



SAN RAFAEL CITY COUNCIL AGENDA REPORT

Department: Public Works

Prepared by: Bill Guerin,
Public Works Director

City Manager Approval: _____

TOPIC: DOWNTOWN TRAFFIC SIGNAL MODERNIZATION

SUBJECT: ADOPTION OF RESOLUTIONS RELATED TO “INNOVATIVE DEPLOYMENTS TO ENHANCE ARTERIALS” (IDEA) GRANT-FUNDED PROJECT NO. 11348:

1. RESOLUTION AWARDING AND AUTHORIZING THE CITY MANAGER TO EXECUTE A CONSTRUCTION AGREEMENT FOR THE DOWNTOWN SIGNAL MODERNIZATION WITH MIKE BROWN ELECTRIC IN THE AMOUNT OF \$172,700 AND AUTHORIZING CONTINGENCY FUNDS IN THE AMOUNT OF \$34,540 FOR A TOTAL APPROPRIATED AMOUNT OF \$207,240.
2. RESOLUTION APPROVING AND AUTHORIZING THE CITY MANAGER TO PURCHASE VARIOUS EQUIPMENT FOR THE IDEA GRANT DOWNTOWN SIGNAL MODERNIZATION PROJECT (#11348) FOR A TOTAL NOT-TO-EXCEED AMOUNT OF \$815,000.
3. RESOLUTION AUTHORIZING AN ADDITIONAL \$125,764 IN TRAFFIC MITIGATION FUND (#246) APPROPRIATIONS FOR THE “INNOVATIVE DEPLOYMENTS TO ENHANCE ARTERIALS” (IDEA) GRANT-FUNDED PROJECT NO. 11348.

RECOMMENDATION: Staff recommends that the City Council:

1. Adopt the resolution awarding and authorizing the City Manager to execute a construction agreement with Mike Brown Electric in the amount of \$172,700 and authorizing contingency funds of \$34,540, for a total appropriated amount of \$207,240.
2. Adopt the resolution authorizing the City Manager to purchase various equipment for the Downtown Signal Modernization Project (#11348) for a total not-to-exceed amount of \$815,000.
3. Adopt the resolution approving and authorizing an additional \$125,764 in Traffic Mitigation Fund (#246) appropriations for the “Innovative Deployments to Enhance Arterials” (IDEA) Grant-Funded Project No. 11348.

FOR CITY CLERK ONLY

File No.:

Council Meeting:

Disposition:

BACKGROUND: On July 17, 2017, the Metropolitan Transportation Commission (MTC) issued a Call for Projects for the [Innovative Deployments to Enhance Arterials \(IDEA\) Grant Program](#). Grant funds were to be directed towards two categories of projects: Category 1 projects that would deploy mature, commercially-available advanced technologies and Category 2 projects that would deploy connected/automated vehicle technologies. The City submitted a Category 1 application on September 29, 2017 for funding to develop and deploy an Adaptive Traffic Control System (ATCS) in Central San Rafael. An ATCS would measure current traffic volumes and adjust signals in real-time based on demand. This would be particularly beneficial for the interruptions caused by the grade crossings for the SMART train.

Prior to awarding of funds, further reviews of the infrastructure revealed major deficiencies that would make an ATCS much more expensive than originally thought. Staff negotiated a reduced scope to fit the available funding in line with the IDEA Grant program. The installation of a reduced scope [Automated Traffic Signal Performance Measures \(ATSPM\) system](#), instead of an ATCS system, would bring down the cost of the project more in line with the funding, and would still bring major benefits to the City.

On January 10, 2018 MTC awarded the City \$830,000 to develop and implement an ATSPM system, with \$365,856 in matching local funds, for a total project budget of \$1,195,856. This system consists of a network of cameras at intersections in combination with an analytic program that measures traffic volumes, provides approach delay per vehicle, and reports arrivals on red, pedestrian delay, and highly sophisticated coordination data. Once installed, data collected from the ATSPM can be used to more accurately program and time the traffic signals based on historical traffic patterns in Central San Rafael. The ATSPM system benefits all users, from vehicles to bicyclists to pedestrians.

On [May 21, 2018](#), San Rafael City Council adopted a resolution accepting the \$830,000 grant award from MTC, the local match of \$365,856, and authorized the City Manager to execute funding agreements with MTC. For the remainder of 2018 and first half of 2019, staff worked with MTC and their consultants to go through the technical process of deploying an ATSPM system.

In June 2018 the City signed a [contract with Advanced Mobility Group](#) for \$168,880 for assistance in project management and development.

ANALYSIS: A request for proposals was advertised on August 19, 2019 for the Automated Traffic Signal Performance Management (ATSPM) software system. Six companies submitted proposals, and evaluation criteria included: project understanding and approach, firm qualification and system capability, implementation schedule, proposed system integration cost, and commitment to research and development. Econolite Systems, Inc. was selected based on their proposal and product demonstration, and their ATSPM software package layers over the City's current Traffic Management System (TMS), Centrac.

In addition to the software, there are significant equipment and capital costs of installing an ATSPM system. Staff has issued requests for bids for the necessary camera detection, traffic signal cabinet, controller, and radio equipment and is ready to purchase upon Council authorization.

The largest portion of the equipment and capital costs is the camera system, and the lack of signal mast-arms in San Rafael limited the option of traditional multi-camera video detection systems. A request for proposals was advertised on February 13, 2020 for the video detection system, and Miovision was the only responsive bidder. Their system consists of a single camera that provides detection and multi-modal counts. Because the camera detection system is the project's biggest investment, prior to committing with Miovision the City first verified the operability of the system by installing it at four critical intersections last spring.

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For the other products (traffic signal cabinets, controllers, radios, and switches), a request for quotes was sent to Actellis, Econolite, and Intuicom. The City of San Rafael uses Econolite products for signalized intersections and Intuicom radios and Actellis switches for communication exclusively, and the new equipment needed to be compatible with the current systems. A Public Interest Finding (PIF) was filed with Caltrans to notice the public regarding the “use of proprietary products and processes”.

The equipment costs are as follows:

| <u>NAME OF VENDOR</u> | <u>PRODUCT AND QUANTITY</u> | <u>AMOUNT</u> |
|------------------------------|------------------------------------|----------------------|
| Actellis | 14 Switches | \$15,712.00 |
| Econolite | 8 Signal cabinets | \$86,717.28 |
| Econolite | 15 Signal controllers | \$60,000.00 |
| Intuicom | 17 Radios | \$28,403.00 |
| Miovision | Video Detection | \$550,451.00 |
| 10% Contingency | | \$73,716.72 |
| Total | | \$815,000.00 |

The recommended Resolution authorizes the City Manager to execute Purchase Orders for equipment totaling an amount not to exceed \$815,000.00.

With the preliminary list of equipment selected, the City issued a request for bids in accordance with San Rafael’s Municipal Code on April 10, 2020 to install it. Federal requirements were also followed in the bidding process to ensure compliance with the reimbursement conditions by MTC. On May 7, 2020 at 11:00 AM the following bids were received and read aloud:

| <u>NAME OF BIDDER</u> | <u>AMOUNT</u> |
|------------------------------|----------------------|
| Mike Brown Electric | \$172,700 |
| Bear Electrical Solutions | \$183,900 |
| St. Francis Electric | \$197,000 |
| Tennyson Electric | \$208,400 |
| DC Electric Group | \$226,500 |
| Gremelli Industries | \$387,500 |

As the lowest responsible and responsive bidder, City staff recommends awarding the construction contract to Mike Brown Electric for the bid amount and recommends that the City Council authorize a construction contingency of approximately 20 percent for the project in an amount of \$34,540. This larger contingency is because this project affects 34 signalized intersections and integration of many different types of equipment. City staff recommends that the City Council authorize a total amount of \$207,240 for the construction, including the contingency.

FISCAL IMPACT: No City of San Rafael General Funds would be used for these expenditures. The current total project expenses are **\$1,321,620**. The following table summarizes the expenditures for the project:

Year to Date Project Expenditures

| | | |
|-------------------------|--|-----------|
| Advanced Mobility Group | Project Management and Development | \$168,880 |
| SPM Econolite | ATSPM Software | \$99,173 |
| DKS System Engineering | IDEA Grant coordination (managed by MTC) | \$31,327 |

\$299,380

Future Project Expenditures - Pending 6/1/20 City Council Approval

| | | |
|-----------|-----------------------|------------------|
| Actellis | 14 Switches | \$15,712 |
| Econolite | 8 Signal cabinets | \$86,717 |
| Econolite | 15 Signal controllers | \$60,000 |
| Intuicom | 17 Radios | \$28,403 |
| Miovision | Video detection | \$550,451 |
| | 10% contingency | \$73,717 |
| | | <u>\$815,000</u> |

| | | |
|---------------------|---------------------------|------------------|
| Mike Brown Electric | Installation of equipment | \$172,700 |
| | 20% contingency | \$34,540 |
| | | <u>\$207,240</u> |

Total Project Cost \$1,321,620

The project is receiving \$830,000 in funding from MTC’s IDEA Grant program. The total project budget authorized at the [May 21, 2018 City Council meeting](#) of \$1,195,856 included a \$365,856 local match. Now that the project bidding and scoping is complete, it is clear that the project will need an additional \$125,764 in local funds in order to fully fund the \$1,321,620 planned in improvements.

The project funding is as follows:

Project Funding - Approved 5/21/18 City Council Meeting

| | | |
|-------------------------|---|--------------------|
| MTC Award | IDEA Grant | \$830,000 |
| Local Match – Fund #246 | Upfront cash commitment - paid to MTC | \$239,171 |
| Local Match – Fund #246 | City to utilize on any project expenses | \$126,685 |
| | | <u>\$1,195,856</u> |

Project Funding – Pending 6/1/20 City Council Approval

| | | |
|-------------------------|-------------------------|-----------|
| Local Match – Fund #246 | Additional funds needed | \$125,764 |
|-------------------------|-------------------------|-----------|

Total Project Funding \$1,321,620

While initially the local match was planned to be appropriated from the City Gas Tax Fund (#206) (as described in the 5/21/18 City Council Meeting), upon further review staff deemed it would be preferable to utilize the City’s Traffic Mitigation Fund (#246). As a large-scale improvement to the downtown Traffic signal system, the installation of an ATSPM system in Downtown San Rafael falls under line item 22 of Exhibit 21 of the 2020 General Plan, “Upgrade traffic signal system”. Exhibit 21 of the 2020 General Plan describes projects which may utilize Traffic Mitigation funds. Traffic mitigation fees are charged to an applicant in connection with the approval of a development project. The fees provide a funding source for specific infrastructure projects which increase street capacity to accommodate additional traffic generated by new developments. Appropriations in the City’s Traffic Mitigation Fund (Fund #246) for project #11348 shall be increased by a total of \$1,148,004 (\$815,000 + \$207,240 + \$125,764) to support this project.

OPTIONS: The City Council has the following options:

1. Adopt the resolutions as proposed;
2. Reject the resolutions, resulting in the City declining the benefits of an Automated Traffic Signal Performance Measures system and forfeiting grant funding back to MTC.

RECOMMENDED ACTION:

1. Adopt the resolution awarding a construction agreement for the IDEA Grant downtown signal modernization project to Mike Brown Electric.
2. Adopt the resolution approving the equipment purchase for the IDEA Grant downtown signal modernization project.
3. Adopt the resolution approving and authorizing an additional \$125,764 in Traffic Mitigation Fund (#246) appropriations for the “Innovative Deployments to enhance Arterials” (IDEA) Grant-Funded Project No. 11348.

ATTACHMENTS:

1. Resolution awarding construction agreement for the IDEA Grant downtown signal modernization project to Mike Brown Electric.
2. Resolution approving equipment purchase for the IDEA Grant downtown signal modernization project.
3. Resolution approving and authorizing an additional \$125,764 in Traffic Mitigation Fund (#246) appropriations for the “Innovative Deployments to enhance Arterials” (IDEA) Grant-Funded Project No. 11348.

RESOLUTION NO.

RESOLUTION OF THE SAN RAFAEL CITY COUNCIL AWARDING AND AUTHORIZING THE CITY MANAGER TO EXECUTE A CONSTRUCTION AGREEMENT FOR THE DOWNTOWN SIGNAL MODERNIZATION WITH MIKE BROWN ELECTRIC IN THE AMOUNT OF \$172,700 AND AUTHORIZING CONTINGENCY FUNDS IN THE AMOUNT OF \$34,540 FOR A TOTAL APPROPRIATED AMOUNT OF \$207,240.

WHEREAS, the Metropolitan Transportation Commission (MTC) allocated \$25 million to the Nine Bay Area Counties for the Innovative Deployment to Enhance Arterials (IDEA) Grant Program; and

WHEREAS, one of the projects selected for design and construction was the “Downtown San Rafael Signal Modernization Project”; and

WHEREAS, on May 21, 2018, \$1,195,856 from the IDEA Grant Program was allocated to the City of San Rafael by MTC; and

WHEREAS, City staff has identified an additional \$365,856 of Traffic Mitigation Funds (#246) preliminarily set aside for the San Rafael Downtown Traffic Signal Modernization Project in the FY 2020-21 through FY 2022-23 Capital Improvement Program (CIP); and

WHEREAS, the installation of an Automated Traffic Signal Performance Measures (ATSPM) is included in the 2020 General Plan under line item 22 of Exhibit 21 as “Upgrade traffic signal system”; and

WHEREAS, having advertised and solicited construction bids in accordance with the City’s Municipal Code, the City Clerk did publicly open, examine, and declare all sealed bids on the 7th day of May, 2020 for the following project entitled “DOWNTOWN TRAFFIC SIGNAL IMPROVEMENTS PROJECT” City Project Number 11348 in accordance with the plans and specifications therefore on file in the office of the Department of Public Works; and

WHEREAS, the bid of \$172,700 from Mike Brown Electric at the unit prices stated in its bid, was and is the lowest bid for said work and said bidder is the lowest responsible bidder; and

WHEREAS, City staff has apportioned an additional 20% of the bid price for contingencies in the amount of \$34,540;

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF SAN RAFAEL RESOLVES

as follows:

1. The bid of Mike Brown Electric is hereby accepted at the unit prices stated in its bid, and the contract for said work and improvements is hereby awarded to Mike Brown Electric at the stated unit prices.
2. The City Manager is authorized and directed to execute the contract for the project with Mike Brown Electric at the bid amount, subject to final approval as to form by the City Attorney, and to return the bidder's bond upon the execution of the contract.
3. City Traffic Mitigation Fund #246 appropriations for City Project No. 11348 will be increased by \$207,240, which includes the construction award amount and contingency.
4. The City Manager is hereby authorized to take any and all such actions and make changes as may be necessary to accomplish the purpose of this resolution.

I, **LINDSAY LARA**, Clerk of the City of San Rafael, hereby certify that the foregoing resolution was duly and regularly introduced and adopted at a regular meeting of the Council of said City on the 1st day of June 2020, by the following vote, to wit:

AYES: COUNCILMEMBERS:

NOES: COUNCILMEMBERS:

ABSENT: COUNCILMEMBERS:

LINDSAY LARA, City Clerk

File No.: 18.10.23

RESOLUTION NO.

RESOLUTION OF THE SAN RAFAEL CITY COUNCIL APPROVING AND AUTHORIZING THE CITY MANAGER TO PURCHASE VARIOUS EQUIPMENT FOR THE IDEA GRANT DOWNTOWN SIGNAL MODERNIZATION PROJECT (#11348) FOR A TOTAL NOT-TO-EXCEED AMOUNT OF \$815,000

WHEREAS, in 2017, Metropolitan Transportation Commission (MTC) issued a Call for Projects for the Innovative Deployments to Enhance Arterials (IDEA) grant; and

WHEREAS, the City applied for and received IDEA grant funding in 2018; and

WHEREAS, nearly half of the 90 San Rafael traffic signals are in Central San Rafael, where major arterials meet US 101 on- and off-ramps, the central business district, and several SMART train crossings; and

WHEREAS, the close proximity of the traffic signals results in significant vehicle, pedestrian, and bicycle delays during peak hours, when the SMART train travels through, or when both scenarios occur simultaneously; and

WHEREAS, an Automated Traffic Signal Performance Measure system would benefit San Rafael transportation network users travel through Central San Rafael more efficiently, reducing greenhouse gas emissions by reducing vehicle idling time with more responsive traffic signal timing; and

WHEREAS, the City has requested bids for the various equipment required to implement an ATSPM system, including traffic signal controllers, signal cabinets, video detection, radios, and switches totaling \$815,000, as more particularly detailed in the staff report accompanying this Resolution; and

WHEREAS, there are sufficient funds in the City's Traffic Mitigation Fund (#246) to cover the cost of equipment before reimbursement from MTC;

NOW, THEREFORE BE IT RESOLVED that the City Council of the City of San Rafael authorizes the City Manager to execute the purchase of the equipment detailed in the staff report for this Resolution, for a total purchase price not-to-exceed amount of \$815,000. City Traffic Mitigation Fund #246 appropriations for City Project No. 11348 will be increased by \$815,000.

I, LINDSAY LARA, Clerk of the City of San Rafael, hereby certify that the foregoing Resolution was duly and regularly introduced and adopted at a regular meeting of the City Council of said City held on Monday, the 1st day of June 2020 by the following vote, to wit:

AYES: COUNCILMEMBERS:
NOES: COUNCILMEMBERS:
ABSENT: COUNCILMEMBERS:

LINDSAY LARA, City Clerk

RESOLUTION NO.

RESOLUTION OF THE SAN RAFAEL CITY COUNCIL AUTHORIZING AN ADDITIONAL \$125,764 IN TRAFFIC MITIGATION FUND (#246) APPROPRIATIONS FOR THE “INNOVATIVE DEPLOYMENTS TO ENHANCE ARTERIALS” (IDEA) GRANT-FUNDED PROJECT NO. 11348.

WHEREAS, the Metropolitan Transportation Commission (MTC) allocated \$25 million to the Nine Bay Area Counties for the Innovative Deployment to Enhance Arterials (IDEA) Grant Program; and

WHEREAS, one of the projects selected for design and construction was the “Downtown San Rafael Signal Modernization Project”; and

WHEREAS, on May 21, 2018, \$1,195,856 from the IDEA Grant Program was allocated to the City of San Rafael by MTC; and

WHEREAS, the \$1,195,856 project budget approved on May 21, 2018 included \$365,856 in local match, funded by the Traffic Mitigation Fund (#246); and

WHEREAS, now that the project bidding and scoping is complete, it is clear that the project will need an additional \$125,764 in local Traffic Mitigation Funds in order to fully fund the \$1,321,620 planned in improvements; and

WHEREAS, the installation of an Automated Traffic Signal Performance Measures (ATSPM) is included in the 2020 General Plan under line item 22 of Exhibit 21 as “Upgrade traffic signal system”;

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF SAN RAFAEL RESOLVES, that appropriations for “Innovative Deployments to Enhance Arterials” (IDEA) Grant-Funded City Project No. 11348 shall be increased by an additional \$125,764 in local Traffic Mitigation Funds (#246) in order to fully fund the \$1,321,620 planned in improvements.

I, LINDSAY LARA, Clerk of the City of San Rafael, hereby certify that the foregoing resolution was duly and regularly introduced and adopted at a regular meeting of the Council of said City on the 1st day of June 2020, by the following vote, to wit:

AYES: COUNCILMEMBERS:

NOES: COUNCILMEMBERS:

ABSENT: COUNCILMEMBERS:

LINDSAY LARA, City Clerk

File No.: 18.10.23