

CITY OF SANTA ROSA  
CITY COUNCIL

TO: MAYOR AND CITY COUNCIL  
FROM: CHRIS CATBAGAN, ASSOCIATE ENGINEER  
TRANSPORTATION AND PUBLIC WORKS DEPARTMENT  
SUBJECT: APPROVAL OF SECOND AMENDMENT AND THIRD  
AMENDMENT TO PROJECT WORK ORDER WITH GHD INC.  
FOR ADDITIONAL DESIGN SERVICES AND ENGINEERING  
SUPPORT DURING CONSTRUCTION ASSOCIATED WITH THE  
FULTON ROAD WIDENING PROJECT BETWEEN  
GUERNEVILLE ROAD AND PINER ROAD

AGENDA ACTION: MOTION

---

RECOMMENDATION

It is recommended by the Transportation and Public Works Department that Council, by motion, approve Amendment No. 2 (A010145-2016-14B) and Amendment No. 3 (A010145-2016-14C) to Project Work Order A010145-2016-14, with GHD Inc. of Santa Rosa, California, to update the construction documents for the use of roller compacted concrete and to provide engineering support during construction for the Fulton Road Widening Project between Guerneville Road and Piner Road, increasing the contract amount by \$1,254,704.00 for a total amount not to exceed \$3,091,903.00.

---

EXECUTIVE SUMMARY

This motion will approve Amendment No. 2 (A010145-2016-14B) and Amendment No. 3 (A010145-2016-14C) to Project Work Order (PWO) #A010145-2016-14 with GHD Inc. of Santa Rosa, California, to update the construction documents for the use of roller compacted concrete and to provide design support during construction for the Fulton Road Widening Project between Guerneville Road and Piner Road.

Amendment No. 2 has been negotiated at a cost of \$432,132.00 and will address the addition of City-requested design changes necessary to complete the final construction documents before releasing the Project for bid. Design changes include pavement redesign from hot mix asphalt to roller compacted concrete, design of LID offset mitigation at 55 Stony Point Road, and additional efforts for permit coordination. By using roller compacted concrete on the Fulton Road Widening Project, a cost savings of

# APPROVAL OF SECOND AMENDMENT AND THIRD AMENDMENT TO PROJECT WORK ORDER WITH GHD INC. FOR ADDITIONAL DESIGN SERVICES AND ENGINEERING SUPPORT DURING CONSTRUCTION ASSOCIATED WITH THE FULTON ROAD WIDENING PROJECT BETWEEN GUERNEVILLE ROAD AND PINER ROAD

Page 2 of 6

approximately \$3,000,000 can be realized over the 70-year design life when compared to hot mix asphalt.

Amendment No. 3 will address engineering support during construction including engineering design, environmental support, and construction survey staking. This amendment has been negotiated and is not to exceed \$822,572.00, which is consistent with staff estimates and industry standard for engineering services during construction as proposed costs are within 5 – 8% of the estimated total construction cost.

This Project supports City Council Goal #5 by investing in and sustaining infrastructure and transportation. Widening Fulton Road to a four-lane regional/arterial road, from Guerneville Road to Piner Road, would improve the transportation network and promote multi-modal transportation.

## BACKGROUND

The Fulton Road Widening Project between Guerneville Road and Piner Road will reconstruct and rehabilitate Fulton Road into a four-lane regional/arterial street as envisioned in the 2035 Santa Rosa General Plan. The project includes roadway widening, new vehicle travel lanes, bicycle lanes, sidewalks, bus stops, stormwater treatment facilities, landscaping, traffic signal, utility relocations, and property acquisitions & easements. In addition, overhead utility lines will be relocated underground under the Pacific Gas and Electric Company's (PG&E's) Rule 20A underground utility district (UUD).

Under Project Work Order (PWO) #A010145-2016-14 with civil engineering consultant GHD Inc., the Project began the design phase in January 2018. The expected completion date of final construction documents is June of 2021. The consultant's design efforts have included pavement layout, survey coordination, and engineering of hydraulic, utility, electrical, structural, and traffic features. To date, staff has reviewed the Project's 65% & 95% construction documents (CD) from the Consultant.

A final pavement and curb design were provided by the Consultant, but staff requested additional design revisions to the curb ramp design and to incorporate roller compacted concrete (RCC), rather than hot mix asphalt (HMA), for the entire length of the Project limits. The environmental phase anticipated the use of hot mix asphalt (HMA), but to reduce construction costs and extend the pavement's design life, staff has recommended a RCC pavement design be incorporated into the Project.

Compared to HMA, RCC limits the need for patching and frequent resurfacing, which reduces long-term maintenance costs and results in fewer work zones over the lifespan of the pavement. The initial and long-term costs of concrete are far less than the full

APPROVAL OF SECOND AMENDMENT AND THIRD AMENDMENT TO PROJECT WORK ORDER WITH GHD INC. FOR ADDITIONAL DESIGN SERVICES AND ENGINEERING SUPPORT DURING CONSTRUCTION ASSOCIATED WITH THE FULTON ROAD WIDENING PROJECT BETWEEN GUERNEVILLE ROAD AND PINER ROAD

Page 3 of 6

depth HMA alternative. Use of concrete on the Fulton Road Widening Project should result in approximately \$2,000,000 of construction cost saving immediately and \$1,000,000 in maintenance cost saving over the design life of the pavement. Based on a life cycle cost analysis (LCCA), the City's Material Lab recommends arterial roads to be prioritized for concrete pavement sections when subject to reconstruction or widening.

Due to limited area on the project site for low impact development (LID) improvements and recent changes to the North Coast Regional Water Quality Control Board's (Water Board) hydromodification regulations, this project will incorporate offset mitigation into the design. Offset mitigation is the practice of installing LID improvements outside project limits to meet LID requirements triggered by project improvements. The proposed offset mitigation is a rain garden/bioswale at the City's Municipal Services Center Corporation Yard at 55 Stony Point Road. Offset mitigation is necessary for the Fulton Road Widening Project to meet minimum LID improvement requirements, allowing the City to obtain an approved Storm Water Low Impact Development (SWLID) design and 401 Water Quality Certification (401 permit).

Amendment No. 2 compensates the Consultant for 1) the City's request to change the pavement design to RCC from HMA, 2) completing the final construction documents for the offset mitigation at 55 Stony Point Road, and 3) additional efforts for permit coordination with various public resource agencies.

Amendment No. 3 compensates the Consultant to provide engineering services during construction, which includes engineering design, environmental support, and construction survey staking. Additional engineering services during construction include attending construction meetings, review of shop drawings, submittals, and RFIs, release of technical bulletins, performing construction staking, and project management (PM) services through the construction phase. In addition, Amendment No. 3 will expand the Consultant's scope of work to provide environmental support services during construction. This will include tribal monitoring, California Tiger Salamander (CTS) monitoring, and pre-construction surveys for Western Pond Turtle within, and adjacent to, creeks.

#### PRIOR CITY COUNCIL REVIEW

On August 4, 2015, the City Council, by Resolution No. 28674, approved Cooperative Funding Agreement No. M30406 between Sonoma County Transportation Authority (SCTA) and the City of Santa Rosa for Measure M funds for Fulton Road Widening Improvements.

# APPROVAL OF SECOND AMENDMENT AND THIRD AMENDMENT TO PROJECT WORK ORDER WITH GHD INC. FOR ADDITIONAL DESIGN SERVICES AND ENGINEERING SUPPORT DURING CONSTRUCTION ASSOCIATED WITH THE FULTON ROAD WIDENING PROJECT BETWEEN GUERNEVILLE ROAD AND PINER ROAD

Page 4 of 6

On June 21, 2016, the City Council, by motion, approved work order #A010070-2011-62, for Preliminary Design and Environmental Documentation for the Fulton Road Project from Guerneville Road to Piner Road – Widen to Four Lanes, with GHD Incorporated of Santa Rosa, Ca.

On February 14, 2017, City Council, by Resolution RES-2017-026, approved the establishment of an Underground Utility District (UUD) on Fulton Road between Guerneville Road and Piner Road.

On August 8, 2017, the City Council, by Resolution RES-2017-148, appropriated \$1,200,000 of Measure M funds to assist with the Plans, Specifications, and Estimate (PS&E) and Right-of-Way (R/W) phase for the Fulton Road Widening Improvements from Guerneville Road to Piner Road.

On October 24, 2017, the City Council, by Resolution RES-2017-213, adopt the Mitigated Negative Declaration (MND) for the Fulton Road Widening Improvement Project between Guerneville Road and Piner Road; approve the project; and adopt a Mitigation Monitoring Program (MMP) for the project.

On January 9, 2018, the City Council, by motion, approve project work order #A010145-2016-14, for the PS&E phase for the Fulton Road Project from Guerneville Road to Piner Road – Widen to Four Lanes, in the amount of \$1,398,903 with GHD Incorporated of Santa Rosa, California.

## ANALYSIS

Project Work Order (PWO) #A010145-2016-14 was executed on January 9, 2018, authorizing GHD Incorporated Consulting Engineers to provide design services for the PS&E phase for the Fulton Road Widening Project between Guerneville Road and Piner Road.

The City's Material Lab has concluded a life cycle cost analysis (LCCA) comparing the costs of roller-compacted concrete (RCC) and traditional hot mix asphalt (HMA). Based on this LCCA, the Lab found roller-compacted concrete (RCC) is a cost-effective alternative to traditional hot mix asphalt (HMA) as a cost savings of approximately 32% can be realized over a 70-year design life. This equates to approximately \$3,000,000 in savings for the Fulton Road Widening Project.

Industry standard costs for engineering services during construction are typically between 5 – 8% of the estimated total construction cost. Based on the project estimated construction cost, the proposed cost for engineering services during construction falls

# APPROVAL OF SECOND AMENDMENT AND THIRD AMENDMENT TO PROJECT WORK ORDER WITH GHD INC. FOR ADDITIONAL DESIGN SERVICES AND ENGINEERING SUPPORT DURING CONSTRUCTION ASSOCIATED WITH THE FULTON ROAD WIDENING PROJECT BETWEEN GUERNEVILLE ROAD AND PINER ROAD

Page 5 of 6

within this range. Engineering services during construction involve standard tasks of submittal review and responding to RFIs but also provides allowance for design changes during construction that are necessary when unknown conditions are encountered, minimizing the risk of costly construction delays.

This motion requests Council authorize Amendment #2 and Amendment #3 to this PWO. Amendment #2 will compensate the Consultant to 1) revise the pavement design from HMA to RCC, 2) complete final construction documents for the offset mitigation at 55 Stony Point Road, and 3) provide additional permit coordination with various public resource agencies. Amendment #3 will compensate the Consultant to provide design support during construction, which includes engineering design, environmental support, and construction survey staking. The PWO amendments will secure all necessary scope of work required for the completion of design and required engineering services during construction.

Staff has reviewed and negotiated a total cost of \$1,254,604.00 for both PWO Amendment #2 (#A010145-2016-14B) and PWO Amendment #3 (#A010145-2016-14C) and judges this fee is reasonable and within current industry standard for the scale and complexity of the Project. Accordingly, staff is requesting Council authorize amendment #2 to finalize the project design phase and Amendment #3 for design support services during construction.

## FISCAL IMPACT

Approval of this action does not have a fiscal impact on the General Fund.

Sufficient funding for this project was appropriated in a previous Capital Improvement Program budget from the following funding sources:

- Capital Facilities Fees (CFF) 11.0%
- SCTA Measure M 46.8%
- Utility Impact Fees (UIF) 3.9%
- Senate Bill 1 (SB-1) Funds: 38.3%

## ENVIRONMENTAL IMPACT

On October 10, 2015, the City Council adopted the Mitigated Negative Declaration (MND) for Fulton Road Widening Improvement Project between Guerneville Road and Piner Road.

APPROVAL OF SECOND AMENDMENT AND THIRD AMENDMENT TO PROJECT  
WORK ORDER WITH GHD INC. FOR ADDITIONAL DESIGN SERVICES AND  
ENGINEERING SUPPORT DURING CONSTRUCTION ASSOCIATED WITH THE  
FULTON ROAD WIDENING PROJECT BETWEEN GUERNEVILLE ROAD AND PINER  
ROAD

Page 6 of 6

BOARD/COMMISSION/COMMITTEE REVIEW AND RECOMMENDATIONS

Not applicable.

NOTIFICATION

Not applicable.

ATTACHMENTS

- Attachment 1 – Location Map
- Attachment 2 – Amendment No. 2 (Project Work Order A010145-2016-14B)
- Attachment 3 – Amendment No. 3 (Project Work Order A010145-2016-14C)

CONTACT

Chris Catbagan, Associate Engineer, [ccatbagan@srcity.org](mailto:ccatbagan@srcity.org), (707) 543-4521  
Grant Bailey, Supervising Engineer, [gbailey@srcity.org](mailto:gbailey@srcity.org), (707) 543-4508