

Performing the Geotechnical Field Investigation



David Thomas, Sr. Engineering Geologist
Office of Drilling Services

Drilling Request Submittal

Contact Drilling Services (DS) and arrange for a drill site preview

You may also want to invite the Project Engineer and District representatives from environmental, maintenance, etc.

PRELIMINARY
 FINAL

DRILLING REQUEST

OFFICE OF DRILLING SERVICES

Date _____

Instructions: Please complete this form and submit to Laurel Jensen (916) 227-4407 Fax # (916) 227-5432

Geologist / Engineer Telephone No. _____ Senior Geologist / Engineer Signature _____ Telephone No. _____

PROJECT INFORMATION District County Route Post Mile / KP

Geographic Name / Bridge Name _____

EA No. _____ FA - Activity Code _____ Special Des _____ Requested Start Date _____ Drilling Completed by Date _____

DRILLING AND SAMPLING NEEDS

Hub Core (2.400") Punch Core Auger Boring Drive / Push Samples

Hub Core (1.675") 2 1/2" Brass 2" Brass SPT Shelby Tube

est. qty: _____ est. qty: _____ est. qty: _____ California Modified

Hydraulic Drive Rig 1" Soil Tube (Wacker) Other _____

Expected Rock / Soil Type(s): _____

SITE CONSTRAINTS Construction Support Name: _____
 Permit-to-Enter: Yes No Maintenance Support Contact Person: _____
 Environmental Permits: Yes No Phone No: _____ Cell No: _____
 F & G Army Corp USFWS Other(s) Lane Closure Shoulder Closure Bridge Deck

Remarks _____

INSTALLATIONS

Est. # SI Borings: _____ Est. # Piezo Borings: _____ Monuments (qty) _____

3.31" Geo-Lok est. qty(ft): _____ Slotted (200) PVC Sch 80 Solid PVC Sch 80 6" Flush Mount _____

2.75" Geo-Lok est. qty(ft): _____ 4" est. qty(ft): _____ 4" est. qty(ft): _____ 2" Flush Mount _____

TDR Cable 1" est. qty(ft): _____ 1.5" est. qty(ft): _____ 3" est. qty(ft): _____ 4.5" Locking _____

18 gauge est. qty(ft): _____ 1" est. qty(ft): _____ 1.5" est. qty(ft): _____ 5.5" Locking _____

0.5" est. qty(ft): _____ 1" est. qty(ft): _____ 1" est. qty(ft): _____ 6" Locking _____

Casing Backfill _____
 Cement-Bentonite Grout _____
 No. 8 Sand _____

LJ _____ DJD _____ WT _____ JAR _____ Jobs Rec'd _____ Completed Project _____

Rev. 12/05 Drilling Plan Package (1 of 3) Received Date: _____

The Drilling Request
(the more information the better)

The Drilling Request (The Basics)

GS Whoever (XXX) XXX-XXXX Geologist / Engineer Telephone No.		Signature Please _____ (XXX) XXX-XXXX Senior Geologist / Engineer Signature Telephone No.				
Dry Creek Bridge (REP) No. 51-0999 Geographic Name / Bridge Name			District 05	County SB	Route 2	Post Mile / KP PM33.63
05-#####1 EA No.	1-240 FA - Activity Code	MSA P80 Special Des	(Earliest) Requested Start Date	(Latest) Drilling Completed by Date		

The Drilling Request (Drilling and Sampling Needs)

Dry Creek Bridge (REP)

DRILLING AND SAMPLING NEEDS			Drive / Push Samples	Drilling Phase: _____
<input checked="" type="checkbox"/> Hxb Core (2,400") <input type="checkbox"/> Nxb Core (1,875")	<input checked="" type="checkbox"/> Punch Core <input checked="" type="checkbox"/> 2 1/2" Brass est. qty: _____	<input type="checkbox"/> Auger Boring [] <input type="checkbox"/> 2" Brass est. qty: _____	<input checked="" type="checkbox"/> SPT <input type="checkbox"/> Shelby Tube <input type="checkbox"/> California Modified	Est. # Borings: <u>4</u> Est. Max Depth: <u>100 ft</u>
<input type="checkbox"/> Hydraulic Drive Rig <input type="checkbox"/> 1" Soil Tube (Wacker) <input type="checkbox"/> Other _____				
Expected Rock / Soil Type(s): <u>Silt / Sand / Sandstone Bedrock</u>				

The Drilling Request (Constraints / Remarks)

Dry Creek Bridge (REP)

SITE CONSTRAINTS	LOCAL MAINTENANCE YARD
Permit-to-Enter: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Environmental Permits: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> F & G <input type="checkbox"/> Army Corp <input type="checkbox"/> USFWS <input checked="" type="checkbox"/> Other(s)	Construction Support <input type="checkbox"/> Maintenance Support <input checked="" type="checkbox"/> Name: <u>Lost Creek</u> Contact Person: <u>Yard Sup</u> Phone No: (XXX) XXX-XXXX Cell No: (XXX) XXX-XXXX Lane Closure <input type="checkbox"/> Shoulder Closure <input type="checkbox"/> Bridge Deck <input type="checkbox"/>
Remarks: <u>3 borings are outside of Caltrans right-of-way. 2 borings are below the high water mark and within, or adjacent to sensitive wetland habitat. Creek flows year round. County operated check dam upstream.</u>	

The Drilling Request (Installations)

Dry Creek Bridge (REP)

INSTALLATIONS			
Est. # SI Borings: _____ <input type="checkbox"/> 3.34" Geo-Lok est. qty(ft): _____ <input type="checkbox"/> 2.75" Geo-Lok est. qty(ft): _____ TDR Cable <input type="checkbox"/> 18 gauge est. qty(ft): _____ <input type="checkbox"/> 0.5" est. qty(ft): _____ Casing Backfill <input checked="" type="checkbox"/> Cement-Bentonite Grout <input checked="" type="checkbox"/> No. 8 Sand	Est. # Piezo Borings: <u>1</u> Slotted (.020) PVC Sch 80 <input type="checkbox"/> 4" est. qty(ft): _____ <input checked="" type="checkbox"/> 1.5" est. qty(ft): <u>20</u> <input type="checkbox"/> 1" est. qty(ft): _____	Solid PVC Sch 80 <input type="checkbox"/> 6" est. qty(ft): _____ <input type="checkbox"/> 4" est. qty(ft): _____ <input type="checkbox"/> 3" est. qty(ft): _____ <input type="checkbox"/> 1.5" est. qty(ft): <u>10</u> <input type="checkbox"/> 1" est. qty(ft): _____	Monuments (qty) <input type="checkbox"/> 5" Flush Mount _____ <input type="checkbox"/> 4" Flush Mount _____ <input type="checkbox"/> 2" Flush Mount _____ <input checked="" type="checkbox"/> 4.5" Locking <u>1</u> <input type="checkbox"/> 5.5" Locking _____ <input type="checkbox"/> 6" Locking _____

Site Safety Plan (The Basics)

GS Whoever <small>Geologist / Engineer</small>	(xxx) xxx-xxxx <small>Telephone No.</small>	<i>Please Sign</i> Senior Geologist / Engineer Signature	(xxx) xxx-xxxx <small>Telephone No.</small>
PROJECT INFORMATION Dry Creek Bridge (REP) No. 51-0999		District 05	County SB
Geographic Name / Bridge Name		Route 2	Post Mile / KP PM 33.63
05-####1 <small>E.A. No.</small>	1-240 <small>FA - Activity Code</small>	MSA P80 <small>Special Designation</small>	

Site Safety Plan (Hospital / Cell Reception / Physical Hazards)

Dry Creek Bridge (REP)

Local Hospital Basic Emergency Trauma Center *Please attach map with route to hospital from site(s) clearly marked*

Name: Smalltown Community Hospital

Address: 2929 B Street, Smalltown

Phone No.: (XXX) (XXX-XXXX)

Is there clear Cell Phone reception and transmission at the Site(s)? Yes No Unknown

Please describe any known Physical Hazards at the Site(s):

Rattlesnakes

Site Safety Plan (Utility Clearance / USA Underground Service Alert)

Dry Creek Bridge (REP)

UTILITY CLEARANCE (USA) DATA

USA Ticket No.: 121212 USA Exp. Date: 28 Days from Call

Location Description as Mapped by USA:

Starting at a point 50 ft south of Dry Creek Bridge, Rte 2 centerline and extending 50 ft north of Dry Creek Bridge along Rte 2 for a width of 75 ft east of Rte 2 centerline.

Members Contacted by USA	Did you receive a Member Call-Back?	Did you have a Field Meet with Member?	Did the Member mark or flag their utilities at the site(s)?
<u>PG & E Electrical</u>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<u>PG & E Gas Distribution</u>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<u>AT & T Fiber Optic</u>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Are there Non-Member Utilities at the Site(s)? Yes No

Non-Members Contacted: _____

Are there Overhead Utility lines at the Site(s)? Yes No

Have you been briefed on the location(s) of Non-Member Utilities at the site(s)? Yes No

Are the locations Marked or Flagged? Yes No

Clear the Utilities – It's the Law Call 811



Hazardous Materials/Waste Query

Fax			
From:	To:	Phone:	Ext:
Sender:	Fax:	Phone:	# of pages:

Project Name _____ Dist.-Co.-Rte.-PM _____ E.A. No. _____

Geotechnical Services of the Division of Engineering Services needs to conduct geotechnical and exploratory drilling at this site. A site plan showing the general location of the drilling program is attached. Field operations are tentatively scheduled to start _____. The borings (are/are not) anticipated to extend to groundwater.

Project Comments:

Hazardous Materials/Waste Questionnaire

Response by: _____
Print Name _____ Phone Number _____

1. Has an initial site assessment been performed for this project? Yes No If yes, is the report available and from where?
2. Was the proposed drilling area, as shown on the attached map, identified as having the potential for hazardous waste contamination? Yes No If yes, why?
3. If yes, has a detailed site assessment been performed at this location? Yes No
4. Please briefly describe the results of the detailed site assessment performed at our proposed drill location.
5. Encountering hazardous waste and/or hazardous materials is not is anticipated within subsurface materials at this location. If any, please attach a list of specific substances, levels, etc. that are anticipated at this site.

Signed: _____ Date: _____
Hazardous Waste Coordinator
District _____ Environmental Branch

Please complete this form to the best of your knowledge and return by FAX to _____ to the "sender" listed above. If your answers indicate the area is, or may be, contaminated, you will be contacted for further details.

Rev. 2/19/03 Drilling Plan Package (3 of 3)

ADA Notice For individuals with sensory disabilities, this document is available in alternate format. For information call (916) 263-2844 or TDD (916) 263-2844 or write Records and Form Management, 1130 N Street, Box 1130, SAC 89, Sacramento, CA 95814.

Office of Drilling Services

- Drilling Services routinely schedules 8 drill crews per week statewide
- Typically crew size is comprised of 3 to 4 staff, all with CMV license
- Alternate Work Week 4/10 s Friday RDO



Drilling Services Equipment

- (4) 2WD Truck Mounted Drill Rigs
- (5) 4X4 Truck Mounted Drill Rigs
- (5) Trailer Mounted Drill Rigs
- (2) Track Mounted Drill Rigs, (1) w /Horizontal Drilling Capabilities
- (1) All Terrain (Balloon Tire) Off Road Drill Rig
- (2) Trailer Mounted Hydraulic Drive Rigs
- (3) Limited Access Drill Machines

Geotechnical Drilling and Sampling Methods

Mud-Rotary

- 94mm Wireline (2.5) used for recovery of continuous soil (punch core) samples and continuous rock core
- Hxb Wireline (2.4) used for recovery of continuous rock core
- Nxb Wireline (1.8) use for recovery of continuous rock core
- Conventional Open Hole Tri Cone (≤ 10 Hole Diameters) Open Hole / Soil Cuttings and Chip Samples

Geotechnical Drilling and Sampling Methods



Mud Rotary Set Up

Geotechnical Drilling and Sampling Methods

Auger

- 8 Hollow Stem Continuous Flight
- 6 Hollow Stem Continuous Flight

Geotechnical Drilling and Sampling Methods

Hollow Stem Continuous Flight Auger



CME750 All Terrain Rig



Low Impact Drilling

CME750 All Terrain Rig
with Alturna Mats



Drilling Services Barge Work

Crane Assisted Assembly

Anchors / Spuds Set



CS500 Aluminum Drill Rig

Limited Access Drilling



Limited Access Drilling CS 100 Core Rig

