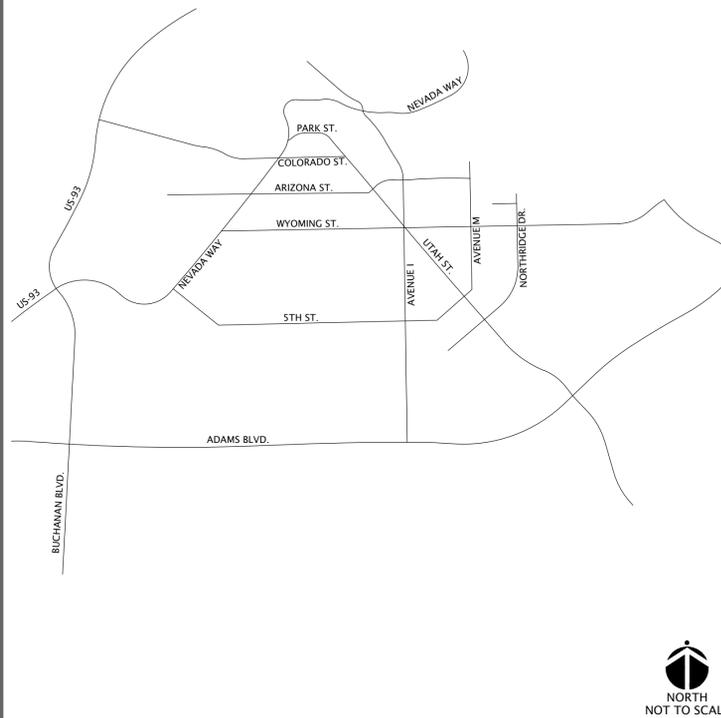


VICINITY MAP:



SITE / KEY MAP:



GENERAL NOTES:

PROJECT:

# HERITAGE PEAK(DIAMOND RIDGE) RESIDENTIAL DEVELOPMENT FRONT YARD PRODUCTION PLANS BOULDER CITY, NV 89005

DEVELOPER:

**BEAZER HOMES**  
2490 PASEO VERDE PARKWAY #120  
HENDERSON, NV 89074

LANDSCAPE ARCHITECT:

**KF LANDSCAPE ARCHITECT PLLC**  
10111 SIAMESE COURT  
LAS VEGAS, NV 89166  
702-205-7816  
kevin@KF-LA.com

SHEET INDEX:

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**KF**  
**Landscape Architect**  
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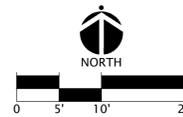
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SHEET TITLE:  
**COVER SHEET**  
PROJECT:  
**Heritage Peak (Diamond Ridge)  
Front Yard Production Plans**  
Arizona Street & Northridge Dr.  
Boulder City, NV 89005

DATE:  
**OCTOBER 17, 2024**  
KF-LA PROJECT NUMBER:  
**24059**

ISSUED FOR:  
**PLAN CHECK**

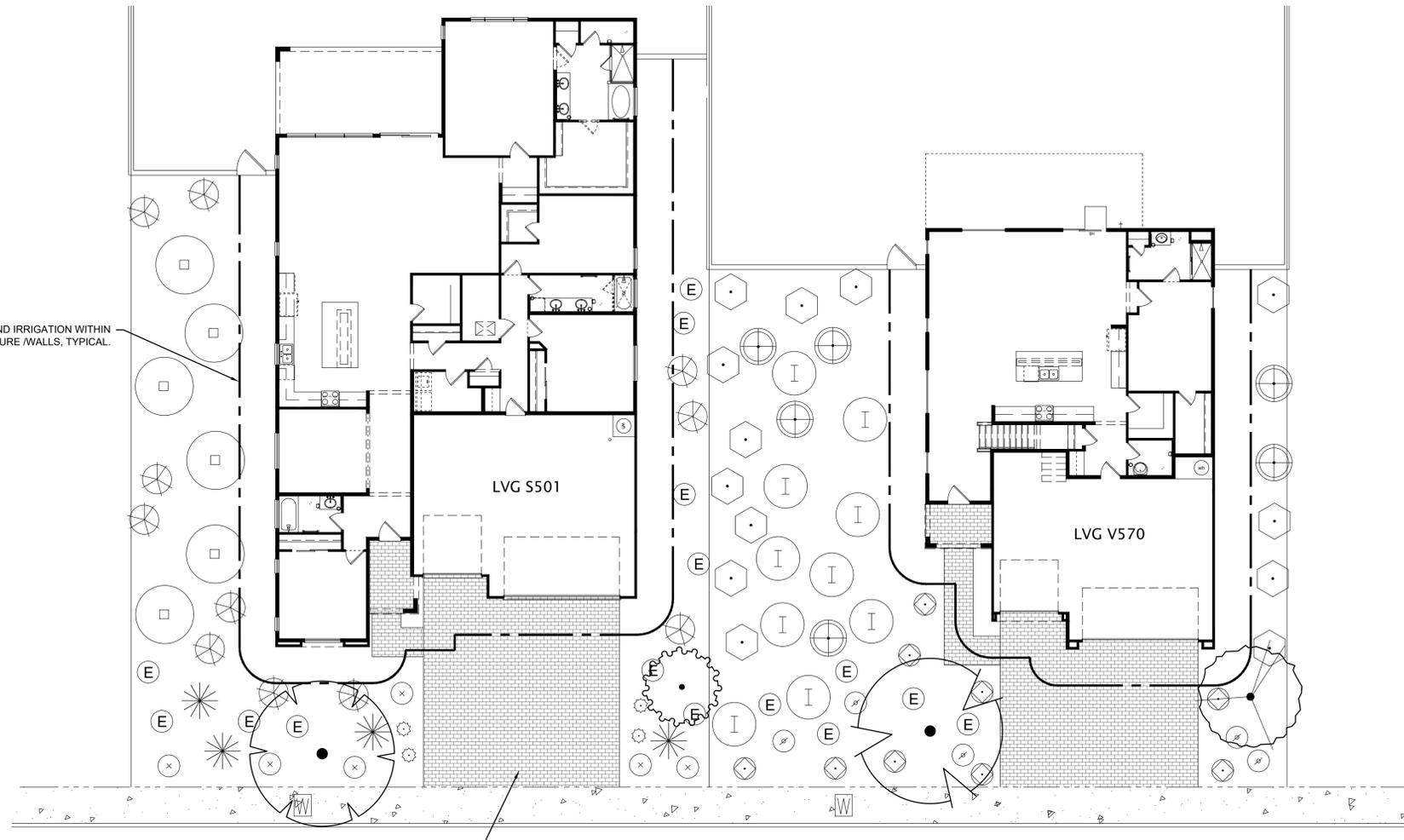
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**IRREGULAR SHAPED LOTS - PLANT PALETTES:**

FOR BID PURPOSES USE THE QUANTITIES LISTED BELOW BASED ON FLOOR PLAN LVG S501. CONTRACTOR SHALL ADJUST THE PLANT QUANTITIES AS NEED BASED ON ACTUAL FLOOR PLAN CONSTRUCTED.

**LOTS #3 - +/- 3,339 SF**

- 1 - 24" BOX - PISTACIA C. 'RED PUSH' - RED PUSH PISTACHE
- 1 - 24" BOX - SOPHORA SECUNDFLORA - TEXAS MTN. LAUREL
- 6 - 5 GALLON - CHRYSACTINIA MEXICANA - DAMIANITA
- 8 - 1 GALLON - LANTANA 'RADIATION' - RADIATION LANTANA
- 14 - 5 GALLON - LEUCOPHYLLUM 'RIO BRAVO' - COMPACT RANGER
- 6 - 5 GALLON - DASYLIRION WHEELERI - DESERT SPOON
- 10 - 5 GALLON - EREMOPHILA 'BLUE BELLS' - BLUE BELLS EMU BUSH
- 10 - 1 GALLON - EREMOPHILA G. 'MINGENEW GOLD' - SUNRISE EMU BUSH

**LOTS #4 - +/- 3,679 SF**

- 1 - 24" BOX - PISTACIA C. 'RED PUSH' - RED PUSH PISTACHE
- 1 - 24" BOX - SOPHORA SECUNDFLORA - TEXAS MTN. LAUREL
- 6 - 5 GALLON - CHRYSACTINIA MEXICANA - DAMIANITA
- 9 - 1 GALLON - LANTANA 'RADIATION' - RADIATION LANTANA
- 14 - 5 GALLON - LEUCOPHYLLUM 'RIO BRAVO' - COMPACT RANGER
- 6 - 5 GALLON - DASYLIRION WHEELERI - DESERT SPOON
- 10 - 5 GALLON - EREMOPHILA 'BLUE BELLS' - BLUE BELLS EMU BUSH
- 12 - 1 GALLON - EREMOPHILA G. 'MINGENEW GOLD' - SUNRISE EMU BUSH

**LOTS #5 - +/- 2,905 SF**

- 1 - 24" BOX - PISTACIA C. 'RED PUSH' - RED PUSH PISTACHE
- 1 - 24" BOX - SOPHORA SECUNDFLORA - TEXAS MTN. LAUREL
- 4 - 5 GALLON - CHRYSACTINIA MEXICANA - DAMIANITA
- 7 - 1 GALLON - LANTANA 'RADIATION' - RADIATION LANTANA
- 12 - 5 GALLON - LEUCOPHYLLUM 'RIO BRAVO' - COMPACT RANGER
- 6 - 5 GALLON - DASYLIRION WHEELERI - DESERT SPOON
- 10 - 5 GALLON - EREMOPHILA 'BLUE BELLS' - BLUE BELLS EMU BUSH
- 9 - 1 GALLON - EREMOPHILA G. 'MINGENEW GOLD' - SUNRISE EMU BUSH

**LOTS #6 - +/- 3,120 SF**

- 1 - 24" BOX - PISTACIA C. 'RED PUSH' - RED PUSH PISTACHE
- 1 - 24" BOX - SOPHORA SECUNDFLORA - TEXAS MTN. LAUREL
- 4 - 5 GALLON - CHRYSACTINIA MEXICANA - DAMIANITA
- 8 - 1 GALLON - LANTANA 'RADIATION' - RADIATION LANTANA
- 13 - 5 GALLON - LEUCOPHYLLUM 'RIO BRAVO' - COMPACT RANGER
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- 10 - 5 GALLON - EREMOPHILA 'BLUE BELLS' - BLUE BELLS EMU BUSH
- 10 - 1 GALLON - EREMOPHILA G. 'MINGENEW GOLD' - SUNRISE EMU BUSH

**LOTS #10 - +/- 2,883 SF**

- 1 - 24" BOX - PISTACIA C. 'RED PUSH' - RED PUSH PISTACHE
- 1 - 24" BOX - SOPHORA SECUNDFLORA - TEXAS MTN. LAUREL
- 4 - 5 GALLON - CHRYSACTINIA MEXICANA - DAMIANITA
- 7 - 1 GALLON - LANTANA 'RADIATION' - RADIATION LANTANA
- 13 - 5 GALLON - LEUCOPHYLLUM 'RIO BRAVO' - COMPACT RANGER
- 6 - 5 GALLON - DASYLIRION WHEELERI - DESERT SPOON
- 10 - 5 GALLON - EREMOPHILA 'BLUE BELLS' - BLUE BELLS EMU BUSH
- 9 - 1 GALLON - EREMOPHILA G. 'MINGENEW GOLD' - SUNRISE EMU BUSH

PLACE 2" DEPTH OF 3/4" SCREENED 'VISTA GOLD' GRANITE ROCK MULCH FROM VISTA LANDSCAPE CENTERS, IN ALL ON-SITE LANDSCAPE PLANTERS, EXCEPT WHERE OTHERWISE NOTED.

**NOTES:**

1. ALL TREES WITHIN 6' OF HARDSCAPE, OR BUILDINGS SHALL BE PLANTED WITH ROOT BARRIERS.
2. ALL PLANTS WITH THE NOTATION 'ENHANCED' SHALL USE THE ENHANCED BACKFILL MIX.
3. QUANTITIES SHOWN IN LEGEND ARE FOR REFERENCE ONLY. THE CONTRACTOR SHALL INSTALL ALL PLANT MATERIAL GRAPHICALLY DEPICTED ON PLAN.
4. CONTRACTOR SHALL CALL "CALL BEFORE U DIG" FOR UTILITY LOCATIONS.
5. ALL CONFLICT BETWEEN PLANT MATERIAL AND UTILITIES SHALL BE RESOLVED BY THE OWNER'S REP.
6. KEEP ALL PLANT MATERIAL 42" CLEAR OF FIRE HYDRANTS.
7. KEEP ALL TREES 10' CLEAR OF STREETLIGHTS.
8. ALL TREES PLANTED WITHIN 5' OF A PERIMETER WALL, SIDEWALK, STREET OR PUBLIC UTILITY EASEMENT ADJACENT TO A STREET SHALL BE PLANTED WITH A ROOT SHIELD.
9. NO PLANTS ALLOWED WITHIN WATER EASEMENTS. REFER TO CIVIL PLANS.
10. ALL PLANT MATERIAL SPECIES AND PLACEMENT WITHIN SIGHT VISIBILITY ZONES SHALL CONFORM TO THE APPROPRIATE JURISDICTION'S STATUTES, CODES AND REQUIREMENTS.

PAVER DRIVEWAY, WALK AND PORCH, TO BE SELECTED BY BEAZER HOMES

**TYPICAL STREET**

**FLOOR PLAN - LVG S501**

**PLANTING LEGEND - TREES**

SYMBOL	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPECS. H X W X CAL.	REMARKS
	PISTACIA C. 'RED PUSH'	RED PUSH PISTACHE	1	36" BOX	9' X 5' X 2"	STANDARD TRUNK ENHANCED
	SOPHORA SECUNDFLORA	TEXAS MTN. LAUREL	1	36" BOX	5' X 4'	MULTI TRUNK
TOTAL PROVIDED			2			

SYMBOLS MAY BE ROTATED AND LARGER IN PLAN

**FLOOR PLAN - LVG V570**

**PLANTING LEGEND - TREES**

SYMBOL	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPECS. H X W X CAL.	REMARKS
	ACACIA STENOPHYLLA	SHOESTRING ACACIA	1	36" BOX	9' X 5' X 2"	STANDARD TRUNK
	ACACIA ANEURA	MULGA TREE	1	36" BOX	8' X 5' X 2"	STANDARD TRUNK
TOTAL PROVIDED			2			

SYMBOLS MAY BE ROTATED AND LARGER IN PLAN

**PLANTING LEGEND - SHRUBS, GROUNDCOVERS, AND GRASSES**

SYMBOL	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	HGT.	COVERAGE SF	TOTAL SF	NOTES
	CHRYSACTINIA MEXICANA	DAMIANITA	4	5 GAL	2	3	12	-
	SALVIA CLEVELANDI	CHAPARRAL SAGE	6	5 GAL	1	28	168	-
	LEUCOPHYLLUM L. 'RIO BRAVO'	COMPACT TEXAS RNGR	11	5 GAL	6	28	308	-
	DASYLIRION WHEELERI	DESERT SPOON	4	5 GAL	6	28	112	-
	EREMOPHILA 'BLUE BELLS'	BLUE BELLS EMU BUSH	10	5 GAL	4	13	130	-
	EREMOPHILA G. 'MINGENEW GOLD'	SUNRISE EMU BUSH	6	5 GAL	4	79	474	-
TOTAL PROVIDED			41	TOTAL PLANT COVERAGE:		1,204 SF		
			TOTAL LANDSCAPE AREA:		2,318 SF			
			% OF COVERAGE:		51.9%			

SYMBOLS MAY BE ROTATED AND LARGER IN PLAN

**PLANTING LEGEND - SHRUBS, GROUNDCOVERS, AND GRASSES**

SYMBOL	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	HGT.	COVERAGE SF	TOTAL SF	NOTES
	DALEA CAPITATA 'SIERRA GOLD'	SIERRA GOLD DALEA	9	5 GAL	1	7	63	-
	HESPERALOE PARVIFLORA	RED YUCCA	5	5 GAL	3	7	35	-
	SENNA ARTIMISIOIDES	FEATHERY CASSIA	13	5 GAL	6	28	364	-
	EREMOPHILA 'BLUE BELLS'	BLUE BELLS EMU BUSH	5	5 GAL	4	13	65	-
	DALEA GREGGII	PROSTRATE INDIGO BUSH	10	5 GAL	1	50	500	-
	CORDIA PARVIFOLIA	LITTLE LEAF CORDIA	6	5 GAL	6	50	300	-
TOTAL PROVIDED			48	TOTAL PLANT COVERAGE:		1,327 SF		
			TOTAL LANDSCAPE AREA:		2,595 SF			
			% OF COVERAGE:		50.1%			

SYMBOLS MAY BE ROTATED AND LARGER IN PLAN

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 Beazer Homes  
 2490 Paseo Verde Pkwy  
 Suite 120  
 Henderson, NV 89074

OWNER/DEVELOPER:  
 Beazer Homes  
 2490 Paseo Verde Pkwy  
 Suite 120  
 Henderson, NV 89074

**PLANTING PLAN**

**PROJECT:**  
 Heritage Peak (Diamond Ridge)  
 Front Yard Production Plans  
 Arizona Street & Northridge Dr.  
 Boulder City, NV 89005

SHEET TITLE:  
**PLANTING PLAN**

DATE:  
 OCTOBER 17, 2024

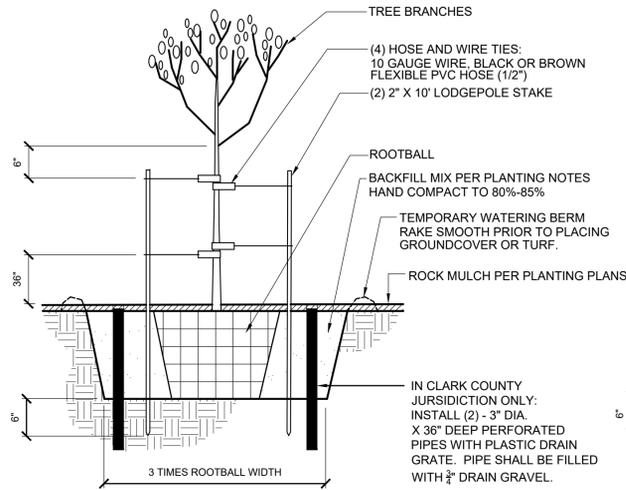
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ISSUED FOR:  
 PLAN CHECK

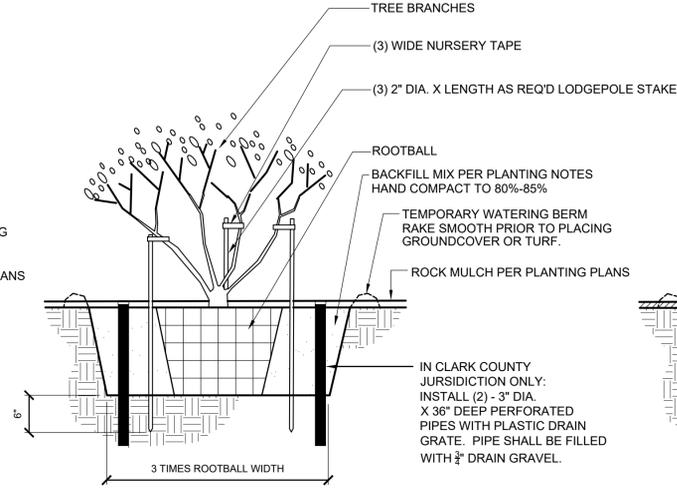
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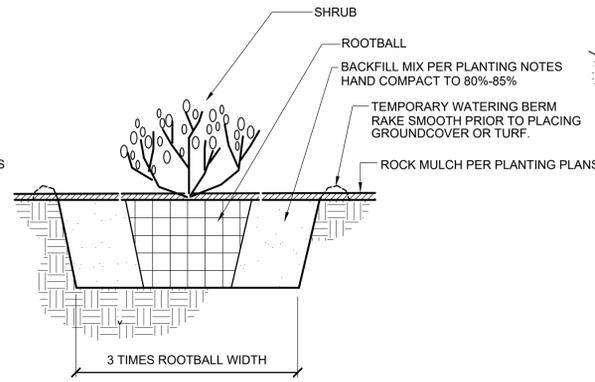
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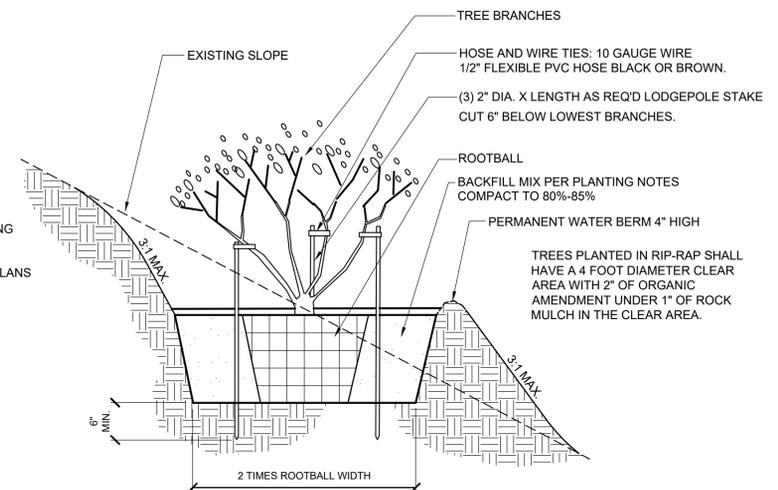
**A** TREE PLANTING STANDARD  
24" BOX AND SMALLER NTS



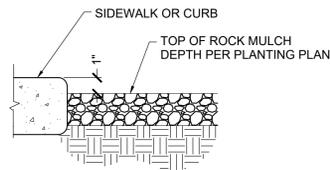
**B** TREE PLANTING MULTI  
24" BOX AND SMALLER NTS



**C** SHRUB PLANTING NTS



**D** SLOPE PLANTING  
24" BOX AND SMALLER NTS



APPLY PRE-EMERGENT HERBICIDE TO SUBGRADE PRIOR TO PLACEMENT OF ROCK MULCH.

**E** ROCK MULCH NTS

**BACKFILL MIXES FOR PLANTING:**

**ENHANCED BACKFILL MIX:**

60% NATIVE SOIL SCREENED TO 1/2" MINUS OR IMPACT SAND AND GRAVEL SILT FROM THE BRQ PIT.  
40% ECO-GRO BY TERRA FIRMA  
1 LBS APEX 15-5-10 NPK MAX PER CUBIC YARD  
IRON SULFATE AS DIRECTED BY THE LANDSCAPE ARCHITECT

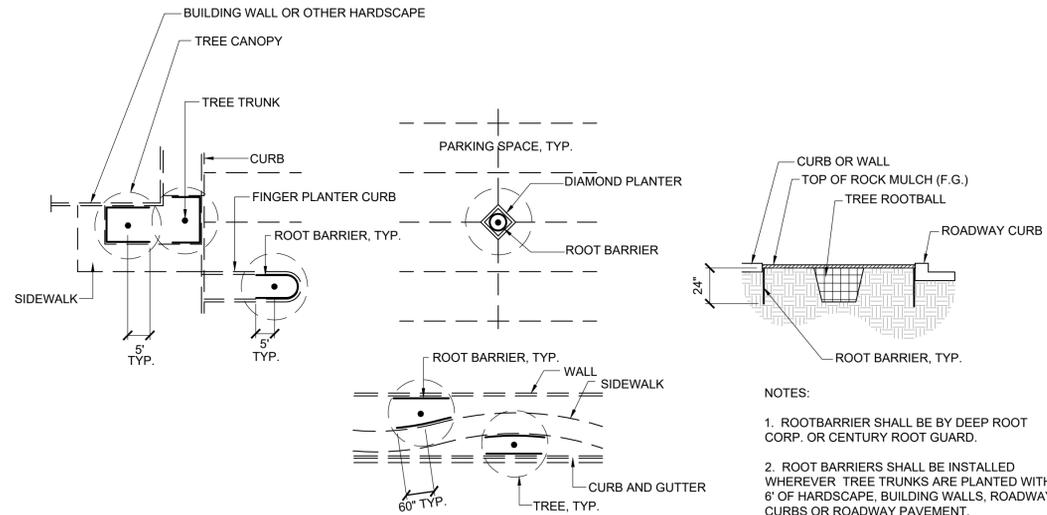
**DESERT ADAPTED TYPE TREE AND SHRUB BACKFILL:**

100% NATIVE SOIL SCREENED OF ROCKS LARGER THAN 1/2" DIAMETER  
0.50 LBS APEX 15-5-10 NPK MAX PER CUBIC YARD

**CACTUS, OCOTILLO, JOSHUA TREE BACKFILL:**

100% NATIVE SOIL

**F** PLANT BACKFILL NOTES NTS



**G** ROOT BARRIER NTS

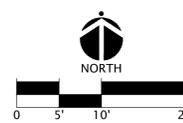
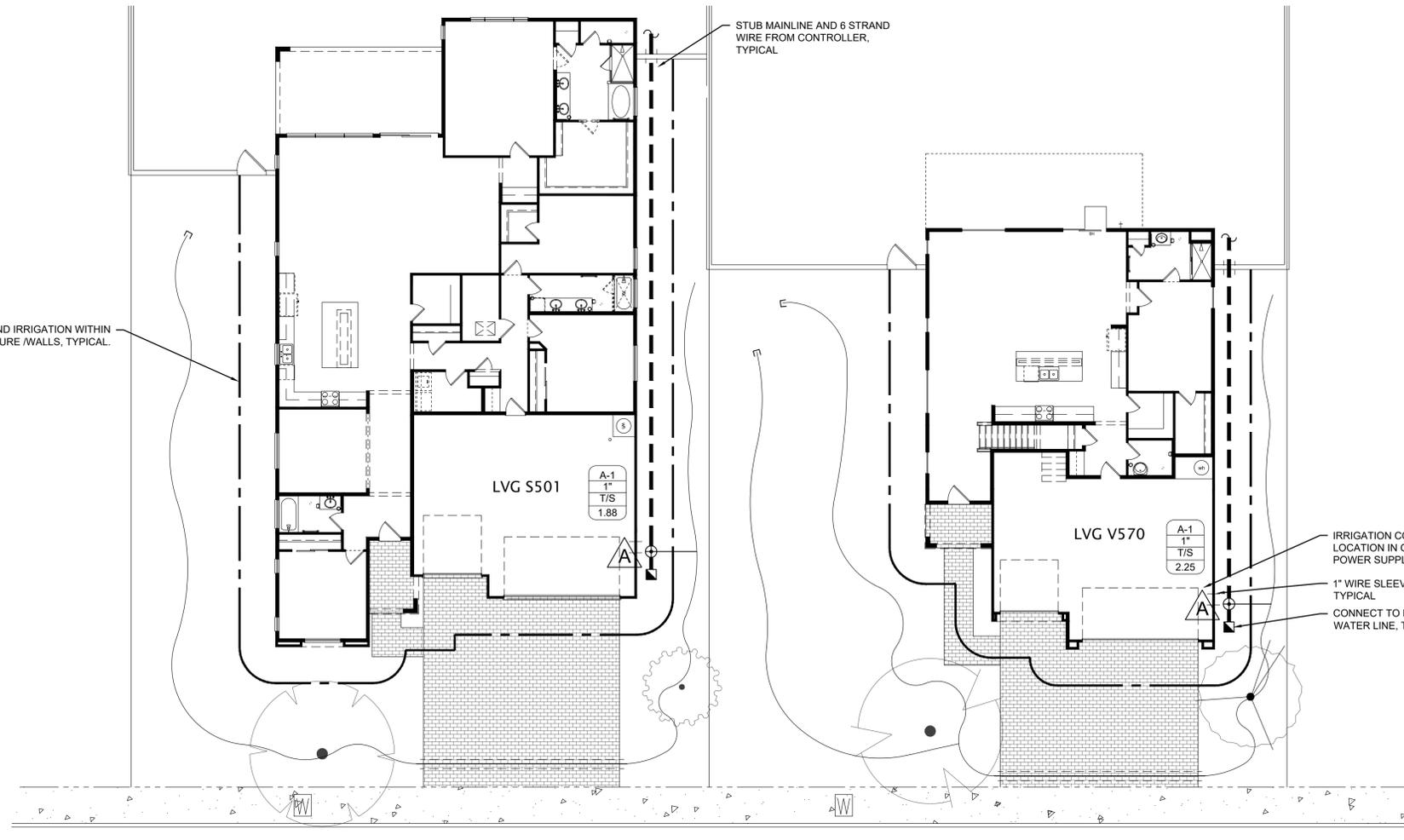
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**TYPICAL STREET**

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**EMITTER CHART**

SYMBOL SEE PLANTING PLAN	BOTANICAL NAME	NUMBER OF EMITTERS AND GPH
	PISTACIA C. "RED PUSH"	10 - 2 GPH
	SOPHORA SECUNDIFLORA	6 - 2 GPH
	ACACIA STENOPHYLLA	8 - 2 GPH
	ACACIA ANEURA	6 - 2 GPH

ALL SHRUBS, GROUNDCOVERS, AND GRASSES SHALL RECEIVE 2 - 1 GPH EMITTERS.

A-1	STATION DESIGNATION
1"	VALVE SIZE
T/S	PLANT MATERIAL IRRIGATED - T/S = TREES AND SHRUBS
00.0	GALLON PER MINUTE

GALLONS PER MINUTE	PIPE SIZE
0-8	3/4"
8-12	1"
12-22	1.25"
22-35	1.50"
35-50	2"

**IRRIGATION LEGEND (DEPICTING AN AUTOMATIC DRIP IRRIGATION SYSTEM)**

SYMBOL	DESCRIPTION	REFERENCE
NOT SHOWN	TREE DRIP EMITTERS: RAINBIRD XERI-BUG XB - 20 PC (2.0 GPH) WITH 1/4" DRIP TUBING.	G,H/LI-2
NOT SHOWN	SHRUB DRIP EMITTERS: RAINBIRD XERI-BUG XB - 10PC (1.0 GPH) WITH 1/4" DRIP TUBING.	H/LI-2
	BACKFLOW PREVENTER ASSEMBLY: FEBCO 825 YA - 3/4" WITH TAN COLORED INSULATED ENCLOSURE	A/LI-2
	DRIP VALVE ASSEMBLY: RAINBIRD XCZ-100-PR-B-COM (FOR FLOWS 0.3 TO 20 GPM) DRIP VALVE ASSEMBLY: RAINBIRD XCZ-075-PR-B (FOR FLOWS 0.3 TO 12 GPM)	C/LI-2
	AUTOMATIC CONTROLLER - INTERIOR WALL MOUNT ENCLOSURE RAINBIRD ESP-MEI (4 STATION)	B/LI-2
	END CAP ASSEMBLY: ADAPT TO VERTICAL SCHEDULE 80 NIPPLE WITH END CAP FITTING IN 6" DIA. TAN VALVE BOX WITH COVER.	F/LI-2
	SHRUB DRIP HOSE: POLYETHYLENE DRIP HOSE: 3/4" MIN., MAX. LENGTH 150'. SHRUB LATERAL LINE: 3/4" MIN. SCHEDULE 40 PVC PIPE. SIZED BY CONTRACTOR PER PIPE SIZING CHART.	E/LI-2
	MAINLINE: SCHEDULE 40 PVC PIPE (1")	E/LI-2
	SLEEVE: SCHEDULE 40 PVC, 2 TIMES DIAMETER OF PIPE INSIDE, OR AS NOTED ON PLAN. SEE NOTE BELOW REGARDING SLEEVE INSTALLATION.	-

**NOTES:**

- CONTRACTOR SHALL CALL APPROPRIATE UTILITY COMPANIES (CALL BEFORE YOU DIG, CALL BEFORE YOU OVERHEAD) TO MARK UTILITIES.
- VERIFY STATIC WATER PRESSURE OF 65 PSI MINIMUM PRIOR TO INSTALLATION OF IRRIGATION SYSTEM. IF PRESSURE IS LESS THAN 65 PSI, CONTACT OWNER'S REP. AND LANDSCAPE ARCHITECT FOR RESOLUTION.
- INSTALL SLEEVING UNDER ROADWAYS, WALLS AND SIDEWALKS PRIOR TO PLACEMENT AND COMPACTION OF TYPE II BASE, OR OTHER BASE MATERIAL. SLEEVES SHALL BE 18" BELOW TOP OF PAVEMENT OR FOOTING.
- INSTALL ALL IRRIGATION PIPING, WIRING AND COMPONENTS WITHIN PRIVATE PROPERTY IN PLANTER AREAS WHEREVER POSSIBLE
- FINAL LOCATIONS OF ALL BACKFLOW PREVENTERS AND IRRIGATION CONTROLLERS SHALL BE APPROVED BY OWNER'S REP. PRIOR TO INSTALLATION.
- INTENT OF PLAN IS TO PROVIDE IRRIGATION TO ALL PLANT MATERIAL SHOWN ON PLANTING PLAN.

**IRRIGATION PLAN**

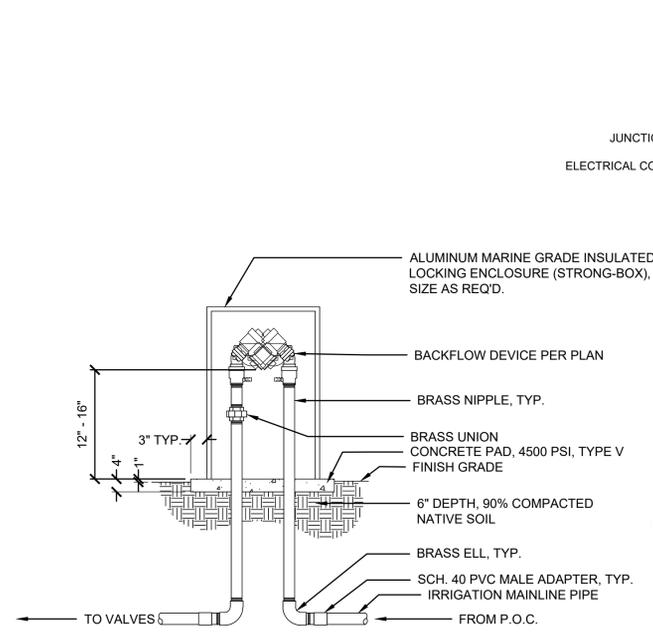
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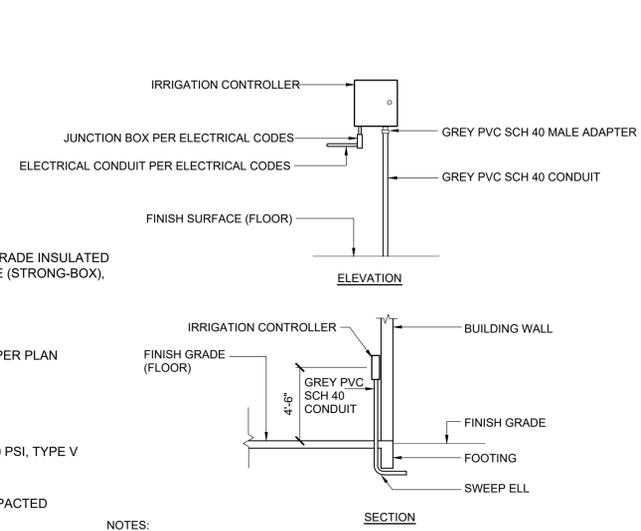
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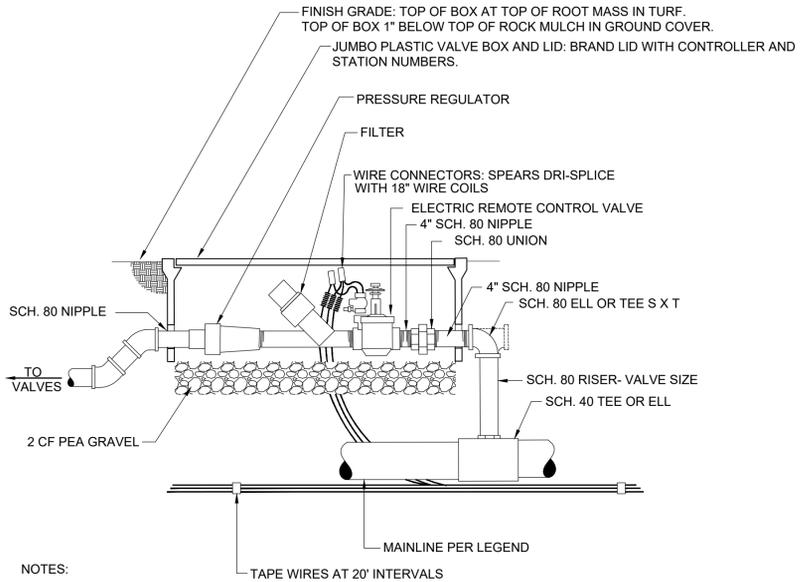


**A BACKFLOW PREVENTER** NTS



- NOTES:
1. GAIN APPROVAL OF OWNER'S REP. FOR FINAL LOCATION OF IRRIGATION CONTROLLER.
  2. SECURELY FASTEN CONTROLLER TO INTERIOR WALL.
  3. ELECTRICAL CONTRACTOR SHALL MAKE FINAL POWER HARDWIRE CONNECTION.
  4. INSTALL WIRE SWEEP ELLS PRIOR TO FOUNDATION AND FLOOR POURS.
  5. SIZE CONDUIT AS NECESSARY FOR VALVE WIRES.

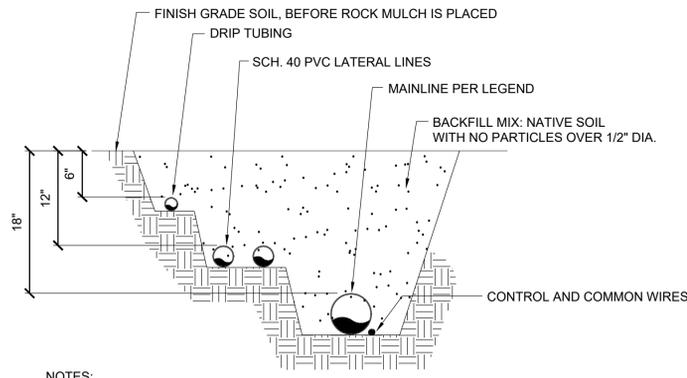
**B AUTOMATIC CONTROLLER** NTS



- NOTES:
1. ALL FITTING SHALL BE DIAMETER OF VALVE OR LARGER.
  2. VALVE BOX SHALL BE APPROXIMATELY 18" X 24" X 12"- GREEN IN TURF AREAS, TAN OTHERWISE.
  3. FILTER MODEL SHALL BE BASED ON MANUFACTURER'S RECOMMENDATION FOR FLOW THRU VALVE.

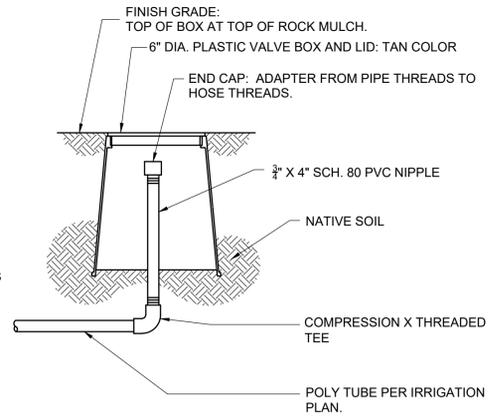
**C DRIP VALVE ASSEMBLY** NTS

**D NOT USED** NTS

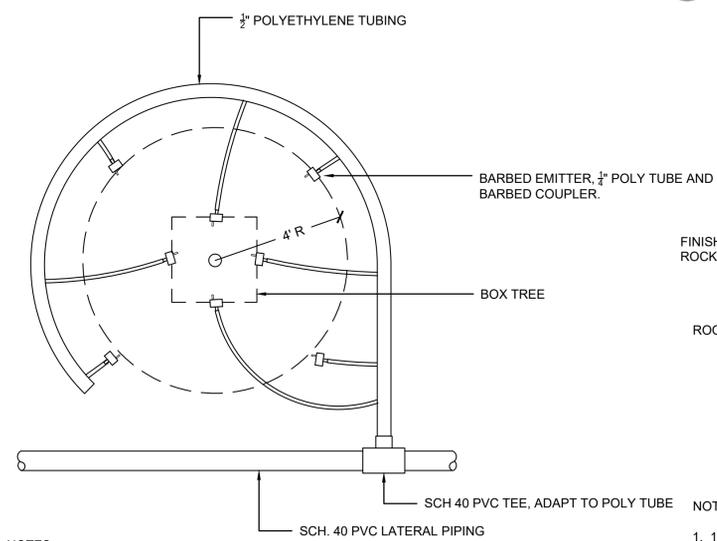


- NOTES:
1. PROVIDE SUFFICIENT HORIZONTAL CLEARANCE BETWEEN PIPES FOR FUTURE REPAIR NEEDS. DO NOT STACK OR "BRAID" PIPES.
  2. PROVIDE SMOOTH, ROCK-FREE BED OF TRENCH.

**E TRENCHING** NTS

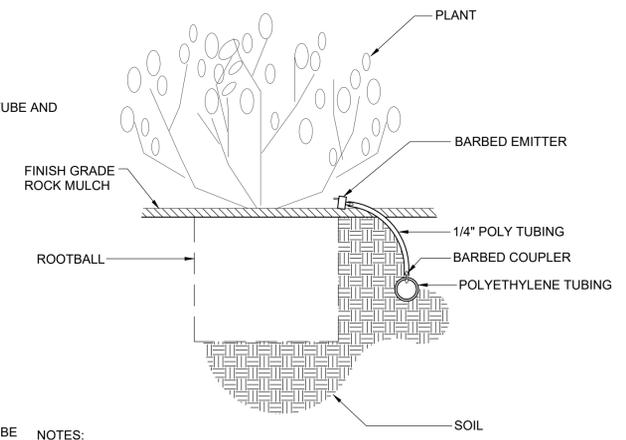


**F END CAP** NTS



- NOTES:
1. 1/4" POLY TUBE LENGTH SHALL BE 8' MAX. LENGTH.
  2. EACH EMITTER SHALL BE CONNECTED TO THE POLY TUBING WITH A SEPARATE BARBED COUPLER.

**G TREE EMITTER LAYOUT** NTS



- NOTES:
1. 1/4" POLY TUBE LENGTH SHALL BE 8' MAX. LENGTH.
  2. EACH EMITTER SHALL BE CONNECTED TO THE POLY TUBING WITH A SEPARATE BARBED COUPLER.

**H DRIP EMITTER** NTS

REV.	DATE	DESCRIPTION	BY
1	10/17/24	UPDATED PER BOULDER CITY COMMENTS	KF

CLIENT:  
**Beazer Homes**  
 2490 Paseo Verde Pkwy  
 Suite 120  
 Henderson, NV 89074

OWNER/DEVELOPER:  
**Beazer Homes**  
 2490 Paseo Verde Pkwy  
 Suite 120  
 Henderson, NV 89074

SHEET TITLE:  
**IRRIGATION DETAILS**

PROJECT:  
**Heritage Peak (Diamond Ridge)  
 Front Yard Production Plans**  
 Arizona Street & Northridge Dr.  
 Boulder City, NV 89005

DATE:  
**OCTOBER 17, 2024**

KF-LA PROJECT NUMBER:  
**24059**

ISSUED FOR:  
**PLAN CHECK**

SHEET NUMBER:  
**LI-2**

SHEET 6 OF 7

**32 80 00 IRRIGATION SYSTEM**

**PART 1 GENERAL**

**1.1 SUMMARY**

- A. Section Includes:
  1. Valves, piping, emitters, specialties, accessories, controls, and wiring for an automatic irrigation system.
  2. Accessories required for a complete installation.
- B. Related Sections:
  1. Section 32 90 00 - Landscaping.
  2. Landscape Drawings.
  3. Electrical Drawings.
  4. Civil Drawings.
- C. System Description:
  1. Electric solenoid controlled underground irrigation system.
  2. Source Power: 120 volt.
  3. Low Voltage Controls: 24 volt.

**1.2 REGULATORY REQUIREMENTS**

- A. Conform to applicable codes for piping, wiring and component requirements.

**1.3 SYSTEM PERFORMANCE REQUIREMENTS**

- A. Intent of Irrigation Plan is to provide irrigation to all plant materials unless otherwise indicated.
- B. Location of Sprinklers and Devices: Design location is approximate. Make minor adjustments necessary to avoid plantings and obstructions such as signs, light standards, utilities, etc..

**1.4 QUALITY ASSURANCE**

- A. Regulatory Requirements, Codes, and Standards:
  1. Comply with requirements of utility supplying water for prevention of backflow and back siphonage.
  2. Installer Qualifications: Installer having minimum 2 years documented experience in irrigation systems similar in material, design, and extent to work indicated and having a successful service record.
  3. Listing/Approval Stamp, Label, or Other Marking: On equipment, specialties, and accessories made to specified standards.

**1.5 SUBMITTALS**

- A. Record Drawings: Record actual locations of all mainline, wires, sleeves, valves, quick couplers, gate valves, controllers, pumps and flow sensors. Provide two dimensions from permanent objects.
- B. Controller Charts:
  1. Provide a colored, plastic laminated chart up to a maximum size of 11" x 17" for each sheet. Provide unique color coding of lateral line and associated valve for each valve operated by each controller. Minimum of one controller chart is required for each controller.

**1.6 PROJECT CONDITIONS**

- A. Visually inspect and measure site for discrepancies with plans. If discrepancies exist, immediately notify the Owner's Representative.
- B. Verify irrigation system piping may be installed in compliance with original design and referenced standards. If conflicts exist, immediately notify the Owner's Representative.
- C. Arrange for utility markings by Underground Service Alert. Verify that marking is completed prior to commencing work. If conflicts exist, immediately notify the Owner's Representative.

**1.7 SEQUENCING AND SCHEDULING**

- A. Maintain uninterrupted water service.
- B. Coordinate work with site backfilling, landscape grading and delivery of plant material.

**1.8 WARRANTY**

- A. Warranty all parts and labor for a period of one year from date of substantial completion as specified in and concurrent with section 32 90 00.
  1. Repair damage to landscape due to settling of trenches.
  2. Fill and repair depressions.
  3. Repair damage to premises caused by defective components.
  4. Make non-hazard causing, non-water wasting repairs within seven days of notification.
  5. Make hazard causing, water wasting repair immediately upon notification.
  6. The contract documents govern replacement materials, labor, and workmanship identically as with new work.
  7. Make replacements at no additional cost to owner.

**PART 2 \_ PRODUCTS**

**2.1 PIPE MATERIALS**

- A. Manufacturers: Firm specializing in the manufacture of specific types of pipe.
- B. Mainline (from pump station to remote control valves)
  1. 1"-3": Solvent Weld Schedule 40 PVC Pipe conforming to ASTM D2411; Schedule 40.
  2. 1"-3" Fittings: Schedule 40 PVC fittings.
  3. Solvent Cement: ANSI/ASTM D2564 for PVC pipe and fittings.
- E. Lateral Line (downstream of valves)
  1. Piping: Solvent Weld Schedule 40 PVC Pipe conforming to ASTM D2411; Schedule 40 minimum 3/4" nominal.
  2. Fittings: Schedule 40 PVC fittings..
- F. Drip Hose/Tubing
  1. Polyethylene Tubing: Hardie Blue Stripe or equivalent, 1/2" nominal minimum.
  2. Fittings: Polyethylene or Schedule 40 PVC fittings- 1/2" minimum. Suitable for use with the Polyethylene Tubing used. Rated at 50 psi minimum.
- G. Sleeve Material: Solvent Weld Schedule 40 PVC Pipe conforming to ASTM D2411; Schedule 40.
- H. Galvanized Steel Pipe: Schedule 40 galvanized steel pipe.
- I. Copper Pipe: Type K.
- J. Brass Pipe: Red Brass

**2.2 VALVES**

- A. Gate Valves: as indicated on drawings.
- B. Jumbo Valve Box: Plastic Body and Lid, 12" height; sized to fit complete valve assembly inside.
- C. Valve Box: Plastic Body, 12" x 17" x 12" minimum inside dimensions with plastic lid.
- D. 10" Round Valve Box: Plastic Body, 10" diameter minimum inside dimension 12" deep. With plastic lid.
- E. Remote Control Valves: Electric solenoid, normally closed, including required fittings and accessories, as indicated on drawings.
- F. Quick Coupling Valve: as indicated on drawings.

**2.3 CONTROLS**

- A. Exterior Controller Housing: Weatherproof, watertight, stainless steel with lockable access door.
- B. Wire Conductors: Color coded, 12 gauge common, 14 gauge pilot, solid copper, UF listed, direct burial. Unique color combinations for each pilot wire.
- C. Controller Unit: as indicated on Drawings.

**2.7 SPRINKLERS AND EMITTERS**

- A. Emitters: As indicated on plans
- B. Sprinklers: As indicated on plans. Rubber covers required for all rotary heads in turf areas.

**2.8 MISCELLANEOUS MATERIALS**

- A. Solvent Weld Cement for PVC pipe and fittings: medium setting gray or blue, Weld-On 711, or equal.
- B. Solvent Weld Cement for PVC pipe to Flexible PVC hose: Weld-On 795, or equal.
- C. Concrete for Thrustblocks: Shall be 3000 psi at 28 days, Type V.
- D. Concrete for Controller and Equipment Pads: Shall be 3000 psi at 28 days, Type V.

**PART 3 \_ EXECUTION**

**3.1 EXAMINATION**

- A. Verify location of existing utilities.
- B. Verify required utilities are available, in proper location, and ready for use.
- C. Verify available water supply water pressure. Notify the Landscape Architect if static pressure measured is less than that indicated in the drawings.

**3.2 PREPARATION**

- A. Set stakes to identify proposed mainline locations. Obtain Owner's Representative's approval before excavation.
- B. Piping layout indicated is diagrammatic only. Route piping to avoid plants, ground cover, and structures.
- C. Review layout requirements with other affected work. Locate and coordinate with existing sleeves.

**3.3 TRENCHING**

- A. Excavate, trench, and backfill as specified in the drawings.
- B. Bottom of trenches shall be level to uniformly support pipe.
- C. Compact backfill to 85% in planting areas and 95% under all pavements and/or structures.
- D. Repair settling of trenches.
- E. Minimum Soil Cover Over Pipes:
  1. Minimum Cover Over Sleeves under roadways and parking lots: 36 inches.
  2. Minimum Cover Over Sleeves under sidewalks, walls: same as mainline or lateral inside.
  3. Minimum Cover Over Installed Mainline Piping:
    - a. 1'-3", 18 inches.
    - b. 4" -12", 36 inches
  4. Minimum Cover Over Installed Lateral Piping:
    - a. 3/4" - 2", 12 inches.
    - b. 2.5" - 4", 18 inches
  5. Minimum Cover Over Installed Drip Tubing: 6 inches.
- F. Horizontal Separation of Pipes:
  1. Between Mainlines: 18" Clear.
  2. Between Mainlines and Laterals: 12" Clear
  3. Between Laterals: 6" Clear.
- G. Trench to accommodate grade changes.
- H. Maintain trenches free of debris, material, or obstructions that may damage pipe.

**3.4 JOINT CONSTRUCTION**

- A. Threaded Joints: Thread pipes with tapered pipe threads, apply tape or joint compound, and apply wrench to valve ends into which pipes are being threaded.
- B. Polyvinyl Chloride (PVC) Piping Solvent Cemented Joints: Construct joints free of burrs.
  1. Handle Solvent Cements, Primers, and Cleaners in a safe and legal manner.
  2. Apply primer to outside of pipe and inside of fitting, apply solvent cement to outside of pipe and inside of fitting taking care not to use an excessive amount. Insert pipe into fitting and rotate one-quarter turn to evenly spread cement around entire contact surface. Wipe away excess glue, do not allow excess glue to restrict flow through inside of pipe or fitting.
- C. Dissimilar Materials Piping Joints: Construct joints using adapters compatible with both piping materials to avoid corrosion, outside diameters, and system working pressure. Install dielectric fittings where dissimilar metals, such as steel and brass or steel and copper join.

**3.5 PIPING SYSTEMS \_ COMMON REQUIREMENTS**

- A. General Locations and Arrangements: Drawings indicate general location and arrangement of piping systems.
- B. Indicated locations and arrangements were used to size pipe and calculate friction loss, and in other design considerations. Install piping as indicated, except where deviations to layout are approved by owner's representative.
- C. Install components having pressure rating equal to or greater than system operating pressure.
- D. Install piping free of sags and bends.
- E. Locate groups of pipes parallel to each other, spaced to permit valve servicing.
- F. Install fittings for changes in direction and branch connections.

**3.6 PIPING AND WIRING INSTALLATION**

- A. Install pipe, valves, controls, and outlets in accordance with manufacturer's instructions.
- B. Connect to utilities.
- C. Set outlets and box covers as indicated on irrigation details.
- D. Provide for thermal movement of components in system. Snake pipe in trench.
- E. Use threaded nipples for risers to each outlet.
- F. Install 24 V control wiring in accordance with Uniform Electrical Code. Provide 10 inch expansion coil at each valve to which controls are connected, at 100 ft intervals and at changes of direction.
- G. Coordinate pipe installation with electrical work and conduit installation.
- H. Lay piping on sand bedding, uniformly sloped without humps or depressions.
- I. Install piping and wire under sidewalks, walls and paving in sleeves.
- J. After mainline piping is installed, centerload only and perform pressure testing prior to completing backfilling.
- K. Flush all piping prior to installing nozzles and emitters.

**3.7 VALVE INSTALLATION**

- A. Valves: Install underground valves in valve boxes. Only one valve per valve box.
- B. Control Valves: Install in valve boxes, arranged for easy adjustment and removal. Only one valve per valve box.
- C. Install control wiring in same trench with mainline piping, wherever possible. Install an extra pilot and common wire from controller along all legs of mainline and stub up into valve boxes for potential future use.

- D. Common wire shall be white in color, pilot wire shall be black or red in color.

- E. Label all wires within the controller enclosure with the valve number using permanent adhesive labels.

**3.8 EMITTER INSTALLATION**

- A. Emitters: After hydrostatic test and flush of mainline, flush lateral piping with full head of water and install emitters.
- B. Place and install emitters as indicated on drawings.

**3.9 SPRINKLER HEAD INSTALLATION**

- A. Layout sprinkler locations with string lines and measuring tape. Accurate placement of heads is required.
- B. Sprinkler heads shall be set flush with finish grade in seeded areas. Sprinkler heads shall be set flush with the top of sod soil in sod areas.
- C. Adjustments to the layout of sprinklers shall be approved by the Owner's Representative prior to installation.

**3.10 CONNECTIONS**

- A. Connect piping to sprinklers, devices, valves, control valves, specialties, and accessories.
- B. Connect water supplies to irrigation systems. Include backflow preventers on potable water supplies.
- C. Electrical Connections: Connect to power source, controllers, and automatic control valves.
- D. Minimum requirements for electrical installations are specified in Electrical Drawings.
- E. Ground systems according to details in Drawings.

**3.11 FIELD QUALITY CONTROL**

- A. Testing: Perform hydrostatic test of piping and valves in the presence of the Owner's Representative after center loading pipe. Keep all joints visible. Piping may be tested in sections to expedite work. All valves are to be installed prior to the test. Perform test in the presence of the Owner's Representative.
- B. Cap and subject the piping system to a static water pressure of 150 psi static. Isolate test source and allow to stand for 2 hours. Leaks or loss in test pressure of more than 3 psi constitute defects that must be repaired.
- C. Repair leaks and defects with new materials and retest system or portion thereof until satisfactory results are obtained.

**3.17 BACKFILLING**

- A. Protect pipe from rocks as necessary. Trench backfill for 2" around pipe shall be free from rocks 1/2" diameter and larger.
- B. Center load pipe prior to Hydrostatic Test. Backfill trench and compact to subgrade elevation. Compact trenches under paving to 95%. Compact trenches in landscape areas to 85%. Protect piping from displacement.

**3.18 CLEANING AND ADJUSTING**

- A. Flush dirt and debris from piping before installing emitters and other devices.
- B. Adjust automatic control valves to provide flow rate and pressure required for each irrigation circuit.
- C. Adjust settings of controllers, pressure regulators and automatic control valves.

**3.19 DEMONSTRATION**

- A. Demonstrate to Owner's Representative that system meets coverage requirements and that automatic controls function automatically.
- B. Demonstrate to Owner's maintenance personnel operation of equipment, emitters, specialties, and accessories.
- C. Review operating and maintenance information.
- D. Provide 7 days' written notice in advance of demonstration.

**3.20 SUBSTANTIAL COMPLETION, MAINTENANCE PERIOD AND FINAL ACCEPTANCE**

- A. Substantial Completion, Maintenance Period and Final Acceptance of this Work shall be concurrent with and follow the procedure prescribed in Section 32 90 00.
- B. Perform all maintenance of irrigation system set forth in Section 32 90 00.

END OF SECTION



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PROFESSIONAL SEAL

REV.	DATE	DESCRIPTION	BY
A	10/17/24	UPDATED PER BOULDER CITY COMMENTS	KF

CLIENT:  
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 Henderson, NV 89074

SHEET TITLE:  
**IRRIGATION SPECIFICATIONS**  
 PROJECT:  
**Heritage Peak (Diamond Ridge)  
 Front Yard Production Plans**  
 Arizona Street & Northridge Dr.  
 Boulder City, NV 89005

DATE:  
**OCTOBER 17, 2024**

KF-LA PROJECT NUMBER:  
**24059**

ISSUED FOR:  
**PLAN CHECK**

SHEET NUMBER:

**LI-3**