

U.S.A NOTE

IT IS THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR TO BE FAMILIAR WITH ALL GRADE DIFFERENCES, LOCATION OF WALLS, STRUCTURES, AND UTILITIES. THE IRRIGATION CONTRACTOR SHALL EXERCISE EXTREME CARE AND BE RESPONSIBLE FOR ANY DAMAGE IN EXCAVATING AND WORKING NEAR UTILITIES. THE LANDSCAPE CONTRACTOR SHALL COORDINATE ALL WORK WITH THE OTHER SUB-CONTRACTORS FOR THE LOCATION OF UTILITIES AND THE INSTALLATION OF PIPE SLEEVES THROUGH WALLS, UNDER ROADWAYS, AND NEAR STRUCTURES. PRIOR TO CONSTRUCTION, CONTACT ALL APPLICABLE AGENCIES AND U.S.A. AT 1-800-642-2444 OR 1-800-227-2600 TO FIELD LOCATE ALL EXISTING UTILITIES.

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REVIEWED BY
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CALIFORNIA

PASTORI AVENUE SIDEWALK IMPROVEMENT PROJECT

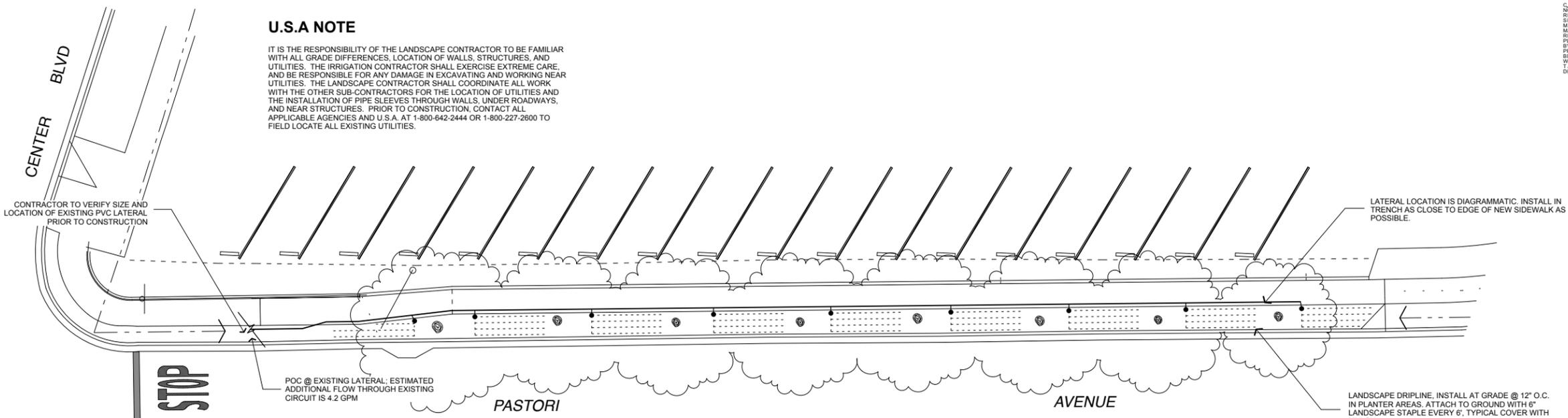
TOWN OF FAIRFAX

IRRIGATION AND PLANTING PLANS

PROJECT NUMBER
38-2518

DRAWING DATE
DECEMBER 2011

SHEET NUMBER
L-4 OF 6



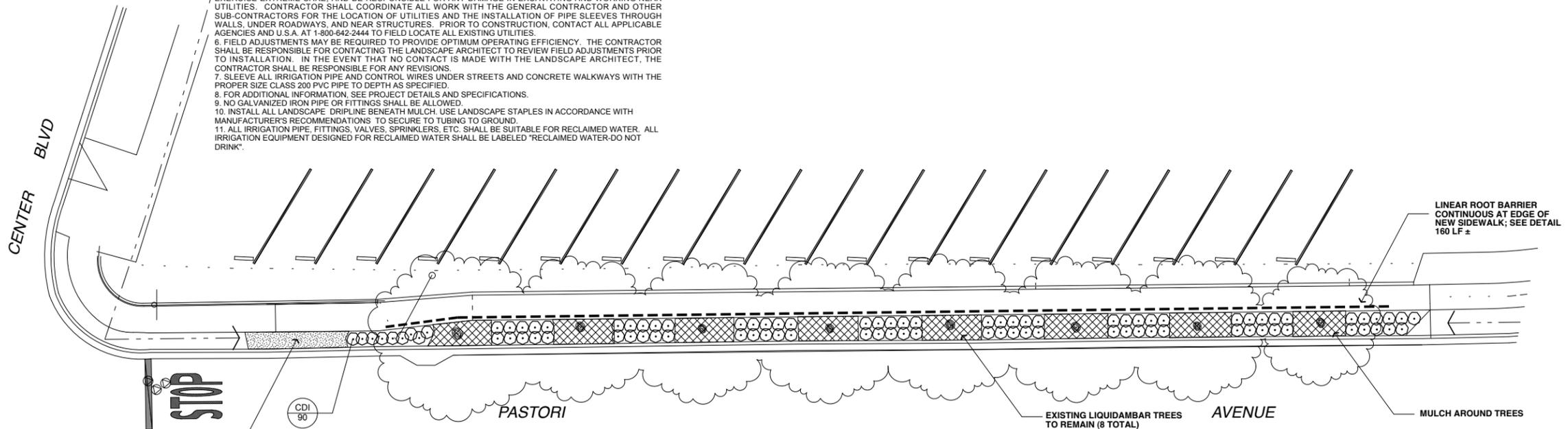
IRRIGATION NOTES

1. THE IRRIGATION SYSTEM DESIGN IS BASED ON THE MINIMUM STATIC PRESSURE OF 35 PSI AT THE VALVES AND THE MAXIMUM FLOW DEMAND SHOWN ON THE IRRIGATION DRAWINGS AT THE POINT OF CONNECTION. THE IRRIGATION CONTRACTOR SHALL VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION OF THE IRRIGATION SYSTEM. IF THE WATER PRESSURE SHOWN ON THE DRAWINGS DIFFERS FROM THE ACTUAL PRESSURE READING AT THE IRRIGATION POINT OF CONNECTION, THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY. IN THE EVENT PRESSURE DIFFERENCES ARE NOT REPORTED PRIOR TO THE START OF CONSTRUCTION, THE IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.
2. ALL CONSTRUCTION IS TO BE PER THE LATEST EDITION OF THE UNIFORM BUILDING CODE.
3. THIS DESIGN IS DIAGRAMMATIC. ALL PIPING, VALVES, ROOT BARRIERS, ETC. SHOWN WITHIN PAVED AREAS ARE FOR DESIGN CLARIFICATION ONLY. INSTALL PIPING AND VALVES IN PLANTING AREAS WHERE POSSIBLE, AND LOCATE ELECTRIC CONTROL AND QUICK COUPLING VALVES IN GROUND COVER/SHRUB AREAS, 6" TO 12" AWAY FROM HARDSCAPE OR TURF AREA FOR EASY ACCESS.
4. THE IRRIGATION CONTRACTOR SHALL FLUSH AND ADJUST ALL IRRIGATION LINES FOR OPTIMUM PERFORMANCE AND TO PREVENT RUN-OFF ONTO WALKS, ROADWAYS, AND/OR BUILDINGS.
5. IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO FAMILIARIZE HIMSELF WITH ALL GRADE DIFFERENCES, LOCATION OF WALLS, STRUCTURES, AND UTILITIES. THE IRRIGATION CONTRACTOR SHALL EXERCISE EXTREME CARE, AND BE RESPONSIBLE FOR ANY DAMAGE IN EXCAVATING AND WORKING NEAR UTILITIES. CONTRACTOR SHALL COORDINATE ALL WORK WITH THE GENERAL CONTRACTOR AND OTHER SUB-CONTRACTORS FOR THE LOCATION OF UTILITIES AND THE INSTALLATION OF PIPE SLEEVES THROUGH WALLS, UNDER ROADWAYS, AND NEAR STRUCTURES. PRIOR TO CONSTRUCTION, CONTACT ALL APPLICABLE AGENCIES AND U.S.A. AT 1-800-642-2444 TO FIELD LOCATE ALL EXISTING UTILITIES.
6. FIELD ADJUSTMENTS MAY BE REQUIRED TO PROVIDE OPTIMUM OPERATING EFFICIENCY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE LANDSCAPE ARCHITECT TO REVIEW FIELD ADJUSTMENTS PRIOR TO INSTALLATION. IN THE EVENT THAT NO CONTACT IS MADE WITH THE LANDSCAPE ARCHITECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REVISIONS.
7. SLEEVE ALL IRRIGATION PIPE AND CONTROL WIRES UNDER STREETS AND CONCRETE WALKWAYS WITH THE PROPER SIZE CLASS 200 PVC PIPE TO DEPTH AS SPECIFIED.
8. FOR ADDITIONAL INFORMATION, SEE PROJECT DETAILS AND SPECIFICATIONS.
9. NO GALVANIZED IRON PIPE OR FITTINGS SHALL BE ALLOWED.
10. INSTALL ALL LANDSCAPE DRIPLINE BENEATH MULCH. USE LANDSCAPE STAPLES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS TO SECURE TO TUBING TO GROUND.
11. ALL IRRIGATION PIPE, FITTINGS, VALVES, SPRINKLERS, ETC. SHALL BE SUITABLE FOR RECLAIMED WATER. ALL IRRIGATION EQUIPMENT DESIGNED FOR RECLAIMED WATER SHALL BE LABELED "RECLAIMED WATER-DO NOT DRINK".

IRRIGATION PLAN

IRRIGATION LEGEND

EQUIPMENT	MANUFACTURER	MODEL	REMARKS
LANDSCAPE DRIPLINE	RAINBIRD	LD-06-12-XX	INST. @ GRADE BENEATH MULCH @ SPACING SHOWN
MAINLINE	PVC	SCH 40	SEE PLAN FOR SIZE
LATERAL	PVC	CLASS 200	SEE PLAN FOR SIZE



PLANTING NOTES

1. ALL GROUND COVER TO BE SPACED IN A TRIANGULAR PATTERN. CONTRACTOR RESPONSIBLE FOR COMPLETE COVERAGE.
2. SUPPLY AGRIFORM 21 GRAM TABLETS AS FOLLOWS: 5-15 GAL., 3-5 GAL., 1-1 GAL.
3. DIG PLANTING PITS 2 TIMES THE DIAMETER AND EQUAL THE HEIGHT OF ROOTBALL.
4. BACKFILL PITS WITH 1/2 EXISTING SOIL, 1/2 ORGANIC AMENDMENT.
5. ALL PLANTS TO BE SPOTTED IN THE FIELD BY LANDSCAPE ARCHITECT PRIOR TO PLANTING.
6. WHEN LANDSCAPING IN EXISTING PLANTED AREAS, CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE OR DESTROY ANY EXISTING PLANT MATERIAL OR IRRIGATION. EXISTING PLANT MATERIAL AND IRRIGATION THAT IS DAMAGED SHALL BE REPLACED WITH LIKE, SIZE, QUALITY, ETC. BY THE CONTRACTOR AT HIS EXPENSE.
7. SPECIAL ATTENTION IS TO BE PAID TO THE PLANTING AREAS PREVIOUSLY COVERED WITH AC PAVING. ROOTS FROM THE EXISTING TREES TO REMAIN, EXPOSED DURING THE AC REMOVAL PROCESS SHALL BE PROTECTED AS DIRECTED BY THE ON-SITE ARBORIST.
8. COMPACTED SOIL IS TO BE SUFFICIENTLY EXCAVATED TO ALLOW FOR PROPER ROOT GROWTH AND DRAINAGE OF ALL AREAS. CHECK SOIL FOR PROPER DRAINAGE PRIOR TO PLANTING. AUGER THROUGH COMPACTED SOIL WHERE NECESSARY.
9. ALL CONSTRUCTION IS TO BE PER ALL APPLICABLE AND PREVAILING COUNTY OF MARIN CONSTRUCTION STANDARDS.

PLANT LEGEND

SYMBOL	SIZE	BOTANICAL NAME	COMMON NAME	REMARKS	WATER USE PER WUCOLS
		GRASSES			III
CDI	1	CAREX DIVULSA	EUROPEAN GREY SEDGE/BERKELEY SEDGE		M
		OTHER			
		MULCH: FIR BARK, 1/2" TO 1-1/2"		3" DEPTH, ALL LANDSCAPE AREAS	
SEE DETAIL		LINEAR ROOT BARRIER	ROOT SOLUTIONS	18" DEPTH; INSTALL WHERE TREE IS CLOSER THAN 5' TO EDGE	

IRRIGATION AND PLANTING PLANS

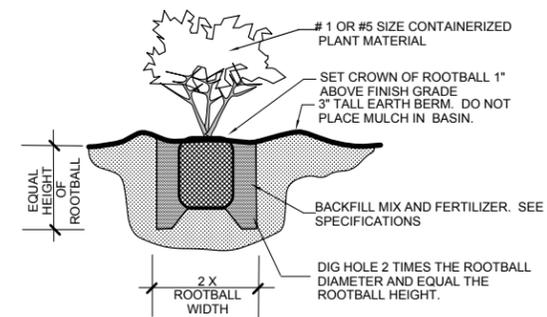
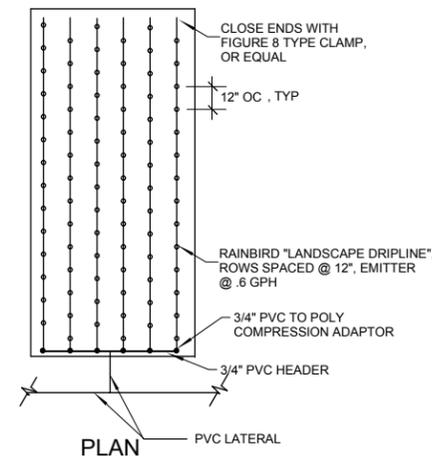
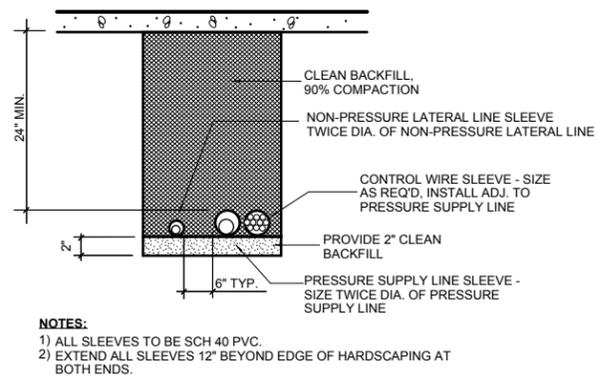
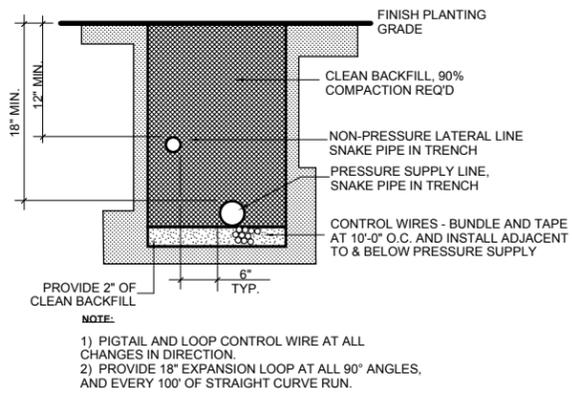


ORIGINAL DATE:

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FOR REDUCED PLANS, THE ORIGINAL SCALE IS IN INCHES

ORIGINAL DATE:

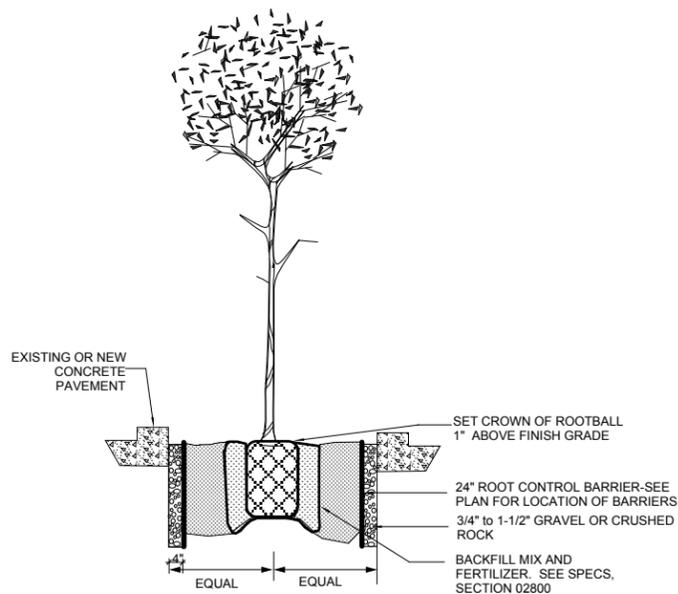


A PIPE INSTALLATION UNDER
PLANTED AREA NTS

B PIPE INSTALLATION
UNDER PAVING NTS

C DRIP CIRCUIT
LAYOUT NTS

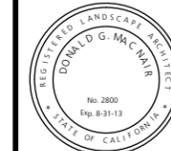
D SHRUB PLANTING DETAIL
NTS



NOTE:
1) DO NOT PLACE MULCH IN TREE BASIN.
2) PLANTING HOLE TO BE TESTED FOR DRAINAGE PRIOR TO PLANTING. IF HOLE'S DO NOT DRAIN WITHIN 4 HOURS CONTACT LANDSCAPE ARCHITECT.
3) INSTALL ROOT BARRIER ON ALL FOUR SIDES OF PLANTER.

E TREE WELL WITH
ROOT BARRIER NTS

FOR REDUCED PLANS, THE ORIGINAL SCALE IS IN INCHES



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PASTORI AVENUE SIDEWALK IMPROVEMENT PROJECT
TOWN OF FAIRFAX
CALIFORNIA

LANDSCAPE DETAILS

LANDSCAPE DETAILS

PROJECT NUMBER
38-2518
DRAWING DATE
DECEMBER 2011
SHEET NUMBER
L-5 OF 6

ORIGINAL LOT DATE:

3
2
1
0

FOR REDUCED PLANS, THE ORIGINAL SCALE IS IN INCHES

DIVISION 2 SITEWORK
SECTION 02750
UNDERGROUND IRRIGATION SYSTEM

PART 1 GENERAL

1.01 SCOPE

- A. Work included: perform all work necessary and required for the construction of the project as indicated. Such work includes but is not limited to the following:
1. Furnish and install complete irrigation system.
2. Trenching and backfilling.
3. Sleeves for irrigation piping and remote control valve wiring under pavements and walls as noted.

- B. Related Work in Other Sections: The following items of associated work are included in other sections of these specifications:
1. Landscaping, Section 02900

- C. By Others: The following items of work will be performed by others and are not included in the contract.
1. Electrical stubout for irrigation controller.
2. Irrigation water meter.
3. Water stubouts for irrigation system.

- 1.02 INSPECTION OF CONDITIONS: Examine related work and surfaces before starting work of this section. Report to the landscape architect in writing, conditions which will prevent the proper provision of this work. Beginning the work of this section without reporting unsuitable conditions to the landscape architect constitutes acceptance of conditions by the contractor. Any required removal, repair, or replacement of this work caused by unsuitable conditions to be done at no additional cost to the owner.

1.03 CODES, RULES AND SAFETY ORDERS

- A. All work and materials to be in full accordance with the latest rules and regulations of safety orders of Division of Industrial Safety, the Uniform Plumbing Code published by the Western Plumbing Officials' Association, and other applicable laws or regulations, including the latest local plumbing code. Nothing in these drawings or specifications is to be construed to permit work not conforming to these codes. Should the construction documents, or instructions, be at variance with the aforementioned rules and regulations, notify the landscape architect and get instructions before proceeding with the work.

- B. Furnish and maintain all warning signs, shoring, barricades, red lanterns, etc., as required by the Safety Orders of the Division of Industrial Safety and local ordinances.
C. Contact U.S.A. for location of underground utilities.

1.04 STANDARDS: American Society of Testing and Materials (ASTM)

- 1.06 PERMITS AND FEES: Obtain all permits and pay required fees to any governmental agency having jurisdiction over the work. Arrange payment as required by local agencies and ordinances during the course of construction as required.

- 1.08 APPROVAL: Whenever the terms "approve", "approval", or "approved" are used in the specifications, they mean approval of landscape architect in writing.

- 1.07 WORK SCHEDULE: Submit a proposed work schedule to landscape architect at least 5 days prior to start of work under this Section. After approval, no modification shall be made to this schedule with out written authorization by the landscape architect.

- 1.06 OBSERVATION SCHEDULE: Schedule a job start meeting with the landscape architect at least 5 days before beginning work under this Section. All requests for observation must be made 72 hours in advance.

- A. Job start meeting: The purpose of this conference is to review questions the contractor may have regarding the work, administrative procedures during construction and project work schedule.

- B. Irrigation installation and hydrostatic tests: Observation of installation and hydrostatic test results to be made by the landscape architect prior to backfilling of trenches.

- C. Pre-maintenance: When all work has been completed a pre-maintenance walk-through will be conducted. If approved, the 90 calendar day maintenance period will begin.

- D. Final Observation: Final Observation will be after the 90 calendar day maintenance period and all required work is completed. Please give 1 week notice for this observation meeting.

1.09 SUBSTITUTIONS

- A. Specific reference to manufacturer's names and products substituted in this Section are used as standards, but this implies no right to substitute other material or methods without written approval of the landscape architect.

- B. Installation of any approved substitution is contractor's responsibility. Any changes required for installation of any approved substitution must be made to the satisfaction of the landscape architect and without additional cost to the owner.

1.10 PROTECTION OF EXISTING CONDITIONS

- A. Contractor shall acquaint himself with all site conditions. Should utilities or other work not shown on the plans be found during excavations, contractor shall promptly notify landscape architect for instructions as to further action. Failure to do so will make contractor liable for any and all damage thereto arising from his operations subsequent to discovery of such utilities not shown on plans.

- 1.11 COORDINATION: Coordinate and cooperate with other contractors to enable the work to proceed as rapidly and efficiently as possible.

- 1.12 PRODUCT HANDLING: Protect work and materials under this Section from damage during construction and storage. Protect polyvinyl chloride (PVC) pipe and fittings from direct sunlight. Beds in which PVC is stored must be full length of pipe. Do not use any pipe or fitting that has been damaged or dented.

- 1.13 SAMPLES: Landscape architect reserves the right to take and analyze samples of materials for conformity to specifications at any time. Contractor shall furnish samples upon request by the landscape architect. Requested material shall be removed from the site immediately and replaced at the contractor's expense. Cost of testing materials not meeting specifications shall be paid by contractor.

1.14 HYDROSTATIC TESTS

- A. Make hydrostatic tests when welded PVC joints have cured at least 24 hours. Apply continuous static water pressure of 100 psi as follows:
1. All piping on the pressure side of control valves shall be tested for 2 hours.
2. At completion of hydrostatic test, mainline shall be opened at farthest most point from the location of the pump to verify continuity of mainline.

- B. Leaks resulting from tests shall be repaired and tests repeated until system passes tests.

- 1.15 "AS-BUILT" IRRIGATION DRAWINGS: Contractor shall furnish Record Drawings of the complete irrigation system. Procure from the landscape architect full sized copies of Contract Drawings. Construction drawings shall be taken on the construction site at all times while the irrigation system is being installed. Actual location of valves and all irrigation and drainage piping shall be shown on the drawings as identified permanent features, such as buildings, curbs, fences, walks or property lines. Drawings shall show approved substitutions, if any, of material including manufacturer's name and catalog number. The drawings shall be to scale and all indications shall be neat. All information noted on the print shall be transferred to the prints by contractor and all indications shall be recorded in a neat, orderly way. The record drawings shall be turned over to the landscape architect at or before the Final Acceptance of the project.

1.16 CONTROLLER CHARTS

- 1. As-built drawings shall be approved by the landscape architect before charts are prepared.
2. Provide one controller chart for each controller supplied.
3. The chart shall show the area controlled by automatic controller and shall be the maximum size controller door will allow.
The chart to be reduced drawing of the actual as-built system. However, in the event the controller sequence is not legible when the drawing is reduced, it shall be enlarged to a size that will be readable when reduced.

- 5. Chart shall be blackline print and a different color shall be used to show area of coverage for each station.
6. The chart shall be mounted using Velcro, or an approved equal type of tape.
7. When completed and approved, the chart shall be hermetically sealed between two pieces of plastic, each piece being a minimum 20 mils. thick.
8. These charts shall be completed and approved prior to final inspection of irrigation system.

1.17 MATERIALS TO BE FURNISHED

- A. Prior to final inspection the contractor shall furnish the following materials to the owner:
1. Two wrenches for disassembling and adjusting each type of sprinkler head supplied.
2. Two keys for each automatic controller.
3. Four keys for loose key hole boxes.
4. Twelve 1/2 inch pop-up sprinkler bodies.

- 1.18 CLEAN-UP: Keep all areas of work clean, neat and orderly at all times. Keep paved areas clean during installation. Clean up and remove all debris from the entire work area prior to Final Acceptance to satisfaction of landscape architect.

- 1.19 FINAL ACCEPTANCE: Work under this Section will be accepted by landscape architect upon satisfactory completion of all work. Upon Final Acceptance, owner will assume responsibility for maintenance of the work. Said assumption does not relieve contractor of obligations under Warranty.

- 1.20 WARRANTY: In addition to manufacturer's guarantee or warranties, all work shall be warranted for one year from the date of Final Acceptance against defects in material, equipment and workmanship by contractor. Warranty shall also cover repair of damage to any part of the premises resulting from leaks or other defects in materials, equipment and workmanship to the satisfaction of the owner.

PART 2 MATERIALS

- 2.01 GENERAL: Materials throughout the system shall be new and in perfect condition. At least 14 days prior to beginning work, submit for approval 2 copies of manufacturer's catalog cuts, specifications, and operating instructions of the complete list of materials and assemblies to be installed. Quantities of materials and equipment need not be reduced. No deviations from the specifications shall be allowed. The decision of the landscape architect shall be final in the determination of the quality of materials and equipment.

2.02 WATER METERS: Shall be provided by others.

2.03 PIPE

- A. Mainline piping on pressure side of irrigation control valves:
1. 2" size and greater to be Polyvinyl Chloride (P.V.C.) 1120-1220, Class 315 and shall conform to ASTM D 2241-73 and D 2872-73.

- 2. Up to and including 1-1/2" size to be Polyvinyl Chloride (P.V.C.) 1120-1220, Schedule 40 and shall conform to ASTM D 1785-73.

- 3. Galvanized Steel: Standard wall, Schedule 40, capable of working pressure up to 600 psi shall run from point of connection to backflow prevention device.

- 4. Piping from the point of connection to the backflow prevention device shall be as approved by local code.

2.04 FITTINGS

- A. PVC Fittings: Schedule 40, Polyvinyl Chloride, high impact weight, as manufactured by Slocum, Lasco, medium or approved equal.

- B. Fittings for Galvanized Steel Pipe: Schedule 40, standard weight as manufactured by Girma or approved equal.

- C. Connections between main and valves shall be PVC Schedule 80 nipples and fittings.

2.05 SLEEVE MATERIALS

- A. For Control Wires: PVC 1120-1220, Class 200 pipe or heavy wall galvanized steel conduit.

- B. For Water Lines: PVC 1120-1220, Class 200 pipe or heavy wall galvanized steel conduit.

2.06 IRRIGATION CONTROLLERS

- A. Controller to be as shown on plans and is to be installed as per detail and manufacturer's specifications.

2.07 IRRIGATION CONTROL VALVES

- A. Remote Control Valves:
1. Valves to be as shown on plans and installed per details and manufacturer's specifications.

2.08 CONTROL WIRE

- A. Wire: Solid copper wire, U.L. approved for direct burial in ground. Minimum gauge: #14. Common ground wire shall be white.

- B. Splicing Materials: Wire connectors shall be Pentite or snap connectors.

- C. All wires shall be labeled with the valve number at the controller and valve.

- D. 120 wiring shall be as required by local code and installed by an electrician. It shall not be on a switched circuit.

- E. Common wire shall be white. Control wires shall be other than white. Use a different color control wire for each controller.

2.09 VALVE BOXES

- A. Remote Control Valves: To be Brooks, Green or approved equal, one per valve.

- B. Gate Valves and Control Wire Stub-out Locations: To be Brooks, Green or approved equal, one per valve or stub-out location

2.10 QUICK-COUPLING VALVES

- A. Quick coupling valves to be as per plans and details.

- B. Furnish 2 valve keys fitted with hose valve assembly.

2.11 HOSE VALVE ASSEMBLY

- A. Hose valves to be as per plans and details.

2.12 SPRINKLER HEADS

- A. Heads as shown in legend and drawings.

2.13 BACKFLOW PREVENTION ASSEMBLIES

- A. Backflow prevention device as shown in legend and drawings.

PART 3 EXECUTION

3.01 LAYOUT

- A. Layout work as accurately as possible to drawings. Drawings are diagrammatic to the extent that swing joints, offsets and all fittings are not shown.

- B. Full and complete coverage is required. Contractor shall make any necessary minor adjustments to layout required to achieve full coverage of irrigated areas at no additional cost to owner.

- C. Where connections to existing stubouts are required, make necessary adjustments. In layout to connect should stubs not be located exactly as shown. Adjust layout as necessary to install around existing work.

3.02 EXCAVATING AND TRENCHING

- A. Perform all excavations as required for installation of work included under this Section, including shoring of earth banks, if necessary. Restore all surfaces, existing underground installations, etc., damaged or cut as a result of the excavations, to their original condition.

- B. Should utilities not shown on the plans be found during excavations, contractor shall promptly notify landscape architect for instructions as to further action. Failure to do so will make contractor liable for any and all damage thereto arising from his operations subsequent to discovery of such utilities.

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- C. Dig trenches wide enough to allow a minimum of 6 in. between parallel pipe lines. Trenches shall be of sufficient depth to provide minimum cover from finish grade as follows:
1. Over PVC pipe on pressure side of irrigation control valve, control wires and quick coupling valves: 18 inches.
2. Over pipe on non-pressure side of irrigation control valve: 12 inches.

3.03 BACKFLOW PREVENTION DEVICE INSTALLATION

- A. Install according to local code and manufacturer's instructions.

3.04 SLEEVING

- A. Where pipes or wires must be installed under paving place them in sleeves with a 2" minimum depth and sufficient size to accommodate irrigation lines and/or wires.

- B. Lack of pipe chase coordination does not relieve the contractor from installing the pipes and control wire shown on the drawings. In the event pipe chases were not installed prior to paving the contractor shall bore under the paving to accommodate pipes and wires.

- C. All control wire shall be in Schedule 40 conduit from trench to controller. When valves are grouped together allow 12" between valve boxes, each valve in a separate box, (not to be placed in drainage swales, but kept in groundcover areas.)

3.05 PIPE LINE ASSEMBLY

- A. Install pipe in accordance with manufacturer's instructions.

- B. Solvent weld all PVC pipe and fittings using solvents (including primer) and methods as recommended by the manufacturer, except where screw connections are required. Clean pipe and fittings of dirt and moisture before assembly. PVC pipe may be assembled on ground surface beside trench. Shake pipe from side to side of trench bottom to allow for expansion and contraction. Make all connections between PVC pipe and metal valves or pipe with threaded fittings using PVC male adapters.

- C. Use Teflon tape on all threaded fittings.

- D. Thrust blocks shall be installed where the irrigation main changes direction as at elbows and tees and where the irrigation main terminates. Pressure tests shall not be made for a period of 36-48 hours following the completion of pouring of the thrust blocks. Concrete thrust blocks for poly mains shall be sized and placed in strict accordance with the pipe manufacturer's specifications and shall be of an adequate size and so placed as to take all thrust created by the maximum internal water pressure.

3.06 IRRIGATION CONTROL VALVES:

- A. Install control valves in valve boxes where shown and group together where practical. Place no closer than 18 in. to walk edges, buildings and walls and other valves. Valve boxes shall be placed in relation to finish grade as follows:
1. 1" above grade when no mulch is used
2. 1/2" with seeded lawn
3. 2" with sod lawn
4. 2" with plant beds

- B. The contractor shall paint on the cover of each valve box in 2" white stenciled letters with the valve number as designated on the plan.

- C. Clearance between the highest part of the valve and the bottom of the valve box lid shall be 2" minimum and 4" maximum. (Lid must not rest on any part of valve and valves must not be buried too deep for convenient access.)

- D. Clearance between the top of the piping and the bottom of the valve box and/or the valve box knock outs, shall be a minimum of 2". (The box must not rest on the piping.)

- E. Clearance between the valve and the sides of the valve box shall be a minimum of 3".

3.07 SPRINKLER HEADS

- A. Install heads as per details.

- B. Nozzles may be changed to control precipitation rate and G.P.M. with approval from the landscape architect.

3.08 QUICK COUPLING VALVES: Quick coupling valves to be installed as approved by local code.

3.09 AUTOMATIC CONTROLLER

- A. Install per local code and manufacturer's instructions.

- B. Grounding of Irrigation controller shall be as per manufacturer's instructions and in accordance with local code.

3.10 CONTROL WIRING

- A. Install control wires with sprinkler mains and laterals in common trenches wherever possible. Lay to the side of pipe line. Provide looped slack at all valves of 18" and snake wires in trench to allow for contraction of wires. All wires in bundles at 10 ft. intervals. Provide expansion loop at all 90 degree angles, and every 100' of straight wire run.

- B. Control wire splices at remote control valves to be crimped and sealed with specified splicing material. Line splices will be allowed only on runs of more than 500 ft. All line splices to be in separate valve box.

- C. Install one continuous ground wire and one extra wire to all valves.

3.11 CLOSING OF PIPE AND FLUSHING OF LINES

- A. Thoroughly flush out all water lines before installing heads, valves and other hydrants.

- B. Test as specified.

3.12 PRESSURE TESTS

- A. The contractor shall partially backfill, leaving all fittings exposed before testing.

- B. Cap all valve openings and test the mainline pipe at full line working pressure and visually check all fittings.

3.13 BACKFILL AND COMPACTING

- A. After system is operating and required tests and inspections have been made, backfill excavations and trenches with clean soil, free of rubbish. All pipe shall have a bedding of 4" under and 4" over of select, rock or backfill.

- B. Backfill for all trenches, regardless of the type of pipe covered, shall be compacted to minimum 95% density under pavements, 85% under planted areas.

- C. Compact trenches in areas to be planted by thoroughly flooding the backfill. Jetting process may be used in those areas.

- D. Dress off all areas to finish grades.

- E. Any setting of more than 1" which may occur during the guarantee period shall be brought to finish grade by the contractor at his expense.

END OF SECTION 02750

SECTION 02900

LANDSCAPING

PART 1 GENERAL

1.01 SCOPE

- A. Work Included: Perform all work necessary and required for the construction of the project as indicated. Such work includes but is not limited to the following:
1. Site preparation including weed and rubble removal.
2. Laboratory soil analysis.
3. Final site preparation.
4. Finish grading of planted areas.
5. Soil amendment.
6. Planting.

- B. Related Work: The following items of associated work are included in other sections of these specifications.
1. Section 02750: Underground Irrigation System.

1.02 INSPECTION OF CONDITIONS

- A. All landscape areas shall be substantially weed free at beginning of maintenance period and at final acceptance.
B. Begin maintenance after each plant and each portion of lawn or ground cover is installed and continue until Final Acceptance.

1.03 MAINTENANCE

- A. All landscape areas shall be substantially weed free at beginning of maintenance period and at final acceptance.
B. Begin maintenance after each plant and each portion of lawn or ground cover is installed and continue until Final Acceptance.

1.04 HANDLING OF PLANT MATERIAL

- A. Damned stock shall be removed after cans have been out on two sides. Do not dump stock to cut cans. Do not lift or handle container plants by tops, stems, or trunks at any time.

1.05 PREPARATION OF SUBGRADE AND/OR EXISTING SOILS

- A. Prior to any work in planting areas by landscape contractor, the general contractor shall clear all construction debris from planting areas.

- D. Maintenance of new planting shall consist of watering, cultivating, weeding, fertilizing, mulching, restaking, tightening and repairing of guys, restaking plants to proper grades or upright position, restoration of the plant saucer, and furnishing and applying such sprays and fertilizers as are necessary to keep the plants free of insects and disease and in thriving condition.

- E. Protect planting areas and plants at all times against damage of all kinds for duration of maintenance period. Maintenance includes temporary protection from herbicides and signs as required for protection. If any plants become damaged or injured, treat or replace as directed by landscape architect at no additional cost to owner.

- 1.16 FINAL ACCEPTANCE: Work under this Section will be accepted by landscape architect upon satisfactory completion of all work, including maintenance, but exclusive of replacement of plant materials under the Warranty Period. Upon Final Acceptance, the owner will assume responsibility for maintenance of the work.

1.17 WARRANTY PERIOD AND REPLACEMENTS

- A. Contractor shall warrant that all plant material except annual color planted under this contract will be healthy and in flourishing condition of active growth one year from date of Final Acceptance.

- B. Any delay in the completion of planting operations which extends the planting period shall extend the Maintenance and Warranty Periods correspondingly.

- C. Replace, without cost to owner, and as soon as weather conditions permit, all dead plants and all plants not in vigorous, thriving condition, as determined by landscape architect during and at the end of Warranty Period. Plants shall be free of dead or dying branches and branch tips, and shall bear foliage of a normal density, size and color. Replacements shall closely match adjacent specimens of the same species and shall be subject to all requirements of this specification.

- D. Contractor shall not be held responsible for failures due to neglect by owner, vandalism, or acts of god, etc., during Warranty Period. Report such conditions to landscape architect in writing.

PART 2 MATERIALS

2.01 PLANTS

- A. Plant Quality: Plants shall be fresh, well established, vigorous, of normal habit of growth, free of disease, insects, insect eggs and larvae. Roots shall be healthy and of normal density to the bottom and sides of the container, and rooting intent, are to be considered as part of the work. Written dimensions take precedence over scale dimensions.

- 1.06 INTENT OF DRAWINGS AND SPECIFICATIONS: It is the intent of the drawings and specifications to provide planting with plants in vigorous growth for owner's use. Any items not specifically shown in the drawings or specifications shall normally remain in place for the life of the project, unless intent, are to be considered as part of the work. Written dimensions take precedence over scale dimensions.

- 1.05 INSPECTION OF SITE: Contractor shall visit site and inspect conditions as they exist prior to submitting bid. Site dimensions, water pressure and general conditions shall be verified prior to beginning of any work.