

RTIP ID# <i>(required)</i> RIV031208
TCWG Consideration Date November 11, 2008
<p>Project Description <i>(clearly describe project)</i></p> <p>The City of Palm Desert, in cooperation with the California Department of Transportation (Department) and the County of Riverside, propose the reconstruction of the westbound ramps at the Interstate 10 (I-10) and Monterey Avenue Interchange (IC). The project is located in a portion of unincorporated Riverside County. Funding will be provided by the City of Palm Desert using local City, Congestion Mitigation and Air Quality (CMAQ) program, and Measure A funds in the 2008/2009 fiscal year.</p> <p><i>Alternative #1 – Loop Entrance Ramp / Hook Exit Ramp (Locally Preferred Alternative).</i> This alternative consists of the construction of a new loop entrance ramp from Monterey Avenue to westbound I-10. This loop ramp will provide for a free flow condition for traffic entering westbound I-10 from northbound Monterey Avenue and eliminate the existing northbound 34 m (112 ft) dual left turn pocket. The loop ramp will provide improved traffic flow along Monterey Avenue without affecting operations of the freeway by joining to the existing auxiliary lane to westbound Ramon Road off ramp. To accommodate the proposed loop ramp, the westbound exit ramp will be realigned to provide a hook exit ramp approximately 160 m (525 ft) east of Monterey Avenue along Varner Road. The intersection spacing between the hook ramp and Monterey Avenue will be in accordance with the Highway Design Manual. A signal is proposed for the intersection of the proposed westbound ramps on Varner Road. The existing traffic signal at the intersection of Monterey Avenue and the westbound exit ramp will be removed since both the northbound to westbound and the westbound to southbound left turn movements will be eliminated at this intersection. Along with the removal of the intersection at the existing westbound ramp termini, the southbound Monterey Avenue left turn lanes to eastbound I-10 will be lengthened to provide sufficient stacking for future traffic volumes between the eastbound ramps and Varner Road. It is anticipated these improvement would not preclude any future improvements to the interchange.</p> <p>The design speed of Monterey is 75 kph (45 mph), and the posted speed is 100 kph (60 mph). The design speed of Varner Road is 75 kph (45 mph), and the posted speed is 90 kph (55 mph). The posted speed will be changed to 75 kph (45 mph) within the vicinity of the project. Reduced Speed Ahead and Speed Limit signs will be installed per the MUTCD and Caltrans standards. This alternative will require the acquisition of three (3) undeveloped parcels located to the east of Monterey Avenue between the existing westbound exit ramp and Varner Road. In conformance with the Highway Design Manual Index 504.8, access control directly opposite of the proposed off-ramp will be required.</p> <p>This alternative will improve the operational deficiencies of Monterey Avenue by eliminating the westbound I-10 ramp intersection and increasing the intersection spacing on Monterey Avenue from 66 m (215 ft) to 190 m (623 ft) between the eastbound ramps and Varner Road. Also, the I-10 westbound volumes will be accommodated from northbound Monterey Avenue in a free-flowing condition onto the new loop ramp. This alternative provides 2-lane ramp metering for the westbound entrance ramps including right of way, geometrics to accommodate vehicle storage, ramp meter equipment, and California Highway Patrol (CHP) enforcement areas in accordance with the Ramp Meter Design Manual. As such, the proposed alternative is in compliance with the District 8 Ramp Meter Development Plan and Ramp Metering Policy Procedures. The proposed loop on-ramp will require a tieback retaining wall to be constructed under the existing overcrossing abutment.</p> <p><i>Alternative #2 - Hook Entrance/Exit Ramp.</i> This alternative consists of the construction of a hook entrance ramp from Varner Road east of Monterey Avenue. The hook ramp will eliminate the left turn movement from northbound Monterey Avenue to the westbound on-ramp by allowing the traffic to make a right turn at the Monterey Avenue and Varner Road intersection to access the hook on-ramp. An additional eastbound right turn lane on Varner Road will be provided for the traffic to access the proposed westbound on-ramp.</p> <p>In addition, this alternative will also include the hook exit ramp as provided in Alternative #1. The hook entrance ramp will provide improved traffic flow along Monterey Avenue without affecting operations of the freeway, as the hook entrance ramp will join to the existing auxiliary lane to westbound Ramon Road off ramp. As with Alternative #1, this alternative will remove the existing intersection at the existing westbound ramp termini and will increase the intersection spacing between Varner Road and the eastbound ramps. A signal is proposed for the intersection of the proposed westbound ramps on Varner Road. It is anticipated these improvement would not preclude any future improvements to the interchange.</p>

PM Conformity Hot Spot Analysis – Project Summary for Interagency Consultation

The design speed of Monterey is 75 kph (45 mph), and the posted speed is 100 kph (60 mph). The design speed of Varner Road is 75 kph (45 mph), and the posted speed is 90 kph (55 mph). The posted speed will be changed to 75 kph (45 mph) within the vicinity of the project. Reduced Speed Ahead and Speed Limit signs will be installed per the MUTCD and Caltrans standards. This alternative will require the acquisition of three (3) undeveloped parcels located to the east of Monterey Avenue between the existing westbound exit ramp and Varner Road. In conformance with the Highway Design Manual Index 504.8, access control directly opposite of the proposed off-ramp and on-ramp will be required.

This alternative will improve the operational deficiencies of Monterey Avenue by eliminating the westbound I-10 ramp intersection and increasing the intersection spacing along Monterey Avenue from 66m (215 ft) to 190m (623 ft) between the eastbound ramps and Varner Road. This alternative provides 2-lane ramp metering for the westbound entrance ramps including right of way, geometrics to accommodate vehicle storage, ramp meter equipment, and CHP enforcement areas in accordance with the Ramp Meter Design Manual. As such, the proposed alternative is in compliance with the District 8 Ramp Meter Development Plan and Ramp Metering Policy Procedures. The proposed hook on-ramp will require a tieback retaining wall to be constructed under the existing overcrossing abutment.

Alternative #3 – Combination Loop/Hook Entrance Ramp and Hook Exit Ramp. This alternative is a combination of both the loop and hook entrance and hook exit ramps as described in Alternatives #1 and #2. As in Alternatives #1 and #2, the intersection at the existing westbound ramp termini will be removed along with the traffic signal. The combination loop/hook entrance ramp will provide improved traffic flow along Monterey Avenue without greatly affecting operations of the freeway since the loop/hook entrance ramp will join to the existing auxiliary lane to westbound Ramon Road off ramp. It is anticipated these improvement would not preclude any future improvements to the interchange.

The design speed of Monterey is 75 kph (45 mph), and the posted speed is 100 kph (60 mph). The design speed of Varner Road is 75 kph (45 mph), and the posted speed is 90 kph (55 mph). The posted speed will be changed to 75 kph (45 mph) within the vicinity of the project. Reduced Speed Ahead and Speed Limit signs will be installed per the MUTCD and Caltrans standards. This alternative will also require the acquisition of three (3) undeveloped parcels located to the east of Monterey Avenue between the existing westbound exit ramp and Varner Road. In conformance with the Highway Design Manual Index 504.8, access control directly opposite of the proposed off-ramp and on-ramp will be required.

This alternative will improve the operational deficiency of Monterey Avenue by eliminating the westbound I-10 ramp intersection and increasing the intersection spacing on Monterey Avenue from 66m (215 ft) to 190m (623 ft) between Varner Road and the eastbound ramps. Also, the I-10 westbound volumes will be removed from northbound Monterey Avenue in a free-flowing condition onto the new loop ramp. This alternative provides 2-lane ramp metering for the westbound entrance ramps including right of way, geometrics to accommodate vehicle storage, ramp meter equipment, and CHP enforcement areas in accordance with the Ramp Meter Design Manual. As such, the proposed alternative is in compliance with the District 8 Ramp Meter Development Plan and Ramp Metering Policy Procedures. The proposed loop/hook on-ramp will require a tieback retaining wall to be constructed under the existing overcrossing abutment. A retaining wall will be required between Varner Road and the loop ramp.

No Build Alternative (Alternative #4). The "No Build Alternative" undertakes no interchange or roadway improvements but rather maintains the existing roadway/interchange geometry. This alternative would produce no environmental impacts other than any which might be associated with routine roadway maintenance within the project area. This alternative does not address the peak period traffic volumes that are projected to increase over the next thirty years resulting in an increase in congestion, queues, and general deterioration in traffic safety. Additionally, this alternative does not address the inadequate left turn lane storage for traffic entering both westbound and eastbound I-10 from Monterey Avenue. The "No Build Alternative" does not satisfy or address the defined purpose and need for this project.

Type of Project (use Table 1 on instruction sheet)

Reconfigure existing interchange

PM Conformity Hot Spot Analysis – Project Summary for Interagency Consultation

County Riverside		Narrative Location/Route & Postmiles The I-10/Monterey interchange is located approximately 2.0 kilometers (km) (1.2 miles [mi]) east of the Ramon Road interchange and 3.7 km (2.3 mi) west of the Cook Street interchange. PM 44.0/45.0 (KP 70.8/72.4) Caltrans Projects – EA# 0F0500			
Lead Agency: City of Palm Desert					
Contact Person John Garcia		Phone# 760.776.6450	Fax# 760.341.7098	Email jgarcia@ci.palm-desert.ca.us	
Hot Spot Pollutant of Concern (<i>check one or both</i>) PM2.5 PM10 X					
Federal Action for which Project-Level PM Conformity is Needed (<i>check appropriate box</i>)					
X	Categorical Exclusion (NEPA)	EA or Draft EIS	FONSI or Final EIS	PS&E or Construction	Other
Scheduled Date of Federal Action:					
NEPA Delegation – Project Type (<i>check appropriate box</i>)					
Exempt		Section 6004 – Categorical Exemption		X Section 6005 – Non-Categorical Exemption	
Current Programming Dates (<i>as appropriate</i>)					
	PE/Environmental		ENG	ROW	CON
Start	1/05		1/07	8/08	12/09
End	1/09		5/09	6/09	12/10
Project Purpose and Need (Summary): (<i>attach additional sheets as necessary</i>)					
<p>Substantial growth within the area, including Costco, Home Depot, Lowe's, and Super Wal-mart, have increased demand for northbound Monterey Avenue traffic to westbound I-10. Due to the intersection spacing between the on and off ramps, the northbound Monterey Avenue to westbound I-10 traffic exceeds the current storage length of the left turn lane and queues into the adjacent mixed flow lane. The current left turn peak queue length is 52 meters (170 feet) per lane while the storage length is 36 meters (118 feet).</p> <p>The purpose of the project is to increase left turn storage capacity along Monterey Avenue and provide congestion relief for northbound Monterey Avenue to the existing westbound on-ramp. The need for the project is warranted based on two critical elements, operational deficiencies from increased traffic demand and queuing from the forecasted growth and development in the area. The proposed improvements will realign the existing westbound off-ramp to connect with Varner Road and construct a loop on ramp from Monterey Avenue to westbound I-10. As a result of these improvements the existing intersection of the westbound on and off ramps will be removed on Monterey Avenue, thereby increasing the intersection spacing between the eastbound ramps and Varner Road along Monterey Avenue; as a result the left turn storage capacity will increase between these intersections to approximately 193 meters (633 ft). Improvement to local roads alone would not relieve congestion due to inadequate storage for queuing. Relocation of ramps is necessary to provide storage length for left turn traffic entering the freeway.</p> <p>The existing westbound auxiliary lane on I-10 will extend and begin at the proposed westbound loop on ramp. The existing westbound on ramp will merge into the westbound auxiliary lane to the westbound Ramon Road off ramp. There are no improvements to the existing Monterey Avenue overcrossing, however a tieback retaining wall will be constructed in the vicinity of the northerly abutment to provide clearance for the proposed westbound loop on ramp. Additionally, ramp metering will be installed on the proposed westbound loop on ramp and existing westbound on ramp.</p>					
Surrounding Land Use/Traffic Generators (<i>especially effect on diesel traffic</i>)					
Currently a Super Wal-Mart was completed and open to business in summer of 2006 south of the interchange and southeast of Monterey Avenue and Dinah Shore Drive intersection. A traffic impact analysis was specifically completed for the Super					

Wal-Mart, and, the traffic impact analysis for the proposed interchange improvements for year 2030 include traffic from the Super Wal-Mart. Just south of the Wal-Mart location there is a Lowe's Home Improvement Center. These two large facilities along with the existing Home Depot and Costco in the area contribute heavy movements northbound on Monterey Ave, making lefts onto westbound I-10.

Opening Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

Refer to Table 1 (Existing and Opening Year Traffic Volumes) for opening Year (2010) traffic volumes and associated percentages of heavy truck traffic.

**Table 1
Existing and Opening Year Traffic Volumes**

	AADT Volumes		
	Existing	Year 2010	% Heavy Trucks ¹
I-10/Monterey Ramps			
WB Exit	6,810	7,250	8.0
WB Entrance	5,475	6,260	8.0
EB Exit	6,580	7,620	8.0
EB Entrance	4,635	5,305	8.0
I-10 Mainline			
WB west of I-10/Monterey	46,000	56,635	13.0
EB west of I-10/Monterey	46,000	56,635	13.0
WB east of I-10/Monterey	44,500	51,175	13.0
EB east of I-10/Monterey	44,500	51,175	13.0

¹ Ramp truck percentage based on Caltrans Route Concept Fact Sheet District 8 (March, 2000); Mainline truck percentage based on I-10/Portola Ave Interchange PSR (April, 2005).

Table 2 (Opening Year LOS) summarizes forecast year 2010 with project conditions AM peak hour and PM peak hour average stopped delay per vehicle and corresponding LOS of the study intersections.

**Table 2
Opening Year LOS**

Study Intersection	Year 2010 Without Project		Year 2010 With Project	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
	Delay – LOS (seconds)	Delay – LOS (seconds)	Delay – LOS (seconds)	Delay – LOS (seconds)
Monterey Ave/Varner Road	22.2 - C	19.9 - B	25.2 - C	22.4 - C
Monterey Ave/I-10 WB Ramps	18.1 - B	15.9 - B	N/A - N/A	N/A - N/A
Monterey Ave/I-10 EB Ramps	17.1 - B	13.0 - B	18.7 - B	13.1 - B
Monterey Ave/Dinah Shore Drive	15.3 - B	19.6 - B	15.6 - B	20.8 - C
I-10 WB Ramps/Varner Road	N/A - N/A	N/A - N/A	10.6 - B	10.2 - B

Source: RBF Consulting, *I-10/Monterey Avenue Interchange Modified Access Report*, August 2008.

RTP Horizon Year / Design Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

Refer to Table 3 (Existing and Horizon Year Traffic Volumes) for horizon Year (2030) Traffic volumes and associated percentages of heavy truck traffic.

Table 3
Existing and Horizon Year Traffic Volumes

	AADT Volumes		
	Existing	Year 2030	% Heavy Trucks ¹
I-10/Monterey Ramps			
WB Exit	6,810	10,910	8.0
WB Entrance	5,475	11,050	8.0
EB Exit	6,580	9,435	8.0
EB Entrance	4,635	14,530	8.0
I-10 Mainline			
WB west of I-10/Monterey	46,000	89,450	13.0
EB west of I-10/Monterey	46,000	89,450	13.0
WB east of I-10/Monterey	44,500	81,500	13.0
EB east of I-10/Monterey	44,500	81,500	13.0

¹ Ramp truck percentage based on Caltrans Route Concept Fact Sheet District 8 (March, 2000); Mainline truck percentage based on I-10/Portola Ave Interchange PSR (April, 2005).

Table 4 (Horizon Year LOS) summarizes forecast year 2030 with project conditions AM peak hour and PM peak hour average stopped delay per vehicle and corresponding LOS of the study intersections.

Table 4
Horizon Year LOS

Study Intersection	Year 2030 Without Project		Year 2030 With Project	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
	Delay – LOS (seconds)	Delay – LOS (seconds)	Delay – LOS (seconds)	Delay – LOS (seconds)
Monterey Ave/Varner Road	23.5 - C	30.5 – C	40.8 – D	78.3 - E
Monterey Ave/I-10 WB Ramps	36.2 - D	104.4 – F	N/A - N/A	N/A - N/A
Monterey Ave/I-10 EB Ramps	34.5 - D	97.4 – F	36.4 - D	90.2 – F
Monterey Ave/Dinah Shore Drive	43.8 – D	129.0 – F	41.6 – D	107.8 - F
I-10 WB Ramps/Varner Road	N/A - N/A	N/A - N/A	12.7 - B	14.4 - B

Source: RBF Consulting, *I-10/Monterey Avenue Interchange Modified Access Report*, August 2008.

Opening Year: If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

See Above

RTP Horizon Year / Design Year: If facility is an interchange (s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

See Above

Describe potential traffic redistribution effects of congestion relief (impact on other facilities)

Some traffic delays can be expected during construction of the project. However, the traffic impacts during construction are only temporary in nature and will cease upon completion of construction activities.

During the operational phase, the proposed project would result in the modification of the existing entrance and exit ramps at the I-10/Monterey Avenue interchange. No modifications to the existing I-10 mainline are planned as part of the project. Thus, local traffic is not expected to be significantly redistributed.

Comments/Explanation/Details *(attach additional sheets as necessary)*

Conformity determinations require the analysis of direct and indirect emissions associated with the proposed project and compare them to the without project condition. If the total of direct and indirect emissions from the project reaches or exceeds regionally significant thresholds, the Lead Agency must perform a conformity determination to demonstrate the positive conformity of the federal action.

The 2008 Regional Transportation Plan (RTP) (adopted May 2008) is a 25-year plan for the six county region in Southern California including Los Angeles, Orange, San Bernardino, Riverside, Ventura and Imperial counties. The RTP is the culmination of a three-year effort with a focus on improving the balance between land use and the current as well as future transportation systems. The Southern California Association of Governments (SCAG) is required to develop, maintain and update the RTP on a three-year cycle. The RTP provides the basic policy and program framework for long-term investment in our vast regional transportation system in a coordinated, cooperative and continuous manner. The proposed Interstate 10/Monterey Avenue Interchange Reconfiguration Project is subject to the requirement to determine conformity. The Project is included in the RTP (RTP ID RIV031208)

The proposed improvements will improve local circulation and access to commercial and retail areas in the City. Without implementation of the proposed improvements, the existing westbound ramp intersection is forecast to operate at a deficient level of service (LOS), according to the acceptable County of Riverside performance criteria of LOS D or better. The realignment of the existing westbound off-ramp and the addition of a westbound on-ramp will decrease the accident rate on Monterey Avenue due to the increase in signalized intersection spacing between the westbound and eastbound ramp termini. Environmental and roadway conditions do not appear to be a contributing factor in the accidents cited for this segment of the Interstate 10 (or the associated ramps at Monterey Avenue). The proposed improvements are planned to accommodate future traffic projections to Year 2030. Although the percentage of heavy truck traffic along the I-10 mainline is 13 percent, the project does not propose to modify any aspect of the interstate. The percentage of heavy truck traffic along the on- and off-ramps, which will be modified, is 8 percent and has an associated ADT of less than 125,000 vehicles. Note that this segment of I-10 does not serve any ports, rail yards or other significant sources of particulate matter.

Based upon the information provided above, the project is not expected to introduce significant amounts of diesel truck traffic and is not considered a project of significant concern per the definition contained within 40 CFR 93.123(b)(1). Thus, a less than significant impact with respect to PM_{2.5} and PM₁₀ would occur.

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
08	RIV	I-10	R70.8-72.4		

REGISTERED CIVIL ENGINEER

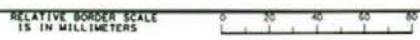
PLANS APPROVAL DATE

CITY OF PALM DESERT
73-510 FRED WARING DRIVE
PALM DESERT, CA 92260

RBF CONSULTING
3300 EAST QUASTI ROAD, SUITE 100
ONTARIO, CA 91761



The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.
California now has a web site! To get to the web site, go to <http://www.dgs.ca.gov>



I-10 / MONTEREY AVENUE INTERCHANGE
IMPROVEMENT PROJECT • AIR QUALITY ASSESSMENT
Preliminary Site Plan • Alt 1
(Locally Preferred)





DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
08	RIV	I-10	R70.8-72.4		

REGISTERED CIVIL ENGINEER	
PLANS APPROVAL DATE	
CITY OF PALM DESERT 73-510 FRED WARING DRIVE PALM DESERT, CA 92260	
RBF CONSULTING 3300 EAST GUASTI ROAD, SUITE 100 ONTARIO, CA 91761	

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.
Caltrans now has a web site! To get to the web site, go to <http://www.dot.ca.gov>



11/14/06 JN 65-100103-13394

I-10 / MONTEREY AVENUE INTERCHANGE
 IMPROVEMENT PROJECT • AIR QUALITY ASSESSMENT
Preliminary Site Plan • Alt 2

Exhibit 3B

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
08	RIV	I-10	R70.8-72.4		

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

CITY OF PALM DESERT
73-510 FRED WARING DRIVE
PALM DESERT, CA 92260

RBF CONSULTING
3300 EAST QUASTI ROAD, SUITE 100
ONTARIO, CA 91761

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

California now has a web site! To get to the web site, go to <http://www.dgs.ca.gov>



I-10 / MONTEREY AVENUE INTERCHANGE
IMPROVEMENT PROJECT • AIR QUALITY ASSESSMENT
Preliminary Site Plan • Alt 3

Exhibit 3C





DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
08	RIV	I-10	R70.8-72.4		

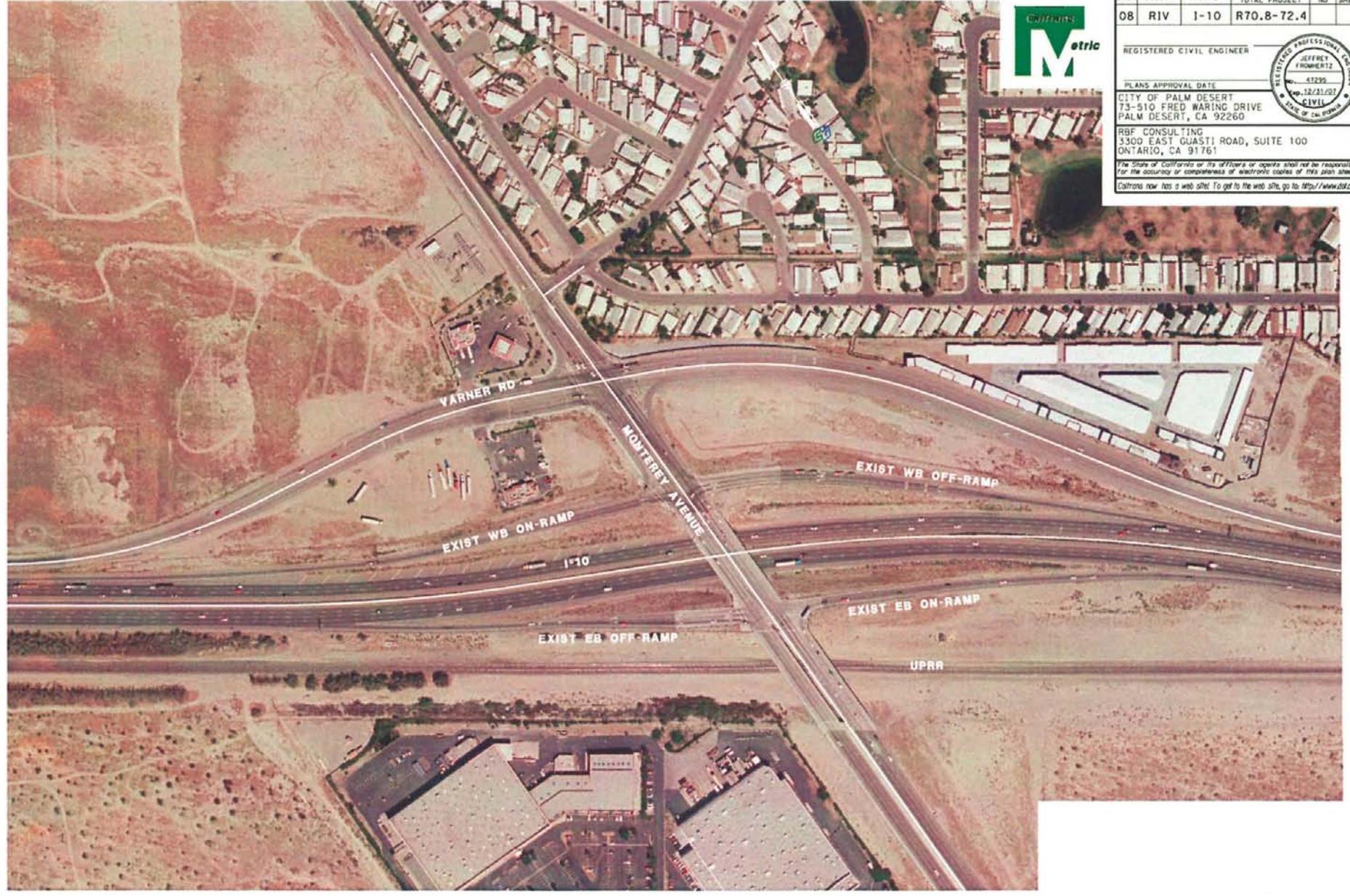
REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

CITY OF PALM DESERT
73-510 FRED WARING DRIVE
PALM DESERT, CA 92260

RBF CONSULTING
3300 EAST GUASTI ROAD, SUITE 100
ONTARIO, CA 91761

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.
Caltrans now has a web site! To get to the web site, go to: <http://www.dot.ca.gov>



I-10 / MONTEREY AVENUE INTERCHANGE IMPROVEMENT PROJECT • AIR QUALITY ASSESSMENT Preliminary Site Plan • Alt 4