

# Earnhart Hill Regional Water & Sewer District

## Development Water Line Specifications

### I. VALVES & APPURTENANCES

#### A. VALVES

1. All hand-operated gate valves, three inches (3") and larger shall conform to the latest standard specifications of the American Water Works Association, Section C-515 for resilient seated valves. All gate valves installed shall be of the same class as the pipe on which they are installed. Valves shall have joint ends compatible with type of pipe used, non-rising stems, 2" square operating nut and shall open "left".
2. All gate valves 2 1/2" and smaller shall be of an EHRWSD approved manufacture and suitable for the service required. All valves shall have openings through the body of the same circular area as that of the pipe to which they are attached. All valves shall be designed to take the full unbalanced pressure upon either face.
3. Underground valves shall be fitted with standard, two-inch square operating nut. All valves in interior or above ground piping shall be fitted with hand wheels and shall have flanged or screwed ends depending upon the size of pipe with which they are being used, or as shown on the plans. Underground valves will be provided with boxes, covers and operating nuts extended to grade. All underground valves shall have cast iron bodies.
4. All hand-operated gate valves shall open by turning counterclockwise. The direction of opening shall be indicated by an arrow on hand wheels and on operating nuts.
5. All submerged valves shall be furnished with "o" ring packing.
6. All gate valves shall be designed for a minimum working pressure equivalent to that of the adjacent pipe.

#### B. HYDRANTS

1. 5 1/4" Type
  - a) Main line flushing hydrants of this size shall conform to AWWA C-502, latest revision. Model utilized shall be American Darling B-84-B, 3-way N.S.T., 4'-6" bury, w/6" MJ connection.
2. Post Type Flushing Hydrants
  - a) Branch line post type flushing hydrant, (Type A) shall be Kupferle Eclipse No. 2 Post Hydrant, 4'-0" bury w/2" PVC mechanical joint type connection.

#### C. TESTING

1. The Contractor shall make all valves tight under their working pressure after they have been installed and before they are placed in operation. Any defective parts shall be replaced at the Contractor's expense.
2. All valves shall be pressure tested in conjunction with their adjoining piping.

#### D. INSTALLATION AND STORAGE

1. The valves and appurtenances shall be installed in accordance with the installation manual furnished by the valve manufacturer. Extreme care shall be used in the handling, storage and installation of these valves to prevent damage or distortion of the equipment and to insure proper performance.

### II. WATER DISTRIBUTION SYSTEM

#### A. SUBMITTALS

1. Provide shop drawings and/or manufacturer's data sheets for all material supplied under this section in accordance with Section 3.
2. Submit with manufacturer's data sheets, published recommendations for installation of materials such as pipe, meter setters, service taps, etc.

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### **B. POLYVINYL CHLORIDE (PVC) PIPE**

1. Polyvinyl chloride (PVC) pipe for water distribution and transmission mains shall be pressure rated pipe with push-on gasket joints as manufactured by Certain-Teed Products Corp., Valley Forge, Pennsylvania; John-Manville, New York, New York; Anesite Division, Clow Corporation, Chicago, Illinois; or approved equal.
2. Rigid PVC (polyvinyl chloride) pressure pipe described herein shall be designed to carry portable water at pressures (including surge) up to the maximum class rating.
3. Material used to produce the pipe shall conform to ASTM D1784, Type 1, Grade 1, 2000 PSI design stress.
4. The standard dimensional ratio for the pipe shall be SDR 21 through 17.
5. All PVC pipe shall conform to the latest revisions of ASTM Specification D2241 and Department of Commerce Specification PS22-PR (SDR-PR) for pressure rated pipe.
6. Pipe identification code marking shall include the following data, and shall be marked continuously down each pipe length.
  - a) Nominal size
  - b) Type of material
  - c) SDR, Class Pressure Rating
  - d) Manufacturer's name
  - e) NSF Seal of Approval
7. Markings of pipe-printing shall be color coded for pressure class identification. Pipe shall be furnished with a minimum of one (1) contrasting color circumferential stripe painted on the plain end or uncoupled end of each length to allow field checking of pipe construction joints.
8. Each lot shipment of pipe and related materials shall include a shipment itemized check list for recording damages and/or deficiencies.
9. The pipe supplier shall be capable of supplying fittings with combinations of spigot (plain) ends and bell ends, designed and manufactured to withstand the same pressures specified for the pipe.
10. All PVC material for pipe shall be light gray, light blue or white I color to minimize material heat gain. The use of white pipe is encouraged.
11. The PVC pipe joints shall be designed and manufactured so that the pipe and fittings may be connected on the job without the use of solvent cement or any special equipment. The push-on joint (single rubber gasket joint) shall be assembled by positioning a continuous, molded, rubber ring gasket in an annular recess in the pipe bell end socket and the forcing of the plain end of the entering pipe into the socket, thereby compressing that gasket radially to the pipe to form a positive seal. The gasket and the annular recess shall be so designed and shaped that the gasket is locked in place against displacement as the joint is assembled. Details of the joint design and assembly shall be in accordance with the manufacturer's standard practice. The joints shall be so designed so as to provide for the thermal expansion of contraction experienced with a total temperature change of at least 75 degrees F. in each joint per length of pipe.
12. All assembled push-on joints of PVC pipe shall meet the requirements of ASTM D3139 and gaskets shall conform to ASTM F477.

### **C. POLYETHYLENE (PE) PIPE**

1. The pipe shall be high performance, high molecular weight, high density polyethylene pipe equal to Driscopipe 5100 as manufactured by Phillips Driscopipe, Inc., Dallas, Texas, and shall conform to AWWA C-901, latest revision. Diameter ratio shall be as required to meet a nominal CTS (nominal copper tubing size). Pipe shall be rated for a maximum working pressure of 200 psi.

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2. EHRWSD may request certified lab data to verify the physical properties of the materials supplied under this specification or may take random samples and have them tested by an independent laboratory.

### **D. D.I. FITTINGS AND ACCESSORIES**

1. Ductile iron fittings shall conform to AWWA C-153/ANSI 21.53. All lining and coating for fittings shall be as specified for pipe. The fittings shall be designed to withstand the same pressures as required for the adjoining pipe and shall have the same type of joints.
2. Fittings shall be as manufactured by US. Pipe and Foundry Co., American Cast Iron Pipe Co. or Clow Corp. or EHRWSD approved equal.
3. Push-on (slip) joint fittings shall also conform to AWWA C111/ANSI 21.11.
4. Mechanical joint fittings including accessories shall also conform to AWWA C111/ANSI 21.11.
5. Long radius elbows, reducing elbows, reducing-on-the-run tees, side outlets, eccentric reducers and laterals supplied as flanged fittings shall conform to ANSI B16.1.
6. All flanged joint fittings shall be furnished with 1/8 inch thick rubber gaskets. The bolts shall have American Standard heavy unfinished hexagonal head and nut dimensions all as specified in American Standard for Wrench Head Bolts and Nuts and Wrench Openings (ANSI B18.2). Material for bolts and nuts shall conform to ASTM A307 Grade B.

### **E. MECHANICAL JOINT RESTRAINTS**

1. FORD UNI – FLANGE UFR1500-SA or SIGMA One – LOK Wedge Action Retainer Gland with a Transition Gasket.
2. FORD UNI – FLANGE UFR1500-CA or SIGMA ONE – LOK Wedge Action Retainer Gland for D.I. or C-900

### **F. CONCRETE BLOCKING**

1. Concrete blocking will be placed at all tees, bends, and valve locations as specified in the project plans.
2. Required concrete will have a minimum compressive strength of 2,500 pounds at 28 days.

### **G. METER ENCLOSURES/SETTERS**

1. Meter enclosures/setters shall incorporate the following materials or materials of similar manufacture which have been approved by EHRWSD.
2. Straight Setter - 3/4" A.Y McDonald 21-215LDQQ33 or a Ford VHC72-15W-44-33-GT Copper Meter Setter - 3/4" CTS-GJ Both Ends - Key Valve Inlet x Dual Check Valve Outlet.
3. Tandem Setter – 3/4" A.Y McDonald 51-215GFQQ33 or a Ford TVHC72-15W-44-33-GT Copper Tandem Meter Setter – 3/4" CTS – GJ Both Ends – Key Valve Inlet x Dual Check Valve Outlet.
4. Meter boxes - 18" x 30" Springfield Tuf-Cor Plus Meter Boxes w/notches.
5. Meter box covers - 18-21" Prosource Model PS500 Meter Box Cover w/small pentagon nut and transponder bottom plate.
6. Base for meter enclosure shall be clean, washed gravel, a minimum of 2' deep and extended beyond the outside of the meter enclosure a minimum of 6 inches on all sides. Backfill shall be tamped in 6" layers to prevent settlement.
7. Where specified that the Owner will supply and install the meters, the Contractor shall also provide cross-over pieces to allow for pressure testing through the meter setter and enclosure to a point beyond the enclosure.
8. All setters shall be shipped complete with neoprene or approved alternate meter gaskets.

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9. Insert stiffeners are required for use with P.E. pipe service line sizes 3/4" through 2" at pack joint connections. Insert stiffeners shall be formed of quality stainless steel and shall be as manufactured by the Ford Meter Box company, Inc., Model #51 CTS, or EHRWSD approved alternate.

### **H. SERVICE SADDLES AND CORPORATION STOPS**

1. Service clamps shall be permanently hinged type, of brass with brass screws, confined "o" ring seal and AWWA thread outlet. Service saddles shall be of a design which will accurately fit plastic pipe (OD.) to provide a positive seal between plastic main and saddle at a minimum working pressure of 200 psi. Model shall be Ford Model S70 or S90 as applicable, or EHRWSD approved alternate.
2. The service saddles shall be marked to indicate size of plastic main (OD.) and outlet size on body and strap. Service saddles shall be as manufactured by Ford Meter Box Co., Inc., or EHRWSD approved alternate.
3. Corporation stops shall be brass, designed and manufactured in accordance with AWWA Standard Specification C800, latest edition, and shall be individually inspected and tested for leaks at the factory prior to shipment. Corporation stops shall be of a design which will permit use with drilling machines of current design.
4. Corporation stops shall be plug type furnished with AWWA inlet thread and pack joint outlet for PE pipe, Type F1000, as manufactured by Ford Meter Box Co., Inc., Mueller H15008, A.Y McDonald 4701Q or an EHRWSD approved alternate.

### **I. METERS**

1. Meters shall be purchased from EHRWSD at the current market price and installed by EHRWSD when service is requested.

### **J. INSTALLATION OF PIPE**

1. All water lines shall be installed on private property (easements obtained by the Developer) unless approved by EHRWSD. The actual location shall be flagged by the contractor and approved by EHRWSD before installation. Restoration shall be in accordance with the specifications.
2. Each pipe manufacturer (or supplier) shall provide a representative for a period of one (1) week, five (5) consecutive working days, to instruct the pipe installer of the proper and approved method of installing pipe in the field on the construction site when requested by EHRWSD. All pipe shall be installed in accordance with the manufacturer's published instructions, modified only as may be directed herein or by EHRWSD.
3. All pipe installations shall comply with applicable paragraphs contained as part of these construction specifications.
4. Normal laying depth shall be 48" of cover regardless of pipe diameter. Where rock is encountered, the minimum cover over top of the pipe shall also be 48". A lesser amount of cover may be permitted with EHRWSD approval. Where rock is encountered on the trench bottom at the normal laying depth, 6 inches of sand bedding and 6 inches of sand cover shall be required.
5. All piping shall be assembled in accordance with the layout shown on the plans with only such modifications as may be necessary to conform to the final detail dimensions or location of existing water mains, hydrants, existing utilities, tanks, valve vaults, booster stations, valves, county roads, highway and stream crossings, etc.. In crossing under ditches and streams the standard depth of the trench required under the Construction Specifications for the job shall be maintained. Standard fittings shall be used if required to depress the pipe but in no case shall the approach to the crossing be laid at a steeper angle than forty-five (45) degrees with the horizontal.

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6. All pipe installed under this contract shall be installed in accordance with the applicable sections of AWWA Specification C600. Type 2 laying conditions shall be maintained for both ductile iron and PVC installations. Trench width at the top of the pipe shall not exceed the pipe diameter plus 1 1/2 feet unless approved by the EHRWSD. Minimum trench width shall be 1 foot greater than the maximum outside pipe diameter. Pipe shall be laid directly on a trench bottom containing coupling or bell joint holes with trench shaped to provide continuous contact with the pipe between coupling or bell joint holes as recommended by the pipe manufacturer or as directed by EHRWSD.
7. If, in the course of construction, ground water is encountered, the Contractor shall, by means of well points or other acceptable methods reduce the water level to the invert of the main or bottom of the structure. The contractor shall maintain this dewatered condition until the area around the structure has been backfilled to existing grade. No pipe shall be laid in water, or when the trench conditions or the weather is unsuitable for such work, except by permission of the EHRWSD. At times when pipe laying is not in progress, the open ends of the pipe shall be closed by approved means and no trench water shall be permitted to enter the pipe. It shall be borne in mind that precautions must be taken to prevent empty pipe from floating, should the trenched become flooded before backfilling has been completed.
8. When recommended by the manufacturer, each piece of pipe shall be lowered into trench and installed separately. All pipe shall be laid in the trench so that it is firmly supported on the bedding material throughout its length.
9. As shown on the plans, or as directed by EHRWSD, the Contractor shall provide concrete anchors or thrust blocks (against undisturbed earth), joint harness, and concrete encasement where required. This work shall be included in the unit prices bid for installing pipe, fittings, and appurtenances.
10. Pieces of pipe or fitting which are known to be defective shall not be laid or placed. Any defective piece of pipe or fitting discovered after the piping is laid shall be removed and replaced with satisfactory pipe or fitting. In case a length of pipe is cut to fit in a line, it shall be so cut as to leave a smooth end at right angles to the longitudinal axis of the pipe. Cuts shall be made with proper tools for cutting the pipe. In the event the pipe is damaged as a result of the pipe being cut, the affected joint shall be rejected.
11. Sand bedding as specified in Paragraph B above shall be required where rock, either loose or solid, is exposed at trench bottom at the required bury depth. It is intended that the pipe at all times is protected against damage from protruding objects and rests on a smooth and continuous bedding of earth or sand.
12. Material used for backfilling trenches over the pipe shall be free from any rock or debris that may be a potential source of damage to the pipe. Where material originally excavated from the trench is deemed unsuitable, the contractor shall obtain other suitable material for use as backfill.
13. 12 Gauge solid tracing wire shall be taped to the top of the pipe. 8 gauge solid wire shall be used on all directional bores. EHRWSD approved waterproof connectors shall be used at all connections.

### **K. WATER MAIN CLEANING AND FLUSHING.**

1. Before a hydrostatic test is applied to any newly constructed water main the main shall be flushed or cleaned and flushed as herein prescribed. During the construction operations, workers shall use care to assure that the interior surfaces of all pipe and fittings are maintained in a sanitary condition. Every effort shall be made to keep loose foreign material out of all pipe and fittings. Exposed open ends of pipe must be temporarily blocked or capped during construction. Particular care shall be taken to protect the main whenever work is temporarily interrupted.
2. All main sizes 8 inches and smaller shall be flushed through available fire hydrants as directed and witnessed by a designated EHRWSD representative. Valving operations may be required to assure that all sections of the main are thoroughly cleaned. Flow rates for adequate flushing velocities shall be 1000 gallons per minute for 6 inch mains and 1600 gallons per minute for 8

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inch mains or maximum available flows from the system. Sections of main which cannot be flushed by valving and hydrant operations shall be cleaned as directed by the Engineer.

3. All mains 12 inches (305 mm) and larger shall be cleaned by passing a properly sized poly pig through the pipe. The poly pig shall have a minimum density of 5 pounds per cubic foot (30 kg per cubic meter), be coated with a double spiral wrap without wire brushes or scraping tools. *Acceptable* poly pigs include: Pipeline Pigging Products Model B4, Girard Model RCC, and Knapp Model 1-C or *approved equal*.
4. The Contractor shall prepare the main for the insertion and removal of the poly pig at points identified by the Engineer as insertion ports, if required, and exit ports. In general, this will consist of providing all material, equipment and labor to insert the poly pig and construct a sanitary exit port. Where practical, the poly pig shall be inserted into the first length of pipe during the initial installation. At the exit port the Contractor shall prevent the backflow of purged water into the main by the temporary installation of mechanical joint bends and pipe joints to provide a riser out of the trench. On larger pipe additional excavation of the trench may serve the same purpose.
5. Where trench is used, the excavation shall be lined with polyethylene. Pumps and/or ditches shall be provided to prevent contaminated water from reentering the main. After the main is cleaned to the satisfaction of the Division of Water representative, the Contractor shall remove all temporary constructions and complete all work necessary to secure the system prior to backfilling insertion and exit sites. Additional poly pig runs may be required by the Engineer when water purged from the main indicates the presence of excessive dirt or debris.

### L. HYDROSTATIC TESTING

1. A hydrostatic test as required in Section 5 of the Standard AWWA Specification C600 shall be applied to the mains, service lines and fire hydrant leads. Each valved section of water main shall be tested independently of one another unless otherwise approved by the Engineer. Pressure test shall be conducted with all watch valves open and hydrant foot valves closed. The pressure during the test shall be maintained at 150 psi in any section being tested. The duration of each pressure test shall be at least one hour. EHRWSD will furnish gauges for the test, but the Contractor shall furnish all materials, make all taps required and furnish a pump, piping, other equipment and all necessary assistance for conducting the tests.
2. If there are indications of leaks under this pressure test, the Contractor shall locate them at his cost and expense. Any cracked or defective pipes, fittings, valves, joints, or other appurtenances discovered as a consequence of this pressure test shall be removed and replaced by the Contractor with approved material, at his cost and expense and the test shall be repeated until satisfactory to the Engineer.
3. A test shall be made to determine the quantity of water lost by leakage under the specified test pressure as provided in Section 5 of the Standard AWWA Specifications above. No pipe installation will be accepted until or unless this leakage (evaluated on a pressure basis of 150 psi) is less than  $L = SD\sqrt{P}$
4. Before applying the specified pressure, all air shall be expelled from the pipe. To accomplish this, air release outlets shall be installed by the Contractor as indicated on the plans, or as required by the Engineer. Cost for air release outlets shall be paid for under Item 812.
5. Should any test of combined sections of pipe laid disclose leakage greater than that specified, or if individual sections show leakage greater than the specified limit, the Contractor shall at his own expense locate and repair the leaks until the leakage is within the specified allowance.
6. Leakage shall be defined as the quantity of water that must be supplied into the newly laid pipe, or any valved section thereof, to maintain pressure within 5 psi (34.5 kPa) of the specified test pressure after the air in the pipe line has been expelled and the pipe has been filled with water.
7. Any testing performed against existing valves shall be at the Contractor's risk and in strict compliance with the requirements of the Engineer. If unable to achieve the required test the

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Contractor shall disconnect from the existing valve, plug and re-test until satisfactory results are obtained. Any damage caused to existing facilities shall be repaired at the Contractor's expense.

### **M. DISINFECTION**

1. After satisfactory hydrostatic testing, the completed pipe will be chlorinated in accordance with AWWA C651, latest edition. All labor, material, and equipment including chlorination taps and blow-off taps necessary to complete the work shall be furnished and paid for by the Contractor. Taps shall include tapping valves, sufficient tubing or pipe to extend outside the trench, and operable valve above ground. Blow-offs shall be installed as required. The time and section of line to be chlorinated shall be approved by EHRWSD.
2. Upon completing the chlorination and the subsequent flushing of the line, the Contractor shall take the necessary water samples from the pipe for testing at an approved laboratory. Testing shall be performed in accordance with Ohio Environmental Protection Agency rules and regulations, copies of which are available from the Ohio Environmental Protection Agency. A certified copy of the test results shall be sent to EHRWSD. The cost of testing shall be borne by the Contractor.

### **N. CONNECTIONS**

1. Connections to existing water mains shall be made by EHRWSD at the Developer's expense. The Contractor shall coordinate this work with EHRWSD.
2. Before water lines are connected to the existing EHRWSD system, easements granted to EHRWSD shall be required on all lots in the project.

### **O. RESTORATION (PUBLIC AND PRIVATE RIGHT OF WAY)**

1. All construction within the right-of-way limits of a county or state highway shall be restored in accordance with the requirements of the state or county highway departments, as applicable.
2. Attention is directed to the proposed location in yards, fields, and all other private property in the construction area. Contractor shall exercise due care to protect trees, shrubbery, garden plots, fences, grassed areas, field topsoil, drainage tile, and all structures within the construction area. The contractor will be responsible for the repair or replacement of all the above items that are removed for construction or damaged during construction.
3. All construction on private right-of-way shall be restored to it's original state by the contractor.
4. All lawn and grass areas damaged by construction shall be raked and seeded with a grass seed mixture of 40 percent Kentucky Bluegrass, 40 percent Creeping Red Fescue, and 20 percent Annual Ryegrass. The area will then be fertilized at a rate of 10 lbs. per 1,000 sq. ft. of 6-24-24 and 5 lbs per 1,000 sq. ft. of 48-0-0. The area will then be mulched to a thickness of at least 1/2" with straw.
5. All valve boxes including curb stops and meter pits, shall be marked using 5' steel fence posts.

### **P. ROAD AND DRIVE CROSSINGS**

1. All work in the state or county right of way shall be performed in accordance with the respective agencies requirements. The Developer will obtain the necessary permits for such work. The contractor shall secure acceptance of work by state and/or county highway department before final acceptance by EHRWSD.
2. All road crossings, whether open cut or bored, shall be encased using either 0.375 inch thick welded steel conduit or Class 200 PVC (SDR 21) of sufficient diameter to permit the easy installation of the water main. Directional boring using HDPE pipe will not require a casing pipe.
3. All crossings of private blacktop or concrete driveways shall be made by the bore method.
4. Except where rock is encountered and approved otherwise by EHRWSD the normal laying depth shall be 48" of cover.

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### **Q. GUARANTEE**

1. The contractor shall guarantee all materials and equipment furnished, and work performed for a period of one (1) year from the date of substantial completion. EHRWSD shall determine and establish the date of substantial completion.

### **III. SUBMITTAL AND SHOP DRAWINGS**

#### **A. SUBMITTALS**

1. Deliver all submittals to EHRWSD at 2030 Stoneridge Dr., PO Box 151, Circleville, Ohio 43113.
2. Transmit each item to EHRWSD with a suitable cover letter. Identify project, contractor, subcontractor, major supplier; identify pertinent Drawing sheet and detail number, and Specification section number, as appropriate. Identify deviations from specifications.
3. After EHRWSD review of submittal, revise and resubmit as required, identifying changes made since previous submittal.
4. Distribute copies of reviewed submittals to concerned person. Instruct recipients to promptly report any inability to comply with provisions.

#### **B. SHOP DRAWINGS**

1. Present in a clear and thorough manner. Title each drawing with Project and Contract name and number; identify each element of drawings by reference to sheet number and detail, or schedule of Contract Documents.
2. Identify field dimensions,; show relation to adjacent or critical features or Work or products.

#### **C. PRODUCT DATA**

1. Submit only pages which are pertinent; mark each copy of standard printed data to identify pertinent products, referenced to Specification Section and Article number. Show reference standards, performance characteristics, and capacities; wiring and piping diagrams and controls; component parts; finishes; dimensions; and required clearances.
2. Modify manufacturer's standard schematic drawings and diagrams to supplement standard information and to provide information specifically applicable to the work. Delete information not applicable.
3. Provide manufacturer's preparation, assembly, and installation instructions as specified.

#### **D. CONTRACTOR REVIEW**

1. Review submittals prior to transmittal; determine and verify field measurements, field construction criteria, manufacturer's catalog numbers, and conformance of submittal with requirements of Specification.
2. Coordinate submittals with requirements of work and of Specifications.
3. Sign or initial each sheet of shop drawings and product data, and each sample label to certify compliance with requirements of Contract Documents. Notify EHRWSD in writing at time of submittal, of any deviations from requirements of Specifications.
4. Do not fabricate products or begin work which requires submittals until return of submittal with EHRWSD acceptance.

#### **E. SUBMITTAL REQUIREMENTS**

1. Provide blank space on each submittal for Contractor and EHRWSD stamps.
2. Apply Contractor's stamp, signed or initialed, certifying to review, verification of products, field dimensions and field construction criteria, and coordination of information with requirements of work and Specifications.
3. Coordinate submittals into logical groupings to facilitate interrelation of the several items:

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- a) Finishes which involve EHRWSD selection of colors, textures, or patterns
- b) Associated items which require correlation for efficient function or for installation
4. Submit number of opaque reproductions of shop drawings Contractor requires, plus two which will be retained by EHRWSD.
5. Submit number of copies of product data Contractor requires, plus two copies which will be retained by EHRWSD.
6. Submit number of samples required by individual Specifications sections.
7. Submit under transmittal letter. Identify Project by title and number. Identify work and product by Specifications Section and Article number.

### **F. RESUBMITTALS**

1. Shop Drawings:
  - a) Revise initial drawings as required and resubmit as specified for initial submittal.
  - b) Indicate on drawings any changes which have been made other than those requested by EHRWSD.
2. In the event a third submittal is required, due to previous submittals of incomplete or incorrect data or not in compliance with the Specifications, the Contractor will be charged one-half of the cost incurred by EHRWSD for the review of the third submittal. The Contractor shall bear the total cost incurred by EHRWSD for all subsequent reviews. EHRWSD costs charged to the Contractor will be at the rate of \$30.00/per hour.

### **G. EHRWSD REVIEW**

1. EHRWSD will review and return submittals within fifteen (15) days of receipt from the Contractor.