MID VALLEY METROPOLITAN DISTRICT

RULES AND REGULATIONS

Adopted by the Board of Directors
Resolution No. 4, Series of 2013
Dated March 20, 2013

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RULES AND REGULATIONS AMENDMENTS

(Subsequent to March 20, 2013)

Date	Resolution Number	Section(s)

ARTICLE I

1.00 GENERAL

1.01 SCOPE: These Rules and Regulations shall govern the operations and functions of the Mid Valley Metropolitan District.

1.02 PURPOSE: The purpose of these Rules and Regulations is to provide for the administration and operation of the Water and Sewer Systems of the Mid Valley Metropolitan District.

1.03 POLICY: The Rules and Regulations hereinafter set forth will serve the public in securing the health, safety, prosperity, security, and general welfare of the inhabitants of the Mid Valley Metropolitan District.

1.04 DISTRICT MAP. A map showing the boundaries of the Mid Valley Metropolitan District is available for review in the District offices.

1.05 PENALTY: Unless otherwise specifically stated, the penalty for violation of any of these Rules and Regulations shall be a fine of one thousand dollars ($1,000) for each day the violation continues. In addition, the violator shall be liable for reimbursement to the District of any and all actual costs, fees and/or damages the District may incur as a result of the violation, including without limitation, legal and engineering fees. Any penalty levied against a property shall constitute a lien against said property.

1.06 DISTRICT ACTION AT CUSTOMER EXPENSE: The Rules and Regulations of the District require District Customers to take certain actions at their own expense. In the event that a Customer fails or refuses to take such action, unless it is necessary for the District to act immediately to protect the health, safety, and welfare of the general public, the District shall mail a written notice to the Customer or the owner of the property on which District service is or will be received. The notice shall request that the required action be taken within the time specified in the applicable Rule or Regulation or, if no time is specified in the Rules and Regulations, then within a reasonable time as set forth in the notice. If the Customer still has not taken the required action within the allotted time, then the Customer shall be in violation of this Section and shall be subject to the penalty provisions of Section 1.05, above. The District may, but is not obligated to, take the required action and bill the expense to the Customer. The District shall be entitled to pursue all remedies granted to it by these Rules and Regulations and Colorado law for collection of the amounts due to it for taking such required actions on behalf of the Customer.

1.07 WAIVER FOR CAUSE: At its sole discretion, the Board of Directors may waive or modify any requirement, penalty, or liability for costs imposed by these Rules and Regulations. Such waiver or modification shall be only for good cause shown in a written application to the Board and must not cause the applicant or District to violate any federal, state, or local laws. Good cause shown shall include but not be limited to:

A. Evidence that strict enforcement of the requirement, penalty, or liability would result in severe hardship, financial or otherwise, which would outweigh the benefits to the District from such strict enforcement; or

B. Evidence that the applicant will provide or has provided a benefit or benefits to the District that will outweigh the positive impacts of strict enforcement. Only the

Board of Directors is authorized to waive or modify any provision or requirement of the Rules and Regulations. The District expressly disclaims the authority or anyone other than the Board of Directors to provide such waiver or modification. To be effective, any waiver or modification granted by the Board must be reflected in the minutes of a regular or special Board meeting at which the requested waiver or modification was granted.

Further, approval by the District Engineer of designs, plans or other submittals, and acceptance by the Board of designs, plans or other submittals, does not relieve Customers or Developers of their obligation to comply with the District's Rules and Regulations. No deviation from the Rules and Regulations is permissible or will be allowed unless a specific waiver or modification is expressly granted by the Board.

1.08 EFFECTIVE DATE: The effective date of these Rules and Regulations shall be March 20, 2013.

1.09 AMENDMENT: These Rules and Regulations may be amended at any time and such amendment shall be effective as prescribed by the Board at the time of such Amendment, and if not prescribed at the time of Amendment, the Amendment shall be effective immediately upon adoption by the Board.

1.10 INSPECTION OR PURCHASE FEES: These Rules and Regulations shall be available to the public for inspection at the District's office, the Basalt Public Library and the offices of the Attorney for the District. A copy shall also be available for purchase at the District's cost of copy and assembly, not to exceed $0.25 per page, as determined from time to time by the District Board. A copy may also be available free on the District website.

ARTICLE II

2.00 DEFINITIONS

Unless the context indicates otherwise, the meaning of terms used herein shall be as follows:

2.01 ACCESSORY DWELLING UNIT: Guest houses, separate apartments attached to Single Family Residential Units, and other separate residential units associated with Single Family Residential Units and containing their own separate kitchens.

2.02 ACTUAL COST: All direct costs applicable to the construction of a given facility, including surveys, construction, construction observation, preliminary and design engineering, inspection, administrative and legal costs and fees, plan approval fees, as-built drawings, and other costs necessary for completion.

2.03 APPURTENANT: Belonging to, accessory, or incident to, adjunct, appended or annexed to.

2.04 AS-BUILT DRAWINGS: Accurate drawings representing the final installed location of water and/or sewer lines which have been installed in accordance with an agreement or understanding with the District, and prepared in compliance with Article I, Section 3.05 of the Technical Specifications and Procedures of the District in Appendix B.

2.05 AUTHORIZED REPRESENTATIVE: A person employed or designated by the District who is authorized by the Board of Directors to conduct activities and other duties on behalf of the District.

2.06 BEDROOM: Any room in a building or other structure that is used predominantly for sleeping accommodations.

2.07 BOARD and BOARD OF DIRECTORS: The duly elected or appointed Board of Directors of the District, which acts as the governing body of the District.

2.08 BUILDING DRAIN: That part of the lowest horizontal piping of a building drainage system from the stack or horizontal branch, exclusive of storm sewer, extending to a point not less than five feet (5') outside of the building wall.

2.09 COLLECTOR SEWER LINE: Any sewer line owned by the District and designed to collect the flow from two or more sewer service lines in a subdivision, planned unit development, or other defined residential, commercial, or industrial area and to transport that collected flow to a sewer interceptor.

2.10 CONNECTION: Any physical connection of a service line to a pre-approved stubout or interceptor or collector sewer line, regardless of whether raw or potable water use actually commences at the time of connection and regardless of whether the service line is connected to the structure to be served.

2.11 CONTRACTOR: Any person, firm or corporation authorized by the District to perform work and to furnish materials within the District.

2.12 CONVEYANCE OF WATER RIGHTS: The legal process by which legal title to water rights to be dedicated is transferred to the District by appropriate deed.

2.13 CUSTOMER: Any person, company, corporation, governmental authority or agency, or other legal entity: (1) authorized to use raw or potable water or to connect to the District sewer system under a permit issued by the Board of Directors; (2) owning EQRs under the Free Tap Program; or (3) owning EQRs purchased pursuant to a Tap Fee Purchase Agreement.

2.14 DEDICATION: An appropriation of an interest in land or raw or potable water to some public use, made by the owner, and accepted for such use by or on behalf of the public.

2.15 DEPOSIT: Cash, letters of credit, payment and/or performance bonds, or other security for performance, as required by these Rules and Regulations, or as approved by the Board in its sole discretion.

2.16 DEVELOPER: Any land owner or owner's representative who seeks to have the land served by the District, other than an individual Customer.

2.17 DISTRICT: The Mid Valley Metropolitan District.

2.18 DISTRICT ENGINEER: Person or firm that has contracted to do engineering work for the District.

2.19 DUPLEX: Residential structures composed of two Single-Family Residential Units which share a common party wall.

2.20 EQUIVALENT RESIDENTIAL UNIT (EQR): A standard of measurement used by the District in calculating fees and water dedication requirements, based on the amount of water used and/or consumed and sewage produced by a Single Family Residential Unit. The standard volumetric use per day is 350 gallons.

2.21 EVAPO-TRANSPIRATIVE SEWER: Any individual sewer disposal system that processes or disposes of liquid or solid wastes by evaporation from the earth's surface to the atmosphere or by transpiration through plants.

2.22 EXTENSIONS OF SERVICE. Any extension of the District's raw or potable water utility for which a fee is assessed.

2.23 FREE TAP PROGRAM: A program established by the Board of Directors at the formation of the District, whereby the District agreed to waive Tap Fees for existing landowners in the District based on the number of equivalent residential units required for service to each landowner's property at that time. The District maintains a list of the participants in the Free Tap Program, designating the number of EQRs of service awarded to each, whether or not said EQRs have been used, and, if not used, whether said free taps are still valid.

2.24 HISTORICAL USE AFFIDAVIT: A document that sets forth the following information concerning a water right or rights proposed for dedication to the District:

A. The name(s) and address(es) of the owners of the water rights proposed for dedication;

B. A legal description of the land to be annexed or provided with the District's water service;

C. The total number of acres to be annexed or provided with the District's water service;

D. The total numbers of acres presently being irrigated and/or intended to remain in irrigation;

E. A copy of all decrees concerning all water rights appurtenant to the property and/or all water rights proposed for dedication;

F. A copy of any legal decree or judgment which affects the title of those water rights entered since the owner received title to the water rights appurtenant to the property and/or proposed for dedication;

G. A copy of the documents by which the owner receives title to the water rights appurtenant to the property and/or proposed for dedication;

H. A copy of all diversion records for the water rights proposed for dedication; and

I. The owner's statement as to the historic use of the water rights appurtenant to the property and/or proposed for dedication.

2.25 INCLUSIONS: The act of attaching, adding, joining, or uniting a parcel of land within the legal boundaries of the District.

2.26 INTERCEPTOR or TRUNK LINE: A sewer line larger than eight inches (8") in size that conveys wastewater flows from collector lines to the District’s wastewater treatment facility.

2.27 IRRIGATED GREEN SPACE: Any lawn, garden, landscaped area, or open space irrigated by water from the District’s potable or raw water system.

2.28 IRRIGATION MONTHS: Those months of the year when Irrigated Green Space usually requires watering, or from April 1st through October 31st.

2.29 KITCHEN: Any room used to cook, heat, or prepare food, as may be evidenced by the use or existence of the following items: sinks, refrigerators, places for food storage, stoves, ovens, microwave ovens, or hot plates. The Board reserves the right, in its discretion, to designate a given room as a kitchen; provided, however, that the existence of a stove, oven, microwave oven, or other cooking device within a room also containing a sink and refrigerator shall conclusively establish said room as a kitchen.

2.30 LICENSED PLUMBER or PIPE LAYER: The person who has been bonded and provided a license to work by the State of Colorado.

2.31 LINE CONNECTION AGREEMENT: An agreement between the District and a Customer which identifies the terms and conditions by which a Developer or Customer is permitted to connect to the District Water and/or Sewer System and receive water and/or sewer service therefrom via lines that are not accepted by the District or, in the event the District is not the beneficiary of security for the lines, subject to a provision that service will not be extended until acceptance by the District.

2.32 LINE EXTENSION AGREEMENT: An agreement between the District and a Customer which identifies the terms and conditions by which the parties agree to extend the District Water and/or Sewer System lines and permit the Customer to connect to the District Water and/or Sewer System and receive water and/or sewer service therefrom. The line extension agreement shall also include a security provision benefiting the District, and the District will agree to accept dedication of the lines upon completion and approval by District staff.

2.33 LINE EXTENSION FEES: Fees charged by the District for infrastructure installed by the District pursuant to Article IX of these Rules and Regulations and determined by the Board of Directors, based on the size in acres of the property to be served by the new connection, the zoning of the property, the existing and potential uses of the property, the potential EQR demand from the property, and any other similar, relevant factors which the Board of Directors believes should be considered in arriving at an equitable reimbursement to the District.

2.34 MANAGER, DIRECTOR OR ADMINISTRATOR: The person, if any, retained by the Board to administer and supervise the affairs of the District and its employees.

2.35 MAY: is permissive.

2.36 MISUSE: The use of the District Sewer System or raw or potable water in a manner or for a purpose other than its intended use or otherwise in violation of these Rules and Regulations.

2.37 PERMIT: Written permission of the Board of Directors to connect to a public sewer and/or water main of the District pursuant to the Rules and Regulations of the District.

2.38 PERSON: Shall mean any individual, firm, company, entity, society, corporation, association, partnership, group, Developer, or person authorized to represent such person.

2.39 PLAT: A map or chart, prepared and stamped by a surveyor licensed by the State of Colorado, of a piece of land subdivided into lots with streets, alleys, roads, easements, and other such avenues of transportation delineated thereon and drawn to a scale.

2.40 POTABLE WATER: Water that is intended and fit for human consumption, free from impurities in amounts sufficient to cause disease or harmful physiological effects. The bacteriological, chemical and radiological quality shall conform to State of Colorado Drinking Water Regulations.

2.41 PRE-TREATMENT FACILITIES: Structures, devices, or equipment approved by the District and installed for the purpose of removing harmful, untreatable, or prohibited substances from wastes discharged into a District sewer interceptor or collector.

2.42 RAW WATER: Water that has not been treated and is not fit for human consumption and that is primarily intended for irrigation uses.

2.43 RAW WATER SYSTEM: All facilities owned by the District and used for collecting, pumping, or disposing of raw water.

2.44 RAW WATER WORKS: All facilities owned by the District for transporting, distributing, storing, pumping, or measuring raw water.

2.45 REPLAT: To make a change in an original plat.

2.46 SAMPLING: The collection of sewage and/or water samples for analysis.

2.47 SEWAGE: Any liquid waste which may contain organic or inorganic material in suspension or solution originating from within residential, commercial, or industrial buildings, which is discharged into the District Sewer System.

2.48 SEWAGE TREATMENT WORKS: Those devices, facilities or locations to which the District sewage is conveyed by interceptors for the purpose of reducing the pollution content and from which point the sewage effluent leaves the District's sewer facilities.

2.49 SEWER SERVICE LINE: The pipe or line connecting the Customer’s structure to the District’s Sewer System up to and including the saddle and/or wye.

2.50 SEWER SYSTEM: All facilities owned by the District and used for collecting, pumping, treating, and disposing of sewage.

2.51 SHALL: is mandatory.

2.52 SINGLE FAMILY RESIDENTIAL UNIT: (EQR) All single-family homes, individually-billed mobile homes, mobile homes on single lots, and mobile homes established as permanent residences which have no more than one (1) kitchen.

2.53 SUBDIVIDE: To separate a tract of land into two or more lots, tracts, units, parcels, sites, separate interests in common, condominium interests or other divisions for the purpose, whether immediate or future, of transfer of ownership, building, or other development, or for street use by reference to such subdivision or recorded plat thereof.

2.54 SUFFICIENT LEGAL PRIORITY: Indicates that water rights proposed for dedication may reasonably be expected to provide a dependable water supply throughout the season of use in the amount for which they are decreed. In making this determination, factors to be considered shall include, but not be limited to, the adjudication date and appropriation date of the water rights, the decreed use or uses, the historic use of the water under the decree, the physical flow available, and the administration practices of the State Engineer.

2.55 TAP: The connection of a service line authorized by the District to a pre-approved stubout or a water main and/or sewer collector.

2.56 TAP FEE: The fee charged by the District for connecting to the District's lines, used to amortize the District's capital investment.

2.57 TAP FEE PURCHASE AGREEMENT: An agreement whereby Customers of the District agree to purchase a specified number of EQRs of service from the District over specified periods of time.

2.58 TESTING: The analysis of samples of waste water and/or water.

2.59 TRANSFER OF WATER RIGHTS: The conveyance of legal title to water rights to the District, as well as all actions required under the laws of the State of Colorado to be brought in the Water Court to ensure that a dedication requirement is fulfilled. Such action may include, but is not limited to, a change in the type, place, or time of use, a change in the point of diversion, a change from a fixed point of diversion to alternate or supplemental points of diversion, a change from alternate or supplemental points of diversion to a fixed point of diversion, a change in the means of diversion, a change in the place of storage, a change from direct application to storage and subsequent application, a change from storage and subsequent application to direct application, a change from a fixed place of storage to alternate places of storage, or any combination such changes. The term includes transfer of conditional as well as absolute water rights.

2.60 USER: Any person to whom raw or potable water and/or sewer service is served, whether renter, record owner, corporation, company, individual, etc.

2.61 VIOLATION: Any failure to follow, uphold, or comply with the requirements of these Rules and Regulations, intentionally or unintentionally, by act of commission or omission, whether or not the violator knew of the existence of the Rule or Regulation. Unless otherwise stated, each day that a Violation continues shall be considered a separate Violation, subject to the penalties which apply.

2.62 WASTE OF WATER: The use of raw or potable water in quantities or for periods of time in excess of what is required for the intended use.

2.63 WATER: Except where specifically described as “raw water,” all references herein to “water” refer to potable water.

2.64 WATER MAIN: A raw or potable water line owned by the District and installed in a public street, public property, or utility easement, including all structures up to and including the curb stop valve.

2.65 WATER RIGHT: A decreed right to use in accordance with its priority a certain portion of the waters of the State of Colorado by reason of appropriation.

2.66 WATER SERVICE LINE: The pipe or line in compliance with Article III of the Technical Specifications and Procedures of the District in Appendix B connecting the Customer’s structure to a District’s raw or potable water main, up to but not including the curb stop valve.

2.67 WATER SYSTEM: All facilities owned by the District and used for collecting, pumping, treating, and disposing of water.

2.68 WATER WORKS: All facilities owned by the District for transporting, distributing, storing, pumping, treating or measuring water.

2.69 XERISCAPING: A type of landscaping which emphasizes the conservation of water and the use of drought resistant native plants.

ARTICLE III

3.00 OWNERSHIP OF OPERATION OF FACILITIES

3.01 - POLICY: The District is a Colorado Special District, formed and functioning under the authority of C.R.S. §32-1-101 et. seq. The District was created for the diversion, treatment, and distribution of water for domestic and other uses, for the collection and treatment of sewage from District Customers, and for the maintenance, repair and replacement of all mains, hydrants, valves, and necessary service facilities. The District shall not be liable or responsible for inadequate, high, or fluctuating water pressure or for interruption of water or sewer service.

The District shall endeavor to plan for, capitalize and build adequate capital improvements as demand occurs, and shall operate and maintain the Districts' facilities in a sound and economical manner. However, the District shall not be liable or responsible for the consequences of its failure or refusal to accept additional or new service which would exceed the capacity of the District's facilities.

It is the District's basic policy that all water mains and sewer interceptors and collectors shall be publicly dedicated and operated, maintained, repaired and replaced by the District and that service lines and taps shall be installed, owned and maintained by the Customer; provided, however, the District shall reserve and always have a right of access to such service lines, curb stops and other facilities as necessary to carry out its functions. The installation, maintenance and repair of the service line is the responsibility of the Customer. Nothing herein shall be deemed a waiver by the District of the provisions of the Colorado Governmental Immunity Act, C.R.S. §24-10-101, et seq.

3.02 LIABILITY: No claim for damage shall be made against the District by reason of the following: breaking of any service or supply line, pipe, cock, or meter by any employee of the District; the unauthorized acts of any employee of the District; failure of the water supply; shutting off or turning on water in the water mains; the making of connections or extensions; damage caused by water running or escaping from open or defective faucets; broken or frozen service pipes or other facilities not owned by the District; damage to water heaters, boilers, or other appliances resulting from shutting water off, or from turning it on, or from inadequate, high, or fluctuating pressures; or for doing anything to the Water System of the District deemed necessary by the Board of Directors or its agents. The District hereby reserves the right to cut off the water supply or disconnect the sewer service at any time, for any reason deemed appropriate including, but not limited to, any violation of these Rules and Regulations or Board policies as set forth in the District minutes. This paragraph shall not relieve the District from liability for negligence of its employees, if such liability would otherwise have existed.

No claim for damage shall be made against the District by reason of the following:

A. Blockage in the system causing the backup of waste water;

B. Damage caused by “smoking” of lines to determine drainage connections to District lines;

C. Breakage of water mains and/or sewer interceptors or collectors or water or sewer service lines by District personnel or third parties; or

D. Interruption of water and/or sewer service and the conditions resulting therefrom where said interruption of service is brought about by request of claimant, interruption of electrical service or by circumstances beyond the District's control.

E. Damage caused by sewer pressure jetting or other maintenance actions.

3.03 OWNERSHIP: Upon acceptance, all existing and future water mains and/or sewer interceptors or collectors, connected with and forming an integral part of the District Water and Sewer Systems, shall become the property and responsibility of the District. Said ownership will remain valid whether the water mains and/or sewer interceptors or collectors are constructed, financed, paid for, or otherwise acquired by the District, or by other persons.

That portion of all existing and future water service lines extending from the water main to and including the curb stop valve shall be the property of the District. That portion of the service line from the building to the curb stop valve shall be the property of the Customer. The Customer's obligation to bear the expense of installing and maintaining said water service line shall exist whether the service lines are constructed, financed, paid for, or otherwise acquired by the District or any other person. Any damage caused by the homeowner will be the responsibility of the homeowner.

That portion of all existing and future sewer service lines extending from the sewer interceptor to each unit or building connected with and forming an integral part of the District Sewer System shall be and become the property of the Customer. The Customer's obligation to bear the expense of installing and maintaining said sewer service line shall exist whether the service lines are constructed, financed, paid for, or otherwise acquired by the District or by another person. Any damage caused by the homeowner will be the responsibility of the homeowner.

Any provision herein to the contrary notwithstanding, the District reserves and shall at all times have a right of access to all service lines and other facilities necessary for the District to carry out its lawful functions.

3.04 RELOCATION OF SERVICE LINES: In the event the District relocates a water main or sewer interceptor or water or sewer line for which the District has responsibility, it shall be the responsibility of the Customer to relocate the service lines of which he or she has ownership. The Customer's responsibility under this Section includes, but is not limited to designing, constructing, installing, connecting and paying for the relocation of the service lines. The District shall notify the affected Customer(s) in writing of its intention to relocate a water main or sewer interceptor or water or sewer service line within thirty (30) days of the District making such determination. Upon the completion of the District's relocation of its water main or sewer interceptor, or water or sewer service line, the District shall notify the Customer of the completion and the Customer shall have six (6) months from such notification to connect to the relocated main, interceptor, or line, at which time the old main or interceptor, at the District's expense, or service line, at the Customer's expense, will be disconnected from the District's system and abandoned. The District Engineer shall cooperate with the Customer regarding the relocation of the service lines.

3.05 POWERS AND AUTHORITY OF AGENTS: The Director and other duly authorized employees of the District, bearing proper credentials and identification, shall be permitted to enter upon all properties served by the District for the purpose of inspection, observations, measurement, sampling, and testing, or any other reasonable purpose in accordance with the provisions of these Rules and Regulations. The right of entry shall include the right by authorized District employees or agents to verify fixtures, bedrooms, irrigated areas, and install, read, or otherwise gather data from water meter(s) on a Customer's property in order to assist the District in analyzing individual sewage production by the Customer. In addition, upon request, a Customer shall provide the District with any applicable water meter records which document the Customer's water usage, and shall consent to the District obtaining the Customer's water meter records from applicable entities possessing such records.

Except in the case of an emergency affecting the health, safety, and welfare of residents of the District or District property, entry upon the property of Customers shall only be made after reasonable notice and during reasonable business hours. All owners and tenants of property connected to District Water and/or Sewer Systems shall be deemed to have agreed to entry onto such property for the purposes set forth.

ARTICLE IV

4.00 USE OF DISTRICT WATER SYSTEM

No person shall uncover, make any connection with or opening into, use, alter, or disturb any public water main or appurtenances without first obtaining a Tap Permit from the District. All installations for water service from the District shall be made in accordance with these Rules and Regulations, the specifications and procedures set forth in Appendix B, and all federal, state, county and local requirements. Every permanent connection to the District Water System must be inspected by a representative of the District before it is covered. The District shall receive at least twenty-four (24) hours' notice of such inspections and shall charge the fees established in Section 7.12 and Appendix A for such inspections. If a connection to the District Water System is covered before inspection, it must be excavated for inspection at the Customer's expense. The District will mail to the owner of the property on which the uninspected connection is located a written request that such connection be excavated for inspection. If the connection is not excavated for inspection within ten (10) days from the date the request is mailed, the District shall excavate and inspect the new connection at the owner's expense.

4.01 RESPONSIBILITIES OF THE CUSTOMER: Each Customer shall be responsible for maintaining that portion of the water service line extending from the curb valve to each unit or building. Leaks or breaks in such service line must be repaired by the Customer within seventy-two (72) hours after notification of such condition by the District. If satisfactory progress toward repairing the said leak has not been accomplished within such time period, the District's authorized representative may shut off the water service until the leaks or breaks have been repaired. The authority of the District or other appropriate water service provider to shut off a Customer's water service for such purposes shall be deemed consented to by the Customer at the time water and/or wastewater treatment service is provided by the District. Any provision herein to the contrary notwithstanding, the District may, but is not required to, take immediate steps to repair any service line, leak or break which the District determines, in its sole discretion, to constitute an emergency. In such event the District shall recover the cost of such repair from the Customer owning such service line. If the Customer fails to pay any costs for which the Customer is responsible within thirty (30) days of the District mailing notice thereof to the Customer, the District may take such action as is necessary to collect such costs, including the imposition and foreclosure of a lien on the Customer's property, and the District shall be entitled to recover all costs of such collection, including reasonable attorneys' fees, late charges and interest.

All persons having boilers and/or other appliances on their premises depending on pressure or water or on a continual supply of water shall provide, at their own expense, suitable safety devices to protect themselves and their property against a stoppage of water supply or loss of pressure.

4.02 PROTECTION FROM DAMAGE; VIOLATIONS OF RULES AND REGULATIONS: No person shall break, damage, destroy, uncover, deface or tamper with any portion of the District Water System. Any person who shall violate the provisions of this Section may be charged pursuant to applicable state statute or local regulation, and upon conviction thereof shall be fined in an amount as established by the court for each violation. In addition to other penalties expressly provided in these Rules and Regulations, any

person violating this Section of the Rules and Regulations shall also be subject to a fine of up to five thousand dollars ($5,000) per occurrence.

Any person violating any of the provisions of these Rules and Regulations shall, in addition to any and all other remedies and penalties provided for herein or at law or equity, become liable to the Board for any expense, loss or damage occasioned by reason of such violation, including attorneys' and engineering fees and costs.

4.03 WATER METERS: Each Customer's building or unit, as applicable, shall have a primary water meter and may be required to have a sub-meter as described herein:

A. Primary Water Meters: Effective September 1, 2005, prior to the receipt of new water service from the District, the Customer must install, at his or her expense, a primary volumetric water flow meter with radio readout device complying with the specifications set forth in Appendix B. Each water flow meter and radio readout device must identify the building or unit to which it belongs. Beginning September 1, 2005, for all new construction within the District, operational meters with radio readouts that comply with the requirements of this Section are mandatory for a Certificate of Occupancy. Also beginning September 1, 2005, any existing water meter that requires replacement (due to malfunction, etc.) shall be replaced with an operational meter and radio readout complying with the requirements of this Section and the specifications set forth in Appendix B. The meter and installation shall meet the specifications and procedures set forth in Appendix B. Each Customer shall be responsible for the repair and maintenance of his or her meter and radio readout in accordance with subsection (F) of this Section. If a meter cannot be read for any reason (dogs, broken, etc.), the District will estimate high the first month and advise the Owner to correct the problem by the next month. If, for reasons other than a broken meter or radio readout, the District is still unable to get a reading the next cycle, the Customer will be charged up to two hundred dollars ($200.00) per month per EQR; or a standard rate based upon average monthly water use as determined by the District at its sole discretion. The District shall, in its sole discretion, elect which billing method to use. The Customer can return to a metered rate once the District can obtain a proper meter reading.

District Customers with water meters existing and located within the District as of the effective date of this provision [September 1, 2005], which meters are not in compliance with the requirements of this Section, shall have until the first of the following events occurs – (1) the existing meter fails or otherwise requires replacement; or (2) the District replaces the existing meter with one complying with this Section – to comply with the requirements of this Section for a primary volumetric water flow meter with radio readout device.

B. Sub-Meters: In order to facilitate proper accounting of water use records, if the District determines that it is necessary to measure separately the water use data for a particular class of use located on a Customer's property, the District may, in its sole discretion, require the Customer to install a sub-meter by which water flow to the individual class of use can be separately measured. A sub-meter is any meter whose flow reading constitutes a portion of the flow reading of a primary water meter. A radio readout shall be installed with all such sub-meters, and both devices shall be installed in accordance with the District's Rules and Regulations, including without limitation Appendix B, in a location readily

accessible to the District. The Customer shall be responsible for the installation, maintenance; repair and replacement of his or her sub-meter, and any defective or inoperable sub-meter shall be repaired or replaced in accordance with subsection (F) of this Section.

Customers may install voluntary sub-meters for their own use. Any such voluntary sub-meter will not be read by District personnel and shall not be installed with a radio readout. Customers may install sub-meters for any lawful purpose at their own expense. Customers are fully responsible for any damage to the Water System or for water leakage resulting from the installation of a sub-meter. No sub-meter shall be installed on the supply side of the primary water meter. The supply side shall mean in this context any point on the service line or the District line closer to the source of District water than the primary water meter. Customers desiring to install additional water meters on the supply side of their primary water meter to service a property or portion of a property to which a meter reading already applies, or would apply, must apply for additional water taps, creating additional primary meters. Regardless of the number of sub-meters or their respective readings, Customer water on the Water System as part of the installation of a sub-meter shall comply with the District Rules and Regulations, including without limitation Appendix B, except that radio readouts shall not be required on voluntary sub-meters.

C Notification: In the event a Customer elects to install a sub-meter, the District shall be so informed in writing prior to the installation and the location of any proposed readout of the sub-meter shall be reviewed and approved by the District to avoid confusion with the primary meter. All sub-meters shall be clearly labeled as sub-meters.

D. Readings: The District shall be under no obligation to read or record sub-meter readings, but the District may in its own discretion do so. Normally sub-meters shall not be read by the District.

E. Car Wash Sub-Meters: All car washes that are part of a larger service station or structure, or otherwise are not equipped with a separate, primary water flow meter, shall have installed a sub-meter, by which water flow to the car wash can be separately metered. A radio readout shall be installed with all car wash sub-meters. The installation of car wash sub-meters shall comply with the District Rules and Regulations, including, without limitation, the requirements of Appendix B. The Customer shall be responsible for the installation, maintenance, repair and replacement of his or her car wash sub-meter, and any defective or inoperable car wash sub-meter shall be repaired or replaced in accordance with subsection (F) of this Section.

All car washes existing and located within the District as of the effective date of this provision [February 19, 2002], which are not in compliance with the requirements of this subsection (E), shall have until the first of the following events occurs – (1) the car wash is sold; or (2) the expiration of five years from the effective date hereof – to comply with the requirements of this subsection (E) for separate water metering.

F. Maintenance, Repair and Replacement of Water Meters, Sub-Meters and Radio Readouts. Each Customer shall be responsible for the maintenance, repair and replacement of his or her meter and radio readout and any sub-meter (hereinafter collectively referred to in this subsection as "meter or appurtenance"). Any defective or inoperable meter or appurtenance shall be repaired or replaced within ten (10) days following discovery of the need of such repair or replacement. In the event a defective meter or appurtenance is not repaired or replaced by the Customer within the 10 day period as provided, such repair or replacement may be completed by the District and the cost thereof charged to the Customer. If the District detects a problem that is not corrected by the Customer as required herein, the District will first replace the radio readout, charging the cost and expense therefore to the Customer. If that does not correct the problem, the Customer shall allow the District access to his or her water meter or sub-meter, as applicable, in order to test its functioning, which costs and expense shall be charged to the Customer. If the problem is a broken or faulty water meter or sub-meter, then the Customer shall hire a qualified plumber to correct the problem by repairing or replacing the meter or sub-meter, as required. If the Customer fails to take such action within fifteen (15) days, then the District may arrange to have the meter or sub-meter repaired or replaced and charge the costs and expenses therefore to the Customer. The Customer shall allow the District access to the meter or sub-meter and consents to the District's entry for this purpose.

4.04 BACKFLOW PROTECTION DEVICES: Subject to Colorado statute, all water service installations shall include backflow/cross connection prevention devices, in accordance with Article X of the District Specifications and Procedures set forth in Appendix B.

4.05 PRESSURE REDUCING VALVES. All Customers are required to install a pressure reducing valve at the water meter location and to consult with County Building Code requirements for such valves. The Board of Directors of the District may, at its discretion, waive the requirements under this Section. See Appendix B, Article IX (general information) for the requirements for fire sprinkler systems.

4.06 USE OF WATER FROM DISTRICT HYDRANTS: Water from District hydrants may be used for fire fighting, construction, testing, or other purposes on the following conditions:

A. The user must give prior notice to the District of the time, place, approximate amount of water to be used, and method to be used for measuring the water. Except for firefighting purposes, in no event shall use of water from District hydrants exceed 45,000 gallons of water per day per user. The user shall measure the water used with a hydrant meter. A hydrant valve and meter, provided by the District, must be used so that the main hydrant valve is not repeatedly opened and closed.

B. When water from the District hydrants is used by the Basalt and Rural Fire Protection District, any other fire protection entity, or any person for firefighting purposes, the person or fire protection entity shall provide the District with an estimate of the total gallons of water used and the name and address of the property owner for whose benefit the water was used. The property owner may be required to reimburse the District for the cost of all water used for firefighting purposes.

C. The price for water used from District hydrants shall be calculated pursuant to Section 4.06 of these Rules and Regulations.

D. Within five days after completion of the use of water from District hydrants, the Customer shall submit a complete accounting of the use, along with full payment, to the District.

E. Any person who uses water from District hydrants without authorization, or who fails to comply with the rules set out in this Section, shall be subject to the remedies of the District set out in Section 7.16 of these Rules and Regulations, including a fine of one thousand dollars ($1,000.00) per unauthorized use.

4.07 WATER USE RESTRICTIONS: The District reserves, in its sole discretion, the right to impose water use restrictions. In the event such restrictions are activated, all commercial and residential Customers of the District will be subject to the following watering schedule for lawn and garden irrigation from the District's system, based on the last digit of the Customer address:

A. Even Numbered Properties: Tuesday, Thursday & Saturday

B. Odd Numbered Properties: Sunday, Wednesday & Friday

No watering shall be allowed on Mondays or during the hours of 10:00 a.m. and 5:00 p.m. on Tuesdays through Sundays. Customers with newly installed landscaping may be exempted from the watering schedule upon the application for and approval of a special permit by the District, for a fee of fifteen dollars ($15.00). The District Administrator is authorized to review and approve special permit applications. Special permits for newly sodded lawns, new trees and gardens will not exceed fourteen (14) consecutive days. Special permits for newly seeded lawns will not exceed twenty-five (25) consecutive days. Special permit holders are subject to the watering hour restrictions set forth herein.

C. Penalties: Any violation of this Section (watering on the wrong day or time) subjects the offender to the following penalties:

1.	First Violation:	Written warning.
2.	Second Violation:	$ 25 fine.
3.	Third Violation:	$ 50 fine.
4.	Fourth Violation:	$100 fine.
5.	Fifth Violation:	$500 fine.

Successive violations are determined per irrigation season, and not from year to year. Upon discovery of a violation, the District shall provide the Customer with written notice of the violation and assessment of a penalty, if applicable, by certified mail, except notice of a first violation will be sent by regular mail. After a notice of a violation has been given, each day of continued violation is a separate offense. Penalties may be imposed by any of the District's employees or consultants, and payment of penalties is due within thirty (30) days of the date of mailing the notice thereof by the District, unless a written appeal is filed with the District within said thirty days. The decision of the Board of Directors on appeals shall be final. Until paid, all penalties imposed hereunder constitute a perpetual lien against the subject property pursuant to Section 7.13 of the District's Rules

and Regulations and C.R.S. §32-1-1001(j), which lien may be foreclosed in the manner provided by law for foreclosure of mechanics liens.

D. Emergency Curtailment: In the event of an emergency, the Board shall have the authority to restrict any or all of the following (in any order deemed appropriate by the Board):

1. Any and all outside water use;
2. Car washes;
3. High volume water users;
4. All commercial water use;
5. All residential water use, according to schedule set forth in A and B above;

In the event an emergency is declared and the provisions are implemented, the penalties and procedures set forth in subsection C apply; however, the penalties will be doubled.

ARTICLE V

5.00 USE OF DISTRICT SEWER SYSTEM:

No unauthorized person or entity shall uncover, make any connection with or opening into, use, discharge into, alter, or disturb any sewer interceptor or appurtenance without first obtaining a written permit from the District. All installations for sewer service from the District and work upon any portion of the District Sewer System shall be made in accordance with these Rules and Regulations, the specifications and procedures set forth in Appendix B, and all federal, state, county and local requirements. Every permanent connection to the District Sewer System must be inspected by a representative of the District before it is covered. The District shall charge the fees set forth in Section 7.18 for such inspections, which shall be performed upon receipt of at least twenty-four (24) hours' notice to the District. If a permanent connection to the District Sewer System is covered before inspection, it must be excavated for inspection at the Customer's expense. The District will mail to the owner of the property on which the uninspected connection is located a written request that the connection be excavated for inspection. If the connection is not excavated for inspection within ten (10) days after such request is sent, the District will excavate and inspect the connection at the owner's expense.

5.01 RESPONSIBILITIES OF THE CUSTOMER: Each Customer shall be responsible for maintaining the entire length of the service line up to and including the saddle and/or wye. Leaks, stoppage, or breaks in such service line must be repaired by the Customer within seventy-two (72) hours after notification of such condition by the District. If satisfactory progress toward repairing said leak, stoppage, or break has not been completed within such time period, the District's authorized representative may shut off the Customer's water service until the sewer leaks, stoppage, or breaks have been repaired. The authority of the District or other appropriate water service provider to shut off a Customer's water service for such purposes shall be deemed consented to by the Customer at the time water and/or wastewater treatment service is provided by the District. Any provision herein to the contrary notwithstanding, the District may, but is not required to, take immediate steps to repair any service line leak, stoppage or break which the District, may, but is not required to, take immediate steps to repair any service line leak, stoppage or break which the District, in its sole discretion, considers to constitute a health hazard or emergency. In such event, the District shall recover the cost of such repair from the Customer owning such service line. If the Customer fails to pay any costs for which the Customer is responsible within thirty (30) days of the District mailing notice thereof to the Customer, the District may take such action as is necessary to collect such costs, including the imposition and foreclosure of a lien on the Customer's property, and the District shall be entitled to recover all costs of such collection, including reasonable attorneys' fees and costs.

5.02 DISCHARGE RESTRICTIONS - GENERAL: Except as hereinafter provided, no person shall discharge, or cause to be discharged, to any interceptor, any waste prohibited by these Rules and Regulations, or any harmful waters or wastes, whether liquid, solid, or gas, capable of causing obstruction to the flow in sewer lines, damage or hazard to structures, equipment or personnel of the sewage works; inhibiting the biological activity in the waste water treatment facilities; otherwise interfering with the proper operation of the sewage works; constituting a hazard through exposure to the District sewer effluent; or causing the District to be in violation of federal, state or local laws.

5.03 DISCHARGE RESTRICTIONS - PROHIBITED WASTES: No person or entity shall discharge or cause to be discharged into the District Sewer System the following wastes:

A. Water from storm drains, floor drains in garages, roof runoff, drainage collection systems, foundation drains, sumps, surface runoff, sub-surface drainage, or cooling processes.

B. Any oil, grease, or other similar petroleum product which is not water soluble. Such prohibited wastes shall include diluted wastes of such nature, including but not limited to, water or wastes containing grease, oil, hydrocarbons, fatty acids, soaps, fats, or waxes which exceed 50 mg/1 as determined by solvent (Freon) extraction.

C. Explosive materials, including but not limited to, gasoline, kerosene, naphtha, benzene, toluene, xylene, ethers, alcohols, ketones, aldehydes, peroxides, chlorates, perchlorates, bromates, carbides, hydrides and sulfides. Such limitation shall additionally include any waste capable of raising the Lower Explosive Limit (L.E.L.) of the ambient atmosphere in any sewer to five percent (5%) for any two (2) successive readings or to ten percent (10%) for any single reading on an explosion hazard meter.

D. Any solid or viscous substance in quantities or sizes capable of causing obstruction to the flow in the sewer lines or other interference with the proper operation or the District Sewer System, such as, but not limited to, ashes, cinders, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, plastic, wood, unground garbage, whole blood, cattle manure, hair and fleshings, entrails, grit, brick, cement, onyx, carbide, and shredded or whole paper products other than tissue, toilet paper, and other products intended for toilet disposal.

E. Any waste having a temperature higher than one hundred fifty (150°) degrees Fahrenheit (66°Celcius).

F. Any waste having a Ph value lower than 5.5 or greater than 9.0.

G. Any toxic substance, or substance requiring pretreatment, as those terms are defined in 40 Code of Federal Regulations §403, as amended from time to time, unless otherwise covered under this Section.

H. Any radioactive wastes or isotopes.

I. Any noxious or malodorous substance capable of creating a public nuisance.

J. Any wastes having a color concentration in excess of thirty (30) color units, based on the Platinum Cobalt Scale.

K. Any wastes having a flash point lower than one hundred eighty-seven degrees Fahrenheit (187°F) (86°C) as determined by the Tagliabue (Tag.) closed-cup method.

L. Any waste having a five (5) day Biochemical Oxygen Demand which may contain more than 1,000 parts per million by weight as averaged during any twelve (12) hour period.

M. Any wastes containing phenolic compounds over 5 mg/1 expressed as phenol.

N. Any cyanides or compounds capable of liberating hydrogen cyanide in excess of 1 mg/l expressed as hydrogen cyanide from any individual outlet.

O. Any wastes containing sulfides over 3 mg/l expressed as hydrogen sulfide.

P. Any wastes containing toxic or poisonous substances having a twenty-four (24) hour proportionate composite sample concentration, at point of discharge, in excess of the following:

1.	Total Chromium	as	Cr	7.5 mg/l
2.	Copper	as	Cu	4.5 mg/l
3.	Nickel	as	Ni	15.0 mg/
4.	Cadmium	as	Cd	1.2 mg/
5.	Zinc	as	Zn	12.0 mg/l
6.	Iron	as	Fe	15.0 mg/l
7.	Lead	as	Pb	15.0 mg/l
8.	Arsenic	as	As	0.25 mg/l
9.	Manganese	as	Mn	0.25 mg/l
10.	Selenium	as	Se	0.05 mg/l
11.	Silver	as	Ag	0.25 mg/l
12.	Mercury	as	Hg	0.10 mg/l

Q. Any waste that would cause a violation of the District's Discharge Permit.

Any person or entity found to be discharging wastes prohibited by this Section shall be fined ten thousand dollars ($10,000.00) for each day such prohibited discharge continues and for each subsection violated, along with all other remedies available at law or equity, including damages, attorneys' fees and costs.

5.04 SEWER TAP PERMIT PROVISIONS: The District Tap Permit allows discharge into the District Sewer System, through a specified sewer tap, of sewage not otherwise restricted or prohibited by these Rules and Regulations. Spot discharges of recreational vehicle wastes, portable toilet wastes, or any other wastes; and discharges of swimming pool water, must be specifically authorized by the Tap Permit or other written permit. The Tap Permit for swimming pools shall specify the hours when such pools may be drained into the District Sewer System, and may include limits on the amount of chlorine (expressed as mg/1) in such discharge.

5.05 DISCHARGE RESTRICTIONS - SPECIAL REVIEW: On written application from a Customer, the Board of Directors may, at its discretion, specially review a request to discharge into the District Sewer System any waste otherwise prohibited under this Article. Said written application shall include an analysis of the types, amounts, concentrations, and times of discharge of each prohibited waste, and an analysis of the impact of such discharge on the District Sewer System, including the District's sewer effluent. After consultation with the District Engineer, the Board may allow discharge of the prohibited waste, provided such discharge does not violate, or cause the District to violate, federal, state, county or local laws.

If approved, the Board may prescribe the times, places, concentrations, total amounts, fees and charges, and any other conditions under which such prohibited waste may be discharged. When necessary in the opinion of the Board, the Customer shall provide, at his or her expense, such pretreatment facilities as may be necessary to treat such prohibited waste prior to discharge to the interceptor. Plans, specifications, and any other pertinent information relating to proposed pretreatment facilities shall be submitted for the approval of the District and of the State Board of Health, and no construction of such facilities shall be commenced until such approval is obtained in writing. Where pretreatment facilities are provided for any prohibited waste, they shall be maintained in continuously efficient operation by the Customer, at his or her own expense.

When required by the District, the Customer served by a service line carrying prohibited wastes shall install and maintain, at his or her expense, a suitable control access hole in the service line to facilitate observation, sampling and measurement of the wastes. The access hole shall be installed by the Customer and maintained at the Customer's expense. In the event that no special access hole has been required, the control access hole shall be considered to be the nearest down-stream access hole in the interceptor to the point at which the service line is connected.

Grease interceptors or sand/oil/gas interceptors of a design set forth in Appendix B shall be provided when, in the opinion of the Board, or its designated representative, they are necessary for the proper handling of prohibited waste or liquid waste containing grease in an excessive amount, or any flammable wastes, sand, and other harmful ingredients. However, such interceptors shall not be required for dwelling units, unless such waste is generated by said units. Floor drains for automobile repair, automobile mechanics, tire repair, automobile painting, and automobile lubrication facilities shall be prohibited. The uses set forth in Section 5.06 shall require mandatory interceptors. Where installed, the interceptors shall be maintained by the Customer, at his or her expense, in continuously efficient operation at all times. The customer is required to provide pumping records of all pumping activity of grease interceptors to the District whenever the pumping activity occurs.

5.06 MANDATORY INTERCEPTORS. The following uses shall be subject to special review by the District Engineer and required to install state-of-the-art interceptors.

A. Food service establishment: Designs for all drainage systems for commercial establishments serving or preparing food shall be subject to review and written approval by the District Engineer. All food service establishment drainage systems shall include a state-of-the-art grease interceptor and shall be constructed in accordance with the technical specifications as set forth at Appendix B, Article XI, Section 6.00.

B. Car wash: Designs for all commercial car wash drainage systems shall be subject to review and written approval by the District Engineer. All commercial car wash drainage systems shall include a state-of-the-art sand/oil/gas interceptor and shall be subject to best management practices as required and approved by the District Engineer.

5.07 PROTECTION FROM DAMAGE; VIOLATIONS OF RULES AND REGULATIONS: No person shall break, damage, destroy, uncover, deface or tamper with any portion of the District Sewer System. Any person who shall violate the provisions of this Section may be charged pursuant to applicable state statute or local regulation, and upon conviction

thereof, shall be fined in an amount as established by the court for each violation. Any person violating this Section of the Rules and Regulations shall also be subject to a fine of one thousand dollars ($1,000.00) per occurrence, in addition to other penalties expressly provided in these Rules and Regulations.

Any person violating this section of the Rules and Regulations shall, in addition to any and all other remedies and penalties provided for herein or at law or equity, become liable to the Board for any expense, loss or damage occasioned by reasons of such violation, including attorneys' and engineering fees and costs.

ARTICLE VI

6.00 APPLICATION FOR SERVICE

6.01 INCLUSION: Except as hereafter provided, and subject to these Rules and Regulations, service shall be provided only to persons whose property is included within the District. It shall be incumbent upon the applicant to furnish satisfactory evidence of inclusion whenever such evidence is requested by the District. Evidence shall consist of a tax receipt, or certificate in lieu thereof, received from and signed by the County Treasurer. The District shall determine in its discretion whether satisfactory evidence of inclusion has been presented.

An applicant owning land both within and outside the boundaries of the District who desires service must include into the District all of his or her land contiguous to the parcel upon which service is desired, unless the District determines, in its discretion, otherwise.

The District's standard form of inclusion petition will be furnished to the applicant upon request. The applicant shall be required to execute a Special Fee and Cost Reimbursement Agreement (in the form set forth in Appendix C) prior to the District's review of the petition. Inclusion of property shall be accomplished in accordance with the provisions of C.R.S. §32-1-401, et seq., and all costs in connection therewith, including legal and engineering fees, publication and recording costs and all other actual costs incurred by the District, shall be borne by the applicant.

Any applicant for inclusion into the District may be required to enter into a pre-inclusion agreement with the District pursuant to C.R.S. §32-1-402(1)(c) as a condition of the District's approval of the inclusion petition. Said pre-inclusion agreement shall set forth the respective rights and obligations of the applicant and the District with respect to fees, charges, the construction of water mains and/or sewer and interceptors or collectors, and other terms and conditions under which the applicant's property may be included in the District. Any inclusion petition and/or pre-inclusion agreement provided to the applicant by the District shall be signed and returned to the District by the applicant within forty-five (45) days following receipt by the applicant. If the pre-inclusion or inclusion agreement is not executed and returned to the District by the applicant within forty-five (45) days from receipt thereof, the District's prior approval of the agreement shall be null and void and of no further force and effect, and a new request for approval of the inclusion petition and/or pre-inclusion agreement shall be required; provided, however, that the District may extend said 45-day execution deadline prior to its expiration for an additional thirty (30) days upon good cause shown by the applicant.

6.02 SERVICE OUTSIDE THE DISTRICT: The District may, in its sole discretion, furnish service to properties located outside the District Boundaries, but, under no circumstances shall the District construct any water mains and/or sewer interceptors or collectors, at its own expense, to service such properties. No service shall ever be provided to properties located outside the District Boundaries, except upon the express written consent of the Board of Directors. The District shall not be required to extend service outside of the District's Boundaries.

Charges for furnishing service and taps outside the District Boundaries shall be at the minimum rate of one and a half (1.5) times the current service charges for in-District service as provided for in the Rate and EQR Schedule in Appendix A, as the same may

be amended from time to time, or as agreed upon by the District and Customer. These Rules and Regulations shall be applicable to all property owners outside the District who are furnished water and/or sewer service by the District. No connection to the District Water and/or Sewer System shall be permitted until the property owner has agreed in writing to the District Rules and Regulations; provided, however, that the Board of Directors, in its discretion, may charge the higher fees provided for herein for properties not located within the District.

6.03 APPLICATION FOR WATER AND/OR SEWER SERVICE: Any owner of property who desires to have the privilege of water and/or sewer service from the District, whether such person intends to make use of EQRs purchased directly from the District, EQRs purchased under a Tap Fee Purchase Agreement, or EQRs issued under the Free Tap Program, shall submit an application for water and/or sewer service to the District along with any supporting documentation required thereby. The application shall be on the District's standard form and shall contain at a minimum the following:

A. Name, address, and phone number of applicant;

B. Name, address, and phone number of owner of the premises where said connection is to be made or drain or line is to be laid;

C. Location of the proposed connection, drain or sewer lines;

D. Size and type of material to be used and any other information required by these Rules and Regulations governing the particular installation proposed;

E. Statement as to the type of connection and type of materials to be discharged into the District Water and/or Sewer System;

F. The Customer’s consent to entry and water use record availability pursuant to Section 3.05 and consent to water shut off pursuant to Sections 5.01 and 6.01 of these Rules and Regulations;

G. The Customer’s consent to abide by and be bound by these Rules and Regulations, as amended from time to time;

H. Information about the structure(s) to be served to calculate the EQR of sewer service requested, including a plumbing or mechanical plan showing all fixtures with a statement of the proposed use of those fixtures, if so requested by the District.

The application shall be accompanied by any Tap Fee required by these Rules and Regulations and by payment of the final inspection deposit required by Section 6.04, below. Upon approval such application shall constitute a contract; the District shall issue a Tap Permit to the applicant. No tap onto the District Water and/or Sewer System shall be allowed until: the required Tap Fee has been paid; a Tap Permit has been issued; and any and all other applicable fees have been paid. Tap Fees shall be non-refundable, unless expressly agreed to otherwise by the Board.

Any Developer who desires water and/or sewer service from the District for use in a town or county-approved subdivision shall be required to execute a Special Fee and Cost Reimbursement Agreement (in the form set forth in Appendix C) with the District

prior to the District's review of the Application. The Application shall be on the District's standard form, and shall be accompanied by: (1) any Tap Fee required by Section 7.03; (2) payment of the final inspection deposit required by Section 6.04; and (3) a request to enter into a Line Extension Agreement. The Developer shall comply with all conditions of Article VIII (Main Line Extensions) and Article IX (Line Extension Fees and Reimbursements) of these Rules and Regulations.

As noted above, EQRs may be purchased from the District under a Tap Fee Purchase Agreement. In the event the District determines that a Tap Fee Purchase Agreement shall be entered into by and between the District and a property owner, and following approval of such agreement by the District, said agreement shall be executed and returned to the District by the subject property owner within forty-five (45) days from receipt of the agreement. If said Tap Fee Purchase Agreement is not executed and returned to the District by the property owner within forty-five (45) days from receipt thereof, the District's prior approval of the agreement shall be null and void and of no further force and effect, and a new request for approval of the Tap Fee Purchase Agreement shall be required; provided, however, that the District may extend said 45-day execution deadline prior to its expiration for an additional thirty (30) day period upon good cause shown by the property owner.

In the event a Customer desires to increase its level of service and EQRs due to the addition of water fixtures, or desires to abandon and/or decrease the level of EQRs of service (in which case such EQR shall be deemed abandoned for all purposes, including tap fees previously paid), the Customer shall complete a new application for water and/or sewer service pursuant to the provisions of this Section. In the event of a proposed decrease in the EQRs, the water fixtures or other uses included in the proposed decrease must be removed and/or eliminated before such decrease will be approved.

6.04 FINAL INSPECTION / DEPOSIT: Prior to requesting a Certificate of Occupancy from the county or the Town of Basalt, as applicable, the Customer shall request the District to perform a final inspection of the property. During the final inspection, District personnel will inspect the Customer's water meter, backflow prevention device, pressure reducing valve, shut-off valves, sewer clean-out, curb box location and accessibility, and other water or sewer appurtenances required by these Rules and Regulations. The District shall charge the Customer a fee for the final inspection, and the amount of the fee is stated in Appendix A.

In order to ensure that the Customer requests a final inspection in the time-frame required hereby, at the time a Developer or property owner submits an application for water and/or sewer service to the District, the applicant shall pay a final inspection deposit to the District in the amount stated in Appendix A. If the Customer complies with this Section 6.04 by having a final inspection completed prior to the issuance of a temporary or permanent Certificate of Occupancy, then the District shall refund to the Customer the amount of the deposit minus the applicable final inspection fee.

If the Customer fails to request a final inspection as required hereby, then the Customer forfeits the inspection deposit. In addition, if the District determines that a final inspection is due for a property, but one was not timely requested or performed, District personnel shall be entitled to perform the final inspection and to charge the Customer the actual costs therefore. The payment or collection of such actual final inspection

costs shall be subject to the terms and conditions of Section 7.13 of these Rules and Regulations.

6.05 DENIAL OF APPLICATION FOR SERVICE: The District reserves the right to deny service for any or all of the following reasons:

A. The connection of the system to the applicant's existing plumbing would constitute a cross-connection to an unsafe water supply;

B. There has been misrepresentation in the application as to the property and fixtures contained in the property, or the use to be made of the water supply;

C. The service applied for would create an excessive demand or adverse impact on the District Water and/or Sewer System, unless the Customer proposes a means to eliminate such excessive demand or adverse impact to the satisfaction of the District;

D. The Customer has violated these Rules and Regulations;

E. The District does not have any remaining uncommitted capacity in the wastewater treatment plant and/or other water and/or sewer facilities to be utilized by the Customer, as determined by the District.

6.06 WATER AND SEWER SERVICE REQUIRED: The District requires that all Customers connect to both the District's water and sewer services. The District reserves the right to deny service to any Customer that requests only water or sewer service. Water or sewer service shall only be provided separately under exceptional circumstances and upon the express written approval of the Board of Directors. Exceptional circumstances shall include but are not limited to the following:

A. Financial hardship; and

B. Pre-existing well or septic tank in good working condition and in full compliance with all local and state laws and regulations. Provided, however, that the District shall require that connection to the non-connected service (i.e. the pre-existing well and/or septic tank) occur by a date certain or upon failure of the well and/or septic tank, whichever occurs first.

However, the District reserves its right under C.R.S. §32-1-1006(1)(A)(I) to compel the owner of premises located within the District boundaries and within four hundred feet of a District Water or Sewer Line to connect to the District lines whenever necessary for the protection of public health.

6.07 CHANGE IN CUSTOMER SERVICE: A Customer shall file an amended Application for Water and/or Sewer Service with the District prior to making any increase in the size of a structure served by the District or in the type of service received. Examples of such changes are the construction of additions to houses or other buildings, changes in use of an existing structure, adding water using fixtures or appliances, or connecting or additional connections to the District's lines. The District shall collect any additional water rights dedications, tap fees and/or service charges due and owing retroactive to the date of any such change. Customers purchasing real property in the District are strongly encouraged to verify that the amount and type of service for which the District is

currently charging is consistent with the type and amount of service which the seller purports to have paid for and wishes to convey. At any time the District may review actual water and/or sewer usage to determine if such actual usage is greater than that implied by the number of EQR units assessed to the user at the time the application for service was accepted. Winter water use records may be utilized for this purpose. If the District finds greater actual water and/or sewer usage the user shall be assessed a greater number of EQR units to reflect his actual water and/or sewer usage and shall be charged an additional tap fee. In no event shall a refund, credit, or rebate of Tap Fees or Line Extension Fees previously paid be permitted in the event of a decrease in the type or amount of service.

6.08 TRANSFER OF EQR CREDITS: EQR credits obtained under the Free Tap Program or obtained by direct purchase from the District are considered appurtenant to the structure and/or land for which they were obtained and may not be transferred.

6.09 TEMPORARY CONNECTIONS: At the discretion of the Board of Directors, temporary connections to the District Water and/or Sewer System may be permitted, pursuant to terms and conditions established by the Board. Any person wishing to make such a temporary connection must first make an application for service to the District, pay the fees required, have the application approved, and have a Tap Permit issued before making any connection. Each temporary connection shall be subject to inspection by a representative of the District. Unauthorized connections shall be subject to the penalties set forth at Section 7.15.

Temporary connections of construction trailers or non-permanent construction buildings to the District Water System and/or Sewer System may be made for periods not to exceed six months; provided, however, that an extension of such period may be granted at the District's discretion. At the time of making the application for water and/or sewer service, the applicant shall either:

A. Pay the Tap Fee for 1.0 EQR of water and/or sewer service and demonstrate that a Tap Fee for at least 1.0 EQR of water and/or sewer service has been paid for the building under construction; or

B. Demonstrate that a Free Tap for at least 1.0 EQR of water and/or sewer service applies to the building under construction.

The construction trailer or non-permanent construction building shall thereafter be assigned an EQR value of 1.0 for purposes of calculating monthly water and/or sewer service charges. If the applicant pays directly the Tap Fee for 1.0 EQR of water and/or sewer service, that amount shall be credited against the full Tap Fees due and payable for the building under construction. The water service line for a temporary connection to the District Water System shall be no greater than three-quarters of an inch (3/4") in diameter.

ARTICLE VII

7.00 FEES AND CHARGES

The information contained in this Section is pertinent to all charges of whatever nature to be levied for provision of water and/or sewer service inside the District. Said rates and charges shall be established by the Board and shall remain in effect until modified by the Board under the provisions of these Rules and Regulations and under the applicable statutes of the State of Colorado. Nothing contained herein shall limit the Board from modifying rates and charges or from modifying any classification.

7.01 APPLICATION OF THIS ARTICLE: The rates, charges and other information shown herein shall apply only to Customers inside the District and shall in no way obligate the District to provide service outside the District Boundaries under any of the conditions contained in this Article.

7.02 TYPE OF SERVICE: Water service shall be metered by the District. Unless otherwise stated, charges and fees for water and/or sewer service shall be based on EQRs of service calculated in accordance with the EQR Schedule in Appendix A. The charge per EQR shall be at the rates in the District's Rate and EQR Schedule, as the same may be amended from time to time.

7.03 TAP FEE: Except as otherwise determined by the Board, Tap Fees shall be charged to all Customers of the District as follows:

Type of Use	Time of Tap Fee Payment
Single family residence	All Tap Fees payable prior to issuance of a building permit.
Residential uses in mixed use building, multifamily	25% of all Tap Fees payable prior to issuance of a building permit for the building; balance due prior to issuance of the first temporary or final Certificate of Occupancy for any unit by the County or Town, or within twenty-four (24) months, whichever first occurs.
Commercial buildings, commercial uses in a mixed use building	Tap Fees for 1 EQR payable prior to issuance of a building permit and prior to any connection to District's Water and/or Sewer System, whichever first occurs; balance due prior to issuance of building permits for owner/tenant finish.

The Board maintains authority to establish differential Tap Fees in its absolute discretion. Such fees shall be assessed as provided for in the EQR Schedule at Appendix A, as the same may be amended from time to time, or, to the extent Tap Fees or charges are set or determined in the Tap Fee Purchase Agreements, as provided

therein. Upon receipt by the District of payment for Tap Fees, a Tap Permit shall be provided to the Customer.

Except as otherwise provided under the Tap Fee Purchase Agreements, the standard District Tap Fees shall be as set forth in the Rate and EQR Schedule in Appendix A, as the same may be amended from time to time. No tap onto, or service from, the District's Water and/or Sewer System shall be allowed until any Tap Fee required by these Rules and Regulations has been paid and a Tap Permit has been issued. Tap Fees shall be non-refundable, unless otherwise expressly agreed by the Board.

In those situations where a prospective Customer applies for a connection permit for service to a structure not defined in the Rules and Regulations, or where, in the Board's opinion, said structure represents a classification not contemplated in the establishment of the previously defined Tap Fees, the Board shall, at its sole discretion, establish a fair, reasonable and equitable Tap Fee for said structure.

7.04 SERVICE CHARGE: Full service charges, calculated under the District's Rules and Regulations and EQR Schedule, as amended from time to time, shall commence and accrue from the date the Customer makes physical connection to the District Water and/or Sewer System and a Certificate of Occupancy is issued by Eagle County, Garfield County, or the Town of Basalt for the structure(s) served on the Customer's property. For any given month, service charges shall be based on the EQR value applicable during that month to the property being served, and any changes in EQR values shall also result in adjustments in monthly service charges. The Customer shall be liable to the District for payment of such service charges from the date of physical connection, regardless of whether the Customer actually receives or uses District water or sewer service by means of said connection. District sewer charges shall be as provided in the Rate and EQR Schedule in Appendix A.

District monthly water service charges shall be based on an increasing block rate structure, the EQR value applicable to the property, and the quantity of water used during that month. The ascending rate structure is set forth in the Rate and EQR Schedule in Appendix A. In addition to the above water service rates, the Customer will be assessed a base rate as set forth in the Rate and EQR Schedule in Appendix A.

Service charges which accrue on or after the date the Certificate of Occupancy is issued shall be due and payable whether or not the premises are occupied. There shall be no right to refund, rebate, or credit for such charges, except as otherwise stated in this Article.

7.05 PRESSURE ZONE OR OTHER SURCHARGES: Where any defined part of the District depends for its potable water or sewer service on a pumping station or discrete facility owned and maintained by the District, the Board of Directors may establish and charge such Customers a monthly pressure zone surcharge. The zone surcharge shall be based on the pro-rata cost to each applicable Customer of the pumping station or other facility and its maintenance, or other service provided by the District. The Board of Directors has established the following pressure zone surcharges:

A. Aspen Junction Booster Station Surcharge: This booster station provides potable water service to portions of the Aspen Junction Subdivision and other areas adjacent thereto. The area eligible shall include all properties on Hillcrest Drive, all Silverado Townhomes, and the properties on Original Road that are located

above the Booster Station. The monthly surcharge for potable water service to Customers in Aspen Junction Subdivision and all other Customers served by the Aspen Junction Booster Station shall be equal to fifty-seven percent (57%) of the monthly charge for potable water service.

B. River Ranch Station Surcharge: This lift station provides sewer service to the River Ranch Subdivision. The monthly surcharge for sewer service shall be equal to sixteen percent (16%) of the monthly charge for sewer service.

C. Dakota Subdivision Lift Station Surcharge: This lift station provides sewer service to Dakota Subdivision, Eagle Dakota Subdivision, and Blue Lake V. The monthly surcharge for sewer service to all Customers in Dakota Subdivision, Eagle Dakota Subdivision, Blue Lake P.U.D. Filing No. V, and for all other users of the Dakota Subdivision Lift Station, shall be equal to twenty-six percent (26%) of the monthly charge for sewer service.

D. Cerise Ranch Lift Station Surcharge: This lift station provides sewer service to the Cerise Ranch Subdivision. The monthly surcharge for sewer service to all Customers in the Cerise Ranch Subdivision and for all other users of the Cerise Ranch Lift Station shall be equal to thirty-six percent (36%) of the District's monthly charge for sewer service.

E. Sopris Village Lift Station: This lift station provides sewer service to the Sopris Village Subdivision. The monthly surcharge for sewer service to all Customers in the Sopris Village Subdivision shall be equal to twenty one percent (21%) of the monthly charge for sewer service.

F. Willits Lane Lift Station: This lift station provides sewer service to a large portion of the eastern part of the District. The monthly surcharge for sewer service to all Customers upstream of the Willits Lane Lift Station shall be equal to sixteen percent (16%) of the monthly charge for sewer service. This lift station provides sewer service to properties located between Aspen Junction and Sopris Village.

7.06 LOOPED LINE SURCHARGES: Where any defined part of the District depends for its potable water or sewer service on looped lines owned and maintained by the District, the Board of Directors may establish and charge the Customers in that part of the District a Tap Fee surcharge. The looped line surcharge shall be based on a pro-rata cost to each Customer of the looped line and is intended to reimburse the District for a portion of its expenses in constructing the lines. The Board of Directors has established the following looped line surcharges.

A. Valley View and Summit Vista to Old Orchard Lines: These looped lines provide or will provide potable water service to the benefited property including but not limited to the Blue Ridge P.U.D., Kodiak Park, the El Jebel Mobile Home Park and adjacent property, and the Tree Farm. The benefited property is more fully described on a map prepared by the District Engineer which will be made available to the public upon request. The Tap Fee surcharge for potable water service to all Customers served by the Valley View and Summit Vista to Old Orchard looped lines shall be two hundred and sixty dollars ($260.00) per EQR payable at the time Tap Fees are due in accordance with Section 7.03 of the District's Rules and Regulations.

7.07 1041 PERMIT AMENDMENT SURCHARGE: All property included in the District's 1041 Permit by the 1041 Permit Amendment approved by Eagle County on December 4, 2000 shall pay a 1041 Permit Amendment Surcharge in the amount of three hundred dollars ($300.00) per EQR at the time of requesting water and/or sewer service from the District. The 1041 Permit Amendment Surcharge is to reimburse the District for costs it incurred in obtaining the 1041 Permit Amendment. A list of the properties subject to the 1041 Permit Amendment Surcharge is included in Appendix D to these Rules and Regulations.

7.08 PER-GALLON SERVICE CHARGES: Per gallon service charges shall apply to water service from District hydrants as set forth in the Rate and EQR Schedule in Section 1(E) of Appendix A to these Rules and Regulations.

7.09 AMENDED MONTHLY SERVICE CHARGES: In those situations where, in the Board's sole discretion, the monthly service charges shown in the previous articles do not represent a fair, reasonable and equitable charge for the intended use, the Board, at its sole discretion, may adjust said rates.

7.10 STANDBY FEES: The following Customers of the District shall be charged monthly standby fees as established in Appendix A, Section 1(F). For the purposes of this Section, the term "standard monthly service charge" shall not include the pressure zone surcharges set forth in Section 7.05, above.

A. FREE TAP PROGRAM CUSTOMERS: Includes all Customers who have received the right to use EQRs of water and sewer service under the District's Free Tap Program. Such Customers shall commence paying the standby fees set forth under this Section when service is available within 100 feet of their property lines and within 400 feet of any structure to which water or sewer service is to be connected, but the Customer chooses not to physically connect to the District's Water and Sewer Lines. Failure by any Customer to pay such standby fees shall result in cancellation of the EQRs held by the Customer under the Free Tap Program after a hearing held at a regular or special meeting of the Board of Directors. Written notice of the hearing to cancel a Customer's Free Tap or Taps shall be sent to the Customer's last known address not less than ten (10) days prior to the hearing. The notice shall specify the place, date, and time of the hearing, and the reasons for cancellation of the Free Tap or Taps. At the hearing, the Customer shall have the opportunity to present testimony and other evidence to the Board. Any cancellation of the Customer's Free Tap or Taps shall be carried out by formal written resolution of the Board.

B. TAP FEE PURCHASE AGREEMENT CUSTOMERS: Includes all Customers who have purchased EQRs of water and sewer service pursuant to Tap Fee Purchase Agreements with the District. In accordance with the Tap Fee Purchase Agreements, such Customers shall begin paying the standby fees set forth under this Section when the District service lines are extended to within 100 feet of the Customer's property lines, but they choose not to connect to such lines. For the purposes of this Section, it shall be assumed that the first EQRs purchased by a Tap Fee Purchase Agreement Customer shall be the first EQRs used by that Customer when any connection to the District lines is made. In the event that any Customer fails to pay the standby fees required under this Section, the District shall be entitled to pursue all remedies provided by statute or under the applicable Tap Fee Purchase Agreement.

C. SYSTEM DEVELOPMENT FEE PURCHASE AGREEMENT CUSTOMERS: Includes all Customers who have purchased EQRs of water and sewer service pursuant to System Development Fee Purchase Agreements with the District. In accordance with the System Development Fee Purchase Agreements, such Customers shall commence paying the standby fees set forth under this Section three (3) years after the purchase of such EQRs, if District service lines have been extended to within 400 feet of the Customer's property lines, but they choose not to physically connect to the District lines. For the purposes of this Section, and in accordance with the System Development Fee Purchase Agreements, it shall be assumed that the first EQRs purchased by a System Development Fee Purchase Agreement Customer shall be the first EQRs used by that Customer when any connection to the District lines is made. In the event that any Customer fails to pay the standby fees required under this Section, the District shall be entitled to pursue all remedies provided by statute or under the applicable System Development Fee Purchase Agreement.

D. INACTIVE TAP CUSTOMERS: Includes all Customers within vacant structures, with idle water or sewer connections, or whose service has been shutoff for non-payment of service charges or for any other violation of these Rules and Regulations.

At the discretion of the Board of Directors, any Customer who certifies in writing to the Board of Directors that his or her property will be vacant for at least twelve (12) months, or that the District water or sewer connections to the structure will be substantially idle for at least twelve (12) months, may be allowed to pay the standby fees set forth under this Section. This subsection (D) shall not apply to water or sewer service to structures which have not yet received a Certificate of Occupancy or Temporary Certificate of Occupancy.

Any District Customer whose water and/or sewer service has been shutoff by the District for non-payment of service charges or for any other violation of these Rules and Regulations shall be required to pay the standby fees set forth under this Section during the period that service has been shutoff. In no case, however, shall service that has been shutoff due to violation of the District's Rules and Regulations remain disconnected for more than twelve (12) months.

All District Water and Sewer service to the Inactive Taps qualifying for the standby fees under this subsection shall be disconnected, blocked, or turned off. Any such work done by District personnel pursuant to Section 7.17 shall be subject to the fees set forth in paragraphs F(1) and F(2), of the Rate and EQR Schedule in Appendix A. Any unauthorized reconnection, unblocking, or turning back on of District water or sewer service after it has been disconnected, blocked, or turned off pursuant to this subsection shall constitute an unauthorized use or connection pursuant to Section 7.16, subject to the one thousand dollar ($1,000.00) fine under that Section.

E. CONSTRUCTION: Includes all Customers who have purchased EQRs of water and sewer service for anticipated use upon the completion of new construction. During the construction, the District will charge a standby (or construction) fee for District water service and for District sewer service as set forth in the Rate and EQR Schedule in Appendix A. For all residential and commercial uses, the District shall require installation of a temporary meter at the owner's expense to

monitor construction water usage. Such charges terminate upon the issuance of a temporary or final Certificate of Occupancy at which time the service charges described in Section 7.04 shall commence. It is the Customer's responsibility to notify the District within ten business days when a temporary, or final, Certificate of Occupancy has been issued. Failure to notify the District will result in forfeiture of inspection deposit and back charging of service charges will apply.

7.11 PAYMENT OF SERVICE CHARGES: All accounts shall be in the name of the owner of property. Statements for service charges are directed to the owner rather than the occupant unless the owner completes and submits to the District an Authorization for Water & Sewer Charges to be sent in Care of the Tenant or Property Manager form.

When a Customer receives service for a number of units which are provided water service through one water meter, the District shall send only one bill to the Customer for water and sewer service for such units. In no event shall the District bill the owners of individual units within a multiple-use area unless service to each unit is metered separately.

Statements for service charges and/or standby fees shall be rendered to Customers at intervals to be established by the District, but not more frequently than monthly nor less frequently than quarterly. Charges for such things as late payments, turn-on, and turn-off shall be included in the statements. Statements shall be mailed after the specified billing period and shall be due and payable in full fifteen (15) days after the date of the statement. Payments will be deemed late twenty-one (21) days after the date of the statement and will be assessed a delinquency charge of five percent (5%) of the amount due or $15.00, whichever is greater, for each month or part thereof in which such charge remains unpaid; however, in no event shall the delinquency charge exceed twenty-five percent (25%) of the amount due. In addition, interest shall be assessed on late payments (excluding the delinquency charge) at the rate of one and one-half percent (1.5%) per month until the late payments are paid. If any charges remain unpaid for thirty (30) days or more, the District may give the Customer notice that the Customer's water and/or sewer service shall be shut off if the delinquent charges are not paid in full within ten (10) days after the postmark on the notice. The notice shall be sent by regular and certified mail to the Customer's billing address ten (10) days before the date of the hearing and shall specify the date, time and place of hearing, as well as the reason or reasons for revocation of service and the amount of delinquent charges. The hearing shall be held by the District at a regular or special meeting of the Board of Directors at which time the Customer shall have an opportunity to present testimony and evidence to the Board. Within fifteen (15) days of the conclusion of the hearing, the Board shall issue a written Memorandum of Decision, which decision shall be final. Thereafter, the District may revoke service to the property by turning off, disconnecting, or blocking the water and/or sewer Lines serving the property. Such actions shall be subject to the fees set forth in paragraphs F(1), (2), and (3) of the Rate and EQR Schedule in Appendix A.

Any unauthorized reconnection, unblocking, or turning on of District water or sewer service after it has been disconnected, blocked, or turned off pursuant to this Section shall constitute an unauthorized use or connection pursuant to Section 7.16, subject to the one thousand dollar ($1,000.00) fine under that Section.

In addition to the District's right to shut off service, the District may enforce the Customer's payment obligations by any and all other lawfully available means, including suits for collection and/or foreclosure of the District's lien on the Customer's property. In

any event, the District shall be entitled to recover all costs incurred in the collection of delinquent payments, including reasonable attorney's fees, recording fees, filing fees and court costs. Any deposit received by the District for service to the Customer may be applied against delinquent payments.

7.12 PAYMENT OF TAP FEES: Tap Fees due under Tap Fee Purchase Agreements shall be subject to the due dates, penalties, and interest charges set forth in those agreements. In addition to the penalty provided for in Section 7.16, late payments of Tap Fees not arising under Tap Fee Purchase Agreements shall be assessed a delinquency charge of five percent (5%) of the amount due or $15.00, whichever is greater, for each month or part thereof in which such charge remains unpaid; however, in no event shall the delinquency charge exceed twenty-five percent (25%) of the amount due. In addition, interest shall be assessed on late payments (excluding the delinquency charge) at the rate of one and one-half percent (1.5%) per month until the late payments are paid. Statements, letters, notices, or other documents concerning unpaid Tap Fees shall be directed to the owner of the property for which the fee is due. Regardless of any rental agreement, lease agreement, or any other contractual agreement between an owner and occupant, the owner of a property for which a Tap Fee is due shall remain solely liable for payment of that fee.

7.13 MISCELLANEOUS COSTS AND EXPENSES: All costs and expenses incident to the installation and connection of water and/or sewer service lines shall be borne by the Customer. In addition, the Customer shall indemnify the Board for any loss or damage that may directly or indirectly be occasioned by the installation of the water and/or sewer service line. Miscellaneous fees and charges for District services are set forth in the Rate and EQR Schedule in Appendix A.

7.14 LIABILITY FOR PAYMENT COLLECTION, PERPETUAL LIEN: Any and all amounts due to the District including tap fees, service charges, other fees and penalties shall be paid by the owner of the property served. The District shall not be bound by any agreement between an owner and occupant concerning payment of charges, regardless of whether the District has been notified of the agreement. Until paid, all fees, rates, tolls, penalties, and charges shall constitute a first and perpetual lien on or against the property served, and any such lien may be foreclosed in the manner provided by law.

The District shall have the right to collect from any Customer who is delinquent in payment of the Customer's account, all legal, court and other costs and expenses necessary to or incidental to the collection of said account, including reasonable attorneys' fees, filing fees and other costs, and recording fees. A fee in the amount set forth in the Rate and EQR Schedule in Appendix A shall be imposed on any check tendered to the District which, upon presentment to the bank for payment, is returned unpaid due to insufficient funds, an overdrawn or closed account, or for whatever reason. Such fee shall accrue each time a check is returned unpaid.

7.15 SELLER'S AND BUYER'S RESPONSIBILITIES: The District assumes no responsibility for agreements between sellers and buyers of property within the District’s Service Area. It shall be the responsibility of the buyer to ascertain whether appropriate fees and charges for the type and amount of service received from the District have been paid by the seller. Regardless of ownership, failure of the District to collect fees and charges at the time of the issuance of permits, or any other act or omission of the District, unpaid fees and charges shall constitute a first and perpetual lien on and against the property which lien may be foreclosed as provided by law and these Rules and Regulations.

7.16 UNAUTHORIZED USE OR CONNECTIONS: Any person who makes a connection to or otherwise uses the District's water, or discharges into the District Sewer System without first paying the appropriate fees and obtaining the appropriate permits shall be fined one thousand dollars ($1,000.00) for each unauthorized use or connection. This fine shall be in addition to the District's right to charge for all services used, and to any and all other remedies which the District may have.

In addition, the District may require and/or carry out immediate disconnection of the service, in which event the District shall be entitled to collect any and all costs and damages incurred by the District as a result thereof, including the applicable fees set forth in the Rate and EQR Schedule of Appendix A; or the District may authorize connection on such terms and conditions as the District may approve. Should the District be required to pursue any legal proceeding or process with regard to unauthorized connection to the District's system or unauthorized use of District water, the person making the unauthorized use or connection shall be liable for all attorneys' fees, filing fees, recording costs, court costs or other legal expenses incurred by the District.

Any unauthorized reconnection, unblocking, or turning back on of District water or sewer service after it has been disconnected, blocked, or turned off pursuant to this Section shall constitute an additional unauthorized use or connection, subject to an additional fine of one thousand dollars ($1,000.00).

7.17 REVOCATION OF SERVICE: Service shall be revocable by the District upon non-payment of fees owing to the District, or upon failure to comply with the Rules and Regulations of the District. In the event of said non-payment of obligations or non-compliance with the Rules and Regulations, the Customer shall be given written notice of a hearing to revoke service. The notice shall be mailed to the Customer's billing address ten (10) days before the date of the hearing and shall specify the date, time, and place of the hearing, as well as the reason or reasons for revocation of service and the amount of delinquent charges, if applicable. The hearing shall be held by the District at a regular or special meeting of the Board of Directors at which time the Customer shall have an opportunity to present testimony and evidence to the Board. Within fifteen (15) days of the conclusion of the hearing, the Board shall issue a written Memorandum of Decision, which decision shall be final. Thereafter, the District may revoke service to the property by turning off, disconnecting, or blocking the water and/or sewer lines serving the property. Such actions shall be subject to the applicable fees set forth in the Rate and EQR Schedule of Appendix A. The fee for disconnection of sewer service shall be one hundred and fifty dollars ($150.00) each plus the District's actual costs of disconnection, and, upon disconnection of water and/or sewer service, the District shall notify the local building authority.

Any Customer who after notification fails to appear at the public hearing on their past due account and has not paid the account to the satisfaction of the Board within the allotted time will be assessed a fine in the amount of one hundred and fifty dollars ($150.00) for the cost of the public hearing. The Board will also continue to terminate service if necessary.

Any unauthorized reconnection, unblocking, or turning back on of District water or sewer service after it has been disconnected, blocked, or turned off pursuant to this Section shall constitute an unauthorized use or connection pursuant to Section 7.16 above, subject to the one thousand dollar ($1,000.00) fine under that Section.

7.17 TURN-OFF SERVICE: Customers desiring that their service be turned off, disconnected, or blocked for such purposes as vacancy of rental property, inactive taps pursuant to Section 7.10(D) or construction shall pay the applicable fees set forth in the Rate and EQR Schedule of Appendix A. Any unauthorized reconnection, unblocking, or turning back on of District water or sewer service after it has been disconnected, blocked, or turned off pursuant to this Section shall constitute an unauthorized use or connection pursuant to Section 7.16 above, subject to the one thousand dollar ($1,000.00) fine under that Section.

7.18 REIMBURSEMENT OF COSTS AND FEES TO DISTRICT: Any person requesting inclusion or exclusion of property from the District, constructing a line extension project, or undertaking any other activity requiring preparation of plats or plans, legal and engineering review and advice, inspections, filing or recording fees, or other out-of-pocket expenses by the District shall be required to reimburse the District for all such costs and fees. Such person shall be required, prior to commencement of the project or activity, to enter into a Special Fee and Cost Reimbursement Agreement substantially similar to that set forth in Appendix C. Pursuant to that agreement, the person shall make such deposit as the Board, in its sole discretion, deems appropriate.

ARTICLE VIII

8.00 MAIN LINE EXTENSIONS

All line extensions shall be made under the observation of the District Engineer and constructed according to the District's specifications and procedures set forth in Appendix B, these Rules and Regulations, and all federal, state, county and local requirements

8.01 MAIN SIZES: The minimum size water main line shall be eight inches (8") in diameter and the minimum size sewer interceptor line shall be eight inches (8") in diameter, except as specifically reviewed and approved by the District Engineer and authorized by the Board.

8.02 APPLICATION FOR LINE EXTENSION: The fees and charges provisions of Article VII of these Rules and Regulations are also applicable to this Article VIII.

It shall be unlawful for any person to construct a line extension within the jurisdiction of the District without first having made formal application to the District for approval and having complied with these Rules and Regulations and any other requirements set forth by the District.

8.03 LINE EXTENSION AGREEMENTS: All line extensions for District water and/or sewer service shall require the execution of a Line Extension Agreement or Line Connection Agreement and a Cost Reimbursement Agreement, in forms approved by the attorney for the District and by the Board, and shall be made under the observation of the District Engineer. Such Agreement shall set forth the respective rights and obligations of the parties regarding the provision of District water and sewer service to the subject property.

Any Line Extension or Line Connection Agreement entered into by and between the District and a property owner following approval of the agreement by the District shall be executed and returned to the District by the property owner within forty-five (45) days from receipt of the agreement. If the Line Extension Agreement is not executed and returned to the District by the property within forty-five (45) days from receipt thereof, the District’s prior approval of the agreement shall be null and void and of no further force and effect, and a new request for approval of the agreement shall be required; provided however, that the District may extend said 45-day execution deadline prior to its expiration for an additional thirty (30) days upon good cause shown by the property owner.

8.04 LOCATION OF LINE EXTENSIONS AND ADDITIONS: Line extensions shall be installed in roads or streets which the County, State Highway Department or other public agency has accepted for maintenance as public rights-of-way, or in easements granted to the District. Prior to the acceptance of water mains and/or sewer interceptors or collectors by the District, all easements necessary for the installation and maintenance of such mains shall be platted or conveyed to the District by warranty deed duly recorded in the County real estate records.

8.05 PROCEDURE FOR LINE EXTENSION CONSTRUCTION BY DEVELOPER: Plans for line extensions shall be submitted to the District and District Engineer along with a written request for a line extension. All plans and specifications which must be approved

by the Board must be submitted to the District at least thirty (30) days prior to the next Board meeting. Said plans shall be reviewed and approved for compliance with the District's service plan and Rules and Regulations and the costs associated for the District's determination of compliance shall be reimbursed by the Customer to the District.

A. SECURITY/IMPROVEMENTS GUARANTY: In order to secure the construction and installation of the water and sewer system improvements for which the owner is responsible, Developer shall furnish the District with a certificate or other evidence, in good and sufficient form approved by the District's attorney, of an irrevocable letter of credit, performance bond, or other security, in an amount equal to the estimated costs of said facilities.

Pursuant to intergovernmental agreements between and among the District and the Town of Basalt, Eagle County, and Garfield County, Developer may also provide the District with a letter of credit in favor of the Town or the County. The letter of credit, if so provided, shall satisfy the requirement of a performance guarantee set forth in this Section. The District shall be a third-party beneficiary of any improvements agreement between the Developer and the applicable local governmental entity, and of any performance guarantee pursuant to such improvements agreement. In the event of a default by the Developer under a line extension agreement with the District, the District reserves the right to complete work on the affected property, using and relying upon the letter of credit as set forth in this Section or as may be agreed upon by the parties. Further, the District reserves its rights to notify the Town of Basalt or Eagle or Garfield County, as may be applicable, in the event of a default of the Developer's obligations under a line extension agreement.

Upon completion or performance of the required water and sewer system improvements and the conditions and requirements of the line extension agreement within the required time, and upon approval of such improvements in writing by the District, the District shall notify the applicable governmental entity that the it may release to the Developer the performance guarantee within ten (10) days of acceptance by the District. If the improvements are not completed within the required time, the performance guarantee may be called by the District, and the monies may be used to complete the improvements; provided, however, that if such guarantee is not sufficient to pay the actual cost, the Developer shall be responsible for the balance. Upon request, the District will notify the applicable governmental entity that a portion of the construction and installation of the improvements which are the subject of the line extension agreement has been completed and that a corresponding portion of the performance guarantee(s) can be released to the Developer. Such release shall be within thirty (30) days after the District's acceptance of that portion of the improvements.

In the event that the District holds its own security for a project, the estimated costs of the public improvements required to be constructed shall be a figure mutually agreed upon by the Developer and the District. In the event the cost of the improvements exceed the estimated cost, the Developer shall be solely responsible for the actual cost. The purpose of the cost estimate is solely to determine the amount of security and shall be revised every twelve (12) months to reflect the actual costs, and the performance guarantee required by this

Agreement shall be adjusted accordingly. No representations are made as to the accuracy of these estimates, and Developer agrees to pay the actual costs of all such public improvements.

B. CONSTRUCTION OBSERVATION: The Developer shall retain, at his sole expense, a licensed professional engineer for appropriate on-site observation to ensure that all sewer improvements are constructed to the satisfaction of the District. Construction observation fees incurred by the District on water and sewer improvements constructed by a Developer shall be paid by the Developer. Such fees shall include the costs of reasonable review of drawings and specifications, meetings, inspections, administration and any other time reasonably required of the District Engineer, attorney, manager, or other authorized representative.

C. AS-BUILT DRAWINGS, DEPOSIT, FORFEITURE: The Developer shall submit, at the Developer's cost, reproducible As-Built Drawings, prepared and submitted according to the specifications and procedures set forth in Section 3.05 of Article I of Appendix B, digital video inspection of the interiors of the extended sewer lines along with a written inspection report and a summary of actual costs incurred by the Developer for the line extension project. No line extension project shall be approved, and no extended water mains and/or sewer interceptors or collectors shall be accepted by the District until satisfactory As-Built Drawings/Inspection Video for the project are received by the District and approved by the District Engineer, which review shall be completed within thirty (30) days of submission by the Developer. The District may deny service through any sewer main or sewer line extension until the above requirements have been met and the main line extension has been accepted by the District and approved by the Board. Submitted Inspection Video of sewer lines shall become the property of the District upon acceptance of the extended sewer lines.

At the same time and in addition to the deposit required for the cost of a line extension project, Developer shall deposit with the District the amount set forth in the Rate and EQR Schedule at Appendix A, to ensure that satisfactory As-Built Drawings and Inspection Video for the project are submitted to and approved by the District. The Board shall determine the amount of the As-Built Drawings deposit based on the District Engineer's estimate of the cost to prepare such drawings for each line extension project. Said Deposit shall not be released back to the Developer until satisfactory As-Built Drawings and Inspection Video are submitted by the Developer and approved by the District Engineer.

In the event that satisfactory As-Built Drawings and Inspection Video are not received by the District within thirty (30) days of the completion of construction, as required by the above provisions, the District shall mail a written notice to the Developer. The notice shall specify the date, time, and place of a hearing in which the Board will consider forfeiture of the As-Built Drawings/Inspection Video Deposit, and the reasons why forfeiture may be required. The notice shall be mailed not less than ten (10) days before the hearing, to the last known address of the Developer. At the hearing, the Developer shall be allowed to present testimony and other evidence. If in the opinion of the Board the Developer's failure to submit acceptable As-Built Drawings/Inspection Video should not be excused, the As-Built Drawings/Inspection Video deposit shall be forfeited as liquidated damages. Such forfeiture of the As-Built Drawings/Inspection Video

deposit shall be ordered by formal written resolution of the Board, and said Deposit shall be used to obtain acceptable As-Built Drawings/Inspection Video of the project; provided however, the Developer shall be responsible for the actual cost of the As-Built Drawings/Inspection Video if such costs is greater than the deposit.

D. WARRANTY: By execution of a Line Extension or Connection Agreement with the District, Developer shall warrant any and all facilities which are conveyed to the District pursuant to this Agreement for a period of two (2) years from the date of acceptance of the facilities by the District. Specifically, but not by way of limitation, Developer shall warrant that:

1. The title conveyed shall be good and its transfer rightful as shown in Appendix D;

2. Any and all facilities conveyed shall be free from any security interest or other lien or encumbrance; and

3. Any and all facilities so conveyed shall be free of any defects in materials or workmanship for a period of two (2) years, as stated above.

E. ACCEPTANCE OF LINE EXTENSIONS: Upon the completion of construction, installation, and connection of a line extension, Developer's engineer of record shall certify to the Board that these Rules and Regulations have been complied with and request the District to accept the facilities. The District Engineer shall confirm in writing to the Board that such facilities have been constructed and installed in accordance with these Rules and Regulations and in accordance with the applicable provisions of federal, state, county, and local laws. Upon satisfactory completion of the above requirements, the District shall formally accept the line extension by a motion entered in the minutes of the Board of Directors. Such acceptance, if given, shall constitute dedication by Developer of such facilities to the District. The parties agree that the District is under no obligation to provide water and/or sewer service to Developer until acceptance and dedication. The Developer shall, upon the District's acceptance, convey such lines and all appurtenances to the District, free and clear of all liens and encumbrances, by Bill of Sale (Sample located in Appendix D).

8.06 SPECIAL STRUCTURES: Special structures required to ensure proper operation of line extensions shall be constructed from designs as approved by the District Engineer in consultation with the Developer and the cost of construction shall be the responsibility of the Developer.

8.07 OVERSIZING: The District may, when it determines that it is appropriate to accommodate future service needs, require the construction of water mains and/or sewer interceptors or collectors of a size larger than the minimum sizes otherwise required by the District for service to a Developer's property. Participation by District in the cost of installation of oversized mains shall be at the sole discretion of the District.

8.08 PRESERVATION OF GRAVITY SEWER SYSTEM: In those instances where pumping stations and force mains are required, the sewer system shall be so designed as to permit eventual connection into a gravity system with a minimum of expense. Where practicable, easements shall be provided and lines constructed to connect into the

gravity system. The District may, in its discretion, require deposits to ensure the eventual construction of gravity lines.

8.09 EXTENSION OF MAIN OR INTERCEPTOR TO DESIGNATED POINT REQUIRED: The Customer or Developer shall extend any water main and/or sewer interceptor constructed pursuant to this article to a point on the property to be designated by the Board so that the District Water and Sewer Systems may continue beyond such property. The Board shall determine the point to which each new main line shall be extended based on the advice of the District Engineer, in accordance with the District Service Plan and the logical extension of service to adjoining properties. The Board shall also take into consideration pre-existing easements and rights-of-way and Developer-dedicated easements and rights-of-way in designating the point to which each main line shall be extended.

8.10 MAIN OR LINE EXTENSION CONSTRUCTION BY DISTRICT: Notwithstanding any provision of this Article, the District itself may, in its discretion, extend mains under such conditions as the Board deems appropriate. The District shall oversee such line extension projects, and, in conjunction with the District engineer and attorney, carry out all necessary planning, evaluation of bids, selection of contractors, financing, right-of-way acquisition, inspections and preparation of As-Built Drawings. Where water mains and/or sewer interceptors or collectors cannot be installed in a street, private drive or common area, and must be installed in easements along adjacent pieces of property, the mains will terminate at point on the line or corner of the property being served which requires the least amount of construction by the District. The District reserves the right to impose a Line Extension Fee surcharge pursuant to Section 9.01 payable by Customers utilizing District constructed water main and/or sewer interceptor extensions to recover the District's actual costs together with interest.

8.11 EXTENSIONS OF WATER MAINS AND/OR SEWER INTERCEPTORS OR COLLECTORS TO SERVE UNPLATTED PROPERTY, INSIDE THE DISTRICT: Extension of water mains and/or sewer interceptors or collectors to serve property already in the District, but not part of a platted subdivision, shall be financed by the Developer or Customer who constructs the mains, subject to the right of reimbursement as hereinafter provided, as otherwise provided by future agreement, or as provided in Tap Fee Purchase Agreements.

8.12 EXTENSIONS OF WATER MAINS AND/OR SEWER INTERCEPTORS OR COLLECTORS OUTSIDE THE DISTRICT LIMITS: No water mains and/or sewer interceptors or collectors shall be extended outside the District limits, except with the purpose of servicing property that is within the District (across islands, or between peninsulas). Exceptions may be granted upon the express consent of the Board of Directors under the terms of a revocable permit.

8.13 CONNECTING WATER MAIN LOOPS: Connecting water main loops and cross-ties within a subdivision shall be constructed and paid for by the Developer. If the connecting loop is such that property outside the subdivision abuts such loops or ties, and connections are made to such lines, the cost recovery provisions of Article IX these Rules and Regulations shall apply.

8.14 SOIL COMPACTION TESTS: Whenever a Developer or Customer seeking water or sewer service from the District is required to obtain a road cut permit from a governmental entity to install a water or sewer line in an existing public road, such

person shall be required to provide the District engineer with soil compaction tests from a registered soils engineer. The soils engineer shall conduct a minimum of one test for each layer or lift for each two hundred and fifty (250) linear feet or less of trench during construction as determined by the District Engineer, to confirm that ninety-five percent (95%) of maximum density based upon ASTM D69 or AASHTO T99 has been achieved. The District engineer will refuse to accept or approve mains which have been installed in public roads if such compaction tests results are not submitted and approved by the District Engineer.

ARTICLE IX

9.00 LINE EXTENSION FEES AND REIMBURSEMENTS

9.01 LINE EXTENSION FEES: In addition to the District's Tap Fee, the District may collect a Line Extension Fee from all Developers or Customers desiring to connect to the District Water and/ or Sewer System through a water main or sewer interceptor extension constructed and funded by the District. The Line Extension Fee shall be based on the size in acres of the property to be served by the new connection, the zoning of the property, the existing and potential uses of the property, the potential EQR demand from the property, and any other factors which the District believes should be considered in arriving at an equitable reimbursement; provided, however, the District's collection of Line Extension Fees under this Article shall not be construed as an obligation to provide operations, maintenance, repair, or replacement of such line extensions.

The Line Extension Fee charged against the benefited property shall not exceed the actual cost, including engineering fees, of the extension. In addition, the District may assess interest at its discretion. All Line Extension Fees charged pursuant to this Section are due and payable at the time a Tap Permit or Line Extension Agreement is issued. The District may charge an administrative fee for collection and reimbursement of Line Extension Fees, not to exceed one hundred dollars ($100.00) per EQR. The District will use its best efforts to collect such fees; provided however, the District shall not be liable for the failure to collect such fees.

9.02 COST RECOVERY TO DEVELOPER: In the event that a Developer constructs a water main and/or sewer interceptor that benefits and serves more than Developer's property, the Developer may be eligible to receive cost recovery from benefited property owners in an amount proportionate to the parties' respective uses of the line, interest free. Subject to approval by the Board, the District will remit to Developer cost recovery fees collected for the use of such line for a period of five (5) years after execution by the Developer and District of the Line Extension Agreement for such line. Upon application prior to the termination of the initial five-year period, and upon District approval, such cost recovery payments shall continue for a maximum of five (5) additional years. The Developer's right to such cost recovery shall permanently cease at that time, regardless of the amount of cost recovery received. In no event shall the cost recovery exceed the Developer's total construction cost of the water main and/or sewer interceptor.

9.03 COST RECOVERY PROVISION IN LINE EXTENSION AGREEMENT: Cost recovery fees shall not be collected by the District or reimbursed to any Developer unless the District and Developer have previously entered into a written Line Extension Agreement containing provisions setting forth at least the following:

A. The amount of interest-free cost recovery to be assessed to benefited property owners.

B. The Developer's right to cost recovery.

C. The procedure by which the District shall collect the cost recovery and forward payments to the Developer, including time limitations.

D. The right of the District to retain an administrative fee not to exceed $100 per EQR for all cost recovery fees collected.

E. The District's obligation to use its best efforts to collect cost recovery fees. In addition, however, an agreement that the Developer will not hold the District itself liable for non-payment of cost recovery fees, or for any failure to collect cost recovery fees from benefited property owners.

All terms and conditions of the Line Extension Agreement shall comply with Articles VIII and IX of these Rules and Regulations.

ARTICLE X

10.00 WATER RIGHT DEDICATION REQUIREMENTS

10.01 INTENT AND PURPOSE: It is the intent and purpose of this Article to require the dedication of water rights prior to the extension of treated water service to new Customers; to ensure that the quantity of water so dedicated be equal to the quantity of water ultimately required to satisfy the uses of the new Customers; to thereby assure an adequate and stable supply of water to District service area; to prevent the abandonment of water rights to the detriment of the District; to ensure the financial stability of the District water utility; and to promote the general welfare of the public.

10.02 BASIC DEDICATION REQUIREMENTS:

A. A dedication or transfer of direct flow and/or storage water rights to the District shall be required prior to the approval of the annexation of any land to the District; prior to all extensions of treated water service outside the District's boundaries; and prior to the District providing or extending any potable water service within the District.

B. The dedication requirement shall be calculated on forms provided by the District in accordance with the EQR Schedule in Appendix A and Section C below. Such forms shall be accompanied by an historical use affidavit. For those persons whose total EQR value, for purposes of compliance with subsection (C) or (D) of this Section, is greater than 30 EQR, no historical use affidavit shall be required; however, an engineering analysis acceptable to the District of the historic use of the water rights proposed for dedication shall be required.

C. The basic dedication requirement for District water service with standard sewer shall be 0.2 acre-feet per year of historic consumptive use from a water right of sufficient legal priority for each EQR of water use calculated under the EQR Schedule in Appendix A.

D. Except as stated below, the basic dedication requirement for District water service with evapo-transpirative sewer shall be 1.0 acre-feet per year of historic consumptive use from a water right of sufficient legal priority, for each EQR of water use calculated under the EQR Schedule in Appendix A. With regard to any EQR value assigned by the EQR Schedule for irrigated green space, the basic dedication shall be 0.20 acre-feet per EQR.

E. The basic dedication requirement for raw water or other uses not listed under the EQR Schedule in Appendix A shall be the quantity of water that ultimately will be required to satisfy the use or uses contemplated by the user. If a party required to dedicate water pursuant to this Article can establish by a preponderance of the evidence that his or her actual use will be less than that calculated under the EQR Schedule, that party shall only be required to dedicate the lesser amount.

F. The person seeking approval of annexation, resubdivision, replatting, or the extension of treated water service outside the District, whether or not that person will be the ultimate user(s), shall satisfy the basic requirement.

G. Sufficient water rights shall be dedicated so as to enable the District to divert a quantity of water, at any point of diversion it may determine, adequate to allow total consumptive use by the District of the quantities of water calculated under subsection (B) hereof.

10.03 PROCEDURE:

A. In accordance with the basic requirements set forth in Section 10.02, the District shall determine, after consultation with a person or persons skilled in the knowledge of water rights, whether the water rights proposed for dedication pursuant to the provisions of these Rules and Regulations will be of sufficient priority under the laws of the state to ensure the District's ability to meet the service demands of the new user. This determination will be aided by a historic use affidavit or engineering report which shall be provided by the new user.

B. The Board of Directors shall have the right, in its sole discretion, to accept or reject any water rights proposed for dedication which it determines to be without sufficient legal priority. If the Board of Directors determines that the water rights proposed for dedication fail to satisfy the basic dedication requirement, or that additional water rights cannot at this time be put to beneficial use or for other good cause are not needed, the following alternatives, or combination thereof, may be used to otherwise satisfy the basic dedication requirement:

1. The person required to comply with the basic dedication requirement may pay to the District a cash amount to be determined by the Board in its discretion.

2. The Board of Directors may, in its discretion, negotiate with the new user to establish other terms or conditions by contract, which shall constitute compliance with the basic dedication requirement of this Article.

C. The new user shall dedicate the appropriate water rights to the District by filing with the Board of Directors an offer thereof. It is the intent of this Article that no water service shall be extended to a new user until the appropriate water rights have been dedicated to the District. However, if there are matters pending resolution in the water court concerning the water rights to be dedicated, or if there is other delay beyond the control of the new user, the Board of Directors shall have the discretion to approve the extension of such water service prior to the dedication of water rights to the District.

D. The new user shall bear all costs and expenses attendant to the dedication of water rights to the District, including legal and engineering fees, filing and recording costs.

10.04 AGRICULTURAL AND OPEN SPACE PROPERTY: This subsection shall apply if the owner of property proposed to be annexed, resubdivided, replatted, or to be served with water service outside the District's boundaries desires to retain the land, or any portion thereof, in agricultural production or as open space prior to development. Such owner shall be permitted to lease back on an annual basis, and for irrigation, stock water, aesthetic, recreational, or historic purposes only, the water rights transferred pursuant to this Article. The terms of the lease shall be negotiated with the District.

10.05 EXCEPTIONS: This Article does not apply to the extension of new treated water service for which the basic dedication requirement has been previously been fulfilled.

ARTICLE XI

11.00 RAW WATER IRRIGATION

11.01 POLICY: It is the policy of the District that use of the District's potable water system for irrigation of all existing parks, green space, lawns, yards, and landscaping should be discouraged. Furthermore, the use of the District's potable water system for irrigation of all parks, green space, lawns, yards, and landscaping is prohibited, except in compliance with the provisions of this Article. It is the intent of this prohibition to encourage the use of raw water irrigation and to provide incentives to make inexpensive irrigation water available to residents of the District.

11.02 PENALTIES: Any use of the District's potable water supply in violation of this Article shall be subject to the penalties provided for in Section 1.05 of these Rules and Regulations. Additionally, in the event that there is significant use of potable water for irrigation through no fault of the District in a development where a raw water system has been installed by a Developer and the building permit applicant has received a water tap fee reduction pursuant to Section 11.03 of this Article, the building permit applicant shall take immediate steps to curtail such use or shall be subject to forfeiture of all or part of said water tap fee reduction and may be required to repay the amount of such tap fee reduction to the District at the discretion of the Board of Directors.

11.03 WATER TAP FEE REDUCTION: By reason of the prohibition on use of potable water supply for outside watering and irrigation imposed herein, the building permit applicant shall be entitled to a reduction of water tap fees in an amount equal to twenty-five percent (25%) of the water tap fees otherwise payable to the District for potable water service. Nothing herein shall require the District to refund any tap fees paid prior to the effective date of this Article XI.

11.04 DESIGN STANDARDS: A raw water system required by this Article shall conform to the following standards:

A. Dedication Standard: Any raw water system to be owned, maintained, or dedicated to the District shall conform to the technical specifications for potable water systems as set forth in Appendix B, except as set forth in Appendix D-1. In lieu of copper service lines, raw water service line materials may conform to AWWA Standard C 901 (latest edition) for polyethylene pressure pipe and tubing. Any Developer submitting an application for dedication of a raw water system to the District shall submit plans of such system in accordance with the procedures set forth in Article 1 of Appendix B of these Rules and Regulations. Acceptance of a raw water system by the District shall be at the sole discretion of the District. The District's ownership and maintenance of such system shall extend only to the Main Lines.

B. Minimum Standard: Where implementation of a raw water system conforming to the Dedication Standard is not feasible or not practical in the sole opinion and discretion of the Board of Directors, a Developer or user may be permitted to comply with the provisions of this Article by installing, owning, operating, and maintaining a raw water system that meets the "Minimum Standard" by complying with the design standards and specifications set forth in the American Water Works Association ("AWWA") Manual - 24, "Dual Water Systems" (AWWA, Denver, CO 1994). Compliance with the Minimum Standard shall

satisfy the requirements of this Article only so long as a raw water system meeting the Dedication Standard remains unfeasible or impractical in the sole opinion of the Board of Directors. The District shall not own, operate, or maintain a system meeting only the Minimum Standard, and the owners and users of such system shall be responsible for its continued operation, maintenance, and repair.

C. Irrigation Plan / Request for Exemption: In extraordinary and unique circumstances, the Board of Directors may exempt property from the requirement of installing, using, or maintaining a raw water system complying with either of the two standards described above, provided that the owner or occupant of such property submits an alternative "Irrigation Plan" satisfactory to the District. The Irrigation Plan shall describe the amount of water used for irrigation on the property, shall state the reasons why a system complying with the Minimum Standard is not feasible, and shall describe measures designed to minimize the use of District potable water for irrigation. The exemption may be permanent or temporary at the Board of Directors' sole discretion. In deciding whether to grant an exemption under this provision, the Board shall consider, among other factors, the following: (1) the contents of the Irrigation Plan; (2) the historical water use on the property; (3) the proximity of the property to other properties served with irrigation water by the District and the potential effect of the exemption on the goal of encouraging other raw water system development; and (4) other measures undertaken with respect to the property – such as xeriscaping – that would encourage reduction of demand for District potable water.

D. Public Notification: Notification shall be provided to inform the public that non-potable water is being used for irrigation and is not safe for drinking, cooking or bathing. The notification shall include posting of signs of sufficient size to be clearly read by the public at all of the entrances to all subdivisions utilizing raw water irrigation systems and in all public application areas (i.e., parks, greenbelts, common areas, etc.). All piping, valves and outlets shall be marked to differentiate raw water from potable water use. Outlets for raw water shall be posted or otherwise marked in a manner that will indicate clearly that the water is unsafe and shall not be used for drinking, cooking or bathing.

11.05 RAW WATER FOR EXISTING DEVELOPMENTS: All Users in existing developments equipped with raw water irrigation systems shall use the raw water system for irrigation and are prohibited from using the District's potable water for irrigation.

11.06 RAW WATER FOR NEW DEVELOPMENTS: Any Developer applying for new water service from the District and submitting for approval a proposed water system shall include a raw water system conforming to the standards described in Section 11.04 as part of the proposed water system. Along with the preliminary drawings and plans for the overall water system as provided in Article II of Appendix B, the Developer shall include a report listing any irrigation water rights owned by the Developer and a map showing any irrigation ditches, pipelines, or other irrigation facilities already serving the land. Plans and specifications for the raw water system are subject to review and approval by the District Engineer and any warranty provisions imposed by the District. However, the raw water system shall be owned, operated, repaired and replaced by the Developer or its successors-in-interest, unless the Board, in its sole discretion, opts to accept dedication of the system. The District shall have the right to refuse potable water service to any Developer until compliance with the provisions of this Section has been satisfied. The District may, at its option, require oversizing of any raw water main in

order to provide for later connection to other development within or outside of the Developer's property. Participation by the District in the cost of installing oversized systems shall be at the sole discretion of the Board of Directors.

A. Water Tap Fee Reduction for Installation of a Raw Water Irrigation System: Any Customer of an existing development installing a raw water system conforming with the Dedication Standard or the Minimum Standard shall be entitled to a water tap fee reduction equal to twenty-five percent (25%) of the tap fees owed by such Customer for potable water service, which water tap fee reduction shall be included in a Line Extension Agreement for the system.

11.07 SYSTEM OWNERSHIP AND OPERATION:

A. Raw Water Irrigation System Meeting Dedication Standard: Upon review and approval by the District Engineer of a raw water system meeting the Dedication Standard, and acceptance of said system by the Board, in its sole discretion, the District may choose own, operate, repair and replace the raw water system, subject to any warranty provisions imposed by the District, and shall charge such fees to the Users of said system as appropriate under the provisions of this Article. However, the District is under no obligation to accept dedication of any raw water systems meeting the Dedication Standard.

B. Raw Water Irrigation System Meeting Minimum Standard: Upon review and approval by the District Engineer of a raw water system meeting the Minimum Standard, the Developer or its successors-in-interest shall be responsible to own, operate, maintain, and repair the raw water system, and the District shall charge such fees to the Users of said system as appropriate under the provisions of this Article.

C. Unauthorized Cross Connections Prohibited: Regardless of ownership, no cross connections to the District's potable water system shall be permitted for raw water systems absent the express, written permission of the District.

11.08 METERING AND ADMINISTRATION OF FEES: All billing by the District for raw water use fees shall be made to the Customer based upon flow meter rates and/or a flat monthly fee (for those properties that do not have meters installed). Flow meters shall be installed at appropriate places (to be determined by the District Engineer) to meter the collective use of raw water by Customers. Open spaces or common element areas typically owned by homeowners associations shall have meters to monitor raw water usage. Single family users shall not be metered.

A. Homeowners associations that pay metered raw water rates or flat fees must own property rights to which a lien could be assessed in the event of nonpayment of raw water use fees. Where such an association does not already exist, any users of District raw water shall form such an association and, if necessary, dedicate or assign property rights to it for the purpose of complying with this provision.

B. Homeowners associations that pay metered rates may bill their members for raw water based upon actual use, flat rates, or whatever method the association deems proper.

All fees, rates, tolls, penalties, or charges of the District shall be paid by the owner of the property served. The District shall not be bound by any agreement between an owner and occupant concerning payment of charges, regardless of whether the District has been notified of the agreement. Until paid, all fees, rates, tolls, penalties, and charges shall constitute a first and perpetual lien on or against the property served, and any such lien may be foreclosed in the manner provided by law.

The District shall have the right to collect from any Customer who is delinquent in payment of the Customer's account, all legal, court and other costs and expenses necessary to or incidental to the collection of said account, including reasonable attorneys' fees, filing fees and other costs, and recording fees. A fee in the amount set forth in the Rate and EQR Schedule in Appendix A shall be imposed on any check tendered to the District which, upon presentment to the bank for payment, is returned unpaid due to insufficient funds, an overdrawn or closed account, or for whatever reason. Such fee shall accrue each time a check is returned unpaid.

11.09 SERVICE CHARGES:

A. Full service charges, calculated under this Article XI and the Rate and EQR Schedule of Appendix A, as amended from time to time, shall commence and accrue from the date the Customer makes physical connection to the Raw Water System. The Customer shall be liable to the District for payment of such service charges from the date of physical connection, regardless of whether the Customer actually receives or uses District raw water service by means of said connection. Service charges that accrue on or after the date of physical connection to the Raw Water System shall be due and payable whether or not the premises are occupied, and there shall be no right to a refund, rebate, or credit for such charges.

B. Raw water service charges shall be as set forth in the Rate and EQR Schedule of Appendix A.

C. All accounts are in the name of the owner of property. Statements for service charges are directed to the owner rather than the occupant unless the owner completes and submits to the District an Authorization for Water & Sewer Charges to be Sent in Care of the Tenant or Property Manager form.

Statements for service charges shall be rendered to Customers at intervals to be established by the District, but not more frequently than monthly or less frequently than quarterly. Charges for such things as late payments, turn-on, and turn-off shall be included in the statements. Statements shall be mailed before the specified billing period and shall be due and payable in full fifteen (15) days after the date of the statement. Payments will be deemed late twenty-one (21) days after the date of the statement, and late payments (excluding any delinquency charges) will be assessed interest at the rate of one and one-half percent (1.5%) for each month, or part thereof, in which such charge remains unpaid. If any charges remain unpaid for thirty (30) days or more, the District may give the Customer notice that the Customer’s raw water service shall be shut off if the delinquent charges are not paid in full within ten (10) days after the postmark on the notice. The notice shall be sent by regular and certified mail to the Customer's billing address ten (10) days before the date of the hearing and shall specify the date, time and place of hearing, as well as the reason or

reasons for revocation of service and the amount of delinquent charges. The hearing shall be held by the District at a regular or special meeting of the Board of Directors at which time the Customer shall have an opportunity to present testimony and evidence to the Board. Within fifteen (15) days of the conclusion of the hearing, the Board shall issue a written Memorandum of Decision, which decision shall be final. Thereafter, the District may revoke service to the property by turning off, disconnecting, or blocking the raw water service lines serving the property. Such actions shall be subject to the fees set forth in the applicable Rate and EQR Schedule in Appendix A.

Any unauthorized reconnection, unblocking, or turning on of District raw water service after it has been disconnected, blocked, or turned off pursuant to this Section shall constitute an unauthorized use or connection pursuant to Section 7.16 of these Rules and Regulations, and subject to the one thousand dollar ($1,000.00) fine under that Section.

In addition to the District's right to shut off service, the District may enforce the Customer's payment obligations by any and all other lawfully available means, including suits for collection and/or foreclosure of the District's lien on the Customer's property. In any event, the District shall be entitled to recover all costs incurred in the collection of delinquent payments, including reasonable attorney's fees, recording fees, filing fees and court costs. Any deposit received by the District for service to the Customer may be applied against delinquent payments.

11.10 MANDATORY POSTING: The Customers and Homeowner Associations served by raw-water irrigation systems shall post and maintain notices to the public warning that the irrigation water is non-potable and is unsafe and shall not be used for drinking, cooking or bathing. The Customer and Homeowner Association shall post such signs in accordance with Section 11.04(D). It is the raw water Customer’s responsibility to ensure that all signs remain in place and in good condition.

11.11 INTERCONNECTED SYSTEMS AND TAP FEES: At the option of the Board, the District may require any new raw water system meeting the Dedication Standard to be connected to a raw water system already owned by the District. The District may establish and collect tap fees for connection to such system on a case by case basis. All such connections shall be undertaken pursuant to the Rules and Regulations of the District, which may require inspections and the installation of meters at the cost of the Customer.

11.12 MAINTENANCE:

A. District Owned Raw Water Systems: The District may at its discretion choose to accept dedication of and own, operate, maintain, and repair raw water systems that comply with the Dedication Standard. Maintenance of District raw water systems shall be governed by the District’s Rules and Regulations and the discretion of the Board of Directors.

B. Privately Owned Raw Water Systems: The Developers or their successors-in-interest shall own, operate, maintain, and repair all raw water systems that comply with the Minimum Standard. Maintenance of private raw water systems shall be governed by the District’s Rules and Regulations and is subject to the

observation, inspection, and approval of the District Engineer. The Developer or its successor-in-interest is required to operate, maintain, and repair the privately owned raw water system in good workmanlike order. If the District deems necessary at the Board's discretion, and after notice and the right to cure have been given, the District has the right, but not the obligation, to perform any maintenance or repair work on a privately owned raw water system and to bill that work to the owner of the system. Payment for such repair work shall be subject to all lien rights of the District and to any other remedy allowed by law or otherwise prescribed in the Rules and Regulations of the District.

11.13 COVENANTS FOR CUSTOMERS OF RAW WATER SYSTEMS: Prior to receiving the water tap fee reduction described in this Section, Customers of raw water systems shall include the following provisions in their restrictive covenants. If the Customers' properties are not already subject to restrictive covenants, new covenants consisting of the following provisions shall be created, accepted, and recorded by the Customers:

A. Outside Use of Potable Water Prohibited: Any outside use of potable water is strictly prohibited. This restriction on use applies when the raw water system is operational and during periods, not to exceed three (3) days, when the raw water system is shut down for maintenance or repair purposes. If the raw water system is shut down for a period exceeding three (3) days, then Customers may commence outside use of potable water, subject to payment for such use pursuant to the District's potable water rates; provided, however, that any outside use of potable water must stop and shall be prohibited once the raw water system becomes operational again.

B. Violations: In the event of any violation of the provisions of this Section, then, in addition to the penalty provision of Section 1.05 of the District's Rules and Regulations, the District shall have the right to levy an assessment or fine of One Hundred Dollars ($100) per day for every day the violation exists and continues. In the event that the violation is continuing or reoccurring, successive fines shall be assessed at such periodic intervals as the District deems appropriate. Fines so assessed shall be due and payable to the District within ten (10) days following notice of the assessment. If not paid within fifteen (15) days of the notice of assessment, the same shall be considered delinquent. All delinquent fines assessed shall bear interest at the rate established by the District from time to time, but in no event less than twelve percent (12%) per annum. The District may further assess a late charge of five percent (5%) for each month the delinquency continues; provided, however, that such late charge shall not exceed twenty-five percent (25%) of the total amount due.

Any such fines, assessment, interest or late charge shall constitute a personal obligation of the owner of the lot or parcel on which the violation occurred, which the District may enforce through an action at law. In addition, the District may record, in the Office of the Clerk and Recorder of Eagle County or Garfield County, Colorado, a Statement of Lien setting forth the name of the owner, the legal description of the lot or the parcel and the amount of the delinquent assessment, which Statement shall be signed and acknowledged by the Secretary of the District and shall be served upon the owner by ordinary mail, at the address of the lot, parcel, or at such other address as the District may have in its records for the owner thereof. Upon the expiration of not less than ten (10) days after mailing of such notice, the District may proceed to foreclose the

Statement of Lien in the same manner as provided for the foreclosure of mortgages on real property. The District shall be entitled to recover as a part of any action (whether a foreclosure action or a personal action) the full amount of all delinquent assessments, together with interest, late charges, costs and expenses of suit, including without limitation its reasonable attorney fees incurred.

The District's rights in the event of a violation of the restrictions on outside water usage provided herein are in addition to any remedy allowed by law or otherwise prescribed in the Rules and Regulations of the District. Without limiting the generality of the foregoing, the District shall have the additional and further right to suspend potable water service and/or raw water irrigation service to any lot owner or user upon not less than ten (10) days advance written notice, pending the correction of any violation or delinquency.

C. Repair of Raw Water Service Lines: Any excavation or repair work on raw water service lines shall be governed by and completed in accordance with the reasonable engineering requirements and specifications of the District and is subject to the observation, inspection, and approval of the District Engineer. Any party proposing to undertake excavation or repair work on a raw water service line shall notify the Mid Valley Metropolitan District of that intent at least twenty-four (24) hours prior to the start of the work in order to give the District the opportunity to observe. No excavation of or repair to raw water service lines shall be completed and covered until the District is notified and given a reasonable opportunity to inspect the work.

D. Covenant Modifications: The covenant provisions regarding raw water irrigation cannot be revoked, amended or modified without the District's consent and approval.

11.14 NO WASTE OR MISUSE: Raw water Customers shall not waste or misuse the District's raw water. If the Board of Directors determines that waste or misuse has occurred, the offending Customer shall be charged in arrears for the twenty-five percent (25%) water tap fee reduction provided to the Customer or building permit applicant. In addition, the Board of Directors may impose a reasonable penalty for waste or misuse in an amount to be determined on a case by case basis. No Customer shall use the District's raw water off of the Customer's property to which it is appurtenant.

11.15 WATER RIGHT DEDICATION REQUIREMENTS: A dedication or transfer to the District of direct flow water rights to be used for raw water irrigation on property to be served by the District shall be required prior to the District extending potable water service to the property. When making such a water rights dedication, the party shall comply with the terms of this Section, as well as Article X of the District's Rules and Regulations.

A. Subject to subsection (B) below, the basic dedication requirement for raw water shall be in accordance with Sections II(D)(1) and (2) of the EQR Schedule in Appendix A, as applicable, or the quantity of water that ultimately will be required to satisfy the use or uses contemplated by the Developer or User. If a party required to dedicate water pursuant to this Section can establish by a preponderance of the evidence that his or her actual use will be less than that calculated under the EQR Schedule, that party shall only be required to dedicate the lesser amount.

B. Sufficient water rights shall be dedicated so as to enable the District to divert, at any point of diversion that it may determine, a quantity of water adequate to provide a total consumptive use by the District of the quantities of water calculated under subsection (A) hereof.

C. The person seeking approval for inclusion, resubdivision, replatting, or the extension of potable water service outside of the District, whether or not that person will be the ultimate user of the raw water system, shall be required to satisfy the basic raw water dedication requirement.

11.16 APPLICABILITY OF DISTRICT RULES AND REGULATIONS: Except where expressly noted otherwise, all references to "water" in these Rules and Regulations shall apply to "potable water" only. However, the following provisions, policies, requirements, and procedures shall apply with equal force to both potable water and raw water regardless of what term is used:

Section 1.02	Purpose
Article III	Ownership and Operation of Facilities (applies in its entirety)
Section 4.02	Protection from Damage; Violations of Rules and Regulations
Section 4.08	Water Use Restrictions
Section 6.03	Application for Water and/or Sewer Service
Section 6.04	Denial of Application for Service
Section 6.05	Change in Customer Service
Section 7.15	Unauthorized Use or Connections
Section 7.16	Revocation of Service
Article VIII	Main Line Extensions (applies in its entirety)
Article IX	Line Extension Fees and Reimbursements (applies in its entirety)
Article X	Dedications (applies in its entirety except where directly contradicted by any provisions of Article XI)

A P P E N D I X A

MID VALLEY METROPOLITAN DISTRICT

FEE AND EQR SCHEDULES

MARCH 2013

Prepared By:

SGM
118 West 6th Street, Suite 200
Glenwood Springs, CO 81601

I. FEE SCHEDULE (as of 7/01/12)

A.	Standard District Tap Fees – 5% Increase July 1st every year:		
	1.	Water.	$4020.29/EQR
	2.	Sewer.	$6030.43/EQR
B.	District Sewer Charges (per month).		$25.50/EQR
C.	District Potable Water Service Charges (per month):		
	1.	Rate Block 1: first 7200 gallons per EQR.	$1.11/1,000 gallons
	2.	Rate Block 2: next 5760 gallons per EQR.	$1.65/1,000 gallons
	3.	Rate Block 3: any quantity over 12,960 gallons per EQR.	$2.21/1,000 gallons
	4.	Base rate (in addition to above rates).	$9.90 per account
D.	District Raw Water Service Charges (per Irrigation Month):		
	1.	Single family users whose District raw water service charges are not paid by a homeowners association.	$25.00 flat rate
	2.	Metered customers.	$25.00 flat rate plus $0.35/1,000 gallons
E.	Per-Gallon Service Charges:		
	1.	For water service from District fire hydrants pursuant to Section 4.06(A)	
		a. Regardless of Location of use.	$10.00/1,000 gallons
	2.	For water service from District fire hydrants used by the Basalt and Rural Fire Protection District or any other person or entity for fire fighting purposes pursuant to Section 4.06(B).	$ 1.07/1,000 gallons
	3.	For raw irrigation water service pursuant to Article XI.	$0.35/1,000 gallons (plus $25.00/month flat fee)
F.	Construction Standby Fees Pursuant to Section 7.10(E):		
	1.	District Water Service (per month).	$5.00
	2.	District Sewer Service (per month).	$7.50

G. Miscellaneous Fees and Charges:

1. Each inspection of a water or sewer connection.	$50.00/each
2. Final inspection fee. (inspection shall include verification of required radio-read meter, PRV, and Backflow Preventer)	$50.00
3. Final inspection deposit (per EQR).	$2,000.00
4. Each water or sewer disconnection, line blocking or unblocking physically carried out by District personnel (does not include location, excavation, and materials).	$150.00/each
5. Turning on or turning off water service requested by District Customer (does not include location, excavation, and materials).	$25.00/each
6. Final meter readings.	$25.00/each
7. Location, excavation, and materials.	Actual cost
8. As-built drawing deposit fee.	$5,000 up to 50 EQR; $100 per EQR over 50

I. Returned Check Fee (for each time a check is returned unpaid). $25.00

J. Out of District Rates:

The fee for Customers outside of the District boundaries shall be assessed at the rate of 1.5 times the service charges described herein for in-District service as provided in the aforementioned subsections A, B, C, D, E, F and G, as the same may be amended from time to time, or as agreed upon by the District and Customer.

K. Surcharges:

1. Aspen Junction Water Booster Station Surcharge
(Reference Section 7.05): 57% of monthly charge for potable water service.

2. Willits Lane Sewer Lift Station Surcharge
(Reference Section 7.05): 16% of monthly charge for sewer service.

3. River Ranch Sewer Lift Station: River Ranch Residents only
(Reference Section 7.05) 16% of monthly charge for sewer service

4. Dakota Subdivision Lift Station Surcharge
(Reference Section 7.05): 26% of monthly charge for sewer service.

5. Sopris Village Sewer Lift Station Surcharge: Sopris Village Residents only
(Reference Section 7.05) 21% of monthly charge for sewer service.

6. Cerise Ranch Sewer Lift Station Surcharge: Cerise Ranch and Down Stream Residents only
(Reference Section 7.05) 36% of monthly charge for sewer service.

7. Valley Road Looped Line Surcharge
(Reference Section 7.05(a)): $260.00 per EQR of potable water.

8. 1041 Permit Amendment Surcharge
(Reference Section 7.05): $300.00 per EQR of sewer and/or potable water service.

II. EQR SCHEDULE

CLASS OF USE	EQR VALUE

A. RESIDENTIAL CLASSIFICATIONS

1. Single Family Residential Units, Accessory Dwelling Units, Duplexes, and Multi Family Residential Units.

a.	Up to 4 bedrooms.	1.00
b.	Each additional bedroom.	0.15
c.	For irrigated green space, such as lawns and gardens, see Special Classification Section (D)(2) below.	

NOTE: Swimming pools, hot tubs, and spas are additional, per Section D(3) below.

NOTE: Rental privileges of all kinds are not included in the above values and constitute a separate unit.

Only one kitchen is permitted in each unit. If a residence has more than one kitchen, then additional 0.5 EQR value shall be assigned in accordance with the values given for multi-family residential units.

NOTE: Values include common laundry facilities or individual laundry hook-ups.

2. Transient Residential Units. Hotels, motels, mobile home parks, dormitories, recreational vehicle parks, short-term rental units in residences, bed and breakfast establishments and similar facilities.

NOTE: Values include laundry facilities in mobile homes. Otherwise, laundry facilities, central kitchen facilities, and swimming pools, hot tubs and spas are additional. Room counts shall include rooms furnished to employees. Values for recreational vehicle parks include central bath house facility, but not laundry, retail, or restaurant spaces.

a.	Manager's unit, use multi-family or Single Family Residential Unit classification as applicable	See Paragraph 1 Above

(per unit).

b. Motels, hotels, and rooming houses without kitchen facilities:

i.	Rooms having not more than two (2) beds (per rental unit).	0.30
ii.	Rooms having more than two (2) beds per rental unit (per additional bed).	0.05

c. Motels with kitchen facilities:

i.	Units having not more than two (2) beds (per rental unit).	0.40
ii.	Units having more than two (2) available bed spaces (per rental unit).	0.50

d. Mobile home parks (per each available space or per living unit). 1.00

e. Dormitories without cooking facilities (per each rental bed). 0.10

f. Recreational vehicle parks (spaces filled by recreational vehicles on a year-round basis shall be evaluated under the “mobile home park" category).

i.	Camping or vehicle spaces without sewer hookup (per space).	0.35
ii.	Camping or vehicle spaces with sewer hookup (per space).	0.40
iii.	Camper dump station.	By Special Review

g. Add for central laundry facilities (per washing machine or available hookup) 1.05

h. Add for central kitchen facilities per Section B(1)

i. For irrigated green space, such as lawns and garden, see Special Classification (D)(2) below

NOTE: Initial Tap Fees, System Development Fees, and monthly service charges for all Multi-Family Residential Units and Transient Residential Units, during construction, shall be calculated on the basis of 1.0 EQRs of service per building. Said initial Tap Fees and System Development Fees shall be paid by the Customer to the District at the time the user submits an application for a tap permit, which shall occur prior to the issuance of a building permit by the County or Town, and prior to physical connection to the District’s Water or Sewer Systems, whichever occurs first. The balance of the Tap fees and System Development Fees for all Multi-Family Residential Units and Transient Residential Units, calculated according to this Section A, shall be due and

payable immediately upon receipt of the temporary or permanent Certificate of Occupancy for the structure or unit within such structure in question. Service charges accruing after receipt of the temporary or permanent Certificate of Occupancy shall be adjusted in accordance with Section 7.04 of these Rules and Regulations.

B. COMMERCIAL CLASSIFICATIONS

1. Restaurants, Bars, Banquet Rooms and Drive-Ins:

a.	Restaurants and bars (per 10 seats).	0.65
b.	Banquet rooms (per 10 seats).	0.35
c.	Drive-ins (per car stall).	0.15

2. Laundromats (commercial laundries evaluated per (B)(5) below):

a.	Per washing machine or available hookup.	0.50
b.	For each toilet or urinal with manual flush mechanism.	0.50
c.	For each toilet or urinal with continuous flow.	1.00
d.	For each lavatory, sink or mop sink.	0.20
e.	For each shower, tub or combination.	0.30

3. Service Stations: (car washes that are located at or a part of a service station are additive per part (B)(4) below).

a.	Per fuel nozzle.	0.40

4. Car Washes:

a.	For each self-service bay/rack with wand and/or foaming brush.	3.15
b.	For each automatic car wash bay.	15.6

5. Commercial or Public Buildings. Non-grocery stores, offices and industrial warehouses, (having no process water or non-domestic waste loads, and which use the sanitary sewer only for nonsolid waste disposal):

a.	For each toilet or urinal with manual flush mechanism.	0.50
b.	For each toilet or urinal with continuous flow.	1.00
c.	For each lavatory, sink or mop sink.	0.20
d.	For each shower, tub or combination.	0.30

e. For each washing machine or available hook-up. 0.20

f. For each other water-using fixture or appliance except as otherwise specified in this table, including drinking fountains which are not continuous flow or decorative fountains which recycle water. 0.30

g. Continuous flow drinking or decorative fountains (nonrecycling). Special Review

6. Barber/Beauty Shops. (per chair). 0.30

7. Theaters. (per 25 seats or part thereof). 0.60

8. Grocery Stores. (per 1000 square feet or part thereof). 0.20

9. Commercial establishments which discharge process water to the collection system shall be evaluated based on Section (4) above and based on the metered water inflow (per 1,000 gpd, maximum day). 2.50

10. Irrigated Green Space. For irrigated green space, such as lawns and garden, see Section (D)(2) below.

NOTE: Initial Tap Fees, System Development Fees, and monthly service charges for all Commercial Classifications, during construction, shall be calculated on the basis of 1.0 EQRs of service per building. Said initial Tap Fees and System Development Fees shall be paid by the Customer to the District at the time the user submits an application for a tap permit, which shall occur prior to the issuance of a building permit by the County or Town, and prior to physical connection to the District's Water or Sewer Systems, whichever first occurs. The balance of the Tap Fees and System Development Fees for all Commercial Classifications, calculated according to this Section B, shall be due and payable immediately upon receipt of the temporary or permanent, whichever first occurs, Certificate of Occupancy for the commercial structure in question. Service charges accruing after receipt of the temporary or permanent Certificate of Occupancy shall be adjusted in accordance with Section 7.04 of these Rules and Regulations. In any instance in which it is unclear which EQR value to assign to a commercial structure, the lowest EQR value for commercial classifications shall be used, subject to later adjustment at the Board's sole discretion. Any change in use of a commercial structure may be subject to increased fees and charges in accordance with Section 6.07 of these Rules and Regulations.

C. CHURCH AND SCHOOL CLASSIFICATIONS

1. Churches. (per 100 seats; rectories or other living areas are additional). 1.00

2. Schools. Day care centers, public and private day schools including administrative centers, warehouses, buildings for equipment repair and/or storage (such as for buses). Swimming pools, hot tubs, spas and similar facilities are additional. Staff includes teachers, librarians, custodians, and administrative personnel associated with school functions.

a. Without gym or cafeteria (per 50 potential students and staff). 1.50

b. Without gym but with cafeteria, or with gym but without cafeteria (per 50 potential students and staff). 1.85

c. With gym and cafeteria (per 50 potential students and staff). 2.10

3. Irrigated Green Space. For irrigated green space such as lawns and garden, see Section (D)(2) below

NOTE: Initial Tap Fees, System Development Fees, and monthly service charges for all Church and School Classifications, during construction, shall be calculated on the basis of 1.0 EQRs of service per building. Said initial Tap Fees and System Development Fees shall be paid by the Customer to the District at the time the user submits an application for a tap permit, which shall occur prior to the issuance of a building permit by the County or Town, and prior to physical connection to the District's Water or Sewer Systems, whichever first occurs. The balance of the Tap Fees and System Development Fees for all Church and School Classifications, calculated according to this Section C, shall be due and payable immediately upon receipt of the temporary or permanent, whichever first occurs, Certificate of Occupancy for the structure in question. Service charges accruing after receipt of the temporary or permanent Certificate of Occupancy shall be adjusted in accordance with Section 7.04 of these Rules and Regulations.

D. SPECIAL CLASSIFICATIONS

1. Common Areas, Parks and Vacant Lands. (For each 1,000 square feet or fraction thereof of irrigated green space) 0.15

2. Irrigated Green Space:

a. Single-Family Residential Units (including associated Accessory Dwelling Units), Duplexes, and Multi-Family Residential Units shall be allowed 3500 square feet of irrigated green space for each 1.0 EQR otherwise calculated under this schedule. If the calculation results in a fractional EQR value (e.g. 1.5 EQR), the allowed square feet of irrigated green space shall be determined by multiplying the EQR value by 3500 (e.g. 1.5 x 3500 = 5250 square feet of irrigated green space allowed).

For each additional 1000 square feet or fraction thereof of irrigated green space above the allowed amount, add (e.g. 1.0 EQR, but 5000 square feet of irrigated green space –1500 square feet above the 3500 square feet allowed:1.5 (1000 sq. ft.) x 0.15 = 0.225 EQR added to the Customer's EQR value.) 0.15

b. Transient Residential Units, Commercial Classifications, and Church and School Classifications shall be assigned additional EQR values for all irrigated green space. Add, for each 1.0 EQR otherwise calculated under this schedule, an additional 0.35 EQR for any irrigated green space up to 3500 square feet per EQR

(e.g. 2.0 EQRs with 4000 square feet of irrigated green space equals 2000 square feet of irrigated green space per 1.0 EQR. 2.0 EQRs x 0.35 each= 0.70 additional EQR. Total EQR value will be 2.70 EQR.) 0.35

Add, for each 1.0 EQR otherwise calculated under this schedule, an additional 0.15 EQR for each 1000 square feet of irrigated green space beyond 3500 square feet per EQR(e.g. 2.0 EQRs with 8500 square feet of irrigated green space equals 4250 sq. ft. of irrigated green space per EQR.The first 3500 square feet per EQR adds 0.70 EQR as above. The additional 750 square feet of irrigated green space per EQR adds 0.15 per EQR, or a total of 0.30 EQR. Total EQR value equals 2.0 plus 0.70 plus 0.30, or 3.0 EQR.). 0.15

3. Swimming Pools, Hot Tubs, Spas, Splash Pools

a. Separate buildings which house swimming pools or hot tubs, and which are not covered by any other classification in this fee schedule, shall be evaluated under Section (B)(5), above, as well as the following:

b. Swimming pools, per 25,000 gallons of capacity (lesser amounts shall be prorated accordingly). 1.00

c. Hot tubs and spas, greater than 500 gallons. 0.20 per 500 gallons

d. Hot tubs and spas, less than 500 gallons. 0.00

e. Splash Pools. Special Review

4. Unclassified Uses. For any water use or water-using structure or appliance not otherwise covered by this schedule, the Board of Directors shall determine the EQR value on a case-by-case basis according to anticipated water use and consumption.

E. MODIFICATIONS AND REVISIONS:

1. The District Board of Directors reserves the right to classify and reclassify establishments and to change EQR rates and values as the needs of the District require.

2. Water or Sewer Usage Review and Recalculation. For purposes of computing and re-computing the number of EQR units attributable to a particular use and the assessment and collection of Tap Fees and service charges in connection therewith, the Board shall have the following authority:

a. At any time the Board may review actual water usage to determine if such actual usage is greater than that implied by the number of EQR units assessed to the Customer at the time application for water and/or sewer service was accepted. For this purpose, 350 gallons per day (gpd) equals one (1) EQR. If the Board finds greater actual water usage, the

Customer shall be assessed a greater number of EQR units to reflect actual usage. Any time the Board decides to evaluate or re-evaluate the appropriate EQR value assessed to a particular Customer, the Customer shall reimburse the District for the actual costs of that review.

b. Upon any recalculation and increase in the number of EQR units attributable to use pursuant to the terms of this Section, the Customer shall pay additional Tap Fees for each additional EQR unit assessed to his or her use at the rate set forth in this Appendix A prior to the issuance of any necessary permit from the Board or within thirty (30) days of the increased assessment of EQR units, whichever occurs first. The Customer's monthly service fee will henceforth be based upon the revised number of EQR units.

c. Notwithstanding the general provisions of this Appendix A or the particular provisions of this Section, nothing herein is intended to automatically modify, revise or amend the terms of any prior individualized assessment or agreement memorialized by a writing or reflected in District minutes, motions or resolutions, nor shall it prevent such modification, revision or amendment at the sole discretion of the Board.

A P P E N D I X B

MID VALLEY METROPOLITAN DISTRICT

TECHNICAL SPECIFICATIONS AND PROCEDURES

MARCH 2013

Prepared By:

SGM
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I. SUBMITTAL INFORMATION

1.00 GENERAL

1.01 SCOPE. This section shall cover the required submittal material necessary for the Mid Valley Metropolitan District to review a sewer project to ensure that it confirms to these regulations. Included in this section are the requirements on preliminary, final and as-built drawings, specifications, soils reports, and other supporting documents. Finally, this section will cover the submission and review procedures to be followed for the District. Upon request of a Developer, and after consultation with the District Engineer, the District may approve variances from the Technical Specifications and Procedures contained herein. See Rules and Regulations for procedures.

2.00 PRELIMINARY DRAWING REQUIREMENT

2.01 GENERAL. This section shall include the requirements necessary for preliminary drawing submittal, specifications, calculations and soils reports.

2.02 TITLE SHEET. The first sheet of the drawings shall be the title sheet and shall have the following shown thereon.

A. Location map, North arrow, numerical and graphical scale.

B. Index to sheet of the drawings.

C. General notes.

D. Title block. The title block should not include the words "Title Sheet," but should contain the project name and a description of the information shown thereon.

2.03 PLAN. The following items shall be included on all plan drawings.

A. Scale: *Use a maximum scale of* one inch = 50 feet. Show scale numerically and graphically.

B. North arrow.

C. Show outline of sewer main and service lines. Show centerline of sewer line with appropriate ties to centerline of street or survey control lines, curbs, property lines or right-of-way lines *and easement lines. .*

D. Show right-of-way or easement lines, street centerline and name, property lines, curbs, gutters, cross gutters, sidewalks, driveways, paving and other improvements, existing and proposed.

E. On each sheet of the plan, show a sufficient number of typical sections to give the relative location of surface and underground improvements with respect to proposed sewer main. Indicate size, type and other appurtenant data for all improvements.

F. Drawings shall be on standard 24 inch x 36 inch sheets.

G. Utilities, sewers and storm drains.

1. Indicate the type, size and ownership of all existing utilities in streets or rights-of-way or rights-of-way in which the water and sewer lines are to be connected. Tie utilities, sewers, house connections and storm drains to streets rights-of-way centerline or to street property line.

2. Indicate portions of existing utilities that are to be abandoned because of water and sewer construction.

H. Details. At intersections where tees, crosses, valves and concrete reaction blocks are to be provided, or at any other sections of the lines where a large number of fittings will be involved, show a large scale view of the appurtenances with dimensions to each separate fitting.

2.04 CALCULATIONS. One set of calculations supporting the design criteria used shall be furnished with the preliminary drawings. Each sheet of calculations shall be dated and have the name or initials of individual making the calculations. All calculations shall be by a professional engineer registered in the State of Colorado.

2.05 SOILS REPORT. A soils investigation report shall be provided with the preliminary drawings. Sufficient subsurface exploration borings and analyses shall be made to permit the Mid Valley Metropolitan District to make an adequate assessment of any soil problems which may be encountered. The soil investigation report shall contain the findings and supporting data for the following:

A. The relative density type and extent of material to be encountered.

B. Excavation problems.

C. Location and extent of excavation.

D. The suitability of excavated materials for use as backfill or bedding.

E. The compaction characteristics of the soils.

F. The groundwater level and conditions.

G. The earth resistivity, moisture content, pH, degree of variation, presence of sulfates, and the likelihood of stray, direct currents.

H. Test Holes. The depth of test holes shall be at least two feet below the proposed pipeline elevation. The spacing of test holes shall be a minimum of 600 feet or where unusual conditions exist. The spacing shall be such to adequately define soil.

I. The soils report shall make recommendation on the consolidation, hydrocompaction shrinkage potential.

2.06 SURVEYS. All the existing conditions, including rights-of-way easements and horizontal and vertical control information, shall be prepared by a registered land surveyor in the State of Colorado. All survey shall be completed in NAVD 88 vertical datum.

3.00 SUBMISSION AND REVIEW PROCEDURE

3.01 PROCEDURES. This section shall cover the procedures and time frame necessary to submit water and sewer drawings to the Mid Valley Metropolitan District.

3.02 PRELIMINARY DRAWING REVIEW.

A. One hard copy and one PDF copy of drawings and specifications of the proposed sewer system accompanied by one set of supporting data in PDF format shall be submitted to the District at least 45 days prior to a regular meeting of the Board. The preliminary drawings and specifications of the proposed water and sewer system shall be reviewed in general and, if in acceptable form for processing, shall be referred by the District Manager to the following offices and interested persons for study and recommendation at least 30 days prior to a regular Board meeting.

1. The District Engineer (SGM).

2. Eagle County, if in Eagle County; Garfield County, if in Garfield County.

When transmitting the preliminary drawings and specifications for review, the District shall indicate to the reviewing agency the date and time of the District meeting at which the proposed water and/or sewer system will be discussed and formal action taken by the Board.

B. At the regular meeting of the Board at which the proposed water and/or sewer system is to be considered, the Board shall review all written and oral recommendations presented and shall, upon diligent evaluation of the facts, approve or disapprove the preliminary plans for the proposed water and/or sewer system.

C. Should the Board approve the preliminary plans, written notice of said approval shall be transmitted to the Applicant along with any modifications required by the District. Such approval of preliminary plans shall permit the Applicant to prepare final construction drawings in accordance with the standards established by the Board and incorporate any modifications required by the District.

3.03 FINAL DRAWING REVIEW.

A. Final drawings and specifications shall be prepared in the form prescribed for preliminary drawing requirements. In addition, the title sheet shall provide a space for certification of approval by the Board of the Mid Valley Metropolitan District.

B. Final drawings consisting of two hard copies and one PDF copy from which clear, legible prints can be obtained shall be submitted to the District for final review at least 10 days prior to a regular meeting of the Board.

C. If the final drawings are found to be in compliance with the District's standards and these regulations and any modifications requested by the Board, the District shall recommend approval of the plans at the next regular Board meeting.

D. If the final drawings and specifications are found not be to be in compliance with

the District standards and any modifications requested by the Board, the District Engineer shall recommend disapproval of the plans and submit a written itemization of the deficiencies at the next regular meeting of the Board. Non-conformity of the final plans with the District's standards and requirements of the Board may result in disapproval of the project by the District.

E. The Applicant is strongly advised against receiving construction bids or beginning construction until certification of approval of final plans and specifications has been received from the District.

3.04 CONSTRUCTION PROCEDURES**.** Following final approval of the plan(s) by the District, the Applicant may proceed with construction. In addition, to all construction requirements contained in other portions of the Specifications, the Applicant and his Contractor shall observe the following:

A. A mandatory pre-construction meeting shall occur 48 hours prior to any excavation. Participants may include, but are not limited to, the following: Representatives of the Contractor, Excavator, Engineer, Applicant and District.

B. In the event that said construction does not commence within 6 months of the approval date, the plans must be resubmitted for review and approval. If construction on the main installation is halted for more than 6 months, plans must be resubmitted for review and approval.

3.05 RECORD DRAWINGS. Record drawings consisting of two hard copies and one PDF copy from which clear, legible prints can be obtained, shall be submitted to the District within 30 days of completion of construction. Said drawings shall be prepared according to the following general requirements:

A. A survey stamped by a licensed Professional Land Surveyor shall be provided to the District which shall show the location of the sewer line to permanent physical objects located in the field. All valves, tees, curb boxes, hydrants, storage tanks and pump stations and other major appurtenances shall be given two swing ties to a physical permanent object in the field. In all cases, the distance from sewer line and appurtenance items shall be dimensioned to rights-of-way easements and property lines.

B. The benchmarks or benchmarks used on the project to determine sewer line depth shall be shown on the drawings and shall be based on U.S.G.S NAVD 88 datum.

C. All sewer lines shall have manhole rim and invert elevations, percent slope and horizontal distance of each line between manholes shown. Sewer service lines stubbed to property lines shall have to swing ties provided to permanent objects and shall be marked with fence posts.

D. Manufacturer's literature and product data, including catalog sheets and descriptive literature for all materials and equipment used, shall be provided with record drawings.

E. CADD files shall be submitted to the District in AutoCad format, either on CD or e-mailed.

F. Digital files.

G. Electronic Inspection Video. An electronic inspection video acceptable to the District's Engineer, of the inside of all mains shall be provided.

H. Construction Costs. The actual construction costs shall be submitted with Bill of Sale. The costs are used to update the District's insurance policy.

End of Section I

II. WATER TRANSMISSION AND DISTRIBUTION LINES

1.00 GENERAL

1.01 SCOPE. This section shall include all materials, labor, equipment and miscellaneous items necessary to install all raw water, potable water transmission and distribution pipelines and appurtenances as specified herein for the Mid Valley Metropolitan District.

1.02 PROTECTION OF WORK. All pipe, fittings, valves and equipment shall be carefully handled, stored and protected to prevent damage to materials, protective coatings and linings. At no time shall such materials be dropped or dumped into the trench.

Precautions shall be taken to prevent foreign matter from entering the pipe, fittings and valves prior to and during installation. No debris, tools, clothing or any other material shall be placed in the pipe during installation. Whenever pipe installation is suspended, either temporarily or overnight, the open end of the pipe shall be sealed with a water-tight plug to prevent the entrance of trench water, debris or foreign matter into the pipeline system.

Under no circumstances shall trench water be allowed to enter the pipeline. When water is present in the trench, the plug shall remain in place until the trench is pumped dry. Whenever trench water becomes evident, measures shall be taken to prevent pipe flotation.

If, in the opinion of the Engineer, the Contractor is incapable of keeping the pipe free of foreign matter during installation, the Engineer shall require the Contractor to cover the pipe ends with close woven bags until the start of the joining operation.

2.00 MATERIALS

2.01 GENERAL. This item covers the types of materials that will be required for the construction and installation of water lines. All materials used shall be new, of the best quality available, and conform to applicable standards as indicated herein.

2.02 DUCTILE IRON PIPE AND FITTINGS.

A. Ductile Iron Pipe.

1. Reference Standard - ANSI, 21.51/AWWA C151, latest revision.

2. Thickness Class - Minimum Class 52 unless design conditions warrant higher class pipe.

3. Pipe joints shall be push-on joints except where specifically shown or detailed otherwise.

B. Fittings.

1. Type - All fittings shall be mechanical joint mega lug or approved equal.

2. Reference Standard - ANSI/AWWA C153 for flanged mechanical joint and push-on joints (3 inch - 24 inch).

3. Material - Ductile iron.

4. Pressure Rating - 350 psi.

C. Joints.

1. Mechanical, Reference Standard - ANSI A 21.53/AWWA C153 (latest revision).

2. Push-on, Reference Standard - ANSI A 21.52/AWWA C153 ,latest revision.

3. Flanged, Reference Standard - ANSI B 16.1, Class 125, latest revision.

D. Gaskets.

1. Type - Rubber ring gaskets shall be suitable for the specified pipe sizes and pressure.

2. Reference Standard - AWWA C111, latest revision.

3. Lubricant - A non-toxic vegetable soap lubricant shall be supplied with the pipe.

E. Protective coatings.

1. Underground Service - Manufacturer's standard bituminous coating - minimum 1 mil thickness.

2. Polyethylene Film Envelope - Polyethylene encasement shall conform to AWWA C105, latest edition, or ANSI A.21.5. Film shall be Class C with a nominal thickness of 8 mils. Tape for securing the film shall have a minimum thickness of 8 mils and a minimum width of 1 inch. The polyethylene film shall be free of streaks, pinholes, tears or blisters.

F. Protective Lining.

1. Type - Cement mortar.

2. Reference Standard -ANSI A 21.4/AWWA C104, latest revision.

3. Thickness - Standard.

G. Couplings.

1. Style - Solid sleeve.

H. Tracer Wire.

1. Tracer Wire shall be 12 gauge or larger, insulated, stranded copper installed on all water mains. All splices shall be watertight and underground.

3.00 INSTALLATION

3.01 GENERAL. All transmission and distribution lines to be dedicated to the Mid Valley Metropolitan District, shall be located a minimum of ten feet inside a public easement. The location of water lines within side lot line easements or rear lot easements is discouraged.

When site conditions allow, the water line should be located outside paved areas. At all times, water lines shall be located so that District maintenance personnel can easily maintain and operate those lines.

Easements or rights-of-way used during installation of water mains shall be a minimum width of 25 feet, 12.5 feet on either side of centerline. In dredge areas and other special conditions, a wider easement may be required.

3.02 PIPELINE DEPTH. The minimum depth of bury of water mains shall be as follows: (Depth of bury equals depth to top of pipe).

A. Mains shall be buried a minimum dept of 5 ½ feet (below existing or proposed grade) in all locations.

B. When water mains are to be located underneath storm drains, culverts or any other submerged air space, the required depth of bury shall be 5 ½ feet below culvert invert. This is necessary to ensure that the water line is beyond the frost depth associated with the storm drain culvert, etc. In some cases, the District water system supervisor may allow insulation in place of increased depth where water lines cross under one of the above. If valves are located in this area, the valve nut shall be extended to within 5 feet of the top of the valve box.

3.03 CLEANING AND INSPECTION. Clean all pipe, fittings, valves and related materials thoroughly of all foreign material; inspect for cracks, flaws, or other defects prior to installation. Mark all defective, damaged or unsound materials with bright marking crayons or paint and remove from job site. Of particular concern should be the gasket groove in the pipe bell. All spurs, excess paint, and any other defects within the gasket groove shall be either removed or repaired, or the pipe shall be deemed unacceptable.

The Contractor shall take all necessary precautions to prevent any construction debris from entering the water lines during construction of water lines and appurtenances. If debris shall enter the distribution system, the Contractor shall furnish all labor and materials necessary to clean the system. Under no circumstances will the Contractor flush the debris into an existing distribution system.

3.04 INSTALLATION. Pipe shall be laid in straight sections with bell ends facing the direction of laying unless otherwise directed by the District. Where pipe is laid on grade of 1% or greater, the installation shall proceed uphill with the bell ends facing upgrade. The pipeline shall be installed so that a continuous positive or negative grade is maintained between high and low points to avoid air pockets. At no time will a high point in the line be acceptable unless an air and vacuum valve is installed to relieve air pockets. Jointing of the pipe shall be made in accordance with the directions of the manufacturer of the pipe and the manufacturer of the couplings. The allowable pipe deflection per joint shall not exceed the maximum deflection tolerances specified by the manufacturer.
Pipe shall be lowered into the trench with ropes, slings or machinery. Under no

circumstances should the pipe be pushed off the bank and allowed to fall into the trench.

In joining the pipe, the exterior 4 inches of the pipe end (at the spigot), and the inside of the adjoining bell shall be thoroughly cleaned to remove oil, grit, tar and other foreign material. The gasket shall be placed in the bell so it will spring into its proper position inside the pipe bell. A thick film of the non-toxic joint lubricant shall be applied over the entire surface of the gasket. The spigot end of the pipe shall then be wiped clean and inserted into the bell to contact the gasket. The pipe shall be pushed all the way into the bell by crowbar or by jack and choker slings. Extreme care shall be exercised when joining the pipe to avoid damaging the bell or rolling the gasket. The bell end of the pipe shall be protected by a piece of wood when pushing the pipe. Generally, every pipe has a depth of insertion stripe on the spigot end. The pipe shall be inserted to the full depth of the stripe. Check bells for rolled gasket with feeler gauge.

The cutting of pipe for fittings or closure pieces shall be done in a neat ad workmanlike manner to prevent damage to the pipe or lining. All cuts should leave a smooth end at right angles to the axis of the pipe. Flame cutting on pipe, by means of an oxyacetylene torch, will not be allowed. Once a pipe is cut, the cut end shall be beveled free of spurs which may damage rubber gaskets.

3.05 CONNECTION TO EXISTING WATER FACILITIES. All main line connections between existing and proposed piping shall be made during non-business hours or at a time which is acceptable to the District. All shut-offs shall be planned 48 hours in advance and all persons affected by the shut-off shall be given a 48 hour notice. Take all precautions to prevent contamination when making connections to existing potable water lines. No trench water, mud, or other contaminating substances shall be permitted to enter the pipe line.

3.06 FUTURE CONNECTIONS. At intersections, dead-end runs, or other locations where the possibility may exist for a future connection, a tee or cross and a valve on all sides should be provided. This procedure allows a future connection to be made while keeping the existing main line in service at all times. In each case, the valve shall be properly restrained to the tee or cross, using restraining rods with eye bolts. In addition, a concrete reaction block will be placed on the plugged end of the valve.

3.07 PROTECTION OF WATER SUPPLIES. Water lines shall be located a minimum of 10 feet horizontally from existing or proposed sewer mains. Wherever the sewer line crosses above or within 18 inches beneath the water lines, the sewer line shall be made impervious by either of the two methods listed below:

A. Method 1. Twenty feet of AWWA DR18 C-900 PVC, shall be used for sewer pipe and centered over the water main. The joints between the sewer pipe and the placement pipe (DIP or PVC) shall be encased in a concrete collar. The concrete collar will be a minimum of 1foot thick, centered on the joint.

B. Method 2. The sewer pipe shall be reinforced with concrete encasement. The encasement shall be at least six inches thick on either side of the water main, and extend 10 feet each side of the water main. In all cases, select granular backfill shall be used to prevent any settling of the higher pipe.

All work should be in strict conformance with the Colorado Department of Health's *"Design Criteria for Potable Water Systems".*

3.08 REACTION ANCHOR AND BLOCKING. Concrete thrust blocks shall be provided as shown in the Standard Detail No. 2 for all tees, elbows, plugs, reducers, valves, fire hydrants, and crosses if one or more sides of the cross are plugged. The bearing area of the block shall be at least equal to that stated on the attachment. The bearing surface shall be against undisturbed earth. The block shall be placed normal to the thrust as show on the drawings. Concrete for thrust blocks shall have 3,000 psi compressive strength. (NOTE: No other materials other than concrete may be used in thrust blocks).

If the concrete has not had sufficient time to cure (e.g., restoring water service), the Contractor shall be required to use temporary bracing for added strength. Use of additional wood bracing will help prevent fitting and valves from leaking or "blowing off" when water pressure is restored to the main line.

Whenever a concrete thrust block is placed, wood or plastic sheets shall be used to prevent concrete from adhering to nuts and bolts. Any concrete splattering onto a nut or bolt will be removed before the line is backfilled.

4.00 SIZING OF MAINS.

4.01 GENERAL. All main water lines shall be sized for peak hour flow plus fire flows required by the Basalt Rural Fire Protection District at a 20 psi residual flow. Minimum size shall be 8 inches in diameter.

End of Section II

III. WATER SERVICE LINES AND APPURTENANCES

1.00 GENERAL

1.01 SCOPE. This section shall include furnishing all materials, labor, equipment and miscellaneous items necessary to install all water service lines and appurtenances as specified herein for the District.

NOTE: The District will own and maintain that portion of the service line from the main line up to and including the curb valve. The curb valve shall be placed on the property line; however, at all times, it will fall on the District side of the property line. All work and materials from the curb valve to the building shall be in conformance to the most recently adopted Uniform Plumbing Code Eagle County.

2.00 MATERIALS

2.01 COPPER SERVICE PIPE.

A. Reference Standard - ASTM B88, latest revision, Type K soft.

B. Size - See 3.06 below.

C. Do not use any pipe lubricants for service line fittings.

2.02 CORPORATION STOPS.

A. Material - Brass or bronze.

B. Size - Same as copper service line.

C. Reference Standard - AWWA C800, latest revision.

D. Inlet - Threaded CC type.

E. Outlet - Compression fittings.

2.03 SERVICE SADDLES.

A. Materials - Bronze service clamp, 'O' ring gasket, double strap, IPS thread.

B. The District will require saddles to be installed.

2.04 CURB STOP.

A. Materials - Cast bronze body, resilient 'O' ring seals, standard tee head operator, Teflon ball valve type.

B. Inlet - Compression fitting.

C. Outlet - Compression fitting.

D. Standard reference AWWA C800, latest revision.

E. Manufacturer's reference - Mueller B25204.

2.05 CURB BOX.

A. 3/4 – 1 inch , manufacturer's reference - Mueller H-10314 or equal.

B. 1.5 inch , manufacturer's reference - Mueller H-10336 or equal.

2.06 COUPLINGS.

A. Materials - Compression fittings.

3.00 INSTALLATION

3.01 SERVICE LINE INSTALLATION. All trenching, backfilling and compaction shall conform to Section IX of these regulations. All service lines shall be disinfected and pressure tested as per Sections VI and VII of these regulations.

3.02 SERVICE LINE DEPTH. A depth of bury for all service lines shall be a minimum of 5 ½ feet.

3.03 TAPPING PRESSURIZED MAINS. All 3/4 – 1 ½ inch taps on pressurized mains shall be made by the Developer. Those greater than 2 inch shall be performed by others with acceptable tapping equipment.

3.04 TAPPING UN-PRESSURIZED MAINS. All taps on un-pressurized mains (new subdivision mains) shall be performed by a qualified contractor.

3.05 PERMITS. A road cut permit for excavation in Eagle County, Garfield County or Town of Basalt streets, alleys and easements must be completed prior to tap. Twenty-four hour notice is required by the District prior to making taps and locating lines. Taps and locations will not be done without a water application filled out by Customer.

3.06 SERVICE LINE SIZING. Service lines to be sized by Customer. The customer is encouraged to have an engineer size the service line. The District will not provide this service.

4.00 METERS

4.01 TYPE. Magnetic drive, sealed register, remote readout. Turbo meters for 3 inch and larger.

4.02 MANUFACTURER'S REFERENCE. Neptune T10 I Dry Radio Read Meter.

4.03 INSTALLATION. Install all meters in a horizontal position with a suitable holding device to support piping, meter and provide electrical bond when meter is taken out for testing. Pre-manufactured holding devices or yolks are available which cut down labor time to install meter. Install in building where meter and pressure reducing valve will not freeze. Install the remote readout on an outside wall at least six feet above grade where it is freely accessible and where falling or melting snow will not cover it.

Turbine meters should be installed with five pipe diameters upstream or downstream of bends, valves, PRV's, check valves or any other fitting that causes turbulence.

4.04 METER INSPECTION. A District representative must inspect the water meter after it is installed and before the Certificate of Occupancy is issued.

5.00 PRESSURE REDUCING VALVE (PRV) (Required in-house throughout district)

5.01 MANUFACTURER'S REFERENCE. Watts U-5-B or equal.

5.02 INSTALLATION. Install upstream of the meter on 1 inch and 3/4 inch meters only. Install downstream of the meter for 12 inch and larger meters. Allow for easy access to strainer and cleanout plug.

5.03 Pressure Testing. Downstream pressure to be set at 40 to 75 psi.

6.00 CHECK VALVE

6.01 TYPE. Rubber seat and spring assist.

6.02 MANUFACTURER'S REFERENCE. Ford H series or equal.

7.00 BACKFLOW PREVENTION DEVICE

7.01 TYPE. Double check backflow preventer or as required by state law.

7.02 MANUFACTURER'S REFERENCE. Febco

7.03 INSTALLATION. Backflow prevention device must be installed after the meter.

7.04 INSPECTION. Backflow preventer will be inspected during final inspection.

End of Section III

IV. FIRE PROTECTION FACILITIES

1.00 GENERAL

1.01 SCOPE. This section shall include furnishing all materials, labor, equipment and miscellaneous items necessary to install fire hydrants as specified herein for the Mid Valley Metropolitan District.

2.00 MATERIALS

2.01 FIRE HYDRANTS.

A. Type - Dry barrel, traffic model with breakaway flange bolts and coupling.

B. Reference Standard - AWWA C502, latest revision.

C. Outlet Size - One 5 ¼ inch, two 2 ½ inch

D. Hydrant Size – 5.5 feet or greater, bronze to rubber seating.

E. Inlet Size - 6 inch.

F. Operation – 1 ½ inch pentagonal national standard operating nut, open counter-clockwise, lubricating reservoir.

G. Special Features - Outlet hydrants shall open when turned to the left (counter-clockwise).

H. Depth of Bury – 5.5 feet unless otherwise shown on drawings.

I. Additional Requirements - Furnish hydrant complete with pipe and tee, six-inch restrained mechanical joint gate valve and thrust blocks. Hydrant shall be restrained to the hydrant tee by 3/4 inch threaded rods protected from corrosion by the use of an approved bituminous coating. Furnish hydrant with bronze seat and lubrication reservoir.

J. Manufacturer's Reference - "Mueller" Centurion A423
"Kennedy" K-81A Guardian

K. Color - Hydrant to be painted red above the ground line.

L. Pressure Rating - 250 psi

3.00 INSTALLATION

3.01 HYDRANT SPACING. The spacing of fire hydrants shall be determined by the area that each hydrant is to serve. In a low density residential area, the maximum spacing of fire hydrants shall not exceed 500 feet. In medium to high density residential areas, the maximum spacing shall not exceed 400 feet. In commercial and high risk areas, the spacing shall not exceed 300 feet. The maximum distance from commercial buildings to hydrants shall be 150 feet, and shall be based on hose length.

3.02 LOCATION. Fire hydrants shall be located whenever possible at an intersection and in a public right-of-way or a utility easement. There shall be a minimum of 1.5 feet between outlet nozzle and back of curb or sidewalk. In all cases, hydrants shall be located out of the direct flow of pedestrian and vehicular traffic. Wherever possible, hydrants located consecutively along a street shall be placed on opposite sides of the street so that stringing fire hoses across a street during a fire can be kept to a minimum. Hydrants shall be placed at all intersections, at end of cul-de-sacs and at all dead-end runs. Hydrant location shall be approved by Basalt Rural Fire Protection District.

3.03 INSTALLATION. All hydrants must be extended so the top of hydrant is four feet above grade. The breakaway flange shall be located at grade. If the previously mentioned conditions are not met after the hydrant is installed and the street is at final grade, the hydrant must be brought to proper grade by installing extensions or other modifications as required. Bag all hydrants that are not in service.

3.04 HYDRANT APPURTENANCES. All fire hydrants shall be connected to the main line by means of a mechanical joint tee with six-inch Class 52 ductile iron pipe branch piping to hydrant. Each fire hydrant shall have a 6 inch valve on the branch pipe conforming to standards as outlined under Section V of these standards. The six-inch gate valve shall not be located in the sidewalk, curb line, or gutter of the proposed street and shall be rodded to the main tee. See Standard Detail 4.

3.05 HYDRANT RESTRAINT. The hydrant shall be restrained to the main line with all 3/4 inch all-thread rod extending from the main line tee to the six-inch valve and then from the six-inch valve to the hydrant. The 3/4 inch rods shall be tied to each joint with the use of eye bolts. A bitumastic coating (to prevent corrosion) shall be liberally applied to the all thread rod and eye bolts. In addition, the hydrant and main line tee shall be provided with concrete reaction blocks. See Standard Detail 4.

3.06 DRY BARREL TYPE DRAINAGE. All hydrants shall be provided with a minimum of 1/3 cubic yard of 3/4 inch to 1 inch cleaned, crushed rock and shall be placed under the weep hole outlet to assure proper drainage.

3.07 INSPECTION. Prior to backfilling around the hydrant, a visual test shall be conducted to ensure the proper operation of the weep holes. The hydrant shall be partially opened and then closed. Water trapped in the hydrant barrel section should begin to drain. If water is not draining, the well holes should be cleared of any obstructions restricting the flow of water.

End of Section IV

V. VALVES

1.00 GENERAL

1.01 SCOPE. This section shall include furnishing all materials, labor, equipment, and miscellaneous items necessary to install gate valves, butterfly valves, air release and vacuum valves, and valve boxes as specified herein for the Mid Valley Metropolitan District.

2.00 GATE VALVES

2.01 MATERIALS.

A. Double disk bronze wedge.

1. Size - As shown on plans up to 12 inch (14 inch and larger shall be butterfly valves).

2. Reference Standard - AWWA C509, latest revision.

3. Style - Iron body, double disk bronze wedge.

4. Pressure Rating - 200 psi.

5. Wrench Nut - Two-inch square, open by turning to the left (counter-clockwise).

6. Stem - Non-rising.

2.02 LOCATION. Whenever possible, water main valves shall be located at street intersections. Valves must be placed on all runs of a tee or cross. For instance, each cross shall have four valves located at the intersection while tees shall have three valves located at the intersection. Valves shall be located at the intersection. Valves shall be located at the end of all dead-end intersections for future connections.

2.03 VALVE SPACING. Valves on cross connecting or looped mains shall be spaced such that no single break shall require more than 500 feet of line to be out of service at one time. All distribution mains connecting to transmission mains must be valved at the tie-in.

2.04 INSTALLATION. All gate valves shall be installed with the two-inch operating nut plumb and true with the vertical and centered within the valve box and extended to within 5 feet of the surface. A valve key extension can be used to achieve this. District personnel will inspect the valve and valve box after installation to ensure that a valve key can easily be set on the operating nut.

3.00 BUTTERFLY VALVES

3.01 MATERIALS.

A. Reference Standard - AWWA C-504, latest revision.

B. Type - Rubber-seated, tight closing type.

C. Ends - Both ends shall be mechanical joint for direct bury. Valves in vaults shall be flanged.

D. Valve Body - Shall be high strength cast iron ASTM A 126, Class B with 18-8 type 304 stainless steel body seat.

E. Operator - Valve operator shall be of the traveling nut type, sealed, gasketed and lubricated for underground service. Operating nut shall be 2 inch square and shall open left (counter clockwise).

F. Rated Working Pressure - Class 150B, 150 psi. Above 150 psi working pressure, use Class 250B or equal.

G. Manufacturer's Reference - Mueller Line Seal III.

4.00 AIR RELEASE AND VACUUM VALVES

4.01 GENERAL. This specification covers all air release, vacuum valves or combination air release valves. The type of valve used shall be dependent upon the conditions under which it will operate.

4.02 MATERIALS.

A. Size - To be designed by Engineer for proper application.

B. Body - Cast iron.

C. Float - Stainless steel.

D. Seat - Buna-N.

E. Pressure Rating - 200 psi.

4.03 LOCATIONS. Air release, vacuum valves or combination air release valves shall be installed to permit efficient filling or draining of long pipelines. In addition, they should provide protection against vacuum and shall continuously vent pockets of air accumulated in the pipeline. The type of valve shall depend upon the intended use of operation.

4.04 INSTALLATION. Air release, vacuum valves or combination release valves shall always be installed at the extreme high point of the distribution or transmission line. These valves shall be installed in a precast manhole vault with the fitting as shown in Standard Detail 7.

5.00 VALVE BOXES

5.01 MATERIALS.

A. Material - Cast iron.

B. Type – Three piece, screw type.

C. Size – 5 ¼ inch diameter.

D. Cover – Deep socket type with the word "Water" cast in the top.

E. Base – No. 160 type with 202 inch bottom opening.

F. Valve Markers – For valves that fall outside of road pavement and shoulders, install a six-foot long, green "carsonite" marker on all new valves. The marker is to have valve decal at top.

G. Debris Caps – Debris caps as shown in detail 6 shall be installed in all valve boxes.

5.02 INSTALLATION. Valve boxes shall be installed plumb and true, and centered over the two-inch operating nut. Bricks shall be placed under the flange of the valve box bottom so that at no time loadings on the valve box will be transmitted to the valve. Valve box lid to be placed 1/4 inch - 1/2 inch below grade when located in asphalt or concrete. See detail 5.

End of Section V

VI. TRENCHING, BACKFILLING AND COMPACTION

1.00 GENERAL

1.01 SCOPE. This section shall include all labor, materials, equipment, and miscellaneous items necessary to perform all excavation, backfilling and compaction of underground waterlines, sewer lines and appropriate appurtenances as specified herein for the Mid Valley Metropolitan District.

It shall be the Contractor's responsibility to secure all required excavation permits and pay all costs thereof.

1.02 PROTECTION OF WORK.

A. All excavation shall be protected by barricades, lights, signs, etc., as required by governing federal, state and local safety codes and regulations. Under no circumstances will more than 20 feet of trench be left open at night. Any trench left open at night will be protected by a temporary snow fence barricade and reflective tape.

B. Sheeting, Shoring and Bracing - Where trench walls are not excavated at a stable slope, the Contractor shall provide and maintain sheeting sufficient to prevent caving, sliding or failure and property or bodily damage.

Under normal construction conditions, sheeting shall be removed as work progresses. Sheeting shall remain installed if directed by the District or if pipe does not have sufficient strength to support backfill based on trench width as defined by the sheeting.

The Contractor shall be held solely responsible for any violations of applicable safety standards. Particular attention is called to minimum requirements of OSHA and State of Colorado Occupational Safety and Health laws.

C. Site Drainage - Excavation to be protected from surface water at all times.

2.00 MATERIALS

2.01 EMBEDMENT MATERIALS. Pipeline embedment materials shall comply with the appropriate class as listed below and as illustrated in Standard Details 8 and 21.

A. Class A - Use for all ductile iron distribution and transmission mains and copper water service lines. Use for all PVC interceptor, collector and service lines.

1. Characteristics - Densely compacted 3/4 inch Class 6 aggregate, four inches below bottom of pipe with densely compacted 3/4 inch Class 6 aggregate to 12 inches above top of pipe.

2.02 BACKFILL MATERIAL.

A. Characteristics - made of materials free from debris, organic matter from frozen material. Uniformly graded sufficient to allow proper compaction.

B. No boulders greater than six inches in diameter in top 12 inches of backfill; bottom, six inches; or sides, six inches.

Generally, no boulder greater than 12 inches in diameter in remainder of trench.

3.00 METHODS AND PROCEDURES

3.01 SITE PREPARATION.

A. Clearing - Remove all vegetation, stumps, roots, organic matter, debris and other miscellaneous structures and materials from work site.

B. Topsoil Removal - Strip existing topsoil from all areas to be disturbed by construction. Topsoil to be stockpiled separately from excavated materials.

C. Pavement Removal - Asphalt and bituminous pavements to be cut to the full depth of pavement. The vertical face of the cut shall be a straight line parallel to the limit of excavation. Cuts shall be made with a flat-bladed air hammer, concrete saw, or as approved by the water system superintendent. The method used should provide a straight, true cut. All asphalt located within trench limits to be hauled off site.

Concrete pavements, including curbs, gutters and sidewalks, to be saw cut to the full depth of pavement. The vertical face of the cut shall be a straight line parallel to the limit of excavation.

All pavement removal shall be disposed of offsite. Broken pavement not to be used in backfill material.

3.02 TRENCH EXCAVATION.

A. Limits of Excavation - Trenches to be excavated along lines and grades as approved by the District. Trench widths for pipe loading to be measured 12 inches above top of pipe.

Minimum trench width to be the outside diameter of the pipe or conduit plus 16 inches.

Maximum trench width to be the outside diameter of the pipe or conduit plus: [1] 24 inches for outside pipe diameter of 24 inches or less; [2] 30 inches for outside pipe diameter of 24 inches or greater.

Trench excavation not to be completed more than 100 feet in advance of pipe installation. Backfill to be completed within 20 feet of pipe installation by the end of any working day.

B. Groundwater Control - Contractor to maintain facilities on site to remove all groundwater from trench. Water shall be kept at least 12 inches below the trench bottom, to a point such that a firm base for pipe or conduit installation exists.

Facilities shall be maintained until all concrete is cured and backfilling is in place at least 24 inches above anticipated water levels before water removal is discontinued. All water removal shall be subject to approval by the District.

C. Stockpile Excavated Material - Excavated material to be stockpiled so as to not endanger the work or public safety and to be kept free of snow and ice. Maintain existing vehicular and pedestrian traffic with minimum disruption. Maintain emergency access and access to existing fire hydrants and water valves. Maintain natural drainage courses and street gutters.

D. Clay Barriers - Install a one foot thick clay barrier, or approved equal, in place of aggregate, 4 inch below and 12 inch above pipe, every 500 feet or as specified by the District's engineer for all water mains.

3.03 BOTTOM PREPARATION.

A. Where soils are suitable and have adequate strength, bottom to be graded and hand-shaped such that the pipe barrel rests uniformly on embedment material.

B. Bell Holes - Material to be removed to allow installation of all fittings and joint projections without affecting placement of pipe.

C. Over-Excavation - Whenever trench is over-excavated to eliminate point bearing rocks or stones or when undisturbed grade tolerances of 0.1 foot is exceeded, the Contractor is to re-establish grade using aggregate bedding materials.

D. Unstable Materials - Materials which are not capable of supporting super-imposed loadings are defined as unstable materials. Should unstable materials be encountered during excavation, immediately notify the District. If unstable material is encountered, the trench bottom shall be over-excavated (minimum 6 inches) and backfilled with a clean 2 - 6 inch rock. The rock backfill provides increased water movement and helps stabilize the trench bottom.

E. Rock Excavation - Rock shall be removed to a 4 inch depth below in bottom pipe grading. Additionally, all rock loosened during jacking, blasting, etc., shall be removed from the trench.

3.04 BACKFILLING.

A. Tamping Equipment - Except immediately next to the pipe, mechanical or air operated tamping equipment is to be used. Hand equipment, such as T-bar, is to be used next to pipe if necessary. Care is to be taken when compacting under, alongside and immediately above pipe to prevent crushing, fracturing, or shifting of the pipe. The Contractor is to note densities required for materials being backfilled and shall use appropriate approved equipment to obtain those densities.

B. Moisture Control - Generally, maintain moisture of the backfill material within 2% of optimal moisture content as determined by ASTM D 698. Maintain close tolerances as needed to obtain densities required.

C. Compaction - Maximum density (100%) based upon ASTM D698 or AASHTO T99.

1. Bedding Material. Includes material used for over-excavation of any kind: 95% Standard Proctor.

2. Select Material: 95% Standard Proctor.

3. Backfill beneath existing or proposed pavements, roadways, sidewalks, curbs, utility lines and other improvements or within five feet horizontally of such improvements. 95% Standard Proctor.

4. Backfill within public or designated right-of-way: 90% Standard Proctor or as shown on the Drawings for those areas outside of No. 3 above.

5. Backfill within undeveloped, green or designated area: 85% Standard Proctor.

D. Placing Backfill - The maximum loose lifts of backfill material to be as follows (use smaller lifts where necessary to obtain required densities):

1. Bedding and select material: 6 inches;

2. Backfill Material: 24 inches where 95% compaction required; 48 inches where less than 95% compaction required.

E. Maintenance of Backfill - Contractor to maintain all backfill in a satisfactory condition during the extent of the contract and warranty period. The Contractor will be responsible for repairing any deterioration or settlement of the road surface. Notification of the required repairs will be issued by the District. All costs for repair and all liability, as a result of surface deterioration or settlement, shall be the responsibility of the Contractor.

3.05 SURFACE RESTORATION. All existing surface improvements and site disturbed or damaged during construction to be restored to a condition equal to pre-construction condition. All restoration costs are considered incidental to the excavation and backfill.

A. Improvements - Replace, repair or reconstruct all improvements as required. Work will not be accepted until restoration is accepted by the District and all affected property owners. Improvements include, by example, other utilities, culverts, structures, curb & gutter, mail boxes, signs, etc.

B. Roadways - All roadways to be restored to original condition with the following minimum depths required:

1. Minimum base course material on gravel roadways or minimum depth gravel on hard surface roadways to be 12 inches.

2. Minimum bituminous surfacing to be 3 inches.

3. Minimum concrete paving to be 6 inches.

C. If any pavement, street, shrubbery, sod, rock, fences, poles or other property surface structures have been damaged, removed or disturbed by Contractor or

subcontractor of Contractor, whether deliberately or through failure to employ standards, such property and structures shall be replaced or repaired to the District's satisfaction, at the expense of the Contractor.

4.00 QUALITY CONTROL - FIELD

4.01 COMPACTION. It should be fully understood that it will be the sole responsibility of the Contractor to achieve the specified densities for all embedment and backfill materials placed. Contractor will be responsible for ensuring that correct methods are being used for the placement and compaction of said materials. Correct backfill methods include, but are not limited to:

A. Use of proper equipment for existing soil condition encountered.

B. Moisture content of existing soils; determination if water should be added or if soil should be air-dried to reduce moisture content.

C. Thickness of backfill lift.

Contractor may, at his own expense, have an approved geotechnical engineer monitor the methods of backfill and compaction used to ensure that the desired densities are being obtained.

4.02 INSPECTION AND TESTING. Inspection and testing to be performed at the direction of the District. Contractor to cooperate fully with all persons engaged in testing. Contractor to excavate as required to allow testing. Contractor to backfill all test excavations in accordance with these regulations.

4.03 DENSITY TESTING AND CONTROL.

A. Reference Standards - Density/moisture relationships to be developed for all soil types encountered according to ASTM D698 or AASHTO T99.

B. Field Testing - Testing for density during compaction operations to be done in accordance with ASTM D2922 using nuclear density methods.

C. Frequency of Testing - Minimum of 1 test for each 100 feet of trench or as directed by the District. Contractor to excavate to depths required by Engineer for testing and backfill test holes to density specified. Testing to be paid for by the Contractor.

End of Section VI

VII. PRESSURE TESTING AND FLOW TESTING

1.00 GENERAL

1.01 SCOPE. This section shall include furnishing all materials, labor, equipment and miscellaneous items necessary to perform pressure and leakage tests all distribution, transmission and service lines as specified herein for the District. Hydrostatic testing shall comply with AWWA C600 latest revision.

1.02 Hydrostatic Tests. Pressure and leakage tests shall be conducted on all newly laid pipe and service lines. Contractor to furnish all the necessary equipment and materials to conduct the test. Contractor will be responsible for installing the appropriate taps used in the test.

The test shall be conducted between valved sections of the pipeline, or as approved by the District. Water service lines will be tested up to the closed curb stop. A visual inspection of the water service connection, at the water main and at the curb stop, will be performed to check the leakage; thus, Contractor shall not backfill the corporation and curb stop connections until inspection by District representative has been completed and accepted.

Furnish the following equipment and material for the tests:

Amount	Description
2	Approved graduated containers.
2	Pressure gauges.
1	Hydraulic force pump approved by the water supt.
1	Additional 3/4 inch pressure tap for District's gauge.
	Suitable hose and suction pipe as required.

Conduct the tests after the trench has been completely backfilled. Where any section of pipe is provided with concrete reaction blocking, do not make the pressure tests until at least 5 days have elapsed after the concrete thrust blocking is installed. If High-Early cement is used for the concrete thrust blocking, the time may be cut to two days.

Conduct pressure test in the following manner unless otherwise approved by the District: After the trench has been backfilled as specified, fill the pipe with water, expelling all air during the filling. The test pressure shall be 1.5. times normal static system working pressure of the pipe at the point of lowest elevation (test minimum 150 psi).

A. Duration

1. The duration of each pressure test shall be two hours, unless otherwise directed by the District.

B. Procedure

1. Slowly fill the pipe with water and allow to stand for 24 hours. Expel all air from the pipe. Apply and maintain the specified test pressure by

continuous pumping in necessary for the entire test period. The test pressure shall be calculated for the point of lowest elevation, or as specified by the District. The pump suction shall be in a barrel or similar device, or metered so the amount of water required to maintain the test pressure may be measured accurately.

2. Before the line is pressurized, the District shall verify that all the necessary main line valves are open or closed with regard to the section of line being tested. In addition, the District shall verify that all hydrant valves are open.

C. Leakage

1. Leakage shall be defined as the quantity of water necessary to hold the specified test pressure for the duration of the test period. No pipe installation will be accepted if the leakage is greater than the number of gallons per hour as determined by the following formula:

$$L = \frac{SD\sqrt{P}}{148{,}000}$$

In the above formula:

L = Allowable leakage (in gallons per hour)
S = Length of pipe tested (feet)
D = Nominal diameter of pipe (in inches)
P = Average test pressure during the leakage test (in pounds per square inch gauge).

D. Correction of Excessive Leakage

1. Should any test of pipe laid disclose leakage greater than that allowed, locate and repair the defective joints or pipe until the leakage of a subsequent test is within the specified allowance.

E. Air Expulsion

1. Always provide a 3/4 inch tap at high point in line for air expulsion.

F. Flow Test

1. After new main has been leak tested, the line shall be flushed by opening one or more fire hydrants for approximately 10 minutes or until sediment has been flushed from system.

End of Section VII

VIII. DISINFECTION OF POTABLE WATER LINES

1.00 GENERAL

1.01 DISINFECTION. The following procedure shall apply to all main extensions within the District service area. Pipe extensions shall be chlorinated in accordance with AWWA C600 and C651 *Standard for Disinfecting Water Mains. The intended high chlorine with any method of chlorination is to be 25 mg/l.*

Before filling the pipe with water, the pipe shall be clean and fr*ee of* debris to the satisfaction of the District.

Disinfecting by chlorination of the pipe shall be performed prior to acceptance by the District. The chlorinating agent and method of application shall be in accordance with AWWA C651. The Contractor shall provide material for disinfecting of water mains.

If the tablet method of chlorination is used, during construction, calcium hypochlorite granules shall be placed at the upstream end of the first section of pipe, at the upstream end of each branch main at 500 foot intervals. The quantity of granules shall be as shown in the table below.

This method may be used only if the pipes and appurtenances have been kept cleaned and dry during construction. This method is **not to be used** on solvent welded plastic or on screwed joint steel pipe because of the danger of fire or explosion from the reaction of the joint compound with the calcium hypochlorite.

1.02 METHOD. Placing of calcium hypochlorite tablets. During construction, 5-g calcium hypochlorite tablets shall be placed in each section of pipe. Also, one tablet shall be placed in each hydrant, hydrant branch, and other appurtenance. The number of 5-g tablets required for each pipe section shall be $0.0012\ d^2\ L$ rounded to the next higher integer, where *d* is the inside pipe diameter, in inches, and *L* is the length of the pipe section, in feet. Table 2 shows the number of tablets required for commonly used sizes of pipe. The tablets shall be attached by a food-grade adhesive. There shall be adhesive only on the broadside of the tablet attached to the surface of the pipe. Attach tablets inside and at the top of the main, with approximately equal numbers of tablets at each end of a given pipe length. If the tablets are attached before the pipe section is placed in the trench, their position shall be marked on the section to indicate that the pipe has been installed with the tablets at the top.

Table 1 Ounces of calcium hypochlorite granules to be placed at beginning of main and at each 500-ft interval.

Pipe Diameter *(d)*	Calcium Hypochlorite Granules
in.	*oz.*
4	1.7
6	3.8
8	6.7
10	10.5
12	15.1
14 and larger	D^2 x 15.1

Where D is the inside pipe diameter in feet $D = {}^{d}/_{12}$

Table 2 Number of 5-g calcium hypochlorite tablets required for dose of 25mg/L*

	Length of Pipe Section, *ft*
Pipe Diameter	20
in.	Number of 5-g Calcium Hypochlorite Tablets
4	1
6	1
8	2
10	3
12	4
16	7

*Based on 3.25-g available chlorine per tablet; any portion of tablet rounded to the next higher integer.

1.03 TESTING. After the pipe is filled with water and chlorine, and unless approved otherwise by the District, the chlorinated water shall be held in contact with the pipe for 24 hours. At the end of the 24 hour period, the water in the pipeline shall be tested by the District to ensure a residual chlorine content of not less than 25 mg/l. The pipeline shall then be tested by the District thoroughly flushed to remove the heavily chlorinated water and/or debris. Care shall be taken in flushing the pipeline to prevent property damage and danger to the public. Discharge of highly coordinated water shall not be released to any stream or watercourse. Samples of water will be collected for bacteriological examination and residual chlorine content testing before the pipeline is put into service. Testing of residual chlorine and bacteriological sampling and testing will be done by the District.

No main which has been disinfected and flushed shall stand stagnant for more than 15 days without being re-flushed and a new disinfecting test performed, passed and approved by the District.

1.04 DISCHARGING CHLORINATED WATER. After the applicable retention period, heavily chlorinated water should not remain in prolonged contact with pipe. In order to prevent damage to the pipe lining or to prevent corrosion damage to the pipe itself, the heavily chlorinated water shall be flushed from the main fittings, valves, and branches until chlorine measurements show that the concentration in the water leaving the main is no higher than that generally prevailing in the distribution system or that is acceptable for domestic use. The environment to which the chlorinated water is to be discharged shall be inspected. If there is any possibility that the chlorinated discharge will cause damage to the environment, a neutralizing chemical shall be applied to the water to be wasted to thoroughly neutralize the residual chlorine. Where necessary, federal, state, local, or provincial regulatory agencies should be contacted to determine special provisions for the disposal of heavily chlorinated water. The chlorinated water shall not be discharged to the District's sewer collection system.

1.05 DISINFECTION PROCEDURES WHEN CUTTING INTO OR REPAIRING EXISTING MAINS. The following procedures apply primarily when existing mains are wholly or partially dewatered. After the appropriate procedures have been completed, the existing main may be returned to service prior to the completion of bacteriological testing in order to minimize the time customers are without water. Leaks or breaks that are repaired with clamping devices while the mains remain full of pressurized water may present little danger of contamination and therefore may not require disinfection.

1.0 *Trench treatment*. When an existing main is opened, either by accident or by design, the excavation will likely be wet and may be badly contaminated from nearby sewers. Liberal quantities of hypochlorite applied to open trench areas will lessen the danger from this pollution. Tablets have the advantage in this situation, because they dissolve slowly and continue to release hypochlorite as water is pumped from the excavation.

2.0 *Swabbing with hypochlorite solution*. The interior of pipe and fittings (particularly couplings and sleeves) used in making the repair shall be swabbed or sprayed with a 1 percent hypochlorite solution before they are installed.

3.0 *Flushing*. Thorough flushing is the most practical means of removing contamination introduced during repairs. If valve and hydrant locations permit, flushing toward the work location from both directions is recommended. Flushing shall be started as soon as the repairs are completed and shall be continued until discolored water is eliminated.

4.0 *Slug chlorination*. Where practical, in addition to the procedures previously described, the section of the main in which the break is located shall be isolated, all service connections shut off, and the section flushed and chlorinated as described in previous section. The dose may be increased to as much as 300 mg/L and the contact time reduced to as little as 15 min. After chlorination, flushing shall be resumed and continued until discolored water is eliminated and the chlorine concentration in the water exiting the main is no higher than the prevailing water in the distribution system or that which is acceptable for domestic use.

1.06 Bacteriological Tests. After final flushing and before the new water main is connected to the distribution system, 2 consecutive sets of acceptable

samples, taken at least 24 hr apart, shall be collected from the new main. (NOTE: The pipe, the water loaded into the pipe, and any debris exert a chlorine demand that can interfere with disinfection.) At least one set of samples shall be collected from every 1,200 ft of the new water main, plus one set from the end of the line and at least one set from each branch. Samples shall be tested for bacteriological (chemical and physical) quality in accordance with *Standard Methods for the Examination of Water and Wastewater*; and shall show the absence of coliform organisms; and, if required, the presence of a chlorine residual. Turbidity, pH, and a standard heterotrophic plate count (HPC) test may be required at the option of the purchaser because new material does not typically contain coliforms but does typically contain HPC bacteria.

1. *Special conditions*. If trench water has entered the new main during construction or if, in the opinion of the Engineer, excessive quantities of dirt or debris have entered the new main, bacteriological samples shall be taken at intervals of approximately 200 ft, and the location shall be identified. Samples shall be taken of water that has stood in the new main for at least 16 hr after final flushing has been completed.

2. *Sampling procedure*. Samples for bacteriological analysis shall be collected in sterile bottles treated with sodium thiosulfate, as required by *Standard Methods for the Examination of Water and Wastewater*. No hose or fire hydrant shall be used in the collection of samples. (NOTE: For pipe repairs, if no other sampling port is available, well-flushed fire hydrants may be used with the understanding that they do not represent optimum sampling conditions.) There should be no water in the trench up to the connection for sampling. The sampling pipe must be dedicated and clean and disinfected and flushed prior to sampling. A corporation cock may be installed in the main with a copper-tube gooseneck assembly. After samples have been collected, the gooseneck assembly may be removed and retained for future use.

3. *Sample results.* If sample results from the lab indicate a measured HPC greater than 500 colony-forming units (cfu) per mL, flushing should be resumed and another coliform and HPC set of samples should be taken until no coliforms are present and the HPC is less than 500 cfu/mL.

4. *Record of compliance*. The record of compliance shall be the bacteriological test results certifying that the water sampled from the new water main is free of coliform bacteria contamination and is equal to or better than the bacteriologic water quality in the distribution system.

1.07 REDISINFECTION. If the initial disinfection fails to produce satisfactory bacteriological results or if other water quality is affected, the new main may be reflushed and shall be resampled. If check samples also fail to produce acceptable results, the main shall be rechlorinated by the continuous-feed or slug method until satisfactory results are obtained—that being two consecutive sets of acceptable samples taken 24 hr apart.

NOTE: High velocities in the existing system, resulting from flushing the new main, may disturb sediment that has accumulated in the existing mains. When check samples are taken, it is advisable to sample water entering the new main to determine the source of turbidity.

End of Section VIII

IX. SPECIAL CONSTRUCTION

1.00 GENERAL

1.01 SCOPE. This section shall include the design and construction of aerial crossings, river crossings, storage tanks, pressure reducing vaults and booster stations. Because each of these structures will require an engineered design to meet field conditions and individual design criteria, this section will not attempt to provide complete design guidelines and specifications. Rather, it will provide a general listing of guidelines that must be followed unless an equivalent alternative is approved by the District.

2.00 AERIAL CROSSING

2.01 GENERAL. This section shall cover the design criteria to be used on aerial crossings, including water lines suspended from existing and proposed bridges, and lines aerially supported over steep canyons and arroyos. In both of the above crossings, an underground or river crossing will be required unless special circumstances render the below grade alternative prohibitive. If it is determined that a bridge crossing is acceptable to the District, then the following design criteria shall be followed. Bleeder valves or heat tape are also to be installed to prevent the line from freezing.

2.02 PIPE SUPPORTS. If pipe is to be supported from an existing bridge, a structural analysis shall be performed to determine if the bridge can withstand the additional loading. If being installed on a new bridge, then additional pipe loading should be included as a dead load consideration.

Pipe shall be supported with a pipe hanger that allows longitudinal movement. Support shall be an adjustable steel yoke pipe roll or approved equal. In addition, a horizontal support from pipe hanger to the bridge shall be provided so that the pipe assembly will not move horizontally due to wind loads, etc. The spacing of the pipe hangers shall depend upon the maximum recommended load of hanger.

2.03 PIPE INSULATION. Aerial pipelines shall be prevented from freezing by pipe insulation. The insulation R-value and thickness shall be designed to a generally accepted standard for the Mid Valley Metropolitan District area. The insulation should have a minimum R-value of 20. The insulation shall be non-absorbing to water. Heat tape shall also be provided to further prevent freezing.

2.04 INSULATION PROTECTION. Provide an aluminum jacket with moisture barrier strapped with stainless steel bands. Jacketing thickness shall be a minimum of 16 mil. Provide insulation protection shields.

2.05 PIPE. Provide Class 52 ductile pipe with flanged joints, ANSI A.21.15, AWWA C 115, latest revision.

2.06. EXPANSION COUPLING. Provide a restrained expansion coupling between each rigidly supported point of the pipe. Follow all manufacturer's recommendations when installing. Expansion couplings shall be accessible to District personnel for maintaining and making adjustments in couplings.

2.07 AIR AND VACUUM VAULTS. If bridge crossing is at a high point in line, install all air and vacuum valves appropriate for design conditions.

2.08 ISOLATION VALVES. An isolation valve shall be provided on either end of the bridge. If a break occurs, the line can be easily isolated.

2.09. ACCESSIBILITY. Generally, the pipe should be placed in a location where personnel can easily access and maintain the pipe.

3.00 RIVER CROSSINGS

3.01 GENERAL. This section covers the design criteria to be used on river crossings.

3.02 ENCASEMENT. Pipe shall be encased in concrete for the length of pipe underneath high water mark.

3.03 PIPE. For river crossing, the pipe joints shall be push-on joints with joint restraint, Class 52 D.I.P. Manufacturer's reference - Griffin Snap-Lok pipe or approved equal by District Engineer.

3.04 BEND RESTRAINT. All vertical bends shall be restrained with vertical reaction blocks and all thread rods between bends or between bends and concrete thrust tie.

3.05 PERMITS. Generally, a river crossing will require a 404 Permit or Nationwide Utilities Permit from the Army Corps of Engineers. The Applicant should begin the permit process as soon as possible, as the process can take from 30-90 days to secure the permit.

4.00 STORAGE RESERVOIRS

4.01 GENERAL. This section covers the design criteria to be used on storage reservoirs. The District may allow either a buried concrete or above-ground steel reservoir. The District reserves the right to require either a concrete or steel tank depending on the field conditions, size and location of the tank. The District shall determine the size and location and elevation of the storage tanks.

4.02 FOUNDATION DESIGN. A soil and geological report shall be provided which makes recommendations on the required foundation.

4.03 STRUCTURAL DESIGN. Complete structural design, with calculations and shop drawings submitted by a professional engineer shall be provided. If a welded steel tank is provided, it shall conform to AWWA D100, latest revision.

4.04 CDPHE REQUIREMENTS. All Colorado Department of Public Health and Environment, Water Quality Control Division "Design Criteria for Potable Water Systems" shall be followed.

4.05 FLOW MEASURING. A magnetic flow meter capable of measuring flow in both directions shall be provided. Two remote recording charts with totalizers shall be provided at the District office. The flow meter shall be housed in a vault outside the tank. The vault shall conform to the same basic requirements as a PRV vault (see Section

4.00 of this section). The vault shall contain heat, lights and two 110 volt outlets. Install lightning arresters on mag meter power sensor lines to eliminate surge and transient voltages (located at both ends).

4.06 TANK INSULATION. Not Applicable.

4.07 STEEL TANK PAINTING. Use an AWWA approved paint system for tank interior and exterior coating on all steel tanks. Painting shall conform to AWWA D102, latest revision.

5.00 PRESSURE REDUCING VAULTS (PRV)

5.01 GENERAL. This section shall cover the design criteria to be used on pressure reducing vaults. The District shall determine the location of PRV's.

5.02 PRV VALVE. The PRV valve shall be a Golden Anderson valve as manufactured by GA Industries Incorporated. The main valve shall be a single seated, hydraulically operated, pilot controlled, diaphragm-type globe valve.

5.03 PILOT CONTROL SYSTEM. Cast bronze ASTM B62 with 303 stainless steel trim. Install isolation cocks, closing and opening speed control and strainers on pilot controls.

5.04 PRESSURE GAUGES. Install two stainless steel, liquid filled, hermetically sealed pressure gauges with pressure snubbers, and isolation cocks. Locate at main inlet and outlet of vault so that if one PRV is isolated, gauges will still register.

5.05 BYPASS PIPING. Install a bypass around main PRV valve so that mainline can be filled and service maintained with PRV valve out of service. Bypass shall be installed with an isolation valve.

5.06 PRESSURE RELIEF VALVE. If damaging downstream pressure can result when PRV is stuck in open position, then a pressure relief valve shall be installed on downstream side of PRV on either the main line or bypass line. Pressure relief valve to be piped to daylight to be sized by Engineer of Record.

5.07 ISOLATED VALVES. Install isolation resilient seat gate valves inside of vault so that main PRV valve can be isolated.

5.08 AIR RELEASE. Install an air release and vacuum valve on both inlet and outlet of pipe in vault. Each air release valve to have an isolation valve. Air Release Valve only to be used at high point in line, when a fire hydrant cannot be used.

5.09 PRV VAULT. All valves, appurtenances and pipe to be enclosed in a concrete or steel vault. Install link seal or equivalent between pipe inlets, outlets and vault wall. Provide frost-proof aluminum manhole lid marked "Water" on concrete vaults. Steel reinforced copolymer polypropylene manhole steps shall be provided in concrete vault. Install pipe supports under PRV and tees. All vaults to be provided with heat, lights, drain to daylight, water sample hose bib and two 110 volt outlets.

5.10 FITTINGS. All main line fittings shall be ductile iron flanged fittings.

End of Section IX

X. BACKFLOW PREVENTION

1.00 GENERAL

1.01 SCOPE. This section shall include the use of backflow prevention devices to prevent cross connection.

1.02 REQUIREMENTS. All work within the District must comply with the current requirements under Colorado law for prevention of cross connections and backflows. Such laws include, but are not limited to, Colorado Department of Health Statutes, C.R.S. ' 25-1-114(h); Colorado Primary Drinking Water Regulations, S.C.C.R. 1003-1 (Article 11); and the *"Colorado Department of Health Cross Connection Manual"*.

In general, the law states that it is illegal to have or to maintain a cross connection on a public water supply. Cross connection is defined as any connection which would allow water to flow from any pipe, plumbing fixture or water system into a water system supplying drinking water to the public.

1.03 TYPES OF CROSS CONNECTIONS. The following are common (but not limited to) cross connections and required devices to prevent backflow:

A. Hose bibs - Vacuum breaker.

B. Irrigation lines.

C. Fire sprinkler systems.

D. Boiler systems.

E. Dishwashers.

F. Solar homes using potable water as heat source.

1.04 BACKFLOW PREVENTERS. Be advised that each cross connection will require different types of backflow prevention devices, and is beyond the scope of these regulations. Approval of backflow preventers must be given by District personnel.

End of Section X

XI. SANITARY SEWER LINES

1.00 GENERAL

1.01 SCOPE. Work under this section shall include furnishing all materials, labor and tools necessary to perform all installation, cleaning and testing of all sanitary sewer lines and appurtenances as specified herein and shown on the Drawings.

1.02 PROTECTION OF WORK. All pipe, fittings and equipment shall be carefully handled, stored and protected in such a manner as to prevent damage to materials. At no time shall such materials be dropped or dumped into trench.

Precaution shall be taken to prevent foreign matter from entering the pipe and fittings prior to and during installation. Place no debris, tools, clothing or other materials in the pipe during installation.

At such time as pipe installation is suspended, either temporarily or overnight, the open end of the pipe shall be sealed with a water-tight plug to prevent entrance of trench water, debris or foreign matter. A mechanical-type fitting or inflatable plug shall be used for this seal. At no time shall duct tape or any other tape be used for this seal.

Under no circumstances shall trench water be allowed to enter the pipeline. When water is present in the trench, the seal shall remain in place until such time the trench is pumped dry. Whenever trench water becomes evident, adequate measures shall be taken to prevent pipe flotation. Contractor shall bear all costs associated with keeping trench free of liquids.

If, in the opinion of the Engineer, the Contractor is incapable of keeping the pipe free of foreign matter during installation, the Engineer shall require the Contractor to cover the pipe ends with close woven bags until the start of the jointing operation.

2.00 MATERIALS

This item covers the types of materials that will be allowed for the construction and installation of sewer lines. All materials used shall be new, of the best quality available and conform to applicable standards as indicated herein.

2.01 DUCTILE IRON PIPE AND FITTINGS. Not permitted for gravity lines.

2.02 POLYVINYL CHLORIDE (PVC) PIPE AND FITTINGS (GRAVITY MAIN)

A. PVC Pipe, through 15 inch diameter.

1. Material Reference Standard - ASTM D1784.

2. Pipe Reference Standard - ASTM D3034.

3. Class - SDR35.

4. Markings - Manufacturer's name, nominal size, PVC classification, Type PSM, SDR-35, PVC gravity sewer pipe, ASTM D3034 and code number,

green coloring dyed into PVC.

B. PVC Pipe, 18 inch to 27 inch diameter.

1. Material Reference Standard - ASTM D1784.

2. Pipe Reference Standard - ASTM F679.

3. PSM 46 PVC Sewer Pipe and ASTM F679. Green coloring dyed into PVC.

4. Variance - PVC piping meeting the stiffness requirement of ASTM F679 but not meeting wall thickness requirement will be allowed under this specification. Manufacturers will be required to provide a list of at least 5 similar projects with references in which pipe has been successfully used and laboratory testing data showing the pipe meets the structural requirements of ASTM F679.

C. Fittings

1. Type - PVC push-joint.

2. Materials - ASTM D1784.

3. Reference Standard - ASTM D3034 or ASTM F679.

D. Joints

1. Type - push-on rubber gasket.

2. Gasket reference standard - ASTM F477.

2.03 FORCE MAIN

A. PVC Pipe.

1. Materials - ASTM D 1784, Type 1, Grade 1, PVC 1120, 2000 psi design stress.
2. Reference Standard - AWWA C-900.

3. Class - 150 (DR-18), (or, dependent upon internal pressure, may require Class 200).

4. Markings - Manufacturer's name, nominal size, class pressure rating, PVC 1120, NSF logo, identification code.

5. Specialties - Electrical tracing wire, 12 gauge solid copper insulated wire.

6. Size - Shall conform to outside diameter of DIP.

7. Fittings.

   a. Type - All fittings shall be restrained mechanical joint except where specifically shown or detailed otherwise. Fittings in a vault shall be flanged.
   b. Reference Standard -.AWWA/ANSI C153/A 21.53.
   c. Pressure Rating - 350 psi.
   d. Gasket Reference Standard - AWWA C-111.
   e. Fittings shall be coated with Permafuse epoxy coating inside and out.

B. Ductile Iron Pipe.

1. Reference Standard - ANSI 21.51/AWWA C151, latest edition.

2. Thickness Class – 52.

3. Pipe joints shall be push on joints, except where specifically shown or detailed otherwise.

4. Pressure Rating - 350 psi

C. Fittings

1. Type - All fittings shall be mechanical joint.

2. Reference Standard - ANSI/AWWA C153, latest edition, for mechanical "compact" joints.

3. Material - Ductile iron.

4. Pressure Rating - 350 psi.

5. Fittings shall be coated with Permafuse epoxy coating inside and out.

D. Joints

1. Mechanical, Reference Standard - ANSI A. 21.53/AWWA C153, latest edition.

2. Push-on, Reference Standard - ANSI A 21.15/AWWA C115, Class 125.

3. Flanged, Reference Standard - ANSI B 16.1, Class 125

E. Gaskets

1. Type - Rubber-ring gasket for gravity main.

2. Type - Rubber-ring field lock gasket, or equal, for force main shall be suitable for the specified pipe sizes and pressure.

3. Reference Standard - AWWA C111, latest edition.

4. Lubricant - A non-toxic vegetable soap lubricant shall be supplied with the pipe.

F. Protective Coating

1. Underground Service - Manufacturer's standard bituminous coating - minimum 1 mil thickness.

2. Polyethylene Film Envelope - Polyethylene encasement shall conform to AWWA C105, latest edition, or ANSI A.21.5. Film shall be Class C with a nominal thickness of 8 mils. Tape for securing the film shall have a minimum thickness of 8 mils and a minimum width of 1 inch. The polyethylene film shall be free of streaks, pinholes, tears or blisters.

G. Protective Lining - Gravity Main

1. Type - Cement mortar.

2. Reference Standard - ANSI A 21.4/AWWA C104, latest edition.

3. Thickness – Standard.

H. Protective Lining - Force Main

1. Type - Lining designed for sewer service equal to Protecto 401 by Clow or Permafuse epoxy coating.

2.04 Small Diameter, Low Pressure Sewer line less than 4 inch.

A. Pipe Materials

1. High density Polyethylene pipe & fittings HDPE 3408 Plastics Pipe Institute, DR9.

2. Polyvinyl Chloride pipe (PVC)ASTM D-1784 & D-2241, DR21, 200 psi.

B. Joints

1. Butt fusion for HDPE.

2. Gasketed for PVC, 2 inch and larger; solvent weld for 12 inch and smaller.

C. Appurtenances

1. Air/Vacuum valve - Crispin SU20 sewage air/vacuum or approved equal.

2. Isolation valve - PVC ball valve or approved equal.

2.05 CONCRETE FOR THRUST BLOCKS AND ENCASING OF PIPE. Concrete for thrust blocks and for encasing the sewer pipeline shall have 28 day compressive strength of not less than 3,000 psi.

2.06 MANHOLES.

A. Concrete Rings/Cones

1. Type – Precast.

2. Reference Standard - ASTM C478.

3. Size - Four-foot or five-foot inside diameter.

B. Manhole Bases

1. Shall be precast or cast-in-place, depending upon local jurisdiction standards, with integrally cast-in water stops. Tee tops of base shall be at least 12 inches above top of pipe.

2. Reference Concrete Standard - ASTM C150 Type II modified or Type V.

C. Manhole Steps. Manhole steps shall conform to ASTM C-478-94 and shall be steel reinforced copolymer polypropylene with materials conforming to the following:

Materials:

1. The deformed steel reinforcing bar shall be 2 inch conforming to ASTM A-615 Grade 60.

2. The copolymer polypropylene shall conform to ASTM D4101-92b PP0344B33534Z02.

3. Manufacturer's Reference: M.A. Industries Model PS1-PF, or approved equal.

D. Joints

1. Type - Rub'r Nek preformed gasket as manufactured by K.T. Snyder Co., Inc., Houston, Texas, or equal.

2. Cement Mortar Material Reference Standard - One part Portland Cement, Type II, modified with three parts of sand. Cement mortar to be used with concrete grade rings only.

E. Grade Adjustment Rings

1. Type - Precast ASTM C150 Type II modified concrete.

2. Size - Not less than 6 inch wide x heights to allow for two-inch adjustments.

3. Alternate - HDPE grade rings.

Manufacturer's reference: Ladtech, Inc., or approved equal.

F. Frame and Cover.

1. Material Reference - Grey Iron, ASTM A48-83, Class 35B.

2. Cover - Stamped with "SEWER"," machined bearing surface with ring.

3. Type - Heavy, weight of cover greater than 140 pounds. Manufacturer Reference -Castings MH-400-24CI.

2.07 SEWER SERVICE LINE MATERIALS

A. Wyes - Required for all sewer service line construction.. Tapping saddles will not be allowed..

1. Material - ASTM D3034 PVC.

2. Strength - for use with SDR-35.

3. Joint - Slip-on rubber gasket.

2.08 SHEAR GATES. Not applicable.

2.09 FLAP GATE. Not applicable.

2.10 BUTTERFLY VALVES. Not applicable.

2.11 GATE VALVES. Not applicable.

2.12 VALVE BOXES. Not applicable.

2.13 TRACER WIRE. Tracer wire shall be 12 gauge uninsulated copper wire. Tracer Wire shall be installed on all force main or pressure sewer pipe. Wire continuity to be tested prior to pipeline being accepted.

3.00 METHODS AND PROCEDURES

3.01 CLEANING AND INSPECTION. Clean all pipe, fittings and related materials thoroughly of all foreign material and inspect for cracks, flaws or other defects prior to installation. Mark all defective, damaged or unsound materials with bright marking crayon or paint and remove from job site.

The Contractor shall take all necessary precautions to prevent any construction debris from entering the sewer lines during construction. If this debris should enter the pipe line system, the Contractor shall furnish all labor and materials necessary to clean the system. Under no circumstances will the Contractor flush the debris into an existing sanitary sewer system.

3.02 PLACEMENT OF PIPE.

A. Laser Beam. All sanitary sewer pipe must be installed with a laser. If bending of the beam due to air temperature variations becomes apparent with "in pipe" units, a fan shall be provided to circulate air in the pipe. Air velocity shall not be so excessive as to cause pulsating or vibrating of the beam. If, in the opinion of the Engineer, the beam cannot be accurately controlled, this method of setting line and grade shall be abandoned.

3.03 PIPE EMBEDMENT.

A. Placing embedment material - Refer to Section VI for placement methods.

B. Embedment Classes - Refer to Section VI and Construction Drawings for embedment materials for each class listed below:

1. Class A - Use where indicated on the Drawings and where improper trenching or unexpected trench conditions require its use as determined by the Engineer.

2. Class B - Use of all PVC pipelines.

3.04 PIPE INSTALLATION.

A. Installation of Ductile Iron Pipe Lines. Not applicable.

B. Installation of Polyvinyl Chloride (PVC) Pipe.

1. Pipe Handling. Pipe should be carefully lowered into the trench to avoid pipe falling into trench.

2. Pipe Laying. Pipe shall be laid true to line and grade, in an uphill direction, with bell ends facing in the direction of laying. When pipe laying is not in progress, the open end of the pipe shall be closed by a watertight plug.

3. Jointing the Pipe. The outside of the spigot and the inside of the bell shall be thoroughly wiped clean. Set the rubber ring in the bell with the marked edge facing toward the end of the bell. Lubricate the spigot end using a thin film of the manufacturer-supplied lubricant. Push the pipe spigot into the bell. Position the completed joint so that the mark on the pipe end is in line with the end of the bell.

4. Pipe Cutting. The cutting of pipe for manholes or for fittings, or closure pieces shall be done in a neat and workmanlike manner without damage to the pipe or lining and so as to leave a smooth end at right angles to the axis of the pipe. Bevel the end of the pipe with a beveling tool after the pipe is field cut. Place a clearly visible position mark at the correct distance from the end of the field-cut pipe.

5. Solvent Weld or Butt Fusion Joints. All cutting and field fabrication shall be done according to printed recommendations of the pipe manufacturer or associated pipe manufacturer organizations. Piping shall be cleaned to

the extent required for joint completion.

C. Installation of Slipline Pipe. Not applicable.

3.05 SEWER MANHOLE INSTALLATION.

A. General. Manholes shall be furnished and installed to depths and dimensions shown on the Construction Drawings and/or staked in the field. Manholes shall be constructed of precast concrete rings in accordance with details shown in Appendix B.

B. Connections to Manholes. Connection of manhole with pipe shall be made with flexible connector detail. See details in Appendix E. In addition, extra care shall be taken by grouting or other means of sealing to assure positive water-tight manholes around the inlet or outlet pipes.

C. Manhole Floor and Inverts. Manhole bases shall be constructed to conform to the details shown in Appendix E. The invert channels shall be smooth and semi-circular in shape, conforming to the inside of the incoming and outgoing sewer pipelines. Changes in direction of flow shall be made with a smooth curve of as large a radius as the size of the manhole will permit. Changes in size and grade of the channels shall be made gradually and evenly. Where large differences in invert elevations exist, sloped flow channels shall be formed so the wastewater does not undergo a vertical drop. The invert channels may be formed directly in the concrete of the manhole base. The floor of the manhole outside the channel shall be smooth and shall slope toward the channels.

D. Finish Grade and Adjustment. To bring the manhole cover to the correct elevation, the top section of each manhole shall be constructed of pre-cast concrete grade adjustment rings. These rings shall be not less than 6 inches wide and furnished in heights to allow for 2 inch adjustments. Grade adjustment rings shall be 8 inches maximum and 2 inches minimum, if required. All rings shall be grouted in place. Distance from top of ring to the first step shall be 18 inch maximum.

Finish Grade and Adjustment HDPE Alternate. High-density polyethylene grade rings may also be used to bring manhole cover to correct elevation. Grade rings shall be molded from HDPE as defined in ASTM Specification D1248-84. Available thicknesses are 1.25 inch, 1.50 inch, 2.00 inch 4.00 inch and a sloped thickness .75 inch x 1.50 inch. When this alternate is used, pavement slope should be matched using one or more sloped rings. Manufacturer's reference - Ladtech, Inc., or approved equal.

E. Manhole Stubs. All pipe stubs required from manholes are shown on the Drawings. Stubs shall extend approximately 24 inch from the outside face of the manhole and shall be capped or plugged with manufactured fittings to form a water-tight installation.

3.06 CONNECTION TO EXISTING SEWER FACILITIES. Connections to existing sewer facilities where live flows exist shall be made only after prior consultation with and receipt of written permission from the Engineer. No bypass of sewage to the surface will be

allowed in the completion of this connection. Connections shall be made as shown on the Drawings. All connections between pipes of different materials shall be made with approved manufactured connectors.

3.07 PROTECTION OF WATER SUPPLIES. Sewer lines shall be located a minimum of 10 feet horizontally from existing or proposed water mains. Where the sewer line crosses above the waterline, or is less than 18 inches vertically below the invert of the water line, or is less than 10 feet horizontally from the water main, the sewer line shall be made impervious by either of the methods listed below.

A. The sewer pipe shall be reinforced with a concrete encasement. The encasement shall be at least 6 inches thick on all sides of the sewer pipe and extend 10 feet on either side of the water main. Use three No. 4 rebar the length of the encasement.

B. Install one piece of C-900 PVC pipe centered over the waterline.

C. Use C-900 PVC pipe sewer with transition gaskets.

If clearance is less than 12 inches vertically, the space between the water and sewer mains shall be filled by 3,000 psi concrete.

In all cases, bedding material shall be used to prevent any settling of the higher pipe.

3.08 SERVICE CONNECTIONS. Customer service connections shall be installed in accordance with the details set forth on the construction drawings. After the service connection is installed, the end shall be plugged water-tight with a manufactured plug and marked with a stake except as shown otherwise on the Drawings.

4.00 FIELD QUALITY CONTROL

4.01 ALIGNMENT AND GRADE. Sewer lines will be checked by a video inspection to determine whether any displacement of the pipe has occurred after the trench has been completely backfilled. The test shall be performed with running water in the sewer line so that flow characteristics can be examined. The video inspection shall be submitted along with a report documenting services, fittings and deficiencies, to the District in electronic format. The District Engineer will review the video inspection and respond in writing with approval or deficiencies that need to be corrected to meet District standards. Contractor will coordinate and pay for video inspection and/or re-inspections. The required video inspection is described in more detail in section 4.05 below.

4.02 LEAKAGE TEST. Sewer lines shall be tested using a low pressure air test only; water tests will not be allowed. Only after the sanitary sewers, including appurtenances and sanitary laterals have been installed, backfilled and cleaned, shall the Contractor proceed with an air test on the installed facilities.

A. Low Pressure Air Test Procedure. The section of sewer line to be tested should be flushed and cleaned prior to conducting the low pressure air test. This serves to clean out any debris, wet the pipe, and produce more consistent results. Isolate the section of sewer line to be tested by means of inflatable stoppers or other suitable test plugs. One of the plugs should have an inlet tap, or other provision for connecting a hose to a portable air control source.

If the test section is below the groundwater level, determine the height of the ground water above the spring line of the pipe at each end of the test section and compute the average. For every foot of groundwater above the pipe spring line, increase the gauge test pressure by 0.43 pounds per square inch. Connect the air hose to the inlet tap and a portable air control source. The air equipment should consist of necessary valves and pressure gauges to control the rate at which air flows into the test section and to enable monitoring of the air pressure within the test section. Also, the testing apparatus should be equipped with a pressure relief device to avoid the possibility of loading the test section with the full capacity of the compressor. Locate valves and gauges above ground.

Add air slowly to the test section until the pressure inside the pipe is raised to 5.0 psig greater than the average back pressure of any groundwater that may be over the pipe. After a pressure of 5.0 psig is obtained, regulate the air supply so that the pressure is maintained between 4.5 and 5.0 psig (above the average ground water back pressure) for a period of two minutes. This allows the air temperature to stabilize in equilibrium with the temperature of the pipe walls. The pressure will normally drop slightly until temperature equilibrium is obtained.

Determine the rate of air loss by the time/pressure drop method. After the two-minute air stabilization period, the air supply is disconnected and the test pressure allowed to decrease to 4.5 psig. The time required for the test pressure to drop from 4.5 psig to 4.0 psig is determined by means of a stopwatch and this time interval is then compared to the required time in the attached table to determine if the rate of air loss is within the allowable time limit. If the time is equal to or greater than the times indicated in the tables, the pipeline shall be deemed acceptable.

MINIMUM DURATION FOR AIR TEST PRESSURE DROP

Pipe Size	Time
Inches	Minutes
4	2.5
6	4.0
8	5.0
10	6.5
12	7.5
15	9.5

Upon completion of the test, open the bleeder valve to allow air to escape. Plugs should not be removed until all air pressure in the test section has been released. During this time, no one should be allowed in the trench or manhole while the pipe is being decompressed. Air test shall also include service lines and appurtenances.

4.03 MANHOLE INSPECTION. During the construction of the manholes, the Contractor shall, in accordance with good practice, ensure that no earth, sand, rocks or other foreign material exists on the joint surfaces during assembly of the section. The Engineer shall check each manhole to determine whether the manhole fulfills the requirements of the

Drawings and Specifications.

A. Visual Examination. The Engineer shall visually check each manhole, both exterior and interior, for flaws, cracks, holes, or other inadequacies which might affect the operation or water-tight integrity of the manhole. Should any inadequacies be found, the Contractor, at his own expense, shall make any repairs deemed necessary by the Engineer.

B. Leakage Test. All manholes shall be tested for leakage and all tests shall be witnessed by the Engineer. The leakage test shall be conducted prior to backfilling around the manhole and shall be carried out in the following manner:

1. Stub-outs, manhole boots and pipe plugs shall be secured to prevent movement while the vacuum is drawn.

2. Installation and operation of vacuum equipment and indicating devices shall be in accordance with equipment specifications for which performance information has been provided by the manufacturer and approved by the Engineer.

3. A measured vacuum of 10 inches of mercury shall be established in the manhole. The time for the vacuum to drop to 9 inches of mercury shall be recorded.

4. Acceptance standards for leakage shall be established from the elapsed time for a negative pressure change from 10 to 9 inches of mercury. The maximum allowable leakage rate for a 4 foot diameter manhole shall be in accordance with the following:

MANHOLE DEPTH (4 FOOT DIAMETER)	MINIMUM ELAPSED TIME FOR A VACUUM CHANGE OF 1 INCH Hg
10 ft. or less	60 seconds
> 10 ft. but < 15 ft.	75 seconds
> 15 ft. but < 25 ft.	90 seconds

For manholes 5 foot in diameter, add an additional 15 seconds and for manholes 6 foot in diameter, add an additional 30 seconds to the time requirements for 4 foot diameter manholes.

5. If the manhole fails the test, necessary repairs shall be made and the vacuum test and repairs shall be repeated until the manhole passes the test or the manhole shall be tested in accordance with the standard exfiltration test and rated accordingly.

6. If a manhole joint mastic is completely pulled out during the vacuum test, the manhole shall be disassembled and the mastic replaced.

4.04 PRESSURE TESTING OF FORCE MAIN AND LOW PRESSURE, SMALL DIAMETER SEWER LINE. Make pressure and leakage tests on all newly laid pipe. Furnish all necessary equipment and material, make all taps in the pipe as required, and conduct the tests. The tests shall be conducted between valved sections of the pipeline, or as approved by the Engineer. The Engineer will monitor the tests.

Furnish the following equipment and material for the tests:

Amount	Description
2	Approved graduated containers
2	Pressure gauges
1	Hydraulic force pump approved by the Engineer
1	Additional 1/2 inch pressure tap for Engineer's test gauge
	Suitable hose and suction pipe as required

Conduct the tests after the trench has been partially backfilled with the joints left exposed for inspection, or when completely backfilled, as permitted by the Engineer. Where any section of pipe is provided with concrete reaction blocking, do not make the pressure test until at least 5 days have elapsed after the concrete thrust blocking is installed. If high-early cement is used for the concrete thrust blocking, the time may be cut to 2 days.

Conduct pressure test in the following manner, unless otherwise approved by the Engineer: after the trench has been backfilled or partially backfilled as hereinbefore specified, fill the pipe with water, expelling all air during the filling. The test pressure shall be 1.5 times normal working pressure at the point of lowest elevation of the test gauge.

A. Duration

1. The duration of each pressure test shall be 2 hours, unless otherwise directed by the Engineer.

B. Procedure

1. Slowly fill the pipe with water and allow to stand for 24 hours. Expel all air from the pipe. Allow and maintain the specified test pressure by continuous pumping if necessary for the entire test period. The test pressure shall be calculated for the point of lowest elevation, or as specified by the Engineer. The pump suction shall be in a barrel or similar device, or metered so that the amount of water required to maintain the test pressure may be measured accurately.

2. Before the line is pressurized, the Engineer shall verify that all necessary main line valves are open or closed with regard to the section of line being tested. In addition, the Engineer shall verify that all hydrant valves are open.

C. Leakage

1. Leakage shall be defined as the quantity of water necessary to hold the specified test pressure for the duration of the test period. No pipe

installation will be accepted if the leakage is greater than the number of gallons per hour as determined by the following formula:

$$L = \frac{SD\sqrt{P}}{148{,}000}$$

In the above formula:

L = Allowable leakage (gallons per hour)
S = Length of sewer line tested (feet)
D = Nominal diameter of pipe (inches)
P = Average test pressure during the leakage test (pounds per square inch gauge).

D. The pressure testing of water service lines shall follow the same procedure as outlined in the section. In all cases, however, the corporation stop, service line and curb stop shall be visually inspected under full test pressure and any leaks fixed.

E. Correction of Excessive Leakage

1. Should any test of pipe laid disclose leakage greater than that allowed, locate and repair the defective joints or pipe until the leakage of a subsequent test is within the specified allowance.

4.05 TELEVISING MAIN. All sewer connection lines 8 inches or larger shall be video inspected. The electronic video inspection shall have a running footage meter showing the exact footage from the entry manhole. Video inspections shall be provided with a report showing the location of all defects and service lines in electronic format.

Sewer lines shall be re-televised at the end of the warranty period to verify that no movement has occurred.

5.00 DESIGN CRITERIA - GRAVITY SEWER

5.01 SIZING. All collection sewer lines shall be designed to flow approximately half full at peak flow. One hundred gallons per capita day shall be used as the per capita contribution for average daily flow. A peaking factor of 4.0 shall be used for peak flow. Minimum line size shall be 8 inches.

5.02 VELOCITIES. All velocities shall be maintained between 2.5 feet per second (fps) and 15 fps. Minimum velocity shall be 2 fps.

5.03 SLOPE. Minimum sewer line slopes shall be as follows:

8 inch	.004 ft/ft
10 inch	.003 ft/ft
12 inch	.0022 ft/ft
15 inch	.0015 ft/ft
18 inch	.0012 ft/ft
21 inch	.0010 ft/ft
24 inch	.0009 ft/ft
27 inch	.0008 ft/ft

5.04 DISTANCES. The distance between manholes shall not exceed four hundred feet (400'), unless approved by the District Engineer. Manholes shall be required on all changes in grade or alignment.

5.05 CURVED SEWER. Not Allowed.

5.06 SMALL DIAMETER PRESSURE SEWER LINES. Under special conditions, such as low tributary population, or areas where it may be determined by the District, that central lift stations are not applicable, small diameter pressure sewer technology may be used. Small diameter technology may include pressure, vacuum and small diameter, gravity sewers.

An integrated plan shall be submitted for review and approval by the District. That plan shall include the design of main line sewers and their appurtenances, service lines and on-site pumping systems. Components of the integrated design shall include, but not be limited to, the following:

A. The on-site pumping system shall include a simplex or duplex, effluent or grinder pump, alarm and monitoring controls, an effluent pipe check valve, a means to isolate the on-site pumping systems during maintenance and a minimum 20-foot usable access easement to allow inspection by District personnel.

B. The service line shall include a shutoff means to allow extension of the service line onto individual properties after the main system is in operation.

C. The main line sewer system shall include air and vacuum release valves with vaults at high points, pressure cleanouts at high points (in combination with air release and vacuum valve vault), pressure cleanouts at intersections and pressure cleanouts at minimum 1,000-foot intervals. Pressure cleanouts shall be installed in a standard manhole for access.

E. The system design shall provide for minimum cleansing velocities of 2 fps at design conditions. Minimum cleansing velocities shall be maintained at less than design flow conditions where excessive headloss at design flows are not introduced. It is recognized that minimum cleansing flows may not be maintained during the early stages of buildout. A plan shall be prepared to address operations during the times when cleansing velocities cannot be maintained. This plan should investigate multiple main lines, odor control facilities and increased maintenance requirements.

6.00 GREASE INTERCEPTORS

6.01 GENERAL. Because of the impact of grease on the District's lines and treatment plant, grease interceptors are required on establishments preparing or serving food. See standard detail 27 for a typical grease interceptor.

All grease interceptors shall be new and the interceptor and its installation shall be in conformance with the latest edition of the Uniform Plumbing Code except as modified herein.

6.02 REQUIREMENTS FOR GREASE INTERCEPTORS. An approved type grease interceptor complying with the provisions of this section shall be installed in the waste line leading from sinks, drains and other fixtures or equipment in the following establishments: Restaurants, cafes, lunch counters, cafeterias, bars and clubs; hotels,

hospitals, factory or school kitchens, or other establishments where grease may be introduced into the drainage or sewage system. Grease interceptors are to be pumped as often as needed. A letter will be sent January 1 of each year requiring a record of pumping, or be subject to the fines described in Appendix A. A grease interceptor is not required for individual dwelling units or for any private living quarters.

6.03 SPECIFICATIONS AND PROCEDURES FOR GREASE INTERCEPTORS.

A. Plans shall be submitted to and approval obtained from the District prior to the installation of any grease interceptor in any establishment set forth in Subsection 6.02.

B. No grease interceptor shall be installed which has an approved rate of flow of more than 55 gallons per minute, except when specially approved by the District.

C. No grease interceptor shall be installed which has an approved rate of flow of less than 20 gallons per minute.

D. Each plumbing fixture or piece of equipment connected to a grease interceptor shall be provided with an approved type flow control or restricting device installed in a readily accessible and visible location in the tail piece or drain outlet of each such fixture. Flow control devices shall be so designed that the total flow through such device or devices shall at no time be greater than the rated capacity of the interceptor. No flow control device having adjustable or removable parts shall be approved.

E. Each grease interceptor required by this section shall have an approved rate of flow which is not less than that given in the District's EQR schedule for the total number and size of fixtures connected thereto or discharging thereunto. The total capacity in gallons from fixtures discharging into any interceptor shall not exceed 2.5 times the flow rate of the subject interceptor.

Any grease interceptor installed or located in such a manner that the inlet is more than 4 feet lower in elevation than the outlet of any fixture discharging into such interceptor, shall have an approved rate of flow which is not less than 50 percent greater than that given in the District's EQR schedule.

F. No more than 4 separate fixtures shall be connected to or discharged into any 1 grease interceptor.

G. For the purpose of this section, the term "fixture" shall mean and include each plumbing fixture, appliance, apparatus or other equipment required to be connected to or discharged into a grease interceptor by any provision of this section.

H. Each grease interceptor shall be vented as required by the Uniform Plumbing Code and each fixture discharging into a grease interceptor shall be individually trapped and vented in an approved manner, expect that an approved type grease interceptor may be used as a fixture trap for a single fixture when the horizontal distance between the fixture outlet and the grease interceptor does not exceed 4 feet and the vertical tail pipe or drain does not exceed 2 feet.

I. Each grease interceptor shall be installed and connected so that it shall be at all times easily accessible for inspection, cleaning and removal of the intercepted grease.

J. Interceptors shall be maintained in efficient operating conditions by periodic removal of the accumulated grease. No such collected grease shall be introduced into any drainage piping, public or private sewer, and it shall be disposed of in an environmentally safe manner.

K. Each grease interceptor shall be constructed of durable material satisfactory to the District and shall have a full size, gas tight cover which can be easily and readily removed.

L. No water jacketed grease interceptor shall be approved or installed.

M. Each grease interceptor shall have an approved water seal of not less than 2 inches in depth or the diameter of its outlet, whichever is greater.

N. No grease interceptor required by this section shall be installed until the type and model of each size thereof has been approved by the District.

O. The District may require such tests as may be necessary to determine the grease collecting efficiency of the various types and kinds of grease interceptors to establish the rate of flow or other rating thereof. Such test requirements may be revised or modified from time to time as may be deemed necessary by the District. A design shall be provided to the District's Engineer for approval.

P. No grease interceptor shall be installed which does not comply in all respects with a type or model of each size approved and accepted by the District. Whenever it shall come to the attention of the District that any grease interceptor does not so comply, the District shall immediately suspend or revoke such approval.

7.00 CLEANOUTS

All service lines shall have a minimum of 1 cleanout, and then one cleanout per one hundred feet of pipeline length. A cleanout consisting of a vertical 90˚ tee the diameter of the service line shall be provided at the property line between the building being served and the main line. The upper 24 inches of the vertical riser shall be cast or ductile iron and terminate 4 inches below grade in unimproved areas and at grade in finished driveways, sidewalks, etc., and be plugged with a water-tight cast iron plug (see Standard Detail S08).

End of Section II

A P P E N D I X C

MID VALLEY METROPOLITAN DISTRICT

SPECIAL FEE AND COST REIMBURSEMENT AGREEMENT

MARCH 2013

Prepared By:

SGM
118 West 6th Street, Suite 200
Glenwood Springs, CO 81601

SPECIAL FEE AND COST REIMBURSEMENT AGREEMENT

This Special Fee and Cost Reimbursement Agreement ("Agreement") is entered into by and between the Mid Valley Metropolitan District, whose address is 0031 Duroux Lane, Suite A, Basalt, CO 81621 (hereinafter "District") and _____, whose address is _____ (hereinafter "Petitioner").

W I T N E S S E T H:

WHEREAS, the District is a Colorado special district and quasi-municipal corporation formed and functioning under the authority of C.R.S. 32-1-101, et. seq., providing potable water and sanitary sewer service to the area around EI Jebel, Colorado; and

WHEREAS, Petitioner is the owner of that certain real property described in Exhibit A attached hereto and incorporated herein by this reference, and desires to undertake the projects or activities described in Paragraph 1; and

WHEREAS, the above activity or project will require the District to provide the special services and incur the costs set forth in Paragraph 2; and

WHEREAS, pursuant to 32-1-1001(1)(d), (j-m) the District has the authority to require reimbursement of its out-of-pocket costs in providing services to District Customers, including, but not limited to water and sewer connections, inclusions and exclusions from the District, and planning and review of line extensions; and

WHEREAS, Sections 6.01, 7.18 and 8.05 of the Rules and Regulations of the District provide that the District may charge legal, engineering, publication, recording, inspection and other fees of Customers desiring services from the District; and

WHEREAS, the special fees paid and collected by virtue of this Agreement shall be used solely to pay for the cost of planning, engineering review and inspection, legal review, administrative review and actual out-of-pocket costs incurred by the District in relation to the anticipated project; and

WHEREAS, the Board of Directors of the District and Petitioner desire to set forth their agreements and understandings concerning this matter.

NOW, THEREFORE, in consideration of the mutual covenants and promises of the parties, and for other good and valuable consideration, the adequacy and sufficiency of which is hereby acknowledged, the parties agree as follows:

1. Petitioner desires to undertake the following projects or activities involving the District or its Water and Sewer Systems:

   __ Inclusion into the District.
   __ Exclusion from the District.
   __ Water line extension.
   __ Sewer line extension.
   __ Other (describe) _____.

2. The activity or project being undertaken by Petitioner will require the District to provide the following special services or incur the following costs:

__ Engineering review and advice.
__ Legal review and advice.
__ Preparation of plats or plans.
__ Inspections.
__ Recording fees.
__ Filing fees.
__ Other (describe) _____.

3. Petitioner agrees to pay the District in full for all special services provided or actual costs incurred by the District in relation to the project or activity described above, on receipt of an itemized billing for those services from the District. All such amounts are due within 30 days of the date of the bill, with interest on any overdue amounts to be assessed at 1.0% per month. In the event that such amounts remain unpaid 30 days after the date they are billed, the District reserves the right to cease supplying any and all services being provided, including but not limited to water and sewer service, review and processing of applications for service, inclusion, exclusion, and line extension. In the event the District is forced to pursue collection of any amounts due and unpaid under this provision, it shall be entitled to collect attorneys' fees, filing, and recording fees incurred in such collection efforts in addition to the unpaid amounts due, plus interest.

4. Petitioner agrees to provide a deposit to the District in the amount of $_____, at the time of making the execution application for the _____. The District shall not commence to provide any of the services desired by the Petitioner, or advance any costs, until this deposit is received by the District. Any amount by which the Petitioner's deposit exceeds the cost assessed under this Section shall be refunded to the Petitioner within a reasonable time after final action has been taken on the project. Any amount by which the deposit is less than the total costs due to the District under this Agreement shall be due and payable subject to the provisions of Paragraph 2 above.

5. The District specifically does not agree to act favorably on the application made by Petitioner in exchange for payment of the special fees set forth above.

6. This Agreement constitutes the entire and complete agreement of the parties on the subject matter herein. No promise or undertaking has been made by any party, and no understanding exists with respect to the transaction contemplated, except as expressly set forth herein. All prior and contemporaneous negotiations and understandings between the parties are embodied and merged into this Agreement.

7. This Agreement may be amended from time to time by amendments made by the parties in written form and executed in the same manner as this Agreement.

8. This Agreement shall be binding upon and inure to the benefit of the parties and their assigns and successors in interest.

9. If any covenant, term, condition, or provision under this Agreement shall, for any reason, be held to be invalid or unenforceable, the invalidity or unenforceability of such covenant, term, condition or provision shall not affect any other provision contained herein.

10. The parties agree and intend that this Agreement shall run with the land described in Exhibit A attached hereto and be a burden upon that property until final payment has been made to the District of all fees due and payable under this Agreement, or until the earlier termination of this Agreement.

IN WITNESS WHEREOF, the parties have executed this SPECIAL FEE AND COST REIMBURSEMENT AGREEMENT on the day and year adjacent to their respective signatures.

MID VALLEY METROPOLITAN DISTRICT

By: _____
President

_____
Date

ATTEST

_____
Secretary

_____
Date

By: _____
Petitioner

_____
Date

STATE OF COLORADO)
) ss.
COUNTY OF EAGLE)

Acknowledged and subscribed before me this __ day of _____, 20 __, by _____ _____ President, and _____ Secretary of the Mid Valley Metropolitan District.

WITNESS my hand and official seal.

My Commission expires: _____.

_____
Notary Public

STATE OF COLORADO)
) ss.
COUNTY OF _____)

Acknowledged and subscribed before me this __ day of _____, 20 __, by _____ _____ Petitioner.

WITNESS my hand and official seal.

My Commission expires: _____.

_____
Notary Public

A P P E N D I X D

MID VALLEY METROPOLITAN DISTRICT

BILL OF SALE / WARRANTY FORM

MARCH 2013

Prepared By:

SGM
118 West 6th Street, Suite 200
Glenwood Springs, CO 81601

BILL OF SALE / WARRANTY FORM

KNOW ALL PERSONS BY THESE PRESENTS, that [Developer], whose address is _____ ("Grantor"), do hereby sell, set over, transfer, assign and convey unto the MID VALLEY METROPOLITAN DISTRICT, a Colorado Special District, the address of which is 0031 Duroux Lane, Suite A, Basalt, CO 81621 ("Grantee"), with warranty as described below, all of Grantor's right, title and interest in and to the following property, goods and chattels, to wit:

> All of the water and wastewater infrastructure ("Facilities") constructed by Grantor, excluding service lines as defined in Grantee's Rules and Regulations, which infrastructure is more particularly described on the plans described as _____ and prepared by _____([insert date and plan data as completely as possible]), as approved by SGM, Grantee's consulting engineer, by letter dated _____, and subject to any conditions contained therein, which infrastructure was constructed by Grantor for the purpose of providing water and wastewater service to Grantee's property commonly known as _____ [insert subdivision name] more particularly described on Exhibit A, attached hereto and incorporated herein by reference [attach legal description of property to be served];

TO HAVE AND TO HOLD the same, together with all and singular the appurtenances and privileges thereunto belonging or otherwise appertaining.

GRANTEE HEREBY WARRANTS any and all Facilities conveyed herein for a period of two (2) years from the date of acceptance of the Facilities by the District, which facilities were accepted by Grantee on _____ [insert date]. Grantee specifically warrants that:

(i) The title conveyed shall be good and its transfer rightful;
(ii) Any and all facilities conveyed are free from any security interest or other lien or encumbrance; and
(iii) Any and all Facilities so conveyed shall be free of any defects in materials or workmanship for a period of two (2) years, as stated above.

This warranty expires on _____, 201___.

IN WITNESS WHEREOF, the Grantor has executed and delivered this Bill of Sale effective this __ day of _____, 201___.

_____
Developer

STATE OF COLORADO)
) ss.
COUNTY OF _____)

ACKNOWLEDGED, subscribed, and sworn to before me this ___ day of _____, 201__, by persons satisfactorily identified to me as _____.

WITNESS my hand and official seal.

_____
Notary Public

My Commission expires: _____.

A P P E N D I X E

MID VALLEY METROPOLITAN DISTRICT

DETAILS

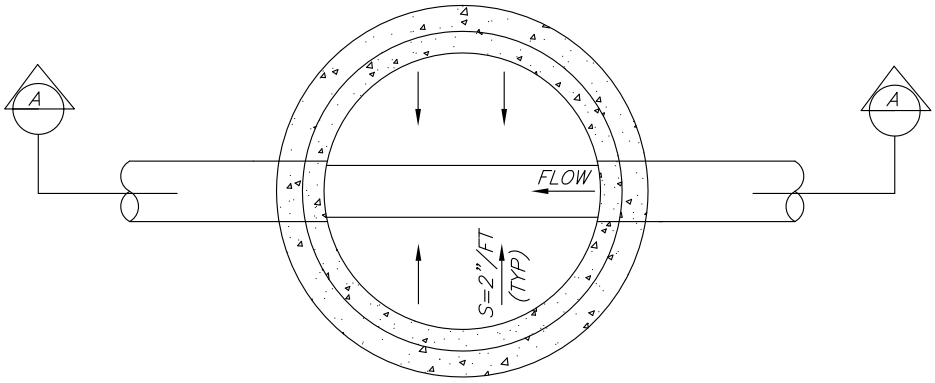
MARCH 2013

Prepared By:

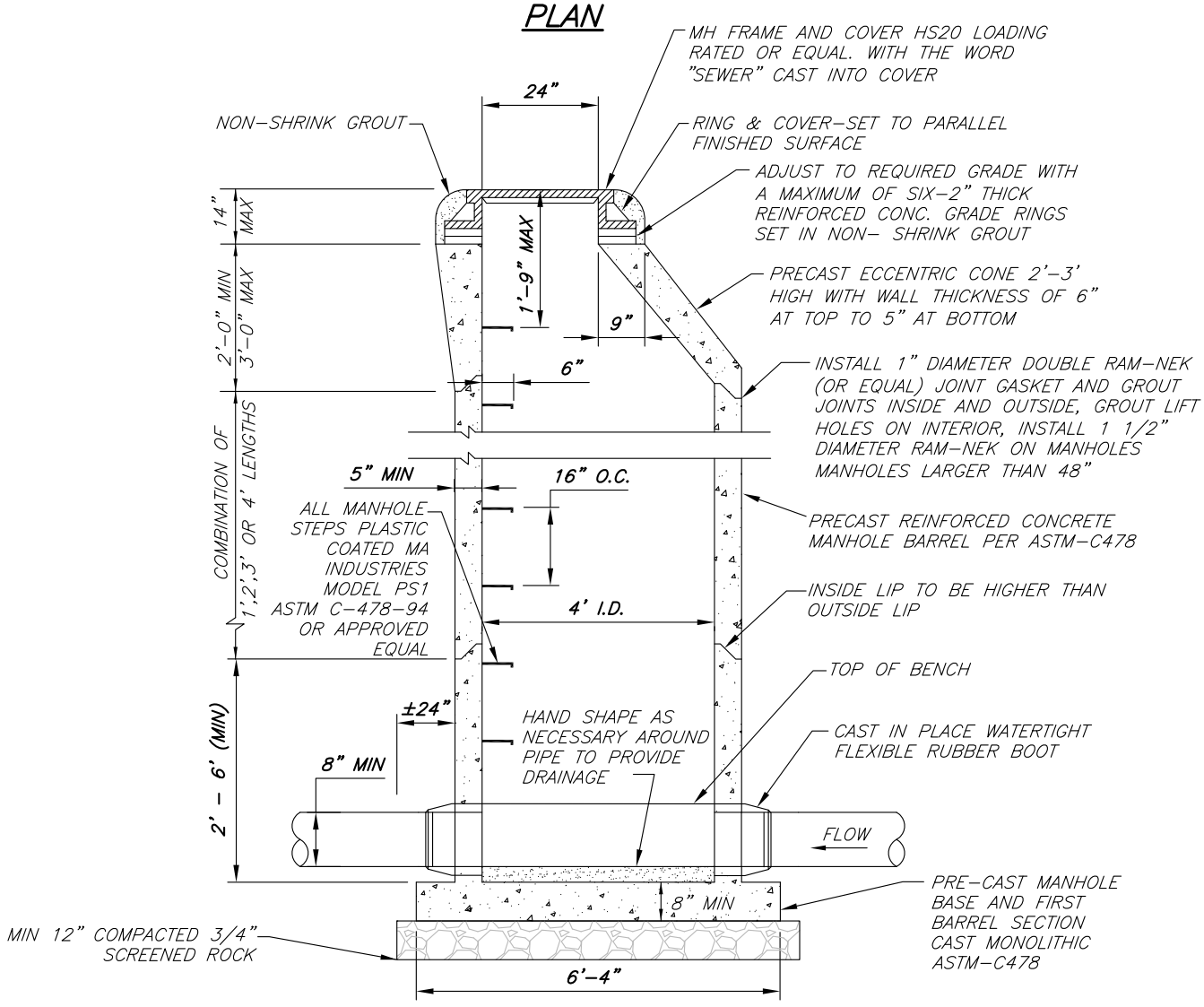
SGM
118 West 6th Street, Suite 200
Glenwood Springs, CO 81601

DETAIL INDEX

	Detail Number
Polyethylene Wrap	W01
Concrete Thrust Blocks	W02
Water Service Stub Out	W03
Fire Hydrant Assembly Installation Detail	W04
Typical Gate Valve	W05
Debris Cap Installation	W06
2 inch Combination Air Valve & Manhole	W07
Water Pipe Bedding	W08
Main Line PRV	W09
Easement Width	W10
Insulation Detail	W11
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Concrete & Steel Pipe Encasement	W13
Pipe Casing Detail	W14
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Water Meter	W16
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Anchor Manhole	S04
Sewer Pipe Bedding	S05
Sewer Service Connection	S06
Pressure Clean-Out	S07
Sewer Clean-Out	S08
Sewer Maintenance Access	S09
Grease Interceptor	S10
90 Bar Screen Manhole	S11



PLAN



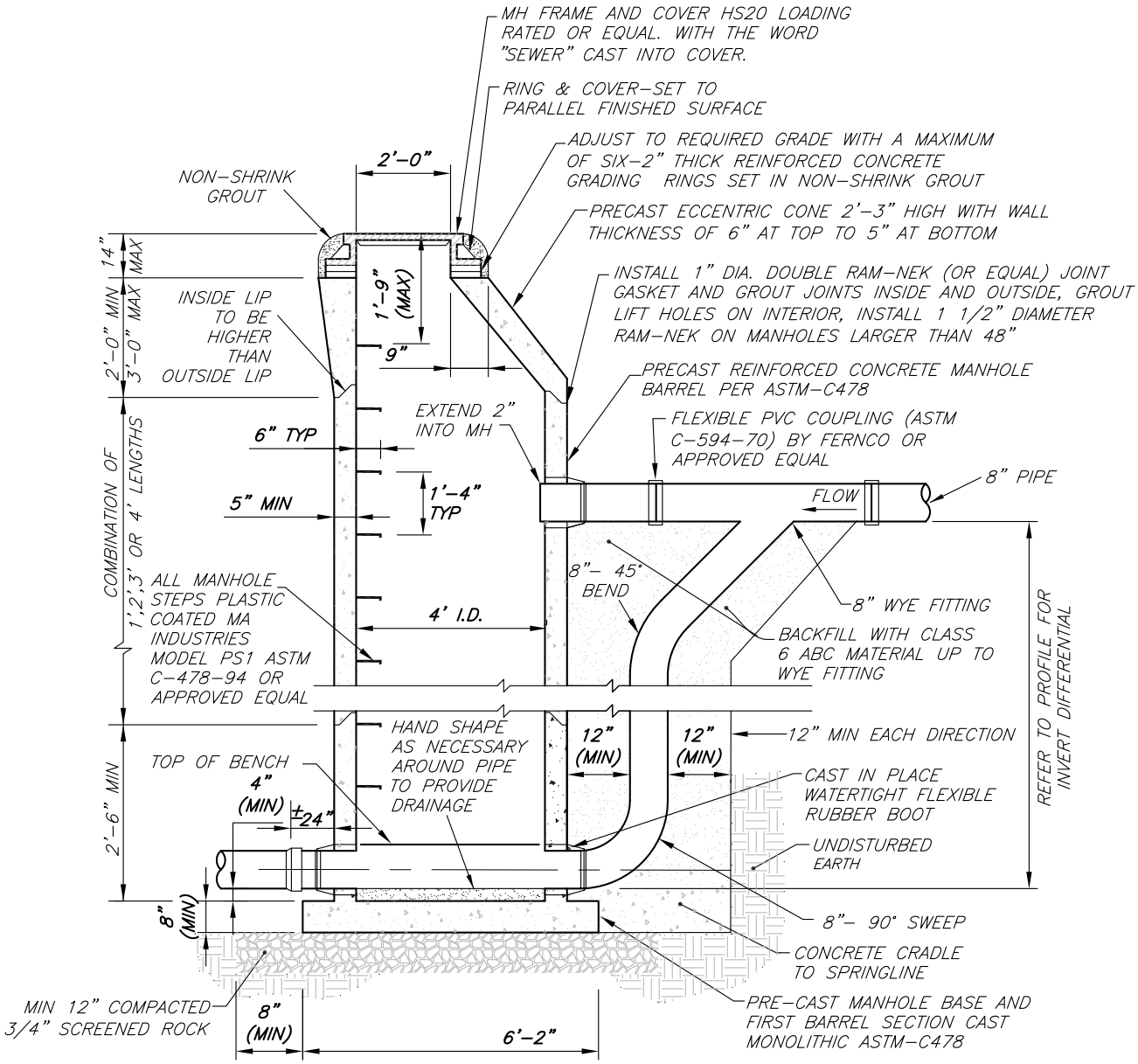
SECTION A

STANDARD MANHOLE

GENERAL NOTE

1. ALL CONCRETE WORK SHALL COMPLY WITH LATEST CI-318 SPECIFICATIONS
2. USE 5' I.D. WHEN PIPE SIZE 15"- 24".

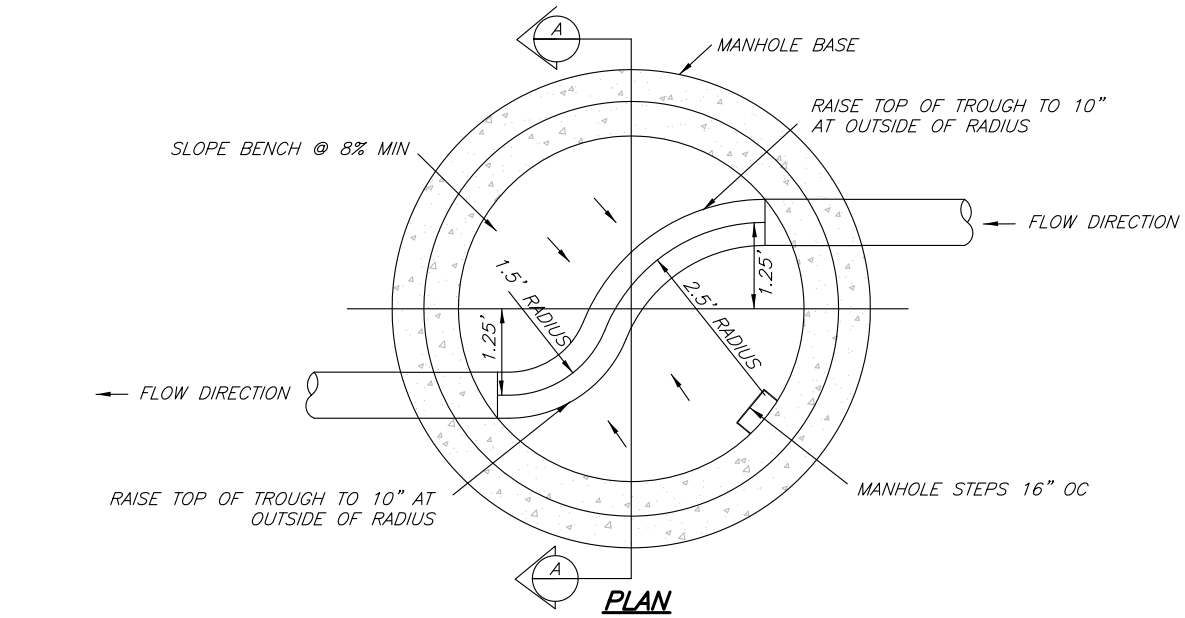
DETAIL "S01"



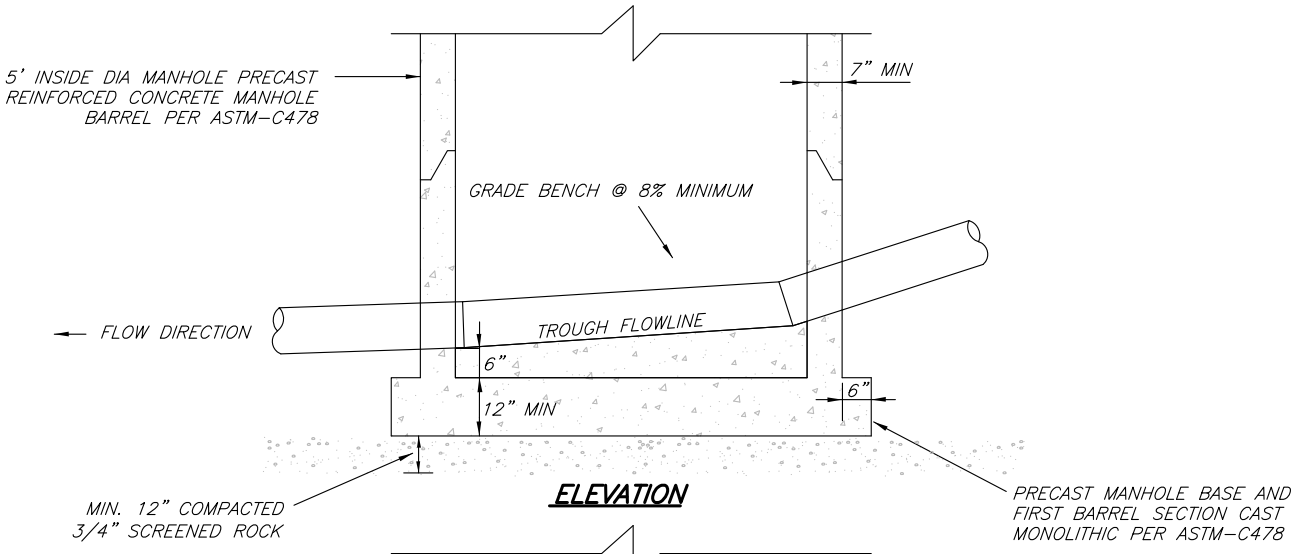
DROP MANHOLE

GENERAL NOTES:
1. ALL CONCRETE WORK SHALL COMPLY WITH LATEST CI–318 SPECIFICATIONS
2. USE 5' I.D. WHEN PIPE SIZE 15" – 24"

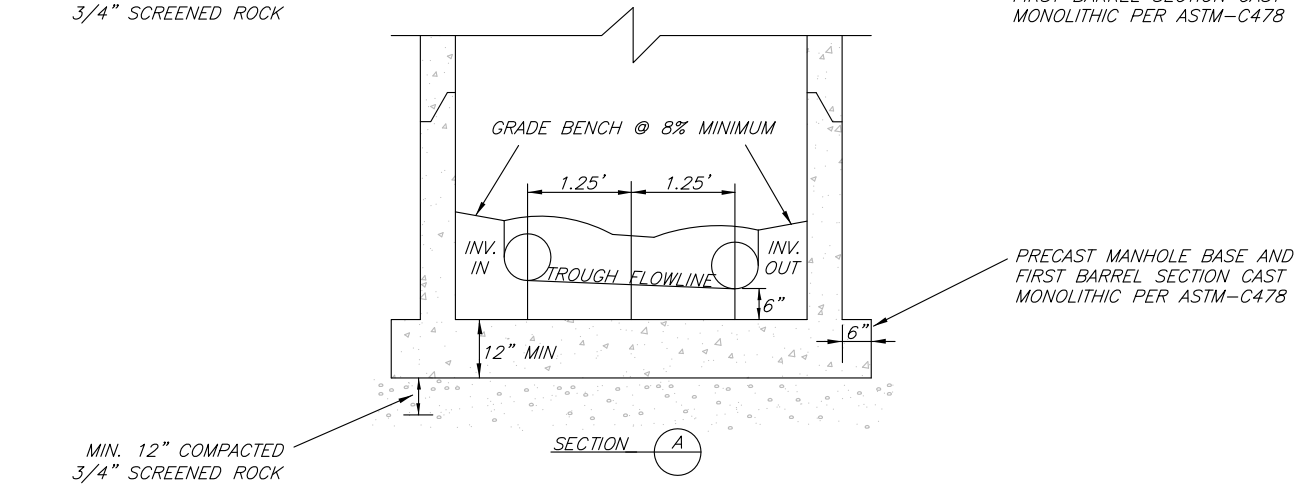
DETAIL "S02"



PLAN



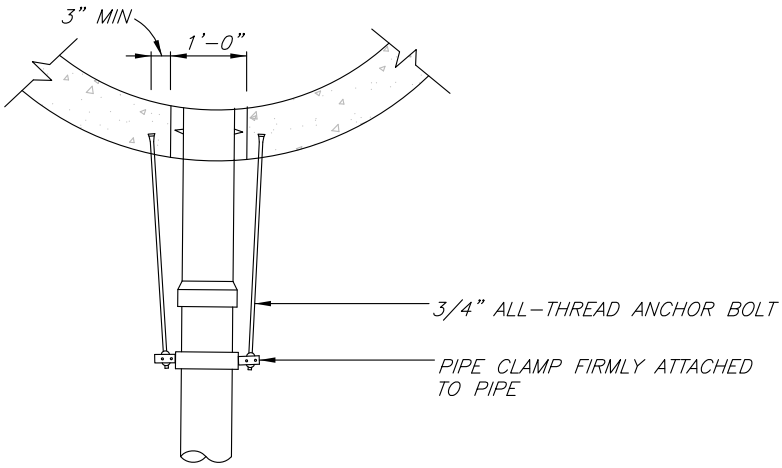
ELEVATION



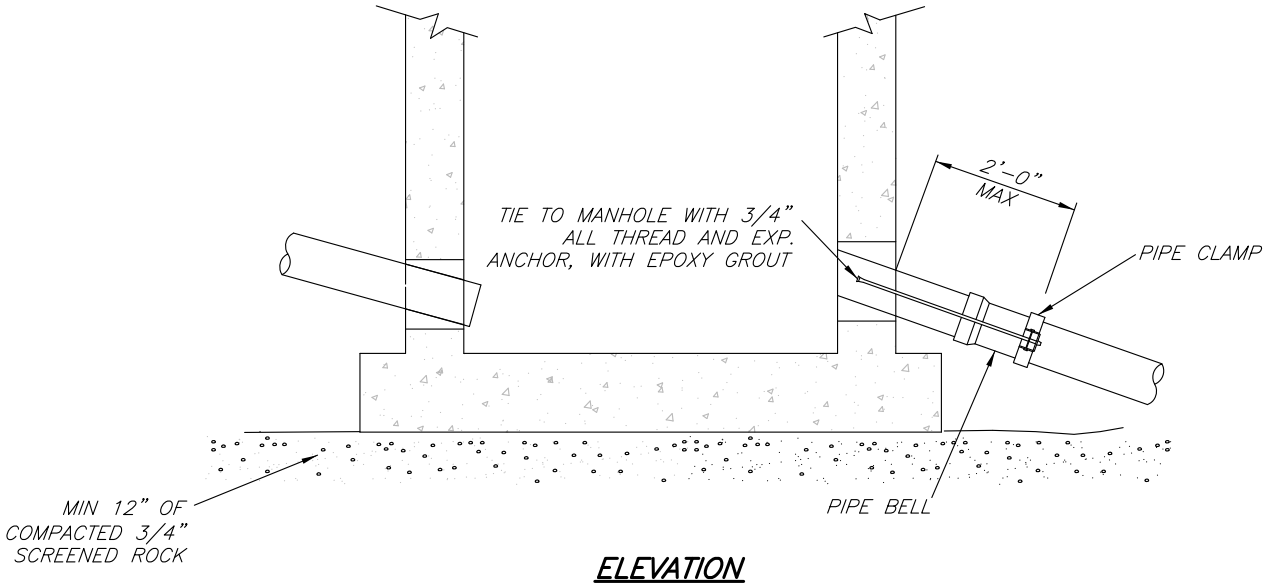
ENERGY DISSIPATOR MANHOLE

NOTE: SET ECCENTRIC MANHOLE RIM SECTION SO THAT THE RIM IS AWAY FROM THE EDGE OF ASPHALT AS MUCH AS POSSIBLE.

DETAIL "S03"



TOP VIEW



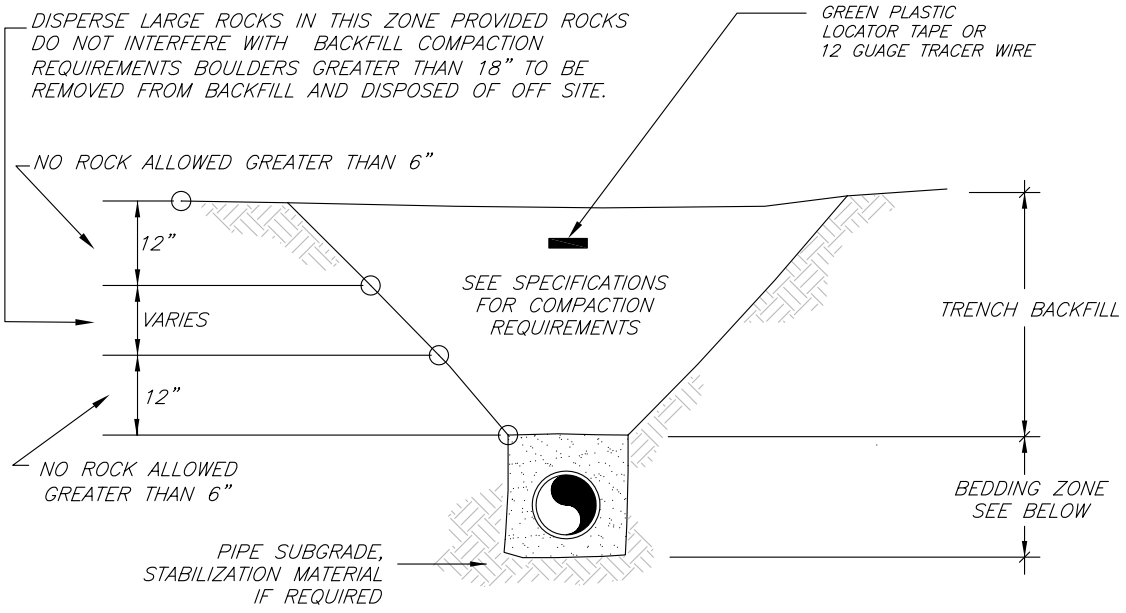
ELEVATION

ANCHOR MANHOLE

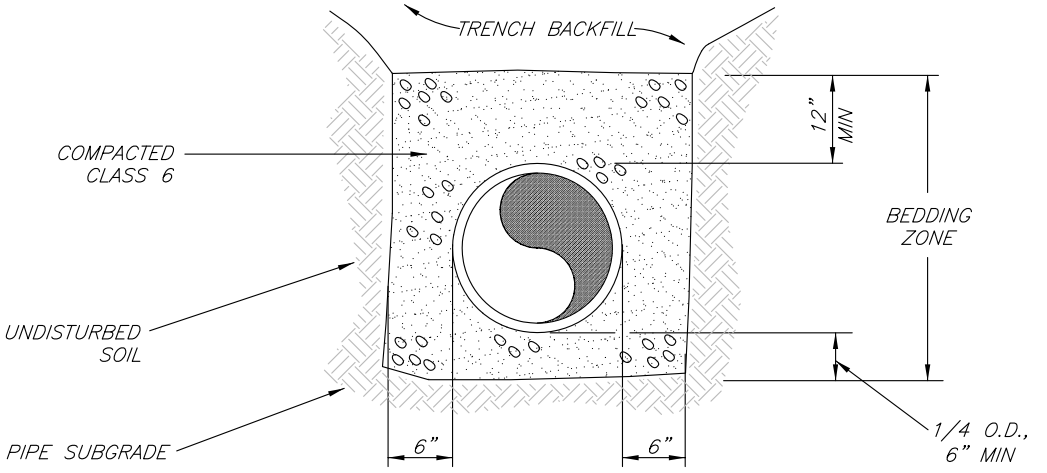
NOTE: ANCHOR MANHOLES ARE REQUIRED WHERE PIPE SLOPE EXCEEDS 20% EXITING THE MANHOLE ONLY

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DETAIL "S04"

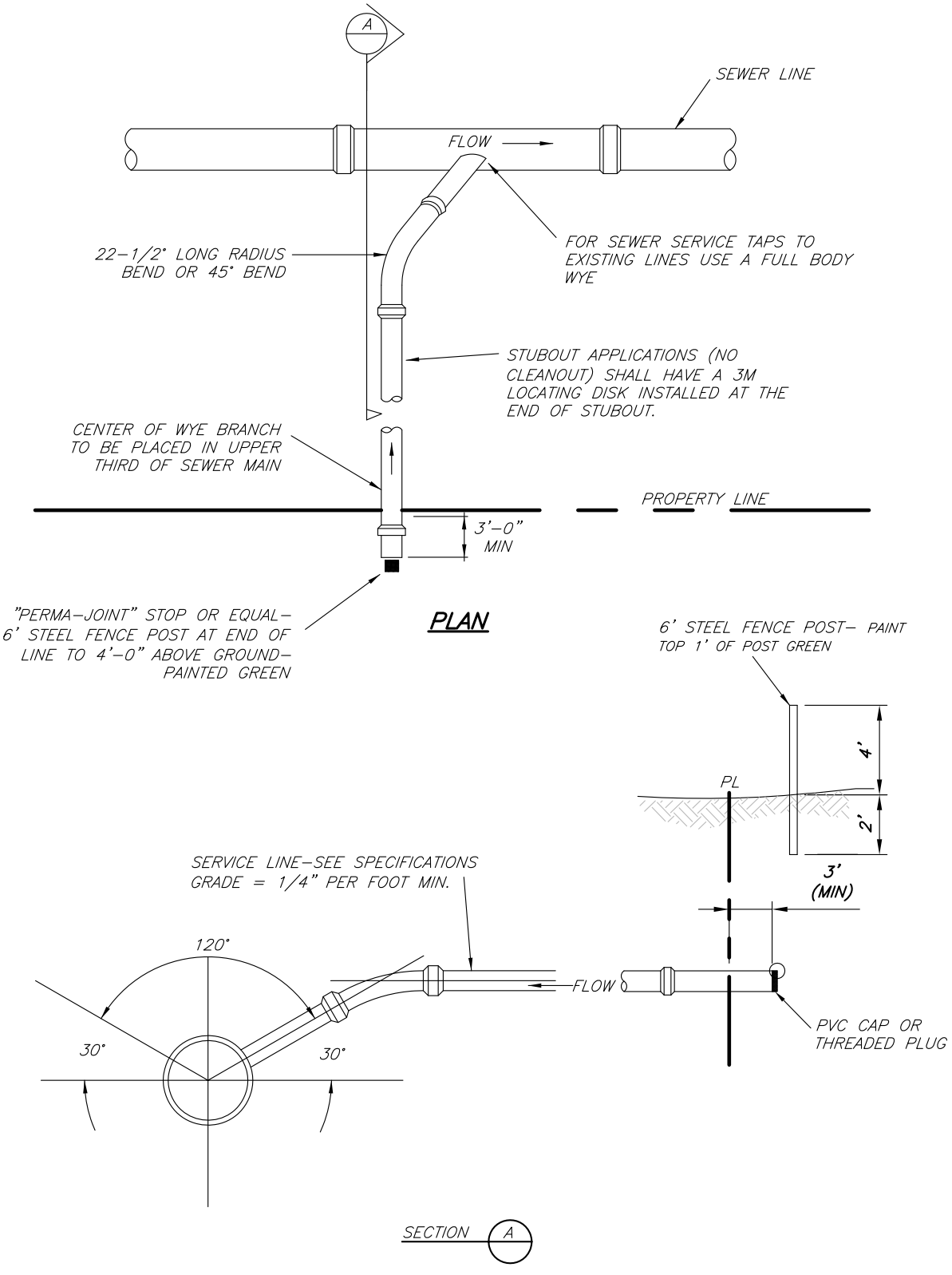


TRENCH ZONES



PIPE BEDDING ZONE

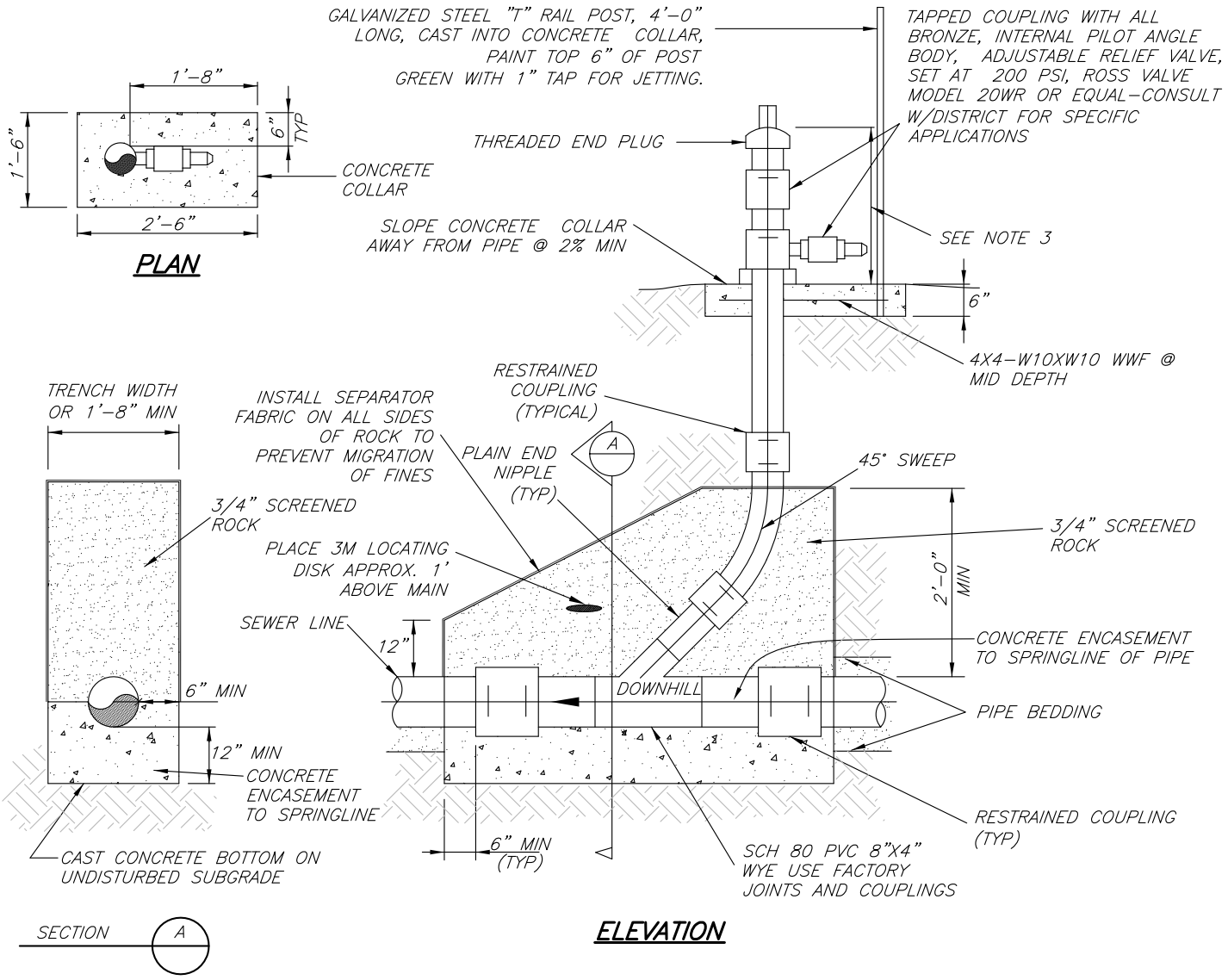
SEWER PIPE BEDDING



SEWER SERVICE CONNECTION

NOTES:
1. MINIMUM SEPARATION BETWEEN TAPS SHALL BE 18"
2. BACKFILL UNDER WYE TO BE CLASS 6 AGGREGATE BASE COURSE. 95% COMPACTION DENSITY PER ASTM D-698.

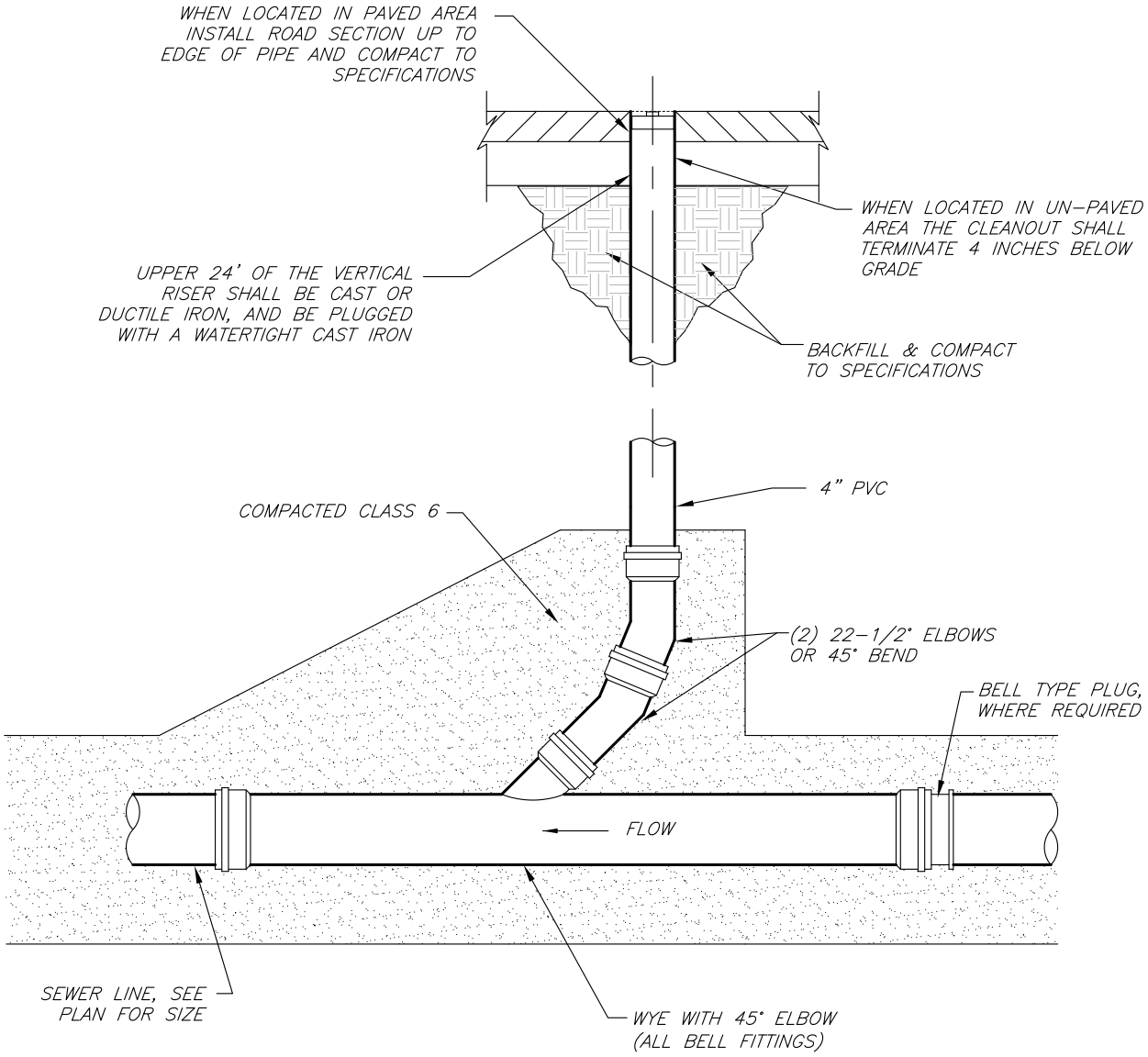
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PRESSURE CLEAN-OUT

NOTES:

1. ENTIRE WYE SECTION AND ADJACENT COUPLINGS TO BE ENCASED IN CONCRETE
2. ENTIRE PRESSURE CLEANOUT SHALL BE PRESSURE RATED AT 200 PSIG MINIMUM
3. MAINTAIN MINIMUM HEIGHT REQUIRED FOR REMOVAL OF END PLUG FITTING ONLY
4. PRESSURE CLEANOUTS ARE REQUIRED AT THE BOTTOM MOST LOCATIONS WHERE PRESSURES MAY EXCEED BURSTING PRESSURE OF THE PIPE
5. FOR SKIWAY APPLICATIONS WHERE MANHOLE AND RINGS ARE USED TO COVER CLEANOUT, 3M LOCATING DISK SHALL ALSO BE INSTALLED 1' TO 2' BELOW MANHOLE RING AND COVER.



SEWER CLEAN-OUT

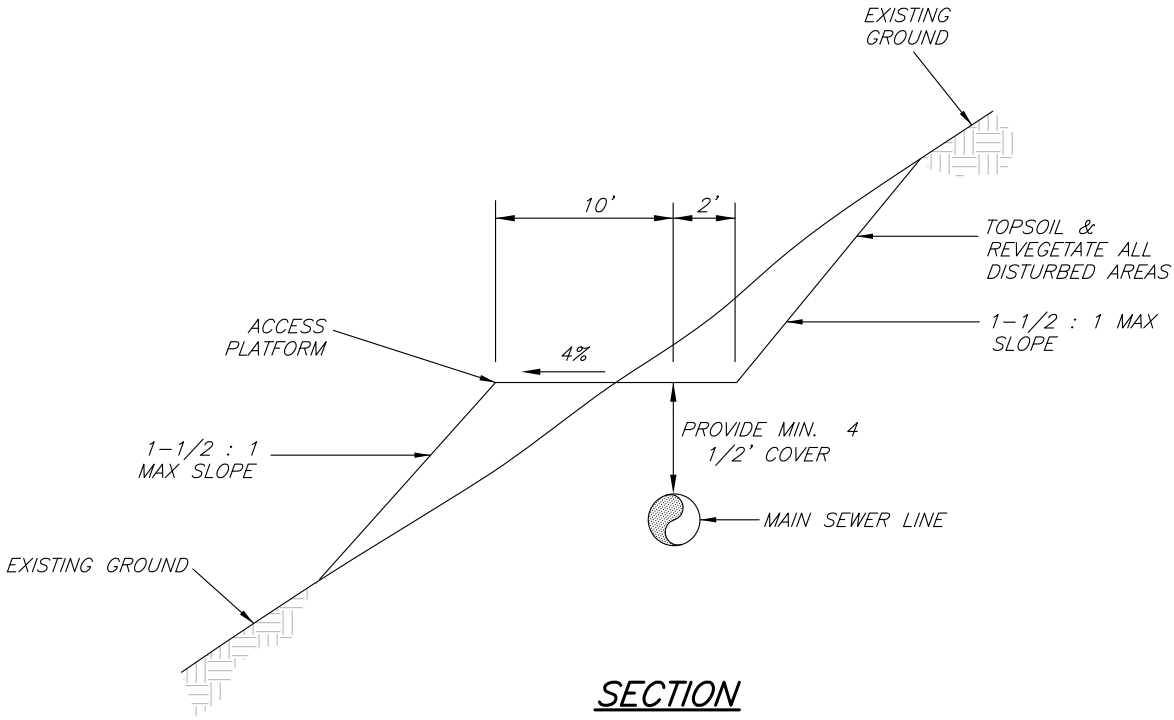
NOTES:

1. FOR SKIWAY APPLICATIONS WHERE MANHOLE AND RINGS ARE USED TO COVER CLEANOUT, 3M LOCATING DISK SHALL ALSO BE INSTALLED 1' TO 2' BELOW MANHOLE.

2. MUST BE TRAFFIC RATED IF INSTALLED IN TRAFFIC AREAS.

DETAIL "S08"

CONSTRUCT HAMMERHEAD OR 90°SIDEARM TURN–AROUND AT THE END OF ALL DEAD END SEWER LINES.



SECTION

SEWER MAINTENANCE ACCESS

NOTES:

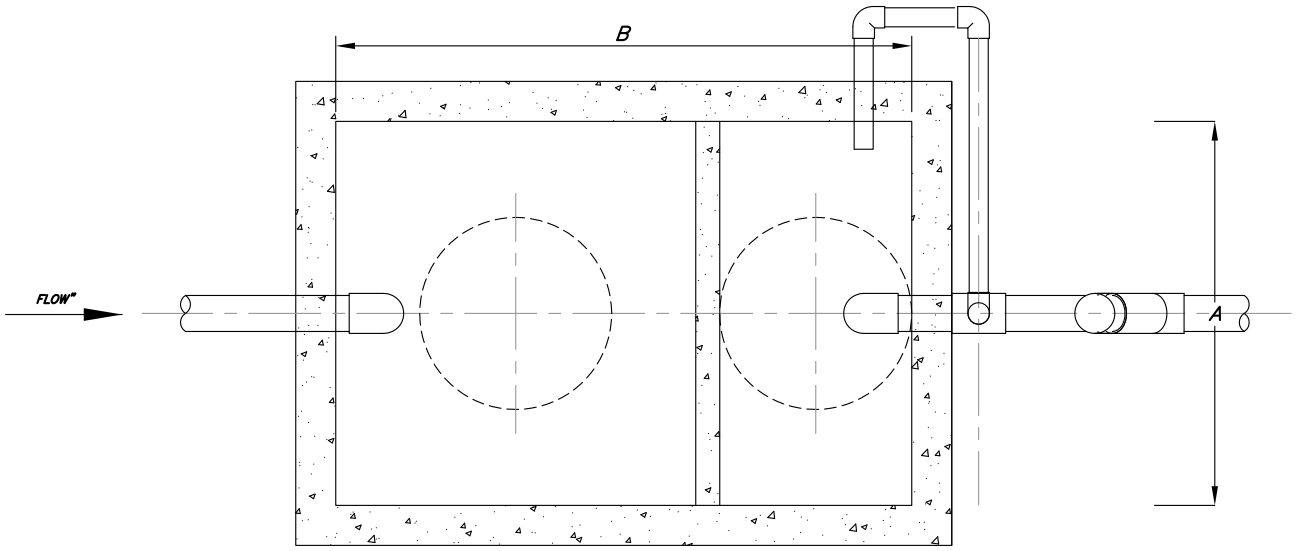
1. THE CONTRACTOR SHALL GRADE ALL OFFROAD SEWER LINE TRENCHES TO PROVIDE ACCESS PLATFORM.

2. ACCESS PLATFORMS SHALL BE GRADED TO MATCH ROAD GRADES TO PROVIDE VEHICULAR ACCESS AT ALL ROAD AND PLATFORM ACCESS INTERSECTIONS. MAXIMUM GRADE FOR BACKLOT ACCESS SHALL BE 7%.

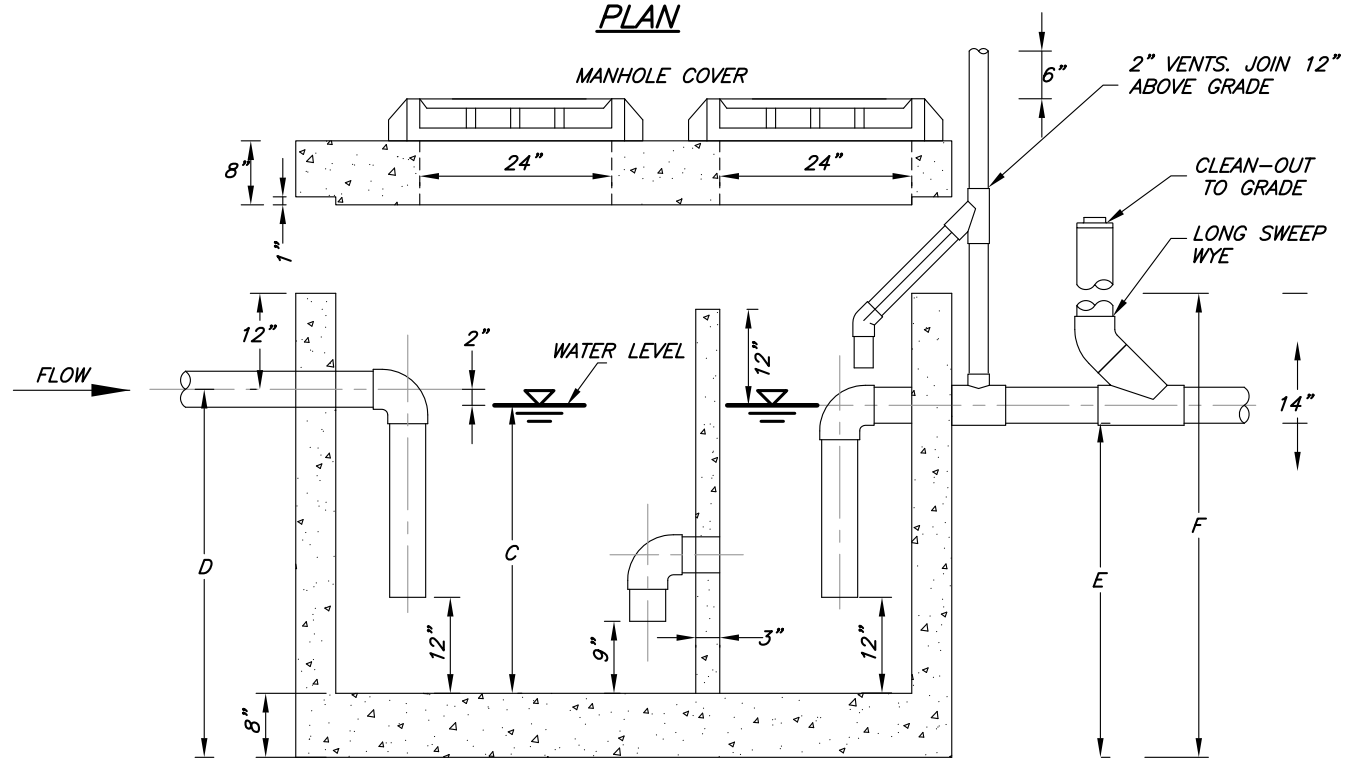
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DETAIL "S09"

Prepared By: SGM | MVMD STANDARD DETAILS | Date: 8/16/13 | By: NKONTOUR



PLAN



SECTION

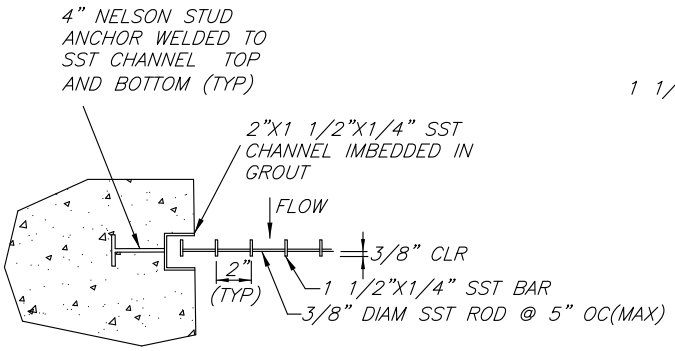
1) SECONDARY COMPARTMENT TO HAVE VOLUME 1/3 OF TOTAL CAPACITY
2) ALL PIPE AND FITTINGS TO BE SCHEDULE 40 PVC, 4" MINIMUM DIAMETER
3) ALL CONCRETE TO INCLUDE FIBERMESH REINFORCEMENT
4) COVERS TO BE REINFORCED LONGITUDINALLY WITH #6 REBAR ON 6" CENTERS, #4 REBAR ON 6" CENTERS WIDTHWISE AND #8 REBAR DIAGONALLY AROUND ACCESS HOLES
5) CLEAN OUT SHALL CONFORM TO STANDARD SEWER CLEAN-OUT DETAIL "24" OF THE MVMD RULES AND REGULATIONS
6) MANHOLE RING AND COVER SHALL CONFORM TO SECTION XI (SANITARY SEWERLINES) OF THE MVMD RULES AND REGULATIONS
7) A SHOP DRAWING DEPICTING ACTUAL DIMENSIONS, PENETRATION LOCATIONS AND REINFORCEMENT SIZE SHALL BE SUBMITTED TO THE DISTRICT FOR APPROVAL.
8) NO BOLT DOWN COVERS ARE ALLOWED WITHOUT THE PRIOR AUTHORIZATION OF THE DISTRICT
9) ALL CONCRETE WALL PENETRATIONS TO BE FILLED WITH NON SHRINK GROUT SUBSEQUENT TO PIPE INSTALLATION
10) THE TOTAL CAPACITY SHALL ACCOMMODATE A 30 MINUTE DETENTION TIME AT PEAK HOUR FLOW.

WATER CAPACITY APPROXIMATE GALLONS	GREASE CAPACITY APPROXIMATE CUBIC FEET	DIMENSIONS TWO COMPARTMENT TANK, INCHES						
		A	B	C	D	E	F	G
320	17	48	72	22	32	30	44	24
500	32	48	72	36	46	44	58	24
780	47	48	96	40	40	48	62	20
1060	74	72	102	34	34	42	56	30
1250	87	80	112	35	45	48	57	36
2000	142	80	128	46	56	54	68	42

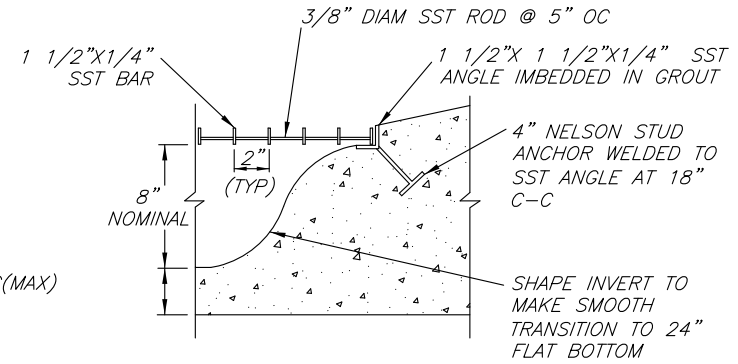
GREASE INTERCEPTOR

DETAIL "S10"

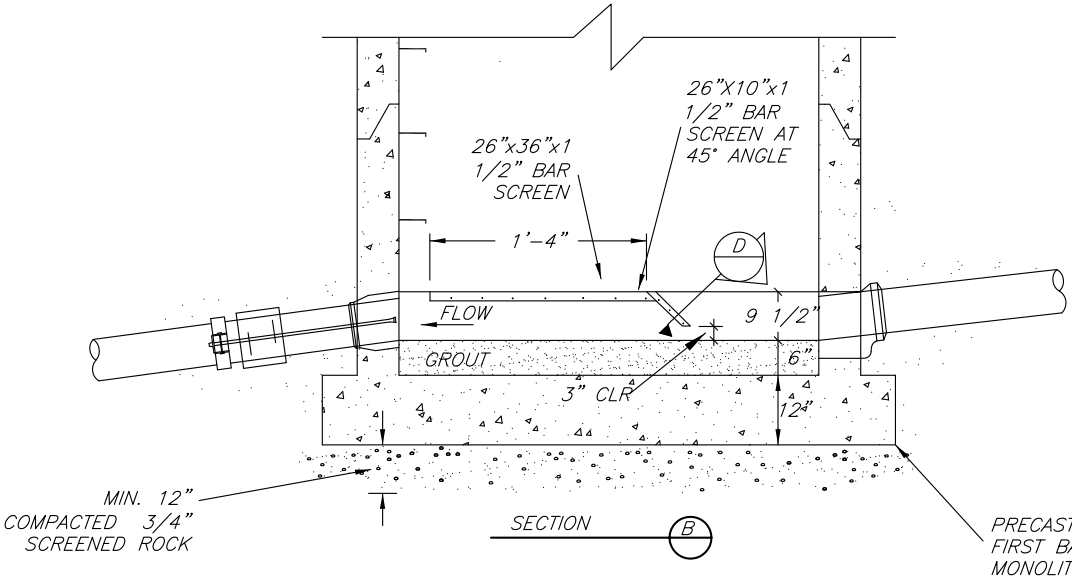
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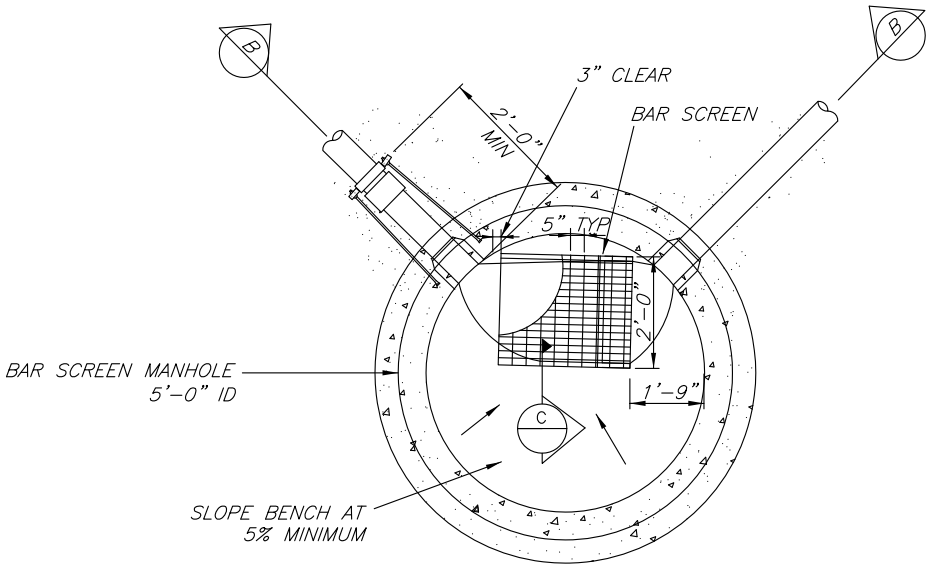
SECTION D



SECTION C



SECTION B

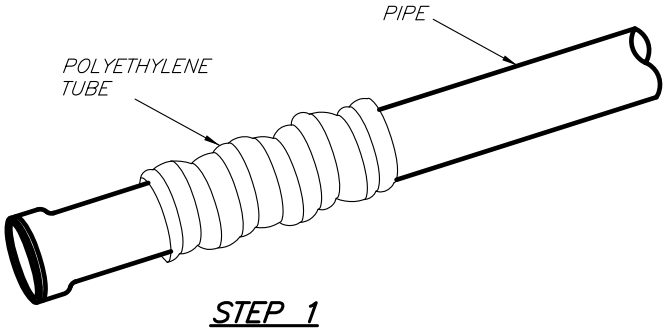


PLAN

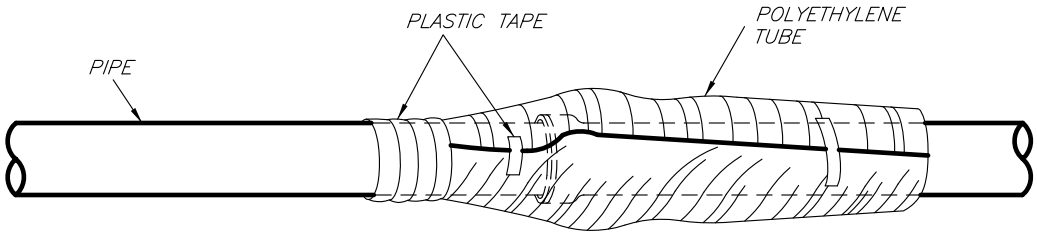
90 BAR SCREEN MANHOLE

NOTES:
1. USE TYPICAL BAR SCREEN MANHOLE OR A DISTRICT APPROVED EQUAL
2. THE DISTRICT WILL NOT ALLOW THREE-WAY BAR SCREEN MANHOLES

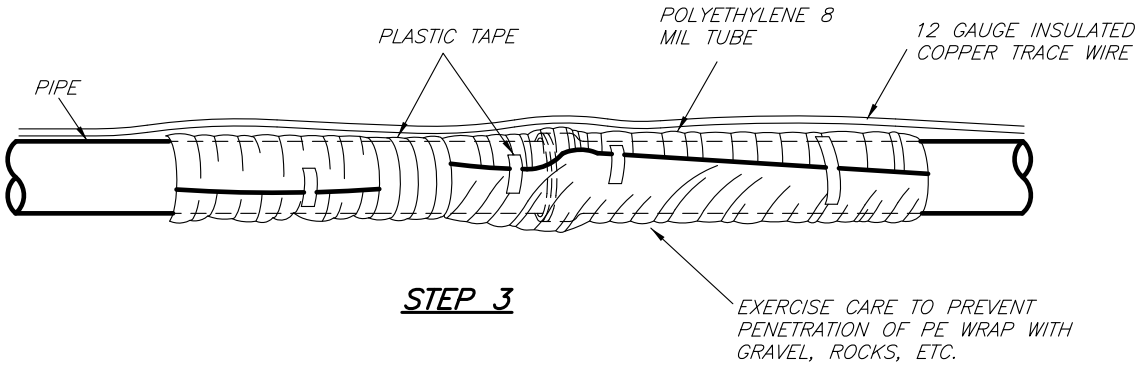
DETAIL "S11"



STEP 1



STEP 2



STEP 3

POLYETHYLENE WRAP

FIELD INSTALLATION – POLYETHYLENE WRAP

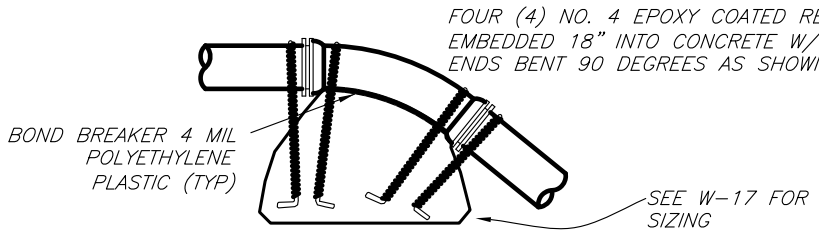
WHERE SPECIFICALLY REQUIRED FOR SOIL APPLICATIONS

STEP 1 – PLACE TUBE OF POLYETHYLENE MATERIAL ON PIPE PRIOR TO LOWERING IT INTO PLACE

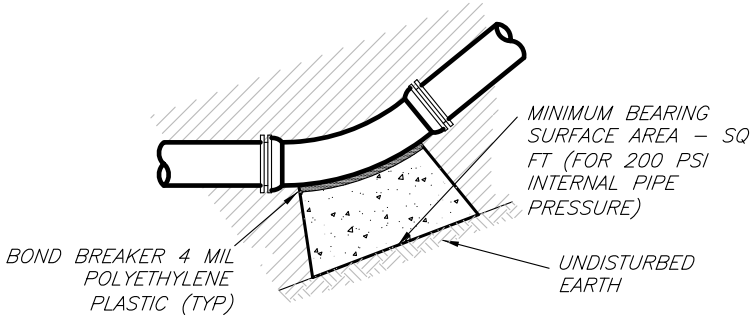
STEP 2 – PULL THE TUBE OVER THE LENGTH OF THE PIPE. TAPE TUBE TO PIPE AT JOINT. FOLD MATERIAL AROUND THE ADJACENT SPIGOT END AND WRAP WITH TAPE TO HOLD THE PLASTIC TUBE IN PLACE.

STEP 3 – OVERLAP FIRST TUBE WITH ADJACENT TUBE AND SECURE WITH PLASTIC ADHESIVE TAPE. THE POLYETHYLENE TUBE MATERIAL COVERING THE PIPE SHALL BE LOOSE. EXCESS MATERIAL SHALL BE NEATLY DRAWN UP AROUND THE PIPE BARREL, FOLDED ON TOP OF PIPE AND TAPED IN PLACE.

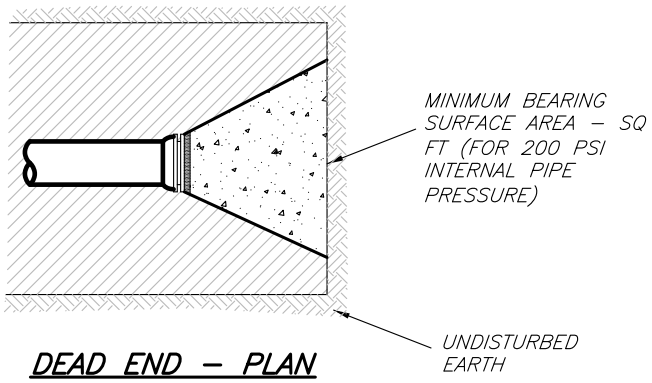
DETAIL "W01"



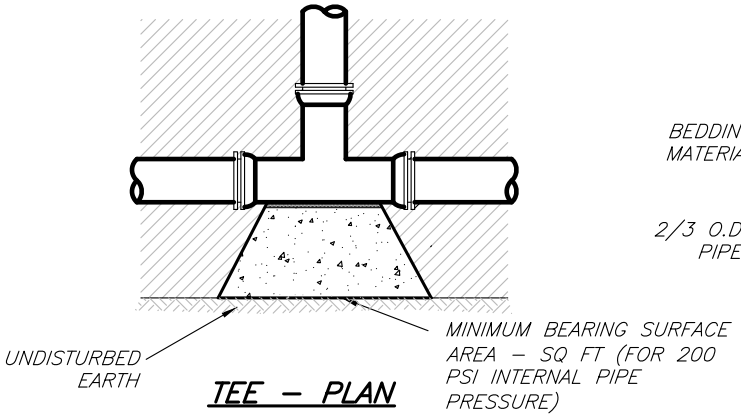
VERTICAL THRUST BLOCK – SECTION



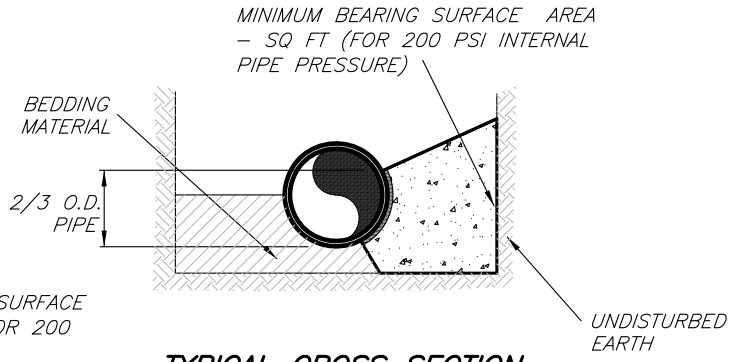
BENDS – PLAN



DEAD END – PLAN



TEE – PLAN



TYPICAL CROSS SECTION

MINIMUM BEARING SURFACE (SF) FOR 200 PSI AND LESS

SIZE OF PIPE	BENDS				TEE OR DEAD END
	11-1/4°	22-1/2°	45°	90°	
6"	1.3	2.5	5.0	9.0	6.4
8"	1.3	2.5	5.0	9.0	6.4
10"	1.9	3.8	7.4	13.7	9.7
12"	2.7	5.4	10.5	19.3	13.7
16"	4.7	9.3	9.1	33.6	23.8
20"	7.2	14.3	28.0	51.8	36.6

MINIMUM BEARING SURFACE (SF) FOR 250 PSI AND LESS

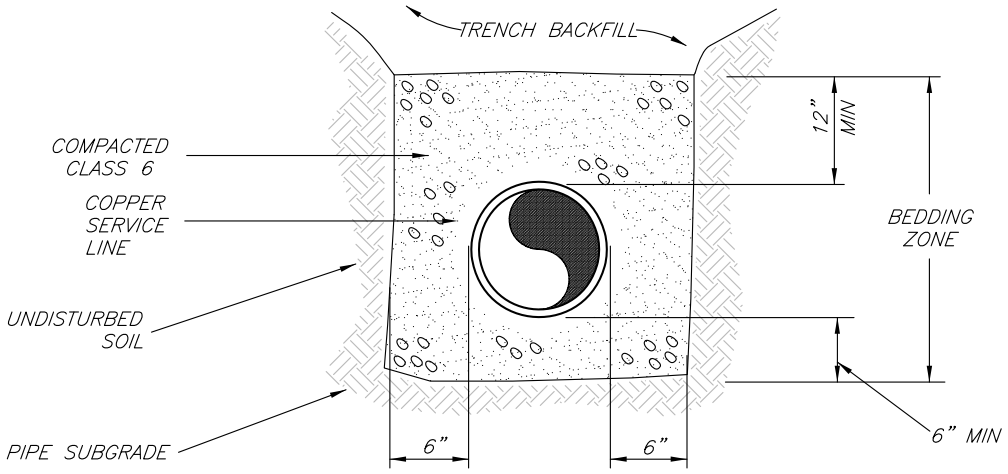
SIZE OF PIPE	BENDS				TEE OR DEAD END
	11-1/4°	22-1/2°	45°	90°	
6"	1.6	3.1	6.2	11.4	8.0
8"	1.6	3.1	6.2	11.4	8.0
10"	2.4	4.7	9.25	17.1	12.0
12"	3.4	6.7	13.1	24.2	17.1
16"	5.8	11.6	22.7	42.0	29.7
20"	9.0	17.9	35.0	64.8	45.8

CONCRETE THRUST BLOCKS

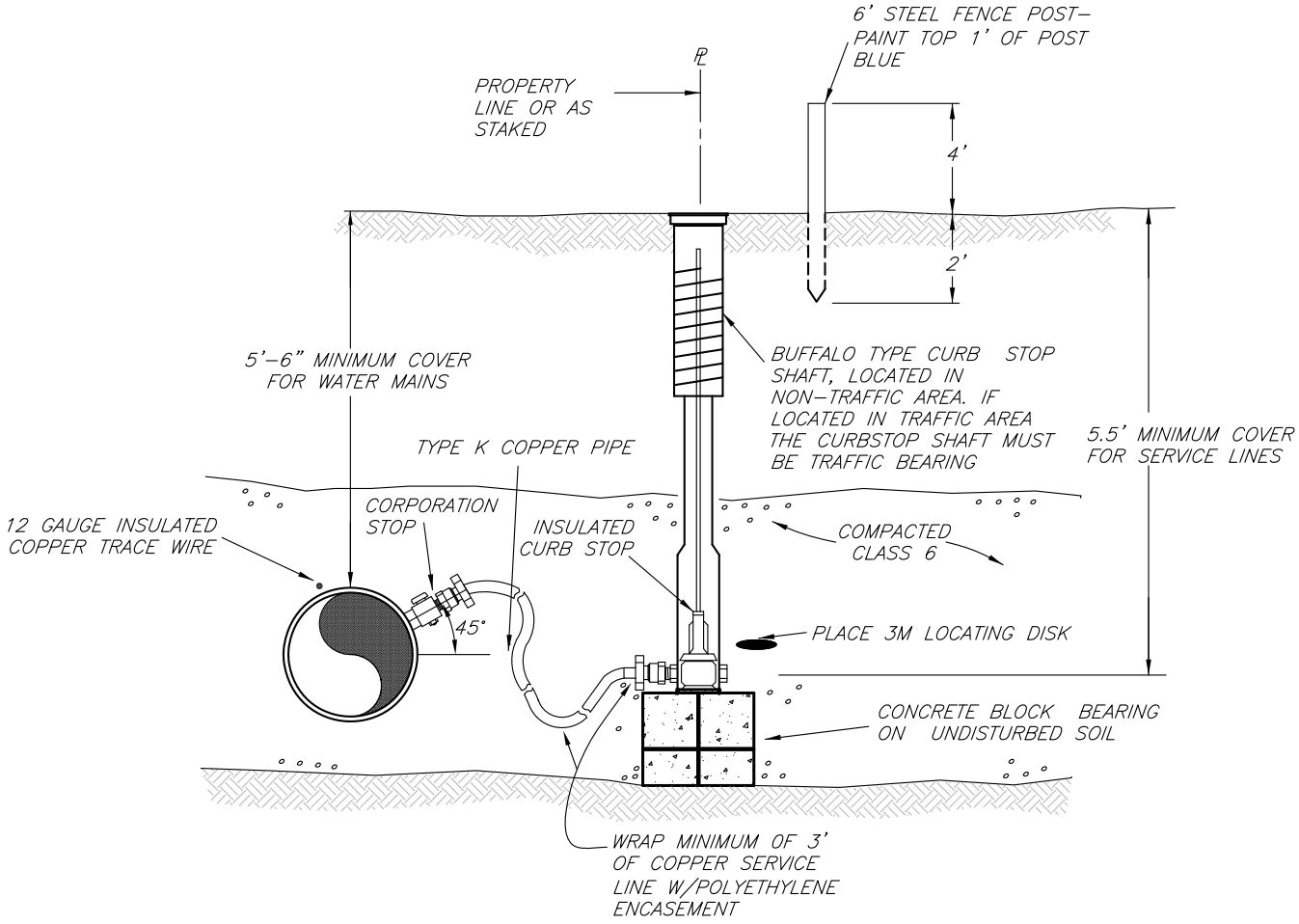
NOTES:

1. FOR 200 PSI INTERNAL PRESSURE, INCLUDING WATER HAMMER
2. MEGALUG RESTRAINTS MAY BE USED IN CONJUNCTION WITH THRUST BLOCKS WITH PRIOR APPROVAL FROM THE DISTRICT
3. MINIMUM AREA REQUIRED WILL BE THAT OF AN 8-INCH MAIN
4. ALL THRUST BLOCKS SHALL BE FORMED. THE MINIMUM THICKNESS FORM MATERIAL SHALL BE 3/8" PLYWOOD
5. BEARING AREA BASED ON SOIL BEARING PRESSURE OF 2000 LB/SF
6. CONCRETE SHALL HAVE A 28 DAY COMPRESSION STRENGTH OF 3000 PSI

DETAIL "W02"



SERVICE STUB–OUT BEDDING



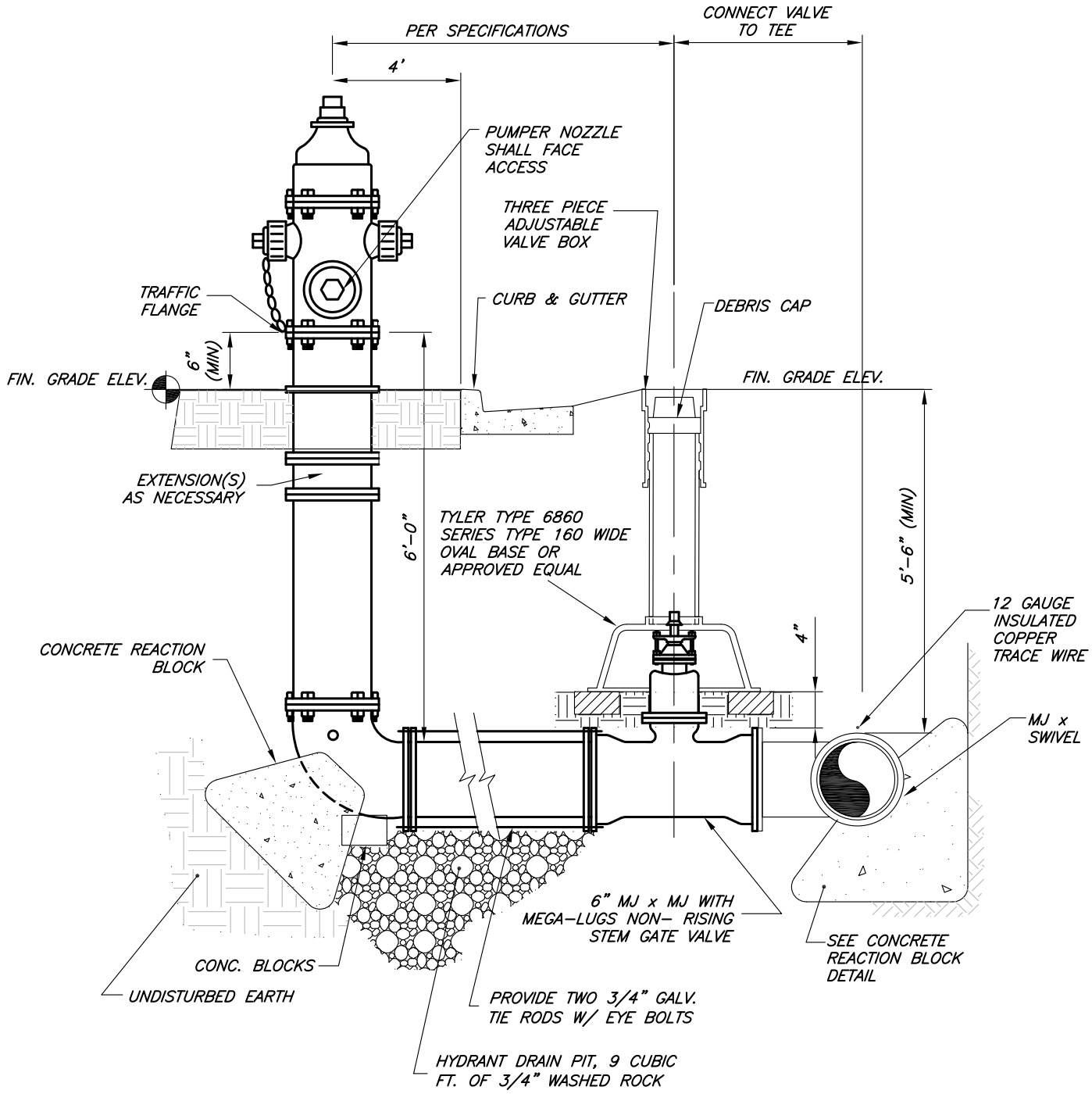
ELEVATION

WATER SERVICE STUB OUT

GENERAL NOTES

1. CURB STOP TO BE LOCATED WITHIN THE PROPERTY LINE OR AT THE EDGE OF EASEMENT–WHICHEVER IS CLOSER TO THE MAIN.
2. CURBSTOP – ALL FITTINGS SHALL BE COMPRESSION FITTINGS.
3. CURBSTOP – MANUFACTURER REFERENCE MUELLER B25204 OR APPROVED EQUAL.
4. CURB BOX AND LID MUST BE TRAFFIC RATED NOT THE CURBSTOP SHAFT. SHAFT MUST NOT BE IN CONTACT WITH CURB BOX.

DETAIL "W03"



FIRE HYDRANT ASSEMBLY INSTALLATION DETAIL

NOTES:

1) ALL JOINTS FROM MAIN TO HYDRANT SHALL BE RESTRAINED MECHANICAL JOINTS.

2) HYDRANT, VALVE AND FITTINGS TO BE 250 P.S.I. RATED.

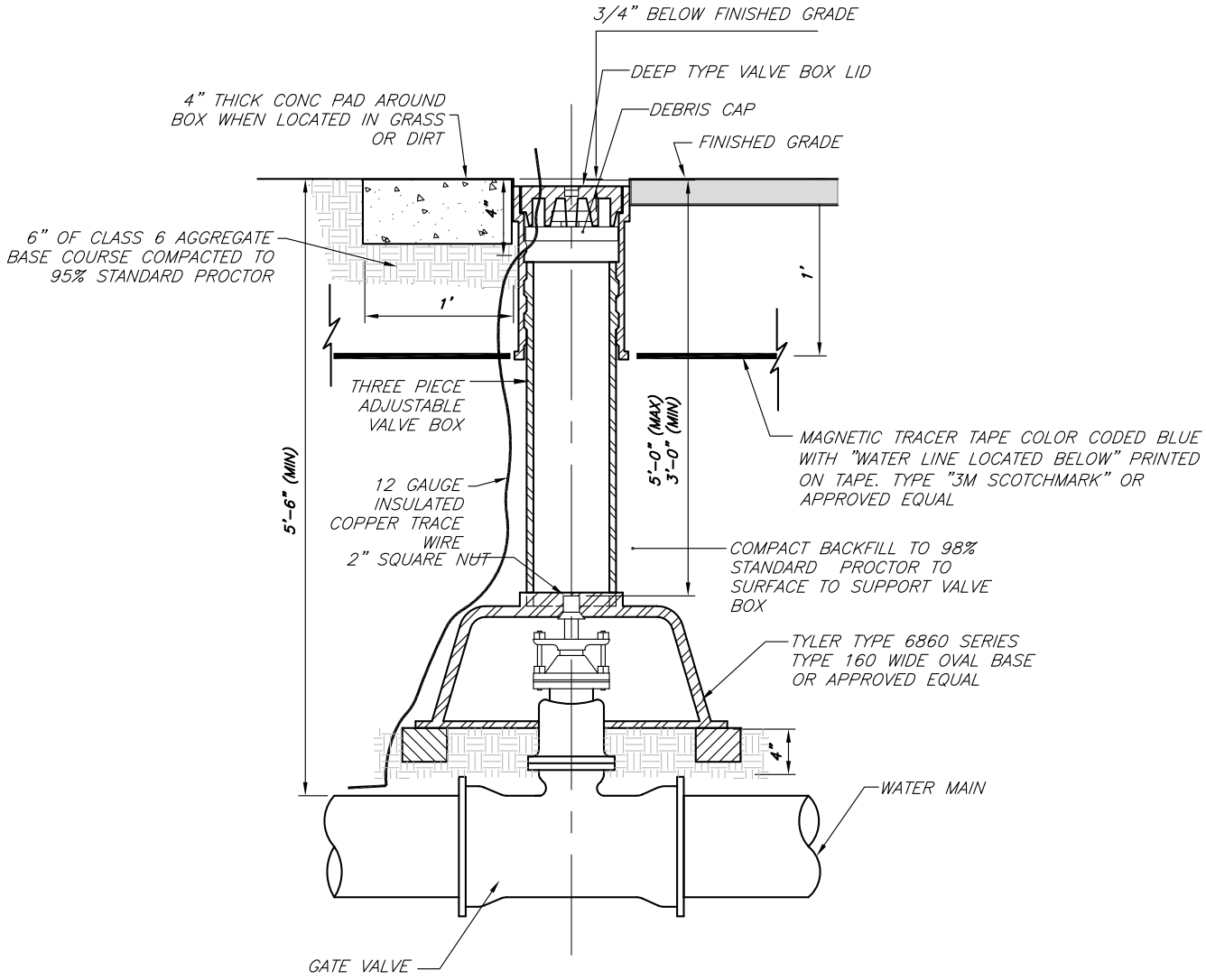
3) POLYETHYLENE WRAP SHALL COVER D.I.P. ASSEMBLY FROM HYDRANT BASE TO WATER MAIN. DO NOT BLOCK WEEP HOLE.

4) ALL HYDRANT LEAD PIPING TO BE 6" CLASS 250 D.I.P. UNLESS OTHERWISE NOTED

5) CENTERLINE OF HYDRANT TO BE 4'-0" FROM BACK OF CURB UNLESS OTHERWISE NOTED.

6) INSTALL VALVE STEM EXTENSION AS NEEDED TO INSURE THE DISTANCE FROM VALVE BOX LID TO TOP OF NUT SHALL NOT EXCEED 5'-0"

DETAIL "W04"



TYPICAL GATE VALVE

NOTES:

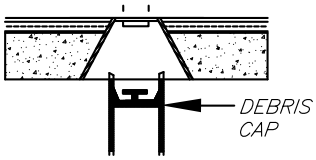
1. ALL VALVES ADJACENT TO FITTING SHALL BE MJ. IN LINE VALVES TO BE MJ x MJ. DESIGN LOCATIONS OF VALVES ARE OUTSIDE OF CONCRETE, CURB/GUTTER AND VALLEY PANS.

2. INSTALLED VALVES WHICH CONFLICT WITH CONCRETE AREAS SHALL BE RELOCATED AT THE CONTRACTOR'S EXPENSE.

3. THIS DETAIL DOES NOT APPLY TO HYDRANT ASSEMBLY VALVES.

4. INSTALL VALVE STEM EXTENSION AS NEEDED TO INSURE THE DISTANCE FROM VALVE BOX LID TO TOP OF NUT SHALL NOT EXCEED 5'-0"

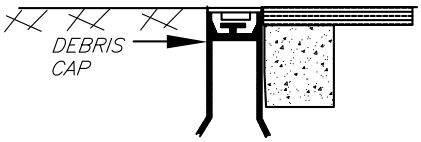
5. THE TRACER WIRE SHALL BE EXTENDED TO THE SURFACE AT ALL VALVES AND FIRE HYDRANTS. THE WIRE SHALL BE EXTENDED TOWARDS THE GROUND ON THE OUTSIDE OF THE VALVE BOX UNTIL THE WIRE IS WITHIN FOUR INCHES (4") OF THE TOP OF THE LID, AT WHICH POINT IT SHALL BE BROUGHT BACK INSIDE THE BOX AND SECURELY FASTENED. SUFFICIENT SLACK IN THE OUTSIDE OF THE WIRE SHALL BE PROVIDED TO COMPENSATE FOR ANY FUTURE ADJUSTMENT TO THE VALVE BOX.



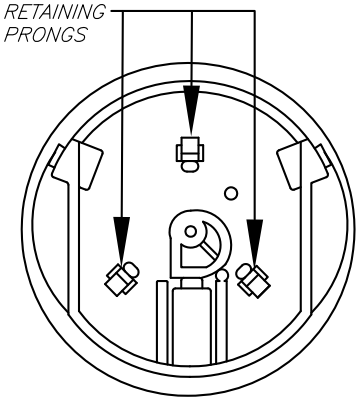
TYPE "A"



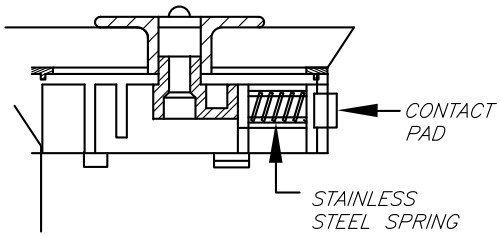
TYPE "B"



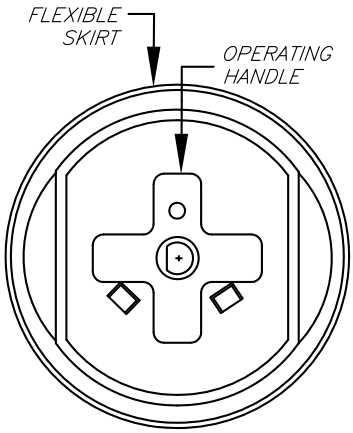
TYPE "C"



BOTTOM VIEW



SECTION VIEW



TOP VIEW

DEBRIS CAP INSTALLATION

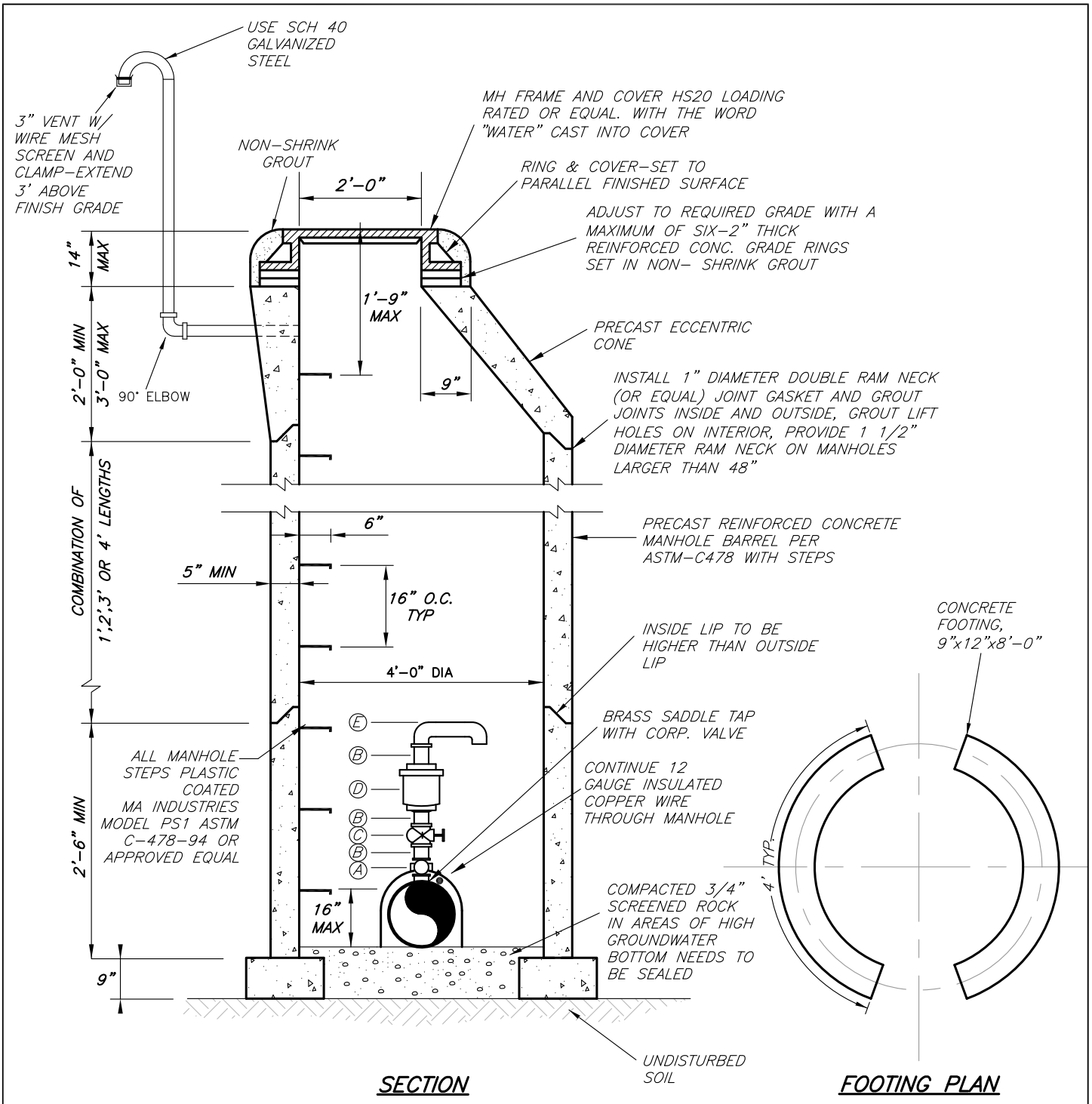
NOTES:

1. DEBRIS CAP SHALL BE INSTALLED AS CLOSE UNDER THE CAST IRON COVER WITHOUT INTERFERING WITH COVER OPERATION.

2. FLEXIBLE SKIRT SHALL BE TRIMMED TO PROVIDE A SMOOTH CONTACT WITH THE INTERIOR DIAMETER OF THE PIPE.

3. THE DEBRIS CAP SHALL BE MANUFACTURED BY SW SERVICES, INC., PHOENIX, ARIZONA OR EQUAL.

4. THE DEBRIS CAP SHALL BE COMPRISED OF A HOLLOW MEMBER HAVING A CYLINDRICAL OUTER SURFACE, A CLOSURE FOR ONE END AND THREE POINT RESILIENT CONTACT PADS PROJECTING FROM THE OUTER SURFACE. THE CAP SHALL HAVE A FLEXIBLE SKIRT PROVIDING AN OUTWARD SEAL PREVENTING DEBRIS FROM GETTING PAST THE CAP. THE CAP MUST WITHSTAND, WITHOUT SLIPPAGE, A MINIMUM VERTICAL FORCE OF 50 POUNDS, AT A LOADING RATE OF 1.0 IN/ MINUTE. THE CAP SHALL BE MOLDED USING GENERAL ELECTRIC ABS #HIM 4500. THE CAP SHALL HAVE RETAINING PRONGS TO RETAIN A STANDARD LOCATING COIL.



2" COMBINATION AIR VALVE & MANHOLE

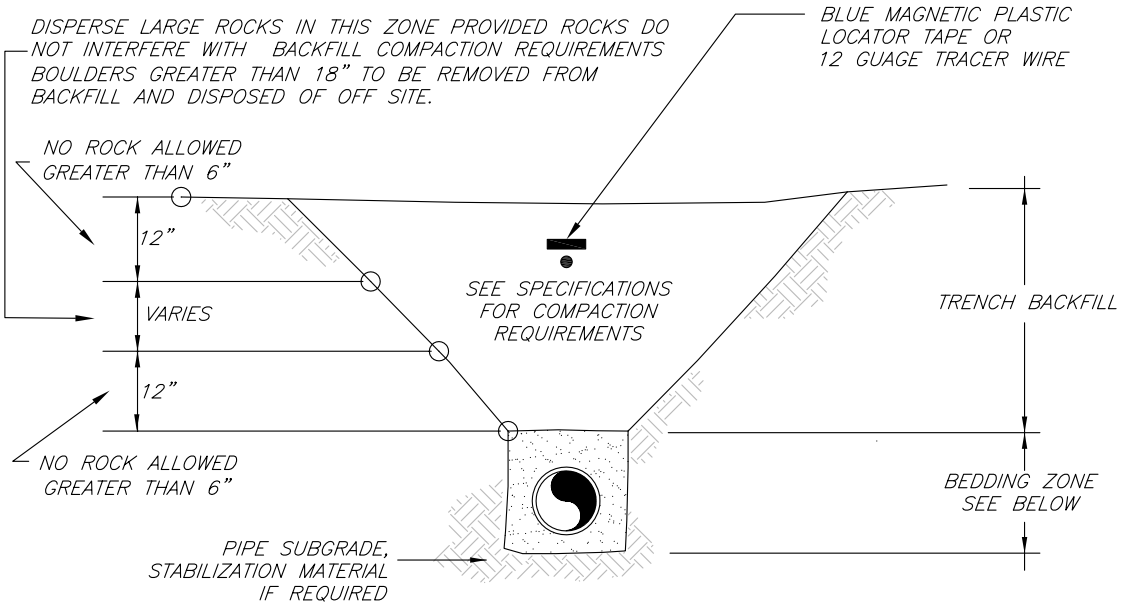
LEGEND

- (A) 2" CORPORATION TAPERED THREADS INLET
- (B) 2" X 4" THREADED BRASS NIPPLE
- (C) 2" THREADED GATE VALVE WITH WHEEL (CRANE OR NIBCO)
- (D) 2" THREADED INLET APCO 144 AIR AND VACUUM RELEASE VALVE
- (E) 2" X 90° PLASTIC ELBOW

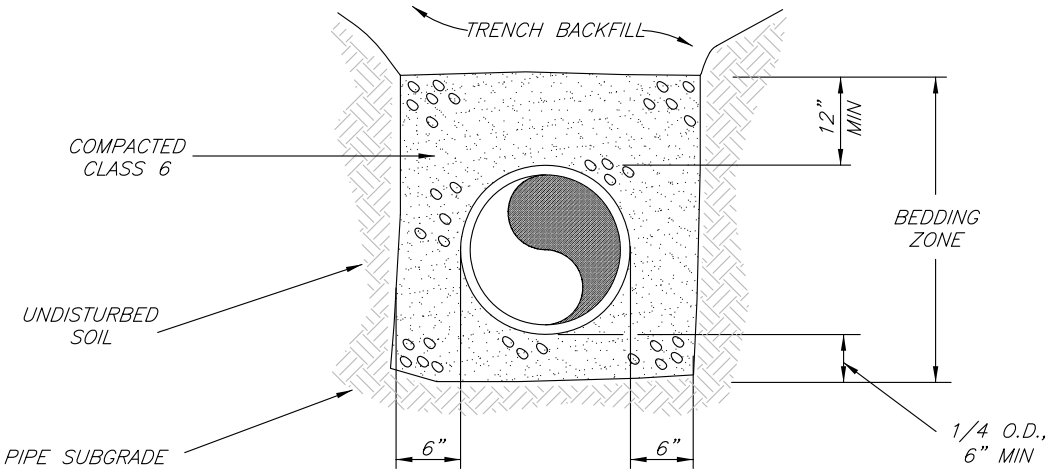
GENERAL NOTES

1. ALL CONCRETE WORK SHALL COMPLY WITH LATEST ACI–318 SPECIFICATIONS
2. AIR VALVE ASSEMBLY LARGER THAN 2" SIZE SHALL BE SPECIALLY DESIGNED AND MEET WATER DEPARTMENT REQUIREMENTS

DETAIL "W07"



TRENCH ZONES



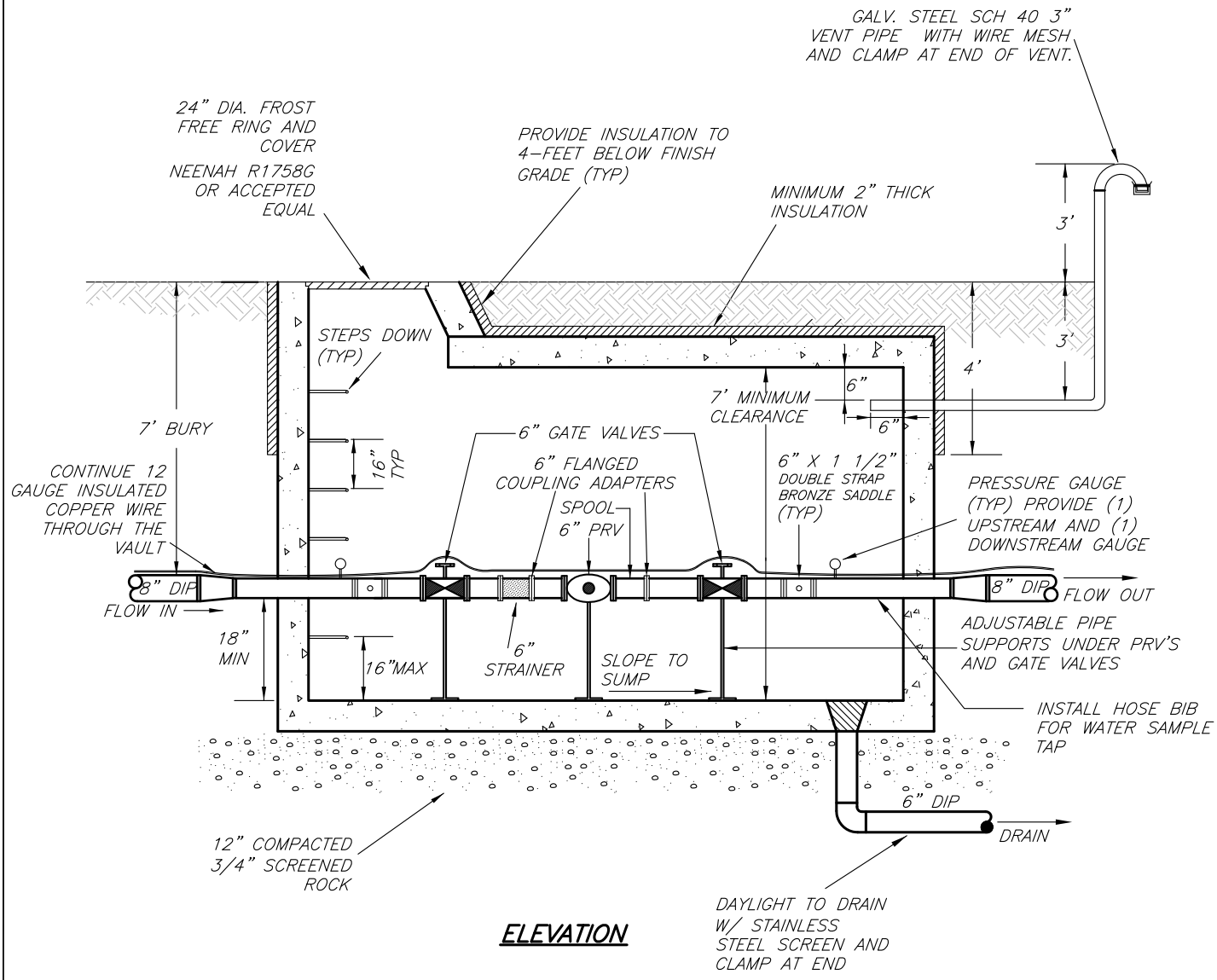
PIPE BEDDING ZONE

WATER PIPE BEDDING

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DETAIL "W08"

Prepared By: SGM | MVMD STANDARD DETAILS | Date: 8/16/13 | By: NKONTOUR



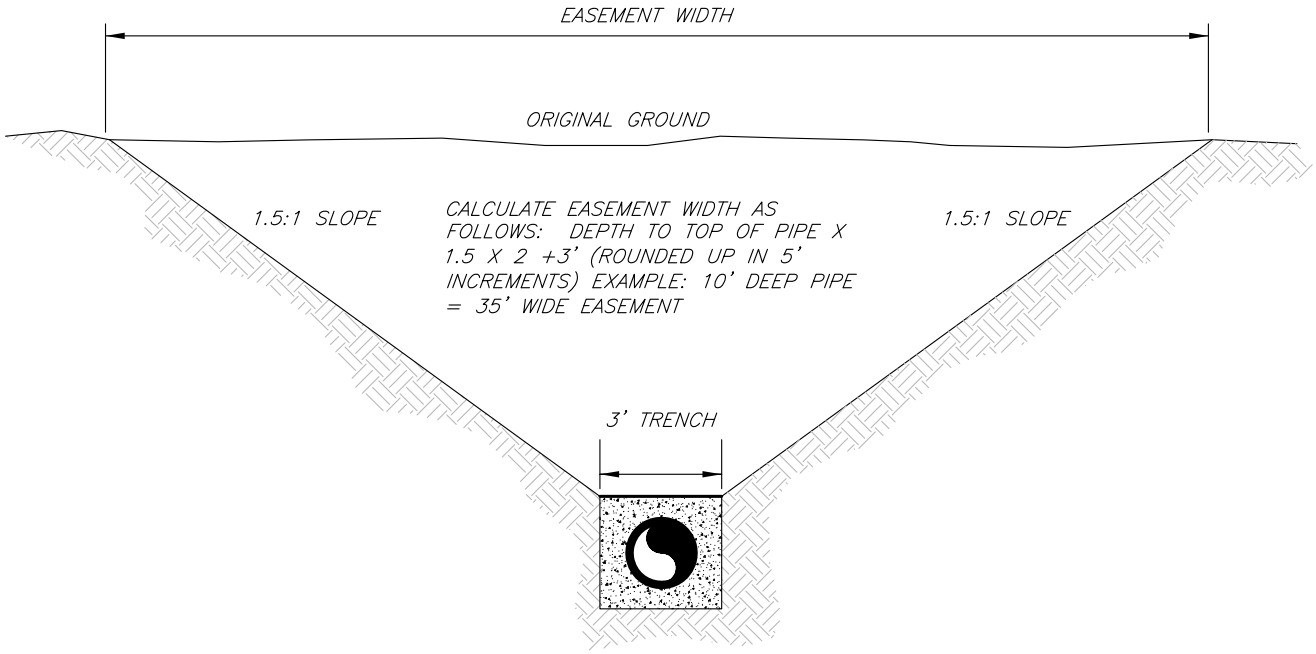
ELEVATION

MAIN LINE PRV VAULT

NOTES

1. VAULT SHALL BE PRECAST CONCRETE AND CAPABLE OF WITHSTANDING HS 20-44 TRAFFIC LOADING CONDITIONS
2. WHERE PIPES PENETRATE WALLS, USE LINK SEAL OR FILL ANNULAR SPACE W/ NON-SHRINK GROUT
3. COAT ALL EXTERIOR VAULT SURFACES WITH BITUMINOUS DAMPROOFING
4. ALL 1 1/2" PIPE SHALL BE BRASS W/ALL OTHER PIPE AND FITTINGS BEING FLANGED DUCTILE IRON
5. ALL TIE-RODS SHALL BE 3/4" ALL-THREAD OR MEGA-LUGS ON EXTERIOR CONNECTIONS
6. CONTRACTOR SHALL SUBMIT VAULT PIPING SCHEMATIC W/ VAULT DIMENSIONS PRIOR TO ORDERING
7. IT SHALL BE THE OWNER'S RESPONSIBILITY TO VERIFY ALL PRV SIZING AND PRESSURE SETTINGS SIZES OF PRV'S SHOWN IS FOR ILLUSTRATION PURPOSES ONLY
8. THE DISTRICT SHALL APPROVE FINAL SIZING OF ALL PRV'S AND VALVES
9. PIPE MATERIAL TO BE OR RESTRAINED JOINT OR FLANGED PIPE. 10. INCLUDE A BYPASS PRV IN PIPING.

DETAIL "W09"



MINIMUM EASEMENT WIDTH

EASEMENT WIDTH

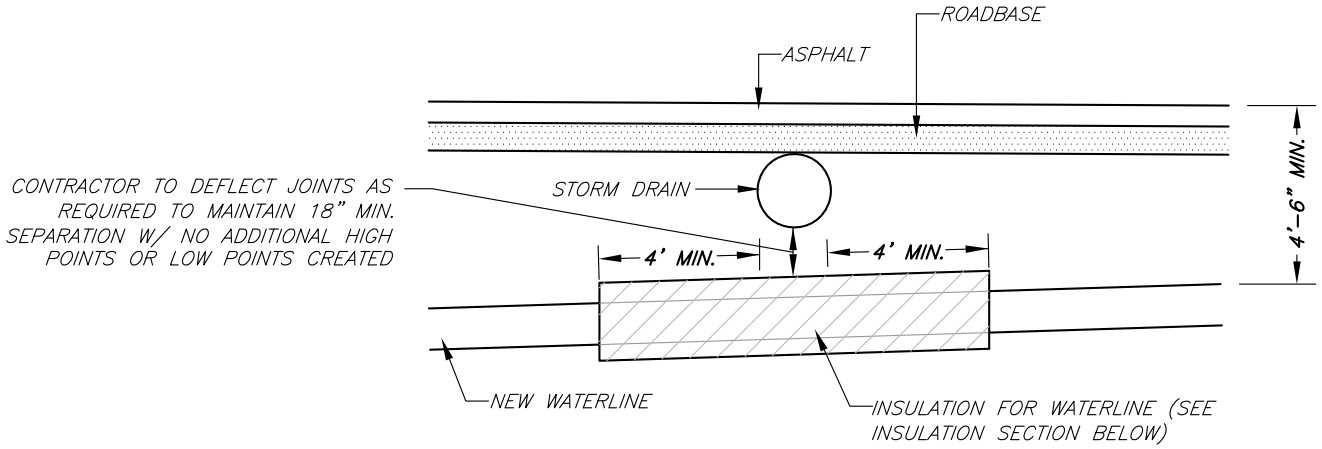
GENERAL NOTES:

1. MINIMUM EASEMENT WIDTH OF 20 FEET FOR 1 LINE
2. MINIMUM EASEMENT WIDTH OF 30 FEET FOR 2 LINES
3. NO PERMANENT IMPROVEMENTS SHALL BE INSTALLED WITHIN EASEMENT AREA SUCH AS LANDSCAPING, CONCRETE, ETC.

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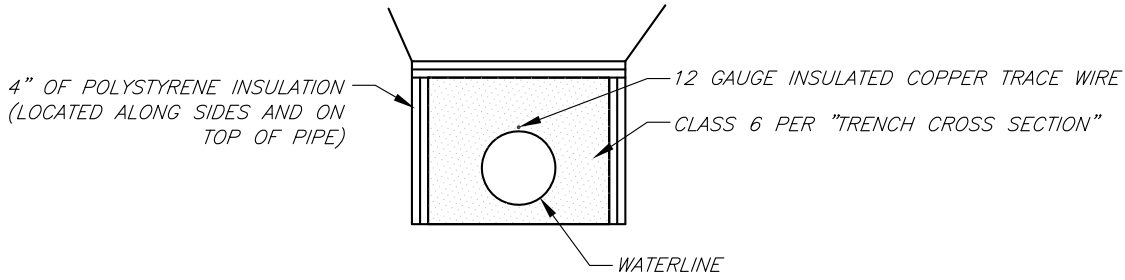
DETAIL "W10"

Prepared By: SGM | MVMD STANDARD DETAILS | Date: 8/16/13 | By: NKONTOUR



ELEVATION WATERLINE/CULVERT CROSSING

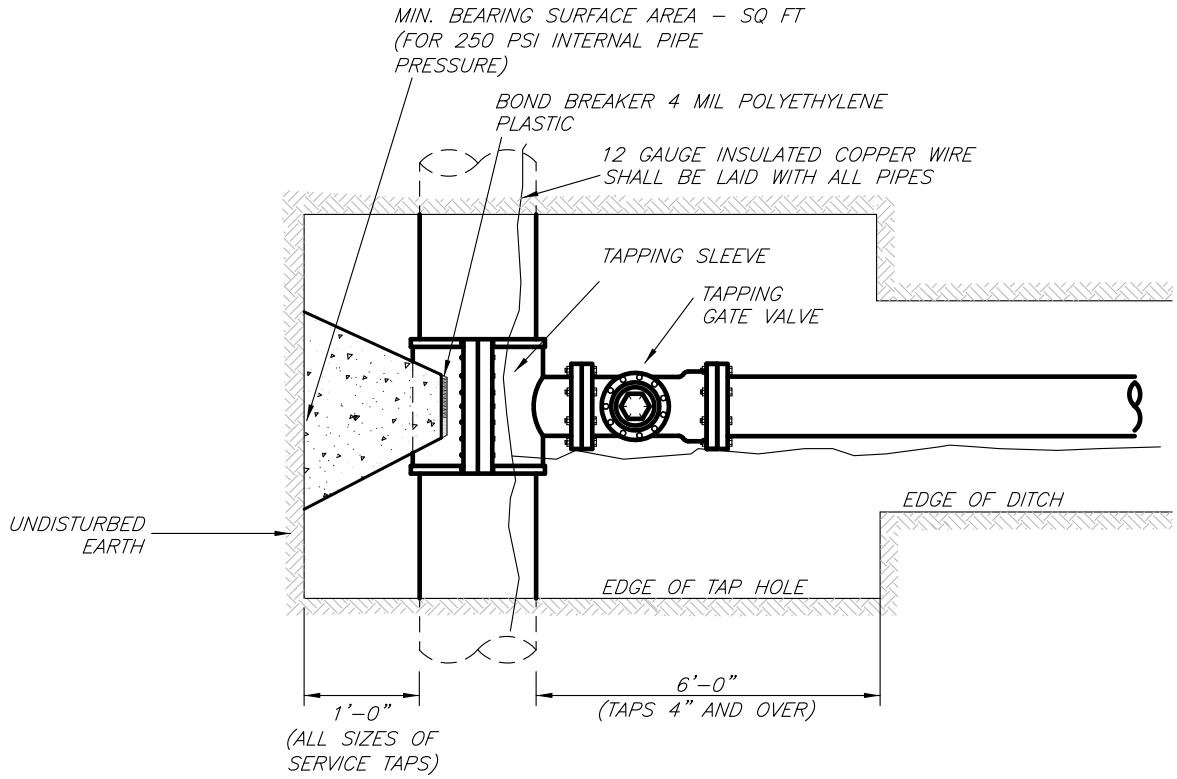
NO SCALE



INSULATION SECTION

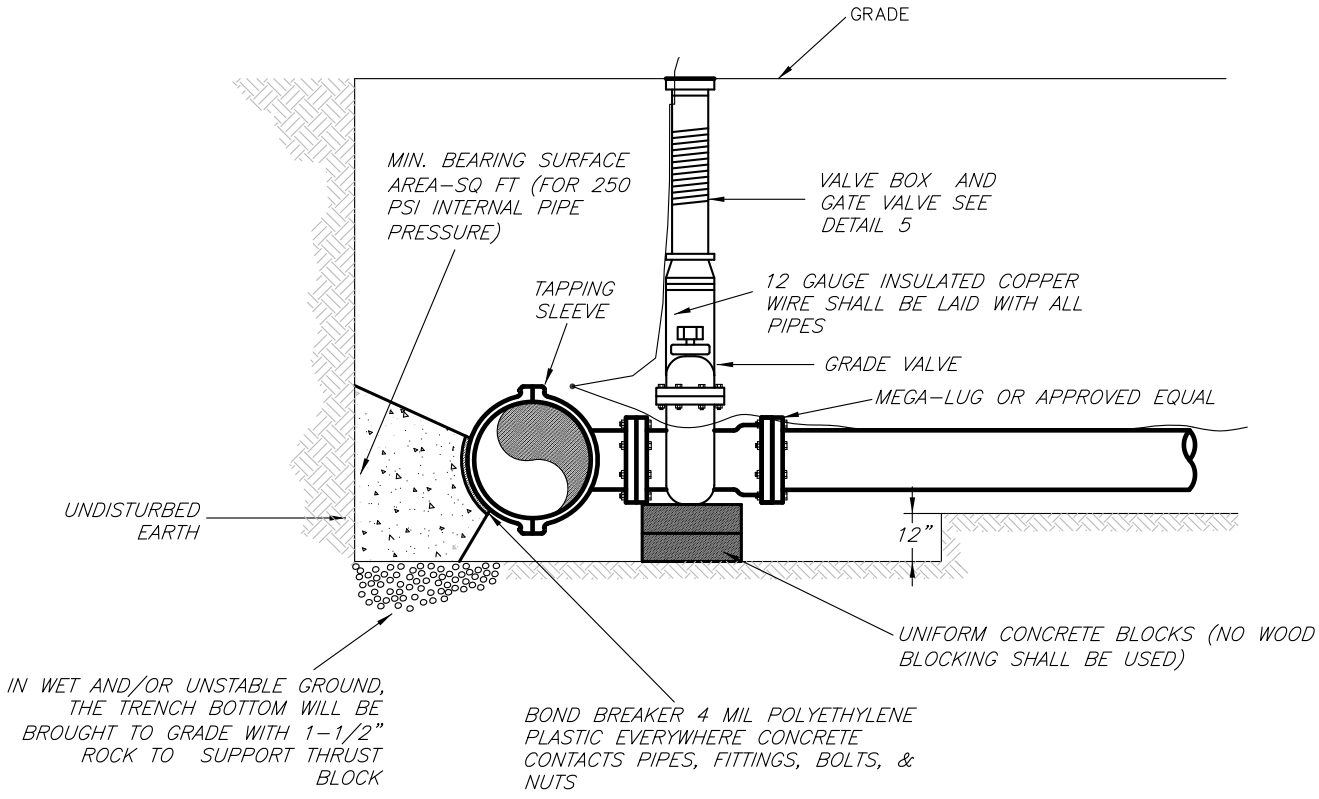
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INSULATION DETAIL



PLAN

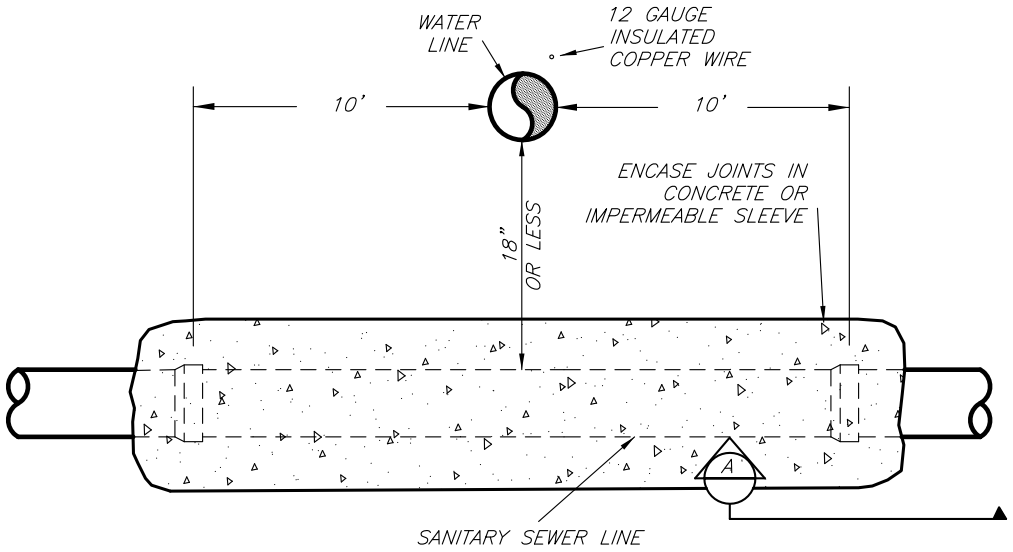
12 GAUGE INSULATED COPPER WIRE SHALL BE LAID WITH ALL PIPES



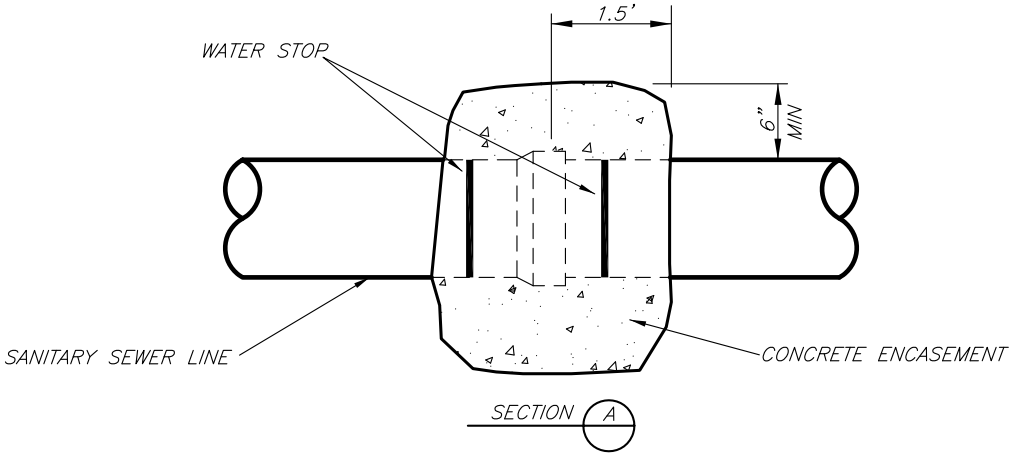
ELEVATION

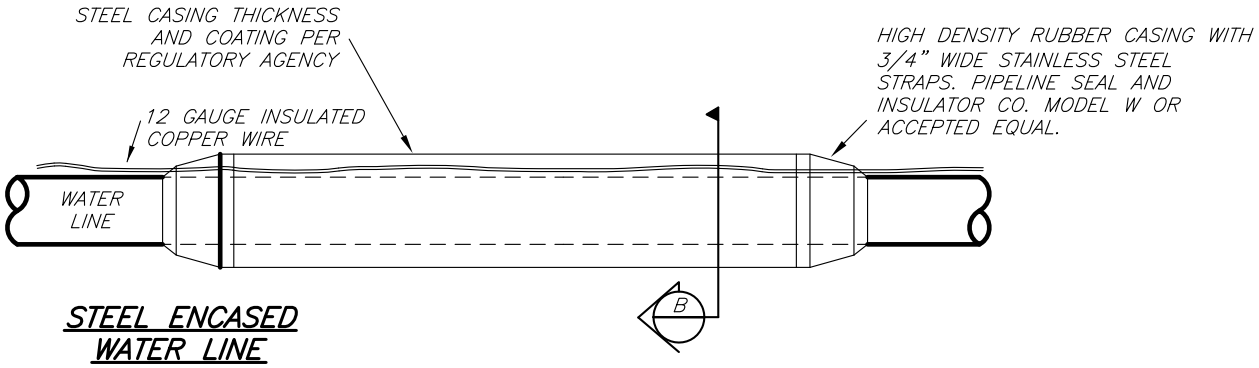
TAPPING DETAIL

DETAIL "W12"

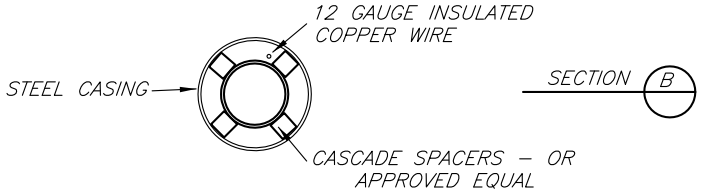


IF WATERLINE IS 18" OR LESS ABOVE SEWER OR IF WATER LINE IS BELOW THE SEWER LINE, INSTALL CONCRETE ENCASEMENT. ENCASEMENT MUST EXTEND UNTIL THE WATER AND SEWER PIPE ARE SEPARATED BY MORE THAN 10 FEET. IN LIEU OF CONCRETE EN– CASEMENT C900 PVC PRESSURE PIPE OR YELOMINE PRESSURE PIPE MAY BE SUBSTITUTED.



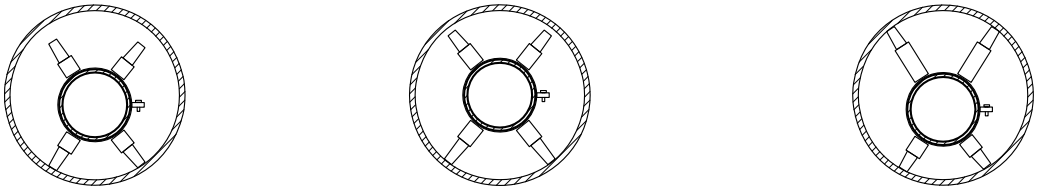


STEEL ENCASED WATER LINE

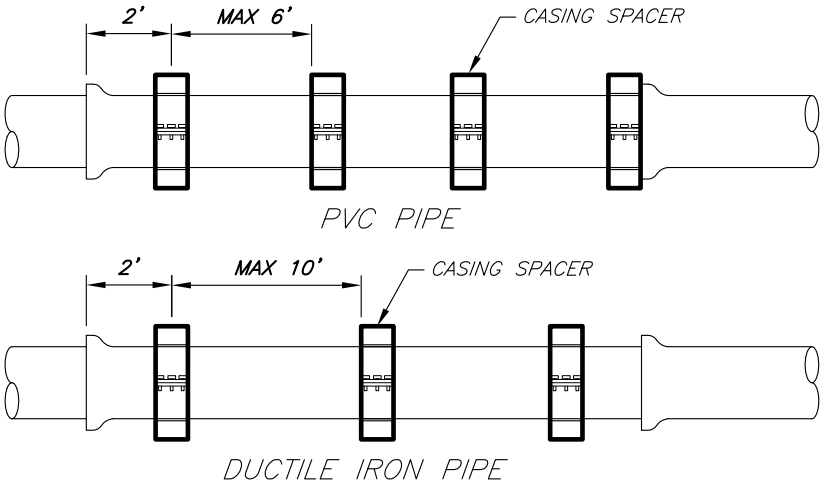


CONCRETE & STEEL PIPE ENCASEMENT

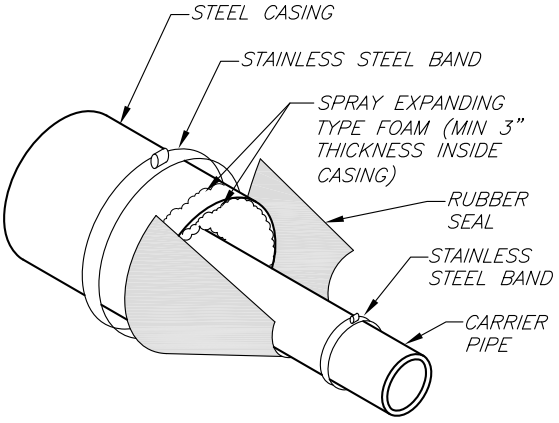
DETAIL "W13"



BASIC POSITIONS



PLACEMENT OF SPACERS ON CARRIER PIPE



END SEAL

PIPE CASING DETAIL

NTS

NOTES:
GENERAL: ONE SPACER SHALL BE PLACED NOT MORE THAN TWO FEET FROM EACH END OF THE CASING SUBSEQUENT SPACERS SHALL BE PLACED AT 10' INTERVALS WITHIN THE CASING.

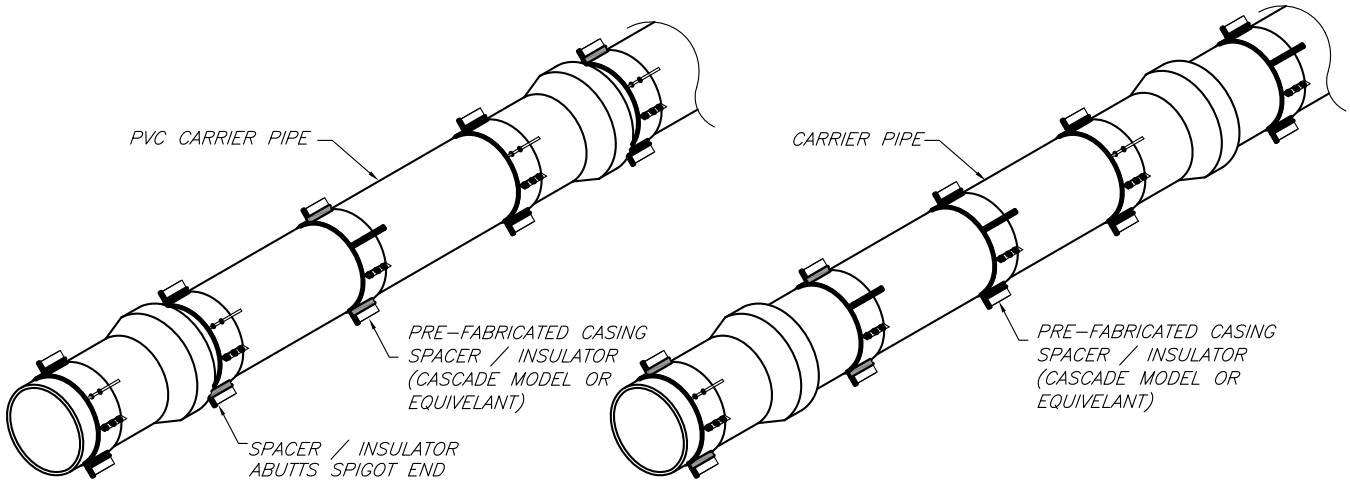
PVC CARRIER: ONE SPACER SHALL BE PLACED ON THE SPIGOT END OF EACH SEGMENT AT THE LINE MARKING THE LIMIT OF INSERTION INTO THE BELL. WHEN THE JOINT IS COMPLETE, THE SPACER SHALL BE IN CONTACT WITH THE BELL OF THE JOINT SO THAT THE SPACER PUSHES THE JOINT AND RELIEVES COMPRESSION WITHIN THE JOINT. SUBSEQUENT SPACERS SHALL BE PLACED AT 6' INTERVALS.

1. CARRIER PIPE SHALL BE INSERTED WITHIN CASING BY USE OF MODEL CCS STAINLESS STEEL CASING SPACERS AS MANUFACTURED BY CASCADE WATERWORKS MFG. CO. OF YORKVILLE, IL OR APPROVED EQUAL BY DISTRICT ENGINEER.

2. ALL PIPE JOINTS LOCATED WITHIN THE CASING AND THE FIRST JOINT EITHER SIDE OF CASING SHALL BE RESTRAINED BY USING SNAP LOCK TYPE GASKETS MANUFACTURED BY US PIPE OR APPROVED EQUAL BY DISTRICT ENGINEER. ALL RESTRAINED PIPE IS TO BE TYPE TYTON-JOINT AS MANUFACTURED BY US PIPE OR APPROVED EQUAL BY DISTRICT ENGINEER. ALL RESTRAINED PIPE IS TO BE INSTALLED USING THE RESTRAINED POSITION OF CARRIER INSTALLATION.

3. CONTRACTOR TO INSTALL PER SPECIFICATIONS SUPPLIED BY CASCADE WATERWORKS MANUFACTURING COMPANY OR APPROVED EQUAL BY DISTRICT ENGINEER.

DETAIL "W14"

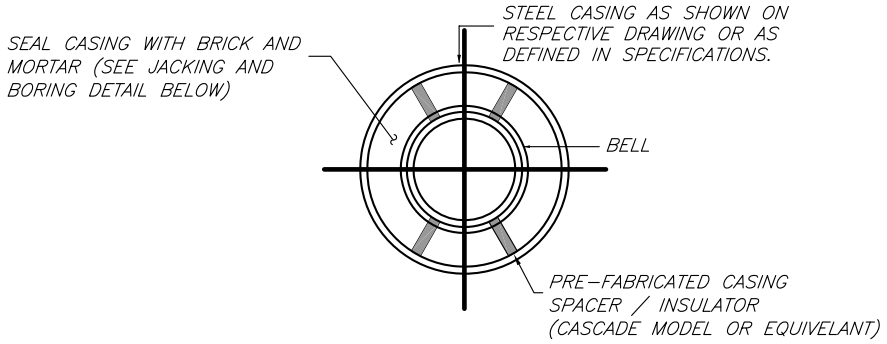


GENERAL NOTES

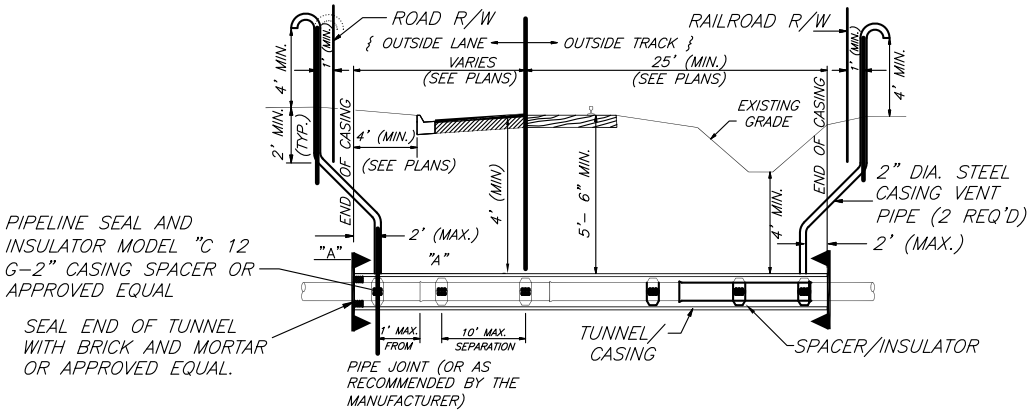
1. ONE SPACER SHALL BE PLACED NOT MORE THAN TWO FEET FROM EACH END OF THE CASING. SUBSEQUENT SPACERS SHALL BE PLACED AT 10' ENTRVALS WITHIN CASING
2. PVC CARRIER: ONE SPACER SHALL BE PLACED ON THE SPIGOT END OF EACH SEGMENT AT THE LINE MARKING THE LIMIT OF INSERTION INTO THE BELL WHEN THE JOINT IS COMPLETE, THE SPACER SHALL BE IN CONTACT WITH THE BELL OF THE JOINT SO THAT THE SPACER PUSHES THE JOINT AND RELIEVES COMPRESSION WITHIN THE JOINT. SUBSEQUENT SPACERS SHALL BE PLACED AT 6' INTERVALS

RECOMMENDED PLACEMENT ON PVC PIPE

RECOMMENDED PLACEMENT ON OTHER PIPE



SECTION "A"

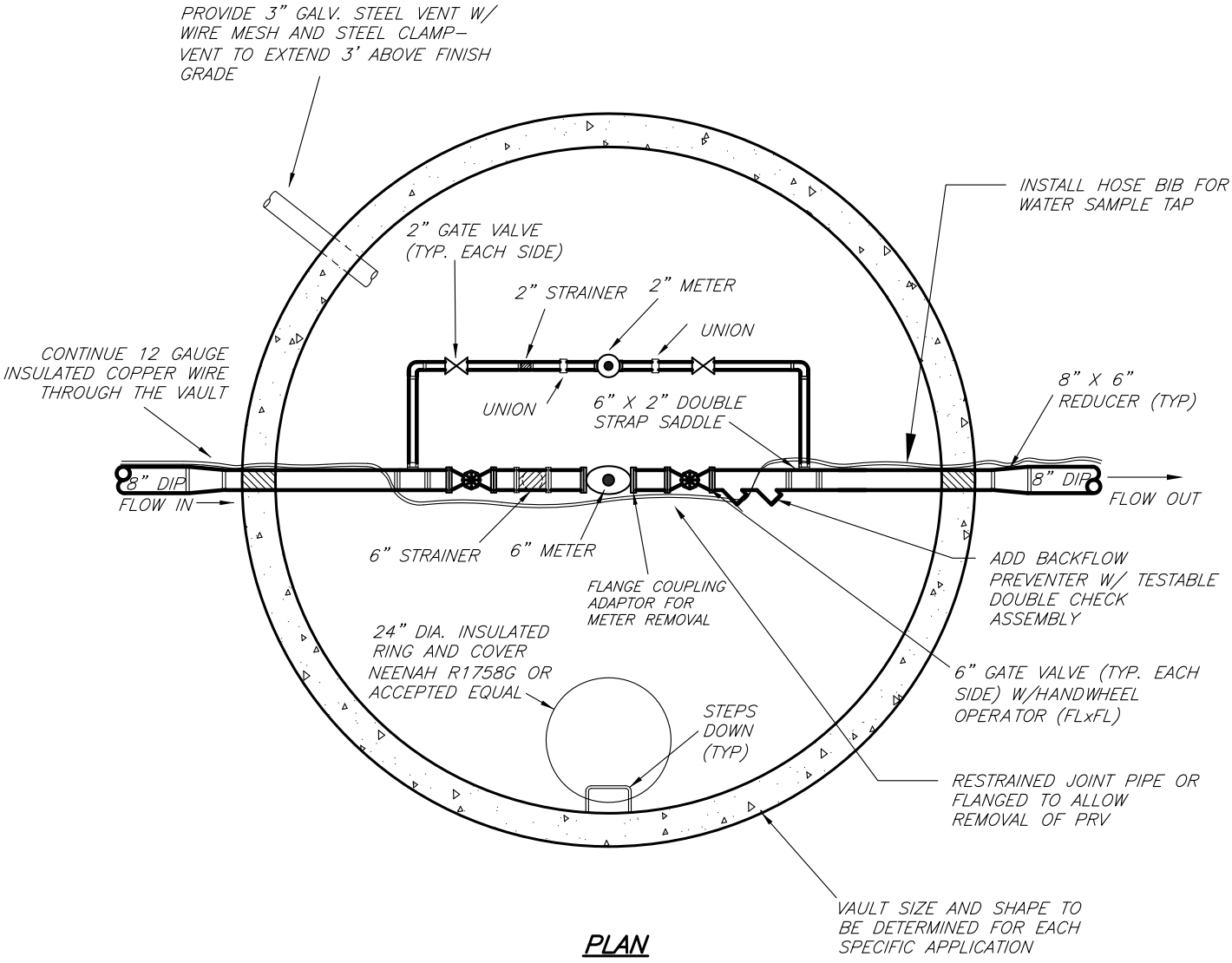


JACK AND BEFORE DETAILS FOR CROSSINGS
N.T.S.

NOTES

1. WATER MAIN TO BE RESTRAINED THROUGH TUNNEL / CASING.
2. PIPELINE SHALL BE PROMINENTLY MARKED AT RAILROAD RIGHT-OF-WAY BY SIGNS WORDED, "HIGH PRESSURE MAIN BURIED BELOW".
3. VENT PIPES SHALL BE FITTED WITH SCREENED DOWN-TURNED ELBOWS.
4. VENT PIPES SHALL BE INSTALLED ONLY IF TUNNEL / CASING IS NOT FILLED.

DETAIL "W15"

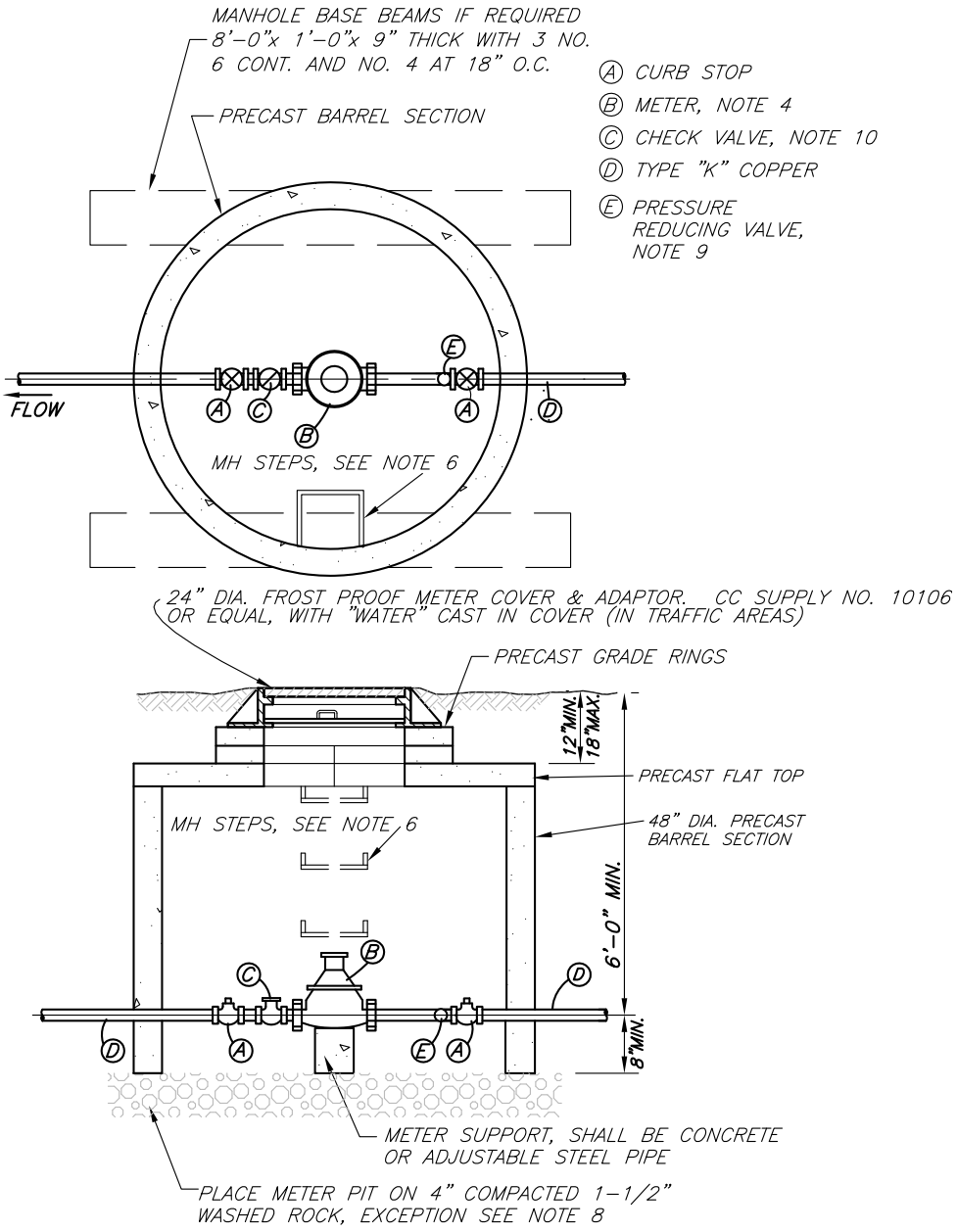


PLAN

MAINLINE WATER METER

NOTES

1. VAULT SHALL BE PRECAST CONCRETE AND CAPABLE OF WITHSTANDING HS 20–44 TRAFFIC LOADING CONDITIONS
2. WHERE PIPES PENETRATE WALLS, USE LINK SEAL OR FILL ANNULAR SPACE W/ NON–SHRINK GROUT
3. COAT ALL EXTERIOR VAULT SURFACES WITH BITUMINOUS DAMPROOFING
4. ALL 2" PIPE SHALL BE BRASS W/ALL OTHER PIPE AND FITTINGS BEING FLANGED DUCTILE IRON
5. ALL TIE–RODS SHALL BE 3/4" ALL–THREAD OR MEGA–LUGS ON EXTERIOR CONNECTIONS
6. CONTRACTOR SHALL SUBMIT VAULT PIPING SCHEMATIC W/ VAULT DIMENSIONS TO DISTRICT PRIOR TO ORDERING MATERIALS OR EQUIPMENT
7. PIPE MATERIAL TO BE FLANGED OR RESTRAINED JOINT PIPE.



IRRIGATION METER PIT DETAIL

GENERAL NOTES

1. MANHOLE BASE BEAMS SHALL BE REQUIRED FOR INSTALLATIONS IN DRIVEWAYS OR PARKING AREAS
2. A 48" DIA. MANHOLE PIT WILL ACCOMODATE 1-1/2" & 2" SPLIT CASE METERS.
3. JOINTS INSIDE METER VAULT SHALL BE EITHER THREADED OR SOLDERED WITH 95/5% TIN/ANTIMONY SOLDER.
4. METER SHALL BE A NEPTUNE T-10 WITH ECODER PIT REGISTER. METERS SHALL BE FLANGES WITH BRASS COMPANION FLANGES.
5. NO CONNECTIONS OR CHANGES IN PIPE DIAMETER SHALL BE MADE IN THE METER PIT OR IN THE DISTANCE OF FIVE FEET BEYOND THE METER PIT ON THE OUTLET SIDE.
6. MANHOLE STEPS SHALL BE PLACED ON THE OPPOSITE SIDE OF BYPASS AT 16" O.C., STEPS TO BE NEENAH R-1982-W OR EQUAL.
7. IF SURFACE IS NOT TO FINAL GRADE AT THE TIME OF INSTALLATION OF METER, OWNER MUST RAISE OR LOWER PIT WHEN SURFACE IS GRADED.
8. IN AREAS OF GROUND WATER, CAST IN PLACE 6" THICK CONCRETE BASE, 6'-0" DIA, WITH NO. 4 BARS AT 12" O.C. EA. WAY. INSTALL 4" PVC DRAIN TO DAYLIGHT. PLACE BASE ON UNDISTURBED GROUND OR 1-1/2" COMPACTED WASHED ROCK FOR STABILIZATION.
9. PRESSURE REDUCING VALVE-WATTS U-5-B
10. CHECK VALVE-FORD H SERIES (TESTABLE).

DETAIL "W17"