

AGENDA: January 17, 2019

TO: Regional Transportation Commission

FROM: Sarah Christensen, Senior Transportation Engineer

RE: Storm Damage Repair Projects Update and Bowman & Williams, Inc. Contract Amendments

RECOMMENDATIONS

Staff recommends that the Regional Transportation Commission (RTC) approve:

1. The attached resolution (Attachment 1) authorizing contract amendments in the amount of \$~~36,500~~43,662 with Bowman & Williams, Inc. for continuation of professional engineering services for the storm damage repairs along the Santa Cruz Branch Rail Line.
-

BACKGROUND

In early 2017 the state of California, including Santa Cruz County, experienced historic rain and flooding which caused damage to the Santa Cruz Branch Rail Line. The heavy rain and storm runoff caused fallen trees, landslides, and erosion within the railroad right of way. In February of 2017, the Federal Emergency Management Agency (FEMA) announced that federal disaster assistance had been made available for emergency repair of facilities damaged by the severe winter storms to eligible local government agencies across California. A Request for Public Assistance was submitted by the RTC for storm damage repair work along the rail line, which was approved. Subsequently, inspections of the rail line with RTC and FEMA Public Assistance Program staff occurred and RTC staff awarded a contract to an engineering consultant, Bowman & Williams, Inc., to prepare the construction documents for the repairs.

Following the inspections by FEMA that took place in November of 2017 through January of 2018, FEMA issued the Damage Description and Dimensions (DDD) and Scope of Work (SOW) for 7 storm damage repair sites. Geotechnical testing has been performed, topographic surveys have been completed, and engineering has begun.

DISCUSSION

There are a total of 7 storm damage repair sites that have construction documents currently being prepared. The storm damage repairs are being funded initially out of the Measure D rail program budget, and the RTC will be seeking reimbursement

in the future by FEMA and the California Office of Emergency Services (CalOES). The storm damage repairs are part of the initial rehabilitation and repair projects noted in Section 5.1 of the operating agreement with Progressive Rail, Inc.

Figure 1 below shows a map of the approximate locations of the storm damage sites:

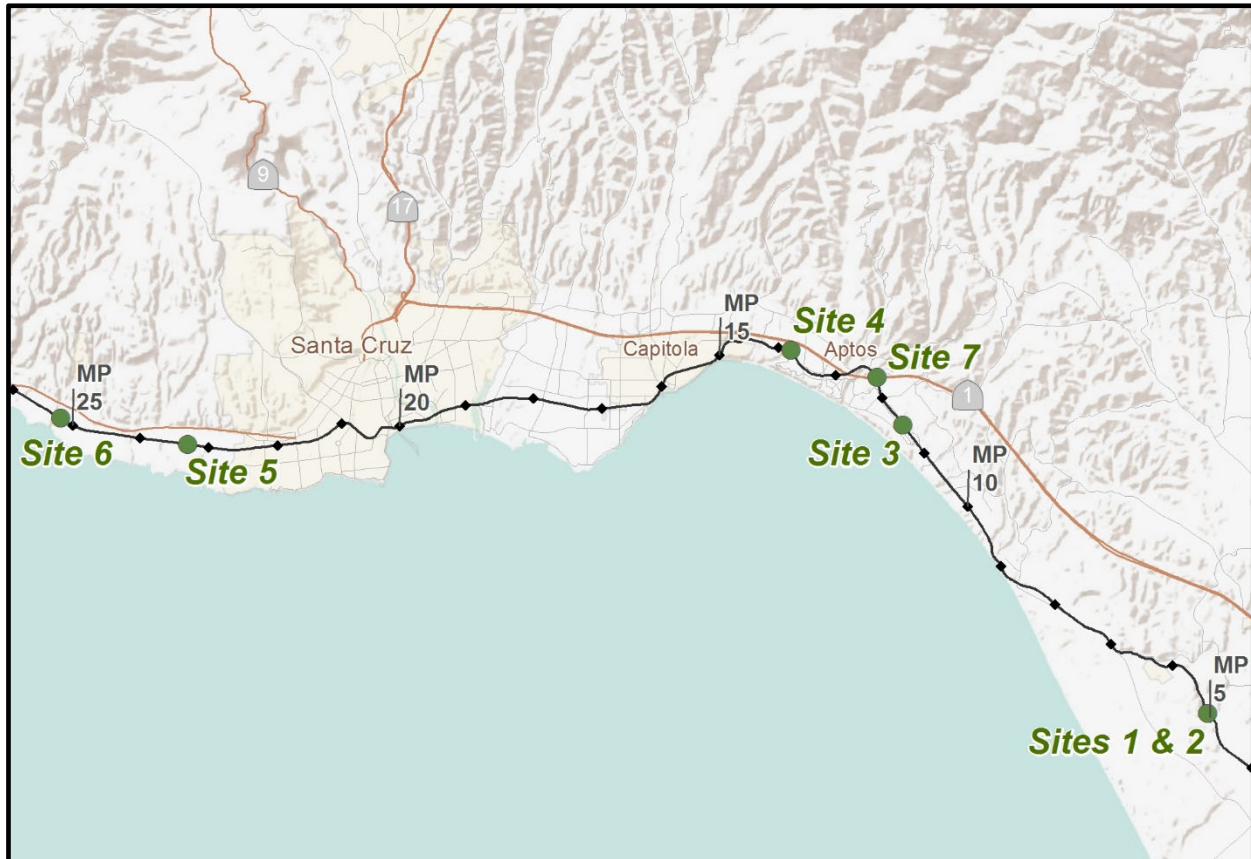


Figure 1 - Storm Damage Repair Project Sites

Below is a description and status update of each of the 7 storm damage repair projects, with their respective anticipated costs and schedule.

Storm Damage Sites 1 and 2

Two of the storm damage sites (1 and 2) located adjacent to Harkins Slough near mileposts 5.0 to 5.1 put the Santa Cruz Branch Rail Corridor out of service north of milepost 5.1. The repair work for Site 1 includes replacement of an existing 36-inch cross culvert with a new 24 foot long pipe culvert 48 inches in diameter, construction of a new headwall and wingwalls, grading to reestablish ditch flowline and drainage through the culvert, and repair of the embankment and railroad ballast. The repair work for Site 2 includes construction of a 32 foot long double box culvert, each box being 4 feet in height and 6 feet in width, wingwalls, grading and drainage improvements to reestablish the drainage pattern, installation of rock slope protection, and repair of the embankment and railroad ballast, ties, and rails.

The construction of the repair at Site 2 will require a permit to enter and construct from the California Fish and Wildlife Services, who owns the property to the east of the outfall.

Following the storms of 2017, the United States Army Corps of Engineers (USACE) visited this site and delineated their jurisdiction through the Santa Cruz Branch Rail right-of-way. In order to construct the repair, the RTC must obtain a permit from USACE. The RTC has submitted permit applications to USACE and the Regional Water Quality Control Board (RWQCB) in October of 2018. A Biological Assessment (BA) was prepared for the repair project and submitted for formal Section 7 consultation with US Fish and Wildlife Services (USFWS). The project will obtain a Biological Opinion (BO) from USFWS, which is a 180 day review process already underway, but may be affected by the shutdown of the federal government. Other potentially necessary permits include California Fish and Wildlife Services and the Coastal Commission.

Pending responses from regulatory agencies, RTC staff is working with our professional engineering and environmental consultants to prepare for a very narrow construction window due to seasonal restrictions. Because the site has been delineated as jurisdictional wetland, construction may not occur in the channel between October 15 and April 15. The large raptor nesting season is between March and August, which leaves a two-month window to construct the improvements. This poses a challenge because of the long lead time required to fabricate the box culvert. Staff is considering an advanced procurement of the box culvert once feedback is received from the regulatory agencies on the scope of the repair.

The engineer's estimate is \$252,000 for Site 1 and \$994,000 for Site 2. Sites 1 and 2 will likely be constructed together as one project, which is currently scheduled for the fall of 2019 subject to obtaining required permits and BO.

The original contract amounts for preparing the construction documents for Sites 1 and 2 were \$36,400 and \$46,200 respectively, for a total of \$82,600. To meet the requirements of the permitting agencies and additional grading needed to correct the drainage pattern between the two sites, the project limits expanded from what was originally scoped, resulting in additional topographic surveys, plan sheets, and calculations amounting to \$19,400 of additional work.

Storm Damage Site 3

Storm Damage Site 3 is located adjacent to Sumner Avenue in Aptos. The project will repair the damaged slope embankment on the east side of the rail line which occurred as a result of the 2017 storms. Adjacent to the damage there is an existing 2 foot wide by 1 foot tall wood box cross culvert that likely needs replacement due to poor drainage through the right of way, which may have contributed to the failure of the embankment. The engineers estimate for Site 3 is \$220,000, with construction scheduled for the fall of 2019. MNS Engineers, Inc. who is a firm on the on-call list for civil engineering services is preparing the construction documents for Site 3.

Storm Damage Site 4

Storm Damage Site 4 is located in Aptos near Harriet Avenue. The project will repair the drainage ditch on the east side of the rail line that eroded as a result of the 2017 storms. The repair includes realigning and grading the ditch to reestablish the drainage pattern, and add rock slope protection (RSP) and erosion control measures to prevent future erosion from occurring. To construct the repair of this storm damage site, coordination with the adjacent private property owner is required to gain access to construct the repair, which is ongoing. The engineers estimate for Site 4 is \$180,000, with construction scheduled for the spring of 2019.

The original contract amount for preparing the construction documents for Site 4 was \$19,000. Once the vegetation was cleared for the topographic survey and site reconnaissance efforts, additional damage was revealed which expanded the limits of the repair from what was originally scoped. The expansion of the repair resulted in additional topographic surveys, calculations, and plan sheets amounting to \$7,600 of additional work.

Storm Damage Site 5

Storm Damage Site 5 is located near Wilder Ranch State Park north of Santa Cruz. The project will repair the damaged slope embankment on the east side of the rail line which occurred as a result of the 2017 storms. Adjacent to the damage, there is a 30 inch reinforced concrete culvert which consistently clogs with sediment and vegetative debris resulting in poor drainage through the right of way which may have contributed to the failure of the embankment. The engineers estimate for Site 5 is \$510,000 which includes repair of the slope embankment and replacement of the cross culvert to reestablish the drainage pattern through the right of way. Construction of the repair will require permits and right-of-way coordination with California State Parks, and construction is anticipated to begin in 2020.

Storm Damage Site 6

Storm Damage Site 6 is located north of Santa Cruz near Three Mile Beach. The project will repair the damaged slope embankment and regrade the existing ditches north and south of an existing cross culvert which eroded as a result of the 2017 storms. Rock slope protection and erosion control measures will be added to prevent future erosion from occurring. The engineers estimate for Site 6 is \$320,000. Construction of the repair may require permits, and right-of-way coordination with California State Parks will be required. Construction is anticipated to begin in late 2019 or 2020.

Storm Damage Site 7

Storm Damage Site 7 is located at the Highway 1 bridge in Aptos between the State Park Drive interchange and the Rio Del Mar Boulevard interchange south of Aptos Village. The project will repair the bridge railing and fence that was damaged by a fallen tree as a result of the 2017 storms. The repair replaces the existing steel railing and chain link fence in-kind, and has an engineer's estimate of \$56,000, and

construction is scheduled to begin in the spring/summer of 2019 pending approval of the encroachment permit from Caltrans.

An encroachment permit application was submitted to Caltrans for Site 7 and comments were received in October. Caltrans requires the plans to include falsework over the highway which requires a structure engineer to prepare. Caltrans also requested a traffic detour plan for the closure of Highway 1. In order to meet Caltrans requirements to obtain an encroachment permit, traffic and structural subconsultants will need to be added to the contract, and a contract amendment in the amount of \$9,500 is needed.

Contract Amendment for Professional Engineering Services

In January of 2018, the RTC approved entering into contracts with Bowman & Williams, Inc. for an amount up to \$150,000. That amount was enough for Sites 1, 2, 4, 6, and 7. In April of 2018, the RTC approved the on-call engineering list for civil engineering, structure inspections/engineering, and construction management services. The construction documents for the remaining two storm damage sites (3 and 5) were put out to the on-call list of civil engineering consultants. Staff came to an agreement with MNS Engineers, Inc. on a scope of work and fee estimate to prepare the construction documents for the repair at storm damage Site 3, but was unable to come to agreement on Site 5 due to fee estimates coming in high. Therefore, staff recommends entering into a professional engineering services agreement with Bowman & Williams, Inc. to prepare the construction documents for storm damage Site 5 in the amount of \$33,100 due to their scope, fee, and schedule better meeting the needs of the proposed project and the RTC. Staff also requests approval of the resolution authorizing amendments to the existing professional engineering services contracts with Bowman & Williams, Inc. for a total of ~~\$36,500~~\$43,662 as shown in the below table:

Location	Consultant	Original Contract Value	Contract Amendment Requested	Total Contract Value
Site 1	Bowman & Williams, Inc.	\$36,400	\$7,200	\$43,600
Site 2	Bowman & Williams, Inc.	\$46,200	\$12,200	\$58,400
Site 3	MNS Engineers, Inc.	\$37,414	-	\$37,414
Site 4	Bowman & Williams, Inc.	\$19,000	\$7,600	\$26,600
Site 5	Bowman & Williams, Inc.	\$33,100	-	\$33,100
Site 6	Bowman & Williams, Inc.	\$20,500	-	\$20,500
Site 7	Bowman & Williams, Inc.	\$12,400	\$9,500	\$21,900
TOTAL		\$205,014	\$36,500	\$241,514

Table 1 - Professional Engineering Services Contract Value Summary

Below is a breakdown of the total estimated costs for storm damage repairs, including geotechnical engineering, permitting/environmental services, preparation of construction documents (design), estimated construction costs, and construction management costs:

	Geotech	Permitting/ Environ.	Design	Construction Capital	Construction Management*	Total
Site 1	\$ -	\$9,800	\$43,600	\$252,000	\$37,800	\$343,200
Site 2	\$22,500	\$23,600	\$58,400	\$994,000	\$99,400	\$1,197,900
Site 3	\$6,000	\$ -	\$37,414	\$220,000	\$33,000	\$296,414
Site 4	\$ -	\$ -	\$26,600	\$180,000	\$27,000	\$233,600
Site 5	\$5,800	\$10,000	\$33,100	\$510,000	\$76,500	\$635,400
Site 6	\$7,500	\$5,000	\$20,500	\$320,000	\$48,000	\$401,000
Site 7	\$ -	\$ -	\$21,900	\$56,000	\$8,400	\$86,300
Debris Removal				\$199,109	\$39,822	\$238,931
TOTALS	\$41,800	\$48,400	\$241,514	\$2,731,109	\$369,922	
TOTAL						\$3,433,000
* Estimated to be between 10% and 20% of the construction capital cost for budgeting purposes						

Table 2 - Total Estimated Costs for Storm Damage Repairs

Staff has been in contact with FEMA and CalOES and anticipate that full reimbursement will be received for the storm damage repair projects for eligible expenses. There is a risk that if the storm damage repairs are considered “betterments” beyond what is minimally required to repair the damage by FEMA, the RTC may not receive full reimbursement. An example would be for a slope embankment repair that includes the replacement of the adjacent cross culvert. The cross culvert replacement may not be fully reimbursed by FEMA and CalOES because it could be perceived as a betterment. Any work that is not reimbursed by FEMA or CalOES will be funded from Measure D as permitted by the Measure D expenditure plan.

Next Steps

Staff will continue to manage the storm damage repair projects and provide regular updates. Later this year, staff will advertise storm damage repair projects and seek Commission approval to award construction contracts to the lowest bidder(s). Staff will also seek Commission approval to enter into contracts for construction management services with on-call engineering consultant(s) once projects get closer to advertisement.

SUMMARY

The storm damage repair projects are in various stages of development, with the first projects planned to be advertised this spring. A summary of each storm damage site was provided, with the anticipated cost and schedule of each. Staff recommends authorization to amend contracts with the professional engineering services consultant, Bowman & Williams, Inc. to continue preparing the construction documents.

RESOLUTION NO.

Adopted by the Santa Cruz County Regional Transportation Commission
on the date of January 17, 2019
on the motion of Commissioner
duly seconded by Commissioner

A RESOLUTION AUTHORIZING THE EXECUTIVE DIRECTOR TO AMEND CONTRACTS WITH
BOWMAN & WILLIAMS, INC. FOR \$~~36,50043,662~~ FOR CIVIL ENGINEERING SERVICES IN
ASSOCIATION WITH THE DESIGN AND CONSTRUCTION OF THE 2017 STORM DAMAGE
REPAIRS ON THE SANTA CRUZ BRANCH RAIL LINE

WHEREAS, the Regional Transportation Commission (RTC) purchased the Santa Cruz
Branch Rail Line (Branch Line) in October 2012; and

WHEREAS, in early 2017, the Branch Line suffered damages due to historic rain storms
that hit Santa Cruz County and other parts of the state; and

WHEREAS, the heavy rain storms of 2017 were declared state and national disasters and
the RTC submitted a Request for Public Assistance to the Federal Emergency Management
Agency (FEMA);

WHEREAS, civil engineering services are required to produce plans, specifications and cost
estimates for the permanent storm damage repairs and to help ensure that FEMA, CalOES, and
Regulatory Agencies requirements are met;

WHEREAS, contracts were awarded to Bowman & Williams, Inc. in January of 2018 to
prepare construction documents for the storm damage repair sites; and

WHEREAS, additional budget is needed due to expanded project limits and unforeseen
conditions/requirements for the projects;

THEREFORE BE IT RESOLVED BY THE SANTA CRUZ COUNTY REGIONAL TRANSPORTATION
COMMISSION:

1. The Executive Director is authorized to amend contracts with Bowman & Williams,
Inc. for \$~~36,50043,662~~ for civil engineering services associated with the 2017 storm
damage repairs, and
2. The Executive Director is authorized to negotiate and execute amendments to this
agreement provided that the amendments are consistent with the RTC's approved
budget and work program.

AYES: COMMISSIONERS

NOES: COMMISSIONERS

ABSENT: COMMISSIONERS

ABSTAIN: COMMISSIONERS

Ed Bottorff, Chair

ATTEST:

Guy Preston, Secretary

Distribution: RTC Fiscal
 RTC Engineer

\\RTCSEV2\Shared\RTC\TC2019\TC0119\CONSENT\Storm Damage\Attachment 1 - Resolution - Civil Engineering Services.doc