



City of Oroville
1735 Montgomery Street
Oroville, CA 95965
530-538-2401

LOWER WYANDOTTE CULVERT REHABILITATION EMERGENCY REPAIR

ADDENDUM NO. 1

NOVEMBER 26, 2019

This addendum forms a part of the Contract Documents and modifies the original Contract Documents as noted below. Acknowledge receipt of this addendum by including a signed copy of this addendum with bidder's proposal. Failure to do so may subject Bidder to disqualification.

Item #1: Responses to Questions

Responses to all Contractor's project questions are included in this Addendum.

Thank you in advance for your bids.



Gabriel Rodell, P.E.
BEN|EN, Engineer of Record

I acknowledge receipt of this addendum and all attachments by including a signed copy of this addendum with bidder's proposal. Failure to do so may subject Bidder to disqualification.

Bidders Signature

Date

CITY OF OROVILLE
LOWER WYANDOTTE CULVERT REHABILITATION EMERGENCY REPAIR
BIDDER QUESTIONS

Question No.	Question	Response
1	Do you have any info on soil type, voids, etc?	<p>A geotechnical investigation was not performed for this project. However, a separate project within the City of Oroville performed an exploratory bore (B18-3) in 2018 near the intersection of Oro Dam Boulevard and Highway 162 (Olive Highway). This location is approximately 0.35 miles away from our project location. Please see the attached snippets of the associated geotechnical report for more information about Bore B18-3. Again, this is not guaranteed to be accurate, but will get you in the ballpark for approximating what may be encountered at our project location.</p> <p>Also, note that we would expect the material around the existing pipe to be imported fill. The natural ground in that area, as evidenced by the stream banks, includes silty sands with cobbles ranging from 4 to 15-inches in diameter.</p>
2	Plans call for 43' of 72" CMP and bid says 59'. Please clarify.	All construction documents posted for bid call out 59 feet of CMP.

GEOTECHNICAL ENGINEERING INVESTIGATION REPORT
CITY OF OROVILLE SEWER PROJECT 1A, 1B, 1C, 1D, 1E, AND 1F
OROVILLE, CALIFORNIA
AUGUST 22, 2018

Prepared For:

BENNETT ENGINEERING SERVICES
1082 Sunrise Avenue, Suite 100
Roseville, California 95661

Mr. Mike Massaro

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48 Bellarmine Court
Suite 40
Chico, CA 95928

125618-0070744.00.001



LEGEND ● B18-3 Exploratory Boring Location

NIVIS

48 BELLARMINE COURT, STE 40
CHICO, CA 95928
530-894-2487 FAX 894-2437

BORING LOCATIONS
CITY OF OROVILLE SEWER PROJECT
OROVILLE, BUTTE COUNTY, CALIFORNIA

DRAWN BY: KAT
CHECKED BY: DJP
PROJECT NO. 70744.01
DATE: AUGUST, 2018

FIGURE NO.

2B

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NV5 observed during the site investigation, that the surface topography across the Project areas and surrounding near vicinity generally consists of relatively flat and gently to moderately sloping ground, with the exception of the Project 1F area that consisted of moderately to steep slope from the northwest portion to the southeast portion of the proposed work area.

2.2.2 Subsurface Soil Conditions

The subsurface soil conditions were investigated by excavating exploratory borings at the site. The subsurface information obtained from these investigation methods are described herein.

2.2.2.1 Exploratory Excavation Information

NV5 provided engineering oversight for the excavation of seven exploratory borings using a Speedstar/GEFCO SS-55 truck-mounted drill rig, equipped with 7-inch diameter hollow stem augers. Practical refusal to drilling with hollow stem augers was encountered in Borings B18-3 and B18-7, at depths of approximately 3 to 9 feet below ground surface (bgs). Borings B18-3 and B18-7 were extended to their maximum depths of 16 to 20 feet bgs, using the Odex down-hole air hammer casing advance drilling system. Figure 2 shows the approximate locations of the subsurface exploratory borings. The depths of the exploratory borings were determined following our review of the design depths of the new manholes to be constructed as part of the improvements. The seven exploratory borings were advanced to maximum depths of approximately 15.5 to 21.5 feet bgs into the undisturbed native soil. Engineering judgment was used to extrapolate the observed soil, rock and groundwater conditions to areas located between and beyond these subsurface exploratory excavations.

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NV5's field engineer/geologist logged each exploratory boring using the Unified Soils Classification System (USCS) procedure as a guideline. Representative soil samples were collected generally from 5-foot depth intervals starting below the ground surface in each boring. Relatively undisturbed soil samples were collected with a 2.5-inch inside-diameter split-spoon sampler denoted by (2.5-SS) equipped with stainless steel liner sample tubes. The 2.5-SS sampler was driven into the soil at the specified sampling depth intervals using a 140-pound slide hammer with a 30-inch free fall to the striking anvil. The liner tube samples were all sealed with labeled end-caps. Liner tube soil samples with limited recovery were generally placed in labeled, sealed plastic bags. The samples were transported to the NV5 Chico office laboratory and selected soil samples were tested to determine their engineering material properties. These soil engineering material properties are used to develop geotechnical engineering design recommendations.

Detailed descriptions of the soil, rock and groundwater conditions that were encountered in each subsurface exploratory location are presented on the exploratory boring logs included in Appendix B. The generalized soil and rock conditions underlying the property are described below. The material percentages listed are based on visual field estimates of each material's dry weight unless noted as laboratory test data. The native soil units encountered in the subsurface exploratory excavations were generally stratigraphically continuous or successive across the site with minor variations in thickness and particle size grading within the units. The soil encountered during the investigation was classified into the following distinguishable units.

- **CL, Low Plasticity Clay** : This soil unit was generally encountered from the surface to a depth of approximately 9 feet bgs and consists of the following field estimated particle size

percentages 95 percent low plasticity silt and clay, and 5 percent fine sand. This soil is predominantly dark reddish brown to yellowish brown with Munsell Color Chart designations of (2.5YR 3/4 to 10YR 6/4). This soil was soft to hard and moist at the time of the subsurface investigation.

- **GC, Clayey Gravel** : This soil unit was generally encountered from approximately 4.5 feet to 21.5 feet bgs and consists of the following field estimated particle size percentages 15 percent low plasticity silt and clay, 15 percent fine to medium sand, 50 percent gravel and 20 percent cobbles. This soil is predominantly yellowish brown with a Munsell Color Chart designation of (10YR 6/4). This soil was very dense and damp at the time of the subsurface investigation.
- **SC, Clayey Sand** : This soil unit was generally encountered from the surface to approximately 13.5 feet bgs in Borings B18-5 and B18-6 and consists of the following field estimated particle size percentages: 45 percent low plasticity silt and clay, 55 percent fine to coarse sand. This soil is predominantly dark reddish to yellowish brown with Munsel Color Chart designations of (5YR 3/3 to 10YR 6/4). This soil was stiff and damp at the time of the subsurface investigation.
- **SM, Silty Sand** : This soil unit was generally encountered from the surface to approximately 8.5 feet bgs in Boring B18-1 and consists of the following field estimated particle size percentages: 40 percent low plasticity silt and clay, 50 percent fine to medium sand, and 10 percent gravel. This soil is predominantly dark brown with a Munsel Color Chart designation of (7.5YR 3/4). This soil was dense and damp at the time of the subsurface investigation.
- **GM, Silty Gravel** : This soil unit was generally encountered at the surface to approximately 20 feet bgs (maximum target depth excavated to) in Boring B18-7. This soil consists of the following field estimated particle size percentages: 15 percent low plasticity silt and clay, 35 percent fine sand, and 50 percent fine to coarse gravel. This soil is predominantly strong brown with a Munsell Color Chart designation of (7.5YR 5/4). This soil was very dense and moist at the time of the subsurface investigation.

2.2.3 Groundwater Conditions

At the time of the subsurface investigation, NV5 encountered the local groundwater table in exploratory borings B18-1 and B18-5 at depths of approximately 13 feet and 18 feet bgs, which is at elevations of approximately 157-feet and 245-feet above msl.

NV5 reviewed the Geotracker (www.geotracker.waterboards.ca.gov) database, an online data base managed by the State Water Resources Control Board, for groundwater information on the surrounding properties. The Geotracker database included groundwater information from seven groundwater monitoring wells, within the vicinity of the proposed sewer improvements. The historical depth to groundwater data listed indicates:

- The first groundwater zone beneath the area of Boring B18-1 may be as shallow as 5 to 10 feet below ground surface.
- The first groundwater zone beneath the area of Boring B18-5 may be as shallow as 15 to 20 feet below ground surface.
- The first groundwater zone beneath the area of Boring B18-6 may be as shallow as 10 to 15 feet below ground surface.

