



City of San Antonio

TRANSPORTATION AND CAPITAL IMPROVEMENTS

ADDENDUM NO. 1

PROJECT NAME: CITYWIDE BRIDGE PROGRAM – SOUTH LAREDO PROJECT

DATE: NOVEMBER 21, 2014

This addendum should be included in and be considered part of the plans and specifications for the above named project. The contractor shall be required to sign an acknowledgement of the receipt of this addendum and submit with their bid.

TCI PROJECT NO. 40-00294G

1. CPS Specifications have been added.
2. The CITY OF SAN ANTONIO 025 UNIT PRICING FORM has been updated to reflect the addition of four CPS Notes.
3. Sheet 18 of the plans *RIGHT OF WAY PREPARATION PLAN* has been updated to reflect the limits of the ordinary high water mark.
4. Sheet 35 of the plans *SWPP PLAN LAYOUT* has been updated to reflect flow direction arrows.





City of San Antonio

TRANSPORTATION AND CAPITAL IMPROVEMENTS

RECEIPT OF ADDENDUM NUMBER(S) 1 IS HEREBY ACKNOWLEDGED FOR PLANS AND SPECIFICATIONS FOR **CITYWIDE BRIDGE PROGRAM – SOUTH LAREDO PROJECT** FOR WHICH BIDS WILL BE OPENED ON **DECEMBER 9, 2014.**

THIS ACKNOWLEDGEMENT MUST BE SIGNED AND RETURNED WITH THE BID PACKAGE.

Company Name: _____

Address: _____

City/State/Zip Code: _____

Date: _____

Signature

Print Name/Title

CPS Energy

**CPS ENERGY
REQUIREMENTS AND SPECIFICATIONS
FOR CONSTRUCTION OF
NATURAL GAS DISTRIBUTION FACILITIES
ON THE
South Laredo Bridge**

CPS Energy

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**CPS ENERGY
EXHIBIT GAS-1**

ADDITIONS TO THE PROJECT BID DOCUMENTS

1. MINIMUM REQUIREMENTS FOR BIDDING ON CPS WORK

A. Contractor used for the gas pipeline work must have performed utility gas pipeline work within the past (3) three years of similar technical scope and magnitude as the services to be performed under this contract. With their bid, Contractor shall provide evidence of qualifications in this regard and of any licenses, permits or registrations possessed that pertain to the services or are required in the specifications. Contractor may contact CPS Energy prior to the letting of this project to determine if their previous experience meets this requirement.

B. The Contractor shall have a program complying with 49 CFR Part 199, "Control of Drug Use in Natural Gas, Liquefied Natural Gas, and Hazardous Liquid Pipeline Operations" and 49 CFR Part 40, "Procedures for Transportation Workplace Drug and Alcohol Testing Programs" to test employees for the presence of prohibited drugs as prescribed and to provide an employee assistance program. The Contractor agrees to provide CPS Energy with an affidavit prior to the date of execution of the Contract which states that Contractor and its employees have complied with all applicable laws, statutes, and regulations pertaining to ensuring a drug free workplace including, but not limited to, the requirements of Part 199 and Part 40. Furthermore, the Contractor agrees to allow CPS Energy Human Resources personnel periodic on-site access to Contractor's records documenting compliance with Part 199 and Part 40. Contractor will provide the name and contact person for the agency or consortium used by the Contractor to comply with this requirement prior to the date of execution of the Contract.

C. The Contractor agrees to provide CPS Energy with an affidavit prior to the date of execution of the contract which states that Contractor and its employees have complied with all applicable laws, statutes, and regulations pertaining to ensuring a drug free workplace including, but not limited to, the requirements of 49 CFR as amended by the Research and Special Programs Administration (RSPA).

D. CPS Energy requires the following to verify Contractor and Sub-Contractor compliance with all applicable laws, statutes and regulations pertaining to the qualification of pipeline personnel including, but not limited to the applicable requirements of 49 CFR Part 192 – Subpart N -“Qualification of Pipeline Personnel” as adopted by the Railroad Commission of Texas (RCC) within the Pipeline Safety Rules.

1. ***A Notarized Affidavit* that states the company placing the bid and its sub-contractors are in compliance with 49 CFR 192 and RRC Pipeline Safety Rules pertaining to the qualification of pipeline personnel.**

- 2. A current copy of its Operator Qualification Plan, unless currently on file, and approval of its plan by a CPS Energy Gas Operation's Representative. A copy of CPS Energy Covered Tasks is shown in Exhibit Gas-7 - CPS Energy Covered Tasks Regulated by 49 CFR Part 192.**
- 3. Current listing of employees and qualifications.**

E. The Contractor shall submit a copy of SMWBA Form 101 to CPS Energy prior to date of execution of the contract.

F. Prospective Contractors bidding on the Project shall submit to CPS Energy through Bexar County a properly executed Certificate of Insurance from its insurance agent or carrier of such insurance coverages as required and set forth in the Project Contract Documents prior to award of the contract. Failure to provide proof of insurance will result in the Contractor not being approved for award of the CPS Energy utility work on the Project.

ADDITIONS TO THE PROJECT CONTRACT DOCUMENTS

1. DEFINITION OF TERMS

Add to the City of San Antonio Article I. Contract Definitions:

49. CPS – CPS Energy Board, a municipal agency of the City of San Antonio.

2. LAWS TO BE OBSERVED

The Contractor shall make himself familiar with and at all times shall observe and comply with all Federal, State, and local laws, ordinances, and regulations which in any manner affect the conduct of the work and shall indemnify and save harmless CPS Energy and its representatives against any claim arising from the violation of any such law, ordinance, or regulation, whether by himself or by his employees.

3. PERMITS, LICENSES AND TAXES

The Contractor and his subcontractors shall procure all permits and licenses, pay all charges, fees, and taxes, and give all notices necessary and incident to the due and lawful prosecution of the work and upon request by the City Engineer give evidence of the same.

4. RESPONSIBILITY FOR DAMAGE CLAIMS

The Contractor agrees to indemnify and save harmless CPS Energy, its agents, and employees from all suits, action or claims and from all liability and damages for any and all injuries or damages sustained by any person or property of any character in consequence of any neglect in the performance of the contract by the Contractor and from any claims or amounts arising or recovered under the “Workers’ Compensation Laws”; Chapter 101, Texas Civil Practice and Remedies Code (Texas Tort Claims Act), or any other laws. He shall further so indemnify and be responsible for all damages or injury to property of any character occurring during the prosecution of the work to the extent resulting in whole or in part from any act, omission, neglect or misconduct on his part in the manner or method of executing the work; or from failure to properly execute the work; or from defective work or materials purchased by Contractor, except those claims for damages caused solely by the negligence of CPS Energy. Contractor shall not be released from these responsibilities until all claims have been settled and suitable evidence to the effect furnished to CPS Energy. The indemnification provided herein shall survive the termination of this Contract.

5. CONTRACTOR REQUIREMENT

A. The Contractor shall abide by the regulations promulgated in 49 Code of Federal Regulations Part 40 and 49 Code of Federal Regulations Part 199 and any modifications thereto listed below in this Article. CPS Energy will require such compliance to be a part of this Contract and will immediately terminate this Contract if Contractor is found to not be in compliance with said regulations. Contractor shall indemnify CPS Energy against any fines, penalties, damages, costs or attorney fees based upon any violation by Contractor of the same.

B. The Contractor shall abide by the regulations promulgated by the Federal Highway Administration (FHWA) which states that contractors subject to FHWA mandates shall be in compliance with those parts of 49 Code of Federal Regulations (CFR) which relate to the illegal use of alcohol and controlled substances.

6. PROSECUTION AND PROGRESS

All workers or subcontractors employed by the Contractor shall have such skill and experience as will enable them to properly perform the duties assigned them.

7. WARRANTY

The Contractor shall warrant all components, materials and workmanship for a period of at the least one (1) year from the date of final completion of gas pipeline work by Contractor. The Contractor warrants the title and guarantees the equipment, materials and workmanship furnished under this Contract to be specified and to be free from defects in design, workmanship and materials. If within the warranty period the work fails to meet the provisions of this guarantee, CPS Energy shall notify the Contractor thereof immediately and the Contractor shall promptly correct any defects, including nonconformance with the Contract Documents, by adjustment, repair or replacement F.O.B. the Project site of all defective work at its sole costs.

8. INSURANCE

The Contractor agrees to keep in full force during the performance of services hereunder insurance sufficient to fully protect CPS Energy from all damages, claims, suits and/or judgements, caused or claimed to have been caused by or in connection with the performance or failure to perform any services undertaken by Contractor, his subcontractor, or their agents, or employees.

9. COORDINATION

All questions about the gas construction shall be addressed to Brad Carr, CPS Energy Gas Construction, at (210) 353-4251. Design and engineering questions may be addressed to the CPS Energy Gas Engineering Division, Civic Improvements Section, at (210) 353-2430.

**CPS ENERGY
EXHIBIT GAS-2
SPECIFICATIONS FOR CONSTRUCTION OF
NATURAL GAS DISTRIBUTION FACILITIES**

1. GENERAL

The work to be done includes clearing right-of-way where necessary; receiving, transporting and unloading all materials from a designated CPS Energy center; stringing pipe, welding steel pipe and pipe fittings, and fusing high density polyethylene gas pipe and pipe fittings; excavating trenches and ditching for the burial of the gas piping facilities; installation of gas piping into the excavation along with required appurtenances such as anodes, anodes lead wires, and tracer wires; backfilling of ditches, repair of damage to any street, road, highway, sidewalk, drainage structures, driveways, signs, other utilities, fencing, or other existing structures; clean-up of right-of-way and any other item enumerated in these specifications.

The work shall conform with Title 49 of the Code of Federal Regulations, Part 192, "Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards" and to the CPS Energy design standards attached to this document as Exhibits GAS-3 and GAS-4, as applicable.

2. ROUTE OF THE GAS LINE

Construction of the gas line will, in general, follow the route shown on Exhibit GAS-6 (CPS Energy Job Sketch). Gas services to be installed, relocated or adjusted are also indicated on Exhibit GAS-6, as applicable.

CPS Energy reserves the right to make any changes in the routing which may be deemed necessary and such changes shall in no manner alter the terms or compensations payable under this contract except as they are affected by linear measurements of work completed.

All gas lines shall be installed in a separate trench apart from any other utility lines unless joint trenching with other utilities is specifically required on the CPS Energy Job Sketch or prior written approval is obtained from the CPS Energy representative allowing joint trench construction.

3. RIGHT-OF-WAY

The CPS Energy Job Sketch will indicate the planned route of the gas lines to be installed. The construction plans will show as much information as can be reasonably obtained by CPS Energy regarding the location of other existing buried utilities and structures in/or crossing the rights-of-way, but CPS Energy assumes no responsibility for the correctness or completeness of this information. Contractor will be held responsible for locating all such utilities and structures and for avoiding damage to them and for making repairs or paying for any damage thereto. CPS Energy will provide and furnish all necessary right-of-way, federal, state, county and city roadway crossing permits, which shall be necessary for the construction.

Most of CPS Energy's gas facilities are constructed within public rights-of-way; however, CPS Energy may acquire easements on private property for construction of gas distribution facilities when public rights-of-way are not available or unusable. When gas facilities are planned for construction within easements on private property, the exact boundaries of such easements will be shown on the CPS Energy Job Sketch, and CPS Energy will survey and stake the easement boundaries in the field. Contractor shall preserve such field staking of easement boundaries. If the Contractor's construction activities disturb the field survey stakes, then the Contractor shall be responsible for resurveying the easement boundary when necessary. Contractor shall comply with all reasonable requirements of landowners, tenants or lessees which are designed to reduce interference of construction. It will be the Contractor's responsibility to limit traffic on the right-of-way to only such vehicles as may be necessary for construction. Contractor will be held liable for damage claims arising from grass and brush fires that may be set during his operations.

In addition, the term "right-of-way" shall also apply to those portions of public streets, roads or highways in which sections of the utility lines will be constructed. The Contractor working in any public right-of-way is responsible for the safe movement of traffic (pedestrian and/or vehicular) through the construction area. The Contractor shall meet all requirements for barricading and traffic control as specified in the Texas Manual on Uniform Traffic Control Devices (TMUTCD).

4. MATERIALS TO BE FURNISHED BY CPS

CPS Energy agrees to furnish all steel pipe, polyethylene (plastic) gas pipe, casing pipe, valves, valve boxes, stop cocks, service risers, couplings, casing insulators, casing end seals, steel pipe insulating joints, miscellaneous pipe fittings, anodes, cathodic protection test lead boxes, pipeline warning signs, gas pipe tracer wire, tracer wire clamps, pipe coating primer, and pipe coating tape and/or shrink sleeves necessary to complete the job except when these materials are to be specifically provided by the Contractor in accordance with written requirements of the Compensation Schedule (Exhibit GAS-5) or CPS Energy Job Sketch (Exhibit GAS-6).

5. CLEARING AND GRADING OF RIGHT-OF-WAY

The Contractor shall clear and grade right-of-way sufficiently for his need and for hauling and stringing pipe and other material but not to exceed the width of right-of-way. Contractor shall be responsible for any damages outside of right-of-way limits. Contractor shall perform all necessary grading and compaction at road, stream, and gully crossings and at other locations where needed to permit the passage of equipment, cars, and trucks. Before any brush or timber is cut to clear right-of-way, approval from CPS Energy in writing must be obtained. All brush and timber cut to clear right-of-way must be removed from the right-of-way and disposed of to the satisfaction of the CPS Energy representative. Any trimming of an oak tree will require the contractor to follow **oak wilt suppression procedures**:

- Avoid pruning or wounding any oaks unless absolutely necessary.
- If pruning is required, request assistance as soon as possible from the CPS Energy Tree & ROW Maintenance Section or one of the Inspectors listed below.

- Any pruning wounds or damage caused by equipment (trucks, diggers, trenchers, backhoes, etc.) must be painted immediately, within a minimum of one hour. This includes any cracked or ripped limbs and wounds to trunks, limbs or root flares which may have been damaged by passing equipment.
- Within a known infection center, all tools must be disinfected with a 10% clorox and water solution or Lysol spray before using these tools on any other oak tree.

Requests for Assistance From the Tree & ROW Maintenance Section

When assistance is required, please provide as much notice as possible or call as soon as damage occurs. Contact names and numbers are listed below:

	Office	Radio#	Cellular	Pager#
Section Office	353-3593	2400		
James F. Koenig	353-3798	2401	844-5457	1336
Terri Minnia	353-5218	2405	394-3580	2241
Margie Regalado	353-5243	2403	394-3579	2428
Clyde Stroud	353-5218	2404	394-3578	2301
Ed Scott	353-5243	2402	275-6935	2852

The Contractor shall promptly repair all bridges, private roads, fences, buildings or other property damaged by him in the progress of the work. Permission must be secured from owner before private roads or bridges are used or blocked.

The Contractor will be notified prior to construction of all known requirements or restrictions of right-of-way by CPS Energy.

6. UNLOADING, HAULING, AND STRINGING MATERIALS

The Contractor shall unload from trucks and string on the right-of-way, as needed, all gas pipe and other materials in such manner as to prevent damage to same. Pipe shall be unloaded with proper equipment, and not dropped from trucks.

When materials in storage are issued to the Contractor, such materials shall become the responsibility of the Contractor, and adequate methods of inventory and material transfer will be set up by the Contractor. The Contractor and CPS Energy jointly shall inspect materials, which have been stockpiled by CPS Energy prior to hauling. After this inspection, the Contractor shall pay CPS Energy delivered cost of any materials lost or damaged beyond use during the construction operation.

Under no circumstances shall pipe be strung in advance of right-of-way clearing operations.

Stringing of pipe on right-of-way shall be done in such a manner as to cause minimum interference with the normal use of driveways, streets, roads, highways, and land crossed. The Contractor shall prevent entrance of dirt or debris into pipe during stringing.

7. LOCATING EXISTING CPS GAS FACILITIES

The Contractor shall be required to locate all existing gas facilities as needed for the construction and installation of new gas facilities. Upon request by the Contractor, the CPS Energy inspector will provide copies of the appropriate gas maps to facilitate locating activities for the existing gas facilities at the job site, however; CPS Energy does not guarantee the accuracy of such gas facilities map information. The Contractor shall use conventional pipe locating equipment and techniques in conjunction with information from the gas facilities maps to determine the actual location of existing gas facilities. The Contractor shall be solely liable for any damages to existing gas facilities and any damages to other infrastructure such as the street, drainage structures or other utilities, that are incurred by the Contractor.

8. TRENCHING (CONVENTIONAL OPEN EXCAVATION)

A. Equipment and General Methods - Contractor shall use such equipment and methods that may be required to excavate the trench or ditch along the route specified on the CPS Energy Job Sketch, regardless of the type of soil or rock encountered and regardless of the depth of excavation necessary. Contractor shall furnish all equipment, materials and supplies that may be necessary for the completion and maintenance of the trench or ditch, including water control, shoring, coffer dams and sheet piling.

B. Survey Stakes - Contractor shall carefully preserve all survey stakes set by CPS Energy, CPS Energy representatives, or consulting engineers and shall be liable for any extra expense due to Contractor's failure to maintain such stakes.

C. Trench Specifications - The trench or ditch shall have sufficient width and be of such depth to allow installation of piping and valves at depths specified on the CPS Energy Job Sketch and/or the CPS Energy Design Standards. When surfaced streets are cut, the paving shall be cut in neat lines defining the width of the trench to be excavated. The cut shall extend entirely through the asphaltic surfacing and shall break the base material to a sufficient depth to assure the removal of the surfacing and base without breaking beyond the lines of the trench. Concrete saws, pneumatic paving chisels, or mechanically operated drop blades may be used for asphalt surface cutting as approved by the governmental authority exercising jurisdiction. A concrete saw must be used to cut concrete driveways, streets, or other concrete surfaces.

D. Blasting - No blasting will be permitted by CPS Energy.

E. Hand Ditch Requirement - In all cases where shrubbery, trees, or valuable growing timber is encountered in the right-of-way, and in any location where, in the opinion of the CPS Energy representative, the use of ditching equipment may result in unnecessary damage or injury to property crossed by the right-of-way, CPS Energy may require the Contractor to excavate the trench or ditch by hand or other approved method.

F. Temporary Bridges - When the trench or ditch is excavated where it is desirable for a property owner, tenant or other pedestrians to have a passageway across the excavation, the Contractor shall provide safe, temporary bridges or provide other safe means of crossing the ditch.

No streets or driveways shall be blocked at night, except with owner's permission, and any street or driveway opened shall be provided with a strong temporary bridge to allow traffic to move safely. Open trenches and test holes shall be properly marked by means of barricades and warning lights.

G. Additional Depth of Trench - Where trenching across or adjacent to, or within the right-of-way of roads or highways, railroads, drainage ditches, creeks, ravines, and other water courses and also at points where the contour of the earth may require extra depth, Contractor shall excavate to such additional depth as may be necessary to meet the requirements of CPS Energy and any public or private authority having jurisdiction over same.

H. Dust Suppression - Whenever trenching activities create significant amounts of dust or other undesirable emissions into the atmosphere, then the Contractor may be required, at the sole discretion of the CPS Energy inspector, to take necessary action to reduce such emissions.

I. Trench Excavation Safety - The Contractor must comply with 29 CFR Part 1926, Occupational Safety and Health Standards; Subpart P - Excavations. Contractor and/or Contractor's independently retained employee or safety consultant, if any, shall review the construction plans and any available geotechnical information and the anticipated installation sites within the project work area in order to develop the Contractor's trench excavation safety plan and procedures. The plans and procedures shall, at a minimum, comply with OSHA's standards for trench excavations. Specifically, the Contractor and/or the Contractor's independently retained employee or safety consultant shall develop and implement a trench safety program in accordance with OSHA's standards governing the presence and activities of individuals working in and around trench excavation.

9. TRENCHLESS CONSTRUCTION METHODS

The use of guided or directional boring equipment to install new gas distribution facilities is acceptable to CPS Energy provided that the Contractor demonstrates to the satisfaction of the CPS Energy representative that such equipment is capable of installing the gas pipe along a controlled and relatively constant horizontal and vertical alignment for the specific soil conditions that are encountered at each job site. Special provisions must be made to insure that the gas pipe is not damaged as it is pulled or otherwise inserted into the bored hole. The bored hole must be at least one nominal pipe size larger than the gas pipe that is to be installed (i.e. a 4-inch gas pipe requires at least a 6-inch bored hole). When the bored hole is known to have significant deflections, the bored hole must then be at least two nominal pipe sizes larger than the gas pipe.

When such equipment is used to install polyethylene gas pipe, a fusible link shall be used between the pull head and the gas pipe at all times to prevent damage to the gas pipe during the pull-back operation. The fusible link shall be at least 2 feet in length and it shall be a section of CPS Energy polyethylene pipe that is one nominal pipe size smaller than the gas main being installed. The CPS Energy representative shall inspect the fusible link and the leading edge of the installed gas pipe for any significant gouges or scrapes in the outside wall of the pipe or excessive change in length of the fusible link. If such damages to the fusible link or pipe are found to exist, then the Contractor shall remove and replace all of the damaged pipe at the Contractor's expense, and the Contractor shall reimburse CPS Energy for the cost of the damaged pipe (including CPS Energy inventory and handling expenses).

When such equipment is used to install steel gas pipe, the CPS Energy representative shall inspect the installed gas pipe for any significant gouges or scrapes in the protective coating on the outside wall of the steel pipe. If such damages to the coating are found to exist, then the Contractor shall repair all of the damaged coating at the Contractor's sole expense.

Whenever gas service lines are planned for installation along a section of gas main that is being installed with guided or directional boring equipment, the Contractor shall excavate at least one service tap location prior to pulling the gas main into the bored hole. The purpose of this excavation is to provide the CPS Energy representative with an intermediate inspection hole where the gas pipe can be inspected during the pipe insertion process. Preferably, the intermediate inspection hole shall be located near the middle of the directionally bored section. If several gas service connections are planned along the insertion route, then the CPS Energy representative shall select the location of the service tap that the Contractor must excavate for the intermediate inspection hole before the gas pipe insertion process.

Gas mains and services that are installed by guided or directional boring equipment shall not be routinely installed at depths greater than seven (7) feet unless one of the following conditions apply:

- 1) The CPS Energy Job Sketch (Exhibit Gas - 6) specifically requires installation depths in excess of seven (7) feet.
- 2) Installation depths in excess of seven (7) feet are the shallowest depths necessary to achieve acceptable clearance between the gas pipe and another buried utility or structure while maintaining the minimum burial depth requirements for the gas pipe.
- 3) The CPS Energy representative approves such installations even though conditions described in Items 1) and 2) above are not applicable.

When guided or directional boring equipment is used to install gas distribution facilities special provisions (if any) in the Compensation Schedule (Exhibit Gas-5) for additional compensation due to extra depth of cover shall not apply.

The method of gas service replacement by Insertion involves sliding a new polyethylene service pipe of smaller diameter into the existing steel service pipe. This is an acceptable method of installation provided that the ends of the existing steel pipe are reamed and fitted with bushings for the pipe to be inserted without damage, and a shrink sleeve is applied to keep components in

place and prevent damage thereafter. In order to reduce stress on the service line being inserted from the main, the horizontal distance between the end point of the new service alignment and the point of insertion should be, at least, twice the perpendicular distance between the lines (See Insertion Detail, page 19 of 20, exhibit Gas-3). Tracer wires will be inserted through the existing service along with the new pipe. An electrical continuity test will be conducted on each installed tracer wire to verify that the tracer wire has not been "shorted" against the existing steel service during the installation procedure.

10. STORM WATER POLLUTION PREVENTION PLAN

The gas utility construction work shall be performed in accordance with the City of San Antonio Storm Water Pollution Prevention Plan (SWPPP).

11. PROTECTION OF GAS PIPE ENDS

During the course of construction, diligent care shall be exercised to keep the gas pipelines clean. At the end of each day's work and at the other times that the ends of the installed pipe are left unattended, the pipe ends shall be securely closed to prevent the entrance of water, animals, trash or any other obstructions, and shall not be opened until work is resumed.

If there is reasonable cause to believe that water, trash or other obstruction is in a portion of the lines, the Contractor shall take whatever steps are necessary to assure CPS Energy that there is no water, trash or other obstruction in the line or to remove the water or other foreign matter if it is in the lines. Any and all work required to assure CPS Energy that the gas pipes are clear of debris and other such matter or to remove such obstructions shall be at the Contractor's expense.

12. WELDING

Welding shall be in accordance with API Standard 1104, 17th Edition, dated September, 1994.

Welds shall be made the "shielded metal-arc" process. All equipment and welding rods will be furnished by the Contractor. Brand of welding rods proposed to be used by the Contractor shall be approved by CPS Energy prior to use.

Where determined by the CPS Energy representative to be necessary, back-welding or inside-welding of all tube turns, ells, etc., in the pipe lines shall be required by the Contractor as part of the work covered by the Contract. Back-welding shall be performed at the sole expense of the Contractor.

All welds shall be made with not less than three (3) beads. The second or "Hot Pass Bead", should be run on the full circumference of the pipe as soon as practical. The intent of the above is that the Hot Pass or second bead shall be run before the Stringer Bead has cooled.

Prior to being permitted to weld on the line, each welder shall qualify in accordance with Section 3.0 of API Standard 1104 referred to previously and shall pass the tests listed in

paragraph 3.4 of the API Standard. The Contractor will conduct, or make arrangements for, and stand the expense of the qualification tests of the welders. The qualifying tests will be conducted in the presence of the CPS Energy representative.

Each welder will be assigned a specific number and it shall be his duty to personally affix such number in crayon on each weld for future identification. Steel die stamping shall not be used.

CPS Energy rights of welding inspection shall be as given in Section 5.1 of API Standard 1104. Unless otherwise directed, the Contractor will test all welds with soapsuds while subjected to an internal air pressure of 90 psig prior to field coating the joints.

Pin holes, leaks, cold laps, rivers, undercutting or any defects whatsoever occurring in any weld shall, at the discretion of the CPS Energy representative, be repaired by cutting out the entire weld and completely rewelding at no additional expense to CPS Energy. Whenever it thus becomes necessary to remove a weld from the completed line, replacement shall be made, at the sole expense of the Contractor, by welding into the line a pup joint having a minimum length of ten (10) feet.

13. RADIOGRAPHIC INSPECTION

This Section applies when radiographic inspection is specified in the contract documents.

A. Standards and Codes - The latest available edition of the following referenced documents shall be applied when required:

1. Department of Transportation, Title 49, Part 192 - "Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards."
2. Recommended Practice No. SNT-TC-1A, Supplement A - "Radiographic Testing Method."
3. ANSI B31.8, "Gas Transmission and Distribution Piping Systems."
4. ASME Code Section V, "Nondestructive Examination."
5. United States Nuclear Regulatory Commission, Title 10, Chapter 1, CFR - Energy and other federal, state and local regulations for protection against radiation hazards.

B. Radiographic Procedure - All radiographic inspections shall be performed in accordance with written procedures per Section 8.2 of API Standard 1104. Contractor shall provide a copy of the written procedure to the CPS Energy representative who shall determine the acceptance of the procedure.

C. Personnel Qualifications - Radiographic certification shall be the result of a qualification and certification program that incorporates the requirements of Recommended Practice SNT-TC-1A, Supplement A in accordance with Section 8.7 of API Standard 1104.

D. Equipment and Material - Contractor shall furnish all equipment and materials necessary for the performance of the radiographic inspection. Such materials and equipment include all film and supplies for the processing, film identification, recording, filing and storage of same. Also, Contractor shall provide all barriers, warning systems, film badges, documentation and records as is necessary for the protection and personnel monitoring of every person near a radiation source.

E. Production Radiography Procedures - Contractor will notify the CPS Energy representative if any welds fail to meet the specification. All repaired welds or welded joints, which have been completely replaced, shall be radiographed.

F. Film Identification Procedure - Film identification shall be in accordance with Section 8.6 of API Standard 1104. The exact method of identification will be approved by the CPS Energy representative prior to the start of radiographic inspection.

G. Radiographic Reports and File - Contractor shall be responsible for furnishing the CPS Energy representative with a report for each calendar day the unit is on the project. All radiographs made by Contractor shall be delivered to the CPS Energy representative and shall become the property of CPS Energy.

14. PRESSURE TESTING

A. General - The Contractor shall demonstrate to the satisfaction of the CPS Energy representative, by performing a pressure test, that the mains and/or services installed do not leak and that they will operate safely at the desired maximum allowable operating pressure. Pressure tests are performed to verify satisfactory workmanship and the strength of materials. To the extent practical, the test shall be conducted to the entire pipeline so as to minimize the number of untested tie-in connections. All joints used to tie-in a test segment of pipeline after the test shall be soap bubble tested at not less than its operating pressure. The Contractor shall be responsible for locating and repairing any leaks or failures, which are revealed by the test.

The Contractor shall furnish all supervision, labor, materials and equipment to perform the pressure test required, including but not limited to, pumps, compressors, pigs, test instrumentation and water. Pressure test specifications will be indicated on the CPS Energy Job Sketch (Exhibit GAS-6). The specifications will indicate the minimum and maximum test pressure, test fluid and test duration, as appropriate. The Contractor shall conduct the test in accordance with the applicable requirements of Title 49 CFR 192 and shall take all necessary safety precautions to protect construction personnel and the general public during the course of the test. The Contractor shall be responsible for obtaining all permits necessary to conduct the test except for the Railroad Commission of Texas test water discharge permit that is required for hydrostatic pressure tests.

B. Standard Air Test - A standard air test will generally be specified for gas mains and services to be operated at pressures of 60 psig or less. This test will be indicated on the CPS Energy Job Sketch without a test duration period. The minimum test pressure shall be 90 psig and shall not exceed 120 psig. The test duration shall be a time sufficient to insure discovery of all potentially hazardous leaks. At the minimum, each weld, butt fusion and any other fitting and connection shall be soap bubble tested at the specified test pressure. The test pressure shall be measured with a dial type gauge and shall be monitored during the course of the test to detect leakage. Upon completion of the test(s), the Contractor shall sign and date, in the appropriate location, the "as built" job sketch to indicate successful completion of the test. Pending acceptance by the CPS Energy representative, the CPS Energy representative shall also sign the "as built" job sketch at the appropriate location.

C. High Pressure Test - When the CPS Energy Job Sketch specifies a test pressure greater than 90 psig or if a specific test duration period is specified, then the following requirements for a High Pressure Test shall also apply.

Prior to initiating any work required for a High Pressure Test, the Contractor must hold a pre-test meeting with the CPS Energy representative and a CPS Energy engineer from the Gas Engineering Division. At this meeting, the Contractor will be required to discuss all aspects of plans for conducting the High Pressure Test. The key points of discussion for hydrostatic pressure tests will include the following: 1) optimum direction and injection rate for filling the pipe section with water while minimizing air entrapment; 2) optimum direction and discharge location for safely and completely draining the pipe section; 3) the type, quantity and condition of pipeline pigs; 4) installation and use of temporary pig launchers and/or receivers; 5) capacities of water pumping equipment; 6) pressurization procedures; 7) written test documentation; 8) limitations on refilling and/or discharging test water during the pressure test without invalidating the test and causing the test to be restarted; 9) test water stabilization period after filling the pipe section; 10) appropriate procedure for dewatering the pipe section to minimize the amount of water that remains in the pipe; 11) any other critical aspects of the High Pressure Test.

The test medium may be either air or water and will be specified on the CPS Energy Job Sketch. A hydrostatic test shall be conducted in general conformance with API Recommended Practice 1110. Air tests shall also be conducted in conformance with API RP 1110 with regard to safety and instrumentation.

All filling and pressurization procedures are subject to the approval of the CPS Energy representative. When a hydrostatic test is to be performed, the Contractor shall fill the pipeline in such a manner that no air is entrapped, making use of pipeline pigs as necessary. The Contractor shall be required to furnish all pipeline pigging equipment, including appropriate styles and types of pipeline pigs and temporary pig traps and launchers. The CPS Energy representative must inspect all pigging equipment, and such equipment must be acceptable to the CPS Energy representative prior to use by the Contractor.

The Contractor shall allow a suitable time for temperature stabilization of the test fluid. The stabilization period shall be a minimum of twenty-four (24) hours after the filling operation is complete for a hydrostatic test, and the stabilization period shall be a minimum of eight (8) hours after the pipeline is pressurized to the minimum test pressure for all High Pressure Tests performed with air or other compressed gases. At the sole discretion of the CPS Energy representative, the stabilization period may be reduced for short sections of pipe such as offsets and valve complexes.

The Contractor shall note each significant step or event during the filling, pressurization and testing operation and comments shall be added for any incidents which may affect the results of the tests. Where the specified test duration is two hours or less, deadweight pressure, pipe temperature and ambient temperature measurements shall be recorded at 15 minute intervals. Where the specified test duration is greater than two hours, these measurements shall be recorded at 30 minute intervals.

Upon completion of the test, the Contractor shall obtain the approval of the CPS Energy representative prior to depressurizing the pipeline. The Contractor shall then depressurize, dewater, clean and dry the pipeline to the satisfaction of the CPS Energy representative. Water shall be disposed of in the manner required by any permits and to the satisfaction of the CPS Energy representative.

D. Test Records - The Contractor shall submit to the CPS Energy representative all documentation associated with the test, including a completed Form I, "Hydrostatic Test Record and Certification" of Appendix I, API RP 1110, (or substantially similar documentation), testing logs and all recorder charts. All documentation shall be labeled to identify the pipeline section that was tested, and it must be signed and dated by the Contractor and approved by the CPS Energy representative.

15. COATING OF PIPE

The Contractor will be furnished coated and wrapped pipe in accordance with such specifications as CPS Energy may in its sole discretion determine. The Contractor will be responsible for coating all field joints and repairing damaged and defective coating on the pipe regardless of the nature, extent or cause of such damage or defect in the coating. However, if the damaged or defective coating is of such magnitude as requires an extra or additional charge by the Contractor, then the Contractor shall first refer such matter to the CPS Energy representative and not proceed until the Contractor has obtained prior written authorization from CPS Energy to do so, in which event the provisions of the Contract relating to extra or additional work shall be applicable.

Coating materials for coating field joints and repairing damaged or defective coating will be furnished by CPS Energy.

For coating field joints, the coating on the pipe must be cut back a distance of 8" to 12" from the joint. The edge of the enamel and felt wrapping shall be feathered at these points to assure a firm bond between the original coating and the field coating. After the joints are welded

and tested, and the welds cleaned and brushed, the bare ends of the pipe shall be thoroughly cleaned, then immediately given a hand-brushed coat of primer to dry surfaces. Care shall be exercised to prevent primer from being applied too heavily, especially at the base of the welds; any runs or sags which have dried or dead primer shall be scraped off and the pipe reprimed. After the tape primer has dried to a tacky consistency, apply cold wrap tape with a 30 percent overlap taking care not to create any voids between the pipe and tap coating. No primer or coating will be applied to wet or damp pipe.

After the field joints have been coated and immediately before the pipe is lowered into the ditch, the entire coating will be tested to locate breaks or pinholes and other flaws in the enamel with an approved "holiday" detector in good working condition capable of producing the testing voltage in pulsating cycles at very low amperage. The voltage used shall not exceed 14,000 volts for pipe coatings of 3/32. All defective places will be plainly marked immediately after they are detected. The Contractor will furnish the holiday detector, and will check the coating for holidays in the presence of the CPS Energy representative.

All repairs to damaged coating which exceeds 2 square inches will be made by breaking out the old coating, scraping the pipe to bare metal, feathering the edges to assure a firm bond and repriming. After the primer has dried to a tacky consistency, apply cold wrap tape taking care not to create any voids between the pipe and the tape coating. For repairs less than 2 square inches, the pipe need not be scraped to bare metal and primed; however, the good enamel around the damaged portion shall be feathered before the cold wrap is applied.

Compression type couplings, valves, welded fittings, etc., will receive a cold applied mastic after the pipe is in the ditch and they have been tested for leaks. A plastic wrap supplied by CPS Energy will be placed over the mastic to protect the coating during backfilling.

Handling of Coated Pipe - Coated pipe shall be handled only with suitable equipment in such a manner as to prevent damage to the coating. The coated pipe shall be placed on skids alongside the ditch until it is to be welded and lowered into the ditch. The skids shall be of sufficient width or padded with sandbags or resilient pads to prevent the skid edges from cutting the coating and wrapping. The skids shall be arranged to permit the coated pipe to bear on the full width of the skid.

At all times, coated and wrapped pipe shall be carefully handled with wide rubber, leather, composition, or canvas slings or belts containing no protruding rivets or belts that may injure the coating. Wire rope, tongs, chairs, hooks, and bare cables shall not be permitted to come into contact with the coating. Coated pipe shall not be handled when the temperature is low enough to cause cracking of the enamel.

16. CATHODIC PROTECTION

The Contractor shall install packaged anodes, insulating joints and insulating flange sets as provided for in the exhibits. Welding machines will not be used to test insulation or otherwise be grounded across insulating devices. Insulation will be checked by the CPS Energy representative and declared acceptable only after testing establishes satisfactory performance.

17. POLYETHYLENE GAS PIPE

Polyethylene pipe, which is commonly referred to as plastic, PE or HDPE pipe, shall be handled only with suitable equipment in such a manner as to prevent damage to the pipe such as fracture, kinking, deep gouges or cuts. The polyethylene pipe shall not be subjected to abuse by dropping, throwing or dragging except over smooth non-scratching terrain or surface.

An insulated copper wire shall be installed with all polyethylene pipe for the purpose of locating the pipe after backfilling. This wire shall be installed with 2 to 6 inches separation between the tracer wire and the polyethylene pipe. Under no circumstances shall the tracer wire be taped or otherwise secured against the outside wall of the polyethylene pipe or spirally wrapped around the pipe.

Fusion of polyethylene pipe joints shall be done by the Contractor in accordance with requirements of D.O.T., Title 49, Part 192 - Transportation of Natural Gas by Pipeline: Minimum Federal Safety Standards, Paragraphs 192.281, 192.283, 192.285, 192.287.

Prior to starting production fusing under this contract each Contractor employee that will be making polyethylene fusion joints shall qualify according to Paragraph 192.285 of the D.O.T. code using a CPS Energy approved procedure. Qualifying tests will be conducted in the presence of the CPS Energy representative.

The Contractor shall furnish all specialty tools and equipment that are required to handle, install, butt fuse and squeeze-off polyethylene pipe. The Contractor shall insure that all specialty tools and equipment are specifically designed for use on polyethylene piping systems and are in good working condition. The CPS Energy representative shall be allowed to inspect all specialty tools and equipment furnished by the Contractor. The CPS Energy representative may disallow the use of any specialty tools or equipment that are not specifically designed for use on high density polyethylene piping systems or are deemed to not be in good working condition. CPS Energy routinely uses the Steve Vick 6" Mark II Coil Trailer for handling large diameter coiled pipe, McElroy equipment for making butt fusions on polyethylene pipe and Mustang squeeze-off tools for stopping the flow of gas in existing polyethylene piping systems. The Contractor shall be required to provide copies of the original manufacturer's literature for all comparable equipment from other manufacturers. At the sole discretion of CPS Energy, comparable equipment from other manufacturers may be approved for use by the Contractor.

All polyethylene pipe joints shall be tested with soap and water with the line having an internal pressure of between 90 and 120 psig. All pressure tests on polyethylene pipe must be observed and approved by the CPS Energy representative. It shall be the Contractor's responsibility to coordinate pressure tests on polyethylene pipe so that such test can be performed with a CPS Energy representative present.

18. LOWERING IN AND BACKFILLING

The ditch shall be free of rocks and clods before the pipe is lowered into the ditch. No pipe will be lowered into the ditch until the ditch has been inspected and approved by the CPS Energy representative.

All stumps and roots found in the ditch line shall be cut so that they will not come in contact with the pipe. All loose rocks, stones, blocks, skids, chocks, tools, heavy clods, tree limbs, and other items, which may damage the pipe, shall be removed from the bottom of the ditch before the pipe is lowered in.

The ditch shall be excavated with sufficient depth to allow for a minimum thickness of four (4) inches of pit run sand to be placed in the ditch below the pipe. Pit run sand placed in the ditch to cushion the pipe shall be leveled and tamped so that the weight of the pipe is as evenly distributed as possible on solid ground.

Backfilling shall be so conducted that the ditch shall be neatly backfilled and compacted. Rock, gravel or like materials shall not be backfilled directly onto the pipe. The Contractor shall provide and shall haul sufficient pit run sand to be backfilled around and over the pipe to form a protective padding or cushion between the pipe and the rock, gravel and other such unexcavated materials. After the pipe has a six (6) inch minimum cover of pit run sand, the remaining backfill may contain rocks and gravel, except that large rocks in excess of four (4) inches in diameter, width or length, shall not be backfilled into the ditch. Such rocks shall be removed from the right-of-way and disposed of to the satisfaction of the landowner, tenant, and/or CPS Energy representative. Care shall be exercised to prevent hand shovels and tampers from damaging the pipe.

Trenches in public roadways will be backfilled and paved in accordance with the requirements of the governmental authority having jurisdiction over the street or road.

Where paving is cut, backfilling and finishing of the top of the trench will be in accordance with the requirements of the authority having jurisdiction over the pavement. On state highways, U.S. highways, expressways and freeways and their frontage roads, and any streets or roadways that are being maintained or rebuilt by the Texas Department of Transportation (TxDOT), the TxDOT specifications and requirements for backfilling trenches will apply. On county roads, private roads, streets in incorporated townships, driveways or paved parkways the backfill will be a mixture of concrete or other material mixtures with depths as required by the authority having jurisdiction and shall be placed in trench to within one and one-half (1-1/2) inches of the surface of the existing pavement. The Contractor shall apply final and finishing topping to cuts in paving with hot mix, hot lay asphalt. Inspection and approval by the authority having jurisdiction over the pavement shall be obtained by the Contractor before the job will be accepted as completed by CPS Energy.

Backfill in public and private thoroughfares shall be hydra-tamped with special care to prevent settlement or damage to other buried utilities.

The Contractor shall not use soil from the right-of-way except from the spoil bank. Any surplus soil shall be disposed of by the Contractor.

When crossing drainage ditches and minor streams, the Contractor shall furnish and install all materials necessary for bank reinforcement. Such backfill must be properly maintained by the Contractor until the entire job has been completed and accepted by an authorized

representative of CPS Energy. No reimbursement will be made for repairing of backfill due to floods and/or other conditions occurring before final acceptance.

The Contractor shall control the ditching and backfilling so as to have a minimum amount of open ditch commensurate with good construction practices.

As soon as backfill is completed on a section of line, Contractor shall immediately clean up the right-of-way, removing all surplus and defective materials to CPS Energy-designated locations. Disposal of all refuse such as brush, broken skids, rock, etc., shall be to the satisfaction of the CPS Energy representative. Insofar as possible, the earth on both sides of the line ditch which has been disturbed during the construction of the line shall be leveled, and the ditch line shall be left in a condition satisfactory to the CPS Energy representative. All temporary fills and bridges shall be removed and the area cleaned to the satisfaction of the CPS Energy representative. The Contractor shall, at his expense, furnish, haul and install black top soil on the ditch line and right-of-way area where necessary in the opinion of the CPS Energy representative to leave such area in the same condition as existed prior to the commencement of the work and/or to obtain the minimum required cover for the utility lines as specified.

Upon completion of all backfilling and cleaning of the right-of-way, permanent repairs shall be made to all fences by using equivalent or new fencing materials. All fence repairs must be satisfactory to CPS Energy representative. These repairs are to be made by Contractor at no extra compensation.

19. FINAL PIPING CONNECTIONS AND/OR TIE-INS

The Contractor will make all connections of new gas lines to existing gas lines. This includes all necessary preparations for tie-ins and purging for all sections of gas lines installed by the Contractor. The Contractor will be required to weld short stop fittings and other necessary fittings on existing steel gas lines that will be used by CPS Energy personnel to control the flow of gas into the new gas lines. CPS Energy personnel will control the flow of gas on all operative gas facilities while the Contractor is making final piping connections and/or tie-ins.

The Contractor shall be responsible for insuring that all tie-ins between new and existing gas mains are performed in a safe manner. The Contractor shall furnish all necessary equipment and instrumentation that is required to insure that the final tie-in welds and/or fusions between new and existing gas facilities are performed in a safe manner. Such equipment and instrumentation may include pneumatic air movers, combustible gas indicators (CGI's), oxygen monitors, self-contained breathing apparatus and fire retardant clothing for construction personnel, and fire extinguishers.

20. REMOVAL OF EXISTING PIPE

The asphaltic wrap on pipe removed under this contract may contain asbestos. In handling the pipe (including the excavation, cutting, removal, loading and unloading of such pipe), Contractor shall observe all State and Federal worker protection regulations and standards, and all environmental and public safety standards that are applicable to such work, including the

OSHA standard found at 29 CFR Section 1926.1101, and following, that relates to the occupational exposure standard to asbestos for the construction industry.

The Contractor will indicate in its bid the manner in which the pipe shall be managed after removal. For example, Contractor shall indicate whether the pipe will be disposed at a licensed landfill facility, will be recycled as pipe by Contractor, will be sold to and recycled as pipe by a third party, will be recycled by a third party as scrap metal, etc. If dealing with a third party, Contractor shall identify the various third parties Contractor will rely upon to provide the indicated services.

For all pipe removed from the ground under the terms of this contract, Contractor shall place the following notice, beginning approximately two (2), feet from each end of the pipe, in stenciled or comparable lettering, i.e. not attached labels, of not less than 3 inches in height;

PIPE WRAP MAY CONTAIN ASBESTOS

Upon removal of the pipe from the ground, ownership of the pipe is transferred to the Contractor.

21. PURGING NEW GAS FACILITIES

CPS Energy personnel will purge the new gas mains, and the Contractor will purge all new gas service lines or existing gas service lines that have been tied-over to the new gas mains or otherwise adjusted.

22. GOODWILL OF GAS CUSTOMERS & RESIDENTS IN THE WORK AREA

The Contractor shall make reasonable efforts to create goodwill among the property owners, tenants and lessees along the right-of-way of the gas construction project.

For this reason, no gas service shall be cut-off after 2:30 p.m. each day. All gas services that have been cut-off during the day must be restored before 4:00 p.m. that same day. If the Contractor is consistently late in restoring gas service by 4:00 p.m., the contract may, at CPS Energy's discretion, be adjusted to reflect an earlier cut-off time.

When customer gas service is to be interrupted, the Contractor must use CPS Energy approved door-hangers to inform the customers of the impending construction activity. The door-hangers must be placed on the front door of each residence at least 48 hours prior to construction, and the Contractor must contact each customer by telephone or in person before the gas service is cut off.

The Contractor shall provide approved sanitary facilities in sufficient quantities and at such locations as may be needed for workers on the job.

24. WORKDAYS, WORKING HOURS AND HOLIDAYS

Normal working hours for this contract shall be from 7:30 a.m. to 4:00 p.m. Work days shall include Monday through Friday, except for holidays. Holidays shall include the following days: New Year's Day, San Jacinto Day (observed on Friday of Fiesta Week), Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, and Christmas Day. If the holiday falls on a Saturday, it will be observed on the preceding Friday. If the holiday falls on a Sunday, it will be observed on the following Monday. Christmas Eve and New Year's Eve will be observed as holidays when Christmas Day and New Year's Day fall on Tuesday through Friday. Exceptions to these working hours and work days will be allowed by CPS Energy when required by the governing entity, mutually agreed upon by both Contractor and CPS Energy or the customer approves or requests work to be performed outside of these established times. **At the sole discretion of CPS Energy, service renewal work can be suspended during periods of extremely cold weather.**

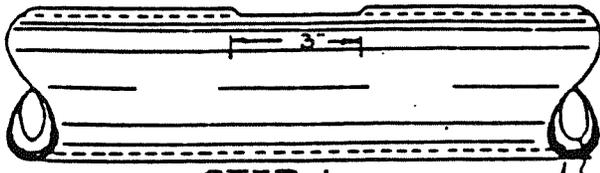
25. ACCEPTANCE

The CPS Energy representative will make all inspections and final acceptance of the work performed by the Contractor for CPS Energy.

As required by CPS Energy, Contractor shall maintain and provide a copy of the "as-built" job sketch and all associated documents once the work is completed.

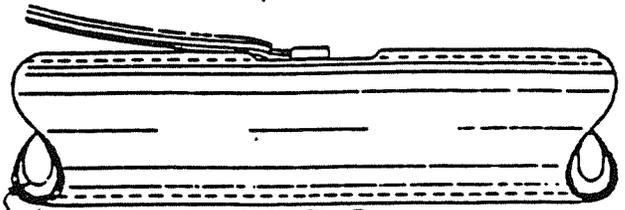
CPS
Design Standards
(Steel Gas Pipe)
Exhibit GAS-3

Remove a section of coating 3" long and file pipe bright so that a space 1" wide and 2" long is clean and dry.



STEP 1

Strip 1/2" of insulation from wire and place copper sleeve on #10 and smaller wire.

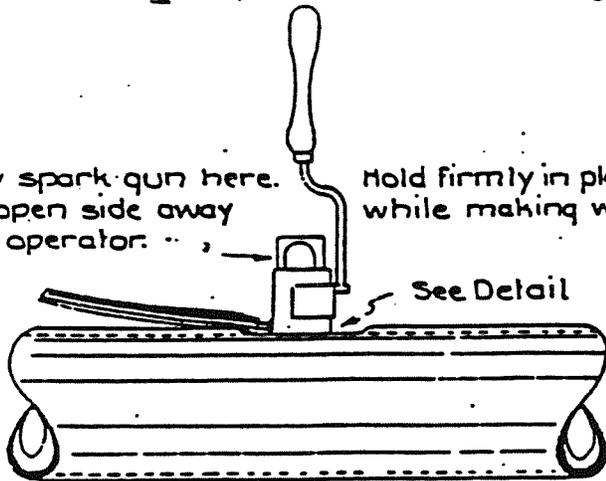


STEP 2

Pipe Coating

Apply spark gun here. Keep open side away from operator.

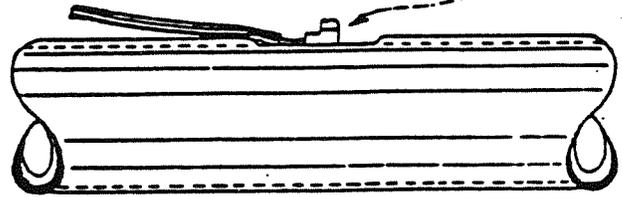
Hold firmly in place while making weld.



STEP 3

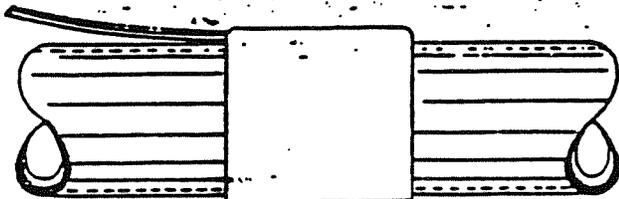
See Detail

Remove slag with hammer and paint thoroughly with primer.

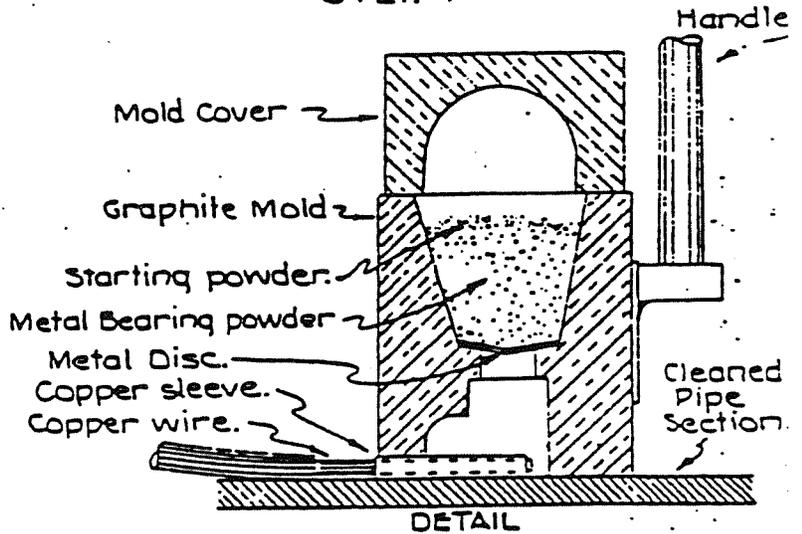


STEP 4

Repair pipe coating with care. Cover entire weld.



STEP 5



DETAIL

IMPORTANT

1. REMOVE RED CAP OF CADWELL CARTRIDGE AND DUMP ALL OF CONTENTS INTO MOLD. THE CHARGE WILL NOT IGNITE WITHOUT THE FINE STARTING POWDER ON TOP.
2. THE CARTRIDGES MUST BE KEPT DRY AT ALL TIMES.

Cadweld mold with sleeve for #10 wire and smaller.

CITY PUBLIC SERVICE BOARD
SAN ANTONIO, TEXAS
GAS DEPARTMENT

COPPER WIRE CONNECTION TO PIPE USING CADWELD.

DRAWING DS-32

INSTRUCTION SHEET - TYPE TB-3 WELDER**PREPARATION OF SURFACE:**

To obtain a good weld, surface must be bright clean and dry.

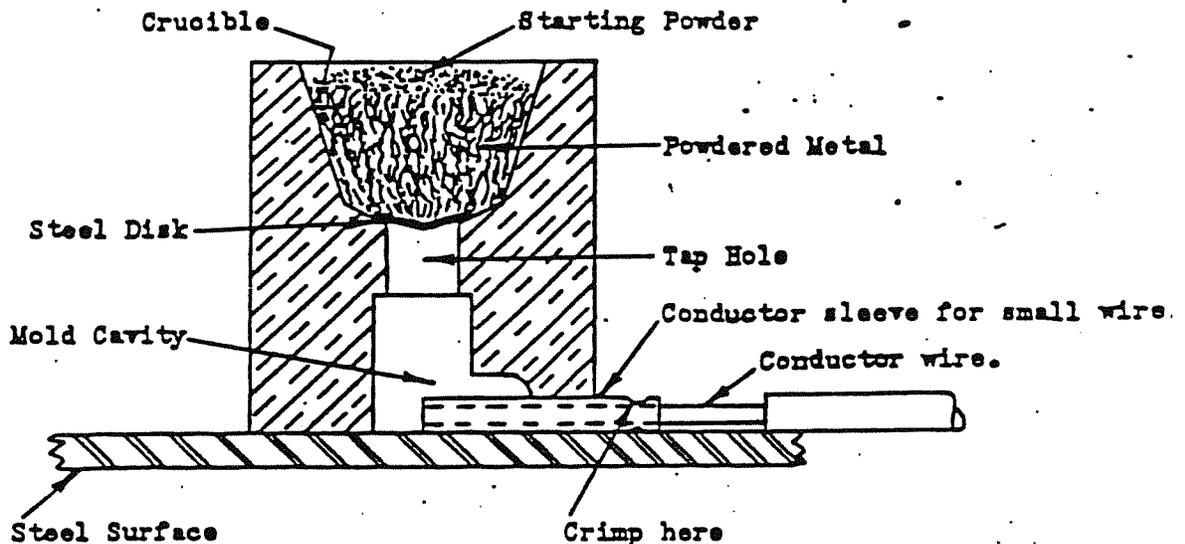
Steel surface should be ground or filed to remove all scale, rust, grease and dirt.

Galvanized steel must be cleaned with emery cloth to remove oxide.

PREPARATION OF WIRE:

Strip the insulation from the conductor and scrape until wire is bright and clean.

For #10 and smaller sizes, place the wire in a copper sleeve, ends flush, and crimp the sleeve tightly to the wire at the insulation to provide additional mechanical strength at the weld.

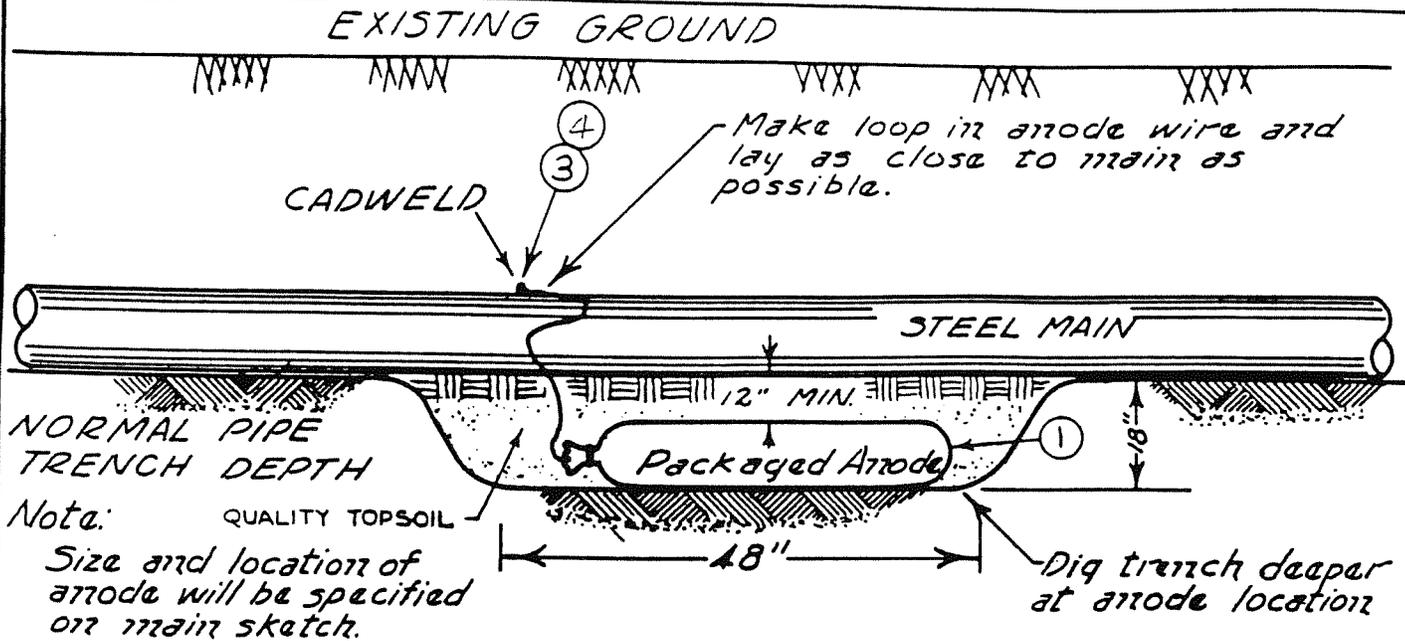
**WELDING PROCEDURE:**

- (1) PLACE WELDER OVER CLEAN STEEL SURFACE and insert the wire until it is under the CENTER of the tap hole.
- (2) COVER TAP HOLE WITH STEEL DISK.
- (3) DUMP CARTRIDGE IN CRUCIBLE AND CLOSE COVER. (Tap bottom of cartridge to be sure starting powder is emptied). Replace empty cartridge in box to keep remaining cartridges in an upright position.
- (4) HOLD DOWN ON WELDER TO PREVENT LEAKS AND IGNITE WITH FLINT GUN. Jerk gun away to prevent fouling. Should gun become fouled, soak in Spirits of Ammonia.
- (5) DO NOT REMOVE WELDER UNTIL METAL HAS SOLIDIFIED.
- (6) ALL SLAG MUST BE CLEANED FROM MOLD BEFORE MAKING NEXT WELD.

Note: Wet or damp molds produce porous welds. Mold can be dried out by firing a charge before making the desired weld.

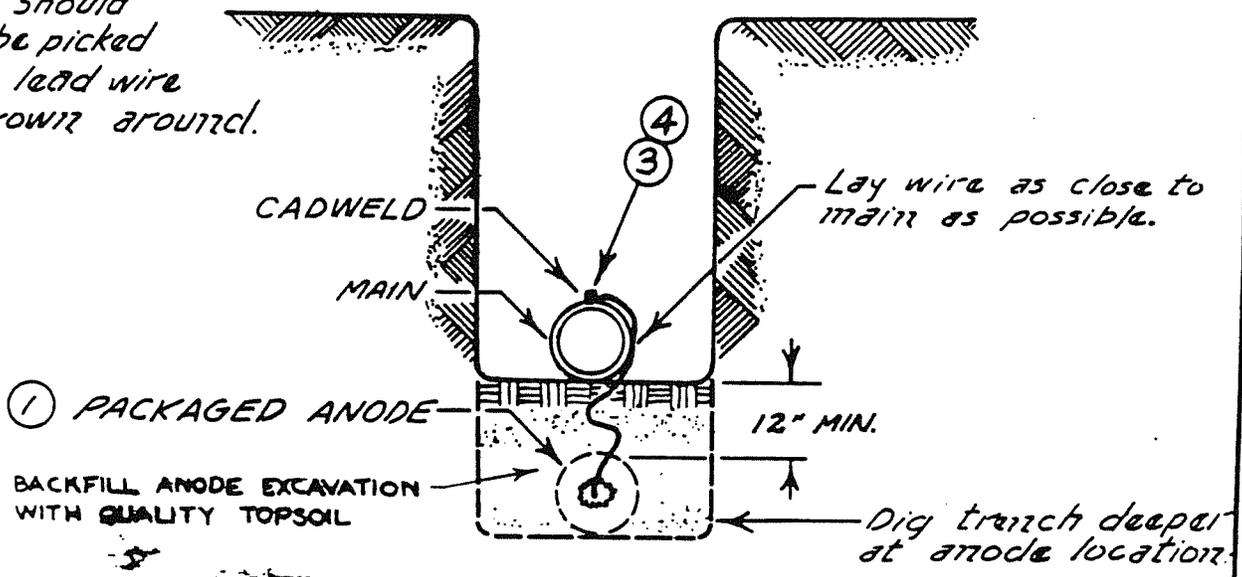
4.5

PACKAGED ANODES



Nota: QUALITY TOPSOIL
 Size and location of anode will be specified on main sketch.

Anode should never be picked up by lead wire or thrown around.

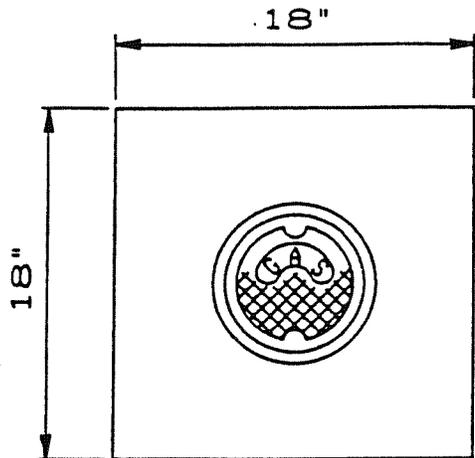


NOTES:

- a. Cadweld connection to be primed and coated carefully.
- b. Packaged anode should be covered with fine soil containing no rocks, clods, or sand.
- c. Pour 5 gallons of water over anode location and tamp thoroughly.
- d. Provide test leads when specified. (See test lead standard)
- e. Anode specification sheet will be attached to main order, and is to be completed by the main construction foreman.

ISSUED	9-1-70	APPROVED	CJH	CITY PUBLIC SERVICE BOARD CONSTRUCTION STANDARD (GAS)	DRAWING DS-33
REVISED	1-14-71		JSC		G-S-171-1-2

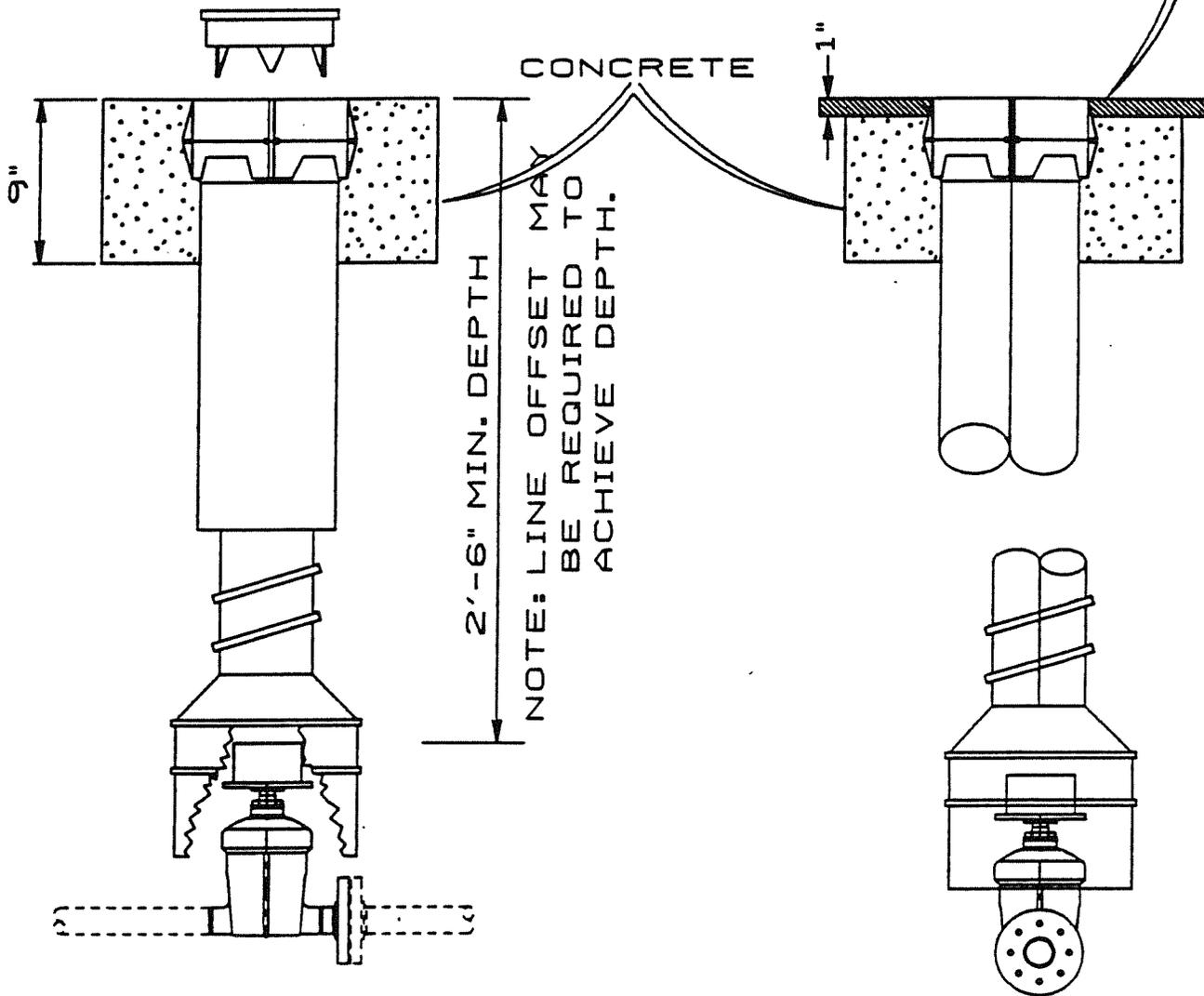
VALVE, STEEL
(WELD x FLANGE)



CAM UNITS
VGS2WXF
VGS4WXF

NOTE: TAMP & BACKFILL
VALVE BOX ABOVE
PIPE.

OPTIONAL METHOD FOR
ASPHALT STREETS

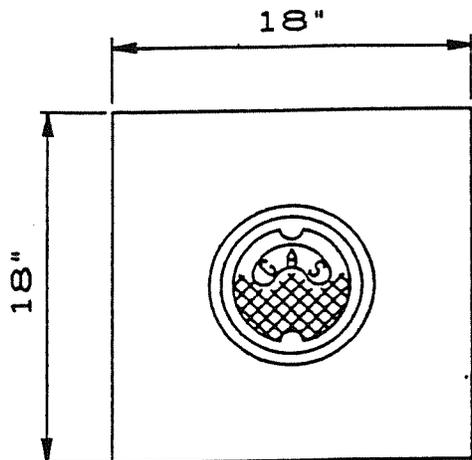


NOTE: COAT VALVE UP TO TOP OF PACKING GLAND.

AVAILABLE SIZES: 2, 4 Page 5 of 19

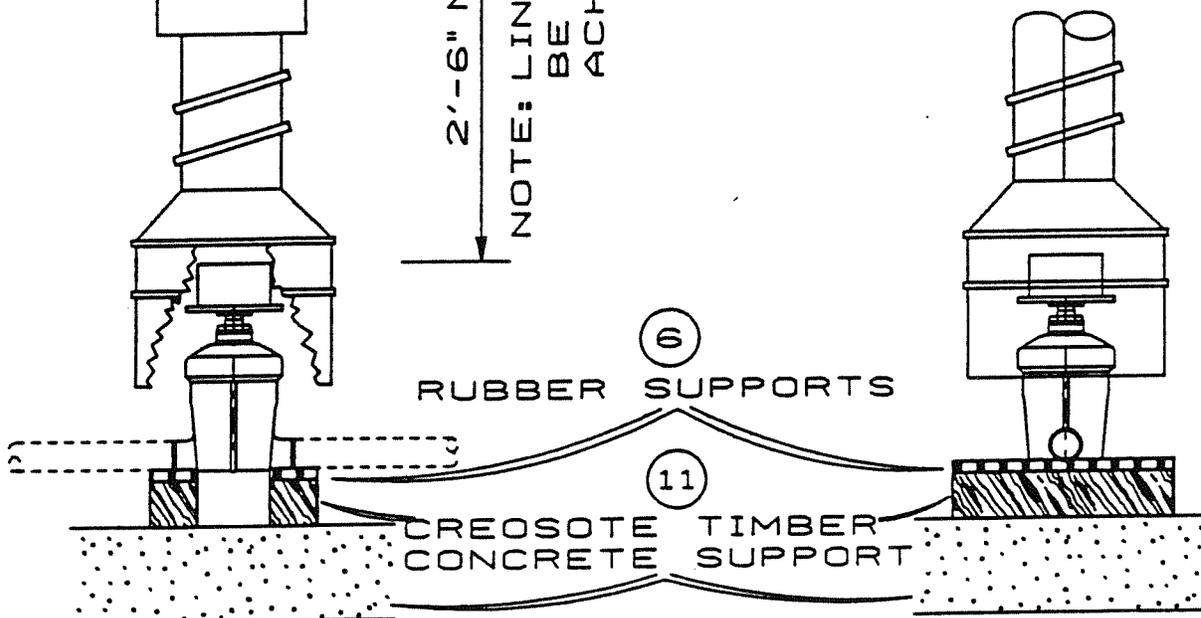
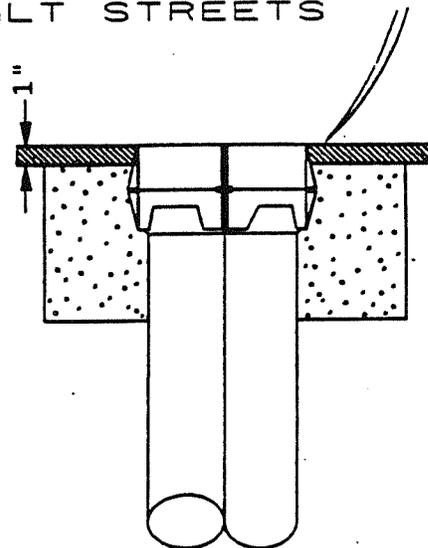
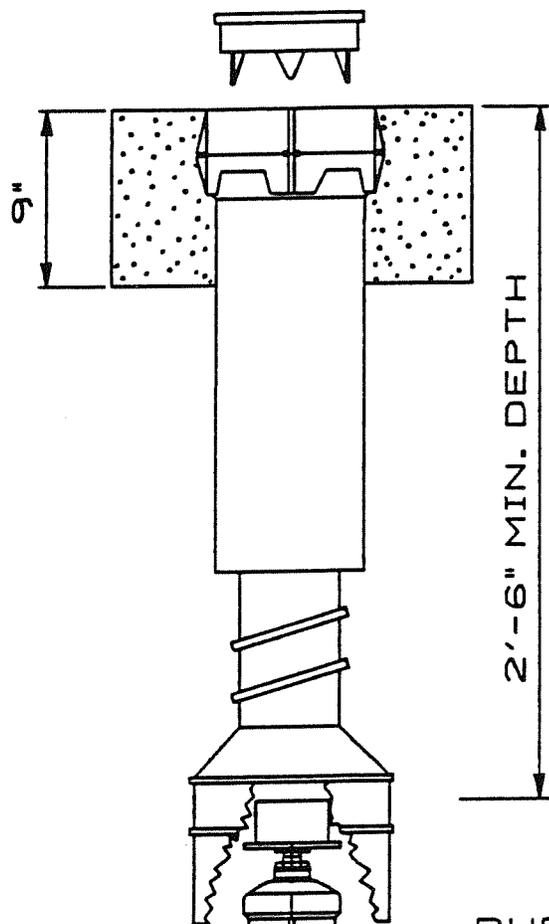
ISSUED	DATE	APPROVED	CITY PUBLIC SERVICE CONSTRUCTION STANDARD (GAS)	G - S - 127 - 1 - 0 DRAWING DS-36
REVISED				

VALVE, STEEL
(WELD x WELD)



CAM UNITS	
VGS2WE	VGS8WE
VGS4WE	VGS12WE
VGS6X8WE	VGS16WE

OPTIONAL METHOD FOR ASPHALT STREETS



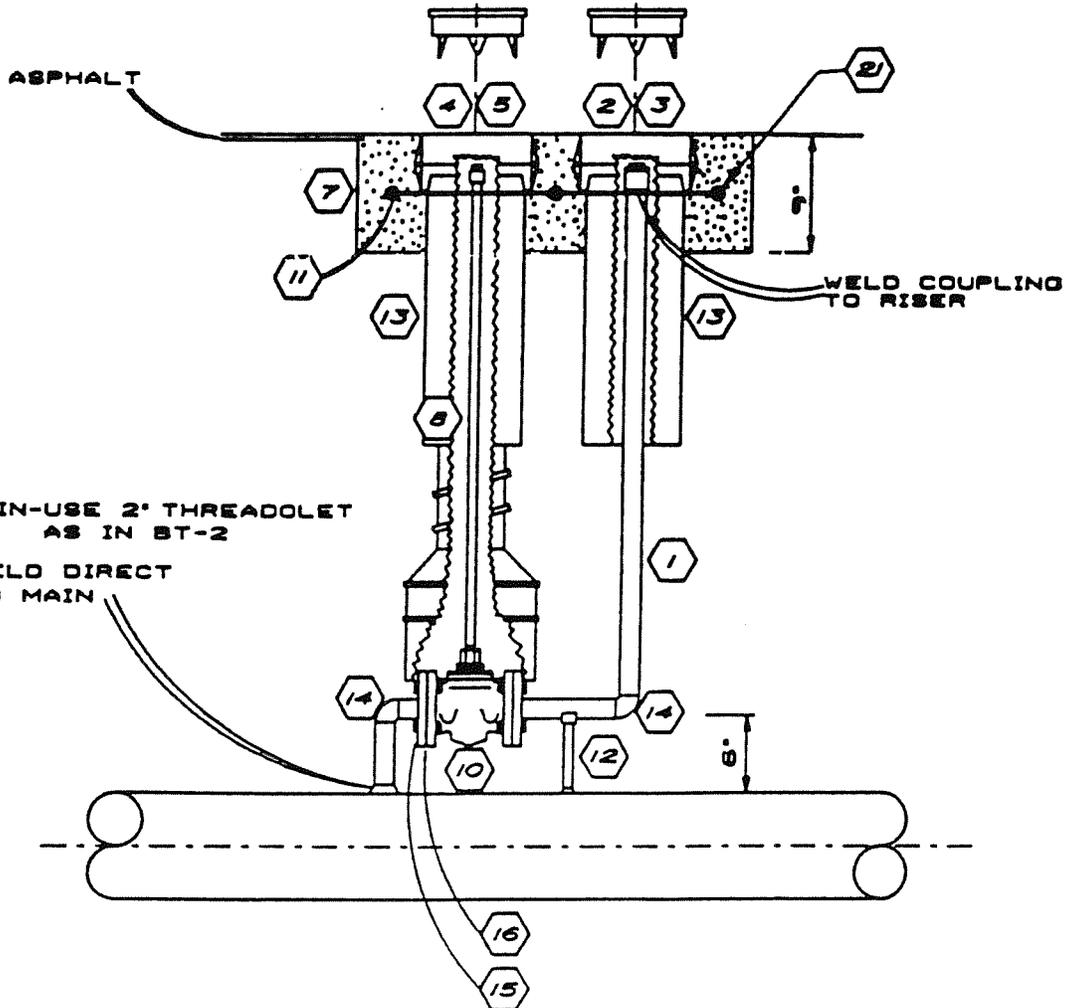
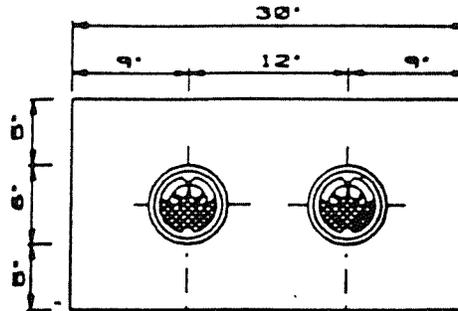
NOTE: ITEMS 6 AND 11 ARE TO BE INSTALLED FOR 12" VALVES, OR LARGER. COAT VALVE UP TO TOP OF PACKING GLAND.

AVAILABLE SIZES: 2, 4, 8x6, 8, 12

ISSUED	DATE	APPROVED	CITY PUBLIC SERVICE CONSTRUCTION STANDARD (GAS)	G - S - 127 - 2 - 0
REVIS				DRAWING DS-37

TEST RISER 2 IN.

EXHIBIT DST-3

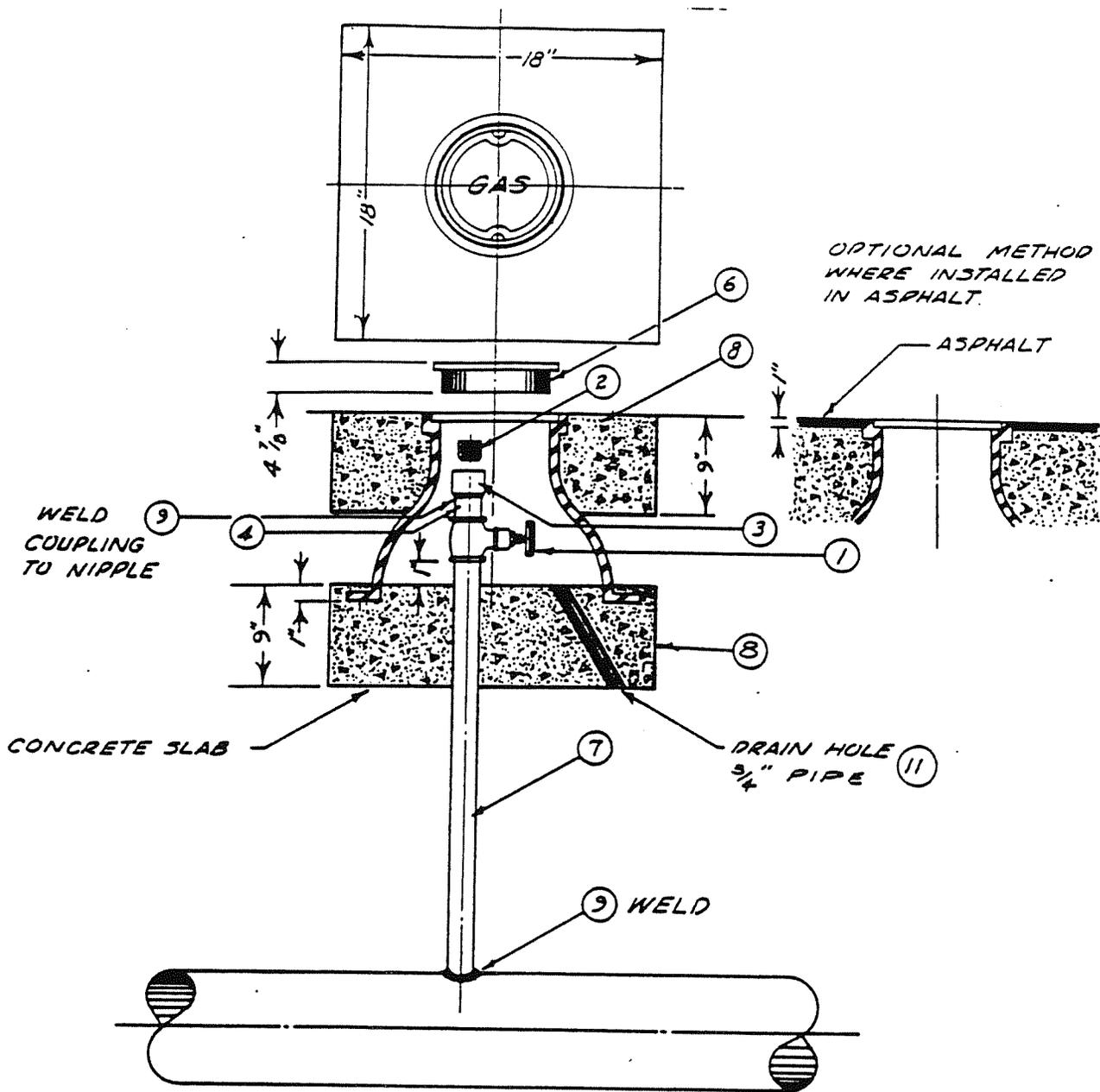


NOTE:
EXISTING MAIN-USE 2" THREDOLET
AS IN BT-2
NEW MAIN-WELD DIRECT
TO MAIN

ISSUED	DATE	APPROVED	CITY PUBLIC SERVICE CONSTRUCTION STANDARD (GAS)	0 - 9 - 142 - 1 - 1 PLANNED BY THE
	9/2/92	<i>D. Voge</i>		

4.5

TEST RISER, 1 IN.

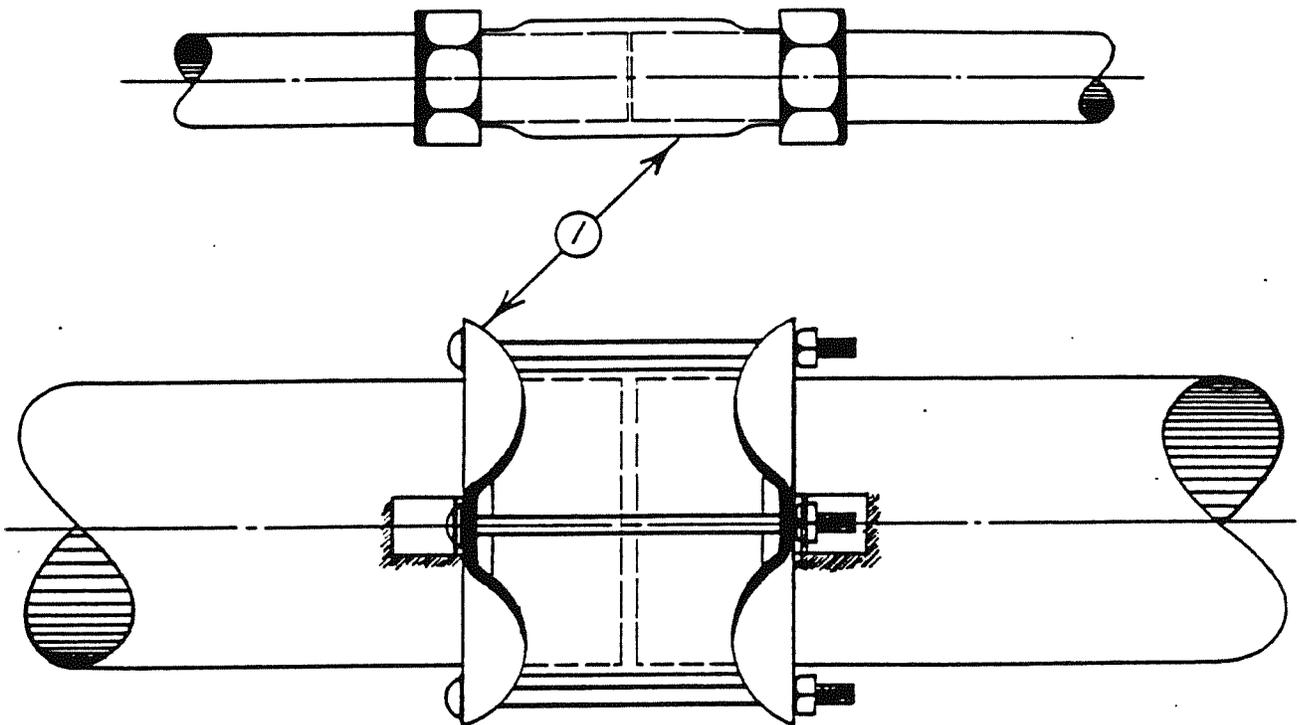


	DATE	APPROVED	CITY PUBLIC SERVICE BOARD CONSTRUCTION STANDARD (GAS)	DRAWING DS-39
ISSUED	9-1-70	WHP		G-S-141 -1-0
REVISED				

4.5

COUPLING, BONDED

WITH WELD LUGS



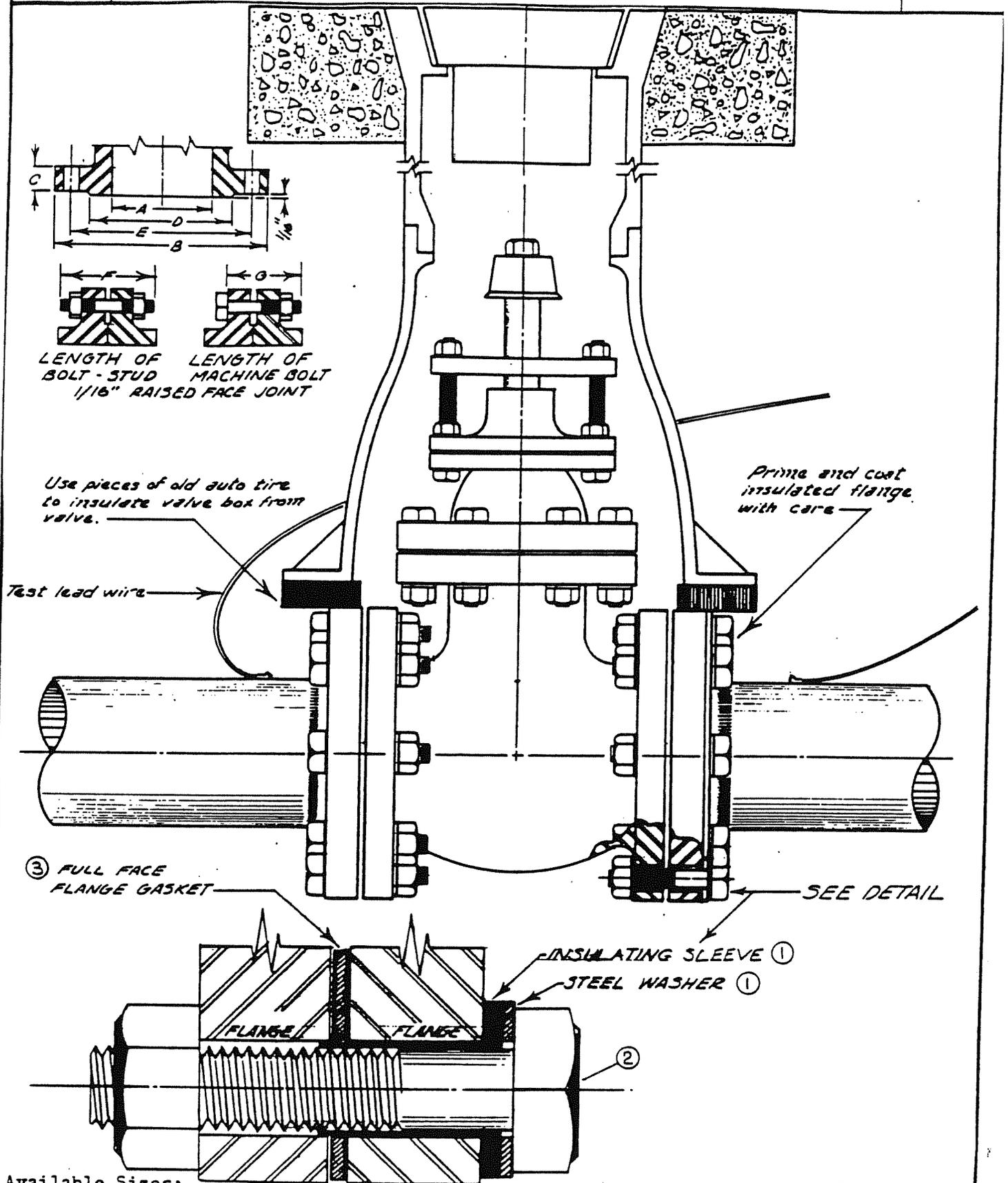
- NOTE: 1 All couplings to be centered over pipe joint with minimum spacing between pipe ends. Spacing shall not exceed 1".
2 File pipe to bright finish over areas covered by bonding gaskets. Area should be a minimum of 2-1/2" wide.
3 Lubricate gaskets with soap water before installing.
4 Tighten all bolts on coupling uniformly.

AVAILABLE SIZES: 3/4", 1", 1-1/4", 1-1/2"
 2", 4", 8", 12", 16", 18", 20", 24", 30"

ISSUED	DATE	APPROVED	CITY PUBLIC SERVICE BOARD CONSTRUCTION STANDARD (GAS)	DRAWING DS-40
REVISED	9-1-70	CJH		G-S-051-1-1

4.5

INSULATE FLANGE



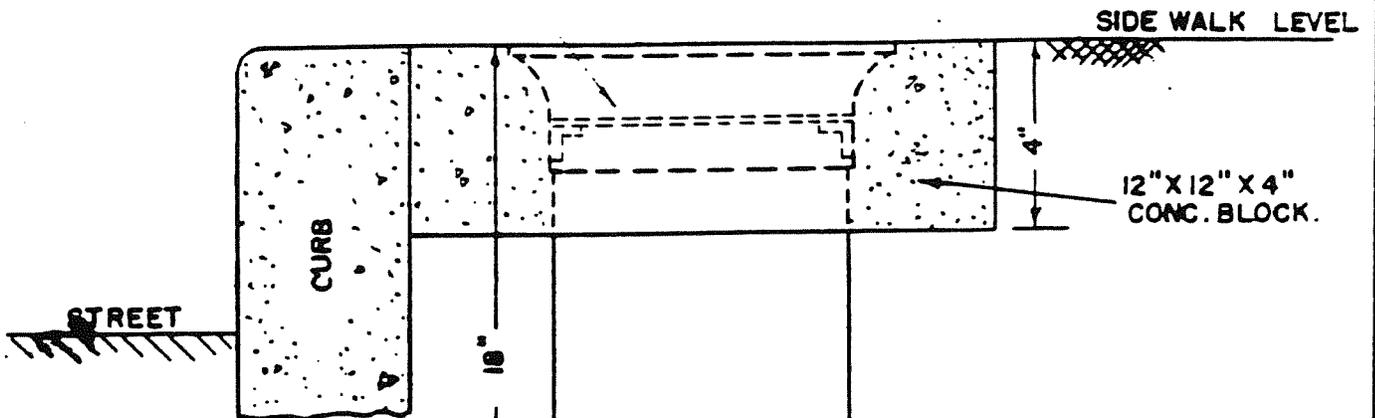
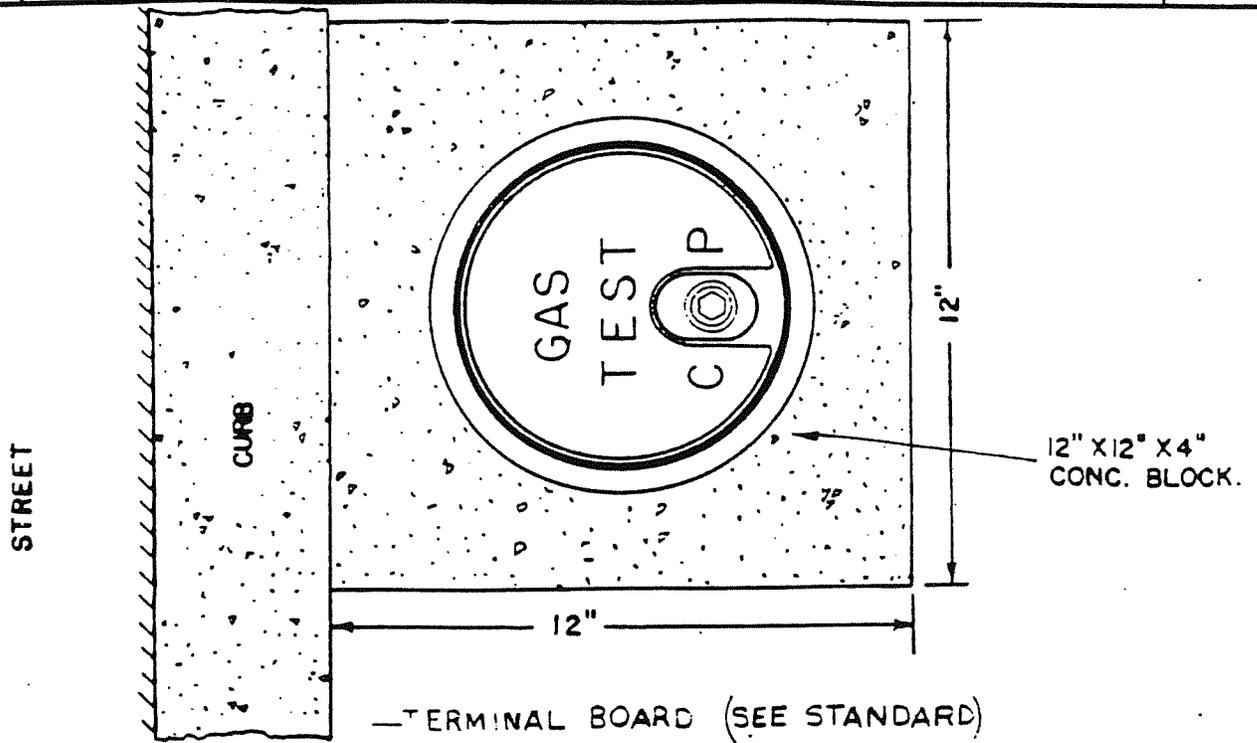
Available Sizes:

150# Flg (2, 4, 8, 12, 16); 150# Exist Flg (2, 4, 8, 12, 16); 300# Flg (8, 12, 16, 20)

ISSUED	DATE	APPROVED	CITY PUBLIC SERVICE BOARD CONSTRUCTION STANDARD (GAS)	DRAWING DS-41 G-S-118-1-1
REVISED	9-1-70	JW		

4.5

CATHODIC PROTECTION TEST POINT



NOTE:

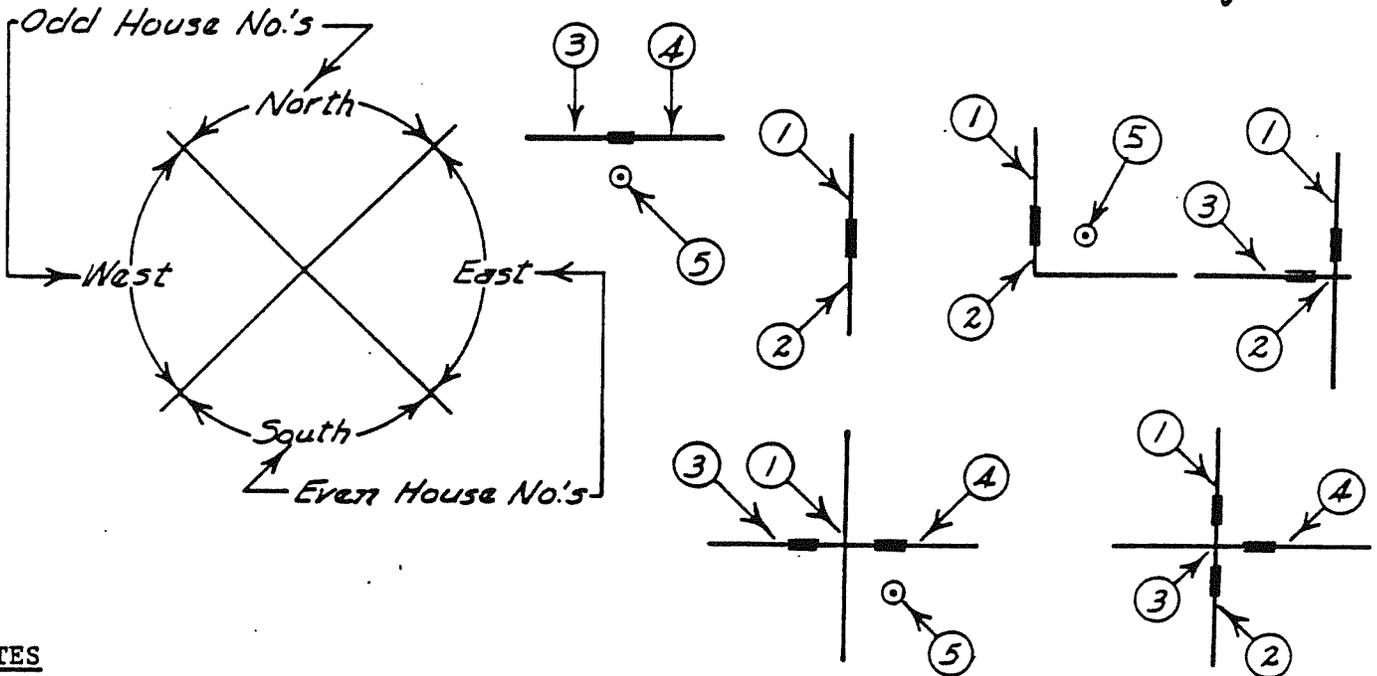
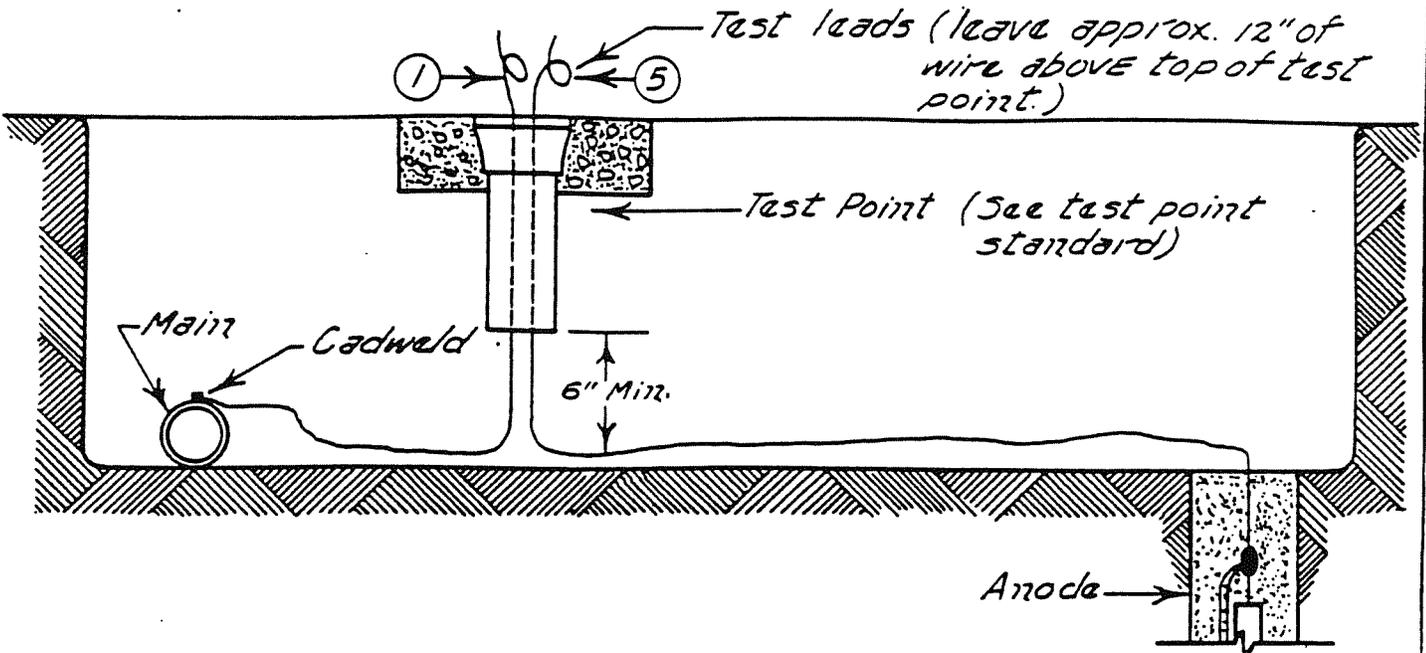
1. BE SURE BOTTOM OF TEST LEAD OPEN IS AT LEAST 6" BELOW END OF TEST POINT BARREL.
2. TEST POINT RECORD SHEETS WILL BE ATTACHED TO MAIN ORDER AND ARE TO BE COMPLETED BY MAIN FOREMAN.

TEST LEADS (NO 10 TYPE TW COPPER WIRE)

	DATE	APPROVED	CITY PUBLIC SERVICE BOARD	DRAWING DS-42
ISSUED	9-1-70	CJP		G-S-182-2-0
REVISED				

4.5

CATHODIC PROTECTION TEST LEAD CONNECTION TO MAIN

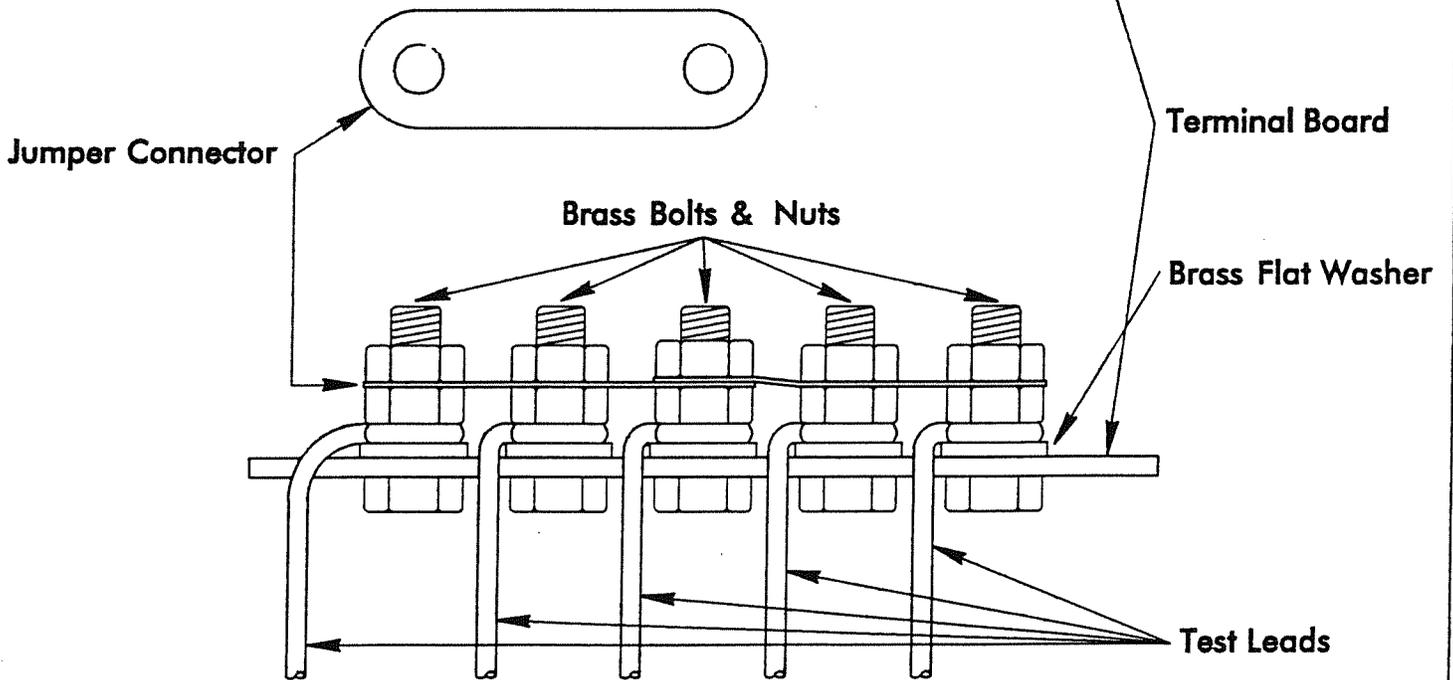
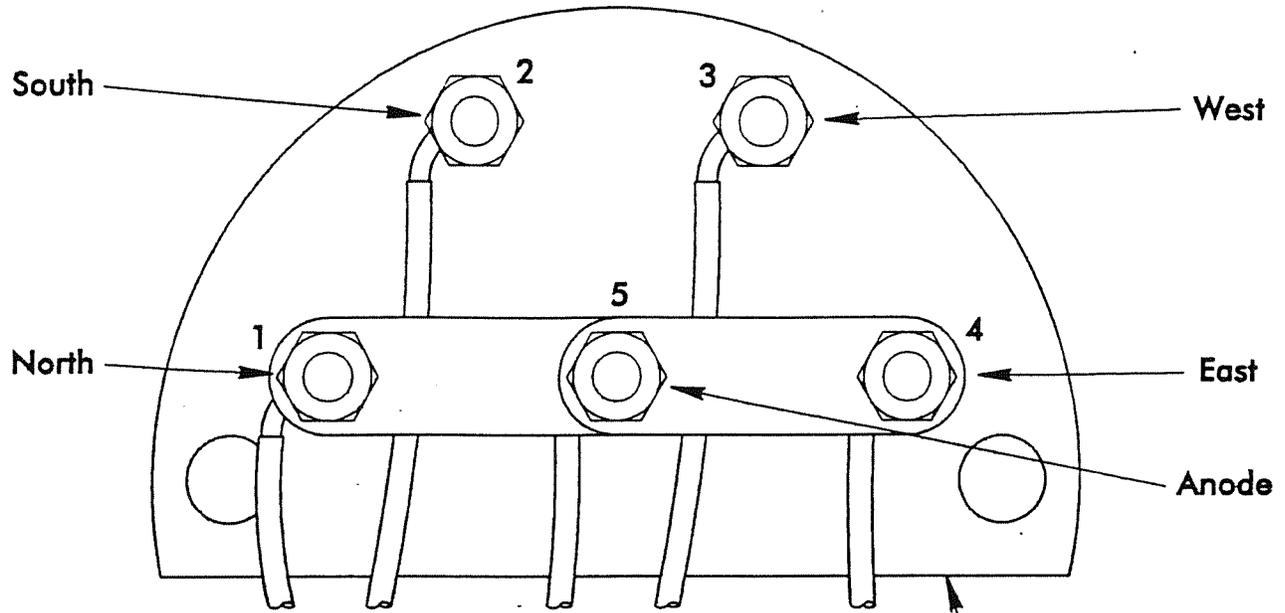


NOTES

1. All test leads to be No. 10 type TW solid copper wire.
2. Test point record cards will be attached to main order, and are to be completed by the main foreman.
3. All test leads should be tagged with a metal tag about 6" from end of lead according to the following numbering code:

- 1 North
- 2 South
- 3 West
- 4 East
- 5 Anode

	DATE	APPROVED	CITY PUBLIC SERVICE BOARD	DRAWING DS-43
ISSUED	9-1-70	CJH		G-S-182-1-0
REVISED				

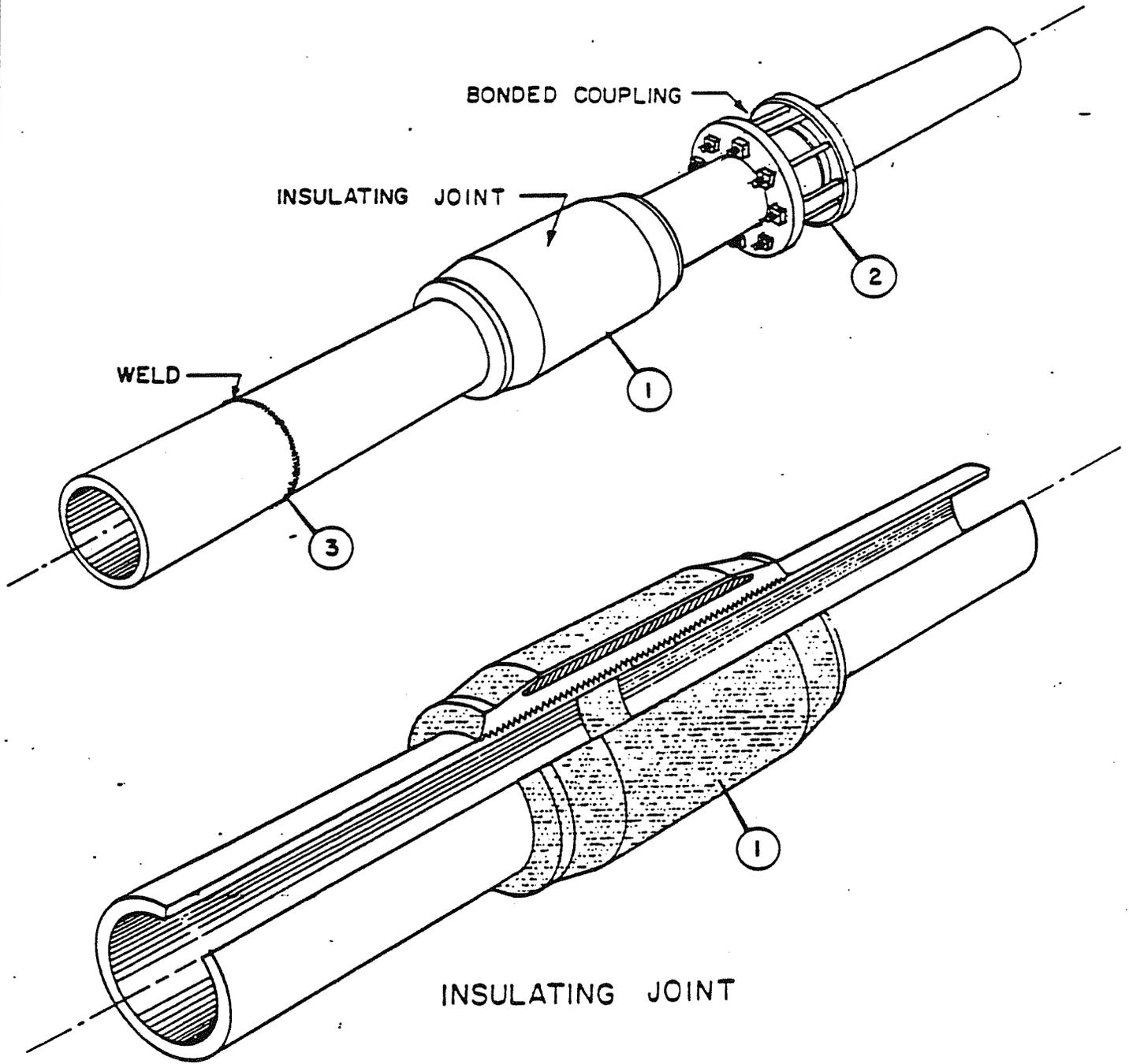


Note:
Connect test leads on top
side of terminal board

	Date	Approved
Issued	11-28-94	<i>M Kotara</i>
Revised		

4.5

INSULATING JOINT 8" & 12"



AVAILABLE SIZES: 8" & 12"

ISSUED	DATE	APPROVED	CITY PUBLIC SERVICE BOARD	DRAWING DS-45
	6/5/80	S.R. J	CONSTRUCTION DRAWING (CAS)	

PLUGGING EQUIPMENT INSTALLATION

IMPORTANT

THE ARROW ON THE TEE HANDLE AND THE PLUGGING HEAD SHOULD BOTH FACE TOWARD THE SECTION OF MAIN BEING CUT.

TYPICAL SETUP
4" THROUGH 12"

SHORTSTOPP 60
PLUGGING
MACHINE

GASKET

SHORTCUTT
VALVE

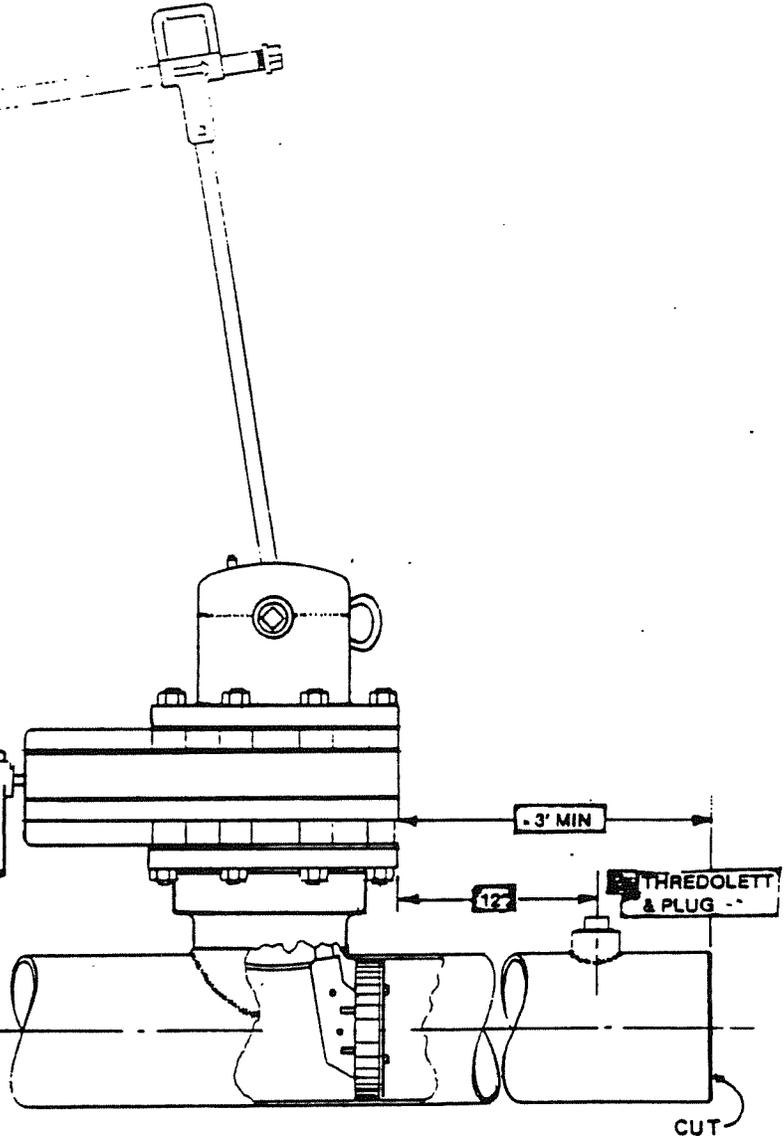
GASKET

VALVE-TO-
FITTING
ADAPTER

GASKET

SHORTSTOPP
WELDING
FITTING

PIPELINE



ALL SIZES MEET ANSI CLASS 150 SERVICE RATINGS. WHEN USED WITH TDW PLUGGING MACHINES, THE MAXIMUM RECOMMENDED WORKING PRESSURE IS 60 PSI FOR SHORTSTOPP 60 PLUGGING MACHINES.

APPROVED	WAG	FRL							
DATE	10/07	10/08							

CITY PUBLIC SERVICE BOARD
CONSTRUCTION STANDARD

INSTALLATION INSTRUCTIONS TYPE II SHORTSTOPP® FITTING

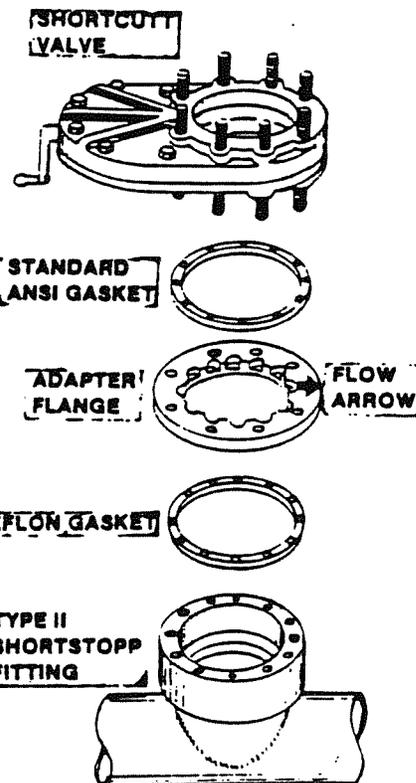
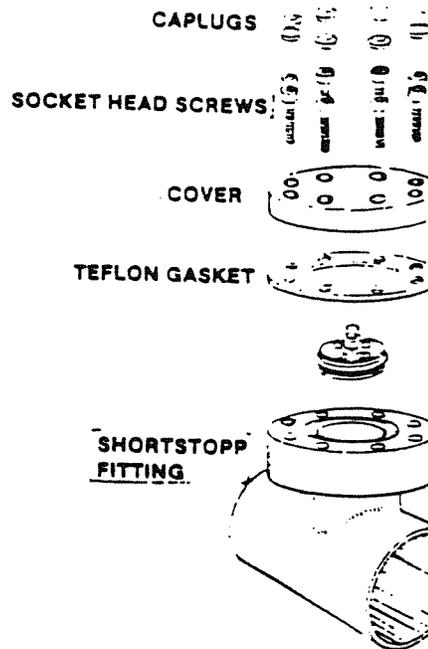
1. Remove completion plug from inside fitting before welding.
2. Clean all weld edges thoroughly — remove all paint, dirt, rust, oil, etc.
3. Apply grease to machined surface inside fitting to protect machined surface from weld spatter.
4. Center and level fitting. Flange centerline should intersect centerline of pipe, and flange gasket surface parallel to pipe.
5. Maintain 1/16" to 1/8" gap between fitting and pipe surface for proper penetration. **DO NOT WELD INSIDE** of fitting to avoid tapping problems.
6. Place white Teflon gasket on face of fitting.
7. Position reusable valve adapter flange on fitting so that the flow arrow stamped on flange adapter is in line with the pipe. Be sure that fitting and valve adapter flange bores are concentric.
8. Attach valve adapter flange to face of fitting; use socket head screws furnished with the fitting. A minimum torque on socket head screws assures a leak-tight joint.

4" fitting...40 to 60 ft. lbs.
 8" fitting...60 to 90 ft. lbs.
 12" fitting...60 to 90 ft. lbs.

CAUTION

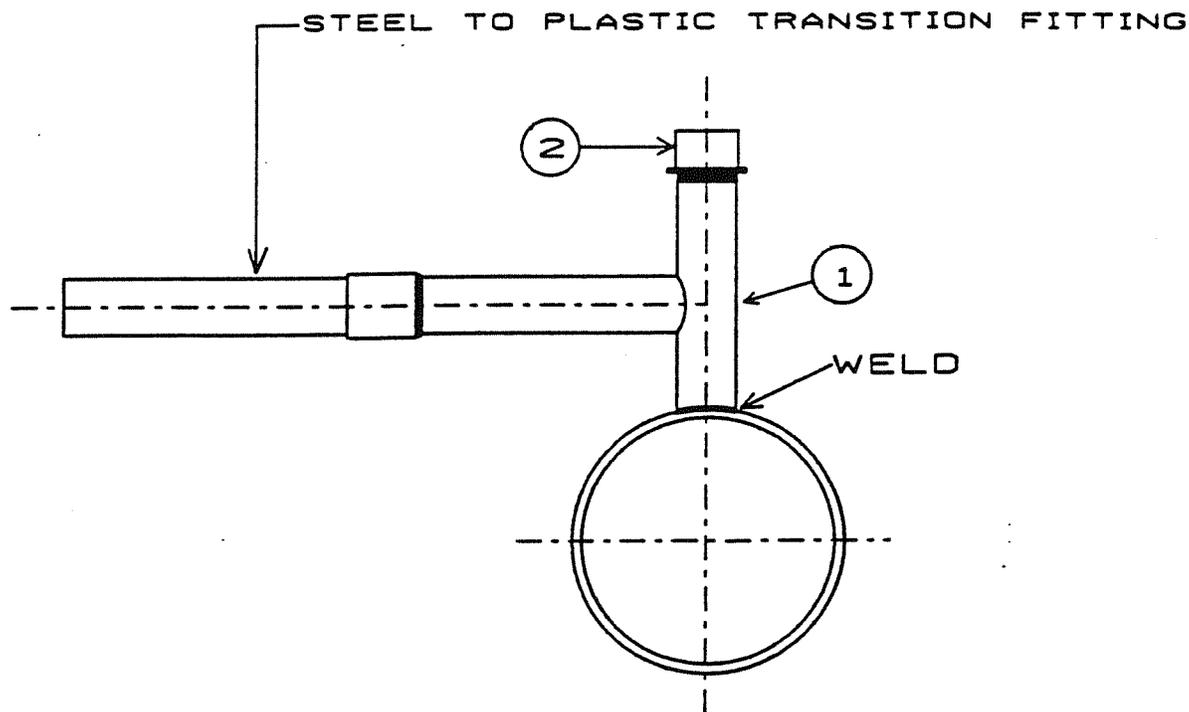
Excessive overtorquing can break socket head screws. Broken socket head screws can be difficult to remove and could allow gasket to leak.

9. Place a standard ANSI flange gasket on face valve adapter flange. Then install T.D.W. Shortcutt® Valve on the valve adapter flange.
10. Proceed and use standard T.D.W. Shortstopp equipment.
11. After completion plug has been set and Shortcutt Valve has been removed, remove reusable valve adapter flange.
12. Install cover (blind flange) on fitting with use of socket head screws and Teflon gasket. Use minimum torque values as shown in Item 8.
13. Insert plastic Caplugs into hex holes of socket head screws on cover. Caplugs help protect fitting from dirt and other foreign matter.



APPROVED	WRS	S-K							
DATE	1-13	1983							

TEE SERVICE WELDED TRANSITION
STEEL TO PLASTIC



SIZE SERVICE	DRILL SIZE
1"	7/8"
1-1/4"	1-1/8"

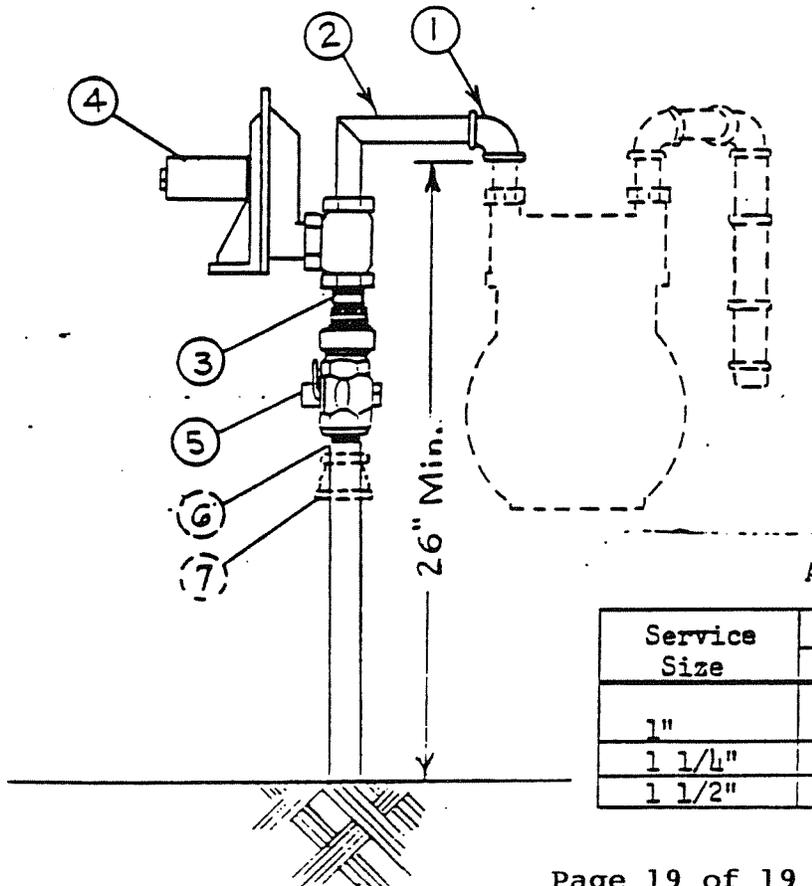
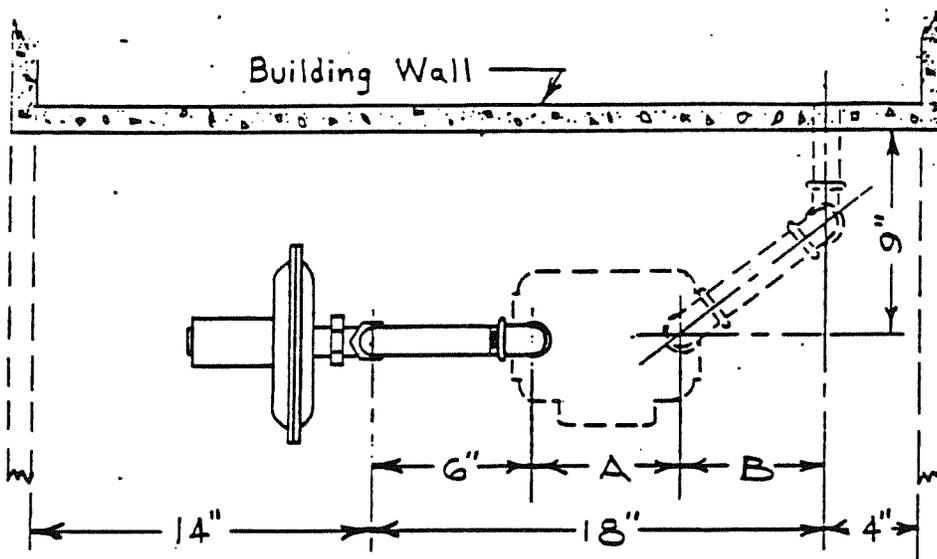
TEE SERVICE WELDED TRANSITION STEEL TO PLASTIC 1"
C.P.S. STOCK *520700204
TEE SERVICE WELDED TRANSITION STEEL TO PLASTIC 1 1/4"
C.P.S. STOCK *520700220

ISSUED	DATE	APPROVED	CITY PUBLIC SERVICE CONSTRUCTION STANDARD (GAS)	G - S - 127 - 2 - 0
REVISD				DRAWING DS-49

4.5

RISER AND REGULATOR FOR 5, 10, 30 & 35 LT. METERS

NOTE: FOR DIMENSIONS OF METERS REFER TO EXHIBIT 8-1 IN THE PLANNING INSTRUCTIONS.



Available Sizes: ●

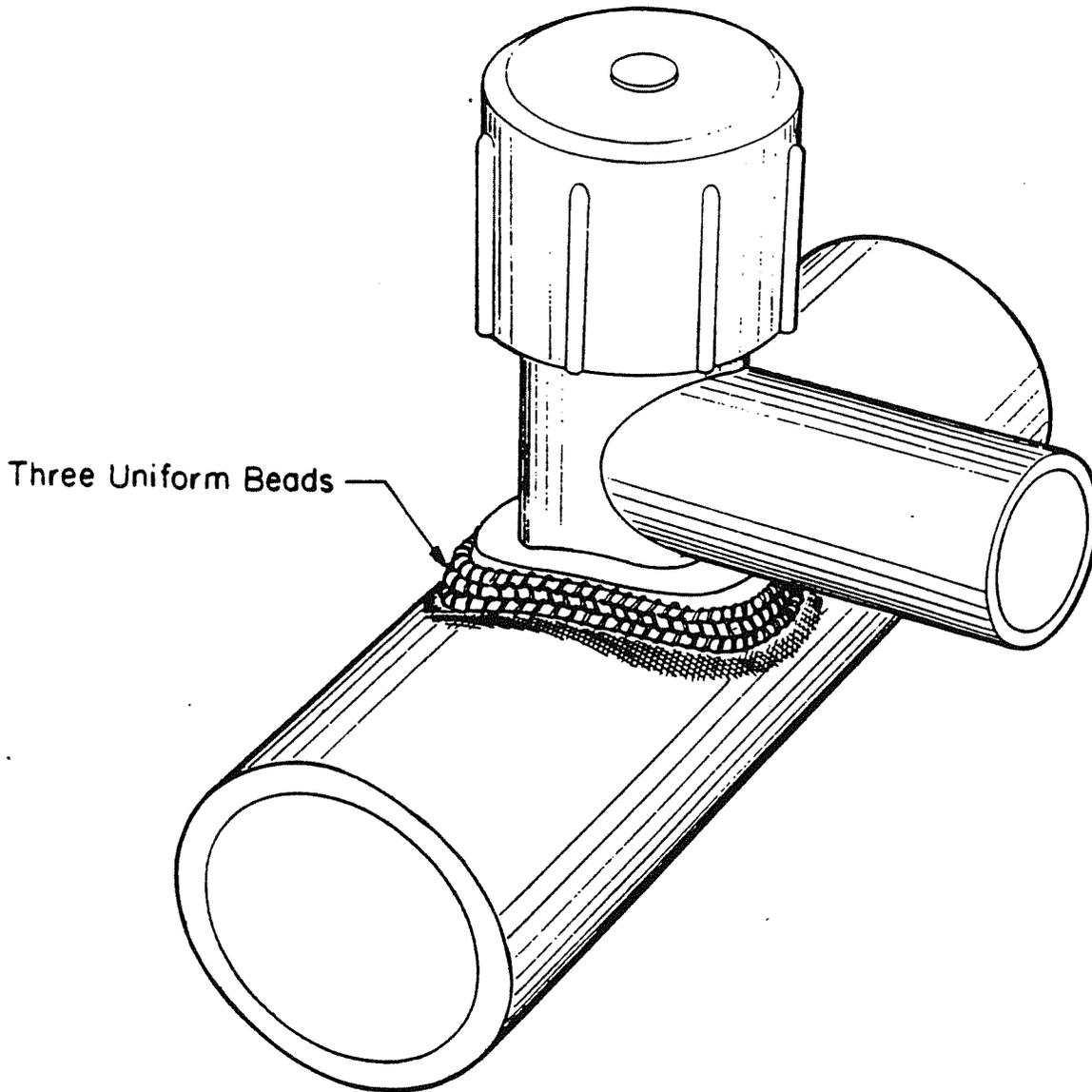
Service Size	Size of Meter Connection		
	1"	1 1/4"	1 1/2"
1"	●	●	●
1 1/4"	●	●	●
1 1/2"			●

ISSUED	DATE	APPROVED	CITY PUBLIC SERVICE BOARD CONSTRUCTION STANDARD (GAS)	DRAWING DS-50
REVISED				G-S-222-1-1

**CPS
Design Standards
(Plastic Gas Pipe)
Exhibit GAS-4**

4.5

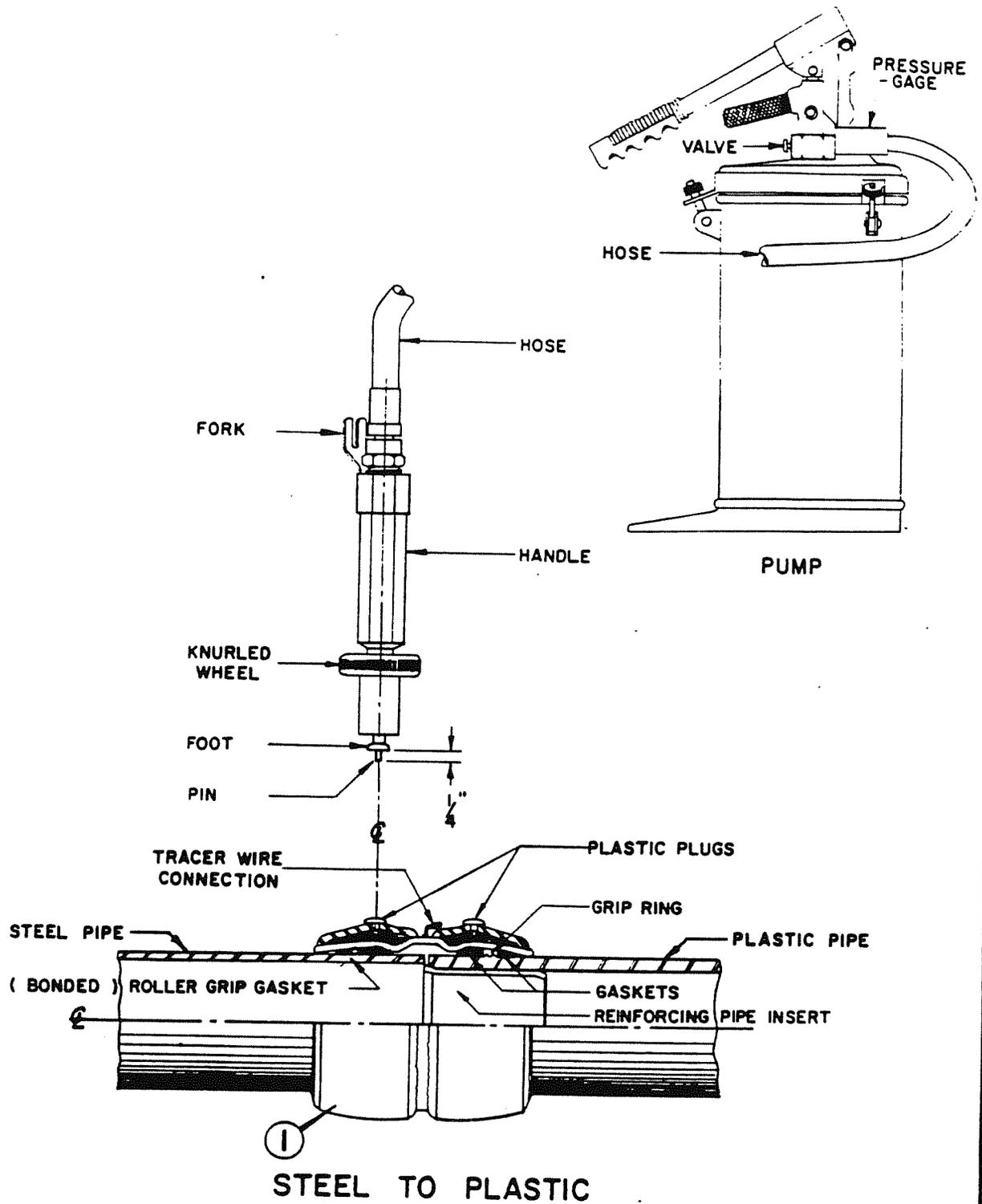
PLASTIC PIPE, TAPPING TEE



	DATE	APPROVED	CITY PUBLIC SERVICE BOARD CONSTRUCTION STANDARD (GAS)	DRAWING DS-21
ISSUED	3/23	R.K.J.		G-S-505-6-0
REVISED				

4.5

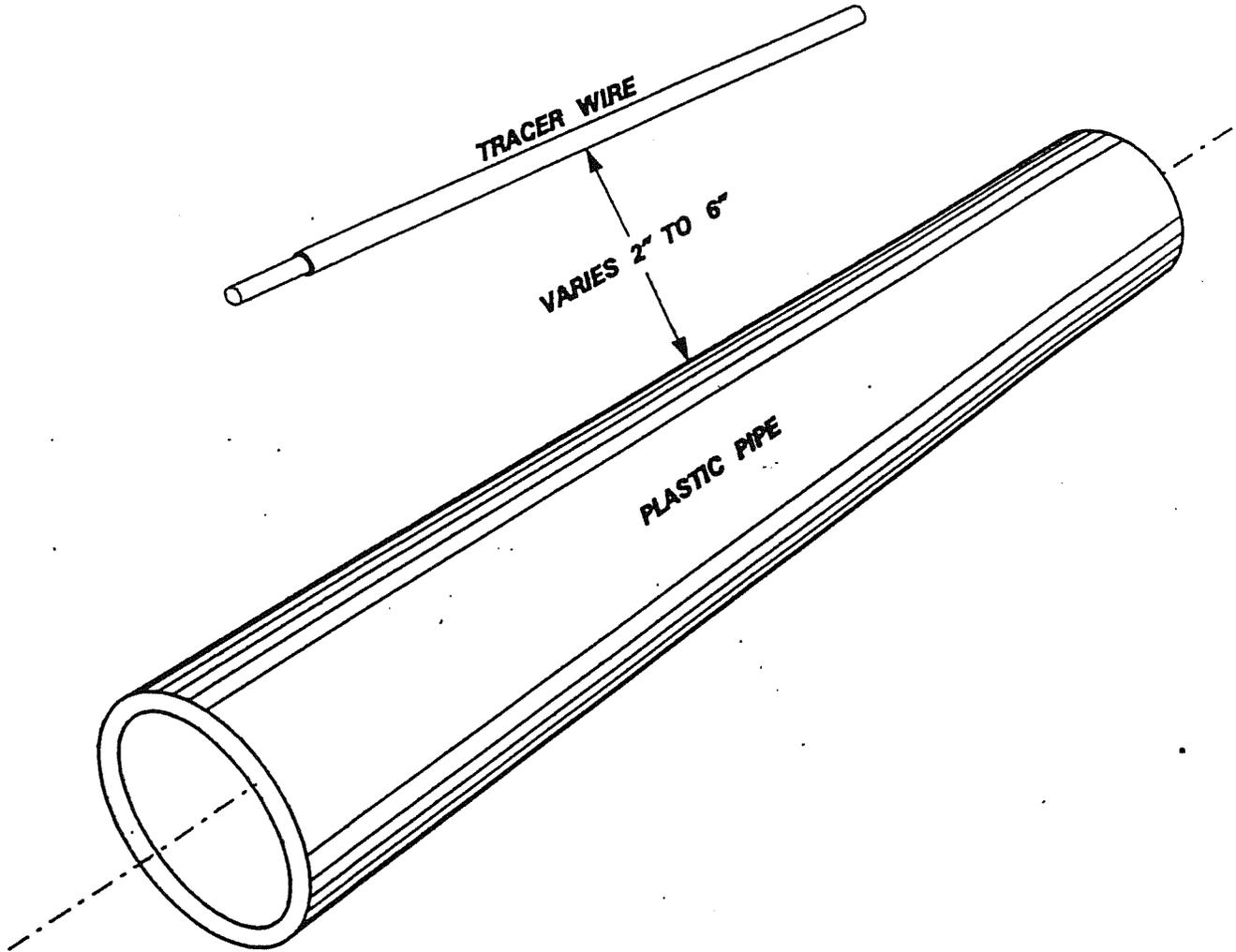
POSI-HOLD COUPLING INSTALLATION



ISSUED	DATE	APPROVED	CITY PUBLIC SERVICE BOARD CONSTRUCTION DRAWING (GAS)	DRAWING DS-24
REVISED	5/00	<i>[Signature]</i>		G-S-507-8-0

4.5

PLASTIC PIPE & TRACER WIRE



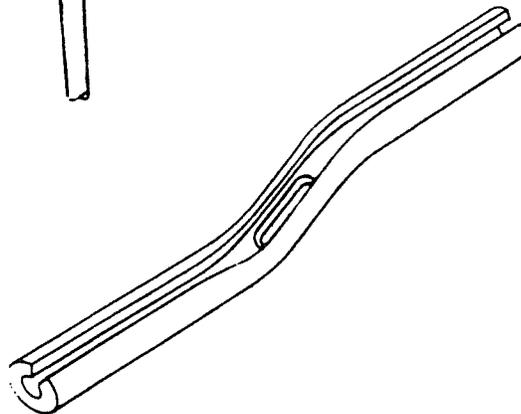
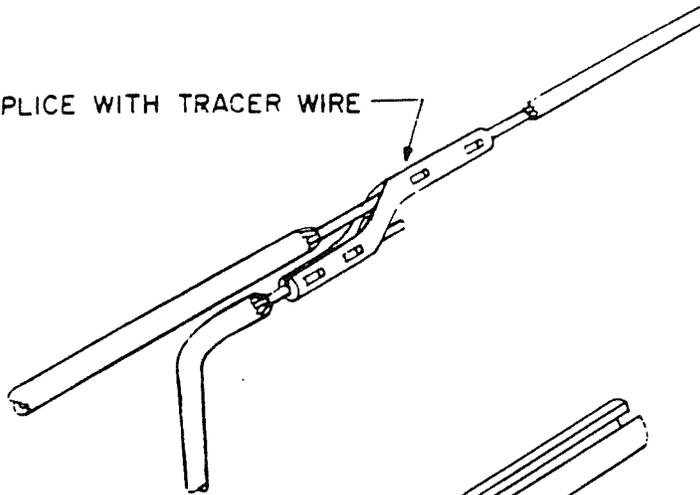
NOTE: THERE IS TO BE 2" TO 6" OF SEPARATION BETWEEN PIPE AND TRACER WIRE.

	DATE	APPROVED	CITY PUBLIC SERVICE CONSTRUCTION STANDARD	G-S-501-2-1 DATE: 18-Dec-02 12:47
ISSUED	6-8-00	D.R.S.		
REVISED				

4.5

TEE SPLICE

TEE SPLICE WITH TRACER WIRE



TEE SPLICE

NOTE:

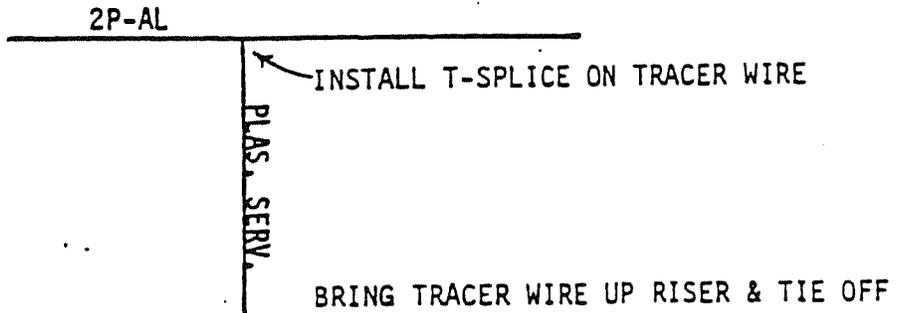
1. APPLY PIPELINE TAPE WRAP PRIMER (ALLOW TO DRY UNTIL TACKY)
2. USE PIPELINE TAPE WRAP ONLY (CIGARETTE WRAP)

	DATE	APPROVED	CITY PUBLIC SERVICE BOARD CONSTRUCTION DRAWING (GAS)	DRAWING DS-27
ISSUED	6/5/00	P.R.S.		G - S - 541 - 1 - 0
REVISED				

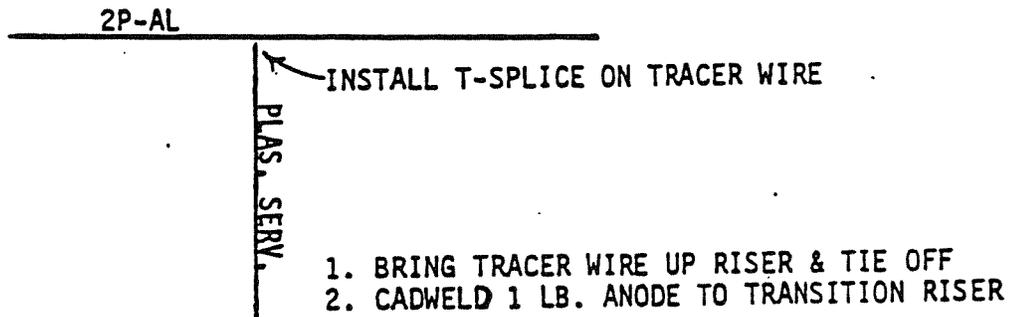
DRAWING DS-28
 EXAMPLES FOR ANODELESS RISERS
 (Page 1 of 2)

4/1/03

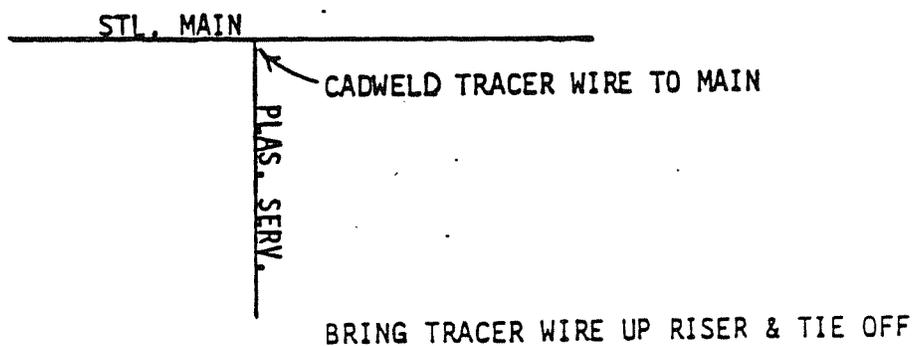
- ① ANODELESS TRACER WIRE ON PLASTIC MAIN - PLASTIC SERVICE WITH ANODELESS RISER



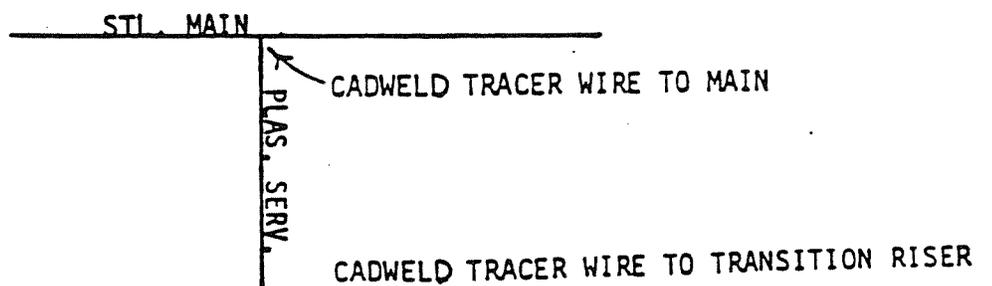
- ② ANODELESS TRACER WIRE ON PLASTIC MAIN - PLASTIC SERVICE WITH STEEL TRANSITION RISER



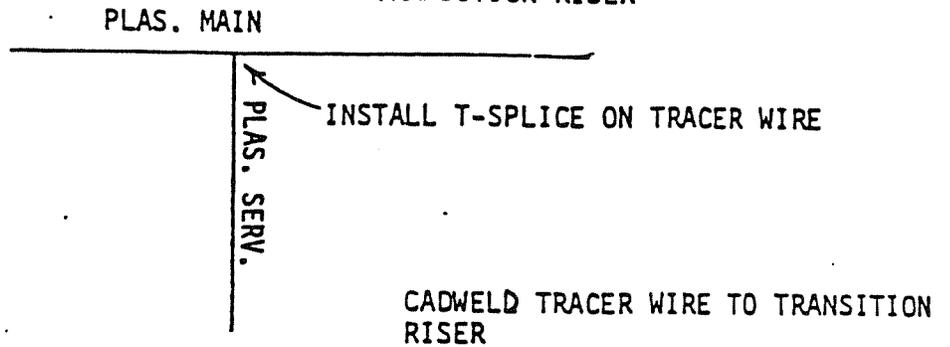
- ③ STEEL MAIN - PLASTIC SERVICE WITH ANODELESS RISER - ALSO RERUNS



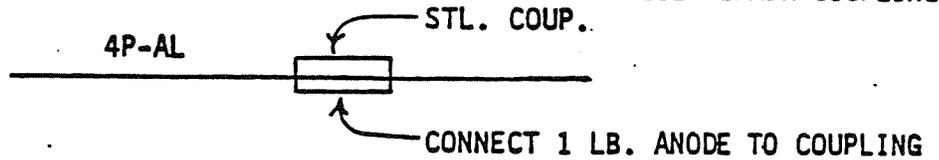
- ④ STEEL MAIN - PLASTIC SERVICE WITH STEEL TRANSITION RISER



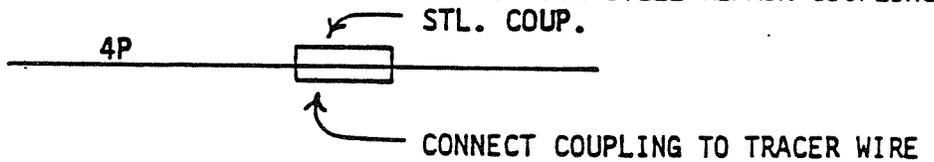
- ⑤ PROTECTED TRACER WIRE ON PLASTIC MAIN - 2" OR 4" PLASTIC SERVICE WITH STEEL TRANSITION RISER



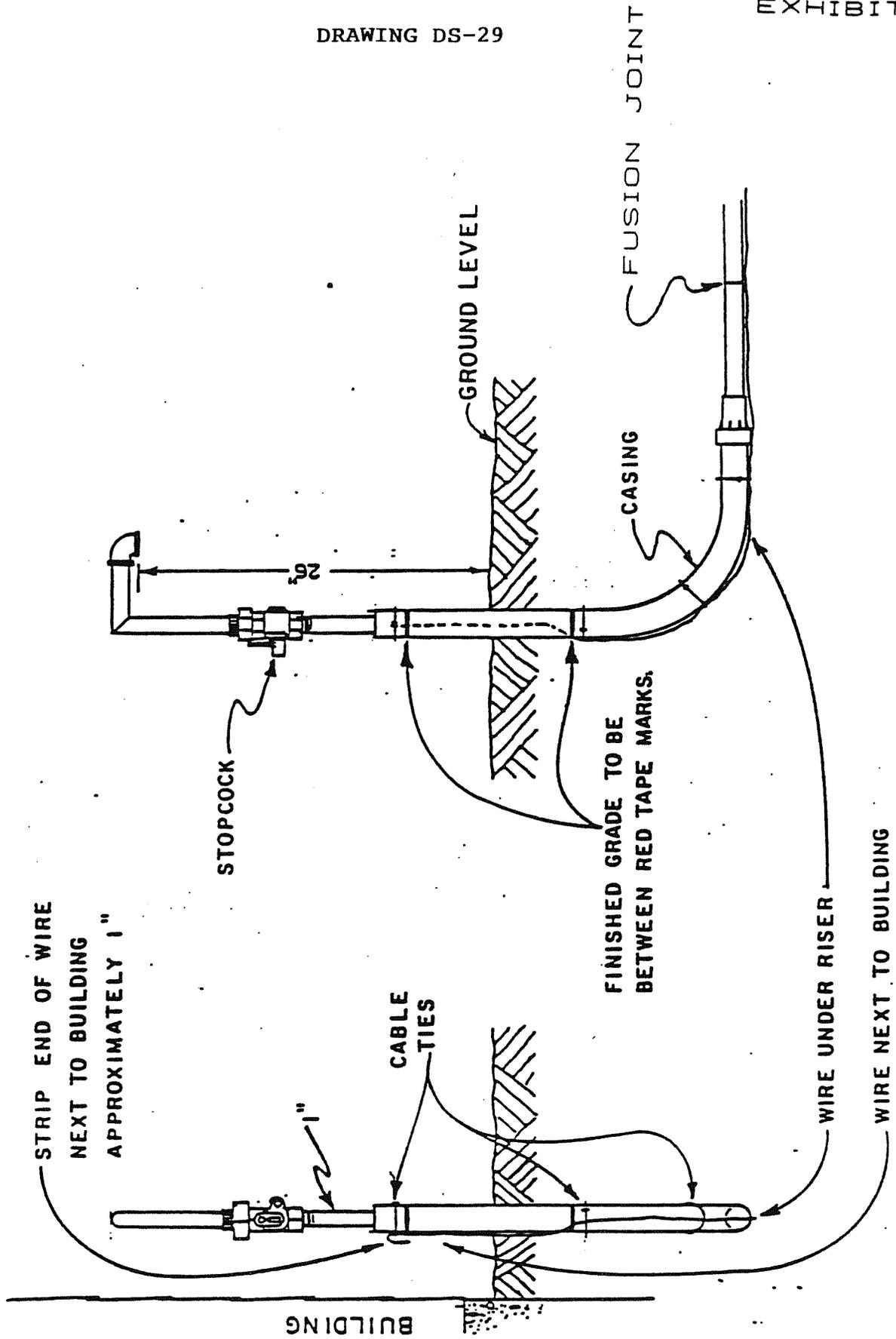
- ⑥ ANODELESS TRACER WIRE ON PLASTIC MAIN OR SERVICE WITH STEEL REPAIR COUPLING



- ⑦ PROTECTED TRACER WIRE ON PLASTIC MAIN OR SERVICE WITH STEEL REPAIR COUPLING

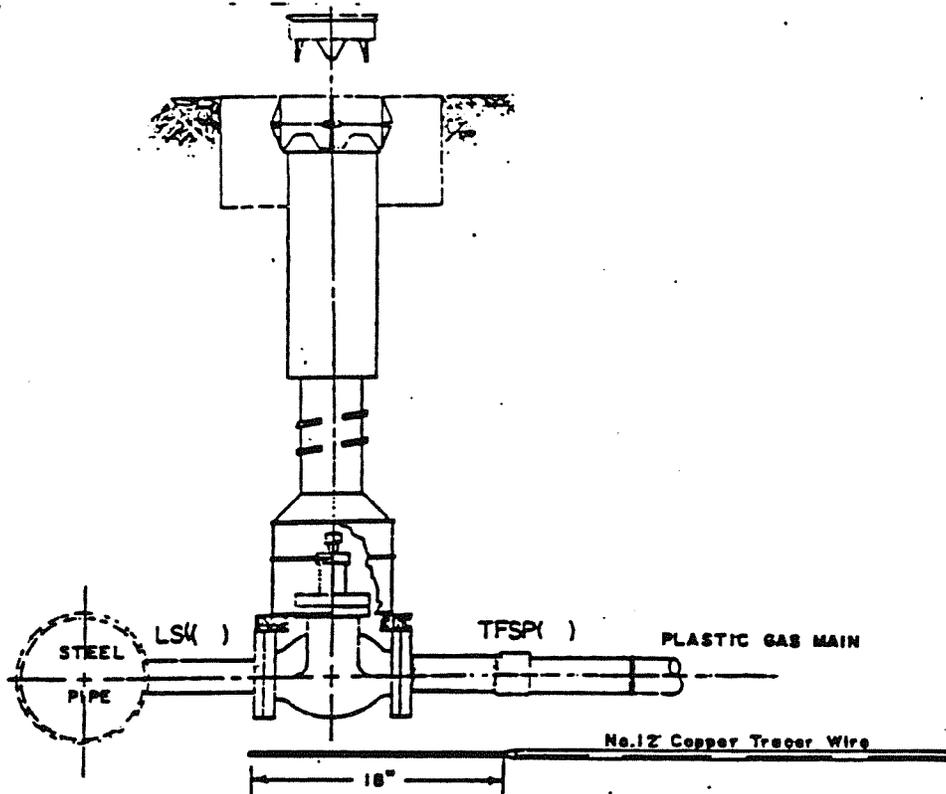


NOTE - NEVER CADWELD TRACER WIRE TO THE NEW ANODELESS SERVICE RISER

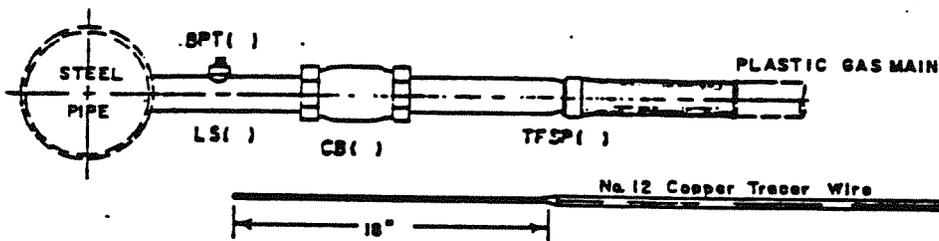


ANODELESS RISER

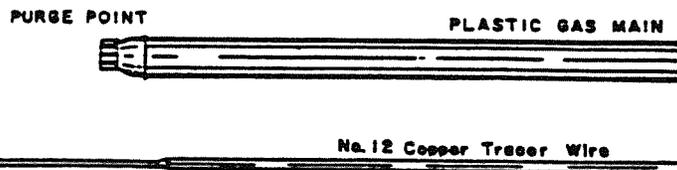
TERMINATION OF TRACER WIRE ON ANODELESS SYSTEMS



REMOVE 18" OF INSULATION AT END OF TRACER WIRE - LEAVE WIRE BARE
DO NOT LET WIRE TOUCH STEEL MAIN OR FITTINGS

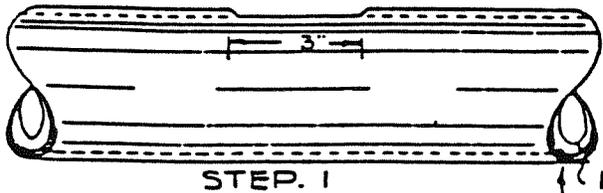


REMOVE 18" OF INSULATION AT END OF TRACER WIRE - LEAVE WIRE BARE
DO NOT LET WIRE TOUCH STEEL MAIN OR FITTINGS



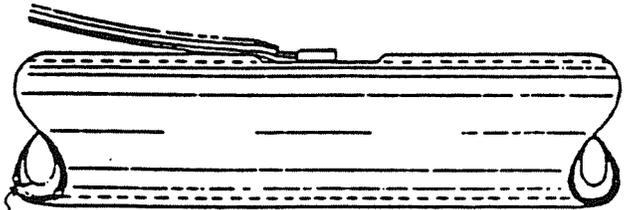
REMOVE 18" OF INSULATION AT END OF TRACER WIRE - LEAVE WIRE BARE

Remove a section of coating 3" long and file pipe bright so that a space 1" wide and 2" long is clean and dry.



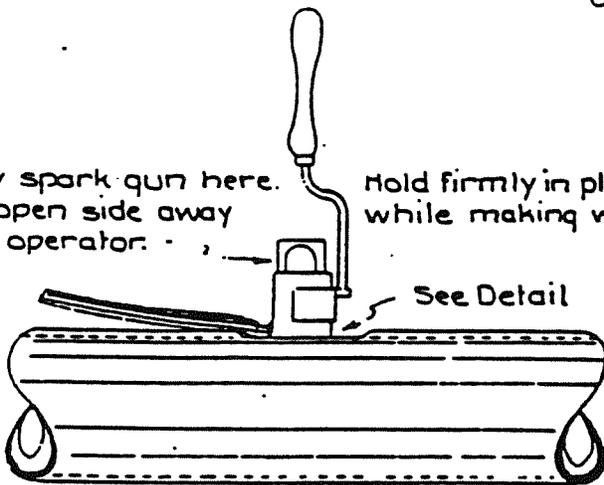
STEP 1

Strip 1/2" of insulation from wire and place copper sleeve on #10 and smaller wire.



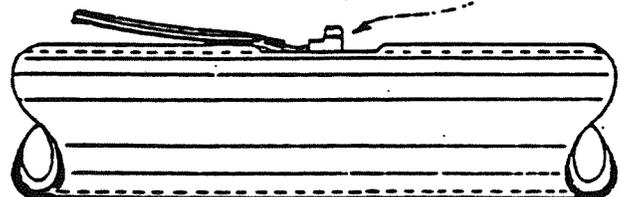
STEP 2

Apply spark gun here. Keep open side away from operator. Hold firmly in place while making weld.



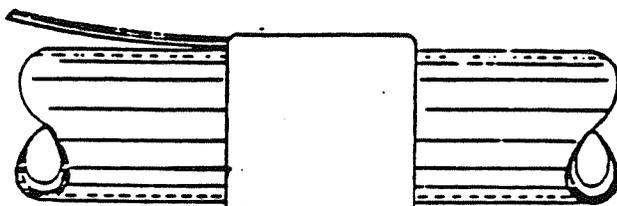
STEP 3

Remove slag with hammer and paint thoroughly with primer.

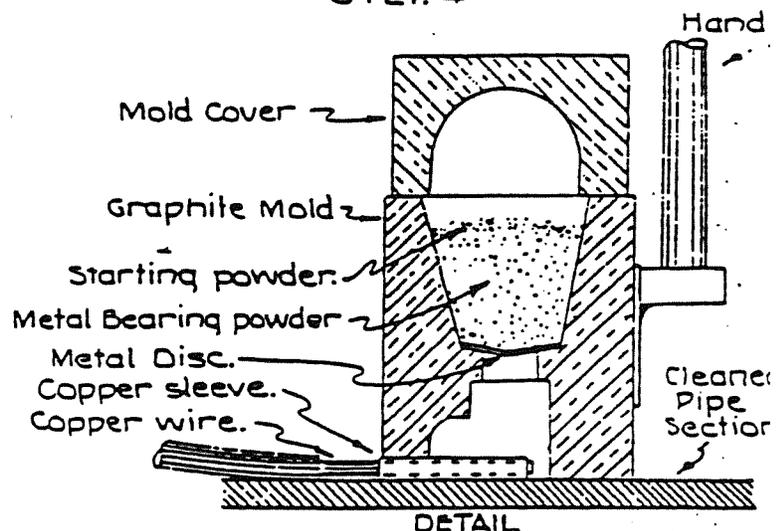


STEP 4

Repair pipe coating with care. Cover entire weld.



STEP 5



DETAIL

IMPORTANT

1. REMOVE RED CAP OF CADWELD CARTRIDGE AND DUMP ALL OF CONTENTS INTO MOLD. THE CHARGE WILL NOT IGNITE WITHOUT THE FINE STARTING POWDER ON TOP.
2. THE CARTRIDGES MUST BE KEPT DRY AT ALL TIMES.

Cadweld mold with sleeve for #10 wire and smaller.

CITY PUBLIC SERVICE BOARD
SAN ANTONIO TEXAS
GAS DEPARTMENT

COPPER WIRE CONNECTION TO PIPE USING CADWELD.

INSTRUCTION SHEET - TYPE TB-3 WELDER**PREPARATION OF SURFACE:**

To obtain a good weld, surface must be bright clean and dry.

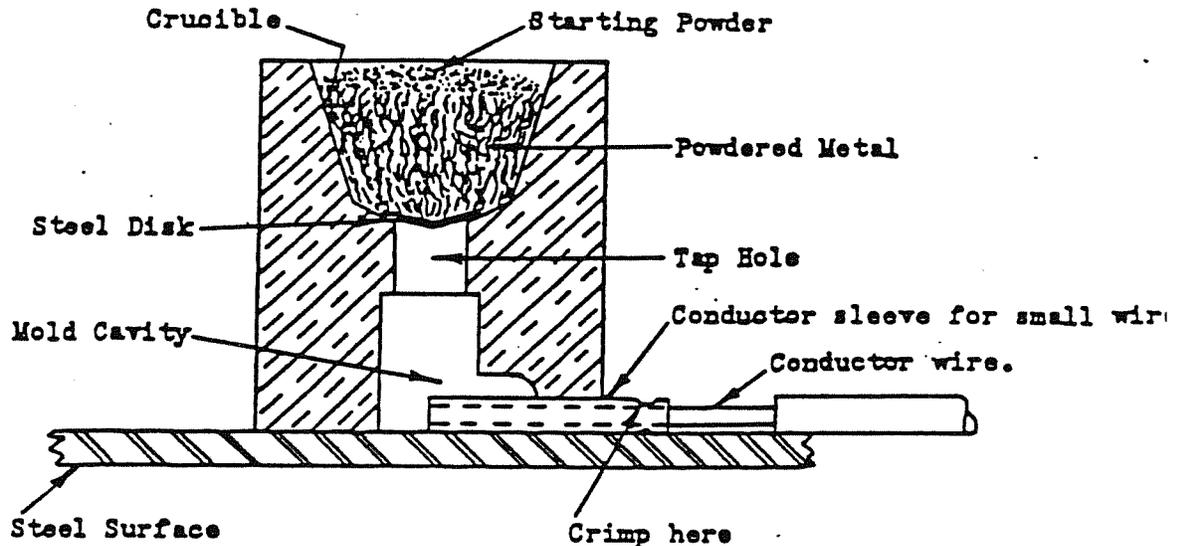
Steel surface should be ground or filed to remove all scale, rust, grease and dirt.

Galvanized steel must be cleaned with emery cloth to remove oxide.

PREPARATION OF WIRE:

Strip the insulation from the conductor and scrape until wire is bright and clean.

For #10 and smaller sizes, place the wire in a copper sleeve, ends flush, and crimp the sleeve tightly to the wire at the insulation to provide additional mechanical strength at the weld.

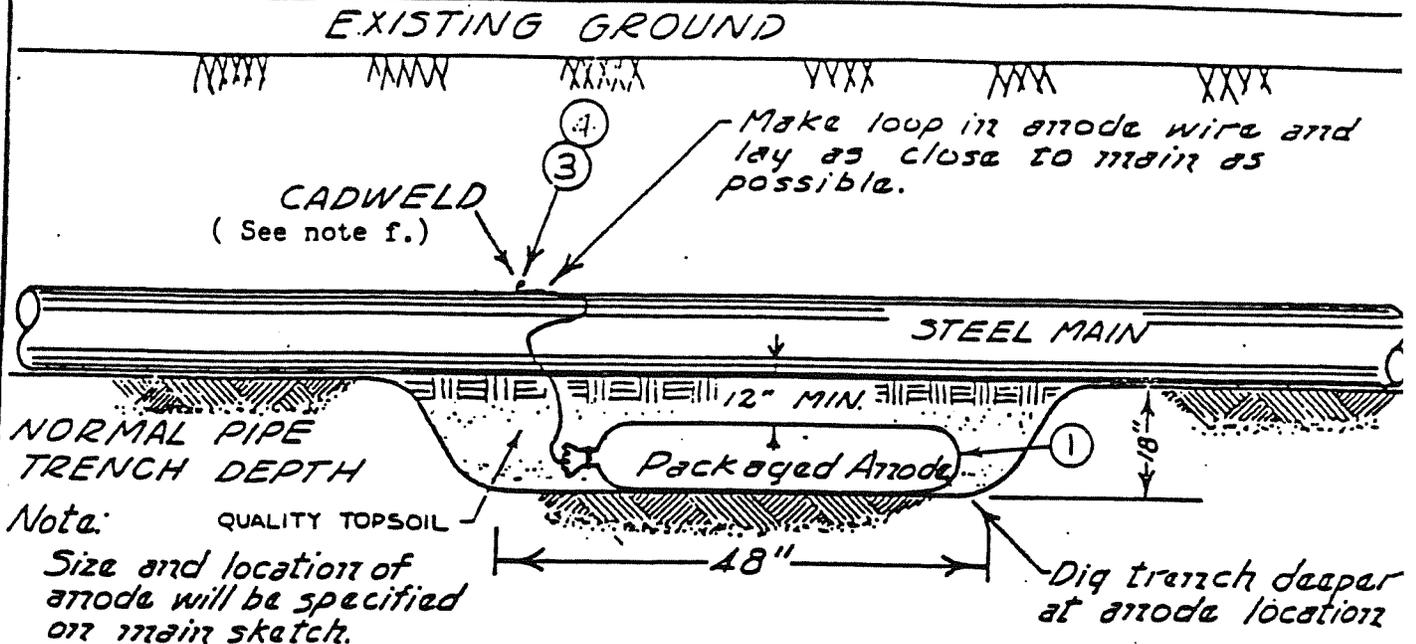
**WELDING PROCEDURE:**

- (1) PLACE WELDER OVER CLEAN STEEL SURFACE and insert the wire until it is under the CENTER of the tap hole.
- (2) COVER TAP HOLE WITH STEEL DISK.
- (3) DUMP CARTRIDGE IN CRUCIBLE AND CLOSE COVER. (Tap bottom of cartridge to be sure starting powder is emptied). Replace empty cartridge in box to keep remaining cartridges in an upright position.
- (4) HOLD DOWN ON WELDER TO PREVENT LEAKS AND IGNITE WITH FLINT GUN. Jerk gun away to prevent fouling. Should gun become fouled, soak in Spirits of Ammonia.
- (5) DO NOT REMOVE WELDER UNTIL METAL HAS SOLIDIFIED.
- (6) ALL SLAG MUST BE CLEANED FROM MOLD BEFORE MAKING NEXT WELD.

Note: Wet or damp molds produce porous welds. Mold can be dried out by firing a charge before making the desired weld.

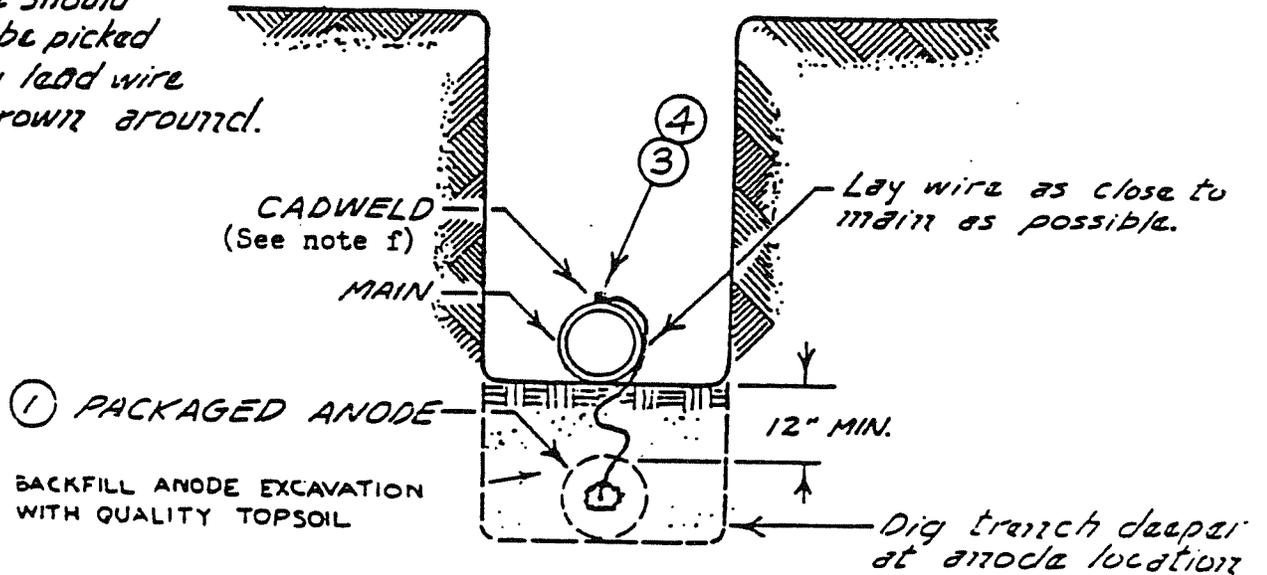
4.5

PACKAGED ANODES



Nota: QUALITY TOPSOIL
 Size and location of anode will be specified on main sketch.

Anode should never be picked up by lead wire or thrown around.



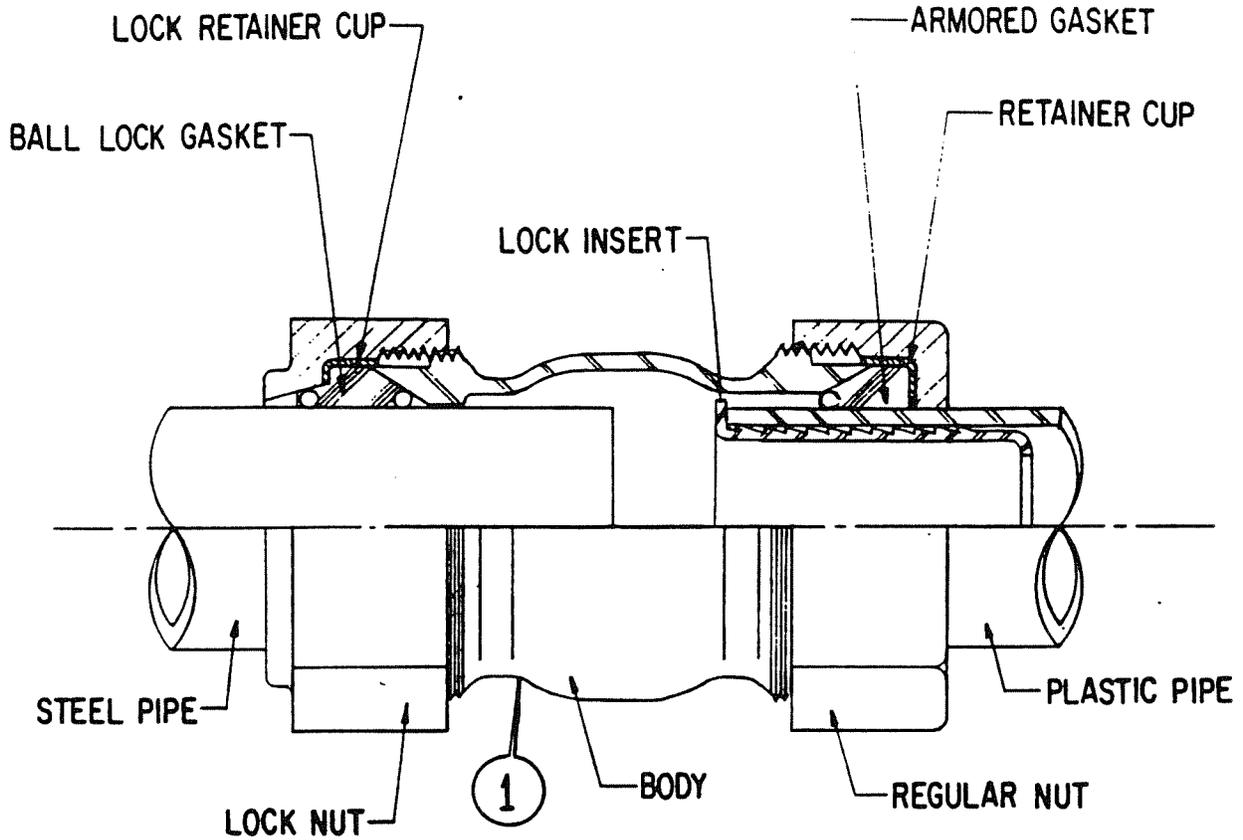
NOTES:

- a. Cadweld connection to be primed and coated carefully.
- b. Packaged anode should be covered with fine soil containing no rocks, clods, or sand.
- c. Pour 5 gallons of water over anode location and camp thoroughly.
- d. Provide test leads when specified. (See test lead standard)
- e. Anode specification sheet will be attached to main order, and is to be completed by the main construction foreman..
- f. Where plastic main is installed in place of steel, use tee splice to connect anode wire to tracer wire.

ISSUED	DATE	APPROVED	CITY PUBLIC SERVICE BOARD CONSTRUCTION STANDARD (GAS)	DRAWING DS-33
REVISED	12-14-77	J. J. C.		G-S-171-1-2

4.5

PLASTI-LOK TRANSITION COUPLING INSTALLED



STEEL TO PLASTIC

AVAILABLE SIZES: 1", 1 1/4", 2"

	DATE	APPROVED	CITY PUBLIC SERVICE BOARD CONSTRUCTION DRAWING (GAS)	DRAWING DS-34
ISSUED	9/81	GRS		G-S-507-4-Ø
REVISED				

**CPS ENERGY
EXHIBIT GAS-5
COMPENSATION SCHEDULE
CONSTRUCTION OF NATURAL GAS DISTRIBUTION FACILITIES**

PROJECT NAME: South Laredo Bridge

W.R. #: 1877568

NOTE A: For each of the items below, the Contractor's work is to include: trenching, joining, testing, coating steel, connecting new pipe to existing pipe and all necessary fittings for tie-ins such as, stopper fittings and 3-way stopper tees, sand padding, backfilling and compacting to consistency of original soil, installing all necessary cathodic protection devices such as CPTLB's and anodes, replacing paving, curbs, and sidewalks removed or damaged during construction, and cleanup as may be necessary in each instance.

NOTE B: Trenching is considered to be the normal method of service installation and is required on all service adjustments. A gas service can be rerun by INSERTION, when the old service is PULLED from the riser to one foot inside the property line, ONLY at the discretion of the CPS Inspector.

NOTE C: Bid quantities shown are estimates by CPS. Per foot prices shall be applied to the actual distance measured along the top of the trench or the actual length of the bore, as applicable.

NOTE D: Unit prices shall include insurance costs. CPS' insurance requirements are specified in Exhibit GAS-1.

ITEM NO.	DESCRIPTION	UNIT	UNIT PRICE	BID QUANTITY	TOTAL PRICE
1.	Rerun and Lower Gas Service Off New Main to Meter, Sizes 1/2" thru 4" (including replacing riser if necessary).				
	Long Side	1 ea.	\$ _____	X 1	= \$ _____
2.	Install Gas Main or Casing (Distance As Measured Along the Top of Trench)				
	8" Plastic Pipe and Tracer Wire	1 ft.	\$ _____	X 198	= \$ _____

The COST to abandon the existing main(s) is not an ADDITIONAL item and is to be included in the Unit Price(s) for this item.

TOTAL COST: \$ _____

COMPANY: _____

PREPARED BY: _____

TITLE: _____

DATE: _____

EXHIBIT GAS-7

CPS Energy Covered Tasks Regulated by 49 CFR Part 192

<u>Tasks Regulated By 49 CFR Part 192</u>	<u>CFR 192</u>	<u>ReQual Interval</u>	<u>Tasks Regulated By 49 CFR Part 192</u>	<u>CFR 192</u>	<u>ReQual Interval</u>
Examining PE pipe for defects	192.59	3 year		192.287	3 year
Visually inspecting metallic components for defects	192.144	3 year		192.305	3 year
Welding	192.225	6 month		192.307	3 year
	192.225	-----		192.309 192.713	3 year
	192.241	3 year		192.311	3 year
	192.243	3 year	Installation of pipe in a ditch	192.319	3 year
	192.243	3 year	Inserting PE pipe into a casing	192.321	3 year
Repair or removal of weld defects	192.245 192.715	6 month	Installing customer meters and regulators	192.357	3 year
Making welded joints	192.273	6 month	Installation of service lines	192.361	3 year
Inspecting welded joints	192.273	3 year	Installation and maintenance of cathodic protection systems	192.453	3 year
Joining PE pipe by heat fusion or mechanical joint	192.281	1 year		192.457	-----
Qualifying PE pipe joining procedures	192.283	1 time		192.457	3 year
	192.285	-----	Inspecting pipe coating	192.459 192.461	3 year
	192.285	-----		192.465	3 year
Testing cathodic protection system with pipe-to-soil reads	192.465	3 year	Line locating and marking pipelines	192.614	3 year
Inspect interference bonds, diodes & reverse current switches	192.465	3 year		192.615	-----
Remedial actions to correct cathodic protection deficiencies	192.465	3 year		192.615	3 year
Connecting test lead wires to the pipeline ^{1,2}	192.471	-----	Making safe a pipeline emergency	192.615	3 year
Taking action to minimize the effect of stray currents	192.473	3 year		192.615	-----
	192.475	3 year		192.619 192.621	3 year
Cleaning and coating pipe for control of atmospheric corrosion	192.479	3 year		192.625	3 year
	192.479	3 year		192.625	3 year
	192.479 192.483	3 year	Tapping pipelines under pressure	192.627	3 year

Covered Tasks (cont)

Pipeline pressure testing	192.503	3 year	Purging of pipelines	192.629	3 year
	192.605	3 year			
	192.605	-----			
²	192.605	-----	Abandoning or deactivating pipeline facilities	192.727	3 year
Starting up and shutting down any part of a pipeline	192.605	3 year			3 year
Taking precautions against hazardous atmospheres in trenches ^{2,3}	192.605	-----			3 year
Recognizing safety-related conditions that require reporting	192.605	3 year			3 year
	192.605	3 year			3 year
	192.605	3 year	Prevention of accidental ignition	192.751	3 year
	192.613	3 year			

¹ Not an operations or maintenance task

² Does not affect the operation or integrity of the pipeline

³ Not an activity performed on the pipeline

⁴ Not required by CFR Part 192

Any Contractor employed by CPS Energy to perform a covered task will have their employees qualified by an approved consortium or training provider. CPS Energy will require Contractor to supply a list of all qualified personnel and may require the Contractor to supply the qualified employee with a qualification card stating tasks that employee is qualified for, the qualification date, qualification method and the name of the qualifier.

CPS Energy will accept qualification of Contractor employees by any approved combination of the following methods:

- (a) approved qualification and training program (i.e. TEEX/TGA)
- (b) approved certifications (i.e. AWS Certified Welding Inspector, ASNT)
- (c) field evaluation
- (d) work performance history (See Note); and
- (e) other forms of assessment approved by CPS Energy

Contractor employee will be subject, at a minimum, to the same requalification intervals as CPS Energy employees. CPS Energy shall have the right to require removal of any employee of Contractor, or of Subcontractors, who in the CPS Energy representative's opinion, may be incompetent or unqualified to perform work.

Note: Work performance history cannot be the sole method for qualifying an employee after October 28, 2002.

CITY OF SAN ANTONIO
025 UNIT PRICING FORM

PROJECT NAME: Citywide Bridge - S. Laredo
PROJECT NO. 40-00294G

ALT. NO.	ITEM NO.	DESC. CODE	S.P. NO.	BID ITEM DESCRIPTION	UNIT OF MEASURE	APPROX. QUANTITIES	UNIT BID PRICE	AMOUNT	ITEM SEQUENCE NO.
				The City only will accept bid pricing to the hundredths. Any pricing extended out to three decimal points will be truncated to two decimal points in the City's favor.					
COSA ITEMS									
				TREE PRESERVATION (1/2%)	LS	1			
	100	0.2		BOND AND INSURANCE (3%)	LS	1			
	100	0.1		MOBILIZATION (11%) (COSA 40-00294G)	LS	1			
	530	0.1		BARRICADES, SIGNS, AND TRAFFIC HANDLING (3%)	LS	1			
	101	0.2		PREP RIGHT OF WAY (DEMOLITION)	LS	1			
	103	0.1		REMOVE CONCRETE CURB (700 LF < X < 10,000 LF)	LF	440			
	103	0.3		REMOVE CONCRETE SIDEWALKS & DRIVEWAYS (<1,000 SF)	SF	2,070			
	103	0.4		REMOVE MISCELLANEOUS CONCRETE	SF	100			
	107	0.1		EMBANK (FINAL)	CY	2,429			
	108	0.1		LIME TREATED SUBGRADE (6")	SY	953			
	205	0.2		HMAC TYPE B (10")	SY	953			
	205	0.3		HMAC TYPE C (2")	SY	880			
	230	0.1		FLEXIBLE PAVEMENT STRUCTURE REPAIR (1.5")	SY	182			
	450			RAIL (TY PR2)	LF	200			
	500	0.1		CONCRETE CURB	LF	440			
	502	0.1		CONCRETE SIDEWALKS	SY	270			
	503	0.1		PORTLAND CEMENT CONCRETE DRIVEWAY	SY	25			
	512	0.1		ADJUST EXISTING MANHOLE	EA	1			
	515	0.1		FURN AND PLAC TPSL (4")	CY	238			
	516	0.1		SODDING (INCLUDES WATERING)	SY	1,235			
	540	0.1		ROCK FILTER DAM (TYPE 3)	LF	40			
	540	0.6		CONSTRUCTION EXITS (INSTALL/REMOVE)	SY	80			
	540	0.7		CONSTRUCTION PERIMETER FENCE	LF	500			
	540	0.1		CURB INLET GRAVEL FILTERS	LF	20			
	307	0.1		CONCRETE STRUCTURE (HEADWALLS)	CY	20			
	307	0.2		CONCRETE STRUCTURE (SPECIAL JUNCTION BOX)	CY	18			
	401	0.1		REINFORCED CONCRETE PIPE (CLASS III) (12" DIA)	LF	17			
	401	0.1		REINFORCED CONCRETE PIPE (CLASS III) (42" DIA)	LF	34			
	401	0.1		REINFORCED CONCRETE PIPE (CLASS III) (60" DIA)	LF	203			

CITY OF SAN ANTONIO
025 UNIT PRICING FORM

PROJECT NAME: Citywide Bridge - S. Laredo
PROJECT NO. 40-00294G

ALT. NO.	ITEM NO.	DESC. CODE	S.P. NO	BID ITEM DESCRIPTION	UNIT OF MEASURE	APPROX. QUANTITIES	UNIT BID PRICE	AMOUNT	ITEM SEQUENCE NO.
	407	0.4		CONCRETE COLLARS	CY	4			
	403	0.12		SPECIAL INLET (4-WAY)	EA	2			
	505	0.1		CONCRETE RIPRAP	SY	40			
	531	A		SIGNS TO BE REMOVED	EA	3			
	535	0.1		4" WIDE YELLOW LINE	LF	442			
	535	0.2		4" WIDE WHITE LINE	LF	120			
	537	0.6		TRAFFIC BUTTON (TY I C)	EA	12			
	537	0.8		TRAFFIC BUTTON (TY II-AA)	EA	12			
	531	0.5		W10-1 RAILROAD WARNING SIGN	EA	1			

SAWS ITEMS

	100			MOBILIZATION (10%) (SAWS 13-5059)	LS	1			
	101	0.2		PREP RIGHT OF WAY (SAWS 13-5059) (5%)	LS	1			
	550	0.1		TRENCH EXCAVATION SAFETY PROTECTION	LF	206			
	818			8" PVC WATERLINE	LF	174			
	836			PIPE FITTINGS, ALL SIZES AND TYPES	TON	0.5			
	840			8" WATER TIE-IN	EA	2			
	841			HYDROSTATIC TESTING	EA	1			
	844			2" BLOWOFF, TEMPORARY	EA	2			
	856	0.2		8" CARRIER PIPE (OPEN CUT)	LF	32			
	856	0.3		24" STEEL CASING (OPEN CUT)	LF	32			
	1015			SERVICE LINE BREAKS, LEAKS, REPAIRS	EA	1			
	1020			WATER MAIN BREAKS, LEAKS, REPAIRS	EA	1			
	3000			AC PIPE REMOVAL, TRANSP, DISP	LF	40			

CITY OF SAN ANTONIO
025 UNIT PRICING FORM

PROJECT NAME: Citywide Bridge - S. Laredo
PROJECT NO. 40-00294G

CPS ITEMS

	NOTE A:	For each of the items below, the Contractor's work is to include: trenching, joining, testing, coating steel, connecting new pipe to existing pipe and all necessary fittings for tie-ins such as, stopper fittings and 3-way stopper tees, sand padding, backfilling and compacting to consistency of original soil, Installing all necessary cathodic protection devices such as CPTLB's and anodes, replacing paving, curbs, and sidewalks removed or damaged during construction, and cleanup as may be necessary in each instance.							
	NOTE B:	Trenching is considered to be the normal method of service installation and is required on all service adjustments. A gas service can be rerun by INSERTION, when the old service is PULLED from the riser to one foot inside the property line, ONLY at the discretion of the CPS Inspector.							
	NOTE C:	Bid Quantities shown are estimates by CPS. Per foot prices shall be applied to the actual distance measured along the top of the trench or the actual length of the bore, as applicable.							
	NOTE D:	Unit Prices shall include insurance costs. CPS' insurance requirements are specified in Exhibit GAS-1.							
ALT. NO.	ITEM NO.	DESC. CODE	S.P. NO	BID ITEM DESCRIPTION	UNIT OF MEASURE	APPROX. QUANTITIES	UNIT BID PRICE	AMOUNT	ITEM SEQUENCE NO.
	1	1032780*		PIPE PLASTIC 8" IPS SDR 11 STICK	LF	155			
	2	1018417*		FITTING SHORTSTOP 8" WELDING F/USE	EA	2			
	3	1032895*		FITTING TRANSITION 8" STEEL TO PLASTIC	EA	2			
		* Stock Number							

Total Bid Amount:

_____ certifies that the unit prices shown on this complete computer print-out for all of the bid items and the alternates contained in this proposal are the unit prices intended and that its bid will be tabulated using these unit prices and no other information from this print-out.

_____ Acknowledged and agrees that the total bid amount shown will be read as its total bid and further agrees that the official total bid amount will be determined by multiplying the unit bid prices shown in this print-out by the respective estimated quantities shown in the proposal and then totaling all of the extended amounts. _____ agrees to the terms, conditions, and requirements of the bidder's bid proposal.

Signed: _____ Date: _____

Title: _____

