CITY OF SAUSALITO

420 Litho Street, Sausalito, CA 94965

Addendum No. 2

Issued **June 6, 2016**

For

Gate 5 Road Sewer Rehabilitation

NOTICE TO ALL PLAN HOLDERS SUBMITTING BIDS FOR THIS WORK:

You are hereby notified of the following information, changes, clarifications or modifications to the original Contract Documents, Project Manual, Drawings, Specifications and subsequent Addenda. This Addendum shall supersede the original Contract Documents and previous Addenda wherein it contradicts the same and shall take precedence over anything to the contrary therein. All other conditions remain, UNCHANGED.

This Addendum is hereby made a part of the Contract Documents to the same extent as though it were originally included therein.

Revision:

CONTRACT DOCUMENTS, DRAWINGS

Drawing G02 – As noted
Drawing C01 – As noted
Drawing C02 – As noted
Drawing C03 – As noted
Drawing C04 – As noted
Drawing C05 – As noted
Drawing C06 – As noted
Drawing C07 – As noted

CONTRACT DOCUMENTS, SPECIFICATIONS

Table Of Contents – As noted
Section 00010 – Notice Inviting Bids – As noted
Section 00300 – Bid Form – As noted, replace pages with attached revised pages (3 pages)
Section 00800 –Supplementary General Conditions – As noted
Section 01025 – Measurement and Payment- As noted, replace pages with attached pages (9 pages)
Section 02084 – Precast Concrete Structures – As noted
Section 02501 – Sewer Cleaning and CCTV Inspection – As noted
Section 15052 – Common Work Results for General Piping – As noted, replace Piping Schedule with attached piping schedule (1 page)
Section 15241 – High Density Polyethylene Plastic (HDPE) Pipe: AWWA C906 – As noted

Section 15244 – Polyvinyl Chloride (PVC) Pipe: AWWA C900 – As noted, replace entire section with attached section (3 pages)
Appendix G – Uniform Standards All Cities and County of Marin – As noted, add attached Detail 300 (1 page)

END OF ADDENDUM NO. 2

Total number of Pages of this Addendum is 24

Issued By: **City of Sausalito**
Andrew Davidson
Senior Engineer
California Civil Engineer C048210
Sealed 06June16
Expires 30June18

ACKNOWLEDGED

_____
Bidder's Signature
A signed copy of this addendum is to be submitted as a part of the bid package for the subject project. Failure to do so may subject the Bidder to Disqualification.

ADDENDUM NO. 2

TO

Bid Documents

FOR

City of Sausalito

Gate 5 Road Sewer Rehabilitation Project

June 6, 2016

CONTRACT DOCUMENTS, DRAWINGS:

Drawing G02

1. Under Legend, insert second symbol for a monument:.o
2. In General Note 1, line 1, insert after "all existing sewer mains" the following text "and 3 private sewer laterals shown on drawing C01"
3. Insert at end of General Note 7 "Monuments shall be replaced according to Uniform Constructions Standards All Cities and County of Marin Drawing No. 300 - Monument. See Appendix G."

Drawing C01

1. In profile, change pipe callout from "8" FPVC OR HDPE SS" to "8" PVC SS" in two locations.
2. In plan, add "Note 6" callout and arrow in 3 locations: pointing to monuments at Sta 10+59, SSMH 430103, and Sta 13+39.
3. In profile, add to Notes "6. Replace existing monuments near Sta 10+59, SSMH 4301103, and Sta 13+39. Relocate monument as necessary at SSMH 430103 if current location conflicts with new manhole."
4. In profile, revise note 4 as follows "4. Replace existing 24" and 15" RCP SDs and Type F CB to existing line and grade, as required for construction."

Drawing C02

1. In profile, change pipe callout from "8" FPVC OR HDPE SS" to "8" PVC SS" in two locations.
2. In profile, revise note 4 to read "4. Remove and dispose of exist SSMH and backfill with CLSM."
3. In plan, add "Tracer Wire Box. Note 8" and arrow pointing to cleanout symbol adjacent to SSMH 430113. In profile, add to Notes: "8. Cleanout cover adjacent to SSMH 430113 is a tracer wire box. Contractor shall reinstall as directed by City."
4. In plan, add "Note 9" and arrow pointing to monument at Sta 18+97 adjacent to SSMH 430104A. In profile, add to Notes: "9. Relocate existing monument at Sta 18+97 as directed by City."
5. At bottom of page, move "ALTERNATIVE ADDITIVE BID ITEM 2 and BASE BID dividing line to northwest edge of manhole at Sta 18+64.

Drawing C03

1. In profile, change pipe callout from "8" FPVC OR HDPE SS" to "8" PVC SS" in three locations.
2. In profile, add callout for storm drain profile at Sta 23+94 "Sta 23+94± Type E CB"
3. In profile, revise Note 4 as follows "4. Contractor may elect to replace 15" and 12" SDs and Type E CB to existing line and grade as required for construction."
4. In profile, Note 3, after 1st sentence add new sentence "At a minimum, contractor shall remove and dispose of the top 3 feet of exist SSMH and backfill with CLSM."

Drawing C04

1. In profile, change pipe callout from "8" FPVC OR HDPE SS" to "8" PVC SS" in two locations.
2. Replace note 4 with the following "4. Disconnect private lateral that currently discharges to SSMH 430110 and reconnect to new cleanout at Sta 29+01 using fabricated fittings as required. No reconnection is required at new manhole."
3. In plan, at existing SSMH 430107, delete arrow and callout "connect to ex sewer G/C08"

Drawing C05

1. In profile, change pipe callout from "8" FPVC OR HDPE SS" to "8" PVC SS" and add second leader line to the 32.37 feet of pipe.
2. In plan, revise note 2 to read "2. Alignment of 18" SD is unknown. Contractor shall locate and pothole SD. Contractor shall protect in place."

Drawing C06

1. In profile, change pipe callout from "6" FPVC OR HDPE SS" to "6" PVC SS" in two locations.
2. In plan, near rodding inlet at Sta 12+93, change "Private" callout to "6" Private Lateral".

Drawing C07

1. Detail B: Delete Typical Trench Note 2. Move arrow for "VERTICAL SAW CUT FULL DEPTH AC" callout to point to edge of trench. Delete "WARNING TAPE" callout in trench section. In note 3, delete "TRACER TAPE AND."
2. Detail D: Change "PVC or HDPE RISER CLEANOUT" to "PVC RISER CLEANOUT".
3. Detail C, Note 8: revise 2nd sentence to read ""Wrap exterior of all manhole joints, including manhole frame, intermediate barrel joints, grade rings, and top cone joint with heat shrink membrane per section 07900." Revise Note 6 to read "6. Backfill entire SSMH excavation with CLSM per Section 02318."

CONTRACT DOCUMENTS, SPECIFICATIONS:

Table of Contents

1. Page 3: Delete "Section 15241 HIGH DENSITY POLYETHYLENE PLASTIC (HDPE) PIPE; AWWA C906"

Section 00010 - Notice Inviting Bids

1. Page 2: 4th paragraph, after 1st sentence, insert "If Additive Alternative Item 1 is authorized, then CONTRACT TIME, Substantial Completion shall be completed within one-hundred and seventy-five (175) consecutive calendar days."

Section 00300 - Bid Form

1. Pages 3 to 5: Replaced pages with attached revised pages (3 pages)

Section 00800 - Supplementary General Conditions

1. Page 1: After 1st sentence, insert "If Additive Alternative Item 1 is authorized, then CONTRACT TIME, Substantial Completion shall be completed within one-hundred and seventy-five (175) consecutive calendar days."
2. Page 1, Paragraph 1.04, 1st line: insert after "sewer mains", "and private sewers shown on Dwg C01,"

Section 01025 - Measurement and Payment

1. Replace Pages 3 to 11 with attached pages 3 to 11 (9 pages).

Section 02084 - Precast Concrete Structures

1. Paragraph 2.03.A.3.a: Replace "FPVC or HDPE pipe" with "PVC pipe".

Section 02501 - Sewer Cleaning and CCTV Inspection

1. Paragraph 1.01.A, 1st line: After "sewer pipelines", insert ", private sewers, ".
2. Replace Paragraph 3.02.C with:
   "C. Contractor shall completely CCTV all portions of identified sewer mains and private sewers, including those portions that are normally partially or completely surcharged with water. It shall be the Contractor's responsibility to evacuate all standing water in portions of surcharged sewer main and private sewers so that the CCTV image reveals a complete image of sewer, and may include the simultaneous use of high pressure jetter moving in conjunction with, and immediately in front of the camera.

Section 15052 - Common Work Results for General Piping

1. Paragraph 1.01.B.3: Delete b. Section 15241 - High Density Polyethylene (HDPE) Pipe: AWWA C906.
2. Page 5: Replace Piping Schedule with attached piping schedule (1 page).

Section 15241 - High Density Polyethylene Plastic (HDPE) Pipe; AWWA C906

1. Delete entire section.

Section 15244 - Polyvinyl Chloride (PVC) Pipe: AWWA C900

1. Replace entire section with attached section (3 pages).

Appendix G - Uniform Standards All Cities and County of Marin

1. Add attached Detail 300 - Monuments (1 page).

This Addendum No. 2, pages 1 through 22, shall become part of the Contract and all provisions of the Contract shall apply thereto.

The time provided for completion of the Contract is not changed.

Bidders shall acknowledge receipt of all Addenda by number in the space provided in the Proposal.

CAROLLO ENGINEERS, INC.

Jill Shankel
PE NO. CE 54604

Name of Bidder: _____

to submit a false or sham Bid; BIDDER has not solicited or induced any person, firm or corporation to refrain from bidding; and BIDDER has not sought by collusion to obtain for itself any advantage over any other BIDDER or over OWNER.

4. Bid Prices

BASE BID SCHEDULE

BID ITEM NO.	DESCRIPTION	EST. QTY.	UNIT	UNIT PRICE	BID PRICE
1	Mobilization and Demobilization	1	LS		
2	Bypass Pumping and Control of Sewage Flow	1	LS		
3	Dewatering (incl. treatment and disposal)	1	LS		
4	Disposal of Excavated Materials to Class 2 Landfill	3,721	TON		
5	Shoring	1	LS		
6	Traffic Control	1	LS		
7	CCTV of Sewer Mains and Lateral Connections	1	LS		
8	8-inch C900 DR 18 PVC Sanitary Sewer	128	LF		
9	8-inch C900 DR 18 PVC Sanitary Sewer - Replacement	1,394	LF		
10	12" RCP Storm Drain Replacement	150	LF		
11	15" RCP Storm Drain Replacement	40	LF		
12	Catch Basin w/ 12" x 12" x 12" Connections	1	EA		
13	Lateral Replacement per Detail A/C07	300	LF		
14	Two-Way Clean Out per Detail D/C07	15	EA		
15	48" Manhole per Detail C/C07	9	EA		
16	48" Manhole Removal	5	EA		
17	48" Manhole Rehabilitation	1	EA		
18	Rodding Inlet per Detail H/C08	2	EA		
19	AC Pavement Restoration per Detail B/C07	7,240	SF		
20	Builder's Risk Insurance	1	LS		
21	Geotechnical Report	1	LS		
22	Existing Utility Pothole	51	EA		
23	Monument Replacement per Detail 300	4	EA		
	TOTAL BASE BID (use figures)				

TOTAL BID FOR ALL BASE BID ITEMS (use words)

_____ dollars and

_____ cents

Name of Bidder: _____

ALTERNATE BID ITEMS

The following Alternate Bid amounts shall be added to the Total Base Bid Price entered above at City's sole option. City can choose to include either of the Alternate Bids in the Project at its sole discretion. If either of the Alternate Bids is selected by City, the resulting amount shall be added to Total Bid Price for the Project. City can award/select Alternate Bid items at any time(s). However, if City elects to award either of the alternates, the items will be constructed within the Contract Time as described in Specification Section 00800, 1.01. Therefore, no additional line items for mobilization, traffic control, and demolition have been included in the alternate price bid forms.

Alternative Additive Bid Item 1: The Bidder agrees that if the Owner elects to move forward during the contract period with the additive bid item as described below, the Contract price will be increased by the lump sum amount as indicated below. The Bidder declares that the costs for labor, materials, equipment, and incidentals necessary for all work required by the plans and specifications for replacement of SSMHs 430113 and 430103 and rehabilitation of SSMH 430102 per Section 02641 including sheeting and shoring, dewatering, bypass pumping, testing and material disposal are included in the Total Alternative Additive Bid Price, and that such costs are indicated as follows:

TOTAL BID FOR ALTERNATIVE ADDITIVE BID ITEM 1:

_____

(Price in figures)

TOTAL BID FOR ALTERNATIVE ADDITIVE BID ITEM 1:

_____ dollars and

(Price in words)

_____cents

Name of Bidder: _____

Alternative Additive Bid Item 2: The Bidder agrees that if the Owner elects to move forward during the contract period with the additive bid item as described below, the Contract price will be increased by the lump sum amount as indicated below. The Bidder declares that the costs for labor, materials, equipment, and incidentals necessary for all work required by the plans and specifications applicable to work shown on Drawing C01 and Drawing C02 west of SSMH 430104 at Sta 18+64 including sheeting and shoring, material disposal, dewatering, CCTV, lateral locate and replacement, and bypass pumping, and that such costs are indicated as follows:

ALTERNATIVE ADDITIVE BID ITEM 2 SCHEDULE

BID ITEM NO.	DESCRIPTION	EST. QTY.	UNIT	UNIT PRICE	BID PRICE
24	Bypass Pumping and Control of Sewage Flow	1	LS		
25	Dewatering (incl. treatment and disposal)	1	LS		
26	Disposal of Excavated Materials to Class 2 Landfill	2,230	TON		
27	Shoring	1	LS		
28	Traffic Control	1	LS		
29	CCTV of Sewer Mains, 3 Private Sewers on Dwg C01 and Lateral Connections	1	LS		
30	8-inch C900 DR 18 PVC Sanitary Sewer	265	LF		
31	8-inch C900 DR 18 PVC Sanitary Sewer - Replacement	600	LF		
32	15" RCP Storm Drain Replacement	10	LF		
33	24" RCP Storm Drain Replacement	70	LF		
34	Catch Basin w/ 24" x 24" x 15" Connections	1	EA		
35	Lateral Replacement per Detail A/C07	420	LF		
36	Two-Way Clean Out per Detail D/C07	21	EA		
37	48" Manhole per Detail C/C07	2	EA		
38	48" Manhole Removal	2	EA		
39	48" Manhole Rehabilitation	1	EA		
40	Rodding Inlet per Detail H/C08	1	EA		
41	AC Pavement Restoration per Detail B/C07	4,060	SF		
42	Builder's Risk Insurance	1	LS		
43	Existing Utility Pothole	32	EA		
44	Monument Replacement per Detail 300	3	EA		
	TOTAL ALTERNATIVE ADDITIVE BID ITEM 2 (use figures)				

TOTAL BID FOR ALTERNATIVE ADDITIVE BID ITEM 2 (use words)

_____ dollars and

(Price in words)

_____ cents

materials, and staff including obtaining and set up of Contractor's staging area/yard; preparing Storm Water Pollution Prevention Plan; furnishing and erecting all needed construction facilities; fencing; preparing traffic control plans; project signage; project security; demobilization; preconstruction photographs; video recording of surface features; progress schedules and reports; contract meetings; and record drawings.

3. Final payment for mobilization and demobilization, or any part thereof, will be approved for payment under the Contract when all applicable mobilization and demobilization items listed above have been completed.

4. This amount shall not exceed five percent (5%) of the total bid price for the Work.

C. Bid Item 2 - Bypass Pumping and Control of Sewage Flow

Bid Item 24 - Bypass Pumping and Control of Sewage Flow

1. Payment for this bid item shall be based on a lump sum cost. Payment for this item will be prorated over the course of the Project based on percentage complete of all items.

2. This bid item includes all work and materials necessary to maintain uninterrupted sewer service during the project and includes design and preparation of a flow control plan; submittals; personnel; plugging; bypass pumping; piping; temporary pipe trenching and surface restoration; protecting piping from traffic; sound attenuation equipment; temporary flow diversions; odor control equipment, handling flow from laterals that are temporarily disconnected; restoration of sewer flow; and all incidentals as required by these Plans and Specifications.

D. Bid Item 3 – Dewatering (incl. treatment and disposal)

Bid Item 25 – Dewatering (incl. treatment and disposal)

1. Payment for this bid item shall be based on a lump sum cost. Payment for this item will be prorated over the course of the Project based on percentage complete of all items.

2. These bid items include all work and materials necessary for design and installation of dewatering system necessary to keep sewer trench and other excavations dry at all time and includes furnishing and operating pumps, power supply; noise control, sediment removal devices; piping; protecting piping from traffic; wells, appurtenances; submittals; all incidentals including obtaining all permits; pretreatment of water and testing as required to meet discharge limits as outlined in Appendix C; abandonment of wells per Marin County requirements and restoration of pavement; sidewalk; or landscaping damaged due to wells and power supply.

E. Bid Item 4 – Disposal of Excavated Materials to Class 2 Landfill

Bid Item 26 - Disposal of Excavated Materials to Class 2 Landfill

1. Payment for this bid item shall be based on a unit cost. Measurement for unit price work will be based on the actual number of tons hauled and disposed of as determined by the landfill tickets and verified by Construction Manager.

2. These bid items include all work and materials necessary to dispose of excavated materials and debris excavated or removed as part of the project and includes cost for handling, equipment, hauling, noise control, submittals, and all incidentals including landfill fees.

F. Bid Item 5 – Shoring

Bid Item 27 – Shoring

1. Payment for this bid item shall be based on a lump sum cost. Payment for this item will be prorated based on the linear footage of sewer main work completed as determined by the Construction Manager.

2. This bid item includes excavation support measures required including but not limited to: geotechnical investigation, design; submittals; installation and removal of shoring and bracing required to stabilize and prevent movement of existing ground and to protect and provide for the safety of the Contractor's workers due to collapse or movement of the existing ground during excavation and trenching operations, including furnishing all equipment, materials, and personnel associated therewith, and in accordance with these Specifications and California Labor Code 6700-6708.

G. Bid Item 6 - Traffic Control

Bid Item 28 - Traffic Control

1. Payment for this bid item shall be based on a lump sum cost. Payment for this item will be based on the linear footage of sewer main work completed as determined by the Construction Manager.

2. This bid item will be for traffic control required to safely complete the work. This bid item includes all labor, equipment, and materials necessary to provide traffic control in compliance with encroachment permits and these bid documents during construction of the project.

H. Bid Item 7 - CCTV of Sewer Mains and Lateral Connections

Bid Item 29 - CCTV of Sewer Mains, Private Sewers and Lateral Connections

1. Payment for this bid item shall be based on a lump sum cost. Payment for this item will be prorated over the course of the CCTV work based on percentage complete of all items.

2. This bid item includes pre-construction cleaning and CCTV of existing sewer mains and private sewers (Dwg C01) to determine exact lateral connection locations, as well as post-construction cleaning and CCTV of installed sewer mains to ensure compliant installation. Bid item includes all work and materials necessary for CCTV during the project; submittals; personnel; plugging; bypass pumping; piping; temporary pipe trenching and surface restoration; protecting piping from traffic; temporary flow diversions; handling flow from laterals that are temporarily disconnected; restoration of sewer flow; and all incidentals as required by these Plans and Specifications.

I. Bid Item 8 – New 8-inch C900 DR 18 PVC Sanitary Sewer

Bid Item 9 – 8-inch C900 DR 18 PVC Sanitary Sewer Replacement

Bid Item 10 – 12-inch Storm Drain Replacement

Bid Item 11 - 15-inch Storm Drain Replacement

Bid Item 30 – New 8-inch C900 DR 18 PVC Sanitary Sewer

Bid Item 31 – 8-inch C900 DR 18 PVC Sanitary Sewer Replacement

Bid Item 32 - 15-inch Storm Drain Replacement

Bid Item 33 - 24-inch Storm Drain Replacement

1. Payment for these bid item shall be based on a unit cost. Measurement for unit price work will be based on the actual number of linear feet complete and in place as determined by the Construction Manager.

2. These bid items include submittals; SWPPP pollution prevention measures; protecting existing utilities; surveying; saw cutting, grinding, surface demolition; concrete plugs, excavation of trench; spoil removal; pipe bedding; trench backfill, stabilization material; filter fabric; trench dams; compaction; testing; post construction CCTV inspection of pipe; dust control; cleaning; testing, record drawings; furnishing all equipment, materials, and personnel associated therewith, and all incidentals in accordance with these Plans and Specifications.

J. Bid Item 12- Type E Catch Basin Replacement with 12"x12"x12" Connections

Bid Item 34- Type F Catch Basin Replacement with 24"x24"x15" Connections

1. Payment for this bid item shall be based on a unit cost. Measurement will be based on the actual number of catch basins completed and in place.

2. This bid item includes all labor, equipment, and materials necessary to furnish and construct the catch basins; any additional SWPPP pollution prevention measures; any additional saw cutting; any additional

excavation; any additional dust control; soil stockpiling and spoils handling and disposal; any additional backfilling; compaction; testing; any additional surface restoration including sidewalks, concrete paving, asphalt paving, curbs, gutters, fences, and other surface features disturbed by the Work; record drawings and all incidentals required for a complete installation.

K. Bid Item 13 – Lateral Replacement per Detail A/C07

Bid Item 35 – Lateral Replacement per Detail A/C07

1. Payment for this bid item shall be based on a unit cost. Measurement will be based on the actual number of linear feet of lateral complete and in place as determined by the Construction Manager.

2. This bid item shall be for the lateral replacement and connection installed as directed in the field by the Construction Manager. This bid item includes furnishing all equipment, materials, (except for two-way cleanouts covered in Bid Item 18), and personnel associated therewith, and in accordance with these Specifications; submittals; traffic control; SWPPP pollution prevention measures; dust control; collection and legal disposal of all coupons; locating/potholing and protecting existing utilities; surveying; locating/potholing the lateral; surface demolition; saw cutting; grinding; trenching; excavation; removal and proper disposal of concrete; spoil handling; cutting and sealing sewer service laterals; removal and disposal of existing laterals; preparing and compacting pipe sub base; placing and compacting pipe bedding; furnishing, installing, and compacting trench backfill; installation of lateral wye connection and lateral piping and connection couplings, connection to existing lateral; backfill; compaction; testing; CCTV inspection; additional surface restoration including fences, curb and gutter, sidewalks, asphalt paving per Detail B/C07, irrigation system components and landscaping; cleaning; record drawings, and all incidentals as required by these Specifications and Drawings.

L. Bid Item 14 – Two-Way Clean Out per Detail D/C07

Bid Item 36 – Two-Way Clean Out per Detail D/C07

1. Payment for this bid item shall be based on a unit cost. Measurement will be based on the actual number of two-way cleanouts complete and in place as determined by the Construction Manager.

2. This bid item includes all labor, materials, and equipment to install and connect the two-way cleanout to the lateral pipe per detail D/C07 as directed in the field by the Construction Manager. This shall include surface demolition, excavation spoils handling, bedding and initial backfill, trench backfill and compaction, surface restorations that are in addition to those indicated for bid item 17.

M. Bid Item 15 - 48" Manholes per Detail C/C07

Bid Item 37 - 48" Manholes per Detail C/C07

1. This bid item shall be a unit cost. Payment will be based on the actual number of manholes along with manhole frames and covers completed and in place as determined by the Construction Manager, regardless of depth.

2. This bid item includes all labor, equipment, and materials necessary to furnish precast concrete manholes, cast-in-place bases, barrel sections, frames and covers; submittals; SWPPP pollution prevention measures; saw cutting; excavation; dust control; soil stockpiling and spoils handling; structure bedding; lining and coating of manhole; non-shrink grout; backfilling; compaction; routing of new flow channels within manholes; all external drop connections, testing; surface restoration including sidewalks, concrete paving, curbs, gutters, fences, and other surface features disturbed by the Work; cleaning; testing; record drawings and all incidentals required for a complete installation.

N. Bid Item 16 - 48" Manhole Removal

Bid Item 38 - 48" Manhole Removal

1. This bid item shall be a unit cost. Payment will be based on the actual number of manholes removed and in place.

2. This bid item includes all labor, equipment, and materials necessary to remove existing manhole; any additional SWPPP pollution prevention measures; any additional saw cutting; any additional excavation; any additional dust control; soil stockpiling and spoils handling; any additional backfilling; compaction; any additional surface restoration including sidewalks, concrete paving, curbs, gutters, fences, and other surface features disturbed by the Work; record drawings and all incidentals required for a complete removal.

O. Bid Item 17- 48" Manhole Rehabilitation

Bid Item 39- 48" Manhole Rehabilitation

1. This bid item shall be a unit cost. Payment will be based on the actual number of manholes rehabilitated as determined by the Construction Manager.

2. This bid item will be for each existing manhole that will be rehabilitated as part of the project per Section 02641. This bid item includes all labor, equipment, and materials necessary to connect new pipe to existing manhole; manhole leakage test; manhole repairs; any additional SWPPP pollution prevention measures; any additional saw cutting; any additional excavation; any additional dust control; soil stockpiling and spoils handling and disposal; any additional backfilling; compaction; testing; any

additional surface restoration including sidewalks, concrete paving, asphalt paving, curbs, gutters, fences, and other surface features disturbed by the Work; record drawings and all incidentals required for a complete installation.

P. Bid Item 18 - Rodding Inlets per Detail H/C08

Bid Item 40 - Rodding Inlets per Detail H/C08

1. This bid item shall be a unit cost. Payment will be based on the actual number of rodding inlet along with frames and covers completed and in place as determined by the Construction Manager, regardless of depth.

2. This bid item will be for each rodding inlet including frame and cover, installed regardless of depth. This bid item includes all labor, equipment, and materials necessary to furnish pipe segments, bends and fittings; frames and covers; submittals; SWPPP pollution prevention measures; saw cutting; excavation; dust control; soil stockpiling and spoils handling; structure bedding; non-shrink grout; backfilling; compaction; testing; surface restoration, curbs, and other surface features disturbed by the Work; cleaning; record drawings and all incidentals required for a complete installation.

Q. Bid Item 19 - AC Pavement Restoration per Detail B/C07

Bid Item 41 - AC Pavement Restoration per Detail B/C07

1. Payment for this bid item shall be based on a unit cost. Measurement shall be based on the square feet of AC pavement restored due to sewer and manhole installation as measured in the field by the Construction Manager. Pavement and surface restorations for laterals are addressed elsewhere.

2. This bid item will be pavement restoration for asphalt pavements as indicated in Detail B/C07 and the Specifications his bid item includes all labor, equipment, and materials necessary to repair the trench-disturbed asphalt including sawcutting and widening the tee section of the base course and pavement; hauling and disposal of debris, furnish, place and compact aggregate base material; dress sides of the existing asphalt with asphalt emulsion; furnish, place and compact hot mix asphalt concrete; provide submittal and quality assurance documentation; testing; and miscellaneous work for a complete system.

R. Bid Item 20 – Builder's Risk Insurance:

Bid Item 42 – Builder's Risk Insurance:

1. Payment for this bid item shall be lump sum. Measurement for this item will be prorated over the course of the Project based on percentage complete of all items.

2. This bid item includes the cost of "All Risk or Special Form" Builder's Risk Insurance required to cover full replacement of any damage to the work caused by an Act of God, as defined by Section 7105(b) of the Public Contract Code.

S. Bid Item 21- Geotechnical Report

1. Payment for this bid item shall be lump sum. This bid item will be for the geotechnical report required under Section 02260. Payment will be based on receipt of a final report sealed by a geotechnical engineer licensed in the State of California.

2. This bid item will be for the geotechnical report required under Section 02260. This bid item includes all labor, equipment, permits, testing and materials necessary to investigate and prepare a geotechnical report to be used for shoring design.

T. Bid Item 22- Existing Utility Pothole

Bid Item 43- Existing Utility Pothole

1. Payment for this bid item shall be based on a unit cost. Measurement will be based on the actual number of utility potholes completed as determined by the Construction Manager.

2. This bid item includes all labor, materials, and equipment to locate an existing utility where it crosses the sanitary sewer as indicated on the drawings and as marked by USA in the field. This shall include surface demolition, excavation spoils handling, backfill, and surface restorations that are in addition to Bid Items 19 and 41.

U. Bid Item 23 - Monument Replacement

Bid Item 44 - Monument Replacement

1. Payment for this bid item shall be based on a unit cost. Measurement will be based on the actual number of monuments installed as determined by the Construction Manager.

2. This bid item includes all labor, materials, and equipment to survey and install monument per typical Detail 300 - Monument and General Note 7. This shall include surface demolition, excavation spoils handling, backfill, and surface restorations that are in addition to Bid Items 19 and 41.

1.03 LUMP SUM PAYMENT ITEMS

A. Payment items for the Project for which Contract lump sum payments will be made are as listed in the Bid Schedule.

B. Payment for each lump sum item provides full compensation for furnishing the labor, materials, tools, and equipment and doing all the work involved to

complete the work covered by each item and included in the Contract Documents. Costs for items of Work, not specifically mentioned to be included in a particular lump sum or unit price payment item, but deemed incidental to the Work to be considered complete, shall be included in the listed lump sum item most closely associated with the Work involved.

C. The lump sum price and payment made for each item listed shall be for performing all work required to complete the item and for which separate payment is not otherwise provided.

D. Contractor shall submit a Schedule of Values for lump sum items. Provide itemized costs of lump sum items to facilitate progress payments of lump sum items that will take longer than one month to complete and are not tied to overall project completion.

1.04 UNIT PRICE PAYMENT ITEMS

A. Payment items for the Project on which the Contract unit price payments will be made are as listed in the approved Bid Schedule.

B. Each unit price item provides full compensation for furnishing the labor, materials, tools, and equipment and doing all the work involved to complete the work covered by each item and included in the Contract Documents. Measurement and payment stipulations are as detailed in the Specifications.

1.05 BID SCHEDULE QUANTITIES

A. Contract quantities are those quantities that have been calculated from the neat lines shown on the Plans and Specifications with no allowance for so-called shrinkage, swelling or settlement.

B. When the Plans and Specifications have been altered or when disagreement exists between the Contractor and the Construction Manager as to the accuracy of the Plan and Specification quantities, either party shall, before any work is started that would affect the measurement, have the right to request in writing a change to the noted quantity.

1.06 SCHEDULE OF VALUES

A. In addition to the requirements stated in Contract Documents, the Schedule of Values shall be in the form of an Excel hardcopy spreadsheet along with the electronic file on a disk. A Schedule of Values shall be submitted for each bid item as directed by the Construction Manager. Each component of work shall be consistent with the Contractor's Construction Schedule as defined in Section 01310 PROGRESS SCHEDULES. Construction Manager will use the approved Schedule of Values to assist in determining monthly progress payments for associated bid items, but will pay for work in terms of percentages actually completed.

B. Lump Sum bid items as listed in the Bid Schedule submitted by the Contractor with the accepted bid shall be included in a separate detailed Schedule of Values addendum. Each lump sum item shall be as included on the Bid Schedule and shall indicate the portion of the lump sum expected to be requested for each month for the period of the Project. Construction Manager will use this information for reviewing and approving partial payments for these items.

C. Construction Manager will review the Schedule of Values to assure that item breakdowns are reasonable and balanced. Before any work associated with Schedule of Value items can commence, Construction Manager must approve the Schedule of Values. When approved, they will be used in reviewing and approving the associated bid items to be included in the monthly partial payment requests.

D. Updates and proposed changes to cash flow and Schedule of Values shall be submitted with the monthly partial payment request. Construction Manager will review the updates and proposed changes and advise the Contractor as to their acceptance, modification, or rejection.

1.07 CHANGES AND EXTRA WORK

A. Measurement and payment of changes and extra work shall be as detailed in the Contract Documents.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

PIPING SCHEDULE

Process Abbrev.	Service	Nominal Diameter (inches)	Material	Pressure Class Special Thickness Class Schedule Wall Thickness	Pipe Spec. Section	Joints/ Fittings	Test Pressure/ Method	Lining	Coating	Service Conditions	Comments
	Underground	4-8	PVC	C900 DR 18, DIPS	15244	B&SP	15 feet/GR	None	None	Sewer	
	Underground	12-24	RCP	CL II	15221	B&SP	15 feet/GR	None	None	Storm Water	

Abbreviations:

1. The following abbreviations used in the column of test method refer to the respective methods as specified in Section 15956.
   GR Gravity method
2. Abbreviations to designate piping include the following:
   B&SP Bell and spigot
   CL Class

RCP - Reinforced Concrete Pipe
PVC Polyvinyl Chloride
DR Dimension Ratio

SECTION 15244

POLYVINYL CHLORIDE (PVC) PIPE: AWWA C900

PART 1 GENERAL

1.01 SUMMARY

A. Section includes:
   1. AWWA C900 PVC pipe and fittings.

B. Related sections:
   1. The Contract Documents are complementary; what is called for by one is as binding as if called for by all.
   2. It is the Contractor's responsibility for scheduling and coordinating the Work of subcontractors, suppliers, and other individuals or entities performing or furnishing any of Contractor's Work.
   3. The following Sections are related to the Work described in this Section. This list of Related Sections is provided for convenience only and is not intended to excuse or otherwise diminish the duty of the Contractor to see that the completed Work complies accurately with the Contract Documents;
      a. Section 01300 - Submittals.
      b. Section 15052 - Common Work Results for General Piping.
      c. Section 15076 - Pipe Identification.
      d. Section 15956 - Piping Systems Testing.

1.02 REFERENCES

A. American Water Works Association (AWWA):
   1. C605 - Standard for Underground Installation of PVC and PVCO Pressure Pipe and Fittings for Water.
   2. C900 - Standard for Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 4 Inches to 12 Inches, for Water Transmission Distribution.
   3. M23 – PVC Pipe – Design and Installation Manual.

B. ASTM International (ASTM):
   1. D 1784 - Standard Specification for Rigid Poly(Vinyl Chloride) (PVC) Compounds and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds.
   2. D 3139 - Standard Specification for Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals.
   3. F 477 - Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe.
   4. F 645 - Standard Guide for Selection, Design and Installation of Thermoplastic Water-Pressure Piping Systems.

1.03 ABBREVIATIONS

A. DR: Dimension ratio.

B. NPS: Nominal pipe size followed by the size designation.

1.04 SUBMITTALS

A. Submit as specified in Section 01330.

B. Shop Drawings:
   1. Describe materials, pipe, fittings, and gaskets.
   2. Manufacturer's product handling and installation instructions.

C. Provide Manufacturer's Certificate of Source Testing:
   1. Include date of manufacture for each lot delivered.

1.05 QUALITY ASSURANCE

A. Mark plastic pipe with date of extrusion, nominal size, class, manufacturer and all markings required in accordance with ASTM and AWWA standards.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Protect from sunlight, scoring, and distortion.

B. Do not allow surface temperatures to exceed 120 degrees Fahrenheit.

C. Deliver, offload, handle, and store pipe in accordance with manufacturer's or pipe supplier's recommendations and best practices provided by AWWA M23 and AWWA C605, including compliance with minimum recommended bending radius and maximum safe pulling forces for each specific pipe.

PART 2 PRODUCTS

2.01 PIPE

A. General:
   1. Extruding and molding material: Virgin material containing no scrap, regrind, or rework material except where permitted in the referenced standards.
   2. In accordance with AWWA C900.
   3. Made from a PVC compound conforming to cell classification 12454 in accordance with ASTM D 1784.

B. Pipe:
   1. Bell and spigot:
      a. Pipe with integral bell.
      b. Pressure Class as scheduled in Section 15052 with a minimum DR of 18.
      c. Manufacturers:
         1) Diamond Plastics Corporation.
         2) CertainTeed.
         3) North American Pipe Corporation.

2.02 FITTINGS

A. Material:
   1. Same material as the pipe, sized for the dimensions of the pipe being used.

B. Equal to or greater pressure rating than the pipe.

2.03 JOINTS

A. Bell and spigot joints:
   1. Push-on or mechanical joint type as identified in the Piping Schedule in Section 15052.
   2. Gasketed joint assembly: Meet or exceed the requirements in accordance with ASTM D 3139.
   3. Factory installed gaskets: Neoprene or EPDM in accordance with ASTM F 477.

2.04 SOURCE QUALITY CONTROL

A. Bell and spigot piping:
   1. Hydrostatic proof testing in accordance with AWWA C900: Test pipe and integral bell to withstand, without failure, 2 times the pressure class of the pipe for a minimum of 5 seconds.

PART 3 EXECUTION

3.01 INSTALLATION

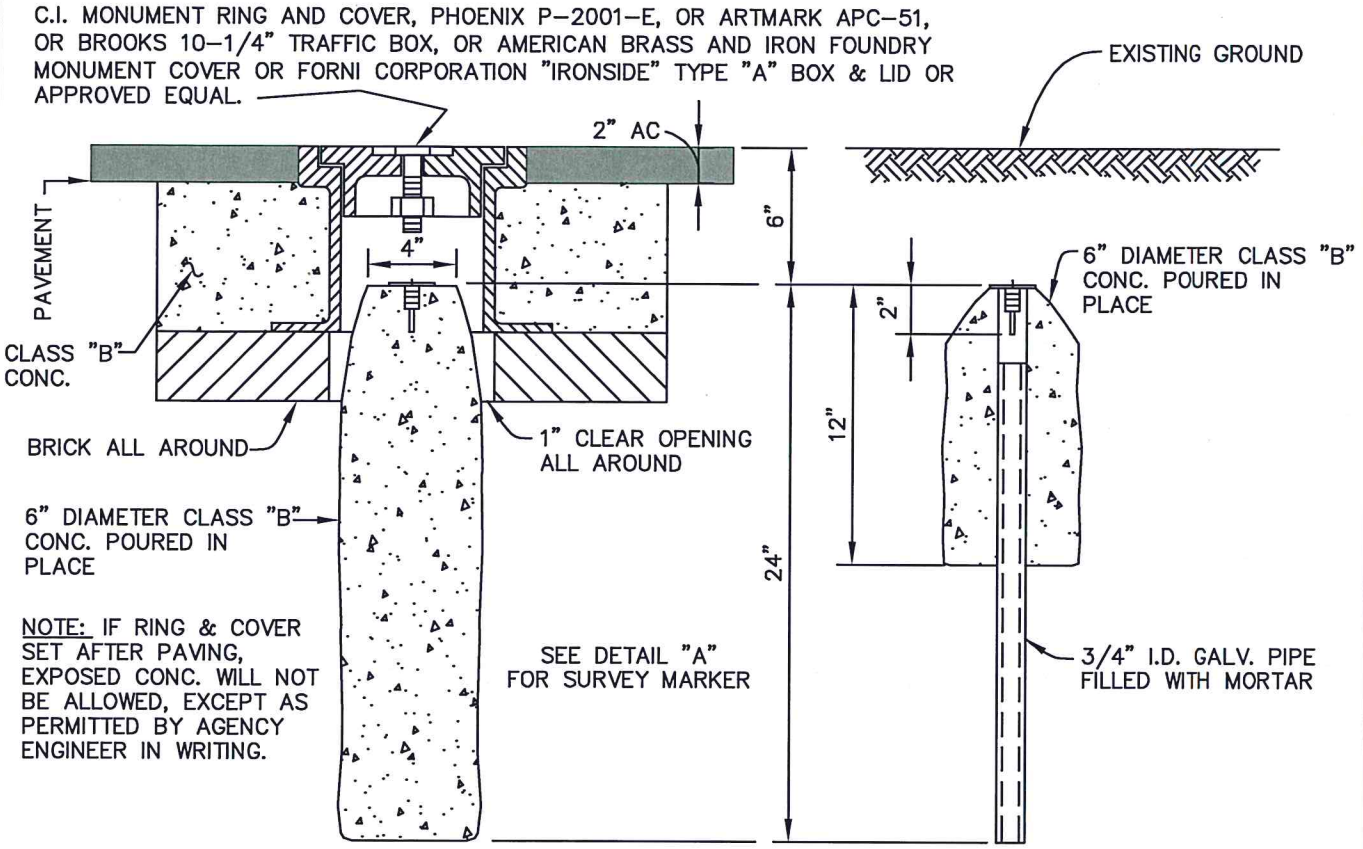
A. General:
   1. Install piping in accordance with ASTM F 645, AWWA C605, the Appendix of AWWA C900 and manufacturer's or pipe supplier's published installation instructions.
   2. For open cut installations, install underground detectable tape as specified in Section 15076.
   3. Install pipe with tracer wire as specified in Section 15076.

3.02 FIELD QUALITY CONTROL

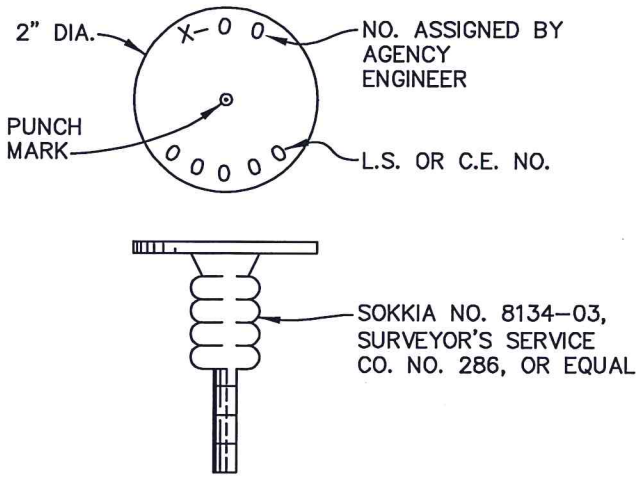
A. Leakage test for piping:

   1. Subject to visible leak test and pressure test with maximum leakage allowance, as specified in Section 15956:

END OF SECTION



STREET MONUMENT PIPE MONUMENT



DETAIL "A"

NOTES:

1. MONUMENTS SHALL BE SET AT THE LOCATIONS DESIGNATED ON THE PLANS AND ON THE FINAL MAP.
2. STREET MONUMENTS SHALL BE USED IN ALL PAVED AREAS AND OTHER LOCATIONS AS SHOWN ON THE PLANS. IRON PIPE MONUMENTS SHALL BE USED AT ALL OTHER LOCATIONS IN THE PUBLIC RIGHT OF WAY.
3. NO CONCRETE SHALL BE PLACED PRIOR TO EXCAVATION INSPECTION BY THE AGENCY ENGINEER.
4. MONUMENTS SET ON SUBDIVISION BOUNDARIES SHALL BE 3/4" DIAMETER GALVANIZED IRON PIPE 24" LONG FILLED WITH MORTAR.

UNIFORM STANDARDS ALL CITIES AND COUNTY OF MARIN	MONUMENTS	REV.	DATE	BY	MAY 2008 DWG. NO. 300

M:\Standards\County Standards (UCS)\2008 Updated County Standards