOx: 320 pounds/day; CO2 1.36 million pounds/day; PM10: 260 pounds/day; CO: 540 pounds/day.	The NOX/SOX/PM/CO2/CO estimates were derived from the 2007 EMFAC model assuming a potential 31,800 diverted truck trips based on the added capacity. Using that same model, and the fact the project has provided the intended capacity enhancements, the potential emissions reduction goals can be acheived by 2030.

^{*} Please note: All 4 phases of Southline Main Line (75.1-75.4) and SY Yard project (74) were needed to acheives benefits listed above

G. Differences/Variances

Describe differences/variances (if any) and reason for, between approved scope, cost, schedule, and actual.

The completion of the project's construction was delayed as a result of the following items: unanticipated site conditions; additional work at the at-grade crossings to meet CPUC requirements as part of GO-88; and phasing/scheduling restrictions related to the timing of full track closures for the signal system cutovers, done to limit impact to trolley and freight operations.

The project experienced a savings of over \$5 Million as a result of being constructed in conjunction with MTS Trolley imporvements, but the end of the close-out was delayed as a result of the need to close out the Trolley portion of the project and reconcile finances so that an accurate accounting of applicable and final TCIF construction support and operational costs could be made.

H. Lessons-Learned/Best Practices

Describe lessons-learned and best practices for future projects.

The overall project was split into 4 phases to enhance the delivery of the project. The phased approach allowed for the following: -- Better integration with a concurrent Trolley improvement program on the same corridor (the project could not have been delivered on-time without being split)

- -- Less impact to existing Freight and Trolley operations during construction
- -- Large costs savings the original project budget was \$107 Million and the final cost for the project will be ~\$48 Million. A portion of this was due to other factors, such as the slow down of the economy during the early phases of the project, but the phasing of the project was the largest factor
- -- By constructing the freight and trolley projects concurrently, the system received consistent, compatible upgrades to the signal communication and rail in the corridor which will benefit freight opertions in the overall corridor.

Implementating Agency I hereby certify to the best of my knowledge and belief, the information in this report	is a true and accurate record. The work
Pete d'Ablaing	
(Print name) Project Manager	
Peter d'all 101	26/18 Date
(Signature) Project Manager	Date
*	
Caltrans	
The TCIF Division Program Coordinator and/or the Project Manager from the Califor reviewed the information contained in this report and has verified the information pro-	
Mr. 101 - m. 14 - 1 - 1	
Phillip D. Hoebeke (Print Name) TCIF Division Program Coordinator/Project Manager	
> 1/1 - 1/1/	
PILL DIGIL	10/20/18
(Signature)TCIF Division Program Coordinator/Project Manager	Date
2 W	
The TCIF Program Lead from the California Department of Transportation has revie	wed the information contained in the report
Tone	
(Print Name) TCIF Program Lead	
71.	
(Signature) TCIF Program Lead	10/20/18
(Signature) TCIF Program Lead	Date

Distribution: 1) Local Agency, 2) Division Program Coordinator/Project Manager, 3) TCIF Program Lead, 4) CTC

A.	Project Information			Date: _	10/18/2018
	TCIF # (Segment):	75.3	Other Project Identifier (EA, P	Project #, PPNO, etc):F	PNO 11-2103
	Project Title:	Southline Mainline Phase 3	<i>W</i>		
	Delivery Report:		ix months of project becoming of at the conclusion of all project		
	Location: County:	San Diego	City:	Chula Vista	***************************************
	Project Description:	Street Trolley Station and ren	ications to the SD&AE Freight on noval, realignment, and recons ts to associated signal and ove	truction of the Mainline ar	Palomar nd Palomar
В.	Contact Information				
	Implementing Agency:	San Diego Association of Gov	vernments	Caltrans District Number	:11
	Contact Person:	Pete d'Ablaing		Phone: <u>(619)</u> 699-1906	Ę
	Email Address:	pete.dablaing@sandag.org			

C. Cost				
	Adopted Program Amount (\$)	Current Approved Amount (\$)	Actual Expended Amount (\$)	Net Difference (Dollars)
<u>Environmental</u>				
Total Amount	\$0	\$0	\$0	\$0
<u>Design</u>	A COLUMN TO A MARKET			1
Total Amount	\$0	\$0	\$0	\$0
Right of Way				17.0
Total Amount	\$0	. \$0	. \$0	\$0
Construction				18.4.7.440.85
TCIF	\$4,000,000	\$3,445,000	\$3,445,000	\$0
Local	\$0	\$0	· \$0	\$0
Federal	\$0	\$0	· \$0	\$0
Other	\$0	\$0	\$0	\$0
<u>Totals</u>	\$4,000,000	\$3,445,000	\$3,445,000	\$0

D. Schedule	Adopted Program Date	Current Approved Date	Actual Begin/End [.] Date	Net Difference (Months)
Environmental Phase	Shirth and the state of the sta	Jana Caranta and American	Maria Carlo Terrano	
Begin	07/01/08	07/01/08	07/01/08	0
End	04/01/10	04/01/10	04/01/10	0
Design (PS&E) Phase				N
Begin	04/03/10	04/03/10	04/03/10	0
End	11/30/11	09/10/12	09/10/12	0
Right of Way Phase				P 1 (4 1) (8) (8)
Begin	N/A	N/A	N/A	0
End	N/A	N/A	N/A	0
Construction Phase				MO CONTRACTOR
Begin	04/02/12	03/18/13	04/25/13	1
End	07/01/15	12/22/14	02/24/16	14
Closeout Date				
Begin	07/02/15	12/23/14	02/25/16	14
End	01/01/16	12/21/15	01/30/17	13

E. Amendments			
List approved a	mendments		
Amendment #	CTC Meeting	Summary of Changes (Scope, Cost, Schedule)	
1	October 2011	Split project into 3 phases and updated delivery schedule	
2 .	April 2012	Split Phase 3 into Phase 3 and Phase 4 and updated Schedules	
3	February 2013	Update costs, Phase 3 schedule, and move scope from Phase 4 to 3	
4	September 2013	Update Phase 3 schedule	
Alloc. Amend	March 2014	Deallocated contract award savings	

F. Project Benefits Describe and compare project benefits with those included in the approved Baseline Agreement.					
Outcomes	Adopted Program	Current Approved	Actual *		
Safety	to 31,800 truck trips annually on the regional highway system, with an estimated reduction of two injury accidents per year	Project provides for the rail transportation of goods allowing for a reduction of up to 31,800 truck trips annually on the regional highway system, with an estimated reduction of two injury accidents per year	The increase in capacity has reduced truck trips by 31,800 per year, which in turn is expected to reduce injury collisions by 2/year		
Velocity	The Centralized Train Control and reverse approach signaling will allow freight trains to move on the South Line at greater operating speeds. During periods of track maintenance, reverse train speeds will increase from 10 mph to 40 mph.	The Centralized Train Control and reverse approach signaling will allow freight trains to move on the South Line at greater operating speeds. During periods of track maintenance, reverse train speeds will increase from 10 mph to 40 mph.	During track maintenance, train speeds increased to 40 mph while operating on 'normal' rail and 30 mph while operating on 'reverse' rail		
Throughput	Implementation of the Mainline Track Improvements project is expected to povide capacity to double the number of freight train movements from two to four trains per day. The mainline project provides for a potential increase in yearly track carload capacity from 12,375 to over 23,600. In conjunction with the San Ysidro Yard Improvements project, the Mainline Track Improvements project will help increase total system capacity from 10,000 to 19,600 carloads transported per year.	Implementation of the Mainline Track Improvements project is expected to povide capacity to double the number of freight train movements from two to four trains per day. The mainline project provides for a potential increase in yearly track carload capacity from 12,375 to over 23,600. In conjunction with the San Ysidro Yard Improvements project, the Mainline Track Improvements project will help increases total system capacity from 10,000 to 19,600 carloads transported per year.	Capacity in total system has increased from allowing 10,0000 carloads per year to now 19,600 carloads per year due to a 96% increase of the capacity of the Yard and improvements on the Main Line		

h	- 07		
Reliability	Reliability of freight delivery is increased with two additional train operations per day. The project also reduces canceled train movements because of scheduled and unscheduled track maintenance and reduces the variability and unpredictability of train travel times.	Reliability of freight delivery is increased with two additional train operations per day. The project also reduces canceled train movements because of scheduled and unscheduled track maintenance and reduces the variability and unpredictability of train travel times.	Improvements allow for 4 train operations per day (2 each direction) and reverse running has reduced impacts of track maintenance. Allows for increase from 2 train operations per day to 4. Reduce canceled train movements and/or variability of travel times due to track maintenance.
Congestion Reduction	The increased rail capacity will eliminate up to 31,800 truck rips annually, reducing congestion on the highway network and at the U.S. – Mexico border crossing.	The increased rail capacity will eliminate up to 31,800 truck rips annually, reducing congestion on the highway network and at the U.S. — Mexico border crossing.	The increase in rail freight capacity has, upon completion of TCIF 74 & 75.1-75.4, reduced the amount of trucks on the highway network by 31,800/yr and reduced calculated VMT by approx. 3,800,000
Emissions Reductions	The reduction of 31,800 trucks by 2030 is projected to result in the following emissions, reductions: NOx: 320 pounds/day; CO2 1.36 million pounds/day; PM10: 260 pounds/day; CO: 540 pounds/day.	result in the following	The NOX/SOX/PM/CO2/CO estimates were derived from the 2007 EMFAC model assuming a potential 31,800 diverted truck trips based on the added capacity. Using that same model, and the fact the project has provided the intended capacity enhancements, the potential emissions reduction goals can be acheived by 2030.

^{*} Please note: All 4 phases of Southline Main Line (75.1-75.4) and SY Yard project (74) were needed to acheives benefits listed above

G. Differences/Variances

Describe differences/variances (if any) and reason for, between approved scope, cost, schedule, and actual.

The completion of this project took longer than anticipated for the following reasons: unanticipated field conditions including relocation of utility lines by utility owners; the delay in starting a portion of the work caused by a concurrent project being undertaken by the City of Chula Vista and; work that was needed to obtain CPUC approval of the GO-88 process due to changes to the grade crossing at Anita Street. The closeout phase was delayed by the extension of the construction, though the closeout was expedited so as to lessen the total length of the delay.

The project experienced a savings of approxiamtely \$2 Million (adjusted at the March 2014 CTC meeting) as a result of being constructed in conjunction with MTS Trolley Improvements.

H. Lessons-Learned/Best Practices

Describe lessons-learned and best practices for future projects.

The overall project was split into 4 phases to enhance the delivery of the project. The phased approach allowed for the following: — Better integration with a concurrent Trolley Improvement program on the same corridor (the project could not have been delivered on-time without being split)

Less impact to existing Freight and Trolley operations during construction

Large costs savings - the original project budget was \$107 Million and the final cost for the project will be ~\$48 Million. A portion of this was due to other factors, such as the slow down of the economy during the early phases of the project, but the phasing of the project was the largest factor

- By constructing the freight and trolley projects concurrently, the system received consistent, compatible upgrades to the signal communication and rail in the corridor which will benefit freight operations in the overall corridor.

I hereby certify to the best of my knowledge and belief, the	e information in this	report is a true and accurate record. The	e work
Thereby certary to the book of my knownedge and below, the			
Data disklation			
Pete d'Ablaing (Print name) Project Manager			
(Time name) Troject manager			
Text J'all	*	10/26/18	
(Signature) Project Manager		Date	
Caltrans			
The TCIF Division Program Coordinator and/or the Project	t Manager from the	California Department of Transportation	has
reviewed the information contained in this report and has	verified the informat	tion presented is correct.	
Phillip D. Hoebeke			
(Print Name) TCIF Division Program Coordinator/Project M	Vlanager		
$\sim 11 \times 111$			
PUB DHH		10/26/19	
(Signature)TCIF Division Program Coordinator/Project Ma	ınager	Date	
The TCIF Program Lead from the California Department of	of Transportation has	is reviewed the information contained in	the report
Tony Cano			
(Print Name) TCIF Program Lead			
		101	
Longer		10/30/18	
(Signature) TCIF Program Lead		Date	

Distribution: 1) Local Agency, 2) Division Program Coordinator/Project Manager, 3) TGIF Program Lead, 4) CTC

TCIF # (Segment): 75.4 Other Project Identifier (EA, Project #, PPNO, etc): PPNO 11	-2101
Project Title: Southline Mainline Phase 4	
Delivery Report: Final- Due within six months of project becoming operable. Supplemental - Due at the conclusion of all project activities.	
Location: County: San Diego City: San Diego, National City, Chula V	∕ista
The project consists of installation of a communication and railroad signaling fiber backbone between San Diego and the San Ysidro Yard, establishing the communication link required for reverse running and communication with the Central Control Center.	the
3. Contact Information	
Implementing Agency: San Diego Association of Governments Caltrans District Number:	11
Contact Person: Pete d'Ablaing Phone: (619) 699-1906	
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C. Cost	Adopted Program Amount (\$)	Current Approved Amount (\$)	Actual Expended Amount (\$)	Net Difference (Dollars)
Environmental				_ `
Total Amount	\$220,000	\$220,000	\$220,000	\$0
<u>Design</u>	Section 1995			CANCEL SERVICE AND ADDRESS OF A SERVICE AND AD
Total Amount	\$8,750,000	\$8,750,000	\$3,823,620	\$4,926,380
Right of Way				
Total Amount	\$0	\$0	. \$0	\$0
Construction	There and become			
TCIF	\$68,060,000	\$21,621,000	\$21,621,000	\$0
Local	\$0 ·	\$0	\$3,025,572	-\$3,025,572
Federal	\$0	\$0	\$0	\$0
Other	\$0 ·	\$0	\$0	\$0
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<u>Totals</u>	\$77,030,000	\$30,591,000	\$28,690,192	\$1,900,808

D. Schedule				
	Adopted Program Date	Current Approved Date	Actual Begin/End Date	Net Difference (Months)
Environmental Phase	MARKET AND A SECOND	FASTER STATE OF STATE OF		
Begin	07/01/08	- 07/01/08	07/01/08	O
End	04/01/10	04/01/10	04/01/10	0
Design (PS&E) Phase				
Begin	04/03/10	04/03/10	04/03/10	0
End	06/03/13	05/03/13	05/03/13	0
Right of Way Phase				
Begin	N/A ·	N/A	N/A	0
End	N/A	N/A	N/A	. 0
Construction Phase	dana da a			
Begin	12/02/13	11/01/13	12/02/13	1
End	07/01/15	07/01/15	08/14/16	13
Closeout Date				Control of the state of
Begin	07/02/15	07/02/15	08/15/16	13
End	01/01/16	07/01/16	02/28/17	7

E. Amendments						
List approved amendments						
Amendment #	CTC Meeting	Summary of Changes (Scope, Cost, Schedule)				
1	October 2011	Split project into 3 phases and updated delivery schedule				
2	April 2012	Split Phase 3 into Phase 3 and Phase 4 and updated Schedules				
Allocation	May 2013	Allocation of funds for Phase 4				

Outcomes	Adopted Program	Current Approved	Actual *
Safety		Project provides for the rail transportation of goods allowing for a reduction of up to 31,800 truck trips annually on the regional highway system, with an estimated reduction of two injury accidents per year	The increase in capacity has redi truck trips by 31,800 per year, wi turn is expected to reduce injury collisions by 2/year
Velocity	The Centralized Train Control and reverse approach signaling will allow freight trains to move on the South Line at greater operating speeds. During periods of track maintenance, reverse train speeds will increase from 10 mph to 40 mph.	The Centralized Train Control and reverse pproach signaling will allow reight trains to move on the south Line at greater perating speeds. During eriods of track maintenance, reverse train peeds will increase from 10 mph to 40 mph	During track maintenance, train speeds incresed to 40 mph while operating on 'normal' rail and 30 while operating on 'reverse' rail
e e	Implementation of the Mainline Track Improvements project is expected to povide capacity to double the number of freight train movements from two to four trains per day. The mainline project provides for a potential increase in yearly track	Implementation of the Mainline Track Improvements project is expected to povide capacity to double the number of freight train movements from two to four trains per day. The mainline project provides for a potential increase in yearly	Capacity in total system has inc from allowing 10,0000 carloads year to now 19,600 carloads pe
Throughput	carload capacity from 12,375 to over 23,600. In conjunction with the San Ysidro Yard Improvements project, the Mainline Track Improvements project will help increaes total system capacity from 10,000 to 19,600 carloads transported per year.	track carload capacity from 12,375 to over 23,600. In conjunction with the San Ysidro Yard Improvements project, the Mainline Track Improvements project will help increaes total system capacity from 10,000 to 19,600 carloads transported per year.	due to a 96% increase of the cap of the Yard and improvements or Main Line
Reliability	Reliability of freight delivery is increased with two additional train operations per day. The project also reduces canceled train movements because of scheduled and unscheduled track maintenance and reduces the variability and unpredictability of train travel times.	Reliability of freight delivery is increased with two additional train operations per day. The project also reduces canceled train movements because of scheduled and unscheduled track maintenance and reduces the variability and unpredictability of train travel times.	Improvements allow for 4 train operations per day (2 each direct and reverse running has reduced impacts of track maintenance. Alfor increase from 2 train operatio per day to 4. Reduce canceled transvements and/or variability of t times due to track maintenance.

Со	ngestion Reduction	The Increased rail capacity will eliminate up to 31,800 truck rips annually, reducing congestion on the highway network and at the U.S. – Mexico border crossing.	The increased rail capacity will eliminate up to 31,800 truck rips annually, reducing congestion on the highway network and at the U.S. — Mexico border crossing.	The increase in rail freight capacity has, upon completion of TCIF 74 & 75.1-75.4, reduced the amount of trucks on the highway network by 31,800/yr and reduced calculated VMT by approx. 3,800,000
Em	issions reductions	trucks by 2030 is projected to result in the following	trucks by 2030 is projected to result in the following emissions reductions: NOx: 320 pounds/day; CO2 1.36 million pounds/day; PM10: 260 pounds/day; CO: 540	The NOX/SOX/PM/CO2/CQ estimates were derived from the 2007 EMFAC model assuming a potential 31,800 diverted truck trips based on the added capacity. Using that same model, and the fact the project has provided the intended capacity enhancements, the potential emissions reduction goals can be acheived by 2030.

* Please note: All 4 phases of Southline Main Line (75.1-75.4) and SY Yard project (74) were needed to acheives benefits listed above

G. Differences/Variances

Describe differences/variances (if any) and reason for, between approved scope, cost, schedule, and actual.

The end of construction was delayed as a result of unanticipated field conditions that resulted in additional work.

The project experienced a savings of over \$5 Million as a result of being constructed in conjunction with MTS Trolley imporvements, but the end of the close-out was delayed as a result of the need to close out the Trolley portion of the project and reconcile finances so that an accurate accounting of applicable and final TCIF construction support and operational costs could be made.

H. Lessons-Learned/Best Practices

Describe lessons-learned and best practices for future projects.

The overall project was split into 4 phases to enhance the delivery of the project. The phased approach allowed for the following: — Better integration with a concurrent Trolley improvement program on the same corridor (the project could not have been delivered on-time without being split)

- -- Less impact to existing Freight and Trolley operations during construction
- -- Large costs savings the original project budget was \$107 Million and the final cost for the project will be ~\$48 Million. A portion of this was due to other factors, such as the slow down of the economy during the early phases of the project, but the phasing of the project was the largest factor
- By constructing the freight and trolley projects concurrently, the system received consistent, compatible upgrades to the signal communication and rail in the corridor which will benefit freight operations in the overall corridor.

Implementating Agency I hereby certify to the best of my knowledge and belief, the information in this report is a true a	and accurate record. The work
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Pete d'Ablaing (Print name) Project Manager	
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Peter d'allan 10/2	6/18
(Signature) Project Manager	Date
Caltrans	
The TCIF Division Program Coordinator and/or the Project Manager from the California Depart	tment of Transportation has
reviewed the information contained in this report and has verified the information presented is	correct.
Phillip D. Hoebeke	
(Print Name) TCIF Division Program Coordinator/Project Manager	
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PIA DILL	210/18
(Signature)TCIF Division Program Coordinator/Project Manager Date	23/10
(Signature) for Division Program Coordinatorn Toject Manager	
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The TCIF Program Lead from the California Department of Transportation has reviewed the in	mormation contained in the report
	(47.
Tony Cano	
(Print Name) TCIF Program Lead	
Tour 1/2 - 10/3	30/18
(Signature) TelF Program Lead Date	

Distribution: 1) Local Agency, 2) Division Program Coordinator/Project Manager, 3) TCIF Program Lead, 4) CTC