

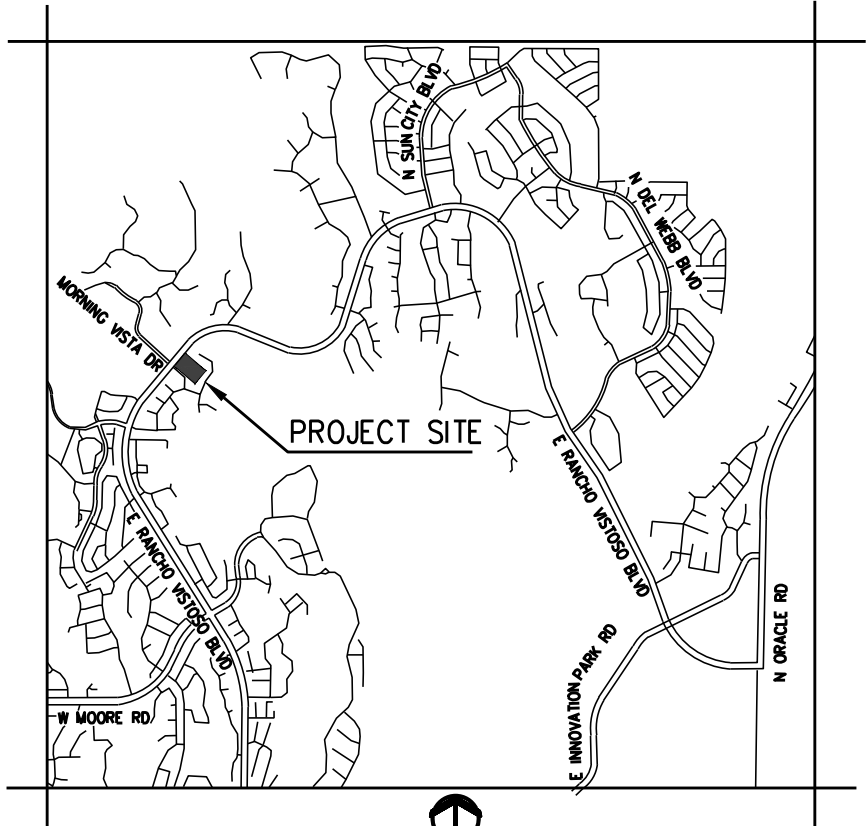
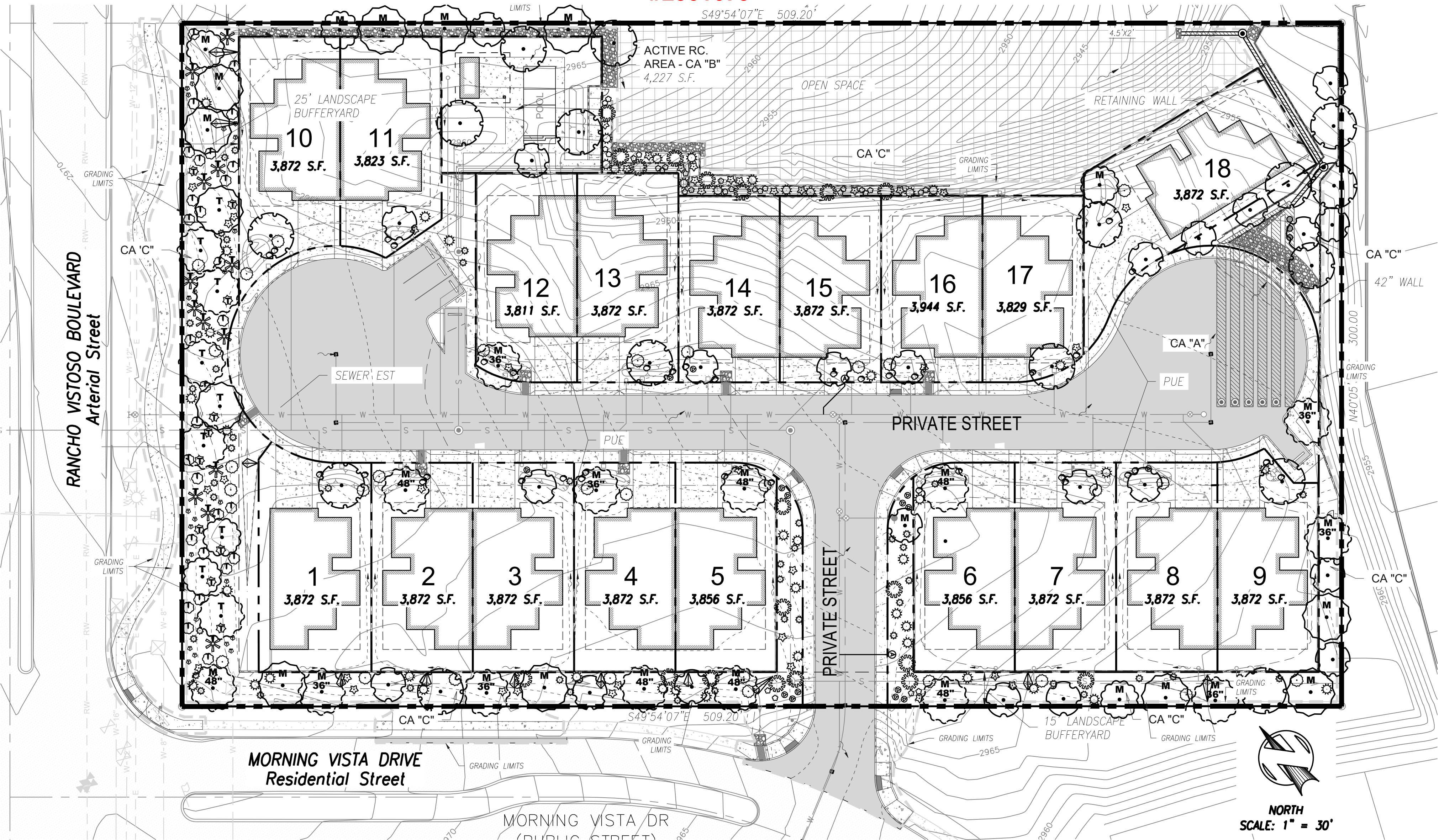
FINAL LANDSCAPE & IRRIGATION PLAN  
RESIDENCES AT MORNING VISTA

2102029  
GRADING PERMIT  
#2501679

LANDSCAPE NOTES

- Landscape shall conform to Oro Valley Landscape Code.
- Mitigation of surveyed plants in the Native Plant Preservation Plan will be incorporated into the landscape design.
- Front yard landscape areas shall be depressed 6" for water harvest.
- All landscape planting areas (not including hydroseeded areas) are to have 2" of decomposed granite or screened landscape rock as the groundplane treatment. Color to be desert tan.
- Water harvest basin groundplane treatment to be raked earth in the bottom and decomposed granite or screened landscape rock on the side slopes and top areas.
- All 3:1 slopes will be hydroseeded with approved mix (see sheet # L-2 for hydroseed mix).
- The property is 3.51 acre (152,761 SF), is zoned PAD (Rancho Vistoso) and is currently free of any development.
- Total graded area: 3.10 acres (135,427 SF).
- Total undisturbed area: 0.40 acres (17,337 SF).
- Required Open Space: 1.05 acres (45,895 SF).
- Total acres of Natural Open Space and Landscape area: 0.97 acres (42,283 SF).
- Total Recreational area: 0.10 acres (4,227 SF).
- Total Open Space: 1.06 acres (46,510 SF) or 30.4% of the site.
- Landscape buffer yards are appropriately labeled per OVZCR Table 27.7 and are shown on plan. Information as follows:

- (1) **BUFFERYARD #1 (Type "B")**  
300 LF x 25' Width requires:  
12 Trees, 21 Shrubs or Cacti, 36 Accents or Cacti
  - (2) **BUFFERYARD #2 (Type "A")**  
271 LF x 15' Width requires:  
11 Trees, 11 Shrubs or Cacti, 22 Accents or Cacti
  - (3) **BUFFERYARD #3 (Type "A")**  
200 LF x 15' Width requires:  
8 Trees, 8 Shrubs or Cacti, 16 Accents or Cacti
- Perimeter Setbacks:  
Front Provided: 25'  
Sides Provided: 15'
  - There are no applicable General Plan, rezoning, conditional use permit (CUP), or annexation conditions and associated case number impacting the project, including any applicable Pima County case numbers.
  - There are no zoning variances or modification that are applicable to the project, such as Board of Adjustment variance or interpretation.
  - Assurances for landscaping and re-vegetation bonds must be posted prior to issuance of grading permits. A landscape bond in the amount of 10% of the original landscape bond shall remain in place for a period of one year from the complete installation of landscape materials and any replacement materials.
  - Property owner shall maintain bufferyard plantings to ensure unobstructed visibility to motorists. All shrubs, accents, and groundcovers shall not exceed thirty (30") inches in height within sight visibility triangles. Trees within site visibility triangles will be maintained to ensure that branches/foliage is not below a height of six (6') feet and the diameter should not exceed 1-foot when fully mature.
  - In the event of abandonment of the site after grading/disturbance of natural areas, disturbed areas shall be re-vegetated with a non-irrigated hydroseed mix from OVZCR Addendum D: Approved revegetation seed mix.
  - All plant material shall meet the minimum standards contained in the current editions of the Arizona Nursery Association's Growers Committee Recommended Tree Specifications and the American Association of Nurserymen as to size, condition, and appearance.
  - Property owner is responsible for maintaining the temporary irrigation system as long as necessary in order to transition plants over to natural sources. Any plant material that die in transition, for any reason, shall be replaced in accordance with Sec. 27.6.E.4, Maintenance.
  - Any spaded or boxed tree transplanted on site that dies due to neglect or lack of maintenance shall be replaced with the same size and species of the original salvaged tree, as required by the salvage plan.
  - The limits of grading shall be staked in the field, in accordance with Section 27.6.B.7.c.ii of the Zoning Code. Disturbance outside the approved grading limits shall not be permitted.



LOCATION MAP  
INTERSECTION OF RANCHO VISTOSO BLVD. AND  
MORNING VISTA DR., TOWN OF ORO VALLEY, PIMA  
COUNTY, ARIZONA

SHEETS		
LANDSCAPE COVER		L-1
LANDSCAPE PLAN		L-2
LANDSCAPE DETAILS		L-3
IRRIGATION PLAN		L-4
IRRIGATION DETAILS & NOTES		L-5
WATER HARVEST PLAN		L-6

Approval Block:  
Bayer Vella  
Planning & Zoning Administrator Date

- The developer shall replace removed or damaged plant materials with like size and species, and shall maintain and guarantee (in accordance with Section 26.6.C and i) the replacement of plant materials for a period of three (3) years.
- No salvage of plants regulated by the Endangered Species Act and/or the Arizona Native Plant Law may occur without the issuance of the appropriate permit by the State Department of Agriculture.
- Landscape materials shall not obstruct sight distances or vehicle turning movements.
- Landscape areas that are susceptible to damage by pedestrian or auto traffic shall be protected by appropriate curbs, tree guards or other devices.
- Landscape shall be designed to minimize sediment, sand and gravel being carried into the streets from storm water or other runoff.
- Landscape plan enables adequate plant spacing to ensure survivability at plant maturity.
- Deep rooted vegetation and trees shall not be planted closer than 7.5' from a public water line. Exceptions for alternative design solutions such as root barriers shall be considered on a case by case basis.

- Water harvest basin groundplane treatment to be raked earth in the bottom and decomposed granite or screened landscape rock on the side slopes and top areas.
- Landscape to conform to Oro Valley Landscape Code.
- All 3:1 slopes will be hydroseeded with approved mix (see sheet #L-2 for hydroseed mix).
- Property owners, lessees, and occupants shall maintain required landscape, irrigation, buffering, screening and rainwater harvesting system improvements per the approved plan
- Property owner is responsible for maintaining the temporary irrigation system as long as necessary in order to transition plants over to natural sources. Irrigation shall be reduced three years after issuance of the first certificate of occupancy.
- Metered water use for landscape irrigation shall be reduced by fifty percent, five years from the date of the issuance of the certificate of occupancy.

OWNER/DEVELOPER  
DSW Commercial Real Estate  
Attn: Michael A. Sarabia  
1795 E. Skyline Dr., STE 193  
Tucson, AZ 85718  
Phone: 520-297-8929  
Email: msarabia@dscommercial.com

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Attn: Jim McMahon  
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Tucson, AZ 85718  
Phone: 520-321-0468  
Email: jimcmahon@aol.com

CIVIL ENGINEER  
GRENIER ENGINEERING, INC.  
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Phone: 520-326-7082  
Email: jgrenier@greniereng.com

LANDSCAPE ARCHITECT  
Novak Environmental, Inc.  
Attn: Karen Cesare  
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Phone: 520-206-0591  
Email: karen@novakenvironmental.com



Novak Environmental, Inc.  
4574 North First Avenue #100 Tucson, AZ 85718  
Phone 520.206.0591 • Fax 520.882.3006  
Landscape Architecture • Natural Resources • Planning • Mitigation

2102029  
Reference Case 2003075 Pre-Application

1	8-29-22	1ST SUBMITTAL
2	2-17-23	2ND SUBMITTAL - REVISIONS FROM 1ST SUBMITTAL COMMENTS
3	5-31-23	3RD SUBMITTAL - ADD WATER HARVESTING
4	8-15-23	#4 SUBMITTAL - WATER HARVEST REVISIONS
Rev #	Date	Description

LANDSCAPE PLAN  
RESIDENCES AT MORNING VISTA

Approval Block:  
Bayer Vella  
Planning & Zoning Administrator Date

GRADING PERMIT #2501679



GRADING PERMIT #2501679



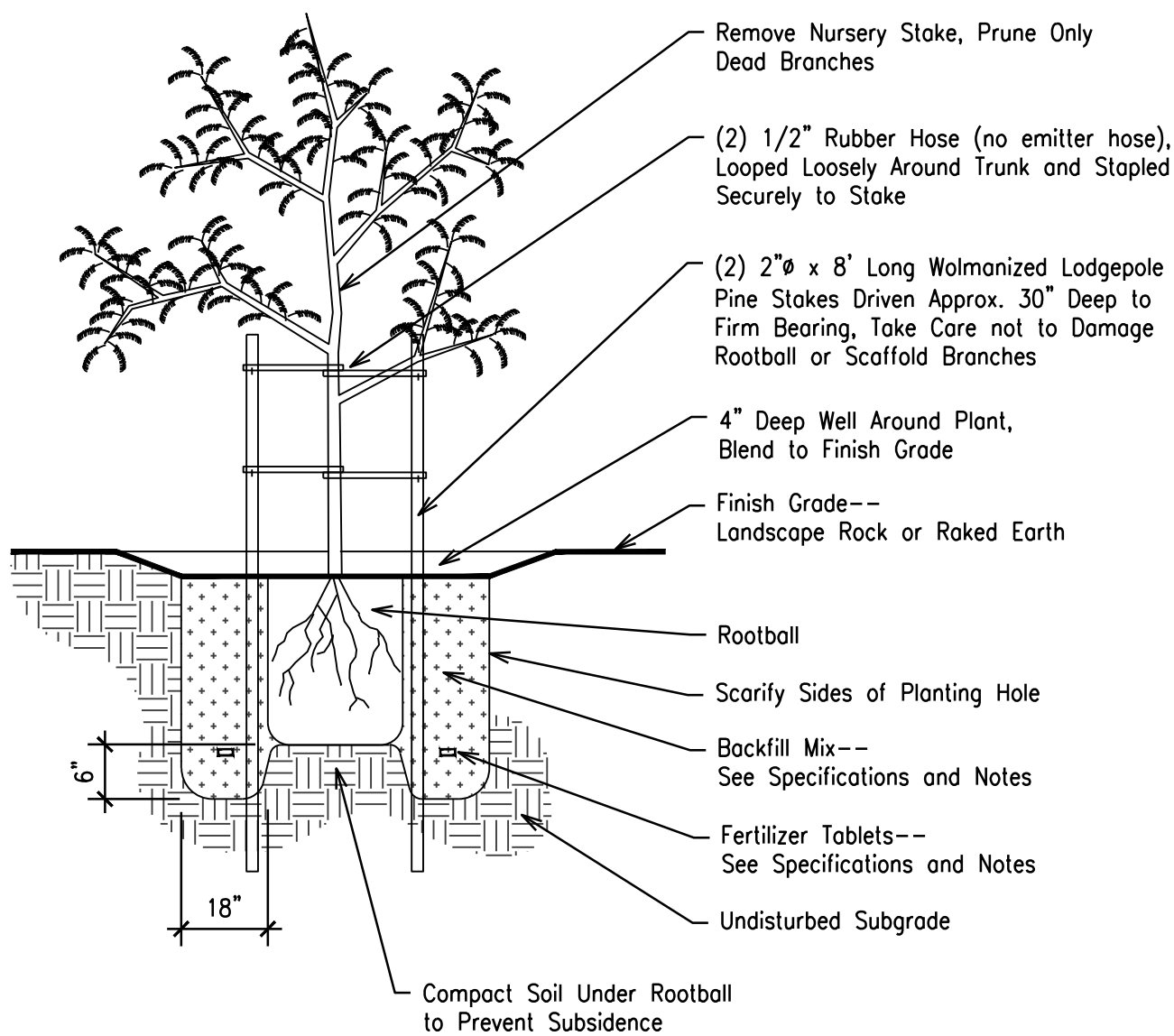
INORGANIC MATERIAL		DESCRIPTION
Boulders	36	3' x 3' x 2'

Job Number:	NE 21024	
Designed By:	TC/SS/RA	
Drown By:	TC/SS/RA	
Checked By:	KO	
Date:	AUG. 2022	
Scale	Vt: N/A	Hz:
Sheet Number:		
L-2		
Sheet 2 of 6		

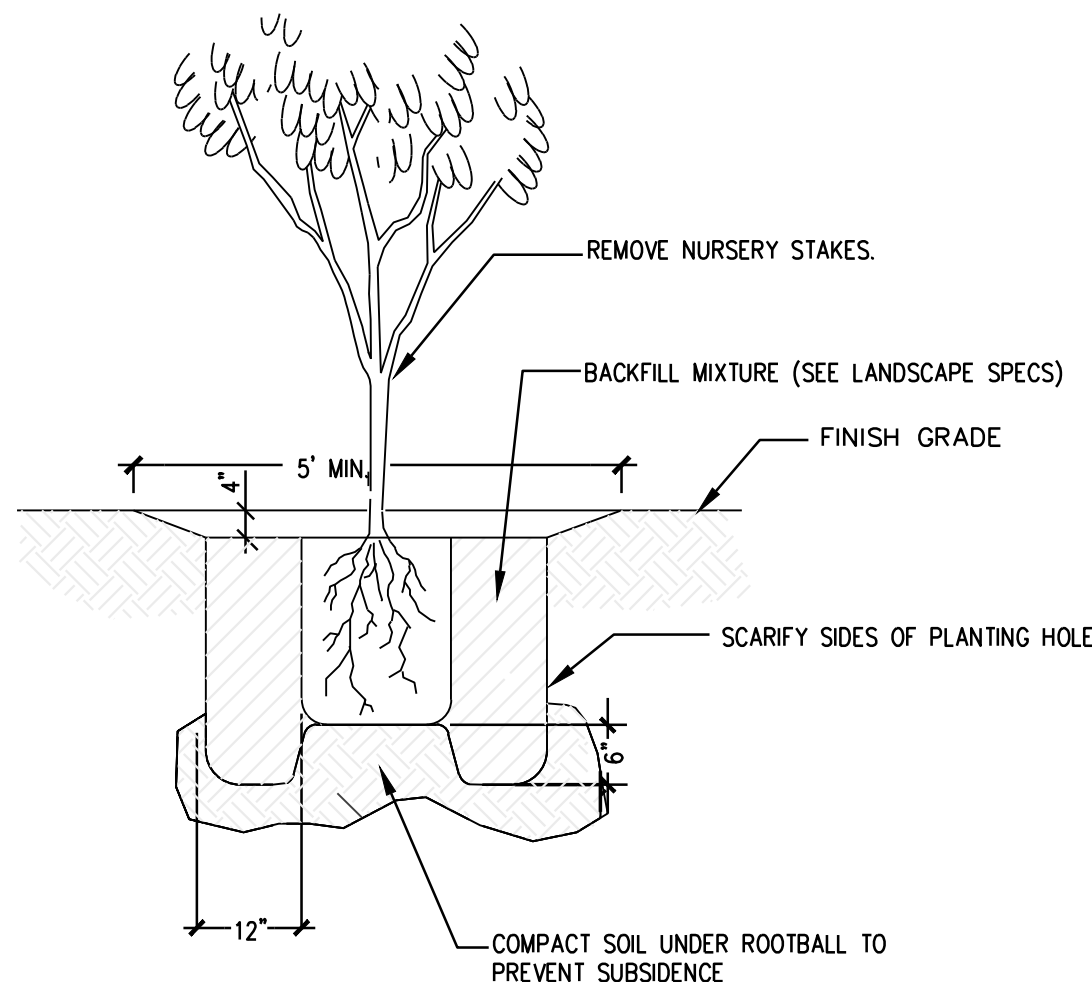
 **Novak Environmental, Inc.**  
4574 North First Avenue #100 Tucson, AZ 85718  
Phone 520.206.0591 • Fax 520.882.3006  
Landscape Architecture • Natural Resources • Planning • Mitigation



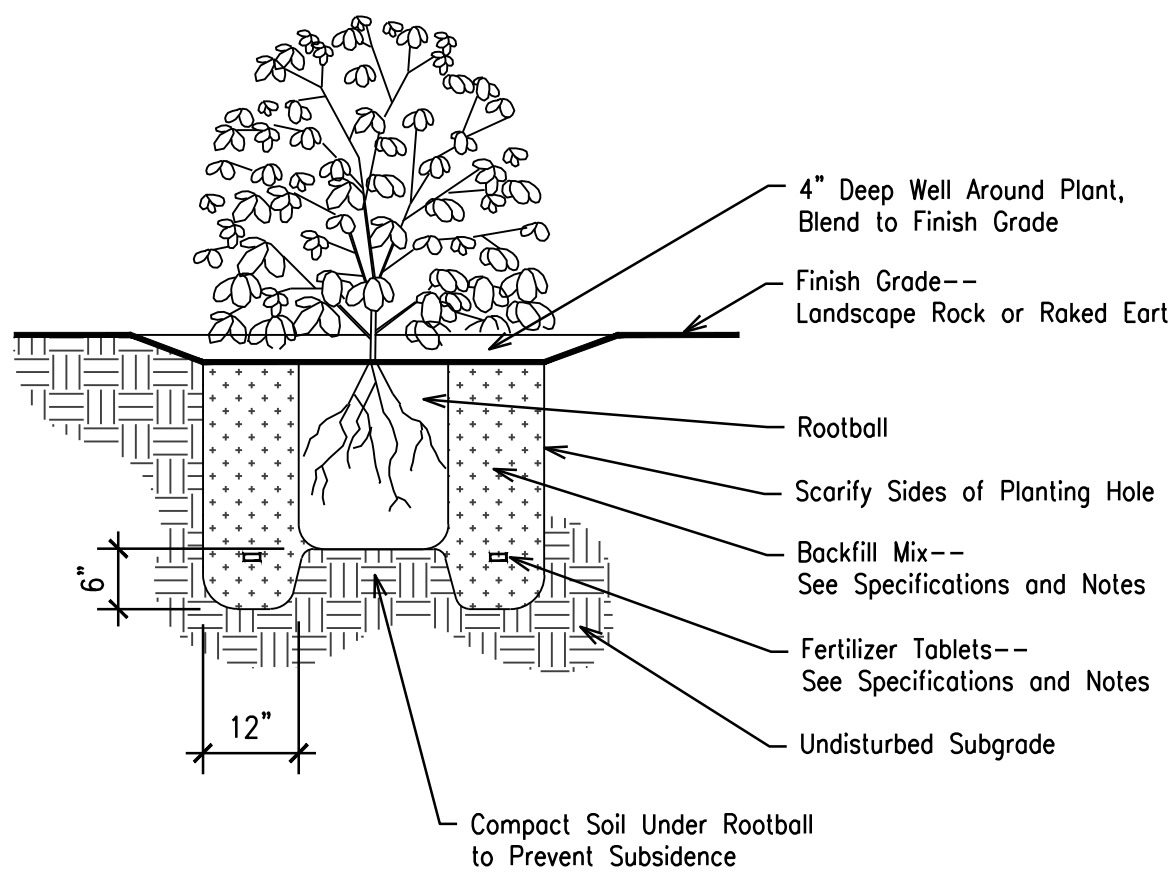
LANDSCAPE DETAILS  
2102029



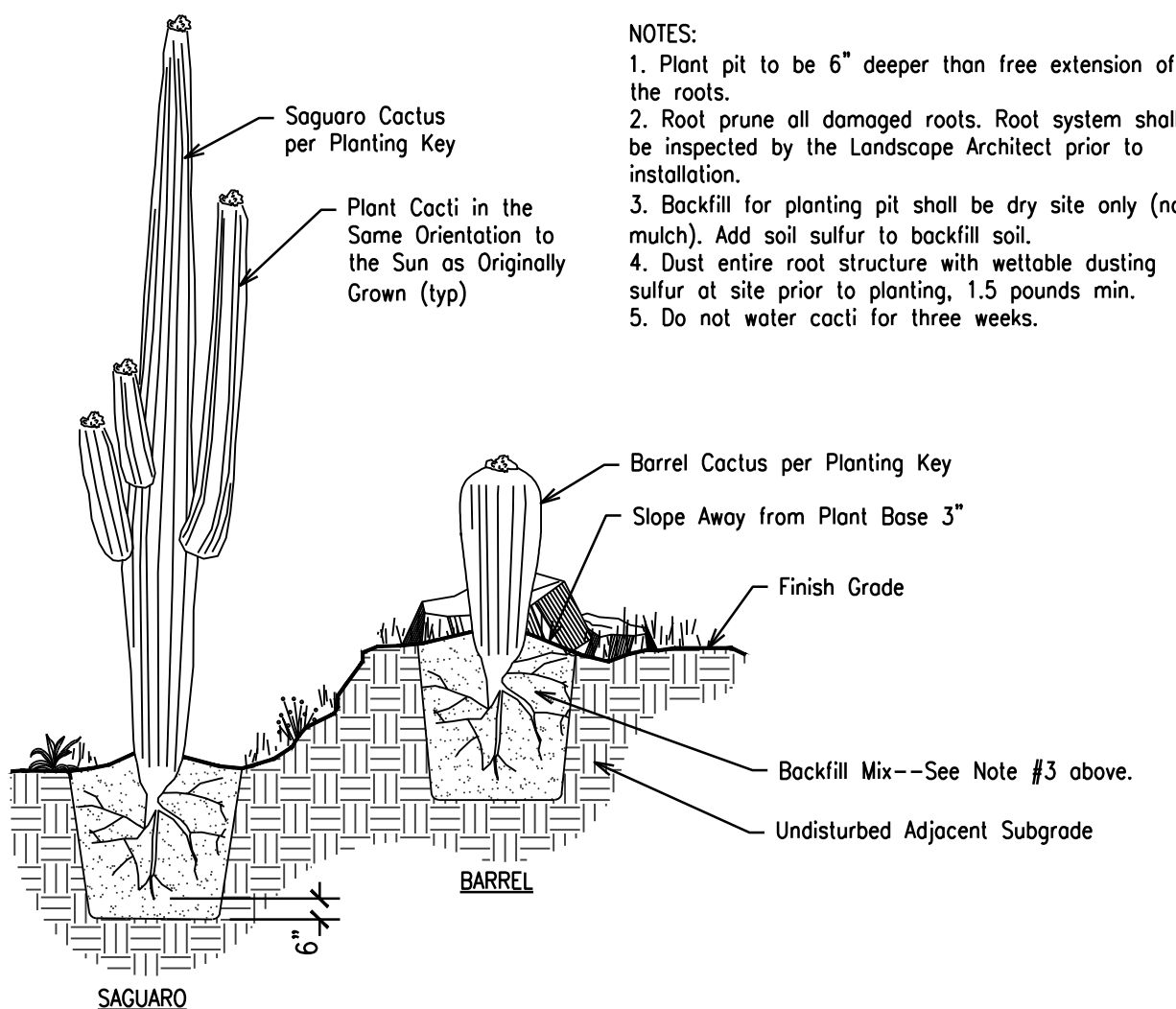
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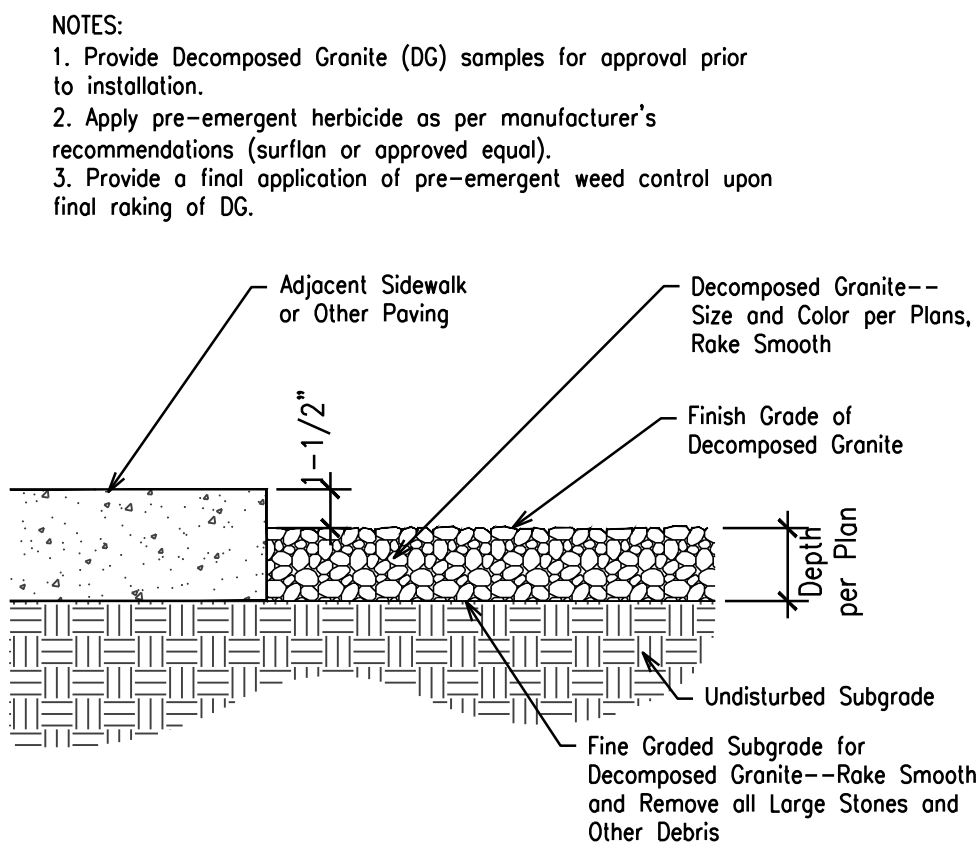
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NTS



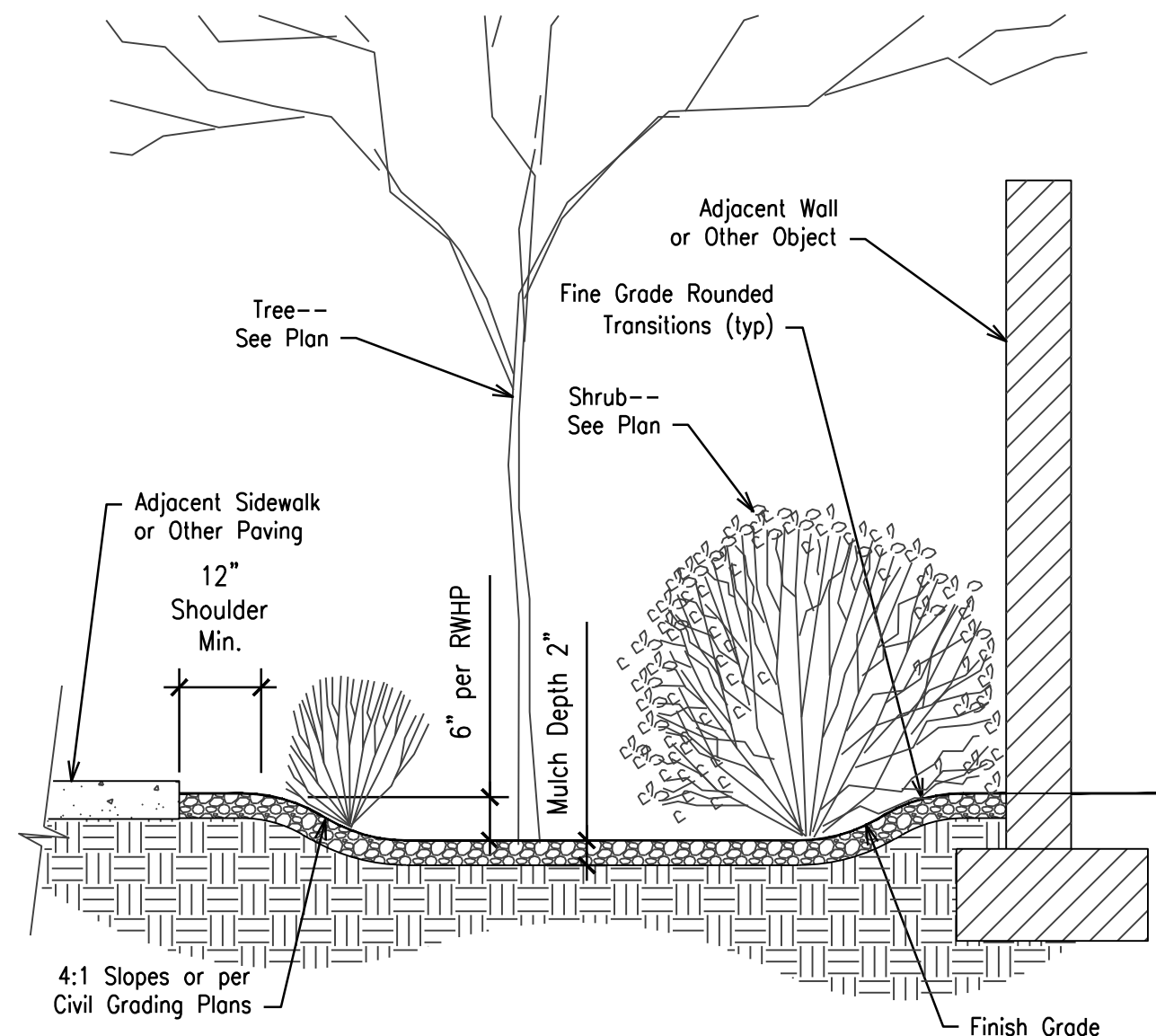
3 SHRUB PLANTING  
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4 CACTI PLANTING  
Not to Scale



5 DECOMPOSED GRANITE  
Not to Scale



6 WATER HARVEST BASIN SCHEMATIC  
Not to Scale

2102029  
Reference Case 2003075 Pre-Application

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4	8-15-23	#4 SUBMITTAL - WATER HARVEST REVISIONS
Rev #	Date	Description

Sheet Name	LANDSCAPE DETAILS
Project	RESIDENCES AT MORNING VISTA

Job Number:	NE 21024
Designed By:	TC/SS
Drawn By:	TC/SS/RA
Checked By:	KC
Date:	AUG. 2022
Scale:	N/A
Hz:	
Sheet Number:	L-3
Sheet	3 of 6

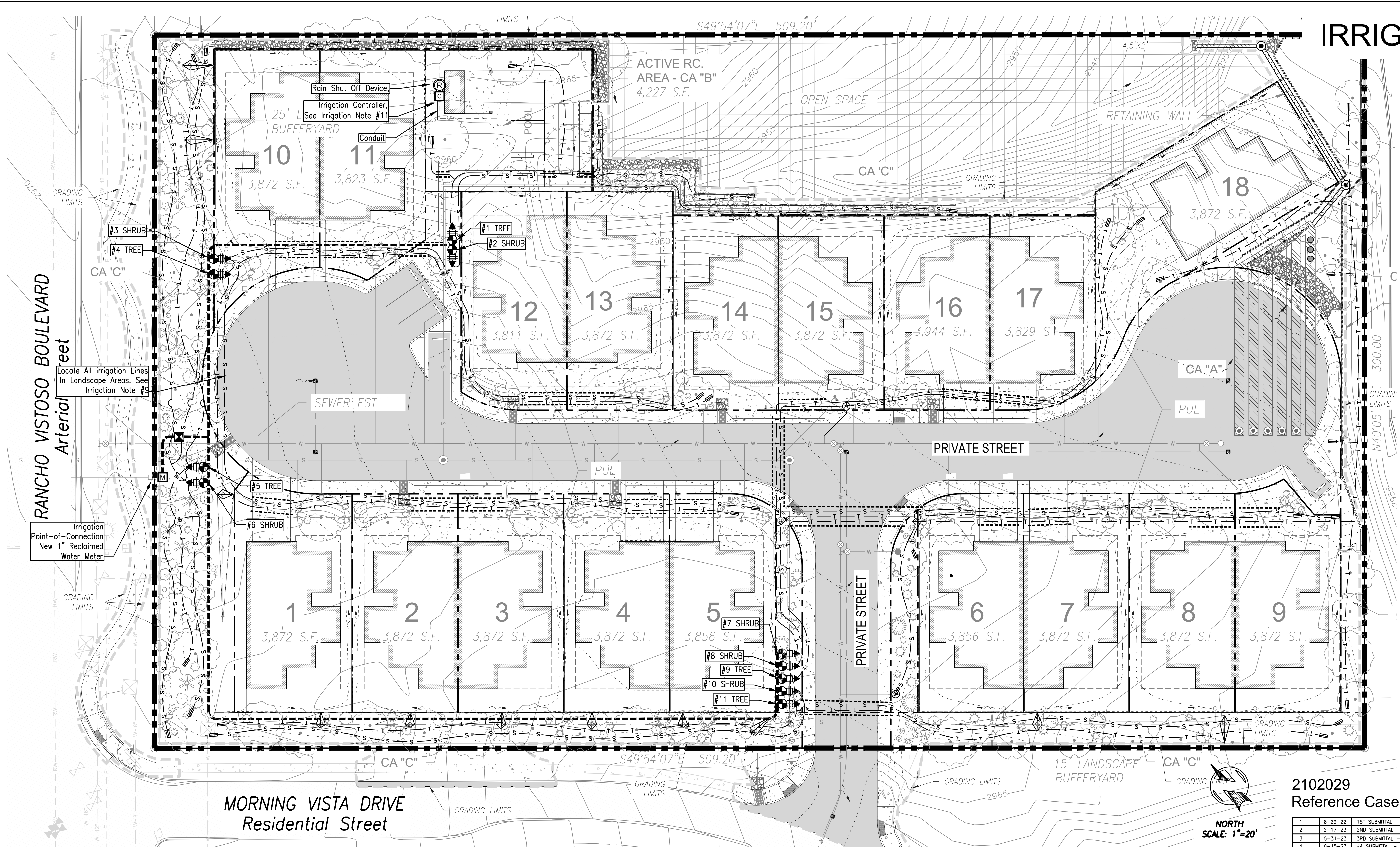
GRADING PERMIT #2501679



IRRIGATION PLAN  
2102029

LEGEND

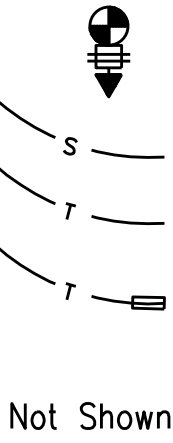
---	W	WATERLINE
---	C	CENTERLINE
---	WS	WATER SERVICE LINE
---	S	SIGHT VISIBILITY TRIANGLE
---	G	GRADING LIMIT
---	L	LOT LINE
---	SE	SEWER EASEMENT
---	PE	PUE EASEMENT
---	SW	SWALE
---	F	FENCE
---	PL	PROPERTY LINE
---	WM	WATER MAIN
---	FM	SEWER
---	E	SEWER
---	EW	ELECTRICAL
---	RW	RECLAIMED WATER
---	IC	INDEX CONTOUR
---	MC	MINOR CONTOUR
---	GA	GRADING TRADE AREA



IRRIGATION LEGEND

Equipment	Manufacturer & Model	Size
Irrigation Point-of-Connection Water Meter	Connect to New 1" Reclaimed Water Meter	1"
Irrigation Mainline	Sch. 40 PVC (PURPLE) with Solvent Weld Joints	3/4"
Irrigation Pipe Sleeve	Sch. 40 PVC with Solvent Weld Joints	3"
Irrigation Controller	Rainbird #TM2-12-120V	12 stations
Rain Shut Off Device	Rainbird #RSD Series	

Equipment	Manufacturer & Model	Size
Drip Control Zone Kit	Rainbird #XCZ-100-PRBR (40 psi, 200 mesh screen)	1"
Drip Laterals	Polyethylene SDR Rated Tubing-- (PURPLE COLOR) "T" Indicates Tree Lines, "S" Indicates Shrub Lines	3/4"
Drip Lateral Flush End	Install at all Drip Lateral Ends (PURPLE COLOR)	3/4"
Emitters (see Emitter Schedule)	Rainbird #XB-20PC (single outlet), Rainbird #XB-20-6 (multi-outlet)	2 gph



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Rev #	Date	Description

**GRENIER ENGINEERING, INC.**  
Structural & Civil Engineering Consultant  
6300 E. El Dorado Plaza Suite A120, Tucson, Arizona 85715  
Phone: 520.326.7082 ~ Fax: 520.326.7508

**IRRIGATION PLAN**

Project: RESIDENCES AT MORNING VISTA

Sheet Number: L-4

Sheet 4 of 6

Job Number: NE 21024  
Designed By: TC/SS  
Drawn By: TC/SS/RA  
Checked By: KC  
Date: AUG. 2022  
Scale: N/A  
Hz: 1/4"

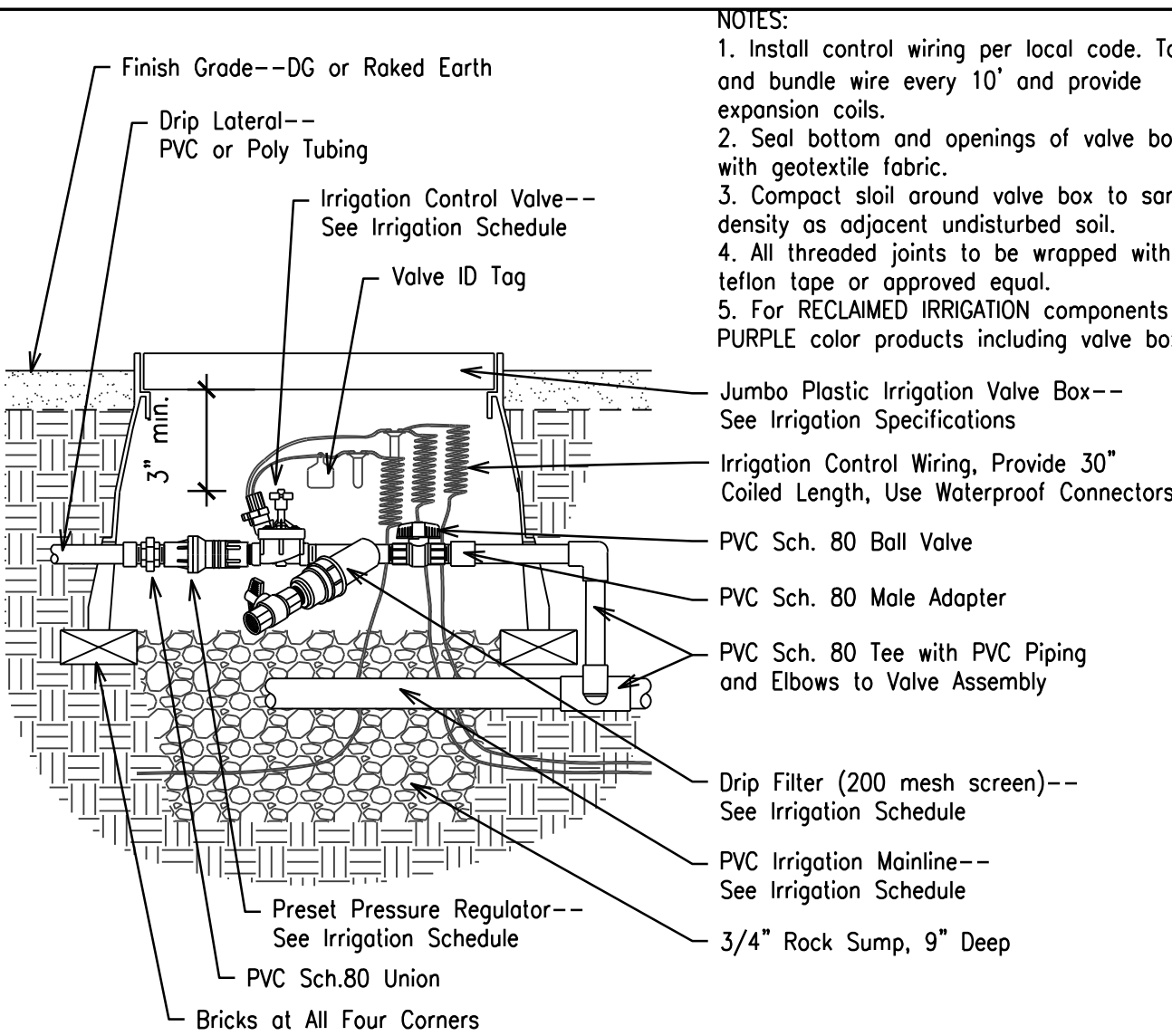
**GRADING PERMIT #2501679**



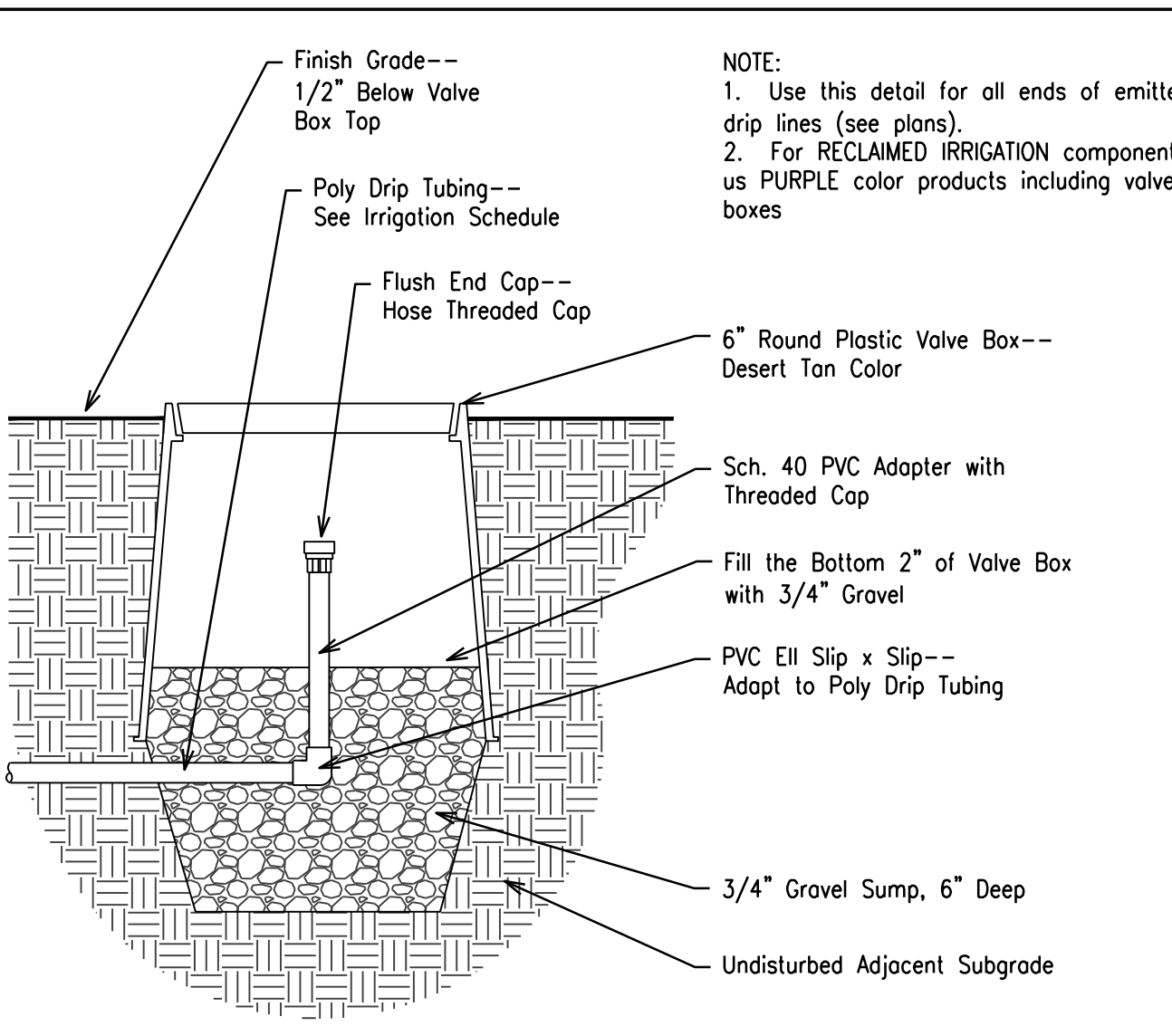
IRRIGATION DETAILS & NOTES
2102029

IRRIGATION NOTES

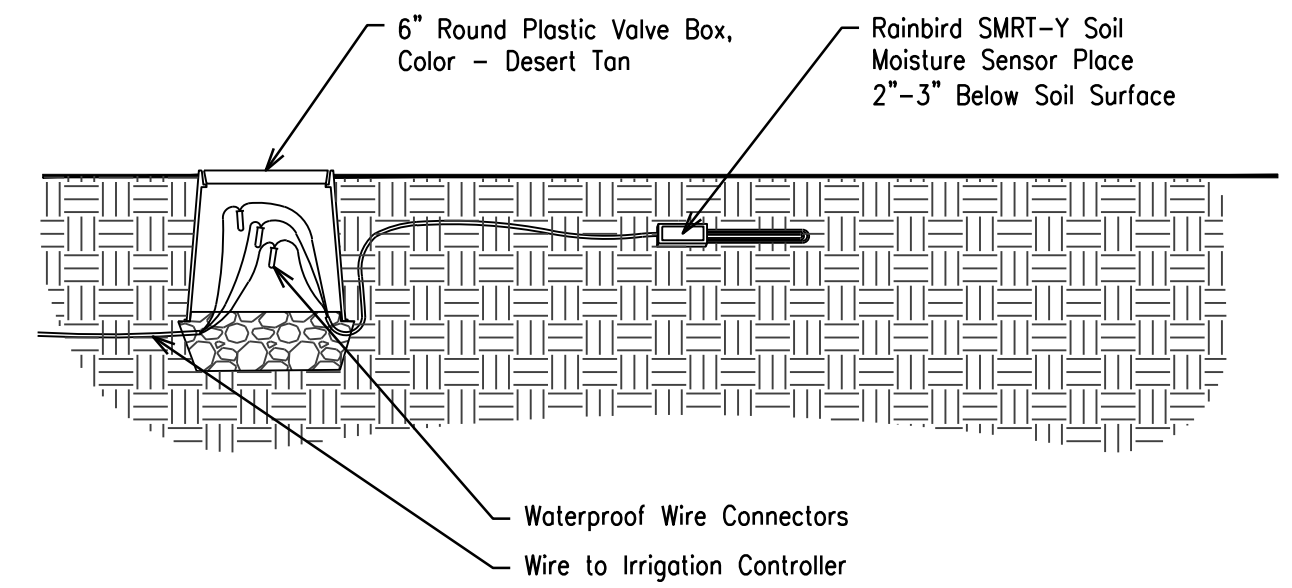
- 1. Irrigation and/or watering plans shall meet the minimum standards of the American Society of Irrigation Consultants.
- 2. The property owner is responsible for maintaining the temporary system as long as necessary in order to transition plants over to natural sources. Any plant materials that die in transition, for any reason, shall be replaced in accordance with Section 27.6.E.4 - Maintenance.
- 3. Irrigation systems connected to potable water mains (public or private) shall be equipped with backflow preventers.
- 4. The annual water use for a project shall not exceed the annual landscape water plan.
- 5. Irrigation meter readings shall be used to determine compliance with the landscape water plan. Non-compliance is subject to penalties under Oro Valley Town Code.
- 6. Meter readings shall be taken, at a minimum, on an annual basis. Monthly readings may be required, at the discretion of the Planning and Zoning Administrator, in order to address non-compliance with the Water Plan.
- 7. An initial meter reading shall be taken prior to the issuance of the certificate of occupancy and recorded for reference as part of the water plan.
- 8. Irrigation water shall not leave the landscaped areas and flow onto roads, parking areas or sidewalks.
- 9. Irrigation system is schematic. Locate all irrigation lines in landscape areas and on the project property. Provide sleeves (whether shown or not) for crossing all paved areas.
- 10. The irrigation system will serve all of the landscape plantings. Proposed location for the irrigation point-of-connection and the irrigation controller are shown on the plan.
- 11. The irrigation controller shall be a outdoor wall mounted unit. Contractor shall coordinate and provide 120 VAC electric power source for the controller. Controller shall include an automatic rain shutoff device.
- 12. Point-of-connection shall include a backflow preventer installed per Town of Oro Valley requirements. Backflow preventer shall include freeze protection and a lockable protective cage.
- 13. A Security Enclosure shall be provided for the Backflow Preventer, Guardshock #GS-1. A Security Enclosure shall be provided for the Irrigation Controller, Guardshock #CG-1.
- 14. All landscape areas will be depressed 6" (with suitable transitions) for rainwater infiltration whenever possible.



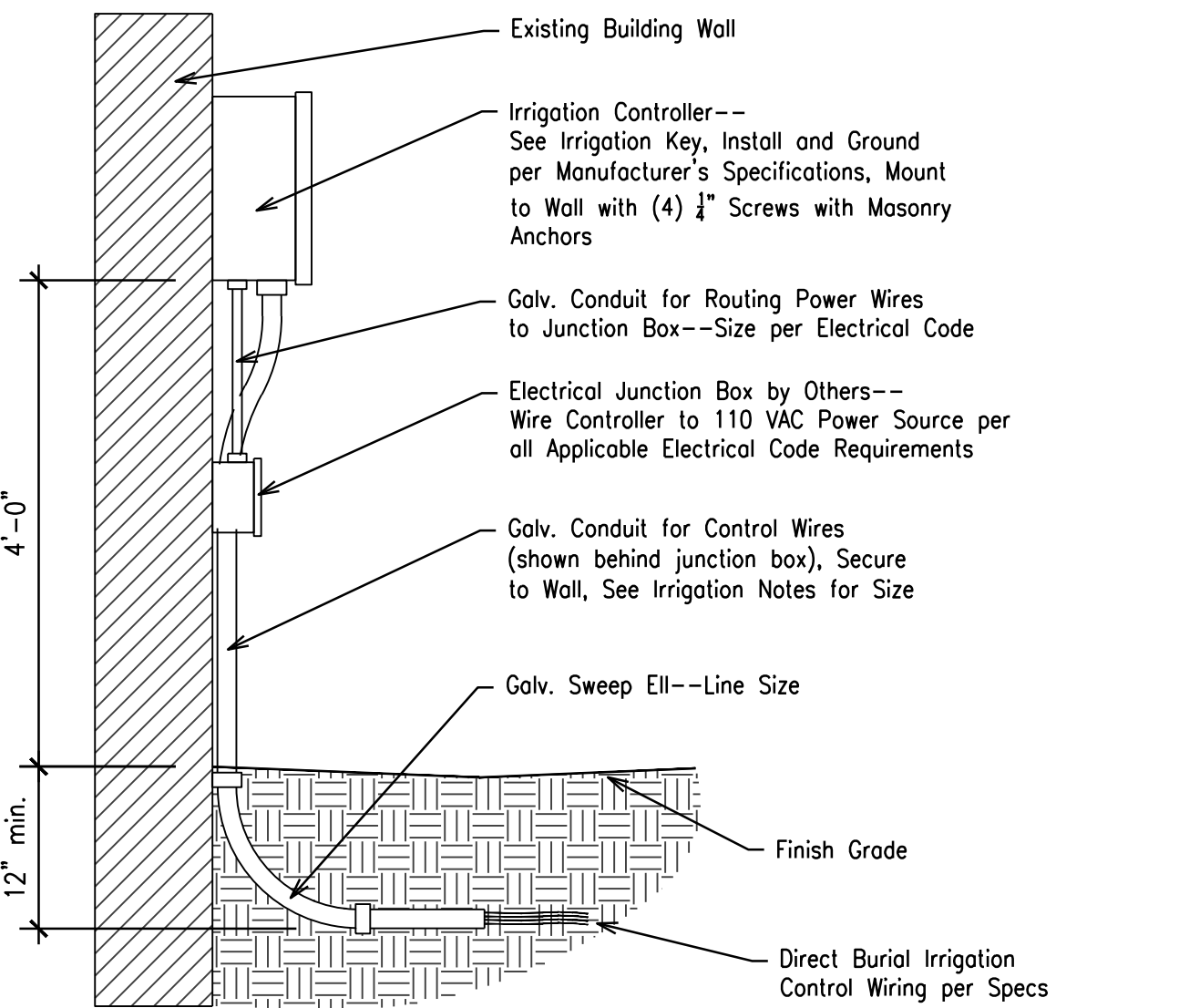
1 DRIP CONTROL VALVE ASSEMBLY
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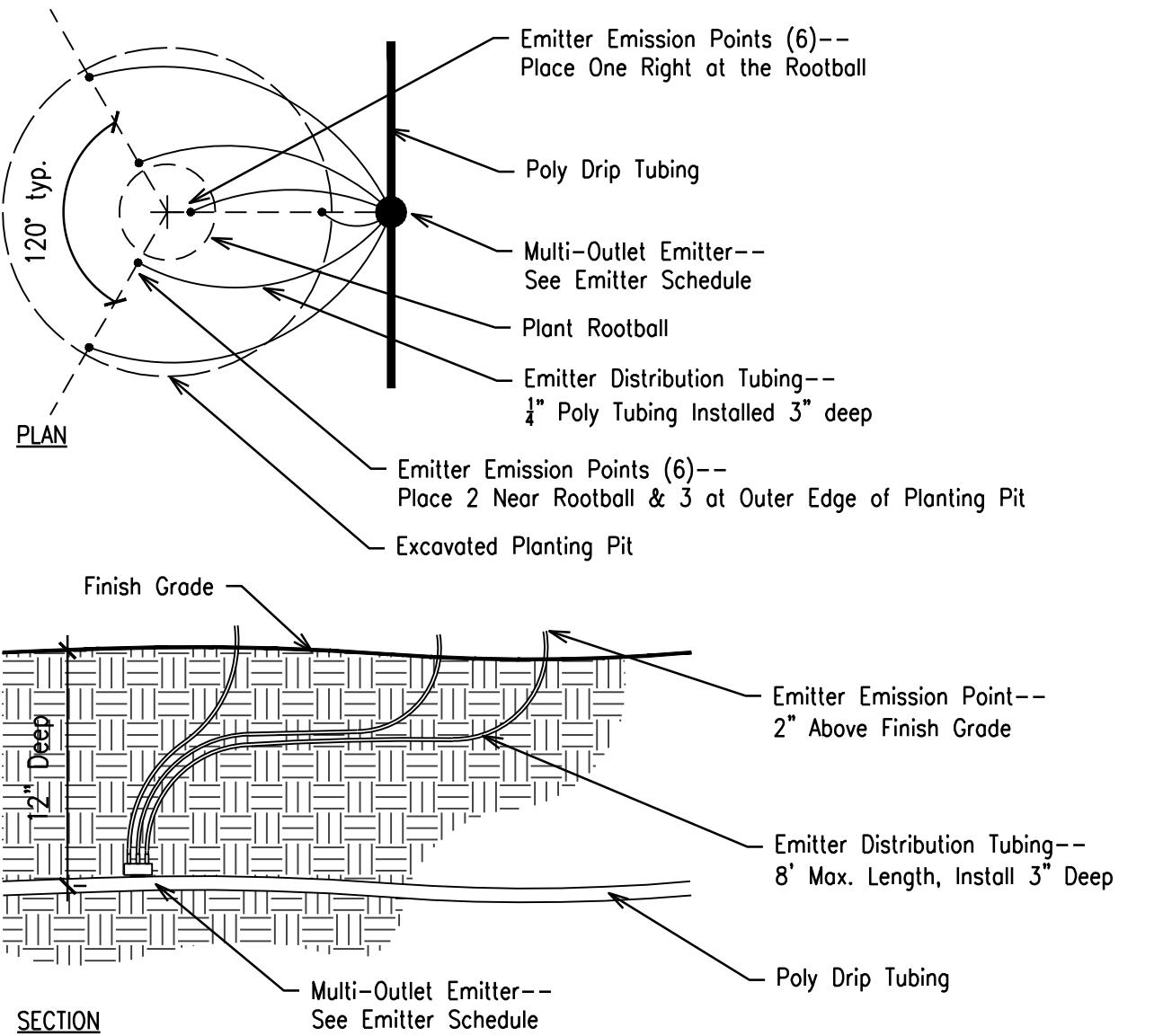
4 END FLUSH CAP
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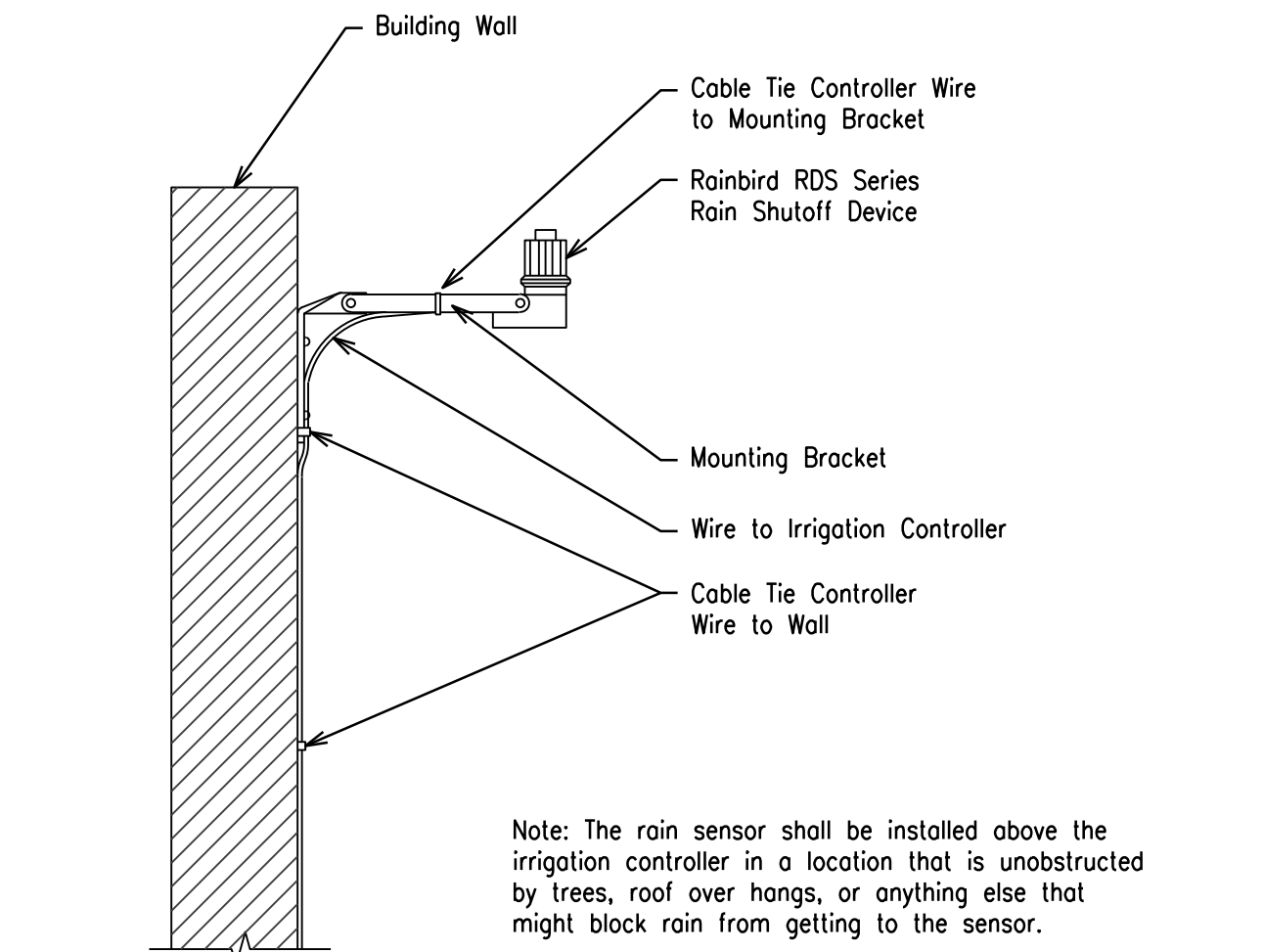
7 SOIL MOISTURE GAUGE
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2 WALL MOUNT CONTROLLER
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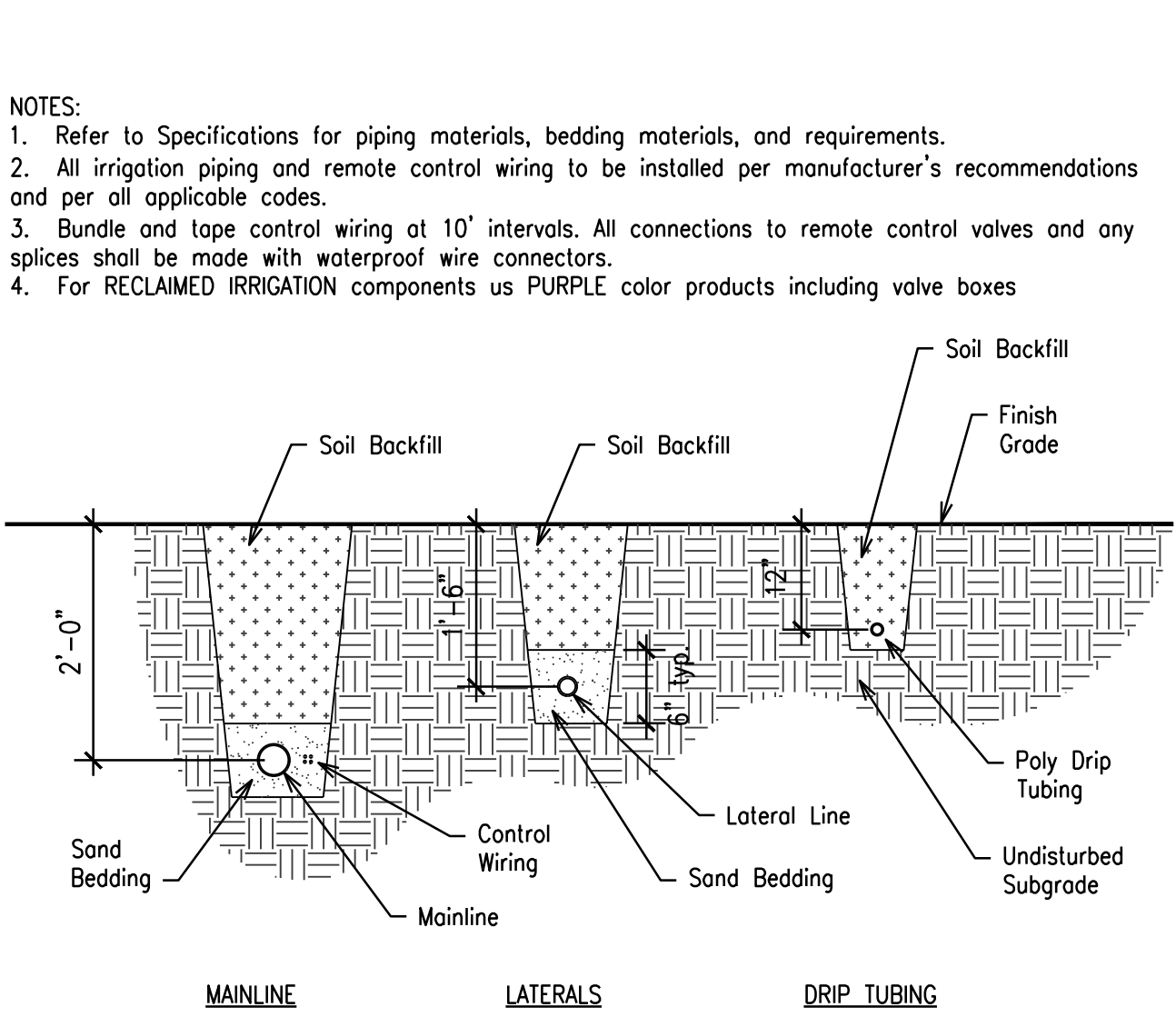


5 MULTI-OUTLET EMITTER, DIRECT BURY
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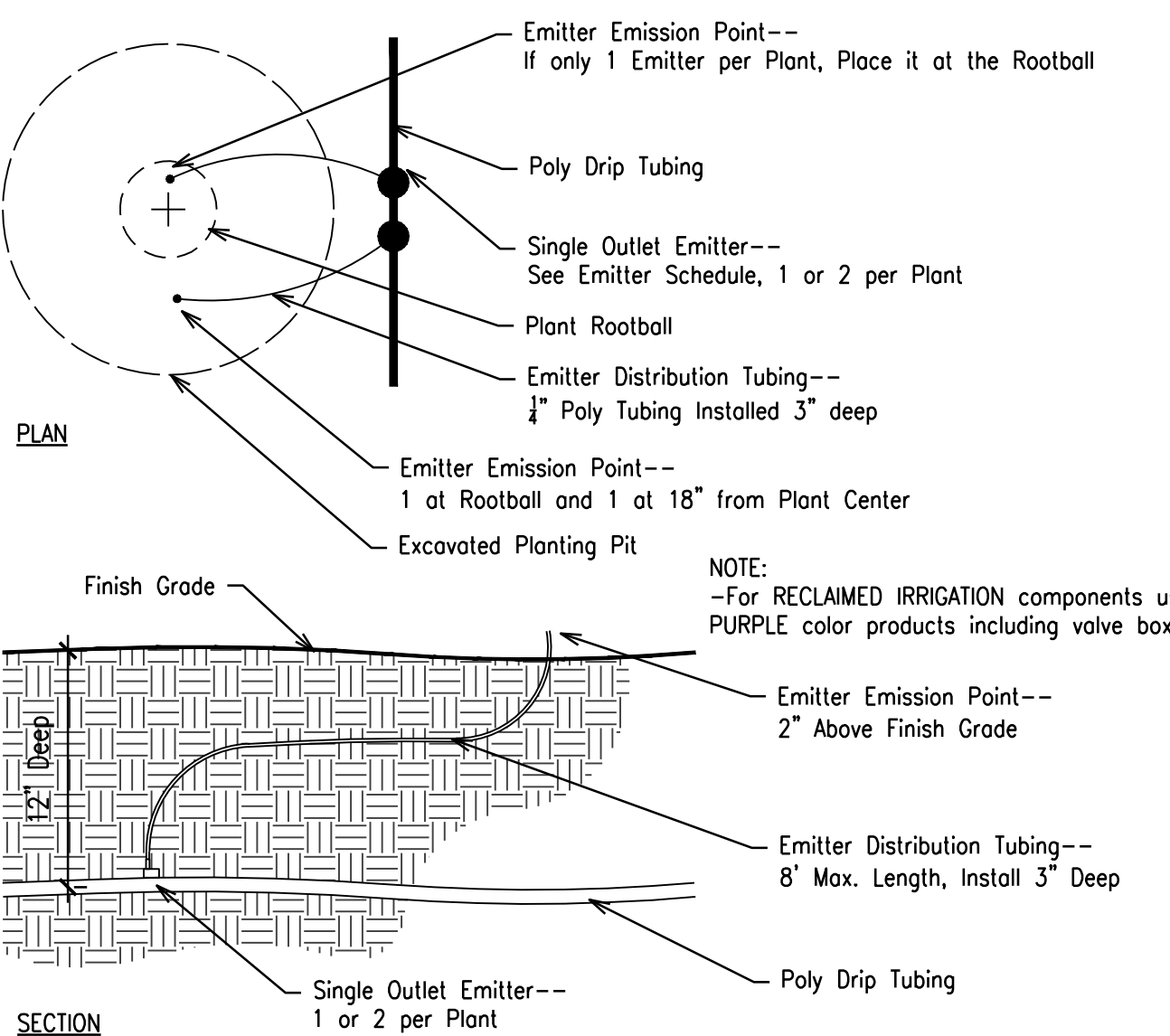


8 RAIN SHUT-OFF DEVICE
Not to Scale

Table with 7 columns: Months, Lines, Days, Frequency, Run Time (min), Gal. Monthly, Gal. Seasonal. It contains a 'CONTROLLER SCHEDULE' for various months and a 'TOTAL WATER' summary of 422489. A note explains the schedule is based on 100% water usage and provides adjustments for Years 1-5.



3 IRRIGATION TRENCHING
Not to Scale



6 SINGLE OUTLET EMITTER
Not to Scale

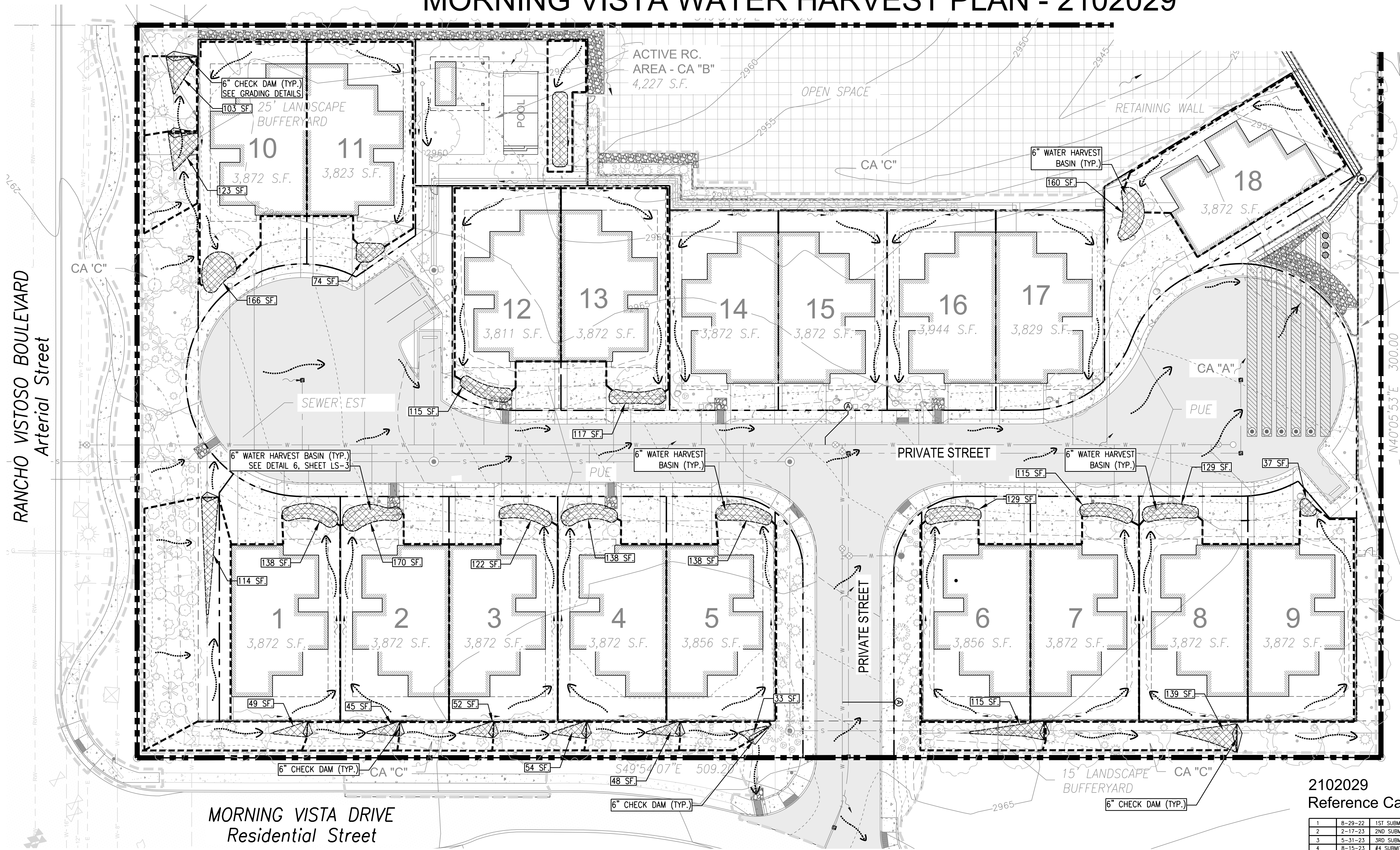
Table with 7 columns: BOTANICAL NAME, COMMON NAME, EMITTER TYPE, # OF EMITTERS, # OF OUTLETS OPEN, EMITTER SIZE (GPH), TOTAL (GPH) TO PLANT. It lists various plants and their corresponding emitter specifications under categories: Trees, Shrubs, Accent, and Ground Cover.

2102029
Reference Case 2003075 Pre-Application

Project information block including a revision table, company logo for Grenier Engineering, Inc., contact details (6300 E. El Dorado Plaza Suite A120, Tucson, Arizona), and project title 'IRRIGATION DETAILS & NOTES' for 'RESIDENCES AT MORNING VISTA'. It also includes a permit stamp and sheet number 'L-5'.



MORNING VISTA WATER HARVEST PLAN - 2102029



**LEGEND**

- WATERLINE
- CENTERLINE
- WATER SERVICE LINE
- SIGHT VISIBILITY TRIANGLE
- GRADING LIMIT
- LOT LINE
- SEWER EASEMENT
- PUE EASEMENT
- SWALE
- FENCE
- PROPERTY LINE
- WATER MAIN
- SEWER
- SEWER
- ELECTRICAL
- RECLAIMED WATER
- INDEX CONTOUR
- MINOR CONTOUR
- GRADING TRADE AREA

**WATER HARVEST LEGEND**

- 6" WATER HARVEST BASIN
- 6" CHECK DAM
- 6" BUFFER YARD
- FLOW LINE
- PROPOSED CONTOUR
- PROPOSED CONTOUR
- LOT FLOW LINE
- WATER HARVEST INFILTRATION AREA
- SUB-WATERSHED AREA
- DRAINAGE FLOW LINES

**WATER HARVEST NOTES**

- This project will use a passive rainwater harvest methodology to supplement irrigated landscape planting. Landscape areas will be depressed 6" (including mulch if applicable) or more per plan (with suitable transitions) for rainwater infiltration whenever possible.
- The site's water harvest infiltration areas will have catchment areas consisting of adjacent sloped landscape and paved areas. Building roof drainage will be directed to water harvest basin/infiltration areas.
- The soil in the landscape planting areas shall be prepared for proper rain water infiltration as needed. This might include caliche removal, "ripping" of compacted soils, or mixing site soil with sand.
- The irrigation system shall include a rain shut off device for the irrigation controller.
- Water Harvest Basins located in front yards and in common areas are to be 6" in depth and are to have a slope of 4:1 (typ). A slope of 3:1 may be used in locations where basin width requires that a steeper slope be used to

- reach the 6" depth.
- Check Dams in the Buffer Yard areas are to be 6" in height and to be armored on both sides of the dam with 6" riprap. The dashed line on the plan indicated the surface area of the catchments when full.
- See Landscape Detail 6, Sheet LS-3, for a Water Harvest Basin Schematic.
- Total area of all new impervious surfaces including pavements, sidewalks, hardscape areas and buildings is 88,564 SF.
- Total volume of rainwater harvesting provided is 625 CF.
- Rainwater harvesting measures employed for this development consist of the following: (15) 6" water harvest basins in front yards and common areas and (11) 6" rip rap armored check dams along the landscape border.
- All rainwater harvesting measures shown on this plan shall be integrated into both the landscape installation as well as the site grading construction.
- The site soils report had 2 infiltration tests on the site. The worst of the infiltrations rates is 8.5 minutes per inch. A 6" deep harvesting basin will infiltrate in 0.85 hours.

Approval Block:  
**Bayer Vella**  
Planning & Zoning Administrator  
Town Engineer  
Date: 2023.09.26  
08:59:19-0700



CALL TWO WORKING DAYS BEFORE YOU DIG  
602-263-1100  
1-800-STAKE-IT  
(OUTSIDE MARICOPA COUNTY)

**Novak Environmental, Inc.**  
4574 North First Avenue #100 Tucson, AZ 85718  
Phone 520.206.0591 • Fax 520.882.3006  
Landscape Architecture • Natural Resources • Planning • Mitigation

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**IRRIGATION PLAN**

Project: **RESIDENCES AT MORNING VISTA**

Sheet Number: **L-6**

Sheet 6 of 6

**Professional Engineer Seal**  
KAREN M. CESARE  
Arizona U.S.A.  
Exp. 8/30/24

Job Number: NE 21024  
Designed By: TC/SS  
Drawn By: TC/SS/RA  
Checked By: KC  
Date: AUG. 2023  
Scale: N/A  
Sheet Number: L-6

GRADING PERMIT #2501679