Standards and Specifications

VALLEY-WIDE
RECREATION &
PARK DISTRICT

2026

Creating community since 1972

Edition 5

Valley-Wide Recreation and Park District
901 W. Esplanade Ave., San Jacinto, CA
www.GoRecreation.org

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Valley-Wide Recreation and Park District's Standards and Specifications are continually refined to reflect evolving industry best practices and community needs. The Planning and Public Works Department extends its sincere appreciation to all staff and partners whose expertise and contributions continue to drive its success.

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VALLEY-WIDE RECREATION AND PARK DISTRICT STANDARDS AND SPECIFICATIONS

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Volume 1

Chapter 1
Introduction

VALLEY-WIDE RECREATION AND PARK DISTRICT
STANDARDS AND SPECIFICATIONS

Valley-Wide Recreation and Park District (the "District" or "Valley-Wide") was formed in July 1972, established under the authority of the California Public Resources Code Section 5780 et seq. and serves the central portion of western Riverside County. Within its current boundaries, Valley-Wide provides services within the cities of Hemet, San Jacinto, a portion of the City of Menifee, and to the unincorporated communities of Aguanga, French Valley, Homeland, Romoland, Sage, Valle Vista, and Winchester. The current total area served is approximately 530 square miles with an overall Sphere of Influence of 800 square miles.

This publication is for the purpose of providing information to the property owner, developer, engineer, architect, or any other interested party regarding the requirements and expectations of Valley-Wide for development projects in our jurisdiction. The information contained herein also includes information about park and landscape improvements that will be accepted for Valley-Wide maintenance and operations. It is highly recommended for all parties involved to read this entire publication to ensure that anything shown on their exhibits, plans, and specifications does not conflict with Valley-Wide standards.

1.0 Introduction

1.1 Valley-Wide Recreation and Park District (the "District" or "Valley-Wide") shall be considered Valley-Wide Recreation and Park District inspection personnel, consultants, or other approved team members hereafter.

1.2 Properties maintained by Valley-Wide are comprised of, but not limited to, the following categories:

a. Park and Recreation Facilities

1. Neighborhood Parks
2. Community Parks
3. Sports Parks
4. Walking and bicycle trails
5. Paseos

b. Streetscapes

    1. Medians and Parkways

    2. Entries and Entry Monuments

c. Miscellaneous Uses

    1. Detention Basins

    2. Drainage Channels

    3. Open Space

1.3 The information contained within this publication only applies to Valley-Wide maintained areas and not the entire project site. Valley-Wide shall not be responsible for any conflict related to the use or reproduction of standards, specifications or details for any project outside of the District.

1.4 The property owner, developer, engineer, architect, or any other interested party is solely responsible for complying with all other agency requirements as required by law for all areas within the project.

1.5 Whether shown on the plans or not, the project shall comply with all standards, specifications and details. In the event of any contradiction, the higher and more stringent standard, specification or detail shall prevail.

END OF SECTION

Chapter 2
Planning Requirements

PLANNING REQUIREMENTS

PLANNING REQUIREMENTS (GENERAL)

Valley-Wide Recreation and Park District (the "District" or "Valley-Wide") shall be considered Valley-Wide Recreation and Park District inspection personnel, consultants, or other approved team members hereafter.

This section establishes the planning requirements for development projects within the District's service area and provides step-by-step guidelines for clear direction to avoid unnecessary delays.

It is highly encouraged that prior to tentative tract map submission to Riverside County (County), the developer meets with Valley-Wide to discuss the layout of the project to determine the appropriate size and placement of any parks that will be owned and maintained by the District. Early engagement with the District will assist the developer and/or applicant to better coordinate project development through Valley-Wide's planning process. Based on condition requirements and circumstances, projects may need to provide a fully developed park.

1.0 Planning Project Start-Up Meeting

1.1 Prior to submission of any plan, the owner, developer, engineer, and/or architect must schedule an initial project meeting with District representatives to discuss the project requirements, proposed parcel dedications, and proposed areas to be maintained by the District. Contact the Planning Department at (951) 654-1505 to schedule a meeting.

1.2 Valley-Wide generally requires five (5) acres of developed parkland per 1,000 residents. Park acreage is calculated by the following formula:

(No. of dwelling units) x (Persons per dwelling units) x (Acres per Capita)

Refer to Valley-Wide's adopted Master Plan for additional information.

1.3 Parks under five (5) acres are subject to Valley-Wide review for acceptance and approval.

1.4 Park land must be usable land in which all required amenities can be provided. Flood conveyances, basins, channels or slopes will not be considered active park areas. Areas that have utility easements and are not buildable shall not be considered as required park acreage.

1.5 All park land must also meet the minimum requirements as indicated in the conditions of approval by the County of Riverside and/or local city (if applicable).

1.6 The following items must be provided at the time of the meeting:

a. Assessor's Parcel Number(s) for all property(s) discussed.

b. Site plan or proposed progress tentative tract map containing the total residential units, total acreage, total proposed park acreage, open space, channels, basins, or other area proposed to be maintained by the District.

c. Owner, developer, engineer, and/or architect contact information.

d. Project commencement timeline.

e. Projected map recordation timeline.

f. Any other additional items as determined by Valley-Wide based on the specific project area or characteristics.

2.0 Planning Fees and General Submittal Requirements

2.1 Valley-Wide requires all development projects to provide a Developer Deposit which shall be paid upon original engagement with Valley-Wide. The developer deposit is an account from which project-related expenses are expended. Expenses include contract services and District administrative time. Contract services include, but are not limited to, project coordination meetings, review and approval of plan checks and contractor submittals, inspections, and other project-specific costs listed within this section. Subsequent deposits will be required when development occurs and as needed.

2.2 Prior to submission of any plan, the owner, developer, engineer, and/or architect must schedule an initial project meeting with District representatives to discuss the project requirements, proposed parcel dedications, and proposed areas to be maintained by the District. Contact the Planning Department at (951) 654-1505 to schedule a meeting.

2.3 Valley-Wide must approve all improvement plans with improvements to be maintained by the District, including but not limited to parkways, monument entries, parks, detention basins, trails, walls, and fences.

2.4 Before improvement plans can be submitted, the following items must be submitted to the District for review:

a. Environmental Impact Review documents

b. Specific Plan (if applicable)

c. Pre-Application Review (PAR) submittal to the County of Riverside

d. Tentative Tract Map or Tentative Parcel Map

e. Preliminary Maintenance Exhibit

f. Preliminary Park Concept Plan

3.0 Environmental Impact Report (EIR)

3.1 Applicant and/or County/Planning Authority shall notify the District of an EIR.

3.2 The EIR should be the first review for a new development for the District. District's review of the EIR should document early on any impacts that the proposed development could have on recreational programs and park services.

4.0 Specific Plan (SP)

4.1 Applicant and/or County/Planning Authority notifies District of an SP. SPs should be developed when there is a larger development (500+), or as directed by the County, and should be sent to the District for review and comment, consistent with the County's Ordinance 460.

4.2 This SP stage is when park sizes and locations, and overall project theme and concepts should be determined, consistent with the District's Master Plan and Standards and Specifications.

4.3 Regardless of other agency approvals for an SP, it is the responsibility of the developer to ensure compliance with the District's Standards and Specifications.

5.0 Pre-Application Review (PAR) and Development Advisory Committee (DAC)

5.1 The PAR is the preliminary submittal to the County of Riverside Planning Department to receive a preliminary review of the project.

5.2 The DAC is the group of County departments that review PARs and provide comments and initial conditions of approval, prior to entitlement of any tract.

5.3 It is recommended for applicants to review their projects with the District concurrently and receive input to be shared with the DAC.

5.4 This is the time for the District to provide conditions that will be approved through the County/Planning Authority within the entitlement process, prior to Tentative Map Approval.

6.0 Tentative Tract Map (TTM) and Tentative Parcel Map (TPM)

6.1 Proposed TTMs and TPMs should be forwarded to the District for review and comment prior to the PAR submittal to the DAC.

6.2 Per Ordinance 460, the applicant shall coordinate park location and size with the public agency prior to TTM submittal. District needs ample notice from both the applicant and County/Planning Authority Planning Department to be able to review and provide needed conditions.

6.3 Prior to TTM approval, a Preliminary Maintenance Exhibit (PME) and Preliminary Park Concept (PPC) must be submitted to the District for review and approval, to ensure proper conditions of approval applicable to the District's requirements are provided.

6.4 The PME and TTM will be used to confirm what areas outside of the County right-of-way will be maintained under a maintenance easement and lots proposed to be owned by an HOA, the District, or other agency.

a. This may not be required for TPMs as determined by the District.

6.5 Approval of the PPC is for the purpose of approving the park size, location, and shape. This confirms what the District intends to maintain including the necessary park amenities to be provided, prior to any entitlement of the land. PPC approval is still subject to the review of the final Park Concept Plan, which finalizes the final park layout and specific amenities required.

6.6 Prior to TTM or TPM approval, the District will provide a pre-entitlement letter to the County/Planning Authority planner indicating recommended approval or comments to be addressed. Comments will be provided to ensure consistency with the District's Master Plan and Standards and Specifications. The Letter will also confirm if a Local Agency Formation Commission (LAFCo) process is required, if the project is outside of the current District Boundaries. The County/Planning Authority planner will

request landscape concept plan approval prior to TTM or TPM approval. Once the TTM or TPM is approved by the County /Planning Authority and the conditions of approval have been given, the District will meet with the applicant to review the submittal documents needed to meet the conditions related to the District.

7.0 Preliminary Maintenance Exhibit (PME)

7.1 All projects within Valley-Wide's service territory shall be processed in accordance with the MOU between the County and Valley-Wide.

7.2 The PME shall be submitted for all projects within the District service area. The PME shall be based on the proposed TTM layout to be submitted.

7.3 All PME submittals must be submitted with the proposed TTM.

7.4 The PME standard format shall be:

a. PDF file with legible linework and text.

b. The same page size and scale as the TTM.

7.5 The PME base linework must show the following items:

a. Site linework from the TTM showing all proposed streets, rights-of-way, residential lots, open space lots, basin lots, park lots, commercial lots, mitigation areas, etc.

b. Street names and right-of-way distances.

c. Lot numbers for all proposed lots with the final lot circled.

d. Adjacent properties and land use designation.

7.6 The PME must contain the following information:

a. Title block with the owner, engineer, and architect information, and project name and tract or parcel map number.

b. Vicinity map, north arrow, and graphic scale.

c. All proposed landscape areas color-coded with a legend indicating the proposed maintaining agencies, including, but not limited to,

County, Riverside County Flood Control and Water Conservation District (RCFC&WCD), HOA, private homeowner, and District areas.

d. Location, size, and shape of the proposed park(s), parkways, slopes, trails and basins to be maintained by the District.

1. All proposed landscape areas outside of a County right-of-way must be identified as open space lots or easement areas within private lots.

e. Assumed locations of future walls that provide the boundaries of street-facing landscape proposed to be maintained by the District.

f. Approximate quantities of each type of landscape area.

g. Quantity of all proposed residential lots, basins, and open space lots

7.7 PME review and comments:

a. The District will review the submitted PME and provide preliminary determinations of what areas must be maintained by the District in coordination with County staff as needed.

b. A PPC must be submitted separately from the PME when a park is proposed or required, to determine if the proposed park(s) meet the project's ultimate park obligations.

7.8 The PME should be designed by a registered Landscape Architect or the project's registered engineer. The project engineer must be capable of understanding the requirements of the PME as it relates to landscape maintenance and related components, such as POC locations and waterline connections.

7.9 The PME and TTM will be used to confirm what areas outside of the County right-of-way will be maintained under a maintenance easement and lots proposed to be owned by an HOA, the District, or other agency.

8.0 Preliminary Park Concept (PPC)

8.1 A PPC must be submitted with the TTM and PME when a park is proposed or required, to determine if the proposed park(s) meet the project's ultimate park obligations.

8.2 The PPC must contain the following:

a. Title block with the owner, engineer, and architect information, and project name and tract number

b. Vicinity map, north arrow, and graphic scale

c. Scaled layout with information of adjoining properties or roads

d. Detailed linework design of the proposed park layout and general amenities, including but not limited to ballfields, soccer fields, courts, shelters, tot-lots, restrooms, walkways, and parking lots

e. Colored renderings, landscape species, and tree and shrub layouts are not required

8.3 The PPC must provide preliminary elevations based on the TTM level preliminary grading plan to ensure all the required amenities will fit.

8.4 The PPC must be designed by a registered Landscape Architect.

8.5 Refer to the District's park prototypes (Figures E, F and G), Chapter 4 Park Standards, and Chapter 10 Grading Standards for additional information to ensure the proposed PPC can be able to be in compliance with all District Standards and Specifications.

9.0 Maintenance Exhibit (ME)

9.1 An ME shall be submitted for all projects within the District service area. The ME shall be based on the information within the approved PME and updated based on project engineering.

9.2 The ME must be submitted along with the available project engineering for review and progress comments by the District. The ME will not be approved until all required engineering is provided for review by the District.

9.3 The ME shall correspond with all rough grading plans, water quality management plan, street improvement plans, storm drain plans, wall and fence plans, and final tract maps. It is the responsibility of the person making the ME to ensure the ME is based on the latest version of the referenced plans.

9.4 All landscape areas, including slopes, open space lots, streetscape, basins, and parks shown on the ME will be reviewed with the most current grading plan to ensure consistency between the ME and project engineering.

9.5 Irrigation POC locations must be shown on the ME.

9.6 All wall locations shown on the ME will be reviewed with the wall and fence plans to ensure consistency. Wall locations will also be reviewed with the grading plans and final tract maps.

9.7 All areas within the ME shown to be outside of the County right-of-way shall be reviewed with the final Tract Map to ensure easements and lot ownership for areas maintained by the District are properly identified.

9.8 If the referenced plans are not prepared, the ME may be subject to return without review or may be reviewed, but will only be considered an updated PME at the sole discretion of the District.

9.9 The ME shall be updated as needed whenever project engineering revisions are made.

9.10 The ME must include everything with the approved PME, showing all areas and items to be maintained by the District and other maintenance entities in units of measurement in square footage for areas and linear footage for lengths and counts. All items must be submitted with an AutoCAD file containing the following items:

a. Closed polygons and color-coded hatching for each landscape area type, separated by layer name and color. Refer to Chapter 3 Plan Standards Section 5.0 for additional formatting requirements.

b. Area types to be separated must be as follows:

1. Parkway irrigated landscape areas with slopes separated

2. Areas within designated Transportation Corridors

3. Parks (separated if multiple parks exist)

4. Basin irrigated landscape areas with slopes and bottoms separated

5. Non-irrigated landscape areas

6. Decomposed granite trails

7. Access roads by material type

8. Concrete areas for walkways within open space lots (outside of parks)

9. Transportation corridor areas

c. Slope areas shall be separated from flat areas with the following factors:

1. Flat areas must be separated from slope areas

2. 2:1 slope areas shall have a factor of 1.118 added to the quantities

3. 3:1 slope areas shall have a factor of 1.054 added to the quantities.

4. 4:1 slope areas shall have a factor of 1.03 added to the quantities

d. Line type-specific polylines for all linear foot types for the following items:

1. Walls

2. Fencing

3. Trail concrete headers

4. Mow curbs

5. Drain pipes

6. Drainage ditches

e. Block symbols for count items:

1. Water Meters (POCs)

2. Monument signs

3. Basin forebays

4. Gates

f. Locations of all proposed POC's.

9.11 If the community has a park or paseo with amenities, the amenities and layout shall be shown on the ME. Please note that park amenities shown are for illustrative purposes only and do not constitute a final park layout or the required amenities and quantities.

9.12 The ME must show all lot numbers and indicate the final number of Dwelling Units (DUs) based on final engineering and the final tract map.

9.13 When other entities, such as the County of Riverside and the Riverside County Flood Control and Water Conservation District, maintain areas within the same areas as proposed to be maintained by the District, additional coordination is needed to ensure maintenance agreements and design compliance are feasible, prior to the approval of the ME.

9.14 The ME must indicate if streets are proposed to be privately maintained.

9.15 It is the responsibility of the project engineer, landscape architect, or developer to notify the District of any special conditions, water quality requirements, conservation easements, wildlife corridors, protective habitats, etc.

9.16 The quantities shown on the ME must be certified by the project landscape architect or engineer for each category.

9.17 The ME is used to generate CFD maintenance budgets. The ME must be approved prior to any CFD budget approval or CFD formation.

9.18 A separate ME may be required for civil engineering items and projects within a Caltrans right-of-way.

9.19 Once the ME is approved, landscape construction plans can then be submitted for review.

10.0 Recycled Water Use Exhibit (RWUE)

10.1 The RWUE is a requirement of Eastern Municipal Water District (EMWD) for all projects to be irrigated with recycled water. The RWUE must be consistent with the Valley-Wide approved ME. Valley-Wide approval of the RWUE may be required prior to obtaining EMWD's approval.

10.2 The RWUE can be submitted after ME approval or concurrently with the 2nd ME submittal.

10.3 Areas of irrigation per POC, including meter locations, and the meter sizes must be approved by the District.

10.4 The RWUE must be approved by EMWD and Valley-Wide before the submittal of the irrigation plans.

10.5 Approval of the RWUE by EMWD does not constitute approval of the meter locations and areas to be irrigated. Meter locations and areas to be irrigated must be approved by Valley-Wide. It is the developer's responsibility to ensure the proposed District-maintained items and areas shown on the RWUE correspond with District requirements.

11.0 Local Agency Formation Commission (LAFCo)

11.1 If the project is within the District's service territory and not part of a prior annexation, the applicant must go through a LAFCo annexation before a District CFD process. Valley-Wide will prepare a Plan of Services Letter for the applicant at the applicant's request.

11.2 Once the LAFCo annexation has been approved, the District can proceed with the CFD annexations. If the property is already in the District's jurisdiction, then this step is unnecessary.

11.3 LAFCo proceedings can occur directly after TTM or TPM approval if desired by the applicant.

12.0 Special Finance District Formations and Annexations

12.1 After ME approval, maintenance quantities are forwarded to the District's Special Finance District engineer for creation of appropriate Community Facilities Districts (CFD), which may include either or both a landscape and park maintenance CFD, and a Water Quality Management Plan (WQMP) CFD for dedicated maintenance funding.

12.2 Prior to the creation of CFD budgets, final project-engineered plans must be submitted and reviewed to confirm compliance with approved ME and District's Standards and Specifications.

12.3 As a condition of the CFD establishment and the District's acceptance to maintain improvements, the applicant agrees to fully comply with the

improvements as shown on the District-approved ME and the District's Standards and Specifications.

12.4 The applicant has the sole responsibility to ensure that any subsequent construction engineering and architectural plans related to improvements to be maintained by the District are submitted, reviewed, and approved by the District to confirm compliance with District Standards and Specifications.

12.5 Approvals for any plan or document from other agencies with improvements or standards that are not in compliance with approved ME and District Standards and Specifications are subject to revisions to comply with our said standards, as a condition of our acceptance of maintenance.

12.6 Establishment of CFDs does not stipulate that the District maintain improvements when improvements are out of compliance with said standards.

12.7 Upon completion of formation and/or annexations of the necessary CFDs, the District will send a letter to the planner to clear the appropriate condition. If the project is not in the District's jurisdiction, the applicant must go through a LAFCo annexation prior to a Valley-Wide CFD process (Refer to Section 11 above).

13.0 Park Agreement (PA)

13.1 Quimby Agreements (QA) are conditioned by the County to be executed prior to map recordation. The District requires a Park Agreement (PA) with the developer that will satisfy the QA condition.

13.2 In accordance with County Ordinance 460 and the District's Master Plan, the District will coordinate the conditions of approval with the Planning Department to collectively determine if the project is to provide a park or pay in lieu fees to the District.

13.3 Once the PA is fully executed, the District will notify the County that the agreement has been executed.

14.0 Final Map (FM)

14.1 The FM is the final approval of a tract subdivision and should not be recorded until the required conditions are met. The District-related FM conditions are generally an approved ME with formation and/or annexation of necessary CFDs and an executed PA.

14.2 Prior to map recordation, final subdivisions maps must be reviewed by Valley-Wide to ensure the proper language, easement lots and fee title lots adequately represent areas to be maintained by Valley-Wide. The developer will submit concurrently to Valley-Wide and the County/Planning Authority the FM for review and approval. The District will compare the lots to the approved ME and request easements and/or fee title for areas to be District-maintained where appropriate.

14.3 The language on the final map under the owner's statement shall read as follows:

a. For parkway landscaped areas: "The real property described below is dedicated as an easement for public purposes to the Valley-Wide Recreation and Park District, County of Riverside, State of California: lying within Lots (include the appropriate lot numbers), as shown hereon. The dedication is for landscape and maintenance purposes."

b. For basins: "The real property described below is dedicated as an easement for public purposes to the Valley-Wide Recreation and Park District, County of Riverside, State of California: Water Quality Basin Lots (include the appropriate lot numbers), as shown hereon. The dedication is for open space, landscape drainage and water quality purposes."

c. For parks: "The real property described below is dedicated in fee for public purposes to the Valley-Wide Recreation and Park District, County of Riverside, State of California: Lot (park lot number), as shown hereon. The dedication is for park and landscape maintenance purposes."

14.4 The language on the final map for signature under "Valley-Wide Recreation and Park District" shall read "The Valley-Wide Recreation and Park District, County of Riverside, State of California, hereby approves the tract map but does not now accept the irrevocable offers of dedication made hereon." It shall also include the date and the General Manager's name.

14.5 Generally, the District will accept ownership in fee title for parks or open areas with reasonable recreational improvements. Easements for maintenance purposes should be provided to the District for all other areas to be Valley-Wide maintained per the approved ME and engineering plans.

14.6 In the event that any proposed area to be maintained by the District was not provided on the FM, the developer shall be required to provide an easement for the area. Legal and plat for these areas must be reviewed and approved by Valley-Wide. If the developer is unable to provide an easement, the area is subject to rejection of maintenance by the District.

14.7 It is the responsibility of the developer, engineer, and landscape architect to collaborate with each other to confirm all landscape areas outside of the County right-of-way proposed to be District-maintained are shown on the FM with either lot ownership or maintenance easements.

14.8 The County/Planning Authority will not allow any building permit (except for model homes) to be issued until the FM has been approved and recorded.

14.9 Once the FM is plan check approved by the District, an electronically signed copy will be sent to the County/Planning Authority for further processing. If the developer desires signed mylars, then Valley-Wide will sign them after the Park Agreement is fully executed and the CFDs are established.

14.10 Valley-Wide will approve the map but does not accept the Irrevocable Offers of Dedication (IOD) until all improvements have been installed, inspected and accepted by Valley-Wide.

14.11 All IODs are accepted by Valley-Wide's Board of Directors by resolution and the resolution will be recorded with the County of Riverside.

15.0 Conceptual Plan Review

15.1 Conceptual landscape plans may be submitted prior to the submittal of construction drawings. Conceptual plan approval can be waived at the discretion of the District; however, revisions to construction drawings prior to conceptual approval shall be made at the cost of the architect or developer. The District reserves the right to make changes to the project at any time.

15.2 Conceptual Plan review is primarily for projects that will have a park or paseo located in the subdivision; however, conceptual landscape plans are recommended to be submitted to the District for review to confirm that planting layouts and species are approved.

15.3 The District reviews the plans for consistency with District Standards and Specifications, including the location of all required amenities. The District will also review the landscape areas to ensure consistency with the approved ME. Conceptual Plans are not construction drawings, and any approval will not constitute a developer to begin construction.

15.4 Refer to Chapter 3 Plan Standards Section 3 for additional requirements.

16.0 Construction Drawings (CDs) Review

16.1 All CDs must be submitted to the District in PDF digital format with first-generation plotting. Scanned copies of printed plans will not be accepted. It is the responsibility of the developer/architect to ensure that drawings are designed per District standards.

16.2 No work shall commence until all related CDs are approved by Valley-Wide and the County, and all pertinent contractor submittals have been submitted to the District for review.

16.3 The District shall review submitted plans and provide digitally processed written comments on the plans. Rough grading plan check comments will generally be purple in color to differentiate from the County of Riverside plan check comments in red. All other plans will generally be red in color.

16.4 As a condition of District maintenance, all comments must be addressed to the satisfaction of the District.

16.5 In the event of any potential conflict between District comments and other agency comments or conditions, the developer, engineer, or landscape architect must bring this to the attention of the District.

16.6 Approval of CDs by other agencies does not constitute District approval. Any CD that is not revised to meet the requirements of the District will result in the District's denial to maintain proposed improvements.

16.7 Once the landscaping plans are approved, the District digitally signs the plans and sends them to the County for further processing. All other plans that are Valley-Wide approved must be submitted to the County for their review and approval by the developer or its representative.

16.8 The District must review all plans for any improvement or related improvement to be maintained by the District, including but not limited to rough grading, precise grading, storm drain, street improvement, wall and fence, basin drainage, landscape plans and parks.

16.9 If the project is irrigated with recycled water, EMWD approval of irrigation plans shall be required before District signature on landscape plans.

16.10 The landscape plan must have the approved Maintenance Exhibit provided on the second sheet, along with the County of Riverside landscape encroachment permit.

16.11 The landscape plan must be submitted along with a completed Landscape Plan Submittal Checklist provided within the Standards and Specifications.

16.12 All new submittals will not be accepted until all required plans have been submitted. Partial plan submittals are subject to rejection. The developer must coordinate with engineers and architects to provide a complete submittal package that includes all required plans.

16.13 The District does not review preliminary working drawings. All incomplete plans will be rejected without review.

16.14 All proposed utilities, drainage structures, easements or other applicable site information must be shown on landscape plans.

16.15 It is the responsibility of the engineer and landscape architect to provide all necessary title blocks for other agency approvals. Projects with parkways within a public right-of-way must have the applicable approval blocks and format as required by the County of Riverside Transportation Department format. Projects with flood conveyance features to be maintained by the RCFC&WCD must have the applicable approval blocks and format as required by the RCFC&WCD. All required irrigation plans shall have applicable approval blocks and format as required by the governing water district.

16.16 It is recommended for engineers and landscape architects to submit plans concurrently to all other required agencies.

16.17 Compliance with the specific plan for the County of Riverside does not constitute District approval.

16.18 It is the developer's responsibility to review the District's complete Standards and Specifications and conditions of approval prior to completion of their project budget costs. The District is not responsible for costs related to complying with Valley-Wide Standards and Specifications not identified in the County of Riverside's specific plan.

16.19 Refer to Chapter 3 Plan Standards Section 3 for additional requirements.

17.0 Construction Phase

17.1 After the plans have been signed by all appropriate agencies and contractor submittals have been submitted to Valley-Wide for review, a pre-construction conference (pre-con) meeting is held.

17.2 To schedule the pre-con, email the District for further requirements.

17.3 The developer or contractor's representative is responsible for contacting the District for inspections during the duration of the construction phase.

17.4 The District will provide inspections for compliance with District standards. This includes California Building Code compliance for accessibility of Valley-Wide maintained areas only.

17.5 The developer or contractor's representative must coordinate with other agencies for their respective inspections (i.e., Building and Safety).

18.0 Maintenance Establishment Period

18.1 After the applicable park construction, landscape, basins, and trail improvements are complete per District requirements, the landscaped area(s) must enter the maintenance establishment period for a minimum of 90 days.

18.2 Prior to the start of maintenance as determined by the District, the developer or contractor's representative must ensure all required District punch lists are completed. The developer or contractor's representative must contact the District to obtain a list of all requirements related to the start of maintenance and final acceptance.

18.3 During that time, it is the responsibility of the developer to make sure all landscape areas are thriving and all irrigation, including meters, backflow devices, and controllers, are in working order. Any replacement is the responsibility of the developer.

18.4 Delays in submitting turnover documents to Valley-Wide may extend the maintenance establishment period and improvements remain the developer's responsibility.

18.5 It is the developer's responsibility to schedule inspections every 30 days to review any outstanding issues from previous inspections, and to ensure the landscaping is thriving. Failure to complete monthly inspections may constitute a restart of the maintenance period.

18.6 If any project area is not complete for turnover or not all turnover documents have been received and approved by Valley-Wide, the project shall remain in an extended maintenance period until such time as the District deems it complete.

18.7 The District reserves the right, prior to final acceptance of the project, to require a maintenance bond against all defects in workmanship and materials that may become apparent during a period of one year from final acceptance by Valley-Wide. Contractor shall be responsible for the cost of the bond.

18.8 Final acceptance for all projects to be turned over for District maintenance shall be the first of each calendar month. Failure to receive approval for all open punch list items prior to the end of the month shall result in additional maintenance performed by the contractor until formal acceptance at no additional cost to the District.

18.9 Refer to Chapter 26 Maintenance Specifications for additional maintenance requirements.

19.0 Utility Exhibit Standards

19.1 The developer and/or contractor shall prepare and submit a Utility Exhibit to the District for review and approval prior to project maintenance acceptance and transfer of utilities.

19.2 Utility Exhibit shall be a reduced tract map or site plan indicating the sizes, locations, and Identification numbers for all utilities to be transferred to the District. Below is a list of utilities to be shown on the exhibit:

a. Water meter

b. Backflow device

c. Electric meter

d. Gas meter (if applicable)

e. Cable/phone (if applicable)

f. Irrigation controller

g. Pump and fertigation (if applicable)

19.3 Utility Exhibit shall have a title block indicating the following items:

a. Project name

b. Owner/developer name, address, telephone number, and contact person

c. Project street address, location, and tract number

d. Date of exhibit

e. Sheet number block (indicating sheet (x) of (x))

19.4 Utility Exhibit shall have a base file to include the following:

a. Sidewalks, ramps, curbs, walls, and fences

b. Streets

c. Buildings

d. Property lines and tract boundaries

e. Lot numbers

19.5 Each utility shall have a designated symbol and shall be shown on a legend to describe the utility name, meter number and address, size, identification number, and area of coverage.

19.6 Utility Exhibit shall include the name and telephone number of each public utility purveyor.

19.7 The water meter number and size shall be shown on the Utility Exhibit. The landscape area irrigated by each water meter shall be separately shown, and the exhibit shall include the square footage covered by each meter. Each irrigated area shall be shown with a specific-colored coded hatched boundary, including separation of transportation corridor, irrigated landscape areas and non-irrigated/hardscape improvements. Square

footage for turf and planter areas shall be calculated separately, including slope factors per Maintenance Exhibit requirements.

19.8 The model number, size, and serial number of each backflow device shall be included on the exhibit.

19.9 The physical address, model number, and amperage size for the electric meter shall be shown on the exhibit.

19.10 If a natural gas meter is within the project, all equipment supplied by the gas meter shall also be shown on the exhibit. Locations of the gas equipment shall also be shown on the exhibit.

19.11 If cable or phone line is within the project, all equipment supplied by cable or phone shall be shown on the exhibit.

19.12 The model number, serial number, and station size for all irrigation controllers, including communication devices shall be shown on the exhibit.

19.13 The model number, horsepower size, and serial number of each booster pump shall be shown on the exhibit.

19.14 The model number, capacity, and serial number of each fertigation system shall be shown on the exhibit.

19.15 Size of exhibit shall be determined by the project size in order to legibly identify and note all utility information.

19.16 Utility Exhibits shall be created in AutoCAD with a similar format as the Maintenance Exhibit. Refer to Chapter 3 Plan Standards Section 5.0 for Utility Exhibit AutoCAD Standards. Final version shall be sent as a pdf.

19.17 Utility Exhibits must be reviewed along with utility bills to ensure all utility locations and addresses are confirmed to be correct.

20.0 Project Final Acceptance

20.1 Sufficient special finance district revenue must be available for the District to assume maintenance of any project. It is the developer's responsibility to communicate with the District the expected completion date and acceptance date of a project to determine whether Valley-Wide will have sufficient funds to accept the improvements for maintenance.

20.2 All required project documents must be submitted to the District 60 days prior to acceptance of any project. The developer or contractor representative must contact the District to obtain a list of all required project documents for final project acceptance.

20.3 The developer must submit a notarized deed for all properties that are to be deeded over to the District in fee title or as an easement. If IODs are offered on the final map, then deeds will not be required.

20.4 All property transfers and easements shall go to the District's Board of Directors at its regular monthly meeting for final approval prior to maintenance acceptance. The developer shall be responsible for all costs and processes to record deeds and easements.

20.5 Refer to the District's Turnover Checklist for specific items required to be completed 60 days prior to the Final Project Acceptance.

END OF SECTION

Chapter 3
Plan Standards

PLAN STANDARDS

PLAN STANDARDS (GENERAL)
Valley-Wide Recreation and Park District (the "District" or "Valley-Wide") shall be considered Valley-Wide Recreation and Park District inspection personnel, consultants, or other approved team members hereafter.

This section establishes the requirements for development projects within the District's service area and provides step-by-step guidelines for clear direction to avoid unnecessary delays.

1.0 Conceptual Plans

1.1 Conceptual plans must be submitted prior to the submittal of construction drawings. If the landscape architect and/or developer desires to commence designing of construction drawings prior to conceptual approval, any changes in working drawings related to conceptual plan comments shall be revised at the cost of the architect/developer. Additionally, Valley-Wide reserves the right to make changes to the project at any time.

1.2 Construction plans submitted without conceptual plan approval are subject to return without review.

1.3 Conceptual plan approval can be waived at the discretion of Valley-Wide.

1.4 All conceptual plans must be submitted to Valley-Wide for plan approval. Drawings must comply with all of Valley-Wide's standards.

1.5 Conceptual plans shall contain the following:

a. Overall site map or tract map showing locations of all parks, trails, channels, basins, and/or open spaces.

b. Vicinity Map

c. Street Names

d. North Arrow

e. Adjacent land use

f. Proposed park layout including but not limited to:

1. Parking lot and concrete layout

2. Restroom building

3. All proposed amenities, e.g., ball fields, soccer fields, shelters, play courts, tot lots, picnic areas, lighting, sports lighting, decomposed granite trails, walking trails, etc. and quantities of each amenity

g. Turf and planter layout

h. Tree locations

i. Plant palette

j. Fencing

1.6 Title blocks for all drawings shall contain the following:

a. Project name

b. Owner/developer name, address, telephone number, and contact person's name, phone number, and email address

c. Landscape architect's name, address, telephone number, email address and name of person who prepared the plans

d. Landscape architect's seal signed and dated on each sheet

e. Project street address, location, point-of-connection number and tract number

f. Date of drawings

g. Revision block

h. Sheet number block (indicating sheet (#) of (#))

i. Valley-Wide approval signature block in the lower right-hand corner on all sheets

2.0 Park Plans

2.1 Refer to Chapter 4 Park Standards for general park requirements.

3.0 Construction Drawings

3.1 Construction drawings must be no larger than 24” x 36” in size, unless otherwise approved by the District.

3.2 Drawing scale shall not exceed 1”=40’-0” for rough grading plans, unless approved by the District.

3.3 Drawing scale shall not exceed 1”=30’-0” for precise grading plans, unless approved by the District.

3.4 Drawing scale shall not exceed 1”=20’-0” for irrigation and planting plans, unless approved by the District.

3.5 Graphic scales shall be shown on all scaled drawings.

3.6 Properly aligned and numbered match lines shall be used when multiple sheets are required.

3.7 Title blocks for drawings shall include:

a. Project name and tract number

b. Owner/developer name, address, telephone number, and contact person

c. Engineer or landscape architect’s name, address, telephone number, and name of person who prepared the plans

d. Engineer or landscape architect’s seal shall be provided and signed and dated on each sheet.

e. Project street address and location

f. Valley-Wide approval signature block in the lower right-hand corner on all sheets (See Figure “A”)

g. Hold Harmless Clause (See Figure “B”)

h. Approval Time Limitation Note (See Figure “C”)

i. Date of drawings

j. Revision block (update for every submittal)

k. Sheet number block (indicating sheet (#) of (#))

3.8 Title sheets shall include:

a. Vicinity maps, index maps.

b. Contents with sheet description and sheet numbers

c. Valley-Wide's maintenance area square footage

d. Applicable utility company names and telephone numbers

e. Note to read, "All work must conform to Valley-Wide's current standard landscape specifications."

f. Point-of-connection (POC) number

g. Hold Harmless Clause (See Figure "B")

h. Approval Time Limitation (See Figure "C")

i. ADA Compliance Note (See Figure "D")

3.9 Figures "A", "B", "C" and "D" must be incorporated on all drawings.

3.10 Specification Sections for related plans must be incorporated into drawing sheets as part of a complete plan set, including but not limited to sewer, water, storm drain, landscape construction, irrigation, planting, and maintenance specifications.

3.11 Valley-Wide Standard Details must be incorporated into drawing sheets. No generic installation details will be accepted when a Valley-Wide detail exists.

3.12 No modification of District Details or Specifications shall be allowed.

3.13 It is the responsibility of the project engineer, landscape architect and developer to notify Valley-Wide of any special conditions, water quality requirements, conservation easements, wildlife corridors, protective habitats, etc. that may inhibit construction.

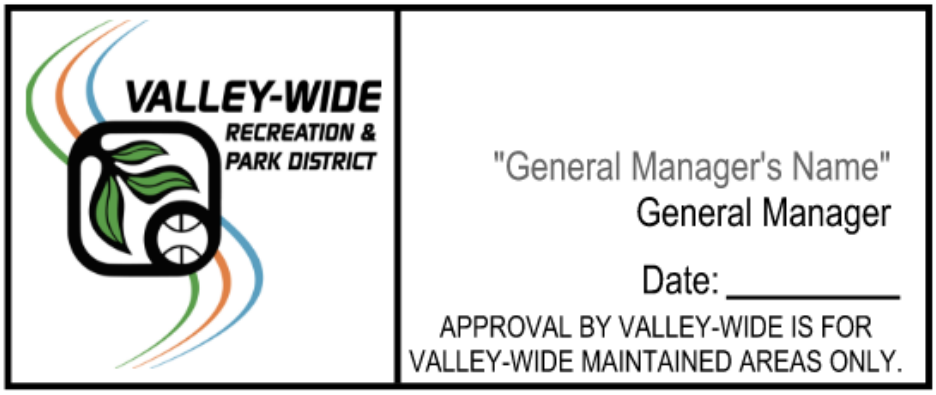
3.14 All construction drawings shall be drawn in AutoCAD or other approved computer aided drafting format.

3.15 Construction drawings should not have any linework or text shown in red. The color red shall be used for plan check review comments by the District.

4.0 Figures

4.1 The following figures must be provided on the title sheet

a. Figure "A" – Valley-Wide Signature Block (This shall be provided on all pages)



b. Figure "B" – Hold Harmless and Indemnification Clause

HOLD HARMLESS AND INDEMNIFICATION CLAUSE

CONTRACTOR AGREES TO ASSUME SOLE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE OWNER/DEVELOPER, VALLEY-WIDE RECREATION AND PARK DISTRICT, THE COUNTY OF LOCAL JURISDICTION AND, THE ENGINEER AND LANDSCAPE ARCHITECT HARMLESS FROM ANY AND ALL LIABILITY REAL OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER/DEVELOPER, COUNTY OF LOCAL JURISDICTION AND THE LANDSCAPE DESIGNER.

c. Figure “C” – Approval Time Limitation

APPROVAL TIME LIMITATION

APPROVAL SHALL BE SIX (6) MONTHS FROM THE DATE OF APPROVAL SIGNATURE. IF CONSTRUCTION HAS NOT COMMENCED WITHIN THE LISTED TIME, VALLEY-WIDE RECREATION AND PARK DISTRICT RESERVES THE RIGHT TO REVIEW DRAWINGS FOR POSSIBLE REVISIONS DUE TO CHANGES IN SPECIFICATIONS AND STANDARDS.

d. Figure “D” – ADA Compliance Note

THE ENGINEER AND/OR LANDSCAPE ARCHITECT SIGNING THESE PLANS HAS ENSURED THAT ALL PATHS OF TRAVEL FOR INGRESS AND EGRESS AND ALL PROPOSED MATERIALS, EQUIPMENT AND AMENITIES SHOWN ON CONSTRUCTION PLANS, DETAILS AND SPECIFICATIONS MEET ALL APPLICABLE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT ACCESS GUIDE (ADAAG) AND CURRENT CALIFORNIA BUILDING CODE (CBC).

ALL SLOPES SHOWN ON THIS PLAN HAVE BEEN DESIGNED BELOW THE MAXIMUMS ALLOWED BY THE ADAAG AND CBC TO ALLOW FOR REASONABLE CONSTRUCTION TOLERANCES.

THE ENGINEER AND/OR ARCHITECT CANNOT CONTROL MEANS AND METHODS USED BY THE CONTRACTOR; THEREFORE, FINAL ACCESSIBILITY COMPLIANCE IS THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL FAMILIARIZE ALL WORKERS WITH ALL ACCESSIBILITY REQUIREMENTS TO ENSURE ALL ACCESSIBILITY-RELATED FIELD CONDITION CHANGES HAVE BEEN REVIEWED AND APPROVED BY THE ENGINEER AND/OR ARCHITECT TO ENSURE COMPLIANCE.

WRITTEN CONFIRMATION FROM A DISTRICT-SELECTED THIRD-PARTY CERTIFIED ACCESS SPECIALIST IS REQUIRED TO CONFIRM ALL IMPROVEMENTS MEET ALL APPLICABLE ACCESSIBILITY REQUIREMENTS BEFORE DISTRICT ACCEPTANCE.

5.0 AutoCAD Standards

5.1 AutoCAD Standards Overview

a. All engineering and architectural firms must adhere to the District's AutoCAD standards. These requirements ensure file consistency and support efficient audits, GIS integration, and project archiving.

b. The following shall be submitted to the District in AutoCAD or another approved format:

1. Maintenance Exhibit

2. Utility Exhibit

c. All AutoCAD line work shall be drawn on individual layers as defined in this Section.

5.2 AutoCAD Layer Names

a. All specific AutoCAD blocks used within the drawing shall be drawn on layers as defined in this Section.

b. Each drawing file shall be named by the tract number and file type.

5.3 AutoCAD Maintenance Exhibit Format

a. The Maintenance Exhibit file shall be comprised of the following AutoCAD files:

1. Site Base File (from project engineer)

2. Title Block

3. Maintenance Exhibit

b. All areas to be maintained by the District shall be identified as a unit of measurement. The three basic units of measurement are square footage, linear footage, and count.

c. All closed polygons created for the Maintenance Exhibit shall be placed on the associated layer with the standard layer name for that drawing file. Hatch patterns for each item shall have an individual layer name

designation for each closed polygon type, for the District to audit quantities by layer type for each item class.

d. The Maintenance Exhibit shall be submitted to the District with an AutoCAD and PDF file.

e. The Maintenance Exhibit Files shall be named with the project tract number followed by "_ME". Refer to Section 5.15 for standard layer names.

f. Refer to Chapter 2 Planning Requirements Section 9.0 Maintenance Exhibit for additional requirements.

5.4 AutoCAD Utility Exhibit Format

a. AutoCAD Utility Exhibit shall contain information as defined in the Utility Exhibit Requirements section.

b. All required equipment to be included in the Utility Exhibit shall be placed on the AutoCAD drawing in the exact location and coordinates as installed on the project.

c. The Utility Exhibit file shall be comprised of the following AutoCAD files:

1. Site Base File (from project engineer)

2. Title Block

3. Utility Exhibit

d. All utilities to be transferred and maintained by the District shall be identified on the Utility Exhibit.

e. All areas covered by each utility service shall be identified within the drawing by closed polygons to reflect the final as-built conditions. Polygons created for the Utility Exhibit shall be placed on the associated layer with the standard layer name for that drawing file.

f. All areas shall be verified against the approved Maintenance Exhibit and project as-builts. Any discrepancies between the area of coverage between the Utility Exhibit and the approved Maintenance Exhibit shall be reported to the District.

g. The Utility Exhibit shall be submitted to the District with an AutoCAD and PDF file.

h. Utility Exhibit Files shall be named with the project tract number followed by "_UE". Refer to Section 5.16 for standard layer names.

5.5 AutoCAD Line Styles

a. Specific Line Styles shall be used as symbols for all items that are required to be shown on the Maintenance Exhibit with linear feet units, including but not limited to all block walls, tubular steel fencing, vinyl fencing, mow curbs, drainage ditches, and low flow drains as follows:

	DESCRIPTION	AUTOCAD COLOR	LINETYPE
	BLOCK WALL	BLUE	DASHED
	TUBULAR STEEL FENCE	CYAN	FENCELINE1
	VINYL FENCE	GREEN	FENCELINE2
	MOW CURB	MAGENTA	HIDDEN
	DRAINAGE DITCH	YELLOW	PHANTOM
	LOW FLOW DRAIN	30	CENTER

5.6 Color Standards

a. The Maintenance Exhibit and Utility Exhibit shall be printed in color and shall utilize the color hatch and line types as a visual delineation of the components.

b. All colors used in the creation of the color hatch and color line types shall be a District standard as shown on the next page:

	DESCRIPTION	AUTOCAD COLOR	SCREEN
	PARK	92	30%
	BASIN BOTTOM	170	30%
	BASIN SLOPE (2:1)	140	30%
	BASIN SLOPE (4:1)	211	30%
	BASIN FLAT	191	30%
	OPEN SPACE	55	30%
	PARKWAY 1	11	30%
	PARKWAY 2	41	30%
	PARKWAY 3	71	30%
	SLOPE 1 (2:1)	132	30%
	SLOPE 2 (3:1)	161	30%
	SLOPE 3 (4:1)	150	30%
	WALKWAY	9	30%
	GRAVEL	54	30%
	PARKING LOT	42	30%
	DECOMPOSED GRANITE	30	30%

c. The AutoCAD drawing file shall have an individual color designation for each layer to separate and organize the file.

d. Every color hatch pattern shall be made by a closed polygon with the same hatch color. Color hatches drawn by "Pick Points" must still have a closed polygon by generating a boundary capable of adding area for District auditing.

e. All hatch patterns shall be colored per the color standards and set to "solid" in the AutoCAD Boundary Hatch and Fill Window.

5.7 Callout Standards

a. All callouts used for all plans shall be Standard arrow, leader line type, font, and font height.

b. Leader lines for all callouts shall be created on the ME_LABELS or UE_LABELS layer.

c. Text for all callouts shall be created on the ME_TEXT or UE_TEXT layer.

5.8 Vicinity Map

a. A Vicinity Map shall be located on the Maintenance Exhibit and Utility Exhibit.

b. The Vicinity Map shall be created on one layer with the appropriate color selection to clearly print.

c. All text shall be a minimum size of 1/16”.

d. The map shall indicate the project location, including major roads and nearest cross streets. The nearest highways or freeways must also be shown.

5.9 Legend

a. Legends shall have closed polylines with “solid” colored coded hatches that correspond with each individual closed polyline within the Maintenance Exhibit and Utility Exhibit.

b. Legend shall have polyline line styles for all fencing as indicated in line style patterns section.

c. Legend shall have text that describes each individual polyline colored coded hatch pattern, and symbol created on the ME_TEXT and UE_TEXT layer so that the legend describes each item within the Maintenance Exhibit and Utility Exhibit.

5.10 AutoCAD Site Base File

a. AutoCAD site base file shall include, but be limited to the following items:

1. Project site plan/base map
2. Basic topography, including proposed slopes
3. Sidewalks, ramps, curbs, and gutters
4. Streets including names
5. Buildings and lot lines
6. Lot numbers
7. Property lines, tract boundaries, and rights-of-way
8. Storm drain lines
9. Adjacent land use

b. Base Files shall be named with the project tract number followed by "_Base". Refer to Section 5.15 for standard layer names.

5.11 AutoCAD Title block

a. Title block file shall contain the following items:

1. Valley-Wide approval block
2. Architect and engineer contact information
3. Owner contact information
4. Project name and tract number
5. Revision block, date, and drawn by block
6. Licensed landscape architect and/or civil engineer stamp, and signature block.

b. The title Block files shall be named with the tract number followed by "_TB". Refer to Section 5.15 for standard layer names.

5.12 Drawing Scale and Units

a. A North arrow and graphic scale bar shall be included on the lower right corner of each drawing sheet.

b. Drawing files shall be drawn at an Engineer's scale using 1 unit = 1'-0"

c. Base file shall maintain a true north orientation in model space. If the current orientation of the base file in AutoCAD model needs to be rotated to fit the page more effectively to minimize paper use, this shall be completed by using the viewport in Layout (Paper) Space by using the AutoCAD "DVIEW" command.

5.13 External Reference Set Up

a. All External Reference drawings shall be created in Model Space and tied to the Horizontal Datum of the California State Plane Coordinate System Zone 6 (NAD83). Drawing units shall be decimal.

b. External Reference drawings shall be saved in the same folder as the file that the External File is being inserted into as listed below:

1. In the External Reference Manager, use the Overlay Function to attach an external reference to the Master Drawing.

2. The Master Drawing should be set at "World" through the Universal Coordinate System; "UCS". External Reference drawing for the "Base" file shall be inserted into the "model" space of the master drawing at X,Y,Z insertion point, 0,0,0.

3. External Reference drawing for the "Title Block" file shall be inserted into the "paper" space of the master drawing.

4. Both drawings shall be inserted with an X, Y insertion point of 0,0,0, and the Universal Coordinate System or "UCS" should be set at "World."

5.14 Line Type Scaling

a. Line type scaling shall be adjusted by the layer and/or the line itself in the drawing it is created in.

b. Line type scaling for all drawings shall be a listed below:

1. Set “LT” scale for all drawings to “1”

2. Set “PSLTSCALE” for all drawings to “0”

5.15 Standard Viewports

a. The “paper” space portion of the drawing shall contain a viewport created on the P_VIEWPORT layer for the maintenance exhibit. This layer shall be set to a “non-plot” in the layer manager window. The “Base” drawing will be inserted through the viewport at a scale not to exceed 1” = 100’0”.

5.16 Standard Layer Names

a. The “Base” file is not required to have designated names, provided that all base information is on a separate AutoCAD file.

b. Below is a list of AutoCAD layer names that must be used within the “Title Block” drawing:

Layer Name	**AutoCAD Object**
TB_LINES	LINE
TB_OUTLINE	LINE
TB_STAMP AGENCY	BLOCK
TB_STAMP CONSULTANT	BLOCK
TB_TEXT 1	LINE
TB_TEXT 2	LINE

c. Below is a list of AutoCAD layer names that must be used within the "Maintenance Exhibit" drawing:

Layer Name	AutoCAD Object
ME_PARK	POLYGON
ME_BASIN BOTTOM	POLYGON
ME_BASIN SLOPE (2:1)	POLYGON
ME_BASIN SLOPE (4:1)	POLYGON
ME_BASIN FLAT	POLYGON
ME_OPEN SPACE	POLYGON
ME_PARKWAY 1	POLYGON
ME_PARKWAY 2	POLYGON
ME_PARKWAY 3	POLYGON
ME_SLOPE (2:1)	POLYGON
ME_SLOPE (3:1)	POLYGON
ME_SLOPE (4:1)	POLYGON
ME_WALKWAY	POLYGON
ME_GRAVEL	POLYGON
ME_PARKING LOT	POLYGON
ME_DECOMPOSED GRANITE	POLYGON
ME_BLOCK WALL	POLYLINE
ME_TUBULAR STEEL FENCE	POLYLINE
ME_VINYL FENCE	POLYLINE
ME_MOW CURB	POLYLINE
ME_DRAINAGE DITCH	POLYLINE
ME_LOW FLOW DRAIN	POLYLINE
ME_SCALE	BLOCK
ME_TEXT	LINE
ME_VICINITY MAP	LINE
ME_VIEWPOINT	LINE
ME_DATA TABLE	LINE
ME_DELTA REVISION	LINE
ME_DETAILS	LINE
ME_NORTH ARROW	BLOCK
ME_PARCEL AREA	LINE
ME_LABELS	LINE
ME_MATCHLINE	LINE
ME_PROJECT LIMIT	LINE
ME_PROJECT PHASING	LINE
ME_TOTAL PROJECT SITE AREA	LINE
ME_TOTAL LANDSCAPE AREA	LINE

d. Below is a list of AutoCAD layer names that must be used within the "Utility Exhibit" drawing per Chapter 2 Planning Requirements Section 19:

Layer Name	**AutoCAD Object**
UE_IRRIGATED AREA 1	POLYGON
UE_IRRIGATED AREA 2	POLYGON
UE_IRRIGATED AREA 3	POLYGON
UE_IRRIGATED AREA 4	POLYGON
UE_IRRIGATED AREA 5	POLYGON
UE_WATER METER	BLOCK
UE_BACKFLOW	BLOCK
UE_ELECTRIC METER	BLOCK
UE_GAS METER	BLOCK
UE_CABLE	BLOCK
UE_IRRIGATION CONTROLLER	BLOCK
UE_BOOSTER PUMP	BLOCK
UE_FERTIGATION INJECTOR	BLOCK
UE_TEXT	LINE
UE_SCALE	LINE
UE_VICINITY MAP	LINE
UE_VIEWPORT	LINE
UE_DATA TABLE	LINE
UE_DELTA REVISION	LINE
UE_NORTH ARROW	LINE
UE_PARCEL AREA	LINE
UE_LABELS	LINE
UE_MATCHLINE	LINE
UE_PROJECT LIMIT	LINE
UE_TOTAL LANDSCAPE AREA	LINE
UE_DATA TABLE	LINE

5.17 Standard Fonts

a. All Exhibits shall use a standard AutoCAD font and font style for all labels and call-outs. The standard font and font style shall be Arial and Standard.

b. Font sizes shall be adjusted as needed based on the drawing scale.

c. Minimum font sizes shall be 1/10".

6.0 Plan Review Procedures

6.1 All plans shall be digitally submitted to the Planning Department via email at Planning@GoRecreation.org in any of the following methods:

a. Blue Beam Revu – Plans can be added to an unrestricted Blue Beam Revu session, and the session ID shall be included. The session must remain unrestricted with no expiration for the plans to be accessible to Valley-Wide's plan check team.

b. Dropbox link

c. Share file

d. FTP site

e. Other file sharing programs that do not require a password.

f. Attachments – If the files are too large, the email may not be received, so please confirm receipt with the Park Planner

6.2 All plan checks shall include a transmittal of the request. Plans without the transmittal and in the format requested will not be entered in the queue until properly submitted.

6.3 All emails shall include in the subject line the tract/parcel map number, project name, and what is being submitted (e.g. TR 12345 – Sunny Hills – POC 1 Landscaping Plans).

6.4 Plan check time will depend on the number of current plans in review. Allow approximately 4 to 6 weeks. There is no expedited plan check process.

6.5 All plans will be processed in the order received, on a first-come, first-serve basis.

6.6 Any incomplete plan checks submitted without all required items are subject to rejection without review.

6.7 Plans where District standard guidelines, details, or specifications have not been incorporated are subject to rejection without review.

6.8 It is of utmost importance for the engineer or landscape architect submitting plans to review all requirements, checklists, and specifications prior to submittal to minimize plan check comments.

6.9 All plans will be reviewed by Valley-Wide for consistency, accuracy, clarity, and conformity to District Standards, Specifications, and Details, before approval is given. Plans requiring corrections and/or found incomplete must be resubmitted for approval. Redlined drawings will be sent back to the engineer, landscape architect, or person that submitted the plans.

6.10 Plan check comments and corrections will be sent via email to the project manager or the project's main contact. All revisions must follow the specified format below; failure to comply will result in a rejection of the resubmittal. Valley-Wide comments will be in red text; responses must be in blue text. Both a blue text mark-up set with the prior comments, and a revised set shall be submitted for review.

6.11 It is the responsibility of the signing engineer or landscape architect to quality control the plans prior to submittal. Valley-Wide reviews plans to verify compliance with District standards and is not responsible for confirming that all irrigation systems and planting selections will function properly. It is imperative for the engineer, landscape architect, and developer's supervising representative to confirm that plans are in compliance with all requirements and planned improvements are functional prior to the first submittal.

6.12 Additional development plan check fees may be charged to the developer or architect when repeated incomplete submittals are received.

6.13 The District will distribute all plans to and from the appropriate project manager. No direct submittals to any plan review consultant shall be allowed, unless approved by the District.

6.14 To mitigate delays associated with the District review cycle, all developers and professional service firms are strongly encouraged to appoint a designated person to quality control resubmittals to confirm all prior comments have been addressed, including all responses to comments. This individual should also conduct a rigorous internal audit of all plans to ensure full adherence to District standards prior to submission. This quality control measure is vital to minimizing the cycle of re-submittals, thereby optimizing turnaround times and expediting the overall approval process.

6.15 All engineers and architects with third-party irrigation consultants must review all irrigation sheets for conformance with District standards. Engineers and architects are responsible for all sheets submitted.

6.16 Historically, a high frequency of review comments has been attributed to avoidable drafting errors. Consequently, the District expects a formal validation of work quality to ensure that all plans provide a precise and professional representation of the project.

7.0 Plan Approval

7.1 Final execution of landscaping plans by Valley-Wide is contingent upon the receipt of approved and signed Eastern Municipal Water District (EMWD) irrigation plans.

a. RECYCLED WATER: EMWD will submit the EMWD signed approved irrigation plans to Valley-Wide. Approved EMWD plans sent to Valley-Wide from the applicant will not be accepted unless otherwise requested by Valley-Wide. Upon official approval, Valley-Wide will facilitate the direct transmittal of the signed plans to the County on the developer's behalf. Please note that approved plans are distributed exclusively to the County; however, the developer's representative will receive an electronic notification confirming the date of transmittal.

b. POTABLE WATER: Valley-Wide will sign and transmit plans directly to the County upon approval. Plans are considered fully executed only after all jurisdictional signatures have been obtained. It is the responsibility of the applicant to ensure that all landscape and irrigation plans, water use exhibits or other related documents comply with EMWD's water conservation and irrigation water meter application requirements.

7.2 If the project lies within an incorporated City, the approved plans will be sent to the developer. The developer will be responsible for City submission of the Valley-Wide approved plans.

7.3 After plans have been fully executed and Valley-Wide has received all required contractor submittals, the owner/developer may proceed with a pre-construction conference.

7.4 No changes can be made to an approved plan and circulated without written approval by the District.

7.5 District plan approvals are subject to a six-month expiration period. This policy ensures that all projects remain compliant with evolving statutory requirements, incorporate the latest technological advancements, and address potential equipment obsolescence. By maintaining a limited validity

period, the District guarantees that all approved designs adhere to current industry standards and the most recent regulatory agency mandates.

7.6 The Owner/Developer shall submit all required plans to the County of Riverside Transportation Department and/or the local municipal jurisdiction for approval of any improvements within Right-of-Way (R.O.W.). All submissions must adhere to the respective governing agency's established standards. The commencement of work is strictly prohibited until a formal encroachment permit has been officially issued by the governing agency.

7.7 Once plan approval has been given, the property owner is responsible for complete compliance with all installation standards, specifications, details, and plan requirements.

8.0 Delta Revisions

8.1 Delta revisions to the approved plans must be made on the signed approved plans in red and must have red revision clouds and the delta number within a red triangle next to all revisions.

8.2 Sheets requiring revisions where redlined revisions are not reasonable or achievable to remain legible, a new sheet should be made.

8.3 All originally approved and signed sheets must be retained within the plan set and clearly marked with two red diagonal strike-throughs to indicate they have been superseded. The corresponding revised sheet shall utilize the original sheet number, appended with the suffix "a" (e.g., Sheet 10a).

8.4 An itemized list of revisions by sheet number must also be provided on a written transmittal along with the delta plan submittal.

8.5 When delta revisions are approved, the approval will be denoted within the revision block, and the new sheets will have new signatures on the signature block.

END OF SECTION

Chapter 4
Park Standards

PARK STANDARDS

PARK STANDARDS (GENERAL)

Valley-Wide Recreation and Park District (the "District" or "Valley-Wide") shall be considered Valley-Wide Recreation and Park District inspection personnel, consultants, or other approved team members hereafter.

This section establishes the park requirements for development projects within the District's service area.

1.0 Park Size

1.1 The required park size will vary depending on a development project's quantity of dwelling units and dwelling unit type(s). Each project may have unique characteristics and requirements; therefore, the developer must contact the District to discuss any proposed project earlier in the development process. Please refer to Chapter 2 Planning Requirements for parkland formula.

1.2 The District reserves the right to determine the size of the park based on adopted District requirements. Valley-Wide will coordinate the park requirements with the County of Riverside Planning Department. This determination includes whether fees in-lieu of parkland dedications may be paid.

1.3 The required park size will be based on the net usable park acreage that allows for the unrestricted use of recreation as solely determined by the District, including but not limited to layouts that allow for ballfields, soccer fields, courts, playgrounds, picnic areas, walking paths, parking lots, restrooms, and other amenities as determined by the District.

2.0 Parkland

2.1 Parkland shall be free of restrictive encumbrances, covenants, easements, flood conveyance, or other environmental restrictions that would impact the ability to function as an unrestricted use public park.

2.2 Land with utility easements may not qualify as parkland unless the District determines the proposed easement does not impact the required park design or the District's ability to own and maintain the park. Easement agreements between the applicable utility company or entity and the District must be drafted to outline easement rights and responsibilities within an active public park. These areas should be avoided if possible.

2.3 The proposed parkland must be suitable land with slopes meeting District Grading Standards. Refer to Chapter 6 Grading Standards and Chapter 16 Grading Specifications for specific requirements.

2.4 Proposed parks under 5 acres are subject to approval for acceptance for maintenance.

2.5 Parkland must be usable land, not flood conveyance basins or channels. Park land must also be free of cultural, environmental and other developmental constraints.

2.6 All park sites shall have active amenities. Any proposed passive parks will not count towards park credit and are subject to District refusal.

2.7 All parkland must meet the minimum requirements as indicated in the conditions of approval by the County of Riverside and/or local city (if applicable).

3.0 Park Location and Shape

3.1 The District must approve all park locations, as site selection is fundamental to community integration and the park's ultimate success. These locations vary based on the community's layout, park size, amenities and surrounding land use.

3.2 Local neighborhood parks are generally centrally located within a community, and larger sports parks may be located towards the edges of communities to allow for buffers for sports lighting and increased noise.

3.3 Generally, parks should be a four-sided rectilinear configuration. Parks with more sides containing trapezoidal or irregularly curved shapes may not be approved if they cannot adequately accommodate required amenities or if the design results in suboptimal spatial function, as determined by the District.

3.4 Failure to provide the required location and shape may result in loss of park credit. Each developer must obtain District approval of the park location and shape during preliminary site layouts before final tentative map layout.

3.5 Mini park areas situated behind residential properties tend to attract undesirable activity e.g., loitering and vandalism problems.

4.0 Park Surroundings

4.1 The interface between a park and its adjacent land use is pivotal to community integration and the park's overall success. To prevent light pollution, noise disturbances, and obstructed sightlines, rear-facing residential lots should not border park boundaries.

4.2 Parks should have streets or other approved buffers from residential units. Buffers may include basins, schools, commercial areas, and other open spaces.

4.3 Backyards that face parks shall be avoided whenever possible. The District's experience has shown that when parks are surrounded by streets, there is more visibility and security, which benefits the park, users, and residents.

4.4 Public sidewalks that are adjacent to any park shall have widened curb adjacent sidewalks to allow for on-street parking. Parkway landscape planters shall be placed behind the sidewalk to minimize damage to the landscaping.

4.5 All parks shall have fencing along the frontage of all streets, channels, basins and schools. Type of fencing shall be determined by the District at the design stage. Parks shall have masonry split-face walls when adjacent to private residences or commercial property.

4.6 The District reserves the right to require park buffers along all sides of a park.

5.0 Park Amenities

5.1 The District has prepared typical park layouts for general guidance. Each project must be reviewed by the District, which will provide project-specific guidance on the required amenities based on the project's location, adjacent communities, and the park's required size.

5.2 All park amenities shall be carefully placed within a park to maximize use, accessibility, and ease of maintenance, as solely determined by the District, as outlined below:

a. Restrooms must be near the parking lot and major amenities

b. Playground areas must be visible from the streets

c. Basketball courts should be away from playground areas

d. Shade shelters should be close to playgrounds

5.3 All sports fields and courts shall be north/south facing, unless otherwise approved by the District.

5.4 All sports fields and courts shall be sloped as outlined in Chapter 6 Grading Standards.

5.5 Typical 5-acre parks must have the following amenities, unless otherwise approved by the District:

a. 250-foot ballfield with clay infield, backstop, dugouts, sideline fencing, home run fencing, foul poles, and bases

b. U-11-sized soccer field with soccer goals

c. Building with restrooms and storage

d. Lighted concrete parking lot with 40 parking stalls

e. Multiple shade shelters with picnic features, including tables, benches, trash receptacles, BBQs, and hot coal containers

f. Covered playgrounds for ages 2-5 and 5-12 groups

g. Basketball court or other approved courts

h. Perimeter lighted concrete walkways with seating areas

i. Park monument sign with park name and Valley-Wide name and logo

5.6 Typical parks larger than 5 acres must have the same amenities, but with larger fields for larger, older age groups and the following additional items:

a. Parking lots for sports parks to be sized at approximately 10 stalls per acre

b. Trash enclosures (unless otherwise approved by the District)

c. Sports field and court lighting when determined by the District

5.7 All playground areas should be placed close to shade structures and picnic areas. Playground locations shall be visible from the street. All playground equipment must have shade sails. All parks shall have swings with at least one infant basket swing.

5.8 Ballfields shall be designed so that foul balls will not come in contact with playground, parking, and picnic areas. Backstops and fencing must be used as a minimum standard. Higher fencing and/or protective netting may be required when the project layout does not allow adequate distance between parking, playgrounds, and picnic areas.

5.9 All basketball courts shall be placed within each park so that they are the furthest away from adjacent residences. Whenever possible, all courts shall face north/south to balance the sun exposure. Full or half will be determined on a case-by-case basis.

5.10 All parks shall have fencing along the frontage of all streets, channels, basins, and schools. The District shall determine the types of fencing at the design stage. Parks shall have 6-foot-high masonry walls when adjacent to private residences or commercial property.

5.11 Park site lighting and security cameras are required for all parks unless otherwise approved by the District. Quantity and type shall be determined on a project-by-project basis.

5.12 All open turf areas larger than two (2) acres shall have a 120VAC GFCI outlet installed in a lockable stainless steel vandal proof enclosure for scheduled park events.

5.13 Additional requirements shall be discussed during the preliminary park concept design phase based on specific project requirements related to the layout of the community.

6.0 Parking Lots

6.1 Parking lot size shall be per Section 5.0 above in addition to the required accessible stalls. All parking lots shall be designed to meet or exceed the County of Riverside and/or local city (if applicable) minimum requirements

6.2 Parking lots shall be screened from the street with hedge planting.

6.3 All parking lot islands shall have 12” wide maintenance concrete access adjacent to each parking stall.

6.4 All parking lot surfacing shall be concrete.

6.5 All parking lots shall have lighting and tree shading to meet the County of Riverside or local city minimum requirements.

6.6 All park sites shall have active amenities. Any proposed passive parks will not count toward park credit and may be subject to denial by the District.

7.0 Restroom Buildings

7.1 All restrooms must also have a maintenance room to house electrical timers and misc. park equipment.

7.2 The size of the restrooms and maintenance room will be determined by project size and amenities.

7.3 Restroom buildings must be inspected and approved by Valley-Wide prior to building final.

7.4 All restroom buildings shall be accessibly compliant, per the Americans with Disabilities Act (ADA) and California Building Code (CBC).

7.5 Typical restroom buildings shall be pre-fabricated modular units unless otherwise approved by the District.

7.6 Restroom buildings should be in close proximity to the playground and picnic areas.

7.7 Restroom buildings with concession windows shall be required for parks with multiple sports fields of the same type.

7.8 Exterior colors shall be consistent with Valley-Wide's standard park colors.

7.9 Refer to Chapter 15.0 Construction Specifications General for additional restroom requirements.

8.0 Typical Park Layouts

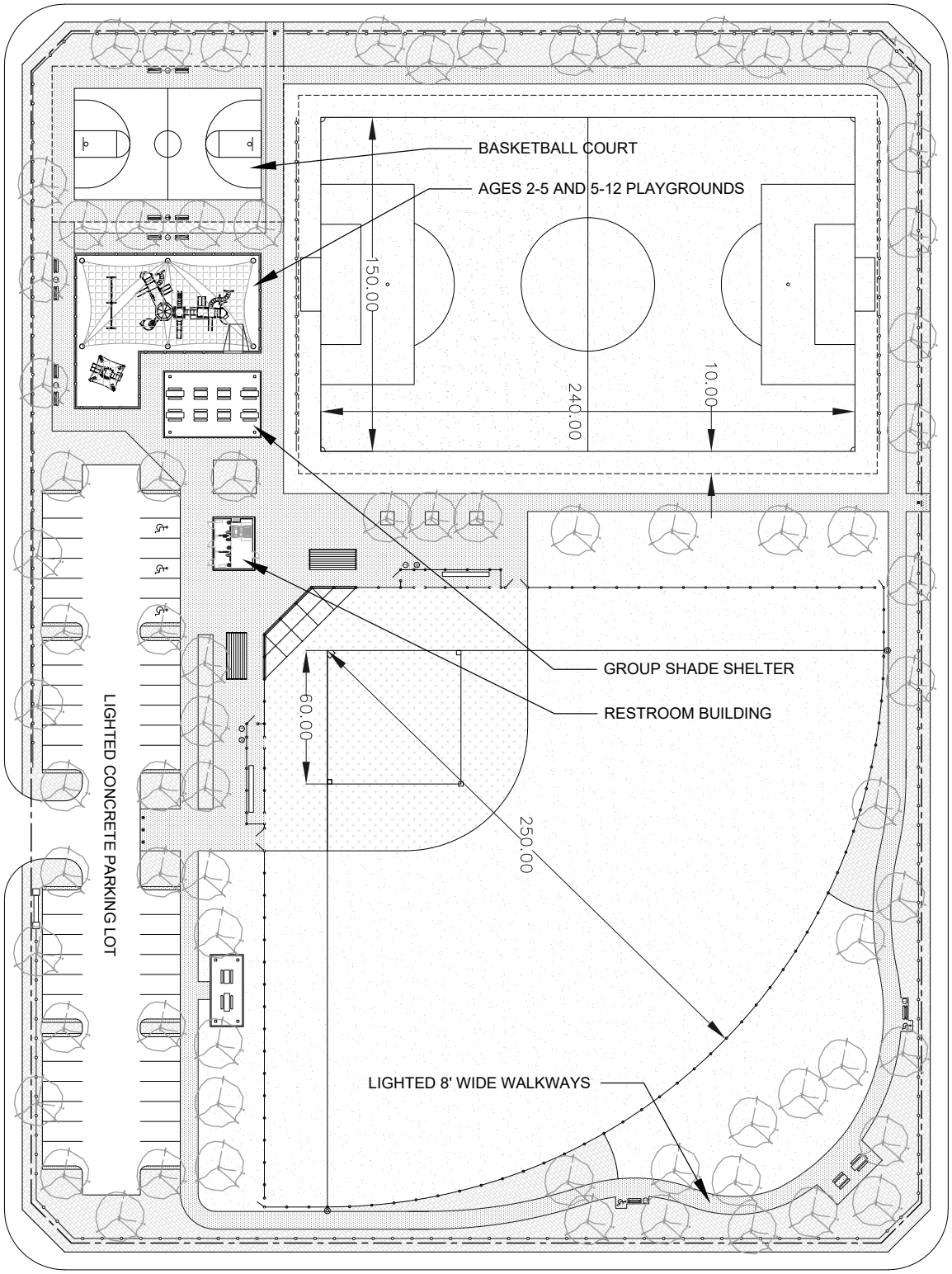
8.1 All park layouts shall be designed consistent with the District's typical park layouts per Figures "E", "F", and "G".

8.2 It is understood that each site is different in shape; however, it is the intent of the District to receive usable park land and not irregular trapezoidal areas to be able to provide the required amenities**.**

END OF SECTION

FIGURE "E"

STREET "D"



STREET "C"

STREET "A"

STREET "B"

NORTH

NOT TO SCALE

THIS PLAN IS DIAGRAMMATIC AND IS FOR CONCEPTUAL LAYOUT REPRESENTATION SPECIFIC AMENITIES AND REQUIREMENTS SHALL COMPLY WITH VALLEY-WIDE'S DESIGN GUIDELINES AND STANDARDS.

LD Consulting, Inc. 2026

VALLEY-WIDE RECREATION AND PARK DISTRICT

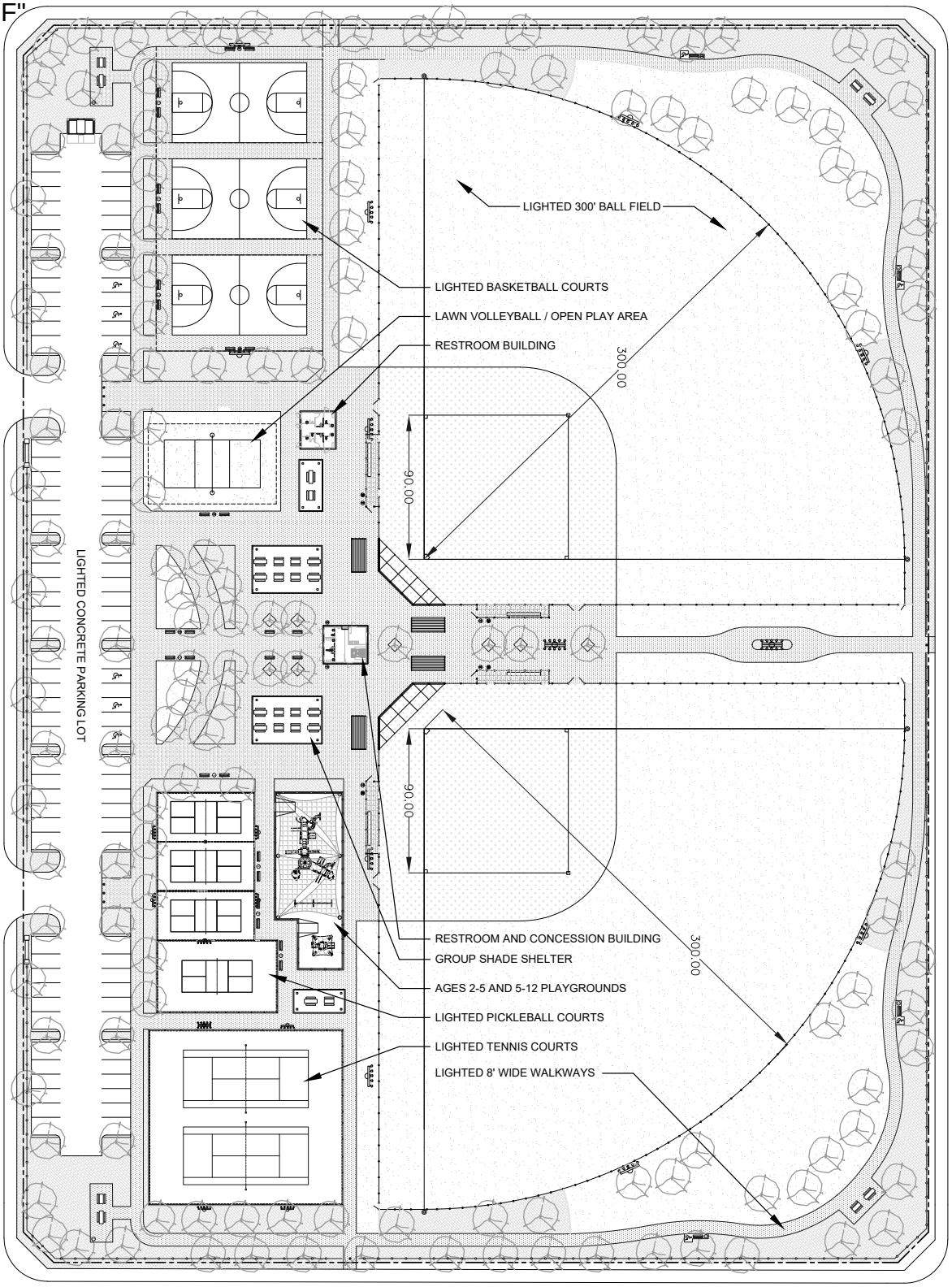
NO REPRODUCTION OR MODIFICATION OF THIS DETAIL IS ALLOWED WITHOUT THE EXPRESS WRITTEN APPROVAL OF VWRPD AND LDC

5 ACRE NEIGHBORHOOD TYPICAL PARK

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

PC-1

FIGURE "F"



NORTH

NOT TO SCALE

THIS PLAN IS DIAGRAMMATIC AND IS FOR CONCEPTUAL LAYOUT REPRESENTATION SPECIFIC AMENITIES AND REQUIREMENTS SHALL COMPLY WITH VALLEY-WIDE'S DESIGN GUIDELINES AND STANDARDS.

LD Consulting, Inc. 2026

VALLEY-WIDE RECREATION AND PARK DISTRICT

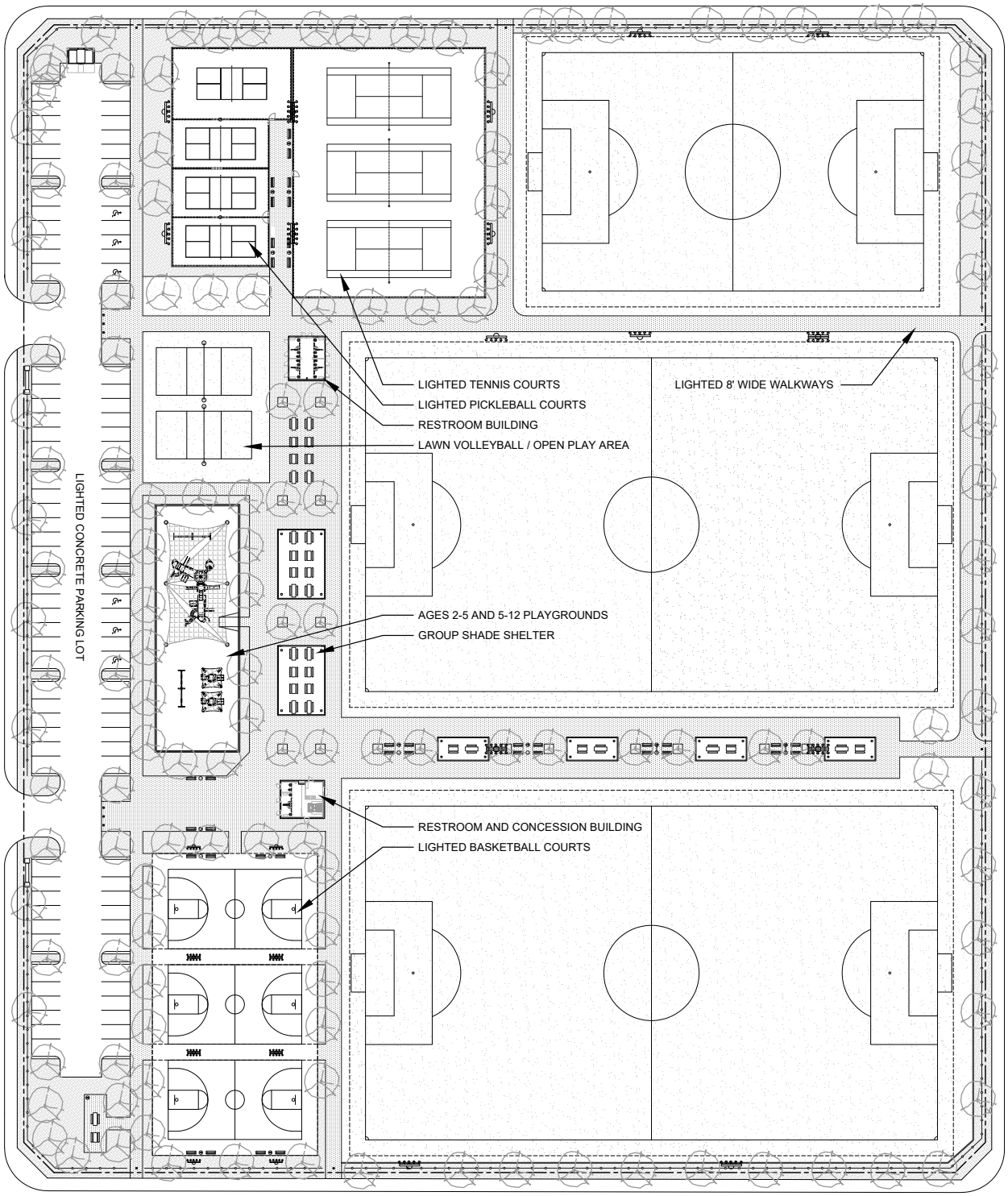
NO REPRODUCTION OR MODIFICATION OF THIS DETAIL IS ALLOWED WITHOUT THE EXPRESS WRITTEN APPROVAL OF VWRPD AND LDC

10+ ACRE TYP. BALL FIELD SPORTS PARK

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

PC-2

FIGURE "G"



NORTH

NOT TO SCALE

THIS PLAN IS DIAGRAMMATIC AND IS FOR CONCEPTUAL LAYOUT REPRESENTATION SPECIFIC AMENITIES AND REQUIREMENTS SHALL COMPLY WITH VALLEY-WIDE'S DESIGN GUIDELINES AND STANDARDS.

LD Consulting, Inc. 2026

VALLEY-WIDE RECREATION AND PARK DISTRICT

NO REPRODUCTION OR MODIFICATION OF THIS DETAIL IS ALLOWED WITHOUT THE EXPRESS WRITTEN APPROVAL OF VWRPD AND LDC

10+ ACRE TYP. SOCCER SPORTS PARK

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

PC-3

Chapter 5
Construction Standards

CONSTRUCTION STANDARDS

CONSTRUCTION STANDARDS (GENERAL)

Valley-Wide Recreation and Park District (the "District" or "Valley-Wide") shall be considered Valley-Wide Recreation and Park District inspection personnel, consultants, or other approved team members hereafter.

This section establishes the construction requirements for development projects within the District's service area.

1.0 Applicability and Precedence

1.1 Whether shown on the plans or not, the project shall comply with all District Standards, Specifications, and Details.

1.2 In the event of any contradiction, the higher and more stringent standard, specification, or detail shall prevail, unless otherwise approved by the District.

1.3 If approved plans contradict District Standards, Specifications, or Details, the District must be contacted immediately to determine the appropriate and approved course of action.

2.0 Pre-Construction Conference (Pre-Con) Requirements

2.1 No construction shall commence until all plans are approved by all applicable agencies and all required permits are obtained.

2.2 Once plans are approved, a pre-con must be requested with the District. Prior to the scheduling of the pre-con, all submittals must have been submitted to the District.

2.3 The owner or developer must notify the District seven (7) days in advance to schedule the pre-con.

2.4 The following parties must be present at the pre-construction conference:

a. Valley-Wide's representative

b. Landscape architect

c. Project engineer (if requested)

d. Owner/developer representative

e. Contractor and all sub-contractors (including project foreman). Foreman must not be changed until the project is completed.

2.5 The owner/developer or contractor must provide the following at the pre-construction conference:

a. Copy of encroachment permit

b. Project superintendent and contact information

c. List of subcontractors with contact information

d. Project schedule with projected turnover date

e. Underground Service Alert (USA) Dig Alert number

f. Two full-size sets of all approved plans

g. One 11x17 set of all approved plans

h. Copies of all issued permits

2.6 The owner/developer shall assign one person to be responsible for notifying the District in advance for all inspections as outlined in each specification section.

2.7 Inspections in no case relieve the owner/developer or contractor of any liability for work performed.

2.8 No underground inspection can be approved for backfill until the required field as-built drawings are complete, reviewed, and approved.

2.9 Valley-Wide Inspection Cards must always be on the project site.

2.10 Upon completion of all required inspections, after the project complies with all District Standard Specifications and the project has been maintained to an acceptable condition, a letter of acceptance will be sent to the owner/developer. Refer to all applicable Specification sections for additional requirements.

2.11 Prior to acceptance of the improvements and any utility transfer, all items on the “Turnover Checklist” shall be submitted to Valley-Wide’s Planning

Department for review and approval. These items shall be provided via a single digital link emailed to the Park Planner. Partial or incomplete submittals will not be accepted. Please contact Valley-Wide's Planning Department for a complete list of requirements and timelines.

2.12 Owner/developer shall be responsible for the project until the District has provided a formal letter of acceptance for maintenance. Questions regarding turnover should be directed to Valley-Wide's Planning Department at (951) 654-1505.

2.13 Labor Code Sections 1720 et seq. and 1770 et seq., as well as California Code of Regulations, Title 8, Section 16000 et seq. ("Prevailing Wage Laws"), require the payment of prevailing wage rates and the performance of other requirements on certain "public works" and "maintenance" projects. If this Project involves an applicable "public works" or "maintenance" project, as defined by the Prevailing Wage Laws, and if the total compensation is $1,000 or more, Developer agrees to fully comply with such Prevailing Wage Laws, including the mandatory fringe benefit annualization requirements of Labor Code Section 1773.1. The Developer shall defend, indemnify, and hold the District, its elected officials, officers, employees, and agents free and harmless from any claims, liabilities, costs, penalties, or interest arising out of any failure or alleged failure to comply with the Prevailing Wage Laws.

3.0 Request for Information (RFI) Process

3.1 In the event of a field question or plan clarification, the owner/developer or contractor must submit an RFI to the engineer or architect for review.

3.2 Prior to the RFI response, the engineer or architect must review the RFI with the District representative to confirm direction is acceptable. Both the engineer or architect and the District must provide a written response providing direction for the RFI.

3.3 Any RFI related to recycled water irrigation must also be submitted to Eastern Municipal Water District and the District for review and a written response.

3.4 Any RFI related to any improvement to be maintained by another agency other than the District must be submitted to the appropriate agency for review and response.

3.5 In the event that a response to any RFI is provided by the engineer, architect, or any other agency, it is the owner/developer and contractor's responsibility to obtain District approval.

3.6 The District shall determine if RFI direction will require a delta plan revision or a field change for either the engineer, architect, or contractor to as-built. Any as-built changes made to a precise grading plan must be approved by the engineer and the County of Riverside.

4.0 Change Orders

4.1 The District shall not be liable for costs or change orders arising from field or plan modifications required to meet District Standards and Specifications. This applies irrespective of whether the work was explicitly detailed in the plans or included in the contractor's original proposal/contract.

4.2 Change orders for developer-improved projects must be approved by the owner/developer per the terms of their respective contracts.

4.3 Change orders for District-improved projects are subject to the terms of the District's contract requirements.

END OF SECTION

Chapter 6
Grading Standards

GRADING STANDARDS

GRADING STANDARDS (GENERAL)

Valley-Wide Recreation & Park District (the "District" or "Valley-Wide") shall be considered Valley-Wide Recreation & Park District inspection personnel, consultants, or other approved team members hereafter.

1.0 Purpose

1.1 This section establishes District Grading Standards for various types of projects to ensure that engineers and developers understand requirements to:

a. Design rough grading and precise grading plans to meet District expectations to achieve proper slope for parks, open spaces, parkways, and basin areas for the use of public recreational activity, operations, and maintenance for areas to be maintained by the District.

b. Maximize the use of recreational sports fields and courts for game play while maintaining reasonable slope and drainage for operations and maintenance needs.

c. Provide standards for elevations and slopes for hardscape and landscape areas.

1.2 The standards contained within this section are not intended to alter, modify, or replace any state or local grading ordinances, regulations, restrictions, or permitting requirements. The project engineer shall be responsible for meeting these requirements and what is provided within these Grading standards.

2.0 Grading Plan (General)

2.1 A precise grading plan is required for all areas with a recreational element for public use, including but not limited to parks, paseos, trails, or open spaces outside of the County right-of-way.

2.2 Plans must be designed by a licensed civil engineer.

2.3 All plans are subject to review and approval by both the District and the County of Riverside.

2.4 Plans must be designed to meet all current applicable accessibility guidelines, requirements, and provisions.

2.5 Plans must be signed and stamped by the engineer of record prior to approval.

2.6 Plans must provide owner, developer, and engineer contact information.

2.7 Plans must have section views of proposed grading conditions.

2.8 Plans must have plan view sheets drawn at 1" = 40'-0" maximum scale for rough grading plans and 1" = 30'-0" for precise grading plans. Preferred scale is 1" = 20'-0".

2.9 Plans must have a construction legend or call-outs for improvements on each plan sheet.

2.10 Plans must have elevations for all curbs, flow lines, walkways, walls, structures, and footings. Storm drains must have elevations for all inverts, top of grates, and the slope percentage of each storm drain pipe section. All walkways must show the slope percentage in a reasonable number of areas. All high points, low points, and grade breaks must be shown within all walkways.

2.11 Projects with parking lots must have parking lot improvements shown on the precise grading plan, including all curbs, gutters, signs, striping, truncated domes and accessible parking stalls.

2.12 All grading shall comply with all State, County, and local codes at the time of project design and construction.

2.13 Grading plans must show any proposed or existing easements or land restrictions.

3.0 Rough Grading

3.1 All rough grading plans are subject to review and approval by the District and the County of Riverside for areas to be maintained by the District.

3.2 No slopes shall exceed 2:1.

3.3 All slopes must have a minimum bench of 12 inches from any wall or walkway.

3.4 Park sites should be rough graded to ensure final grades within the park can comply with all minimum and maximum slopes and setbacks listed within the entire Grading Standard section. Park sites should be rough graded to a maximum of 1.5% slope in all directions to ensure compliance. In the event that the proposed slope exceeds 1.5%, detailed park layouts including preliminary precise grading information must be provided to ensure that the overall proposed rough grading can facilitate final park design, without substantial rough grading, implantation of retaining walls, ramps, or loss of required amenities.

3.5 Orientation and placement of any required ballfield must be approved by the District prior to rough grading approval to ensure the infield slopes away from concrete areas and backstop.

3.6 Rough grading plans for areas with a park must indicate where any applicable water quality treatment for park improvements are proposed. If water quality treatment for a park is proposed within the park, the plans must indicate this and be confirmed to not impact the required sports fields, courts and other amenities.

4.0 Walkways and Patio Areas

4.1 Accessible paths are required to all proposed or required amenities. Accessible paths must be concrete unless otherwise approved by the District.

4.2 The longitudinal slope of a walkway by design may not exceed 4.7% slope to provide a reasonable construction tolerance to ensure finished concrete does not exceed 5% slope.

4.3 The cross slope of a walkway by design may not exceed 1.7% slope to provide a reasonable construction tolerance to ensure finished concrete does not exceed 2% slope.

4.4 All paths of travel change of directions or intersections by design may not exceed a 1.7% slope in all directions to provide a reasonable construction tolerance to ensure finished concrete does not exceed 2% slope in all directions.

4.5 All path of travel areas at site amenities by design may not exceed 1.7% slope in all directions to provide a reasonable construction tolerance to ensure finished concrete does not exceed 2% slope in all directions, including but not limited to all open patio areas, tables, benches, trash receptacles, BBQ's, hot coal containers, pet stations, bike racks, dugouts, bleachers,

spectator seating, shade shelters, playground areas, access gates, ramp landings, restroom and concession buildings, etc.

4.6 Ramps are considered walkways exceeding 5% longitudinal slope and are subject to review and approval by the District. Ramps should be avoided whenever possible.

4.7 Ramps shall be subject to all accessible requirements, including but not limited to length and height restrictions, landings, raised curbs, and handrails. Ramps by design may not exceed 8% slope to provide a reasonable construction tolerance to ensure finished concrete does not exceed an 8.33% slope.

4.8 If stairs are proposed, there must also be an accessible path within proximity to ensure access. All stairs are subject to all accessibility requirements, including but not limited to rise and tread limitations, contrast striping, handrails and extensions, cheek walls, and landings. Landings at intersections or ramps must be large enough to ensure handrail extensions do not extend within the path of travel.

4.9 All walkways adjacent to slopes must have a level bench of not less than 12 inches, and the adjacent surface must be no greater than 2 inches below the walkway.

4.10 2:1 slopes above and adjacent to walkways may require flow lines or raised curbs to ensure soil erosion does not alter a firm and stable accessible path.

4.11 2:1 slope below and adjacent to walkways may require a raised curb or fencing as determined by the District.

5.0 Sports Fields and Courts

5.1 All recreational fields and courts are subject to minimum and maximum slopes as identified in this section. Any project that does not meet these requirements will be subject to redesign unless specifically approved by the District.

5.2 Ball field clay infield minimum slope shall be 0.5% with a maximum slope of 1%. All infields must slope away from concrete edges and backstop. No special flow lines or drain inlets are allowed within infields.

5.3 Ball field turf outfield minimum slope shall be 0.5% with a maximum slope of 1.5%. All outfield areas must slope away from infield areas. No drain inlets are allowed within the outfields. Flowlines for outfields must be gradual and

positioned to a minimum of three areas. Low points for flow lines at perimeter fencing must have depressed concrete headers for runoff to exit the fields.

5.4 Soccer field minimum slope shall be 0.50% with a maximum slope of 1.0%. Special consideration may be given to allow a 1.5% slope, depending on the project constraints and field size.

5.5 Basketball, tennis, and pickleball courts minimum slope shall be 0.50% with a maximum slope of 1.0%.

6.0 Paseos and Trails

6.1 All paseos and trails with walkways and other improvements must meet all accessibility compliance requirements.

6.2 Trails with flood conveyance areas are subject to review and approval by the District and Riverside County Flood Control and Water Conservation District. Any flood conveyance structure within a designated path of travel must meet all applicable accessibility requirements.

7.0 Park and Open Space Landscape Areas

7.1 Open space areas within a park with proposed turf shall have a minimum slope of 0.50% with a 7:1 maximum slope. All turf areas must be functional for active use.

7.2 All planter areas within a park shall have a minimum slope of 1% and a 2:1 maximum slope.

7.3 Any flow lines under 1% must have low flow drainage. Low-flow drainage shall not be less than a 0.50% slope.

8.0 Soil Material

8.1 Soil within parks and paseos must be suitable for flatwork, footings, and structural construction as determined by the Geotechnical Engineer of Record.

8.2 Soil within landscape areas must be suitable for planting as follows, within the rough grading stage of the project.

a. Turf areas shall have a minimum of 30 inches of clean dirt without rocks greater than 3 inches in size. Final section of amended soil and rock restrictions shall be performed per the District's Planting Specifications.

b. Soil within turf areas shall be Class A unless otherwise approved by the District.

c. Planter areas shall have a minimum of 24 inches of clean dirt without rocks greater than 6 inches in size. Final section of amended soil and rock restrictions shall be performed per the District's Planting Specifications.

8.3 The District must observe rough grading operations within parks and paseos maintained by the District.

END OF SECTION

Chapter 7 Sewer and Domestic Water Standards

SEWER AND DOMESTIC WATER STANDARDS

SEWER AND DOMESTIC WATER STANDARDS (GENERAL)

Valley-Wide Recreation and Park District (the "District" or "Valley-Wide") shall be considered Valley-Wide Recreation and Park District inspection personnel, consultants, or other approved team members hereafter.

1.0 Purpose

1.1 This section establishes District Sewer and Domestic Water Standards for park projects to ensure that engineers and developers understand requirements in order to:

a. Design wet utility plans to meet District expectations to provide services for parks and paseos with sewer and domestic water, for the use of public recreational activity, operations, and maintenance for areas to be maintained by the District.

b. Design criteria for system sizing, placement, and materials.

1.2 The standards contained within this section are not intended to alter, modify, or replace any state or local ordinances, regulations, restrictions, or permitting requirements. The project engineer shall be responsible for meeting these requirements and what is provided within these sewer and water standards.

1.3 Additional requirements may be required by the sewer and water company. These standards are only related to drainage to be maintained by the District.

1.4 Any reference to "water" within these specifications shall be considered domestic potable water for drinking purpose only.

2.0 Sewer and Water Plan (General)

2.1 A wet utility plan is required to show sewer and water for all areas with a recreational element for public use, where restroom facilities and drinking fountains are provided.

2.2 Plans must be designed by a licensed civil engineer.

2.3 All plans are subject to review and approval by the District, Eastern Municipal Water District (EMWD), and the County of Riverside Building and Safety Department, or other applicable local jurisdiction.

2.4 Plans must be designed to meet all local codes and ordinances.

2.5 Plans must be signed and stamped by the engineer of record prior to approval.

2.6 Plans must provide owner, developer, and engineer contact information.

2.7 Plans must have details of all sewer and domestic water lines.

2.8 Plans must have plan view sheets drawn at 1" = 40'-0" maximum scale. Preferred scale is 1" = 20'-0".

2.9 Plans must have a construction legend or call-outs for improvements on each plan sheet.

2.10 Sewer and water lines must have elevations for all inverts and the slope percentage of each sewer pipe section.

2.11 District Domestic Water Details must be shown on the plans.

2.12 District Sewer and Domestic Water Specifications must be shown on the plans.

2.13 All wet utility plans shall comply with all State, County, and local codes at the time of project design and construction.

2.14 Potable water lines shall be shown on the wet utility or irrigation plans in the actual locations. Potable water lines shall not be shown diagrammatically on any plan. It is the civil engineer's responsibility to coordinate with the landscape architect to identify any conflicts between proposed potable water locations and amenity structures, footings, trees, etc.

2.15 It is the civil engineer's responsibility to coordinate with the landscape architect to identify if there are any conflicts with the proposed sewer and clean-out locations, so they do not conflict with amenity structures, footings, trees, etc.

3.0 Sewer and Water Pipe

3.1 Refer to Chapter 17 Sewer and Domestic Water Specifications for material requirements.

3.2 All changes of direction shall not exceed 45 degrees. No 90-degree fittings are permitted.

3.3 All sewer drainage connections, both horizontal and vertical orientation, must be made using Wye's with 1/8 bend elbows. No standard tee connections are allowed.

3.4 All sewer piping should be installed with a longitudinal slope of no less than 2%.

3.5 All sewer laterals must be installed per EMWD standard drawing SB-177, but with SDR 35 PVC piping.

3.6 No clay pipe is allowed within District-maintained areas.

4.0 Clean-Out Boxes

4.1 Refer to Chapter 17 Sewer and Domestic Water Specifications for material and placement requirements.

5.0 Water Meter and Backflow Device

5.1 Refer to Chapter 17 Sewer and Domestic Water Specifications for material and placement requirements.

6.0 Isolation Valves

6.1 Refer to Chapter 17 Sewer and Domestic Water Specifications for material and placement requirements.

END OF SECTION

Chapter 8
Storm Drain Standards

STORM DRAIN STANDARDS (NON-SEWER)

STORM DRAIN STANDARDS (GENERAL)

Valley-Wide Recreation and Park District (the "District" or "Valley-Wide") shall be considered Valley-Wide Recreation and Park District inspection personnel, consultants, or other approved team members hereafter.

1.0 Purpose

1.1 This section establishes District Storm Drain Standards for various types of projects to ensure that engineers and developers understand requirements in order to:

a. Design storm drains on precise grading plans to meet District expectations to achieve proper drainage for parks, paseos, and open spaces for the use of public recreational activity, operations, and maintenance for areas to be maintained by the District.

b. Design criteria for drainage systems sizing, placement, and materials, efficiently capture runoff, and prevent flooding.

c. Maximize the use of recreational sports fields and courts for game play while maintaining reasonable drainage for operations and maintenance needs.

d. Provide standards for material types and application guidelines for hardscape and landscape areas.

1.2 The standards contained within this section are not intended to alter, modify, or replace any state or local drainage ordinances, regulations, restrictions, or permitting requirements. The project engineer shall be responsible for meeting those requirements and what is provided within these Storm Drain standards.

1.3 Additional requirements may be required when drainage is to be maintained by the County of Riverside Transportation Department (RCTD) or Riverside County Flood Control and Water Conservation District (RCFC&WCD). These standards are only related to drainage to be maintained by Valley-Wide.

2.0 Drainage Plan (General)

2.1 A precise grading plan is required to show drainage for all areas with a recreational element for public use, including but not limited to parks, paseos, trails or open spaces outside of the County right-of-way.

2.2 Plans must be designed by a licensed civil engineer.

2.3 All plans are subject to review and approval by both the District and the County of Riverside.

2.4 Plans must be designed to meet all local codes and ordinances.

2.5 Plans must be signed and stamped by the engineer of record prior to approval.

2.6 Plans must provide owner, developer, and engineer contact information.

2.7 Plans must have details of all inlets and drain pipes.

2.8 Plans must have plan view sheets drawn at 1” = 40’-0” maximum scale. Preferred scale is 1” = 20’-0”.

2.9 Plans must have a construction legend or call-outs for improvements on each plan sheet.

2.10 Storm drains must have elevations for all inverts, top of grates, and the slope percentage of each storm drain pipe section. Walkways near inlets must show the elevation of the walkway to ensure a positive slope is provided and inlets are not placed too low.

2.11 Slope between inlets and adjacent walkways must comply with Chapter 6 Grading Standards for minimum and maximum slopes within turf and planter areas.

2.12 District Storm Drain details must be shown on the plans.

2.13 District Storm Drain specifications must be shown on the plans.

2.14 All storm drain plans shall comply with all State, County, and local codes at the time of project design and construction.

3.0 Storm Drain Pipe

3.1 Refer to Chapter 18 Storm Drain Specifications for storm drain pipe material requirements.

3.2 All changes of direction shall not exceed 45 degrees. No 90-degree fittings are permitted.

3.3 All non-sewage drainage tee connections, both horizontal and vertical orientation, must be made using Wye's with 1/8 bend elbows for 6" and larger piping, unless otherwise approved by the District. Sanitary tees may be used for 3" through 4" piping where space is limited. No standard tee connections are allowed, unless approved by the District. End-of-line piping connections to catch basin inlets where a 90-degree bend is needed must be done with a long elbow or a combination of two 45-degree bends.

3.4 All piping should be installed with a longitudinal slope of no less than 0.50%.

3.5 Provide green metallic storm drain warning tape installed 12" above the piping in landscape areas and 6" above the piping below any concrete surface.

3.6 All changes of direction of piping must have the invert elevation shown on the plans.

3.7 All lines shall have a minimum clearance of 4 inches vertical and horizontal from each other and 24 inches from any other lines from different trades.

3.8 Provide a minimum cover of 12 inches over all drainage piping and ensure piping is placed lower than the bottom of any outlet box to prevent trimming of inlet boxes to achieve design elevations.

4.0 Inlets

4.1 Refer to Chapter 18 Storm Drain Specifications for inlet material requirements.

4.2 Locations of all inlets shall be approved by the District. No inlets are allowed within the field of play within any type of field.

4.3 The concept of sheet flow drainage over walkways is generally not accepted; therefore, all landscape areas must have inlets suitable to minimize runoff over walkways, unless otherwise approved by the District.

4.4 All turf and planter areas must have positive draining flow lines to inlets that capture the flow of storm water and irrigation runoff. Small turf and planters may not need drainage inlets as determined by the District, based on their experience for both storm water, irrigation run-off, and landscape drainage needs.

4.5 All playground areas shall have drainage inlets to ensure the subgrade of the playground surfaces drains properly to eliminate ponding and reduce moisture buildup. Multiple inlets are required for each playground.

5.0 Outlets

5.1 All outlets must be shown on the plans, and the entity responsible for maintenance of the outlets must be identified. Any maintenance access easement related to outlet maintenance must be identified on the plans.

5.2 Outlets must be per Cal-Trans, RCFC&CFD or RCTD standards.

5.3 All outlets must be protected from public access.

END OF SECTION

Chapter 9
Basin and Channel Standards

BASIN AND CHANNEL STANDARDS

BASIN AND CHANNEL STANDARDS (GENERAL)

Valley-Wide Recreation and Park District (the "District" or "Valley-Wide") shall be considered Valley-Wide Recreation and Park District inspection personnel, consultants, or other approved team members hereafter.

This section establishes the basin and channel requirements for development projects within the District's service area.

1.0 Applicability of Standards

1.1 Basins and channels with any maintenance operations performed by the District shall be subject to the District's Basin and Channel Standards.

1.2 The District must review and approve all applicable improvement plans prior to the commencement of any work.

1.3 Approval of basin and channel plans by other agencies does not constitute District approval of the said plans.

1.4 Proposed improvements shall be maintained by the applicable agency as outlined within the County and Valley-Wide Memorandum of Understanding (MOU) or as otherwise collectively approved by the County of Riverside and District.

1.5 Joint-use detention basins are generally unacceptable and highly discouraged by the District. In the event a joint-use facility is allowed, the District shall determine the required amenities and project-specific design requirements. Pre-design meetings are required prior to final engineering design to confirm what amenities would be suitable.

1.6 The owner/developer, project engineer, and architect shall be responsible for complying with all water quality requirements. It is the responsibility of the owner/developer, project engineer, and architect to notify the District of any water quality requirements that may conflict with District Standards.

2.0 Basin and Channel Plans

2.1 Basin and channel plans must be submitted with the rough grading plans.

2.2 Storm drain plans must be submitted with the rough grading plans to show all drainage inlets and outlets, piping, fencing, access roads, and other related improvements within all basins and channels.

2.3 Irrigation and planting plans must correspond with the grading and storm drain plans and must show all drainage structures and storm drain lines on the plans.

2.4 All basins and channels designed per the Low Impact Design (LID) manual developed by the Riverside County Flood Control and Water Conservation District (RCFC&WCD) must have positive drainage in order for the project to be accepted for maintenance.

2.5 Any specific maintenance required for basins or channels, including landscape, shall be clearly outlined on the plans consistent with the approved Maintenance Exhibit.

2.6 All drainage structures and storm drain piping shall be shown in plan view and plan profile with all applicable elevations. All plan profiles shall clearly identify the applicable maintenance agency for all proposed improvements.

3.0 Basin and Channel Required Components

3.1 All basins and channels shall have maintenance vehicle access driveway approaches approved by the District, County of Riverside Transportation Department, RCFC&WCD, and/or local city (if applicable).

3.2 All basins shall be engineered to drain within 48-72 hours of any rain event.

3.3 All basins shall have 6' high fencing per the Basin Fencing section.

3.4 Additional requirements may be required as determined by the District for each specific project.

4.0 Basin and Channel Grading

4.1 All elevations of slopes, contours, drains, flow lines, sidewalks, trails, buildings, and applicable amenities must be clearly identified on the plan.

4.2 All basins and channels must have positive drainage. Basin bottoms must have a minimum of 1% slope or 0.50% slope with low-flow drains.

4.3 Low-flow drain must be installed per District Specifications and Details, unless otherwise approved by the District. The engineer may make necessary adjustments for each individual project to be submitted to the District for review and approval.

4.4 Side slopes shall not exceed a 4:1 slope, unless approved by the District and County or Riverside. In no case shall any slope exceed a 2:1 slope.

4.5 Access roads shall be under 5% longitudinal slope and under 2% slope where pedestrian access is planned. Access roads required for the County of Riverside or RCFC&WCD must comply with their requirements.

4.6 Access road ramps may be Class 2 base, asphalt, or concrete. The determination of material surfaces shall be based on the access requirements and slope of the ramp per County requirements.

5.0 Drainage Structures

5.1 All structures shall be designed by a registered engineer, meeting the requirements of the County of Riverside and RCFC&WCD when applicable.

5.2 All structures proposed to be maintained by Valley-Wide shall be clearly identified on the drawings. Generally, the District will only maintain drainage structures within parks used for the purpose of park drainage. Drainage structures within basins and channels must be maintained by the County of Riverside or RCFC&WCD in order for the District to maintain the basin or channel.

5.3 Structures must be designed to prevent water entrapment caused by debris or silt build-up. Trash racks that prevent unauthorized entry shall be provided on all openings larger than 18 inches.

5.4 All structures must be set at an elevation that will allow the entire basin or channel to have a minimum flow of 0.50%.

5.5 All basins with water quality requirements must have concrete forebays for desilting of any debris that may enter the basin. The size and specific design of the forebays shall be determined per project by the engineer and must meet the sizing requirements of the County of Riverside. The forebays shall have curb openings where debris can be trapped without flowing through the openings. Baffle walls or splash curbs may be used to ensure debris does not easily flow through curb openings. Curb openings shall have rock or cobble to reduce soil erosion or scouring.

5.6 All storm drain structures shall have energy dissipating devices such as baffle walls or rip rap. Baffle walls must be used when water quality media is used.

5.7 All upstream inlets shall be protected to reduce silt and debris from entering storm drain pipes. The District must review and approve all upstream storm drain pipes and inlets where water is tributary to a District-maintained basin.

6.0 Basin and Channel Walls and Fencing

6.1 Perimeters of all basins and channels must have walls or fences.

6.2 Walls must be provided adjacent to all rear and side yard residential properties and all commercial properties. Walls shall be a minimum height of 6 feet. All walls shall be split-face CMU block with an integral color. No stucco walls will be allowed.

6.3 In addition to District approval, all walls must be approved and permitted by the County of Riverside County, and/or the local city (if applicable).

6.4 Fencing must be provided adjacent to all streets and other open space lots. Fencing for District-maintained basins shall be 6-feet high tubular steel per District details.

6.5 Tubular steel vehicle access gates shall be provided for all basin and channel entrances. Gates must be designed to restrict unauthorized pedestrian or vehicle public access. The width of gates shall be determined based on access requirements for the District, County of Riverside, and Riverside County Flood Control and Water Conservation District when applicable.

7.0 Bio-Retention and Bio-Filtration

7.1 Bio-retention or bio-filtration shall be determined by the County of Riverside and the project engineer.

7.2 Generally, bio-retention is accomplished through an impervious liner to retain or restrict drainage from entering the site soil when a basin is within proximity to a street or other improvement where drainage is not desired. Generally, bio-filtration is accomplished through a permeable liner allowing drainage to infiltrate the site soil.

7.3 The District will only maintain bio-retention and bio-filtration basins meeting District Standards and Specifications per this section, hereinafter referred to as infiltration basins.

7.4 Infiltration basins with upstream runoff from privately maintained streets and inlets will not be maintained by the District, unless there are upstream County-maintained water quality devices. Infiltration basins with upstream runoff from County-maintained streets and inlets can be maintained by the District, provided that the basin meets District standards.

7.5 Infiltration basins maintained by the District shall meet the following design criteria:

a. Basin bottoms must have a minimum bottom slope of 0.50%.

b. Either an impervious or permeable liner shall be provided along the bottom and sides of the basin.

c. A minimum of 12 inches of washed #57 rock shall be placed above the basin bottom liner.

d. 6-inch perforated pipes shall be provided at a maximum distance of 10 horizontal feet. Pipes shall be SCH 40 PVC. All fittings shall be SCH 40, and all changes of direction shall not exceed 45 degrees.

e. Clean-out risers with wyes and 1/8 bends are required at a maximum distance of 50 horizontal feet.

f. Clean-out risers shall be located at the end of all pipes and shall have SCH 40 long elbows.

g. Clean-outs shall be PVC female adapters with a square plug for removal and reinstallation. Clean-outs shall be 6 inches above the top of the basin media.

h. Observation risers shall be provided prior to the connection to the storm drain outlet structure for observation of drainage pipes.

i. A 3-inch-thick choker layer of washed pea gravel shall be installed over the top of the #57 washed rock.

j. A 3-inch-thick choker layer of washed coarse sand shall be installed over the top of the washed pea gravel.

k. Infiltration media referred to as Biofiltration Soil Media (BSM) shall be provided above the washed coarse sand. Refer to the BSM specification section for additional requirements.

7.6 Biofiltration Soil Media (BSM) shall meet the requirements of the LID manual and District specifications listed below:

a. BSM shall contain a minimum of 80% approved washed sand. The District allows up to 90% washed sand, provided sufficient organic content is provided and the infiltration rate of the actual installed

material does not exceed the maximum infiltration rate of 20 inches per hour as published within the LID manual and Santa Margarita WQMP.

b. Considerable changes in infiltration rates can occur between laboratory testing and final field testing; therefore, it is strongly recommended that the BSM be designed to contain material to achieve the maximum allowable infiltration rate, knowing compaction can occur naturally when water enters the basin.

c. BSM must be certified to be compliant with the plans and specifications by the soils engineer and the engineer of record, prior to District approval. The County of Riverside Grading Department must also approve the BSM prior to District approval.

d. The depth of the BSM shall be per the approved plans.

7.7 The following items shall be inspected by the District:

a. Side slopes and bottom sub-grading prior to liner installation. A grading certification by the project engineer or licensed surveyor must be provided before or at the time of the grading inspection.

b. Installation of #57 washed rock bedding, piping, observation tubes, and clean-outs

c. Installation of #57 rock and choker layers

d. Installation of BSM

7.8 The installation of the BSM shall be monitored by the project soils engineer to ensure compliance with the LID manual and Santa Margarita WQMP installation requirements. The soils engineer shall provide an installation observation report or memo to the District at the completion of the installation.

7.9 The BSM shall be tested and certified after installation is completed and not longer than 6 months prior to District acceptance. Testing shall include field double-ring infiltrometer testing for infiltration rates. Infiltration rates shall not be less than 8 inches per hour for initial testing and 2.5 inches per hour for long-term testing. Each basin shall have at least three (3) tests and one (1) test for every 10,000 square feet.

7.10 The District reserves the right to reject any BSM not meeting the above requirements.

7.11 Prior to District approval of any infiltration basin, the owner/developer or contractor shall provide evidence that the County of Riverside has inspected and approved the basin grading, drainage structures, and infiltration improvements.

8.0 Self-Retaining Swales

8.1 The District will only maintain self-retaining swales meeting District Standards and Specifications per this section.

8.2 Self-retaining swales can be maintained by the District when upstream run-off is from County-maintained streets and inlets.

8.3 Downstream outlets for self-retaining swales must be maintained by the County of Riverside.

8.4 Swales must have a minimum slope of 1% or 0.50% with low-flow drains.

8.5 Side slopes should not exceed 4:1 slopes.

8.6 Inlets shall be under sidewalk drains per County of Riverside Standards or small curb openings or curb cores. Inlets shall have cobble placed at the flow line to reduce erosion or scouring.

8.7 Low-flow drains shall have the following materials:

a. A minimum of 12-inch wide by 12-inch deep #57 washed rock with filter fabric along the entire length of the swale.

b. 6-inch SCH 40 PVC perforated pipe with clean-outs at every 50 horizontal feet.

c. 6 inches of washed sand over the #57 washed rock for planting.

d. Clean-outs shall have SCH 40 PVC wye fittings with 1/8 bend and a solid SCH 40 PVC riser with a SCH 40 PVC female threaded adapter and threaded plug installed 6 inches above the top of the swale.

8.8 Self-retaining swales shall be planted with grasses. Refer to the Basin Planting section for additional information.

8.9 The District reserves the right to refuse maintenance for parkways with swales when engineering per District standards is not achievable.

9.0 Basin and Channel Irrigation

9.1 Irrigation shall be designed carefully to accommodate grade differences and silt build-up. Separate irrigation zones must be provided for the top, the center, and the bottom of slopes.

9.2 All irrigation spray heads and rotors must be installed to eliminate overspray onto access roads, drainage structures, etc.

9.3 Bottom of basins shall be irrigated with 12" pop-up rotors or spray heads to accommodate future silt build-up. Heads shall be placed one foot up the slope when located at the perimeter of a basin bottom.

9.4 All nipples for swing joints for irrigation heads at the bottom of basins shall have a 24" lay length for future adjustments.

9.5 Low-volume point-to-point drip irrigation shall be required for slopes unless otherwise approved by the District.

9.6 All irrigation within basins and channels shall also comply with Chapter 24 Irrigation Specifications.

10.0 Basin and Channel Planting

10.1 Plant material must be carefully selected based on the micro-climate, soil texture, soil moisture, and sun exposure, prior to designing and submitting plant species for District approval. Low-growing grasses should be used within the lower portions and flow lines of the swales, with taller grasses and ornamental shrubs in the foreground to screen the basin, channel, or swale from the public view.

10.2 Plant material shall be specified for basin bottoms that can withstand flood water for a period of 48-72 hours. The type of material is based on the type of basin.

10.3 Extended basins without water quality treatment requirements are generally planted or hydro-seeded with low-growing native grasses. Native riparian plant container-grown grasses are generally used for bio-retention basins, as determined by the District.

10.4 Slopes shall have evergreen trees to screen adjacent residential lots. Trees shall be 15-gallon minimum size. 24" box trees may be required adjacent to visible residential lots.

10.5 Slopes shall have large shrubs positioned in natural free-flowing patterns throughout.

10.6 All planters between perimeter block walls or tubular steel fencing and streets for basins shall have 5-gallon screen hedge shrubs at the appropriate spacing for basin screening, unless otherwise restricted by the County of Riverside Fire Department.

10.7 All remaining landscaped areas shall comply with the District's typical design guidelines, specifications, and details.

10.8 All parkways adjacent to basins must comply with the District's street tree requirements.

10.9 All planting within basins and channels shall comply with Chapter 25 Planting Specifications.

END OF SECTION

Chapter 10
Electrical Standards

ELECTRICAL STANDARDS

ELECTRICAL STANDARDS (GENERAL)
Valley-Wide Recreation and Park District (the "District" or "Valley-Wide") shall be considered Valley-Wide Recreation and Park District inspection personnel, consultants, or other approved team members hereafter.

This section establishes District Electrical Standards for various types of projects to ensure that engineers and developers understand the electrical requirements.

1.0 Purpose

1.1 Provide lighting systems for the safety and welfare of park participants, players and spectators.

1.2 Take measures to mitigate the environmental impact of sports field lighting within communities.

1.3 Establish standards for the planning, design, installation, and continued maintenance over the life of the lighting system.

1.4 The standards contained within this section are not intended to alter, modify, or replace any state or local lighting ordinances, regulations, restrictions, or Title 24 compliance requirements. The electrical engineer shall be responsible for meeting those requirements and for what is provided within these electrical standards.

2.0 Site Lighting (General)

2.1 Site lighting is required for all parking lots and pathways within a park or paseo, unless otherwise approved by the District.

2.2 Sports field and court lighting within parks are required as determined by the District based on the size, location, and layout of the project.

2.3 Solar-powered lighting is not permitted unless otherwise approved by the District.

2.4 Low-voltage lighting is not permitted. All lighting must be 120 VAC or higher.

2.5 All site lighting must be designed by a licensed electrical engineer and installed by a licensed electrical contractor.

2.6 All lighting plans must show site photometrics to ensure the required foot-candles are provided and light spill meets District requirements.

2.7 All fixtures throughout the project shall be uniform in style, color, and lamp kelvin, unless otherwise restricted by the County of Riverside.

2.8 All fixture lamps must be LED, unless otherwise approved by the District.

2.9 Pole heights must be maximized to improve the environmental control of these standards. Pole heights must be carefully considered when adjacent to residential properties.

2.10 Parks should have landscape screening to minimize the visibility of the illuminated areas where adjacent streets and residential properties are.

2.11 All exterior lighting must have horizontal shields to reduce vertical light above the fixture.

2.12 All electrical systems shall comply with all State, County, and local codes at the time of project design and construction.

3.0 Walkway and Parking Lot Lighting

3.1 Walkways and parking lots accessing buildings and parking areas must be illuminated with a minimum of one (1) foot-candle and a maximum of eight (8) foot-candles of light on the walking or driving surface during the hours of operation and one hour after the facility is closed.

3.2 Lighting for walkways and parking lots must not exceed a light spill of 0.25 foot-candles at 5 feet from residential property lines.

3.3 Lighting of paved walkways in open spaces must be illuminated with a minimum of 0.5 foot-candle of light at ground level during darkness.

3.4 Lighting of walkway and parking lot areas must be designed with two or more circuits to allow for 50% reduced illumination for after-hours operations controlled with motion and multilevel dimming sensors when required to meet Title 24.

3.5 Multi-use trails and bike paths must be illuminated with a minimum of 0.25 foot-candles of light at ground level during darkness.

3.6 Areas with geographical constraints requiring a higher lighting level may have a maximum of 0.50 foot-candles of light at ground level at the property line during the hours of darkness. The foot-candles may be exceeded when adjacent parcels are not residential properties.

3.7 Exterior doors must be illuminated during all hours of darkness with a minimum of one (1) foot-candle of light at ground level, within a 5-foot radius of the door.

3.8 Picnic shelters must have LED lighting mounted on the top of the ceiling. All conduits through posts and main trusses must be installed concealed within the steel members. Shelters must be lighted at dusk and one hour after the facility is closed.

3.9 Monument signs shall be lighted during darkness.

3.10 The average bulb life must be rated not less than 10,000 hours unless otherwise approved by the District.

3.11 Exterior lighting must be activated by either a time clock with an astronomic clock feature or a photocell.

3.12 All light fixture locations must be coordinated with the Landscape Architect to ensure trees and shrubs do not obscure required light levels

4.0 Walkway and Parking Lot Lighting Poles and Bases

4.1 All light fixtures for walkways must be installed with a concrete post base with a surface 6 inches above finish grade. The bottom of the light fixture lamp and lower housing must be no less than 14 feet above finish grade, unless approved as light bollards for locations within close proximity to residential units.

4.2 30” high concrete post bases must be provided for all light fixtures near a parking lot or other drivable surface, including maintenance access roads.

4.3 12” high concrete post bases must be provided for all other light fixtures.

4.4 All light fixtures should be installed 6-12” behind walkways and curbs.

4.5 Concrete collars shall be installed at the bottom of light bases per District detail.

4.6 All posts must be galvanized steel. Final color and finish to be determined per project.

4.7 Landscape shrubs and groundcover may not exceed a mature height of 3 feet directly adjacent to light fixtures.

5.0 Shade Shelter Lighting

5.1 Shelter lighting must be provided for all shelters.

5.2 Shelter lighting must be installed within the ceiling structure of shelters.

5.3 All conduits must be installed within the footings and posts of the shelter where possible. Conduits outside posts must not be lower than 7 feet above finish grade and must be secured to the structure of the shelter with metal straps and painted to match the shelter supports.

5.4 Shelter lighting must be commercial-quality with vandal-resistant housing and covers.

5.5 Shelter lighting lamps must be LED.

6.0 Monument Sign Lighting

6.1 Monument Sign Lighting must be provided for all monument signs.

6.2 Monument Sign Lighting must be installed in a location that illuminates the text of the sign. Coordinate sign placement with the landscape architect to confirm adequate space for the lighting to illuminate all of the text within the sign.

6.3 Monument Sign Lighting must have a concrete housing and a vandal-resistant cover.

6.4 Fixtures must be permanently secured to a footing per District details.

7.0 Restroom Building Lighting

7.1 Restroom building lighting must be determined with the review of the restroom building plans based on layout, size, and type of building. Refer to Chapter 23 Site Amenities Section 30.0 Restroom Building for further information.

7.2 Restroom building lighting must be controlled by time clocks and the electrical panel within the building.

7.3 All interior and exterior lighting must comply with all State, County, and local codes at the time of project design and construction, including ingress and egress lighting requirements.

8.0 Sports Lighting

8.1 The District shall solely determine where sports lighting will be required on a project-by-project basis.

8.2 When selected to have sports lighting, sports fields must meet the required foot-candles per field type and recreational level as determined by the District.

8.3 The maximum lighting level for recreational athletic fields shall be an average maintained level of 50 foot-candles, as measured in the horizontal plane of the inbound portion of the play area.

8.4 Ballfields with 90-foot bases must be lighted to maintain a level of 50 foot-candles horizontal on the infield and 30 foot-candles on the outfield.

8.5 Ballfields with bases less than 90 feet must be lighted to maintain a level of 30 foot-candles horizontal on the infield and 20 foot-candles on the outfield.

8.6 Soccer fields must be lighted to maintain a level of 30 foot-candles horizontally within the play area.

8.7 Basketball courts must be lighted to maintain a level of 30 foot-candles horizontally within the play area.

8.8 Tennis and pickleball courts should be lighted to maintain a level of 50 foot-candles measured at the net and 30 foot-candles measured at the baseline.

8.9 The measurement for determining the horizontal foot-candles shall be the maximum footcandle light which occurs on a light meter in a horizontal position 3-5 feet above the play surface.

8.10 Light spill when fields are located adjacent to residential dwellings should be carefully considered in the design of the lighting system and should not exceed 0.25 foot-candles within 5 feet of the property line. When layout and geographical issues occur, the District may approve, at its sole discretion, 0.50 foot-candles of light at ground level at the property line. This light spill standard assumes all playing fields will be at least 50 feet from a property line of residential dwellings.

END OF SECTION

Chapter 11
Irrigation Standards

IRRIGATION STANDARDS

IRRIGATION STANDARDS (GENERAL)

Valley-Wide Recreation and Park District (the "District" or "Valley-Wide") shall be considered Valley-Wide Recreation and Park District inspection personnel, consultants, or other approved team members hereafter.

The "Irrigation Consultant" shall be considered the certified irrigation designer or qualified landscape architect.

This section establishes the irrigation requirements for development projects within the District's service area. It is the intent of Valley-Wide to conserve water in the best possible manner for all landscape areas. Plant selection is a key component for water conservation in conjunction with properly designed irrigation systems. The irrigation consultant must coordinate irrigation design with the planting design.

1.0 Design Requirements

1.1 All irrigation systems must be designed to efficiently irrigate all landscape areas with the least amount of water as reasonably possible. All irrigation shall be designed with individual zones for each different moisture requirement to provide 80% minimum Distribution Uniformity (DU).

1.2 All plant material shall be California-friendly and shall survive with a water demand of 70% (or less as required by water purveyor) of its referenced evapotranspiration (ETo). Generally, all plant material shall be low water use, unless otherwise approved by the District.

1.3 The irrigation consultant shall provide an Estimated Annual Water Use (EAWU) and shall not exceed the Maximum Allowed Water Allowance (MAWA) unless approved by the District. Sports parks are considered special-use projects and will be considered exempt from the MAWA.

1.4 An irrigation audit shall be provided for all irrigation projects larger than 3,000 square feet to confirm distribution uniformity. The irrigation audit shall include recommended adjustments if needed. The irrigation auditor shall be a licensed landscape architect, certified water auditor, or an irrigation designer with a minimum of 5 years of experience.

1.5 All irrigation shall conform to Ordinance No. 859.2 and AB1881.

1.6 All below-grade piping shall be non-potable purple PVC approved for recycled water use. Projects where recycled water is not currently available shall be installed with purple piping for future use.

1.7 All irrigation shall conform to the governing local water district's recycled water guidelines.

1.8 All irrigation shall comply with Chapter 24 Irrigation Specifications and Details.

1.9 Irrigation plans must include and show the following:

a. An irrigation equipment legend with specific symbols and descriptions for all equipment specified, including but not limited to:

1. Meters, backflows, filters, pumps, master valves, flow meters, and fertilizer injectors collectively referred to as Point of Connection (POC) equipment.

2. Mainline and wiring sleeving, mainlines, isolation valves, remote control valves, and quick coupler valves, collectively referred to as mainline equipment. All mainline and sleeving sizes shall be shown on the plans. Each remote control valve must have a valve call-out indicating the hydrozone designation number, station number, size, GPM, and precipitation rate.

3. Lateral sleeving, lateral lines, sprinkler heads, rotator heads, and rotor heads.

4. Dripline, supply headers, exhaust headers, air relief valves, and flush valves. General hatching of drip zones is not permitted for drip laterals. Piping and locations of all equipment listed above must be shown on the legend and plan for each specified drip zone.

5. Low-volume point-to-point lateral lines showing supply lines, isolation ball valves, pressure regulators, lateral pipe placement, and flush valves. General hatching of low-volume point-to-point lateral zones is not permitted. Piping and locations of all equipment listed above must be shown on the legend and plan for each specified low-column point-to-point zone.

b. Each sprinkler nozzle, bubbler, or emitter type must have the gallons per minute and precipitation rates shown on the legend.

c. District Irrigation Details must be provided on the plan for all specified equipment. Any equipment specified where a District detail does not exist shall be shown on the plan for District review and approval. EMWD's water meter, POC sequence, temporary potable water, and crossing details specific to recycled water shall be provided on the plans when recycled water is used. The irrigation legend shall list the applicable detail number next to each irrigation equipment item.

d. District Irrigation Specifications shall be provided on plan sheets.

e. Water pressure and pressure loss calculations must be provided.

f. The irrigation plan base file must be shown in grayscale color and contain the following items:

    1. Street curbs, gutters, ramps, street names, and street station numbers.

    2. Walls, fences, and mow curbs

    3. Storm drains, street lights, fire hydrants, blow-offs, and dry utilities.

    4. Adjacent lot lines and lot numbers.

    5. Slopes and swales.

    6. County right-of-way

g. If the entire project is not able to fit on a single plan sheet, match lines must be provided. Each match line must identify the location or sheet number where the continuation of the area is shown. Key maps showing the entire project with the area of coverage for each sheet must be provided on each sheet, with the applicable sheet highlighted.

h. All plan view sheets must have a north arrow with the arrow representing true north. It is suggested that drawing sheets be shown at true north orientation, as this may be required of other agencies required to review and approve the plans.

i. All plan view sheets must have a graphic scale bar with measurements and the assigned scale.

j. Plan sheet title blocks shall be provided as required by the County of Riverside and EMWD. The Valley-Wide signature block must be provided on all sheets and placed at the lower right corner. All title blocks must show the landscape architect's name, contact information, and seal, tract number, project name, and date.

k. Controller conformance memo and booster pump specifications, including voltage and amperage.

2.0 Point of Connection (POC) Equipment

2.1 Separate POC equipment shall be provided for District-maintained areas, including but not limited to all electrical meters, water meters, backflows, filters, pumps, master valves, flow meters, fertilizer injectors, and isolation valves.

2.2 The District must approve the locations of all POC's, and the coverage area of each POC.

2.3 When multiple POC's are required within a project, the POC equipment must be numbered. The area of coverage within a POC shall be referred to by the POC number.

2.4 All POC equipment must comply with Chapter 24 Irrigation Specifications.

3.0 Meters

3.1 Refer to Chapter 10 Electrical Standards and Chapter 19 Electrical Specifications for requirements for electrical meters and pedestals.

3.2 Electrical meters must be installed within close proximity of the irrigation POC equipment.

3.3 Separate water meters shall be used with potable and recycled water irrigation systems. No potable or recycled water irrigation systems shall be connected to any domestic water line or service.

3.4 Water meters shall comply with EMWD standards and requirements.

4.0 Backflow Devices

4.1 Approved Reduced Pressure (RP) backflow devices must be installed downstream of any potable water meter.

4.2 Recycled water irrigation meters shall have approved DC backflow devices.

4.3 All devices shall be protected with a lockable enclosure per Chapter 24 Irrigation Specifications.

4.4 All devices shall be protected with a freeze protection blanket per Chapter 24 Irrigation Specifications.

4.5 Piping between meters and backflows and DC backflow devices must be brass or copper, unless otherwise approved by the District and EMWD.

4.6 All devices shall be sized as required by EMWD.

5.0 Booster Pumps

5.1 Booster pumps must be provided for all projects where 10% or greater residual pressure is not available based on the available water pressure, system design pressure, and system pressure losses.

5.2 Booster pumps shall be per Chapter 24 Irrigation Specifications.

6.0 Master Valves and Flow Meters

6.1 All irrigation systems must have master valves and flow meters.

6.2 Master valves shall be normally closed, connected to a controller capable of operating the master valve based on flow data provided by a flow meter. Normally opened master valves must be approved by EMWD.

6.3 Flow meters shall be capable of reading and sending flow data to a controller capable of opening or closing a master valve.

6.4 Wiring for master valves and flow meters shall be within conduit.

6.5 All piping upstream of a master valve shall be brass or copper, unless otherwise approved by the District and EMWD.

6.6 Piping between the master valve and the flow meter shall be the same material as the flow meter.

7.0 Fertilizer Injectors

7.1 Fertilizer injectors shall be provided for all District-maintained landscape areas, unless otherwise approved by the District.

7.2 Refer to Chapter 24 Irrigation Specifications for types of fertilizer injectors to be used.

8.0 Irrigation Controllers

8.1 All irrigation controllers must have remote operation capabilities via cellular internet connection. The controller must have a cellular plan extending for a period of at least 5 years after acceptance by the District.

8.2 It is the responsibility of the irrigation consultant to provide all required sensors, modules, antennas, rain switches, and other related equipment as required by the District.

8.3 Controllers shall be conventionally wired or 2-wire operational. 2-wire controllers require more specific wiring requirements, including conduit for all wiring.

8.4 Refer to Chapter 24 Irrigation Specifications for additional requirements.

8.5 The irrigation consultant must confirm with the District's controller manufacturer and fertigation representative that all required communications and components have been incorporated. The irrigation consultant must obtain a letter of recommendation from the manufacturer indicating that the proper equipment has been specified for each specific project according to District requirements.

9.0 Control Wiring

9.1 Control wiring for conventional wired controllers shall be as follows:

a. Each remote control valve shall have one pilot wire connected to the assigned controller station number.

b. Each remote control valve shall have a common wire connected to the common connection at the controller. The common wire may be shared with other remote control valves within each mainline section.

c. Separate common wires must be provided for each mainline section. Common wire splices at intersecting mainline tees are not permitted. Common wires must be labeled at the controller and within the as-builts to identify what mainline section the common wire is for.

d. Spare wires shall be provided for all remote control valves. Two spare wires must be provided to the last valve along a mainline section, and one spare wire for every five (5) remote control valves.

9.2 Control wiring for 2-wire controllers shall be as follows:

a. All 2-wire shall be installed inside 1-1/2" conduit with sweeps into each valve box.

b. All intersecting mainlines shall have a pull box for the 2-wire path wiring to be routed in multiple directions. All pull box splices shall be identified showing which valves are connected to each wire path direction. Pull box locations must be identified on the as-builts.

c. All conduits shall be thoroughly cleaned and sealed.

d. Special 2-wire decoders shall be installed as required by the manufacturer. All decoder wire leads shall be sealed.

e. All wire connectors shall be sealed with approved connectors per District Irrigation Specifications.

9.3 Refer to Chapter 24 Irrigation Specifications for additional requirements

10.0 Remote Control Valves

10.1 Remote control valves shall be provided for all areas within a street block or driveway. No lateral piping under streets or driveways to supply water from a remote control valve on the other side of a street or driveway is permitted, unless otherwise approved by the District.

10.2 Each remote control valve must be located within a valve box. Multiple valves are not permitted within a single valve box.

10.3 A maximum of six (6) valves can be grouped together on a manifold.

10.4 All remote control valves shall have an isolation valve on the upstream side of the valve.

10.5 Remote control valves should be located within planter areas whenever possible.

11.0 Isolation Valves

11.1 Isolation valves shall be provided at all mainline intersections and prior to any street crossing.

11.2 Isolation valves shall be the same size as the mainline.

11.3 Isolation valves shall be used for all valve manifolds.

12.0 Quick Coupler Valves (QCV's)

12.1 QCV's shall be provided with all irrigation systems.

12.2 QCV's shall be spaced every 150 feet and within 75 feet from the end of a project.

12.3 QCV's shall be provided for each individual area that may be isolated by a street or driveway.

12.4 All QCV's must have an isolation valve directly upstream within the same valve box per District detail.

12.5 QVC locations shall be subject to EMWD approval when recycled water is used.

13.0 Irrigation Laterals

13.1 All irrigation for planters and slopes irrigated with potable water shall be point-to-point drip irrigation unless otherwise approved by the District.

13.2 Irrigation for planters and slopes 10 feet wide or greater that will be irrigated with recycled water may have conventional overhead irrigation as determined by the District. The irrigation consultant must contact the District prior to the layout of any overhead irrigation to confirm application approval for all irrigated areas proposed to be irrigated with overhead irrigation.

13.3 Conventional irrigation may be used for basins and channels as determined and approved by the District.

13.4 All irrigation within 24" of any non-permeable surface that could potentially run off-site shall be irrigated with low-volume drip irrigation.

13.5 Turf areas within 24" of any non-permeable surface that could potentially run off-site must be irrigated with below-grade dripline with emission devices at

12” O.C. in all directions. Dripline shall have Copper Shield Technology to reduce root intrusion.

13.6 Low-volume irrigation lateral zones shall be designed as outlined below:

a. Valves must be designed between 2-40 GPM in order for accurate flow meter readings to occur.

b. All valves shall have basket filters installed directly downstream of each zone valve.

c. Lateral supply lines shall be provided to distribute adequate pressure and flow to each lateral branch line with tees and emitters. Lateral supply lines shall be installed to the elevation level of each lateral branch line. Lateral supply lines shall be 1-inch minimum diameter in size and shall have the appropriate check valve for elevation changes greater than 3 feet.

d. Isolation ball valves and pressure regulators shall be provided downstream of all lateral supply lines and directly upstream of lateral branch lines with tees and emitters.

e. The ends of all lateral branch lines shall have a flush valve. The ends of lateral branch lines can be connected together to be piped to an end for a single flush valve for up to five (5) lateral branch lines on flat areas and two (2) lateral branch lines on slope areas.

f. Branch laterals shall have ¾” x ½” Slip x FT UVR tees installed for each emitter to be installed for each plant.

g. Each emitter shall be connected to the tee with a threaded flexible riser long enough to provide sufficient placement of the emitter. Each emitter shall be placed 4 inches above grade. Each riser longer than 12 inches shall be secured with a coated staple.

h. All plants shall have a minimum of one (1) emitter.

i. Irrigation and planting layouts must be designed to correspond with each other.

j. All piping for flat areas shall be buried 4 inches deep, and emitters must be aligned with the edge of the root ball for each plant. Piping buried 4 inches deep shall be UVR PVC.

k. Piping for slopes 4:1 or greater may be above-grade UVR PVC. Projects within a Caltrans right-of-way may be subject to pipe burial.

l. All UVR lateral lines on slopes shall be secured with epoxy-coated "J" hooks at 10-foot spacing.

13.7 The irrigation consultant must show all locations of supply lines, check valves, isolation ball valves, pressure regulators, and flush valves on the irrigation plan and on the legend with all model numbers. Locations of actual tees and emitters are not required.

13.8 Conventional spray and rotor head irrigation lateral zones shall be designed as outlined below:

a. All spray and rotor heads must comply with Chapter 24 Irrigation Specifications and are subject to District approval for type, use, and placement.

b. All turf pop-ups must be 6-inch minimum height.

c. Where conventional overhead spray or rotor heads are approved to irrigate planters, all spray heads and rotors must be 12 inches in height for slopes and the bottom of detention basins and channels.

d. All parkways, entries, parks, basins, channels, and other open space areas with overhead irrigation must have head-to-head irrigation coverage.

e. Irrigation lines must be separated from the top and bottom of slopes and all other areas where elevation changes exceed the manufacturer's factory-installed check valve elevation limitations.

13.9 Tree irrigation lateral zones shall be designed as outlined below:

a. Each tree shall have one above grade bubbler and one deep-root watering bubbler systems.

b. Tree zones shall be separated for each group of trees within a specific landscape area. Trees within DG, planter, and turf areas must be separated.

13.10 Vines shall be irrigated with individual zones using low-volume drip irrigation.

END OF SECTION

Chapter 12
Planting Standards

PLANTING STANDARDS

PLANTING STANDARDS (GENERAL)

Valley-Wide Recreation and Park District (the "District" or "Valley-Wide") shall be considered Valley-Wide Recreation and Park District inspection personnel, consultants, or other approved team members hereafter.

This section establishes the planting requirements for development projects within the District's service area. It is the intent of Valley-Wide to conserve water in the best possible manner for all landscape areas. Plant selection is a key component for water conservation in conjunction with properly designed irrigation systems. The irrigation consultant must coordinate irrigation design with the planting design.

1.0 Design Requirements

1.1 All plant material shall be California-friendly and shall survive with a water demand of 70% (or less as required by water purveyor) of its referenced evapotranspiration (ETo). Generally, all plant material shall be low water use, unless otherwise approved by the District.

1.2 All planting shall comply with District Planting Specifications, Plant Palette, and Planting Details.

1.3 All plant material shall be carefully selected based on each site-specific characteristic, including but not limited to space, soil type, sun exposure, wind, weather, microclimate, etc.

1.4 Selection of plant material per Valley-Wide's Approved Plant List does not relieve the landscape architect of the responsibility of proper placement and selection of material per proper horticultural practices.

1.5 The landscape architect must visit the project prior to submittal of plans to confirm all proposed street trees, shrubs, and groundcovers specified are consistent with any adjacent existing landscape improvements.

1.6 Only plant material listed on Valley-Wide's Approved Plant List will be accepted unless otherwise approved in writing.

1.7 Plant material quantities must be in accordance with Valley-Wide's Plant Standards.

1.8 Plant material and cover bark mulch must comply with the County of Riverside Fire Department when planting restrictions apply. Projects within a Fire Hazard Severity Zone (FHSZ) are subject to specific review and approval of the landscape plans by the County of Riverside Fire Department. Any contradictions or clarifications between County Fire's requirements and County Landscape ordinances and/or Valley-Wide's Standards and Specifications must be reviewed by Valley-Wide and all applicable County departments to determine specific direction.

1.9 Layouts shall be as designed, as listed below:

a. Design plants and ground cover to be in groupings of free-flowing patterns with variations in color, texture, and height. Plants must be positioned so that the tallest are positioned behind the smaller material. Formal and linear patterns with a single species throughout an area are not permitted.

b. Provide multiple varieties of shrubs for each project to avoid mass plantings of single species. Alternate hedgerow shrubs along narrow parkways with other plant varieties to achieve contrast in color and texture.

2.0 Planting Plan Requirements

2.1 The planting plan must include the following:

a. A legend which specifies plant symbols, quantities, sizes, and detail number for each type of plant material specified. The planting legend shall also list the WUCOLS plant factor of each plant type.

b. Each plant material specified must have an individual symbol or hatch pattern on the plan with the corresponding symbol or hatch pattern indicated on the legend. Abbreviated call-outs with only circles will not be approved. Each type of plant material represented by an individual symbol or hatch pattern must have the plant size and spacing listed on the legend. All individual symbols on the plan must be spaced to be consistent with the spacing listed on the legend.

c. Each tree symbol shall be sized accordingly to reflect the average mature canopy of the tree.

d. Turf and other groundcover items shall be shown with hatch patterns with corresponding information on the legend.

e. Boulders, DG, rock, or other similar material must be shown on the plan and legend, including sizes, depths, and quantities.

f. Abbreviated planting legends should be provided on each planting sheet whenever possible.

g. District Planting Details must be provided on the plan for all planting. Any specific planting where a District detail does not exist shall be shown on the plan for District review and approval.

h. District Irrigation Specifications shall be provided on plan sheets.

2.2 The planting plan base file must be shown in grayscale color and contain the following items:

a. Street curbs, gutters, ramps, street names, and street station numbers

b. Walls, fences, and mow curbs

c. Storm drains, street lights, fire hydrants, blow-offs, and dry utilities

d. Adjacent lot lines and lot numbers

e. Slopes and swales

f. County right-of-way

2.3 If the entire project is not able to fit on a single plan sheet, match lines must be provided. Each match line must identify the location or sheet number where the continuation of the area is shown. Key maps showing the entire project with the area of coverage for each sheet must be provided on each sheet, with the applicable sheet highlighted.

2.4 All plan view sheets must have a north arrow with the arrow representing true north. It is suggested that drawing sheets be shown at true north orientation, as this may be required of other agencies that are required to review and approve the plans.

2.5 All plan view sheets must have a graphic scale bar with measurements and the assigned scale.

2.6 Plan sheet title blocks shall be provided as required by the County of Riverside. The Valley-Wide signature block must be provided on all sheets and placed at the lower right corner. All title blocks must show the

landscape architect's name, contact information, stamp, tract number, project name, and date.

3.0 Tree Standards

3.1 Typical parkway street tree spacing shall be an average of approximately 30 feet apart. Street trees can be grouped closer together in areas with random openings to provide a more natural appearance and to be located away from street lights and other utilities. Tree placement and spacing must comply with the County of Riverside Fire Department when a project is within a Fire Hazard Severity Zone (FHSZ).

3.2 Parkways, including any adjacent slope, with more than 20 feet total width, must have accent trees in addition to street trees. Accent trees should be spaced at an average of 50 feet apart in groupings of 3-5 trees where possible.

3.3 Tree spacing and required quantities may vary depending on project location and any applicable fire restrictions. The District reserves the right to determine tree spacing and required quantities for each project.

3.4 Trees for slopes and open space areas should be appropriately spaced so that tree canopies do not overlap.

3.5 No pine trees shall be planted within 8 feet of any residential wall.

3.6 No trees shall be planted for areas less than 3 feet wide.

3.7 Trees for areas 8 feet wide or less must be smaller-growing species with non-invasive roots.

3.8 Trees must be located at least 20 feet away from any street light or stop sign and at least 8 feet away from underground utilities.

3.9 No tree shall be planted within a street line of sight area.

3.10 Street trees shall be 24" box minimum size.

3.11 Trees within parks within 5 feet of walking areas shall be a 24" box minimum size.

3.12 Accent trees for parkways, slopes, or other open space areas shall be 15-gallon minimum size, unless otherwise approved by the District.

3.13 No tree shall be topped unless otherwise approved by the District.

3.14 All landscape areas should have evergreen and deciduous trees wherever possible. Consideration may be given for narrow parkways with limited space.

3.15 Any tree within 8 feet of a hardscape surface shall have District-approved root barriers. Any tree within 8 feet of a shallow footing less than 3 feet deep shall have District-approved root barriers.

3.16 The District reserves the right to reduce the tree quantities as deemed necessary.

4.0 Shrub Planting Standards

4.1 Shrub planting for streetscape parkway planters shall be as follows:

a. Provide 5-gallon shrubs along all walls. The type and size of shrub, as well as the respective spacing, will be based on the width of the area. The spacing shall not exceed 5 feet along walls, unless otherwise restricted by the County Fire Department and as approved by the District.

b. Streetscape parkway planters 5 feet in width or less shall only have a 5-gallon shrub.

c. Streetscape parkway planters larger than 5 feet in width shall have a 5-gallon shrub and a perennial plant or groundcover depending on the width of the planter, unless otherwise restricted by the County Fire Department and as approved by the District. Groundcover plants must have a 4' wide clear growing area. Perennial plants must have a 3' wide clear growing area.

d. Plants adjacent to curbs or walkways should be a minimum distance of 2 feet away from the edge of the hardscape surface from the center of the plant root ball.

e. Plants adjacent to walls or fences should be a minimum distance of 2 feet away from the edge of the wall from the center of the plant root ball.

f. Parkway planters between street curbs and walkways must have low-growing plants and groundcover. Parkway planters must be at least 3 feet wide. Parkway planters 3-4 feet wide shall only have one row of

plants or groundcover. Wider parkways shall have additional plants or groundcover, provided that curb and walkway spacing per this section is provided.

g. All plants within the County's line of sight must comply with the County's height limitations based on the mature height of the proposed plant.

h. The District reserves the right to reduce the shrub and groundcover quantities as deemed necessary.

4.2 Shrub Planting for Slopes

a. Spacing along curbs, walkways, walls, and fencing shall be consistent with Section 4.1a.

b. The type and size of plant, as well as the respective spacing, will be based on the width of the area. It is expected that larger slopes will have larger growing plants and smaller slopes will have smaller plants.

c. Plants shall be selected and spaced to avoid mature growth overlap as determined by the District. Some species may be required to be planted closer for faster coverage and erosion control protection.

d. Maintenance paths must be provided for mass planting of large-growing plants by designing small gaps in the planting.

e. The District reserves the right to dictate placement and spacing of any plant.

5.0 Groundcover Standards

5.1 All planter and slope areas shall have some means of groundcover for erosion and dust control and suppression of weeds.

5.2 Groundcover is generally accomplished with 1-gallon plants at closer spacings when irrigated with low-volume point-to-point irrigation. Spacing is based on the selected plant and may range from 3 feet to 6 feet as determined by the District.

5.3 Where overhead spray irrigation is approved to be used, ground cover planting from rooting cuttings may be used as determined by the District. Groundcover planting must also have groupings of plants.

6.0 Slope Erosion Control

6.1 All slope areas shall have some means of ground cover for erosion and dust control and suppression of weeds.

6.2 Ground cover may be live planting, bark mulch, or other covering as determined by the District.

6.3 2:1 slopes directly adjacent to walkways or retaining walls may be subject to jute netting.

6.4 Slopes with rocky conditions that may not allow for planting must be deemed to be stable by a licensed soils engineer.

7.0 Bark Mulch

7.1 All planters and slopes shall have a layer of approved bark mulch, unless otherwise restricted by the Riverside County Fire Department and as approved by the District.

7.2 Bark mulch shall be 3 inches thick for slopes and planters when point-to-point irrigation is used and 2 inches thick when conventional irrigation is used.

7.3 Bark mulch must taper to 1 inch thick at curbs and walkways per District Detail.

7.4 Bark mulch must be approximately 4” in size to minimize movement.

8.0 Wall Covering

8.1 All tract walls shall be screened with shrubs, unless otherwise restricted by the Riverside County Fire Department and approved by the District.

8.2 Walls where shrubs are not allowed should have vines at 10-foot spacing.

8.3 Vines may be omitted at the discretion of the District, provided that there is sufficient screening as determined solely by Valley-Wide.

9.0 Turf Grass

9.1 All proposed turf grass areas are subject to review and approval by the District.

9.2 Turf grass areas must be functional with recreational value as determined by the District.

9.3 The type of grass will be selected based on the proposed use. The typical types are either tall fescue or a sports blend containing Bermuda and perennial rye.

9.4 Turf grass may be sodded or hydroseeded.

9.5 Hydroseeded grass must have 95% germination prior to District acceptance of maintenance.

9.6 No turf grass is allowed on slopes 7:1 or greater.

END OF SECTION

Chapter 13
Exhibits

Exhibit 1
Plan Submittal Checklist

EXHIBIT 1
VALLEY-WIDE RECREATION AND PARK DISTRICT
PLAN SUBMITTAL CHECKLIST

General:

- ___ Screen out areas other than Valley-Wide maintained areas
- ____ Legible to read and interpret
- ____ 24" x 36" maximum size sheets completed plans (all sheets listed on title sheet index)
- ____ Sheet___of___ provided
- ____ Max. scale 1" = 30'
- ____ North arrow on each plan
- ____ Match lines correct
- ____ Street names
- ____ Project limits, walls, fences, mow curbs R.O.W., lot numbers and slopes
- ____ Maintenance responsibilities defined
- ____ Handicap ramps & rails
- ____ Plan cross-referencing
- ____ 1st submittal with approved M.E.
- ____ Re-submittal with Response to Comments
- ____ Approval (signature blocks provided)
- ____ Re-submittal required past 6 months
- ____ Fence & wall plan included
- ____ Storm drain plan included
- ____ Precise grading plan included
- ____ M.E. and County EP application
- ____ Calsense controller compliance memo

Title Sheets:

- ____ Location map
- ____ Vicinity maps with street configurations
- ____ Index
- ____ General notes: landscape quantities:
  - ___ Total sq. ft. in R.O.W.
  - ___ Total sq. ft. Valley-Wide area
  - ___ Total acres Valley-Wide area
- ____ Total trees by size
- ____ Project title/tract no.
- ____ Cross street & addresses
- ____ Revision block
- ____ Landscape arch. seal/signature
- ____ Developer's name/address/phone number
- ____ Project manager's name/phone number
- ____ Plan date
- ____ Valley-Wide approval block on all sheets (lower right corner)
- ____ All other required agency approval blocks
- ____ List required inspections
- ____ List inspection email
- ____ A.D.A.A.G. note
- ____ Time Limitation Note
- ____ County of Riverside Fire compliance note

Irrigation Plans:

- ____ Maintenance responsibilities defined
- ____ Spot elevation (top of curb @ P.O.C.)
- ____ Location of water meter and/or P.O.C.
- ____ Water information (blocked out)
  - water source & phone no.
  - potable/recycled water listed
  - available pressure range (high/low)
  - water meter size
  - peak demand in GPM
  - date information obtained
- ____ Backflow preventer
- ____ Fertilizer injector
- ____ Pressure regulator
- ____ Master valve
- ____ Flow sensor
- ____ Filter
- ____ Controller/enclosure
- ____ Booster pump/enclosure
- ____ Precipitation rates for each valve
- ____ Water budget
- ____ Irrigation pressure loss calculations – farthest, largest (15-20 PSI residual)
- ____ Drinking fountains (ADA accessible)
- ____ Isolation valves
- ____ Quick coupler valves @150' O.C. and 75' from limit of work
- ____ Approved irrigation equipment
- ____ Recycled Water "Standard Notes" from water district
- ____ Cross-reference on each sheet for irrigation legend, details, notes and specifications
- ____ Current details per Valley-Wide standards
- ____ Legend
  - equipment model number/size
  - radius per sprinkler head
  - PSI demand per sprinkler head
  - GPM demand per sprinkler head
- ____ Specifications per Valley-Wide Standards and Specifications

EXHIBIT 1
VALLEY-WIDE RECREATION AND PARK DISTRICT
PLAN SUBMITTAL CHECKLIST

Landscape Planting Plans:

____ Conformance with specific plan
____ Maintenance responsibilities defined
____ Concrete header project limits and between turf and planters)
____ Trees on approved street tree list
____ Min. street tree spacing distance
____ Site distance: Primary corners
____ Site distance: Secondary corners
____ Cross reference on each sheet for planting legend, details, notes and specifications
____ Details per Valley-Wide Standards and Specifications
____ Specifications per Valley-Wide Standards and Specifications
____ Legend
- botanical name
- common name
- plant size
- plant quantities
- plant spacing
- plant symbols
- special comments
- tree trunk caliper & canopy diameter
- Water use

Grading and Electrical Plans:

____ **Precise Grading Plan**
- Path of travel less than 2% cross slope and 5% running slope shown with FS elevations (handrails for ramps to 8%)
- Site Furnishings shown with grade breaks and less than 2% slope in all directions with FS elevations
- Field slopes per Grading Standards
- Drainage shown with pipe slope, inlet INV. and FG elevations
- Domestic water line(s) shown
- Sewer line(s) shown
- Electrical post bases shown
- District details and specifications

____ **Electrical Plan**
- All fixtures shown on plan and legend with symbols and model numbers
- Conduit and wire shown on plan
- Pull boxes shown on plan
- Tree locations shown on plan
- Site Furnishings shown on plan
- All storm drain pipes and inlets shown on plan
- Photometrics meet District standards

Park Plans:

____ Landscape construction plan legend with symbols, description, models and quantities
____ Submittal to include Precise Grading Plan
____ Submittal to include Electrical Plan
____ Submittal to include CCTV Plan
____ Storm drain lines and inlets shown on landscape construction, irrigation and planting plan sheets
____ Domestic Water and Sewer lines shown on landscape construction, irrigation and planting sheets
____ Electrical light fixture post bases, transformers and enclosures shown on landscape construction, irrigation and planting sheets
____ Accessible paths show on construction plan
____ Accessible parking stalls and signage on plan
____ Accessible compliance for all Site Furnishings
____ Installation details for all Site Furnishings
____ List of required permits for Site Furnishings
____ Structural details for Site Furnishings
____ Perimeter fencing provided
____ Playground fencing provided
____ Confirm no conflicts with drainage pipes and inlets and electrical light bases

Site Furnishings:

____ Concrete walkways (8’ wide min.)
____ Playground curbs
____ PVC fencing
____ Tubular steel fencing
____ Chain link fencing
____ Chain link backstop & dugouts
____ Trash and recycle receptacle
____ Park bench
____ Picnic table
____ ADA picnic table
____ Play structure (ages 2-5 and 5-12)
____ BBQ and hot coal container
____ Shade structure
____ Swings
____ Drinking fountain
____ Bleachers
____ Players bench
____ Bat rack
____ Ball field bases
____ Pitching rubber
____ In-field mix
____ Site lighting
____ Flag Pole
____ Bike rack
____ Volleyball

Exhibit 2
Approved
Plant List

EXHIBIT 2
VALLEY-WIDE RECREATION AND PARK DISTRICT
APPROVED PLANT LIST

TREES

Botanical Name	Common Name	WUCOLS Water Use	Design Use and Restriction Notes:
Acacia baileyana	Bailey acacia	Low	
Agonis flexuosa and cvs.	Peppermint tree	Low	
Albizia julibrissin	Silk tree	Low	
Callistemon viminalis	Weeping bottle brush	Moderate	
Cedrus deodara	Deodar cedar	Moderate	
Cercidium 'Desert Museum'	Desert Museum palo verde	Low	8' from walkways
Cercis occidentalis	Western redbud	Low	
Ceratonia siliqua	Carob tree	Low	
Chilopsis linearis	Desert willow	Low	8' from walkways
Chitalpa tashkentensis	Chitalpa	Low	
Cinnamomum camphora	Camphor tree	Moderate	
Citrus spp.			Limited use (as directed)
Cupaniopsis anacardioides	Carrotwood	Moderate	Selective use for frost sensitivity
Cupressus sempervirens	Italian cypress	Low	Selective use outside of fire zone areas
Eriobotrya deflexa	Bronze loquat	Moderate	Entry monument with sandy soil only
Eucalyptus sideroxylon	Red Iron bark	Low	
Geijera parviflora	Australian willow	Moderate	For small parkways or planters
Ginkgo biloba	Maiden hair tree	Moderate	
Gleditsia triacanthos	Honey locust	Low	
Grevillea robusta	Silk tree	Low	Limited use on large slopes
Hymenosporum flavum	Sweet shade	Moderate	
Koelreuteria bipinnata	Chinese flame tree	Moderate	
Koelreuteria paniculata	Golden rain tree	Low	
Lagerstroemia indica 'red or purple'	Crape myrtle (red or purple)	Moderate	For small parkways and planters
Laurus nobilis	Sweet Bay	Low	
Liquidambar styraciflua 'burgundy'	American sweet gum 'burgundy'	Moderate	Only for large open areas
Magnolia grandiflora	Magnolia species	Moderate	
Magnolia x soulangeana	Saucer magnolia	Moderate	
Malosma laurina	Laurel sumac	Low	
Olea europaea 'swan hill' or 'wilsoni'	Fruitless olive	Low	Limited to sloping areas
Parkinsonia	Desert Museum palo verde	Low	
Pinus canariensis	Canary Island pine	Moderate	6' from wall, walkways and curbs
Pinus eldarica	Eldarica pine	Low	8' from walls, walkways and curbs

EXHIBIT 2
VALLEY-WIDE RECREATION AND PARK DISTRICT
APPROVED PLANT LIST

TREES Continued

Botanical Name	Common Name	WUCOLS Water Use	Design Use and Restriction Notes:
Pistacia chinensis	Chinese pistache	Moderate	
Podocarpus gracilior or m. maki	Fern or yew pine	Moderate	
Platanus species	Sycamore	Moderate	
Platanus Mexicana	Mexican sycamore	Moderate	6' from walls, walkways and curbs
Platanus recemosa	California sycamore	Moderate	6' from walls, walkways and curbs
Platanus x acerifolia	London plane	Moderate	6' from walls, walkways and curbs
Prosopis glandulosa (P. chilensis)	Chilean mesquite	Low	6' from walkways and curbs
Prunus species		Moderate	Limited Use
Pyrus calleryana 'bradford'	Ornamental pear 'bradford'	Moderate	Limited Use
Quercus agrifolia	Coast live oak	Low	Stay out of turf areas
Quercus berberidifolia	Scrub oak	Low	Stay out of turf areas
Quercus chrysolepis	Canyon live oak	Low	Stay out of turf areas
Quercus douglasii	Blue oak	Low	Stay out of turf areas
Quercus virginiana	Southern live oak	Moderate	
Rhaphiolepis 'Majestic Beauty'	Majestic beauty	Moderate	
Rhus lancea	African sumac	Low	Limited use only on larger slopes
Robinia species	Locust	Low	
Sambucus spp.	Elderberry	Low	Limited to slopes
Schinus molle	California pepper tree	Low	Limited use only on larger slopes
Ulmus parvifolia 'sempervirens'	Chinese evergreen elm	Low	Limited use in large open areas

All listed plant material is subject to approval based on location and use

Prior to design work, we encourage each design consultant to meet with our planning team to discuss project specifics to maximize installation savings and water conservation.

EXHIBIT 2
VALLEY-WIDE RECREATION AND PARK DISTRICT
APPROVED PLANT LIST

SHRUBS

Botanical Name	Common Name	WUCOLS Water Use	Design Use Restriction Notes:
Abelia grandiflora	Glossy Abelia	Moderate	Limited Use being Moderate Water
Acacia redolens	Acacia	Low	For large slopes and large open areas
Acacia redolens 'desert carpet'	Prostrate acacia	Low	For slopes and open areas
Agave attenuata	Agave	Low	
Aloe spp.	Aloe	Low	
Anigozanthos flavidus	Kangaroo paw	Low	
Artemisia Californica	California sagebrush	Very Low	
Baccharis Starn	Starn coyote bush	Low	
Baccharis pilularis consanguinea	Coyote bush	Low	
Baccharis pilularis 'Twin Peaks'	Dwarf coyote bush	Low	
Baccharis pilularis 'Pigeon Point'	Dwarf coyote bush	Low	
Baccharis salicifolia	Mulefat	Moderate	Limited Use being Moderate Water
Berberis thunbergii	Japanese barberry	Moderate	Limited Use being Moderate Water
Bouteloua gracilis and cvs.	Blue gramma	Low	30" from walkways and curbs
Buddleja species	Butterfly bush	Moderate	Limited Use being Moderate Water
Buxus sempervirens	English boxwood	Moderate	Limited Use being Moderate Water
Caesalpinia Mexicana	Mexican bird of paradise	Low	
Calliandra californica	Baja fairy duster	Low	
Callistemon 'Little John'	Little John bottlebrush	Low	
Carex praegracilis	California field sedge	Moderate	Limited Use being Moderate Water
Carex pansa	Sand dune sedge	Moderate	Limited Use being Moderate Water
Carex spissa	San Diego sedge	Low	
Carex tumulicola	Berkeley sedge	Low	
Cassia fistula	Golden shower	Moderate	Limited Use being Moderate Water
Cistus purpurea	Rockrose	Low	
Clytostoma callistegioides	Violet trumpet vine	Moderate	Limited Use being Moderate Water
Coleonema pulchrum	Pink breath of heaven	Moderate	Limited Use being Moderate Water
Convolvulus cneorum	Morning glory	Low	
Cotoneaster species	Evergreen cotoneaster	Moderate	Limited Use being Moderate Water
Cuphea hyssopifolia	False heather	Moderate	Limited Use being Moderate Water
Dianella revoluta cvs.	Flax lily	Low	
Dietes vegeta	Fortnight lily	Moderate	Limited Use being Moderate Water

EXHIBIT 2
VALLEY-WIDE RECREATION AND PARK DISTRICT
APPROVED PLANT LIST

SHRUBS Continued

Botanical Name	Common Name	WUCOLS Water Use	Design Use Restriction Notes:
Distichlis spicata	Salt grass	Low	
Distictis buccinatoria	Blood-red trumpet vine	Moderate	Limited Use being Moderate Water
Dodonea viscosa	Hopseed bush	Moderate	
Dudleya spp.	Dudleya live forever	Low	
Echium candicans (fastuosum)	Pride of Madeira	Low	
Elaeagnus angustifolia	Russian olive	Low	
Elaeagnus pungens	Silverberry	Low	
Elymus triticoides	Creeping wild rye	Low	
Encelia californica	Coast sunflower	Low	
Eremophila glabra 'Mingenew Gold'	Gold emu bush	Low	
Eremophila maculata	Spotted emu bush	Low	
Eriogonium Fasciculatum	California buckwheat	Very Low	
Euonymus species	Evergreen euonymus	Moderate	
Festuca ovina and cvs.	Sheep fescue	Moderate	Limited Use being Moderate Water
Ficus pumila	Creeping fig	Moderate	
Galvezia Speciosa	Island bush snap dragon	Low	
Hemerocallis hybrid (no yellow)	Evergreen daylily	Moderate	Limited Use being Moderate Water
Hesperaloe parviflora	Red/Yellow yucca	Low	
Heteromeles arbutifolia	Toyon	Low	
Heuchera elegans	Urn flowered alum root	Low	
Hordeum brachyantherum	Meadow barley	Low	
Hypericum calycinum	Aaron's beard	Moderate	Limited Use being Moderate Water
Ilex vomitoria	Yaupon	Low	
Juncus mexicanus	Mexican rush	Moderate	Limited Use being Moderate Water
Juncus patens	Common rush	Low	
Juniperus horizontalis	Blue chip juniper	Low (not found)	Limited Use in low and small areas
Juniperus 'Wiltonii'	Blue rug juniper	Low (not found)	Limited Use in low and small areas
Kechiella cordifolia	Heart-leaved pentemon	Low	
Kniphofia uvaria hybrids and cvs.	Red hot poker	Low	
Lantana montevidensis	Trailing lantana	Low	Limited Use for frost sensitivity
Lavendula stoechas	Spanish lavender	Low (not found)	

EXHIBIT 2
VALLEY-WIDE RECREATION AND PARK DISTRICT
APPROVED PLANT LIST

SHRUBS Continued

Botanical Name	Common Name	WUCOLS Water Use	Design Use Restriction Notes:
Leonotis leonurus	Lion's tail	Low	
Leptospermum ‘laevigatum’	Australian tea tree	Low	
Leucophyllum frutescens	Texas ranger	Low	
Leymus condensatus	Blue lyme grass	Moderate	Limited Use being Moderate Water
Ligustrum japonicum	Japanese privet	Moderate	Limited Use being Moderate Water
Lirope spp.	Lily turf	Moderate	Limited Use being Moderate Water
Lomandra confertifolia	Mat rush	Moderate	Limited Use being Moderate Water
Lonicera japonica	Japanese honeysuckle	Low	
Mahonia oiwakensis (M. lomariifolia)	Chinese holly grape	Moderate	Limited Use being Moderate Water
Malacothamnus fasciculatus	Bush mallow	Low	
Mimulus aurantiacus aurantiacus	Sticky monkeyflower	Low	
Mimulus aurantiacus puniceus	Southern bush monkeyflower	Very Low	
Mimulus aurantiacus puniceus	Red bush monkeyflower	Very Low	
Miscanthus sinensis	Silver grass	Moderate	Limited Use being Moderate Water
Muhlenbergia capillaris and cvs.	Hairy awn muhly	Low	
Muhlenbergia ‘rigens’	Deergrass	Moderate	
Muhlenbergia ‘regal mist’	Pink muhly or Capillaris	Moderate	
Myoporum parvifolium ‘pink’	Pink myoporum	Low	
Myrtus communis ‘compacta’	Myrtle	Moderate	Limited Use being Moderate Water
Nandina domestica ‘species’	Heavenly bamboo	Moderate	Limited Use being Moderate Water
Nassella gigantean	Giant needle grass	Low	
Nassella pulchra	Purple needle grass	Low (not found)	
Nerium oleander ‘petite pink’	Dwarf oleander	Low	
Oenothera elata hooker	Hooker’s Evening primrose	Low	
Oenothera stunnei	Baja evening primrose	Low	
Parthenocissus tricuspidata	Boston ivy	Moderate	
Pelargonium peltatum	Ivy geranium	Moderate	Limited Use being Moderate Water
Pennisetum setaceum	Fountain grass	Low	
Phlomis fruticose	Jerusalem sage	Low	
Photinia fraseri	Red tip photinia	Moderate	Limited Use being Moderate Water
Prunus caroliniana	Carolina laurel cherry	Moderate	Limited Use being Moderate Water
Pyracantha ‘santa cruz’	Santa Cruz pyracantha	Moderate	
Rhamnus californica	California coffeeberry	Low	

EXHIBIT 2
VALLEY-WIDE RECREATION AND PARK DISTRICT
APPROVED PLANT LIST

SHRUBS Continued

Botanical Name	Common Name	WUCOLS Water Use	Design Use Restriction Notes:
Rhaphiolepis indica 'pink species'	Indian hawthorn	Moderate	Limited Use being Moderate Water
Rhus intergrifolia	Lemonade berry	Low	
Rhus ovata	Sugerbush	Low	
Rosa californica	California wild rose	Low	
Rosa 'Flower carpet red'	Red carpet rose	Moderate	
Rosmarinus officinalis	Trailing rosemary	Low	Limited Use in low and small areas
Rosmarinus 'Tuscan Blue'	Upright rosemary	Low	
Salvia clevelandii	Blue sage	Low	
Salvia greggii	Autumn sage	Low	
Salvia leucantha and cvs.	Mexican bush sage	Low	
Salvia mellifera and cvs.	Black sage	Low	
Sambucus spp.	Elderberry	Low	
Santolina spp.	Lavender Cotton	Low	
Senecio serpens	Blue chalksticks	Low	
Sesleria autumnalis	Autumn moor grass	Moderate	Limited Use being Moderate Water
Simmondsia chinensis	Jojoba	Very Low	
Stipa tenuissima	Mexican feathergrass	Low	
Strelitzia reginae (shade in desert)	Bird of paradise	Moderate	
Tecoma stans	Yellow bells	Low	
Teucrium fruticans	Bush germander	Low	
Trachelospermum jasminoides	Star jasmine	Moderate	Limited Use being Moderate Water
Tulbaghia violacea	Society garlic	Moderate	Limited Use being Moderate Water
Viburnum japonicum	Japanese viburnum	Moderate	Limited Use being Moderate Water
Westringa 'Wynyabbie Gem'	Whyyabbie gem westringa	Low	Limited Use in low and small areas
Westringa fruitcosa	Coast rosemary	Low	Limited Use in low and small areas
Xylosma congestum	Shiny xylosma	Moderate	Limited Use being Moderate Water
Yucca rigida	Blue yucca	Very Low	

All listed plant material is subject to approval based on location and use
Prior to design work, we encourage each design consultant to meet with our planning team to discuss project specifics to maximize installation savings and water conservation.

Exhibit 3
Contractor Submittal Checklist

EXHIBIT 3

VALLEY-WIDE RECREATION AND PARK DISTRICT
CONTRACTOR SUBMITTAL CHECKLIST

Approved submittals must be on job prior to commencement of work and be available at inspection.

Email: inspections@gorecreation.org for requests

Please note that incomplete submittals will be rejected by Valley-Wide.

The "Submittal Checklist" must be included in all submittals with the appropriate items highlighted.

Provide an index sheet with the following: manufacturer, model number, quantity, and sizes (colors when appropriate)*

IRRIGATION

Sleeving
- Type and size
- Sand bedding/backfill

Mainline
- PVC piping size and type
- PVC SCH 80 fittings
- Iron ductile fittings
- Restraints
- Brass piping nipples
- Brass fittings
- Copper piping
- Glue and primer
- Warning tape

Wiring
- Type and size
- Wiring colors
- Wire connectors
- Wire conduits

Backflow
- Type and size
- Enclosure
- Polar barrier
- Pressure regulator
- Auto filter

Quick Coupler Valve
- Type and size
- Brass swing joints
- Isolation valve

Booster Pump
- Model number
- Piping
- Electrical wire and conduit

Master Valve
- Type and size
- Conduit and wire splice
- ID tag

Flow Meter
- Type and size
- Conduit and wire splice
- ID tag

Fertilizer Injector
- Type and size
- Installation location
- Electrical wire and conduit connection (Pump enclosure or alone)

Controller
- Type and size
- Enclosure
- Communications
- Grounding rod
- Radio remote

Isolation Valve
- Type and size
- PVC SCH 80 fittings
- SCH 80 flanges
- SCH 80 nipples
- SCH unions
- Pipe stand for 2.5" and larger valves

Remote Control Valve
- Type and size
- PVC SCH 80 fittings
- SCH 80 flanges
- SCH 80 nipples
- SCH 80 unions
- Iron ductile service tee
- ID tag
- Decoders

Low Volume Emitter
- Type, size and GPH
- Flexible risers

Sprinkler/Bubbler
- Type and size GPM or GPH
- PVC swing joint
- Nozzle GPM

Lateral Line
- PVC piping size and type
- UVR piping
- PVC SCH 40 fittings

Irrigation (General)
- Rectangle valve boxes
- Jumbo valve boxes
- Round valve boxes
- Verify wire connections
- SCH 40 conduit
- Filter fabric
- Wire mesh
- Flush valves
- Recycled water signs
- PVC cement and primer

EXHIBIT 3

VALLEY-WIDE RECREATION AND PARK DISTRICT
CONTRACTOR SUBMITTAL CHECKLIST

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Email: inspections@gorecreation.org for requests

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Provide an index sheet with the following: manufacturer, model number, quantity, and sizes (colors when appropriate)*

PLANTING

Trees
- Type, size and quantities
- Height, width and caliper

Palms
- Type, size and quantities
- BTH, canopy and caliper

Shrubs
- Type, size and quantities
- Height and spread

Vines
- Type, size and quantities
- Stakes and/or ties

Groundcover
- Type, size and quantities
- Bark mulch sample
- Decomposed granite stabilized

Sod
- Type and quantities

Hydro-seed
- Seed mix and application rate
- Fiber application rate
- Binder application rate
- Fertilizer application rate

Tree Stakes
- Height and diameter
- Cinch tie and/or twist brace

Vine Support
- Anchor and wire
- Twist ties

Amendments
- Soil report
- Lab recommendations
- Organic amendment
- Imported topsoil (lab test)
- Fertilizer 16-6-8
- Fertilizer 15-15-15
- Fertilizer 6-20-20
- Fertilizer 21-7-14
- Fertilizer (other per lab)
- Gypsum
- Soil sulfur
- Planting tablets NPK

Herbicides
- Pre-emergent (type and application rate)
- Post emergent (type and application rate)

Planting (General)
- Root barrier type and size
- Breather tube
- Filter fabric/sock
- Jute netting (when applicable)

EXHIBIT 3

VALLEY-WIDE RECREATION AND PARK DISTRICT
CONTRACTOR SUBMITTAL CHECKLIST

Approved submittals must be on job prior to commencement of work and be available at inspection.

Email: inspections@gorecreation.org for requests

Please note that incomplete submittals will be rejected by Valley-Wide.

The "Submittal Checklist" must be included in all submittals with the appropriate items highlighted.

Provide an index sheet with the following: manufacturer, model number, quantity, and sizes (colors when appropriate)*

CONSTRUCTION (Page 1 of 2)

Concrete

- Design mix, PSI slump
- Thickness
- Color/texture
- Steel reinforcement
- Dobies
- Expansion joints
- Caulking

Masonry

- Split face block
- Pilaster block
- Wall caps
- Mortar mix
- Steel reinforcement
- Concrete footing design
- Retaining wall drainage
- Graffiti coating

Electrical

- Light fixtures
- Lighting bollards
- Electrical pedestal
- Electrical panels
- Conduit and wiring sizes
- Electrical pull boxes
- GFCI outlets
- Timers, switches and controls
- Security cameras
- NVR components
- Low voltage cabling
- Communication pull boxes

Site Utilities

Sewer

- Sewer pipeline
- Sewer line bedding and shading
- Sewer fittings
- Sewer clean-outs

Potable Water

- Potable water pipeline
- Potable water bedding and shading
- Domestic water back flow and enclosure
- Domestic water isolation valves
- Plastic and concrete valve boxes

Drainage

- Drain pipe
- Drain wyes, sanitary tees and long elbows
- Drain cleanouts
- Drain reducers
- Catch basins conc/plastic
- Drain grates
- Filter fabric
- Gravel
- Media (Sand/compost mix)

Amenities

- Removable bollard
- Trash receptacle
- Recycle receptacle
- Park bench
- Picnic Table
- BBQ
- Hot coals receptacle
- Bike rack
- Shade structure
- Backstop
- Players bench
- Bat rack
- Ball field bases
- Bleachers
- Infield mix and sand and pitching mound
- Chain link fencing
- Chain link gates
- Foul pole
- Tubular steel fencing
- Tubular Steel gates
- Court surfacing and striping
- Basketball goal
- Soccer goals
- Tennis, pickleball and soccer nets
- Drinking fountain
- Flagpole
- Pet waste stations
- Playground (tot-lot)
- Playground equipment
- Playground drains, gravel filter fabric and fibar
- Swings
- Trash enclosure
- Park monument sign

EXHIBIT 3

VALLEY-WIDE RECREATION AND PARK DISTRICT
CONTRACTOR SUBMITTAL CHECKLIST

Approved submittals must be on job prior to commencement of work and be available at inspection.

Email: inspections@gorecreation.org for requests

Please note that incomplete submittals will be rejected by Valley-Wide.

The "Submittal Checklist" must be included in all submittals with the appropriate items highlighted.

Provide an index sheet with the following: manufacturer, model number, quantity, and sizes (colors when appropriate)*

CONSTRUCTION (Page 2 of 2)

Restroom Building

- Color Submittal
- Design Submittal
- Utility Submittal
- Complete Plan Submittal

Fencing

- Tubular steel fencing
- Tubular steel gates
- Tubular steel hardware
- Chain link fencing
- Chain link gates
- Chain link hardware
- Vinyl fencing
- Concrete footing design mix

Exhibit 4
Inspections List

EXHIBIT 4
VALLEY-WIDE RECREATION AND PARK DISTRICT
INSPECTION LIST

Construction Inspections	Notification Time
1. Pre-construction conference	7 days
2. Precise grading	48 hours
3. Sewer trenching, placement, and backfill	48 hours
4. Domestic Water trenching, placement, and backfill	48 hours
5. Storm drains, trenching, placement, and backfill	48 hours
4. Concrete footing excavation and reinforcement	48 hours
5. Electrical trenches, placement, and backfill	48 hours
6. CCTV trenches, placement, and backfill	48 hours
7. Concrete subgrade, reinforcement, and formwork	48 hours
8. Concrete elevations and finish	48 hours
9. Retaining wall footing, reinforcement, and pre-grout	48 hours
10. Surface mount amenity placement	48 hours

Irrigation Inspections	Notification Time
1. Pre-construction conference	7 days
2. Mainline, valve, and tree layout	48 hours
3. Mainline and valve pressure testing and as-built review	48 hours
4. Valve box operation and wiring review	48 hours
5. POC equipment review	48 hours
6. Lateral line and sprinkler trench observation	48 hours
7. Lateral coverage testing and controller chart review	48 hours
8. Low-volume drip operation testing	48 hours
9. Final irrigation inspection	48 hours

Planting Inspections	Notification Time
1. Finish grading	48 hours
2. Soil preparation and weed-abatement	48 hours
3. Tree pit review and percolation testing	48 hours
4. Plant material review	48 hours
5. Shrub pit review	48 hours
6. General planting observation	48 hours
7. Pre-mulch inspection	48 hours
8. Final finish grade inspection for turf areas	48 hours
9. Final Inspection	7 days

Continued on next page

EXHIBIT 4
VALLEY-WIDE RECREATION AND PARK DISTRICT
INSPECTION LIST

Maintenance Inspections:	**Notification Times**
1. Preliminary Start of Maintenance walk	7 days
2. Start of Maintenance walk	7 days
3. Monthly Maintenance walk	48 hours
4. Final Project Acceptance walk	7 days

Contractor must be on site for all inspections. Any work not completed and ready when the inspector arrives may be billed to the developer at the current inspection rate. Any work completed without inspection or approval shall be uncovered at the contractor's cost. All rejected work shall be removed and replaced at the contractor's cost.

All inspections must be requested via email to inspections@gorecreation.org

Exhibit 5
Landscape Inspection Card

EXHIBIT 5

VALLEY-WIDE RECREATION AND PARK DISTRICT LANDSCAPE INSPECTION CARD

Email: Inspections@GoRecreation.org for inspection requests

Email must include tract number and project name when requesting an inspection.

SIGNED APPROVED PLANS ***MUST*** BE ON SITE AT TIME OF INSPECTION

****Please note that no work shall be covered without an inspection****

POC Number_____ **Contractor Contact Phone**_____

Inspection	Date	Inspector
Pre-Job Conference		
○ Verify approved plans		
○ Verify submittals		
○ Coordinate inspection proc.		
Sleeving		
○ Verify sleeving depth, type, size		
○ Verify sleeving separation, bedding		
Mainline		
○ Mainline depth, type, size		
○ Mainline connections		
○ Hydrostatic test		
○ Wiring for size, depth, color (min 14 ga)		
Backflow Preventer		
○ Verify backflow cert		
○ Verity type, size, location		
○ Verify thrust blocks, cage, pad		
Booster Pump		
○ Location/enclosure, install		
○ Installation/power connection		
○ Booster pump cert		
Irrigation (Open Trench)		
○ Verify lateral line depth, size, type		
○ Verify head type, spacing		
○ Verify swing joint assembly		
○ Verify RCV for type, size		
Irrigation (General)		
○ Verify box supports, gravel markings		
○ Verify valve I.D. tags		
○ Verify wire connections		
○ UVR or Sch 80 above ground		
○ Verify pipe and head staking		
○ Controller type/stations		
○ Controller certs		
○ Installation power connections		
○ Verify current as-builts		
○ Fertigation system		
○ Coverage test (100% coverage)		

Inspection	Date	Inspector
Planting Installation		
○ Weed eradication program		
○ Verify soil amendments/prep		
○ Verify plant species/size/ quantities/location		
○ Verify tree pit depth		
○ Verify root barriers where specified		
○ Verify tree staking/ installation/ties		
○ Finish grade (prior to hydroseed)		
○ Turf installation		
○ Verify hydroseed species mix/installation		
○ Hydroseed (100% germination)		
○ Ground cover (95% coverage)		
Hardscape/Site Amenities		
○ Site furnishings		
○ Play equipment		
○ Fencing, type/height/material		
○ Walks/curbs/layout		
○ Signage where required		
○ Play equipment certs		
Maintenance		
○ Compliance to begin maintenance		
○ Turnover controller charts, as-builts		
○ 30-day maintenance walk		
○ 60-day maintenance walk		
○ Final maintenance walk		
Final Acceptance		
Please see attached for all required turnover items		
○ Materials to be turned over per specifications		
○ Walk-through inspection with contractor/owner		
○ Landscape architect/inspector		
○ Letter of completion from landscape architect		
○ Cut sheets/guarantees/warranties		

Other requested/required inspections

_____

Volume 2

Chapter 14
Introduction

VALLEY-WIDE RECREATION AND PARK DISTRICT
SPECIFICATIONS AND STANDARD DETAILS

This publication is for the purpose of providing information to the developer and the contractor regarding the requirements and expectations of Valley-Wide Recreation and Park District (the "District" or "Valley-Wide") for development construction projects in our jurisdiction. The information contained herein also includes information about park and landscape improvements that will be accepted for Valley-Wide maintenance and operations.

It is highly recommended for all parties involved to read this entire publication to ensure that anything shown on their plans and any other construction documents does not conflict with Valley-Wide specifications and standard details.

THIS PUBLICATION SHALL REMAIN ON SITE AT ALL TIMES.

1.0 Introduction

1.1 The District shall be considered Valley-Wide Recreation and Park District inspection personnel, consultants, or other approved team members hereafter**.**

1.2 The information contained within this publication only applies to Valley-Wide maintained areas and not the entire project site. Valley-Wide shall not be responsible for any conflict related to the use or reproduction of these specifications or standard details for any project outside of the District.

1.3 The property owner, developer, engineer, architect, or any other interested party is solely responsible for complying with all other agency requirements as required by law for all areas within the project.

1.4 Whether shown on the plans or not, the project shall comply with all Valley-Wide standards, specifications and details. In the event of any contradiction, the higher and more stringent standard, specification or detail shall prevail.

END OF SECTION

Chapter 15
Construction Specifications General

CONSTRUCTION SPECIFICATIONS GENERAL

CONSTRUCTION SPECIFICATIONS GENERAL

Valley-Wide Recreation and Park District (the "District" or "Valley-Wide") shall be considered Valley-Wide Recreation and Park District inspection personnel, consultants, or other approved team members hereafter.

1.0 General Requirements

1.1 Developer or contractor shall obtain and pay for any permits for all concrete flatwork, structural footings, fencing and site amenities, as required by the County of Riverside Building and Safety or local city (if applicable).

1.2 A Cal-OSHA permit is required before excavating greater than 4 feet deep.

1.3 Contractor shall notify all utility companies through Underground Service Alert "Dig Alert" (USA) 2 days before trenching.

1.4 Contractor must provide the District's representative with the USA Dig Alert number at first inspection.

1.5 The current Construction Specifications must be on site at all times for each project.

1.6 Many drawings are diagrammatic and must be field verified. Domestic water and sewer lines shown on civil plans are intended to be shown in the exact locations, and pressure water lines shown on irrigation plans are generally diagrammatic. It is the intent for the approved plans for both civil and irrigation plans to show exact locations of domestic water and sewer lines. Irrigation pressure lines shown on irrigation plans are diagrammatically shown in streets, walkways, or other areas for clarity so they are not shown over lateral irrigation lines and other irrigation. Electrical conduits and wiring are shown diagrammatically on electrical plans but must be installed under hardscape areas wherever possible. Refer to each respective specification for specific layout requirements.

1.7 All District inspection fees must be paid before the start of work. These fees will be deposited from the Developer Deposit. Please contact Valley-Wide's Planning Department at (951) 654-1505 to confirm the account is in good standing.

1.8 The contractor shall have and maintain the required license for all work performed throughout the duration of the work. Licensing must meet the

state requirements based on the specific scope of work on the project. The contractor shall maintain an experienced project supervisor and foreman at the site throughout the installation.

1.9 A qualified contractor must perform all work and have at least 5 years of experience performing similar projects. The District reserves the right to disqualify any contractor who does not meet this qualification.

1.10 Labor Code Sections 1720 et seq. and 1770 et seq., as well as California Code of Regulations, Title 8, Section 16000 et seq. ("Prevailing Wage Laws"), require the payment of prevailing wage rates and the performance of other requirements on certain "public works" and "maintenance" projects. If this Project involves an applicable "public works" or "maintenance" project, as defined by the Prevailing Wage Laws, and if the total compensation is $1,000 or more, Developer agrees to fully comply with such Prevailing Wage Laws. The Developer shall defend, indemnify, and hold the District, its elected officials, officers, employees, and agents free and harmless from any claims, liabilities, costs, penalties, or interest arising out of any failure or alleged failure to comply with the Prevailing Wage Laws

2.0 Scope of Work

2.1 The intent of the drawings and specifications is to indicate the process required for the installation of a complete project, satisfactory to the District and applicable regulatory agencies.

2.2 The work consists of furnishing all tools, equipment, material, transportation, labor and any processes required to provide a complete project as specified in the drawings and specifications.

2.3 Contractor must notify the architect and the District immediately of any discrepancies prior to starting work. Continued work without notification of any discrepancy between plans and/or field conditions by the contractor is considered an acknowledgment that the contractor agrees to take responsibility for all necessary adjustments required to comply with District requirements.

2.4 All work indicated in the specifications, details, notes, or plans shall be provided and installed, whether or not explicitly mentioned in the specifications. It shall be understood that if an item is shown in specifications but not shown on the plan, it shall be as if shown on both, and if an item is shown on the plan but not shown in the specifications, it shall be as if shown on both. The District shall have final authority for any and all requirements.

2.5 Due to the scale of the drawings, it is not possible to show all assemblies, hardware, etc., for a complete construction of all items, whether shown or not.

2.6 Contractor shall provide all necessary assemblies, hardware, etc., to provide a complete installation as listed in drawings and specifications with no additional cost to the District.

2.7 The work shall be performed in such a manner as not to conflict with any known obstructions. Contractor shall notify the District of any conflict. Contractor shall assume full responsibility for any modification or revision required if no notification was given to the District.

3.0 Quality Control

3.1 Contractor must provide one competent English-speaking employee capable of understanding and communicating with District personnel on-site at all times throughout the duration of the work.

3.2 Contractor must provide personnel with at least five (5) years of experience who are familiar with all types of material being used and installation methods for all work performed on similar projects under this section.

3.3 If no specifications or details are provided for any items shown on the plans, the manufacturer’s directions, specifications, and/or details shall be followed.

3.4 District specifications and/or details shall always take precedence over the manufacturer’s specifications or recommendations.

3.5 All local, county, and state laws, rules, and regulations related to any portion of work shall be incorporated within these specifications and adhered to throughout the duration of work. Nothing contained within these specifications shall be construed to conflict with said rules and regulations.

3.6 The provisions of these specifications shall take precedence over the said rules and regulations if these specifications indicate a higher quality or better standard.

3.7 Any extra work performed must be approved in writing by the District or the District's representative before the start of such work.

3.8 Any unapproved work must be corrected at the contractor's expense.

3.9 All material and labor shall be free from any defects. Any defective work must be corrected immediately without additional cost to the District.

3.10 In the event of conflict between plans and specifications, the specifications shall take precedence. No additional compensation should be considered for direction given by District personnel providing clarification to specifications in the event of conflict between plans and specifications.

3.11 No additional compensation should be given as a result of any District-generated punch list item or correction notice given to the contractor to comply with specifications.

4.0 Contractor Submittals

4.1 After the plans have been approved by Valley-Wide, and before a pre-construction conference can be scheduled, the contractor must submit to the District a complete, detailed list of all construction item components to be used per plan and District specifications. Submittals must be complete per the submittal discipline as shown on the District's submittal checklist.

4.2 Submittals shall include, but not be limited to, the following:

a. Title sheet indicating job name, tract number, POC number, phase number, contractor name, developer name, address, phone number, date of submittal, and submittal number. No partial submittals will be accepted for review. Refer to Valley-Wide's "Exhibit 3 – Contractor Submittal Checklist" for information on what is required to be submitted.

b. Valley-Wide's "Contractor Submittal Checklist" must be included with disciplines that are not applicable with an "X" and/or marked as not applicable "NA" and applicable details highlighted.

c. Index sheet indicating item number for each item, description of each item, manufacturer name and model number, and the page on which the item is within the submittal.

d. Manufacturer cut sheet of each item providing manufacturer address and phone number, warranty information, all available model numbers, and all available graphic illustrations of the item.

e. Each model number to be used shall be circled or marked and highlighted to indicate the exact model number, size, type, and options to be used. All markups made by the contractor must be in blue or green lettering. Red mark-ups should only be done by the approved submittal review consultant or designated District staff member.

4.3 Submittals shall be submitted complete as one PDF file per submittal discipline. The file must not be locked, certified, or stamped to allow for the submittal review technician to provide comments or approval. Please refer to Chapter 3 Plan Standards Section 6.0 for information on how to submit the contractor submittals.

4.4 The District shall return without review any submittal that does not comply with the format requested.

4.5 The District will provide written comments for the item(s) submitted.

4.6 Submittals stamped “Rejected” or “Revise and Resubmit” do not conform to District specifications and must be corrected and resubmitted for review. All returned submittals with comments must address all prior comments and be resubmitted. Prior submittal corrections shall have contractor marked blue line responses to all comments next to prior submittal comments to ensure and explain how corrections were addressed on the revised submittals. Both the blue line marked response to comments and the new revised set shall be resubmitted as separate files. Failure to provide blue line marked response to comments for prior submittals will result in a rejected resubmittal.

4.7 Submittals shall be stamped “Reviewed” if deemed to be consistent with District specifications. Submittals shall be stamped “Approved as noted” when minimal changes and/or notations have been made by the District. Once approved submittals are received, the contractor must install the material per the approved submittals.

4.8 Once submittals are obtained from the District, the contractor must provide one (1) 8.5”x11” hard colored copy of the stamped approved submittals to Valley-Wide’s designated inspection representative.

4.9 Submittals must remain on-site for the duration of this work.

4.10 Substitutions

a. Any substitutions that are not per plan or District specifications must be submitted on a separate cover sheet clearly identified as "Construction Item Submittal Substitutes". Any material that may be thought to be equal by the contractor will be determined solely by the District and shall also be based upon the required material consistency throughout the District. Substitutions must also include a reference submittal of the specified material that is proposed to be substituted, to be able to compare materials. All proposed submittal substitutions shall be submitted to the District prior to the pre-construction conference.

b. All substitutions must not vary in color, size, operation, and/or appearance that will change the design, concept, or performance as solely determined by the District. The burden of proof on product uniformity rests upon the contractor requesting the approval. Delays caused by substitution submittal review(s) shall be the responsibility of the contractor and will not be considered for additional time.

c. Changes in cost related to substitution approval or denial shall be the responsibility of the contractor and shall not warrant contract amount additions or reductions.

d. Substituted materials installed by the contractor that have not been approved are subject to rejection and shall be corrected at the cost of the contractor.

e. Substitutions shall not be approved unless submitted as outlined.

5.0 As-Builts and Record Drawings

5.1 As-builts are generally referred to as the contractor's field redlined changes and measurements. Record drawings are generally referred to as the architect's and/or engineer's record of changes to the drawings based on the contractor's redlined changes.

5.2 Record drawings shall accurately depict on one .pdf file per plan type black and white prints denoting variation in work from original drawings in contrasting colors, including but not limited to changes in materials, specifications, or placement of amenities, including all applicable notes, details, and legends.

5.3 Refer to the scope-specific specification sections for record drawing requirements for specific sections such as electrical, sewer, water, storm drains, irrigation, and planting.

5.4 All measurements must be clearly shown using standard dimension lines and text measurements in blue. Text of measurements must be carefully located to be legible, and extension dimension lines must accurately reflect the points of measurements. Measurement text must indicate feet and inches. Measurements shall be taken from two permanent points of reference, including but not limited to sidewalks, pavement, curbs, street lights, buildings, and fire hydrants, and shall be recorded on as-builts daily or as work is performed. All drafting must be clearly legible, and dimension measurement text shall be no smaller than 1/4" in size. For parkways, all second point of reference dimensions must be taken from the face of the curb whenever possible.

5.5 Maintain progress hardcopy plan as-built drawings on site at all times. As-built drawings are subject to inspection at any time.

5.6 Before the acceptance of the project, as-built measurements must be transferred to an AutoCAD.dwg drawing, Adobe Acrobat, or BlueBeam Revu.pdf digital file prepared by the EOR or a qualified draftsman as record drawings before turnover. All as-built information must be performed in a manner equal to the original drawings.

5.7 All site lines and plan base file information must be black or gray, and as-built information, including dimensions, must be in a contrasting color approved by the District, as outlined in each specification section.

5.8 Field as-builts must be completed and ready for review at the time of inspection for any backfill approval.

5.9 No trenches will be allowed to be backfilled until the field as-builts are reviewed and deemed acceptable to be transferred to the final record drawings.

6.0 Operation and Maintenance Manuals (O&M)

6.1 Prepare and deliver to the District all required descriptive materials in complete detail in digital PDF format. Describe the material installed in sufficient detail to permit qualified operating personnel to understand, operate, and maintain all equipment. Each manual shall include the following:

a. Index sheet, stating contractor's address and telephone number.

b. Duration of the guarantee period with the guarantee forms.

c. List of equipment with names and addresses of manufacturers' local representatives.

d. Complete operating and maintenance instructions on all major equipment.

e. Complete installation instructions for all major equipment.

6.2 In addition to the maintenance manuals, provide the maintenance personnel with the instructions for major equipment and show written evidence to the District at the conclusion of the work that this has been completed.

7.0 Inspections

7.1 The contractor shall allow the District to inspect the project at any time throughout the duration of the project and shall provide safe access to all areas of the project.

7.2 The District requires inspection for all work listed below, including but not limited to the following:

	Construction Inspections:	**Notification Time:**
1.	Pre-construction conference	7 days
2.	Precise grading	(See Grading Specs)
3.	Sewer trenching, placement, backfill	(See Sewer Specs)
4.	Domestic water trenching, placement, backfill	(See Water Specs)
5.	Storm drain trenching, placement, backfill	(See Storm Drain Specs)
6.	Concrete footing excavation and reinforcement	48 hours
7.	Electrical trenches, placement, backfill	(See Electrical Specs)
8.	CCTV trenches, placement, backfill	(See CCTV Specs)
9.	Concrete subgrade reinforcement, formwork	48 hours
10.	Concrete elevations and finish	48 hours
11.	Retaining wall footing, reinforcement, pre-grout	48 hours
12.	Surface mount amenity placement	48 hours
13.	Irrigation	(See Irrigation Specs)
14.	Planting	(See Planting Specs)
15.	Maintenance	(See Maintenance Specs)
16.	Final Inspection	7 days

7.3 No work shall be covered without inspection for all items listed in this section and any other items specifically requested by the District.

7.4 In addition to District inspections, it is the developer's and contractor's responsibility to ensure all other agency inspections have been completed. Below is a general inspection guideline; however, it is the responsibility of the developer and contractor to confirm what is required for each project.

a. Grading, storm drains, concrete curbs, and flat work shown on precise grading plans shall be inspected by the County of Riverside Transportation Department in addition to District inspections.

b. All water, sewer, electric, and site amenities required to have the County of Riverside Building and Safety Department, or local city building permit, must be inspected by the permit issuing agency in addition to District inspections.

c. Third-party deputy inspections are required for all special inspections as required per plan permit plans, including but not limited to cylinder tests, steel inspection, torque test, and compaction tests.

7.5 Contractor or subcontractor performing the work must be on site for all inspections.

7.6 Any work not completed when the inspector arrives, which was requested to be inspected, shall be billed to the developer at the current non-productive inspection rate.

7.7 Any work completed without inspection or approval shall be uncovered or exposed as deemed necessary by the District in order to be reviewed. Said work shall be at the cost of the contractor with no additional cost to the District.

7.8 All rejected work shall be removed and replaced at the cost of the contractor with no additional cost to the District.

7.9 Contractor shall schedule all inspections by email as identified at the pre-construction conference.

END OF SECTION

Chapter 16
Grading Specifications

GRADING SPECIFICATIONS

GRADING SPECIFICATIONS (GENERAL)

Valley-Wide Recreation and Park District (the "District" or "Valley-Wide") shall be considered Valley-Wide Recreation and Park District inspection personnel, consultants, or other approved team members hereafter.

1.0 General Requirements

1.1 Permits: Contractor or Developer shall obtain and pay for any permits required.

1.2 Contractor shall notify all utility companies through Underground Service Alert (USA) "Dig Alert" two days before trenching.

1.3 Contractor must provide the District's representative with the USA Dig Alert number at first inspection.

1.4 The current Grading Specifications must be on site at all times for each project.

1.5 All inspection fees must be paid before the start of work.

1.6 The contractor shall have and maintain a Class A - General Engineering license or C-12 license throughout the duration of the work. Licensing must also meet the state requirements based on the specific scope of work on the project. A contractor with a C-27 license can prepare and grade plots and areas of land for the installation of any architectural, horticultural, and decorative treatment or arrangement as part of a landscape project per the state code of regulations, as determined by the County of Riverside Grading and Building and Safety Department. The contractor shall maintain an experienced project supervisor and foreman at the site throughout the installation.

1.7 A qualified contractor must perform all work and have at least 5 years of experience performing similar projects. The District reserves the right to disqualify any contractor who does not meet this qualification.

1.8 All grading work must comply with the latest County of Riverside grading regulations and the California Building Code. Contractors must obtain all necessary permits and approvals from local authorities before commencing grading operations. Adequate safety measures must be implemented to protect workers and the public during all operations.

1.9 The County of Riverside Building Official may require a Best Management Practices (BMP) permit to conduct certain types of inspections, including but not limited to the following types of inspections: Pre-Construction Inspection, NPDES Construction inspections, Water Quality Management Plan (WQMP) BMP inspections, Annual Water Quality Management Plan (WQMP) inspections, Bond Release inspections, and Air Quality inspections.

1.10 Labor Code Sections 1720 et seq. and 1770 et seq., as well as California Code of Regulations, Title 8, Section 16000 et seq. ("Prevailing Wage Laws"), require the payment of prevailing wage rates and the performance of other requirements on certain "public works" and "maintenance" projects. If this Project involves an applicable "public works" or "maintenance" project, as defined by the Prevailing Wage Laws, and if the total compensation is $1,000 or more, Developer agrees to fully comply with such Prevailing Wage Laws. The Developer shall defend, indemnify, and hold the District, its elected officials, officers, employees, and agents free and harmless from any claims, liabilities, costs, penalties, or interest arising out of any failure or alleged failure to comply with the Prevailing Wage Laws.

2.0 Scope of Work

2.1 The intent of the drawings and specifications is to indicate the process required to complete the grading per approved plans, satisfactory to the District, applicable county, city, and state requirements.

2.2 The work includes furnishing all tools, equipment, transportation, labor, and any processes required to provide grading as specified in the drawings and specifications.

2.3 All grading work performed shall comply with the rules and regulations of the Division of Industrial Safety, State of California, and all laws and regulations having local jurisdiction.

2.4 All grading operations shall include the following elements:

a. Site preparation, including clearing, grubbing, and removing vegetation and debris

b. Excavation and fill operations to achieve the designed grades

c. Proper drainage and erosion control measures

d. Restoration of any disturbed areas post-grading

2.5 All vegetation, debris, and other obstacles must be removed from the site before grading. Erosion control measures should be implemented to prevent soil displacement.

2.6 Excavation depths and fill heights shall adhere to engineered designs. Fill material must be free from organic matter, rock larger than the specified size, and other unsuitable materials.

2.7 All graded surfaces shall be compacted to 90% of maximum density as determined by ASTM D1557.

2.8 Slopes must be designed and constructed as per engineering specifications, ensuring stability and drainage.

2.9 Proper grading must ensure that surface water is directed away from structures and that drainage systems are in place to minimize erosion and runoff.

2.10 Erosion control measures shall be implemented per the County's guidelines, including installing silt fencing, sediment basins, or other methods as necessary to manage runoff.

3.0 Quality Control

3.1 Contractor must provide one competent English-speaking employee capable of understanding and communicating with District personnel on site at all times throughout the duration of the work.

3.2 The contractor must provide personnel with at least five (5) years of experience who are familiar with all types of material being used and installation methods for all work performed.

3.3 All local, county, and state laws, rules, and regulations related to any portion of work under this section shall be incorporated within these specifications and adhered to throughout the duration of work. Nothing contained within these specifications shall be construed to conflict with said rules and regulations.

3.4 The provisions of these specifications shall take precedence over the said rules and regulations if these specifications indicate a higher quality or better standard.

3.5 Any extra work performed shall be approved in writing by the Owner or the District's representative before starting such work.

3.6 Any unapproved work will be at the contractor's expense.

3.7 In the event of conflict between plans and specifications, the specifications or more stringent standard shall take precedence. No additional compensation shall be considered for direction given by District personnel providing clarification on specifications in the event of conflict between plans and specifications.

3.8 No additional compensation shall be given as a result of any District-generated punch list item or correction notice given to the contractor in order to comply with specifications.

4.0 Equipment Storage

4.1 All grading equipment must be stored in designated areas that comply with local zoning requirements and regulations set forth by the County of Riverside.

4.2 Storage areas must be designed to minimize environmental impact and ensure safety for personnel and the public.

4.3 Grading equipment shall be stored in a secure, designated area that is clearly marked and free from pedestrian and vehicular traffic when not in use.

4.4 Storage areas should preferably be on surfaces to facilitate equipment movement and minimize damage to paved areas, soil disturbance, and erosion.

4.5 Equipment should be stored within a reasonable distance from the work site to facilitate easy access while ensuring that the storage location does not interfere with operations or public safety.

4.6 Equipment must be inspected regularly while in storage to ensure it remains in good working condition, free from leaks, and safe for future use.

4.7 Any chemicals, fuels, or lubricants used in conjunction with the grading equipment must be stored in compliance with Riverside County’s hazardous material regulations to mitigate the risk of spills and environmental contamination.

4.8 Proper containment systems must be in place to manage fuel or lubricant spills and prevent soil and groundwater contamination.

5.0 Inspections

5.1 The contractor shall allow the District to inspect the project at any time throughout the duration of the project and shall provide safe access to all areas of the project for all visits.

5.2 The District reserves the right to require inspection of any and all work.

5.3 The County of Riverside or designated inspectors shall conduct regular inspections throughout the grading process. Any non-compliance with specifications must be rectified before proceeding.

6.0 Final Approval

6.1 All grading work shall be inspected by the District prior to acceptance.

6.2 Any County of Riverside precise grading plan permit must be finalized prior to final inspection by the District.

END OF SECTION

Chapter 17 Sewer and Domestic Specifications

SEWER AND DOMESTIC WATER SYSTEMS SPECIFICATIONS

SEWER AND DOMESTIC WATER SPECIFICATIONS (GENERAL)

Valley-Wide Recreation and Park District (the "District" or "Valley-Wide") shall be considered Valley-Wide Recreation and Park District inspection personnel, consultants, or other approved team members hereafter.

1.0 General Requirements

1.1 Permits: Contractor or Developer shall obtain and pay for any permits required.

1.2 A Cal-OSHA permit is required before excavating greater than 4 feet deep.

1.3 Contractor shall notify all utility companies through Underground Service Alert (USA) "Dig Alert" two days before trenching.

1.4 Contractor must provide the District's representative with the USA Dig Alert number at first inspection.

1.5 The current Sewer and Domestic Water Specifications must be on site at all times for each project.

1.6 All inspection fees must be paid before the start of work.

1.7 The contractor shall have and maintain a Class A – General Engineering license, Class B – General Building license if work falls within the scope of the General Building Contractor, C-36 license, or C-42 license for sewer installation. A C-27 licensed contractor can perform water line installation for water systems for domestic water within a District park. Licensing must also meet the state requirements based on the specific scope of work on the project. If work is performed for another entity, such as the County of Riverside Transportation Department or Riverside County Flood Control and Water Conservation District, the contractor must also meet their licensing requirements. The contractor shall maintain an experienced project supervisor and foreman at the site throughout the installation.

1.8 A qualified contractor must perform all work and have at least 5 years of experience performing similar projects. The District reserves the right to disqualify any contractor who does not meet this qualification.

1.9 Any reference to "water" within these specifications shall be considered domestic potable water for drinking purposes only.

1.10 Labor Code Sections 1720 et seq. and 1770 et seq., as well as California Code of Regulations, Title 8, Section 16000 et seq. ("Prevailing Wage Laws"), require the payment of prevailing wage rates and the performance of other requirements on certain "public works" and "maintenance" projects. If this Project involves an applicable "public works" or "maintenance" project, as defined by the Prevailing Wage Laws, and if the total compensation is $1,000 or more, Developer agrees to fully comply with such Prevailing Wage Laws. The Developer shall defend, indemnify, and hold the District, its elected officials, officers, employees, and agents free and harmless from any claims, liabilities, costs, penalties, or interest arising out of any failure or alleged failure to comply with the Prevailing Wage Laws.

2.0 Scope of Work

2.1 The intent of the drawings and specifications is to indicate the process required for the installation of a complete operating Sewer and Water system, complete in every respect, satisfactory to the District, applicable Sewer and Water utility provider, county, city, and state requirements.

2.2 The work consists of furnishing all tools, equipment, fixtures, transportation, labor, and any processes required to provide a complete operating sewer and water system as specified in the drawings and specifications.

2.3 All materials shall be new, of the best quality, and in perfect condition, of the same make and model number per the approved plans and submittals, conforming to the requirements of the District.

2.4 Additional requirements may be required when Sewer and Water is to be maintained by EMWD. These specifications are only related to Sewer and Water, to be maintained by the District.

2.5 Portions of the drawings are diagrammatic and must be field verified. The contractor must notify the sewer and water engineer and the District immediately of any discrepancies before starting work.

2.6 All work indicated in the specifications, details, notes, or plans shall be provided and installed, whether or not specifically mentioned in the specifications. It shall be understood that if an item is shown in specifications but not shown on the plan, it shall be as if shown on both, and if an item is shown on the plan but not shown in the specifications, it shall be as if shown on both. The District shall have final authority for any and all clarifications.

2.7 Due to the scale of the drawings, it is impossible to show all offsets, assemblies, fittings, tees, wyes, elbows, boxes, etc., for a complete sewer and water system.

2.8 Contractor shall provide all necessary assemblies, fittings, tees, wyes, elbows, boxes, etc., to provide a complete sewer and water system as listed in drawings and specifications with no additional cost to the District.

2.9 The work shall be performed in a manner that does not conflict with any known obstructions. Contractor shall notify the District of any conflict. The contractor shall assume full responsibility for any modification or revision required if no notification was given to the District.

2.10 All sewer and water work performed shall comply with the rules and regulations of the Division of Industrial Safety, State of California, and all rules and regulations having local jurisdiction, including the California Plumbing Code (CPC).

3.0 Quality Control

3.1 Contractor must provide one competent English-speaking employee capable of understanding and communicating with District personnel on site at all times throughout the duration of the work.

3.2 The contractor must provide personnel with at least five (5) years of experience who are familiar with all types of material being used and installation methods for all work performed.

3.3 If no specifications or details are provided for any items shown on the plans, the manufacturer’s directions, specifications, and/or details shall be followed.

3.4 District specifications and/or details shall always precede the manufacturer’s specifications or recommendations.

3.5 All local, county, and state laws, rules, and regulations related to any portion of work under this section shall be incorporated within these specifications and adhered to throughout the duration of work. Nothing contained within these specifications shall be construed to conflict with said rules and regulations.

3.6 The provisions of these specifications shall take precedence over the said rules and regulations if these specifications indicate a higher quality or better standard.

3.7 Any extra work performed shall be approved in writing by the Owner or the District's representative before starting such work.

3.8 Any unapproved work will be at the contractor's expense.

3.9 All material and labor shall be free from any defects. Any defective work must be corrected immediately without additional cost to the District.

3.10 In the event of conflict between plans and specifications, the specifications shall take precedence. No additional compensation shall be considered for direction given by District personnel providing clarification on specifications in the event of conflict between plans and specifications.

3.11 No additional compensation shall be given as a result of any District-generated punch list item or correction notice given to the contractor in order to comply with specifications.

3.12 All sewer and water pipes, inlets, outlets, or any other sewer and water equipment must be tested before completing all sewer and water work.

4.0 Contractor Submittals

4.1 Refer to Chapter 15 Construction Specifications General Section 4.0 Contractor Submittals for general requirements.

4.2 Sewer and water submittals with any substitutions shall be approved by the Engineer of Record (EOR) before District approval.

4.3 Submittals must include all sewer and water products to be used, including but not limited to all pipe, fittings, primer, glue, concrete, bedding material, risers, clean-outs, clean-out boxes, and lids.

5.0 Substitutions

5.1 Refer to Chapter 15 Construction Specifications General Section 4.0 Contractor Submittals for general substitution requirements.

6.0 As-Builts and Record Drawings

6.1 Refer to Chapter 15 Construction Specifications General Section 5.0 As-Builts and Record Drawings for general requirements.

6.2 All underground components, including, but not limited to, sewer and water piping, clean-out boxes, and tie-ins, must be shown to scale on the plans in the locations installed in red where any changes have been made different from locations per the approved engineered plans, including all vertical and horizontal changes.

6.3 Contractor must submit complete field sewer and water as-built drawings for review during underground inspection. The District representative shall review the Sewer and water as-built drawings as part of the underground inspection, and any corrections must be made before underground backfill approval. The District inspector will then sign and date the sewer and water as-built drawings, and the contractor must provide a scanned digital copy of the District-signed sewer and water as-builts within 3 working days to the District. No underground trenches will be allowed to be covered until the field as-builts are reviewed and deemed acceptable to be transferred to final record drawings.

6.4 All sewer and water as-built drawings shall include actual depths taken from the top of the pipe to the final finish grade.

7.0 Operation and Maintenance Manuals

7.1 Refer to Chapter 15 Construction Specifications General Section 6.0 Operation and Maintenance Manuals for general requirements.

8.0 Warranty

8.1 Provide a written warranty that all work with defects in workmanship and materials will be repaired or replaced at no cost to the District for a period of one year from the date of acceptance by the District's representative.

8.2 Manufacturer’s warranties do not relieve the contractor of liability under their warranty but shall supplement the contractor.

8.3 This form shall be transferred onto the contractor's letterhead, shall be notarized and must contain the following information as shown below and on the next page:

Warranty for Sewer and Water System
Project Name and Tract No

Contractor hereby warranties that the sewer and water system we have furnished and installed for **Name of Project** is free from defects in materials and workmanship, and the work has been completed in accordance with the drawings and specifications. The District agrees not to hold the contractor responsible for ordinary wear and tear, unusual abuse, or neglect as determined by the District. Contractor agrees to repair or replace any defects in material or workmanship, which may develop during the period of one (1) year following the date of formal Valley-Wide acceptance, and also to repair or replace any damage resulting from the repairing or replacing of such defects at no additional cost to the District. Contractor shall make all repairs or replacements within 36 hours of written notification

and all other repairs or replacements within 7 days of written notice. If the contractor fails to complete such repairs or replacements within 36 hours of written notice or any other repair within 7 days after receipt of such written notice, the contractor hereby authorizes the District to proceed on behalf of the contractor to have said repairs or replacements made and agrees to pay all costs, including material, labor, and equipment, including a 10% administrative fee.

Project Name:_____
Location:_____
Sewer and Water Engineer: _____
Signature: _____
Title: _____Date:_____
Address: _____
Phone No.:_____

9.0 Inspections

9.1 Refer to Chapter 15 Construction Specifications general Section 7.0 Inspections for general requirements.

9.2 The District reserves the right to require inspection of any and all work listed below, but not limited to the following:

	Site Inspections:	**Notification Time:**
1.	Pre-construction conference	7 days
2.	Sewer pipe and clean-outs	48 hours
3.	Water pipe and isolation valve	48 hours
4.	Pressure testing	48 hours
5.	Backfilling	48 hours
6.	Final Inspection	7 days

9.3 The contractor is responsible for ensuring all sewer and water tie-in connections have been approved and inspected by the water and sewer purveyor.

10.0 Sewer and Water System Layout

10.1 The District must be notified 48 hours prior to any sewer and water testing or inspections.

10.2 Prior to commencement of any trenching, the contractor must mark out proposed lines and obtain layout approval from the District. Approval from the District does not relieve the contractor of any potential obstructions. Contractor must review all construction plans to avoid layout conflicts with any storm drain, irrigation, gas, domestic water, cable television, data lines,

trees, etc. Coordination with both existing and future utilities must be done prior to layout.

10.3 All sewer and water must be installed per the approved sewer and water plans.

10.4 Sewer and water pipes must be 12 vertical inches away from any other utility and 24 horizontal inches away from any other utility. In the event that these distances are not achievable, contact the District to determine if slurry backfill is required and to confirm which utility will have the slurry.

11.0 Execution

11.1 Coordinate the installation of the sewer and water work with all other trades and the construction schedule.

11.2 Verify dimensions of all equipment panels and boxes to ensure fitment and compliance with all requirements.

11.3 The sewer and water contractor shall be responsible for all sewer and water boxes or other equipment requiring concrete work. All concrete work shall be finished with a medium broom finish, and all raised concrete must be troweled smooth with a consistent surface throughout.

11.4 Work shall include all necessary fittings and connections.

12.0 Trenching and Backfilling

12.1 Contractor must contact the USA “Dig Alert” prior to any digging. Underground permits are required to be provided prior to the commencement of trenching.

12.2 No trenches are to be backfilled until approval from the County of Riverside Transportation Department and the District has been given.

12.3 Excavate trenches straight and support pipe continuously on the bottom of the trench per the layout indicated on the drawings.

12.4 All trenches must be a minimum of 6 inches wider than the piping per District details.

12.5 All lines shall have a minimum clearance of 4 inches vertical and horizontal from each other and 24 inches from any other lines from different trades.

12.6 Depth for sewer piping must be per the approved engineered Sewer plans. Depth for water piping must be per the approved water plans and a minimum cover 18 inches.

12.7 Fine granular soil not larger than ½ inch shall be backfilled to achieve a 2-inch-deep bedding below piping. Sand shall be used when the site soil is unsuitable, as determined by the District, at no additional cost to the District. Sand bedding shall be used for all primary lines as required by the power provider.

12.8 Fine granular soil not larger than ½ inch shall be used for the initial 6 inches of backfill and shall be compacted to a density equal to undisturbed soil. Sand shall be used when the site soil is unsuitable, as determined by the District, at no additional cost to the District. Clean backfill soil not greater than 1 inch shall be used for the remaining backfill and shall be compacted to 90% density.

12.9 No flooding shall be performed to compact trenches unless approved by the District.

12.10 Sand backfill, a minimum of 3 inches shall be provided below and above all piping under paved areas.

12.11 If any settling occurs and if any conduit adjustments are required, the contractor shall make these adjustments with no additional cost to the District.

12.12 Sewer pipe zone bedding shall comply with EWMD standard drawing SB-157.

12.13 All water line trenching and piping must be installed per District details.

13.0 General Piping and Fittings (Sewer)

13.1 All sewer pipe and fittings 4” through 12” must be SDR 35 PVC pipe, unless otherwise approved by the District.

13.2 SDR 35 PVC sewer pipe shall have integral bells with solvent-welded connections.

13.3 All SDR 35 PVC sewer pipes must bear the manufacturer’s name, date, and schedule, and must face upwards for visible inspection.

13.4 All SDR 35 PVC sewer pipe 4” through 8” must be solvent-welded and have a compound of PVC 1120 Type 1, Grade 1, with a cell class of 12454B per ASTM D1785. Sewer pipe larger than 8” can be solvent-welded or gasketed as approved by EWMD and the EOR.

13.5 All PVC pipe and fittings must be primed and solvent-cement welded per the manufacturer's recommendations and per ASTM D2665. Joints must

conform to ASTM D2672, and solvent cement must conform to ASTM D2564 and ASTM D2665.

13.6 All changes of direction shall not exceed 45 degrees. No 90-degree fittings are permitted.

13.7 All sewer tee connections, for horizontal orientation, must be made using Wye's with 1/8 bend elbows for 6" and larger piping, unless otherwise approved by the District. Sanitary tees may only be used for air vents. No standard tee connections are allowed, unless approved by the District.

13.8 Depths shall be per the approved plans and Eastern Municipal Water District (EMWD) requirements.

13.9 All sewer piping should be installed with a longitudinal slope of no less than 2% or greater as required by EMWD.

13.10 All sewer laterals must be installed per EMWD standard drawing SB-177, but with SDR 35 PVC piping.

13.11 Provide green metallic sewer warning tape installed 12" above the piping in landscape areas and 6" above the piping below any concrete surface.

13.12 Contractor must cut and patch or replace all pavements, curbs, gutters, or walkways whenever needed to install conduit. Repairs or replacements must be of the same quality.

14.0 General Piping and Fittings (Potable Domestic Water)

14.1 All domestic water pipe must be SCH 40 PVC or copper.

14.2 All domestic water piping must be pressure tested at 125 PSI for 4 hours.

14.3 Piping under concrete from nearest landscape to buildings must be copper. All other areas within landscape can be SCH 40 PVC. All piping under concrete with each end within a landscape area must be sleeved with a SCH 40 PVC pipe twice the diameter of the water line.

14.4 No water line fittings are allowed under paving.

14.5 SCH 40 PVC pipe shall have integral bells with solvent-welded connections.

14.6 All SCH 40 PVC water pipes must bear the manufacturer's name, date, and schedule, and must face upwards for visible inspection.

14.7 All SCH 40 PVC water pipe must be solvent-welded and have a compound of PVC 1120 Type 1, Grade 1, with a cell class of 12454B per ASTM D1785.

14.8 All PVC pipe and fittings must be primed and solvent-cement welded per the manufacturer's recommendations and per ASTM D2665. Joints must conform to ASTM D2672, and solvent cement must conform to ASTM D2564 and ASTM D2665.

14.9 All PVC fittings must be SCH 80 PVC.

14.10 When copper pipe is used, the pipe must be Type K hard copper or copper tubing conforming to ASTM B88-20. All copper pipe connections must be soldered by an experienced plumber and tested to be water-tight. No underground compression fittings are allowed. All joints must be visible for inspection prior to backfill. All copper piping must be installed within a 6-mil poly sleeve with warning labels indicating “corrosion protection, repair any damage”. All ends of the poly sleeve must be wrapped with 2-inch, 10-mil pipe wrap tape.

14.11 All changes of direction shall not exceed 45 degrees for piping over 2 inches.

14.12 Depths shall be per local code.

14.13 Provide blue metallic potable water warning tape installed 12” above the piping in landscape areas and 6” above the piping below any concrete surface.

14.14 Contractor must cut and patch or replace all pavements, curbs, gutters, or walkways whenever needed to install conduit. Repairs or replacements must be of the same quality.

14.15 All domestic potable water piping systems must be sanitized and chlorinated before operation per the International Plumbing Code (IPC) Section 602.3.4 and the American Water Works Association (AWWA) standard AWWA C651 or AWWA C652.

15.0 Clean-Out Boxes

15.1 All sewer lines must have clean-outs per local code. All clean-outs must be installed per EWMD standard drawing SB-52.

15.2 All clean-outs must have a wye fitting and 1/8 bend. Clean-outs must have a threaded cap with a square nut and be installed within a round concrete Brooks or approved equal box. The lid must be cast iron and ADA compliant when installed within a walkway.

15.3 Pre-manufactured Sewer and Water boxes must comply with ASTM C 1433 and AASHTO M 259.

15.4 All Sewer and Water boxes must have concrete pre-cast.

15.5 All Water boxes must have cast iron or concrete lids.

15.6 All Sewer boxes must have cast iron lids.

16.0 Water Meter and Backflow Device

16.1 All potable water systems for drinking fountains must have a separate water source from any irrigation system.

16.2 All water systems must have an approved backflow prevention device in compliance with EMWD standards and requirements per District details.

16.3 All backflow prevention devices must be installed with an enclosure and a Polar Barrier freeze-resistant blanket.

17.0 Isolation Valves

17.1 All potable water lines shall have brass ball valves per plan and per District detail.

17.2 Isolation valves must be installed prior to any street crossing and within any landscape area prior to the start of concrete where PVC piping is required to transition to copper piping.

18.0 Final Approval

18.1 All sewer and water work shall be cleaned and tested in its entirety and be inspected by the District.

18.2 CCTV pipe inspection or CCTV pipe video (aka. cameraing) of sewer lines may be required as per the discretion of the District.

18.3 All sewer and water boxes must be cleaned before final inspection.

18.4 Any County of Riverside Building and Safety permit must be finalized prior to final inspection by the District.

END OF SECTION

Chapter 18
Storm Drain Specifications

STORM DRAIN SPECIFICATIONS (NON- SEWER)

STORM DRAIN (NON-SEWER) SPECIFICATIONS (GENERAL)

Valley-Wide Recreation and Park District (the "District" or "Valley-Wide") shall be considered Valley-Wide Recreation and Park District inspection personnel, consultants, or other approved team members hereafter.

1.0 General Requirements

1.1 Permits: Contractor or Developer shall obtain and pay for any permits required.

1.2 A Cal-OSHA permit is required before excavating greater than 4 feet deep.

1.3 Contractor shall notify all utility companies through Underground Service Alert (USA) "Dig Alert" two days before trenching.

1.4 Contractor must provide the District's representative with the USA Dig Alert number at first inspection.

1.5 The current Drainage Specifications must be on site at all times for each project.

1.6 All inspection fees must be paid before the start of work.

1.7 The contractor shall have and maintain a Class A - General Engineering license, Class B – General Building license if work falls within the scope of the General Building Contractor, C-36 license, C-42 license, or C-27 license when performed as part of landscaping, throughout the duration of the work. Licensing must also meet the state requirements based on the specific scope of work on the project. If work is performed for another entity, such as the County of Riverside Transportation Department (RCTD) or Riverside County Flood Control and Water Conservation District (RCFC&WCD), the contractor must also meet their licensing requirements. The contractor shall maintain an experienced project supervisor and foreman at the site throughout the installation.

1.8 A qualified contractor must perform all work and have at least 5 years of experience performing similar projects. The District reserves the right to disqualify any contractor who does not meet this qualification.

1.9 Labor Code Sections 1720 et seq. and 1770 et seq., as well as California Code of Regulations, Title 8, Section 16000 et seq. ("Prevailing Wage Laws"), require the payment of prevailing wage rates and the performance of other requirements on certain "public works" and "maintenance" projects. If this Project involves an applicable "public works" or "maintenance" project, as defined by the Prevailing Wage Laws, and if the total compensation is $1,000 or more, Developer agrees to fully comply with such Prevailing Wage Laws. The Developer shall defend, indemnify, and hold the District, its elected officials, officers, employees, and agents free and harmless from any claims, liabilities, costs, penalties, or interest arising out of any failure or alleged failure to comply with the Prevailing Wage Laws.

2.0 Scope of Work

2.1 The intent of the drawings and specifications is to indicate the process required for the installation of a complete operating drainage system, complete in every respect, satisfactory to the District, applicable drainage utility provider, county, city, and state requirements. This section does not include specific requirements for bio-retention basins as part of a water quality treatment feature. Refer to Chapter 9 Basin and Channel Standards for specific requirements within basins.

2.2 The work consists of furnishing all tools, equipment, fixtures, transportation, labor, and any processes required to provide a complete operating drainage system as specified in the drawings and specifications.

2.3 All materials shall be new, of the best quality, and in perfect condition, of the same make and model number per the approved plans and submittals, conforming to the requirements of the District.

2.4 Additional requirements may be required when drainage is to be maintained by the County of Riverside Transportation Department or Riverside County Flood Control and Water Conservation District. These specifications are only related to drainage to be maintained by the District.

2.5 Portions of the drawings are diagrammatic and must be field verified. The contractor must notify the drainage engineer and the District immediately of any discrepancies before starting work.

2.6 All work indicated in the specifications, details, notes, or plans shall be provided and installed, whether or not specifically mentioned in the specifications. It shall be understood that if an item is shown in specifications but not shown on the plan, it shall be as if shown on both, and if an item is shown on the plan but not shown in the specifications, it shall be

as if shown on both. The District shall have final authority for any and all clarifications.

2.7 Due to the scale of the drawings, it is impossible to show all offsets, assemblies, fittings, tees, wyes, elbows, boxes, etc., for a complete drainage system.

2.8 Contractor shall provide all necessary assemblies, fittings, tees, wyes, elbows, boxes, etc., to provide a complete drainage system as listed in drawings and specifications with no additional cost to the District.

2.9 The work shall be performed in a manner that does not conflict with any known obstructions. Contractor shall notify the District of any conflict. The contractor shall assume full responsibility for any modification or revision required if no notification was given to the District.

2.10 All drainage work performed shall comply with the rules and regulations of the Division of Industrial Safety, State of California, and all rules and regulations having local jurisdiction, including the California Plumbing Code (CPC).

3.0 Quality Control

3.1 Contractor must provide one competent English-speaking employee capable of understanding and communicating with District personnel on site at all times throughout the duration of the work.

3.2 The contractor must provide personnel with at least five (5) years of experience who are familiar with all types of material being used and installation methods for all work performed.

3.3 If no specifications or details are provided for any items shown on the plans, the manufacturer's directions, specifications, and/or details shall be followed.

3.4 District specifications and/or details shall always take precedence over the manufacturer's specifications or recommendations.

3.5 All local, county, and state laws, rules, and regulations related to any portion of work under this section shall be incorporated within these specifications and adhered to throughout the duration of work. Nothing contained within these specifications shall be construed to conflict with said rules and regulations.

3.6 The provisions of these specifications shall take precedence over the said rules and regulations if these specifications indicate a higher quality or better standard.

3.7 Any extra work performed shall be approved in writing by the Owner or the District's representative before starting such work.

3.8 Any unapproved work will be at the contractor's expense.

3.9 All material and labor shall be free from any defects. Any defective work must be corrected immediately without additional cost to the District.

3.10 In the event of conflict between plans and specifications, the specifications or more stringent standard shall take precedence. No additional compensation shall be considered for direction given by District personnel providing clarification on specifications in the event of conflict between plans and specifications.

3.11 No additional compensation shall be given as a result of any District-generated punch list item or correction notice given to the contractor in order to comply with specifications.

3.12 All drainage pipes, inlets, outlets, or any other drainage equipment must be tested before completing all drainage work.

4.0 Contractor Submittals

4.1 Refer to Chapter 15 Construction Specifications General Section 4.0 Contractor Submittals for general requirements.

4.2 Drainage submittals with any substitutions shall be approved by the Engineer of Record (EOR) before District approval.

4.3 Submittals must include all drainage products to be used, including but not limited to all pipe, fittings, primer, glue, concrete, bedding material, inlet catch basins, outlet structures, grates, and locking mechanisms.

4.4 Detailed shop drawings of all approved poured-in-place structures.

5.0 Substitutions

5.1 Refer to Chapter 15 Construction Specifications General Section 4.0 Contractor Submittals for general substitution requirements.

6.0 As-Builts and Record Drawings

6.1 Refer to Chapter 15 Construction Specifications General Section 5.0 As-Builts and Record Drawings for general requirements.

6.2 All underground components, including, but not limited to, drainage piping, boxes, vaults, and cleanouts, must be shown to scale on the plans in the locations installed in red where any changes have been made different from locations per the approved engineered plans, including all vertical and horizontal changes.

6.3 Contractor must submit complete field drainage as-built drawings for review during underground inspection. The District representative shall review the drainage as-built drawings as part of the underground inspection, and any corrections must be made before underground backfill approval. The District inspector will then sign and date the drainage as-built drawings, and the contractor must provide a scanned digital copy of the District-signed drainage as-builts within 3 working days to the District. No underground trenches will be allowed to be covered until the field as-builts are reviewed and deemed acceptable to be transferred to final record drawings.

6.4 All drainage as-built drawings shall include actual depths taken from the top of the pipe to the final finish grade.

7.0 Operation and Maintenance Manuals

7.1 Refer to Chapter 15 Construction Specifications General Section 6.0 Operation and Maintenance Manuals for general requirements.

8.0 Warranty

8.1 Provide a written warranty that all work with defects in workmanship and materials will be repaired or replaced at no cost to the District for a period of one year from the date of acceptance by the District's representative.

8.2 Manufacturers' warranties do not relieve the contractor of liability under their guarantee but shall supplement the contractor.

8.3 This form shall be transferred onto the contractor's letterhead, shall be notarized and must contain the following information on the next page:

Warranty for Drainage System
Project Name and Tract No.

Contractor hereby warranties that the drainage system we have furnished and installed for **Name of Project** is free from defects in materials and workmanship, and the work has been completed in accordance with the drawings and specifications. The District agrees not to hold the contractor responsible for ordinary wear and tear, unusual abuse, or neglect as determined by the District. Contractor agrees to repair or replace any defects in material or workmanship, which may develop during the period of one (1) year from the date of formal Valley-Wide acceptance, and also to repair or replace any damage resulting from the repairing or replacing of such defects at no additional cost to the District. Contractor shall make all repairs or replacements within 36 hours of written notification and all other repairs or replacements within 7 days of written notice. If the contractor fails to complete such repairs or replacements within 36 hours of written notice or any other repair within 7 days after receipt of such written notice, the contractor hereby authorizes the District to proceed on behalf of the contractor to have said repairs or replacements made and agrees to pay all costs, including material, labor, and equipment, including a 10% administrative fee.

Location:_____
Drainage Engineer: _____
Printed Name:_____ Title:_____
Signed: _____
Address: _____
Phone No.:_____
Date of Signature: _____

9.0 Inspections

9.1 The contractor shall allow the District to inspect the project at any time throughout the duration of the project and shall provide safe access to all areas of the project for all visits.

9.2 No work shall be covered without inspection for all items listed in this section and any other items specifically requested by the District.

9.3 The District reserves the right to require inspection of any and all work listed below, but not limited to the following:

Site Inspections and notification time:

1.	Pre-construction conference	7 days
2.	Drain pipe and box	48 hours
3.	Final Inspection	7 days

9.4 No field underground inspections will commence unless the record drawings are current and available for observation upon request by the District's representative.

10.0 Drainage System Layout

10.1 The District must be notified 48 hours prior to any drainage testing or inspections.

10.2 Prior to commencement of any trenching, the contractor must mark out proposed lines and obtain layout approval from the District. Approval from the District does not relieve the contractor of any potential obstructions. Contractor must review all construction plans to avoid layout conflicts with any storm drain, irrigation, gas, domestic water, cable television, data lines, trees, etc. Coordination with both existing and future utilities must be done prior to layout.

10.3 All drainage must be installed per the approved drainage plans.

10.4 Drainage pipes must be 12 vertical inches away from any other utility and 24 horizontal inches away from any other utility. In the event that these distances are not achievable, contact the District to determine if slurry backfill is required and to confirm which utility will have the slurry.

11.0 Execution

11.1 Coordinate the installation of the drainage work with all other trades and the construction schedule.

11.2 Verify dimensions of all equipment panels and boxes to ensure fitment and compliance with all requirements.

11.3 The drainage contractor shall be responsible for all drainage boxes or other equipment requiring concrete work. All concrete work shall be finished with a medium broom finish, and all raised concrete must be troweled smooth with a consistent surface throughout.

11.4 Work shall include all necessary fittings and connections.

12.0 Trenching and Backfilling

12.1 Contractor must contact the USA "Dig Alert" prior to any digging. Underground permits are required to be provided prior to the commencement of trenching.

12.2 No trenches are to be backfilled until approval from the County of Riverside Transportation Department and the District has been given.

12.3 Excavate trenches straight and support pipe continuously on the bottom of the trench per the layout indicated on the drawings.

12.4 All trenches must be a minimum of 6 inches wider than the piping per District details.

12.5 All lines shall have a minimum clearance of 4 inches vertical and horizontal from each other and 24 inches from any other lines from different trades.

12.6 Depth must be per the approved engineered drainage plans. Provide a minimum cover of 12 inches over all drainage piping.

12.7 Fine granular soil not larger than ½ inch shall be backfilled to achieve a 2-inch-deep bedding below piping. Sand shall be used when the site soil is unsuitable, as determined by the District, at no additional cost to the District. Sand bedding shall be used for all primary lines as required by the power provider.

12.8 Fine granular soil not larger than ½ inch shall be used for the initial 6 inches of backfill and shall be compacted to a density equal to undisturbed soil. Sand shall be used when the site soil is unsuitable, as determined by the District, at no additional cost to the District. Clean backfill soil not greater than 1 inch shall be used for the remaining backfill and shall be compacted to 90% density.

12.9 No flooding shall be performed to compact trenches unless approved by the District.

12.10 Sand backfill, a minimum of 3 inches shall be provided below and above all piping under paved areas.

12.11 If any settling occurs and if any conduit adjustments are required, the contractor shall make these adjustments with no additional cost to the District.

12.12 All trenches must be excavated at the same slope as the drainage pipe. Trenches and drainage pipes must have a minimum slope of 0.50%.

12.13 Bedding for RCP must be per Riverside County Flood Control and Water Conservation District (RCFC&WCD) Standard Drawing No. M815.

13.0 General Piping and Fittings (PVC)

13.1 All drainage pipe and fittings 3" through 8" must be SCH 40 PVC pipe, unless otherwise approved by the District. All drainage pipe and fittings larger than 8" must be SDR 35 PVC pipe, unless otherwise approved by the District.

13.2 SCH 40 PVC pipe shall have integral bells with solvent-welded connections. All SDR 35 PVC pipe and fittings shall be bell and gasket type.

13.3 All SCH 40 and SDR 35 PVC drainage pipes must bear the manufacturer's name, date, and schedule, and must face upwards for visible inspection. No PVC pipe used for storm drains shall have any lettering or stenciling indicating "sewer".

13.4 All SCH 40 PVC drainage pipe must be solvent-welded and have a compound of PVC 1120 Type 1, Grade 1, with a cell class of 12454B per ASTM D1785.

13.5 All SCH 40 PVC pipe and fittings must be primed and solvent-cement welded per the manufacturer's recommendations and per ASTM D2665. Joints must conform to ASTM D2672, and solvent cement must conform to ASTM D2564 and ASTM D2665.

13.6 All changes of direction shall not exceed 45 degrees. No 90-degree fittings are permitted.

13.7 All non-sewage drainage tee connections, both horizontal and vertical orientation, must be made using wyes with 1/8 bend elbows for 6" and larger piping, unless otherwise approved by the District. Sanitary tees may be used for 3" through 4" piping where space is limited. No standard tee connections are allowed, unless approved by the District. End-of-line piping connections to catch basin inlets where a 90-degree bend is needed must be done with a long elbow or a combination of two 45-degree bends.

13.8 Provide a minimum cover of 12 inches over all drainage piping and ensure piping is placed lower than the bottom of any outlet box to prevent trimming of inlet boxes to achieve design elevations.

13.9 All piping should be installed with a longitudinal slope of no less than 0.50%.

13.10 Provide green metallic storm drain warning tape installed 12” above the piping in landscape areas and 6” above the piping below any concrete surface.

13.11 Contractor must cut and patch or replace all pavements, curbs, gutters, or walkways whenever needed to install conduit. Repairs or replacements must be of the same quality.

14.0 General Piping (Concrete)

14.1 All drainage pipes larger than 12” must be Reinforced Concrete Pipe (RCP) unless otherwise approved.

14.2 The use of HDPE may be considered based on the project's use and quantity. When HDPE is approved for use, it must be a dual-wall N-12 ST IB pipe meeting AASHTO M252 with soil-tight integral bell and spigot joints exceeding AASHTO M294. Material shall be by ADS or an approved equal.

14.3 RCP material must be circular precast material fabricated by an approved manufacturer.

14.4 RCP material must comply with ASTM C76-11 and AASHTO M 170-09.

14.5 All RCP drainage must be installed and inspected per ASTM C1840 and ASTM C1479.

14.6 All changes of direction shall not exceed 45 degrees.

14.7 No 90-degree fittings are permitted.

14.8 Provide a minimum cover of 12 inches over all drainage piping and ensure piping is placed lower than the bottom of any outlet box to prevent trimming of inlet boxes to achieve design elevations.

14.9 All piping should be installed with a longitudinal slope of no less than 0.50%.

14.10 Provide green metallic storm drain warning tape installed 12” above the piping in landscape areas and 6” above the piping below any concrete surface.

14.11 Contractor must cut and patch or replace all pavements, curbs, gutters, or walkways whenever needed to install conduit. Repairs or replacements must be of the same quality.

15.0 Catch Basin Inlet Boxes

15.1 All drainage inlet boxes must be concrete, unless otherwise approved by the District.

15.2 Drainage inlet boxes must be pre-manufactured or Poured-In-Place (PIP) structures per District details.

15.3 Pre-manufactured drainage inlet boxes must comply with ASTM C 1433 and AASHTO M 259.

15.4 PIP drainage inlet boxes must be of the same quality as pre-manufactured boxes and must be 560-C-3,250 PSI with a suitable slump per ASTM C39 and ASTM C-150. Reinforcing steel per ASTM A615. All PIP drainage inlet boxes must be designed, and a structural engineer must stamp drawings. All concrete surfaces shall be formed and shall not be shaped by plastering. The basin bottom shall have a longitudinal and lateral slope of 1:12 minimum and 1:3 maximum. Slope the bottom from all directions to the outlet. Reinforcement shall terminate two inches from the face of the concrete. PIP boxes must have a pre-manufacturer galvanized steel frame, by Alhambra Foundry Company, National Casting Corporation, or an approved equal.

15.5 All drainage inlet boxes must have a galvanized steel frame with a locking mechanism to secure the grate to the frame.

15.6 All drainage inlet boxes must have concrete pre-cast or poured-in-place concrete bottoms with the inlet pipes raised 3 inches above the bottom to trap debris. When a concrete bottom is poured-in-place, the depth must be a minimum of 6 inches thick.

15.7 All drainage inlet boxes must have a 12” wide by 6” deep concrete collar unless otherwise approved by Valley-Wide.

15.8 All drainage inlet boxes and grates within concrete areas must be ADA-compliant without abrupt changes greater than ¼”. Box subgrade must be compacted to 95% to prevent settlement.

15.9 All drainage inlet boxes must have galvanized steel or cast-iron grates.

15.10 All grates shall have locking bolts secured to the drain box frame with a stainless-steel Penta head bolt and washer or a vandal-proof bolt with a specialty head.

15.11 Atrium grates shall be used in planters when inlets are smaller than 12 inches.

15.12 Plastic inlet boxes and grates shall only be used in small diameter drainage systems 4 inches or smaller in specific, limited instances, as approved by the District.

15.13 Contractor must provide drainage inlet protection as soon as the inlet box is installed by providing temporary erosion control devices, such as filter fabric between the frame and grate, and installing gravel bags. Temporary erosion control devices shall remain in place until other construction is completed, including soil stabilization from landscape planting, mulching, sodding, or hydro-seeding.

16.0 Final Approval

16.1 All drainage work shall be cleaned and tested in its entirety and be inspected by the District.

16.2 CCTV pipe inspection or CCTV pipe video (aka. cameraing) of lines 18 inches and larger may be required at the discretion of the District.

16.3 All drainage inlet boxes must be cleaned before final inspection.

16.4 Any County of Riverside precise grading plan permit must be finalized prior to final inspection by the District.

END OF SECTION

Chapter 19
Electrical Specifications

ELECTRICAL SPECIFICATIONS

ELECTRICAL SPECIFICATIONS

Valley-Wide Recreation and Park District (the "District" or "Valley-Wide") shall be considered Valley-Wide Recreation and Park District inspection personnel, consultants, or other approved team members hereafter.

1.0 General Requirements

1.1 Permits: Contractor or Developer shall obtain and pay for any permits required.

1.2 A Cal-OSHA permit is required before excavating greater than 4 feet deep.

1.3 Contractor shall notify all utility companies through Underground Service Alert "Dig Alert" (USA) 2 days before trenching.

1.4 Contractor must provide the District's representative with the USA Dig Alert number at the first inspection.

1.5 The current Electrical Specifications must be on site at all times for each project.

1.6 All inspection fees must be paid before the start of work.

1.7 The contractor shall have and maintain a specialty C-61 license throughout the duration of the work. The contractor shall also maintain an experienced project supervisor and foreman at the site at all times throughout the installation.

1.8 A qualified contractor must perform all work and have at least 5 years of experience performing similar projects. The District reserves the right to disqualify any contractor who does not meet this qualification.

1.9 All electrical work shall comply with Title 24, County Ordinance No. 655 (Dark Sky), Illuminating Engineering Society (IES), and National Fire Protection Association (NFPA) requirements and guidelines.

1.10 Labor Code Sections 1720 et seq. and 1770 et seq., as well as California Code of Regulations, Title 8, Section 16000 et seq. ("Prevailing Wage Laws"), require the payment of prevailing wage rates and the performance of other requirements on certain "public works" and "maintenance" projects. If this Project involves an applicable "public works" or "maintenance" project,

as defined by the Prevailing Wage Laws, and if the total compensation is $1,000 or more, Developer agrees to fully comply with such Prevailing Wage Laws. The Developer shall defend, indemnify, and hold the District, its elected officials, officers, employees, and agents free and harmless from any claims, liabilities, costs, penalties, or interest arising out of any failure or alleged failure to comply with the Prevailing Wage Laws.

2.0 Scope of Work

2.1 The intent of the drawings and specifications is to indicate the process required for the installation of a complete operating electrical system, complete in every respect, satisfactory to the District, applicable electrical utility provider, county, city, and state requirements.

2.2 The work consists of furnishing all tools, equipment, fixtures, transportation, labor, and any processes required to provide a complete operating electrical system as specified in the drawings and specifications.

2.3 All materials shall be new, of the best quality, and in perfect condition, of the same make and model number per the approved plans and submittals, conforming to the requirements of ASTM, NEMA, U.L., NBFB, and the NEC.

2.4 Portions of the drawings are diagrammatic and must be field verified. The contractor must notify the electrical engineer and the District immediately of any discrepancies before starting work.

2.5 All work indicated in the specifications, details, notes, or plans shall be provided and installed, whether or not specifically mentioned in the specifications. It shall be understood that if an item is shown in specifications but not shown on the plan, it shall be as if shown on both, and if an item is shown on the plan but not shown in the specifications, it shall be as if shown on both. The District shall have final authority for any and all clarifications.

2.6 Due to the scale of the drawings, it is impossible to show all offsets, conduits, assemblies, fittings, sweeps, boxes, etc., for a complete electrical system.

2.7 Contractor shall provide all necessary assemblies, fittings, sweeps, elbows, boxes, etc., to provide a complete electrical system as listed in drawings and specifications with no additional cost to the District.

2.8 The work shall be performed in a manner that does not conflict with any known obstructions. Contractor shall notify the District of any conflict. The contractor shall assume full responsibility for any modification or revision required if no notification was given to the District.

2.9 All electrical work performed shall comply with the rules and regulations of the Division of Industrial Safety, State of California, as set forth in the latest edition of the National Electrical Code (NEC), the Electrical Safety Orders, and all rules and regulations having local jurisdiction, including Title 21 and Title 24 California Administrative Code.

3.0 Quality Control

3.1 Contractor must provide one competent English-speaking employee capable of understanding and communicating with District personnel on site at all times throughout the duration of the work.

3.2 The contractor must provide personnel with at least five (5) years of experience who are familiar with all types of material being used and installation methods for all work performed.

3.3 If no specifications or details are provided for any items shown on the plans, the manufacturer's directions, specifications, and/or details shall be followed.

3.4 District specifications and/or details shall take precedence over the manufacturer's specifications or recommendations.

3.5 All local, county, and state laws, rules, and regulations related to any portion of work under this section shall be incorporated within these specifications and adhered to throughout the duration of work. Nothing contained within these specifications shall be construed to conflict with said rules and regulations.

3.6 The provisions of these specifications shall take precedence over the said rules and regulations if these specifications indicate a higher quality or better standard.

3.7 Any extra work performed shall be approved in writing by the Owner or the District's representative before starting such work.

3.8 Any unapproved work will be at the contractor's expense.

3.9 All material and labor shall be free from any defects. Any defective work must be corrected immediately without additional cost to the District.

3.10 In the event of conflict between plans and specifications, the specifications or more stringent standard shall take precedence. No additional compensation shall be considered for direction given by District personnel providing clarification on specifications in the event of conflict between plans and specifications.

3.11 No additional compensation shall be given as a result of any District-generated punch list item or correction notice given to the contractor in order to comply with specifications.

3.12 All circuits, switches, lights, motors, breakers, outlets, and any other electrical equipment must be tested prior to the completion of all electrical work.

4.0 Contractor Submittals

4.1 Refer to Chapter 15 Construction Specifications General Section 4.0 Contractor Submittals for general requirements.

4.2 Electrical submittals shall be approved by the Electrical Engineer of Record (EEOR) before District approval. Switchgear or other required distribution panels with primary lines shall also be submitted to Southern California Edison (SCE) for review and approval before ordering.

4.3 Electrical submittals shall be one complete package including three sections: Light Fixtures, Panels, and Underground and Wiring.

a. Light Fixture submittals shall include, but not be limited to, all light fixtures, lamps, poles, covers, GFCI outlets, mounting hardware, footing concrete mix and rebar reinforcement.

b. Panel submittals shall include, but not be limited to, all enclosures, cabinets, panels, breakers, labels, switches, controls, photocells and dimming sensors.

c. Underground and Wiring submittals shall include, but not be limited to, types of conduits, sweeps, fittings, wire types, underground warning tape, connectors, pull boxes, pull box lids, sealants, and wire markers.

5.0 As-Builts and Record Drawings

5.1 Refer to Chapter 15 Construction Specifications General Section 5.0 As-Builts and Record Drawings for general requirements.

5.2 All underground components, including, but not limited to, conduit piping, pull boxes, vaults, and wiring, must be shown to scale on the plans in the locations installed in red.

5.3 All site lines must be black, conduits and pull boxes must be red, and dimensions must be blue.

5.4 All electrical as-built drawings shall include actual depths taken from the top of the pipe to the final finish grade.

5.5 All electrical as-built drawings must include any changes to circuits.

5.6 The routing of all wiring shall be listed on the electrical as-built drawings.

6.0 Circuit Charts

6.1 Electrical as-built drawings shall be approved in writing before completion of the circuit charts.

6.2 Provide two circuit charts for each electrical panel supplied, showing the area covered by the panel for each circuit breaker. Any changes to the panel layout must be shown on the panel schedule and must match the electrical as-built drawings.

6.3 The chart shall be a reduced reproduction of the as-built system in black or dark gray. If the panel schedule is not legible when reduced, enlarge it to a size that will be legible when reduced.

6.4 Charts shall be black or dark gray line print with a different transparent color used to show each circuit coverage area.

6.5 Completed and approved charts must be provided in PDF format, and two laminated, 10-mil-thick plastic hard copies must be provided to the District.

6.6 Charts shall be completed and approved before the final inspection of the electrical system. Charts that are laminated before approval with corrections shall be revised without additional cost to the District. Controller charts shall also be saved as an Adobe Acrobat PDF file and submitted to the District.

6.7 Panel access. The District reserves the right to access the electrical panel for monitoring and controlling system failures. The contractor shall provide the District with two sets of all keys necessary to access the panel within the designated area. The keys will then become the property of the District.

7.0 Operation and Maintenance Manuals

7.1 Refer to Chapter 15 Construction Specifications General Section 6.0 Operation and Maintenance Manuals for general requirements.

7.2 In addition to the maintenance manuals, provide the maintenance personnel with the instructions for major equipment and show written evidence to the District.

8.0 Spare Parts and Equipment

8.1 Before acceptance of work, prepare and deliver to the District all required spare parts, tools, and equipment. Spare parts, tools, and equipment shall include, but not be limited to, the following:

a. Two extra bulb lamps for each type of fixture specified, except for sports fixtures

b. One valve box cover wrench or key

c. Three specialty keys for pull box lids

9.0 Warranty

9.1 Provide a written warranty that all work with defects in workmanship and materials will be repaired or replaced at no cost to the District for a period of one year from the date of acceptance by the District's representative.

9.2 Manufacturers' warranties do not relieve the contractor of liability under their guarantee but shall supplement the contractor.

9.3 This form shall be transferred onto the contractor's letterhead, shall be notarized and must contain the following information on the next page:

Warranty for Electrical System

Project Name and Tract No.

Contractor hereby warranties that the electrical system we have furnished and installed for **Name of Project** is free from defects in materials and workmanship, and the work has been completed in accordance with the drawings and specifications. The District agrees not to hold the contractor responsible for ordinary wear and tear, unusual abuse, or neglect as determined by the District. Contractor agrees to repair or replace any defects in material or workmanship, which may develop during the period of one (1) year from the date of formal Valley-Wide acceptance, and also to repair or replace any damage resulting from the repairing or replacing of such defects at no additional cost to the District. Contractor shall make all repairs or replacements within 36 hours of written notification and all other repairs or replacements within 7 days of written notice. If the contractor fails to complete such repairs or replacements within 36 hours of written notice or any other repair within 7 days after receipt of such written notice, the contractor hereby authorizes the District to proceed on behalf of the contractor to have said repairs or replacements made and agrees to pay all costs, including material, labor, and equipment, including a 10% administrative fee.

Location:_____
Electrical Engineer: _____
Printed Name:_____ Title:_____
Signed: _____
Address: _____
Phone No.:_____
Date of Signature: _____

10.0 Inspections

10.1 The contractor shall allow the District to inspect the project at any time throughout the duration of the project and shall provide safe access to all areas of the project for all visits.

10.2 No work shall be covered without inspection for all items listed in this section and any other items specifically requested by the District.

10.3 The District reserves the right to require inspection of any and all work listed below, but not limited to the following:

	Site Inspections:	**Notification Times**:
a.	Pre-construction conference	7 days
b.	Conduit and pull box layout	48 hours
c.	Site fixture location	48 hours
d.	Panel placement	48 hours
e.	Conduit mandrel test	48 hours
f.	Lighting test	48 hours
g.	Sports lighting lumen test	3 days
h.	Final inspection	4 days

10.4 No field underground inspections will commence unless the record drawings are current and available for observation upon request by the District's representative.

11.0 Electrical System Layout

11.1 Prior to commencement of any trenching, the contractor must mark out proposed lines and obtain layout approval from the District. Approval from the District does not relieve the contractor of any potential obstructions. Contractor must review all construction plans to avoid layout conflicts with any storm drain, irrigation, gas, domestic water, cable television, data lines, trees, etc. Coordination with both existing and future utilities must be done prior to layout.

11.2 All electrical conduits must be installed under concrete walkways whenever possible. Conduits must sweep out to fixtures and pull boxes where needed.

11.3 All pull boxes must be installed within landscape areas wherever possible.

11.4 Contractor must coordinate layout around trees based on review of landscape plans and the landscape contractor.

11.5 Where electrical conduits cross water lines or other utilities, generally, the electrical conduits must be installed below the water lines unless the water lines are sleeved.

11.6 Electrical conduits must be 12 vertical inches away from any other utility and 24 horizontal inches away from any other utility. In the event that these distances are not achievable, contact the District to determine if slurry backfill is required and to confirm which utility will have the slurry.

12.0 Execution

12.1 Coordinate the installation of the electrical work with all other trades and the construction schedule.

12.2 Verify dimensions of all equipment panels and boxes to ensure fitment and compliance with all requirements.

12.3 All pull boxes, conduit envelopes, raised pads, or other equipment requiring concrete work shall be the electrical contractor's responsibility. All concrete work shall be finished with a medium broom finish, and all raised concrete must be troweled smooth with a consistent surface throughout.

12.4 All electrical equipment, enclosures, and materials located in damp or semi-exposed areas must be weather-resistant, meeting NEMA Type 3R requirements.

12.5 All underground conduits must be confirmed to be dry and clean prior to the installation of conductors. Mandrel testing may be required as directed by the District.

12.6 Work shall include all necessary fittings and connections.

13.0 Trenching and Backfilling

13.1 Contractor must contact the USA “Dig Alert” prior to any digging. Underground permits are required to be provided prior to the commencement of trenching.

13.2 No trenches are to be backfilled until approval from the County of Riverside Transportation Department and the District has been given.

13.3 Excavate trenches straight and support pipe continuously on the bottom of the trench per the layout indicated on the drawings.

13.4 All trenches must be a minimum of 6 inches wider than the piping per District details.

13.5 All lines shall have a minimum clearance of 4 inches vertical and horizontal from each other and 24 inches from any other lines from different trades.

13.6 Provide the minimum cover as listed:

a.	Conduit 3” and larger	30 inches
b.	Conduit under 3”	24 inches
c.	Conduit under 3” under concrete	18 inches

13.7 Fine granular soil not larger than ½ inch shall be backfilled to achieve a 2-inch-deep bedding below piping. Sand shall be used when the site soil is unsuitable, as determined by the District, at no additional cost to Valley-Wide. Sand bedding shall be used for all primary lines as required by the power provider.

13.8 Fine granular soil not larger than ½ inch shall be used for the initial 6 inches of backfill and shall be compacted to a density equal to undisturbed soil. Sand shall be used when the site soil is unsuitable, as determined by the District, at no additional cost to the District. Clean backfill soil not greater than 1 inch shall be used for the remaining backfill and shall be compacted to 90% density.

13.9 No flooding shall be performed to compact trenches unless approved by the District.

13.10 Sand backfill a minimum of 3 inches shall be provided below and above all piping under paved areas.

13.11 If any settling occurs and if any conduit adjustments are required, the contractor shall make these adjustments with no additional cost to the District.

14.0 General Conduit and Fittings (PVC)

14.1 All underground conduits must be sunlight-resistant SCH 40 or SCH 80 gray PVC pipe. PVC shall be rigid non-metallic conduit and be ETL Listed to UL651 in compliance with the requirements it NEMA TC-2 and the NEC. Integral Bell Dimensions must meet the requirements of UL651. PVC must be rated for use with 90°C conductors.

14.2 All underground PVC conduits must bear the manufacturer’s name, date, and schedule and must face upwards for visible inspection.

14.3 All PVC conduit fittings must be UL651 certified.

14.4 All PVC pipe and fittings must be primed and solvent-cement welded per the manufacturer's recommendations.

14.5 Depths shall be per Section 13.0.

14.6 Run all conduits so as not to interfere with or come in contact with other piping, fixtures, or equipment.

14.7 Provide red metallic high-voltage warning tape installed 12” above the conduit in landscape areas and 6” above the conduit where below any concrete surface.

14.8 Provide PVC conduit sweeps for all horizontal-to-vertical transitions.

14.9 Contractor must cut and patch or replace all pavements, curbs, gutters, or walkways whenever needed to install conduit. Repairs or replacements must be of the same quality.

14.10 Empty conduits for future use must have a heavy nylon cord or rope for future wire pulls. Each end shall have a plastic tag indicating where the other end terminates.

14.11 All rotating equipment shall have flexible, liquid-tight conduit with enough slack from the equipment to disconnect the switch.

14.12 Seal or cap all conduit ends until all wires are pulled. Seal all below-grade conduit directly after wires are pulled with Polywater FST foam duct sealant or approved equal.

14.13 Approved type bending tools or machines shall be used for conduit bends when sweeps cannot be used. The use of a blow torch is strictly prohibited.

14.14 Wire pulling shall be done manually or by an approved conductor pulling machine. The use of a tractor or vehicle is strictly prohibited.

14.15 All PVC service conduits, bends, sweeps, depths, backfill, etc., must comply with the local service authority.

15.0 General Conduit and Fittings (Metal)

15.1 Exposed conduit must be rigid hot-dipped galvanized steel manufactured in accordance with ANSI C80.1. All ends must be threaded, and connections must be made with Galvanized Rigid Conduit (GRC) couplings and elbows.

15.2 All exposed conduit must be painted to match adjacent surfaces.

15.3 All exposed conduits to be connected to masonry walls or concrete must be of a size of ¾" or less, unless otherwise approved by the District.

15.4 All exposed conduits to be connected to dry walls or ceilings within a building shell shall be steel tube (EMT) unless otherwise approved by the District.

15.5 All exposed conduits must have a minimum separation of 6" from water and must be installed above water lines whenever possible.

15.6 Run all conduits so as not to interfere with or come in contact with other piping, fixtures, or equipment.

15.7 Special water-tight union fittings are required in locations exposed to concrete, underground, wet, damp, or weather. No running threads will be permitted in places exposed to concrete, underground, wet, damp, or weather.

15.8 All exposed conduit must have supports not less than 10 feet apart and 3 feet from any outlet or bend. Conduit clamps must be galvanized, heavy stamped, one-hole malleable material secured with a nail, where concealed. Where conduit clamps are exposed they must be galvanized, heavy stamped, two hole malleable material secured with a screw or bolt. Unistrut channels may be used only when approved by the District and must be painted to match the adjacent surfaces.

15.9 All exposed conduit must be installed parallel or perpendicular to walls, ceilings, structural members, or other components. Avoid offsets and bends wherever possible.

15.10 Any conduit extending through a wall must be supported and caulked with an approved material per approved plans and submittals. If any conduit extends through a fire-resistant wall, floor, or partition, voids must be packed with U.S.G. Thermafiber or equal as approved by the State Fire Marshal.

15.11 Any conduit extending through a roof must have an appropriate flashing and be sealed to be waterproof. Locations and materials must be approved by the District prior to any drilling or cutting of any roof.

15.12 Use only factory-manufactured elbows unless otherwise approved by the District. Field bends are permitted for EMT conduit 1" or less.

15.13 Conduit for shade shelters must be installed within the steel posts and trusses and shall only be exposed where the conduit enters the light fixture outset housing.

15.14 All metal service conduits, bends, sweeps, offsets, connections, etc., must comply with the local service authority.

16.0 Pull Boxes and Junction Boxes

16.1 All pull boxes for electrical shall be made of reinforced polymer concrete with a Tier 22 body rating and a composite cover with a Tier 15 rating, conforming with ASTM C-1028 and ASTM C-857. Pull boxes must be Oldcastle H-Series or approved equal.

16.2 All pull boxes shall be sized large enough to be able to access all conduits and wiring without the removal of the box and must be sized per the NEC. Conduit must be placed on one side of the box per District details to allow for access and coiling of expansion loops.

16.3 All pull boxes shall have locking covers secured with a stainless-steel Penta head bolt and washer or a vandal-proof bolt with a specialty head.

16.4 All electrical lines shall have a dedicated pull box for electrical wiring to access conduits as shown on approved plans and as needed, as approved by the District. All pull boxes for the camera system (CCTV) low-voltage conduits shall have a dedicated pull box.

16.5 All pull boxes shall be gray in color and shall have “ELECTRICAL” embossed on the lid for electrical lines and shall have “COMMUNICATION” embossed on the lid for site camera systems (CCTV).

16.6 All pull boxes within concrete areas must be ADA compliant without any abrupt changes greater than ¼”. Box subgrade must be compacted to 95% to prevent settlement.

16.7 All pull boxes within landscape areas must be buried below grade per District details.

16.8 All pull boxes must have four common bricks, gravel, filter fabric, and galvanized mesh below the boxes per District details.

16.9 Above-grade junction boxes shall be galvanized metal with removable water-tight gasketed covers, secured with non-ferrous machine screws, and

shall comply with the applicable Electrical Safety Orders, State of California, and the NEC. Exterior junction boxes must be NEMA 3R.

16.10 All conduits within pull boxes shall be clean, dry, and sealed to prevent entry of moisture, dirt, or insects.

16.11 Outdoor outlet boxes shall have locking waterproof covers and be mounted above 6 feet from finish grade, where located at a shade shelter. If located at a ballfield backstop, the outlet must be centered and be 2 feet above finish grade.

17.0 Conductors and Wiring

17.1 All conductors must be copper 600-volt A.C. unless otherwise approved. Aluminum conductors are not permitted.

17.2 All conductors must be THHN for dry areas and THWN for underground and damp locations.

17.3 All conductors shall be transported to the project site in unbroken packages, marked with the manufacturer's name, date of manufacture, voltage, and gauge letters.

17.4 No conductor shall be less than 12 AWG for 120 volts or more, unless shown on the approved plans and submittals.

17.5 No fixture wire shall be less than 18 AWG and must carry the capacity per the latest NEC. Fixture wire must comply with the latest requirements of the National Board of Fire Underwriters.

17.6 All conductors shall be inside an approved raceway. Factory assemblies, non-metallic, pliable corrugated raceways, type UF cable, or multi-conductor assemblies are not allowed. All conductors within pull boxes must have the circuit number labeled on the wire with waterproof ID decals.

17.7 Conductors #8 AWG and larger shall be stranded, and #10 and smaller shall be solid.

17.8 Power wire and cable for feeders and branch circuits shall be color-coded.

17.9 All conductors in panels, terminal cabinets, and switchgear shall be neatly grouped in a manner that fans into terminals with regular, consistent spacing. Groups of conductors must be laced with No. 12 waxed twine,

nylon strap numbers, or other approved material. Larger conductors shall be laced with tie anchors or secured with cleats.

17.10 208Y/120 Volt systems shall have the following color-coded wiring:

a. Phase A – Black

b. Phase A Switch Leg – Black with “S” tag

c. Phase B – Red

d. Phase B Switch Leg – Red with “S” tag

e. Phase C – Blue

f. Phase C Switch Leg – Blue with “S” tag

g. Travelers – Yellow

h. Neutral – White

i. Equipment Ground – Green

17.11 480Y/27 Volt systems shall have the following colored-coded wiring:

a. Phase A – Brown

b. Phase A Switch Leg – Brown with “S” tag

c. Phase B – Orange

d. Phase B Switch Leg – Orange with “S” tag

e. Phase C – Yellow

f. Phase C Switch Leg – Yellow with “S” tag

g. Travelers – Yellow with “T” tag

h. Neutral – Gray

i. Equipment Ground – Green with Yellow stripe

17.12 Conductor joints for smaller than No. 6 AWG must be solderless, tapeless, wing nut type pressure cable connectors. Conductor joints for No. 8 AWG and larger must be joined with an approved type pressure connector and tape to provide insulation not less than that of the conductor. Conductors No. 8 and larger connections to switch or bus bar must be done with a one-piece copper lug.

17.13 Grounding for the entire electrical system shall be as required by the local serving utility company and local codes, and shall include:

a. Conduit

b. Neutral or identified conductor of the interior wiring system

c. Power and lighting panelboards

d. Non-current carry metal parts or fixed equipment

e. Electrical panels in separate buildings

18.0 Panels

18.1 Distribution panels shall be rust-free, gray enamel finish, and be the size and type as shown on the approved plans and submittals.

18.2 Distribution panels shall be completely enclosed within a self-supporting cabinet with the required number of vertical panel sections, per the approved plans and submittals.

18.3 All gear on the front, top, rear, and sides must be completely enclosed with louvered openings sufficient for proper ventilation. The main horizontal bus shall have bolted frames and an insulating block for short-circuit stress.

18.4 Buses shall be 100% rated, made with copper bars sized for a current density not more than 1000 amperes per square inch with silver-plated bus connections. Provide a ¼” by 2” copper ground bus within 12” of the neutral bus and connect with a removable link.

18.5 Each panel must have a phenolic engraved plastic nameplate attached to the top of the panel.

18.6 Each breaker must have a phenolic engraved plastic name tag secured next to the breaker and must be visible when the panel cover is installed.

18.7 All fusible switches shall be indicated as 100% rated and shall comply with UL 977, bolted pressure type, suitable for 100% rating.

18.8 Panel boards must be of the automatic circuit breaker type with wiring on the sides, top, and bottom, made by the same manufacturer as the main switchboard. Size shall be per the approved plans and submittals.

18.9 Additional spaces must be provided for future circuit breaker installation.

19.0 Circuit Breakers

19.1 Circuit breakers must have inverse time characteristic thermal and magnetic tripping elements, with interrupting capacity of not less than 10,000 amperes, NEMA-rated, UL-labeled, molded case type with a common trip single-handled multi-pole breaker.

19.2 To prevent tampering, Circuit breakers must have covers sealed on non-interchangeable trip breakers and trip unit covers sealed on interchangeable trip breakers.

19.3 All circuit breakers must be bolt-on type unless otherwise noted on the approved plans and submittals.

19.4 All circuit breakers must be the same brand per panel.

20.0 Disconnect Switches

20.1 All power disconnect switches must be as specified on the approved plans and submittals.

20.2 All power disconnect switches must be within a NEMA 1 enclosure for interior dry locations and a NEMA 3R enclosure for exterior conditions.

20.3 Voltage, horsepower, ampacity, and inductive ratings must comply with the power source voltage and the characteristics of the load controlled.

20.4 Disconnect switches must have an external lockable handle operation with not less than two padlock provisions and a heavy-duty mechanism with quick-break and a voidable interlock to prevent opening the enclosure in the ON position.

20.5 Where fuses are installed, dual-element time-delay fuses must be used.

20.6 Pole and fusing must comply with load requirements. Unfused switches must be provided except where fusing is indicated or required to comply with Code Requirements.

21.0 Push Buttons

21.1 Push buttons shall be the size and type shown on the approved plans and submittals.

21.2 Push buttons must be placed at an accessible height and at locations as approved by the District.

22.0 Meter Pedestal Enclosures

22.1 All meter enclosures must comply with the local serving utility company.

22.2 All meter enclosures must comply with the County of Riverside requirements and must be permitted and inspected by the County of Riverside Building and Safety Department.

22.3 All meter enclosures shall be stainless steel pedestal type and installed on a raised concrete pad. The depth of the concrete pad shall not be less than 2 feet.

22.4 The meter enclosure must have the project address identified with phenolic lettering. No vinyl lettering is allowed.

22.5 All circuits must be labeled with phenolic lettering.

22.6 Grounding must be per local codes and the NEC.

22.7 A concrete pad must extend to the back of the walkway.

23.0 Light Bases

23.1 All light bases must be concrete, plumb with grade, and have a consistent, smooth finish without exposure to aggregates. No tube-form lines shall be visible unless otherwise approved by the District.

23.2 All concrete footings must be installed per the County of Riverside and District-approved, stamped, and permitted plans. No concrete shall be poured until footings have been completed and approved by the County of Riverside. Concrete mix shall be in accordance with the approved, stamped,

and permitted plans. Concrete cylinder testing shall be performed as required by the structural engineer and permitting agency.

23.3 Whether shown on the plans or not, all post bases must have bare copper bonding wire connected to the steel reinforcement within the footing and light fixture per the NEC.

23.4 Light base concrete footings must be 12 inches above the adjacent finish grade. Light base concrete footings must be 30 inches above the adjacent finish grade when they are within close proximity of a parking or driving surface. Light bases for light bollards must be 6 inches above the adjacent finish grade.

23.5 Light base concrete footings must be 6-12 inches away from adjacent curbs or walkways when shown adjacent to curbs or walkways. An additional 6" deep concrete collar must be installed around the concrete footing per District details.

23.6 The top of the concrete footing must have a 1" chamfer edge with a consistent angle throughout.

23.7 Skim-coating of concrete light bases shall only be performed when directed by the District. Process and material must be approved by the District.

23.8 Light fixtures shall not be placed directly on concrete, and anchor bolts must be placed high enough to allow for bolts to be installed below and above the plate of the light fixture. Provide non-shrink grout between the bottom of the fixture and the top of the concrete base.

24.0 Fixtures

24.1 Fixtures shall be per the approved plan and submittals.

24.2 Fixtures shall be mounted plumb and level.

24.3 All fixtures with hand holes must have vandal-resistant locking covers.

24.4 Fixture poles specified with cameras shall have factory-mounted threaded bungs when possible. When factory-mounted bungs are not provided, the camera may be mounted to the pole with a stainless-steel strap. The hole must have a rubber grommet installed between the hole and the wiring.

25.0 Final Approval

25.1 All electric work shall be cleaned and tested in its entirety and be inspected by the District.

25.2 Contractor shall provide all circuit charts, record drawings, turnover items, etc., as listed in Section 1.0 above prior to final acceptance.

25.3 Permanent power must be provided prior to final acceptance.

END OF SECTION

Chapter 20
Security Camera Specifications

SECURITY CAMERA SYSTEMS (CCTV)

CCTV SPECIFICATIONS (GENERAL)

Valley-Wide Recreation and Park District (the "District" or "Valley-Wide") shall be considered Valley-Wide Recreation and Park District inspection personnel, consultants, or other approved team members hereafter.

1.0 General Requirements

1.1 Permits: Contractor or Developer shall obtain and pay for any permits required.

1.2 Please refer to Chapter 15 Construction Specifications (General) Section 7.0 Inspections for inspection requirements.

1.3 A Cal-OSHA permit is required before excavating greater than 4 feet deep.

1.4 Contractor shall notify all utility companies through Underground Service Alert "Dig Alert" (USA) 2 days before trenching.

1.5 Contractor must provide the District's representative with the USA Dig Alert number at first inspection.

1.6 The current CCTV Specifications must be on site at all times for each project.

1.7 All inspection fees must be paid before the start of work.

1.8 The contractor shall have and maintain a specialty C-7 license throughout the duration of the work. The contractor shall maintain an experienced project supervisor and foreman at the site throughout the installation. Any portion of work involving 120-volt electricity shall be performed per the Electrical Specifications Section.

1.9 A qualified contractor must perform all work and have at least 5 years of experience performing similar projects. The District reserves the right to disqualify any contractor who does not meet these qualifications.

1.10 Security cameras may be required to capture video recordings of playgrounds, picnic areas, and sports activities. Cameras are typically required when restroom buildings are provided, so the network video recorder can be placed within the maintenance room. Security cameras

may be required for park projects without restrooms, as determined by the District.

1.11 Security camera system must include a DSC NEO/IQ system with a Verizon LTE communicator, which allows for off-site control through an app or web interface. No phone line is needed.

1.12 All equipment must be name-brand, commercial-grade, or equivalent.

1.13 Additional equipment or equipment with different capabilities may be required for community buildings, gymnasiums, aquatic facilities, etc.

1.14 Labor Code Sections 1720 et seq. and 1770 et seq., as well as California Code of Regulations, Title 8, Section 16000 et seq. ("Prevailing Wage Laws"), require the payment of prevailing wage rates and the performance of other requirements on certain "public works" and "maintenance" projects. If this Project involves an applicable "public works" or "maintenance" project, as defined by the Prevailing Wage Laws, and if the total compensation is $1,000 or more, Developer agrees to fully comply with such Prevailing Wage Laws. The Developer shall defend, indemnify, and hold the District, its elected officials, officers, employees, and agents free and harmless from any claims, liabilities, costs, penalties, or interest arising out of any failure or alleged failure to comply with the Prevailing Wage Laws.

2.0 Scope of Work

2.1 The intent of the drawings and specifications is to indicate the process required for the installation of a complete operating security camera system, complete in every respect, satisfactory to the District, county, city, and state requirements.

2.2 The work consists of furnishing all tools, equipment, fixtures, transportation, labor, and any processes required to provide a complete operating security system as specified in the drawings and specifications.

2.3 All materials shall be new, of the best quality, and in perfect condition, of the same make and model number per the approved plans and submittals, conforming to the requirements of ASTM, NEMA, U.L., NBFB, and the NEC.

2.4 Portions of the drawings are diagrammatic and must be field verified. Before starting work, the contractor must notify the camera system engineer and the District immediately of any discrepancies.

2.5 All work indicated in the specifications, details, notes, or plans shall be provided and installed, whether or not specifically mentioned in the specifications. It shall be understood that if an item is shown in specifications but not shown on the plan, it shall be as if shown on both, and if an item is shown on the plan but not shown in the specifications, it shall be as if shown on both. The District shall have final authority for any and all clarifications.

2.6 Due to the scale of the drawings, it is impossible to show all offsets, conduits, assemblies, fittings, sweeps, boxes, etc., for a complete security camera system.

2.7 Contractor shall provide all necessary conduits, assemblies, fittings, sleeves, sweeps, boxes, etc., to provide a complete, fully automatic electrical system as listed in drawings and specifications with no additional cost to the District.

2.8 The work shall be performed in a manner that does not conflict with any known obstructions. Contractor shall notify the District of any conflict. The contractor shall assume full responsibility for any modification or revision required if no notification was given to the District.

2.9 All electrical work performed shall comply with the rules and regulations of the Division of Industrial Safety, State of California, as set forth in the latest edition of the National Electrical Code (NEC), Electrical Safety Orders, and all rules and regulations having local jurisdiction, including Title 21 and Title 24 California Administrative Code.

3.0 Quality Control

3.1 Contractor must provide one competent English-speaking employee capable of understanding and communicating with District personnel on site at all times throughout the duration of the work.

3.2 The contractor must provide personnel with at least five (5) years of experience who are familiar with all types of material being used and installation methods for all work performed.

3.3 If no specifications or details are provided for any items shown on the plans, the manufacturer’s directions, specifications, and/or details shall be followed.

3.4 District specifications and/or details shall always precede the manufacturer’s specifications or recommendations.

3.5 All local, county, and state laws, rules, and regulations related to any portion of work under this section shall be incorporated within these specifications and adhered to throughout the duration of work. Nothing contained within these specifications shall be construed to conflict with said rules and regulations.

3.6 The provisions of these specifications shall take precedence over the said rules and regulations if these specifications indicate a higher quality or better standard.

3.7 Any extra work performed shall be approved in writing by the Owner or the District's representative before starting such work.

3.8 Any unapproved work will be at the contractor's expense.

3.9 All material and labor shall be free from any defects. Any defective work must be corrected immediately without additional cost to the District.

3.10 In the event of conflict between plans and specifications, the specifications shall take precedence. No additional compensation shall be considered for direction given by District personnel providing clarification on specifications in the event of conflict between plans and specifications.

3.11 No additional compensation shall be given as a result of any District-generated punch list item or correction notice given to the contractor in order to comply with specifications.

3.12 All cameras, network video recorders, cables, cabinets, and any other related equipment must be tested prior to the completion of all electrical work.

4.0 Contractor Submittals

4.1 Please refer to Chapter 15 Construction Specifications General Section 4.0 Contractor Submittals for general requirements.

4.2 Security Camera submittals with any substitutions shall be approved by the Electrical Engineer of Record (EEOR) or the camera consultant who prepared the CCTV plans before District approval.

4.3 Submittals must include the cameras, mounting brackets, connections, connectors, cables, conduits, pull boxes, conduit sealers, network video recorder, cabinet, monitor, keyboard, mouse, and any other required components.

5.0 As-Builts and Record Drawings

5.1 Refer to Chapter 15 Construction Specifications General Section 5.0 As-Builts and Record Drawings for general requirements.

5.2 All underground components, including, but not limited to, conduit piping, pull boxes, vaults, and cabling, must be shown to scale on the plans in the locations installed in red where any changes have been made different from locations per the approved engineered plans.

5.3 All conduit depths shall be shown on record drawings.

5.4 Contractor must submit complete field security camera as-built drawings for review during underground inspection. Valley-Wide shall review the electrical as-built drawings as part of the underground inspection, and any corrections must be made before underground backfill approval. The District inspector will then sign and date the security camera as-built drawings, and the contractor must provide a scanned digital copy of the District-signed security camera as-builts within 3 working days to the District.

5.5 No underground trenches will be allowed to be covered until the field as-builts are reviewed and deemed acceptable to be transferred to final record drawings.

5.6 All site lines must be black, conduits and pull boxes must be red, and dimensions must be blue. Final digital security camera as-built drawings must be submitted to the District for review and approval.

5.7 All security camera as-built drawings shall include actual depths of communication conduit taken from the top of the pipe to the final finish grade.

5.8 All security as-built drawings must include any changes to the routing of the communication conduits.

5.9 The routing of all wiring shall be listed on the as-built drawings.

6.0 Camera Charts

6.1 Security camera as-built drawings shall be approved in writing before completion of the camera charts.

6.2 Provide two camera charts for each network video recorder supplied, showing the area covered by each camera. Any changes to a camera layout must be shown on as-builts.

6.3 The chart shall be a reduced reproduction of the as-built system in black or dark gray. If the panel schedule is not legible when reduced, enlarge it to a size that will be legible when reduced.

6.4 Charts shall be black or dark gray line print with a different transparent color used to show each camera and their respective coverage area.

6.5 Completed and approved charts must be provided in PDF format, and two laminated with 10 mil thick plastic hard copies must be provided to the District.

6.6 Charts shall be completed and approved before the final inspection of the camera system. Charts that are laminated before approval with corrections shall be revised without additional cost to the District. Controller charts shall also be saved as an Adobe Acrobat PDF file and submitted to the District.

6.7 Cabinet access. The District reserves the right to access the network video recorder for monitoring and controlling system failures. The contractor shall provide the District with two sets of all keys and passwords necessary for access. The keys will then become the property of the District.

7.0 Operation and Maintenance Manuals

7.1 Refer to Chapter 15 Construction Specifications General Section 6.0 Operation and Maintenance Manual for general requirements.

8.0 Training and Start-Up Operations

8.1 Before acceptance of work, the contractor must meet with the District's representative to ensure all operations and programming of all components are completed and acknowledged, including confirming that recordings are occurring.

8.2 All passwords in the network video recorder must be removed.

8.3 Hard copies and digital manuals must be provided to the District's representative.

8.4 All cameras must be adjusted and accepted by the District's representative.

9.0 Warranty

9.1 Provide a written warranty that all work with defects in workmanship and materials will be repaired or replaced at no cost to the District for a period of three years from the date of acceptance by the District's representative.

9.2 Manufacturer’s warranties do not relieve the contractor of liability under their warranty but shall supplement the contractor.

9.3 This form shall be transferred onto the contractor's letterhead, shall be notarized, and must contain the following information below:

Warranty for Security Camera System
Project Name and Tract No.

Contractor hereby warranties that the security camera system we have furnished and installed for **Name of Project** is free from defects in materials and workmanship, and the work has been completed in accordance with the drawings and specifications. The District agrees not to hold the contractor responsible for ordinary wear and tear, unusual abuse, or neglect as determined by the District. Contractor agrees to repair or replace any defects in material or workmanship, which may develop during the period of one (1) year following the date of formal Valley-Wide acceptance, and also to repair or replace any damage resulting from the repairing or replacing of such defects at no additional cost to the District. Contractor shall make all repairs or replacements within 36 hours of written notification and all other repairs or replacements within 7 days of written notice. If the contractor fails to complete such repairs or replacements within 36 hours of written notice or any other repair within 7 days after receipt of such written notice, the contractor hereby authorizes the District to proceed on behalf of the contractor to have said repairs or replacements made and agrees to pay all costs, including material, labor, and equipment, including a 10% administrative fee.

Location:_____
Electrical/Camera Engineer: _____
Printed Name:_____Title:_____
Signed: _____
Address: _____
Phone No.:_____
Date of Signature: _____

END OF SECTION

Chapter 21
Cast-in-Place Concrete Specifications

CAST-IN-PLACE CONCRETE SPECIFICATIONS

CAST-IN-PLACE CONCRETE CONSTRUCTION SPECIFICATIONS

Valley-Wide Recreation and Park District (the "District" or "Valley-Wide") shall be considered Valley-Wide Recreation and Park District inspection personnel, consultants, or other approved team members hereafter.

1.0 General Requirements

1.1 The general requirements of this section shall be as listed within the Chapter 15 Construction Specifications General.

1.2 Please refer to Chapter 15 Construction Specifications General Section 4.0 Contractor Submittals.

1.3 Please refer to Chapter 15 Construction Specifications General Section 6.0 Operation and Maintenance Manuals.

1.4 Please refer to Chapter 15 Construction Specifications General Section 7.0 Inspections for inspection requirements.

1.5 This section covers the requirements for materials and installation of cast-in-place concrete flatwork, including but not limited to sidewalks, driveways, patios, and other flat surfaces.

1.6 The contractor shall have and maintain a specialty C-8 license or C-27 license when performing concrete as part of a landscape project throughout the duration of the work. The contractor shall also maintain an experienced project supervisor and foreman at the site at all times throughout the installation.

1.7 A qualified contractor must perform all work and have at least 5 years of experience performing similar projects. The District reserves the right to disqualify any contractor who does not meet this qualification.

1.8 Labor Code Sections 1720 et seq. and 1770 et seq., as well as California Code of Regulations, Title 8, Section 16000 et seq. ("Prevailing Wage Laws"), require the payment of prevailing wage rates and the performance of other requirements on certain "public works" and "maintenance" projects. If this Project involves an applicable "public works" or "maintenance" project, as defined by the Prevailing Wage Laws, and if the total compensation is $1,000 or more, Developer agrees to fully comply with such Prevailing Wage Laws.

The Developer shall defend, indemnify, and hold the District, its elected officials, officers, employees, and agents free and harmless from any claims, liabilities, costs, penalties, or interest arising out of any failure or alleged failure to comply with the Prevailing Wage Laws.

1.9 References:

a. ASTM C150 - Standard Specification for Portland Cement

b. ASTM C33 - Standard Specification for Concrete Aggregates

c. ACI 318 - Building Code Requirements for Structural Concrete

d. ACI 302.1R - Guide for Concrete Floor and Slab Construction

e. ACI 360R - Design of Slabs-on-Ground

1.10 Definitions:

a. Flatwork: Any horizontal surface of concrete, including slabs for buildings, walkways, pavements, and driveways.

b. Joint: A planned separation in a concrete slab to accommodate movement and control cracking.

2.0 Cast-In-Place Concrete Flatwork – Materials

2.1 Cement shall be Portland Cement in compliance with ASTM C-150. Type I or II, depending on the environmental exposure and specific requirements of the project. Cement shall be from a certified supplier with certifications of conformance. Integral pigment shall be iron oxide plain concrete. Fly Ash must be in conformance with ASTM C-618.

2.2 Fine aggregates shall be clean, tough, durable natural sand or manufactured sand. The maximum size shall not exceed 1/4 inch and be in compliance with ASTM C-33.

2.3 Coarse aggregates shall be clean, durable, and inert materials, with a maximum aggregate size determined based on the project specifications but not exceeding 1 inch for structural applications and 3/4 inch for flatwork, and be in compliance with ASTM C-33.

2.4 Sand shall be natural, strong, and durable washed, not containing more than 2% of shale, clay, or other harmful material, free of impurities.

2.5 Water shall be clean potable water, free from harmful amounts of oils, acids, alkalis, salt, or organic matter, conforming to ASTM C94.

2.6 Chemical admixtures must be in conformance with ASTM C494 to modify concrete properties such as workability, setting time, or durability, as required by the project. Contractor shall submit details of all admixtures, including usage rates and performance data, for approval prior to use.

2.7 Rebar shall be Grade 40 and in compliance with ASTM A-615.

2.8 Curing compound shall be used for all flatwork and curbs. In conformance with ASTM C309 or ASTM C1315, suitable for exterior surfaces.

2.9 Expansion joints shall be asphalt-impregnated fiberboard, 3/8" width, and the depth of the concrete with a plastic or foam breakaway strip to be removed when directed by the District.

2.10 Caulking for control joints shall be Sikaflex®-1c SL, or approved equal. Area to receive caulking must have a plastic or foam breakaway strip to be removed just prior to caulking application.

2.11 Dowels shall be Sika® Speed Dowels® or approved equal for slab-on-ground applications.

2.12 Class II aggregate base conforming to ASTM C33 per Caltrans specification, unless otherwise approved by the project soil engineer.

3.0 Cast-In-Place Concrete Flatwork – Execution

3.1 Prior to placement of concrete, the sub-grade shall be compacted using a tamp or roller. Sub-grade shall be compacted to 90% density for walkways and courts subgrade, unless otherwise noted. Sub-grade shall be compacted to 95% density for curb and gutter subgrade, access roadway, and parking lot subgrade. Compaction must be tested and documented by a qualified soils testing company using the nuclear (densometer) method ASTM D 6938 (Procedure A).

3.2 Class II base shall have a depth as specified in District details. Base shall be mechanically compacted to a smooth surface and watered after completion. Base shall be compacted to 90% density for walkways and courts, unless otherwise noted. Base shall be compacted to 95% density for curb and gutter subgrade, access roadway, and parking lot subgrade. Compaction

must be tested and documented by a qualified soils testing company using the nuclear (densometer) method ASTM D 6938 (Procedure A).

3.3 Forms shall be Douglas Fir or equal with a minimum height of 3½ inches. Forms shall have a smooth texture with a straight upper edge.

a. Forms shall have adequate thickness to support the concrete without bending. Thin planks can be used for radius curves and supported as needed to prevent bending. No bender board shall be allowed.

b. Forms shall not vary from vertical grade by more than 0.02' in 10' and from horizontal alignment by more than 6". Fill dirt may be required to be placed against the forms to eliminate bulging when concrete is poured.

c. All forms shall be protected in place for a period of 12 hours minimum, with the exception of vertical curbs. Forms for vertical curbs shall be removed when required to provide a consistent finish per plan without any concrete movement.

d. All forms shall be clean and coated to prevent the concrete from adhering to forms.

e. All forms shall be held in place with steel or wood stakes as required.

f. Contractor must verify all forms are set so that the final finish will comply with all applicable accessible requirements. In the event that the plan design does not comply, it is the responsibility of the developer or contractor to submit an RFI to both the engineer of record and the District for direction on how to proceed. Refer to District Grading Standards and all current accessibility requirements to confirm compliance, including a safe construction tolerance.

3.4 Rebar

a. Rebar shall be as specified in drawings.

b. Rebar shall be clean, free of rust, oil, and grease.

c. Rebar shall be secured together at intersections with 16-gauge wire.

d. Rebar shall be supported with pre-cast mortar blocks or other approved spacers at 4-foot spacing. Pre-cast mortar blocks shall be

2”x 2” for 4” thick concrete and 3”x 3” for 6” thick concrete per District detail.

e. Rebar shall be supported in a manner to support foot traffic and concrete pouring without displacement.

f. Rebar welding, when specified, shall be performed by a qualified welder in compliance with the American Welding Society’s recommendations for welding reinforcing steel. (AWSD 12.1) latest edition.

g. Existing reinforcing rebar, which is connected to new reinforcing rebar, shall be cleaned to remove any dirt, rust, oil, or grease.

h. Rebar shall be per plans and details and at 4-foot maximum spacing.

3.5 Concrete mixing shall be in compliance with ASTM C-94 and shall consist of the following:

a. 6 sacks of Portland cement per cubic yard.

b. 6-3/4 gallons of water per sack of cement maximum.

c. Slump, 2 to 5 inches of concrete shall discharge from the chute in cohesive masses. Any highly fluid or segregated mixtures shall be rejected.

d. Mixing strength for curbs and flat work shall be 2,500 pounds per square inch (PSI) @ 28 days, unless otherwise specified. All concrete mixes for footings must be per the approved and permit-stamped structural plans.

e. Concrete mixed in a transit mixer shall be mixed for a minimum period of 10 minutes at a peripheral drum speed of 200 feet per minute.

f. Concrete color shall be standard gray unless otherwise specified.

g. No hand mixing of concrete for any flatwork areas is allowed. All concrete must be ready-mix concrete per approved concrete submittals.

3.6 All existing trees, shrubs, groundcovers, hardscaping, and structures within the limits of work specified shall be protected.

3.7 Weather Conditions

a. No concrete shall be poured or finished when rain is apparent.

b. No concrete paving shall commence during rainfall nor when the air temperature is less than 50°F, unless previously approved in writing. No request will be reviewed unless the contractor submits a program for cold-weather pouring. The report shall be based on ACI Standards.

c. No concrete shall be mixed or poured when the temperature is below 40°F or when conditions indicate that the temperature will fall below 40°F within 72 hours. Concrete, when deposited, shall have a temperature of not less than 60°F. Reinforcements, forms, and ground with which concrete will come in contact shall be completely free of frost.

3.8 Pouring

a. Prior to placement of concrete, all tools and equipment used for mixing and conveying shall be cleaned. All forms must be wet, and the entire area where concrete will be placed must be cleaned.

b. Concrete pouring shall be carried on, as a continuous operation, until the areas of approved size are complete. Cut-off locations shall be approved and shall never end on a driveway or in the center of an expansion joint.

c. Concrete shall be handled as rapidly as practical from the mixer to the place of final deposit by methods that prevent the separation or loss of material. It shall be deposited as nearly as practical, in its final position to avoid re-handling or flowing. Concrete shall not be dropped freely more than six feet. Concrete that has partially hardened shall not be deposited in the work. The discharge of concrete shall start not more than 45 minutes after the introduction of mixing water. Placing of concrete shall be completed within 90 minutes of the first introduction of water into the mix. It shall not be reworked.

d. In pouring columns, walls, or thin sections of considerable height, openings in the forms, elephant trunks, or other approved devices shall be used, which will permit the concrete to be placed without segregation and the accumulation of hardened concrete on the forms or metal reinforcement above the level of the concrete. Such devices

shall be installed so that the concrete falls vertically. At least two hours must elapse after depositing concrete in the wall or columns before depositing concrete in heads over openings, supported beams, girders, or slabs.

e. All concrete shall be thoroughly agitated using approved mechanical vibrators. Internal vibration must be by direct action in the concrete and not against forms or reinforcement. Each pour shall be vibrated until the water shows indications of rising, but not until the water has risen.

f. Along the faces of the forms, suitable tools shall be used during the pour to force large particles away from the forms and bring mortar to the surface of the forms. In addition, when approved by the District's representative, external form vibration may be used. The responsibility for providing fully filled-out, smooth, clean, and properly aligned surfaces, free from objectionable pockets and blemishes, shall rest entirely upon the contractor.

g. Slabs shall be tamped to depress the rock and push-floated with a float as necessary. Care shall be taken at all times so that the wet slab meets the screeds accurately and does not rise above or settle below the required grade.

h. When the slab is indicated as being poured directly on an earth construction pad without rock fill, proceed as follows: Although the construction pad was made level within 0.10 of a foot, it is assumed that by the time all the excavation for footings and utility trenches is completed, the surface will be considerably disturbed. Therefore, it shall be bladed off and brought to an accurate level, compacted to a smooth, true surface. This level shall be thoroughly re-leveled before each day's pour and thoroughly wet down, but not flooded.

i. Cast-in-place concrete foundation piers shall be poured into undisturbed pier holds. Casing should be placed where the walls of the pier holes show instability. Casing should be withdrawn gradually as the pour proceeds. Where groundwater occurs in the pier hole, it should be pumped dry before pouring by the tremie method.

3.9 Construction Joints

a. Locations of construction joints shall be as indicated on the plans and District details. Joints shall be made and located, as not to impair the

strength of the structure. Review all locations of construction joints with the District's representative before blocking out the pours.

b. Large slabs poured on grade shall be limited to 10 ft x 10 ft. between construction joints, or as shown on the details and as approved by the District's representative. Pathways shall have control joints equal to the width, but not greater than 10 ft. In general, lines of joints shall follow column lines, fence posts, or permanent walls. Construction and control joints shall be tooled with a 3/4" radius edge tool on both sides of the joint. Joints shall be straight, true, and level. Control joints shall be ¼" wide by ¾" deep minimum.

c. All control joints shall be saw cut to a depth of 1-1/2" the following day.

3.10 Finishing

a. Finish shall be as specified on the plans and details.

b. After concrete has been troweled to a smooth finish following the lines and grades shown on the drawings, one of the following shall be executed:

1. Broom: Draw a broom across the surface at 90° to the direction of traffic in a continuous motion from score mark to score mark or edge to edge. The degree of texture – light, medium, or heavy broom – will be specified on the drawings. Broom marks shall be neat, parallel, and uniform in texture throughout.

2. Washed aggregate finish: Evenly expose aggregate by water washing and brushing or other approved means to an average depth of 1/8 inch. Pocketing or kicking out of aggregate will not be accepted.

3. Finish shall be uniform throughout in color, texture, and degree of exposure.

3.11 Protections

Concrete surfaces shall be protected from the elements, defacement, and traffic during construction operations by whatever means necessary without additional cost to the District.

3.12 Defects

If any concrete work is not formed as indicated, is under-strength concrete, concrete out of line, level, plumb, or showing objectionable cracks, honeycomb, rock pockets, voids, spalling, exposed reinforcing, or has scratches or scrapes, it shall be removed and replaced as directed by the District's representative. No repairs by filling or patching shall be allowed unless approved by the District in writing. All repairs are subject to replacement if deemed to be unacceptable by the District.

a. Defects in concrete work approved to be repaired shall be as directed by the District. Voids shall be chipped to a depth of at least one (1) inch or to remove all loose material with the edges perpendicular to the surface and parallel to form markings. Voids, surface irregularities, chipped areas, etc., shall be filled by patching as directed by the District and shall be done at the contractor's expense. Repaired surfaces shall duplicate the appearance of the unpatched work. Prepare a sample of a repaired condition for approval before proceeding with all of the repair work.

3.13 Grading

The contractor shall complete grading and filling as needed and remove all rocks and debris. Sub-grading preparation shall be in accordance with local governing agencies. Prior to commencing any work, the contractor shall carefully check all grades and verify that after all irrigation work and soil preparation are completed, all grades will be per the specified depth as per the landscape contractor's scope of work within +/- 0.10 of a foot. Where concrete is adjacent to a planter, the planter sub-grade shall be 2 inches below the top of the concrete.

3.14 Clean-Up

Clean up shall take place on a daily basis, after each portion of work has been completed and as directed by the District's representative. The contractor shall legally remove from site any trash or unused material from the project.

3.15 Final Approval

All concrete paving shall be inspected in its entirety by the District's representative and must be approved by the District in writing. Prior to District approval. All paving must be compliant with all applicable

accessibility requirements by the Engineer of Record and a third-party CASp. Any corrections will be the responsibility of the developer or contractor.

4.0 Concrete Mow Curb

4.1 All mowcurb concrete shall conform to Concrete Cast-In-Place, unless otherwise noted herein.

4.2 Concrete mow curb shall be a minimum of 2500 PSI concrete and as specified on District details.

4.3 All mowcurb shall be 6" x 6" with #4 continuous rebar, unless otherwise specified. Rebar shall be centered within the mowcurb in both directions and shall not be within 2 inches of the edge of the concrete.

4.4 All mowcurbs must be formed and poured in place, unless otherwise approved for the use of a commercial curb machine capable of installing concrete from a ready-mix truck with an approved ready-mix truck and rebar per details. Mowcurb extrusion with dry mix material shall not be allowed.

4.5 All forms shall be consistent in grade and maintain a 6" minimum height and 6" minimum width.

4.6 Mowcurbs shall be depressed when needed when installed across any flow line to prevent ponding as directed by the District.

4.7 All control and expansion joints shall be installed per District detail spacing.

4.8 All cold joints shall be secured with rebar per District detail.

4.9 No exposed faces of mowcurbs, included concrete below forms shall be exposed. All mowcurb edges shall be backfilled and compacted with adjacent grade per all applicable landscape details.

5.0 Play Area Curbs and Ramps

5.1 All play area curb concrete shall conform to Concrete Cast-In-Place, unless otherwise noted herein.

5.2 All play area curbs shall be a minimum of 2500 PSI concrete and as specified on District details.

5.3 All play area curbs shall be 12” wide x 20” deep with #4 continuous rebars. All rebar shall be centered within the play area curb and shall not be within 2 inches of edge of concrete.

5.4 All play area curbs must be formed and poured in place. Mowcurb extrusion with dry mix material or curb machines shall not be allowed.

5.5 All forms shall be consistent in grade.

5.6 All control and expansion joints shall be installed per District detail spacing.

5.7 All cold joints shall be secured with rebar per District detail.

5.8 Play area ramps shall comply with ADA requirements.

5.9 Play area ramps shall have a slope not greater than 16:1 (6.25%) and shall have flared sides with 10:1 (10%) max. elevation change.

5.10 All edges of the concrete ramp adjacent to the engineered wood fiber shall have a tapered bullnose per District detail.

5.11 Concrete contractor shall coordinate all fence posts for playground fencing with fencing contractor prior to pouring.

6.0 Concrete Footings

6.1 Contractor shall be responsible for securing all required permits as required by the County of Riverside Building and Safety Department and/or the local city (if applicable).

6.2 All concrete footings shall be inspected by the District prior to pouring.

6.3 All steel reinforcement bars shall be in place at the time of inspection. Rebar must be properly supported and tied to maintain its position during concrete placement operations through the use of wire ties and spacers. Rocks, wood blocks, or other unapproved material shall not be used as support for reinforcement. Wire tie ends shall be twisted away from concrete surfaces. Rebar overlap shall be 12 inches minimum.

6.4 Adding water to the surface of the concrete during finishing activities and overworking the concrete shall not be permitted to avoid lowering the water/cement ratio and thereby lowering strength in the top layer, which later can be more susceptible to spalling.

6.5 All footings shall be installed per plan and/or manufacturer's guidelines.

6.6 Footings for support posts shall be poured at the required depth, but shall be low enough to accommodate form boards when mowcurbs are required.

6.7 Footings for, including but not limited to all buildings, shade structures, backstops, fencing over 6' tall, flag poles, foul poles, basketball poles, and lighting poles shall be designed by a structural engineer licensed in the State of California and shall be permitted and inspected by the County of Riverside Building and Safety Department or local city building department.

7.0 Concrete Masonry Unit (CMU) Block

7.1 CMU block, when used for trash enclosures, shall be structural split-face concrete masonry units with integral color. CMU block for tract boundary walls and retaining walls shall be as selected by the structural engineer and as approved by the County of Riverside or local city (if applicable). All block walls to be maintained by the District shall be split-face with an integral color to match the community theme.

7.2 All structural units shall conform to ASTM C90, specification of load-bearing masonry units, medium weight, and the latest editions of ACI 530, and chapter 21 of the California Building Code (CBC) and the International Building Code (IBC).

7.3 Unless otherwise approved, all CMU blocks shall be 8 inches wide, 8 inches tall and 16 inches long

7.4 All CMU blocks shall be solidly filled with approved grout.

END OF SECTION

Chapter 22
Fencing Specifications

FENCING SPECIFICATIONS

FENCING SPECIFICATIONS

Valley-Wide Recreation and Park District (the "District" or "Valley-Wide") shall be considered Valley-Wide Recreation and Park District inspection personnel, consultants, or other approved team members hereafter.

1.0 General Requirements

1.1 The general requirements of this section shall be as listed within the Chapter 15 Construction Specifications General.

1.2 Please refer to Chapter 15 Construction Specifications General Section 4.0 Contractor Submittals.

1.3 Please refer to Chapter 15 Construction Specifications General Section 6.0 Operation and Maintenance Manuals.

1.4 Please refer to Chapter 15 Construction Specifications General Section 7.0 Inspections for inspection requirements.

1.5 This section covers the requirements for materials and installation of chain link, tubular steel, vinyl, and galvanized fencing, gates, and ball field dugouts and backstops.

1.6 Product Data: In the form of manufacturer's technical data, specifications, and installations for fence, posts, gate uprights, post caps, gates, gate hardware, and accessories.

1.7 Shop Drawings showing fence design for any custom work not covered in District details or plans.

1.8 The contractor shall have and maintain a specialty C-13 license or C-27 when performing concrete as part of a landscape project throughout the duration of the work. The contractor shall also maintain an experienced project supervisor and foreman at the site at all times throughout the installation.

1.9 Installer shall be experienced personnel who has at least five (5) years of experience and has completed at least five fence projects with the same material and of similar scope to that indicated for this project, with a successful construction record of in-service performance.

1.10 Labor Code Sections 1720 et seq. and 1770 et seq., as well as California Code of Regulations, Title 8, Section 16000 et seq. ("Prevailing Wage Laws"), require the payment of prevailing wage rates and the performance of other requirements on certain "public works" and "maintenance" projects. If this Project involves an applicable "public works" or "maintenance" project, as defined by the Prevailing Wage Laws, and if the total compensation is $1,000 or more, Developer agrees to fully comply with such Prevailing Wage Laws. The Developer shall defend, indemnify, and hold the District, its elected officials, officers, employees, and agents free and harmless from any claims, liabilities, costs, penalties, or interest arising out of any failure or alleged failure to comply with the Prevailing Wage Laws.

2.0 Chain Link Fencing

2.1 Chain link fabric shall be galvanized (zinc) coated chain link for commercial applications conforming to ASTM A392. Fabric size shall be 2"x2". Fabric thickness shall be 9 gauge.

2.2 Chain link framework shall be galvanized steel for commercial use conforming to ASTM F1043 and ASTM F1083.

2.3 Steel pipe shall be SCH 40 cold-formed electric resistance welded, complying with ASTM F1043 Group IC, having a minimum steel yield strength of 50,000 psi (344 MPa). External protective coating F1043 Type B, 0.9 oz/ft^2 (270 g/m^2) minimum hot-dip zinc coating plus a chromate conversion and a clear polymer coating. Internal coating F1043 Type D, 81% nominal zinc pigmented coating minimum three mils (0.0076 mm) thick or Type B, minimum 0.9 oz/ft^2 (275 g/m^2) zinc. Steel pipe sizes shall be as indicated in the District details.

2.4 Formed steel "C" sections shall be roll-formed steel shapes complying with ASTM F1043, Group II, 50,000 psi (344 MPa) minimum steel yield strength. External coating, ASTM F1043 Type A, minimum average zinc coating of 2.0 oz/ft^2 (610 g/m^2) in accordance with ASTM A 123.

2.5 Chain link accessories shall be made with galvanized steel framework for commercial use.

2.6 Post caps shall conform to ASTM F626 galvanized pressed steel, malleable iron, or aluminum alloy weather-tight closure caps for tubular posts. Provide one cap for each post.

2.7 Rail ends shall be galvanized pressed steel per ASTM F626, for connection of rails to the post using a brace band.

2.8 Top rail sleeves shall be a 7” (178 mm) galvanized steel sleeve per ASTM F626. If expansion and contraction of the rail is a concern, add a 0.137” (3.48 mm) wire diameter by 1.80” (45.72 mm) long expansion spring between the adjoining rails.

2.9 Wire ties shall be 9-gauge (0.148”) (3.76 mm) galvanized steel wire for attachment of fabric to line posts and rails. Pre-formed hog ring ties to be 9-gauge (0.148”) (3.76 mm) galvanized steel or aluminum for attachment of fabric to tension wire. Tie wire and hog rings per ASTM F626.

2.10 Tension wire shall conform to ASTM A824 Type II, zinc-coated (galvanized) steel wire, 7-gauge, (0.177”) (4.50 mm) diameter wire having a tensile strength of 75,000 psi (517 MPa).

2.11 Brace and tension (stretcher bar) bands shall conform to ASTM F626 galvanized 12 gauge (0.105”) (2.67mm) pressed steel by 3/4” (19mm) formed to a minimum 300-degree profile curvature for post attachment. Secure bands using the minimum 5/16” (7.94 mm) galvanized carriage bolt and nut.

2.12 Tension (stretcher) bars shall be galvanized steel, one piece, length equal to 2 inches (50 mm) less than the full height of fabric, with a minimum cross-section of 3/16” x 3/4” (4.76 mm x 19 mm) per ASTM F626. Provide tension (stretcher) bars where chain link fabric is secured to the terminal post.

2.13 Truss rod assembly shall be galvanized steel, a minimum 5/16” (7.9mm) diameter truss rod with pressed steel tightener, in accordance with ASTM F626.

2.14 Swing gates shall be chain link fabricated in accordance with ASTM F900. Gate frame to be of welded construction. Weld areas to be protected with zinc-rich paint per ASTM A780. Gate frame members are to be spaced no greater than 8’ 0” (2.44 m) apart horizontally or vertically. Exterior members are to be 1.900” (48.3 mm) OD pipe; interior members, when required, shall be 1.660” (42.2 mm) OD pipe. Pipe to be [Grade 1 ASTM F1083] [Grade 2 ASTM F1043 Group IC] per section 2.03. Chain link fabric to match the specifications of the fence system. Fabric to be stretched tightly and secured to vertical outer frame members using tension bar and tension bands spaced 12” (304.8 mm) on center and tied to the horizontal and interior members 12” (304.8 mm) on center using 9-gauge galvanized steel ties per section 2.04. Gates with public access shall have kick plates with smooth surfaces on the push side extending the full width of the gate, as required for accessible

compliance with ADA 404.2 and CA 11B-404.2. Gates shall have landings with 2% slope or less in all directions. Gate landings must comply with ADA 302, 404, 305, 404.2, and CA 11B-404.2.

2.15 Hinges shall be hot-dip galvanized pressed steel or malleable iron, structurally capable of supporting the gate leaf, and allow opening and closing without binding. Non-lift-off type hinge design shall permit the gate to swing 180° (3.14 rad).

2.16 Latches shall be galvanized forked type capable of retaining the gate in a closed position and have provisions for padlocks. Latch shall permit operation from either side of the gate, and height shall be per accessibility requirements between 34 and 44 inches from the finish surface. Latch side clearance of 24 inches must be provided. Latches shall comply with ADA 404, 404.2, and CA 11B-404.2

2.17 Double gates must have a galvanized drop rod with a center gate stop pipe or receiver to secure the inactive leaf in the closed position. Provide a galvanized pressed steel locking latch, requiring one padlock for locking both gate leaves, accessible from either side.

2.18 Gate holdback shall be a galvanized gate holdback for each gate leaf over 5’ (1524 mm) wide. A gatekeeper shall consist of a mechanical device for securing the free end of the gate when in the fully open position.

2.19 Concrete footings shall be 2500 PSI @ 28 days, unless otherwise specified in the final approved and stamped structural drawings and structural calculations. Footings shall be as indicated within the District details and final approved and stamped structural drawings and structural calculations.

2.20 All chain link fencing within turf areas shall have a maintenance concrete mowcurb between each post per District detail unless approved by the District. Footing height shall allow for mowcurb form boards to avoid breaking post footings in order to form and pour mowcurb.

2.21 Contractor shall be responsible for all permits and inspections required by the County of Riverside Building and Safety Department or local city (if applicable).

2.22 Install chain link fence system in accordance with ASTM F567. Locate terminal posts at each fence termination and change in horizontal or vertical direction of 30° or more.

2.23 Space line posts uniformly 8’ on center [maximum 10’on center] as determined by wind load post selection calculations.

2.24 Footings for concrete set posts shall be excavated in firm, undisturbed, or compacted soil. Holes shall have a diameter a minimum of 4 times greater than the rounded outside dimension of the post, and depths approximately 4” deeper than the post bottom. Excavate deeper as required for adequate support in soft and loose soils, and for posts with heavy lateral loads. Set post bottom a minimum of 18” below surface when in firm, undisturbed soil. Place concrete around posts in a continuous pour. Trowel finish around the post and slope to direct water away from the posts. Check each post for vertical and top alignment, and maintain the position during placement and finishing operations.

2.25 Install horizontal brace and truss assemblies at mid-height or above for fences over 6’ at each fabric connection to the terminal post. The diagonal truss rod is installed at the point where the brace rail is attached to the terminal post and diagonally down to the bottom of the adjacent line post. Place the truss rod in tension by adjusting the turnbuckle.

2.26 Top and bottom rails are required on all fences for parks and other active projects per District details.

2.27 Top rails shall be installed in lengths of 21’. Connect ends with sleeves forming a rigid connection, and allowing for expansion and contraction.

2.28 Center rails shall be installed between line posts and attached to posts using rail end or line rail clamps. A center rail is required for fabric height 8’ and over.

2.29 Bottom rails shall be installed for all fencing between posts. Attach to post using rail end or line rail clamps.

2.30 Install fabric on security side unless used for tennis courts, pull fabric taut; thread the tension bar through fabric and attach to terminal posts with tension bands spaced maximum of 15” on center and attach so that fabric remains under tension after pulling force is released. Secure fabric using wire ties to line posts at 15” on center and to rails and braces 24” on center, and to the tension wire using hog rings 24” on center. Tie wire shall be secured to the fabric by wrapping it two 360-degree turns around the chain link wire pickets. Cut off any excess wire and bend it back so as not to protrude, so as to avoid injury if a pedestrian may come in contact with the fence.

2.31 Installation of swing gates and gate posts shall be per ASTM F567. The direction of swing shall be as shown on the drawings. Gates shall be hung plumb in the closed position with minimal space from grade to the bottom of the gate leaf. Double gate drop bar receiver shall be set in a minimum concrete footing 6" in diameter by 24" deep. Gate leaf holdbacks shall be installed on all double gates and all gate leaves greater than 5' in width.

3.0 Chain Link Backstop Fencing

3.1 All chain link shall comply with Section 2.0 above.

3.2 Backstop dimensions shall be not less than 30' wide with 20' sides and 18' tall to the bottom of the overhang. Projects with active site amenities within proximity may require larger backstops and/or higher sideline and homerun fencing.

3.3 Posts shall be a minimum of SCH 40, 6-5/8" diameter in size and 18' above the concrete surface and set plumb vertical within footings not greater than ten (10) feet apart per final approval and stamped permitted plans.

3.4 Horizontal rails shall be SCH 40, 2-3/8" diameter at five (5) feet vertical spacing for the first ten (10) vertical feet from the concrete surface and four (4) feet vertical spacing for the remaining eight (8) vertical feet. Rails shall be cut at the appropriate angle to be welded to the posts or mounted with straps per the final approved and stamped structural drawings and structural calculations.

3.5 Backstop shall have a minimum chain link cantilever overhang of five (5) vertical feet height above posts and seven (7) horizontal feet span away from posts. Overhand shall have 4" rails in center and end of overhand.

3.6 Back of backstop along the 30' wide center section, shall have 2"x6"x3' tall recycled plastic bumper boards, brown in color. Boards shall be secured to 3" x36" galvanized steel angle welded to vertical posts. Provide two galvanized bolts for each end of the recycled plastic bumper board, and provide a 2"x1/4" galvanized vertical flat bar to secure the boards in the center of the posts. Bumper boards shall have a 1" vertical gap between each other.

3.7 All other areas of the backstop shall have 9-gauge 2" chain link fabric secured to posts and rails with oversized straps per chain link fencing details.

4.0 Chain Link Dugout Fencing

4.1 All chain link shall comply with Section 2.0.

4.2 Dugout dimensions shall be a minimum 9 feet deep and 45 feet long. The back and sides of dugouts shall be 8 feet tall. The field side of dugouts shall be per fence heights per plan, but not less than 8' tall. Dugouts shall start 20 feet from the end of each backstop wing.

4.3 Dugouts shall have a lockable 4-foot-wide entry gate located furthest from home plate. Gates shall be per Section 2.14 above.

4.4 Dugouts shall have player access openings per District detail and approved plan.

4.5 Dugouts shall have concrete throughout.

4.6 Dugouts shall be designed and engineered to allow for future shade screen if desired by the District.

5.0 Vinyl Fencing

5.1 General

This section includes the following:

a. Polyvinyl chloride (PVC) fence and gate components

b. Gate hardware

c. Reinforcing steel for concrete-filled, reinforced fence posts

d. Concrete for post footings and for concrete-filled reinforced fence posts

5.2 Definitions

a. Posts are the vertical structure support members of the fence.

b. Rails are the horizontal structural support members of the fence or gate frame.

c. Gate Uprights are the vertical structural support members of the gate frame.

5.3 Manufacturer's Warranty: Lifetime non-prorated limited warranty applies to original consumer, or 30-year non-prorated limited warranty applies to commercial applications.

5.4 Fence Materials

Standard 3 Rail Fence Smooth from Merchants Metals EverGuard® Ranch Three Rail 8' Nominal Panel or approved equal per ASTM F 967, fabricated from PVC extrusion. The PVC extrusions shall comply with ASTM D 1784, CLASS 13343 and have the following characteristics:

Specific Gravity (+/- 0.02).....1.4
Izod impact ft. lbs./in. notch (at 32o F) 2.41 & (at 73o F) 3.24
Tensile yield strength, psi..... 6,720
Flexural yield strength, psi.....9,756
Elasticity modulus, psi.....381,000
DTUL psi.....155oF
Flame spread..... 15

5.5 Polyvinyl Chloride (PVC) Fence Components for posts, rails, gate uprights, post caps, and accessories shall be of high impact, Ultra Violet (U.V.) resistant, rigid PVC, and shall comply with ASTM D1784, Class 14344B.

5.6 Fence Posts: One piece extruded, of lengths indicated and pre-routed to receive rails at spacing indicated. Post caps to be outside pyramid type.

a. Cross Section: 5" x 5" minimum.

b. Wall Thickness: 0.135" minimum.

c. Corner Radius: 3/8" R minimum.

d. Rails: 5-1/2" x 1-1/2" One piece extruded, of lengths indicated.

e. Small Rail – Ribbed Extrusions

f. Wall Thickness: 0.120" minimum.

g. Corner Radius: 11/32" R minimum.

5.7 Gate Uprights: One piece extruded, of lengths indicated

a. Cross Section: 4" x 4" minimum

b. Wall Thickness: 0.140” minimum

c. Corner Radius: 11/32” R minimum

5.8 Post Caps: Molded, one piece

a. Cross Section: Match post or gate upright cross section.

b. Thickness: 0.095" minimum.

c. Configuration: Four-sided pyramid design, with cross section sized as required for installation to the top of posts and gate uprights. Form post caps as required for concealed attachment to the tops of posts and gate uprights.

5.9 Miscellaneous Materials

a. Fasteners and Anchorage: Stainless Steel. Provide sizes as recommended by the fence manufacturer.

b. PVC Cement: As recommended by the fence manufacturer.

5.10 Rail Plugs: Manufacturer’s standard duct tape to prevent seepage at concrete filled posts.

5.11 Gate Hardware and Accessories

Provide hardware and accessories for each gate according to the following requirements:

a. Hinges:

1. Size and material to suit gate size, lift-off type stainless steel, and adjustable, offset to permit 120-degree gate opening. Provide one pair of hinges for each gate.

2. Finish: Pre-painted, 2 coats "Polane"

3. Color: Black

4. Latch: Manufacturers’ standard self-latching, stainless steel latch. Provide one latch per gate.

5. Finish: Match gate hinge finish.

6. Hardware: Stainless Steel. Provide sizes as recommended by the fence manufacturer.

7. Finish: Match gate hinge finish.

5.12 Concrete

Provide concrete consisting of Portland cement per ASTM C 150, aggregates per ASTM C 33, and potable water.

a. Mix materials to obtain concrete with a minimum 28-day compressive strength of 2500 psi. Use at least four sacks of cement per cubic yard, 1-inch maximum size aggregate, 3-inch maximum slump. Use ½ inch maximum size aggregate in post where required.

b. Packaged Concrete Mix: Mix dry-packaged normal-weight concrete conforming to ASTM C 387 with clean water to obtain a 2-to-3-inch slump.

5.13 Installation

a. Install fence in compliance with the manufacturer's written instructions. During installation, PVC components shall be carefully handled and stored to avoid contact with abrasive surfaces. Install components in sequence as recommended by the fence manufacturer. Install fencing as indicated on the drawings provided. Variations from the installation indicated must be approved. Variations from the fence and gate installation indicated, and all costs for removal and replacement will be the responsibility of the contractor.

b. Drill or hand-excavate (using a post hole digger) holes for posts to diameters and spacings indicated, in firm, undisturbed, or compacted soil. If not indicated on drawings, excavate holes for each post to a minimum diameter of 8" inches. Unless otherwise indicated, excavate hole depths not less than 36 inches or to the frost line.

c. Install posts in one piece, plumb and in line. Space a maximum of 8 feet O.C. unless otherwise indicated. Enlarge excavation as required to provide clearance indicated between the post and the side of the excavation. Protect the portion of posts above ground from concrete splatter. Place concrete around posts and vibrate or tamp for

consolidation. Check each post for vertical and top alignment and hold in position during placement and finishing operations.

d. Terminate top of concrete footings per District detail. Secure posts in position for manufacturers' recommendations until concrete sets. After installation of rails and unless otherwise indicated, install reinforcing in posts in opposing corners of the post as shown, and fill end and gate posts with concrete to level as indicated. Concrete fill shall completely cover the reinforcing steel and gate hardware fasteners. Consolidate the concrete by striking the post face with a rubber mallet, carefully tamping around the exposed post bottom.

e. Install post caps. Use two #8 screws, nylon washers and snap caps.

f. Remove concrete splatters from PVC fence materials with care to avoid scratching.

g. Install rails in one piece between the post and into the routed hole fabricated into posts to receive rails where necessary. Stagger rail ends in posts, except at sloping terrain. Install rails level, centered on posts.

h. Nylon Lock Rings shall be inserted into the ends of the rails to secure in the post. At posts to receive concrete fill, plug the ends of the rails with duct tape to prevent seepage when filling the post with concrete.

i. Fence Installation at Sloping Terrain: At sloping terrain, the rails may be racked (sloped) or stepped to comply with manufacturers' recommendations.

j. Prior to installation of rails into the gate upright, apply PVC cement into the sockets per the manufacturer's recommendations. Assemble the gate prior to fence installation to accurately locate the hinge and latch post. Align the gate horizontal rails with the fence horizontal rails.

k. Install gates plumb, level, and secure for full opening without interference according to the manufacturer's instructions. Install the gate latch according to the manufacturer's instructions. Adjust for smooth, trouble-free operation. Allow a minimum of 72 hours to let the concrete set up before opening the gates. Remove all traces of dirt and soiled areas in accordance with the manufacturer's recommendations. Gates with public access shall have kick plates with smooth surfaces on the push side extending the full width of the

gate, as required for accessible compliance with ADA 404.2 and CA 1BB-404.2. Gates shall have landings with 2% slope or less in all directions. Gate landings must comply with ADA 302, 404, 305, 404.2, and CA 11B-404.2.

5.14 All vinyl fencing within turf areas shall have a maintenance concrete mowcurb between each post per District detail unless approved by the District. Footing height shall allow for mowcurb form boards to avoid breaking post footings in order to form and pour mowcurb.

5.15 Contractor shall be responsible for all permits and inspections required by the County of Riverside Building and Safety Department or local city (if applicable).

6.0 Tubular Steel Fencing

6.1 Steel material for fence panels and posts shall conform to the requirements of ASTM A653/A653M, with a minimum yield strength of 50,000 psi (344 MPa) and a minimum zinc (hot-dip galvanized) coating weight of 0.90 oz/ft2 (276 g/m2), Coating Designation G-90.

6.2 Material for fence pickets shall be 3/4" square x 16 Ga. tubing. Picket holes in the rail shall be spaced 4" O.C. Pickets shall have smaller openings and a smaller space between the bottom rail and mowcurb when used for small dog parks. Posts shall be a minimum of 2-1/2" square x 14 Ga. Rails shall be tubular steel with a minimum radius of 1-3/8". Rails shall be installed 4" above a concrete mowcurb. Rails shall be secured to posts with a slip-type bracket with two (2) self-taping screws.

6.3 Pickets, rails, and posts shall be pre-cut to specified lengths.

6.4 The manufactured panels and posts shall be subjected to an inline electrode position coating process consisting of a multi-stage pre-treatment/wash (with zinc phosphate), followed by a duplex cathodic electrocoat application of an epoxy primer, followed by an acrylic topcoat. The minimum cumulative coating thickness of epoxy and acrylic shall be 2 mils (0.058 mm). The color shall be black. Any field welds, if required, must have one coat of epoxy primer and two coats of exterior enamel. Painting must be guaranteed for five (5) years.

6.5 Gates shall be fabricated using welded ornamental panel material and gate ends having a 2" minimum square cross-sectional size. All gate posts shall be 4" square or larger. All rail and upright intersections shall be joined by

welding. All picket and rail intersections shall also be joined by welding. All welds shall be primed and receive two coats of black enamel paint.

6.6 Gates must have a latch and a strike receiver capable of locking with a padlock. Latches shall be capable of retaining the gate in a closed position and have provisions for padlocks. Latch shall permit operation from either side of the gate, and height shall be per accessibility requirements between 34 and 44 inches from the finish surface. Latch side clearance of 24 inches must be provided. Latches shall comply with ADA 404, 404.2, and CA 11B-404.2. Gates with public access shall have kick plates with smooth surfaces on the push side extending the full width of the gate, as required for accessible compliance with ADA 404.2 and CA 1BB-404.2.

6.7 All fence and gate posts shall have a standard square cap permanently secured to each post.

6.8 Concrete footings shall be 2500 PSI @ 28 days. Footings shall be as indicated within the District details for fencing 6' high and under, and for gate 6' wide and under. Larger fencing and gates are subject to project-specific engineering and permitting by the County of Riverside Building and Safety Department or the local city.

6.9 All tubular steel fencing shall have a maintenance concrete mowcurb between each post per District detail unless approved by the District. Footing height shall allow for mow curb form boards to avoid breaking post footings in order to form and pour mowcurb.

6.10 All fencing shall be installed per District details.

END OF SECTION

Chapter 23
Site Amenities Specifications

SITE AMENITIES SPECIFICATIONS

SITE AMENITIES SPECIFICATIONS

Valley-Wide Recreation and Park District (the "District" or "Valley-Wide") shall be considered Valley-Wide Recreation and Park District inspection personnel, consultants, or other approved team members hereafter.

1.0 General Requirements

1.1 The general requirements of this section shall be as listed within the Chapter 15 Construction Specifications General.

1.2 Please refer to Chapter 15 Construction Specifications General Section 4.0 Contractor Submittals.

1.3 Please refer to Chapter 15 Construction Specifications General Section 6.0 Operation and Maintenance Manuals.

1.4 Please refer to Chapter 15 Construction Specifications General Section 7.0 Inspections for inspection requirements.

1.5 This section covers the requirements for materials and installation of Site Amenities for outdoor recreation open to the public**.**

1.6 The contractor shall have and maintain a B license or C-27 license when performing site amenities as part of a landscape project throughout the duration of the work. The contractor shall also maintain an experienced project supervisor and foreman at the site at all times throughout the installation.

1.7 Installer shall be experienced personnel who has at least five (5) years of experience and has completed at least five fence projects with the same material and of similar scope to that indicated for this project, with a successful construction record of in-service performance.

1.8 Labor Code Sections 1720 et seq. and 1770 et seq., as well as California Code of Regulations, Title 8, Section 16000 et seq. ("Prevailing Wage Laws"), require the payment of prevailing wage rates and the performance of other requirements on certain "public works" and "maintenance" projects. If this Project involves an applicable "public works" or "maintenance" project, as defined by the Prevailing Wage Laws, and if the total compensation is $1,000 or more, Developer agrees to fully comply with such Prevailing Wage

Laws. The Developer shall defend, indemnify, and hold the District, its elected officials, officers, employees, and agents free and harmless from any claims, liabilities, costs, penalties, or interest arising out of any failure or alleged failure to comply with the Prevailing Wage Laws.

2.0 Aluminum Edging

2.1 All borders between decomposed granite, gravel, turf grass, and planters shall be concrete mowcurb, unless otherwise approved in writing by the District. When mowcurb has been approved to be substituted, aluminum edging may be used.

2.2 Aluminum edging must be 8 inches tall and 0.116 inches thick.

2.3 Aluminum edging shall be connected using factory-designed connectors (XLR Adapters).

2.4 Aluminum edging shall be secured with 18-inch aluminum stakes at 4-foot spacing per manufacturer's guidelines.

2.5 Aluminum edging shall be mill finish.

3.0 Trail Material

3.1 Trails used for the purpose of recreational pedestrian and bicycle access, by design, shall have a cross-slope of 0.50% minimum slope, and 1.5% maximum slope to provide a suitable construction installation tolerance to ensure a maximum cross-slope of 2% can be achieved. The longitudinal slope shall not exceed 4.5% by design to provide a suitable construction installation tolerance, to ensure a maximum longitudinal slope of 5% can be achieved. Trails that cannot meet this standard will not be considered for District acceptance without confirmation from a Certified Access Specialist (CASp) that the project meets all applicable accessibility requirements. The District reserves the right to reject acceptance of any trail not meeting applicable accessibility requirements as determined by the District's ADA representative.

3.2 Areas greater than 4.5% slope should be concrete or another approved surface that cannot erode during rain events.

3.3 Decomposed granite shall be generally used for trails when specified by the District. Decomposed granite shall be stabilized pre-blended material consisting of natural colors ranging from tan to gold. Material size shall not exceed 3/8".

3.4 Decomposed granite shall be compacted to a minimum thickness of 4 inches and shall be compacted to 85% density, compacted in 2” lifts.

3.5 Decomposed granite pathways and trails shall be subject to ADA accessibility requirements, unless otherwise specified and approved in writing by the District.

3.6 Decomposed granite shall be installed flush with all walkways and curbs per District detail.

3.7 Contractor shall submit samples for District approval prior to delivery.

3.8 Decomposed granite shall be derived from the crushing and screening of naturally friable granite. The blending of course sand with rock dust is not an equal product.

3.9 Decomposed granite shall be screened to include stone particles of 3/8" minus. The particles passing the 200-mesh screen, as determined by ASTM C136, shall not exceed 18 percent.

3.10 Decomposed granite shall have a Natracil™ or approved equal organic binder with a minimum swell volume of 35 ml/gm. The binder shall be incorporated with the granite fines using a pug mill with a weight belt feeder to ensure the proper ratio of binder to granite fines. Blending using a bucket loader or similar equipment is not acceptable. The binder shall be mixed at the rate of 12 lbs. per ton of granite fines.

3.11 For each 2" lift, spread the material over the area. Grade and smooth as desired. Thoroughly water the entire area so that the entire depth of the material is moist. After a period of +/- 6 hours, compact the final lift with a 1000-3000 lb. drum roller. Allow for a sufficient curing period of +/- 4 days prior to use.

3.12 All decomposed granite shall be placed over compacted subgrade compacted to 85% or greater. The District shall review all subgrade compaction before the installation of the decomposed granite.

3.13 For trails where vehicular access is needed, the material shall be placed over a Class 2 base compacted to 95%, at a thickness based on the load requirements as determined by a registered soils engineer.

3.14 A licensed soils engineer shall provide compaction testing reports and certifications before project acceptance.

3.15 Trails used as access roads for other agencies with heavy load requirements shall be reviewed on a project-specific basis to determine the appropriate surface and subgrade material. Materials may include reinforced concrete, asphalt paving, Class II base, Crushed Miscellaneous Base (CMB), or any combination as deemed necessary by all agencies using the trail in conjunction with the soils engineer's recommendations and District requirements.

3.16 All trails shall have 6-inch by 6-inch minimum-size concrete headers on each side per District details. Trails where vehicles or equipment must cross must have 12-inch-by-12-inch reinforced concrete headers.

4.0 Infield Mix

4.1 Infield mix shall be 4" minimum thickness compacted to 90% density.

4.2 Gradation – A minimum of 98% of particles shall pass the 2.00 mm sieve, with the highest portion of sand particles in the medium to very fine range. Silt and clay distribution shall be relatively equal, with allowable differences no greater than 10%. The final soil classification based on USDA criteria shall be a "sandy loam – sandy clay loam". This is a single source material, and the blending of different parent materials is not acceptable.

4.3 The color of the material shall be "Gold" to "Reddish Gold".

4.4 For installation of new fields, place infield mix to a final minimum depth of 4 inches over a 2" washed concrete sand sub-base that is prepared to acceptable specifications. The final grade should be leveled and sloped according to standard infield construction specifications. Allow for +/- 1 inch for compaction.

4.5 For installation of existing fields, properly scarify the surface of the existing material while incorporating +/- 1 inch of infield mix. Continue placement of the remainder of the infield mix that is to be installed.

4.6 After leveling the infield mix, thoroughly water the entire infield surface until the complete depth of the infield mix is moistened. After a period of +/- 4 hours, compact with a minimum 2000 lb. static drum roller. If low areas are present, scarify and level low areas with additional infield mix.

4.7 Infield mix shall be 1" below all concrete edges and flush with all turf areas.

4.8 Material shall be an approved Pro Gold Mix.

5.0 Pitching Mix

5.1 Pitching mix or mound mix shall be used around all home plate bases and pitching rubbers.

5.2 Mound Mix shall be 100% pure clay, screened to 1/8" minus.
Gradation – A minimum of 95% of particles shall pass the 2.0 mm sieve with the highest proportion of sand particles in the medium to fine range. The particles that do not pass the 2 mm sieve shall be limited to fine gravel and shall not exceed 5%. Combined silt plus clay content shall be in the range of 30% with the allowable difference between silt and clay particles no greater than 10%. All of the above percentages are based on weight and not by volume.

5.3 The color of the material shall be “Gold” to “Reddish Gold”.

5.4 Provide a 9-foot diameter of pitching mix 4 inches deep around home plate and pitching rubber(s).

6.0 Players Benches

6.1 Player’s benches shall be 21’ long, aluminum benches with backs located within each ball field dugout.

6.2 Benches shall be in-ground mounted with a concrete footing.

6.3 Seat and back planks shall be 10” wide with a ribbed, non-slip surface. Planks shall be anodized aluminum with safety end caps riveted to planks.

6.4 Support legs shall be 2-3/8” O.D. galvanized steel heavy-duty commercial grade steel.

6.5 Benches shall have a 5-year warranty for all component parts for defects and workmanship.

6.6 Top of benches seat planks shall be installed 17-19 inches above the finish grade. The back plank shall be less than 3 inches or greater than 9 inches from the chain link dugout. Benches shall be placed to ensure a 48-inch clear path between the front of the bench and the field side of the dugout chain link fencing.

7.0 Bat Racks

7.1 Bat racks shall be provided at each dugout.

7.2 Bat racks shall be heavy-duty galvanized steel, capable of holding 14 bats.

7.3 Bat racks shall be 35 inches tall x 25.5 inches wide x 6 inches deep.

7.4 Bat racks can be permanent footing or surface mount.

8.0 Field Bases

8.1 Bases shall be provided for all ball fields as determined by the District.

8.2 Additional bases for each field may be required, depending on the field size and intended uses by the District.

8.3 Home plate, first base, second base, and third base bases shall have ground anchors installed within a concrete footing per the manufacturer's recommendations. Anchor plugs shall be provided for each ground anchor.

8.4 Additional ground anchors shall be installed for each field per District requirements.

8.5 Pitching rubbers shall be installed for the top of the rubber to be flush with the surface of the infield.

8.6 Home plate shall be pro-style sturdy hard white rubber with black beveled edges with 6" stanchion and anchor.

8.7 Pitching rubber shall be a 6" 4-way x 24" long molded rubber construction with inner support tubing, designed to be rotated for use over multiple seasons.

8.8 First base shall be a 30"x15"x 3" premium one-piece molded rubber covering high-density foam interior with all-welded steel station pan, double first safety base weighing 33 lbs. with two ground anchors. Colors to be white and red.

8.9 Second and third bases shall be Hollywood style 15"x15"x3" premium one-piece molded white rubber covering high-density foam interior with all-welded steel station pan with ground anchor.

9.0 Foul Poles

9.1 Foul poles shall be provided for all ball fields with homerun fencing.

9.2 Foul poles shall be 3.5" O.D. x 20' long above finish grade, 13-gauge heavy-duty steel pipe with 18" wide x 12' long expanded metal wings. All components shall be yellow powder-coated.

9.3 Foul poles can be installed in-line with homerun fencing.

9.4 Larger foul poles may be required for larger fields as determined by the District.

9.5 Footings for foul poles shall be as determined by the project structural engineer.

9.6 Foul pole footings must be permitted as determined by the County of Riverside Building and Safety Department, or local city.

10.0 Aluminum Bleachers

10.1 General

Manufacturers must have a minimum of ten years of experience in the design and manufacture of bleachers. Welders must conform to AWS standards. Source Quality Control: Mill Test Certification. Codes and Standards: 2006 International Building Code / ICC 300. Typical bleacher size shall be 21 feet long and 5 rows. Larger bleachers may be required as determined by the District, depending on the type and size of the project.

10.2 Warranty shall guarantee bleachers to be free from defect in materials and workmanship for a period of 1 year under normal use. Warranty period shall begin on the date of completion for projects installed by the manufacturer, or its subcontractors, or the warranty period shall begin on the date of final delivery on projects installed by others. Anodized finish of plank extrusions shall be covered by a 5-year warranty against loss of structural strength or finish deterioration due to exposure to weather conditions or UV rays. Discoloration of mill-finish aluminum due to galvanic reaction is not covered.

10.3 Seat planks and vertical pickets shall be anodized aluminum finish.

10.4 Riser and foot planks shall be aluminum mill finish.

10.5 Most current International Building Code (IBC) and ICC 300

Design Loads:

a. Live Loads: Uniform loading - Structure = 100 per square foot (PSF) Uniform loading - Seat and Foot plank = 120 per linear foot (PLF)

b. Sway Loads: Perpendicular to seats = 10 PLF Parallel to seats = 24 PLF

c. Guardrail Loads: Uniform vertical load = 100 PLF Uniform horizontal load = 50 PLF Concentrated horizontal load = 200 pounds

d. *Wind Loads: Basic design wind speed = 150 mph (exposure “B”) *Note: Bleacher must be anchored to meet wind loads above.

10.6 NON-ELEVATED ANGLE FRAME BLEACHERS

Quantity and Size: Shall consist of 1 unit(s) 5 rows high x 21'-0" min. length. Net seating capacity per unit 48 + 2 HC (excluding aisles, based on 18" per seat).

Framework: Prefabricated aluminum angle spaced at 6' - 0" intervals joined by means of aluminum angle cross bracing. Shop connections: Welded to meet AWS standards and local code requirements.

10.7 NON-ELEVATED ALUMINUM ANGLE FRAME BLEACHERS

Design and fabrication of Non-Elevated Angle Frame Bleachers Specifications.

Joint Sleeve Assembly: Internal splices, where required shall be two per joint, and shall penetrate the joint a minimum of 8” in each direction and be riveted at one end only to allow for contraction and expansion.
Rise and Depth Dimensions: 8” vertical rise and 24” tread depth, Seat height is 17” above its respective tread. Seats: Nominal 2” x 10” anodized aluminum with anodized end caps.

Treads: Nominal two (2) 2” x 10” mill finish aluminum with anodized end caps on rows 2 & up. Risers: Nominal two (2) 1” x 6” mill finish aluminum with mill finish end caps on top row.

Nominal 1” x 6” mill finish aluminum with end caps on all other rows.

10.8 Aisles

Aisle footboards shall be of aluminum alloy 6063-T6 and be of mill finish with contrasting aisle markings. Three aisle stiffener angles shall be used to strengthen the aisle step. There shall be 1 aisle(s) 48" wide.

10.9 Aisle Handrail: Anodized aluminum pipe with intermediate rail.

10.10 Guard Rail

Guard rails shall be anodized aluminum vertical picket panels attached to support members. Rear rail support member shall be an aluminum channel. Side rail support member to be aluminum angles. Standard AA-M10C223A31(204R1). Panels shall consist of 1-5/8" O.D. round tube and extruded aluminum 5/8" square. Panels shall attach to rail support members by means of 5/16" dia. U-bolts, lock washers, and nuts. Panels shall connect together using an internal splice and rivet. End panels shall be terminated using aluminum elbows and aluminum round tube, mechanically fastened.

10.11 Handicapped accessibility shall be provided as required by the code, including integrated wheelchair spaces and labeled companion seating. A pedestrian path of travel with a clear width of 5 feet must be provided around all sides of the bleachers.

10.12 Framework:

a. Aluminum: Structural fabrication with aluminum alloy 6061-T6 mill finish. Each frame shall be unit-welded, using the metal inert gas method, under guidelines by the American Welding Society. After fabrication, all steel is hot-dipped galvanized to ASTM A-123 specifications. All cross bracing and horizontal bracing shall be aluminum angle 6061-T6 mill finish.

b. Extruded Aluminum: Seat planks: Aluminum alloy 6063-T6, clear anodized 204R1, AA-M10C22A31, Class II with a wall thickness nominally .078" for impact and deformation resistance.

c. Tread and Riser Planks: Aluminum alloy 6063-T6, mill finish with a wall thickness nominally .078” for impact and deformation resistance.

d. Guardrail Pipe: 1-5/8 OD schedule 40 aluminum alloy 6105-T5, clear anodized 204R1, AA-M10C22A31, Class II.

10.13 Accessories

a. Channel End Caps: Aluminum alloy 6063-T6, clear anodized 204R1,AA-M10C22A31,Class II.

b. Hardware: Bolts and Nuts shall be hot-dipped galvanized

c. Hold Down Clip Assembly: Aluminum alloy 6063-T6 mill finish

d. Joint Sleeve Assembly: Aluminum alloy 6061-T6, mill finish

10.14 Installation

Install the bleacher unit in accordance with the manufacturer's written instructions and shop drawings. Note: Building codes may vary from site to site. The contractor is responsible for verifying local code requirements. Bleacher shall be permanently anchored to concrete per the manufacturer and District details and requirements. Contractor shall maintain ADA accessible routes as required per ADA regulations.

10.15 Bleachers shall be permanently secured to a concrete foundation with the following:

a. Minimum soil bearing of 2,000 PSF

b. Bleacher frame dead and live load of 700 lbs./ft

c. Bleacher frame wind uplift of 250 lbs./ft

10.16 Bleachers shall be secured to the foundation with ½" dia. X 3-3/4" wedge-type expansion anchors, embedded a minimum of 2-1/2" into the concrete foundation. All anchors shall be HILTI Bolt TZ2, or approved equal.

10.17 Concrete foundations shall be in accordance with ACI 318.14, 3,000 PSI at 28-day strength, with a minimum thickness of 5 inches, with #4 rebar at 4' O.C. Concrete foundations with ends or corners under 5 feet from the edge of the bleacher shall have thickened edges of 12 inches thick.

11.0 Drinking Fountains

11.1 Drinking fountains shall be made from heavy-duty 12-gauge stainless steel with a corrosion and scratch-resistant finish. Color shall be satin stainless-steel finish, unless otherwise approved by the District.

11.2 Drinking fountain shall have a stainless steel self-closing pushbutton valve activated with less than 5 pounds of force, providing 1.0 GPH. Fountain shall allow front access to a stream adjustment, with cartridge and strainer access.

11.3 Drinking fountain shall meet all current accessibility regulations, including those in the Americans with Disabilities Act. Drinking fountains shall be lead-free by all known definitions, including ANSI/NSF Standard 61, Section 9, California Proposition 65, and the Federal Safe Drinking Water Act. Product shall be compliant with the current California Health and Safety Code.

11.4 All drinking fountains must have a sand trap per District detail. Sand trap body and fittings shall be made of high-density black polyethylene. Cover shall be white polypropylene with eight vandal-resistant ¼" x 1-1/2" stainless steel screws and cadmium-plated steel anchoring nuts, rubber gasket, and three anti-skid strips. Contractor shall provide the District with a tool or key capable of opening the vandal-resistant cover. Contractor shall install a plastic irrigation valve box to cover the sand trap cover to prevent pedestrian damage. When a sand trap is installed within a concrete or other walkway surface, a concrete valve box must be used.

11.5 All drinking fountain drain lines shall be installed per local codes.

11.6 All drinking fountain supply lines shall be copper piping encased within a poly sleeve or SCH 40 PVC piping with SCH 80 fittings. All piping shall be pressure tested at 150 PSI for 4 hours. Pressure test shall be performed by the contractor in the presence of the District. All piping shall conform to the District's potable water pressure line irrigation standards.

11.7 All drinking fountain supply lines shall be flushed, chlorinated, and sanitized per local health code.

11.8 All drinking fountains must be installed on a concrete pad with accessible pedestrian access under 2% in all directions. Drinking fountains must be carefully located within an alcove or with cane detection rails and skirts to ensure no component becomes a protruding object within the general path of travel.

11.9 Drinking fountains must have a high- and low-level fountain and a bottle filler fountain.

11.10 Drinking fountains for dog parks must have high- and low-level fountains and a ground-level fountain.

12.0 Trash Receptacles and Recycle Containers

12.1 All trash and recycled waste receptacles shall be a 24-inch minimum diameter, 32-gallon, one-piece perforated metal, with PVC coating. Metal shall be 16-gauge HR steel with 11-gauge steel sidebars. Perforated sides shall be 14-gauge steel.

12.2 Receptacles shall be footing-mounted with a 10-gauge HR steel mounting plate.

12.3 Receptacle coating shall be Plastisol (PVC), antimicrobial (non-leaching) to help prevent microbiological attack on the plastisol (PVC) surface that can cause the loss of aesthetic appearance, mildew odors, embrittlement, and premature product failure per ASTM G21-90. Tensile strength of no less than 1800 psi per ASTM D412. Elongation of no less than 200% per ASTM D412 Tear strength of no less than 300lb/in per ASTM D624. Hardness of 90 ± 5 (Durometer, Shore A (Instant)) per ASTM D2240. Flammability – Pass per FMVSS 302 UV stabilized – guaranteed to not show significant fading for 5 years per written warranty.

12.4 Contractor shall remove the provided plastic liner provided by the manufacturer and provide a galvanized liner. The liner shall be 20-1/2" in diameter at the top, 27" tall, and shall have a 30–32-gallon capacity.

12.5 Dome Lids shall be used for trash receptacles. The dome lid shall be made of structural plastic measuring 25" in diameter by 12-3/4" tall. The dome lid shall be secured to the receptacle frame with a galvanized cable and vandal-proof screws per District detail. Operable parts must be 15-48 inches high, with a one-hand operation, such as handles or latches, between 15-48 inches from the concrete surface. No more than 5 pounds of force should be needed to operate the parts.

12.6 Recycled waste containers shall have circular openings for plastic bottles. Recycled waste containers shall have a recycled logo permanently inscribed in the frame. The flat lid shall be secured to the receptacle frame with a galvanized cable and vandal-proof screws per District detail. Operable parts must be 15-48 inches high.

12.7 All hardware shall be Fastener Style A.

12.8 Recycle containers shall be used for all parks with sports fields and restrooms, and shall be designed for outdoor use and must be lockable. Two recycled containers must be provided for every ball field and soccer field. For parks without playing fields, one container shall be provided at the

restroom building. Recycled waste containers shall be permanently mounted to concrete flatwork.

12.9 Typical colors are blue containers with black support posts.

12.10 All receptacles shall be accessible and must have a minimum of 30 inches by 48 inches of clear space to access the front of the lid. All concrete within the clear space in front of the receptacle must be under 2% slope in all directions.

13.0 Picnic Tables

13.1 All picnic tables shall be PVC-coated perforated steel with seat boards and table tops with rounded edges for enhanced comfort and safety, and shall be designed for in-ground installation. All picnic tables shall be installed with in-ground posts and footings to be permanently mounted within concrete flatwork.

13.2 The standard table top shall measure a minimum of 30" x 72" (or 96" x 2-3/4") thick. The seat boards shall measure 10" x 72" (or 96") x 2-3/4" thick. Each shall be constructed with 14-gauge steel sheet perforated with 3/8" diameter holes at 5/8" apart center-to-center. The frame shall be constructed by folding edges to form 2-3/4" tall walls and shall be supported by solid welded braces of 1/4" x 1-1/2" flat.

13.3 The upright and seat support arms shall be constructed of 4" square tube with a cap of 11 ga. sheet. The top support angle shall be constructed of 2" x 3" x 3/16" angle, and the seat support angle shall be constructed of 3" x 4" x 3/16" angle. The assembly shall be solid-welded.

13.4 The assembly shall contain Fastener Style A hardware.

13.5 The seat boards and table top shall be coated with Plastisol (PVC), antimicrobial (non-leaching) to help prevent microbiological attack on the Plastisol (PVC) surface that can cause the loss of aesthetic appearance, mildew odors, embrittlement, and premature product failure per ASTM G21-90. Tensile strength of no less than 1800 psi per ASTM D412. Elongation of no less than 200% per ASTM D412 Tear strength of no less than 300lb/in per ASTM D624. Hardness of 90 ± 5 (Durometer, Shore A (Instant)) per ASTM D2240. Flammability – Pass per FMVSS 302 UV stabilized – guaranteed to not show significant fading for 5 years per written warranty.

13.6 Each project shall have a minimum of one ADA accessible table and one ADA accessible table for every four tables. ADA tables shall comply with all ADA requirements.

13.7 ADA tables shall have 96” table tops with 72” seat boards. The table top shall be centered with seat boards to provide wheelchair access on both sides.

13.8 ADA tables must have a minimum of 48 inches of clear path of travel to access each of the ends of the table, to allow for wheelchair access.

13.9 ADA tables must have 27 vertical inches of knee space clearance from the concrete surface to the bottom of the table top and 19 horizontal inches from the frame to the edge of the table. The top of the table top must not exceed 34 inches above the concrete.

14.0 Benches

14.1 All benches shall be PVC-coated perforated steel with seat boards and backs with rounded edges for enhanced comfort and safety, and shall be designed for in-ground installation. All benches shall be installed with in-ground posts and footings to be permanently mounted within concrete flatwork.

14.2 The standard bench seat board and back shall measure a minimum of 10" x 72" (or 96” x 2-3/4") thick. Each shall be constructed with 14-gauge steel sheet perforated with 3/8" diameter holes at 5/8" apart center-to-center.

14.3 The bench seat and back shall be coated with Plastisol (PVC), antimicrobial (non-leaching) to help prevent microbiological attack on the plastisol (PVC) surface that can cause the loss of aesthetic appearance, mildew odors, embrittlement, and premature product failure per ASTM G21-90. Tensile strength of no less than 1800 psi per ASTM D412. Elongation of no less than 200% per ASTM D412 Tear strength of no less than 300lb/in per ASTM D624. Hardness of 90 ± 5 (Durometer, Shore A (Instant)) per ASTM D2240. Flammability – Pass per FMVSS 302 UV stabilized – guaranteed to not show significant fading for 5 years per written warranty.

14.4 All benches shall be permanently mounted with a post and footing. Benches shall be permanently mounted to concrete flatwork.

14.5 The support legs shall be 1.9 inches O.D. diameter steel round pipe. Leg assemblies shall consist of a seat support welded to a vertical support, which serves as the leg and back bracing. The assembly shall be fabricated with seat brackets made of 7 ga. galvanized sheet, solid welded, drilled, and

formed. Open pipe ends shall be capped with 16 ga. galvanized steel, die-formed and welded caps.

14.6 The assembly shall contain Fastener Style A hardware.

14.7 All benches must be installed in concrete that meets accessible requirements and be large enough to ensure seating is outside of the primary path of travel. Each bench shall include an additional 36-inch by 48-inch clear space within the concrete area for companion seating, to ensure wheelchair space with shoulder-to-shoulder spacing is achievable. Bench pads shall be installed per District Detail.

15.0 BBQ and Hot Coal Containers

15.1 BBQs shall be 300 sq. in. in size with adjustable grill levels. BBQs shall have 3/16” thick 304 grade stainless steel firebox sides and back, and 1/8” 304 grade stainless steel integral ash flange die-formed into front edge to retain ashes and provide reinforcement. The firebox shall be 15 inches deep by 20 inches wide by 10 inches tall.

15.2 The grate shall be 5/8” diameter A-36 steel bars, with 1/2” diameter A-36 support handles with public use-type spring grips of coiled steel bar.

15.3 BBQs shall be mounted to a theft-proof base attachment with a 2-3/8” O.D. x 40-inch-long pipe of 304 grade stainless steel for permanent installation in a concrete footing.

15.4 BBQs must have a 360-degree full rotation for draft control.

15.5 BBQs must be installed in concrete that meets accessible requirements and outside of the primary path of travel.

15.6 BBQs must have a hot coal container within the same general area.

15.7 Hot coal container shall be 32” x 32” x 34” tall. The container shall be 5,000 PSI precast concrete with a light sand blast finish. Concrete shall be reinforced with #4 and #5 rebar grid. The container shall have a cast-in painted logo and words to read, “HOT COALS ONLY”.

15.8 The steel ash grate shall be 24" square to dump coals and ash. The grate bar spacings shall allow full-size charcoal briquettes to fall through, but will prevent most large trash from being deposited.

15.9 The container shall have a 15-3/4" x 13" cleanout door with a concealed hinge allowing the door to be raised and locked in an upright position for ash removal.

15.10 The container shall have an acrylic sealer.

15.11 The container must be installed in concrete that meets accessible requirements and outside of the primary path of travel.

16.0 Pet Waste Stations

16.1 Pet waste stations shall be installed at all entrances to parks and paseos and located throughout projects with pedestrian pathways.

16.2 Pet stations shall have an 18" x 11.5" 14-gauge reflective sign, with a 12-gauge powder-coated aluminum 15.5" high x 9.4" wide x 3.25" deep bag dispenser, with two diamond bag dispenser slots and a locking access panel, with clearly posted instructions.

16.3 Pet stations shall have a 16-gauge powder-coated 23" tall x 11.5" diameter steel trash receptacle with a stainless-steel hinged lid. Receptacle shall be a 10-gallon capacity with an interior trash liner bag retainer bands.

16.4 Pet station sign, bag dispenser, and receptacle shall be mounted to a 2" x 2" x 8' tall telescoping 11-gauge galvanized steel mounting post. Post to be installed in a concrete footing per the manufacturer's detail.

16.5 Pet stations shall be placed along an accessible path and must have a minimum of 30" x 48" of clear space to access the front of the station. All concrete within the clear space in front of the receptacle must be under 2% slope in all directions.

17.0 Bike Racks

17.1 Bike racks shall be provided at parks as determined by the District and as required per local code.

17.2 Bike racks shall be 2-3/8-inch diameter galvanized steel tubing with curved wave styling.

17.3 Bike racks shall be in ground mount styles installed within a concrete footing.

17.4 All bike racks shall be installed in concrete that meets accessible requirements and outside of the primary path of travel, including the distance from the ends of bicycles.

18.0 Flag Poles

18.1 Flag poles shall be provided for all parks.

18.2 Flag poles shall be a minimum height of 35 feet. Poles shall be heat-treated seamless 6063-T6 aluminum polished tubing designed to withstand 100 MPH winds. Poles shall be cone tapered approximately 1 inch for every 5-6 feet.

18.3 Flag poles shall have an internal cam cleat concealed halyard with UV-resistant polyester with white vinyl-covered brass flag snaps. Truck shall be stationary non-fouling with an aluminum body cast Delrin Sheave on stainless steel pin.

18.4 The cam cleat shall be mounted inside the pole with a self-locking access door.

18.5 At least two keys and one crank designed to raise and lower the flag shall be provided to the District at project acceptance.

18.6 Flag poles must be installed with a 16-gauge galvanized steel ground sleeve with a 3/8-inch steel base plate, being 2 inches larger than the sleeve diameter.

18.7 Flag poles shall have a 14-gauge aluminum gold anodized ball.

18.8 Flag pole and collar must be installed 12 inches above the concrete finish grade with a raised concrete post base not less than 18 inches in diameter.

18.9 Footings shall be as indicated within the final approved and stamped structural drawings and structural calculations.

18.10 Contractor shall be responsible for all permits and inspections required by the County of Riverside Building and Safety Department or local city (if applicable). Confirmation of permit inspections and final sign-off is required prior to project acceptance.

18.11 All flag poles shall have two well lights to ensure night illumination of the flag. Lights must be in compliance with all applicable lighting ordinances.

18.12 One 3’ x 5’ minimum size stitched American flag shall be provided to the District prior to project acceptance.

19.0 Soccer Goals

19.1 Soccer goals shall be provided for all soccer fields as directed by the District.

19.2 Soccer goals shall be aluminum with a powder-coated white finish meeting NCAA and NFSHSA specifications and ASTM F2950-14 standards.

19.3 Post and cross bar shall be 4.375-inch diameter with a wall thickness of 0.094 inch. Backdrops shall be 2 feet deep, with a net channel powder-coated white, 2 inches in diameter, and a wall thickness of 0.125 inch. Left, right, and back bases shall have a net channel.

19.4 Net shall be 3mm braided knotless HTTP 120mm mesh. Colors to be back and white.

19.5 Size to be determined by field size per plan and as directed by the District.

19.6 Goals shall be provided with a wheel kit for easy relocation.

19.7 Goals shall have footings with a strap-down kit when required per plan or by the District.

20.0 Bollards

20.1 Bollards shall be provided for all areas where vehicle access is possible or desired and as directed by the District.

20.2 There are three types of bollards to be used. Fold down, removable, and permanent.

a. Fold-down bollards are generally used at the entrance of large walkways where vehicle access is possible to restrict unauthorized vehicle access. Walkways or vehicle access areas where fold-down bollards are to be used must be straight to prevent the tire tread from hitting the bollard when folded down. Curved entries must have removable bollards.

b. Removable bollards shall be used when multiple agencies need to access an area where multiple agency padlocks are required.

c. Permanent bollards shall be used to prevent any vehicular access.

20.3 Bollards shall be spaced apart to ensure a clear path width of 48 inches. A typical 8-foot walkway shall have two bollards with a centered clear path of 48 inches.

20.4 Fold down bollards shall be surface-mounted bollards capable of being locked in an upright and folded position. Fold down bollards shall be designed so as not to damage the bollard when folded down.

20.5 Removable bollards shall have a sleeve for the bollard to sit inside with a hinged lid to ensure a flush surface is maintained when the bollard is removed. The bollard must have a metal hasp to accept a padlock and a gate-keeper dual locking hasp when two separate padlocks are needed for access by multiple agencies.

20.6 Permanent bollards can be surface-mounted to allow for future replacement without removing and replacing the adjacent concrete.

20.7 Surface-mounted bollards installed within decomposed granite, asphalt, or other similar surfaces other than concrete shall have 18-inch by 18-inch x 12-inch-deep concrete pads.

21.0 Basketball Goals

21.1 Permanent basketball goals shall be provided for all basketball courts.

21.2 Pole shall be constructed of 5 9/16" outside diameter schedule 40 structural pipe and have a hot-dipped galvanized finish. Design shall be a bent gooseneck style and allow for a 48" bury into the ground and a 72" extension from the front of the pole to the face of the backboard. Two 1 5/8" diameter, 13-gauge flow-coated galvanized tubular braces shall support the top of the backboard and connect directly to the pole. The pole shall be designed so that the rim mounts directly to the horizontal pole section through the backboard to eliminate stress on the backboard during play. Pole systems without backboard support braces shall not be considered equal. Pole shall carry a limited lifetime warranty.

21.3 Backboard shall be constructed of formed and welded steel with a 42" x 60" rectangular playing surface. Skin shall be 12-gauge mild steel, and the rear structure shall be 7-gauge. and 10-gauge steel. All edges of the skin shall be formed in such a way that no shear edges are exposed. Boards with exposed shear edges shall not be considered equal. The backboard shall be coated with a white polyester powder-coated finish and have an official-sized orange

shooter's square. The Board shall accept rims with a 5" x 5" mounting pattern. Backboard shall carry a limited 10-year warranty.

21.4 Rim shall consist of two 5/8" diameter AISI 1018 cold-drawn carbon steel rings welded together at a minimum of six places. Back and side plates shall be 3/16" thick and be continuously welded. The net attachment system shall be a continuous type, constructed of 3/16" x 1" steel, with punched net attachment slots suitable for nylon nets. Individual or continuous wire-formed net locks are not an acceptable equal. Rim shall be punched to mount on any front mount backboard, have an unconditional lifetime warranty, and an orange powder-coated finish.

21.5 Mounting hardware shall be included. Rim shall be made in the USA. Installation to be completed in accordance with the manufacturer's instructions.

21.6 Contractor shall provide and install poly nets before project turnover.

21.7 Footings shall be as indicated within the final approved and stamped structural drawings and structural calculations.

21.8 Contractor shall be responsible for all permits and inspections required by the County of Riverside Building and Safety Department or local city (if applicable). Confirmation of permit inspections and final sign-off is required prior to project acceptance.

22.0 Pickleball and Tennis Posts and Nets

22.1 Permanent net posts shall be installed for all pickleball and tennis courts, unless otherwise approved by the District.

22.2 Pickleball posts shall be round 11-gauge steel posts 3-inch in O.D. by 54 inches in length to sit 36 inches above the court surface. Post shall have a black, baked-on polyester powder coat finish. Post shall be internally wound and feature a self-locking gear mechanism. Gears shall be constructed of plated steel, and the small gear shall be case hardened. Gear housing and caps shall be made of cast aluminum alloy. Gear function shall be 30:1 to ensure smooth, easy operation. Gear plate cover and removable handle shall be chrome-plated.

22.3 Pickleball posts shall have corresponding ground sleeves installed within the court's concrete surface.

22.4 Pickleball nets shall have integrated welded steel lacing rods and shall meet the IFP and UCTA's requirements for official Pickleball sizes. Net size to be 36" high x 21'9" long. Nets shall have a 4-year warranty.

22.5 Tennis posts shall be round 11-gauge steel posts 3-inch in O.D. by 62 inches in length to sit 42 inches above the court surface. Post shall have a black, baked-on polyester power coat finish. Post shall be internally wound and feature a self-locking gear mechanism. Gears shall be constructed of plated steel, and the small gear shall be case hardened. Gear housing and caps shall be made of cast aluminum alloy. Gear function shall be 30:1 to ensure smooth, easy operation. Gear plate cover and removable handle shall be chrome-plated.

22.6 Tennis posts shall have corresponding ground sleeves installed within the court's concrete surface.

22.7 Tennis nets shall be 3.5mm solid core knotted braided polyethylene with 325 lb. break strength, double-thick 100% polyester headband with black vinyl side pockets with fiberglass dowels and shall meet USTA standards. Net size to be 3 feet 6 inches high by 41 feet 9 inches long. Nets shall have a 5-year warranty.

23.0 Volleyball Posts and Nets

23.1 Permanent net posts shall be installed for all volleyball courts, unless otherwise approved by the District.

23.2 Volleyball posts shall be 3-inch square steel with a 1/8" wall thickness. Length of poles shall be 10 feet 6 inches. One-piece adjustable collars are required to allow easy net height adjustment for official play. The windup mechanism shall be a heavy-duty reel. All metal parts shall be exterior finished with a black baked-on black polyester powder coating for maximum weather resistance.

23.3 Ground sleeves shall be installed for all posts. Ground sleeves shall be installed in a concrete footing per the manufacturer's recommendations. When posts are installed in turf areas, the top of the footing shall be domed to allow for grass to grow to the edge of the posts.

23.4 Volleyball nets shall be 3.0mm black 4-inch square netting with 20-ounce white vinyl 2-1/2 inch perimeter bands. Nets shall meet USVBA standards.

24.0 Court Surfacing and Striping

24.1 All courts for basketball, tennis, and pickleball shall have court surfacing and striping.

24.2 Concrete shall be installed per District Standards and Specifications. Surfacing requires a minimum cure time of 28 days on new concrete. Concrete should have a medium-broom finish to allow for proper adhesion. Absolutely no concrete curing compounds may be used. Lightweight concrete is not an acceptable substrate. If waterproofing products are installed on the concrete, the supplier needs to guarantee that their system is compatible with acrylic coatings. New concrete must be acid-etched with either phosphoric or muriatic acid and must be thoroughly rinsed to remove laitance and salt and to reduce alkalinity. California Concrete Preparer is a self-neutralizing alternative.

24.3 Surfacing shall conform to the guidelines of the ASBA for planarity. All surface coating products shall be supplied by a single manufacturer.

24.4 The contractor shall record the batch number of each product used on the site and maintain it through the warranty period. The contractor shall provide the inspector, upon request, an estimate of the volume of each product to be used on the site.

24.5 The installer shall be an authorized applicator of the specified system.

24.6 A Patching Mix shall be used in all cracks, holes, depressions, and other surface imperfections. The Patching Mix shall be acrylic resin blended from Portland Cement and silica sand.

24.7 A Crack Filler shall be used in filling fine cracks. The Crack Filler shall be acrylic resin heavily filled with sand.

24.8 An Acrylic Color Playing Surface shall be used to finish color and surface texture. The Acrylic Color base shall be acrylic resin containing no vinyl copolymerization constituent. Contains not more than 63% rounded silica sand.

24.9 Line paint shall be used to mark the court/play surface. Line paint shall be 100% acrylic resin containing no alkyds or vinyl constituents. Texturing shall be rounded silica sand.

24.10 Water used for dilution and mixing shall be clean potable water.

24.11 All surfacing materials shall be non-flammable and have a VOC content of not less than 100g/L. Measured by the EPA method 24.

24.12 Local sands are not acceptable in the color playing surface. Sands must be incorporated at the manufacturing location to ensure quality and stability.

24.13 Preparation:

a. Do not install when rainfall is imminent or extremely high humidity prevents drying. Do not apply unless the surface and air temperatures are 50°F and rising. Do not apply if the surface temperature exceeds 140°F.

b. Clean surfaces of loose dirt, oil, grease, leaves, and other debris in strict accordance with the manufacturer's directions. Pressure washing will be necessary to adequately clean areas to be coated. Any areas previously showing algae growth shall be treated with Clorox or an approved product to kill the organisms and then be properly rinsed.

c. Cracks and holes shall be cleaned, and a suitable soil sterilant, as approved by the owner, shall be applied to kill all vegetation 14 days prior to use of Court Patch Binder according to the manufacturer's specifications. Prior to the application of surfacing materials, the entire surface should be flooded and left in direct sunlight for one hour under ideal conditions and checked for minor depressions or irregularities. Any puddled area that exceeds 1/8 inch in depth shall be marked and repaired with Court Patch Binder using the following mix:

1. 100 lbs. (45kg) of 60-80 mesh silica sand (dry)

2. 3 gallons (10L) Court Patch Binder

3. 12-24 lbs. (5.5-11 kg) dry Portland Cement (depending on humidity and temperature)

4. Tack coat consisting of 1-part Court Patch Binder and 2 parts water shall be applied to the patch areas and allowed to dry thoroughly prior to patching. After patching, the surface shall not vary more than 1/8 inch in ten feet measured in any direction. Edges of the patch should be sanded down, as necessary, to avoid ridges.

d. Depressions holding enough water to cover a US five-cent piece shall be filled with Court Patch Binder Patching Mix. 3 gallons of Court Patch Binder, 100 lbs. 60-80 silica sand, 1-gallon Dry Portland Cement (Type I). This step shall be accomplished prior to the squeegee application of Acrylic Resurfacer. The contractor shall flood all the courts and then allow draining. Define and mark all areas holding enough water to cover a nickel. After defined areas are dry, prime with a tack coat mixture of 2 parts water/l part Court Patch Binder. Allow tack coat to dry completely. Spread Court Patch Binder mix true to grade using a straight edge (never a squeegee) for strike off. Steel trowel or wood float the patch so that the texture matches the surrounding area. Never add water to the mix. Light misting on the surface and edges to feather in is allowed as needed to maintain work ability. Allow to dry thoroughly and cure.

e. Filler course shall be applied to the clean underlying surface in one application to obtain a total quantity of not less than .06 gallons per square yard based on the material prior to any dilution. Acrylic Resurfacer may be used to pre-coat depression and crack/hole repairs to achieve better planarity prior to filler course application.

f. Use clean, dry 50-60 mesh sand and clean, potable water to make mixes. The quantity of sand and water in the above mix may be adjusted within above limits to complement the roughness and temperature of the surface. Mix the ingredients thoroughly using accepted mixing devices and use a 70 Durometer rubber-bladed squeegee to apply each coat of Acrylic Resurfacer as required. Allow the application of Acrylic Resurfacer to dry thoroughly. Scrape off all ridges and rough spots prior to any subsequent application of Acrylic Resurfacer or subsequent cushion or color surface system.

g. Mix the ingredients thoroughly using accepted mixing devices and use a 70 Durometer rubber-bladed squeegee to apply each coat of Acrylic Resurfacer as required.

h. Allow the application of Acrylic Resurfacer to dry thoroughly. Scrape off all ridges and rough spots prior to any subsequent application of Acrylic Resurfacer or subsequent cushion or color surface system.

24.14 Installation and application

a. All areas to be color-coated shall be clean, free from sand, clay, grease, dust, salt, or other foreign matter. The Contractor shall obtain the District's approval, prior to applying any surface treatment

b. Blend color base and coating with a mechanical mixer to achieve a uniform fortified mixture. The mix shall be:

1. Color Base 30 gallons

2. Coating 20 gallons

3. Water 20 gallons

c. Application shall be made by 50 durometer rubber-faced squeegees. The fortified mixture should be poured onto the court surface and spread to a uniform thickness in a regular pattern.

d. A total of 3 applications of fortified mixture shall be made to achieve a total application rate of not less than .15 gal./sy. No application should be made until the previous application is thoroughly dry.

24.15 Lines shall be 2" wide unless otherwise noted on the drawings. Lines shall be carefully laid out in accordance with ASBA and USTA guidelines. The area to be marked shall be taped to ensure a crisp line. The line paint shall have a texture similar to the surrounding play surface. Application shall be made by brush or roller at the rate of 150-200 square feet per gallon.

24.16 Protection and Clean Up

a. Erect temporary barriers to protect coatings during drying and curing.

b. Lock gates to prevent use until acceptance by the owner's representative.

c. Remove all containers, surplus materials, and debris. Dispose of materials in accordance with local, state, and Federal regulations

d. Leave the site in a clean and orderly condition.

24.17 Layouts

a. Layouts shall be as shown on the approved plans based on District design requirements.

b. Contractor must confirm all layouts and dimensions prior to the start of work.

c. Contractor must contact the District immediately if there are any discrepancies between the plan and site conditions.

25.0 Play Surfacing

25.1 All areas with play equipment must have an approved play surface meeting ASTM F1292 (Impact Attenuation) for Head Injury Criteria (HIC) below 1000 and Gmax (peak deceleration) below 200G's.

25.2 Play surfacing shall be tested per ASTM F1292 by a Certified Playground Safety Inspector (CPSI) prior to project acceptance.

25.3 All play surfacing shall comply with ASTM F1951 (Accessibility) for the standard for accessibility that was adopted into the Americans with Disabilities Act (ADA) to ensure the surface allows for easy passage by wheelchairs and other mobility devices. All play surfacing shall be under 2% slope in all directions.

25.4 Protective surfacing must extend a minimum of 6 feet in all directions from the play equipment.

25.5 The subgrade for all play surfacing shall be sloped at 2% or greater and have subdrains per District standards.

25.6 A 4-inch minimum depth of washed ¾ inch rock shall be installed between the subgrade and play surfacing. Approved filter fabric shall be installed below and above the rock. The top of the rock shall be no higher than 13 inches below the top of the perimeter curb.

25.7 A minimum depth of 12 inches of loose-fill certified Engineered Wood Fiber (EWF) meeting ASTM F2075 is required for play surfacing within the protective fall zone of any play equipment structure. The material shall be independently tested and certified by the International Play Equipment Manufacturers Association (IPEMA) to meet safety standards for playground surfacing. This certification ensures the mulch provides superior impact attenuation to reduce injury from falls, and that it is free of hazardous chemicals, foreign objects like rocks and metal, and foreign materials like sticks or dirt.

25.8 All play surfacing shall be consistent in depth throughout the entire area at the time of installation. The wood fiber shall be no more than 1 inch below the top of the perimeter curb. All play equipment shall be installed per the manufacturer's instructions, with the finish grade to be 1 inch below the perimeter curb.

25.9 Play surfacing shall be protected within a 12-inch-wide by 20-inch-deep concrete header per District details. A concrete ramp must be provided, meeting accessibility requirements. Ramps shall not extend within the protective fall zone of any equipment.

26.0 Play Equipment

26.1 Scope

Furnish labor, material, and equipment necessary for the installation of the playground equipment, structure, or modular unit as shown on the drawings and specified herein. Work shall include, but not be limited to, the following: excavation, layout, and the installation of playground equipment in accordance with the manufacturer's installation specifications, including all appurtenances and accessories as required for a full and complete installation.

26.2 Products

All public playground equipment supplied shall meet all applicable provisions of the current California Code of Regulations Title 22, Div. 4, Chapter 22. All productions shall bear the certification seal of the International Playground Equipment Manufacturers Association (IPEMA). All designs shall meet or exceed the Americans with Disabilities Act (ADA) "Final Accessibility Guidelines for Play Areas" regulations. All manufacturers must be ISO 9001 certified.

All manufacturers and products are subject to review and approval by the District. Consideration of approved manufacturers and products is based on familiarity with the products, availability of replacement parts, and the products' life expectancy.

26.3 Design and Fabrication

Playground equipment, structure, or modular unit submitted for consideration shall be equivalent in design, layout, deck size, post size, clamping/fastening system, deck/slide/climber height, ADA accessibility, appearance, color, and construction detail to playground equipment specified in the drawings. Reasonable variations in size/height (no more than +/- 10%) and manufacturer's standard colors may be allowed at the District's discretion. Color schemes are to match as closely as possible to the originally specified colors. Play value and safety features of components must be equal to or superior to the specified design as judged by the District.

All playground equipment shall have a shade canopy structure unless otherwise approved by the District. Shade canopies can be integrated with the structures or stand-alone shade sails.

26.4 Modification

Any expense of modification, adjustment, or revision required to ensure compliance of furnished equipment with the specified equipment and playground design shall be the sole expense and responsibility of the Contractor.

26.5 Safety Standards & Quality Assurance

All products shall bear the certification seal of the International Play Equipment Manufacturers Association (IPEMA). All designs shall meet or exceed the Americans with Disabilities Act (ADA) "Final Accessibility Guidelines for Play Areas". All manufacturers must be ISO 9001 and ISO 14001 certified.

26.6 References and Standards

a. California Title 22, Division 4, Chapter 22 Playground Safety Regulations

b. CPSC: Consumer Product Safety Commission

c. IPEMA: International Playground Equipment Manufacturers Association

d. ADA: Americans with Disabilities Act

e. IOS: International Organization for Standardization

f. CPSI: Certified Playground Safety Inspector

26.7 Manufacturer Warranty/Guaranty

The equipment manufacturer shall warranty material and workmanship against defects, from the date of the manufacturer’s invoice, for the period of time as follows:

a. LIMITED ONE HUNDRED (100) YEAR WARRANTY on aluminum deck posts, steel deck posts, clamping/fastening system, and associated fastening hardware against structural failure caused by corrosion or

deterioration from exposure to weather, or by defective materials or defective workmanship.

b. LIMITED FIFTEEN (15) YEAR WARRANTY on steel support legs and coated components against structural failure caused by corrosion, defective materials, or defective workmanship.

c. LIMITED FIFTEEN (15) YEAR WARRANTY on play system steel components, including railings, rungs, and rigid climbers, against structural failure caused by defective materials or defective workmanship.

d. LIMITED FIFTEEN (15) YEAR WARRANTY on rotationally-molded plastic components against structural failure caused by defective materials or defective workmanship.

e. LIMITED FIVE (5) YEAR WARRANTY Climbing Rocks against structural failure caused by defective materials or defective workmanship.

f. LIMITED THREE (3) YEAR WARRANTY on Slash proof seats and 360-degree Bucket Tot Seats for Swings against structural failure caused by defective materials or defective workmanship.

g. LIMITED ONE (1) YEAR WARRANTY on all products not listed above, including all moving parts and flexible climbers, against structural failure caused by defective materials or defective workmanship.

h. Warranty for repaired or replacement part(s) is only for the balance of the original limited warranty. These warranties are only valid if products are installed according to the manufacturer's installation instructions.

26.8 Contractor Warranty

a. The Contractor shall guarantee installation workmanship for a period of one year from the date of acceptance for maintenance by the District. The Contractor shall be responsible for coordinating manufacturer-mandated warranty items with the manufacturer / distributor and for installing replacement material(s) at no additional cost to the District.

b. Provide a copy of the contractor's installation warranty on the company letterhead.

26.9 Installation

a. Instructions: Explicit installation instructions shall be provided by the manufacturer, which shall include detailed, scaled plan view; elevations; footing drawings and details; as well as written instructions to ensure proper installation of the playground equipment, structure, or modular unit.

b. Playground equipment must be installed by a manufacturer-certified installer and must be installed in accordance with the manufacturer's installation specifications. The installation crew leader must be CPSI certified. If not installed by a manufacturer-certified installer, the play equipment shall be inspected after installation by a CPSI not employed by the installer and signed off by said CPSI before the playground is opened for first use. Inspection certification must be provided to the District prior to park acceptance.

c. Close Out: Contractor shall provide the District with one copy of the complete manufacturer's installation instructions and maintenance kit, if provided. Most manufacturers send at least two sets of installation manuals with each order. Additional sets of installation instructions should be purchased from the manufacturer if originals are lost or damaged. It is the contractor's responsibility to secure the installation instructions from the installer.

d. Clean-up: The site shall be kept clean and free of tools, trash, debris, and installation materials on a daily basis. Material may be stored on site during installation with appropriate protective measures and approval by the District.

27.0 Shade Structures

27.1 General

Shade structures shall be prefabricated from a manufacturer with 10 or more years of experience in designing and manufacturing steel pre-manufactured shade structures. Cumulative experience in fabrication will not be an acceptable alternative. The product shall comply with the following:

a. The product shall be shipped from a single source.

b. Membership in American Institute of Steel Construction.

c. Membership in American Society for Quality.

d. Membership in American Welding Society.

e. Membership in Chemical Coaters Association International.

f. Membership in Construction Specifications Institute. \

g. Full-time on-staff Licensed Engineer.

h. Full-time on-staff Quality Assurance Manager.

i. Published Quality Management System.

j. Full-time on-staff AWS Certified Welding Inspector.

k. Continued certification by an independent inspection agency.

l. Control of finishing quality by in-house shot blast, pretreatment, primer, and powder coating.

Rectangle structures are preferred to allow for the effective placement of picnic tables. Structures proposed to be hexagonal or octagonal are subject to District approval on a project-by-project basis.

Shade structures shall be bolt-together tubular steel frames, with a powder-coat finish. No field welding shall be permitted. Roof decks shall be metal or concrete tile. Shade structures shall be shipped as a knocked-down pre-fabricated kit that includes the structural frame, roof deck, fasteners, trim, optional ornamentation, and installation instructions. Footing details shall be designed by a licensed engineer. All shade structures shall comply with current local building codes. Install all components according to the manufacturer's installation instructions and these specifications.

27.2 Structural Framing

a. Structural framing shall be steel tube, minimum ASTM A500 grade B. "I" beams; tapered columns, open channels, or wood products shall not be accepted for primary beams.

b. All support frames, posts, beams, braces, and rails shall be hot-dip galvanized to protect steel from rust. All support frames, posts, beams, braces, purlins, and rails shall receive an "E"-Coat Undercoating dip process or approved equal with an electro-deposition applied epoxy coating that bonds to the steel. The

combination of “E”-coating and powder coating shall be a durable finish, and shall be comparable to Poli-5000 available through Poligon.

c. Support posts shall have all required electrical. Typical support posts shall be square; however, decorative posts can be submitted for approval. Structural channel or welded plate, minimum ASTM A36, or Compression Tube: structural steel tube, minimum ASTM A500 grade B.

d. Structural Fasteners: ASTM A325 high-strength bolts and A563 high-strength nuts, ASTM A307 anchor bolts. One support for each shade structure shall have an electrical box knock-out provided by the manufacturer.

e. Columns shall be placed so that all column bottoms and anchor bolts are at least 3 inches below the top of the concrete decking. Where possible, the structure will have a moment connection at the top of the column and a pinned connection at the base of the column to ensure a clean connection at the base, reduce the size of the concrete base, and provide for a one-step concrete installation process.

f. Steel shall be cleaned, pretreated, and finished at a facility owned and directly supervised by the manufacturer. Steel shall be shot blasted to SSPC-SP10 near-white blast cleaning. SSPC-SP2 hand tool cleaning will not be an acceptable alternative. Parts shall be pretreated in a 3-stage iron phosphate or equal washer.

g. Epoxy primer powder coat is to be applied to parts for superior corrosion protection. Top powder coat of Super Durable TGIC Powder Coat to color selected from manufacturer’s standard color chart: For environmental purposes, finish shall allow no VOC emissions. Sample production parts shall have been tested and meet the following criteria:

    1. Salt spray resistance per ASTM B 117/ ASTM D 1654 to 5000 hours with no creep from the scribe line and a rating of 10.

    2. Humidity resistance per ASTM D2247-02 to 3000 hours with no loss of adhesion or blistering.

    3. Color/UV resistance per ASTM G154-04 to 2000 hours exposure, alternate cycles with results of a) no chalking b) 75%

color retention c) Color variation maximum 3.0 E variation CIE formula (before and after 2000 hours exposure.)

27.3 Roofing

Roofing for shade structures for parks under five acres without a restroom building shall be multi-rib roofing. Multi-rib roofing shall be 24-gauge galvanized steel panels with a Kynar color paint on the top and white prime paint on the ceiling surface. Multi-rib roofing shall be supplied pre-cut to length and angle. All trim shall match the Kynar color trim as required. The metal roof deck shall be attached with exposed fasteners with gaskets. Trim shall include panel ridge caps, eave trim, splice channels, roof peak cap, and corner trim as applicable for the model selected, with reference drawings for additional information. Painted screws and butyl tape shall be included. Ridge Caps shall be pre-formed with a single central bend to match the roof pitch and shall be hemmed on the sides. Roof peak cap shall be supplied on all buildings except ones that include a cupola option. 30-pound felt and nails shall be provided when a tongue and groove or SIP roof deck is ordered along with metal roofing. 2x6 tongue and groove panel roof decks with exposed wood ceilings can be used as an upgrade if desired.

Roofing for shade structures for parks with restrooms or other buildings shall match the style and color of the standing seam roof used on other buildings. Standing seam roofing shall have a 2x6 tongue and groove roof deck.

27.4 Footings

Shade structure shall be set on prepared footings designed by the manufacturer, and anchor bolts shall be provided by the manufacturer. The design engineer shall be presented with complete information about the site, including soil bearing and lateral load capability. The contractor must use appropriate construction practices for the specific site conditions. All footings shall be installed per stamped engineered plans and shall be inspected by the District prior to pouring. Typical footing details within shade structure plans shown “for reference only” shall not be used. All excavation shall be performed per OSHA safety requirements. Contractor shall be responsible for procuring an excavation permit as required by law for footings over four feet in depth. All steel bars shall be installed per the structural engineered drawings. Anchor bolts provided by the manufacturer shall be installed per approved plans.

27.5 Contractor shall be responsible for all permits and inspections required by the County of Riverside Building and Safety Department or local city (if

applicable). Confirmation of permit inspections and final sign-off is required prior to project acceptance.

27.6 Contractor shall be responsible for obtaining concrete cylinder tests per the California Building Code (CBC), which is based on the International Building Code (IBC) and modified with state amendments. Cylinder tests shall comply with California Test 540 and ASTM C31, to ensure compressive strength is as specified. Results shall be provided to the District prior to project acceptance.

27.7 All shelters shall have ceiling-mounted LED lights installed underneath the roof to illuminate the area within the shelter. A photocell and timer, per the approved electrical plans, shall control lights. All shelters shall have a GFCI outlet with a weather-proof lockable receptacle cover plate mounted 7 feet above the concrete surface. Contractor shall install electrical work in accordance with local codes. A licensed electrician shall perform all electrical work and shall be inspected by the District and local governing agency.

28.0 Park Monument Sign

28.1 General

Park monument signs shall be provided for all parks. Signs shall identify the park name with the Valley-Wide logo and full name below the park name. The sign shall be pre-cast concrete. The sign shall have recessed painted lettering per District detail. The sign shall have pilasters with rock veneer on each side. The sign manufacturer shall provide pre-cast caps for the sign and pilasters. Pilasters can be either pre-fabricated or site-constructed. The sign shall be elevated on a one-piece, built-in pedestal to ensure lettering is visible above landscape vegetation. Sign placement shall not conflict with any County or City site distance regulation and shall be within the park property line.

28.2 Shop Drawings

Submit detailed manufacturer shop drawings of all precast concrete items showing detail sections and profiles for all precast items. Details shall show all reinforcing and special hardware required for fastening. Shop drawing submittals shall comply with the general submittal section. Shop drawings shall have the actual park name shown.

28.3 Performance Requirements

a. Compressive Strength 5000 psi

b. Air Content 6-8%

c. Water-Cement Ratio .45:1

28.4 Certification

Suppliers shall furnish a certification attesting that the materials meet the specification requirements.

28.5 Quality Assurance

a. PCI Standards: Comply with specified provisions and recommendations of the Precast/Prestressed Concrete Institute. (PCI)

b. ACI Manual of Concrete Practice: Comply with specified provisions and recommendations of the American Concrete Institute. (ACI)

c. Manufacturer's Instructions: In addition to specified requirements, comply with precast concrete manufacturer's instructions and recommendations for substrate preparation, material storage, mixing and application, finishing and curing.

28.6 Qualifications

Precast concrete manufacturer and contractor must have a minimum of 5 years of successful experience on projects of similar magnitude and complexity to the indicated project. The District must prequalify the manufacturer and contractor.

28.7 Delivery, Storage, and Handling

Precast concrete to be palletized and shrink wrapped, delivered in original unopened packaging with legible manufacturer identification, including size, piece number, quantities, manufacture date, and inspector's initials. Precast concrete to be stored in a secure area in the original packaging. Protect from damage by other trades.

28.8 Warranty

The manufacturer shall warranty the sign for a period of 2 years from the date of substantial completion against failure of workmanship and materials.

28.9 Materials

a. Portland Cement: ASTM C-150 specifications for Portland Cement.

b. Aggregates: All aggregates to meet ASTM C-33 specifications, cleaned and properly graded to size. Aggregates shall be blended to meet individual project requirements.

c. Coloring: Pigments used shall be inorganic, resistant to alkalinity, and used per manufacturer's recommendations.

28.10 Reinforcement

Reinforcement and hardware to conform with ACI and the manufacturer's design. Reinforce precast with rods or wire, or both, as recommended by the precast concrete manufacturer, with #4 and #5 rebar grid.

28.11 Caulks and Sealers

a. Urethane or Polyurethane sealant

b. Color to be selected by the District from the standard color palette.

c. Colorless, pure acrylic water-repellent penetrating sealer. Sealer to maintain the natural look of the concrete surface with no glaze or gloss, darkening, or color change.

28.12 Tolerances

All units to conform to shop drawings, with a 1/8" tolerance in dimension.

28.13 Precast Surfaces and Edges

All exposed edges are to have a minimum 1/8" chamfer to prevent chipping. Finished surfaces to match the approved control sample. All precast concrete finished surfaces to be sealed with a sealer approved by the manufacturer.

28.14 Installation

Alignment of precast should be straight and true to all dimensions. It may not vary more than 1/8" in length, height, or width. Install anchors as shown on the details. Fill joints with manufacturer-approved caulk or as specified.

28.15 Protection

Upon completion, the work shall be ready for final inspection and acceptance by the District. Contractor shall protect the finished work from the time the installing contractor completes the work.

28.16 Footings

A registered engineer shall design footings. The engineer shall confirm that the footing design corresponds with the approved sign manufacturer's shop drawings, including dowel coil rod locations and embedment, and whether pilasters are prefabricated or site-constructed. Footings shall be as indicated within the final approved and stamped structural drawings and structural calculations. The engineer and sign manufacturer shall be responsible for providing detailed drawings showing the footing design and concrete reinforcement for all precast portions to obtain plan approval and permit issuance from the County of Riverside Building and Safety Department or the local city (if applicable).

28.17 Confirmation of permit inspections and final sign-off is required prior to project acceptance.

29.0 Trash Enclosure

29.1 Trash enclosures shall be used for parks larger than 5 acres or as directed by the District.

29.2 Trash enclosures shall have 6-foot-tall solid-filled, steel-reinforced tan split-face CMU block walls with a powder-coated steel roof and doors per District details. The enclosure shall have 6-inch-thick concrete inside and in front of the doors. All walls shall have precision wall caps. All walls shall be coated with a graffiti coating.

29.3 Trash enclosures shall house one or two 3-yard bin-style dumpsters as required by the District, depending on the size of the park and refuge needs. The layout shall accommodate the bid at a 90-degree rotation to access the lid from the center of the inside of the enclosure. A 6-inch high raised access

walkway shall be provided within the enclosure to access the lid opening of each bin.

29.4 Inside walls shall have a raised curb with a lower concrete section to protect the walls from being damaged by the bin.

29.5 Front gates shall be 6-foot-wide by 6-foot-tall, with 4" x 4" ¼ inch thick steel gate posts. Front gate posts shall extend to the top of the roof. Rear roof posts shall be secured to the top of the rear wall. Rear or side maintenance access gates shall be provided. Gate frames shall be 2-inch by 3-inch .020" wall thickness hot-rolled steel rectangle tube. Gate panels shall be 20-gauge B-Beck structural type panels with 1-1/2 inch high ribs at 6-inch on center. All gates shall have heavy-duty steel lockable sliding hasps. Front gates shall have a steep drop hinge rod for securing gates in open and closed positions. Gate hinges shall be heavy-duty steel hinges with greaseable Zerk fittings. Hinges shall be welded to the gate posts and gate frames. All field-welded connections shall be smooth, epoxy primed, and painted with two coats of exterior enamel paint matching the factory powder coating.

29.6 Trash enclosure roof shall match adjacent shade shelters. Steel structural members and roof panels shall be fabricated by the same company as the shade shelters. Refer to the Shade Shelter Section 27.0 for additional information.

29.7 Trash enclosure drainage or sewer connections shall comply with all applicable local codes. It is the contractor's responsibility to ensure compliance with the required standards, ordinances, permits, and inspections issued by the County of Riverside Building and Safety Department or the local city.

29.8 All trash enclosures shall be designed by a registered engineer, including structural calculations and footing designs, as required by the County of Riverside Building and Safety Department or the local city.

29.9 Confirmation of permit inspections and final sign-off is required prior to project acceptance.

30.0 Restroom Building

30.1 Restroom buildings shall be provided for all parks 5 acres and larger or as required by the District based on the specific needs of the park and community. Restroom buildings shall have the following components:

a. Multiple accessible single-user rooms with toilets, urinals, and sinks

b. Storage room

c. Garage with a roll-up door unless otherwise approved by the District

d. Restroom buildings with concession windows shall be required for parks with multiple sports fields of the same type unless otherwise approved by the District.

e. External drinking fountains

30.2 Buildings shall be pre-manufactured off-site and delivered to each project to minimize on-site construction and maintain District uniformity. Contact the District for project-specific layouts and requirements. Submit a conceptual layout of the building prior to commencement of construction plans and prior to submittal to the State, County of Riverside, or local city. Building plans must be submitted to the District to be reviewed for layout, material, appearance, and required amenities. All other aspects of the building shall be reviewed and approved by the State, County of Riverside, or local city.

30.3 Buildings must also have a maintenance space to house electrical panels, timers, camera recording equipment, and storage areas for miscellaneous park equipment. The size of the restrooms and maintenance room will be determined by project size and amenities.

30.4 All buildings must be compliant with ADA regulations.

30.5 Exterior materials and colors shall be submitted to the District for approval. Standard colors are as follows:

a. Walls shall be Khaki color, split-face CMU block with anti-graffiti coating

b. Roofing and Roof Flashing shall be Colonial Red color, 24-gauge metal vertical seam panels

c. Fascia shall be Pittsburg Toasted Almond PPG 1097-6 color, 16-gauge netter wrapped wood

d. Soffits shall be Pittsburg Toasted Almond PPG 1097-6 color, F.R.C., with a textured pattern.

e. Trim shall be Pittsburg Toasted Almond PPG 1097-6 color, F.R.C.

f. Cap Beam shall be Pittsburg Toasted Almond PPG 1097-6 color, steel

g. Vent Frames shall be Pittsburg Toasted Almond PPG 1097-6 color, F.R.C. and steel angle bar

h. Vent Screens shall be stainless steel

i. Alcove shall be Khaki color, precision CMU block

j. Doors, Frames, and Concession Shutter shall be Pittsburg Toasted Almond PPG 1097-6 color, hollow metal

k. Floor Finish shall be A1435 Blue Blend #B22-2158 color, polymer coating with chips.

30.6 Submittals

Refer to Chapter 15 Construction Specifications General Section 4.0 Contractor Submittals for general requirements.

30.7 Foundations

Foundations shall be a minimum of 8" thick reinforced concrete, as per the final stamped and approved engineer's drawings. Foundations shall be placed on an approved compacted certified building pad. Foundation knock-outs shall be coordinated to ensure all underground utilities line up, including additional conduits for each camera to be controlled by the digital network recorder within the building.

30.8 Walls

All restroom walls must be 8' minimum height and be 8" x 8" x 16" precision block walls with split-face with an integral color on the exterior. Provide anti-graffiti coating to all block walls inside and out. The building manufacturer shall apply anti-graffiti coating. Caulk between all blocks and wood. The District shall approve graffiti coating. All walls for concession rooms shall be tiled or have fiberglass-reinforced plastic (FRP) as approved by the District.

30.9 Doors

Doors shall be 10-gauge commercial steel self-closing doors with steel frames. All entry doors must swing outward. Provide electronically operated door locks that can be programmed to lock and unlock for restroom doors

only. All doors shall be clearly labeled, identifying the use. A Knox box shall be provided for emergency service access.

30.10 Roofing

Roofing shall be standing seam metal roofing.

30.11 Flooring

All restroom/maintenance floors shall be standard broom finish concrete with a polymer coating. All concession rooms shall be tiled. All building rooms shall have a floor drain with a brass grate. All floor drains must be positioned in the center of the room.

30.12 Vents

Provide gable vents as applicable. Gable vents must match exterior colors.

30.13 Lighting

Exterior lights must be provided and controlled by a photocell. Interior lights must be provided and controlled by a timer.

30.14 Security System

All buildings shall have a space and electrical supply source for a security camera system capable of capturing video of the playground area or other active recreational areas. Location shall be coordinated with the District.

30.15 Drinking Fountain

Exterior drinking fountains shall be provided for all restroom buildings. Drinking fountains shall be cooled with an internal chiller. High and low fountains meeting accessibility requirements shall be provided.

30.16 Domestic Water Supply Line

All domestic water supply lines shall be copper piping encased within a poly sleeve for all areas where the supply line is under concrete. SCH 40 PVC piping with SCH 80 fittings can be used where the supply line is under landscape areas. All piping shall be pressure tested at 150 PSI for 4 hours. Pressure test shall be performed by the contractor in the presence of the District. All piping shall conform to the District's potable water pressure line irrigation standards. The required size of the water line, pressure, and flow

rate shall be provided to the building company to confirm sufficient supply is provided. Piping shall not be less than 1-1/2 inch in size.

All domestic water supply lines shall be flushed, chlorinated, and sanitized per local health code. All domestic water shall have a dedicated potable water meter and approved backflow and enclosure.

30.17 Sewer

Sewer supply shall be provided for all buildings per local code. Refer to the District Sewer Standards and Specifications for additional information.

30.18 Concession Rooms

Concession rooms, when required, shall comply with all current local health department regulations. The District shall determine concession levels.

30.19 Grading

Grading plan for restrooms to be reviewed for elevations and layout only. Grading plans must also be approved by the County of Riverside or the local city. The contractor shall complete grading and filling as needed and remove all rocks and debris. Sub-grading preparation shall be in accordance with local governing agencies. Prior to commencing any work, the contractor shall carefully check all grades and verify that the finish floor elevation is per approved plans.

30.20 Clean Up

Clean up shall take place on a daily basis, after each portion of work has been completed and as directed by the District's representative. The contractor shall legally remove from the site any trash or additional materials generated by the project.

30.21 Final Approval

The District will not approve any buildings until all applicable grading permits, park amenity permits, and building permits have been approved and closed by the County of Riverside or the local city.

END OF SECTION

Chapter 24
Irrigation Specifications

IRRIGATION SPECIFICATIONS

IRRIGATION SPECIFICATIONS (GENERAL)

Valley-Wide Recreation and Park District (the "District" or "Valley-Wide") shall be considered Valley-Wide Recreation and Park District inspection personnel, consultants, or other approved team members hereafter.

This section establishes the irrigation requirements for development projects within the District's service area.

1.0 General Requirements

1.1 Permits: Contractor shall obtain and pay for any permits required.

1.2 Cal-OSHA permit is required prior to any excavation greater than 4 feet deep.

1.3 Contractor shall notify all utility companies through the Underground Service Alert (USA) 2 days before trenching.

1.4 Contractor must provide the District's representative with the USA Dig Alert number at the first inspection.

1.5 The current Irrigation Specifications must be on site at all times for each project.

1.6 All inspection fees must be paid prior to the start of work.

1.7 Contractor shall have and maintain a specialty C-27 license throughout the duration of the work. The contractor shall maintain an experienced project supervisor and foreman at the site at all times throughout the installation.

1.8 All work must be performed by a qualified contractor with a minimum of 5 years of experience performing similar projects. The District reserves the right to disqualify any contractor that does not meet this qualification.

1.9 Refer to Chapter 15 Construction Specifications General Section Contractor Submittals for general substitution requirements.

1.10 The District intends for all irrigation systems to properly irrigate all landscape areas, with water conservation being of the utmost importance. All irrigation shall be designed with individual zones for each different moisture requirement to provide 80% minimum Distribution Uniformity (DU).

1.11 All plant material shall be California-friendly and shall survive with a water demand of 70% or less of its referenced evapotranspiration (ETo).

1.12 Irrigation consultant shall provide an Estimated Annual Water Use (EAWU) and shall not exceed the Maximum Allowed Water Allowance (MAWA) unless approved by the District. Sports parks shall be considered a special use project and will be considered exempt from the MAWA. Contractor must ensure that water schedules comply with the MAWA after plant establishment is obtained and prior to District acceptance.

1.13 All planter irrigation shall be low-volume irrigation unless approved by the District. All turf irrigation within 24" of any non-permeable surface that could potentially run off-site shall be irrigated with Rainbird XF-SDI Series Dripline with Copper Shield™ Technology or approved equal. Dripline irrigation shall be installed per manufacturer guidelines.

1.14 An irrigation audit shall be provided for all irrigation work larger than 3,000 square feet to confirm distribution uniformity. Irrigation audit shall include recommended adjustments when needed.

1.15 All irrigation shall conform with Ordinance No. 859.2 and AB1881.

1.16 In the event of any contradiction within specifications, details, or plans, the contractor shall be responsible for compliance with the more stringent standard, unless approved in writing by the District.

1.17 All recycled and potable water irrigation systems shall comply with the following items per Eastern Municipal Water District ("EMWD") recycled water guidelines, regardless of water source, and are subject to change and must be verified with EMWD and the District:

a. All recycled water irrigation pressure mainline piping shall be installed a minimum of four horizontal feet away and one vertical foot under any domestic water line, including but not limited to all fire hydrants, blow-offs, and drinking fountains. In the event that a four-foot separation is not feasible, all irrigation pressure mainlines shall be sleeved ten feet in each direction from any domestic water line. If the pressure mainline changes direction within ten feet of the domestic water line, piping must be backfilled with concrete slurry instead of sleeving. No slurry shall be installed until the District has verified that the layout, piping, as-built measurements, and digital photo documentation have been completed.

b. All recycled water irrigation lateral piping that crosses or is within four feet of any domestic water line shall be sleeved ten feet in each direction.

c. Based upon the geographic area, all below-grade irrigation piping must be purple PVC per piping specifications, regardless of whether recycled water is available or not, unless approved in writing by the District.

d. Cross connections between domestic and irrigation piping is strictly prohibited. Interconnection of irrigation pressure mainlines originating from more than one meter is strictly prohibited.

e. No ponding, runoff or overspray is permitted. Adjust all sprinkler heads to minimize overspray onto sidewalks, streets, drinking fountains, decorative fountains, comfort stations, playground equipment, picnic tables, BBQ, private lots, potable water areas and equipment, food preparation, outdoor eating areas or non-designated use areas. All areas must be protected from recycled water overspray, wind blown spray, runoff, ponding, or unauthorized use. Lack of prevention, whether by design, construction practice, or system operation, is strictly prohibited.

f. All irrigation components must be included in the project record drawings as outlined within this specification's Section 5.0 below.

1.18 Labor Code Sections 1720 et seq. and 1770 et seq., as well as California Code of Regulations, Title 8, Section 16000 et seq. ("Prevailing Wage Laws"), require the payment of prevailing wage rates and the performance of other requirements on certain "public works" and "maintenance" projects. If this Project involves an applicable "public works" or "maintenance" project, as defined by the Prevailing Wage Laws, and if the total compensation is $1,000 or more, Developer agrees to fully comply with such Prevailing Wage Laws. The Developer shall defend, indemnify, and hold the District, its elected officials, officers, employees, and agents free and harmless from any claims, liabilities, costs, penalties, or interest arising out of any failure or alleged failure to comply with the Prevailing Wage Laws.

2.0 Scope of Work

2.1 The intent of the drawings and specifications is to indicate the process required for the installation of a complete operating irrigation system, complete in every respect, satisfactory to the District, applicable water purveyor, county, city, and state requirements.

2.2 The work consists of furnishing all tools, equipment, material, transportation, labor, and any processes required to provide a complete operating irrigation system as specified in the drawings and specifications.

2.3 Portions of the drawings are diagrammatic and must be field verified. The contractor must notify the architect and the District immediately of any discrepancies prior to starting work.

2.4 All work indicated in the specifications, details, notes, or plans shall be provided and installed, whether or not specifically mentioned in the specifications. It shall be understood that if an item is shown in specifications but not shown on the plan, it shall be as if shown on both, and if an item is shown on the plan but not shown in the specifications, it shall be as if shown on both. The District shall have final authority for any and all clarifications.

2.5 Due to the scale of the drawings, it is not possible to show all offsets, assemblies, fittings, etc. for a complete irrigation system.

2.6 Contractor shall provide all necessary assemblies, fittings, sleeves, etc., to provide a complete, fully automatic irrigation system as listed in drawings and specifications with no additional cost to the District.

2.7 The work shall be performed in a manner that does not conflict with any known obstructions. Contractor shall notify the District of any conflict. The contractor shall assume full responsibility for any modification or revision required if no notification was given to the District.

2.8 If recycled water is used, the contractor shall provide all necessary recycled water and all necessary signage and equipment. The entire irrigation system must be in accordance with the local recycled water purveyor's specifications and as listed in the drawings. The contractor shall notify the District of any contradictions between Valley-Wide specifications and the local water purveyor's specifications to confirm precedence.

3.0 Quality Control

3.1 Contractor must provide one competent English-speaking employee capable of understanding and communicating with District personnel on site at all times throughout the duration of the work.

3.2 Contractor must provide personnel with at least five (5) years of experience who are familiar with all types of material being used and installation methods for all work performed on similar projects under this section.

3.3 In the event that no specifications or details are provided for any items shown on the plans, the manufacturer's directions, specifications, and/or details shall be followed.

3.4 District specifications and/or details shall always take precedence over the manufacturer's specifications or recommendations.

3.5 All local, county, and state laws, rules, and regulations related to any portion of work under this section shall be incorporated within these specifications and adhered to throughout the duration of work. Nothing contained within these specifications shall be construed to conflict with said rules and regulations. The provisions of these specifications shall take precedence over the said rules and regulations in the event that these specifications indicate a higher quality or better standard.

3.6 Any extra work performed shall be approved in writing by the Owner or the District's representative before starting such work.

3.7 Any unapproved work will be at the contractor's expense.

3.8 All material and labor shall be free from any defects. Any defective work must be corrected immediately without additional cost to the District.

3.9 In the event of conflict between plans and specifications, the specifications or more stringent standard shall take precedence. No additional compensation shall be considered for direction given by District personnel providing clarification on specifications in the event of conflict between plans and specifications.

3.10 No additional compensation shall be given as a result of any District-generated punch list item or correction notice given to the contractor in order to comply with specifications.

4.0 Contractor Submittals

4.1 Refer to Chapter 15 Construction Specifications General Section 4.0 Contractor Submittals for general requirements.

5.0 As-Builts and Record Drawings

5.1 Refer to Chapter 15 Construction Specification General Section 5.0 As-Builts and Record Drawings for general requirements.

5.2 All mainline components, including, but not limited to, piping, change-of-direction fittings, valves, wiring, and sleeves, must be shown to scale on the plans in the locations installed in red.

5.3 All piping depths shall be shown on record drawings, including all sleeved street and sidewalk crossings.

5.4 Show measurement dimensions from the following locations:

a. Point of connection (P.O.C.)

b. Backflow prevention assembly, master valve, and flow sensor

c. Routing of irrigation pressure mainlines and all directional changes

d. Routing of control wiring when separate from the irrigation mainline

e. Future wire stub-out locations and quantities

f. Gate, ball, and butterfly isolation valves

g. Irrigation control valves

h. Automatic controller, rain sensors, and electrical conduits

i. Sleeves and pull boxes

j. Moisture sensors and tipping buckets

k. Other related equipment (as directed by the District.

5.5 Contractor must submit complete field irrigation as-built drawings for review at the time of pressure testing. A Valley-Wide representative shall review the irrigation as-built drawings during mainline pressure testing, and any corrections must be made prior to pressure test approval. The Valley-Wide inspector will then sign and date the irrigation as-built drawings, and the contractor must provide a scanned digital copy of the District-signed irrigation as-builts within 3 working days to Valley-Wide. No pressure line trenches will be allowed to be covered until the field as-builts are reviewed and deemed acceptable to be transferred to final record drawings.

5.6 All electrical conduits shall be included in the as-builts.

5.7 All irrigation as-built drawings shall include actual depths taken from the top of the pipe to the final finish grade.

5.8 All irrigation as-built drawings must include any changes to valve numbering and sequencing.

5.9 The routing of all wiring shall be listed on the irrigation as-built drawings, and any wiring away from the mainline must be identified, including all dimensioned measurements.

6.0 Controller Charts

6.1 Irrigation as-built drawings shall be approved in writing prior to completion of the controller charts.

6.2 Provide two controller charts for each controller supplied, showing the area covered by the automatic controller for each valve zone. Any changes to valve sequencing and lateral layouts must be shown on the controller charts and must match the irrigation as-built drawings.

6.3 The chart shall be a reduced reproduction of the as-built system in black or dark gray. If the controller sequence is not legible when reduced, enlarge it to a size that will be legible when reduced.

6.4 Charts shall be black or dark gray line print with a different transparent color used to show each station's coverage area.

6.5 Completed and approved charts must be provided in PDF format, and two laminated with 10 mil thick plastic hard copies must be provided to the District.

6.6 Charts shall be completed and approved prior to the final inspection of the irrigation system. Charts that are laminated prior to approval with corrections shall be revised without additional cost to the District. Controller charts shall also be saved as an Adobe Acrobat PDF file and submitted to the District.

6.7 Controller access. The District reserves the right to have complete access to the controller clocks for monitoring and controlling system failures. The contractor shall provide the District with two sets of all keys necessary for access to the controller clocks within the designated area. The keys will then become the property of the District.

7.0 Operation and Maintenance Manuals

7.1 Refer to Chapter 15 Construction Specifications General Section 6.0 Operation and Maintenance manuals for general requirements.

8.0 Spare Parts and Equipment

8.1 Prior to the start of maintenance, prepare and deliver to the District all required spare parts, tools, and equipment. Spare parts, tools, and equipment shall include, but not be limited to, the following:

a. 2 quick coupler keys with ¾ inch bronze hose bib with a hand wheel

b. 2 quick coupler lid keys

c. 1 valve box cover wrench or key

d. 2 wrenches and screw drivers for adjustment and disassembly for each type of sprinkler head used in the irrigation system

e. 1- 5-foot tee wrench for operating isolation valves if specified

f. 6 extra sprinkler heads of each type and size used in the irrigation system

g. 25 extra drip emitters of each type used

h. A quantity equal to 10% of all decoders used when 2-wire is specified.

9.0 Warranty

9.1 Provide a written warranty that all work with defects in workmanship and materials will be repaired or replaced at no cost to the District for a period of one year from the date of acceptance by the District's representative.

9.2 Manufacturer’s warranties do not relieve the contractor of liability under their guarantee but shall supplement the contractor.

9.3 Warranty letters shall be provided on the contractor's letterhead, notarized and must contain the following information on the next page:

Warranty for Irrigation System
Project Name and Tract No.

Contractor hereby warranties that the irrigation system we have furnished and installed for **Name of Project** is free from defects in materials and workmanship, and the work has been completed in accordance with the drawings and specifications. The District agrees not to hold contractor responsible for ordinary wear and tear, unusual abuse, or neglect, as determined by the District. Contractor agrees to repair or replace any defects in material or workmanship, which may develop during the period of one (1) year from the date of formal Valley-Wide acceptance, and also to repair or replace any damage resulting from the repairing or replacing of such defects at no additional cost to the District. Contractor shall make all mainline repairs or replacements within 36 hours of written notification and all other repairs or replacements within 7 days of written notice. If contractor fails to complete such repairs or replacements for mainline piping within 36 hours of written notice or any other repair within 7 days after receipt of such written notice, the contractor hereby authorizes the District to proceed on behalf of the contractor to have said repairs or replacements made and agrees to pay all costs, including material, labor, and equipment, including a 10% administrative fee.

Project Name:_____
Location:_____
Landscape Architect:_____
Contractor's License No.:_____
Signature:_____
Title:_____ Date:_____
Address:_____
Phone No.:_____

10.0 Inspections

10.1 Refer to Chapter 15 Construction Specifications General Section 7.0 Inspections for general inspection requirements.

10.2 The contractor shall allow the District to inspect the project at any time throughout the duration of the project and shall provide safe access to all areas of the project for all visits.

10.3 The District reserves the right to require inspection of any and all work listed below, but not limited to the following:

	Site Inspections:	**Notification time**:
a.	Pre-construction conference	7 days
b.	Mainline/valve/tree layout	48 hours
c.	Pressure line installation and testing	48 hours
d.	Valve box inspection	48 hours
e.	2-wire conduit mandrel test	48 hours
f.	Lateral line and sprinkler installation	48 hours
g.	Coverage test	48 hours
h.	Final Inspection	7 days

11.0 Irrigation System Layout

11.1 The district must be notified 48 hours prior to any irrigation testing or inspections.

11.2 Prior to commencement of any trenching, the contractor must mark out proposed lines and obtain layout approval from the District. Approval from the District does not relieve the contractor of any potential obstructions. Contractor must review all construction plans to avoid layout conflicts with any storm drain, electrical, gas, domestic water, cable television, data lines, trees, etc.

12.0 Pressure Line Observation

12.1 Contractor shall perform a water pressure test to all pressure lines in the presence of the District and EMWD prior to any backfilling of any trench. Contractor shall call for field observation for verification of material, depths, and clearances by the District and EMWD.

12.2 All pressure lines must be tested under hydrostatic water pressure at 150 pounds per square inch (PSI) and be proven watertight.

12.3 Pressure lines must maintain pressure for a period of 2 hours. If a pressure drop occurs, the contractor shall replace joints and repeat the test until no pressure drop is achieved.

12.4 Pressure test must include all isolation valves, remote control valves, fittings, and piping.

12.5 Pressure tests must be performed with multiple pressure gauges at the high and low ends of the mainline. Additional pressure gauges may be required at the ends of the mainline where runs exceed 300 feet.

12.6 As-builts must also be reviewed for all pressure lines prior to backfilling.

12.7 All pipe labels must be facing upwards and be visible for inspection.

12.8 Any trenching covered that was not inspected or approved shall be made visible for observation at the Contractor's cost.

12.9 All pressure line trenches must be trenched wide enough to allow for control wiring to lay adjacent to the pipe and maintain clearance on each side of the trench per District details.

12.10 Proposed backfill must be reviewed at the time of the pressure test to determine if the site soil is suitable for backfill or if clean fill or sand is required. After the pressure testing is completed, the contractor may backfill the initial trench and prepare it for the installation of the required warning tape.

12.11 The District shall verify warning tape installation prior to complete backfill. Warning tape shall be installed per District details and must be installed at a consistent depth throughout the trench.

13.0 Lateral Line Observation

13.1 Prior to any backfilling of any trench, the contractor shall call for a field inspection for verification of material, depths, and clearances by the District.

13.2 All sprinklers and assemblies shall be made visible for observation to verify that all material has been installed per the plans and specifications.

13.3 Per District Details, all lateral line trenches must be trenched wide enough to allow clearance between the pipe and untrenched soil.

13.4 Any trenching covered that was not inspected or approved shall be made visible for observation at the cost of the Contractor.

13.5 UVR piping shown on plans for point-to-point irrigation must be buried 4 inches deep. UVR piping on 3:1 and 2:1 slopes may be above grade with pipe support j-hooks at 10 feet on center.

14.0 Controller Testing

14.1 Prior to final acceptance, the contractor shall provide certification from the manufacturer stating that the controller specified on the drawings has been installed per the manufacturer's specifications and District communication requirements.

14.2 The contractor shall test all control wires and extra control wires in the presence of the district to confirm their proper operation.

14.3 The contractor must have all flow sensors, master valves, weather devices, booster pumps, etc., installed prior to the controller inspection.

14.4 The controller must have permanent power.

14.5 Contractor shall provide sufficient manpower and communication devices to complete such testing in a timely manner.

14.6 All master valves, flow meters, tipping buckets, and moisture sensor equipment must be set up in the controller prior to acceptance, including learned flows for all zones.

15.0 Coverage Test

15.1 Contractor shall perform a coverage test in the presence of the District. All irrigation sprinkler systems must provide 100% head-to-head coverage. Any areas not receiving head-to-head coverage shall be corrected and retested by the District.

15.2 All point-to-point zones must be reviewed to ensure a consistent, equal distribution of watering within all high and low points throughout each zone. Any uneven watering locations must be corrected by reviewing piping, check valves, and emitters. The review includes all ball valves, pressure regulators, check valves, and flush valves.

15.3 Permanent power must be connected prior to scheduling the coverage test.

15.4 All irrigation areas to be tested must be finish graded prior to the coverage test.

15.5 Contractor shall provide sufficient manpower and communication devices to complete such testing in a timely manner.

15.6 All irrigation heads must be adjusted to prevent overspray to buildings, walks, streets, etc. per Section 20.0 below.

15.7 No planting or hydro-seeding shall take place until a coverage test has been approved in writing by the District.

15.8 Tree planting may commence after the mainline is completed with approval from the District.

16.0 Final Irrigation Inspection

16.1 All irrigation systems shall be tested in the presence of the District and be under complete automatic operation and proven to be leak-free; irrigating designated areas per plans and specifications without overspray.

16.2 The contractor shall provide AutoCAD and Adobe Acrobat PDF files with as-built record drawings and controller charts at the final irrigation inspection for approval prior to mylar transfer and laminating the controller charts.

16.3 Irrigation turn-over items shall be submitted to the District prior to the start of maintenance per Chapter 26 Maintenance Specifications Section 16.0.

16.4 Contractor must provide evidence that controllers have been monitored and adjusted based on the needs of the landscape and weather conditions, and water budget restrictions. Water utility bills must be submitted prior to acceptance to confirm water use.

17.0 Layout

17.1 Contractor shall lay out the irrigation mainline, including change of directions, valves, sprinklers, etc., for approval from the District. Layout approval is for compliance with District guidelines and does not relieve the contractor of the obligation to verify potential conflicts with existing utilities and other items to be installed, i.e., trees, walls, concrete, etc.

17.2 Contractor must identify all mainline changes of direction and ensure that all changes of direction are minimized and the use of 90-degree elbows is limited to locations where two 45-degree elbows are not feasible.

17.3 Contractor must identify all trees, street lights, and other above-ground utility locations with the mainline layout.

17.4 Layout of all mainline change of directions and valves shall be done to obtain adequate distance between fittings to minimize future repairs if fittings fail. It is recommended to maintain a 10” minimum distance between each solvent-welded fitting, unless otherwise approved by the District.

18.0 Trenching and Backfilling

18.1 Contractor must contact USA “Dig Alert” prior to any digging.

18.2 No trenches are to be backfilled until approval from the District has been acquired.

18.3 Excavate trenches straight and support pipe continuously on the bottom of the trench per the layout indicated on the drawings.

18.4 All trenches must be wider than piping per District details.

18.5 All lines shall have a minimum clearance of 4 inches vertical and horizontal from each other and 24 inches from any other lines from different trades.

18.6 Provide the minimum cover as listed below:

a.	Pressure lines 4” and larger	30 inches
b.	Pressure lines 3” and larger	24 inches
c.	Pressure lines 2 ½” and smaller	24 inches
d.	Lateral lines	12” (no more than 18”)
e.	Control wiring	24” (next to mainline)

18.7 Fine granular soil not larger than ½ inch shall be backfilled to achieve a 2-inch-deep bedding below piping. Sand shall be used when site soil is unsuitable, as determined by the District, at no additional cost to the District.

18.8 Fine granular soil not larger than 1/2 inch shall be used for the initial 6 inches of backfill and shall be compacted to a density equal to undisturbed soil. Sand shall be used when site soil is unsuitable, as determined by the District, at no additional cost to the District. Clean backfill soil not greater than 1 inch shall be used for the remaining backfill and shall be compacted to 90% density.

18.9 No flooding shall be performed to compact trenches unless approved by the District.

18.10 Sand backfill, a minimum of 3 inches shall be provided below and above all piping under paved areas.

18.11 If any settling occurs and if any irrigation adjustments are required, the contractor shall make these adjustments with no additional cost to the District.

18.12 Contractor shall install concrete thrust blocks for all pressure line changes of direction 2-inch and larger. Thrust blocks shall be a minimum size of one cubic foot. Thrust blocks must be provided for bell and gasket pipe, joint restraint system fittings.

19.0 Flushing the System

19.1 Contractor shall flush all mainline piping and assemblies prior to installing control valves, quick coupler valves, or other valves per plan to ensure that no debris is present. Contractor shall repeat flushing as needed to achieve a clean and clear system.

19.2 The contractor shall flush all lateral piping and assemblies, including all swing joints, prior to installing irrigation heads, bubblers, or emitters per the plan to ensure that no debris is present. The contractor shall repeat flushing as needed to achieve a clean and clear system. After all heads have been installed, the contractor shall install all nozzles as needed.

19.3 Point-to-point systems shall be flushed prior to the installation of any emitters or flush valves by installing temporary risers at flush valve locations. After the initial flushing has been done, flush system again while installing the emitters. Contractor shall be responsible for the replacement of any clogged nozzle or emitter.

20.0 Adjusting the System

20.1 The contractor shall adjust all irrigation heads, control valves, pressure regulators, etc., for optimum performance.

20.2 The contractor shall be responsible for selecting the best nozzle to achieve head-to-head coverage at no additional cost to the District. All head and nozzle adjustments shall be shown on the record as-built drawings. All nozzles shall be adjusted to spray the arc and radius as specified per the manufacturer's nozzle performance chart. Nozzles for rotors and spray heads shall not be over-tightened to achieve the desired arc or radius in order to avoid replacing the nozzle with the appropriate size. Any nozzle for rotor or spray heads with poor spray patterns shall be replaced per the manufacturer's recommendations as directed by the District without any additional cost to the District.

20.3 All heads must be adjusted to prevent overspray onto buildings, walkways, streets, etc.

20.4 Adjusting the system shall include adjustments to any pressure-regulating device at the pump, master valve, or zone valves.

21.0 Sleeving

21.1 All sleeving shall be two (2) times the diameter of the pipe used. Minimum sleeve size shall be two (2) inches.

21.2 All sleeving shall have a minimum cover of 24 inches and a maximum cover of 36 inches under paving.

21.3 All sleeving shall extend a minimum of 12 inches horizontally past paving.

21.4 All ends of sleeves shall be located within District-maintained landscape areas and must also be located within the County right-of-way or open space lot that has an easement to Valley-Wide for maintenance purposes.

21.5 All ends of sleeves must be located away from walls so that piping within a sleeve can be replaced without accessing any area outside the District's maintained landscape.

21.6 All street sleeving must be installed per the District's sleeving detail.

21.7 All trenches for sleeving must be compacted to 95% compaction using a manual or mechanical tamping device.

21.8 The contractor shall cap and pressure test all pressure lines under the paving prior to backfilling and paving.

21.9 The contractor shall be responsible for installing all sleeves required for the irrigation system that are not listed in the drawings.

21.10 All ends of sleeves shall be sealed with expansion foam per District details.

21.11 All sleeves with larger diameter bell and gasket piping requiring pipe-to-pipe restraints shall be large enough to clear pipe restrains, nuts, and bolts. When possible, request that all piping within sleeves be solvent-welded with approval from the District prior to installation.

21.12 All sleeving shall be purple when recycled water is used.

21.13 As-builts must be provided for all sleeves with two points of reference and shall also include the depths of sleeves.

IRRIGATION SPECIFICATIONS (MATERIALS)

22.0 Backflow Prevention Devices

22.1 Backflow prevention units shall be approved by the Foundation for Cross-Connection Control and Hydraulic Research and the water purveyor.

22.2 Backflow assemblies shall be installed using brass or copper elbows, unions, and nipples.

22.3 Type: Febco 825YA or approved equal (for potable water)

22.4 Backflow device enclosure shall be constructed of powder-coated steel painted green. Enclosure shall be poured in a concrete pad using steel hardware. Sentry Max Security Lock Down (800) 716-8071 (no known equal).

22.5 When a fertigation system is used with recycled water, an approved DC backflow assembly shall be used. The type is Febco LF850 or an approved equal.

23.0 Pressure Reducing Valves

23.1 Pressure reducing valves shall be of bronze and stainless-steel construction and be adjusted from 25 P.S.I. to 125 P.S.I.

Manufacturer: Wilkens 500HLR or approved equal

24.0 Wye Strainers

24.1 Wye strainer shall be bronze construction with a stainless-steel screen element. The wye strainer shall have a standard filtration size of 80 mesh.

Manufacturer: Wilkens 100YSBR or approved equal

25.0 Shut Off Valves

25.1 Ball Valve:

a. Shut off valves 2 inches and smaller shall be brass ball valves.

b. Brass ball valves shall be threaded forged brass 1 CU>57% with a working pressure of 400 PSI. The ball valve shall have a vented ball

with a blowout-proof system. Ball valves shall conform to AWWA standards.

Manufacturer: Nibco T-580-A or approved equal

25.2 Gate Valves:

a. Shut off valves 2 ½" and larger shall be self-restrained, resilient wedge gate valves.

b. Gate valves must conform to AWWA C-515 standards, rated for 250 PSI.

c. Gate valves shall have ductile iron parts and must be coated with fusion-bonded epoxy that meets AWWA C550 standards.

d. Gate valves shall have a 2-inch square operating nut.

e. Gate valves shall have a shroud around the operating nut to provide dirt-free access to activate the valve.

Manufacturer: Leemco LMV BB Series or approved equal)

26.0 Quick Coupler Valves

26.1 Quick coupler valves shall have a body constructed of red brass with a wall thickness guaranteed to withstand the normal working pressure of 150 P.S.I. without leakage with female threads at base. The quick coupler valve shall have a hinge cover constructed of red brass with a leather-like vinyl cover bonded to it in such a manner that it becomes a permanent type of cover. Quick couplers used with potable water shall have vinyl covers yellow in color. Quick coupler valves used for recycled water shall have locking vinyl covers, purple in color, with the appropriate recycled water warnings in English and Spanish, as well as the "Do Not Drink" symbol.

26.2 All quick coupler valves must have a brass ball valve installed directly below them to isolate the mainline from the quick coupler valve. The mainline shall be the size of the quick coupler valve from the mainline tee to the quick coupler.

Manufacturer: Potable Water: Rainbird 44LRC – lug type or approved equal
Recycled Water: Nelson # 7645, Signature-ACME or approved equal

27.0 Remote Control Valves

27.1 The remote-control valve shall be normally closed, 24 VAC solenoid-actuated globe pattern, spring-loaded diaphragm type. The valve shall be pressure rated up to 200 P.S.I. at 150 degrees F. Valve shall have a durable glass-filled nylon construction.

27.2 The valve shall have a 600-pound test fabric-reinforced rubber diaphragm assembly with a self-cleaning stainless-steel screen.

27.3 The remote-control valve body and bonnet shall be brass, and the valve shall have a stainless-steel control shut-off stem and manual operator.

27.4 The valve shall have a nylon scrubber that scrapes a stainless-steel screen to clean and break down grit and plant material.

27.5 The valve shall have a pressure regulating solenoid module (PRS-D) for all lateral lines with fixed spray nozzles or rotors. PRS-D devices are not required for tree bubblers or point-to-point zones.

27.6 The valve shall have a purple handle when recycled water is used.

27.7 All remote-control valves shall have Christy or approved equal plastic molded valve identification tags with corresponding controller and valve number. Purple numbered identification tags with the "Do Not Drink" symbol on the back shall be used when recycled water is used.

Manufacturer: Rainbird PESB-PRS-D or approved equal

28.0 Master Control Valves

28.1 The master control valve shall be either switchable, normally closed, or open 24 VAC solenoid-actuated globe pattern, spring-loaded diaphragm type. The valve shall have a pressure rating of up to 200 P.S.I. at 150 degrees F.

28.2 All wiring for master valves shall be installed in a separate conduit from the master valve to the controller.

28.3 Red wires from the master valve solenoid shall be connected to the controller "MV" and "MV Common" terminals.

28.4 All master valves shall have Christy or approved equal plastic "MV" molded valve identification tags. Purple identification tags with the international "Do Not Drink" symbol on the back shall be used when recycled water is used.

28.5 All wire connections for master valves shall be soldered in addition to the wire connectors per Section 38.0 below.

Manufacturer: Superior 3200 or 3300

29.0 Flow Meter

29.1 Flow meter shall be constructed of a schedule 80 tee whenever possible with a solid-state O-ring sealed epoxy fused sensor housing and nylon impeller. Flow switch sensitive to flows as low as 1 foot per second (FPS) mounted on piping and interconnected to a time delay relay to shut down the pump for no flow conditions, time delay relay adjustable from 0 to 5 minutes.

29.2 The flow meter must be installed and wired per the manufacturer's specifications.

29.3 Irrigation zones must be sized so that the specified flow meter is capable of reading the minimum and maximum gallons per minute for all proposed zones.

29.4 Install directly downstream of the master valve.

29.5 All wiring for the flow meter shall be installed in a separate conduit from the flow meter to the controller.

29.6 All flow meters shall have Christy or approved equal plastic “FM” molded valve identification tags. Purple identification tags with the “Do Not Drink” symbol on the back shall be used when recycled water is used.

29.7 All wire connections for flow meters shall be soldered in addition to the wire connectors per Section 38.0 below.

Manufacturer: Calsense FM U, FM or FM-X

30.0 Tipping Bucket

30.1 Each single controller must have a tipping bucket capable of collecting rainfall data. When multiple controllers are used within a community, controllers should be specified to share data with one tipping bucket, provided that it is confirmed that each controller can properly share the data.

31.0 Main Line Filtration Device

31.1 Filter shall be constructed of heavy-gauge steel, which is fusion epoxy lined with 3M Scotchkote® 134 with a Maxi-Clean® rugged polymeric screen 150-mesh filtration element with a stainless-steel basket.

31.2 The filter shall have a flush port that shall be connected to an automatic flush valve per the District Auto Flush Detail.

31.3 The filter shall have an easy-open lid that allows cartridge removal.

31.4 The filter must comply with all current local water district requirements.

31.5 The filter shall be powder-coated purple when recycled water is used.

31.6 The filter must have an automatic remote-control valve with control wiring connected to the irrigation controller for automatic flushing per filter detail.

31.7 The automatic flush valve must be connected to DRIP 2 program within the Calsense controller for District monitoring.

31.8 Filters must have a discharge piping and a sump to capture automatic flushing.

Manufacturer: Yardney MCS-XX Series or approved equal)

32.0 Lateral Line Filtration Device

32.1 Lateral line filters shall be installed directly after each drip remote control valve.

32.2 The filter body shall be made from impact-resistant glass-filled polypropylene with a glass-filled nylon cap.

32.3 The filter shall have an indicator bubble to ensure the filter will be cleaned as needed.

32.4 The filter screen shall be stainless steel. Mesh size shall be 75/100.

32.5 Two filters shall be used at each valve when flows are between 20.0 and 40.0 GPM.

32.6 Filters shall not have any pressure-regulating components.

Manufacturer: Rainbird QK-CHK or approved equal

33.0 Booster Pump

33.1 Booster pumps shall be as manufactured by Barrett Engineered Pumps, San Diego, California (619) 232-7867. The project irrigation consultant and pump engineer shall determine the pump based on District requirements for each specific project.

33.2 Booster pumps must be controlled by a flow switch activator. Pump relay switches will not be allowed without written approval.

33.3 Booster pumps must be pre-assembled by the manufacturer and have an aluminum marine-grade lockable enclosure.

33.4 The irrigation consultant, pump manufacturer, and the District shall determine the pump size, pressure regulator settings, and relay timing and approve them.

33.5 Booster pumps shall have variable frequency drive (VFD) motors.

34.0 Fertigation Injectors

34.1 All irrigation systems must have a fertilizer injector system.

34.2 Systems with only point-to-point drip and basin irrigation can have siphon-based fertilizer injectors for systems 80 PSI or less. These systems are referred to as Siphon-based systems.

34.3 Siphon-based fertilizer injector systems shall be High-Capacity Mainline Systems connected directly to the irrigation pressure mainline to irrigate through each zone irrigation system.

34.4 Siphon-based systems shall be capable of operating with sprinklers and drip irrigation zones to have fertilizer fed through them without needing to change nozzles or adjust for water flow and water pressure. Every time you use your irrigation system, the fertilizer injector shall release small, precision doses of water-soluble or liquid fertilizers into the water stream automatically.

34.5 Siphon-based systems shall be High-Capacity Main Line Systems and shall include a proprietary fill system allowing the tanks to double their water-soluble capacity, without the need to remove the proportioning cap to add

products. High-Capacity models must feature a larger drain valve, an automatic air vent valve, and a schedule 80 PVC body for added protection and durability. Units shall be constructed of heavy-walled, UV-resistant PVC and have no moving parts, making them very reliable, dependable, and maintenance-free.

34.6 Siphon-based systems must provide various precision settings that enable you to achieve desired feed rates for just about any fertilizing or control situation. The systems shall automatically adjust to pressure and flow.

34.7 Systems shall operate on as little as 0.53 gallon per hour flow at only 5 PSI (35 kPa) water pressure. Systems shall be rated to 80 psi.

Manufacturer: EZ-Flow or approved equal

34.8 Systems with turf and recreational areas and systems over 80 PSI must be capable of flow sensing to ensure accurate and precise proportional injection of fertilizers into the landscape. Flow metering shall be used to receive direct flow-rate signals to automatically control discharge volume into the irrigation system. The fertilizer injector shall be capable of calculating mainline flow rates to calibrate the application ratio and shall be fully adjustable.

34.9 Injector shall use metering controls that allow the injection rate to be set in three ways:

a. Stroke Speed: 1 – 300 strokes per minute (spm)

b. Percentage: 1 to 100%

c. Injection rate: ml/min.

34.10 The manual stroke length shall be adjustable from 20% to 100%.

34.11 The metering control shall have an onboard calibration to measure the actual discharge volume under the exact operating condition of the specific installation and chemical, that then stores that value to ensure the correct injection rate.

34.12 The injector system shall inject a multi-pump proportional flow rate from a single direct flow sensor signal (pulse/analog).

34.13 Injector shall have a 2-point level control that enables output of an alarm at the liquid level “low limit” and stops pump operation at the “low-low limit”.

34.14 The injector shall have batch injection, which allows pump operation to start on a command signal. Operation shall automatically stop, and the operator shall be notified of completion when a preset count is reached.

34.15 The injector shall allow ON time and OFF interval that can be set from 1-9999 minutes. The injector shall allow interval injection, which allows repeated start and stop operation by a preset timed program. The injector shall allow an ON time and an OFF interval that can be set from 1 to 9999 minutes, respectively.

34.16 The injector shall have low-level sensing abilities to ensure that the metering pump shuts down in case of low tank fluid levels.

34.17 Injector metering pump shall be made of a PVC head, Viton valve seat, ceramic check ball, Teflon diaphragm, and ½" FNPT suction and discharge connections.

34.18 The injection electrical system shall be 120 VAC and have a dedicated circuit.

34.19 Tanks shall be made of durable, corrosion-resistant polyethylene material to hold all typical chemical or biological materials used in fertigation and shall be dual-tanked for greatest containment. Tanks shall be available in sizes from 15-200+ gallons and sized according to the area irrigated.

34.20 The injector shall have a flow sensor to provide the required pulse signal to the control unit to signal the pump of the current volume of water flowing through the irrigation piping at any given time.

34.21 Agitation shall be used so that liquids that require constant mixing do not clog the tubing or injection tee in the pipeline. Agitator shall be a 120VAC/60 Hz electrically controlled 1/20HP mixer pre-mounted on top of the inner tank and activated whenever the injection pump is operational.

34.22 The fertilizer injector system shall be installed below grade within a box or vault and secured to ensure the box or vault does not move upward or settle downward.

34.23 Fertilizer injection flow meter and injection lance must be installed after the irrigation flow meter used for controller flow monitoring.

34.24 Fertilizer injector must be installed per the manufacturer's installation specifications and District details.

34.25 The contractor shall install liquid fertilizer in the injector system prior to the start of the maintenance period. The type and application rate shall be according to manufacturer recommendations and recommended by a qualified fertilizer advisor.

34.26 Contractor shall provide a written certification from the manufacturer confirming that installation, fertilizer application, and programming have been performed properly.

Manufacturer: LIS Ferti-boost or approved equal.

35.0 Automatic Controller

35.1 Manufacturer: Calsense. Please contact Calsense at (800) 572-8608 for specific District requirements and communication components as determined per project.

35.2 The controller shall operate on a minimum of 120 volts A.C. power input and shall be capable of operating up to four 5.5 VAC 24-volt A.C. remote control valves at once. The controller shall have a reset circuit breaker to protect the controller from overloading.

35.3 The controller shall have independent programmable stations. The controller-programming schedule shall be capable of allowing four automatic start times per day on four separate programs. Station timing shall be variable from 1 to 99 minutes. The controller must have a water budgeting function to allow increasing or decreasing of watering times for all stations at once.

35.4 The controller shall have a master valve/remote pump start circuit for use with a master valve to pressurize the system when the programmed cycle starts to activate a remote pump start relay to run the pump during the programmed cycle.

35.5 The controller shall have manual watering capabilities for single-station operation at any time without changing programmed times.

35.6 The controller shall have a factory-installed backup program for standby operation and a backup battery to maintain the program during power loss.

35.7 Install one extra 1½" inch conduit to the controller for future use.

35.8 Contractor shall be responsible for communicating with Calsense to ensure that all of the required components are ordered and installed per the

District's requirements, as determined by Calsense, for each individual project.

35.9 The architect must provide the following information to Calsense:

a. Project name and tract number

b. Project location-cross streets or address if applicable

c. Number of controllers on the project and proposed specification

d. Number of water meters on the project

36.0 Controller Enclosure

36.1 All controllers installed outside must be mounted inside a stainless-steel enclosure with lockable-hinged doors provided by the controller manufacturer.

36.2 The enclosure shall have one full-time 120 VAC GFCI-type circuit with an on/off switch and pigtail connection for remote control use.

Manufacturer: Calsense SSE-R.

37.0 Electrical Pedestal

37.1 All electrical pedestals must be stainless steel.

37.2 All electrical pedestals must comply with local electrical code and agency requirements and permits.

37.3 Refer the District Electrical Standards and Specifications for additional information.

Manufacturer: Strongbox #MPS-A16-10K or approved equal

38.0 Control Wiring

38.1 All control wiring for connections between remote control valves and controllers shall be either direct burial AWG-F wire or 2-wire systems and must be installed in accordance with the manufacturer's specifications.

38.2 In the event of project phasing, the district shall approve all required splices, which must be sealed with waterproof connectors and waterproof sealant

and installed in a pull box. Direct burial wire must be upsized one size for each splice.

38.3 All wire connections for remote control valves must be connected with Dayton or approved equal copper oval wire rope sleeve installed with a 4-sided Bucanan C24 crimper tool and 3M DBR-6 connectors for direct burial wire and must be 3M ScotchCast™ connector sealing pack for 2-wire systems.

38.4 All wire connectors for master valves and flow sensors must be connected with Dayton or approved equal copper oval wire rope sleeve installed with a 4-sided Bucanan C24 crimper tool and 3M DBR-6 connectors with a hardener applied inside of wire nut for direct burial systems and must be 3M ScotchCast™ connector sealing pack for 2-wire systems.

38.5 All extra wires shall be sealed with waterproof connectors.

38.6 Direct burial wiring shall be buried adjacent to mainline wherever possible and for more than one wire they shall be bundled at every ten feet using black electrical tape.

38.7 Direct burial wiring shall have 24-inch expansion curls provided within three feet of each connection and at all changes in direction a 24-inch expansion loop for every 100 feet of run.

38.8 Direct burial wire size shall not be less than #14. Provide #12 for runs over 2500 feet.

38.9 All direct burial common wires shall be #12.

38.10 Direct burial control wires shall be black. If additional controllers are installed, provide different-colored control wires for each controller.

38.11 Direct burial common wire shall be white in color. If additional controllers are installed, provide a white wire with a colored stripe. Stripe to be same color as control wire color.

38.12 When direct burial wire is used, the contractor shall provide one extra wire for every five valves and two extra wires for every valve in any isolated area. The extra wires shall extend past the last valve in a group. The extra wires shall be orange in color, looped in every valve box, and made accessible for future use if needed.

38.13 No direct burial wire splices shall be permitted unless run is longer than 2500 feet or approved by District's representative.

38.14 2-wire shall be twisted 14/1 AWG wire within an outer jacketed housing for operation up to 600 volts, and temperatures up to 60˚C. Inner conductors shall be soft-drawn copper meeting the requirements of ASTM specification B-3 or B-8. Insulation shall be low-density, high molecular weight polyethylene and a thickness of 0.445" per Paige electrical specification P7079D. The two conductors (blue and red) shall be twisted with a minimum lay of 4".

38.15 When 2-wire is specified, all wiring must be installed within a 1.25" minimum diameter electrical conduit, with sweeps into all valves and pull boxes.

38.16 All conduit must be thoroughly mandrel cleaned and dry prior to installation of wiring.

38.17 Contractor must schedule conduit mandrel inspection prior to installation of wiring.

38.18 All ends must be sealed per the District details. Sweep ends must be placed so as not to impact the access and removal of remote-control valves.

38.19 Grounding of 2-wire shall be per the controller manufacturer's requirements

Manufacturer: Direct burial wire Paige or approved equal
2-wire Paige P-7354-d 14/1 AWG

39.0 Valve Boxes

39.1 All valve boxes for irrigation valves shall be made of HDPE structural foam conforming to ASTM D1248 with a tensile strength of 3,000 to 4,400.

39.2 Standard rectangular valve boxes shall be 14 inch wide by 19 inch long and 12 inch high. Rectangular lids shall have a lip (t-cover) to overhang the box. Rectangular boxes shall be NDS Pro 314BCB, Rainbird VBSTD, or approved equal.

39.3 Round valve boxes shall be 10-inch diameter and 10- inch high. Round lids shall have a lip (t-cover) to overhang the box. Round boxes shall be NDS Pro 312BCB, Rainbird VB10RBDH, or approved equal. Round boxes shall only be used for flush valves, unless otherwise approved in writing by the District.

39.4 Round valve boxes shall be 6-inch diameter for all PVC ball valves used at the beginning of each point-to-point lateral line just prior to each pressure

regulator. Round emitter boxes are not required to be locking. Round emitter boxes shall be NDS 107BC, Rainbird PVB6RND, or approved equal.

39.5 Jumbo valve boxes shall be used when needed and as indicated in the District details. Jumbo boxes shall be 13 inch wide by 20 inch long and 12 inches high or larger as needed to accommodate valve(s). Jumbo box lids shall have a lip (t-cover) to overhang the box. Jumbo boxes shall be NDS Pro 318BCB, NDS Pro 324BCB, Rainbird VBJMB, Rainbird VBSPRH, or approved equal.

39.6 Valve boxes shall have locking covers secured with a 3/8-inch stainless steel bolt and washer.

39.7 Rectangular valve boxes shall be used for control valves, quick couplers, master control valves, pressure regulators, flow sensors, wye strainers, filtration devices, ball valves, gate valves, and pull boxes.

39.8 All valve boxes and lids to be green in color unless otherwise specified for use of recycled water. All valve boxes and lids for recycled water shall be purple in color and bear the recycled water warnings as well as the "Do Not Drink" symbol.

39.9 Heat brand all box lids with the appropriate two-inch high identification letters and/or numbers as indicated on District details.

39.10 All valve boxes shall have ½” square-spaced hot-dipped galvanized welded wire mesh at the bottom opening and side pipe openings to prevent rodent entry.

39.11 All rectangular valve boxes shall receive 3 cubic feet of ¾ inch gravel per detail. All round valve boxes shall receive 1 cubic foot of ¾ inch gravel per detail.

39.12 All rectangular valve boxes shall have 4 concrete bricks, and round valve boxes shall have 2 concrete bricks.

39.13 Valve boxes shall not be cut past the knock-out to ensure that valves are not placed too high for the lid to close properly without touching the lid cover and to not alter the strength of the valve box. In the event valve boxes are cut past the knock-out to provide the necessary clearance, the cuts shall be rounded and are subject to District approval. In the event that the box becomes weakened, it must be replaced

Manufacturer: NDS Pro, Rainbird or approved equal

40.0 General Piping

40.1 Pressure line from the point of connection to the master valve shall be brass or Type K copper.

40.2 The pressure line from the master valve to isolation valves, remote control valves, and quick couplers shall be PVC piping per plastic pipe specifications.

40.3 Pressure lines 2" and smaller after the master valve shall be Schedule 40 solvent weld PVC.

40.4 Pressure lines 2-1/2 inch to 3 inch after the master valve shall be Class 315 solvent-weld PVC.

40.5 Pressure lines 4 inches and larger after the master valve shall be Class 200 bell and gasket PVC. All bell and gasket connections for all piping shall be iron ductile fittings with restraints, including all bell and gasket couplings. All piping connected to any tee, elbow, cap, or other fitting, regardless of change of degree, shall be restrained, including pipe-to-pipe connections.

40.6 All pressure line piping for potable water shall have blue metallic detecting warning tape installed 6 inches above all piping. Warning tape for recycled water piping shall be purple metallic warning tape.

40.7 Lateral lines 2 inch and smaller shall be Schedule 40 solvent-weld PVC.

40.8 Lateral lines 2 ½ inch and larger shall be Class 315 solvent-weld PVC.

40.9 All pipe and fittings shall bear the markings of the Manufacturer's name, nominal pipe size, pressure rating P.S.I., NSF, schedule or class, and date of extrusion.

40.10 All solvent weld pressure line piping shall be primed with approved primer and glued with approved glue suitable for current weather temperatures as authorized by the District. All lateral lines shall be glued with approved glue suitable for the current weather temperatures as authorized by the District. All above-grade UVR piping shall be primed with approved primer and glued with approved glue suitable for current weather temperatures as authorized by the District.

40.11 All piping shall have a minimum horizontal separation of 4 inches from other piping and 24 inches from other utilities.

41.0 Plastic Pipe

41.1 Solvent weld pipe shall conform to ASTM D 1784 or D 2241 to meet the requirements of cell classification 12454B for pipe. The pipe shall be extruded from an improved PVC virgin pipe compound with high impact strength. The compound shall have a hydrostatic design stress rating of 2,000 PSI.

Manufacturer: Pacific Plastics, JM Eagle, Westlake, or approved equal.

41.2 Rubber gasket PVC pipe shall conform to ASTM D-1784 Type I, Grade I 2,000 P.S.I. design stress. All pipes shall conform to commercial standards CS-256-64 and NSF testing laboratories. Rubber gaskets shall conform to ASTM 1869.

41.3 Recycled water pipe shall conform to ASTM D1784 or D 2241 to meet the requirements of cell classification 12454B for pipe. The pipe shall be extruded from an approved PVC virgin pipe compound of high strength. The compound shall have a hydrostatic design street rating of 2,000 PSI. Recycled water pipe shall be purple in color and bear the words "CAUTION - RECYCLED WATER" printed in black letters on two sides of all pipes.

41.4 Ultra Violet Resistant (U.V.R.) pipe shall conform to ASTM D 1784 or D 2241 to meet the requirements of cell classification 12454B for pipe. The pipe shall be extruded from an approved PVC virgin pipe compound of high strength. The compound shall have a hydrostatic design street rating of 2,000 PSI. U.V.R. pipe shall be manufactured using material proven to resist corrosion by ultraviolet radiation. Pipe shall be brown in color.

Manufacturer: Pacific Plastics, JM Eagle, Westlake, or approved equal.

42.0 Fittings

42.1 All pressure line fittings 3 inch and smaller shall be Schedule 80 solvent-weld PVC. Fabricated pipe shall be from an NSF-approved Type I, Grade I, PVC compound conforming to ASTM D-1784.

Manufacturer: Dura, Lasco, Spears, or approved equal.

42.2 All pressure line fittings, including couplings 4 inch and larger, shall be iron ductile, slanted, deep bell, gasketed style made in accordance with ASTM A-536, Grade 65-45-12. Rubber for gaskets in fittings shall be in accordance with ASTM-477. All ductile iron parts must be coated with fusion-bonded epoxy that meets AWWA C550 standards. All iron ductile fittings shall have

iron restraints that are made in accordance with ASTM A-536. Exterior bolts and nuts to secure a joint restraint system shall be 304 stainless steel.

Manufacturer: Leemco or approved equal.

42.3 All lateral line fittings after remote control valves shall be Schedule 40 solvent-weld PVC. The fabricated pipe shall be made from an NSF-approved Type I, Grade I, PVC compound to ASTM D1784.

Manufacturer: Dura, Lasco, Spears, or approved equal.

42.4 Provide primer and solvent cement for all PVC solvent-weld pipe and fittings of the specified type by the manufacturer's recommendations.

Manufacturer: Weld-on or approved equal.

42.5 All fittings shall have the manufacturer's name, trademark, and size applicable NSF or IPS approval.

42.6 All PVC SCH 80 and SCH 40 threaded fittings shall have ¾ inch Teflon tape wrapped two to four times, starting at the second thread to ensure Teflon is not pushed into the fitting.

42.7 All brass threaded fittings shall have ¾" inch Teflon tape and thread sealant.

43.0 Brass Pipe and Fittings

43.1 Brass pipe shall be in accordance with the American National Standards Institute and be 85 percent Schedule 40 red brass.

43.2 Brass fittings shall be threaded 125-pound class.

43.3 All threaded fittings shall have ¾ inch Teflon tape wrapped two to four times and thread sealant.

44.0 Galvanized Steel Pipe and Fittings

44.1 Galvanized steel pipe shall be Schedule 40 hot-dipped galvanized. All galvanized pipe and fittings shall be approved for use in writing by the District.

44.2 All threaded fittings shall have ¾ inch Teflon tape wrapped two to four times and thread sealant.

45.0 Low Volume Emitters

45.1 Low-volume emitters shall have a threaded inlet with one-half-inch female threads so that they may be screwed onto a standard one-half-inch male threaded fitting or nipple. The emitters shall be available in flow rates of one-half, one, two, and four gallons per hour. Each outlet of each emitter shall be fully pressure-compensated and self-flushing with a diffuser cap. The outlet of the emitter shall have a separate silicone elastomeric control element to provide pressure compensation.

45.2 Features shall include:

a. Stamped flow and color-coded cap for easy installation.

b. The fully pressure-compensating design delivers uniform flow throughout a wide pressure range (5-45 psi; 0.33-3 bars), regardless of pressure inconsistencies (from elevation changes, etc.).

c. Available in flow rates of 0.5, 1, 2, and 4 GPH. Flow rates and flow direction are clearly molded into the diffuser cap.

d. Rugged design using UV-inhibiting engineering-grade plastics to ensure maximum life span.

e. Barbed emitters are not acceptable. 1/2" FIPT emitters must be compatible with all standard 1/2" MIPT fittings.

45.3 Operating range shall be P.C. flow: 0.5, 1, 2 & 4 GPH.

45.4 Pressure: 5-65 PSI.

45.5 Filtration: 80-150 mesh.

Manufacturer: Rainbird XBT-20, Salco ProSpec, Bowsmith SL220, or approved equal.

46.0 Flexible Riser Tubing

46.1 Flexible tubing shall be non-rigid poly-vinyl-chloride (PVC) hose, extruded from integrally compounded algae-resistant S-0214 material that shall conform to all of the following: Hardness (A Shore) - 92 to 86 tested per ASTM Method D2240 Specific Gravity, nominal - 1.42 +/-.02 tested per ASTM Method D792(A) 100% Modulus: -1800 (psi) Tensile Strength, minimum - 2450 (psi) tested per ASTM Method D412 Brittleness Temp., maximum -20 C tested per ASTM Method D746(A) Elongation: -270%.

46.2 Algae resistant hose shall be in compliance with ASTM F-21-70* (Fungus Testing) and ASTM G-42* (Algal Testing). Hose shall be uniformly black in color, smooth inside and outside, free of foreign material contamination, and have no cracks, pinholes, dents, wrinkles, or blisters.

46.3 Tubing shall be UV and algae-resistant.

46.4 PVC supply tubing shall be compatible with schedule 40 slip fittings of the corresponding size. The fittings shall be solvent-welded.

46.5 All tubing shall have P-70 or equal primer applied with IPS Weld-On-795 Flexible PVC Clear, Medium Bodies, Fast-Setting solvent cement for connection to SCH 40 fittings.

46.6 Tubing thickness shall be no smaller than 0.50" inside diameter, 0.68" outside diameter, and a minimum wall thickness of 0.09".

Manufacturer: GPH Products Model #GPVCAR050IRR, Salco IH-Series Flex Riser or approved equal.

47.0 Flexible Riser Fittings (Black PVC Fittings)

47.1 Flexible riser fittings shall be used in conjunction with flexible or rigid PVC pipe.

Durometer Hardness	- 90D tested per ASTM D2240
Tensile Strength, minimum	- 4,700 psi tested per ASTM D412
Brittleness Temp., maximum	- 15 C tested per ASTM D746(A)

Manufacturer: GPH Products Model #G436, Salco SLV-436-073B, or approved equal.

48.0 Flexible Riser Assembly

48.1 Flexible riser assemblies (IH-Series) shall be used for all plant material when possible.

48.2 Flexible riser assemblies shall be made from non-rigid vinyl-chloride ½" irrigation hose (3/8" IPS) extruded from integrally algae-resistant poly-vinyl chloride (PVC) resin conforming to ASTM Designation D2287 with the following characteristics:

Durometer Hardness (A Scale)	- 88 to 94 tested per ASTM Method D2240
Specific Gravity, nominal	- 1.40 to 1.44 tested per ASTM Method D792(A)

Tensile Strength, minimum	- 1,800 psi tested per ASTM Method D412
Brittleness Temp., maximum	- 15 °C tested per ASTM Method D746(A)

48.3 The IH Series is available in any length required.

48.4 The hose shall be uniformly black in color, homogeneous throughout, and smooth inside and outside, free from foreign materials, cracks, holes, dents, wrinkles, and blisters. The shape must remain concentric for proper contact with the fittings.

48.5 The rigid vinyl-chloride fittings are to be BLACK in color and ½" Irrigation size (3/8") slip x ½" threaded. The solvent used to weld the hose and fittings together must meet the designation by GPH to conform to the assembly process. A thorough coating of primer (# P-70) shall be used to conform to proper welding techniques.

Manufacturer: GPH Products Model #GIH-XX, Salco SLV-PVC-ACL, or approved equal

49.0 Irrigation Heads (General)

49.1 All irrigation heads shall be the size, type, and provide the same rate of precipitation with the same radius of spray, pressure, and discharge in G.P.M. as listed on drawings.

49.2 All spray head sprinklers shall have stainless steel screw adjustment for radius of spray.

49.3 Riser and swing joint assemblies shall be as indicated on drawings.

49.4 All irrigation heads shall have a factory-installed check valve or have an aftermarket check valve installed.

49.5 All other requirements for non-pressure lateral line pipe are as specified in the fitting specification section.

49.6 In no case shall the irrigation head spacing exceed the maximum manufacturer's recommendation.

49.7 Irrigation heads shall be installed ¾" above finish grade for turf areas and flush with all sidewalks, curbs, paving, etc. Irrigation heads in planter areas shall be installed 2" above finish grade and flush with all sidewalks, curbs, paving, etc.

49.8 All sprinkler heads shall be set perpendicular to finish grades.

49.9 All sprinklers in turf areas shall have a minimum pop-up height of six (6) inches.

49.10 All sprinklers in planter/slope areas shall have a minimum pop-up height of twelve (12) inches.

50.0 Bubblers

50.1 Bubblers shall be constructed of heavy-duty plastic and be pressure-compensated full-circle. The bubbler shall have a screen to protect the nozzle from clogging.

50.2 Bubblers shall be preset to 1.0 GPM and operate between 20-90 PSI.

50.3 Tree bubblers shall be a deep root water system (RWS) per District detail.

50.4 RWS tree bubblers shall have purple grates when used on recycled water systems.

50.5 RWS Sock shall be used for all applications regardless of soil conditions.

Manufacturer: Rainbird 1404 Series, Rainbird RWS-B-C-P-1401-RWS-SOCK, or approved equal.

51.0 Sprinkler Heads

51.1 The sprinkler body, nozzle, stem, and screen shall be molded out of heavy-duty plastic.

51.2 Pop-up height shall be as listed in drawings and in no case shorter than 6 inches.

51.3 The sprinkler shall have an adjustment screw used for regulating flow and radius with a matched precipitation rate (MPR) nozzle.

51.4 The sprinkler shall have a removable screen to protect it from clogging.

51.5 The sprinkler shall have a stainless steel spring for proper pop-down.

51.6 The sprinkler shall be equipped with a factory-installed check valve identified on the cap and capable of holding water up to 10 feet of elevation change.

51.7 The sprinkler shall be equipped with a factory-installed pressure-regulating device constructed of stainless steel and heavy-duty plastic capable of

maintaining a pressure of 45-70 PSI for operation unless specified for rotary nozzles.

51.8 Fixed spray nozzles shall have matched precipitation rates per valve to ensure distribution uniformity.

Manufacturer: Rainbird SAM-PRS or approved equal.

52.0 Sprinkler Heads for Rotary Nozzles

52.1 The sprinkler body, nozzle, stem, and screen shall be molded out of heavy-duty plastic.

52.2 Pop-up height shall be as listed in drawings and in no case shorter than 6 inches.

52.3 The sprinkler shall have a diffuser pin used for regulating low and radius.

52.4 The sprinkler shall have a removable screen to protect it from clogging.

52.5 The sprinkler shall have a stainless-steel spring for proper pop-down.

52.6 The sprinkler shall be equipped with a factory-installed check valve identified on the cap and capable of holding water up to 10 feet of elevation change.

52.7 The sprinkler shall be equipped with a factory-installed pressure-regulating device constructed of stainless steel and heavy-duty plastic capable of maintaining a pressure of 40-45 PSI for the operation of rotary nozzles.

52.8 Rotary nozzles shall have matched precipitation rates per valve to ensure distribution uniformity.

Manufacturer: Rainbird SAM P45, Hunter MPR 40 or approved equal.

53.0 Rotor Heads (Medium Range)

53.1 All pop-up rotors shall have a rubber cover and be constructed of heavy-duty plastic except for the wiper seal, bearing spring, and bearing washers. All rotors are to have a reinforced rib design with flange encasement.

53.2 Pop-up height shall be as listed in drawings and in no case be shorter than 5½ inches.

53.3 The rotor shall have a diffuser pin for regulating flow and radius.

53.4 The rotor shall have a screen to protect it from clogging and have a minimum inlet of 3/4 inch.

53.5 The rotor shall be capable of covering a 16-55 feet radius at 40-60 PSI with a rate of .5 - 9.2 GPM and be adjustable from 1 to 360 degrees. All rotors designated for center 360-degree rotation shall be full circles.

53.6 Rotor nozzles shall have matched precipitation rates per valve to ensure distribution uniformity.

Manufacturer: Hunter I-20, Rainbird 5000 Plus, or approved equal.

54.0 Rotor Heads (Large Range)

54.1 All pop-up rotors shall have a rubber cover and be constructed of heavy-duty plastic except for the wiper seal, bearing spring, and bearing washers. The riser shall be constructed of plastic encased in a stainless-steel sleeve. All rotors are to have a reinforced rib design with flange encasement.

54.2 Pop-up height shall be as listed in drawings and in no case be shorter than 5 inches.

54.3 The rotor shall have a diffuser pin for regulating flow and radius.

54.4 The rotor shall have a screen to protect it from clogging and have a minimum inlet of 1 inch.

54.5 The rotor shall be capable of covering a 16-55 feet radius at 40-74 PSI with a rate of 3.8 - 27.5 GPM and be adjustable from 1 to 360 degrees. All rotors designated for center 360-degree rotation shall be full circles.

54.6 Rotor nozzles shall have matched precipitation rates per valve to ensure distribution uniformity.

Manufacturer: Hunter I-25, Hunter I-40, Rainbird 7005, or approved equal.

55.0 Turf Dripline

55.1 All turf areas within 24” of a non-permeable surface where run-off will occur off-site shall be irrigated with dripline to be in compliance with AB1881.

55.2 Dripline shall be flexible polyethylene tubing with factory-installed pressure-compensating inline emitters spaced evenly at 12” spacing. The flow rate shall be from 0.6 to 0.9 when the inlet pressure is between 8.4 and 60 psi.

55.3 Tubing shall have an OD of 0.6364”, an ID of 0.536”, and a wall thickness of 0.049”.

55.4 The inline emitter diaphragm shall have a pressure-regulating diaphragm with a spring action allowing it to self-rinse if there is a plug at the outlet hole. The flexible tubing shall allow for easy, non-linear installation.

55.5 The inline emitter inlet shall have copper shield technology installed to protect the emitter from root intrusion.

55.6 The inline emitter inlet shall be raised off the inside tube wall to minimize dirt intrusion.

55.7 Dripline valve shall have a filter with a 120 mesh for filtration that must be installed after the remote-control valve.

55.8 Dripline shall be installed per Rainbird’s Sub-Surface Drip Irrigation Installation and Maintenance Guide and as directed by the District.

Manufacturer: XF™-SDI Series Dripline #XFS-06-12, Rainbird or approved equal.

56.0 Additional Miscellaneous Items

56.1 All pipe above grade shall be UVR PVC and must be stabilized with j-hooks at every 10 feet. J-hooks shall be #3 x 9-inch black epoxy rebar. When UVR PVC is used in sandy soils, epoxy-coated rebar J-hooks must be 12 to 18 inches long as required to properly stabilize the pipe in place.

56.2 All assemblies requiring rebar stabilizing rods per the plan and details shall be with #4 x 30-inch rebar supported by vandal-proof stainless steel clamps installed with a tool specifically designed for the process.

56.3 Contractor shall install metallic warning tape over all pressure supply lines with a cover of 12 inches from grade. Warning tape for potable water shall be blue in color, and the words "CAUTION WATER LINE" shall be permanently attached to the tape. Warning tape for recycled water shall be purple in color, and the words "CAUTION RECYCLED WATER" shall be permanently attached to the tape. Warning tape shall be 3" wide minimum.

56.4 Contractor shall provide identification tags with the number labeled for each valve attached the each valve. For potable water, the tags shall be yellow in color with black lettering. For recycled water, the tags shall be purple in color with black lettering.

56.5 All utilities, valve boxes, valves, sprinklers, quick couplers, etc., shall either have purple caps or purple-colored covers or tags as provided by the manufacturer for the use of recycled water.

56.6 All valve box lids must be heat branded per District details. The text must be 2" tall, aligned and centered on the valve box, and face the nearest walkway or curb.

57.0 Water Supply

57.1 The Irrigation system shall be connected to the water supply as shown on the drawings. The contractor shall notify the Architect and the District immediately of any discrepancies.

57.2 The Contractor shall be responsible for any minor changes due to actual site conditions.

58.0 Electrical Supply

58.1 Contractor to coordinate the final location of the controller with the job site Superintendent and District.

58.2 Prior to installation of the controller, the contractor is to verify that all required electrical equipment is accessible for complete installation.

58.3 Electrical connections and equipment must be as listed in the controller installation section, per the controller installation section, and per the manufacturer's specifications and local codes.

58.4 Electrical enclosures shall be stainless steel per Section 37.0.

58.5 All wiring and conduits from the electrical meter pedestal to the irrigation controller shall be per the NEC and local jurisdiction requirements. The spacing between the controller and the electrical meter pedestal shall be a minimum of 5 feet.

58.6 All meter pedestal breakers shall be sized and installed per NEC and local jurisdiction requirements. All breakers must be labeled with engraved phenolic plastic name plates clearly identifying what equipment each breaker supplies power to.

58.7 All irrigation equipment must have a dedicated breaker, including, but not limited to, controllers, booster pumps, fertilizer injector pumps, or any other device requiring a 120 VAC or higher power supply.

58.8 Controller wiring shall be sized to include a 15-amp GFCI outlet provided within the controller enclosure.

59.0 Grades

59.1 Prior to commencing any work, the contractor shall carefully check all grades and verify that after all irrigation work and soil preparation is completed, all grades will be per the specified depth as per the landscape contractor's scope of work with a +/- .10 of a foot. No ponding shall be allowed.

59.2 All sprinkler heads, rotors, emitters, and dripline shall be adjusted based on the final finish grade and adjusted at the final finish grade to ensure compliance with District details.

60.0 Maintenance

60.1 Prior to the start of maintenance, the Contractor shall schedule an inspection for the entire system to be observed. Any correction items must be corrected in a timely manner. At the time of inspection, it will be determined by the District if any punch list item can be corrected during maintenance or if corrective action is required prior to the start of maintenance.

60.2 The contractor shall maintain the entire irrigation system to an acceptable condition for the District until formal written acceptance from Valley-Wide.

60.3 All irrigation piping, valves, filters, and pressure regulators shall be regularly flushed.

60.4 All rotors and sprinkler heads shall be checked and adjusted as needed to provide optimum watering.

60.5 All valve box vaults shall be cleaned to ensure that no soil has entered the box and be insect-free. All lids shall be secured with locking bolts. All damaged valve box lids shall be replaced.

60.6 Contractor shall provide a current irrigation schedule for all controller programming at the end of the maintenance period.

61.0 Clean-Up

61.1 Clean up shall take place on a daily basis, after each portion of work has been completed and as directed by the District. The contractor shall legally remove from the site any trash or additional material from the project.

62.0 Final Approval

62.1 All irrigation shall be tested in its entirety by the District and approved in writing before commencement of planting and hydro-seeding, except for trees as directed by the District.

62.2 Contractor shall provide all charts, record drawings, turn-over items, etc., as listed in the Irrigation (General) Section prior to commencement of maintenance.

END OF SECTION

Chapter 25
Planting Specifications

PLANTING SPECIFICATIONS

PLANTING SPECIFICATIONS (GENERAL)

Valley-Wide Recreation and Park District (the "District" or "Valley-Wide") shall be considered Valley-Wide Recreation and Park District inspection personnel, consultants, or other approved team members hereafter.

1.0 General Requirements

1.1 Contractor shall obtain and pay for any permits required.

1.2 All work under this section shall be performed under the supervision of a current C-27 licensed Landscape Contractor in the State of California. Contractor shall maintain an experienced project supervisor and/or project foreman at the project site at all times throughout the duration of the installation.

1.3 All irrigation shall be completed and approved, and be under automatic irrigation for seven days. The irrigation system must be automatic in order to commence the weed-abatement process prior to planting and hydro-seeding as directed by the District.

1.4 No planting shall commence until the weed-abatement process has been completed unless approved by the District in writing.

1.5 No planting can occur until permanent electric power is provided unless approved by the District.

1.6 Contractor shall be responsible for all erosion control best management practices per local, state, and federal regulations.

1.7 Due to the scale of drawings, it is not possible to show all plant symbol placement to scale. Minimum District plant spacing shall take precedence when symbol spacing is unclear.

1.8 Contractor shall provide one competent English-speaking person present at all times during the duration of the project with at least 5 years of experience in equal or greater landscape projects. The District reserves the right to require the contractor to replace the foreman in the event that there is evidence of inexperience.

1.9 Contractor shall comply with all local, state, and federal laws related to any portion of the work and shall incorporate them in these specifications.

1.10 Nothing within these specifications shall be construed as a conflict with any laws or regulations. These specifications shall take precedence over industry standards and local, state, and federal regulations when specifications indicate a higher standard or better quality.

1.11 All work shall be inspected as indicated in Section 4.0 Inspections below.

1.12 Substitutions or alternates of any material must be approved a minimum of ten (10) days before pre-construction meeting and prior to the start of work.

1.13 In the event of any contradiction within specifications, details or plans the contractor shall be responsible for compliance with the more stringent standard.

1.14 Labor Code Sections 1720 et seq. and 1770 et seq., as well as California Code of Regulations, Title 8, Section 16000 et seq. ("Prevailing Wage Laws"), require the payment of prevailing wage rates and the performance of other requirements on certain "public works" and "maintenance" projects. If this Project involves an applicable "public works" or "maintenance" project, as defined by the Prevailing Wage Laws, and if the total compensation is $1,000 or more, Developer agrees to fully comply with such Prevailing Wage Laws. The Developer shall defend, indemnify and hold the District, its elected officials, officers, employees and agents free and harmless from any claims, liabilities, costs, penalties or interest arising out of any failure or allege failure to comply with the Prevailing Wage Laws.

2.0 Scope of Work

2.1 The intent of the drawings and specifications is to indicate the process required for the complete installation including but not limited to all, grading, soil amendment blending, planting, final finish leveling, raking and mulching. This section includes all labor, materials equipment and tools required for a complete planting operation including all imported top soils and fertilizers in order to adjust existing soil deficiencies to ensure strong thriving plant material.

2.2 All work indicated in the specifications, details, notes or plans shall be provided and installed whether or not specifically mentioned in the specifications. It shall be understood that if an item is shown in the specifications but not shown on the plan it shall be as if shown on both and if an item is shown on plan but not shown in the specifications it shall be as if shown on both. The District shall have final authority for any and all clarifications.

3.0 Quality Control

3.1 Contractor must provide one competent English-speaking employee capable of understanding and communicating with District personnel on site at all times throughout the duration of the work.

3.2 Contractor must provide personnel with a minimum of three (3) years of experience who are familiar with all types of material being used and installation methods for all work performed.

3.3 In the event that no specifications or details are provided for any items shown on the plans, the manufacturer's directions, specifications and/or details shall be followed.

3.4 District specifications and/or details shall always take precedence over the manufacturer's specifications or recommendations.

3.5 All local, county and state laws, rules and regulations related to any portion of work under this section shall be incorporated within these specifications and adhered to throughout the duration of work. Nothing contained within these specifications shall be construed to conflict with said rules and regulations.

3.6 The provisions of these specifications shall take precedence over the said rules and regulations in the event that these specifications indicate a higher quality or better standard.

3.7 Any extra work performed shall be approved in writing by the Owner or the District's representative prior to the start of such work.

3.8 Any unapproved work will be at the contractor's expense.

3.9 All material and labor shall be free from any defects. Any defective work must be corrected immediately without additional cost to the District.

3.10 In the event of conflict between plans and specifications, the specifications shall take precedence. No additional compensation shall be considered for direction given by District personnel providing clarification to specifications in the event of conflict between plans and specifications.

3.11 No additional compensation shall be given as a result of any District generated punch list item or correction notice given to contractor in order to comply with specifications.

4.0 Inspections

4.1 Refer to Chapter 15 Construction Specifications General Section 7.0 Inspections for general inspection requirements.

4.2 Request for inspections must be made 48 hours in advance of the requested inspection date.

4.3 Contractor shall call for inspection of the following items:

a. Finish grading

b. Soil preparation and weed-abatement

c. Tree and shrub layout

d. Plant material review

e. Tree and shrub planting pits

f. Finish grade prior to mulching or hydro-seeding

g. Final Inspection

5.0 Contractor Submittals

5.1 Please refer to Chapter 15 Construction Specifications General Section 4.0 Contractor Submittals for general requirements.

5.2 Plant material breakdown indicating intended nurseries, material height, width and caliper for District approval. All plant material is still subject to field inspection to review root structure and overall consistency with all quantities.

5.3 Agronomic soil fertility analysis with recommendations of all required amendment material.

5.4 All required soil amendments per recommendation from an approved laboratory testing agency. No amendments shall be submitted unless approved by the laboratory testing agency.

a. Bark mulch

b. Labels for all herbicide and fertilizers used.

c. Hydro-seed mix.

d. Tree stakes, ties, and arbor guards if applicable.

e. Root barriers.

f. Decomposed granite, decorative rock or other landscape material.

g. Refer to the District's submittal by discipline for information on what is required to be submitted.

5.5 Submittals shall include physical product samples when feasible, in addition to catalog cuts indicating technical data.

5.6 Laboratory testing for the agronomic soil fertility testing shall be performed by an approved certified, reputable company. Approved companies are:

Wallace Laboratories, El Segundo, CA (310) 615-0116
Soil and Plan Laboratory, Orange, CA (714) 282-8777
Waypoint Analytical, Anaheim, CA (714) 282-8777, or approved equal.

5.7 Soil samples shall be taken in the presence of the District's representative, unless otherwise approved. Locations of tested soil shall be indicated on the as-builts.

5.8 Contractor shall provide a minimum of one soil report for each project. Contractor shall provide an additional soil report for every 50,000 square feet to determine if there is soil variance that would require different amendment rates and applications.

5.9 Soil recommendations must be prepared for turf, planter, slope, and plant material backfill mix.

5.10 Agronomic soil fertility analysis shall include results for all of the following:

pH, salinity, soil type, soil texture, soil organic matter, sodium, lime, nitrate, sulfate, calcium, magnesium, potassium, boron, phosphate, zinc and estimated infiltration rates.

5.11 In addition to the actual site soil samples, contractor shall submit written specifications and current analysis of all intended organic compost material. In the event that analysis is older than six months, contractor shall provide a current soil analysis of the intended material to be used.

5.12 No planting shall commence until all submittals have been approved and soil has been amended per the agronomic soil fertility analysis and as approved by the District.

5.13 The soil report shall take precedence over the application rates indicated with the soil preparation section as approved by the District. In the event that soil preparation requirements indicated in the soil recommendations based upon field samples are greater or less than indicated in the specifications, the contractor must submit a cost breakdown of each item bid and of each item per the recommendations prior to commencement of work for District approval. Commencement of soil preparation prior to District notification constitutes contractor acceptance, and that no additional cost will be owed by the District.

6.0 Substitutions

6.1 Refer to Chapter 15 Construction Specifications General Section 4.0 Contractor Submittals for general substitution requirements.

PLANTING SPECIFICATIONS (MATERIALS)

7.0 Plant Material

7.1 All plant material shall be the same as specified in the drawings.

7.2 All plant material shall be superior nursery stock, healthy, symmetrical and show vigorous growth. Plant material shall be true to botanical and common name as indicated in *An Annotated Checklist of Woody Ornamental Plants of California, American Standard for Nursery Stock, ANSI Z60.1 and American Joint Committee on Horticultural Nomenclature*.

7.3 Contractor shall tag one plant from each bundle or lot with the plant name in accordance with the recommendations of the American Association of Nurserymen.

7.4 All plant material shall be free of pests, plant diseases, abrasions, or any other objectionable disfigurations. Objectionable disfigurations shall be

determined solely by the District and shall not be decided by the opinion of the contractor.

7.5 Plant material must show a vigorous habit of growth that is normal for that particular species.

7.6 Any plant material with evidence of insects, pests, larvae, eggs, plant diseases, root rot, abrasions, mechanical damage, wind damage, salt burn, sun burn or objectionable disfigurations or discolorations shall be rejected.

7.7 Plant material shall not have circling roots, girdling trunk surface, or center roots that indicate any evidence of root-bound material.

7.8 No plants shall be planted when root balls are broken, damaged or separated from the original container.

8.0 Tree Stakes

8.1 Tree stakes shall be lodge poles consisting of pine from various regions of North and South America. Lodge poles must be smooth without bark and be pointed on one end and chamfered at the other end. Lodge poles shall be pressure-treated with an EPA-registered pesticide to protect from insect attack and decay. Pressure treatment shall be alkaline copper quaternary (ACQ).

8.2 Tree stakes shall be 2" minimum in diameter, 10’ minimum length.

8.3 Tree ties shall be manufactured from virgin flexible vinyl meeting ASTM D-412 standards for tensile and elongation strength. Material shall be black in color and be ultraviolet resistant. Tree ties shall be manufactured with a double back locking configuration and secured with one galvanized nail to prevent slippage. Tree ties shall elongate with the tree's growth, preventing damage to the tree. Each tree shall receive (4) four cinch ties. Material shall be 30” or larger cinch ties manufactured by V.I.T. products or approved equal.

8.4 Tree ties shall be attached to lodge poles with galvanized nails per detail.

8.5 Contractor shall install 3” diameter stakes for all trees where high winds occur as directed by the District’s representative.

8.6 V.I.T. Products or equal twist braces shall be required where high winds occur.

8.7 All trees larger than 36” box size shall have three tree guys with ½” PVC pipe to protect the wire. 3” diameter lodge poles may be used for 36” box trees and larger in high traffic areas or in small tree wells with the approval of the District’s representative.

9.0 Tree Guys

9.1 Tree guys shall have a wireless collar consisting of a .375-inch flex poly vinyl tubing 30 inches long, capable of up to a 24-inch tree caliper.

9.2 Guy line shall be .375-inch flex poly vinyl tubing and be 60 inches long.

9.3 Cable shall be .0125 O.D. 7 x 19 strand galvanized aircraft cable with 2000 lb. nominal strength.

9.4 Fittings shall be 1/8-inch wire rope clips made of copper compressive oval sleeves.

9.5 Compressor springs shall be .375-inch zinc-coated piano wire.

9.6 Anchoring device shall be 1” x 2” x 15” recycled polyethylene with a shear strength of 2150 PSI and tensile breaking strength of 4000 PSI.

9.7 Tree guys shall be installed per the manufacturer's specifications and District detail.

9.8 Material shall be manufactured by Wonder Tree Guy®, Duckbill Tree Anchor System or approved equal.

9.9 Size shall be as recommended by the manufacturer based upon the tree caliper size.

10.0 Vine Ties

10.1 Vine ties shall be as specified in the District details.

10.2 Vine ties shall be installed permanently to all wall surfaces for vines that do not self-adhere to walls.

11.0 Root Barrier

11.1 Root barrier shall be black, made of high-density recycled polystyrene rubber modified, with a minimum .060 thickness and ribs every 6 inches.

11.2 Tensile strength shall conform to ASTM D 638 and yield and break at a value of 4100 PSI. Izod impact strength at 73 degrees shall be 2.0 ft/lbs./in. Root guiding ribs shall face towards the roots.

11.3 The top of the root barrier shall be slightly above grade and never be under grade. Root barrier shall be 24" deep along all curbs and 18" deep along all walkways. The root barrier shall not be installed higher than any concrete surface.

11.4 Root barrier shall be "Deep Root" control barrier panels # UB 18 and UB 24- or approved equal. No cylinder root barriers shall be approved.

11.5 Root barriers shall be installed for all trees planted within 8 feet of any walls, sidewalks, building structure, or other hard surface, including all decomposed granite, gravel, or other surface intended for the use of vehicle or pedestrian travel.

11.6 Root barriers shall be installed plumb to grade.

11.7 Length of root barrier shall extend along hardscape surface for all areas within an 8-foot radius from the center of the trunk.

11.8 Contractor shall install root barriers per District detail.

12.0 Herbicides

12.1 Contractor shall submit labels of all herbicides used prior to application for District approval.

12.2 Contractor shall apply pre-emergent herbicide to all areas possible as recommended by a licensed pest control consultant.

12.3 All herbicides shall be applied only by a licensed applicator in compliance with local, state, and federal regulations.

12.4 Non-selective herbicides shall be spray applied 41% or greater Glyphosate or approved equal. Application rate shall be per manufacturer's instructions.

13.0 Plant Tablets

13.1 Planting tablets shall be Agriform, Gro-Power, or approved equal as specified in plans, details, and soil report recommendations.

13.2 The NPK and specific application rates must be determined per project by the soil report.

13.3 All trees, shrubs, and groundcovers shall receive tablets as shown in the District planting details.

14.0 Mulch

14.1 Mulch shall be produced from tree bark, ground clean brush, woody landscape trimmings, and vegetative material free from deleterious material, debris, trash, and weed seeds. Material shall be large enough to avoid being blown away by the wind. No material shall be over 4" in size.

14.2 Mulch shall be certified to be free of any contaminants, weeds, and insects.

14.3 All planters shall receive 3" of mulch unless otherwise indicated on plans.

14.4 Mulch shall be tapered at the crown of all trees and shrubs per District detail.

14.5 Any and all objectionable materials shall be removed from all areas with mulch as directed by the District.

14.6 Mulch pH shall be between 5.5 and 7.5.

14.7 Salt content shall be less than 4 parts per million.

15.0 Soil Conditioner Compost

15.1 Compost material shall be an organic soil amendment produced from clean vegetative material.

15.2 Material shall be high in organic matter, micronutrients, and micro-organisms.

15.3 Material shall be dark earthy brown in color and possess a pH between 6.0 and 7.5. Ece shall be low and be suitable as approved by the agronomic soil analysis recommendations based upon site soil Ece levels.

15.4 Majority of material shall be screened to ½" minus with not more than 5% larger material. Water shall be added to maintain suitable moisture and dust control.

15.5 Soil conditioners shall be EPA class 'A' co-compost or compost with SAR less than 3.0 and CN ratio of 15 to 25:1 passing through ½" mesh screen as approved by the District's representative prior to delivery of material.

15.6 Bio-waste or sludge products shall not be accepted unless specifically approved by the agronomic soil testing agency and the District.

15.7 Boron content of the saturated extract shall be less than 1.0 parts per million.

15.8 Acceptable types of compost are manures, mushroom composts, peat moss low in heavy metals and salts, and free from weed seeds and pathogens.

15.9 All soil conditioner material shall be approved prior to ordering.

16.0 Concrete Mow Curb

Refer to Chapter 21 Cast in Place Specifications

17.0 Aluminum Edging

Refer to Chapter 15 Construction Specifications General

18.0 Decomposed Granite

Refer to Chapter 15 Construction Specifications General

PLANTING SPECIFICATIONS (EXECUTION)

19.0 Installation

19.1 Contractor shall verify and be familiar with all existing and proposed utilities and appurtenances to confirm that installation of the landscape per plan shall not conflict.

19.2 Prior to breaking ground, the contractor shall locate all cables, conduits, gas lines, water lines, sewer lines, or other utilities to assure worker safety. The Contractor shall be responsible for all damages.

19.3 Contractor shall clean, remove, and legally dispose of all weeds, grasses, including roots, and construction debris under this section.

19.4 Contractor shall be responsible for the protection and storage of all material for the project.

19.5 All grades shall be as indicated on the drawings and must be +-.10 of a foot prior to planting.

19.6 Prior to planting, the project must comply with Section 1.0 General Requirements.

19.7 Contractor shall not prune plant material unless requested by the District.

19.8 Contractor shall protect all plant material from damage due to sun, frost, and wind exposure prior to planting.

19.9 Contractor shall not handle plant material by their branches, leaves, or trunks.

20.0 Landscape Grading and Drainage

20.1 The contractor shall complete grading and filling as needed or remove additional dirt, rock, and debris over ¾ inch in diameter within the top 4 inches in all turf and planter areas, less than 3:1.

20.2 Contractor shall bring all landscaped areas to the finish grade.

20.3 Flow lines shall be established to existing curbs, sidewalks, catch basins, or other drainage appurtenances as specified on the drawings or as directed by the District.

20.4 All landscape areas shall be sloped to 2% to provide positive drainage. No ponding shall be acceptable.

20.5 Grades shall be 2 inches below the top of curbs or walkways.

20.6 Drainage flow lines, inlet catch basins, french drains, or other means of drainage will be required to ensure 2% slope within all planters. All drains must be inspected and approved by the District prior to installation.

20.7 2” curb cores may be required as directed by the District for all low areas within planters to ensure adequate drainage. Where curb cores are placed, a cubic foot of gravel wrapped with approved filter fabric shall be placed within the soil prior to curb core opening.

21.0 Soil Preparation

21.1 Contractor shall cross rip all areas 9 inches deep prior to applying any soil amendments.

21.2 Contractor shall rotor-till amendments into all turf, hydro-seed and groundcover areas 3:1 or less throughout the first 6 inches.

21.3 All clods, rocks, or other objectionable material shall be removed from the project.

21.4 Contractor shall rake soil conditioner lightly into all 2:1 slope areas.

21.5 The following application rate is for bidding purposes only and is per 1000 square feet of planting area:

a. 4 cubic yards of organic soil conditioner

b. 30 lbs. of commercial fertilizer approved by the District's representative

c. 100 lbs. of agricultural-grade gypsum

d. 25 lbs. soil sulfur

21.6 Actual soil preparation shall be based on the soil report.

21.7 At the request of the District, the contractor shall be responsible for additional soil testing to confirm that soil preparation procedures have been completed thoroughly. The original soil testing agency shall provide the report and shall indicate compliance within 8% of the recommendation; otherwise, the required additional amendments shall be performed at no additional cost to the District.

21.8 Contractor shall be responsible for site leaching as required by the soil report recommendations at no additional cost to the District. Leaching shall also be performed to ensure no settlement occurs after planting operations.

21.9 Areas with rocky soil may require removal of the upper 12-24 inches of fill and replaced with Class A soil as determined by the District.

22.0 Weed Abatement

22.1 Weed-abatement shall not commence until a complete irrigation system is under complete automatic irrigation and has been approved by the District.

22.2 Upon completion of soil preparation, the contractor shall complete the following:

a. Irrigate all areas to be planted, sodded, or seeded for a period of seven days to germinate all weed seeds.

b. Cut watering and apply approved weed killer per manufacturer's recommendations and allow adequate time to complete kill. Refer to the herbicide Section 12 for additional application requirements.

c. Repeat step one and two.

d. Obtain approval of completed weed-abatement prior to any planting. Trees may be planted prior to the weed-abatement process after the mainline is complete, with the approval of the District in writing.

23.0 Layout

23.1 Contractor shall lay out all trees and shrubs for approval from the District prior to excavation of any planting pits.

23.2 Contractor shall not willfully lay out any plant material where known obstructions exist. In the event that the layout per plan conflicts with present or future known utilities, the contractor shall notify the District to obtain direction. In the event that there are any overhead utilities on site within 20' of tree placement, contact the District to confirm tree species and layout.

23.3 Contractor shall adjust tree locations around all street lights and overhead utility lines as directed by the District. All trees must be located as far as possible from perimeter walls. Pine trees should be placed 8' away from walls, unless otherwise approved by the District.

23.4 Contractor shall mark out all utilities within 6 feet of any tree or shrub. Failure to delineate any utility shall result in relocation as directed by the District at the cost of the contractor.

23.5 Approval of layout by the District does not constitute liability for any damages related to the excavation or placement of the material.

23.6 Contractor shall be solely responsible for obtaining all excavation permits and dig alert notifications in compliance with local and state requirements, in addition to personal site observation, including all necessary potholing to confirm that no conflicts exist.

23.7 No planting shall occur within the center of flow lines.

23.8 No shrub planting shall occur within 18 inches of curbs or walkways.

23.9 Planting should be placed at least 24 inches from walls and fences.

24.0 Percolation Test

24.1 Contractor shall flood excavated planting pits with water to test water penetration through the soil at locations approved by the District.

24.2 Contractor shall monitor and record incremental counts of water percolation and provide written and photographic results to the District. If water levels do not drain more than 12 inches in 24 hours, the contractor must notify the District.

24.3 If the percolation test results are less than 12 inches of drainage within a 24-hour period, the contractor shall auger a 6-inch diameter by 36-inch-long hole and backfill with pea gravel and repeat the water test. If water still does not penetrate and drain, the contractor shall notify the District for direction. If gravel sumps are required, the contractor shall submit an itemized additional cost breakdown for District and/or Developer approval. The cost of additional gravel sumps shall be paid by the current property developer.

24.4 Percolation tests shall be performed in all planted areas to confirm adequate drainage.

25.0 Planting

25.1 Planting shall be performed per District details and as outlined below.

25.2 Excavate all planting pits to a diameter twice the width of the container to be planted.

25.3 Contractor shall scarify the side of planting pits if an auger is used with a shovel or digging bar.

25.4 Plant material shall be placed in the planting pit in a manner that does not disrupt the root ball, and the crown shall be set above the final finish grade per District details.

25.5 Provide 21-gram fertilizer tablets per agronomic fertility recommendations and per District detail.

25.6 Backfill all plant material with approved backfill mix per agronomic fertility recommendations. Compact backfill material in 6-inch lifts, tamping evenly to eliminate all air pockets and voids.

25.7 Contractor shall provide 5-gram fertilizer tablets to all rooted cuttings per District detail and per agronomic fertility recommendations.

25.8 All plants must be planted plumb with backfill mix to the top of the rootball.

25.9 Do not place any material on top of the rootball.

25.10 Install plant watering basins per District details and water as needed to promote vigorous growth.

25.11 All trees from 5-gallon to 36" box size shall be installed with one (1) 3" diameter perforated PVC pipe breather tube. All trees larger than 36" box size shall have two (2) 3" diameter perforated PVC pipe breather tubes. Breather tubes shall be equal in length to the depth of the rootball.

25.12 All trees and shrubs must have plant basins per District details regardless of slope.

26.0 Sodded Turf

26.1 All sodded areas shall be per the approved planting plan unless otherwise approved by the District.

26.2 Contractor shall prepare all areas indicated within the Soil Preparation Section 21.0 prior to placement of any sod.

26.3 Contractor shall evenly rake all sodded areas to level and remove all rocks 3/4 inch in diameter and larger from the upper 4 inches of amended soil.

26.4 Contractor shall spread commercial fertilizer per the agronomic soils report to all sodded areas.

26.5 Contractor shall lay sod immediately upon arrival.

26.6 Sod must be laid along a straight line, staggering each row like laying bricks, and must be butted tightly together, preventing any air pockets. No overlapping edges shall be permitted.

26.7 Top of sod soil shall be ½" to 1" below curbs, walkways, and valve box lids.

26.8 Sod shall be cut with a sharp knife and never pulled apart.

26.9 Sod shall be rolled immediately after sod is installed.

26.10 Sod must be watered thoroughly as required to achieve root establishment and growth and an overall green appearance.

26.11 Contractor shall monitor watering to prevent browning and fungus.

26.12 Contractor shall take every measure possible to protect sod by providing temporary fencing if necessary at no additional cost to the District.

26.13 Contractor shall be responsible for all pedestrian, bicycle, or vehicle traffic damage.

26.14 Contractor shall replace all damaged sod as directed by the District.

26.15 Contractor shall adjust all sprinkler heads and rotors to ensure there is no damage by mowers when cutting occurs.

27.0 Hydro-seeding

27.1 Turf hydro-seed mix shall be per approved plans and submittals, unless otherwise specified or approved.

27.2 Contractor shall prepare all areas indicated within the soil preparation section 20.0 prior to placement of any sod.

27.3 Contractor shall evenly rake all areas to receive turf to the proper level and remove all rocks 3/4 inch in diameter and larger from the upper 4 inches of amended soil.

27.4 Contractor shall monitor watering to prevent browning and fungus.

27.5 Contractor shall be responsible for all pedestrian, bicycle, or vehicle traffic damage.

27.6 The contractor shall take every measure possible to protect the seed, including providing temporary fencing, if necessary, at no additional cost.

27.7 Hydro-mulch slurry, fertilizer, and seed mix shall be applied under high pressure evenly and provide a uniform coat in all areas specified.

27.8 Over spray shall be removed immediately from sidewalks, walls, valve boxes, or any other structure.

27.9 Contractor shall provide 95 percent germination to all hydro-seeded areas prior to turnover.

27.10 Hydro-seeding cannot commence until all irrigation, soil preparation, and final finish grade have been accepted.

28.0 Jute Netting

28.1 Jute netting shall be brown in color, uniform plain weave mesh. Geo-jute or approved equal.

28.2 Jute shall be 48 inches wide with a weight of 1.2 pounds per linear yard.

28.3 All slopes adjacent to sidewalks with potential erosion problems are subject to jute netting as directed by the District's representative. No slopes over 2:1 shall be allowed; however, when tree and shrub planting pits and basins are installed on a 2:1 slope, a greater slope will be created that may require jute netting when the slope is directly adjacent to a sidewalk.

28.4 Jute netting shall be unrolled and placed up and down the slope and shall overlap 6 inches. All edges and overlaps shall be secured with jute staples at 3-foot intervals.

28.5 Jute netting along the top of the slope shall be buried 8 inches deep.

28.6 When ends overlap, going down slope, the material shall overlap 3 feet.

28.7 Jute staples shall be 10-gauge, U-shaped galvanized steel, 6 inches long. Longer staples shall be required for sandy soils.

29.0 Warranty

29.1 Contractor shall warranty the entire project against workmanship defects resulting in damage or death to any landscape, excluding defects resulting from lack of maintenance, neglect, or abuse by the Owner.

29.2 All trees shall be warrantied for a period of one year. All shrubs shall be guaranteed for a period of 90 days.

29.3 All plant material that is dead, dying, or does not show evidence of growth as directed by the District within the warranty period shall be replaced at the cost of the contractor within 15 days of written notice.

29.4 All replacement plant material shall be exact as specified in species and size.

29.5 No substitutions shall be allowed unless written approval is obtained.

29.6 Warranty period shall start on the date of the project letter of acceptance.

29.7 Warranty letters shall be provided on the contractor's letterhead, notarized and must contain the following information on the next page. An additional warranty must also be provided by the Developer using the same format.

Warranty for Landscape Plant Material
Project Name and Tract No.

All trees shall be warrantied for one year and shall remain in a live, healthy condition for said time following the date of formal Valley-Wide acceptance. Within this period, "CONTRACTOR'S or DEVELOPER'S NAME" agrees to replace all dead or unhealthy trees within 15 days after written notification by the District's representative, at no cost to the owner or District. Replacement trees shall meet the same as the original trees. Replacement trees shall be guaranteed for one year after their review by the District's representative. All shrubs and groundcover shall be guaranteed to live in a healthy condition for ninety days following the date of formal Valley-Wide acceptance. Within this period, "CONTRACTOR'S NAME" agrees to replace all dead or unhealthy shrubs or groundcover within 15 days after written notification by the District's representative, at no cost to the owner or District. Replacement shrubs and groundcover shall meet the same as the original shrubs and groundcover. Replacement shrubs and groundcover shall be guaranteed for ninety days after their review by the District's representative. If the contractor fails to complete the required plant replacements within 15 days of written notice, the contractor hereby authorizes the District to complete the replacements and agrees to pay all costs including material, labor, and equipment including a 10% administrative fee.

Location:_____
Landscape Architect:_____
Contractors License No.:_____
Printed Name:_____ Title:_____
Signed: _____
Address: _____
Phone No.:_____
Date of Signature: _____

30.0 Clean Up

30.1 Contractor shall keep the project clean at all times to ensure a safe and orderly workplace.

30.2 All containers, pallets, or other delivery material shall be removed from the site once the material has been installed.

30.3 All sidewalks, gravel, decomposed granite, concrete, or asphalt surfaces shall be broom-cleaned at the end of each day.

30.4 All trash, debris, or extra materials shall be removed and legally disposed of from the project site prior to the completion of the project.

31.0 Establishment Period

Refer to Chapter 26 Maintenance Specifications.

32.0 As-Builts and Record Drawings

32.1 Refer to Chapter 15 Construction Specifications General Section 5.0 As-Builts and Record Drawings for general requirements.

32.2 All trees, shrubs, groundcovers, mowcurbs, fences, trails, and walkways shall be identified on the planting as-builts, including all field changes made to the varieties, quantities, sizes, and locations.

32.3 All tree locations that were changed from the plan shall be located to scale on the planting as-builts to represent the new location.

33.0 Operation and Maintenance Manuals

33.1 Refer to Chapter 15 Construction Specifications General Section 6.0 Operation and Maintenance Manuals for general requirements.

33.2 Provide Valley-Wide with the instructions for major equipment and show written evidence to the District after the work that this service has been completed.

END OF SECTION

Chapter 26 Maintenance Specifications

MAINTENANCE SPECIFICATIONS

MAINTENANCE SPECIFICATIONS (GENERAL)

Valley-Wide Recreation and Park District (the "District" or "Valley-Wide") shall be considered Valley-Wide Recreation and Park District inspection personnel, consultants, or other approved team members hereafter.

1.0 General Requirements

1.1 The section includes all materials, tools, equipment, labor, and transportation to complete the establishment period.

1.2 Establishment period shall not commence until all required start of maintenance punch list items have been completed, unless indicated in writing. Refer to Chapter 2 Planning Requirements Section 18 Maintenance Establishment Period to review the maintenance establishment period requirements.

1.3 Contractor shall provide an experienced landscape maintenance foreman or supervisor to monitor the project continuously throughout the maintenance period.

1.4 Contractor shall visit the site as needed but not less than once per week to perform maintenance operations and monitor watering schedules.

1.5 When requested, the contractor shall provide the District with written time sheets listing each site visit during the maintenance period, indicating services performed. Failure to maintain the project and provide reports of work may result in extended maintenance to confirm work performed.

1.6 Labor Code Sections 1720 et seq. and 1770 et seq., as well as California Code of Regulations, Title 8, Section 16000 et seq. ("Prevailing Wage Laws"), require the payment of prevailing wage rates and the performance of other requirements on certain "public works" and "maintenance" projects. If this Project involves an applicable "public works" or "maintenance" project, as defined by the Prevailing Wage Laws, and if the total compensation is $1,000 or more, Developer agrees to fully comply with such Prevailing Wage Laws. The Developer shall defend, indemnify, and hold the District, its elected officials, officers, employees, and agents free and harmless from any claims, liabilities, costs, penalties, or interest arising out of any failure or alleged failure to comply with the Prevailing Wage Laws.

2.0 Maintenance Establishment Period

2.1 It is the responsibility of the contractor to maintain the entire project without any additional compensation until formal written acceptance is provided by Valley-Wide.

2.2 Before entering the Maintenance Establishment Period, an inspection shall occur to confirm that all required punch list items are corrected and required documents are approved. Furthermore, accessibility requirements may be required prior to entering the Maintenance Establishment Period, at the sole discretion of the District. The contractor shall schedule the following inspections:

a. Preliminary start of Maintenance Walk (15 days prior to the expected start of maintenance)

b. Start of Maintenance Walk

c. Monthly Maintenance Walks

d. 60 Day Prior to Acceptance Walk

e. Preliminary Final Walk (15 days prior to target acceptance)

f. Final Acceptance Walk

2.3 90 days is the minimum duration for landscape establishment only. Refer to the District's Landscape Turnover Checklist for the start of landscape maintenance requirements and 60 Day Prior to Acceptance requirements.

2.4 Contractor shall continuously maintain the entire project until all correction items have been completed and approved in writing, including all required turnover documents, regardless of the time required to complete. Final landscape walk shall not be scheduled until all turnover items have been submitted and approved by the District.

3.0 Turf Maintenance

3.1 Contractor shall mow weekly or as needed, all turf areas to a height of 2 inches unless Bermuda or a mixture of Bermuda is used. Bermuda or a mixture of Bermuda grass shall be maintained at a height of 1 inch unless otherwise directed by the District.

3.2 Contractor shall edge all turf areas adjacent to sidewalks, walls, or other applicable structures and trees bi-weekly or as needed.

3.3 All clippings must be removed from sidewalks and adjacent areas.

3.4 Contractor shall remove all excess clippings from turf areas. No mulching shall be allowed during the maintenance establishment period. First and second mowing operations shall be performed with 21" or 22" walk-behind mowers.

3.5 Contractor shall monitor watering to all turf areas and provide sufficient moisture levels as required to achieve a lush appearance.

3.6 Contractor shall re-seed or re-sod all bare areas as required to achieve 95 coverage prior to project turnover. Seed or sod variety must be verified by the District prior to placement.

4.0 Tree and Shrub Maintenance

4.1 Contractor shall remove any dead growth on all trees and shrubs as needed.

4.2 Lower branches of all trees under twelve feet shall be pruned using best horticultural practices and as directed by the District's representative.

4.3 No topping of any tree is allowed unless directed by the District's representative.

4.4 Tree branches must be trimmed and maintained above 14' within roadways and 7' above walkways.

5.0 Groundcover Maintenance

5.1 Contractor shall edge all groundcover areas as required to maintain a neat, lush, thriving appearance and shall edge as needed, and no less than once per month.

5.2 Contractor shall edge groundcover around shrub and tree basins as required.

5.3 Contractor shall trim and maintain all groundcover to be under 24" in height.

6.0 Weed Control

6.1 Contractor shall eradicate all weeds from all turf, planter, and slope areas by means of manual or chemical abatement. Chemical abatement must be approved by the District in writing prior to application.

6.2 Contractor must have or contract a company with a valid pest control license.

6.3 Contractor shall apply pre-emergent herbicide, where possible, to prevent weed growth as directed by a licensed pest control consultant.

6.4 Any undesirable plants not indicated on the planting plans shall be considered a weed and shall be removed from the site as directed by the District.

6.5 Contractor shall maintain all sidewalks, trails, and parking lots to be clean and weed-free.

7.0 Rodent and Pest Control

7.1 Contractor shall be responsible for maintaining a rodent and pest-free project.

7.2 All measures to eradicate rodents and pests must be completed as directed by a licensed pest control consultant.

7.3 Contractor shall repair/replace all damage caused by rodents or pests at no additional cost to the District.

7.4 Prior to project acceptance, protective fencing may be required where rodents and pest issues persist. The cost of fencing shall be paid by the contractor or developer.

8.0 Fertilization

8.1 Contractor shall fertilize turf, slope, and planter areas every 30 calendar days with approved fertilizer at the manufacturer's recommended application rate and per the agronomic fertility laboratory maintenance recommendations.

8.2 Approved fertilizers are 15-15-15, 16-6-8 and 21-7-14. Additional fertilizers can be used as approved by the District.

9.0 Irrigation

9.1 Contractor shall be responsible for complete irrigation adjustments to achieve proper moisture levels throughout all projects for all seasons as required to promote healthy, thriving plant material, ground cover, and turf while taking every possible measure to conserve water.

9.2 Contractor shall be responsible for repairing or replacing all nozzles, sprinkler heads, lateral lines, mainlines, valves, and/or other required assemblies throughout the project.

9.3 Contractor shall ensure that all irrigation heads are adjusted properly to alleviate overspray wherever possible.

9.4 Contractor shall test the irrigation system a minimum of once per week or more as required to properly maintain optimum moisture levels to promote vigorous plant growth.

9.5 Provide current backflow certification prior to turnover.

9.6 Repair and/or replace any damaged irrigation spray heads, rotors, drip assemblies, valves, backflow devices, water meters, electric pedestals, irrigation controllers, or other equipment. All replacements shall be new material and exact size and model number.

9.7 Contractor shall be responsible for all irrigation repairs and/or replacements throughout the duration of the maintenance period.

10.0 Clean-Up

10.1 Clean up shall occur daily, after each portion of work has been completed and as directed by the District's representative.

10.2 The contractor shall legally remove from the site any green waste, trash, or other debris.

10.3 Contractor shall keep clean all restrooms, trash receptacles, and trash enclosures throughout the maintenance period.

11.0 Infield Mix and Decomposed Granite

11.1 Contractor shall weekly maintain all infield mix and decomposed granite areas by scarifying, raking, and recompacting all uneven areas to be level and consistent in grade per plans, details, and specifications.

11.2 All infield areas must be watered as needed to avoid material transfer caused by wind.

11.3 All infield mix and decomposed granite areas shall be at the required level per plans, details, and specifications at the time of turnover. Any additional material required to replenish material levels per District requirements shall be at the cost of the contractor.

11.4 All infield mix and decomposed granite areas shall be cleaned weekly to be free of weeds, trash, green waste, or any other objectionable debris as determined by the District.

12.0 Parking Lots and Concrete Areas

12.1 All parking lots and concrete areas shall be cleaned weekly to be free of weeds, trash, green waste, or any other objectionable debris as determined by the District.

13.0 Graffiti

13.1 Removal of any graffiti shall be completed within 48 hours of notification.

13.2 Contractor shall be responsible for all graffiti removal until the project has been completed and accepted in writing by the District.

14.0 Vandalism

14.1 Contractor shall be responsible for all vandalism on the project until the project has been completed and accepted in writing by the District.

15.0 Maintenance and Warranty Bond

15.1 The District reserves the right to require a maintenance bond prior to final acceptance of the project by the District against all defects in workmanship and materials that may become apparent during a period of one year. The contractor or Developer shall be responsible for the cost of the bond.

16.0 Final Approval

16.1 All landscaped areas shall be inspected in their entirety by the District's representative upon the completion of the maintenance period.

16.2 The contractor shall be responsible for the entire project at no additional cost to the District until final acceptance has been provided in writing by the District.

16.3 Final acceptance for all projects to be turned over for District maintenance shall be the first of each calendar month. Failure to receive approval due to failed or cancelled inspections or incomplete documentation prior to the middle of the month before the projected target date shall result in additional maintenance performed by the contractor until the end of the following month at no additional cost to the District.

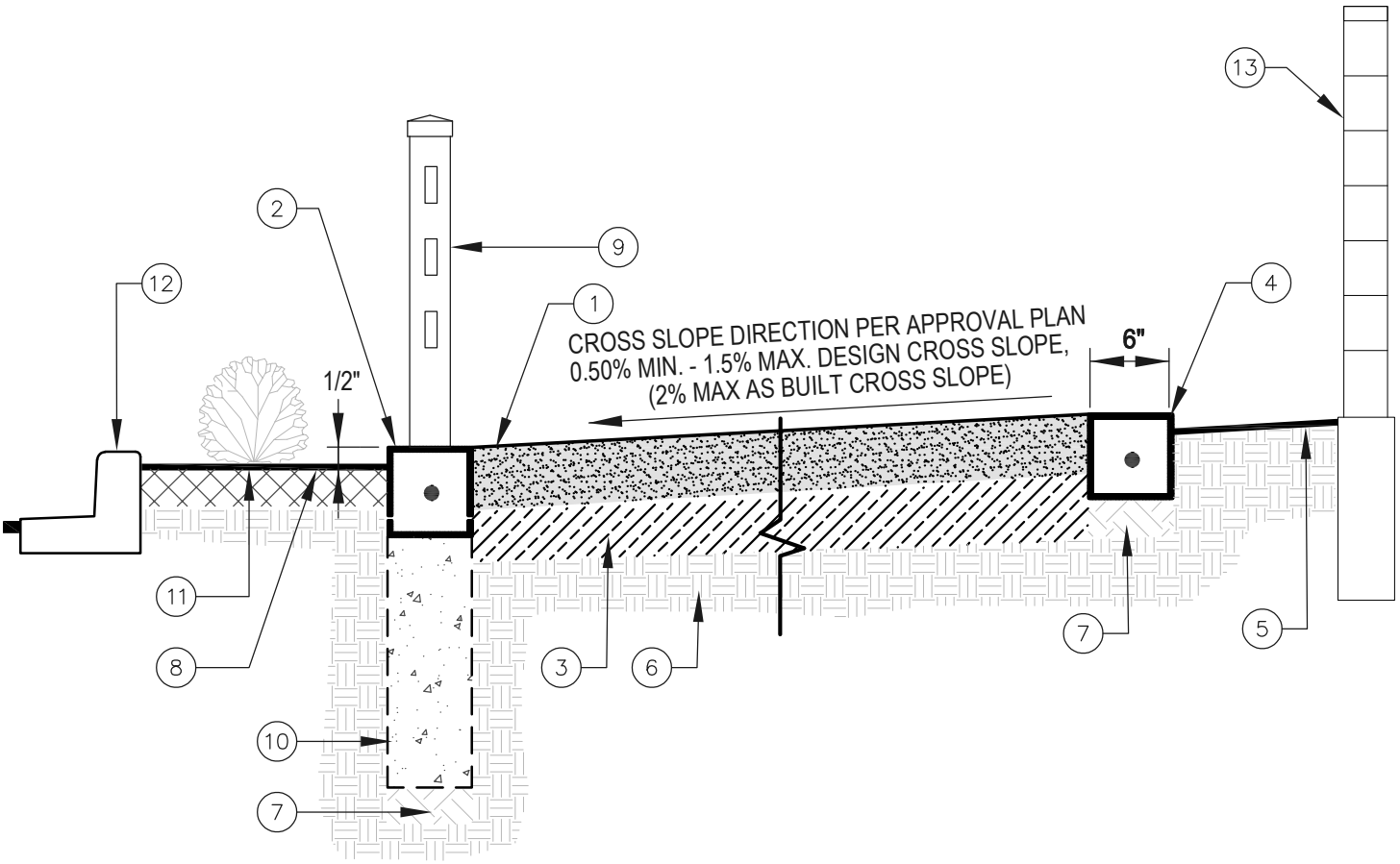
16.4 In the event that sufficient funding has not been levied into the District, the improvements will remain in the maintenance establishment period, at the developer's expense, until appropriate funding has been established with the County Assessor's Office.

END OF SECTION

Chapter 27
Details

VALLEY-WIDE RECREATION AND PARK DISTRICT
LANDSCAPE CONSTRUCTION DETAILS

DETAIL NO.	DETAIL DESCRIPTION
LC-01	DECOMPOSED GRANITE PATH
LC-02	CONCRETE FLATWORK
LC-03	CONCRETE REBAR AND JOINTS
LC-04	INFIELD MIX
LC-05	PLAY AREA CURB & PLAY SURFACE
LC-06	CHAIN LINK POST IN MOWCURB
LC-07	PVC FENCE, FOOTING AND MOWCURB
LC-08	THREE RAIL PVC FENCING
LC-09	CHAIN LINK FENCING
LC-10	CHAIN LINK GATE
LC-11	TUBULAR STEEL FENCING
LC-12	HOT DIPPED GALVANIZED STEEL FENCING
LC-13	TUBULAR STEEL GATE 6' OR SMALLER
LC-14A	TRASH ENCLOSURE FOOTING LAYOUT
LC-14B	TRASH ENCLOSURE PLAN VIEW
LC-14C	TRASH ENCLOSURE ELEVATION VIEW
LC-14D	TRASH ENCLOSURE GATE
LC-15A	DRINKING FOUNTAIN
LC-15B	DRINKING FOUNTAIN DRAIN
LC-16	PLAY AREA SUMP DRAIN LAYOUT
LC-17	PLAY AREA SUMP DRAIN SECTION
LC-18	BASKETBALL COURT
LC-19	BASKETBALL GOAL
LC-20	PARKING LOT CONCRETE (PLAN)
LC-21	PARKING LOT CONCRETE (SECTION)
LC-22	TYPICAL DUGOUT LAYOUT
LC-23	CHAIN LINK BACKSTOP
LC-24	CHAIN LINK BACKSTOP CONNECTIONS
LC-25	BALL FIELD LAYOUT
LC-26	ALUMINUM BLEACHER
LC-27	TRASH RECEPTACLE
LC-28	PARK TABLE AND BENCH
LC-29	PET WASTE STATION
LC-30	PARK BBQ
LC-31	TYPICAL MONUMENT SIGN
LC-32	PLAY AREA RAMP
LC-33	CONCRETE MOWCURB
LC-34	TYPICAL VOLLEYBALL COURT
LC-35	TYPICAL PICKLEBALL COURT



1. STABILIZED DECOMPOSED GRANITE COMPACTED FLUSH WITH TOP OF CURB WITH 4" MIN. THICKNESS. SIZE SHALL BE 3/8 MINUS UNLESS NOTED OTHERWISE.
2. 6" X 8" MOWCURB PER DETAIL LC-07.
3. COMPACTED CLASS 2 BASE AS REQ'D. WHEN SPECIFIED FOR MAINTENANCE VEHICLE ACCESS (DEPTH PER GEOTECHNICAL ENGINEER BASED ON PROJECT SPECIFIC LOAD REQUIREMENTS).
4. 6" X 6" MOWCURB PER DETAIL LC-33.
5. FINISH GRADE OF DIRT IN TURF AREA TO BE 1" BELOW TOP OF MOWCURB.
6. UNDISTURBED NATIVE SOIL.
7. 90% COMPACTED SUBGRADE UNDER MOWCURB.
8. FINISH GRADE OF MULCH IN PLANTER AREA 1/2" BELOW TOP OF MOWCURB.
9. 3 RAIL VINYL FENCE PER DETAIL LC-08 ALONG STREET SIDE OF TRAIL (WHEN SPECIFIED).
10. 8" DIA. X 24" DEEP FOOTING PER DETAIL LC-07 AND LC-08.
11. PARKWAY PLANTER PER PLAN.
12. STREET CURB PER PLAN.
13. PERIMETER WALL (WHEN SPECIFIED).

NOTES: D.G. SAMPLE MUST BE SUBMITTED FOR APPROVAL TO DISTRICT'S REPRESENTATIVE PRIOR TO DELIVERY OF MATERIAL. COLOR SHALL BE "GOLD" UNLESS OTHERWISE NOTED ON PLAN.
RUNNING SLOPE TO BE 4.5% MAX. BY DESIGN AND 5% MAX. AS BUILT.

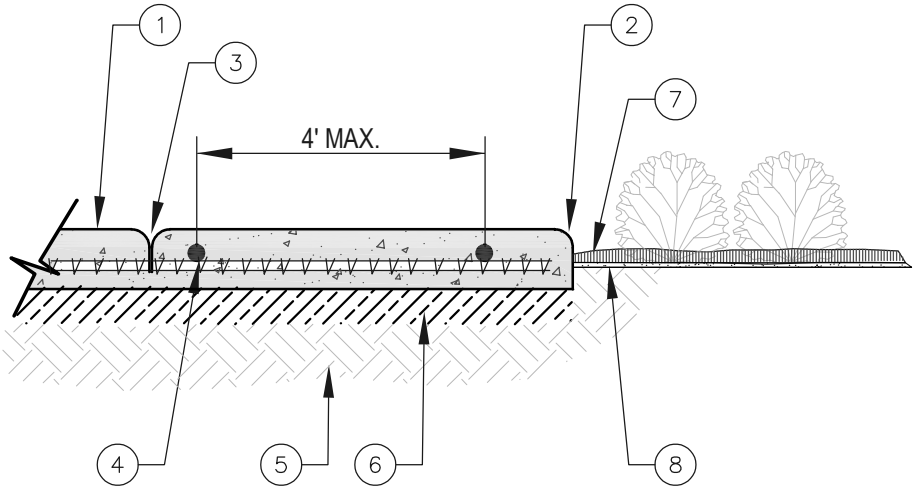
VALLEY-WIDE RECREATION AND PARK DISTRICT

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DECOMPOSED GRANITE PATH

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

LC-01



1. 2500 MIN. PSI GRAY CONCRETE DEPTH PER PLAN (4" MIN.) W/ MEDIUM BROOM FINISH.
2. 1/2" MIN. RADIUS AT ALL EDGES.
3. CONTROL JOINT PER DETAIL LC-03.
4. #4 REBAR TYP @ 4' O.C. UNLESS OTHERWISE SPECIFIED.
5. 90% MIN. COMPACTED SUBGRADE.
6. 3" THICK MIN. COMPACTED CLASS 2 BASE (FINAL DEPTH PER GEOTECHNICAL ENGINEER).
7. FINISH GRADE (TOP OF MULCH) 1/2" BELOW CONCRETE FOR PLANTER AND 1" BELOW FOR TURF.
8. COMPACTED NATIVE SOIL NO MORE THAN 2" BELOW EDGE OF CONCRETE.

NOTES:
- CONCRETE CROSS SLOPE SHALL NOT BE GREATER THAN 1.8% BY DESIGN AND 2% AS BUILT.
- CONCRETE RUNNING SLOPE SHALL NOT BE GREATER THAN 4.8% BY DESIGN AND 5% AS BUILT UNLESS HANDRAILS ARE USED.
- CONCRETE SHALL NOT BE FLATTER THAN 0.5% TO AVOID PONDING.
- PROVIDE 3/8" FELT EXPANSION JOINTS WHEN CONCRETE JOINS WITH A BLOCK WALL OR OTHER STRUCTURE.
- ALL CONCRETE MUST COMPLY WITH ALL ADA CURRENT REGULATIONS & BUILDING CODES.
- PROVIDE #4 REBAR AT 4' SQUARE SPACING (2 CONTINUOUS ALONG WALKWAYS), UNLESS OTHERWISE SPECIFIED.
- ALL CONCRETE FORMS MUST BE INSPECTED PRIOR TO POURING.
- ALL CONCRETE AND SUBGRADES SHALL COMPLY WITH THE GEOTECHNICAL SOILS REPORT & RECOMMENDATIONS.
- REFER TO ADDITIONAL REQUIREMENTS ON DETAIL LC-03.

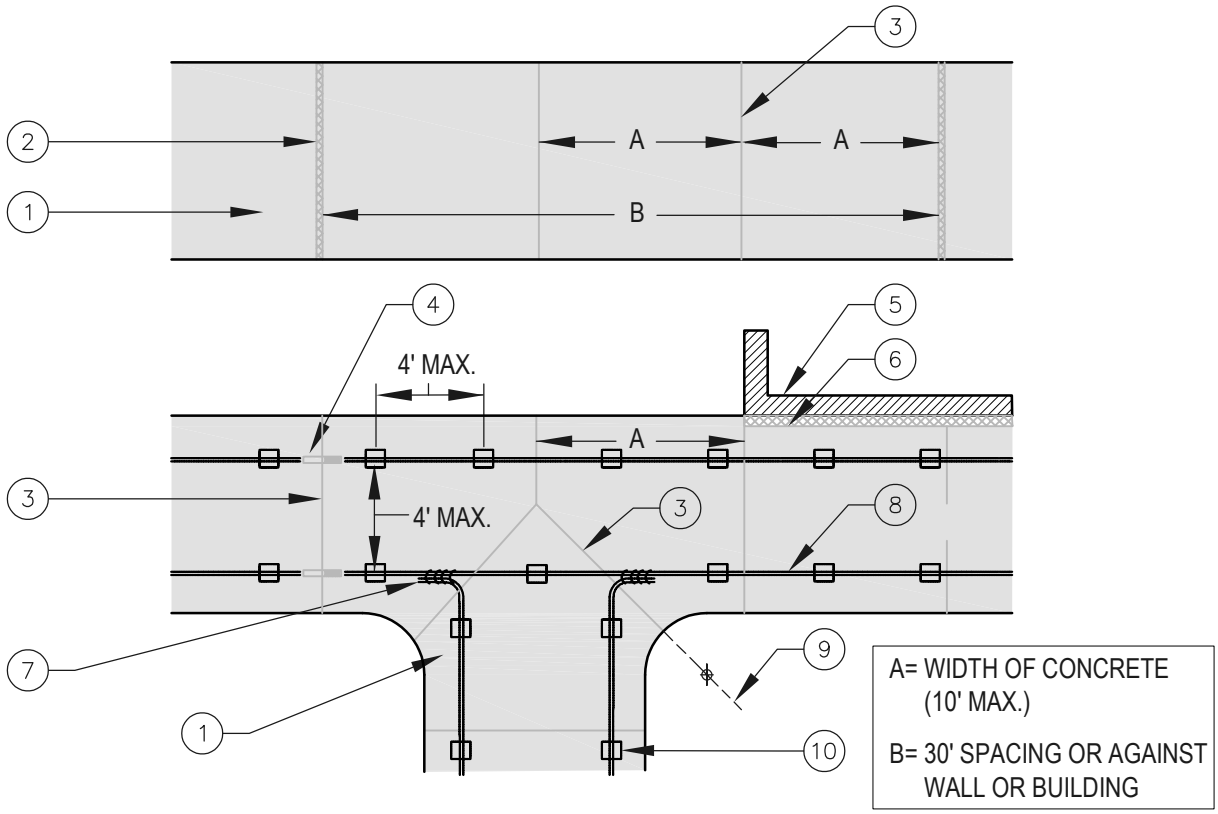
VALLEY-WIDE RECREATION AND PARK DISTRICT

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CONCRETE FLATWORK

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

LC-02



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1. 2500 MIN. PSI GRAY CONCRETE PER DETAIL LC-02.
2. EXPANSION JOINT (SEE NOTE).
3. 1/2" MIN. TOOLED JOINT 3/4" DEEP.
4. SPEED DOWEL AT COLD JOINTS TYP.
5. BUILDING OR WALL.
6. EXPANSION JOINT (SEE NOTE).
7. OVERLAP REBAR 18" MIN. AND TIE WIRE WRAP ALL CONNECTIONS.
8. #4 REBAR TYP.
9. ALIGN JOINT WITH RADIUS.
10. CONCRETE BLOCK TYP.

NOTES: ALL JOINTS SHALL BE PERPENDICULAR TO CONCRETE EDGE.
ALL JOINTS SHALL BE HAND TOOLED AND SAWCUT TO A DEPTH OF 1-1/2".
SAW CUTTING IN LIEU OF TOOLED JOINT MUST BE APPROVED IN WRITING BY THE DISTRICT.
PROVIDE 3/8" FELT EXPANSION JOINTS WHEN CONCRETE JOINS WITH WALL OR BUILDING.
PROVIDE 3/8" FELT EXPANSION JOINTS AT 30 FOOT SPACING TYP.
SPEED DOWELS SHALL BE USED BETWEEN EACH COLD JOINT POURS.
ALL REBAR MUST BE 2" FROM ANY EDGE OF CONCRETE AND BE SECURED TO A 2"X2" MINIMUM CONCRETE BLOCK AT 4' O.C. MAXIMUM SPACING PER SPECS.
DRILL AND SECURE REBAR WITH EPOXY AGAINST ALL EXISTING COLD JOINTS WITH SPEED DOWELS.

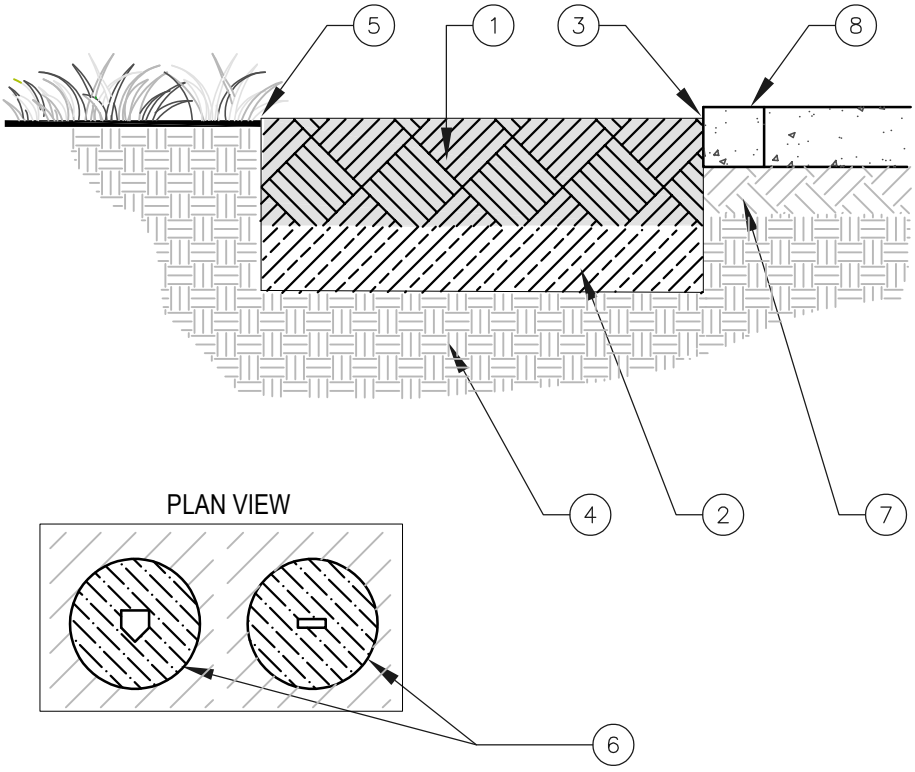
VALLEY-WIDE RECREATION AND PARK DISTRICT

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CONCRETE REBAR AND JOINTS

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

LC-03



1. 4" THICK MIN. APPROVED INFIELD MIX, COMPACT TO 90% DENSITY PER SPECS.
2. 2" THICK WASHED CONCRETE SAND COMPACTED TO 90%.
3. 1" BELOW CONCRETE EDGE AND FLUSH AT FIELD ENTRIES.
4. UNDISTURBED SUBGRADE OR 90% COMPACTED SECTION.
5. LEVEL TRANSITION BETWEEN TURF GRADE AND INFIELD MIX.
6. PITCHING MIX INSIDE 9' DIAMETER AT HOME PLATE AND PITCHING RUBBER.
7. 90% COMPACTED SUBGRADE.
8. HARDSCAPE PER PLAN.

NOTES: INFIELD MIX SHALL BE A SMOOTH CONSISTENT HARD SURFACE AND SHALL SLOPE PER PLAN.
THOROUGHLY WATER AND COMPACT WITH ROLLER IF NEEDED FOR SPECIFIED DENSITY.
PROVIDE 9' DIAMETER PITCHING MIX 4" DEEP AROUND HOME PLATE AND PITCHING RUBBER.
INFIELD MUST SLOPE AWAY FROM BACKSTOP AND DUGOUTS.
NO DRAINS ARE ALLOWED WITHIN INFIELDS.

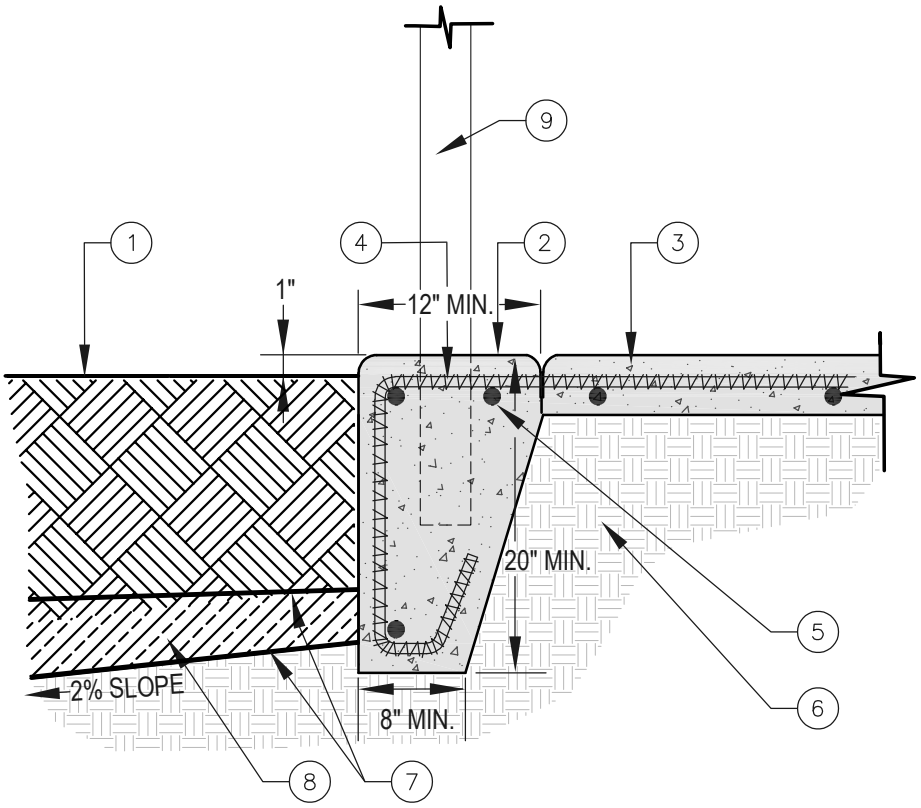
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INFIELD MIX

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

LC-04



1. IPEMA AND ADA APPROVED WOOD FIBER COMPACTED TO 12" THICK MIN.
2. 2500 PSI CONCRETE CURB 12" WIDE MIN. X 20" DEEP MIN.
3. CONCRETE PER PLAN AND CONCRETE DETAILS.
4. #4 REBAR @ 36" O.C. (2" MIN. FROM EDGE OF CURB).
5. CONTINUOUS #4 REBAR (3 PLACES).
6. UNDISTURBED SUBGRADE OR 90% COMPACTED SECTION.
7. FILTER FABRIC PER SPECS. (COVER ENTIRE AREA).
8. 4" MIN. DEPTH 3/4" WASHED GRAVEL. SUBGRADE MUST HAVE 2% MIN. SLOPE TOWARDS DRAINS.
9. TUBULAR STEEL POSTS PER DETAIL LC-11 (CONFIRM LOCATIONS PER PLAN AND DISTRICT STANDARDS).

NOTES: SUBGRADE FOR WOOD FIBER SHALL SLOPE TO DRAINS @ 2% MIN. SLOPE.
PROVIDE 3/4" MIN. RADIUS AT CONCRETE EDGE.
WOOD FIBER SAMPLE MUST BE SUBMITTED FOR APPROVAL FROM DISTRICT.
PROVIDE SPEED DOWELS AND EXPANSION JOINT WITH CAULKING BETWEEN CURB AND FLATWORK UNLESS CURB AND ADJACENT CONCRETE ARE POURED AT SAME TIME.
WOOD FIBAR MUST BE WATERED, COMPACTED AND REPLENISHED TO BE 1" BELOW TOP OF CURB.
PROVIDE 12" MIN. EMBED FOR TUBULAR STEEL FENCE POSTS.

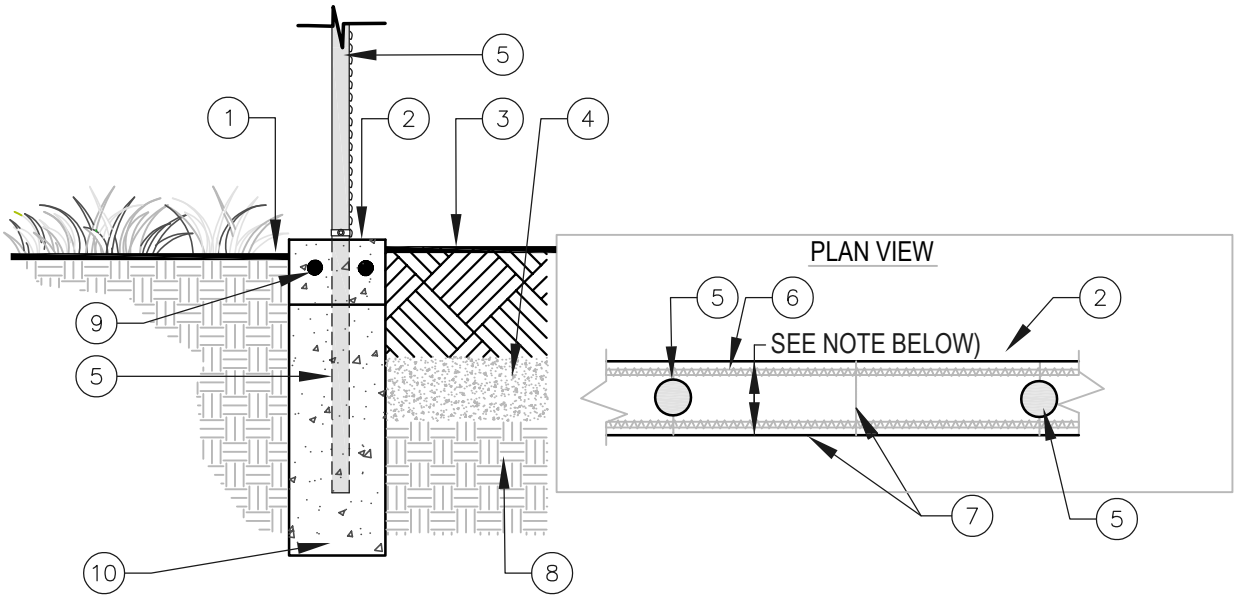
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PLAY AREA CURB & PLAY SURFACE

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

LC-05



FOOTING SIZE FOR CHAINLINK FENCE HEIGHTS

FENCE HEIGHT	FOOTING DEPTH	FOOTING DIAMETER	POST DIAMETER
6'0"-8'0"	18"-24"	8"	2-3/8"
10'0"-12'0"	PER ENGINEER	PER ENGINEER	3-5/8"
16'0"-18'0"	PER ENGINEER	PER ENGINEER	6"

(1) TURF GRADE 1" BELOW MOWCURB CONCRETE GRADE SHALL BE FLUSH WITH MOWCURB.
(2) 2500 MIN. PSI CONCRETE MOWCURB 6" DEEP X 8" - 12" (SEE NOTE BELOW).
(3) TOP OF INFIELD MIX TO BE 1" BELOW MOWCURB.
(4) SAND SECTION PER DETAIL LC-04.
(5) GALVANIZED CHAINLINK POST.
(6) #4 REBAR 2" FROM POST EDGE.
(7) 1/2" TOOLED CONTROL JOINT TYP.
(8) UNDISTURBED SUBGRADE OR 90% COMPACTED SECTION.
(9) #4 REBAR (CONTINUOUS) 2 PLACES @ EACH SIDE OF POST.
(10) CONCRETE FOOTING PER DEPTH CHART ABOVE (TOP OF FOOTING 6" BELOW TOP OF MOWCURB).

NOTES: MOWCURB WIDTH SHALL BE 8" MIN. TYP. AND 12" MIN. ALONG BALLFIELD BACKSTOP AND FOUL LINE FENCING.
TOP OF FOOTING MUST BE AT ELEVATION TO ACCOMMODATE 6" DEEP FORM BOARDS AND CONCRETE MOWCURB TO BE POURED AFTER FOOTING AND POST INSTALLATION.
EXTEND FENCE POST FOOTING 4" ABOVE FINISH GRADE. WHEN MOWCURB IS NOT USED, CHAMFER EDGES 3" AT 45 DEGREE ANGLE FOR DRAINAGE.
CONTRACTOR SHALL BE RESPONSIBLE FOR BUILDING PERMIT PRIOR TO CONSTRUCTION.
FOOTINGS MUST BE INSPECTED BY THE DISTRICT PRIOR TO POURING.
ALL FOOTINGS ARE SUBJECT TO LOCAL CITY AND/OR COUNTY PERMITS AND INSPECTIONS IN ADDITION TO INSPECTION BY THE DISTRICT PER THE DISTRICT'S MINIMUM REQUIREMENTS.

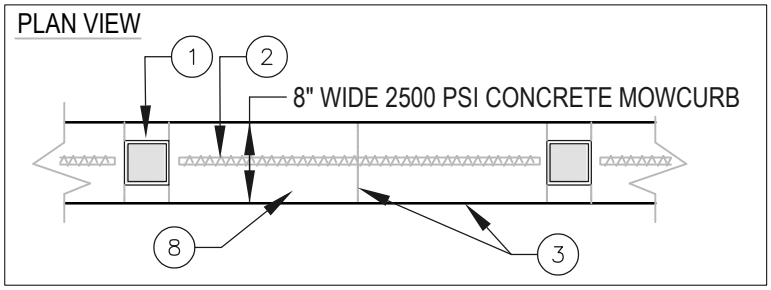
VALLEY-WIDE RECREATION AND PARK DISTRICT

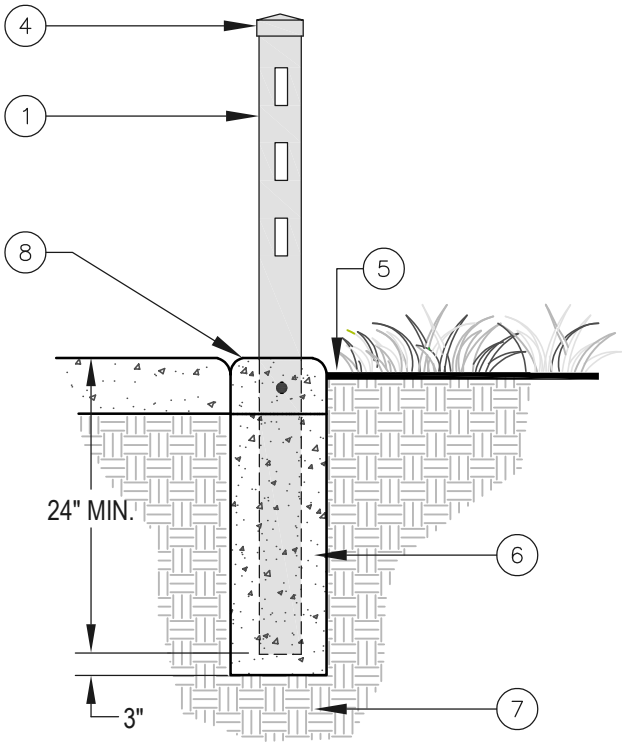
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CHAIN LINK POST IN MOWCURB

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

LC-06





1. 3 RAIL 5"-6" PVC POST @ 8' O.C. MAX. (2 RAIL SUBJECT TO PROJECT SPECIFIC APPROVAL).
2. #4 REBAR SECTION 2" FROM POST EDGE.
3. 1/2" TOOLED CONTROL JOINT TYP.
4. PVC "PYRAMID STYLE" CAP SECURE WITH (2) STAINLESS STEEL TAP SCREWS.
5. FINISH GRADE 1" BELOW CURB FOR TURF 2" BELOW CURB FOR PLANTERS.
6. 2500 PSI CONCRETE FOOTING 8" DIA. X 3" BELOW POST.
7. UNDISTURBED NATIVE SOIL.
8. 6" DEEP X 8" WIDE MOWCURB.

NOTES: WHERE PVC FENCING IS ADJACENT CONCRETE, TURF OR PROJECT BOUNDARY, PROVIDE A CONCRETE MOWCURB ALONG FENCE LINE.

TOP OF FOOTING MUST BE AT ELEVATION TO ACCOMMODATE 6" DEEP FORM BOARDS AND CONCRETE MOWCURB TO BE POURED AFTER FOOTING AND POST INSTALLATION.

ALL FOOTINGS ARE SUBJECT TO SAME REQUIREMENTS INDICATED ON NOTE 4 OF DETAIL LC-06.

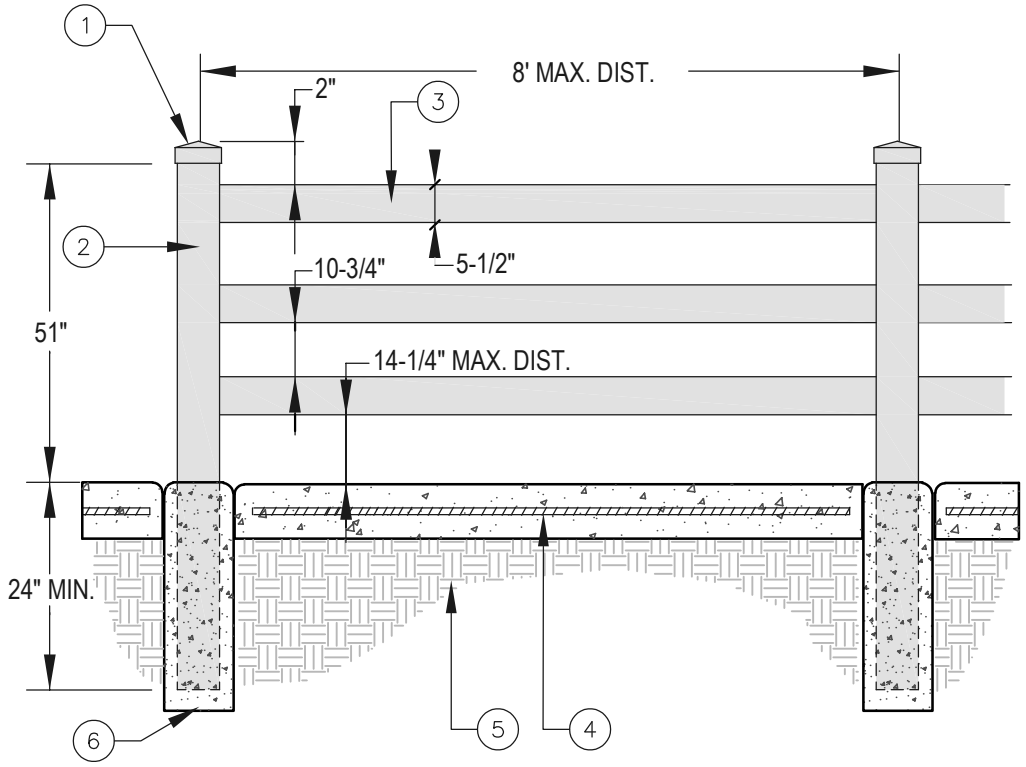
VALLEY-WIDE RECREATION AND PARK DISTRICT

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PVC FENCE, FOOTING AND MOWCURB

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

LC-07



1. PVC CAP SECURE WITH (2) STAINLESS STEEL TAP SCREWS.
2. 3 RAIL PVC POST @ 8' O.C. MAX.
3. 1-1/2" X 5-1/2" PVC RAIL TYP.
4. #4 REBAR 2" FROM POST EDGE.
5. UNDISTURBED NATIVE SOIL.
6. FOOTING PER FOOTING DETAIL LC-07 .

NOTES: WHERE PVC FENCING IS ADJACENT CONCRETE, TURF OR PROJECT BOUNDARY, PROVIDE A CONCRETE MOWCURB ALONG FENCE LINE. REFER TO DETAIL LC-06 & 07 FOR FOOTING ELEVATION TOP OF FOOTING MUST BE AT ELEVATION TO ACCOMMODATE 6" DEEP FORM BOARDS AND CONCRETE MOWCURB TO BE POURED AFTER FOOTING AND POST INSTALLATION. ALL FOOTINGS ARE SUBJECT TO SAME REQUIREMENTS INDICATED ON NOTE 4 OF DETAIL LC-06.

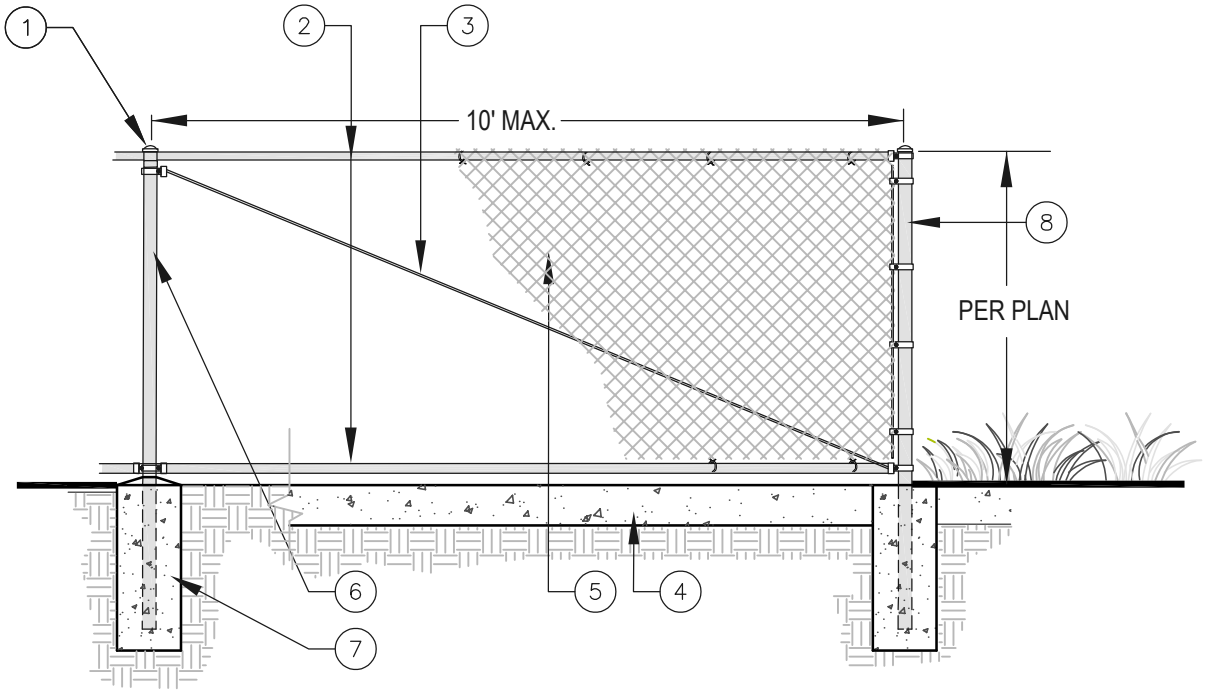
VALLEY-WIDE RECREATION AND PARK DISTRICT

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THREE RAIL PVC FENCING

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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LC-08



FOOTING SIZE FOR CHAINLINK FENCE HEIGHTS

FENCE HEIGHT	FOOTING DEPTH	FOOTING DIAMETER	POST DIAMETER
6'0"-8'0"	18"-24"	8"	2-3/8" ***
10'0"-12'0"	PER PROJECT ENGINEER	PER PROJECT ENGINEER	3-1/2" ***
16'0"-18'0"	PER PROJECT ENGINEER	PER PROJECT ENGINEER	6" ***

1. GALV. BALL CAP (SIZE PER POST SIZE).
2. GALV. 1-5/8" MIN. TOP AND BOTTOM RAIL.
3. 3/8" TRUSS ROD WITH TENSION TURNBUCKLE AT ENDS, TURNS & GATE POST (TYP.).
4. MOWCURB W/REBAR PER DETAIL LC-06. SET TOP OF CURB 2" BELOW BOTTOM RAIL.
5. 9 GAUGE 2" CHAINLINK FABRIC.
6. GALV. TERMINAL POST (SIZE PER CHART BELOW).
7. CONC. FOOTING PER FOOTING SCHEDULE AND STAMPED PLANS.
8. END OR CORNER POST.

NOTES: ALL RAILS & POSTS SHALL BE SCH 40 AND ALL MATERIAL SHALL BE HOT DIPPED GALVANIZED.
CROWN TOP OF FOOTING WHEN NO MOWCURB IS REQUIRED IF APPROVED BY DISTRICT IN WRITING.
CENTER RAILS REQUIRED FOR FENCING WITH 8' VERTICAL DISTANCE BETWEEN TOP AND BOTTOM RAIL.
TOP OF FOOTING MUST BE AT ELEVATION TO ACCOMMODATE 6" DEEP FORM BOARDS AND
CONCRETE MOWCURB TO BE POURED AFTER FOOTING AND POST INSTALLATION ALONG ALL FENCING
***UPSIZE CHAINLINK POST ONE SIZE FOR ALL ENDS AND CORNERS.

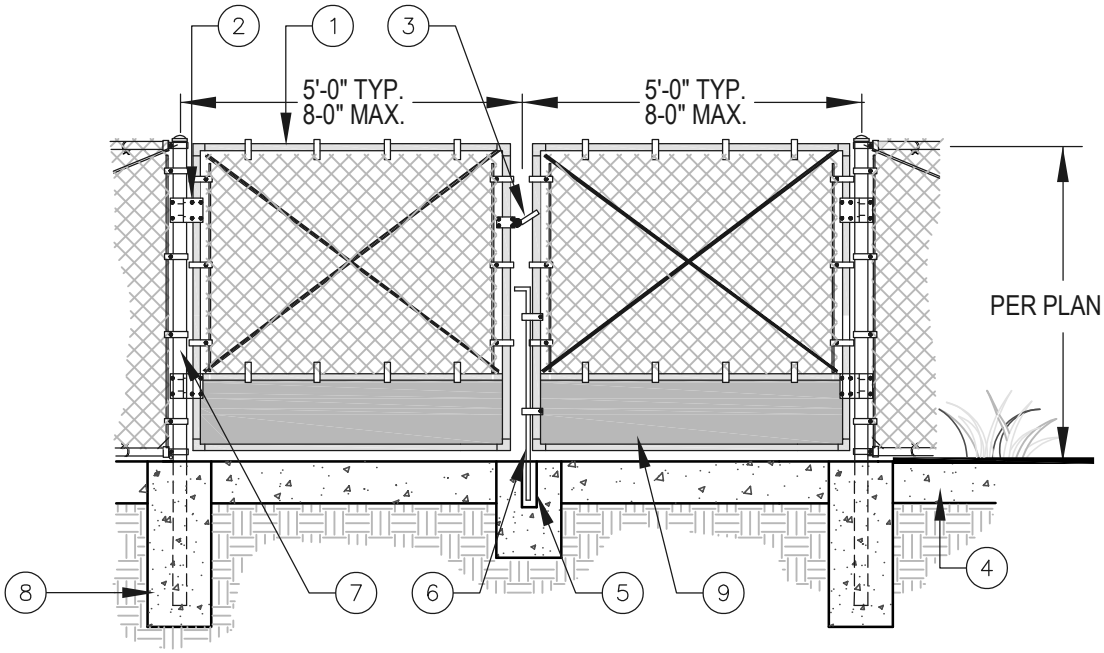
VALLEY-WIDE RECREATION AND PARK DISTRICT

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CHAIN LINK FENCING

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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LC-09



FOOTING SIZE FOR CHAINLINK FENCE HEIGHTS

FENCE HEIGHT	FOOTING DEPTH	FOOTING DIAMETER	POST DIAMETER
6'0"-8'0"	18"-24"	8"	3-1/2"
10'0"-12'0"	PER PROJECT ENGINEER	PER PROJECT ENGINEER	4"
16'0"-18'0"	PER PROJECT ENGINEER	PER PROJECT ENGINEER	6"

(1) GALV. 2-3/8" WELDED GATE FRAME.
(2) INDUSTRIAL 180 DEGREE HINGE.
(3) LOCKING PIPE LATCH @ 34" - 44" ABOVE FINISH GRADE.
(4) MOWCURB W/REBAR PER DETAIL LC-06.
(5) 1" STEEL SLEEVE IN CONCRETE FOOTING (FOR DBL. GATES ONLY, ONE AT OPEN & CLOSE).
(6) 3/4" X 3' GALV. STEEL ROD WITH 3" 90 DEGREE HANDLE.
(7) GALV. TERMINAL POST.
(8) CONC. FOOTING PER FOOTING DETAIL SET TOP OF FOOTING TO ALLOW FOR MOWCURB.
(9) 12" HIGH SMOOTH FULL WIDTH KICK PLATE ON PUSH SIDE OF GATE WHEN REQUIRED FOR PUBLIC ACCESS.

NOTES: ALL RAILS & POSTS SHALL BE SCH 40 AND ALL MATERIAL SHALL BE HOT DIPPED GALVANIZED.
TENSION ROD SHALL BE ATTACHED TO FABRIC @ 16" O.C. WITH GALV. HOG RINGS.
TOP OF FOOTING MUST BE AT ELEVATION TO ACCOMMODATE 6" DEEP FORM BOARDS AND CONCRETE MOWCURB TO BE POURED AFTER FOOTING AND POST INSTALLATION ALONG ALL FENCING.
ALL FOOTINGS ARE SUBJECT TO SAME REQUIREMENTS INDICATED ON NOTE 4 OF DETAIL LC-06.
GATES FOR PUBLIC ACCCESS MUST COMPLY WITH ACCESSIBLE REQUIREMENTS INCLUDING LANDINGS, KICK PLATES, AND LATCH HEIGHTS PER 11B-404.2 AND GATE OPENING FORCE PER 11B-404.2.9.

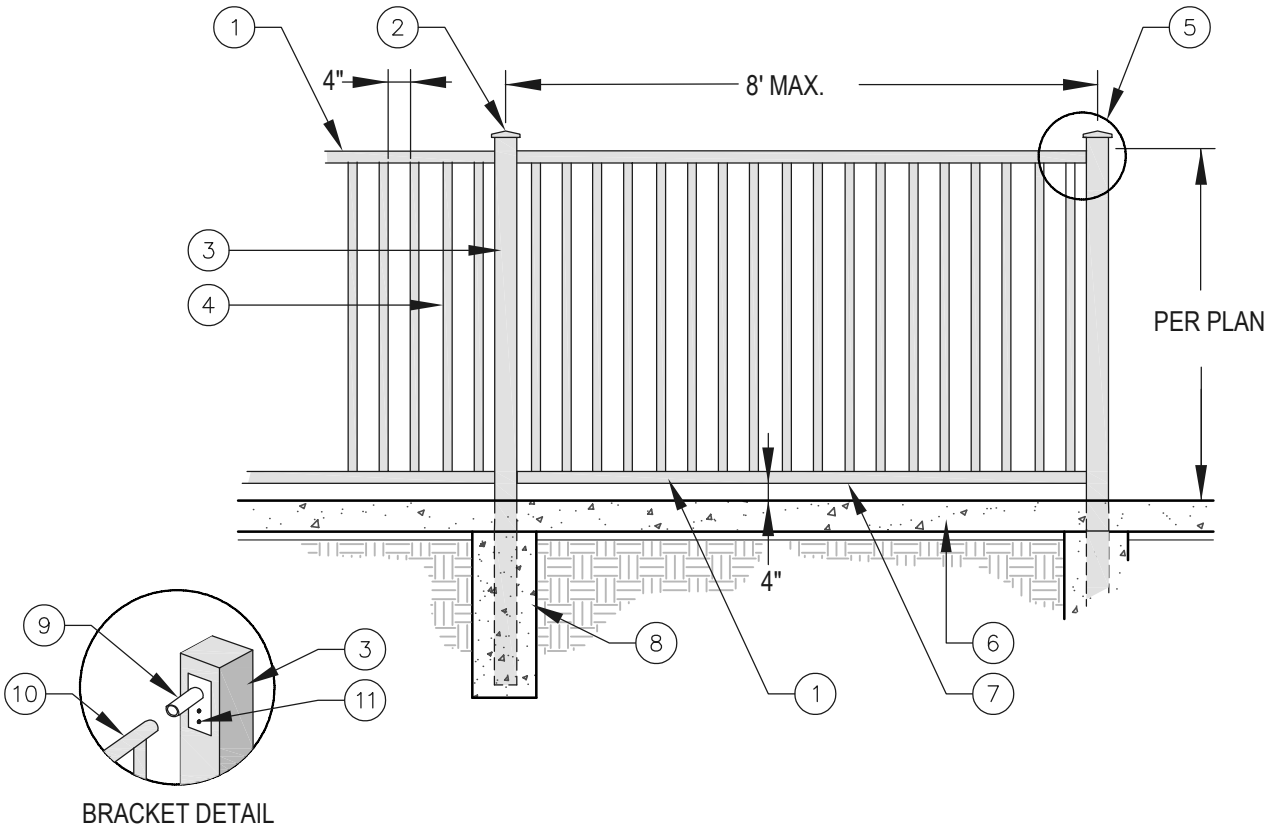
VALLEY-WIDE RECREATION AND PARK DISTRICT

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CHAIN LINK GATE

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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LC-10



BRACKET DETAIL

1. 1-3/8" MIN. ROUND OR SQUARE TUBULAR STEEL FENCE PANEL.
2. WROUGHT IRON STD. CAP.
3. 2" MIN. SQUARE 14 GAUGE POST.
4. 3/4" MIN. SQUARE OR ROUND 16 GAUGE PICKETS.
5. SEE ENLARGED BRACKET DETAIL BELOW.
6. 6" DEEP X 8" WIDE CONCRETE MOWCURB W/#4 REBAR PER DETAIL LC-06.
7. 1-3/8" MIN. TUBULAR STEEL RAIL 4" ABOVE MOWCURB.
8. 2500 MIN. PSI CONCRETE FOOTING 8" DIA. X 24" DEEP.
9. RAIL BRACKET (CAULK JOINT WITH CLEAR SILICON).
10. FENCE RAIL SLIPS OVER POST ASSEMBLY.
11. GALVANIZED SELF TAPPING SCREWS (2X).

NOTES: ALL PANELS AND POST MUST BE BLACK POWDER COATED.
CONCRETE MOWCURB MUST BE CONTINUOUS BELOW ALL TUBULAR STEEL FENCING TYP.
CONTRACTOR MUST CONFIRM RAIL PANELS FIT PROPERLY PRIOR TO FOOTING INSTALLATION.
TOP OF FOOTING MUST BE AT ELEVATION TO ACCOMMODATE 6" DEEP FORM BOARDS AND
CONCRETE MOWCURB TO BE POURED AFTER FOOTING AND POST INSTALLATION ALONG ALL FENCING.
VERTICAL PICKETS SHALL HAVE 4-1/2" OPENING MAX. 2" MAX. OPENING WHEN USED AT DOG PARKS.
BOTTOM RAIL TO BE 4" FROM TOP OF MOWCURB. BOTTOM RAIL TO BE 2" FROM TOP FOR DOG PARKS.

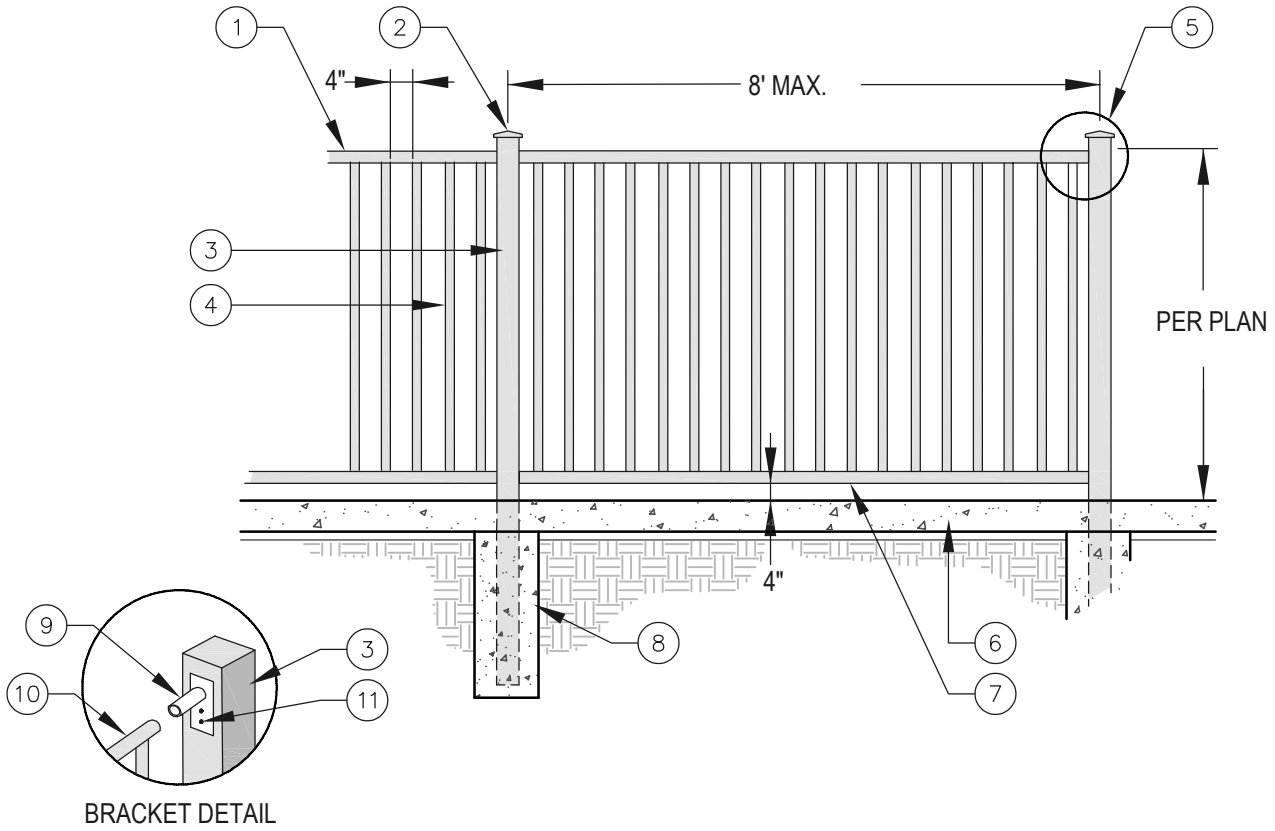
VALLEY-WIDE RECREATION AND PARK DISTRICT

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TUBULAR STEEL FENCING

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

LC-11



BRACKET DETAIL

1. 1-3/8" MIN. ROUND OR SQUARE 16 GAUGE HOT DIPPED GALVANIZED STEEL FENCE PANEL.
2. 2" SQUARE HOT DIPPED GALVANIZED POST CAP.
3. 2" MIN. SQUARE 11 GAUGE HOT DIPPED GALVANIZED POST.
4. 3/4" MIN. SQUARE OR ROUND 16 GAUGE HOT DIPPED GALVANIZED PICKETS, 4-1/2" O.C.
5. SEE ENLARGED BRACKET DETAIL BELOW.
6. 6" DEEP X 8" WIDE CONCRETE MOWCURB W/#4 REBAR PER DETAIL LC-06.
7. 1-3/8" MIN. ROUND OR SQUARE 16 GAUGE HOT DIPPED GALVANIZED STEEL RAIL 4" ABOVE MOWCURB.
8. 2500 MIN. PSI CONCRETE FOOTING 8" DIA. X 24" DEEP.
9. RAIL BRACKET (CAULK JOINT WITH CLEAR SILICON).
10. FENCE RAIL SLIPS OVER POST ASSEMBLY.
11. GALVANIZED SELF TAPPING SCREWS (2X).

NOTES: ALL PANELS AND POST MUST BE HOT DIPPED GALVANIZED.
CONCRETE MOWCURB MUST BE CONTINUOUS BELOW ALL TUBULAR STEEL FENCING TYP.
CONTRACTOR MUST CONFIRM RAIL PANELS FIT PROPERLY PRIOR TO FOOTING INSTALLATION.
TOP OF FOOTING MUST BE AT ELEVATION TO ACCOMMODATE 6" DEEP FORM BOARDS AND
CONCRETE MOWCURB TO BE POURED AFTER FOOTING AND POST INSTALLATION ALONG ALL FENCING.
VERTICAL PICKETS SHALL HAVE 4-1/2" OPENING MAX. 2" MAX. OPENING WHEN USED AT DOG PARKS.
BOTTOM RAIL TO BE 4" FROM TOP OF MOWCURB. BOTTOM RAIL TO BE 2" FROM TOP FOR DOG PARKS.

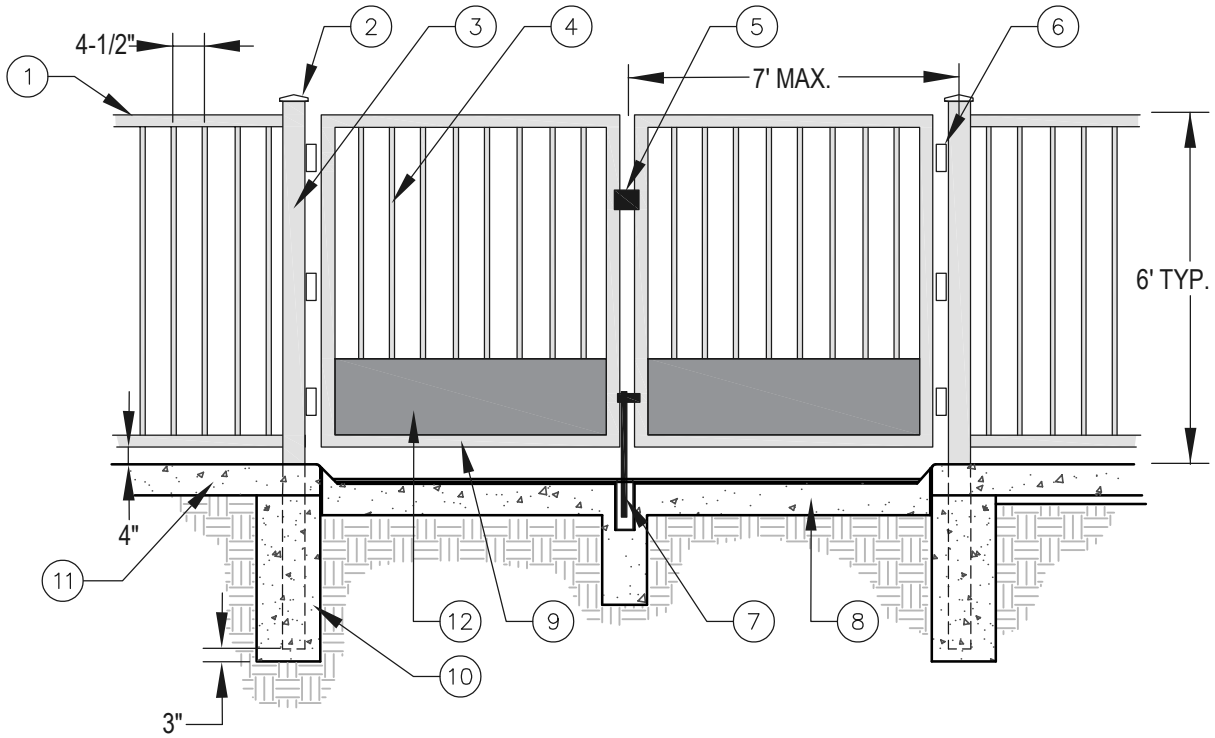
VALLEY-WIDE RECREATION AND PARK DISTRICT

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HOT DIPPED GALVANIZED STEEL FENCING

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

LC-12



1. 1-3/8" MIN. ROUND OR SQUARE TUBULAR STEEL FENCE PANEL.
2. WROUGHT IRON STD. CAP.
3. 4" MIN. SQUARE 14 GAUGE POST.
4. 3/4" MIN. ROUND OR SQUARE 16 GAUGE PICKETS.
5. LOCKING LATCH W/PADLOCK @ 33"- 44" ABOVE FINISH GRADE.
6. STEEL H.D. GRADE GATE HINGE (WELD TO GATE AND POST) (3X PER GATE).
7. DROP PIN WITH SLEEVE (FOR DBL. GATES ONLY, ONE AT OPEN & CLOSE).
8. 8" WIDE X 6" DEEP MOWCURB (TAPER TO FINISH GRADE).
9. 1-1/2" MIN. 14 GAUGE RAIL SET BOTTOM RAIL 4" ABOVE MOWCURB.
10. 2500 MIN. PSI CONCRETE FOOTING 12" DIA. X 24" DEEP MIN.
11. 6" DEEP X 8" WIDE CONCRETE MOWCURB PER DETAIL LC-06.
12. 12" HIGH SMOOTH FULL WIDTH KICK PLATE ON PUSH SIDE OF GATE WHEN REQUIRED FOR PUBLIC ACCESS.

NOTES: ALL PANELS AND POST MUST BE BLACK POWDER COATED. ALL WELDS FOR GATE HINGES MUST HAVE ONE COAT EPOXY PRIMER & TWO COATS OF EXTERIOR ENAMEL.

TOP OF FOOTING MUST BE AT ELEVATION TO ACCOMMODATE 6" DEEP FORM BOARDS AND CONCRETE MOWCURB TO BE POURED AFTER FOOTING AND POST INSTALLATION ALONG ALL FENCING.

VERTICAL PICKETS SHALL HAVE BE AT 4-1/2" O.C. 2" MAX. OPENING WHEN USED AT DOG PARKS.

BOTTOM RAIL TO BE 4" FROM TOP OF MOWCURB. BOTTOM RAIL TO BE 2" FOR DOG PARKS.

GATES WIDER THAN 7' MUST BE DESIGNED BY PROJECT ENGINEER.

GATES FOR PUBLIC ACCESS MUST COMPLY WITH ACCESSIBLE REQUIREMENTS PER 11B-404.2, INCLUDING LANDINGS, KICKPLATES, AND LATCH HEIGHTS AND GATE OPENING FORCE PER 11B-404.2.9.

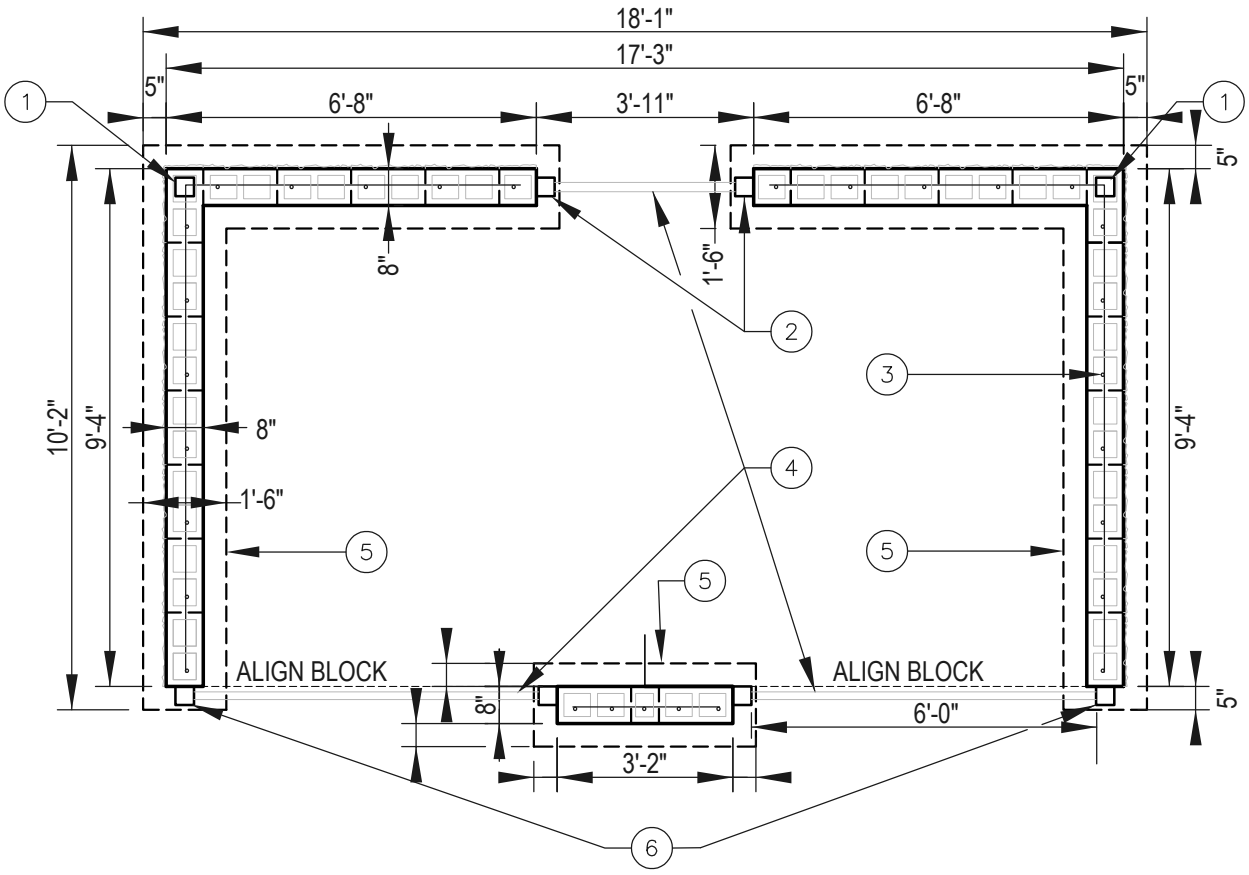
VALLEY-WIDE RECREATION AND PARK DISTRICT

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TUBULAR STEEL GATE 6' OR SMALLER

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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LC-13



TRASH ENCLOSURE
FOOTING LAYOUT

1. 4"X4" HEADER POST MOUNTED ON TOP OF BLOCK TYP.WROUGHT IRON STD. CAP.
2. 4"X4" STEEL GATE POST TO BE SET IN FOOTING.
3. REBAR PER PROJECT ENGINEERING.
4. STEEL GATE PER DETAIL LC-14D.
5. FOOTING PERIMETER PER PROJECT ENGINEERING.
6. 4"X4" STEEL GATE POST TO BE SET IN FOOTING.

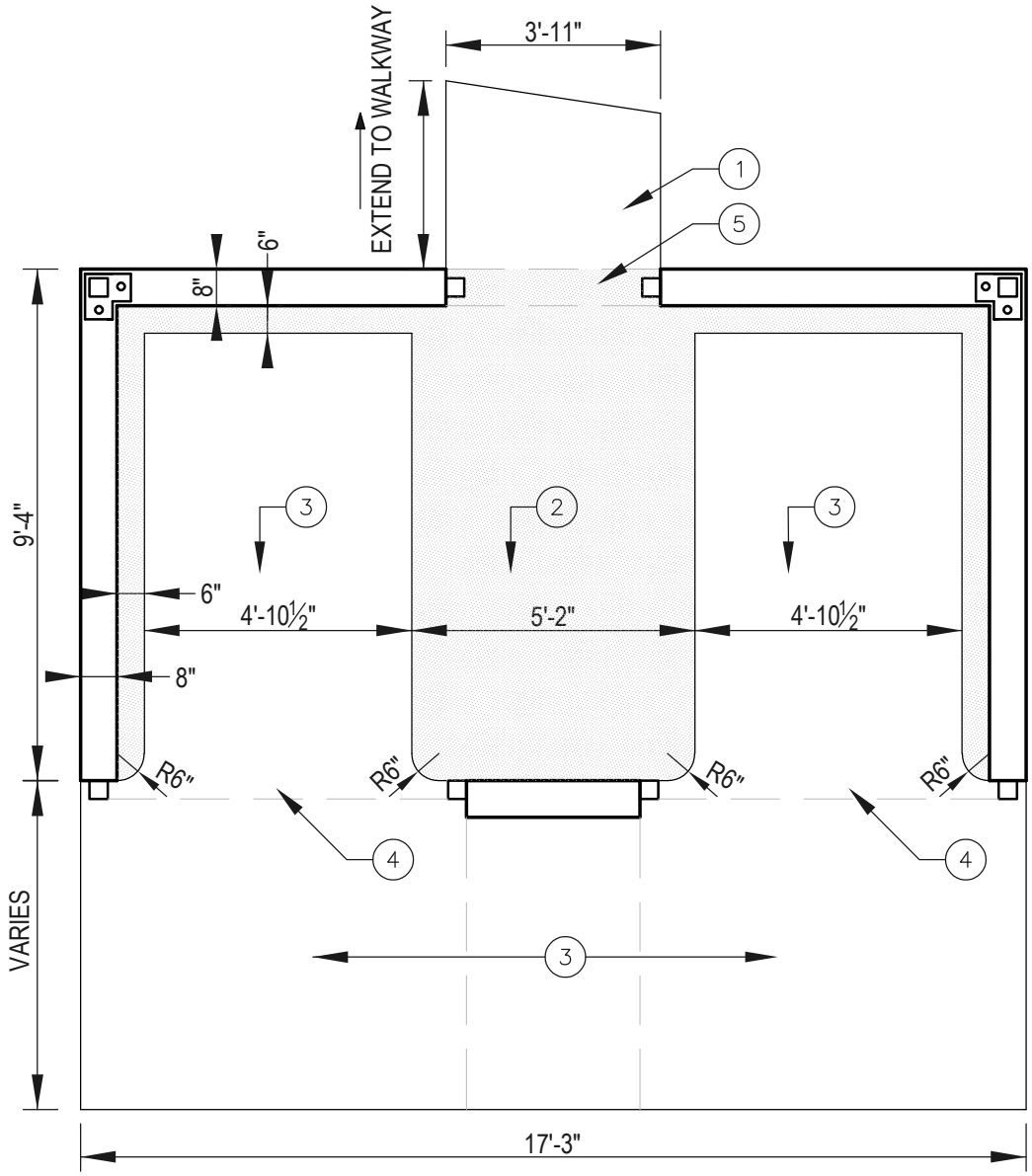
VALLEY-WIDE
RECREATION AND PARK DISTRICT

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TRASH ENCLOSURE FOOTING LAYOUT

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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LC-14A



1. CONCRETE WALK PER PLAN AT SAME ELEVATION AS CALL-OUT 2.
2. CONCRETE WALK 6" HIGHER THAN CONCRETE AT DUMPSTER LOCATIONS.
3. 6" THICK CONCRETE AT DUMPSTER LOCATIONS AT PARKING LOT LEVEL.
4. DUMPSTER ACCESS GATE LOCATION.
5. ENTRY ACCESS GATE LOCATION.

NOTES: FOR SMALL COMMUNITY PARKS A SINGLE DUMPSTER OPENING MAY BE APPROVED.
SHOP DRAWINGS MUST BE SUBMITTED FOR APPROVAL.
ALL CONCRETE SHALL BE PER LC-02 AND LC-03 DETAILS.

VALLEY-WIDE RECREATION AND PARK DISTRICT

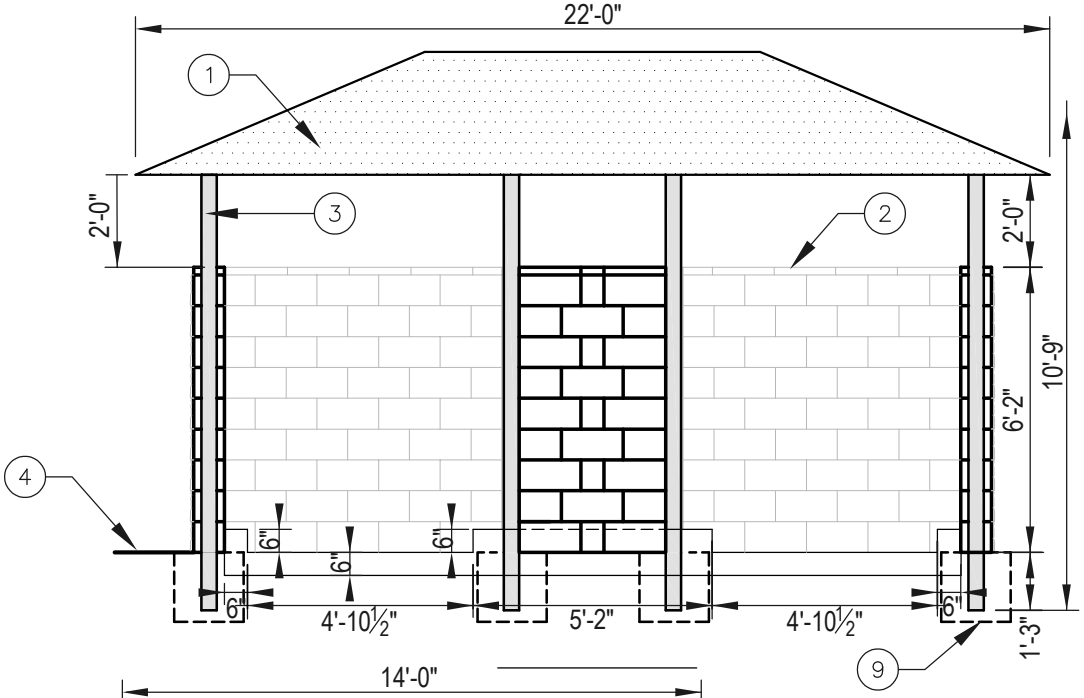
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TRASH ENCLOSURE PLAN VIEW

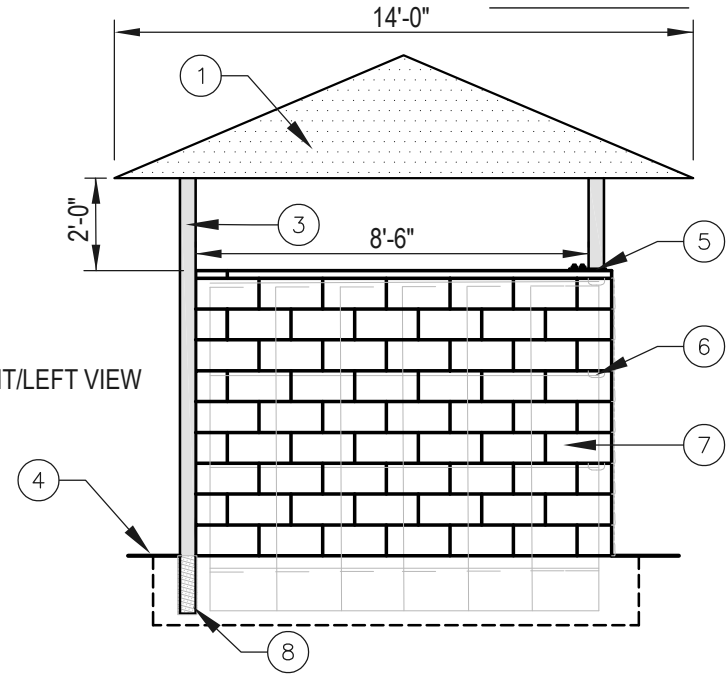
VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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LC-14B

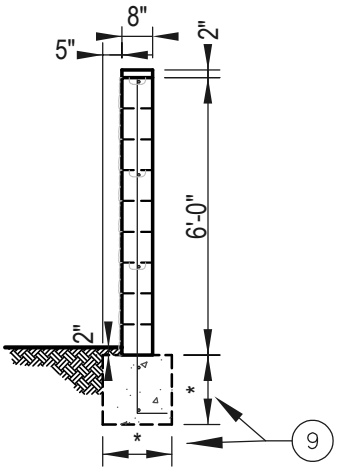
FRONT VIEW



RIGHT/LEFT VIEW



SPLIT FACE OUTSIDE EDGES ONLY



1. POLIGON (OR APPROVED EQUAL) STEEL ROOF STRUCTURE PER PROJECT PLANS, DETAILS AND CALCS.
2. 2" BLOCK FLAT CAP TYP.
3. 4"X4" STEEL POST.
4. FINISH GRADE PER PLAN
5. STEEL BASE PLATE TYP. (2 PLACES) PER PROJECT PLANS, DETAILS AND CALCS.
6. REBAR PER ENGINEERING PLANS (USE BOND BEAM BLOCK AS NEEDED).
7. 8X8X16 SPLIT FACE BLOCK COLOR TO BE APPROVED BY THE DISTRICT.
8. VINYL WRAP STEEL POST TYP.
9. FOOTING PER PROJECT ENGINEERING.

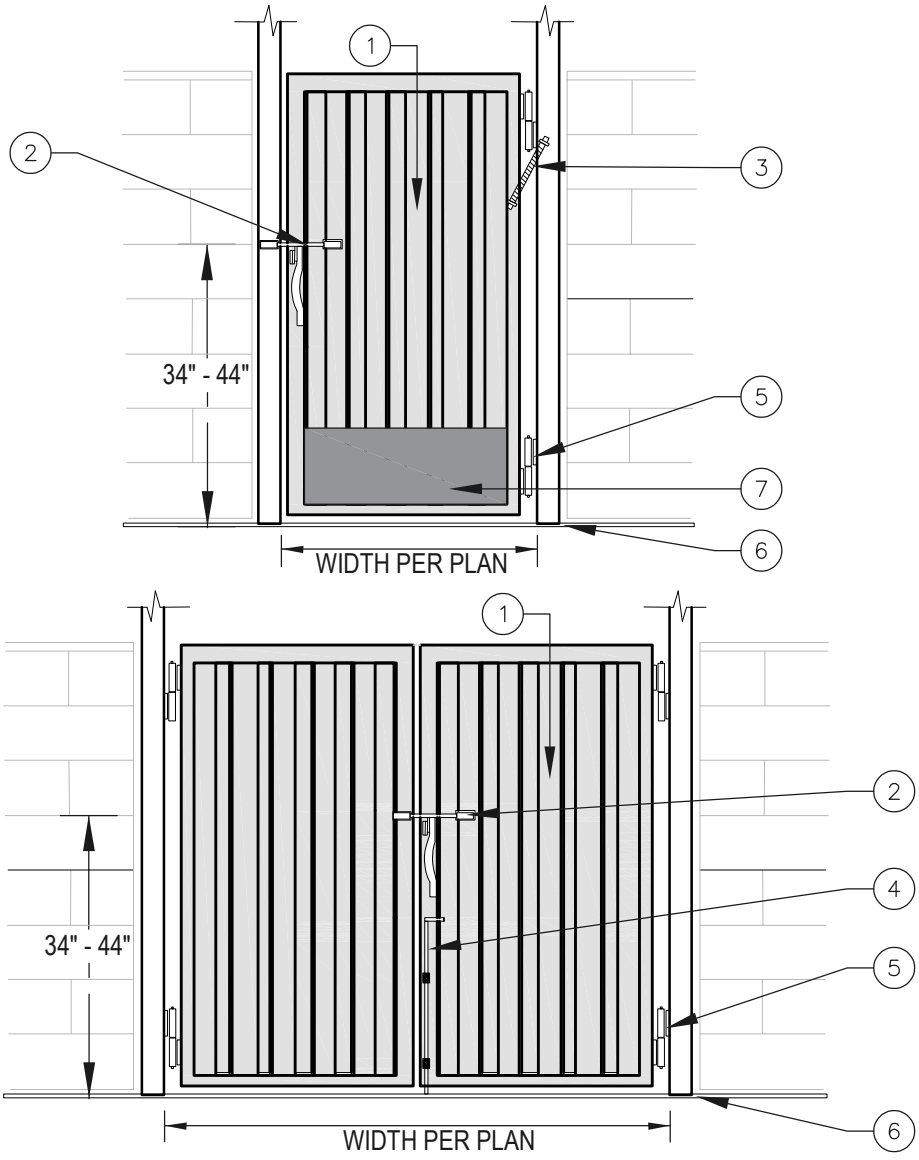
VALLEY-WIDE RECREATION AND PARK DISTRICT

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TRASH ENCLOSURE ELEVATION VIEW

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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LC-14C



1. 22 GAUGE STEEL ENCLOSURE GATE GRIND ALL WELDS SMOOTH GATE SHALL BE POWDER COATED COLOR MUST BE APPROVED BY THE DISTRICT'S REPRESENTATIVE.
2. INTEGRATED HASP DESIGN STEEL LOCKABLE SLIDING HASP.
3. SPRING ASSIST FOR AUTOSHUT.
4. STEEL DROP ROD FOR SECURING GATE IN OPEN AND CLOSED POSITIONS.
5. HD STEEL HINGE PLATE CONNECTED TO STEEL VERTICAL POST. HINGES SHALL HAVE GREASABLE ZERK FITTINGS.
6. PROVIDE 2" MIN. AND 3" MAX. CLEARANCE FROM CONCRETE TO BOTTOM OF GATE.
7. 12" HIGH SMOOTH FULL WIDTH KICK PLATE ON PUSH SIDE OF GATE WHEN REQUIRED FOR PUBLIC ACCESS.

NOTES: ALL STEEL FABRICATION SHALL RECEIVE 1 COAT EPOXY PRIMER AND 2 COATS OF EXTERIOR ENAMEL.
CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND COLOR SAMPLES FOR APPROVAL PRIOR TO CONSTRUCTION.
DOUBLE SWING GATES MUST HAVE SLIDING HASP CAPABLE OF LOCKING GATES CLOSED.
ENTRY GATE MUST COMPLY WITH ACCESSIBLE REQUIREMENTS PER 11B-404.2, INCLUDING LANDINGS, KICKPLATES, AND LATCH HEIGHTS AND GATE OPENING FORCE PER 11B-404.2.9.

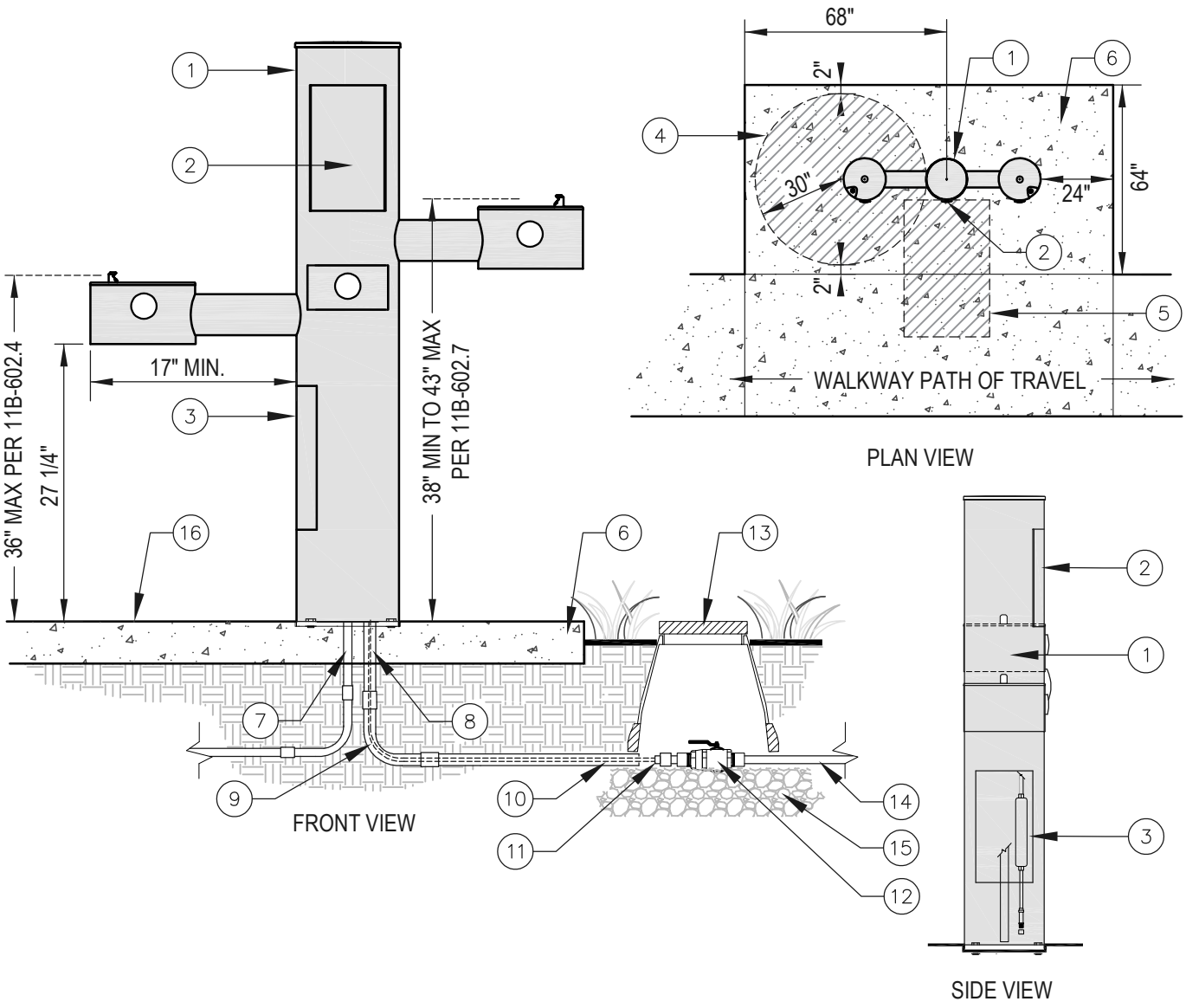
VALLEY-WIDE RECREATION AND PARK DISTRICT

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TRASH ENCLOSURE GATE

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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LC-14D



1. 12" DIA. DRINKING FOUNTAIN PER SPECS.
2. BOTTLE FILLER PER 11B-602.10 (WHEN SPECIFIED).
3. ACCESS DOOR.
4. 60" DIA. CLEAR SPACE AT 2% MAX. SLOPE.
5. 30" X 48" CLEAR SPACE AT 2% MAX. SLOPE.
6. CONCRETE PER PLAN.
7. WASTE LINE (SEE LC-15B DETAIL).
8. WATERLINE PER PLAN.
9. PVC SWEEP SLEEVE FOR FLEX PIPE INSTALLATION.
10. 1-1/2" CONDUIT SLEEVE W/ 3/4" PEX FLEXIBLE PIPE.
11. PEX TO PVC SLIP PIPE.
12. BRASS BALL VALVE PER DETAIL DW-3 (INSTALL IN PLANTER WHERE POSSIBLE).
13. CONCRETE RECTANGLE VALVE BOX WITH LOCKING SS BOLT.
14. SCH 40 PVC OR COPPER PIPING PER DETAIL DW-1 AND DW-2.
15. 3/4" GRAVEL.
16. CONCRETE FINISH SURFACE PER PLAN.

NOTES:

INSTALL DOMESTIC WATER SUPPLY PER PLAN, LOCAL CODES AND MANUFACTURER'S RECOMMENDATIONS. INSTALL DRAIN SUMP AND WASTE SUPPLY PER DETAIL LC-15B AND MANUFACTURER'S RECOMMENDATIONS.

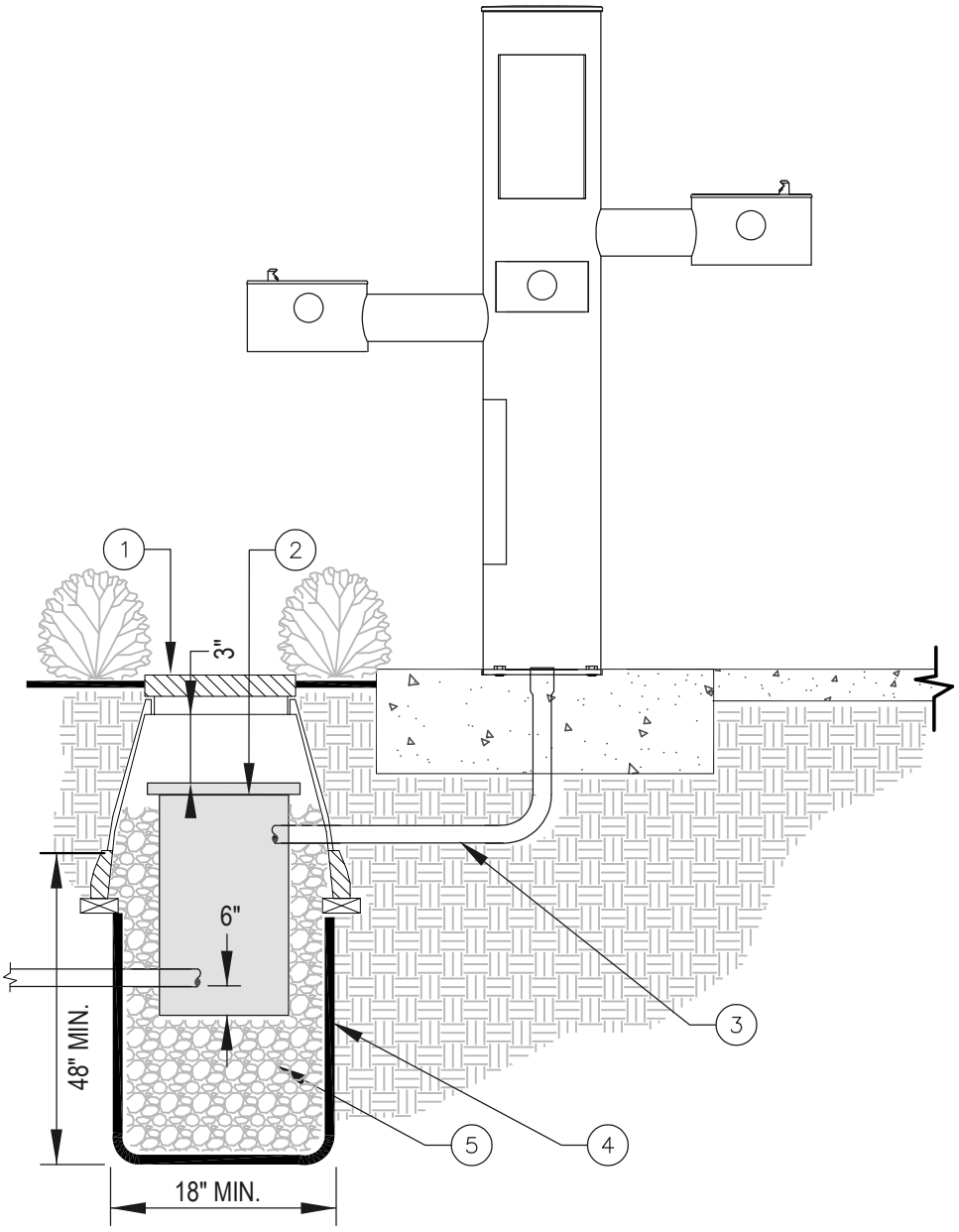
VALLEY-WIDE RECREATION AND PARK DISTRICT

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DRINKING FOUNTAIN

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

LC-15A



1. JUMBO RECTANGULAR VALVE BOX FOR SAND TRAP.
2. IN-GROUND SAND TRAP PER SPECS. INSTALL IN PLANTER WHEN POSSIBLE PER MANUFACTURER'S INSTRUCTIONS.
3. 1-1/2" SCH 40 DRAIN LINE,
4. FILTER FABRIC PER SPECS. (COVER ENTIRE AREA).
5. 3/4" WASHED CRUSHED GRAVEL.

NOTES: INSTALL DRAIN LINE PER PLAN, LOCAL CODES AND DRAINLINE TO BE CONNECTED TO RESTROOM DRAIN OR OTHER BUILDING DRAIN WHEN POSSIBLE, WHEN BUILDING DRAIN IS NOT AVAILABLE INSTALL DRAIN LINE IN 6'X6'X6' GRAVEL SUMP.

VALLEY-WIDE RECREATION AND PARK DISTRICT

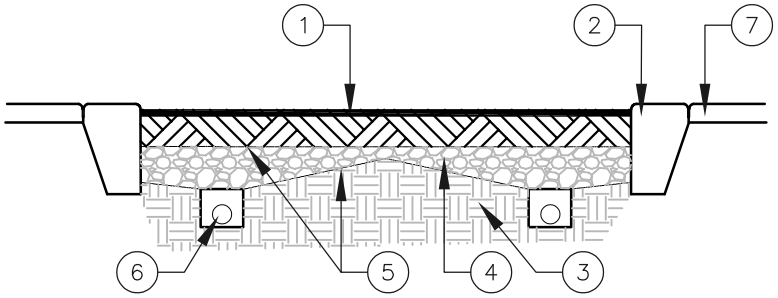
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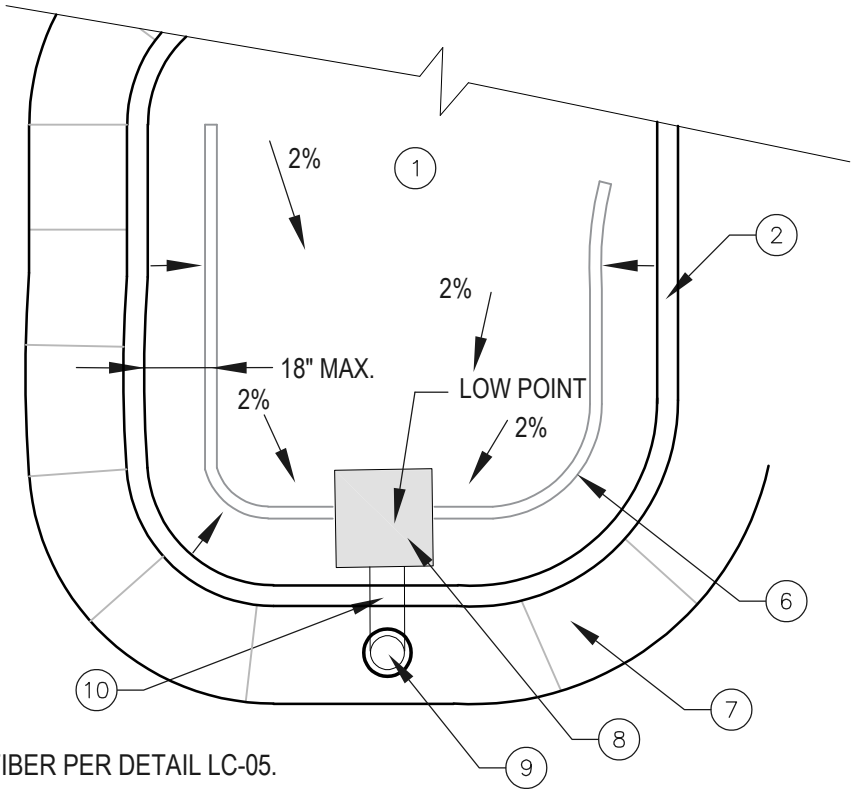
DRINKING FOUNTAIN DRAIN

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

LC-15B

FOR USE ONLY WHEN NO STORM DRAINS ARE USED





1. WOOD FIBER PER DETAIL LC-05.
2. PLAYGROUND CURB PER DETAIL LC-05.
3. COMPACTED SUBGRADE.
4. 4" DEEP MIN. GRAVEL PER DETAIL LC-05.
5. FILTER FABRIC PER DETAIL LC-05.
6. 18" X 18" GRAVEL TRENCH WRAPPED WITH FILTER FABRIC WITH 4" PERFORATED DRAIN PIPE.
7. FLATWORK PER LC-05.
8. SUMP PER DETAIL LC-17.
9. CLEAN-OUT FOR WATER REMOVAL PER DETAIL LC-17.
10. SOLID DRAINLINE PER DETAIL LC-17.

REFER TO DETAIL LC-17, FOR SECTION VIEW.

VALLEY-WIDE RECREATION AND PARK DISTRICT

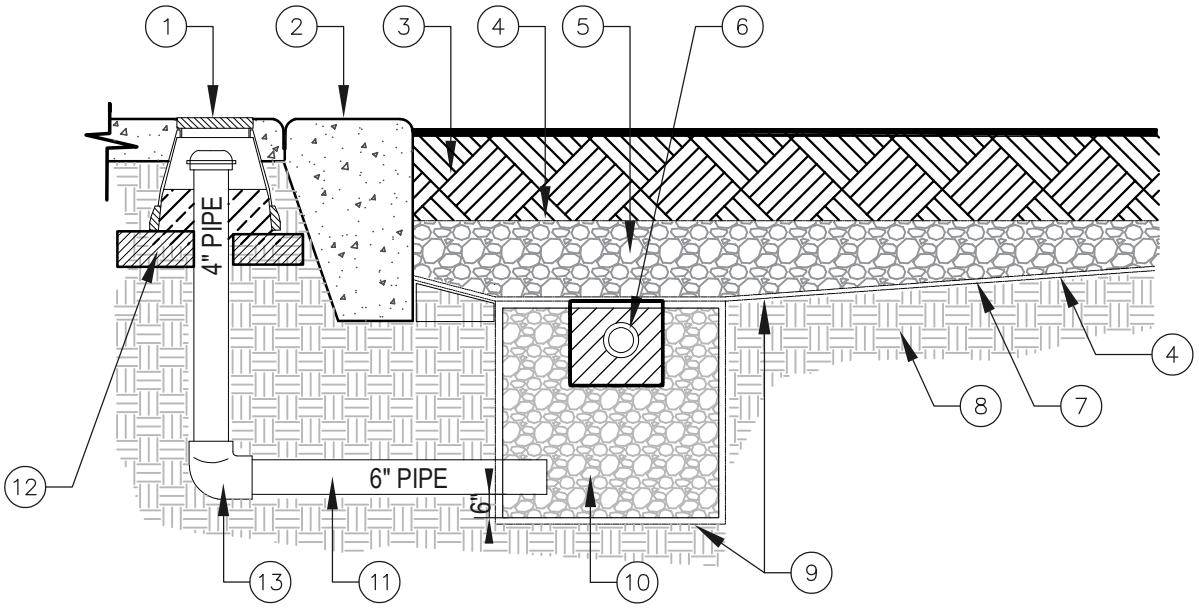
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PLAY AREA SUMP DRAIN LAYOUT

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

LC-16

FOR USE ONLY WHEN NO STORM DRAINS ARE USED



1. 4" SOLID DRAIN PVC CLEANOUT IN LOCKING ROUND CONCRETE BOX. PROVIDE BLACK RUBBER CAP W/S.S. CLAMP.
2. CONCRETE CURB PER DETAIL LC-05.
3. WOOD FIBER 12" THICK MIN.
4. FILTER FABRIC PER SPECS.
5. 3/4" WASHED CRUSHED GRAVEL 4" MIN. DEPTH.
6. 4" PERFORATED DRAIN PIPE IN 18"X18" GRAVEL TRENCH AROUND ENTIRE PLAYGROUND CURB PER DETAIL LC-16.
7. 2% MIN. FLOW LINE.
8. UNDISTURBED NATIVE SOIL.
9. FILTER FABRIC PER SPECS. (WRAP ENTIRE SUMP).
10. 6' X 6' X 6' SIZE 3/4" GRAVEL SUMP.
11. SOLID 6" MIN. DRAINLINE TO CLEAN OUT. INSTALL PIPE PLUMB WITH GRADE.
12. 4" THICK CONCRETE PAD BELOW BOX.
13. 6"X4" REDUCER.

NOTES:

SUBGRADE MUST HAVE 2% MIN. SLOPE TOWARDS SUMP REFER TO DETAIL LC-16 FOR PLAN VIEW.

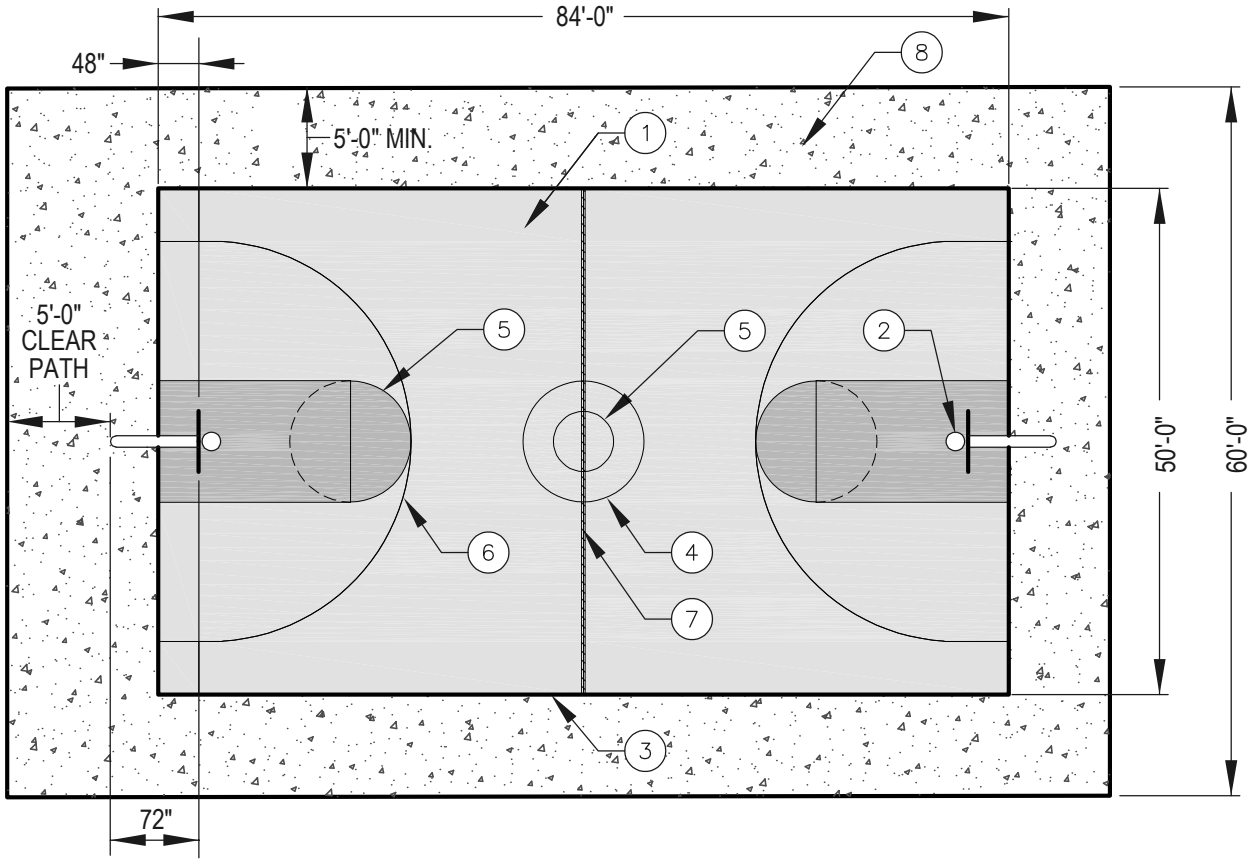
VALLEY-WIDE RECREATION AND PARK DISTRICT

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PLAY AREA SUMP DRAIN SECTION

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

LC-17



1. 3250 MIN. PSI CONCRETE 6" THICK MIN. WITH CLASS 2 BASE (DEPTH PER SOILS ENGINEER).
2. BACKBOARD & GOAL PER BASKETBALL GOAL DETAIL.
3. 2" THICK STRIPING PER HIGH SCHOOL STANDARD DIMENSIONS.
4. 6' OUTSIDE RADIUS.
5. 3' OUTSIDE RADIUS.
6. 19'-9" OUTSIDE RADIUS THREE POINT LINE.
7. 1/2" FELT WITH APPROVED WATERPROOF SEALANT.
8. FLATWORK PER LC-2.

NOTES: CONCRETE SHALL HAVE A (0.5% - 1.0% SLOPE).
ENTIRE PLAYING AREA SHALL HAVE AN APPROVED COLORED SPORTS SURFACE.
COLORS AND LAYOUT MUST BE APPROVED PRIOR TO CONSTRUCTION.
CONCRETE SUBGRADE SHALL HAVE 4" MIN. DEPTH CLASS 2 BASE COMPACTED TO 90%. FINAL SECTION PER SOILS ENGINEER.
CONCRETE SHALL HAVE #4 REBAR AT 36" O.C. WITH SUPPORT BLOCKS AT 4' MIN. SPACING.
CONCRETE SHALL COMPLY WITH SOILS ENGINEERING RECOMMENDATIONS WHEN ADDITIONAL MATERIALS OR DEPTHS ARE INDICATED THAT ARE GREATER THAN DISTRICT DETAIL.
PROVIDE 1-1/2" DEEP CONCRETE SAW CUTS AT 10' SPACING.

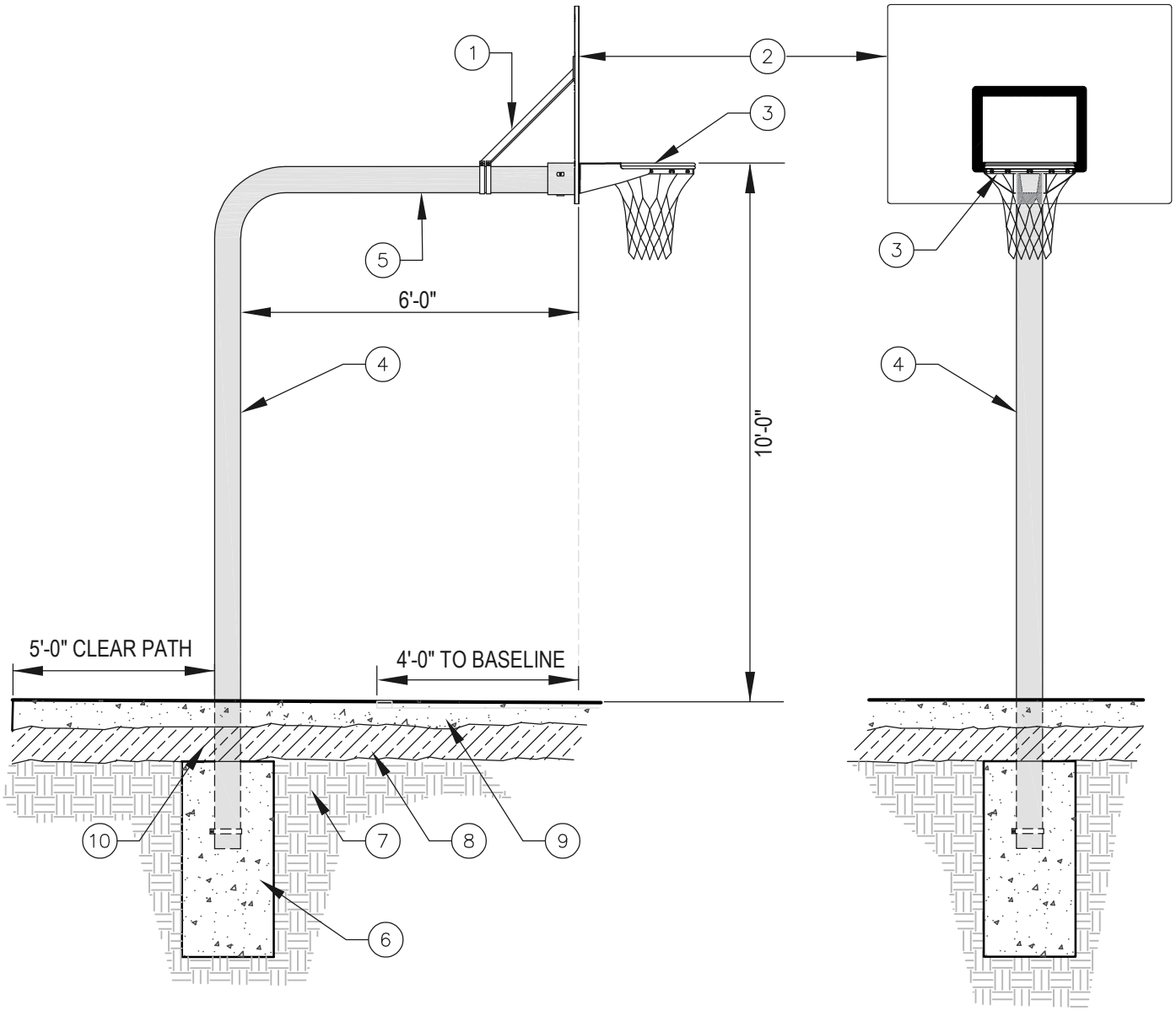
VALLEY-WIDE RECREATION AND PARK DISTRICT

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BASKETBALL COURT

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

LC-18



1. RECTANGULAR BACKBOARD ASSEMBLY PER DISTRICT SPECS.
2. RECTANGULAR BACKBOARD W/TARGET AND BORDER PER DISTRICT SPECS.
3. DOUBLE RIM GOAL PER DISTRICT SPECS.
4. 5-9/16" DIA. GOOSENECK POST.
5. 6' EXTENSION.
6. CONCRETE FOOTING PER PROJECT ENGINEER.
7. 95% COMPACTED SUBGRADE.
8. CLASS 2 BASE PER SOILS ENGINEER'S RECOMMENDATIONS.
9. 6" THICK REINFORCED CONCRETE PER DETAIL LC-03 & LC-18.
10. PROVIDE 4" MIN. THICK CLASS 2 BASE BETWEEN TOP OF FOOTING AND CONCRETE FLATWORK.

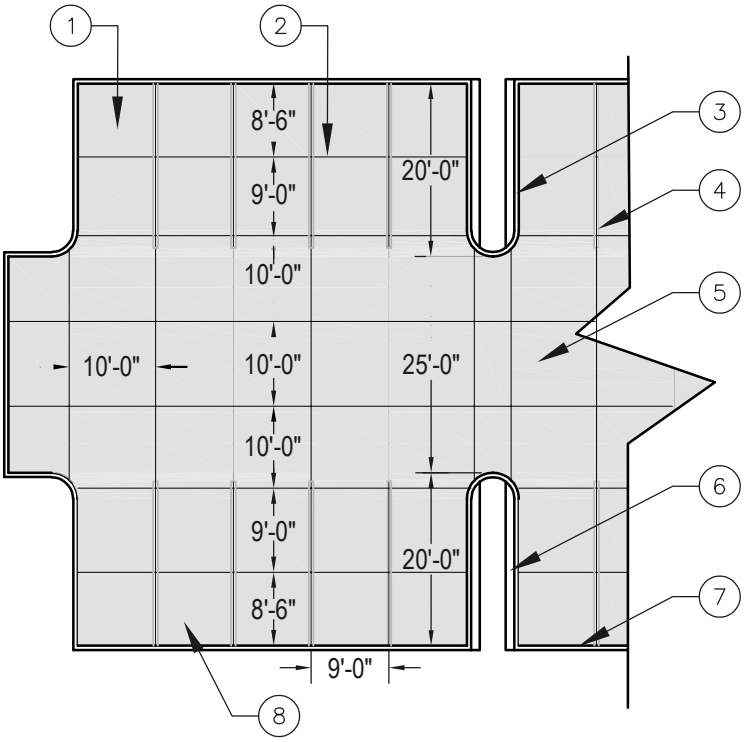
VALLEY-WIDE RECREATION AND PARK DISTRICT

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BASKETBALL GOAL

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

LC-19



1. GRAY CONCRETE 6" THICK MIN. 3250 MIN PSI W/ MEDIUM BROOM FINISH.
2. TYP. TOOLED JOINT (SEE NOTE) 1/2" MIN. RAD. TOOLED JOINT 3/4" DEEP.
3. 6" CURB PER COUNTY RIVERSIDE OR LOCAL CITY STANDARDS.
4. STRIPING PER COUNTY RIVERSIDE OR LOCAL CITY STANDARDS.
5. TYP. DRIVE AISLE PER COUNTY RIVERSIDE OR LOCAL CITY STANDARDS.
6. 12" WIDE CONCRETE STEP OUT DOWEL INTO CURB @ 4' SPACING WITH #4 REBAR TYP.
7. DOWEL INTO CURB @ 4' SPACING WITH #4 REBAR TYP.
8. TYPICAL PARKING STALL PER PLAN.

NOTES:
- ALL JOINTS SHALL BE PERPENDICULAR TO CONCRETE EDGE.
- ALL JOINTS SHALL BE 10' MAX. SPACING, HAND TOOLED AND SAWCUT TO A DEPTH OF 1-1/2".
- SAW CUTTING IN LIEU OF TOOLED JOINT MUST BE APPROVED IN WRITING BY THE DISTRICT.
- SPEED DOWELS SHALL BE USED BETWEEN EACH COLD JOINT POURS.
- ALL REBAR MUST BE 2" FROM ANY EDGE OF CONCRETE AND BE SECURED TO A 3"X3" DOBIE.
- DRILL AND SECURE REBAR WITH EPOXY AGAINST ALL EXISTING COLD JOINTS WITH SPEED DOWELS.
- REFER TO DETAIL LC-03 FOR REBAR PLACEMENT REQUIREMENTS.
- THIS INFORMATION IS THE MINIMUM REQUIREMENT, MORE STRINGENT REQUIREMENTS MAY BE REQUIRED PER THE GEOTECHNICAL SOILS REPORT.

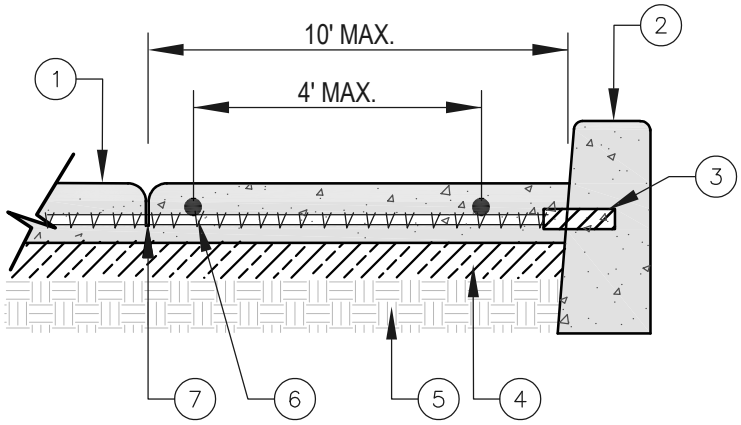
VALLEY-WIDE RECREATION AND PARK DISTRICT

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PARKING LOT CONCRETE (PLAN)

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

LC-20



1. GRAY CONCRETE 6" THICK MIN. 3250 MIN PSI W/ MEDIUM BROOM FINISH.
2. CURB PER CTY. RIV. STDS.
3. DOWEL INTO CURB @ 4' SPACING WITH #4 REBAR TYP.
4. CLASS II BASE (PER PROJECT SOILS ENGINEER) 4" THICK MIN. 95% COMPACTED.
5. 95% COMPACTED SUBGRADE.
6. #4 REBAR TYP.
7. CONTROL JOINT PER DETAIL LC-37.

NOTES: CONCRETE CROSS SLOPE SHALL NOT BE GREATER THAN 2% WITHIN PATH OF TRAVEL.
CONCRETE SHALL NOT BE FLATTER THAN 0.5% TO AVOID PONDING.
ACCESSIBLE SPACES AISLES SHALL NOT EXCEED 2% SLOPE IN ALL DIRECTIONS
PROVIDE #4 REBAR AT 4' SQUARE SPACING.
ALL CONCRETE FORMS MUST BE INSPECTED BY VWRPD PRIOR TO POURING.
ALL CONCRETE AND SUBGRADES SHALL COMPLY WITH SOILS ENGINEER RECOMMENDATIONS.
REFER TO DETAIL LC-20 FOR ADDITIONAL INFORMATION.
THIS INFORMATION IS THE MINIMUM REQUIREMENT, MORE STRINGENT REQUIREMENTS MAY BE REQUIRED PER THE GEOTECHNICAL SOILS REPORT.

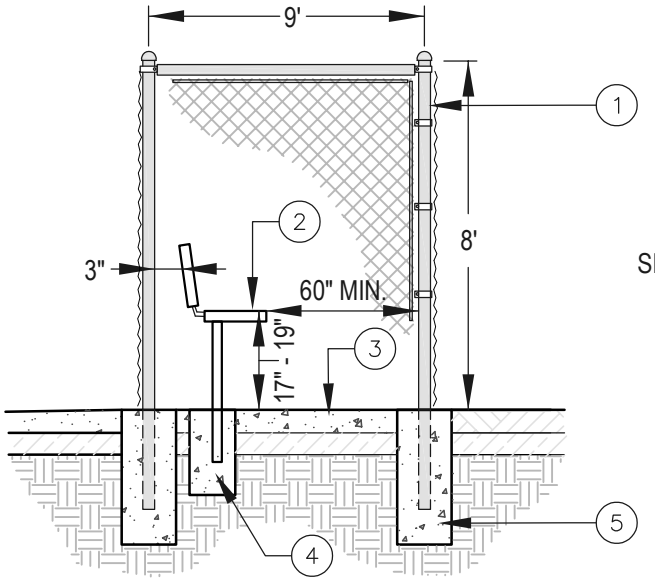
VALLEY-WIDE RECREATION AND PARK DISTRICT

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PARKING LOT CONCRETE (SECTION)

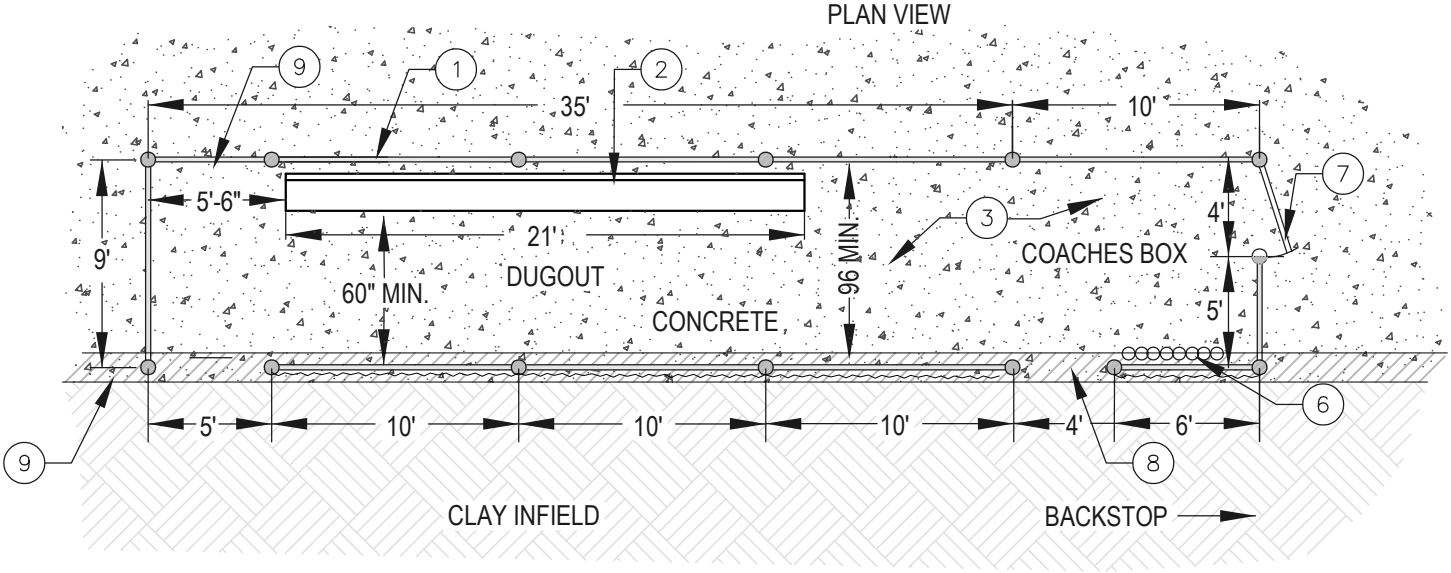
VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

LC-21



SECTION VIEW

PLAN VIEW



1. CHAINLINK FENCING PER DETAIL LC-10 & LC-11.
2. IN-GROUND 21' GALV. STEEL PLAYERS BENCH PER PLAN PER SPECS.
3. CONCRETE FLATWORK PER PLAN, LEGEND & SPECS. NOT TO EXCEED 2% SLOPE IN ALL DIRECTIONS.
4. CONCRETE FOOTING FOR BENCH PER MANUFACTURER'S SPECS.
5. CONCRETE FOOTING PER CHAINLINK DETAIL LC-06.
6. GALV. STEEL BAT RACK PER SPECS.
7. 4' WIDE CHAINLINK GATE WITH SPRING LOADED HINGES FOR AUTO CLOSING & LOCKABLE LATCH.
8. ACCESSIBLE PATH OPENING PER 11B-404 AND VERTICAL CLEARANCE PER 11B-307-4.
9. 6" D. X 12" W. MOWCURB PER DETAIL LC-06. CURB CAN BE POURED WITH FLATWORK WITH DEEP SAWCUT.

NOTES:

GATE MUST COMPLY WITH ACCESSIBLE REQUIREMENTS PER CBC 11B-206.4 AND 11B-404.

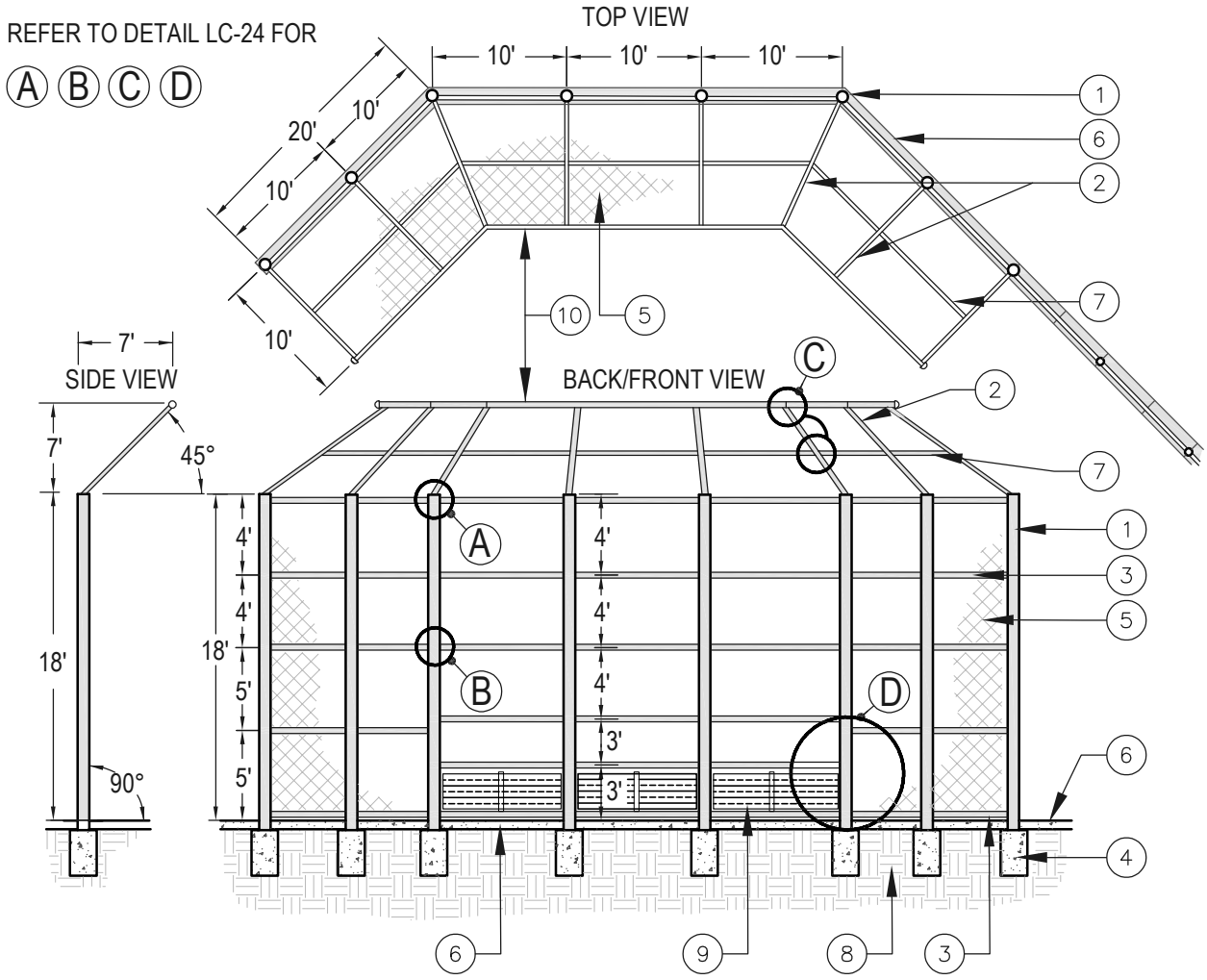
VALLEY-WIDE RECREATION AND PARK DISTRICT

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TYPICAL DUGOUT LAYOUT

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

LC-22



1. 6" DIA. X 18' HIGH GALV. STEEL MAIN POST PER DETAIL LC-06.
2. 3-5/8" DIA. GALV. STEEL POST @ 45° FOR OVERHANG (SECURE TO VERT. POST PER DETAIL LC-24).
3. 2-3/8" DIA. GALV. STEEL HORZ. RAIL (SECURE TO VERT. POST PER LC-24).
4. CONCRETE FOOTING PER PROJECT STRUCTURAL PLANS AND CALCULATIONS.
5. 9 GAUGE CHAINLINK MESH (2" MIN.).
6. 12" WIDE CONCRETE CURB PER DETAIL LC-06.
7. 2-3/8" X 10' HIGH HORZ. OVER HANG (SUPPORT PER DETAIL LC-24).
8. UNDISTURBED SUBGRADE OR FILL, COMPACTED TO 95% DENSITY.
9. RECYCLED PLASTIC 2" X 6" BUMPER BOARDS 3' TALL (SECURE PER DETAIL LC-24).
10. 3-5/8" DIA GALV. STEEL HORZ. END RAIL (SECURE TO 45° POST PER DETAIL LC-24).

NOTES: REFER TO DETAIL LC-24 FOR LEGEND CONTINUATION.

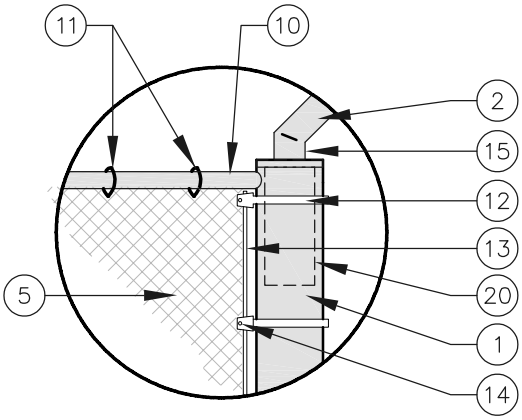
VALLEY-WIDE RECREATION AND PARK DISTRICT

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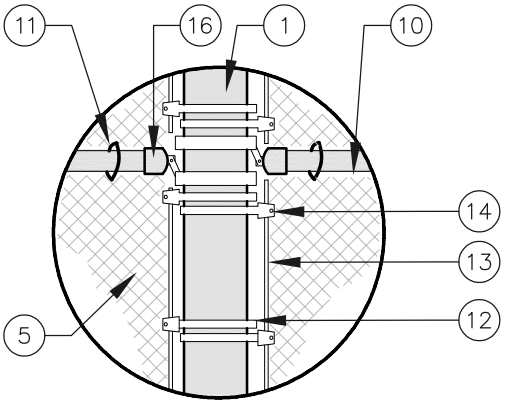
CHAIN LINK BACKSTOP

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

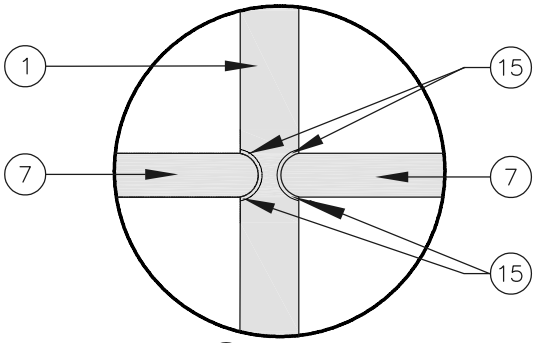
LC-23



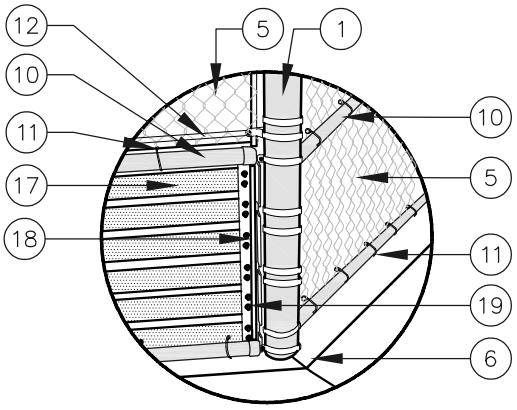
SEE Ⓐ DETAIL LC-23



SEE Ⓑ DETAIL LC-23



SEE Ⓒ DETAIL LC-23



SEE Ⓓ DETAIL LC-23

⑪ 9 GA. GALV. HOG RING @ 24" SPACING.
⑫ 6-5/8" GALV. TENSION BAND.
⑬ 3/4" GALV. TENSION BAR.
⑭ GALV. NUT & BOLT TO SECURE RING.
⑮ WELD GALV. METAL POST TOGETHER (FULL PENETRATION WELDS) AND APPLY COLD GALV. PAINT.
⑯ GALV. RAIL/POST END CAP.
⑰ 2"X6" COMPOSITE WOOD (6X HIGH) PROVIDE 1" GAP BETWEEN EACH BOARD PROVIDE 2" X 1/4"
⑱ THICK GALV. VERT. FLAT BAR TO CONNECT/SUPPORT BOARDS IN CENTER TO PREVENT SAG.
3"X36"X5' GALV. ANGLE WELDED TO 6" POST TO SECURE BUMPER BOARDS.
⑲ 1/2" GALV. BOLT, WASHER & NUT TO SECURE BOARD TO GALV. ANGLE (TWO PER CONNECTION).
⑳ 24" GALV. SLEEVE AND CAP PRE-WELDED TO OVERHANG SUPPORT FOR WELDING PLACEMENT TO MAIN POST.

NOTES: REFER TO DETAIL LC-23 FOR 1 -10 NOTES.

VALLEY-WIDE RECREATION AND PARK DISTRICT

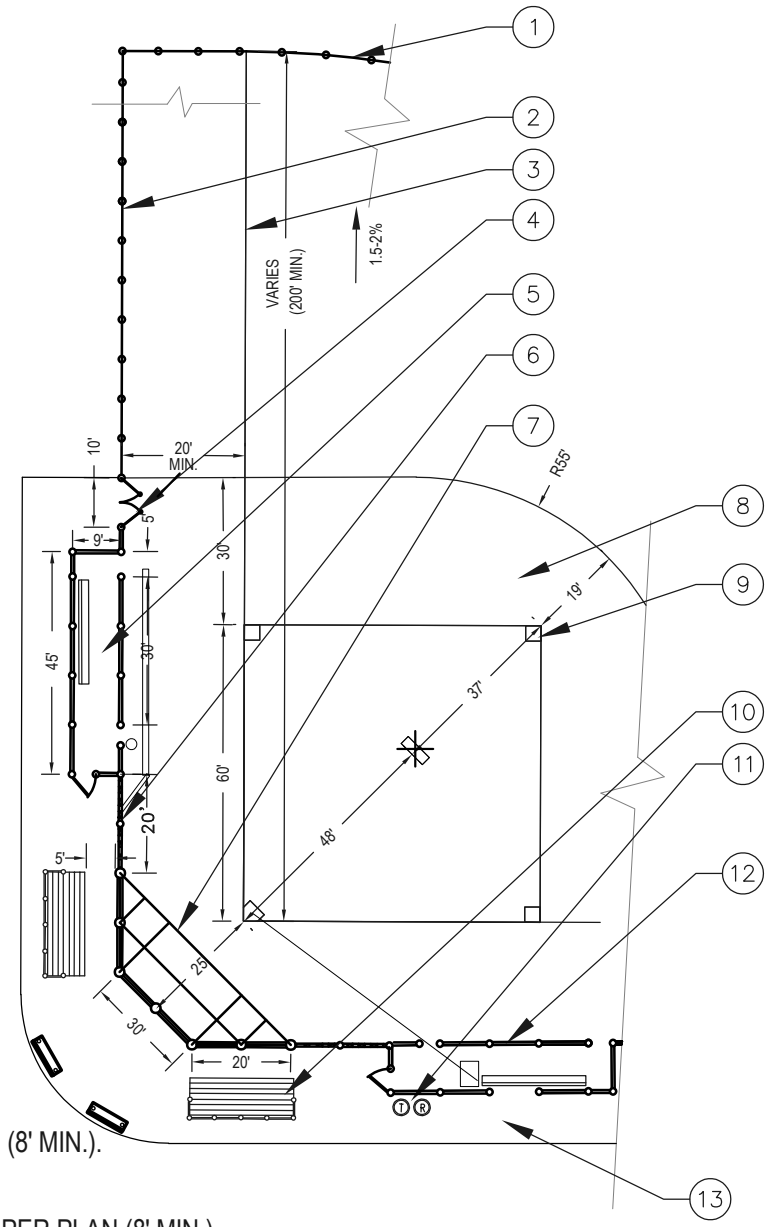
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CHAIN LINK BACKSTOP CONNECTIONS

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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LC-24

FIELDS MUST BE MULTI-PEGGED
PER VALLEY-WIDE DIRECTIONS
PER PROJECT



1. C.L. HOMERUN FENCE TYP. PER DETAIL LC-9. HEIGHT T.B.D. PER PROJECT (8' MIN.).
2. C.L. FOUL LINE FENCE TYP. HEIGHT PER PLAN (8' MIN.).
3. FOUL LINE FENCE TYP.
4. C.L. 10' WIDE GATE PER DETAIL LC-10 HEIGHT PER PLAN (8' MIN.).
5. TYPICAL DUGOUT PER DETAIL LC-22.
6. C.L. FENCE BETWEEN BACKSTOP AND DUGOUT PER DETAIL LC-10 (12' MIN. HEIGHT).
7. C.L. BACKSTOP PER DETAIL LC-23 & LC-24.
8. INFIELD CLAY PER DETAIL LC-04.
9. BASES PER SPECS.
10. TYPICAL BLEACHER PER DETAIL LC-26.
11. TRASH RECEPTACLE & RECYCLE CONTAINER PER DETAIL LC-27.
12. C.L. IN MOWCURB PER DETAIL LC-06.
13. CONCRETE FLATWORK PER DETAIL LC-02 (48" MIN. WIDTH PER 11B-403.5).

NOTES: DIMENSIONS ARE TYPICAL REFER TO PLAN FOR ACTUAL DIMENSIONS.
CHAINLINK FENCING BETWEEN BACKSTOP AND COACHES BOX AT DUGOUT SHALL BE 12' HIGH MIN.

VALLEY-WIDE
RECREATION AND PARK DISTRICT

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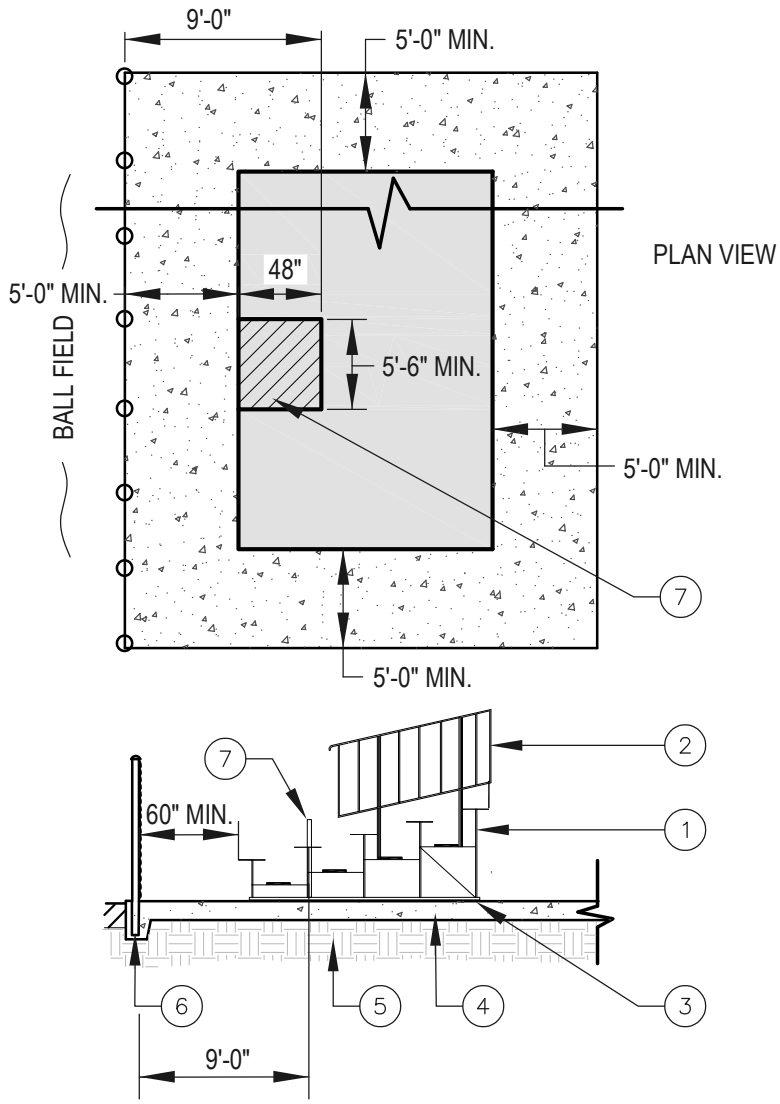
BALL FIELD LAYOUT

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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LC-25

ALUMINUM BLEACHER

5 ROW 21' LONG



1. ALUMINUM BLEACHERS PER PLAN AND SPECS.
2. ALUMINUM PICKET RAILING.
3. ANCHOR BOLT BLEACHERS PER MANUFACTURER'S SPECIFICATIONS.
4. CONCRETE PER DETAIL LC-02 & LC-03.
5. COMPACTED SUBGRADE.
6. BALL FIELD CHAINLINK FENCING.
7. ADA CUT-OUT FOR WHEELCHAIR SEATING (1.8% MAX. DESIGN SLOPE AND 2% MAX AS-BUILT SLOPE).

NOTES: SECURE ALL PLASTIC END CAPS WITH RIVETS.

WHEEL CHAIR SEATING AT BLEACHERS MUST COMPLY WITH 11B-221 AND 11B-802. INCLUDING THE NUMBER OF SPACES, MINIMUM WIDTHS, LOCATION, IDENTIFICATION AND COMPANION SEATING REQUIREMENTS.

VALLEY-WIDE RECREATION AND PARK DISTRICT

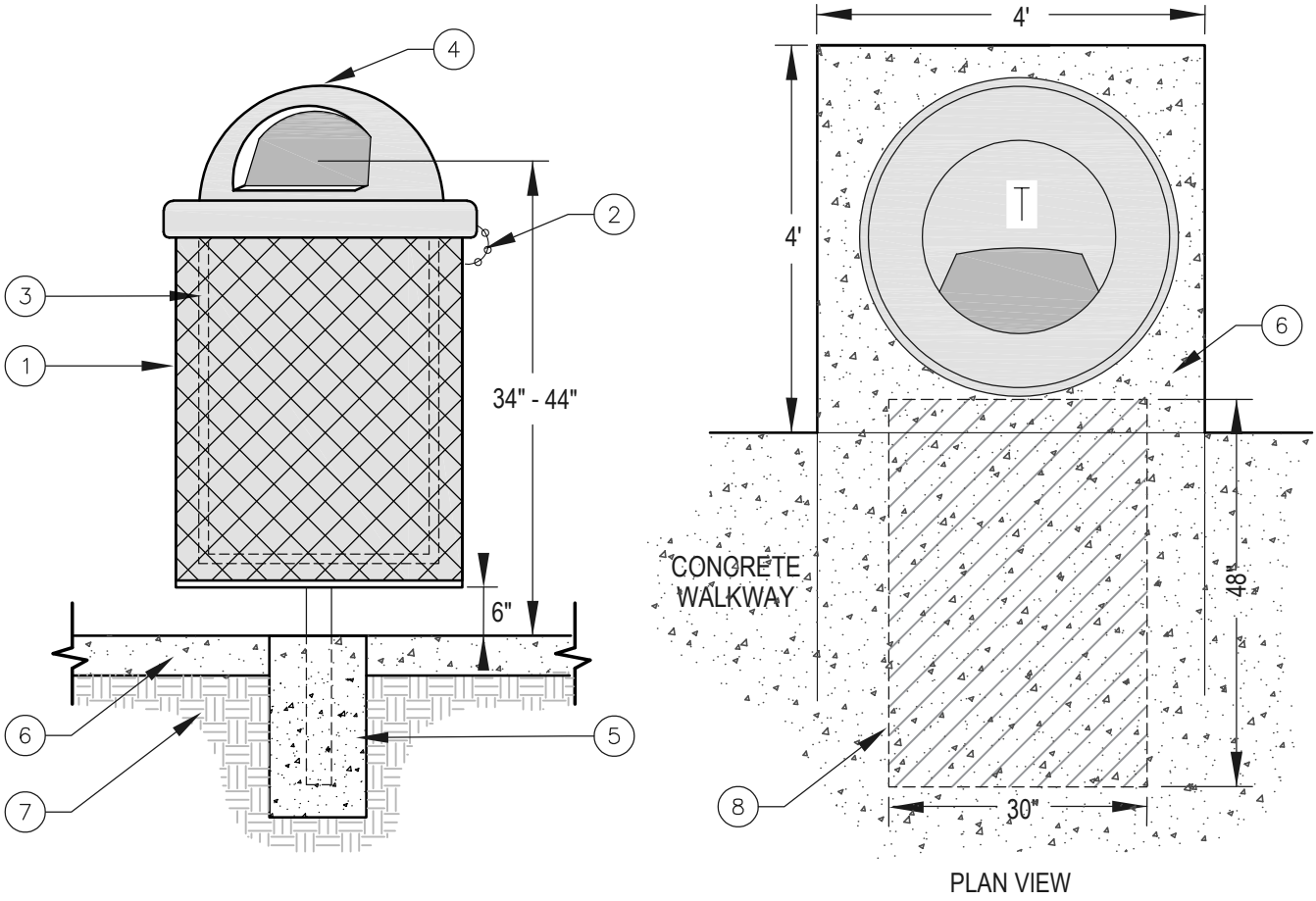
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ALUMINUM BLEACHER

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

LC-26

TRASH RECEPTACLE



PLAN VIEW

1. RECEPTACLE FOR TRASH & FLAT LID RECYCLE CONTAINER PER SPECS.
2. SECURE LID TO BASE WITH STAINLESS STEEL VANDAL PROOF SCREW OR BOLT WITH 18" LONG STAINLESS STEEL WIRE & LEAD CRIMPS.
3. PROVIDE GALVANIZED LINER (DO NOT INSTALL UNTIL PROJECT TURN-OVER).
4. PLASTIC DOME LID (SECURED TO RECEPTACLE).
5. 12" DIA. X 18" CONC. FOOTING ALL CONC. SHALL BE 2500 MIN. PSI.
6. CONCRETE PER DETAIL LC-02 & LC-03 (1.8% MAX. DESIGN SLOPE AND 2% MAX AS-BUILT SLOPE).
7. COMPACTED SUBGRADE.
8. WHEEL CHAIR CLEAR SPACE (1.8% MAX. DESIGN SLOPE AND 2% MAX AS-BUILT SLOPE).

NOTES: ALL RECEPTACLES MUST HAVE A 4' X 4' MIN. CONCRETE PAD 4" THICK PER DETAIL LC-02.
PROVIDE RECYCLE CONTAINER LID WHEN SPECIFIED.
ALL TRASH RECEPTACLES SHALL BE FOOTING MOUNT.
RECEPTACLES MUST HAVE 30" X 48" CLEAR GROUND SPACE ACCESSEIBLE PATH IN FRONT OF OPENING.

VALLEY-WIDE RECREATION AND PARK DISTRICT

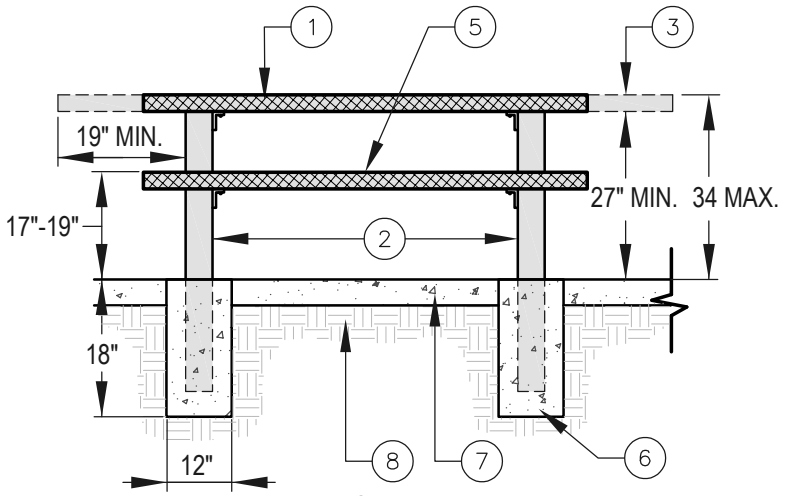
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TRASH RECEPTACLE

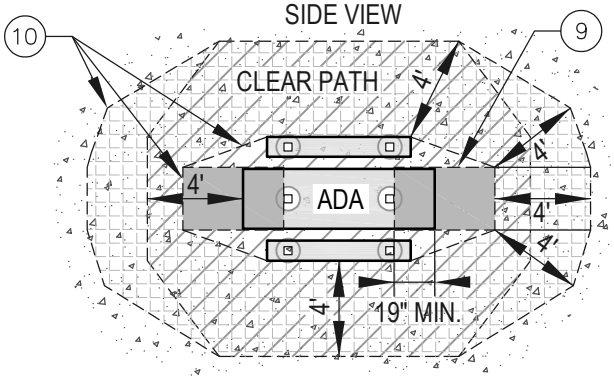
VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

LC-27

TABLE

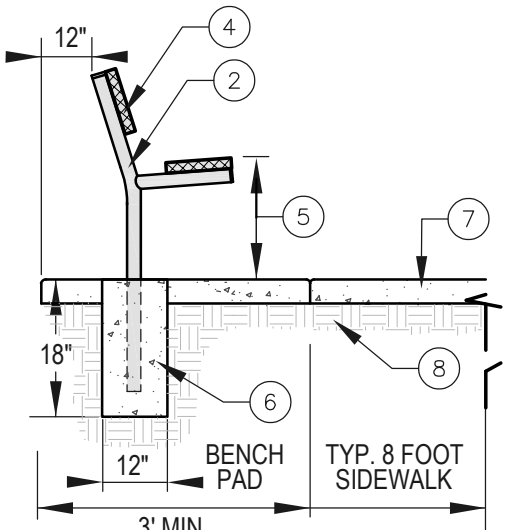


SIDE VIEW

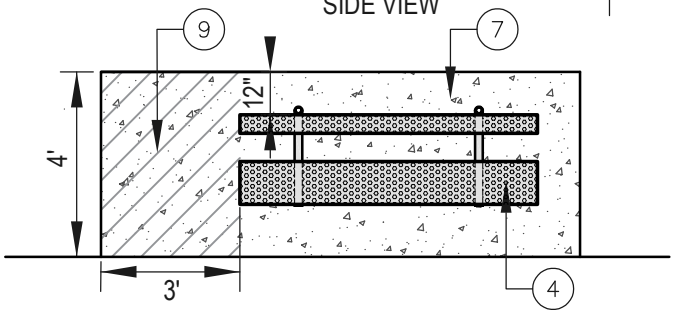


PLAN VIEW

BENCH



SIDE VIEW



PLAN VIEW

1. PARK TABLE PER SPECS.
2. STEEL SUPPORT PER SPECS.
3. ADA COMPLIANT TABLE.
4. PARK BENCH.
5. SET TOP OF SEAT BENCH 18" ABOVE FINISH SURFACE AT CENTER OF BENCH.
6. 12" DIA. X 18" CONC. MIN. FOOTING SIZE. ALL CONC. SHALL BE 2500 MIN. PSI.
7. CONCRETE PER DETAIL LC-02 & LC-03 (1.8% MAX. DESIGN SLOPE AND 2% MAX AS-BUILT SLOPE).
8. COMPACTED SUBGRADE.
9. WHEELCHAIR CLEAR SPACE (1.8% MAX. DESIGN SLOPE AND 2% MAX AS-BUILT SLOPE).
10. PATH OF TRAVEL TO OTHER AMENITIES (IF SPECIFIED).

NOTES: TABLES AND BENCHES MUST HAVE A CONCRETE PAD 4" THICK PER CONCRETE DETAIL LC-02.
TABLES AND BENCHES SHALL BE FOOTING MOUNT.
TABLES AND BENCHES AND SHALL BE INSTALLED LEVEL AND PLUMB TO GRADE.
STANDARD TABLES SHALL HAVE A CONCRETE PAD WITH A MIN. OF 36" OF CONCRETE AROUND ALL SIDES.
ADA TABLES SHALL HAVE A CONCRETE PAD WITH 48" CLEAR PATH OF CONCRETE TO WHEELCHAIR SPACE.
CLEARANCES AND CLEAR FLOOR SPACE MUST COMPLY WITH ACCESSIBLE REQUIREMENTS PER CBC 11B-902.
BENCHES SHALL HAVE A CONCRETE WHEELCHAIR CLEAR SPACE OF 36" X 48" ADJACENT BENCH FOR SHOULDER TO SHOULDER ALIGNMENT.

VALLEY-WIDE RECREATION AND PARK DISTRICT

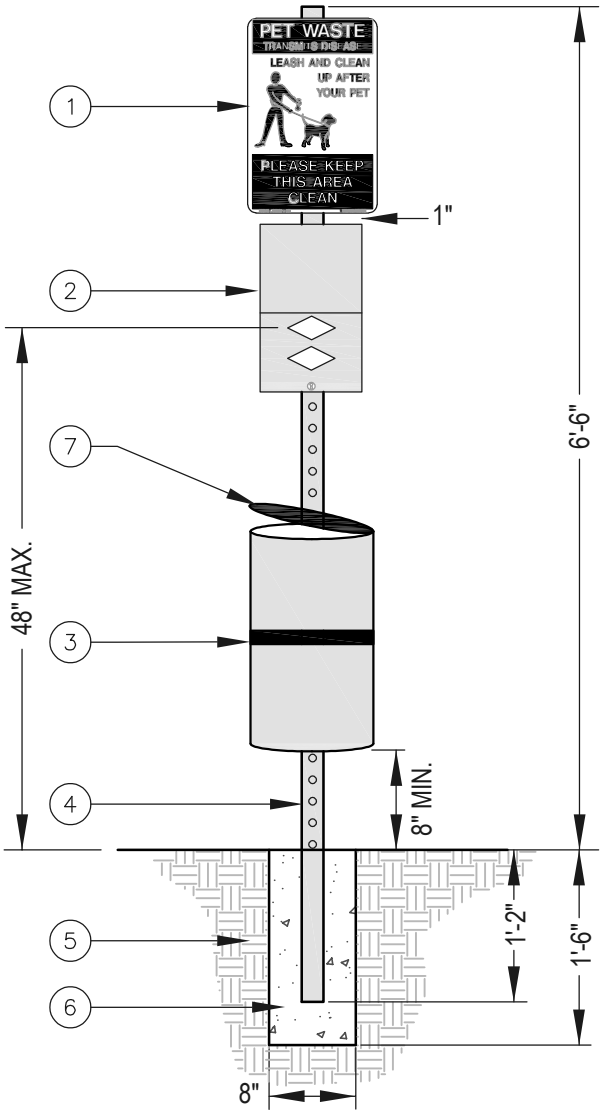
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PARK TABLE AND BENCH

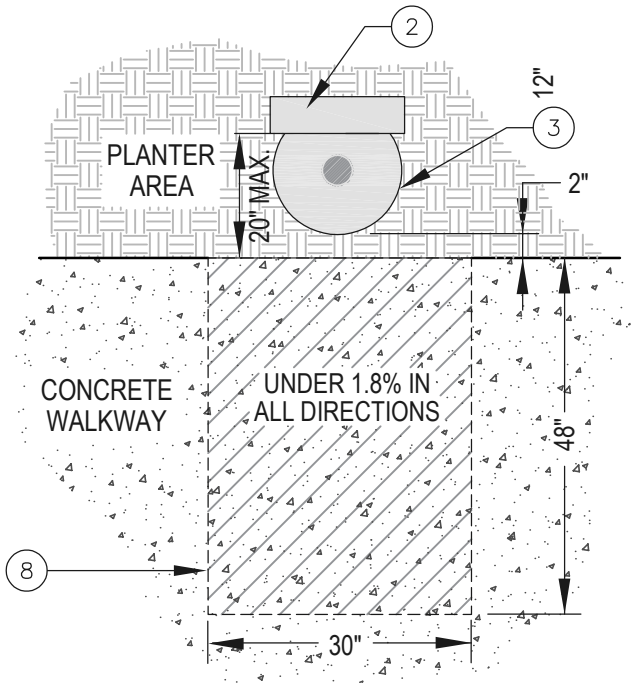
VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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LC-28

PET WASTE STATION



ELEVATION



PLAN VIEW

1. PET SIGN.
2. BAG DISPENSER (PLACED AND POSITIONED PER 11B-308).
3. TRASH RECEPTACLE (PLACED AND POSITIONED PER 11B-308).
4. TELESCOPE GALVANIZED STEEL MOUNTING POST.
5. COMPACTED SUBGRADE.
6. 8" DIA. X 18" CONC. FOOTING ALL CONC. SHALL BE 2500 MIN. PSI.
7. TRASH LID MUST CLEAR BAG DISPENSER.
8. WHEEL CHAIR CLEAR SPACE (1.8% MAX. DESIGN SLOPE AND 2% MAX AS-BUILT SLOPE).

VALLEY-WIDE RECREATION AND PARK DISTRICT

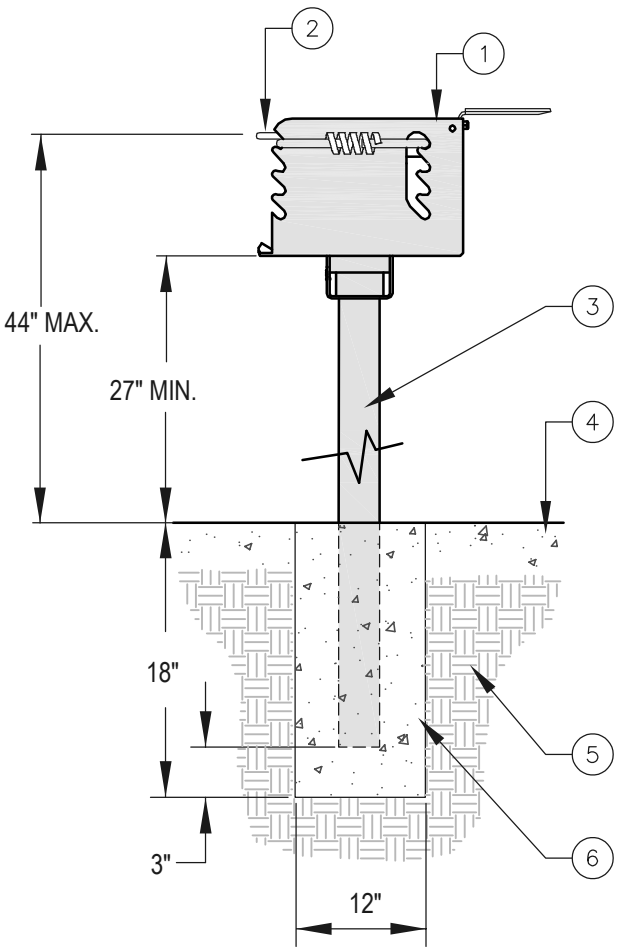
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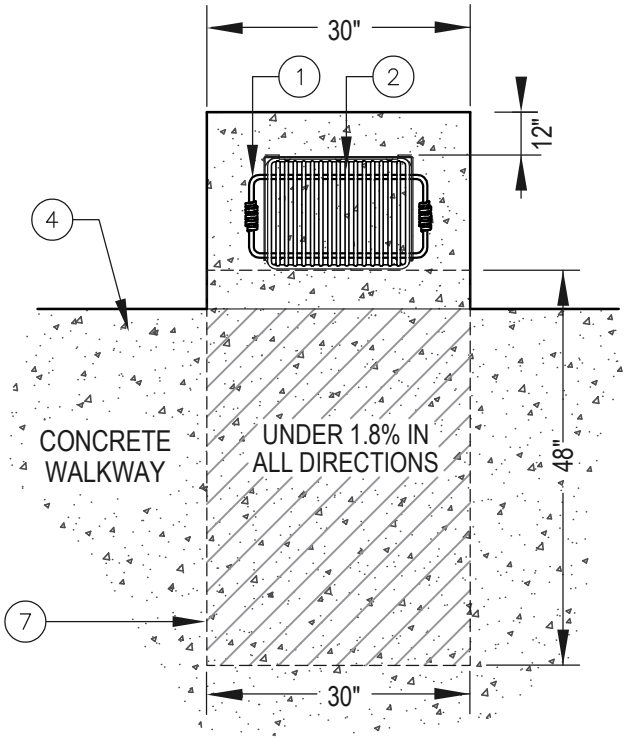
PET WASTE STATION

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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LC-29

PARK BBQ





PLAN VIEW

1. STAINLESS STEEL BBQ.
2. STAINLESS STEEL GRATE.
3. GALV. 3-1/2" O.D. POST.
4. CONCRETE PER DETAIL LC-02 & LC-03.
5. COMPACTED SUBGRADE.
6. 12" DIA. X 18" CONC. FOOTING, ALL CONC. SHALL BE 2500 MIN. PSI.
7. WHEEL CHAIR CLEAR SPACE (1.8% MAX. DESIGN SLOPE AND 2% MAX AS-BUILT SLOPE).

NOTES: BBQ MUST HAVE A 4'X4' CONCRETE PAD 4" THICK PER CONCRETE DETAIL LC-02.
BBQ SHALL BE FOOTING MOUNT.
BBQ SHALL BE INSTALLED LEVEL AND PLUMB TO GRADE.
BBQ MUST HAVE A 30" X 48" CLEAR GROUND SPACE ACCESSIBLE PATH.

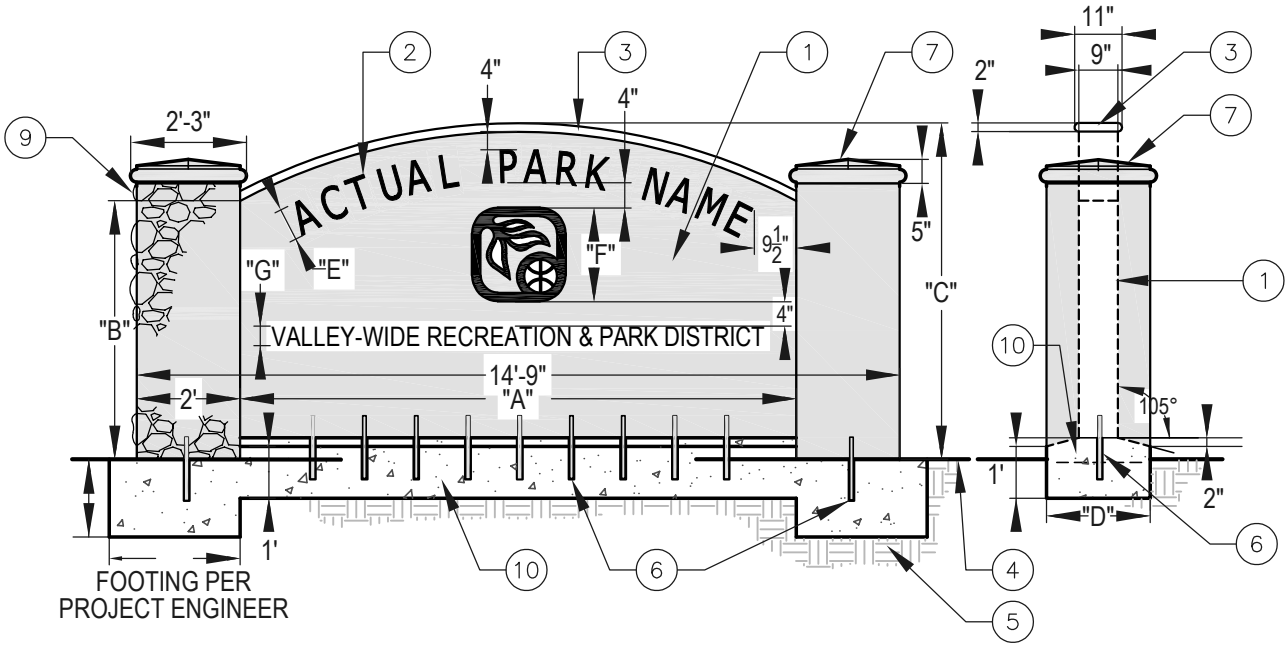
VALLEY-WIDE RECREATION AND PARK DISTRICT

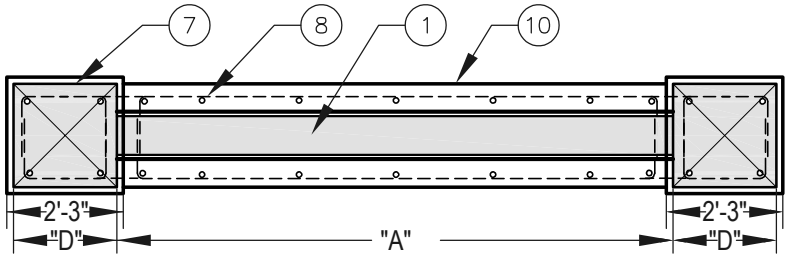
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PARK BBQ

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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LC-30





	LARGE	SMALL
A	129"	72"
B	63"	47"
C	78"	54"
D	24"	18"
E	8"	5"
F	22"	14"
G	6"	3"

1. PRE-CAST CONCRETE MONUMENT SIGN.
2. 1" DEEP RECESSED LETTERS PAINTED BLACK ARIAL NARROW FONT (OR OTHER APPROVED FONT).
3. PRE-CAST CONCRETE WALL CAP.
4. FINISH GRADE.
5. COMPACTED SUBGRADE.
6. 3" DIA. SLEEVE W/REBAR SUPPORT GROUT POCKET PER MANUFACTURER'S DRAWINGS.
7. PRE-CAST PILASTER CAP.
8. REBAR PER PROJECT ENGINEERING.
9. PRE-CAST 24" SQ. PILASTER WITH RIVER ROCK VENEER FOR EACH PILASTER.
10. POURED IN PLACE CONCRETE FOOTING PER PROJECT ENGINEERING.

NOTES: ACTUAL DIMENSIONS & NAME MUST BE DETERMINED PER PROJECT.
CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL.
PRE-CAST WALL AND PILASTER CAPS TO MATCH PRE-CAST SIGN.
LARGE SIGNS ARE TYPICAL SIZE, UNLESS OTHERWISE APPROVED AS SMALL.

VALLEY-WIDE
RECREATION AND PARK DISTRICT

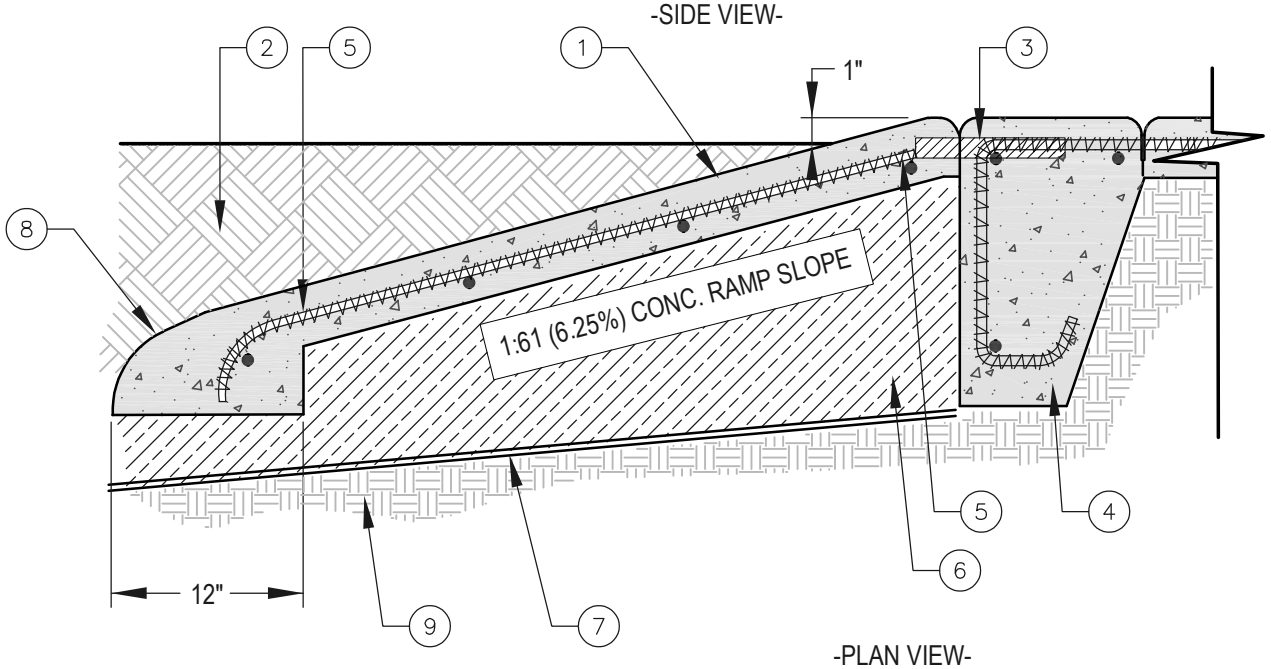
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TYPICAL MONUMENT SIGN

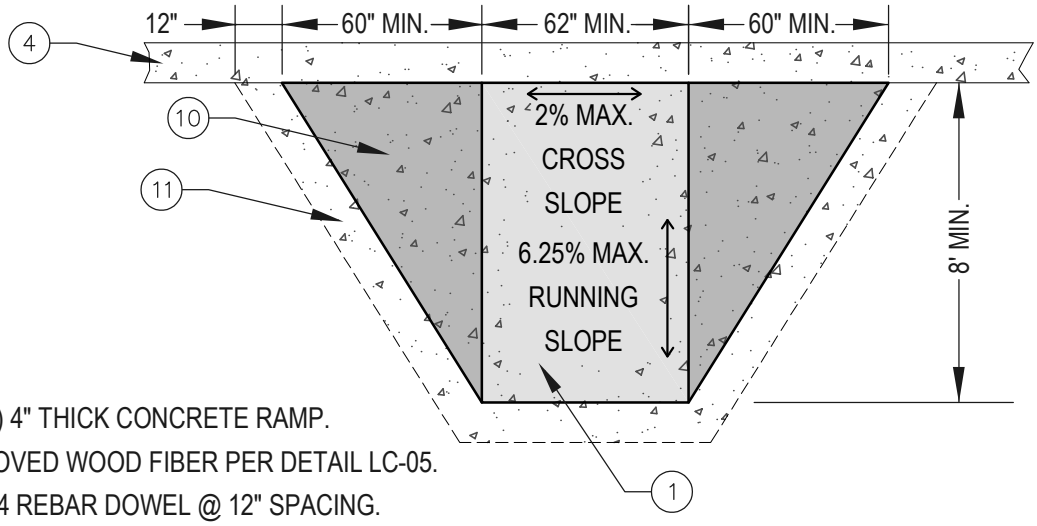
VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

LC-31

-SIDE VIEW-



-PLAN VIEW-



1. 1:16 (6.25%) 4" THICK CONCRETE RAMP.
2. ADA APPROVED WOOD FIBER PER DETAIL LC-05.
3. PROVIDE #4 REBAR DOWEL @ 12" SPACING.
4. CONCRETE CURB PER DETAIL LC-05.
5. #4 REBAR @ 4' SPACING TYP.
6. 95% COMPACTED BASE AS REQUIRED.
7. FILTER FABRIC PER SPECS.
8. TAPER CONCRETE RAMP AT SUBGRADE.
9. COMPACTED SUBGRADE OR UNDISTURBED SOIL.
10. CONCRETE WING 1:10 (10%) MAX. SLOPE.
11. CONCRETE BULLNOSE EDGE WITH 6" RADIUS.

NOTES: PROVIDE 3/4" MIN. RADIUS AT CONCRETE EDGE.
INSTALL ACCESS RAMP PER ALL ADA REGULATIONS.
PROVIDE A MIN. WIDTH OF 62".

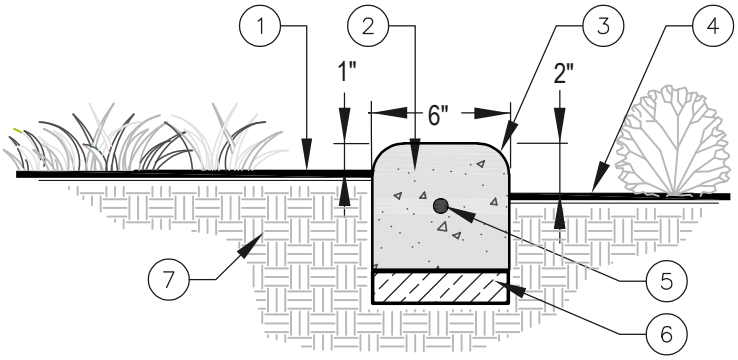
VALLEY-WIDE RECREATION AND PARK DISTRICT

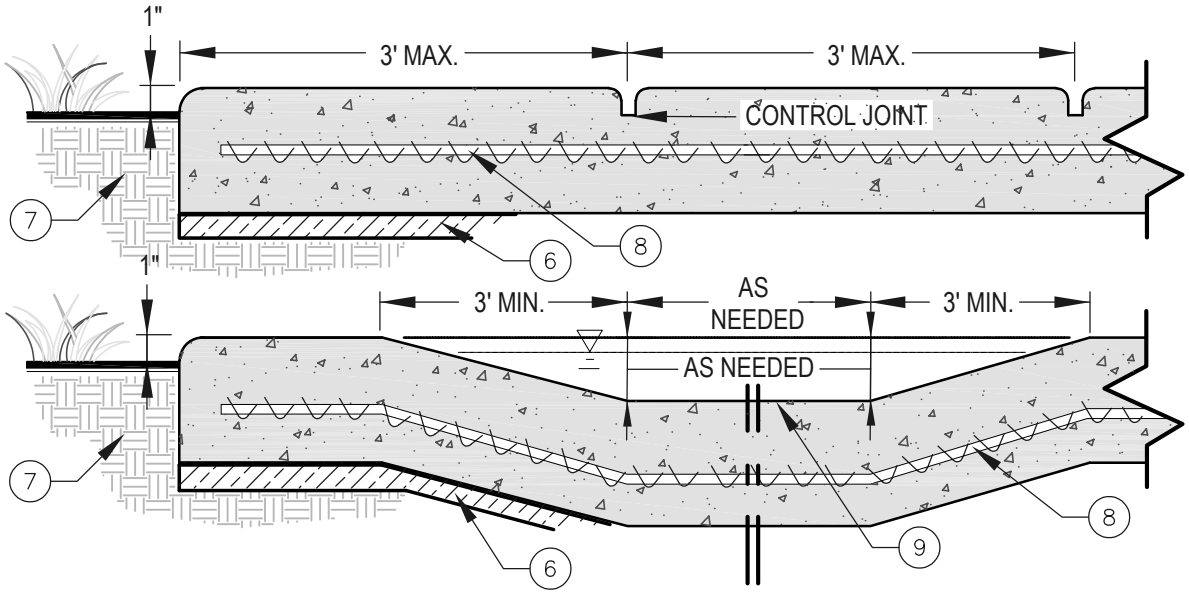
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PLAY AREA RAMP

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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LC-32





1. TOP OF CONCRETE HEADER SHALL BE 1" ABOVE GRADE FOR TURF AREAS.
2. 2500 MIN. PSI NATURAL GRAY 6"X6" CONCRETE MOWCURB FINISH SHALL BE SMOOTH TROWEL.
3. 3/4" TOOLED RADIUS.
4. TOP OF CONCRETE HEADER SHALL BE 2" ABOVE FINISH GRADE FOR PLANTER AREAS.
5. CONTINUOUS #4 REBAR THROUGHOUT LENGTH OF MOWCURB.
6. COMPACTED SUBGRADE.
7. UNDISTURBED SOIL.
8. #4 REBAR TYP. (2" CLEARANCE FROM EDGE) WITH 12" MIN. OVERLAP.
9. LOWER MOWCURB TO FLOWLINE ELEVATION.

NOTES: PROVIDE CONTROL JOINTS AT 3' MAX SPACING.

ANY DAMAGED MOWCURB SHALL BE REPLACED NO PATCHES SHALL BE ALLOWED UNLESS APPROVED IN WRITING.

TAPER MOWCURB AS DIRECTED WHEN FLOW LINES CROSS MOWCURB TYPICAL TAPER IS 6:1.

OBTAIN APPROVAL FOR ELEVATION CHANGE OVER 6:1.

NO EXTRUSION OF MOWCURBS ARE ALLOWED.

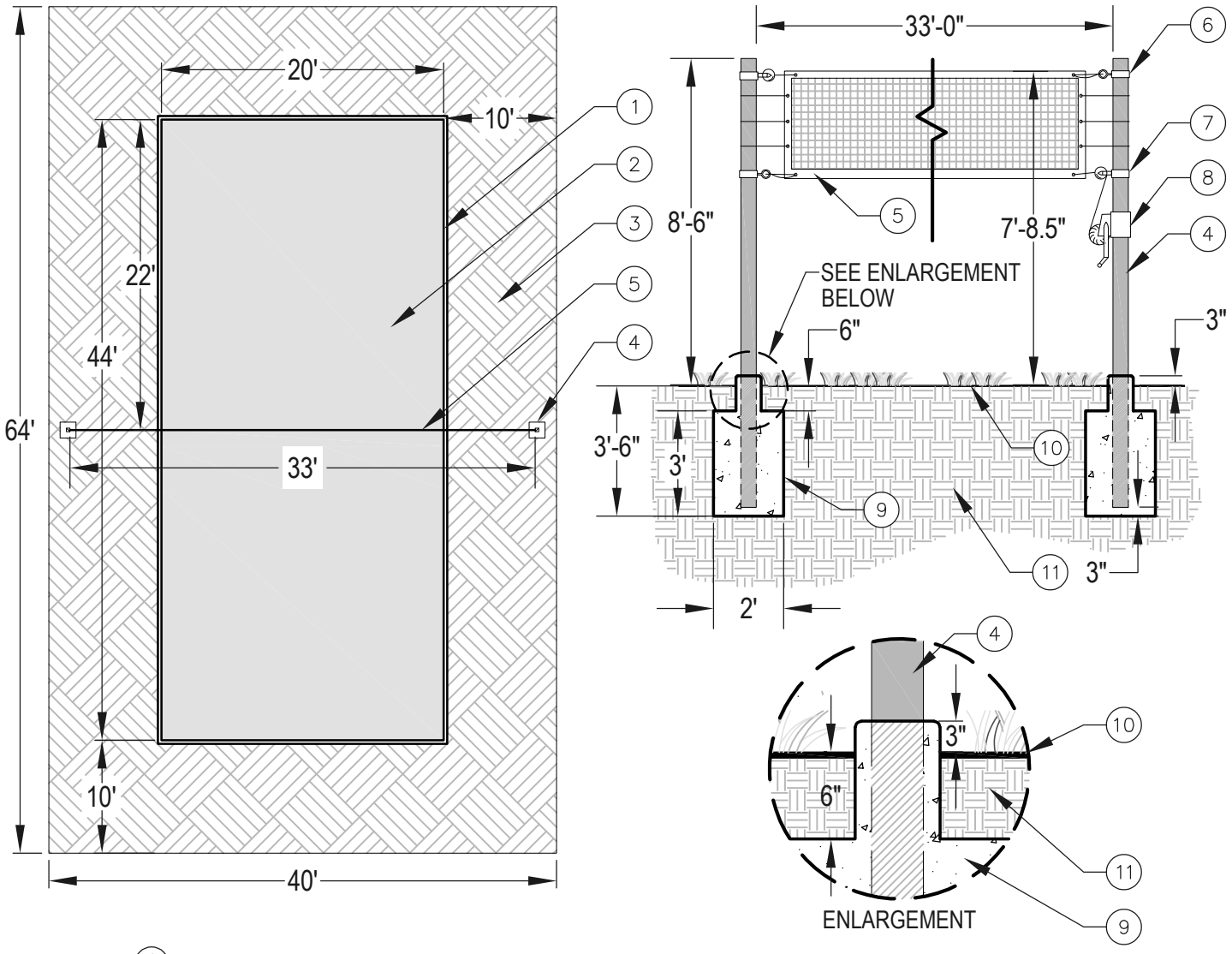
VALLEY-WIDE RECREATION AND PARK DISTRICT

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CONCRETE MOWCURB

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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LC-33



1. VOLLEYBALL COURT LINE (FIELD PAINTED STRIPING).
2. VOLLEYBALL COURT (TURF GRASS).
3. FREE ZONE (TURF GRASS)
4. SUPPORT POSTS PER SPECS.
5. VOLLEYBALL NET PER SPECS.
6. SUPPORT BRACKETS PER SPECS.
7. PULLEY PER SPECS.
8. NET TENSION CRANK PER SPECS.
9. CONCRETE FOOTING
10. FINISH GRADE
11. UNDISTURBED SOIL

NOTES:

EXTEND 6" DIAMETER FOOTING 3" ABOVE GRADE WITH 1" TOOLED RADIUS.

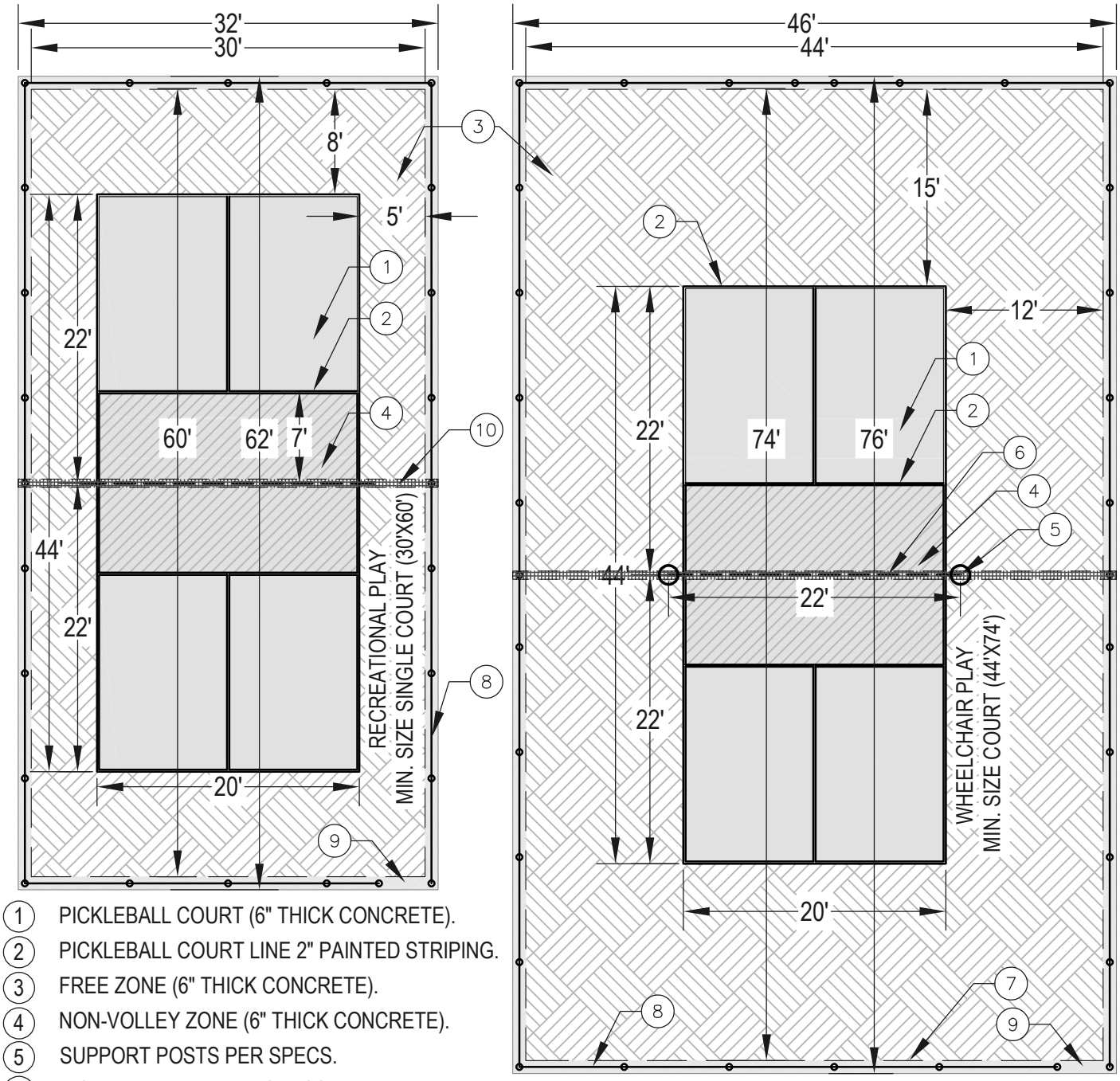
VALLEY-WIDE RECREATION AND PARK DISTRICT

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TYPICAL VOLLEYBALL COURT

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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LC-34



1. PICKLEBALL COURT (6" THICK CONCRETE).
2. PICKLEBALL COURT LINE 2" PAINTED STRIPING.
3. FREE ZONE (6" THICK CONCRETE).
4. NON-VOLLEY ZONE (6" THICK CONCRETE).
5. SUPPORT POSTS PER SPECS.
6. PICKLEBALL NET PER SPECS.
7. 12" WIDE CONCRETE WITH 9" DEEP THICKENED EDGE WITH CONTROL JOINT 12" FROM EDGE.
8. 6' HIGH CHAIN LINE FENCING PER SPECS.
9. 4' CLEAR WIDTH GATE PER PLAN.
10. 1/2" FELT WITH APPROVED WATERPROOF SEALANT.

NOTES: COURT SIZES LISTED ARE MINIMUM SIZES. REFER TO PLAN FOR SITE SPECIFIC LAYOUTS.
ALL CONCRETE AREAS MUST HAVE APPROVED COURT SURFACING WITH COLORS APPROVED BY THE DISTRICT.
REFER TO DETAIL LC-18 NOTES FOR COURT CONCRETE CONSTRUCTION.
ALL COURTS MUST BE IN COMPLIANCE WITH THE USA PICKLEBALL ASSOCIATION (USAPA).

VALLEY-WIDE RECREATION AND PARK DISTRICT

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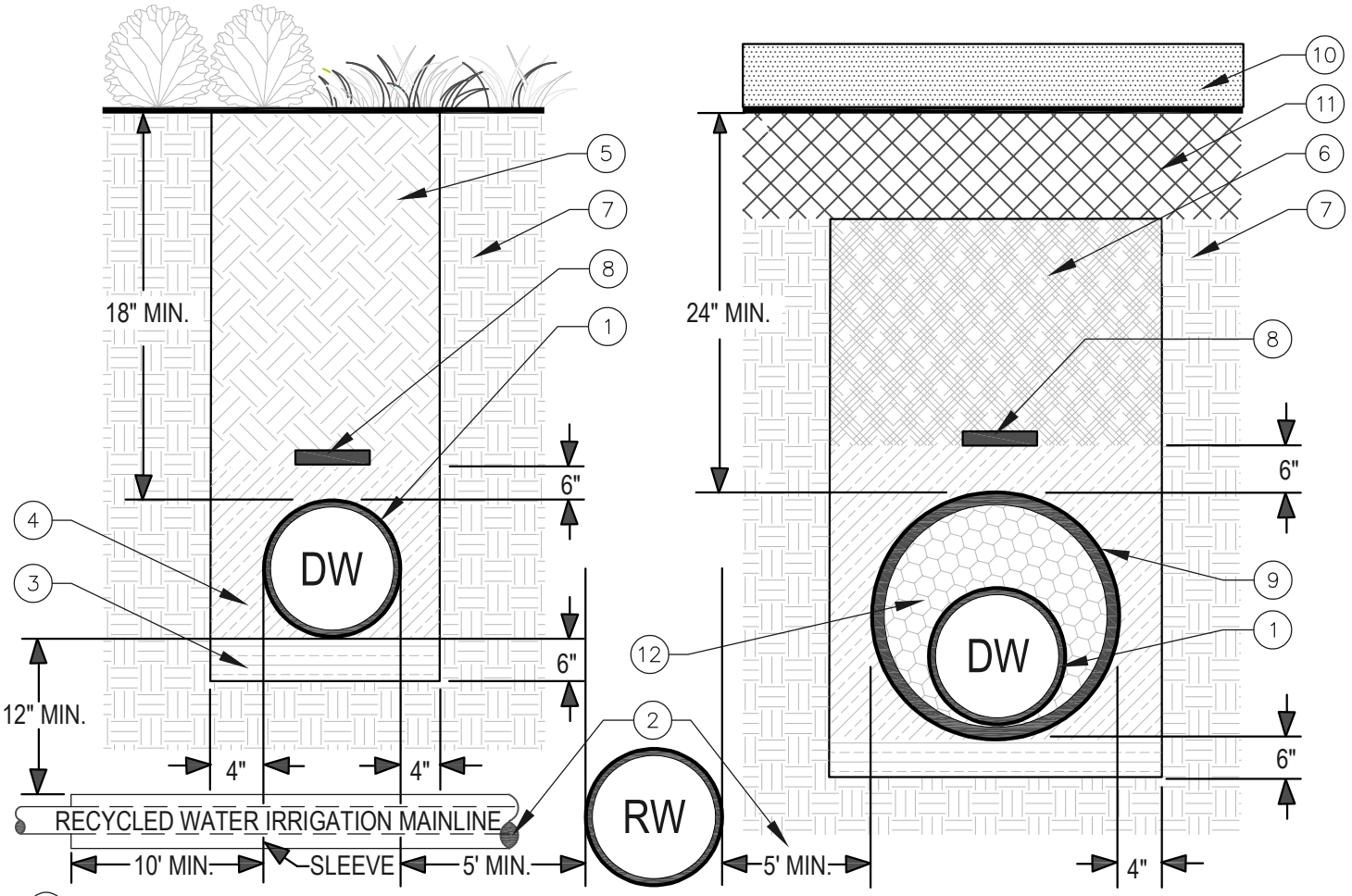
TYPICAL PICKLEBALL COURT

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

LC-35

VALLEY-WIDE RECREATION AND PARK DISTRICT
DOMESTIC WATER DETAILS

DETAIL NO.	DETAIL DESCRIPTION
DW-1	PVC DOMESTIC WATER LINE
DW-2	COPPER DOMESTIC WATER LINE
DW-3	POTABLE WATER ISOLATION VALVE
DW-4	DOMESTIC WATER BACKFLOW



1. PVC POTABLE DOMESTIC WATER LINE "DW" PER PLAN (SCHEDULE PER SPECS.)
2. IF RECYCLED WATER IS PRESENT POTABLE WATER LINE MUST HAVE 5' HORIZONTAL SEPARATION OR 10' SLEEVE.
3. SAND BED WHEN REQUIRED PER PLAN AND SPECS.
4. SAND SHADING WHEN REQUIRED PER PLAN AND SPECS.
5. CLEAN NATIVE 90% COMPACTED BACKFILL PER SOIL SPECS. UNDER LANDSCAPE.
6. CLEAN NATIVE 95% COMPACTED BACKFILL PER SOIL SPECS. UNDER HARDSCAPE.
7. UNDISTURBED NATIVE SOIL.
8. BLUE METALLIC WARNING TAPE WITH "POTABLE WATER LINE" TEXT (6" ABOVE PIPE).
9. PVC SCH 40 SLEEVE 2X TIMES THE WATER LINE DIAMETER.
10. HARDSCAPE PER PLAN.
11. 95% COMPACTED HARDSCAPE SUBGRADE SECTION PER PLAN AND SPECS.
12. SEAL ALL SLEEVE ENDS WITH EXPANSION FOAM TYP.

NOTES

NO DIRECTIONAL CHANGES ALLOWED UNDER HARDSCAPE.

ALL PVC PIPING MUST BE SLEEVED UNDER HARDSCAPE AREAS EXTENDED 12" PAST HARDSCAPE.

WATER LINES FOR BUILDINGS MUST HAVE COPPER PIPING FROM UNDER FOUNDATION TO LANDSCAPE AREA.

ISOLATION VALVE IS REQUIRED AT PVC TO COPPER PIPE TRANSITION.

PRIME AND GLUE ALL FITTINGS PER MANUFACTURER'S RECOMMENDATIONS.

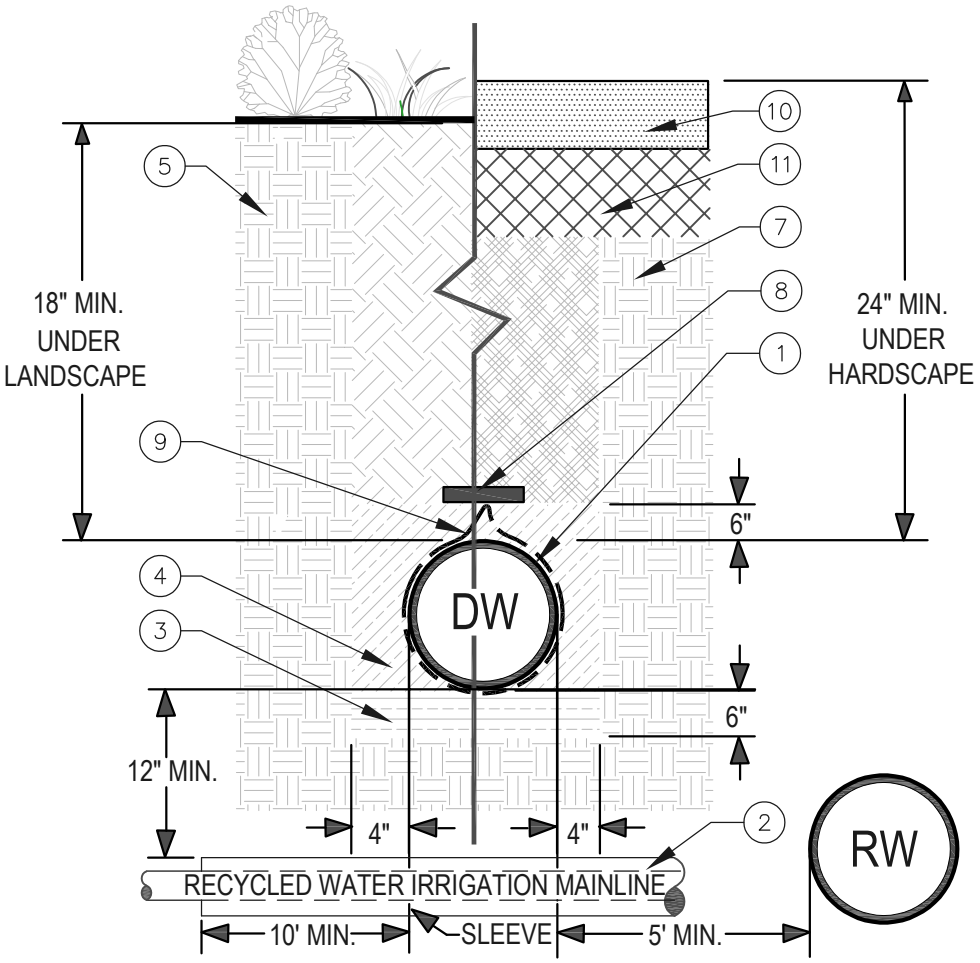
VALLEY-WIDE RECREATION AND PARK DISTRICT

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PVC DOMESTIC WATER LINE

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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DW-1



1. COPPER POTABLE DOMESTIC WATER LINE "DW" PER PLAN (SCHEDULE PER SPECS.).
2. IF RECYCLED WATER IS PRESENT POTABLE WATER LINE MUST HAVE 5' HORIZONTAL SEPARATION OR 10' SLEEVE.
3. SAND BED WHEN REQUIRED PER PLAN AND SPECS.
4. SAND SHADING WHEN REQUIRED PER PLAN AND SPECS.
5. CLEAN NATIVE 90% COMPACTED BACKFILL PER SOIL SPECS. UNDER LANDSCAPE.
6. CLEAN NATIVE 95% COMPACTED BACKFILL PER SOIL SPECS. UNDER HARDSCAPE.
7. UNDISTURBED NATIVE SOIL.
8. BLUE METALLIC WARNING TAPE WITH "POTABLE WATER LINE" TEXT (6" ABOVE PIPE).
9. POLY SLEEVE PER SPECS FOR ALL AREAS IN CONTACT WITH SOIL OR CONCRETE.
10. HARDSCAPE PER PLAN.
11. 95% COMPACTED HARDSCAPE SUBGRADE SECTION PER PLAN AND SPECS.

NOTES

NO DIRECTIONAL CHANGES ALLOWED UNDER HARDSCAPE.

WATER LINES FOR BUILDINGS MUST HAVE COPPER PIPING FROM UNDER FOUNDATION TO LANDSCAPE AREA.

ISOLATION VALVE IS REQUIRED AT PVC TO COPPER PIPE TRANSITION.

PRIME AND GLUE ALL FITTINGS PER MANUFACTURER'S RECOMMENDATIONS.

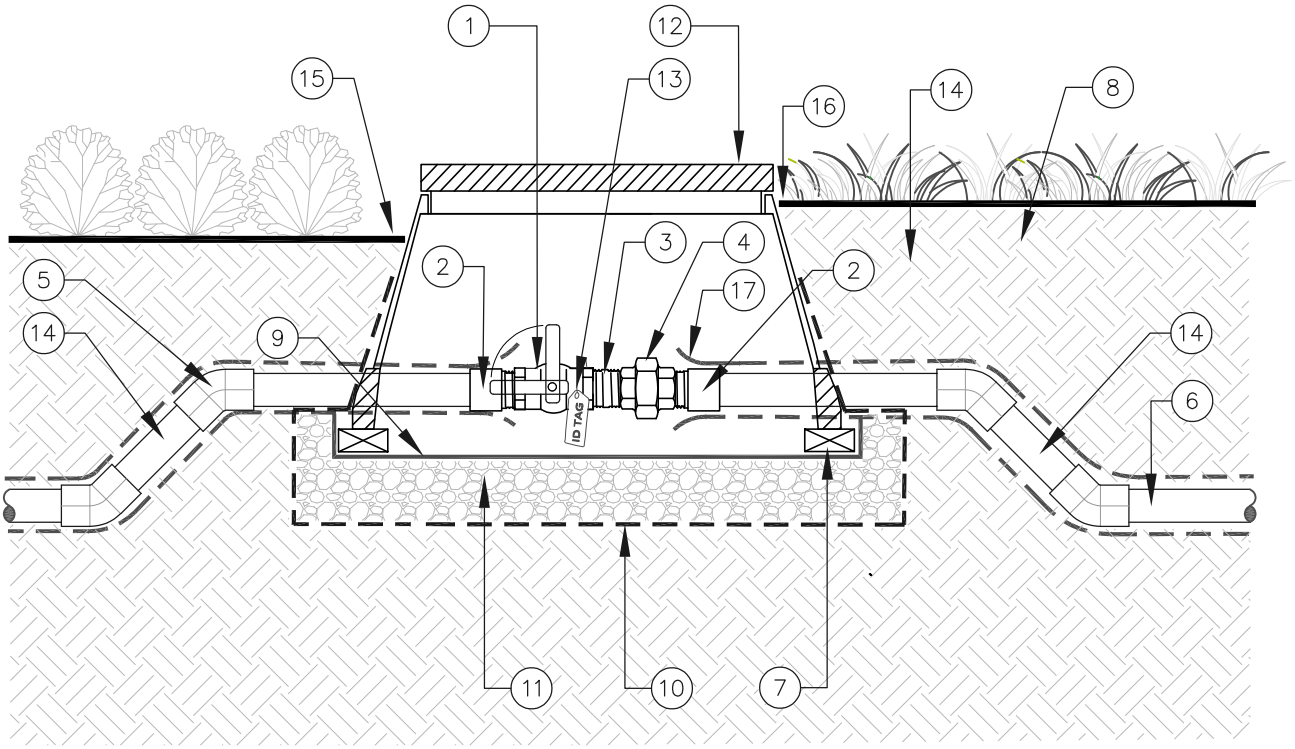
VALLEY-WIDE RECREATION AND PARK DISTRICT

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COPPER DOMESTIC WATER LINE

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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DW-2



1. BRASS BALL VALVE PER LEGEND AND SPECS. (TOP OF HANDLE TO BE 2" BELOW BOX LID).
2. MALE ADAPTER TYP. BRASS, COPPER OR SCH 80 PVC PER PLAN AND SPECS.
3. LINE SIZE X 3" MIN. LENGTH BRASS NIPPLE.
4. LINE SIZE BRASS UNION.
5. 45 DEGREE ELBOW TYP. (4X) BRASS, COPPER OR SCH 80 PER PLAN AND SPECS.
6. POTABLE WATER DOMESTIC WATER LINE PER LEGEND AND SPECS.
7. COMMON BRICK (4 EA. PER RECTANGLE BOX).
8. NATIVE SOIL COMPACTED TO ORIGINAL DENSITY.
9. $\frac{1}{2}$" GALV. MESH BELOW BOX.
10. FILTER FABRIC BELOW GRAVEL.
11. 3 CU.FT. $\frac{3}{4}$" GRAVEL.
12. RECTANGLE VALVE BOX PER SPECS. ANY BOX CUTS MUST BE APPROVED (HEAT BRAND "PW" ON LID).
13. BLUE VALVE ID TAG PER SPECS. AND EMWD REQUIREMENTS.
14. PIPE LENGTH AS REQUIRED TO MEET MAINLINE DEPTH PER SPECS.
15. SET BOX 4" ABOVE GRADE IN PLANTER AREAS.
16. SET BOX 2" ABOVE GRADE IN TURF AREAS.
17. POLY SLEEVE PER SPECS FOR ALL COPPER IN CONTACT WITH SOIL (TAPE WRAP ENDS).

NOTES

IF RECYCLED WATER IS PRESENT POTABLE WATER LINE MUST HAVE 5' HORIZONTAL SEPARATION OR 10' SLEEVE.

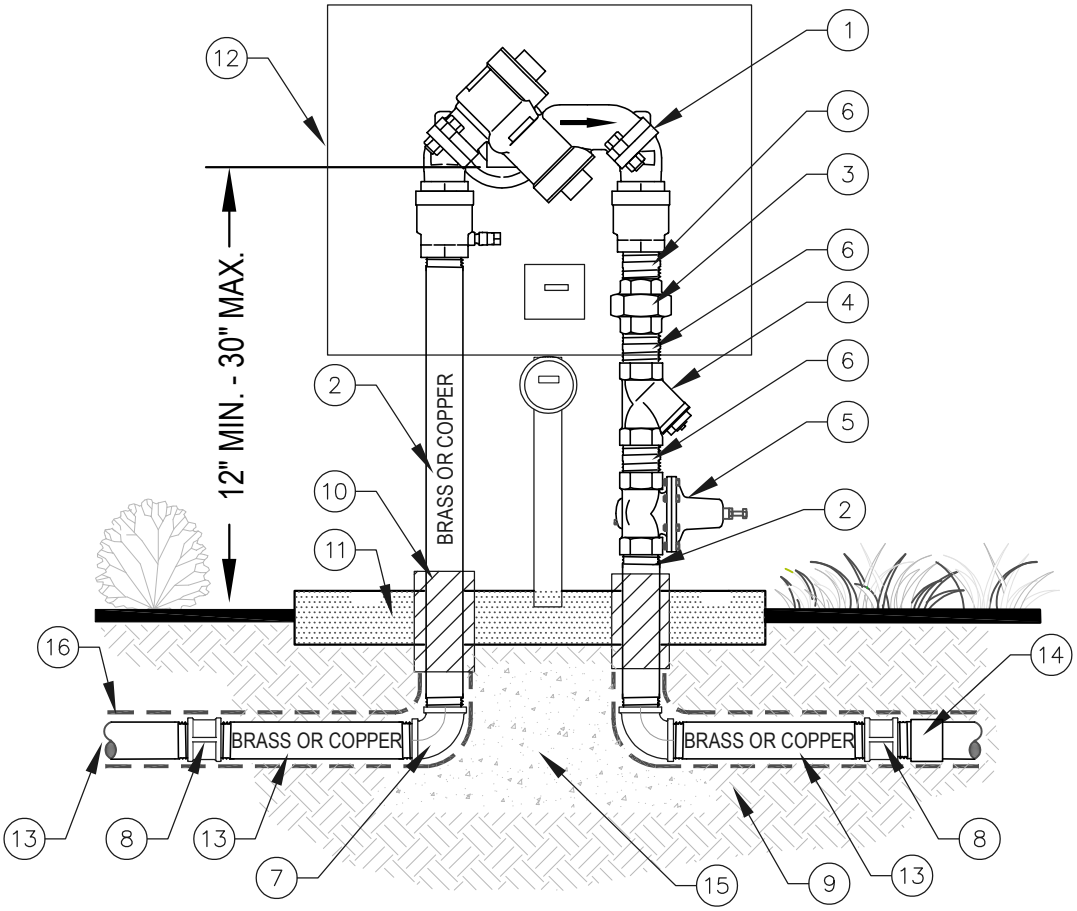
VALLEY-WIDE RECREATION AND PARK DISTRICT

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POTABLE WATER ISOLATION VALVE

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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DW-3



1. POTABLE DOMESTIC WATER LEAD FREE BACKFLOW DEVICE (PER PLAN AND SPECS.) SIZE PER UTILITY PLANS.
2. BRASS OR COPPER RISER (HEIGHT AS REQUIRED).
3. BRASS UNION.
4. BRASS WYE STRAINER.
5. BRASS PRESSURE REGULATOR (IF PRESSURE EXCEEDS 85 PSI).
6. BRASS NIPPLE (LINE SIZE X 3" MIN. LENGTH).
7. BRASS ELL TYP.
8. BRASS COUPLING AS NEEDED TO CONNECT BRASS OR COPPER PIPING DIRECTLY TO WATER METER.
9. CLEAN NATIVE COMPACTED BACKFILL.
10. PIPE WRAP ALL PIPING WITH CONTACT WITH CONCRETE TYP.
11. 9" DEEP CONCRETE PAD 4" ABOVE FINISH GRADE.
12. ENCLOSURE AND FREEZE RESISTANT BARRIER PER PLAN AND SPECS.
13. BRASS OR COPPER PIPING TO POTABLE WATER METER.
14. SCH 80 MALE ADAPTER (WHEN APPROVED FOR PVC PIPE WATER LINE).
15. CONCRETE THRUST BLOCK FOR 2" BACKFLOWS.
16. POLY SLEEVE PER SPECS FOR ALL COPPER IN CONTACT WITH SOIL (TAPE WRAP ENDS).

NOTES

INSTALLATION MUST CONFORM TO LOCAL CODES AND WATER DISTRICT.

CONTRACTOR MUST PROVIDE CERTIFICATION PRIOR TO ACCEPTANCE.

VALLEY-WIDE RECREATION AND PARK DISTRICT

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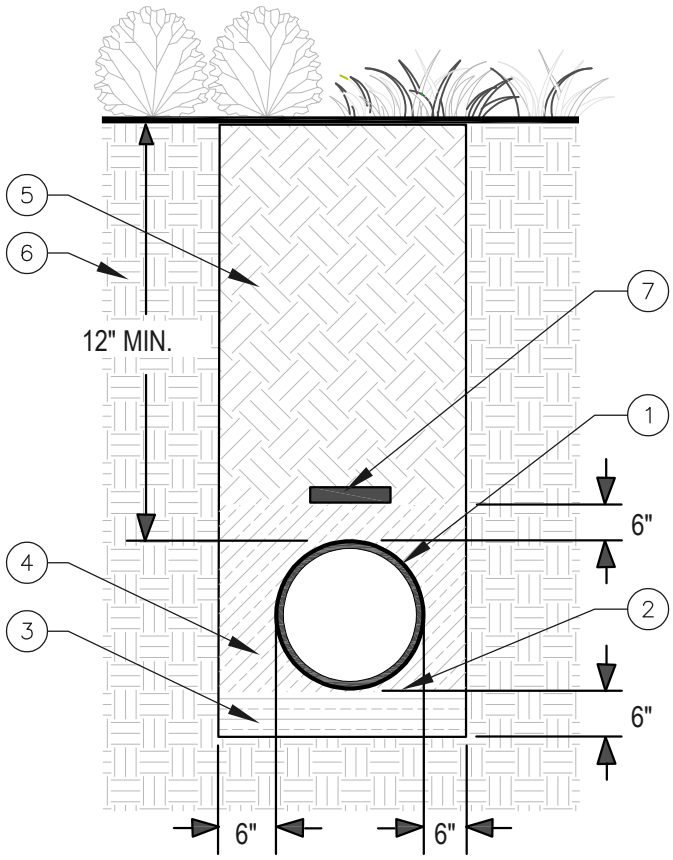
DOMESTIC WATER BACKFLOW

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

DW-4

VALLEY-WIDE RECREATION AND PARK DISTRICT
STORM DRAIN DETAILS

DETAIL NO.	DETAIL DESCRIPTION
SD-1	STORM DRAIN PIPE SECTION VIEW
SD-2	STORM DRAIN PIPE & CATCH BASIN LAYOUT
SD-3	PRECAST CATCH BASIN SECTION VIEW
SD-4	P.I.P. CONC. CATCH BASIN SECTION VIEW
SD-5	ATRIUM INLET SECTION VIEW
SD-6	TYPICAL BASIN SUBDRAIN PLAN VIEW
SD-7	TYPICAL BASIN SUBDRAIN SECTION VIEWS



1. PVC STORM DRAIN PIPE PER PLAN (SCHEDULE PER SPECS.) 0.50% MIN. SLOPE.
2. INVERT ELEVATION PER PLAN.
3. SAND BED WHEN REQUIRED PER PLAN AND SPECS.
4. SAND SHADING WHEN REQUIRED PER PLAN AND SPECS.
5. CLEAN NATIVE COMPACTED BACKFILL SOIL PER SPECS.
   95% COMPACTION UNDER DRIVEWAYS AND 90% COMPACTION IN LANDSCAPE AREAS.
6. UNDISTURBED NATIVE SOIL.
7. METALLIC WARNING TAPE WITH "CAUTION STORM DRAIN" TEXT (6" ABOVE PIPE).

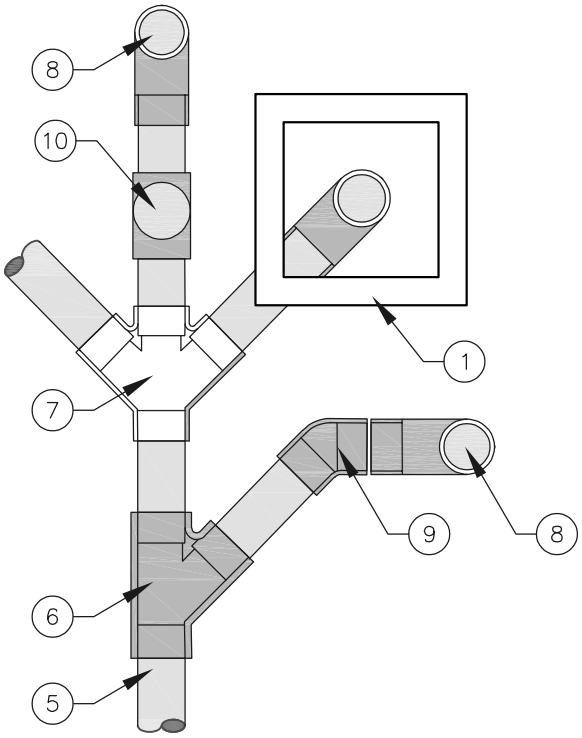
VALLEY-WIDE RECREATION AND PARK DISTRICT

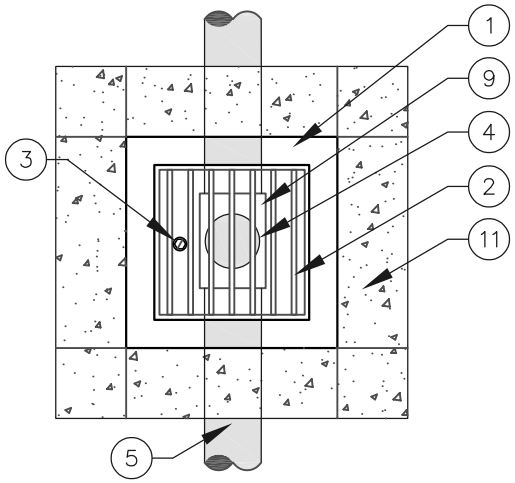
NO REPRODUCTION OR MODIFICATION OF THIS DETAIL IS ALLOWED WITHOUT THE EXPRESS WRITTEN APPROVAL OF VWRPD AND LDC

STORM DRAIN PIPE SECTION VIEW

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

SD-1





PLAN VIEW

1. PRECAST CONCRETE CATCH BASIN PER PLAN AND SPECS.
2. GALV. OR CAST IRON GRATE PER PLAN AND SPECS. (ADA GRATE WHERE REQ'D).
3. BOLT DOWN LOCK TO SECURE GRATE TO CATCH BASIN.
4. PVC RISER (SCHEDULE PER SPECS.-SIZE PER PLAN) 4" MIN. SIZE.
5. PVC STORM DRAIN PIPE PER PLAN (SCHEDULE PER SPECS.).
6. WYE FITTING (SCHEDULE PER SPECS.).
7. DOUBLE WYE FITTING (SCHEDULE PER SPECS.).
8. LONG ELBOW AT ENDS (SCHEDULE PER SPECS.).
9. ELL 45 OR 22.5 DEGREE FITTING (SCHEDULE PER SPECS.).
10. SANITARY TEE (WHEN APPROVED) (SCHEDULE PER SPECS.).
11. 12" WIDE X 6" DEEP CONCRETE COLLAR.

NOTES NO STANDARD TEES OR 90 DEGREE FITTINGS ALLOWED UNLESS OTHERWISE APPROVED.
PRIME AND GLUE ALL FITTINGS PER MANUFACTURER'S RECOMMENDATIONS.

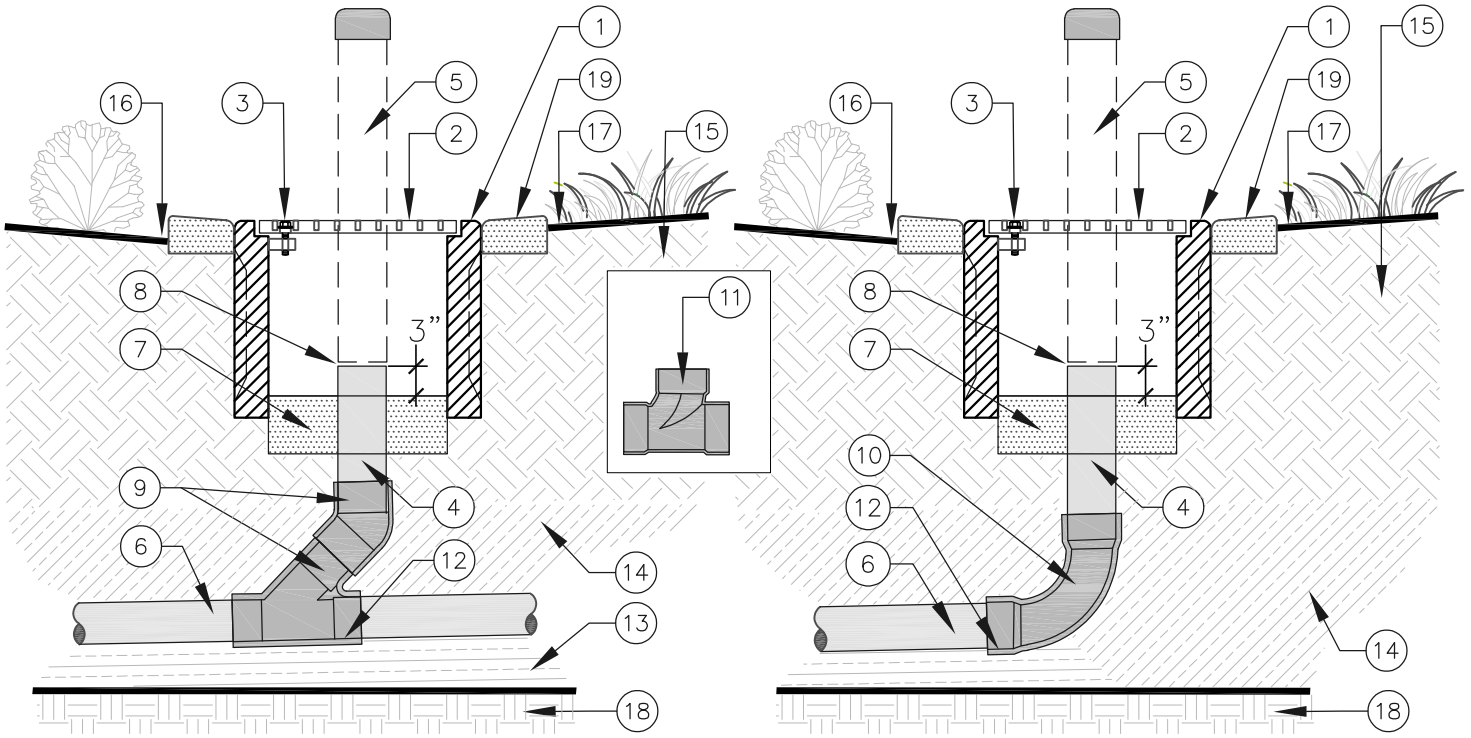
VALLEY-WIDE RECREATION AND PARK DISTRICT

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STORM DRAIN PIPE & CATCH BASIN LAYOUT

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

SD-2



1. PRECAST CONCRETE CATCH BASIN PER PLAN AND SPECS.
2. GALV. OR CAST IRON GRATE PER PLAN AND SPECS. (ADA GRATE WHERE REQ'D).
3. BOLT DOWN LOCK TO SECURE GRATE TO CATCH BASIN.
4. PVC RISER (SCHEDULE PER SPECS.-SIZE PER PLAN) 4" MIN. SIZE.
5. RISER STUB-OUT AND CAP (WHEN CATCH BASIN IS SET AFTER FINISH GRADING).
6. PVC STORM DRAIN PIPE PER PLAN (SCHEDULE PER SPECS.).
7. 6" THICK CONCRETE PAD POURED INSIDE PRECAST CATCH BASIN FOR BOTTOM.
8. CUT DOWN PVC RISER 3" ABOVE CONCRETE PAD (DRILL TWO $\frac{1}{2}$" HOLES AT CONCRETE PAD LEVEL).
9. WYE WITH $\frac{1}{8}$" BEND FITTING ASSEMBLY (SCHEDULE PER SPECS.).
10. SCH 40 STORM PVC LONG ELBOW AT ENDS. (SCHEDULE PER SPECS.).
11. SANITARY TEE (WHEN APPROVED) (SCHEDULE PER SPECS.).
12. INVERT ELEVATION PER PLAN.
13. SAND BED WHEN REQUIRED PER PLAN AND SPECS.
14. SAND SHADING WHEN REQUIRED PER PLAN AND SPECS.
15. CLEAN NATIVE COMPACTED BACKFILL SOIL PER SPECS.
16. SET FINISH GRADE 4" BELOW CATCH BASIN IN PLANTER AREAS (1% MIN. SLOPE).
17. SET FINISH GRADE 2" BELOW CATCH BASIN IN TURF AREAS (1% MIN. SLOPE).
18. UNDISTURBED NATIVE SOIL.
19. 12" WIDE X 6" DEEP CONCRETE COLLAR.

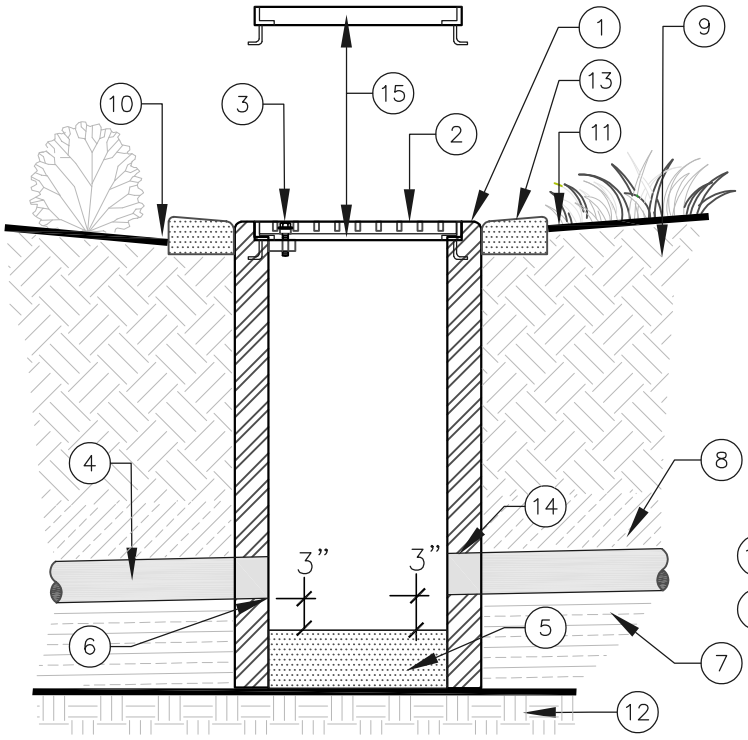
VALLEY-WIDE RECREATION AND PARK DISTRICT

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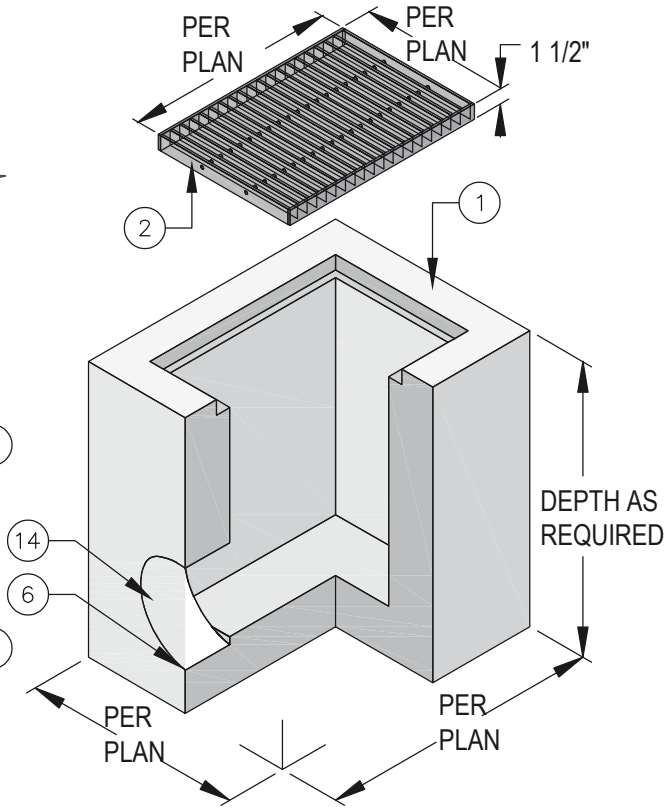
PRECAST CATCH BASIN SECTION VIEW

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

SD-3



ELEVATION



1. POURED IN PLACE CONCRETE CATCH BASIN WITH GALV. METAL GRATE FRAME .
2. GALV. OR CAST IRON GRATE PER PLAN AND SPECS. (ADA GRATE WHERE REQ'D).
3. BOLT DOWN LOCK TO SECURE GRATE TO CATCH BASIN .
4. PVC STORM DRAIN PIPE PER PLAN (SCHEDULE PER SPECS.).
5. 6" THICK CONCRETE PAD POURED INSIDE PRECAST CATCH BASIN FOR BOTTOM.
6. INVERT ELEVATION PER PLAN.
7. SAND BED WHEN REQUIRED PER PLAN AND SPECS.
8. SAND SHADING WHEN REQUIRED PER PLAN AND SPECS.
9. CLEAN NATIVE COMPACTED BACKFILL SOIL PER SPECS.
10. SET FINISH GRADE 4" BELOW CATCH BASIN IN PLANTER AREAS (1% MIN. SLOPE).
11. SET FINISH GRADE 2" BELOW CATCH BASIN IN TURF AREAS (1% MIN. SLOPE).
12. UNDISTURBED NATIVE SOIL.
13. 12" WIDE X 6" DEEP CONCRETE COLLAR.
14. GROUT ANY OPENINGS BETWEEN PIPE AND POURED IN PLACE CATCH BASIN.
15. LOCKING GALV. METAL GRATE FRAME WITH ANCHORS INSET WITHIN STRUCTURE.

NOTES CONCRETE MUST BE 3250 PSI @ 28 DAYS TYPE II/V (ASTM C-150).
CONCRETE MUST HAVE WATER REDUCING ADMIXTURE.
CATCH BASIN WIDTH TO BE 4" MIN. UP T0 4' DEEP AND 6" MIN. UP T0 8' DEEP.

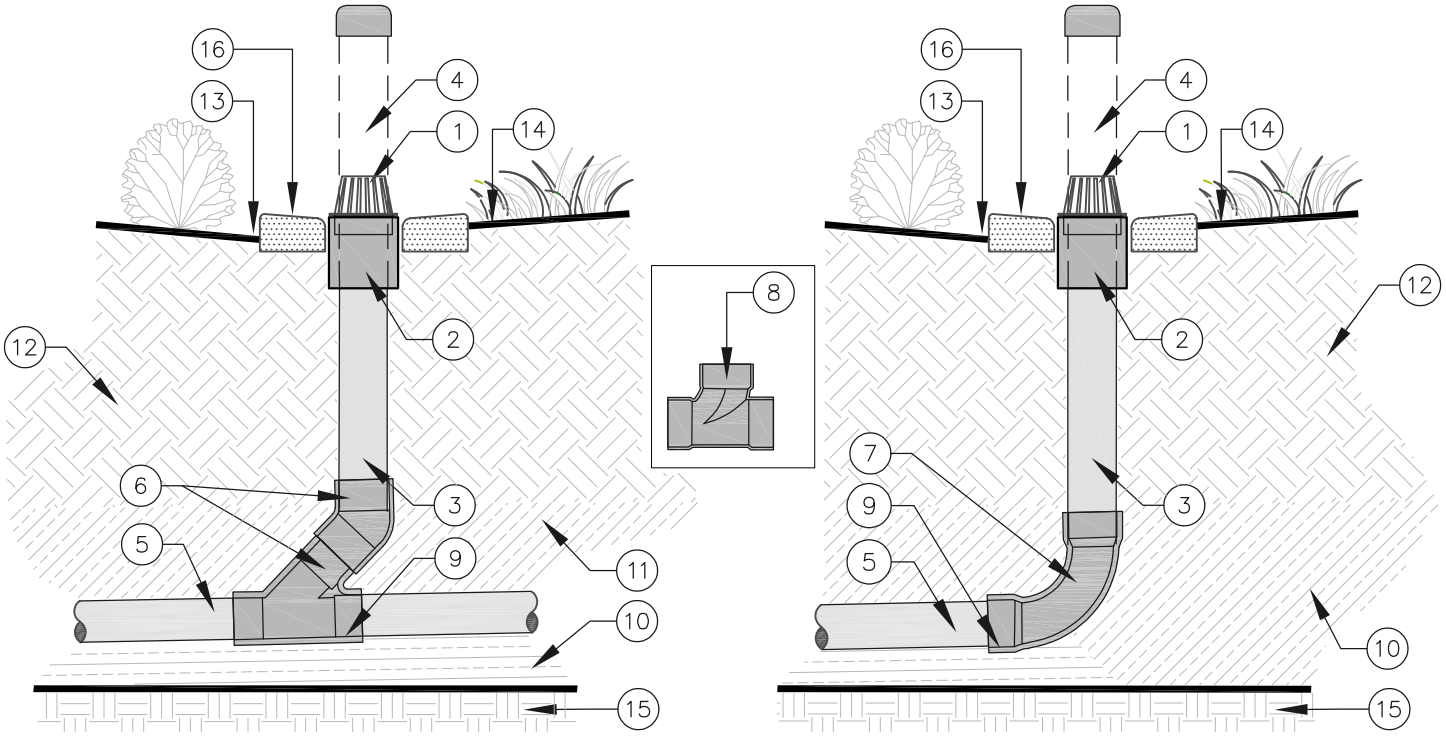
VALLEY-WIDE
RECREATION AND PARK DISTRICT

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P.I.P. CONC. CATCH BASIN SECTION VIEW

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

SD-4



1. NDS OR EQUAL ATRIUM (SIZE PER PLAN).
2. DRAIN COUPLING (SCHEDULE PER SPECS.).
3. PVC RISER (SCHEDULE PER SPECS.-SIZE PER PLAN) 4" MIN. SIZE.
4. RISER STUB-OUT AND CAP (WHEN CATCH BASIN IS SET AFTER FINISH GRADING).
5. PVC STORM DRAIN PIPE PER PLAN (SCHEDULE PER SPECS.).
6. WYE WITH $\frac{1}{8}$" BEND FITTING ASSEMBLY (SCHEDULE PER SPECS.)
7. SCH 40 STORM PVC LONG ELBOW AT ENDS. (SCHEDULE PER SPECS.).
8. SANITARY TEE (WHEN APPROVED) (SCHEDULE PER SPECS.).
9. INVERT ELEVATION PER PLAN.
10. SAND BED WHEN REQUIRED PER PLAN AND SPECS.
11. SAND SHADING WHEN REQUIRED PER PLAN AND SPECS.
12. CLEAN NATIVE COMPACTED BACKFILL SOIL PER SPECS.
13. SET FINISH GRADE 4" BELOW GRATE COLLAR IN PLANTER AREAS (1% MIN. SLOPE).
14. SET FINISH GRADE 2" BELOW GRATE COLLAR IN TURF AREAS (1% MIN. SLOPE).
15. UNDISTURBED NATIVE SOIL.
16. 12" WIDE X 6" DEEP CONCRETE COLLAR.

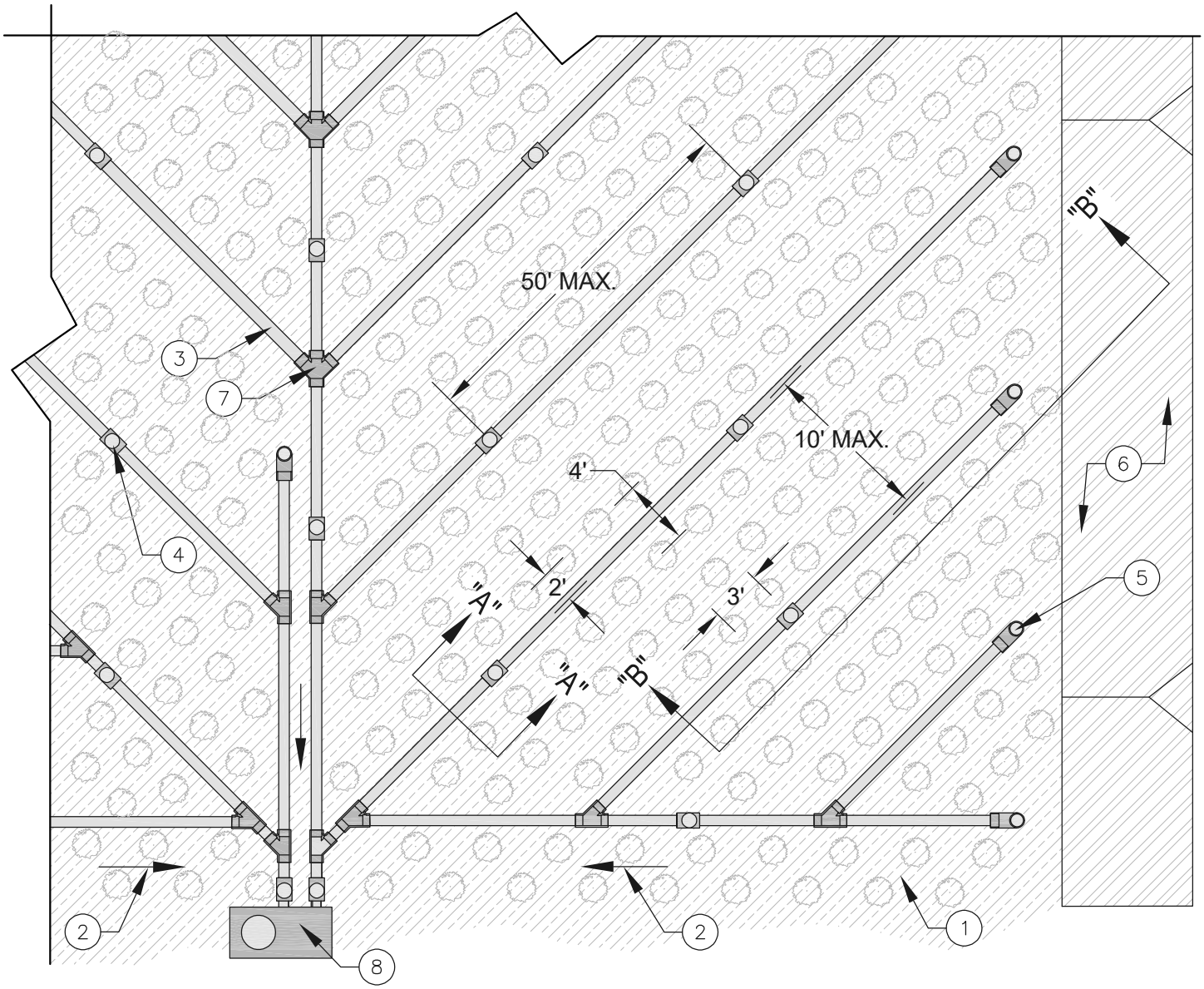
VALLEY-WIDE RECREATION AND PARK DISTRICT

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ATRIUM INLET SECTION VIEW

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

SD-5



1. APPROVED BIO-FILTRATION SOIL MEDIA (BSM), SAND. PEA GRAVEL, ROCK AND FILTER FABRIC.
2. 0.50% MIN. SLOPE SUBGRADE TOWARDS OUTLET WITH APPROVED FILTER FABRIC.
3. 6" DIA. SCH 40 PVC PERFORATED PIPE (PLACE HOLES AT AT 4 O' CLOCK) .
4. 6" DIA. SCH 40 PVC COMBINATION WYE AND $\frac{1}{8}$ BEND FITTINGS, RISER AND CLEANOUT.
5. 6" DIA. SCH 40 PVC "LONG ELBOW" FITTING AT END OF PIPE, RISER AND CLEANOUT.
6. SLOPE PER APPROVED PLAN.
7. 6" DIA. SCH 40 PVC "CROSS" (WHEN NEEDED).
8. OUTLET STRUCTURE PER STORM DRAIN PLANS.

NOTES:

ALL SCH 40 PIPING SHALL BE PRIMED AND GLUED WITH APPROVED MATERIALS.

SEE DETAIL SD-7 FOR SECTIONS "A"-"A AND "B"-"B".

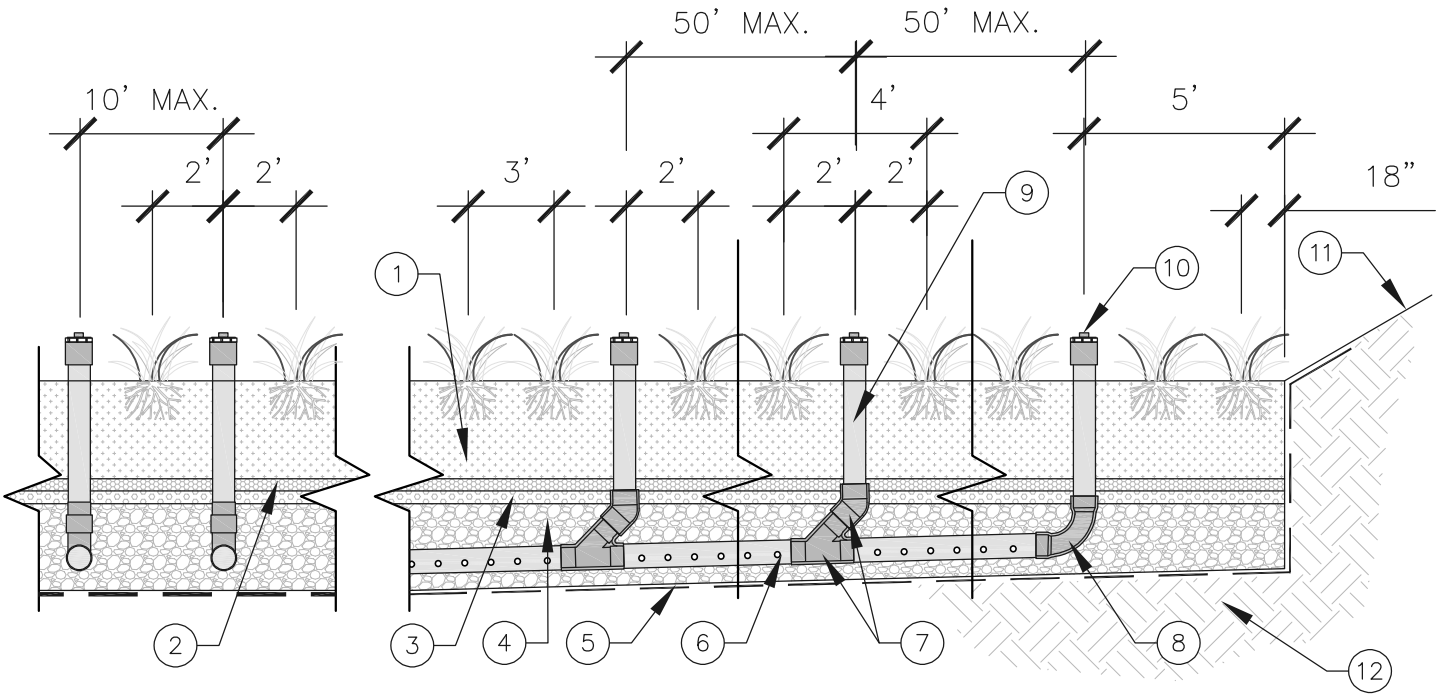
VALLEY-WIDE RECREATION AND PARK DISTRICT

NO REPRODUCTION OR MODIFICATION OF THIS DETAIL IS ALLOWED WITHOUT THE EXPRESS WRITTEN APPROVAL OF VWRPD AND LDC

TYPICAL BASIN SUBDRAIN PLAN VIEW

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

SD-6



SECTION "A" - "A"

SECTION "B" - "B"

1. APPROVED BIO-FILTRATION SOIL MEDIA (BSM) DEPTH PER PLAN.
2. 3" THICK WASHED CHOKER SAND.
3. 3" THICK WASHED PEA GRAVEL PER ASTM 8.
4. WASHED CLEAN #57 ROCK (DEPTH VARIES PER PLAN WITH SLOPING SUB-GRADE).
5. 0.50% MIN. SLOPE SUBGRADE TOWARDS OUTLET WITH APPROVED FILTER FABRIC.
6. 6" DIA. SCH 40 PVC PERFORATED PIPE (PLACE HOLES AT AT 4 O' CLOCK).
7. 6" DIA. SCH 40 PVC COMBINATION "WYE AND $\frac{1}{8}$ BEND FITTINGS.
8. 6" DIA. SCH 40 PVC "LONG ELBOW" FITTING AT END OF PIPE.
9. 6" DIA. SCH 40 PVC PIPE RISER @ 50' O.C. (EXTEND 6" ABOVE TOP OF SOIL MEDIA).
10. 6" DIA. SCH 40 PVC COUPLING, FEMALE ADAPTER AND THREADED PLUG.
11. SLOPE PER APPROVED PLAN.
12. UNDISTURBED OR COMPACTED SUB-GRADE (0.50% MIN. SLOPE).

NOTES:

ALL SCH 40 PIPING SHALL BE PRIMED AND GLUED WITH APPROVED MATERIALS.

SEE DETAIL SD-6 FOR SECTIONS "A"-"A AND "B"-"B" LOCATIONS.

THIS DETAIL REPRESENTS THE MINIMUM DISTRICT REQUIREMENTS. APPROVED PLANS AND SPECS. MUST BE REVIEWED AND CONFIRMED TO MEET THESE MINIMUM REQUIREMENTS. IN THE EVENT OF ANY CONTRADICTION, CONTACT THE DISTRICT FOR DIRECTION PRIOR TO START OF WORK.
ALL DRAINAGE MUST BE INSPECTED AND APPROVED BY VALLEY-WIDE AND COUNTY OF RIVERSIDE GRADING INSPECTOR PRIOR TO BACKFILL.
REFER TO VALLEY-WIDE'S DRAINAGE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

VALLEY-WIDE RECREATION AND PARK DISTRICT

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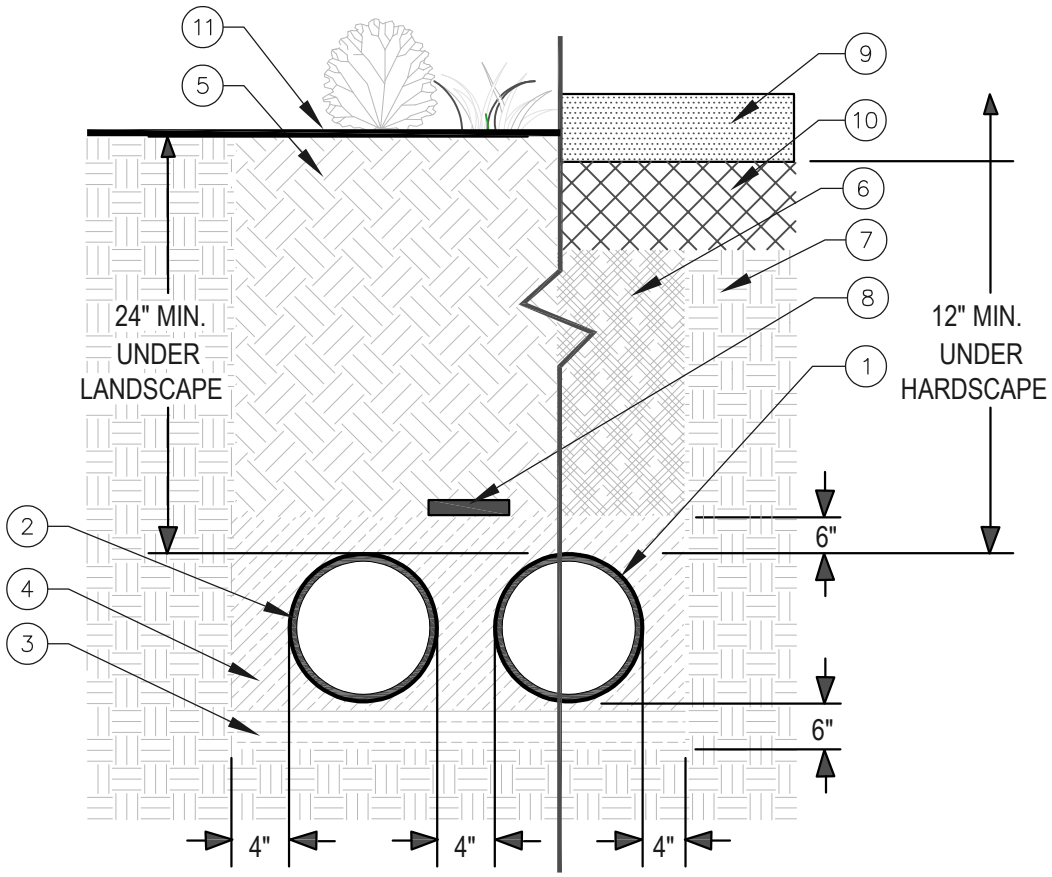
TYPICAL BASIN SUBDRAIN SECTION VIEWS

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

SD-7

VALLEY-WIDE RECREATION AND PARK DISTRICT
ELECTRICAL DETAILS

DETAIL NO.	DETAIL DESCRIPTION
EL-1	ELECTRICAL CONDUIT
EL-2	ELECTRICAL PULL BOX IN LANDSCAPE
EL-3	PULL BOX IN HARDSCAPE
EL-4	CCTV PULL BOX IN LANDSCAPE
EL-5	TYPICAL SITE LIGHT
EL-6	TYPICAL PARKING LOT LIGHT
EL-7	TYPICAL SIGN LIGHT
EL-8	LIGHT BOLLARD
EL-9	FLAG POLE LIGHT
EL-10	GFCI LIGHT AND OUTLET AT SHELTER
EL-11	GFCI OUTLET AT BACKSTOP
EL-12	ELECTRICAL METER PEDESTAL



1. CONDUIT PER PLAN (SCHEDULE PER SPECS.).
2. SECOND CONDUIT OR CCTV COMMUNICTION CONDUIT (SCHEDULE PER SPECS.).
3. SAND BED WHEN REQUIRED PER PLAN AND SPECS.
4. SAND SHADING WHEN REQUIRED PER PLAN AND SPECS.
5. CLEAN NATIVE 90% COMPACTED BACKFILL PER SOIL SPECS. UNDER LANDSCAPE.
6. CLEAN NATIVE 95% COMPACTED BACKFILL PER SOIL SPECS. UNDER HARDSCAPE.
7. UNDISTURBED NATIVE SOIL.
8. RED METALLIC WARNING TAPE WITH "ELECTRICAL LINE" TEXT (6" ABOVE PIPE).
9. HARDSCAPE PER PLAN.
10. 95% COMPACTED BASE SUBGRADE SECTION PER PLAN AND SPECS.
11. FINISH GRADE.

NOTES

ALL ELECTRICAL CONDUITS MUST BE BELOW WATER LINES, UNLESS SLEEVED.

ALL ELECTRICAL CONDUITS MUST HAVE 24" HORIZONTAL AND 12" VERTICAL DISTANCE FROM OTHER UTILITIES.

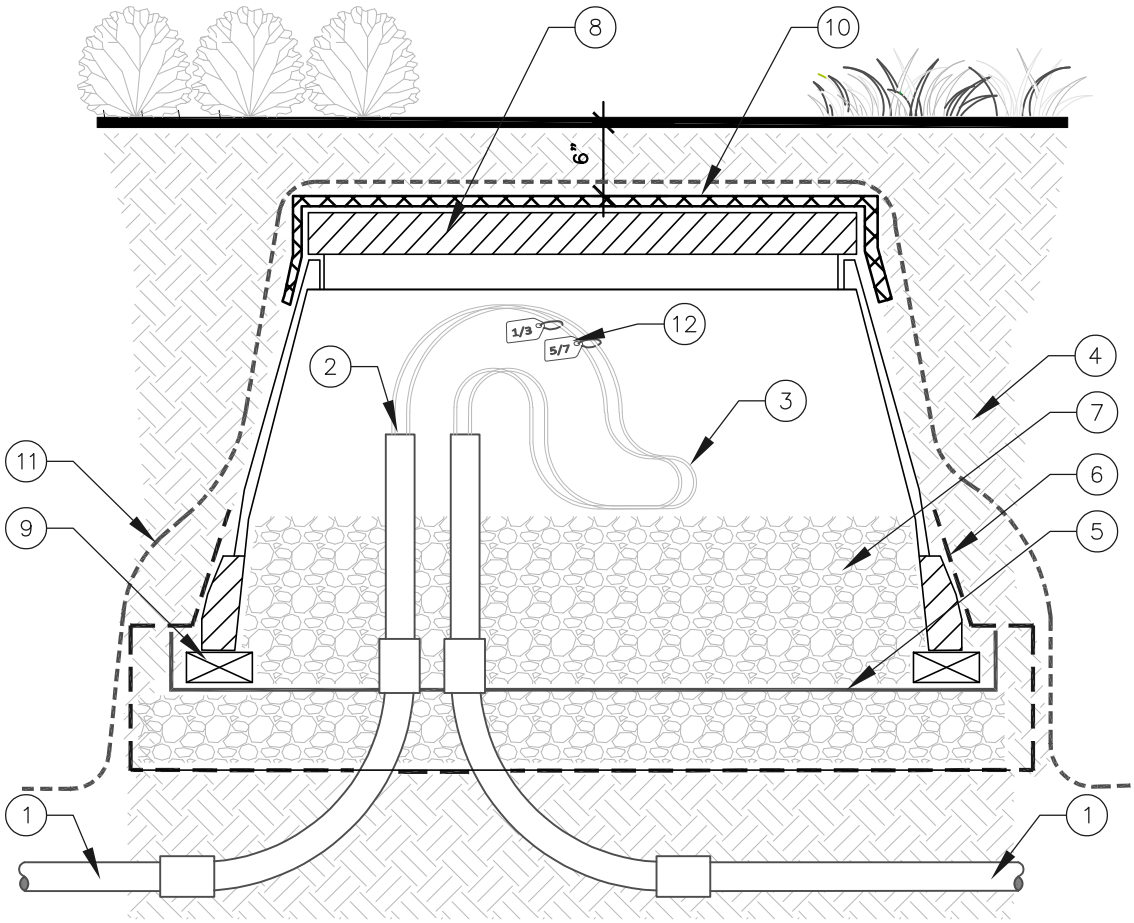
VALLEY-WIDE RECREATION AND PARK DISTRICT

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ELECTRICAL CONDUIT

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

EL-1



1. CONDUIT PER PLAN (SCHEDULE PER SPECS.).
2. VACUUM CLEAN INSIDE ALL CONDUIT AND DUCT SEAL ENDS.
3. 24" EXPANSION WIRE COIL.
4. NATIVE SOIL COMPACTED TO ORIGINAL DENSITY.
5. $\frac{1}{2}$" GALV. MESH BELOW BOX.
6. FILTER FABRIC BELOW GRAVEL.
7. 3 CU.FT. $\frac{3}{4}$" GRAVEL.
8. LOCKING CONCRETE RECTANGLE ELECTRICAL BOX PER PLAN AND SPECS. WITH "ELECTRICAL" ON LID.
9. COMMON BRICK (4 EA. PER RECTANGLE BOX).
10. FILTER FABRIC WRAPPED OVER LID AND BOX.
11. RED METALLIC WARNING TAPE WITH "ELECTRICAL LINE" TEXT (6" ABOVE CONDUIT AND OVER BOX LID).
12. LABEL WIRE CIRCUIT NUMBERS WITH WATERPROOF ID DECALS.

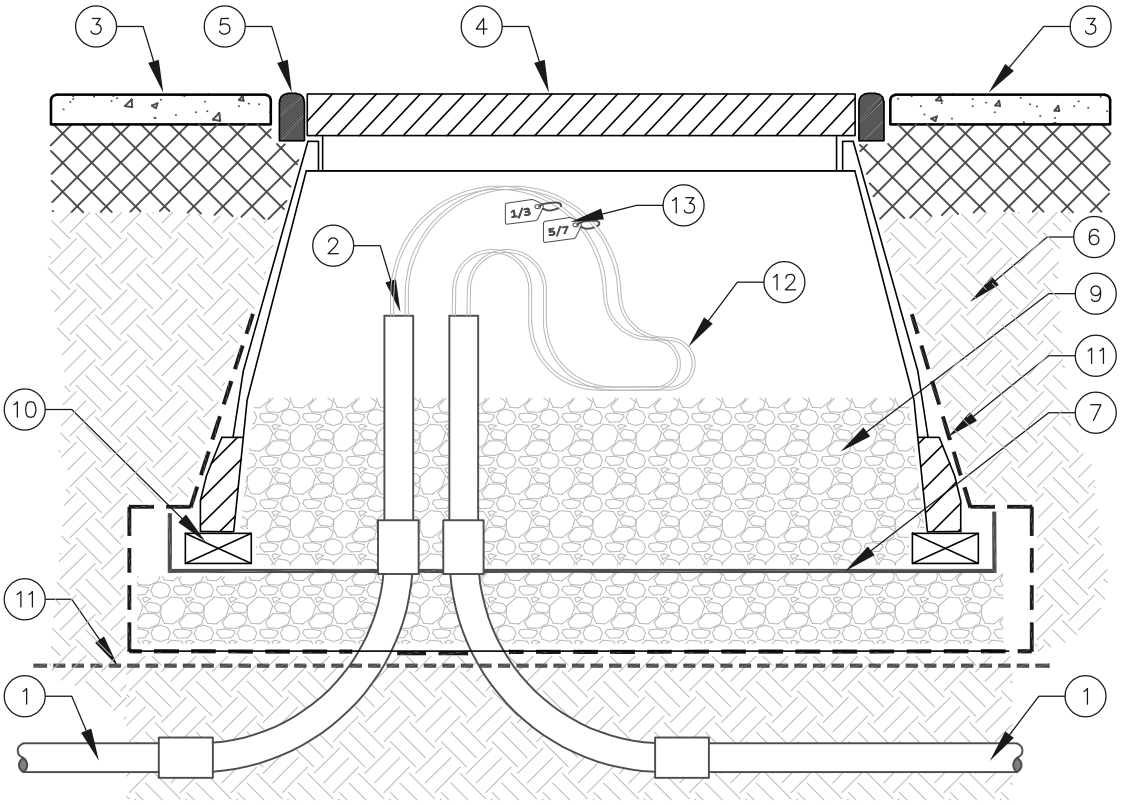
VALLEY-WIDE RECREATION AND PARK DISTRICT

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ELECTRICAL PULL BOX IN LANDSCAPE

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

EL-2



1. CONDUIT PER PLAN (SCHEDULE PER SPECS.).
2. VACUUM CLEAN INSIDE ALL CONDUIT AND DUCT SEAL ENDS PER SPECS. PER UTILITY TYPE.
3. HARDSCAPE PER PLAN.
4. LOCKING CONCRETE RECTANGLE BOX PER PLAN AND SPECS. WITH "ELECTRICAL" OR "COMMUNICATION" ON LID.
5. EXPANSION JOINT OR SEALANT AROUND ENTIRE BOX.
6. NATIVE SOIL COMPACTED TO ORIGINAL DENSITY.
7. $\frac{1}{2}$" GALV. MESH BELOW BOX.
8. FILTER FABRIC BELOW GRAVEL WRAPPED HALFWAY UP BOX.
9. 3 CU.FT. $\frac{3}{4}$" GRAVEL.
10. COMMON BRICK (4 EA. PER RECTANGLE BOX).
11. METALLIC WARNING TAPE PER UTILITY TYPE (6" ABOVE PIPE).
12. 24" EXPANSION WIRE COIL.
13. LABEL WIRE CIRCUIT NUMBERS WITH WATERPROOF ID DECALS.

NOTES

UTILITY BOX LID MUST BE ADA COMPLIANT AND INSTALLED FLUSH WITH ADJACENT HARDSCAPE WITHOUT. ANY ABRUPT CHANGES GREATER THAN $\frac{1}{4}$". BOX SUBGRADE MUST BE COMPACTED TO PREVENT SETTLEMENT.

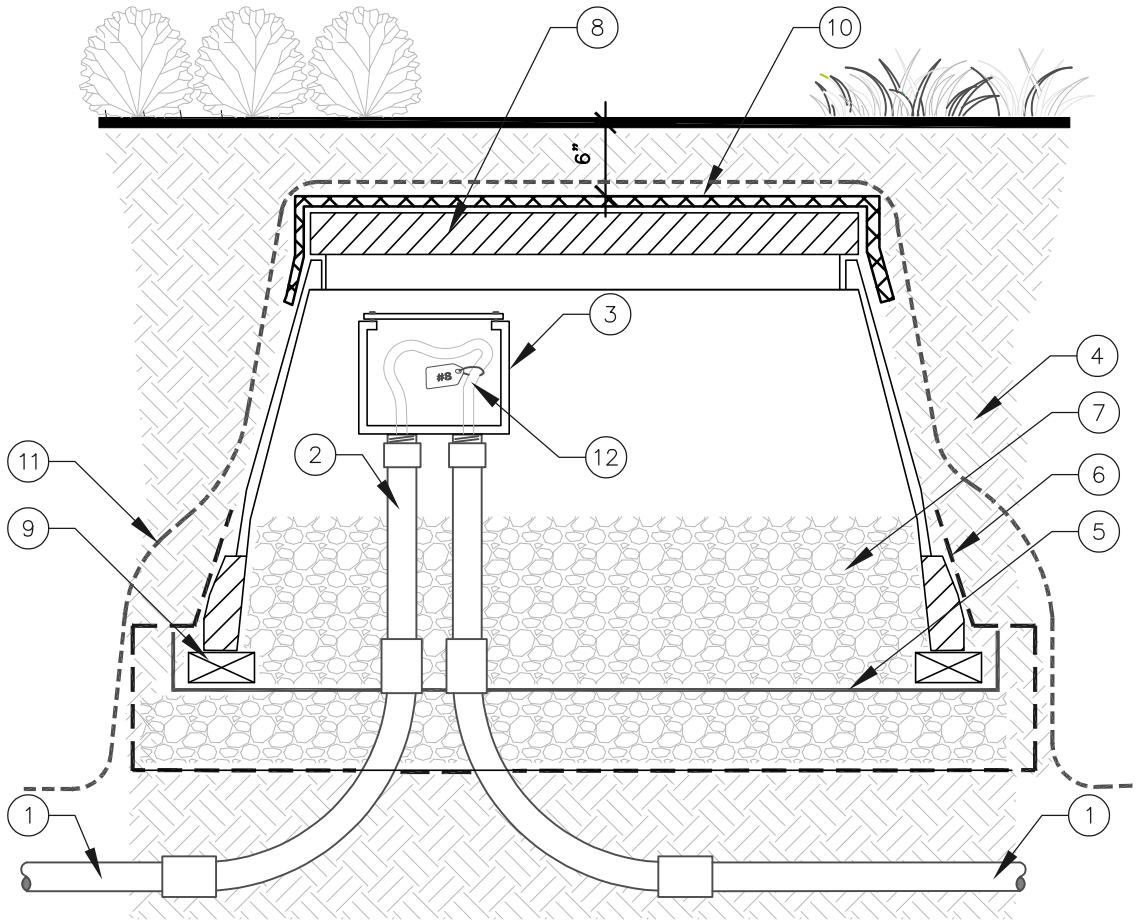
VALLEY-WIDE RECREATION AND PARK DISTRICT

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PULL BOX IN HARDSCAPE

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

EL-3



1. CONDUIT PER PLAN (SCHEDULE PER SPECS.).
2. VACUUM CLEAN INSIDE ALL CONDUIT TO REMOVE ANY DEBRIS OR MOISTURE PRIOR TO CABLE PULL.
3. NEMA 6P WATERPROOF BOX (LABEL BOX PER CAMERA NUMBER WITH WATERPROOF ID DECAL OR TAG).
4. NATIVE SOIL COMPACTED TO ORIGINAL DENSITY.
5. $\frac{1}{2}$" GALV. MESH BELOW BOX.
6. FILTER FABRIC BELOW GRAVEL.
7. 3 CU.FT. $\frac{3}{4}$" GRAVEL.
8. LOCKING CONCRETE RECTANGLE ELECTRICAL BOX PER PLAN AND SPECS. WITH "COMMUNICATION" ON LID.
9. COMMON BRICK (4 EA. PER RECTANGLE BOX).
10. FILTER FABRIC WRAPPED OVER LID AND BOX.
11. ORANGE METALLIC WARNING TAPE WITH "TELEPHONE LINE" TEXT (6" ABOVE CONDUIT AND OVER BOX LID).
12. CCTV CABLES (WITH NUMBER TAG) PER PLAN AND SPECS.

NOTES

EACH CCTV CAMERA TO HAVE DEDICATED CONDUIT RUN FROM NVR TO EACH CAMERA WITHOUT ANY SPLICES. USE PULL BOXES ONLY WHEN NECESSARY AS APPROVED BY DISTRICT REPRESENTATIVE.

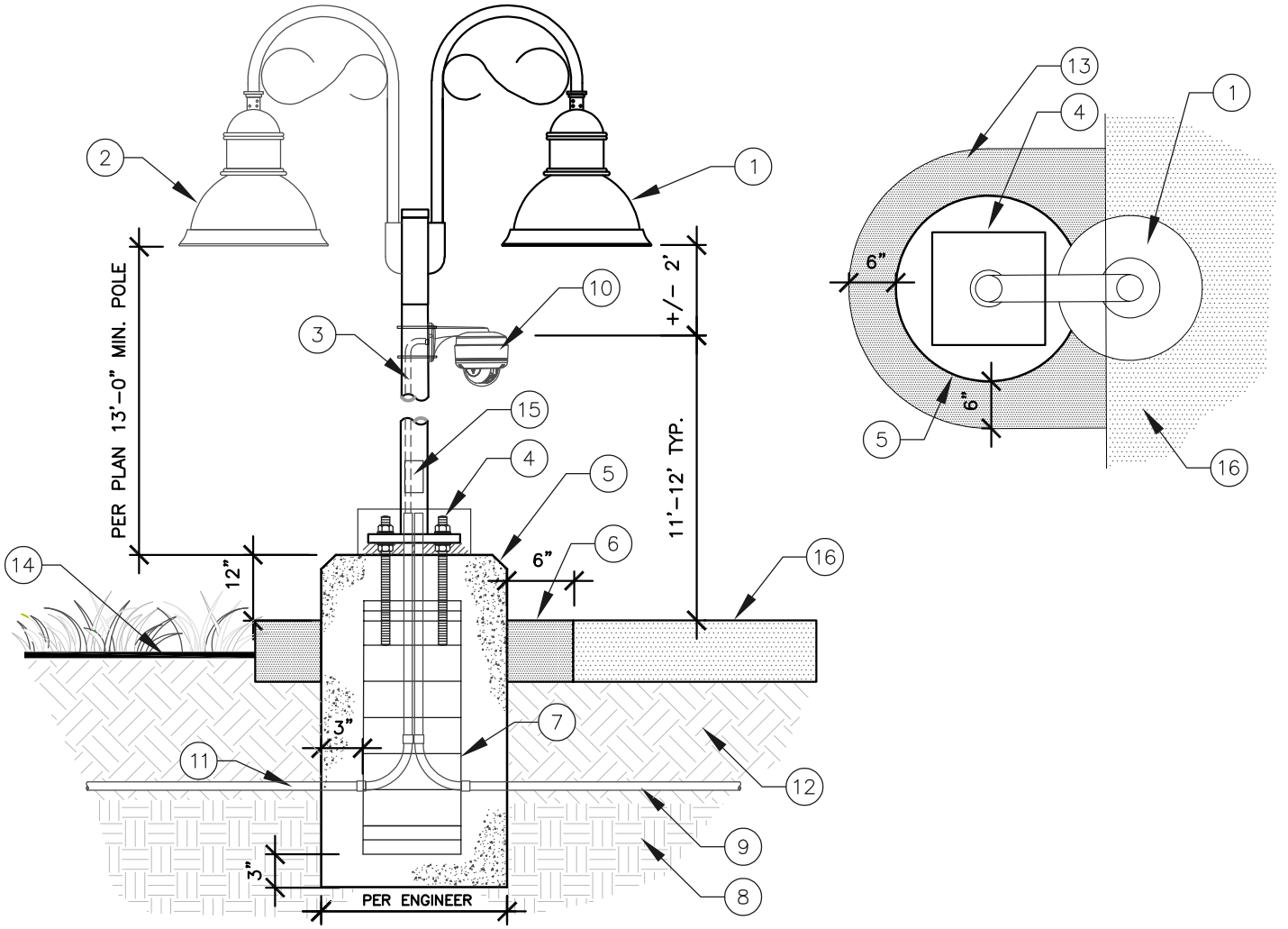
VALLEY-WIDE RECREATION AND PARK DISTRICT

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CCTV PULL BOX IN LANDSCAPE

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

EL-4



1. MISSION STYLE FIXTURE HEAD WITH LED LAMP TYP.
2. DOUBLE FIXTURE HEAD (WHEN SPECIFIED).
3. ALUMINUM OR GALVANIZED STEEL POLE PER PLANS AND SPECS (HEIGHT PER PLAN - 14' MIN. FROM FINISH GRADE).
4. POLE BASE SET 1" ABOVE FOOTING WITH NON-SHRINK GROUT (COVER SECURED TO POLE AND FOUNDATION).
5. CONCRETE LIGHT BASE FOOTING PER ENGINEER WITH 1" CHAMFER EDGE AND SMOOTH FINISH.
6. 6" CLEAR SPACE BETWEEN LIGHT BASE FOUNDATION AND HARDSCAPE EDGE WITH CONCRETE COLLAR.
7. REBAR PER PROJECT ENGINEERING.
8. UNDISTURBED NATIVE SOIL.
9. CONDUIT PER PLAN, SPECS AND CONDUIT DETAIL.
10. CAMERA PER PLAN AND SPECS (COORDINATE CAMERA MOUNT 11' ABOVE F.S. WITH POLE MANUFACTURER).
11. CAMERA CONDUIT TO CAMERA ROOM (EXTEND METAL FLEX CONDUIT FROM LIGHT BASE TO CAMERA CUTOUT).
12. 95% COMPACTED BASE SUBGRADE SECTION OR UNDISTURBED SOIL PER PLAN AND SPECS.
13. 6" DEEP CONCRETE COLLAR EXTENDED 6" PAST LIGHT BASE FOUNDATION.
14. FINISH GRADE.
15. HAND HOLE WITH VANDAL RESISTANT LOCKING COVER.
16. HARDSCAPE SURFACE.

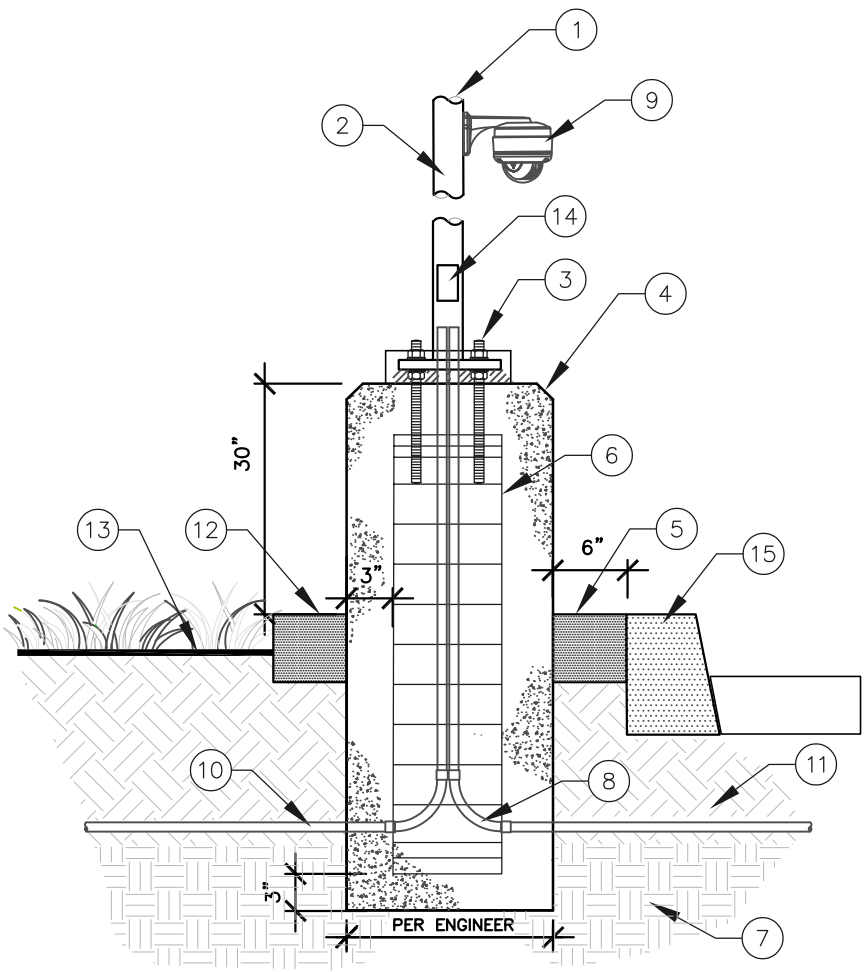
VALLEY-WIDE RECREATION AND PARK DISTRICT

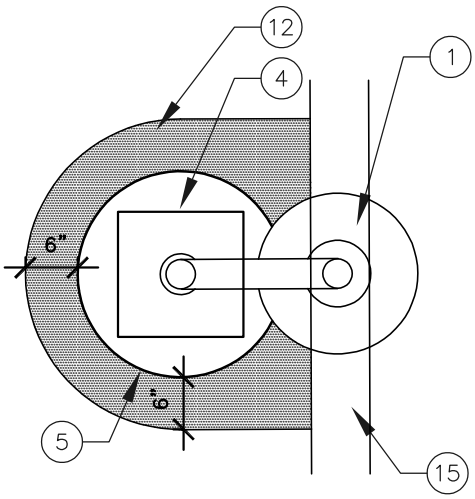
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TYPICAL SITE LIGHT

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

EL-5





1. REFER TO DETAIL EL-1 FOR FIXTURE HEAD.
2. GALVANIZED OR ALUMINUM STEEL POLE PER PLANS AND SPECS (HEIGHT PER PLAN - 14' MIN FROM FINISH GRADE.).
3. POLE BASE SET 1" ABOVE FOOTING WITH NON-SHRINK GROUT (COVER SECURED TO POLE AND FOUNDATION).
4. CONCRETE LIGHT BASE FOOTING PER ENGINEER WITH 1" CHAMFER EDGE AND SMOOTH FINISH.
5. 6" CLEAR SPACE BETWEEN LIGHT BASE FOUNDATION AND HARDSCAPE EDGE WITH CONCRETE COLLAR.
6. REBAR PER PROJECT ENGINEERING.
7. UNDISTURBED NATIVE SOIL.
8. CONDUIT PER PLAN, SPECS AND CONDUIT DETAIL.
9. CAMERA PER PLAN AND SPECS (COORDINATE CAMERA MOUNT 11'-12' ABOVE F.S. WITH POLE MANUFACTURER).
10. CAMERA CONDUIT TO CAMERA ROOM.
11. 95% COMPACTED BASE SUBGRADE SECTION PER PLAN AND SPECS.
12. 6" DEEP CONCRETE COLLAR EXTENDED 6" PAST LIGHT BASE FOUNDATION.
13. FINISH GRADE.
14. HAND HOLE WITH VANDAL RESISTANT LOCKING COVER.
15. PARKING LOT CURB.

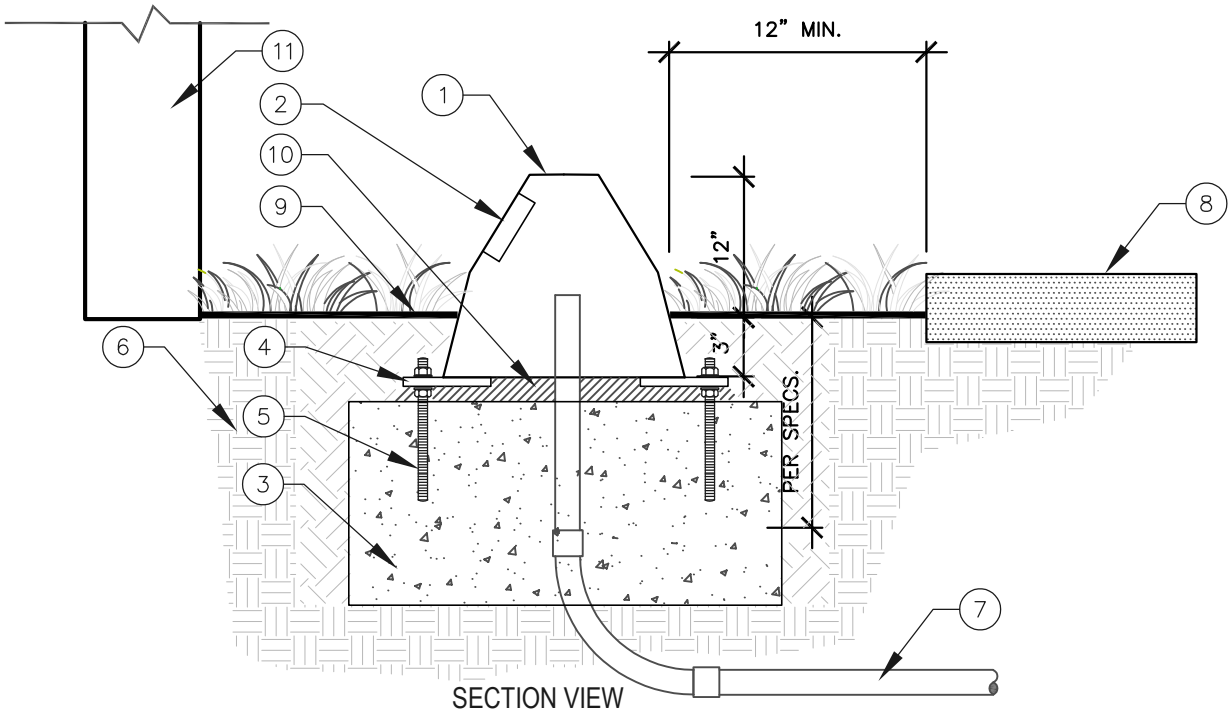
VALLEY-WIDE RECREATION AND PARK DISTRICT

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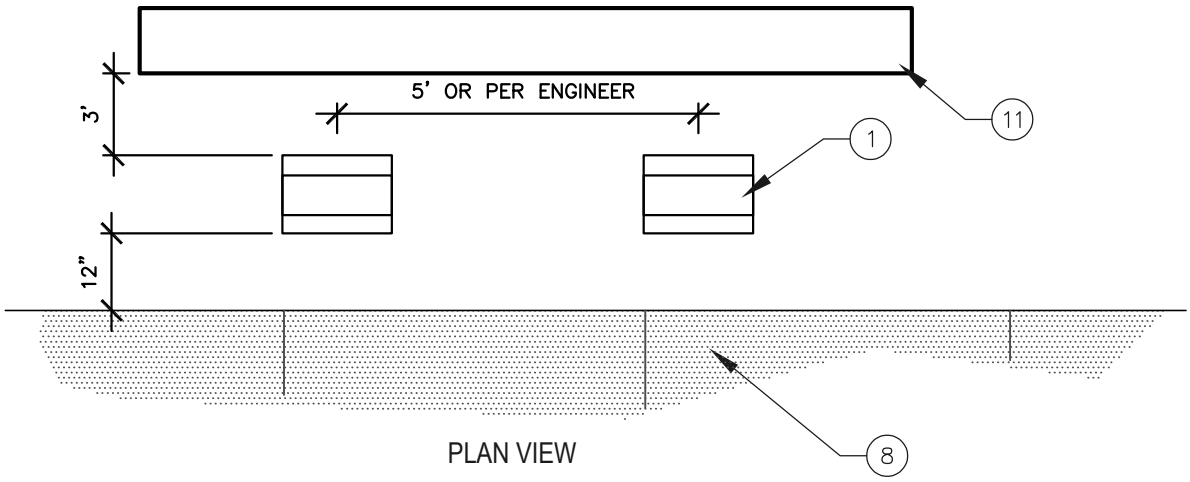
TYPICAL PARKING LOT LIGHT

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

EL-6



SECTION VIEW



PLAN VIEW

1. CONCRETE ENCASED LIGHT FIXTURE WITH LED LAMP TYP.
2. VANDAL RESISTANT CARBONATE LENS.
3. 18"X24" CONCRETE FOOTING 12" DEEP.
4. STEEL ANCHOR BASE.
5. $\frac{3}{8}$" ANCHOR INSET IN FOOTING WITH 9" EMBED.
6. UNDISTURBED NATIVE SOIL.
7. CONDUIT PER PLAN, SPECS AND CONDUIT DETAIL.
8. HARDSCAPE PER PLAN.
9. FINISH GRADE.
10. NON-SHRINK GROUT.
11. MONUMENT SIGN.

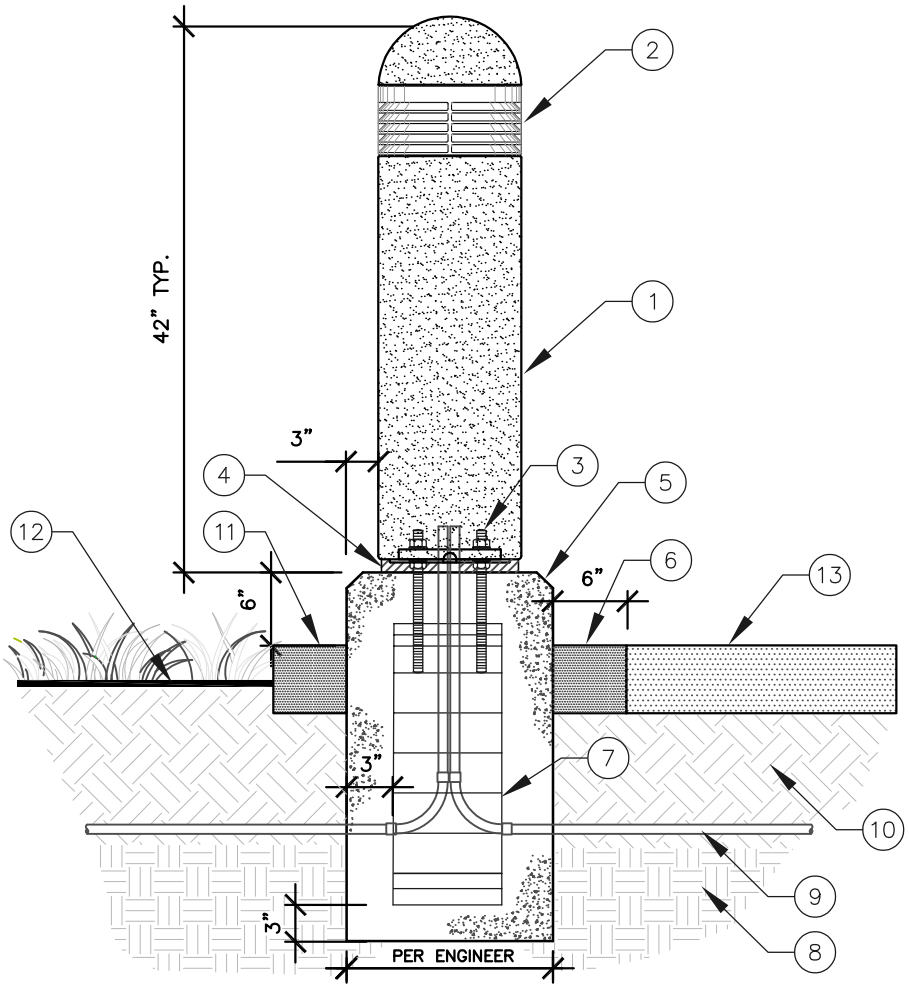
VALLEY-WIDE RECREATION AND PARK DISTRICT

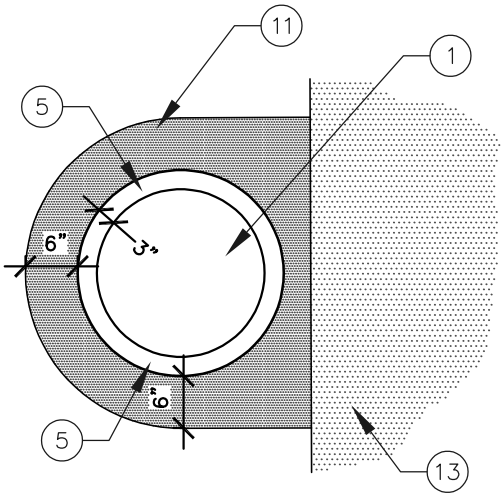
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TYPICAL SIGN LIGHT

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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EL-7





1. LIGHT BOLLARD PER PLAN AND SPECS.
2. FIXTURE LIGHT GRILL PER LIGHT BOLLARD SPECS.
3. GALV. OR STAINLESS STEEL ANCHORS PER LIGHT BOLLARD MANUFACTURER.
4. CAULK SEAL OR NON-SHRINK GROUT FILL BETWEEN BOLLARD AND LIGHT BASE.
5. CONCRETE LIGHT BASE FOOTING PER ENGINEER WITH 1" CHAMFER EDGE AND SMOOTH FINISH.
6. 6" CLEAR SPACE BETWEEN LIGHT BASE FOUNDATION AND HARDSCAPE EDGE WITH CONCRETE COLLAR.
7. REBAR PER PROJECT ENGINEERING.
8. UNDISTURBED NATIVE SOIL.
9. CONDUIT PER PLAN, SPECS AND CONDUIT DETAIL.
10. 95% COMPACTED BASE SUBGRADE SECTION PER PLAN AND SPECS.
11. 6" DEEP CONCRETE COLLAR EXTENDED 6" PAST LIGHT BASE FOUNDATION.
12. FINISH GRADE.
13. HARDSCAPE SURFACE.

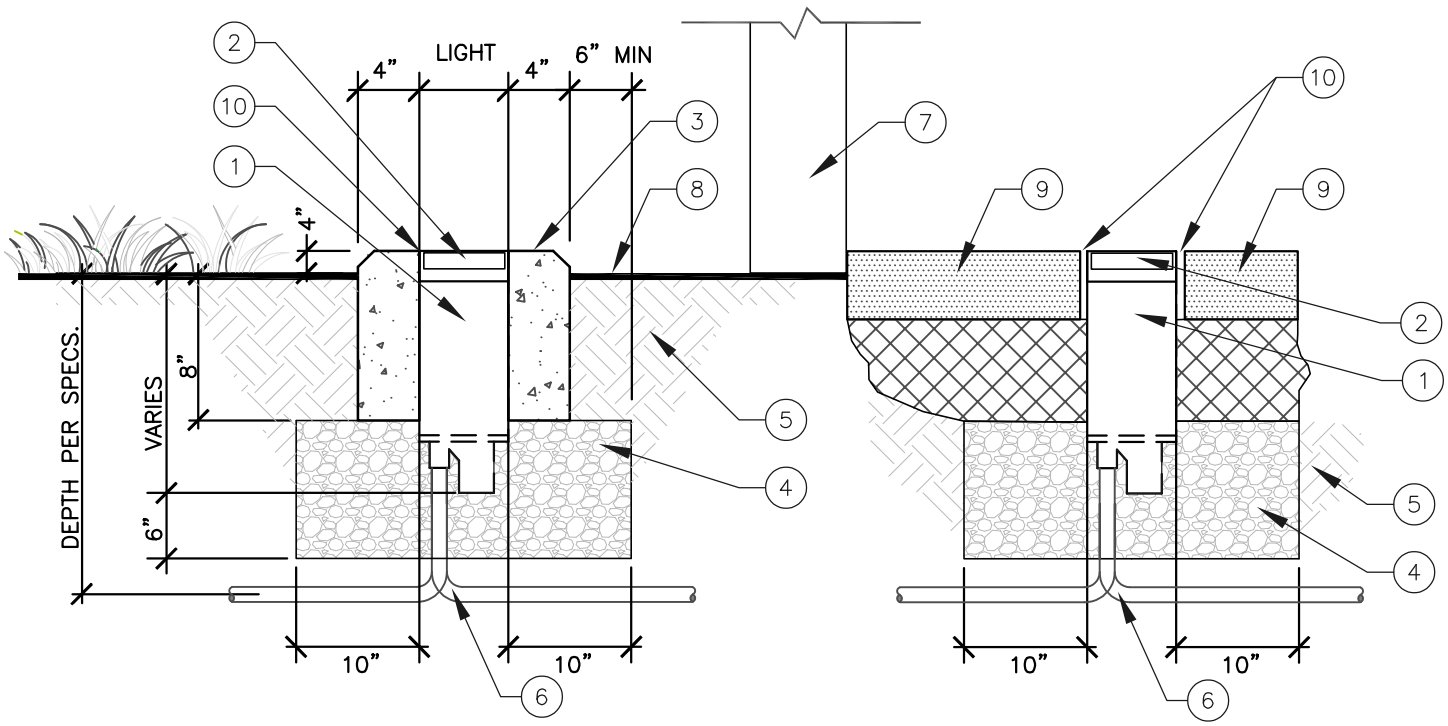
VALLEY-WIDE RECREATION AND PARK DISTRICT

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LIGHT BOLLARD

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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EL-8



1. WELL LIGHT PER PLAN AND SPECS. (SPACING AND ANGLE ADJUSTMENT PER ELECTRICAL PLANS).
2. VANDAL RESISTANT CLEAR COVER .
3. CONCRETE POURED IN PLACE COLLAR WITH 1" CHAMFER EDGE AND SMOOTH FINISH.
4. PEA GRAVEL.
5. UNDISTURBED OR 90% COMPACTED NATIVE SOIL.
6. CONDUIT PER PLAN, SPECS AND CONDUIT DETAIL.
7. FLAG POLE PER PLAN (TWO LIGHTS PER FLAG POLE TYP.).
8. FINISH GRADE.
9. HARDSCAPE SURFACE.
10. CAULK SEAL GAP BETWEEN EDGE OF CONCRETE AND WELL LIGHT.

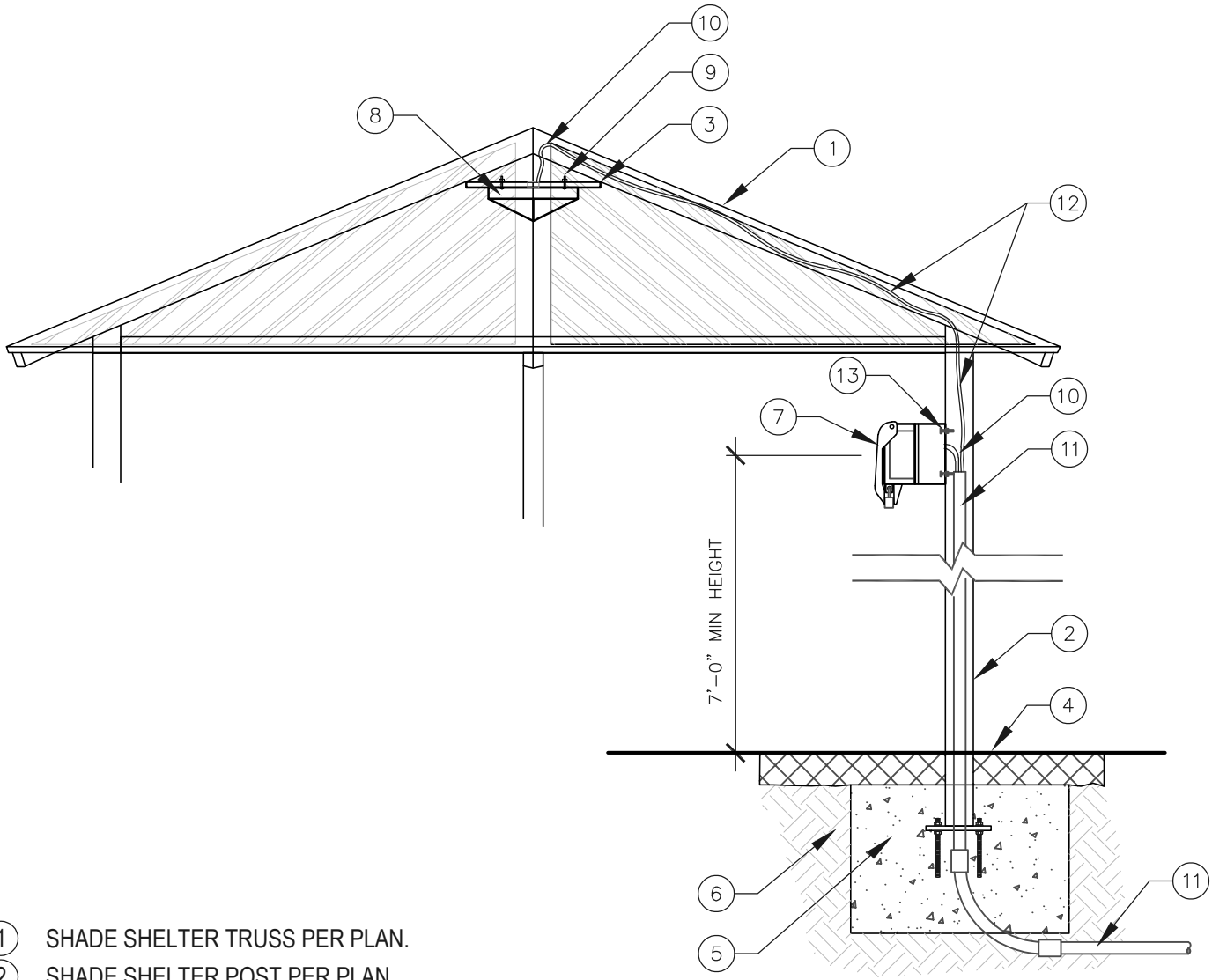
VALLEY-WIDE RECREATION AND PARK DISTRICT

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FLAG POLE LIGHT

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

EL-9



1. SHADE SHELTER TRUSS PER PLAN.
2. SHADE SHELTER POST PER PLAN.
3. SHADE SHELTER MOUNTING PLATE LOCATION(S) COORDINATE WITH MANUFACTURER PER SHELTER.
4. CONCRETE FLATWORK PER PLAN.
5. FOOTING PER PROJECT ENGINEERING.
6. UNDISTURBED NATIVE SOIL.
7. GFCI DUPLEX OUTLET WITH LOCKING COVER AND COMBINATION PAD LOCK (INSTALL 7' ABOVE FINISH GRADE).
8. LIGHT FIXTURE PER ELECTRICAL PLAN.
9. TAP AND THREAD PLATE TO BOLT LIGHT FIXTURE TO PLATE (4 PLACES TYP.).
10. WIRING AND CONDUIT PER NEC AND ELECTRICAL PLAN.
11. CONDUIT TO ELECTRICAL SOURCE.
12. CONDUCTORS CONCEALED INSIDE TRUSS AND POST.
13. BOLT ELECTRICAL BOX TO SHELTER POST FROM INSIDE ELECTRICAL BOX.

NOTES

IF TRUSS DESIGN DOES NOT ALLOW CONCEALED WIRING, EXPOSED RIGID CONDUIT PAINTED TO MATCH TRUSS CAN BE USED WHEN APPROVED BY THE DISTRICT.

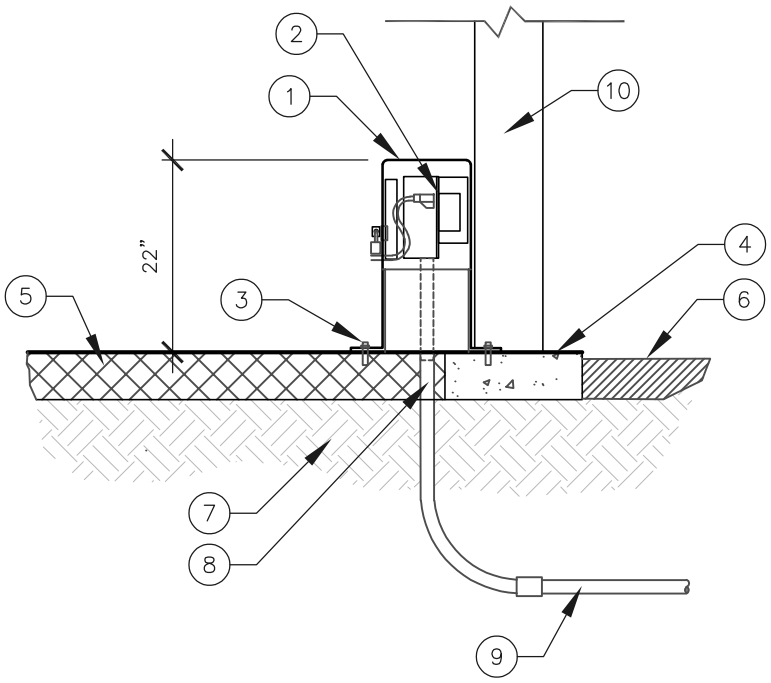
VALLEY-WIDE RECREATION AND PARK DISTRICT

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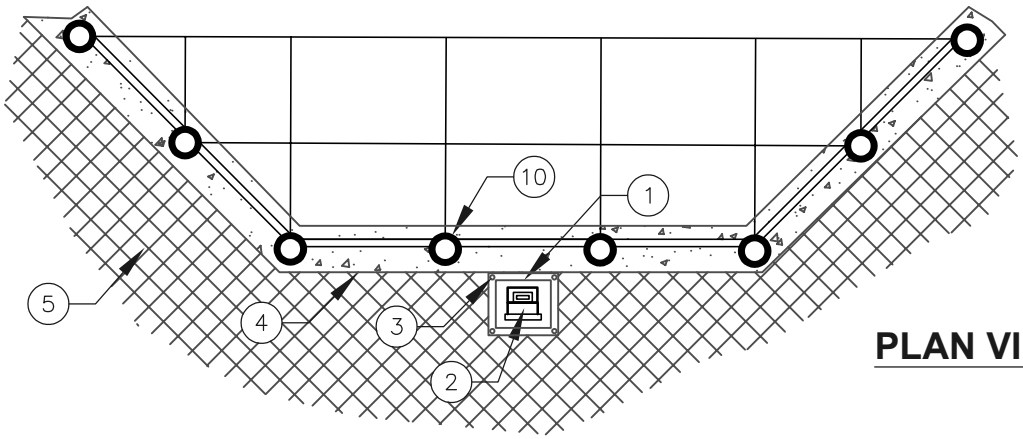
GFCI LIGHT AND OUTLET AT SHELTER

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

EL-10



SECTION VIEW



PLAN VIEW

1. GFCI DUPLEX OUTLET.
2. STAINLESS STEEL OR GALVANIZED LOCKING ENCLOSURE.
3. WEDGE ANCHOR FOR SURFACE MOUNTING PER PLAN AND PER MANUFACTURED INSTRUCTIONS.
4. CONCRETE HEADER PER PLAN.
5. CONCRETE FLATWORK PER PLAN.
6. INFIELD CLAY PER PLAN.
7. UNDISTURBED NATIVE SOIL.
8. CONDUIT THROUGH CONCRETE FLATWORK SLAB PER NEC AND ELECTRICAL PLAN.
9. PVC CONDUIT AND WIRING TO ELECTRICAL SOURCE.
10. BACKSTOP SUPPORT POST.

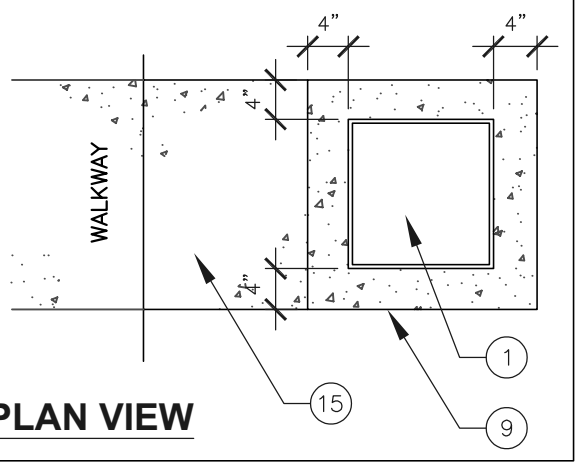
VALLEY-WIDE RECREATION AND PARK DISTRICT

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GFCI OUTLET AT BACKSTOP

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

EL-11



PLAN VIEW

SECTION VIEW

1. STAINLESS STEEL ELECTRICAL METER PEDESTAL PER APPROVED PLAN AND SPECS.
2. READING COVER/METER SOCKET AND TEST BYPASS BLOCKS.
3. MAIN BREAKER AND BRANCH CIRCUIT BREAKERS.
4. PHOTOCELL GLASS (WHEN SPECIFIED FOR SITE LIGHTING).
5. LOCK HASP (PROVIDE COMBINATION PAD LOCK).
6. LOAD CENTER PANEL HINGED DOOR.
7. CONDUITS AS REQUIRED FOR ALL ELECTRICAL COMPONENTS (CONFIRM WITH ALL PLANS AND IMPROVEMENTS).
8. ANCHOR BOLTS PER MANUFACTURER.
9. CONCRETE FOOTING AND PAD WITH SMOOTH FINISH (REFER TO COUNTY OF RIVERSIDE MINIMUM REQUIREMENTS).
10. FINISH GRADE.
11. PROJECT ADDRESS IN PHENOLIC LETTERING (VINYL DECALS ARE NOT ALLOWED).
12. LABEL ALL CIRCUITS WITH PHENOLIC LETTERING.
13. SERVICE/LOAD CONDUIT PER UTILITY COMPANY.
14. GROUNDING ROD, COPPER GROUND WIRE AND CLAMP PER NEC AND LOCAL CODES INSIDE GRAY PULL BOX.
15. CONCRETE PAD TO ADJACENT WALKWAY TYP. (SCORE EDGE OF PAD TO INDICATE MAIN CIRCUIT DIRECTION).
16. VACUUM CLEAN INSIDE ALL CONDUITS AND DUCT SEAL ENDS PER SPECS.
17. UNDISTURBED OR 90% COMPACTED NATIVE SOIL.

VALLEY-WIDE RECREATION AND PARK DISTRICT

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ELECTRICAL METER PEDESTAL

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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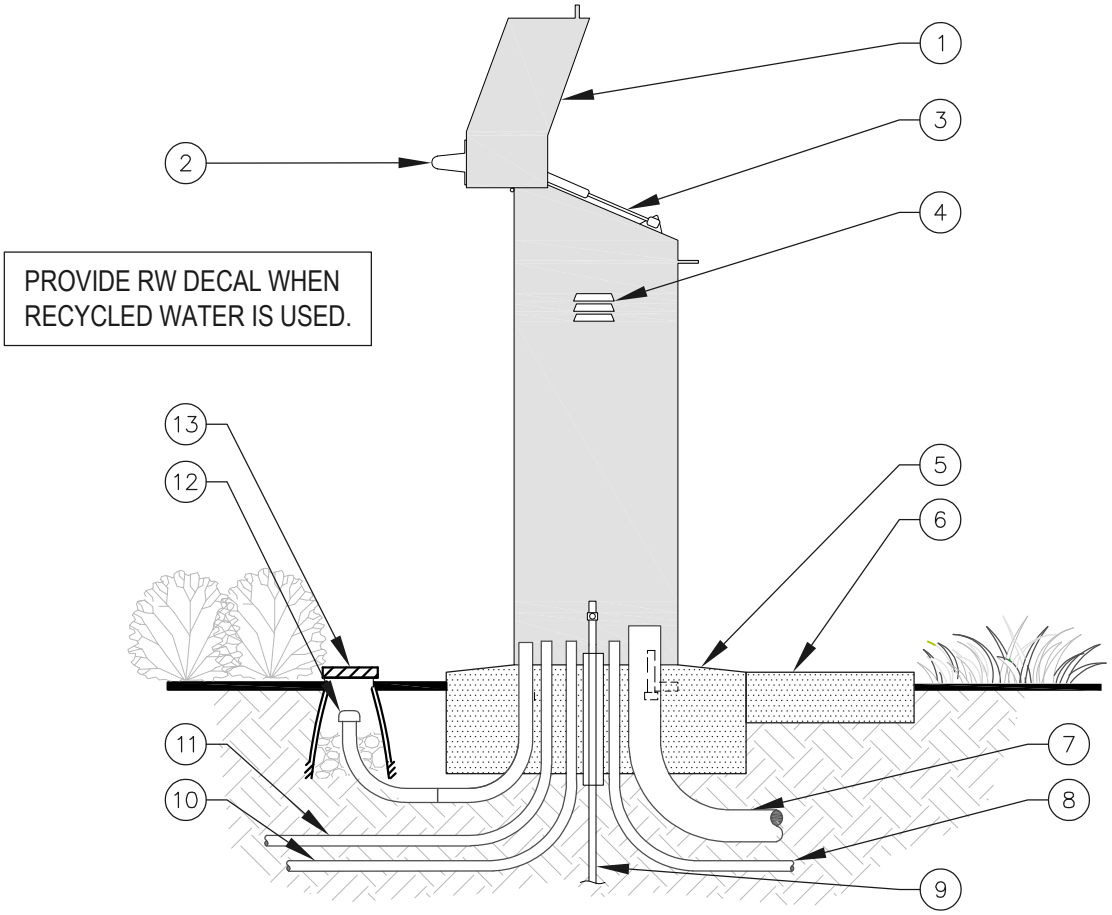
EL-12

VALLEY-WIDE RECREATION AND PARK DISTRICT
IRRIGATION DETAILS

DETAIL NO.	DETAIL DESCRIPTION
ID-01	IRRIGATION PEDESTAL ENCLOSURE
ID-02	IRRIGATION PEDESTAL CONTROLLER
ID-03	P.O.C. LAYOUT SEQUENCE
ID-04	POTABLE BACKFLOW 2" AND SMALLER
ID-05	RECYCLED WATER BACKFLOW/FILTER
ID-06	AUTO FLUSH VALVE AT P.O.C.
ID-07	BOOSTER PUMP
ID-08	MASTER CONTROL VALVE
ID-09	FLOW METER
ID-10	FERTIGATION PUMP AND WIRING
ID-11	FERTIGATION TANK
ID-12	EZ FLO INJECTION SYSTEM
ID-13	REMOTE CONTROL VALVE AT MANIFOLD
ID-14	DRIP REMOTE CONTROL VALVE
ID-15	QUICK COUPLER VALVE
ID-16	BRASS BALL VALVE 2" AND SMALLER
ID-17	GATE VALVE 2-1/2" AND LARGER
ID-18	TYPICAL VALVE AT MANIFOLD
ID-19	TYPICAL VALVE BOX LAYOUT
ID-20	TYPICAL STREET CROSSING (PLAN VIEW)
ID-21	TRENCHING & SLEEVING
ID-22	THRUST BLOCK 3" MAIN & SMALLER
ID-23	MAINLINE RESTRAINTS 4" & LARGER
ID-24	PULL BOX
ID-25	WIRE CONNECTORS (CONVENTIONAL WIRE)
ID-26	WIRE CONNECTORS (2-WIRE)
ID-27	2-WIRE-GROUNDING ROD & DECODER
ID-28	TREE ROOT WATERING SYSTEM
ID-29	POINT TO POINT LATERAL LAYOUT
ID-30	EMITTER ASSEMBLY SECTION VIEW
ID-31	SHRUB EMITTER ASSEMBLY LAYOUT
ID-32	FLUSH VALVE ASSEMBLY
ID-33	CHECK VALVE & PRESSURE REGULATOR
ID-34	SHRUB SPRAY ON GRADE
ID-35	SHRUB SPRAY ON RISER
ID-36	POP-UP SPRAYHEAD
ID-37	SHRUB ROTOR ON GRADE
ID-38	POP-UP ROTOR HEAD

VALLEY-WIDE RECREATION AND PARK DISTRICT
IRRIGATION DETAILS

DETAIL NO.	DETAIL DESCRIPTION
ID-39	SHRUB ROTOR ON RISER
ID-40	SUBSURFACE PIPE AND TUBING MANIFOLD
ID-41	SUBSURFAC PIPE AND TUBING LAYOUT
ID-42	DRIP AIR/VACUUM RELIEF VALVE ON RISER
ID-43	DRIP AIR/VACUUM RELIEF VALVE INLINE
ID-44	SUBSURFACE TUBING SPACING AND DEPTH
ID-45	SUBSURFACE DRIP FLUSH VALVE
ID-46	BENCH DRAIN CROSSING
ID-47	RECYCLED WATER SIGN



1. PRE-ASSEMBLED ENCLOSURE: CONTROLLER MODEL PER PLAN AND SPECS.
2. DOME ANTENNA.
3. PISTON CONNECTED TO FLIP TOP.
4. LOUVERED VENT.
5. 30" x 30" x 8" DEEP CONCRETE BASE. POUR 2" ABOVE FINISH GRADE, TAPER CONCRETE GRADE 2" FROM ENCLOSURE TO CONCRETE EDGE.
6. CONCRETE PAD 4" THICK MIN. POUR 2" ABOVE FINISH GRADE.
7. 3" MIN. SCHEDULE 40 CONDUIT SWEEP FOR CONTROL WIRING.
8. 3/4" MIN. SCHEDULE 40 CONDUIT SWEEP FOR 120 VAC POWER.
9. 5/8" COPPER GROUNDING ROD WITH #6 WIRE AND GROUND ROD CLAMP PER LOCAL CODE.
10. 1" MIN. SCHEDULE 40 CONDUIT SWEEP FOR FLOW METER.
11. 1" MIN. SCHEDULE 40 CONDUIT SWEEP FOR MASTER VALVE.
12. 1-1/2" MIN. SPARE CONDUIT RUN TO BOX 24" AWAY FROM ENCLOSURE.
13. 10" ROUND LOCKING BOX HEAT BRAND "PB" ON COVER.

NOTES

CONTRACTOR SHALL PROVIDE CONTROLLER CERTIFICATION FROM MANUFACTURER.
REFER TO MANUFACTURER'S DETAILS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

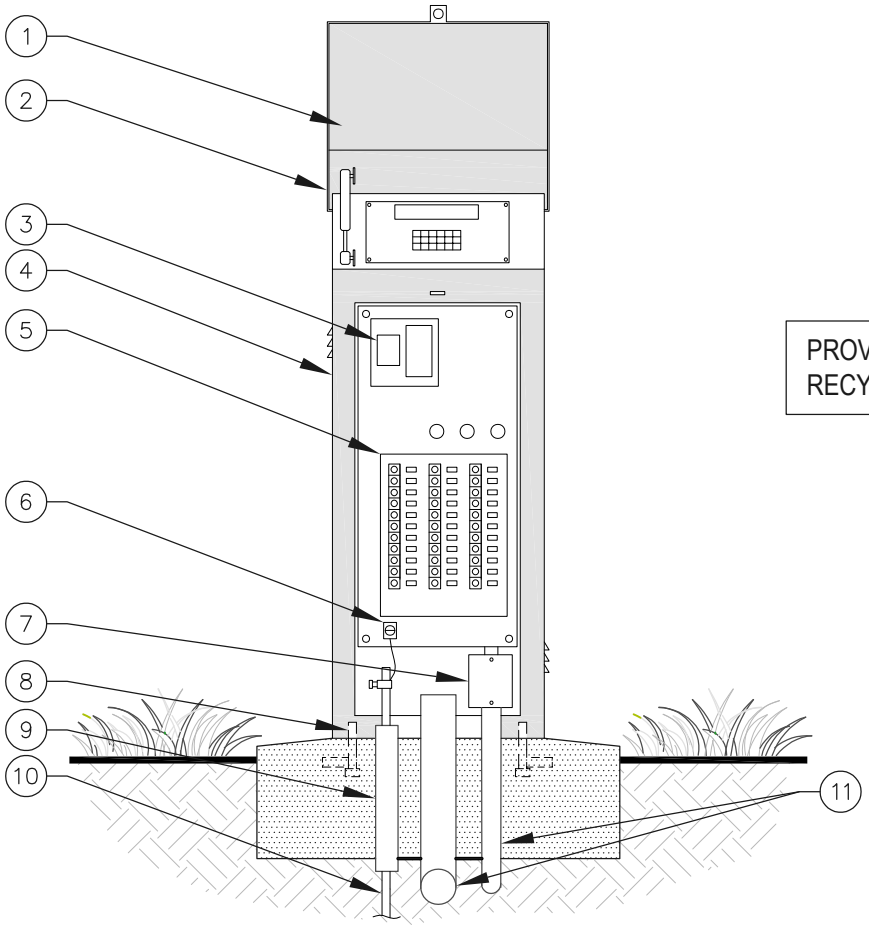
VALLEY-WIDE RECREATION AND PARK DISTRICT

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IRRIGATION PEDESTAL ENCLOSURE

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

ID-01



CONTRACTOR SHALL ADJUST ALL IRRIGATION TO PREVENT OVER SPRAY ON CONTROLLER ENCLOSURE

PROVIDE RW DECAL WHEN RECYCLED WATER IS USED.

1. PRE-ASSEMBLED ENCLOSURE: CONTROLLER MODEL PER PLAN AND SPECS.
2. FLIP TOP IN OPEN POSITION.
3. GFCI OUTLET AND SWITCH.
4. STAINLESS STEEL ENCLOSURE W/ DOME ANTENNA.
5. TRANSIENT PROTECTION BOARD PER CONTROLLER MANUFACTURER.
6. #6 AWG GROUNDING WIRE CONNECTED TO GROUND LUG.
7. 120 VAC JUNCTION BOX.
8. MOUNTING BOLTS.
9. 3/4" MIN. GROUNDING ROD SLEEVE.
10. GROUNDING ROD. (PER LOCAL CODE)
11. SLEEVES FOR WIRING PER ID-21.

NOTES

CONTACT MANUFACTURER FOR SPECIFIC CONTROLLER MODEL NUMBER FOR EACH INDIVIDUAL PROJECT.
ALL CONTROLLER COMPONENTS MUST BE CERTIFIED BY MANUFACTURER.
CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND INSTALLING ALL REQUIRED CONTROLLER COMMUNICATIONS FOR EACH PROJECT REQUIREMENTS.
CONTRACTOR SHALL INSTALL AND PROGRAM FLUSH VALVE TO DRIP 2 PROG. PER SPECS.

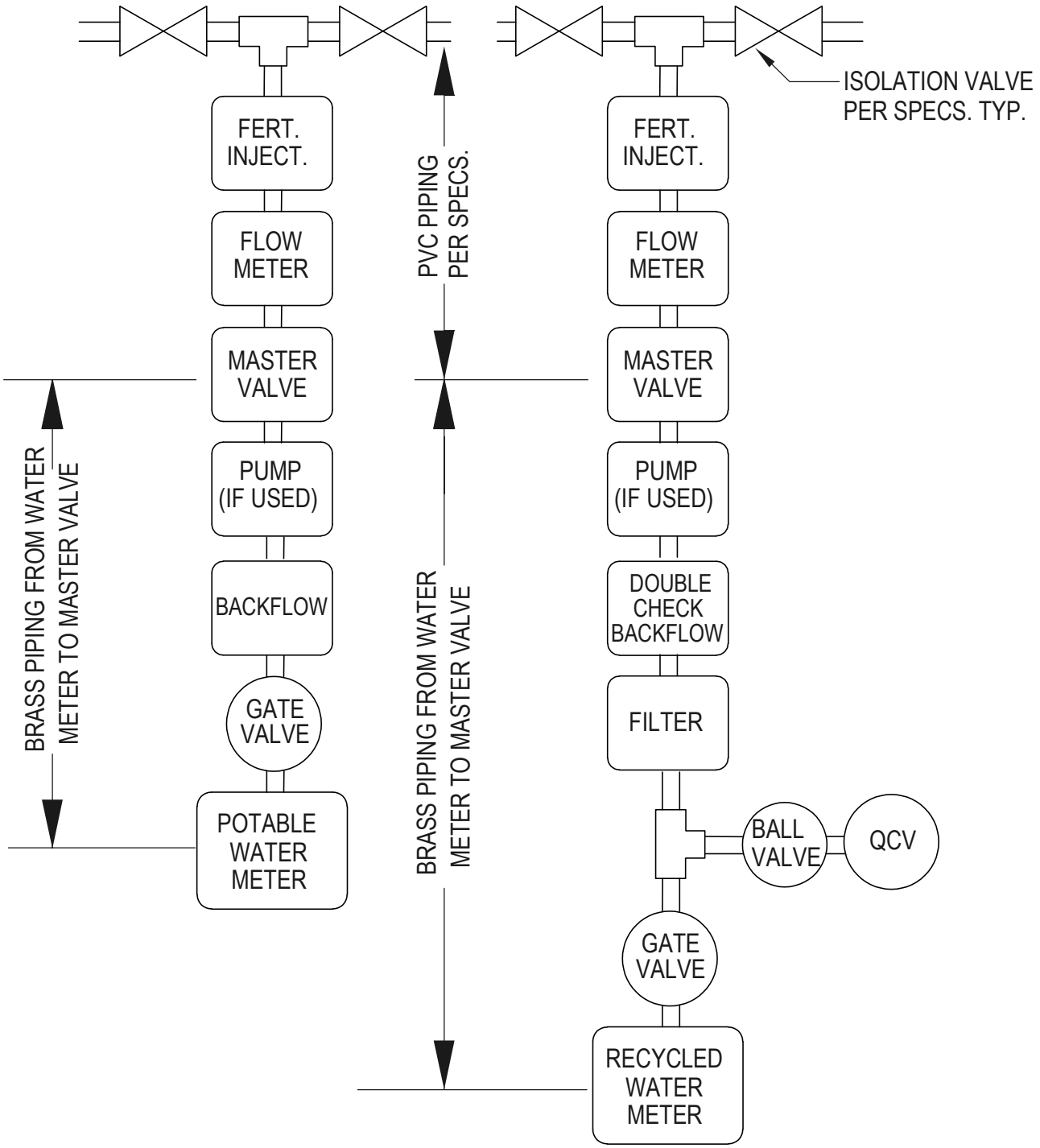
VALLEY-WIDE RECREATION AND PARK DISTRICT

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IRRIGATION PEDESTAL CONTROLLER

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

ID-02



NOTES

ALL PIPING BETWEEN WATER METER AND MASTER VALVE AND MASTER VALVE MUST BE BRASS UNLESS APPROVED IN WRITING BY THE DISTRICT.

OBTAIN LAYOUT PLACEMENT APPROVAL FOR ALL UTILITIES PRIOR TO INSTALLATION.

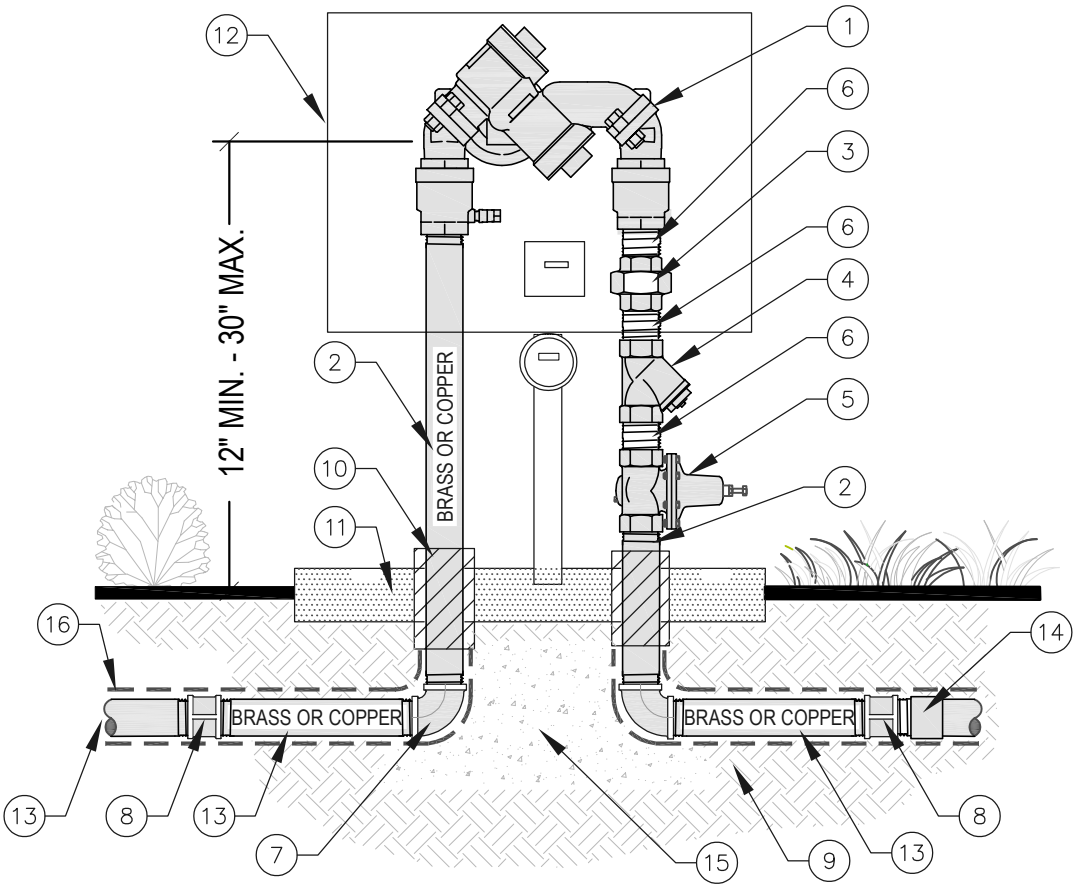
VALLEY-WIDE RECREATION AND PARK DISTRICT

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P.O.C. LAYOUT SEQUENCE

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

ID-03



1. POTABLE DOMESTIC WATER LEAD FREE BACKFLOW DEVICE (PER PLAN AND SPECS.) SIZE PER UTILITY PLANS.
2. BRASS OR COPPER RISER (HEIGHT AS REQUIRED).
3. BRASS UNION.
4. BRASS WYE STRAINER.
5. BRASS PRESSURE REGULATOR (IF PRESSURE EXCEEDS 85 PSI).
6. BRASS NIPPLE (LINE SIZE x 3" MIN. LENGTH).
7. BRASS ELL TYP.
8. BRASS COUPLING AS NEEDED TO CONNECT BRASS OR COPPER PIPING DIRECTLY TO WATER METER .
9. CLEAN NATIVE COMPACTED BACKFILL.
10. PIPE WRAP ALL PIPING IN CONTACT WITH CONCRETE TYP.
11. 9" DEEP CONCRETE PAD 4" ABOVE FINISH GRADE.
12. ENCLOSURE AND FREEZE RESISTANT BARRIER PER PLAN AND SPECS.
13. BRASS OR COPPER PIPING TO POTABLE WATER METER.
14. SCH 80 MALE ADAPTER (WHEN APPROVED FOR PVC PIPE WATER LINE).
15. CONCRETE THRUST BLOCK FOR 2" BACKFLOWS.
16. POLY SLEEVE PER SPECS FOR ALL COPPER IN CONTACT WITH SOIL (TAPE WRAP ENDS).

NOTES

INSTALLATION MUST CONFORM TO LOCAL CODES AND WATER DISTRICT.

CONTRACTOR MUST PROVIDE CERTIFICATION PRIOR TO ACCEPTANCE.

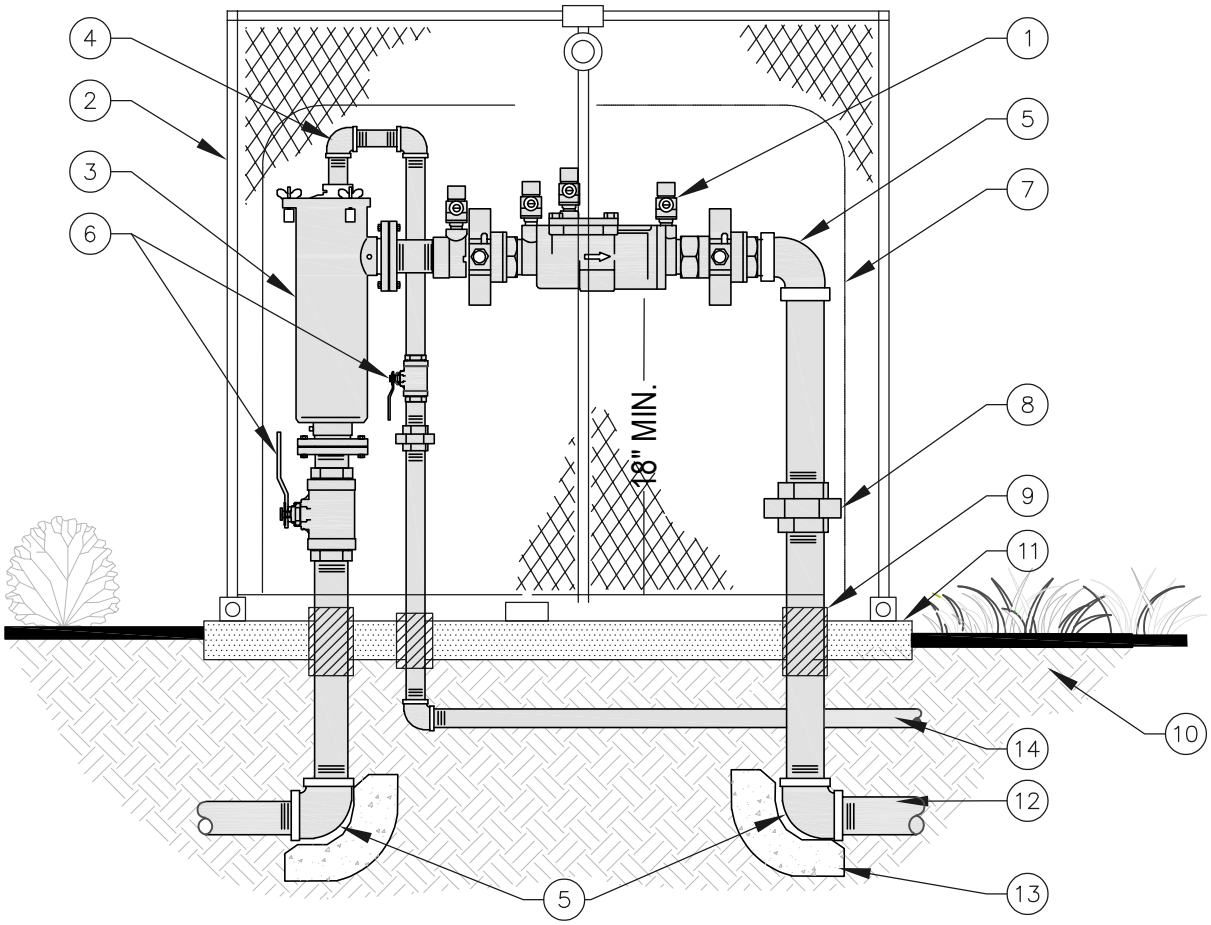
VALLEY-WIDE RECREATION AND PARK DISTRICT

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POTABLE BACKFLOW 2" AND SMALLER

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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ID-04



1. APPROVED DOUBLE CHECK DEVICE PER SPECS.
2. COMBINATION ENCLOSURE W/PADLOCK PER LEGEND & SPECS.
3. FILTER PER SPECS, SIZE MUST BE SAME OR LARGER THAN METER TYP.
4. AUTO FLUSH DISCHARGE LINE PER DETAIL ID-06. EXPOSED PIPING MUST BE BRASS TYP.
5. BRASS 90 ELL.
6. BRASS BALL VALVE (LINE SIZE).
7. POLAR BARRIER COVER SIZE PER FILTER & BACKFLOW SIZE.
8. BRASS UNION TYP. (LINE SIZE).
9. PIPE WRAP ALL PIPING IN CONTACT WITH CONCRETE TYP.
10. NATIVE SOIL COMPACTED TO ORIGINAL DENSITY.
11. 6" DEEP CONCRETE PAD 2" ABOVE FINISH GRADE.
12. BRASS PIPING TO MASTER VALVE.
13. CONCRETE THRUST BLOCKS.
14. SCHEDULE 80 PVC PIPING BELOW GRADE TO ELECTRIC AUTO FLUSH VALVE, REFER TO VALVE DETAIL ID-06.

NOTES

INSTALLATION MUST CONFORM TO LOCAL CODES AND WATER DISTRICT.

OBTAIN EMWD APPROVAL PRIOR TO INSTALLATION.

CONTRACTOR MUST PROVIDE DOUBLE CHECK CERTIFICATION PRIOR TO ACCEPTANCE.

ALL BALL VALVES AND UNIONS MUST BE 4" MIN. ABOVE CONCRETE SLAB.

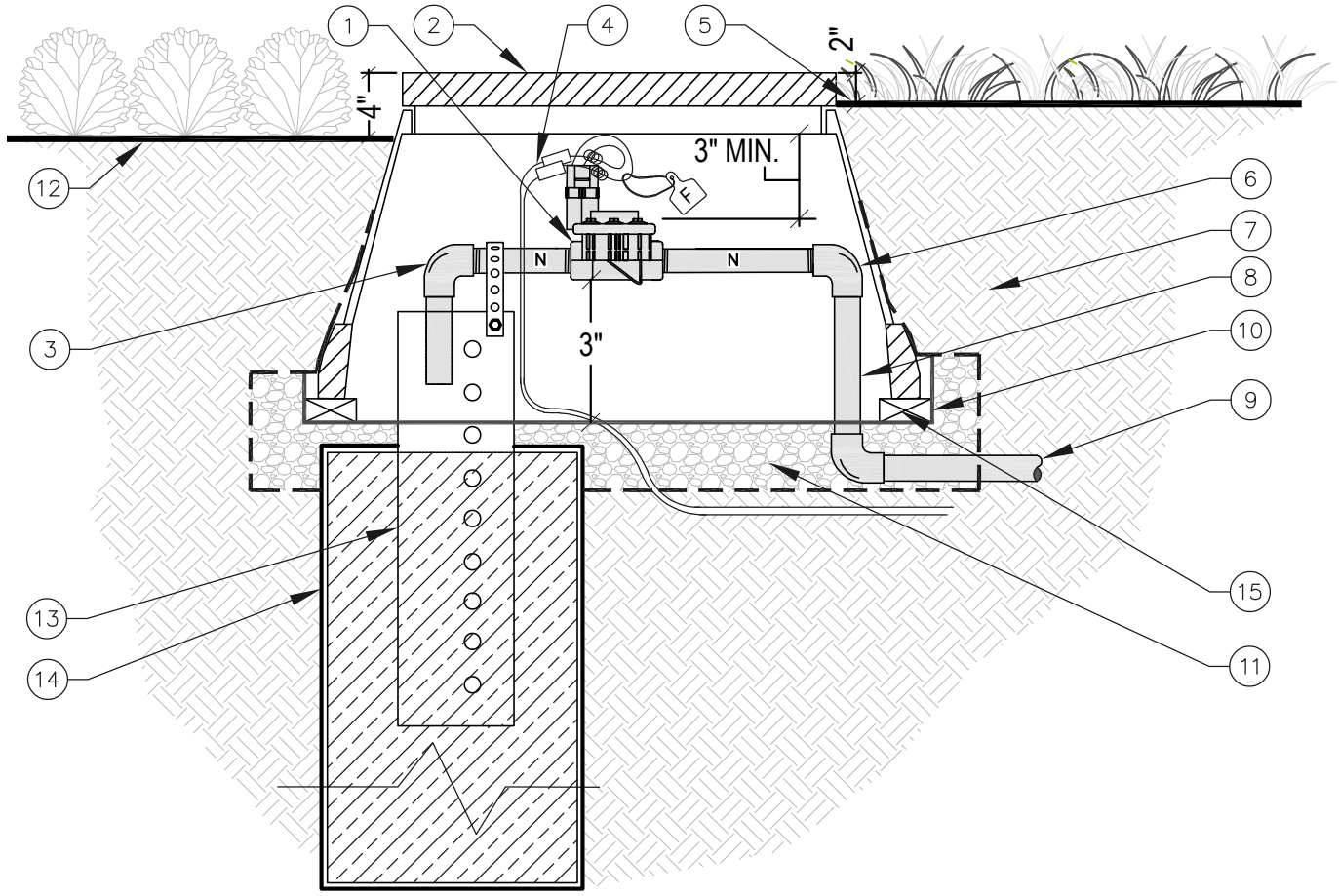
VALLEY-WIDE RECREATION AND PARK DISTRICT

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RECYCLED WATER BACKFLOW/FILTER

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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ID-05



1. 1" REMOTE CONTROL VALVE PER LEGEND AND SPECS.
2. JUMBO RECTANGULAR VALVE BOX W/ LOCKING SS BOLT HEAT BRAND "AF" FOR AUTO FLUSH.
3. 1" SLIP x FT SCHEDULE 80 PVC ELL WITH 6" SCHEDULE 80 NIPPLE INSIDE 8" DRAIN PIPE.
4. CONTROL WIRING PER PLAN CONNECTED TO LAST STATION IN CLOCK AND SET TO RUN 1 MIN. PER DAY ON PROG. D
5. SET BOX 2" ABOVE GRADE IN TURF AREAS.
6. 1" SLIP x FT SCHEDULE 80 PVC ELL.
7. NATIVE SOIL COMPACTED TO ORIGINAL DENSITY.
8. SCHEDULE 80 PVC CUT TO LENGTH.
9. 1" SCHEDULE 80 PIPING TO FILTER PER DETAIL ID-05.
10. 1/2" GALVANIZED WIRE MESH BELOW BOX OPENING.
11. 3 CU.FT. 3/4" GRAVEL WITH 3" GAP BETWEEN VALVE AND GRAVEL AND FILTER FABRIC UNDER GRAVEL.
12. SET BOX 4" ABOVE GRADE IN PLANTER AREAS.
13. 3" PERFORATED PIPE 24" LONG, SET 2" BELOW BOTTOM OF VALVE.
14. 18" DIA. x 48" DEEP 3/4" GRAVEL SUMP WRAPPED WITH APPROVED FILTER FABRIC.
15. COMMON BRICK (4 EA. PER RECTANGLE BOX).

NOTES

PROVIDE 24" LONG EXPANSION COILS AT EACH WIRE CONNECTION.

PROVIDE 3" CLEARANCE BETWEEN VALVE & BOX.

SECURE END OF FLUSH LINE PIPING TO 8" DRAIN PIPE WITH PLUMBERS TAPE.

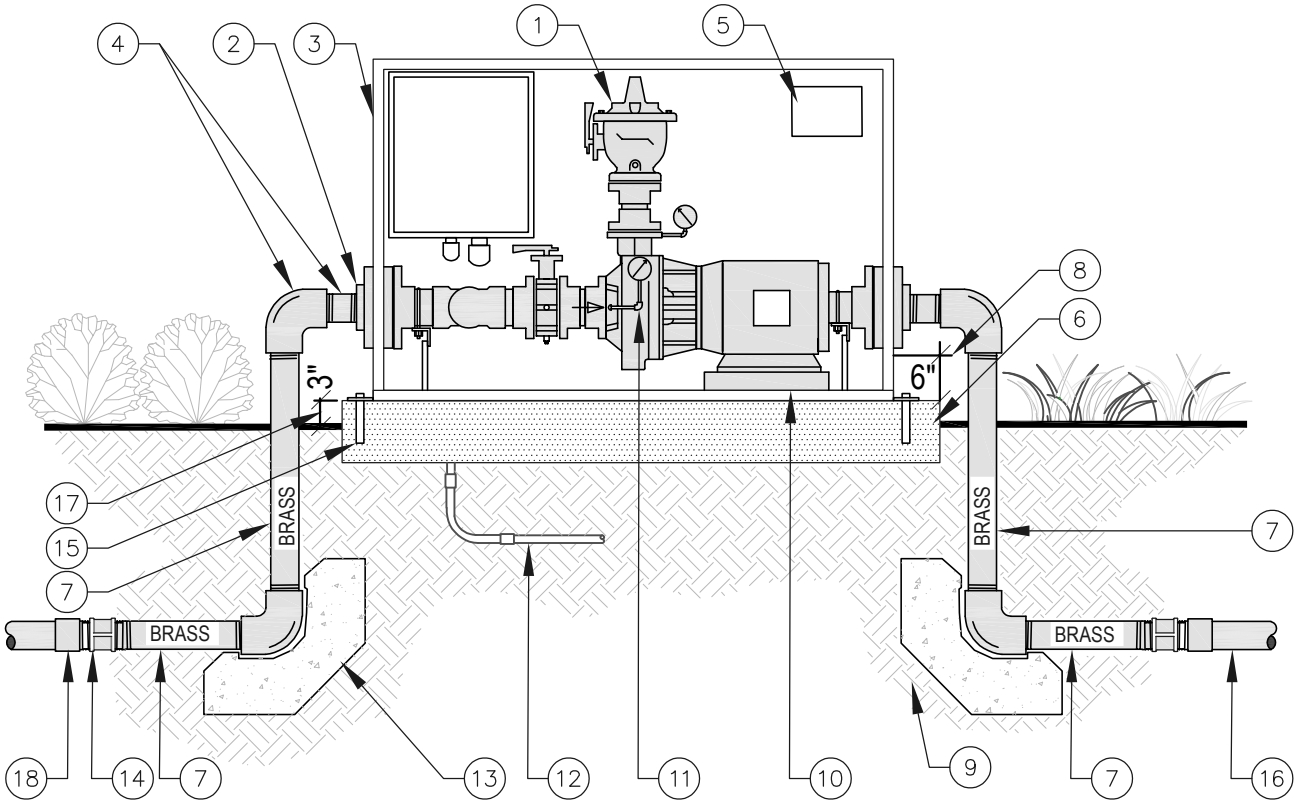
VALLEY-WIDE RECREATION AND PARK DISTRICT

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AUTO FLUSH VALVE AT P.O.C.

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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ID-06



1. APPROVED PUMP ASSEMBLY.
2. BRASS FLANGE ADAPTER TYP.
3. ALUMINUM ENCLOSURE.
4. BRASS ELL & 12" LONG NIPPLE TYP.
5. RECYCLED WATER DECAL WHEN RECYCLED WATER IS USED.
6. CONCRETE PAD 8" THICK TYP.
7. BRASS NIPPLE TYP. (LENGTH AS NEEDED).
8. EXTEND CONCRETE 6" PAST ENCLOSURE.
9. COMPACTED SUBGRADE.
10. ALUMINUM BASE PLATE.
11. FLOW SWITCH ACTIVATOR.
12. ELECTRICAL CONDUIT PER THE N.E.C.
13. 18" x 18" x 18" CONCRETE THRUST BLOCK.
14. BRASS COUPLING AS REQUIRED.
15. 3/8" x 4" EDGE ANCHOR TYP. (4 PLACES).
16. BRASS MAINLINE PER SPECS.
17. SET CONCRETE 3" ABOVE FINISH GRADE.
18. BRASS PIPING TO BACKFLOW OR DOUBLE CHECK.

NOTES

BOOSTER PUMP SHALL BE PRE-ASSEMBLED PER SPECS.

ALL PIPING OVER 4" SHALL BE CAST IRON COATED FLANGED.

PIPE WRAP ALL PIPING IN CONTACT WITH CONCRETE TYP.

REFER TO PLANS FOR PROJECT SPECIFIC MODEL NUMBERS AND NOTES.

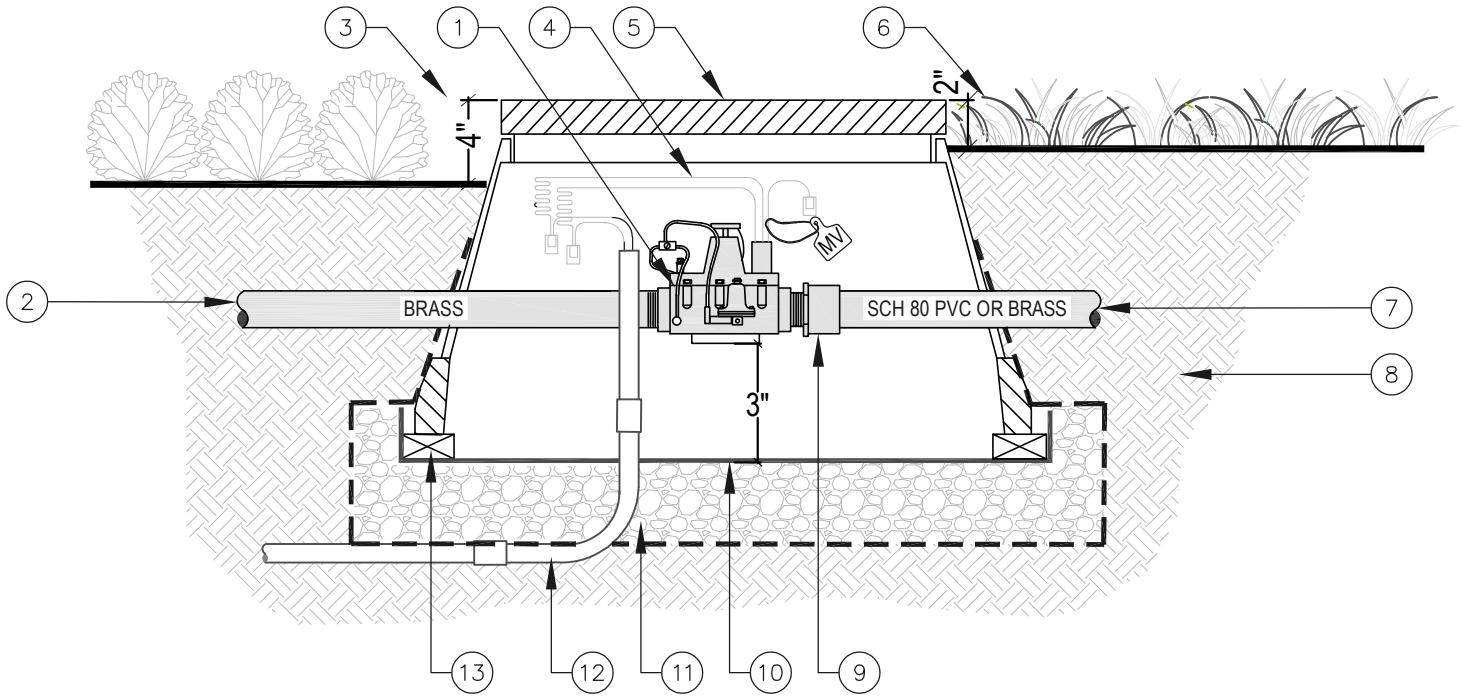
VALLEY-WIDE RECREATION AND PARK DISTRICT

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BOOSTER PUMP

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

ID-07



1. MASTER VALVE PER PLAN AND SPECS.
2. BRASS PIPING FROM PUMP, BACKFLOW OR DOUBLE CHECK DEVICE PER SPECS.
3. SET BOX 4" ABOVE GRADE IN PLANTER AREAS.
4. WIRING (SEE NOTE BELOW).
5. RECTANGULAR VALVE BOX W/ LOCKING STAINLESS STEEL BOLT, HEAT BRAND "MV".
6. SET BOX 2" ABOVE GRADE IN TURF AREAS.
7. PIPING TO FLOW METER. PIPING TO MATCH FLOW METER TYPE.
8. NATIVE SOIL COMPACTED TO ORIGINAL DENSITY.
9. SCHEDULE 80 MALE ADAPTER (LINE SIZE).
10. 1/2" GALVANIZED WIRE MESH BELOW BOX.
11. 3 CU.FT. 3/4" GRAVEL WITH 3" GAP BETWEEN VALVE & GRAVEL & FILTER FABRIC UNDER GRAVEL.
12. 1" CONDUIT TO CONTROLLER WITH #12 WIRE (COLOR TO BE RED W/STRIPE) WHEN CONVENTIONAL WIRE IS SPECIFIED.
13. COMMON BRICK (4 EA. PER RECTANGLE BOX).

NOTES
- ALL WIRING SHALL BE APPROVED BY THE DISTRICT PRIOR TO BACKFILL.
- PROVIDE 24" LONG EXPANSION COILS AT EACH WIRE CONNECTION.
- USE IRON DUCTILE FLANGED FITTINGS FOR 4" & LARGER MAINLINE.
- PROVIDE BRASS PIPING IN LIEU OF SCHEDULE 80 PVC WHEN BRASS FLOW METER IS SPECIFIED.
- SEAL WIRE CONNECTORS AND CONDUIT OPENING WITH HARDENING SEALANT PER SPECS.
- FLOW METERS 3" & LARGER SHALL BE FLANGED. PROVIDE SPOOLS AND ADAPTERS AS REQUIRED.

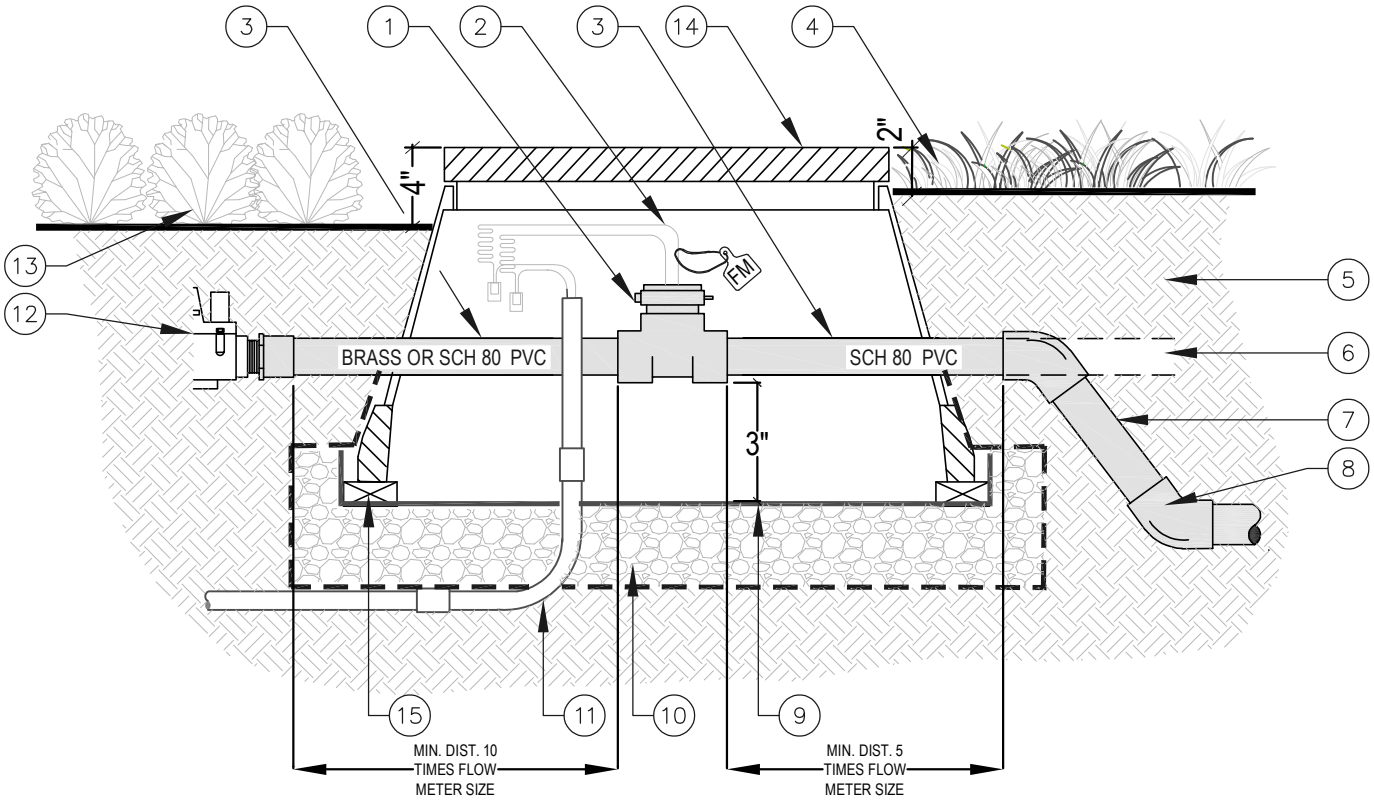
VALLEY-WIDE RECREATION AND PARK DISTRICT

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MASTER CONTROL VALVE

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

ID-08



1. FLOW METER PER PLAN. INSTALL PER MANUFACTURER SPECS.
2. WIRING (SEE NOTE BELOW).
3. BRASS OR SCHEDULE 80 PIPING (SEE NOTE BELOW).
4. SET BOX 2" ABOVE GRADE IN TURF AREAS.
5. NATIVE SOIL COMPACTED TO ORIGINAL DENSITY.
6. LINE TO FERTIGATION FM PER DETAIL ID-10 & ID-11.
7. MAINLINE PER SPECS.
8. MAINLINE 45 DEGREE ELL.
9. 1/2" GALVANIZED WIRE MESH BELOW BOX.
10. 3 CU.FT. 3/4" GRAVEL WITH 3" GAP BETWEEN VALVE AND GRAVEL & FILTER FABRIC UNDER GRAVEL.
11. 1" CONDUIT TO CONTROLLER WITH BLUE & YELLOW #14 WIRE WHEN CONVENTIONAL WIRE IS SPECIFIED.
12. MASTER VALVE PER DETAIL ID-08.
13. SET BOX 4" ABOVE GRADE IN PLANTER AREAS.
14. RECTANGULAR VALVE BOX W/ LOCKING. STAINLESS STEEL BOLT, HEAT BRAND "FM".
15. COMMON BRICK (4 EA. PER RECTANGLE BOX).

NOTES

ALL WIRING SHALL BE APPROVED BY THE DISTRICT PRIOR TO BACKFILL.
PROVIDE 24" LONG EXPANSION COILS AT EACH WIRE CONNECTION.
USE IRON DUCTILE FLANGED FITTINGS FOR 4" & LARGER MAINLINE.
PROVIDE BRASS UPSTREAM PIPING IN LIEU OF SCHEDULE 80 PVC WHEN BRASS FLOW METER IS SPECIFIED.
SEAL WIRE CONNECTORS AND CONDUIT OPENING WITH HARDENING SEALANT PER SPECS.
PIPING AFTER FLOW METER CAN RUN DIRECTLY TO FERTIGATION FLOW METER WHEN USED.

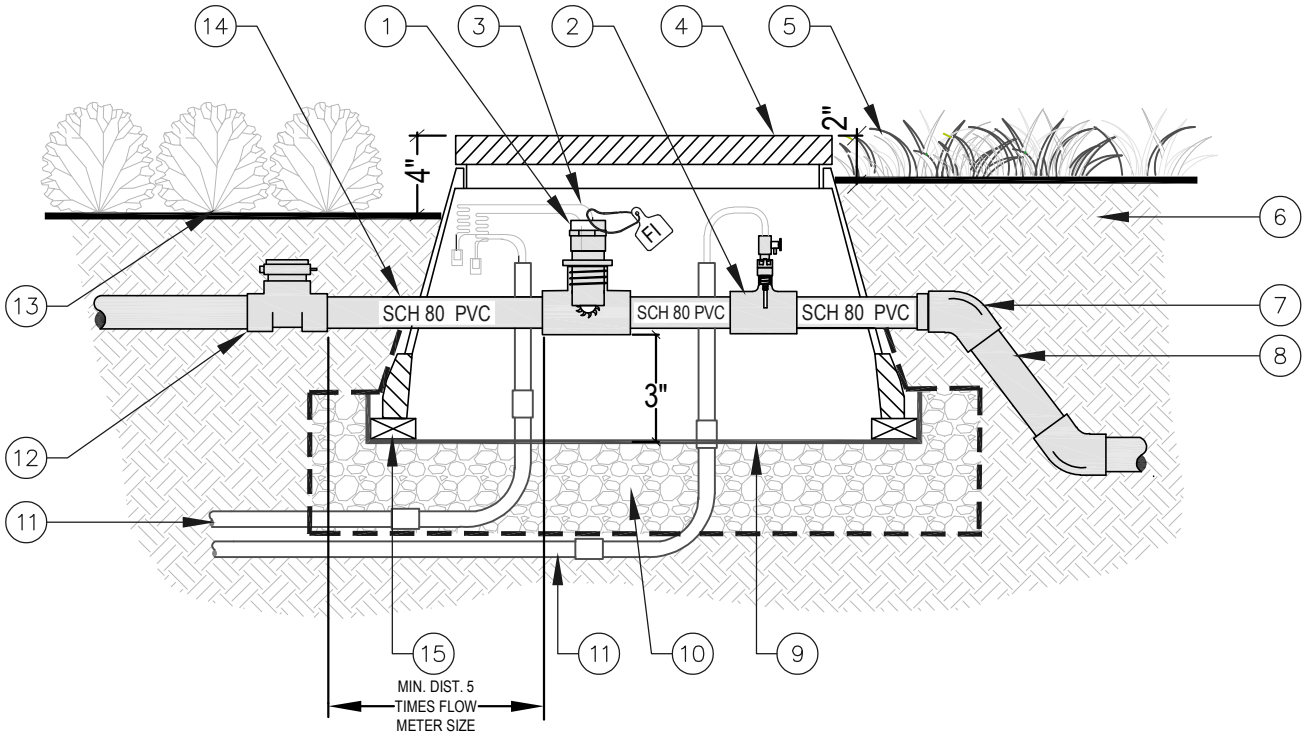
VALLEY-WIDE RECREATION AND PARK DISTRICT

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FLOW METER

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

ID-09



1. FERTIGATION FLOW METER.
2. INJECTION TEE W/ LANCE, 1/2" CHECK VALVE AND AIR RELIEF VALVE.
3. WIRING (SEE NOTE BELOW).
4. JUMBO RECTANGULAR VALVE BOX W/ LOCKING STAINLESS. STEEL BOLT, HEAT BRAND "FI-M".
5. SET BOX 2" ABOVE GRADE IN TURF AREAS.
6. NATIVE SOIL COMPACTED TO ORIGINAL DENSITY.
7. MAINLINE 45 DEGREE ELL MAINLINE SIZE PER SPECS.
8. MAINLINE PIPING PER SPECS.
9. 1/2" GALVANIZED WIRE MESH BELOW BOX.
10. 3 CU.FT. 3/4" GRAVEL WITH 3" GAP BETWEEN VALVE & GRAVEL & FILTER FABRIC UNDER GRAVEL.
11. 1" CONDUIT TO FERTIGATION PUMP WITH RED & GREEN #14 WIRE.
12. FLOW METER FOR IRRIGATION CONTROLLER PER DETAIL ID-09.
13. SET BOX 4" ABOVE GRADE IN PLANTER AREAS.
14. SCHEDULE 80 PIPING (FLOW METER SIZE).
15. COMMON BRICK (4 EA. PER RECTANGLE BOX).

NOTES

CONTRACTOR SHALL PROVIDE FERTIGATION CERTIFICATION FROM MANUFACTURER.
PROVIDE WIRING FROM FERTIGATION CONTROL IRRIGATION CONTROLLER IN 1" CONDUIT.
REFER TO MANUFACTURER'S DETAILS AND SPECIFICATIONS FOR WIRING DIAGRAM.
PROVIDE SEPARATE 15 AMP BREAKER AND INSTALL POWER TO PUMP PER LOCAL CODE.

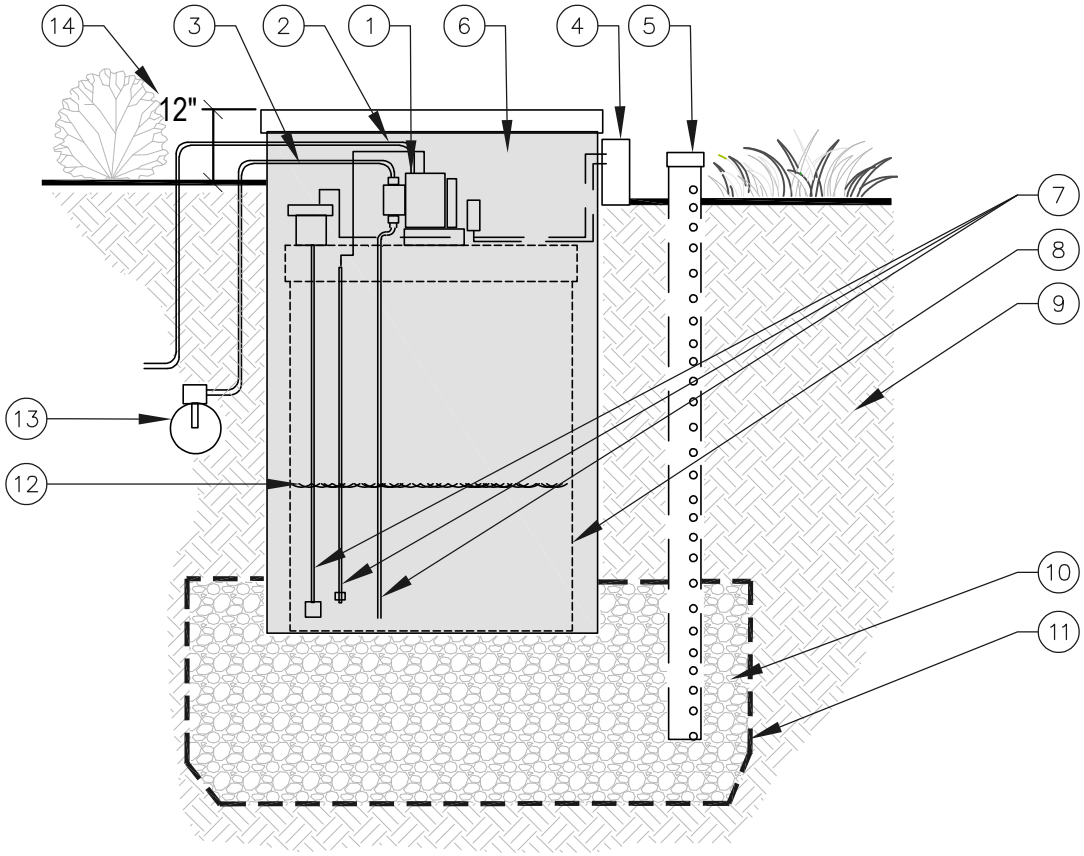
VALLEY-WIDE RECREATION AND PARK DISTRICT

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FERTIGATION PUMP AND WIRING

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

ID-10



1. FERTIBOOST PUMP PER PLAN AND SPECS WITH LOCKABLE POLY CONTAINMENT TANK LID.
2. WIRING TO INJECTOR FLOW METER.
3. PUMP DISCHARGE POLY TUBING.
4. SERVICE 120V CONDUIT.
5. 3" PERFORATED DRAIN PIPE W/CAP, WRAP PIPE WITH FILTER SOCK.
6. LOCKING TANK LID.
7. AGITATOR PADDLE, LIQUID LEVEL SHUTOFF, AND PUMP SUCTION POLY.
8. POLY FERTILIZER TANK SIZE PER PLAN. PROVIDE STARTER FERT. PER SPECS.
9. NATIVE SOIL COMPACTED TO ORIGINAL DENSITY.
10. 3/8" GRAVEL 24" DEEP.
11. APPROVED FILTER FABRIC.
12. FILL WITH WATER WHEN NOT USED.
13. INJECTION TEE W/LANCE, 1/2" CHECK VALVE & AIR PRESSURE RELIEF VALVE.
14. SET TOP OF LID OF TANK 12"-16" ABOVE GRADE.

NOTES

ALL POLY TUBING, 12V & 120V WIRING SHALL BE INSTALLED IN A 1" MIN. SIZE CONDUIT.
CONTRACTOR SHALL PROVIDE FERTIGATION CERTIFICATION FROM MANUFACTURER.
REFER TO MANUFACTURER'S DETAILS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
PROVIDE SEPARATE 15AMP BREAKER AND INSTALL POWER TO PUMP PER LOCAL CODE.

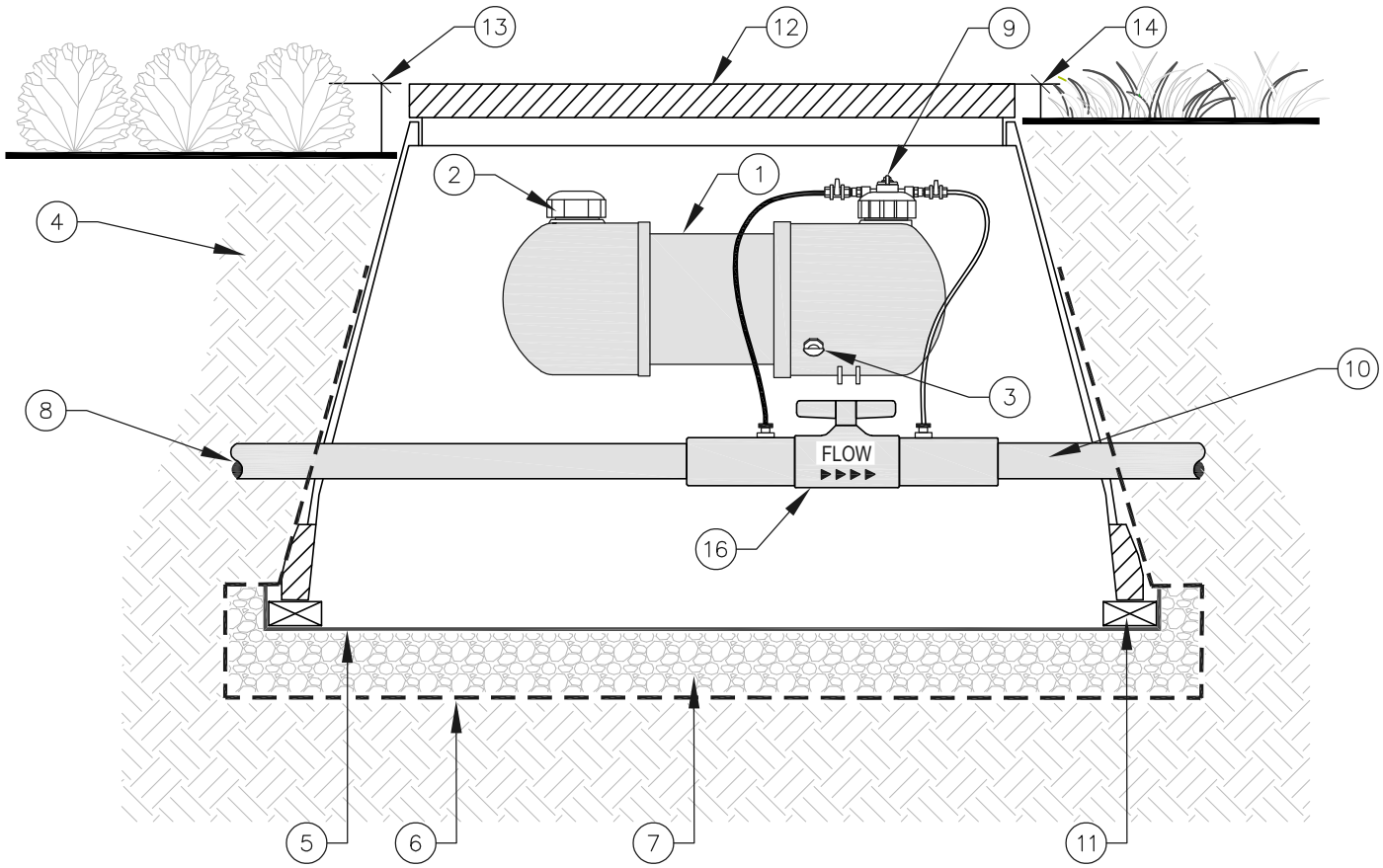
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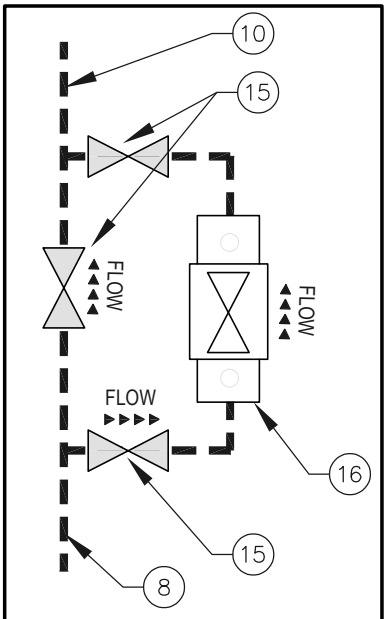
FERTIGATION TANK

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

ID-11



1. EZ-FLO INJECTION SYSTEM: MODEL SHALL BE PER PLAN AND DETERMINED PER MANUFACTURER'S SPECS.
2. FILL PORT CAP.
3. SYSTEM DRAIN.
4. NATIVE SOIL COMPACTED TO ORIGINAL DENSITY.
5. 1/2" GALVANIZED MESH ABOVE GRAVEL.
6. FILTER FABRIC BELOW GRAVEL.
7. 5 CU.FT. 3/4" GRAVEL.
8. PVC MAINLINE FROM MASTER VALVE AND FLOW METER.
9. INJECTION CONNECTION TO TANK.
10. IRRIGATION MAINLINE (PVC) TO VALVE MANIFOLD.
11. COMMON BRICK (4 EA. PER RECTANGLE BOX).
12. RECTANGLE VALVE BOX (17" x 30" x 18" MIN.) W/ LOCKING STAINLESS STEEL BOLTS.
13. SET BOX 4" ABOVE GRADE IN PLANTER AREAS.
14. SET BOX 2" ABOVE GRADE IN TURF AREAS.
15. ISOLATION VALVE PER ID-16 OR ID-17 DEPENDING ON LINE SIZE.
16. INJECTION TEE AND BALL VALVE ASSEMBLY (LINE SIZE).



PLAN VIEW

NOTES

INSTALL PER MANUFACTURER'S SPECIFICATIONS.

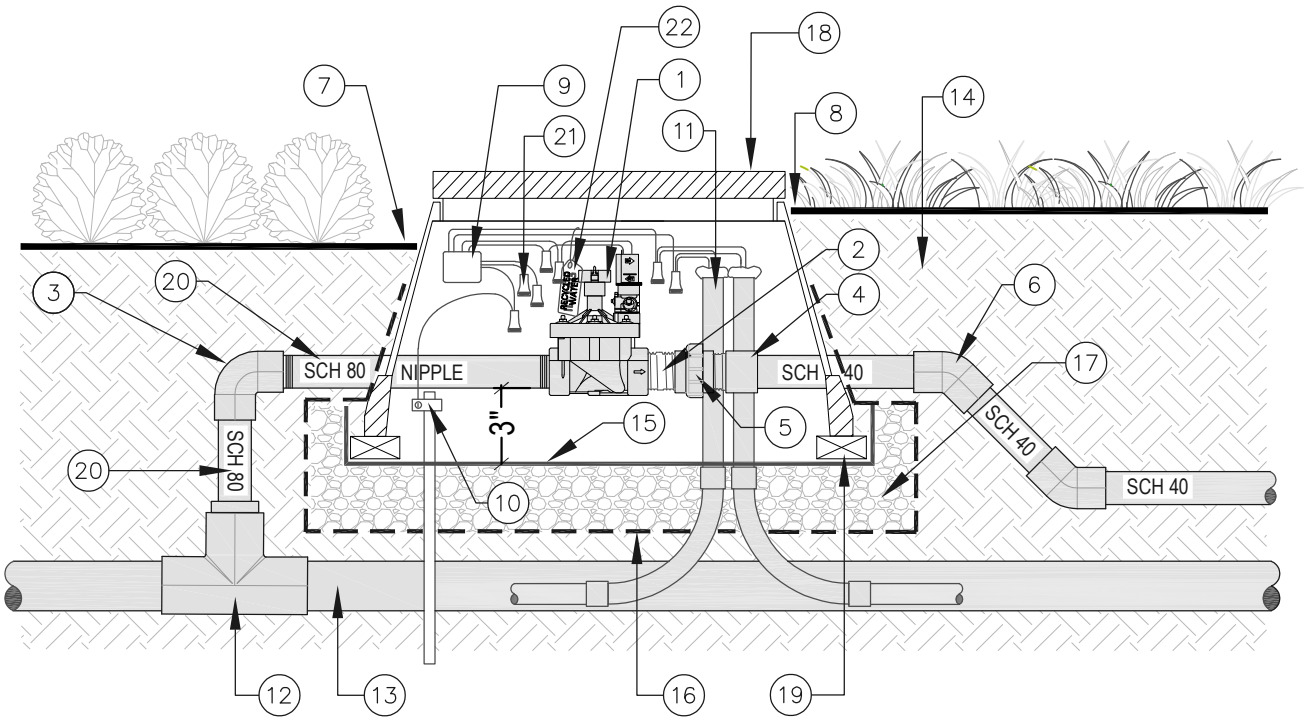
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EZ FLO INJECTION SYSTEM

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

ID-12



1. REMOTE CONTROL VALVE PER LEGEND AND SPECS. TOP OF VALVE TO BE 3" BELOW BOTTOM OF LID.
2. SCH 80 NIPPLE (VALVE SIZE BY 3").
3. SCH 80 ELL SxT (VALVE SIZE).
4. SCH 80 MALE ADAPTER.
5. SCH 80 UNION.
6. SCH 40 PVC LATERAL (SIZE AND TYPE PER PLAN) USE 45 ELL TO DEPTH PER SPECS.
7. SET BOX 4" ABOVE GRADE IN PLANTER AREAS.
8. SET BOX 2" ABOVE GRADE IN TURF AREAS.
9. 2-WIRE DECODER SECURED TO VALVE BOX (WHEN SPECIFIED).
10. 8' GROUND ROD, CLAMP AND COPPER WIRE (PER SPECS.).
11. CONDUIT SIZE PER PLAN WITH EXPANSION FOAM TO SEAL WATER FREE CONDUIT (DIRECT BURIAL FOR STD. WIRE).
12. MAINLINE FITTING PER SPECS.
13. MAINLINE PER SPECS.
14. NATIVE SOIL COMPACTED TO ORIGINAL DENSITY.
15. 1/2" GALV. MESH ABOVE GRAVEL.
16. FILTER FABRIC BELOW GRAVEL.
17. 3 CU.FT. 3/4"GRAVEL.
18. JUMBO RECTANGLE VALVE BOX PER SPECS. ANY BOX CUTS MUST BE APPROVED (HEAT BRAND VALVE ID NO. ON LID).
19. COMMON BRICK (4 EA. PER RECTANGLE BOX).
20. SCH 80 PIPE FOR RISER AND SCH 80 NIPPLE FROM ELL TO RCV (VALVE SIZE X LENGTH AS NECESSARY).
21. 2-WIRE OR CONVENTIONAL WIRE (PER PLAN) ALL WIRE 2-WIRE SPLICES MUST BE SECURED IN RESIN FILLED PACK.
22. VALVE ID TAG PER SPECS. AND EMWD REQUIREMENTS WHEN RECYCLED WATER IS USED.

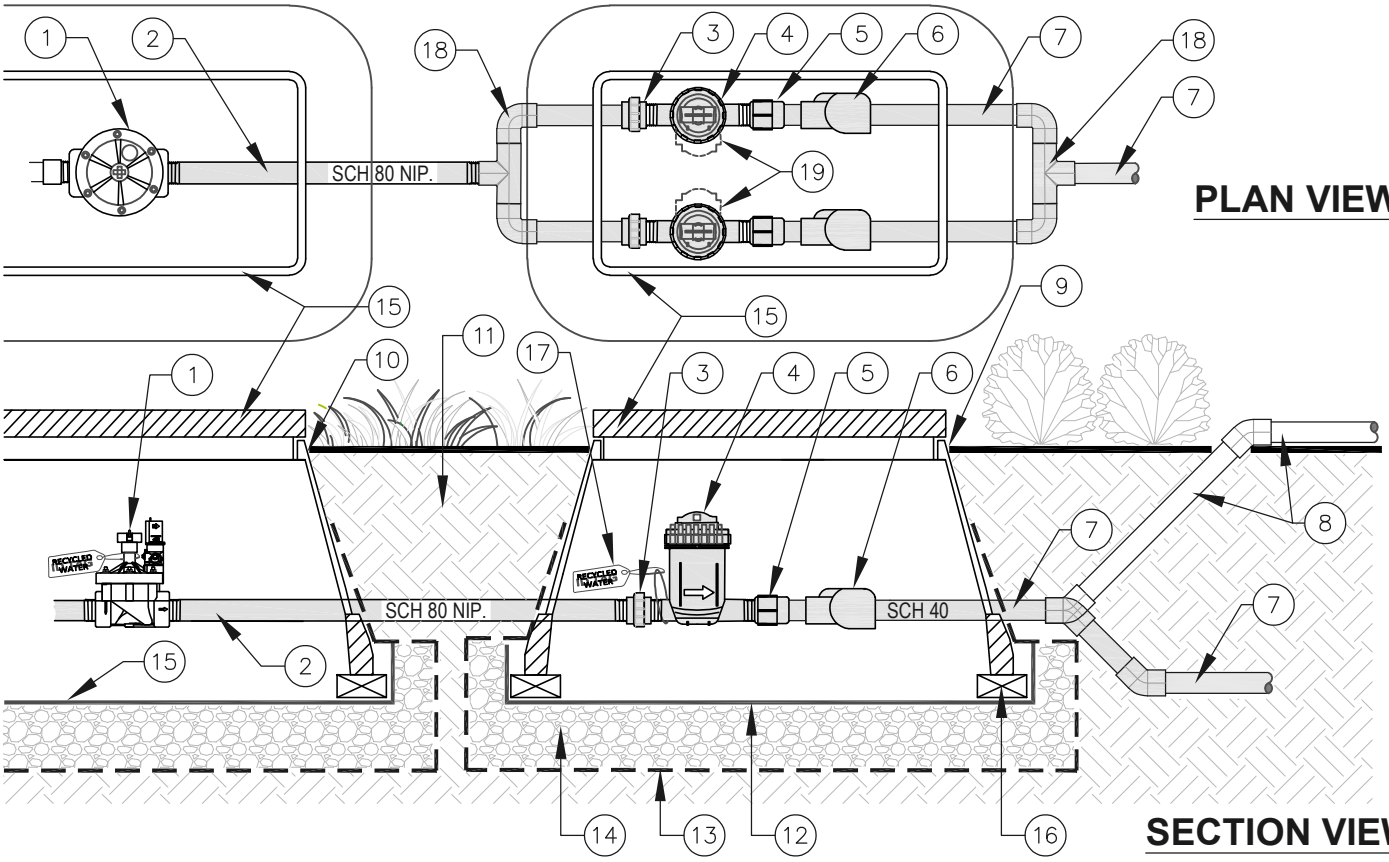
VALLEY-WIDE RECREATION AND PARK DISTRICT

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REMOTE CONTROL VALVE AT MANIFOLD

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

ID-13



1. REMOTE CONTROL VALVE PER LEGEND AND SPECS AND ID-13.
2. SCH 80 NIPPLE (VALVE SIZE).
3. SCH 80 ELL UNION (LINE SIZE).
4. 1" BASKET FILTER FOR FLOWS 3.0 - 20.0 GPM (USE 2 FOR 1.5" RCV'S FOR FLOWS 20.0 - 40 GPM).
5. SCH 80 THREADED COUPLING.
6. CHECK VALVE WHEN REQUIRED PER SPECS.
7. SCH 40 PVC LATERAL (SIZE AND TYPE PER PLAN) USE 45 ELL TO DEPTH PER SPECS.
8. SCH 40 UVR ABOVE GRADE LATERAL LINE WHEN SPECIFIED (SIZE PER PLAN AND SPECS.)
9. SET BOX 4" ABOVE GRADE IN PLANTER AREAS.
10. SET BOX 2" ABOVE GRADE IN TURF AREAS.
11. NATIVE SOIL COMPACTED TO ORIGINAL DENSITY.
12. 1/2" GALV. MESH ABOVE GRAVEL.
13. FILTER FABRIC BELOW GRAVEL.
14. 3 CU.FT. 3/4" GRAVEL.
15. RECTANGLE VALVE BOX PER SPECS. ANY BOX CUTS MUST BE APPROVED (HEAT BRAND VALVE NO. ON LID).
16. COMMON BRICK (4 EA. PER RECTANGLE BOX).
17. PURPLE ID TAG PER SPECS. AND EMWD REQUIREMENTS WHEN RECYCLED WATER IS USED.
18. SCH 40 FITTINGS AS NEEDED.
19. TILT BASKET FILTERS INWARD TO CLEAR EDGE OF BOX WHEN TWO ARE USED TO ENSURE FILTER ACCESS.

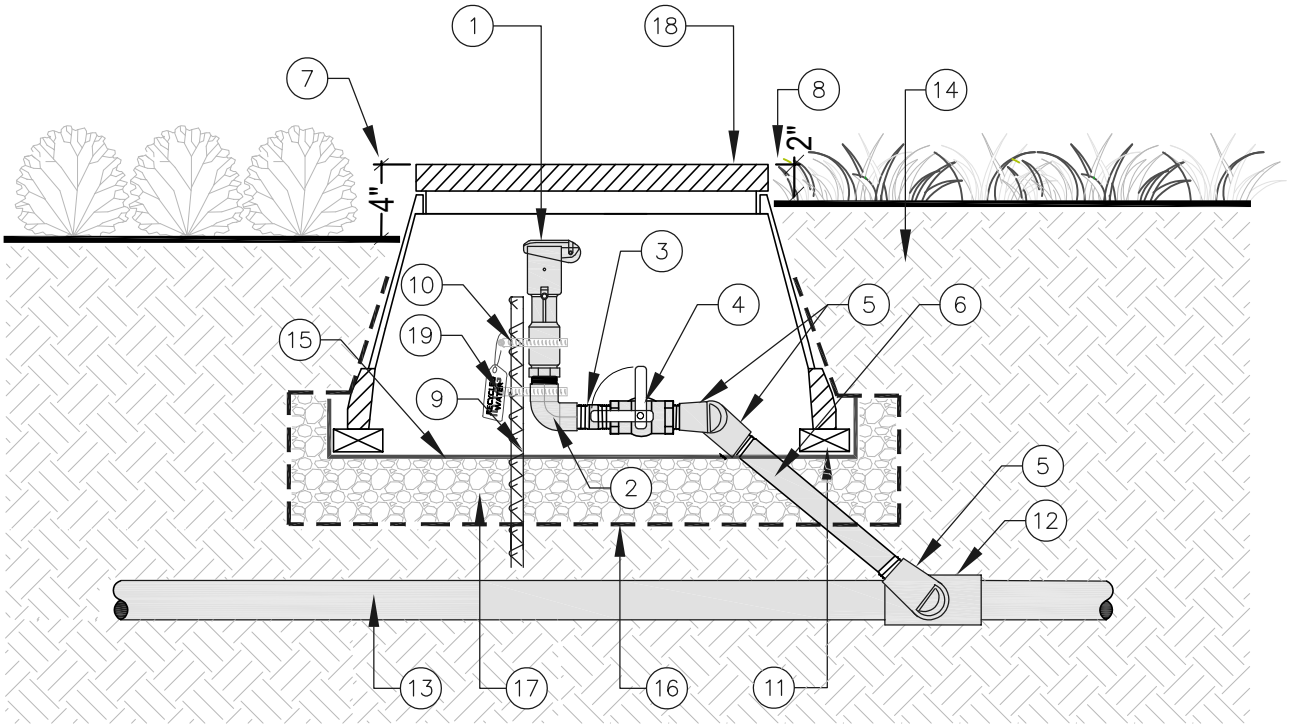
VALLEY-WIDE RECREATION AND PARK DISTRICT

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DRIP REMOTE CONTROL VALVE

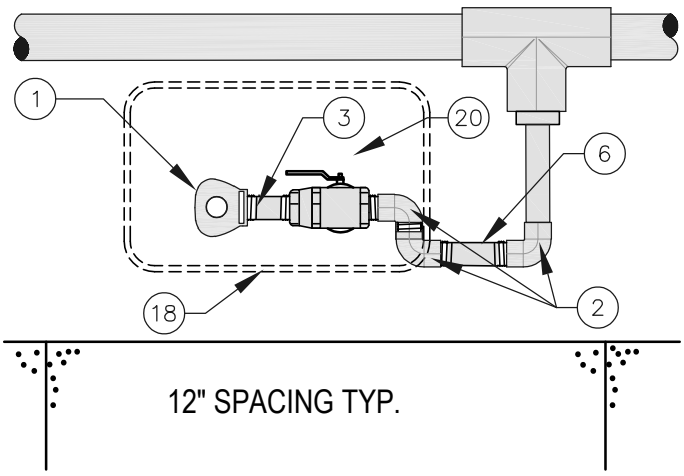
VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

ID-14



1. 1" QUICK COUPLER VALVE PER LEGEND AND SPECS. TOP OF VALVE TO BE 3" BELOW BOTTOM OF LID.
2. 1" BRASS STREET ELL.
3. 1" X 4" BRASS NIPPLE.
4. 1" BRASS BALL VALVE PER SPECS.
5. 1" BRASS STREET ELL (2X).
6. 1" X 24" BRASS NIPPLE TO DEPTH PER SPECS.
7. SET BOX 4" ABOVE GRADE IN PLANTER AREAS.
8. SET BOX 2" ABOVE GRADE IN TURF AREAS.
9. #4 X 36" REBAR STAKE.
10. STAINLESS STEEL STRAP (2X).
11. COMMON BRICK (4 EA. PER RECTANGLE BOX).
12. MAINLINE FITTING PER SPECS.
13. MAINLINE PER SPECS.
14. NATIVE SOIL COMPACTED TO ORIGINAL DENSITY.
15. $\frac{1}{2}$" GALV. MESH ABOVE GRAVEL.
16. FILTER FABRIC BELOW GRAVEL.
17. 3 CU.FT. $\frac{3}{4}$" GRAVEL.
18. RECTANGLE VALVE BOX PER SPECS. ANY BOX CUTS MUST BE APPROVED (HEAT BRAND "QCV" ON LID).
19. VALVE ID TAG PER SPECS. AND EMWD REQUIREMENTS WHEN RECYCLED WATER IS USED.
20. OFFSET BOX ENOUGH TO ALLOW FOR HAND OPERATION OF BALL VALVE.

PLAN VIEW



NOTES ALL THREADED FITTINGS MUST HAVE $\frac{3}{4}$" TEFLON TAPE.

PROVIDE QUICK COUPLERS 150 FEET APART AND 75 FEET FROM PROJECT LIMITS TYP.

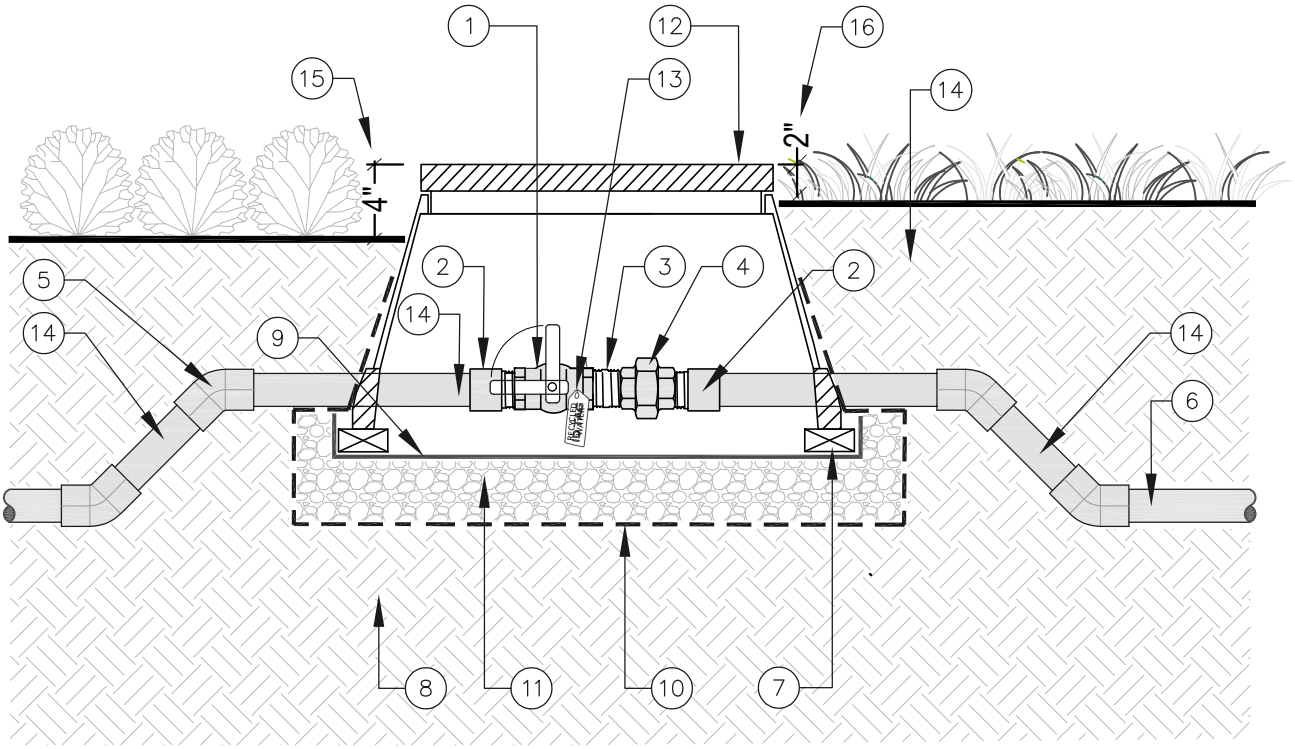
VALLEY-WIDE RECREATION AND PARK DISTRICT

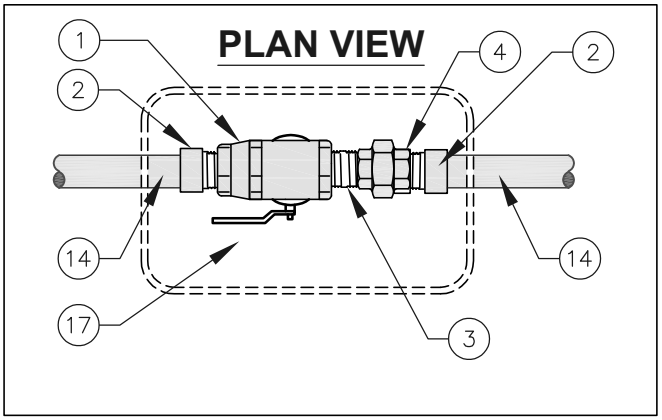
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QUICK COUPLER VALVE

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

ID-15





1. BRASS BALL VALVE PER LEGEND AND SPECS. (TOP OF HANDLE TO BE 2" BELOW BOX LID).
2. SCH 80 MALE ADAPTER TYP.
3. LINE SIZE" x 3" MIN. LENGTH BRASS NIPPLE.
4. LINE SIZE BRASS UNION.
5. SCH 80 45 DEGREE ELBOW TYP. (4X).
6. MAINLINE PER LEGEND AND SPECS.
7. COMMON BRICK (4 EA. PER RECTANGLE BOX).
8. NATIVE SOIL COMPACTED TO ORIGINAL DENSITY.
9. $\frac{1}{2}$" GALV. MESH ABOVE GRAVEL.
10. FILTER FABRIC BELOW GRAVEL.
11. 3 CU.FT. $\frac{3}{4}$" GRAVEL.
12. RECTANGLE VALVE BOX PER SPECS. ANY BOX CUTS MUST BE APPROVED (HEAT BRAND "BV" ON LID).
13. VALVE ID TAG PER SPECS. AND EMWD REQUIREMENTS WHEN RECYCLED WATER IS USED.
14. PIPE MINIMUM LENGTH 5X PIPE DIAMETER AND AS REQUIRED TO MEET MAINLINE DEPTH PER SPECS.
15. SET BOX 4" ABOVE GRADE IN PLANTER AREAS.
16. SET BOX 2" ABOVE GRADE IN TURF AREAS.
17. OFFSET BOX ENOUGH TO ALLOW FOR HAND OPERATION OF BALL VALVE.

NOTES ALL THREADED FITTINGS MUST HAVE $\frac{3}{4}$" TEFLON TAPE.

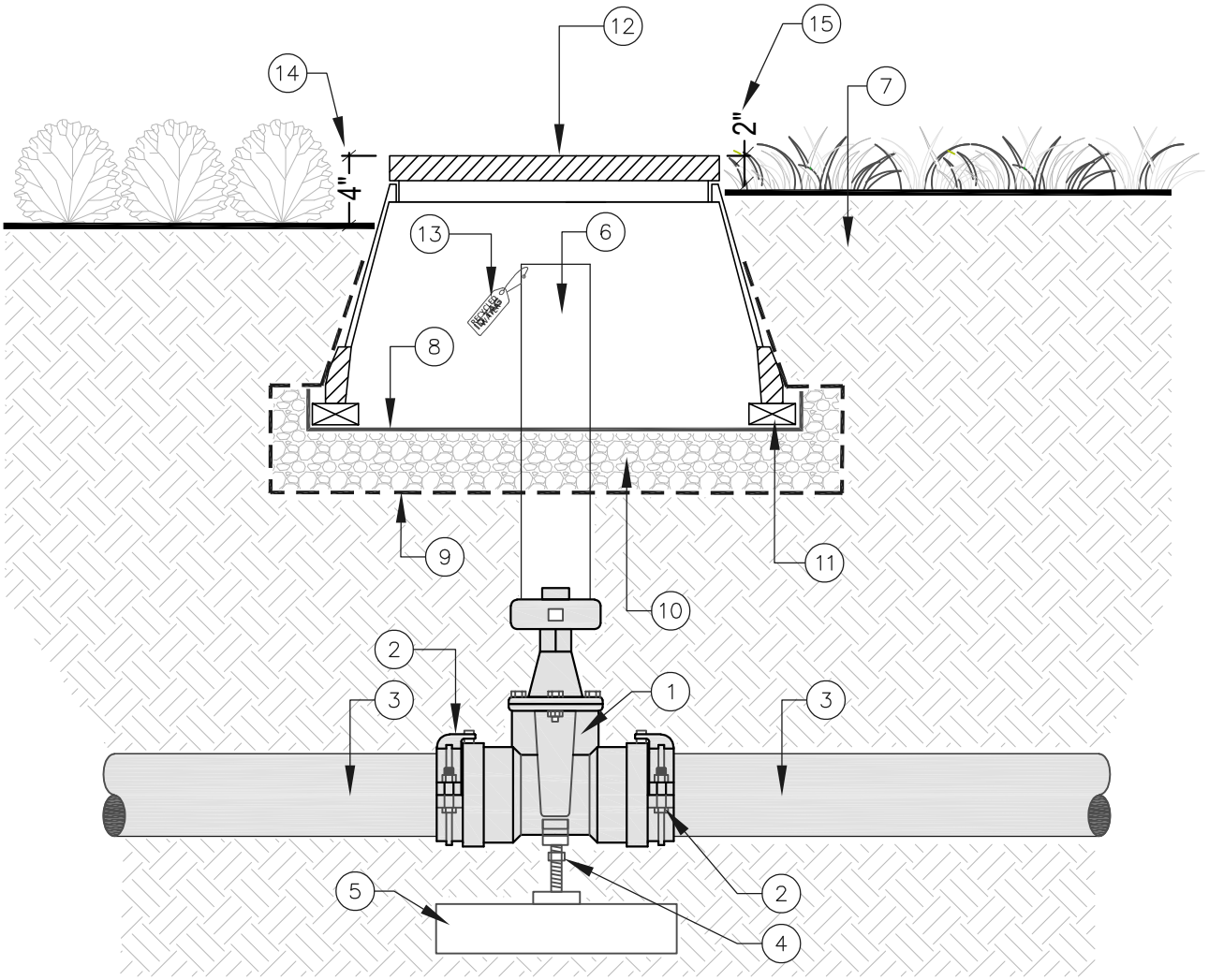
VALLEY-WIDE RECREATION AND PARK DISTRICT

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BRASS BALL VALVE 2" AND SMALLER

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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ID-16



1. GATE VALVE WITH PUSH ON ENDS AND RESTRAINTS PER LEGEND AND SPECS.
2. GATE VALVE RESTRAINTS (TORQUE BOLTS PER MANUFACTURER SPECS.)
3. MAINLINE PER LEGEND AND SPECS.
4. PIPE STAND PER SPECS (ADJUST NUT FOR PIPE STAND TO BE SNUG).
5. 1 CU. FT. POURED IN PLACE CONCRETE PAD.
6. 6" SCH 40 PIPE RISER (SECURE TO GATE VALVE 2" NUT RING AND EXTEND TO 4" BELOW VALVE BOX LID).
7. NATIVE SOIL COMPACTED TO ORIGINAL DENSITY.
8. $\frac{1}{2}$" GALV. MESH ABOVE GRAVEL.
9. FILTER FABRIC BELOW GRAVEL.
10. 3 CU.FT. $\frac{3}{4}$" GRAVEL.
11. COMMON BRICK (4 EA. PER RECTANGLE BOX).
12. RECTANGLE VALVE BOX PER SPECS. ANY BOX CUTS MUST BE APPROVED (HEAT BRAND "GV" ON LID).
13. VALVE ID TAG PER SPECS. AND EMWD REQUIREMENTS WHEN RECYCLED WATER IS USED (ATTACH TO PIPE RISER).
14. SET BOX 4" ABOVE GRADE IN PLANTER AREAS.
15. SET BOX 2" ABOVE GRADE IN TURF AREAS.

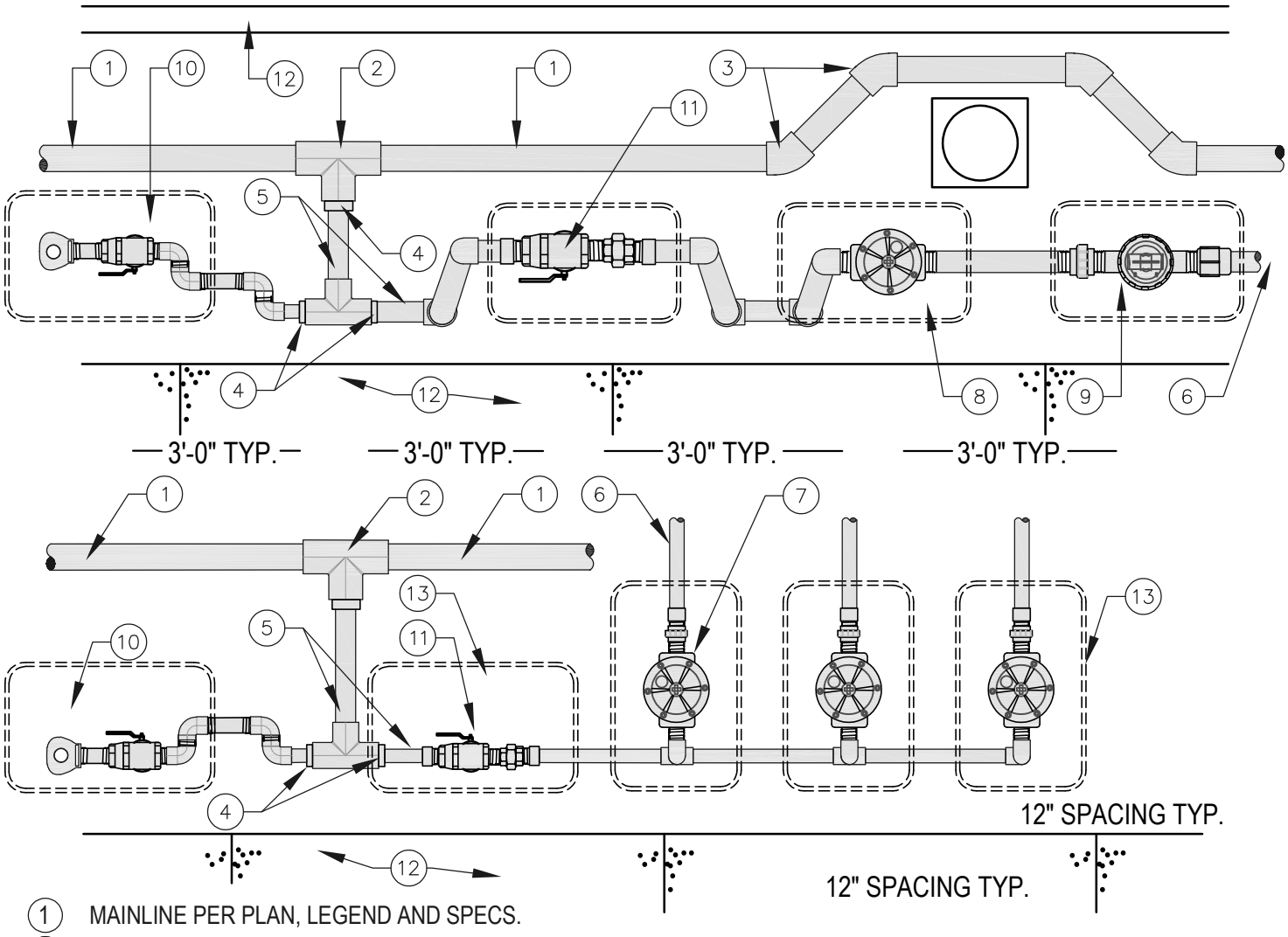
VALLEY-WIDE RECREATION AND PARK DISTRICT

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GATE VALVE 2-1/2" AND LARGER

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

ID-17



1. MAINLINE PER PLAN, LEGEND AND SPECS.
2. MAINLINE TEE PER PLAN, LEGEND AND SPECS.
3. MAINLINE 45 DEGREE ELL (ROUTE AROUND ABOVE GRADE APPURTENANCES AS NEEDED).
4. MAINLINE REDUCTION AS NEEDED PER PER PLAN AND SPECS.
5. MANIFOLD SIZE PER SPECS. MUST BE LARGE ENOUGH FOR FLOWS OF TWO VALVES WITHIN MANIFOLD.
6. LATERAL LINE PER PLAN AND SPECS.
7. REMOTE CONTROL VALVE PER DETAILS ID-13. PLACE LARGEST VALVE(S) CLOSER TO MAINLINE TEE.
8. DRIP REMOTE CONTROL VALVE PER DETAIL ID-14. PLACE DRIP VALVE(S) AT ENDS OF MANIFOLD.
9. BASKET FILTER PER DETAIL ID-14.
10. QUICK COUPLER VALVE PER DETAIL ID-15.
11. ISOLATION VALVE PER DETAILS ID-16 AND ID-17.
12. WALKWAY OR CURB.
13. STANDARD RECTANGLE VALVE BOX PER SPECS.

NOTES: VALVE BOXES MUST BE ALIGNED WITH EACH OTHER.
VALVE BOX LAYOUTS TO BE PARALLEL WITH CURB OR WALKWAY WITHIN NARROW AREAS.
VALVE BOX LAYOUTS CAN BE PERPENDICULAR IN LARGER AREAS, BUT MUST BE CONSISTENT AT MANIFOLDS.

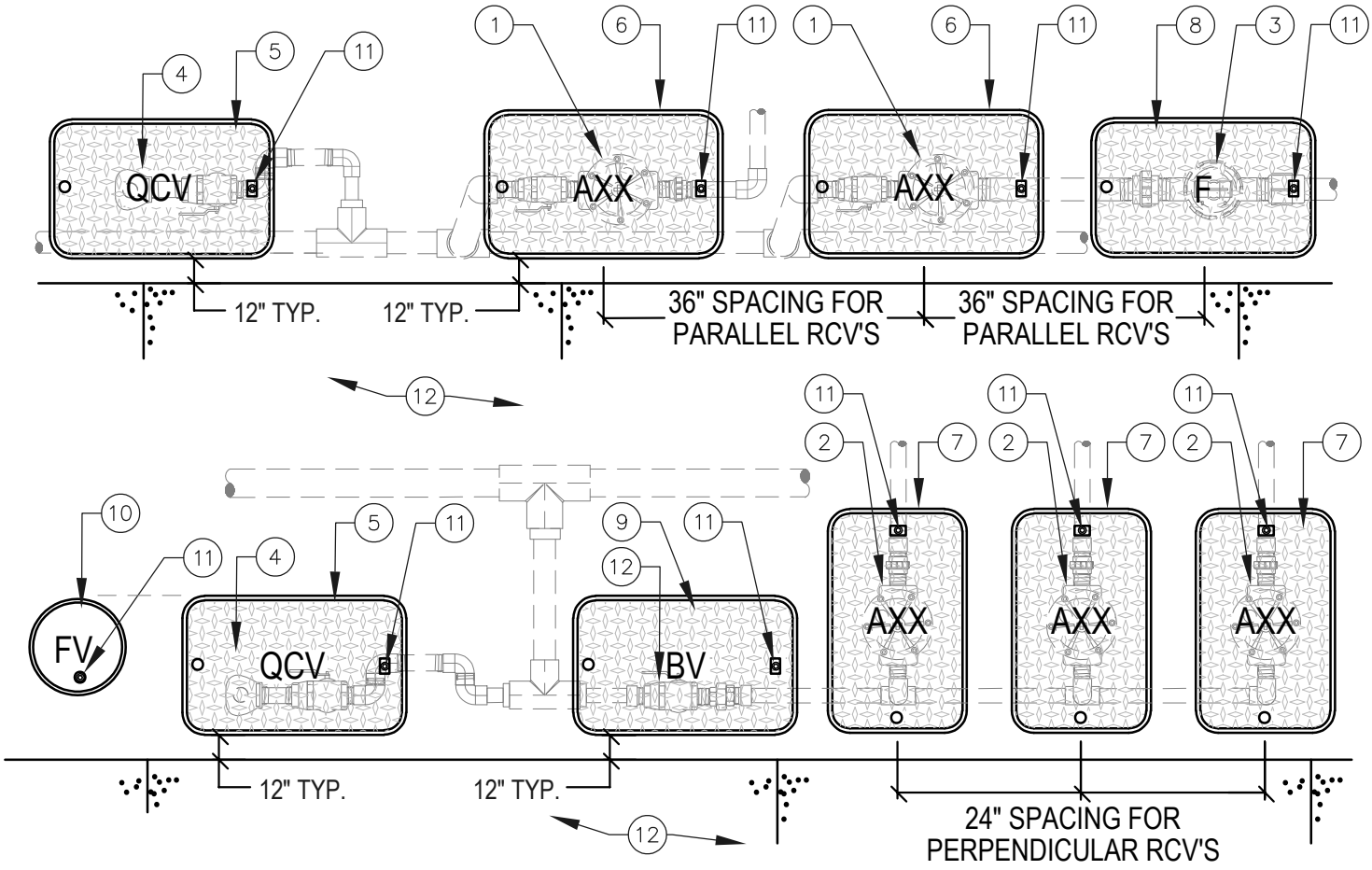
VALLEY-WIDE RECREATION AND PARK DISTRICT

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TYPICAL VALVE AT MANIFOLD

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

ID-18



(1) REMOTE CONTROL VALVE WITHOUT MANIFOLD - USE JUMBO RECTANGLE VALVE BOX.
(2) REMOTE CONTROL VALVE AT MANIFOLD - USE STANDARD RECTANGLE VALVE BOX.
(3) BASKET FILTER PER DETAIL ID-14 - USE STANDARD OR JUMBO RECTANGLE VALVE BOX AS NEEDED.
(4) QUICK COUPLER VALVE PER DETAIL ID-15 - USE STANDARD RECTANGLE VALVE BOX.
(5) STANDARD RECTANGLE VALVE BOX PER SPECS. HEAT BRAND "QCV".
(6) JUMBO RECTANGLE VALVE BOX PER SPECS. HEAT BRAND TIMER AND STATION # .
(7) STD. RECTANGLE VALVE BOX PER SPECS. HEAT BRAND TIMER AND STATION # .
(8) STANDARD OR JUMBO RECTANGLE VALVE BOX FOR BASKET FILTER PER SPECS. HEAT BRAND "F".
(9) STANDARD RECTANGLE VALVE BOX FOR ISOLATION VALVE PER SPECS. HEAT BRAND "BV" OR "GV".
(10) 10" ROUND VALVE BOX FOR FLUSH VALVE PER SPECS. HEAT BRAND "FV" WITH LETTERING FACING WALKWAY.
(11) STAINLESS STEEL BOLT AT EACH VALVE BOX PER SPECS.
(12) WALKWAY OR CURB. ALL LETTERING MUST FACE NEAREST WALKWAY OR ACCESS POINT.

NOTES: ALL VALVES MUST BE CENTERED AND INSTALLED PLUMB INSIDE VALVE BOX.
ALL VALVES MUST BE IN PLANTER AREAS WHENEVER POSSIBLE.
VALVE BOXES MUST BE ALIGNED WITH EACH OTHER.
VALVE BOX LAYOUTS TO BE PARALLEL WITH CURB OR WALKWAY WITHIN NARROW AREAS.
VALVE BOX LAYOUTS CAN BE PERPENDICULAR IN LARGER AREAS.
ALL HEAT BRANDING MUST BE DONE WITH 2" TALL BRASS CHARACTERS ALIGNED AND CENTERED ON BOX.

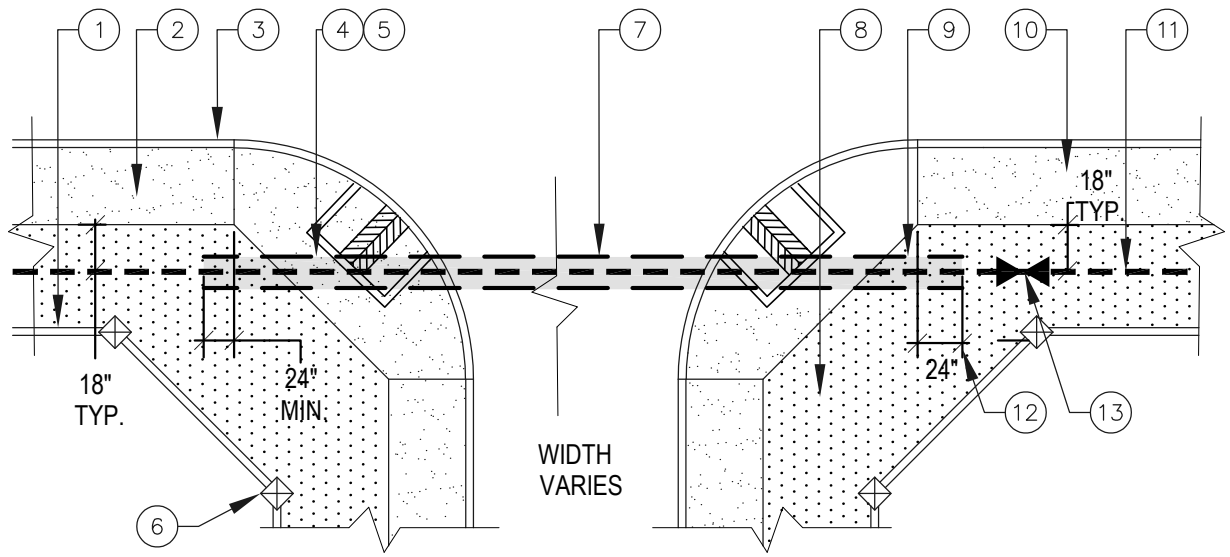
VALLEY-WIDE RECREATION AND PARK DISTRICT

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TYPICAL VALVE BOX LAYOUT

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

ID-19



1. TRACT BLOCK WALL.
2. STREET WALKWAY.
3. STREET TYP. CURB.
4. IRRIGATION SLEEVES AS REQUIRED, EXTEND 24" BEYOND EDGE OF CURB RADIUS AND 7'-6" FROM THE STREET CURB TYP.
5. PROVIDE MAINLINE, WIRING AND LATERAL SLEEVING PER PLAN AND PER DETAIL ID-21.
6. BLOCK PILASTER TYP.
7. PROVIDE SEPARATE SLEEVE FOR WIRING PER SPECS.
8. TYPICAL PLANTER/ MONUMENT ENTRANCE.
9. ALL SLEEVING MUST EXTEND PAST CONCRETE RAMPS AND WALKWAYS.
10. 18" FROM BACK OF WALKWAY TYP. (7'-6" FROM CURB FACE).
11. MAINLINE PER PLAN, SPECS AND DETAIL ID-21. INSTALL 18" FROM BACK OF WALKWAY.
12. 24" BEYOND BEGINNING CURB RADIUS (BCR) TYP.
13. ISOLATION VALVE PRIOR TO STREET CROSSING PER DETAILS ID-16 & ID-17.

NOTES

ISOLATION VALVE REQUIRED ON UPSTREAM SIDE PRIOR TO STREET CROSSINGS.
PIPING MUST BE 4" MIN. FROM EACH OTHER AND 24" FROM OTHER UTILITY LINES.
ALL SLEEVES MUST BE SCHEDULE 40 TWO TIMES (2X) THE SIZE OF THE LINE SIZE.
ALL SLEEVES MUST HAVE A MIN. COVER OF 24" AND NO DEEPER THAN 48".
ALL SLEEVES MUST BE INSTALLED WITHIN VALLEY-WIDE MAINTAINED AREAS.
SLEEVES MUST BE INSTALLED TO ALLOW FOR FUTURE ACCESS TO ENDS WITHOUT OBSTRUCTION.

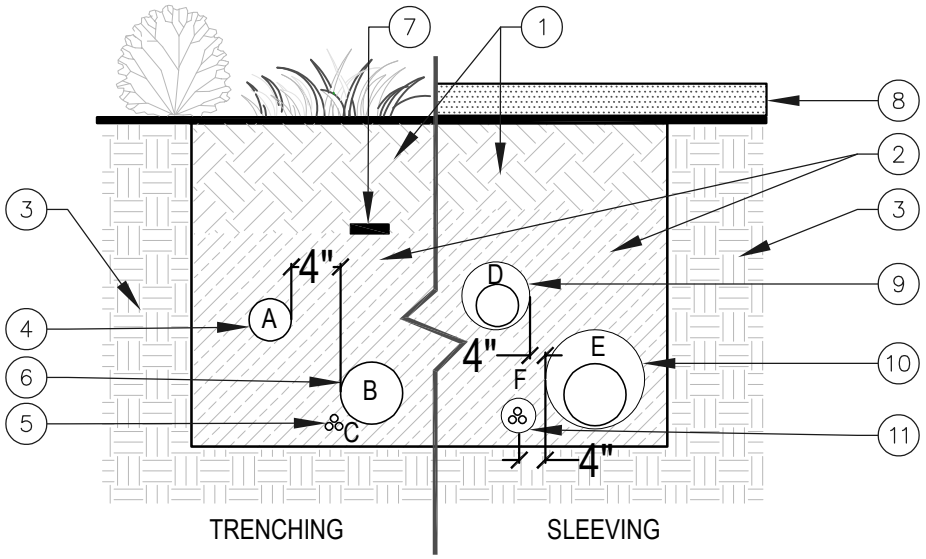
VALLEY-WIDE RECREATION AND PARK DISTRICT

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TYPICAL STREET CROSSING (PLAN VIEW)

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

ID-20



DEPTH	A	B	C	D	E	F
4" & LARGER	-	30"	30"	36"	36"	36"
3" & SMALLER	18"	24"	24"	30"	36"	36"
2-1/2" & SMALLER	12"	24"	24"	24"	30"	30"
WIRING	-	-	BELOW MAIN	-	-	BELOW MAIN

(1) CLEAN NATIVE 90% COMPACTED BACKFILL PER SOIL SPECS. UNDER LANDSCAPE.
(2) SAND SHADING WHEN REQUIRED PER PLAN AND SPECS.
(3) UNDISTURBED NATIVE SOIL.
(4) LATERAL LINE.
(5) CONTROL WIRING. USE CONDUIT WHEN 2-WIRE IS SPECIFIED.
(6) MAINLINE PER PLAN (SCHEDULE PER SPECS.)
(7) METALLIC WARNING TAPE WITH APPLICABLE WATER LINE TYPE TEXT (6" ABOVE PIPE)
(8) HARDSCAPE PER PLAN.
(9) LATERAL SLEEVE PER PLAN (SCHEDULE PER SPECS.)
(10) MAINLINE SLEEVE PER PLAN (SCHEDULE PER SPECS.)
(11) WIRE SLEEVE PER PLAN (SCHEDULE PER SPECS.)

NOTES: PIPES MUST HAVE MIN. CLEARANCE OF 4" FROM EACH OTHER AND 24" FROM OTHER TRADES.
RUN WIRING UNDER MAINLINE , TAPE AND BUNDLE AT 10' O.C.
PROVIDE A 24" WIRING LOOP AT ALL CHANGES OF DIRECTION.
ALL SLEEVES MUST BE 2 TIMES THE DIAMETER OF THE PIPE WITHIN.
ALL SLEEVES MUST HAVE FOAM AT PIPE OPENING TO PREVENT DIRT ENTRY.
ALL SLEEVES MUST EXTEND 12" MIN. DISTANCE PAST CURB OR WALKWAY.
CONTRACTOR MUST ADJUST MAINLINE AROUND ALL STREET LIGHT LOCATIONS.

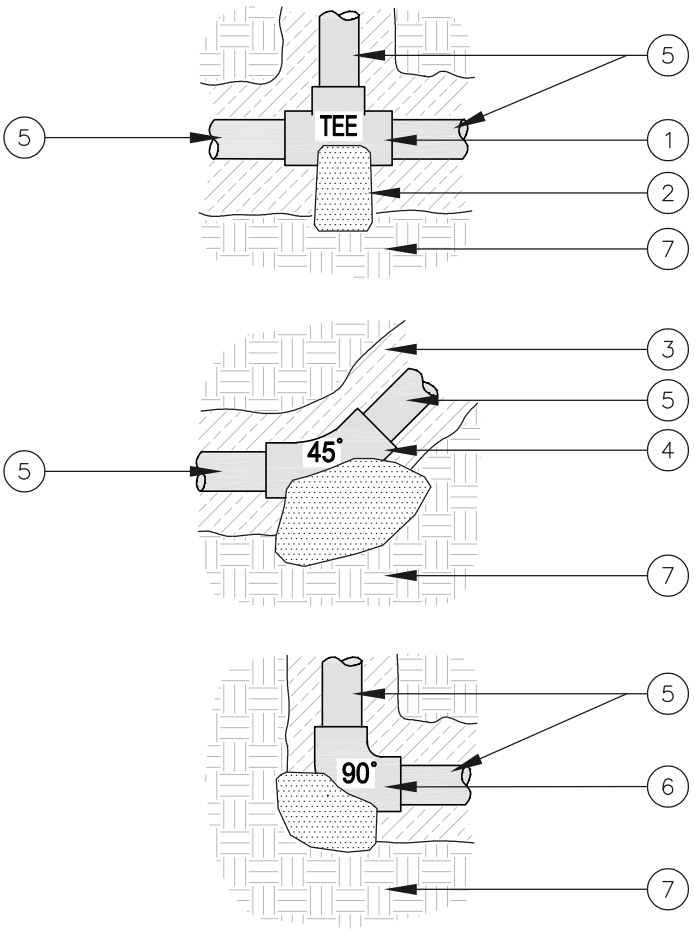
VALLEY-WIDE RECREATION AND PARK DISTRICT

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TRENCHING & SLEEVING

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

ID-21



1. MAINLINE TEE PER SPECS.
2. CONCRETE THRUST BLOCK TYP.
3. CLEAN NATIVE 90% COMPACTED BACKFILL PER SOIL SPECS. (SAND SHADING WHEN REQUIRED PER PLAN AND SPECS.
4. MAINLINE 45 ELL PER SPECS.
5. MAINLINE PER SPECS. TYP.
6. MAINLINE ELL 90 PER SPECS.
7. UNDISTURBED NATIVE SOIL.

NOTES

SUPPLY LINES 2" AND LARGER IN DIAMETER SHALL RECIEVE CONCRETE THRUST BLOCKS.
SUPPLY LINES OVER 3" SHALL HAVE IRON DUCTILE RESTRAINT SYSTEM AND THRUST BLOCKS.
A MINIMUM OF 6" OF CONCRETE SHALL BE POURED ON VIRGIN OR COMPACTED SOIL.
CONCRETE SHALL BE 3 SACK MIX SLURRY CONTAINING NO GRAVEL.
WHERE CONCRETE AND PVC ARE TOGETHER PVC PIPE SHALL BE PROTECTED WITH 6 MIL PLASTIC.

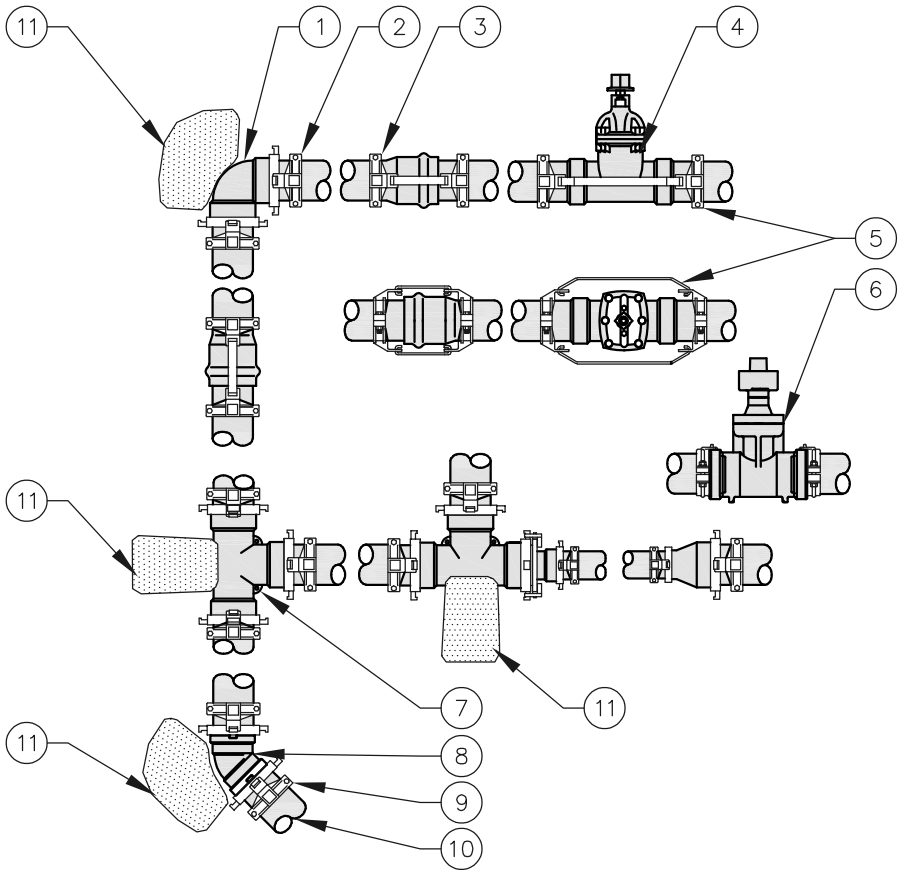
VALLEY-WIDE RECREATION AND PARK DISTRICT

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THRUST BLOCK 3" MAIN & SMALLER

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

ID-22



1. EPOXY COATED IRON DUCTILE GASKETED 90 DEGREE ELBOW.
2. JOINT RESTRAINT WITH STAINLESS STEEL LUGS TYP.
3. JOINT RESTRAINT FOR BELL & GASKET COUPLING (PIPE TO PIPE) LPP-SERIES MAY BE APPROVED AS DIRECTED BY DISTRICT. ALL BELL & GASKETS MUST HAVE RESTRAINTS.
4. GASKETED GATE VALVE WITHOUT BUILT-IN RESTRIANT.
5. LG-SERIES RESTRAINT IF LEEMCO GATE VALVE IS NOT USED.
6. LEEMCO GATE VALVE WITH BUILT IN RESTRAINT.
7. EPOXY COATED IRON DUCTILE GASKETED TEE.
8. EPOXY COATED IRON DUCTILE GASKETED 45 OR 22-1/2 DEGREE ELL.
9. JOINT RESTRAINT WITH STAINLESS STEEL LUGS TYP.
10. GASKETED MAINLINE PER SPECS.
11. THRUST BLOCK TYP.

NOTES

ALL IRON DUCTILE FITTINGS SHALL BE EPOXY COATED WITH INNER GASKET PER SPECS.
ALL FITTINGS AND BELL AND GASKET COUPLINGS SHALL BE RESTRAINED AS SHOWN ABOVE.
ALL LUGS SHALL BE STAINLESS STEEL AND TIGHTENED PER MANUFACTURER TORQUE CHART.

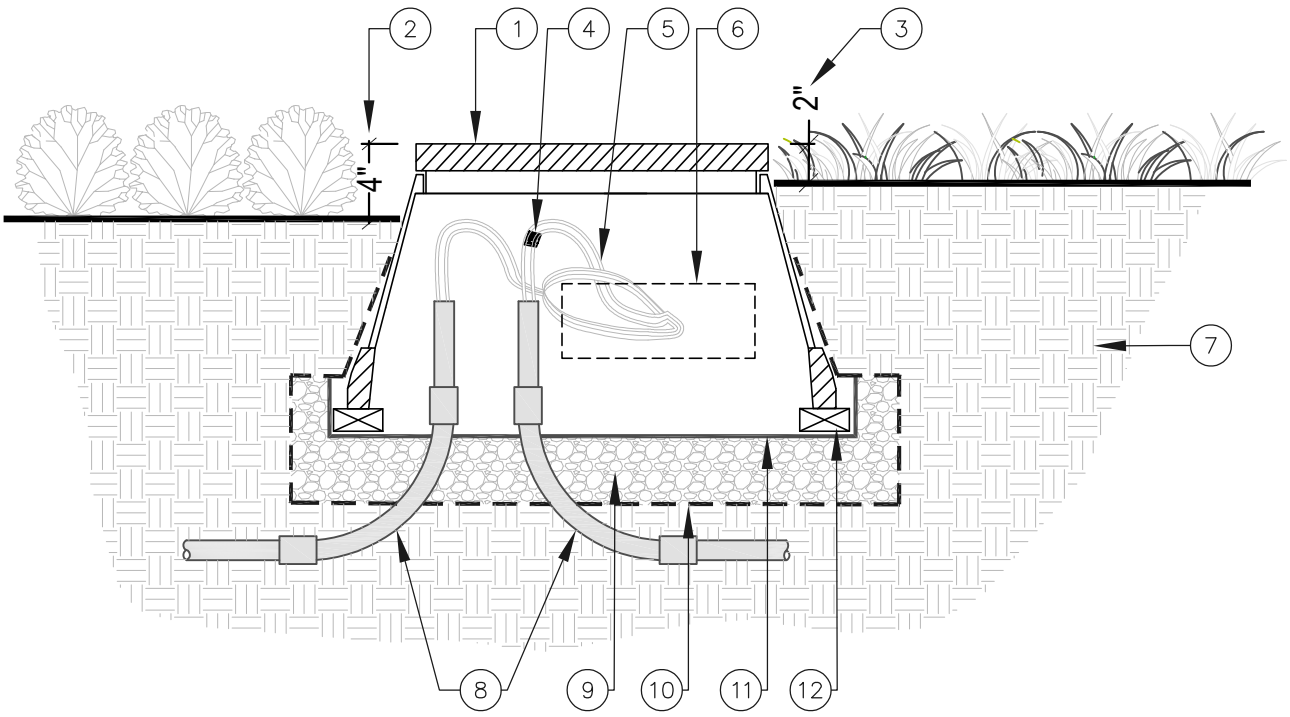
VALLEY-WIDE RECREATION AND PARK DISTRICT

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MAINLINE RESTRAINTS 4" & LARGER

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

ID-23



1. RECTANGULAR VALVE BOX W/ LOCKING STAINLESS STEEL BOLT, HEAT BRAND "PB".
2. SET BOX 4" ABOVE GRADE IN PLANTER AREAS.
3. SET BOX 2" ABOVE GRADE IN TURF AREAS.
4. APPROVED WIRE CONNECTOR.
5. 24" MIN. EXPANSION COILS.
6. SPACE FOR WIRE COIL.
7. NATIVE SOIL COMPACTED TO ORIGINAL DENSITY.
8. PVC CONDUIT SWEEP FOR IRRIGATION CONTROL WIRING (WHEN SPECIFIED).
9. 3 CU.FT. 3/4" GRAVEL
10. FILTER FABRIC BELOW GRAVEL.
11. 1/2" GALVANIZED MESH ABOVE GRAVEL.
12. COMMON BRICK (4 EA. PER RECTANGLE BOX).

NOTES
- ALL WIRING MUST CONFORM TO LOCAL CODES.
- PROVIDE 24" MIN. EXPANSION COILS AT EACH WIRE CONNECTION.
- PROVIDE 3" CLEARANCE BETWEEN WIRES & BOX.
- FOAM SEAL ALL GAPS BETWEEN WIRE AND CONDUIT AT EXPOSED SWEEP ENDS.
- NO WIRE SPLICES SHALL BE ALLOWED UNLESS APPROVED BY THE DISTRICT.
- ALL SPARE WIRES FOR END OF RUN SHALL BE IN A PULL BOX TYP. AND SHALL BE LABELED IN BOX AND AT CONTROLLER.
- PROVIDE PULL BOX FOR ALL WIRE SPLICES FOR RUNS OVER 2500 FEET OR APROVED AND TEE INTERSECTIONS PER 2-WIRE APPLICATIONS.

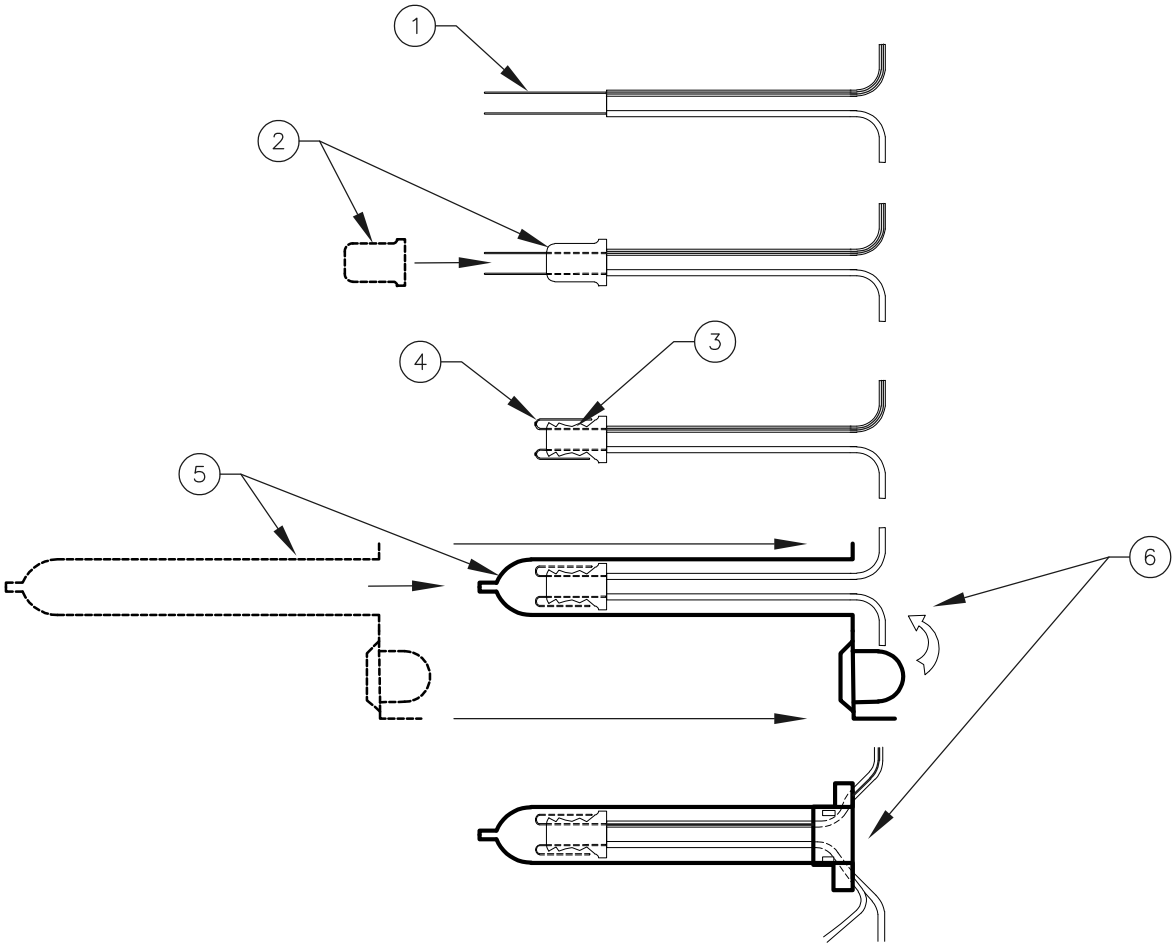
VALLEY-WIDE RECREATION AND PARK DISTRICT

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PULL BOX

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

ID-24



1. STEP 1: STRIP WIRES WITH AT LEAST 1 INCH OF WIRE EXPOSED FROM WIRE INSULATION .
2. STEP 2: SLIDE COPPER SPLICE CAP OVER WIRES TO EDGE OF WIRE INSULATION.
3. STEP 3: CRIMP COPPER SPLICE CAP TO WIRES USING A BUCANAN C24 CRIMPER TOOL.
4. STEP 4: BEND EXCESS WIRES BACK TO COPPER SPLICE CAP AND CRIMP FOLDED BACK WIRES TO CAP.
5. STEP 5. INSERT THE GEL-FILLED INSULATOR TUBE OVER THE SPLICE. PUSH PAST THE LOCKING FINGERS TO HOLD THE SCOTCHLOK CONNECTOR IN PLACE.
6. STEP 6: POSITION WIRE INTO WIRE CHANNELS AND SNAP INSULATOR TUBE COVER CLOSED.

NOTES

PROVIDE WIRE CONNECTORS FOR ALL CONTROL WIRE SPLICES.

PROVIDE WIRE CONNECTORS AT ENDS OF ALL EXTRA WIRES.

WIRE SPLICES SHALL BE INSIDE VALVE BOXES AT VALVES OR FOR RUNS OVER 2500 FEET.

PROVIDE #12 CONTROL WIRE & #10 COMMON WIRE FOR RUNS OVER 2500 FEET.

MASTER VALVE AND FLOW SENSOR MUST BE CONNECTED WITH APPROVED CONNECTORS PER SPECS.

INSTALL WIRING PER DETAIL ID-21.

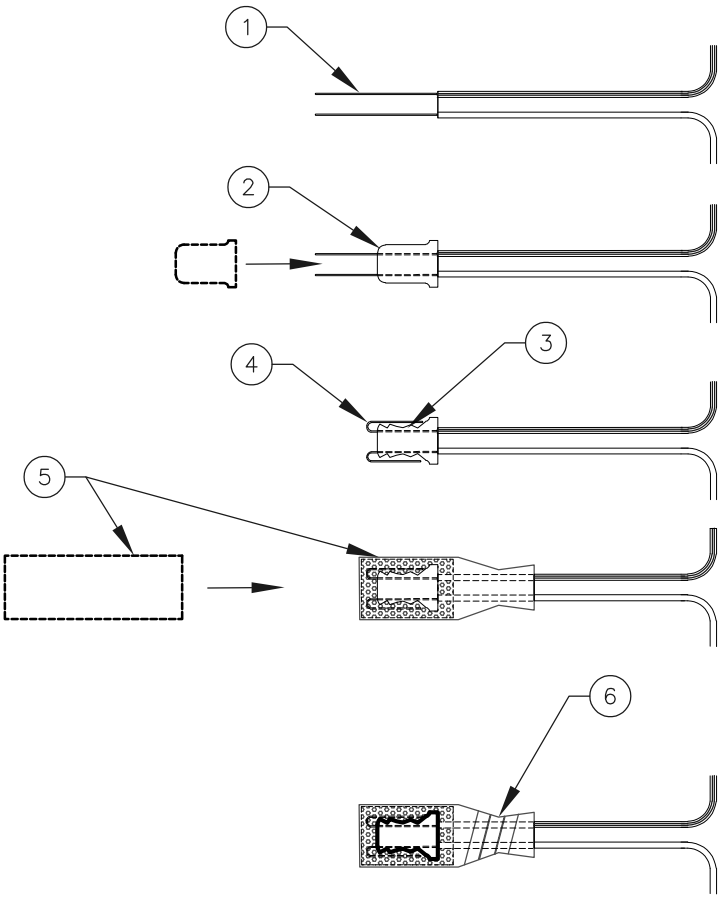
VALLEY-WIDE RECREATION AND PARK DISTRICT

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WIRE CONNECTORS (CONVENTIONAL WIRE)

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

ID-25



1. STEP 1: STRIP WIRES WITH AT LEAST 1 INCH OF WIRE EXPOSED FROM WIRE INSULATION .
2. STEP 2: SLIDE COPPER SPLICE CAP OVER WIRES TO EDGE OF WIRE INSULATION.
3. STEP 3: CRIMP COPPER SPLICE CAP TO WIRES USING A BUCANAN C24 CRIMPER TOOL.
4. STEP 4: BEND EXCESS WIRES BACK TO COPPER SPLICE CAP AND CRIMP FOLDED BACK WIRES TO CAP.
5. STEP 5: SLOWLY INSERT THE SEALING PACK OVER THE SPLICE UNTIL IT FITS SNUGLY AGAINST THE OPPOSITE END.
6. STEP 6: WRAP OPEN END OF BAG WITH ELECTRICAL TAPE AND POSITION THE TAPED END UP UNTIL RESIN GELS.

NOTES

PROVIDE WIRE CONNECTORS FOR ALL CONTROL WIRE SPLICES.
PROVIDE WIRE CONNECTORS AT ENDS OF ALL EXTRA WIRES.
WIRE SPLICES SHALL BE INSIDE VALVE BOXES AT VALVES OR FOR RUNS OVER 2500 FEET.
ALL WIRE IN 2-WIRE SYSTEM SHALL BE INSTALLED IN A 1-1/4" MIN. CONTINUOUS CONDUIT.
SEALING PACKS SHALL BE SCOTCHCAST 3570-G-N PER SPECS OR APPROVED EQUAL.
INSTALL WIRING PER DETAIL ID-21.

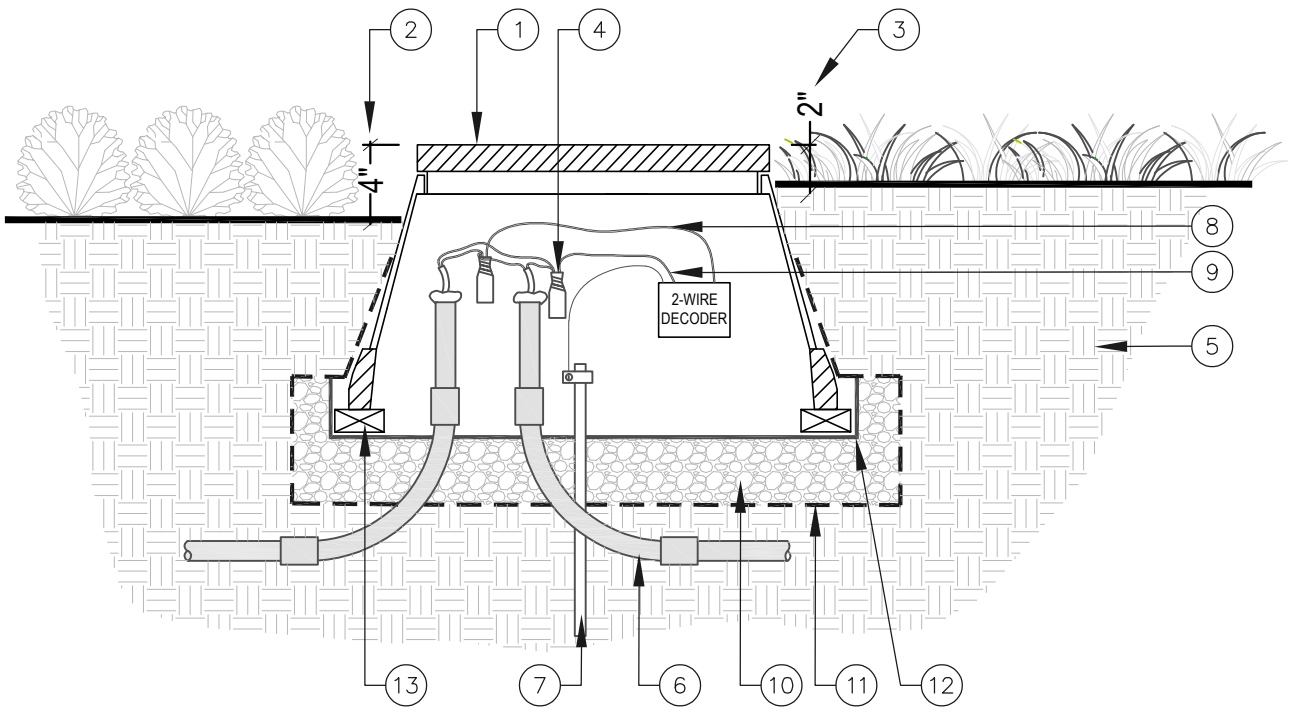
VALLEY-WIDE RECREATION AND PARK DISTRICT

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WIRE CONNECTORS (2-WIRE)

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

ID-26



1. RECTANGLE VALVE BOX W/ LOCKING STAINLESS STEEL BOLT.
2. SET BOX 4" ABOVE GRADE IN PLANTER AREAS.
3. SET BOX 2" ABOVE GRADE IN TURF AREAS.
4. APPROVED WIRE CONNECTOR.
5. NATIVE SOIL COMPACTED TO ORIGINAL DENSITY.
6. PVC CONDUIT SWEEP.
7. 5/8" COPPER GROUNDING ROD PER SPECS.
8. WIRES CONNECTING BACK TO VALVE SOLENOID.
9. WIRES CONNECTING TO 2-WIRE CABLE.
10. 3 CU.FT. 3/4" GRAVEL
11. FILTER FABRIC BELOW GRAVEL.
12. 1/2" GALVANIZED MESH ABOVE GRAVEL.
13. COMMON BRICK (3 EA. PER RECTANGLE BOX).

NOTES

PROVIDE GROUNDING ROD AT CONTROLLER, ONE EVERY 300 FEET (OR THE NEXT CLOSEST DECODER) AND ONE AT END OF EACH TWO WIRE SYSTEM.

WIRE CONNECTORS SHALL BE 3M SCOTCHCAST 3570G-N OR APPROVED EQUAL.

ALL 2-WIRE SHALL BE INSTALLED IN A 1.25" MIN CONTINUOUS CONDUIT.

FOAM SEAL ALL GAPS BETWEEN WIRE AND CONDUIT EXPOSED SWEEP ENDS.

MAX DISTANCE 100' BETWEEN STATION DECODER AND VALVE OR 10' POC DECODER AND MASTER VALVE AND FLOW METER.

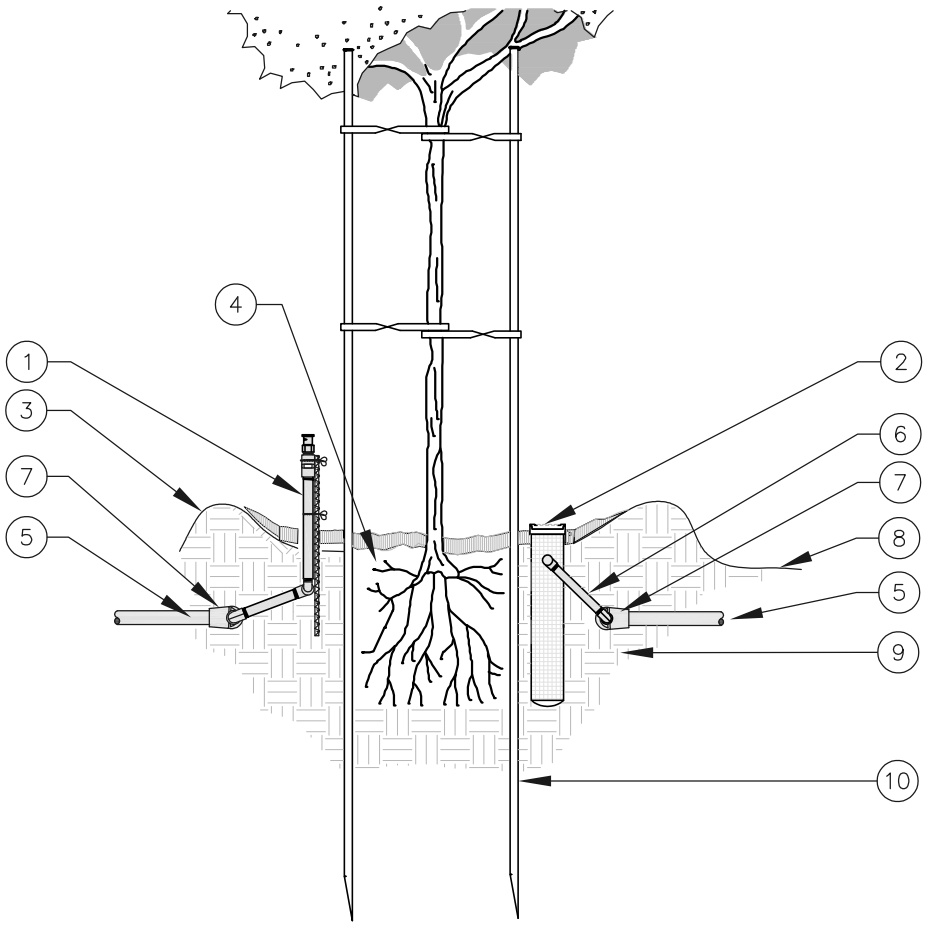
VALLEY-WIDE RECREATION AND PARK DISTRICT

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2-WIRE - GROUNDING ROD & DECODER

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

ID-27



1. BUBBLER ON RISER PER PLAN, SPECS AND DETAIL ID-35. BUBBLER FLOW RATE TO MATCH RWS FLOW RATE.
2. ROOT WATER SYSTEM (RWS) WITH 4" FLAT DRAIN CAP WITH VANDAL PROOF SCREW (PURPLE WHEN RW IS USED).
3. TREE BASIN PER SPECS. AND PLANTING DETAILS.
4. TREE ROOTBALL TYP.
5. PVC LATERAL PER SPECS. AND LATERAL DETAILS.
6. PRE-ASSEMBLED SWING JOINT.
7. SCHEDULE 40 PVC TEE OR ELBOW LINE SIZED REDUCED TO SWING JOINT SIZE.
8. FINISH GRADE.
9. NATIVE SOIL COMPACTED TO ORIGINAL DENSITY.
10. TREE STAKE PER PLANTING DETAILS.

NOTES

PROVIDE ONE BUBBLER AND ONE RWS PER TREE. BUBBLER SHALL BE ON THE LOW SIDE OF TREE.

PROVIDE PERFORATED PVC PIPE BREATHER TUBES PER TREE DETAILS IN ADDITION TO RWS.

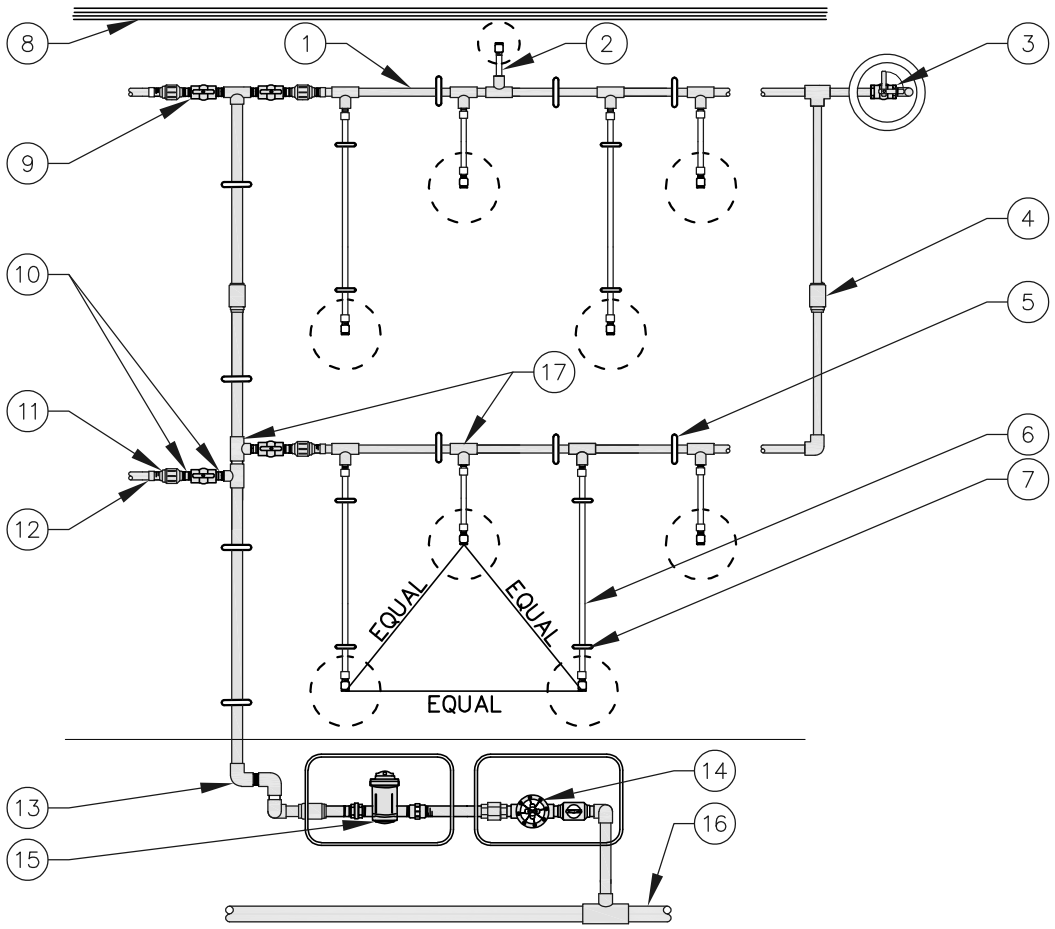
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TREE ROOT WATERING SYSTEM

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

ID-28



1. UVR LATERAL PIPING WHEN ON GRADE. NON-UVR LATERAL PIPING WHEN BURIED.
2. VINE EMITTER AT 10' O.C. SPACING (WHEN SPECIFIED).
3. FLUSH VALVE END CAP PER DETAIL ID-32 - 200' MAX. DISTANCE PER DETAIL ID-32.
4. SWING CHECK VALVE BELOW EACH HORIZONTAL LINE PER DETAIL ID-33.
5. EPOXY COATED J-HOOKS PER SPECS.
6. EMITTER ASSEMBLY PER DETAIL ID-30 & ID-31.
7. 9" PVC COATED GALVANIZED STAPLE.
8. TOP OF SLOPE AGAINST FENCE OR WALL.
9. PVC BALL VALVE TYP. (LINE SIZE).
10. SCHEDULE 80 NIPPLE TYP. (SIZE AS NEEDED).
11. PRESSURE REGULATOR PER DETAIL ID-33.
12. UVR MALE ADAPTER TYP. (LINE SIZE).
13. UVR ELLS FOR SLOPE GRADE TRANSITION WHEN APPLICABLE.
14. REMOTE CONTROL DRIP VALVE PER DETAIL ID-14 12" FROM WALKWAY TYP.
15. BASKET FILTER PER DETAIL ID-14.
16. MAINLINE PER SPECS.
17. SLIP x FEMALE THREAD UVR SCH 40 TEE.

NOTES

ALL PIPING FOR POINT TO POINT LATERALS ON FLAT AREAS SHALL BE BURIED 4" DEEP PER SPECS. PIPING SHALL BE UVR PVC AND HAVE J-HOOKS PER DETAILS AND SPECS.

ALL UVR PIPE JOINTS AND FITTINGS BELOW AND ABOVE GRADE SHALL BE PRIMED.

PIPING ELEVATION SHALL NOT EXCEED 18" OF ELEVATION CHANGE.

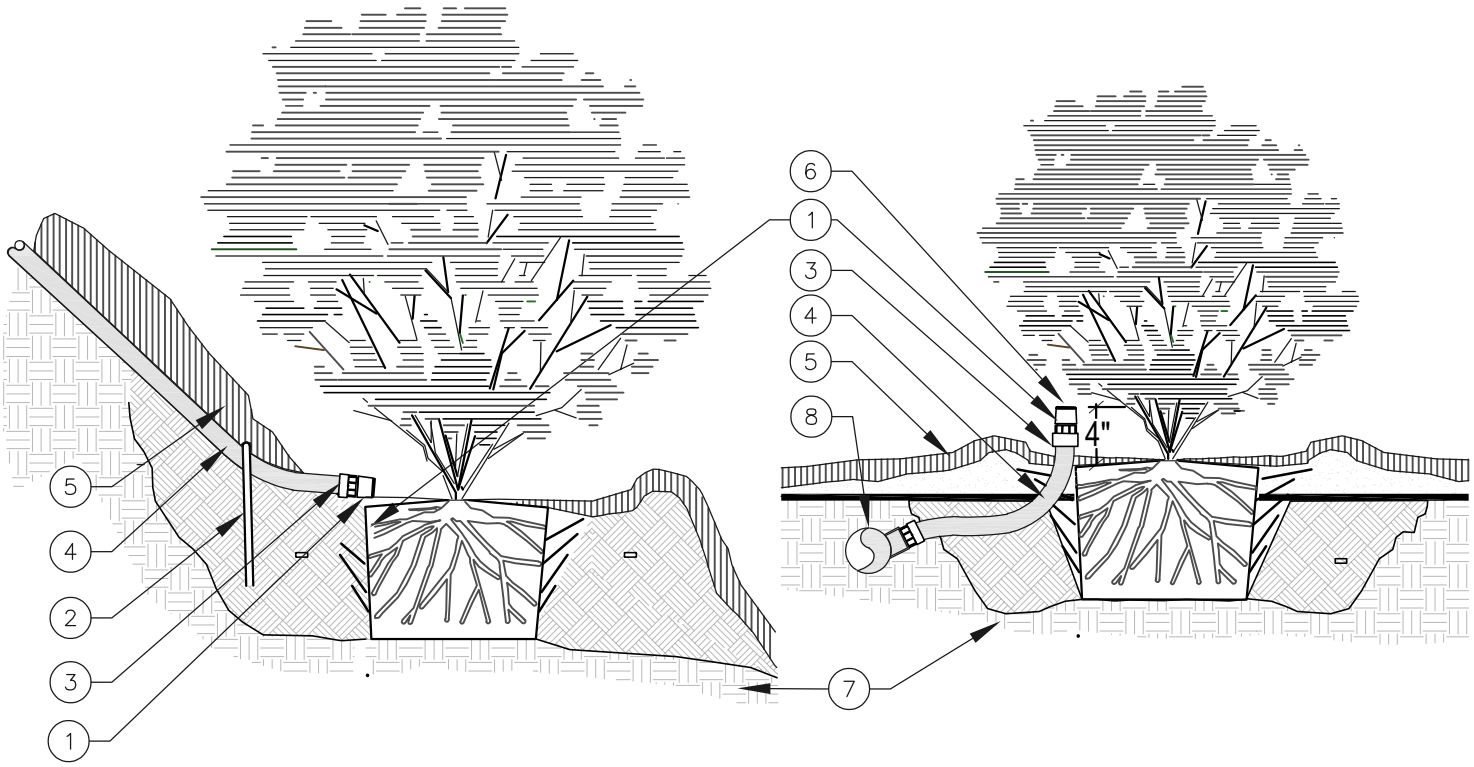
VALLEY-WIDE RECREATION AND PARK DISTRICT

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POINT TO POINT LATERAL LAYOUT

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

ID-29



1. EMITTER PER SPECS. EMITTER TO BE LOCATED AT REAR OF PLANT ROOTBALL.
2. 9" PVC COATED GALVANIZED STAPLE.
3. BLACK UVR MALE ADAPTER.
4. TUBING PER SPECS.
5. BARK MULCH PER SPECS.
6. EMITTER TO BE LOCATED AT EDGE OF PLANT ROOTBALL ABOVE TOP OF MULCH AND 4" ABOVE ROOTBALL.
7. NATIVE SOIL COMPACTED TO ORIGINAL DENSITY.
8. SLIP X FEMALE THREAD UVR SCH 40 TEE.

NOTES

TUBING TO BE BURIED 4" IN FLAT AREAS WITH EMITTER ABOVE TOP OF MULCH.

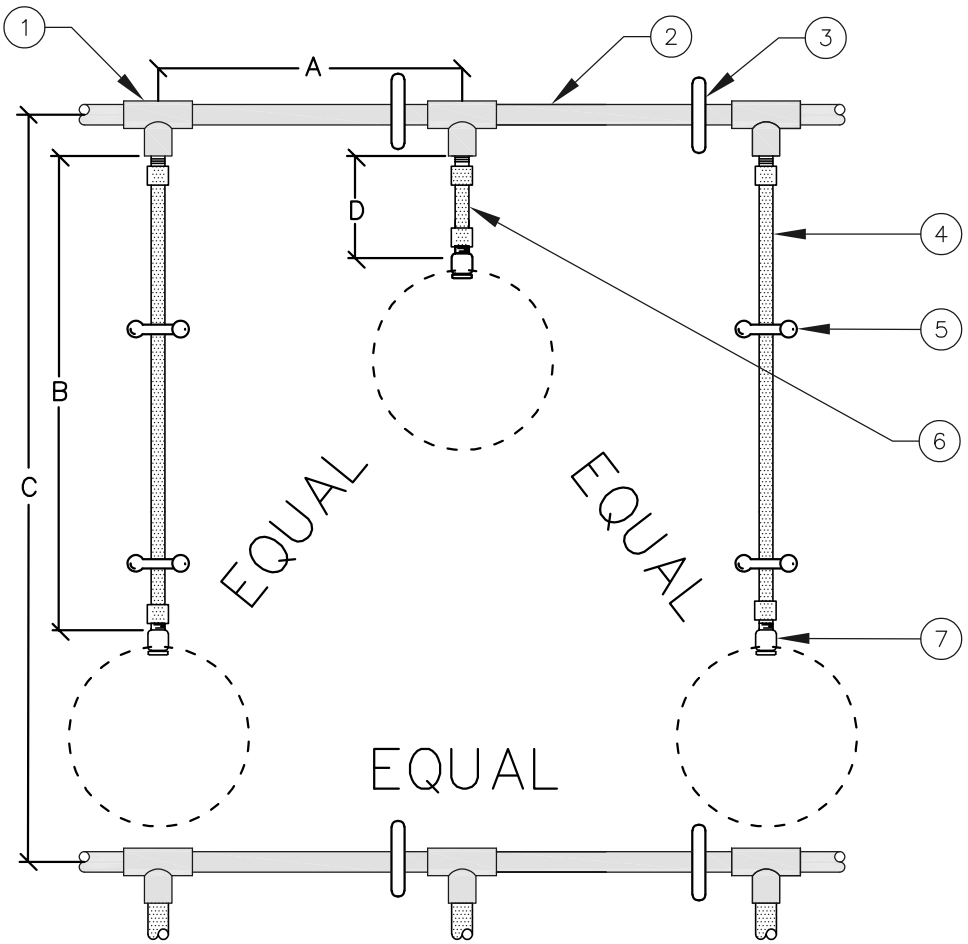
VALLEY-WIDE RECREATION AND PARK DISTRICT

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EMITTER ASSEMBLY SECTION VIEW

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

ID-30



PLANT SPACING	A	B	C	D
2' O.C.	18"	32"	42"	12"
3' O.C.	18"	42"	5'0"	12"
4' 0.C.	24"	54"	7'0"	12"
5' O.C.	30"	64"	8'8"	12"

1. UVR SxSxT TEE (SIZE PER LATERAL LINE).
2. UVR LATERAL LINE (SIZE PER PLAN).
3. EPOXY COATED REBAR J-HOOK PER SPECS.
4. TUBING RISER PER SPECS.
5. 9" PVC COATED GALVANIZED STAPLE.
6. RISER ASSEMBLY PER SPECS.
7. EMITTER PER SPECS.

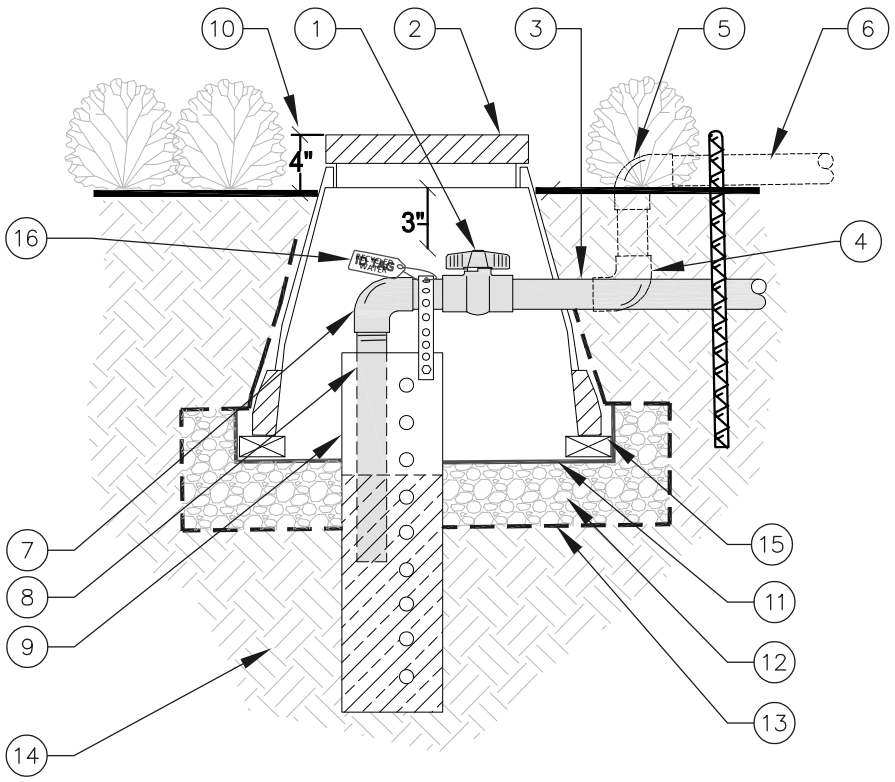
VALLEY-WIDE RECREATION AND PARK DISTRICT

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SHRUB EMITTER ASSEMBLY LAYOUT

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

ID-31



1. 3/4" SCHEDULE 80 PVC BALL VALVE.
2. 10" ROUND VALVE BOX W/ LOCKING SS BOLT HEAT BRAND "FV".
3. SCHEDULE 40 PIPING.
4. 3/4" SCHEDULE 40 ELL.
5. 3/4" UVR SCHEDULE 40 ELL.
6. UVR PVC PIPING (WHEN SPECIFIED).
7. SCHEDULE 80 ELL SXT.
8. 3/4" x 12" SCHEDULE 80 NIPPLE.
9. 4" PERFORATED PIPE 36" LONG, SET 2" BELOW BOTTOM OF VALVE. WRAP PIPE WITH FILTER SOCK.
10. SET BOX 4" ABOVE GRADE IN PLANTER AREAS.
11. 1/2" GALVANIZED MESH ABOVE GRAVEL.
12. 3 CU.FT. 3/4" GRAVEL.
13. FILTER FABRIC BELOW GRAVEL.
14. NATIVE SOIL COMPACTED TO ORIGINAL DENSITY.
15. COMMON BRICK (3 EA. PER ROUND BOX).
16. PROVIDE PURPLE "FV" ID TAG WHEN RECYCLED WATER IS USED.

NOTES

PROVIDE 3" CLEARANCE BETWEEN VALVE & BOX.

SECURE END OF FLUSH LINE PIPING TO 4" DRAIN PIPE WITH PLUMBER'S TAPE.

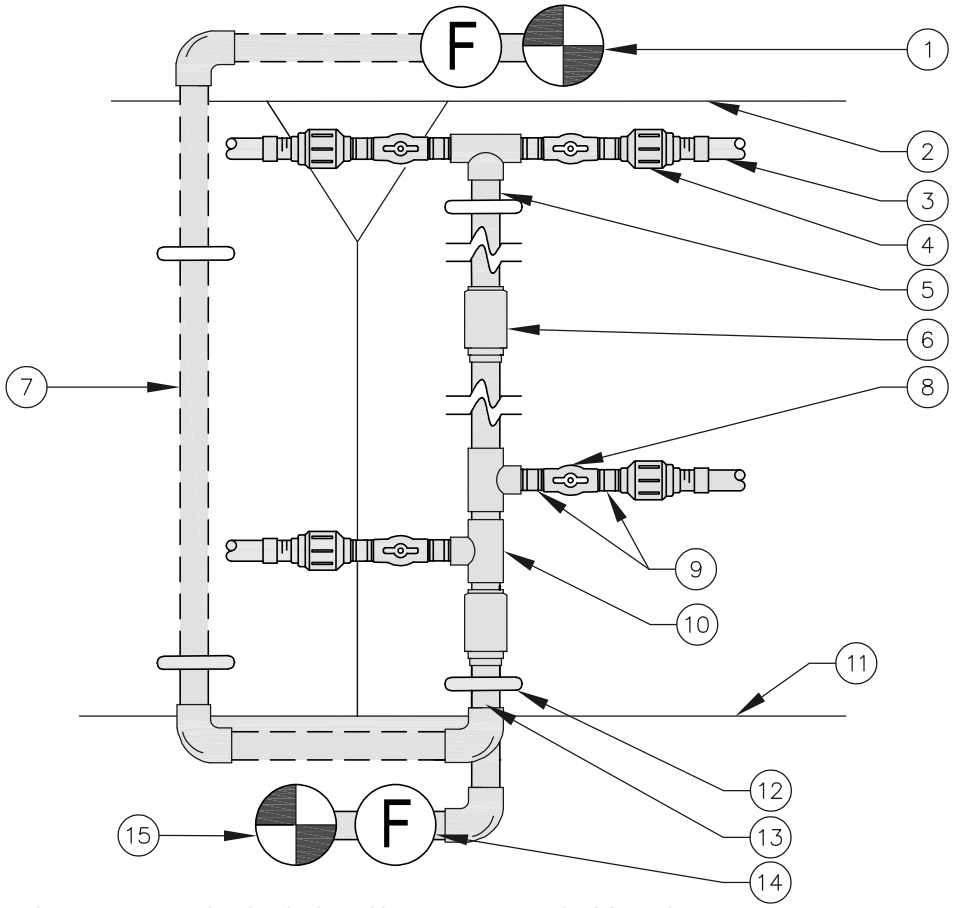
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FLUSH VALVE ASSEMBLY

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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ID-32



1. REMOTE CONTROL VALVE AT TOP OF SLOPE (ONLY WHEN NECESSARY).
2. TOP OF SLOPE.
3. SCHEDULE 40 UVR PVC PIPE PER SPECS (SIZE PER PLAN).
4. INLINE PRESSURE REGULATOR.
5. SCHEDULE 40 PVC FROM VALVE, UVR IF ON GRADE ONLY.
6. PVC SWING CHECK VALVE OR SPRING CHECK VALVE.
7. SCHEDULE 40 UVR PVC FROM VALVE WHEN INSTALLED AT TOP OF SLOPE.
8. 3/4" SCHEDULE 80 PVC BALL VALVE THREADED.
9. 3/4" x 6" SCHEDULE 80 NIPPLE. USE CUT NIPPLE FOR TOP OF LINE WHERE TEE IS SLIP x SLIP.
10. SCHEDULE 40 UVR TEE LINE SIZE BY 3/4" S x S x T.
11. TOE OF SLOPE.
12. EPOXY COATED REBAR J-HOOK AT 8' SPACING.
13. SCHEDULE 40 PVC PIPE TO FILTER AND VALVE, UVR IF ON GRADE ONLY.
14. BASKET FILTER PER DETAIL ID-14.
15. REMOTE CONTROL VALVE AT TOE OF SLOPE (TYPICAL CONFIGURATION)

NOTES

FLUSH LATERAL LINES COMPLETELY BEFORE INSTALLATION OF PRESSURE REGULATORS.

ALL PIPING SHALL BE PRIMED PRIOR TO GLUE APPLICATION PER SPECS.

CHECK VALVES SHALL BE SIZED AND INSTALLED PER MANUFACTURER'S SPECS.

VALLEY-WIDE RECREATION AND PARK DISTRICT

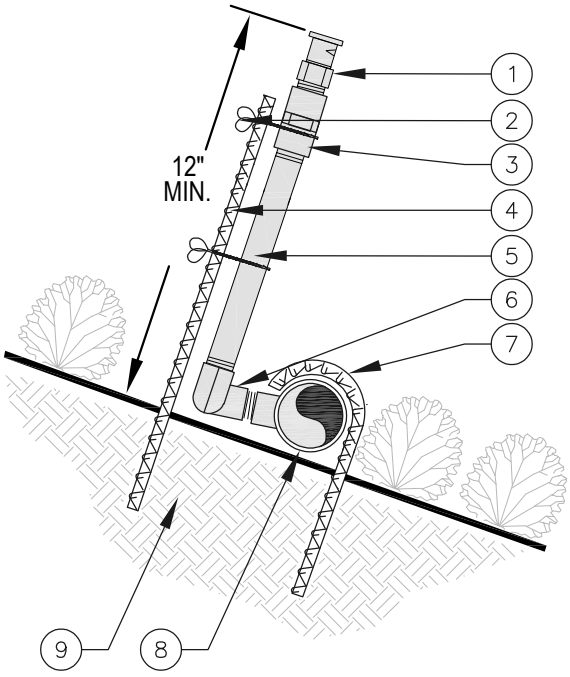
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CHECK VALVE & PRESSURE REGULATOR

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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ID-33

PROVIDE RW DECAL WHEN RECYCLED WATER IS USED.



1. SHRUB ADAPTER AND NOZZLE PER LEGEND AND SPECS.
2. V.I.T. SPRINKLER TIE (2 PLACES)
3. 1/2" MT x FT CHECK VALVE.
4. EPOXY COATED #4 X 30" REBAR STAKE.
5. SCHEDULE 80 RISER TYP. LENGTH AS NEEDED.
6. SCHEDULE 40 UVR STREET ELL TYP.
7. #4 x 18" EPOXY COATED REBAR J HOOK AT 10' SPACING.
8. SCHEDULE 40 UVR TEE SLIP x FT AND UVR LATERAL LINE PER SPECS.
9. NATIVE SOIL ON SLOPE.

NOTES

USE 3/4" TEFLON TAPE AT ALL SCHEDULE 40 ELLS.
INSTALL RISERS PERPENDICULARLY PLUMB TO ADJACENT GRADE.
INSTALL RISERS 12" FROM WALL OF FENCE.
ADJUST NOZZLES TO PREVENT OVERSPRAY ONTO HARDSCAPE.
USE POP-UP SPRAY HEADS AT TOE OF SLOPE AND WITHIN 8' WALKWAY, TURF OR CURBING.
NO SPRAY HEAD SHALL BE WITHIN 24" OF ANY WALKWAY.

VALLEY-WIDE RECREATION AND PARK DISTRICT

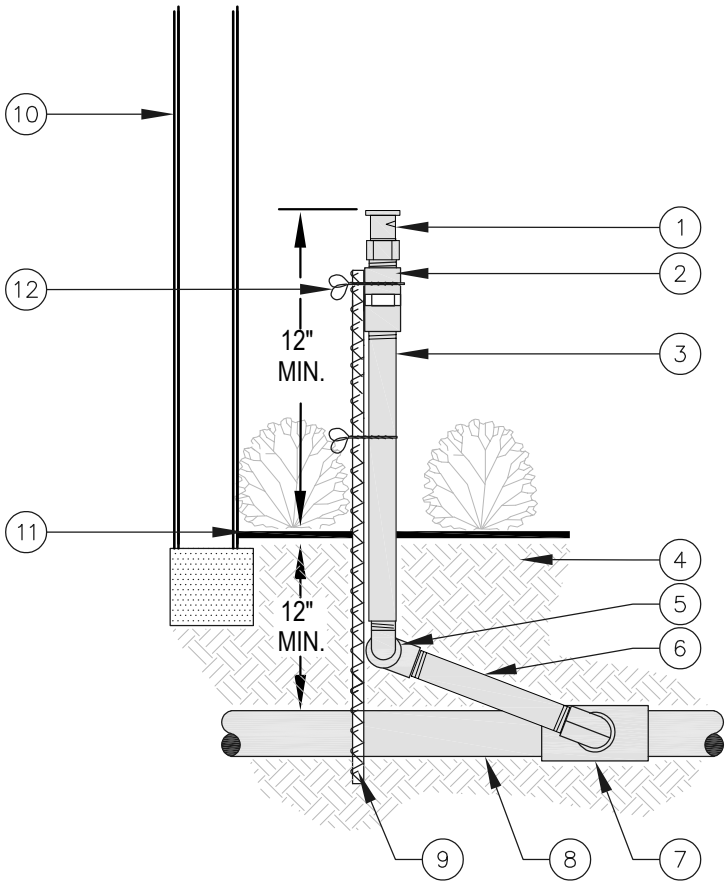
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SHRUB SPRAY ON GRADE

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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ID-34

PROVIDE RW DECAL WHEN RECYCLED WATER IS USED.



1. SHRUB ADAPTER WITH NOZZLE PER LEGEND AND SPECS.
2. 1/2" MT x FT CHECK VALVE AS REQUIRED.
3. SCHEDULE 80 RISER TYP. (LENGTH AS REQUIRED).
4. NATIVE SOIL COMPACTED TO ORIGINAL DENSITY.
5. 1/2" SCHEDULE 40 STREET ELL TYP. 3X
6. 1/2" x 12" SCHEDULE 80 NIPPLE.
7. SCHEDULE 40 TEE LINE SIZE x 1/2" SLIP x FT.
8. LATERAL LINE PER SPECS.
9. #4 x 30" REBAR.
10. WALL OR FENCE.
11. GRADE IN PLANTER.
12. V.I.T. SPRINKLER TIE (2 PLACES) USE RATCHET TOOL TO SECURE.

NOTES

USE 3/4" TEFLON TAPE FOR ALL THREADED FITTINGS.
INSTALL RISERS PERPENDICULARLY PLUMB TO ADJACENT GRADE.
INSTALL RISERS 12" FROM WALL OF FENCE.
ADJUST NOZZLES TO PREVENT OVERSPRAY ONTO HARDSCAPE.
USE POP-UP SPRAY HEADS WITHIN 8' OF WALKWAY, TURF OR CURBING.
NO SPRAY HEAD SHALL BE WITHIN 24" OF ANY WALKWAY.

VALLEY-WIDE RECREATION AND PARK DISTRICT

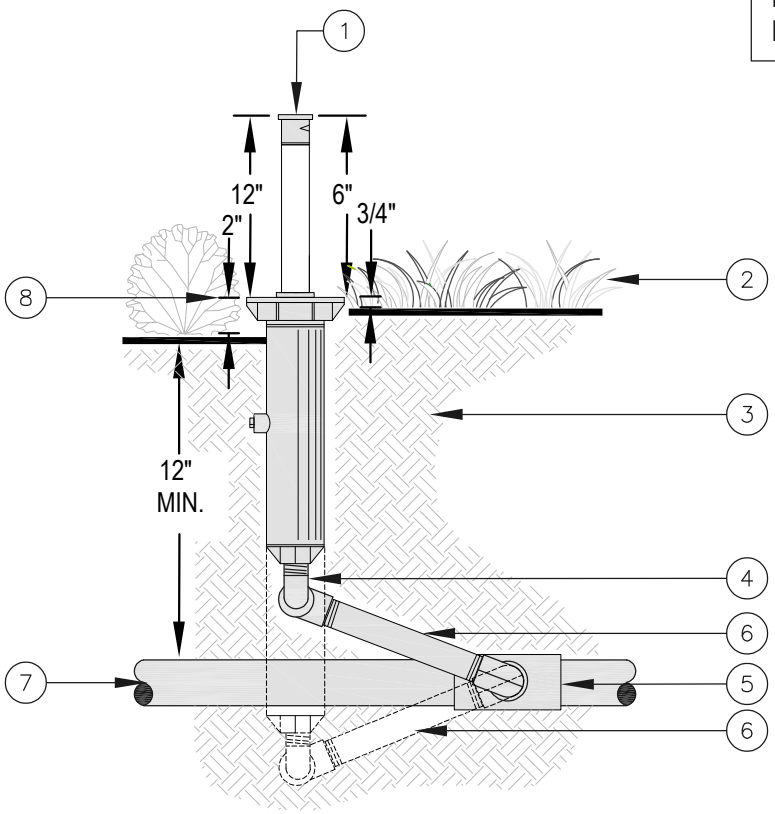
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SHRUB SPRAY ON RISER

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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ID-35

PROVIDE PURPLE CAP WHEN RECYCLED WATER IS USED.



1. SPRAY HEAD WITH CHECK VALVE 6" FOR TURF 12" FOR PLANTER PER LEGEND & SPECS.
2. SET HEAD 3/4" ABOVE GRADE IN TURF.
3. NATIVE SOIL COMPACTED TO ORIGINAL DENSITY.
4. MARLEX ELL TYP. 3 PLACES. (SIZE PER SPRAY HEAD INLET SIZE).
5. SCHEDULE 40 TEE SLIP x FT (LINE SIZE x SPRAY HEAD INLET SIZE).
6. SCHEDULE 80 NIPPLE TYP. : 1/2" x 8" MIN. FOR 6" AND 1/2" x 12" MIN. FOR 12".
7. LATERAL LINE PER SPECS.
8. SET HEAD 2" ABOVE GRADE IN PLANTER.

NOTES

USE 3/4" TEFLON TAPE WHERE ELL MEETS SCHEDULE 40 TEE.

INSTALL HEADS PERPENDICULARLY PLUMB TO ADJACENT GRADE.

ADJUST NOZZLES TO PREVENT OVERSPRAY ONTO HARDSCAPE.

INSTALL HEADS 24" FROM HARDSCAPE EDGE IN TURF AREAS WHERE ALLOWED PER AB 1881.

INSTALL HEADS 6" FROM WALLS IN PLANTER AREAS WHERE ALLOWED PER AB 1881.

ALL HEADS ADJACENT TO CONCRETE SURFACE SHALL BE FLUSH TO TOP OF CONCRETE.

VALLEY-WIDE RECREATION AND PARK DISTRICT

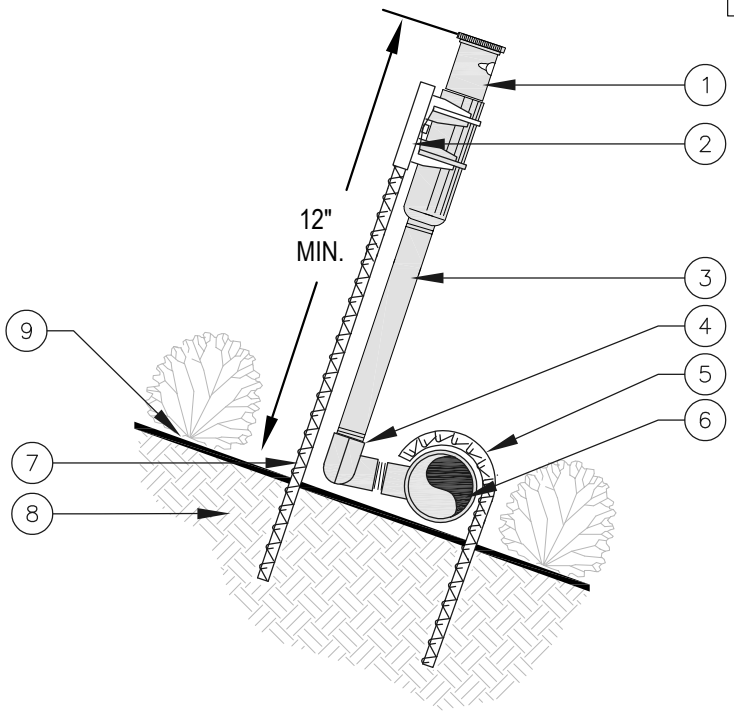
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POP-UP SPRAY HEAD

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

ID-36

PROVIDE RW DECAL WHEN RECYCLED WATER IS USED.



1. SHRUB ROTOR WITH CHECK VALVE PER LEGEND AND SPECS.
2. ROTOR STAKING TIE KIT, CONNECT TO REBAR.
3. SCHEDULE 80 RISER TYP. (LENGTH AS REQUIRED).
4. SCHEDULE 40 UVR STREET ELL TYP.
5. #4 x 18" EPOXY COATED REBAR J HOOK AT 10' SPACING.
6. SCHEDULE 40 UVR TEE LINE SIZE x INLET SIZE SLIP x FT AND UVR LATERAL LINE PER SPECS.
7. #4 x 30" REBAR.
8. NATIVE SOIL ON SLOPE.
9. GRADE ON SLOPE.

NOTES

USE 3/4" TEFLON TAPE AT ALL SCHEDULE 40 ELLS.

INSTALL RISERS PERPENDICULARLY PLUMB TO ADJACENT GRADE.

INSTALL RISERS 12" FROM WALL OR FENCE.

ADJUST NOZZLES TO PREVENT OVERSPRAY ONTO HARDSCAPE.

USE POP-UP ROTORS AT TOE OF SLOPE AND WITHIN 8' OF WALKWAY, TURF OR CURBING.

VALLEY-WIDE RECREATION AND PARK DISTRICT

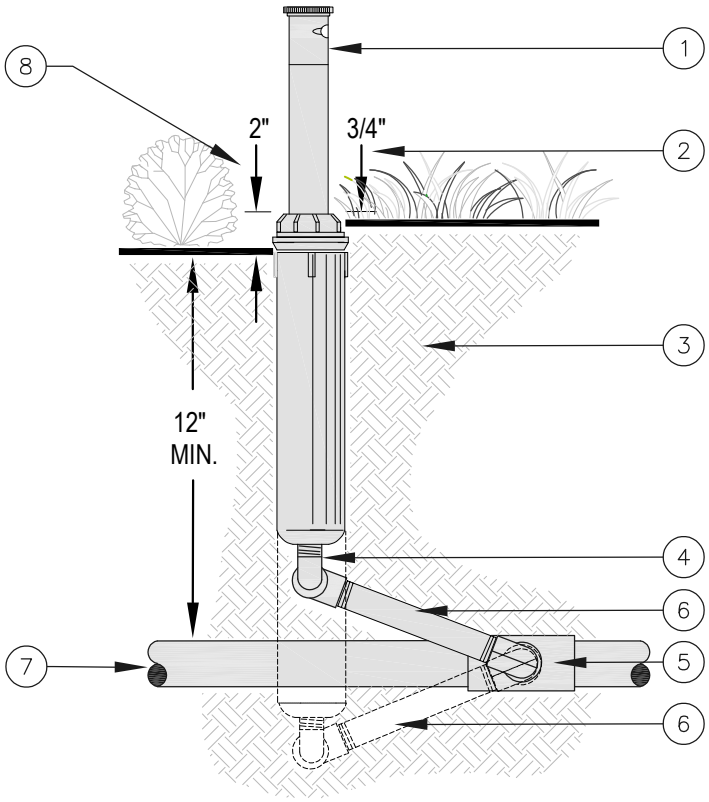
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SHRUB ROTOR ON GRADE

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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ID-37

PROVIDE PURPLE CAP WHEN RECYCLED WATER IS USED.



1. POP-UP ROTOR WITH CHECK VALVE 5"-6" FOR TURF 12" FOR PLANTER PER LEGEND & SPECS.
2. SET HEAD 3/4" ABOVE GRADE IN TURF.
3. NATIVE SOIL COMPACTED TO ORIGINAL DENSITY.
4. SCHEDULE 40 STREET ELL 3 PLACES. (SIZE PER ROTOR HEAD INLET SIZE).
5. SCHEDULE 40 TEE SLIP x FT (LINE SIZE x ROTOR INLET SIZE).
6. SCHEDULE 80 NIPPLE TYP. : 1/2" x 8" MIN. FOR 6" AND 1/2" x 12" MIN. FOR 12".
7. LATERAL LINE PER SPECS.
8. SET HEAD 2" ABOVE GRADE IN PLANTER.

NOTES

USE 3/4" TEFLON TAPE WHERE ELL MEETS SCHEDULE 40 TEE.

INSTALL HEADS PERPENDICULARLY PLUMB TO ADJACENT GRADE.

ADJUST NOZZLES TO PREVENT OVERSPRAY ONTO HARDSCAPE.

INSTALL HEADS 24" FROM HARDSCAPE EDGE IN TURF AREAS WHERE ALLOWED PER AB 1881.

INSTALL HEADS 4" FROM WALLS IN PLANTER AREAS WHERE ALLOWED PER AB 1881.

INSTALL 12" POP-UP ROTORS FOR TURF AREAS WITHIN BOTTOM OF DETENTION BASINS.

VALLEY-WIDE RECREATION AND PARK DISTRICT

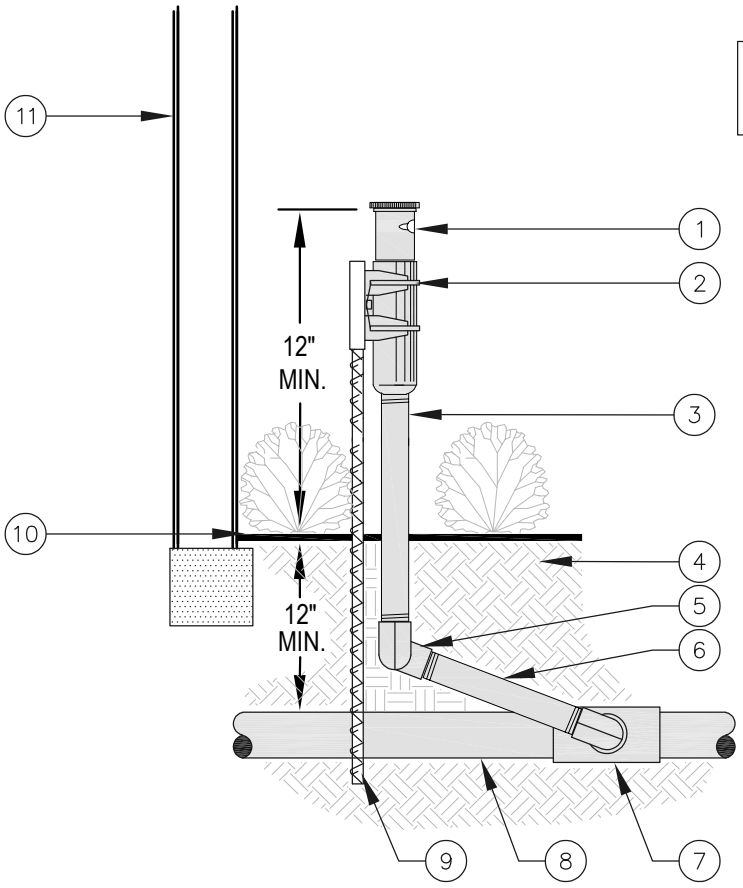
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POP-UP ROTOR HEAD

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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ID-38

PROVIDE RW DECAL WHEN RECYCLED WATER IS USED.



1. SHRUB ROTOR WITH CHECK VALVE PER LEGEND AND SPECS.
2. ROTOR STAKING TIE, CONNECT TO REBAR.
3. SCHEDULE 80 RISER TYP. (LENGTH AS REQUIRED).
4. NATIVE SOIL COMPACTED TO ORIGINAL DENSITY.
5. SCHEDULE 40 STREET ELL TYP. (SIZE PER ROTOR INLET SIZE).
6. SCHEDULE 80 RISER TYP. (LENGTH AS REQUIRED).
7. SCHEDULE 40 TEE SLIP x FT (LINE SIZE x ROTOR INLET SIZE).
8. LATERAL LINE PER SPECS.
9. #4 x 30" REBAR.
10. GRADE IN PLANTER.
11. WALL OR FENCE.

NOTES

USE 3/4" TEFLON TAPE AT ALL SCHEDULE 40 ELLS.

INSTALL RISERS PERPENDICULARLY PLUMB TO ADJACENT GRADE.

INSTALL RISERS 12" FROM WALL OR FENCE.

ADJUST NOZZLES TO PREVENT OVERSPRAY ONTO HARDSCAPE.

USE POP-UP ROTORS WITHIN 8' OF WALKWAY, TURF OR CURBING.

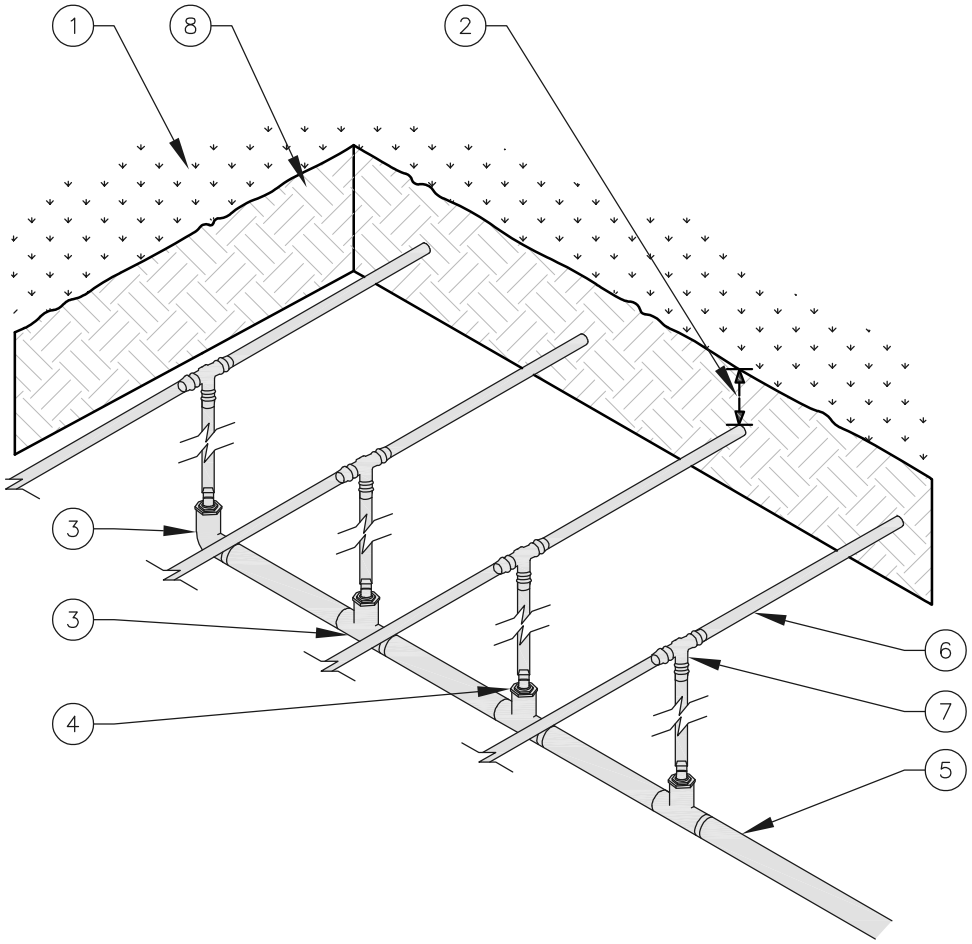
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SHRUB ROTOR ON RISER

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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ID-39



1. FINISH GRADE OF MULCH LAYER.
2. 3" TUBING DEPTH.
3. SCH 40 PVC TEE / ELBOW S x S x FT / S x FT.
4. MALE ADAPTER BARBED x MPT THREADED INTO PVC TEE / ELBOW.
5. SCH 40 PVC MANIFOLD / SUPPLY LINE W / 12" COVER FROM DRIP VALVE AND FILTER.
6. DRIP LINE WITH INTEGRAL EMITTERS 3" BELOW FINISH GRADE OF TOP SOIL.
7. BARBED TEE.
8. NATIVE SOIL COMPACTED TO ORIGINAL DENSITY.

NOTES

INSTALLATION PER MANUFACTURER'S RECOMMENDATIONS.

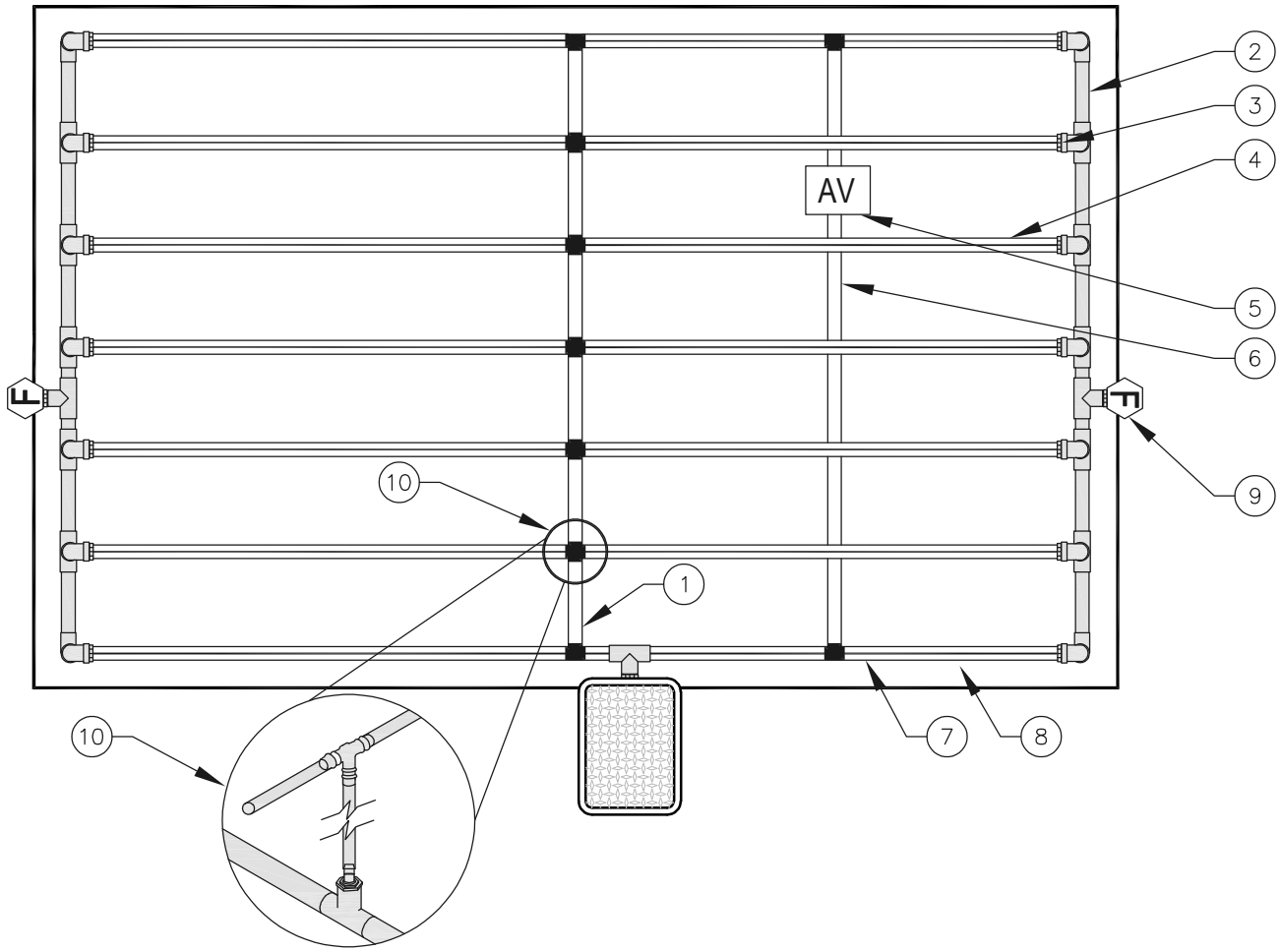
VALLEY-WIDE RECREATION AND PARK DISTRICT

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SUBSURFACE PIPE AND TUBING MANIFOLD

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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ID-40



1. SCH 40 PVC LATERAL LINE FROM ELECTRIC CONTROL VALVE.
2. PVC EXHAUST HEADER (BURIED 12" DEEP).
3. SCH 40 PVC FITTING TO DRIP LINE CONNECTION.
4. DRIP LINE LATERAL PER PLAN.
5. AIR/VACUUM RELIEF VALVE IN ROUND VALVE BOX (INSTALL AT HIGHEST POINT).
6. AIR/VACUUM RELIEF LATERAL (NSTALL AT ENDS).
7. PERIMETER LATERALS 4" FROM EDGE.
8. HARDSCAPE EDGE.
9. FLUSH VALVE PLUMBED TO FLUSH AT LOW POINT IN ROUND VALVE BOX.
10. REFER TO SUBSURFACE PIPE AND TUBING MANIFOLD DETAIL.

NOTES

INSTALLATION TO BE PER MANUFACTURER'S RECOMMENDATIONS.

THE TOTAL LENGTH OF ALL INTERCONNECTED DRIP LINE SHALL NOT EXCEED THE MAXIMUM RUN LENGTH.

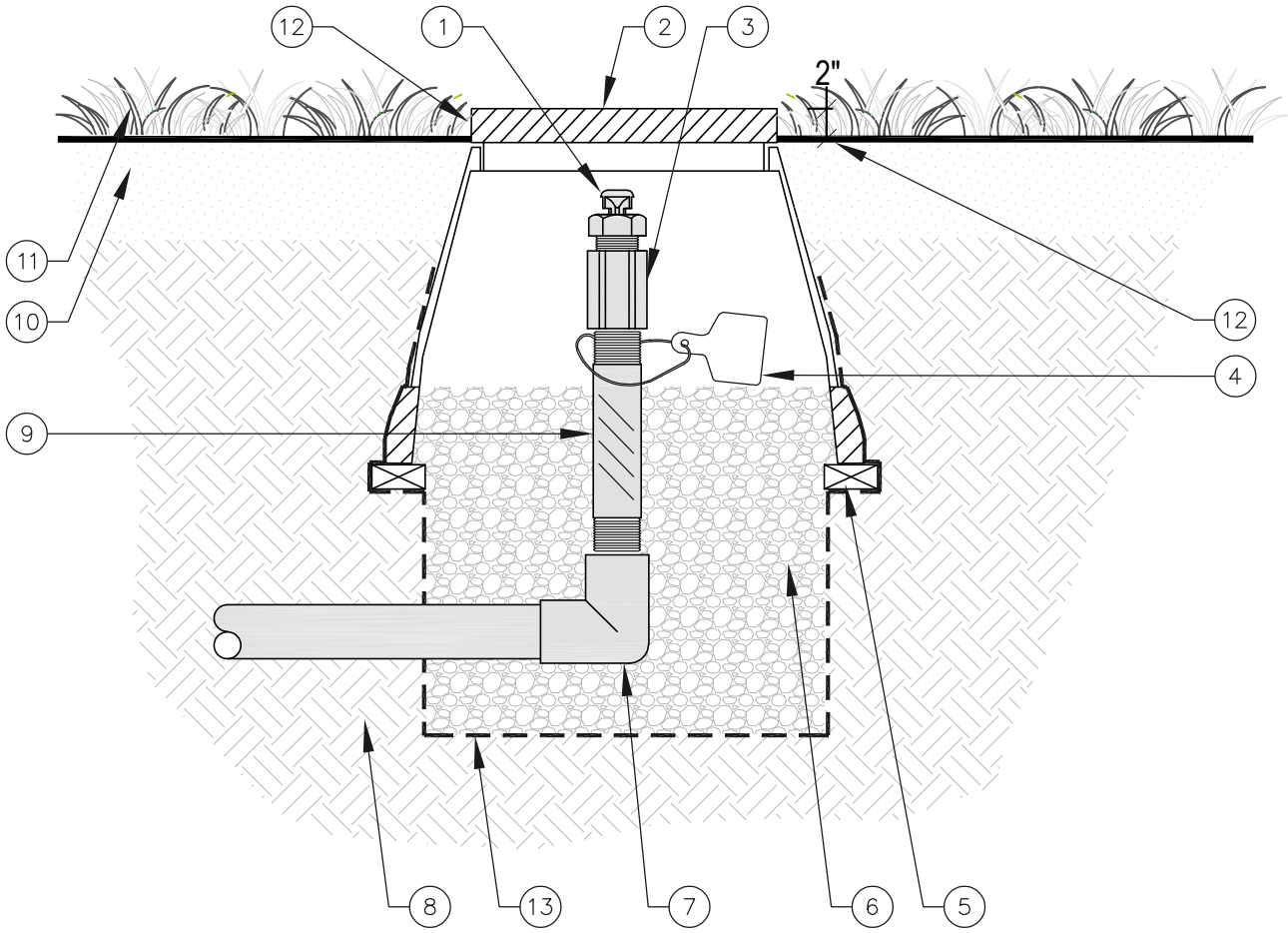
VALLEY-WIDE RECREATION AND PARK DISTRICT

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SUBSURFACE PIPE AND TUBING LAYOUT

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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ID-41



1. AIR/VACUUM RELIEF VALVE WITH 1/2" MIPT.
2. 10" ROUND PLASTIC VALVE BOX (HEAT BRAND "AR" ON THE LID).
3. 1/2" THREADED (TxT) SCHEDULE 40 PVC COUPLER.
4. I.D. TAG (PER LOCAL STANDARDS).
5. COMMON BRICK (2 EA PER 6" ROUND VALVE BOX).
6. 1 CU.FT. OF 3/4" GRAVEL UNDER AIR RELIEF VALVE.
7. 90 DEGREE ELBOW LATERAL LINE SIZE x 1/2" FIPT.
8. NATIVE SOIL COMPACTED TO ORIGINAL DENSITY.
9. 1/2" SCHEDULE 80 PVC NIPPLE, SIZE AS NEEDED.
10. AMENDED SOIL MIX (REFER TO PLANTING PLAN).
11. FINISH GRADE.
12. SET BOX 2" ABOVE GRADE.
13. FILTER FABRIC BELOW GRAVEL.

NOTES

USE ONE AIR/VACUUM RELIEF VALVE PER EVERY 7 GPM ON EACH ZONE AT THE HIGHEST POINT OF DRIP SYSTEM LAYOUT.

REFER TO MANUFACTURER'S RECOMMENDATIONS.

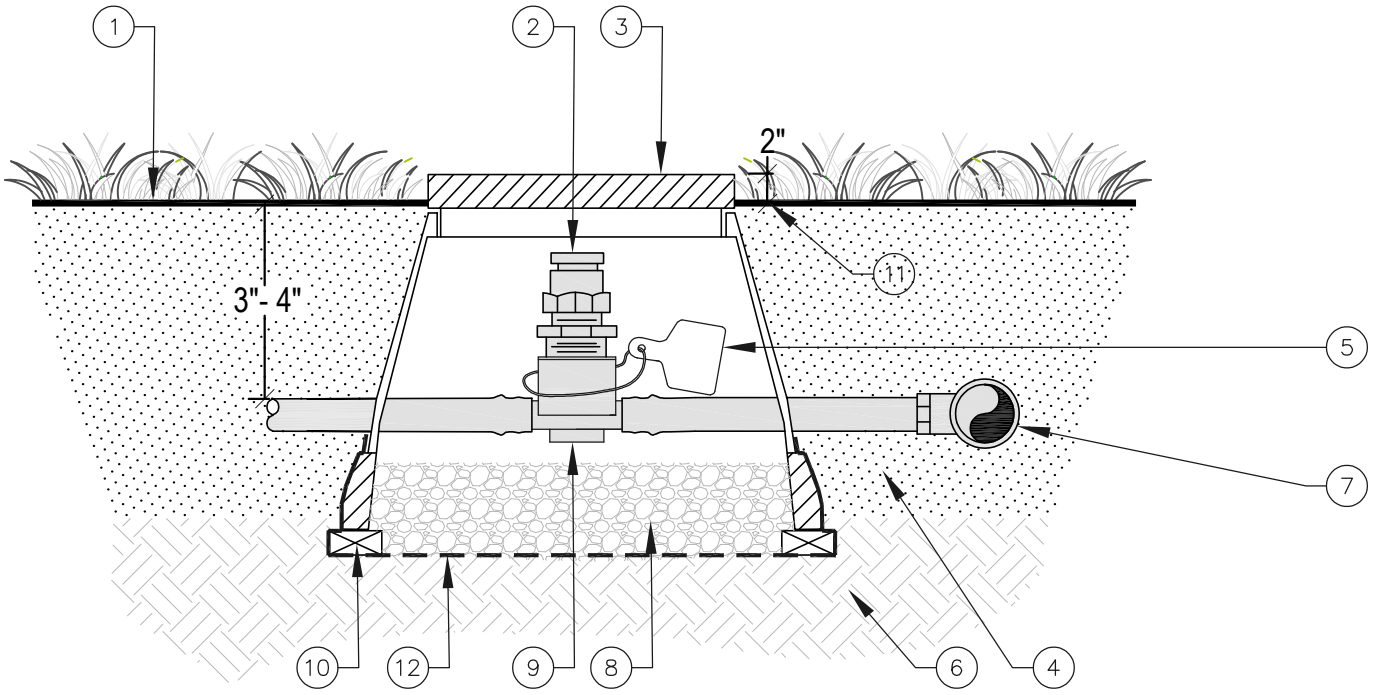
VALLEY-WIDE RECREATION AND PARK DISTRICT

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DRIP AIR/VACUUM RELIEF VALVE ON RISER

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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ID-42



1. FINISH GRADE.
2. AIR/VACUUM RELIEF VALVE WITH 1/2" MIPT.
3. 10" ROUND PLASTIC VALVE BOX (HEAT BRAND "AR" ON THE LID). SET FLUSH WITH FINISH GRADE.
4. AMENDED SOIL MIX (REFER TO PLANTING PLANS)
5. I.D. TAG (PER LOCAL STANDARDS).
6. NATIVE SOIL COMPACTED TO ORIGINAL DENSITY.
7. SCHEDULE 40 PVC TEE S x S x FPT W/ DRIP CONNECTION MALE ADAPTER BARB X MPT
8. 1 CU.FT. OF 3/4" GRAVEL BELOW AIR RELIEF VALVE.
9. DRIP COMBINATION TEE BARB x BARB x FPT
10. COMMON BRICK (2 EA PER 6" ROUND VALVE BOX).
11. SET BOX 2" ABOVE GRADE.
12. FILTER FABRIC BELOW GRAVEL.

NOTES

USE ONE AIR/VACUUM RELIEF VALVE PER EVERY 7 GPM ON EACH ZONE AT THE HIGHEST POINT OF DRIP SYSTEM LAYOUT.

REFER TO MANUFACTURER'S RECOMMENDATIONS.

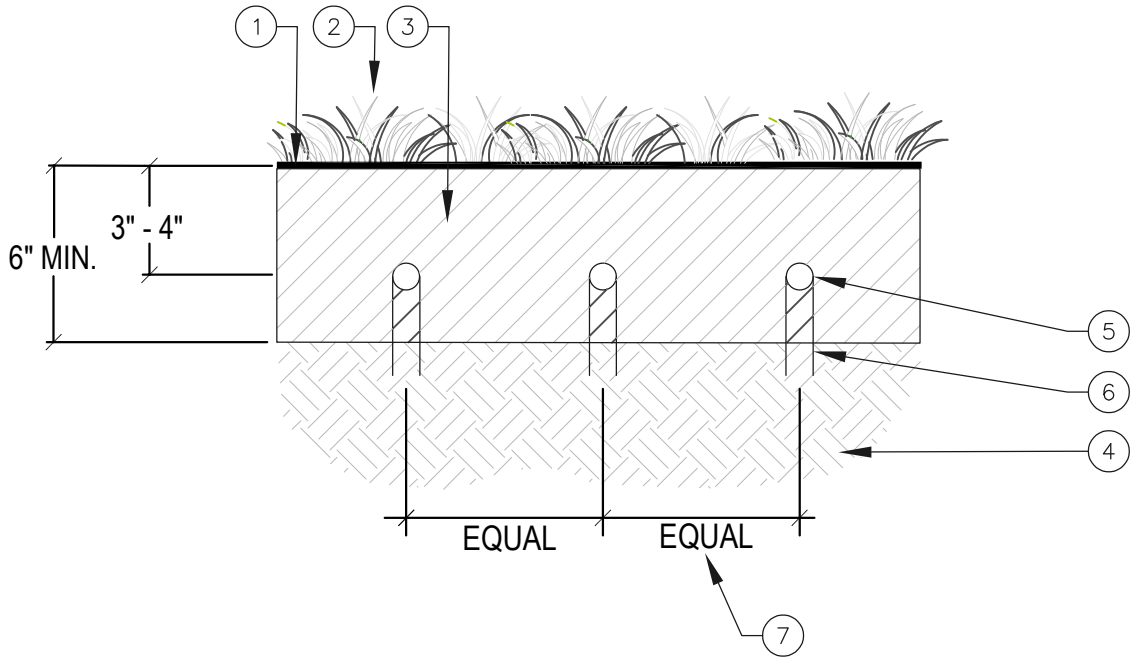
VALLEY-WIDE RECREATION AND PARK DISTRICT

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DRIP AIR/VACUUM RELIEF VALVE INLINE

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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ID-43



1. FINISH GRADE.
2. TURF PER PLAN.
3. AMENDED SOIL PER SPECS.
4. NATIVE SOIL COMPACTED TO ORIGINAL DENSITY.
5. SUB-SURFACE TUBING, BURIED INTO SOIL MIN. 3" (REFER TO IRRIGATION LEGEND).
6. TUBING STAKE (SEE IRRIGATION LEGEND / SPECIFICATIONS FOR MODEL AND SPACING).
7. TUBING SPACING BASED ON EMITTER SPACING (REFER TO IRRIGATION LEGEND).

NOTES

REFER TO MANUFACTURER'S RECOMMENDATIONS FOR TUBING INSTALLATION.

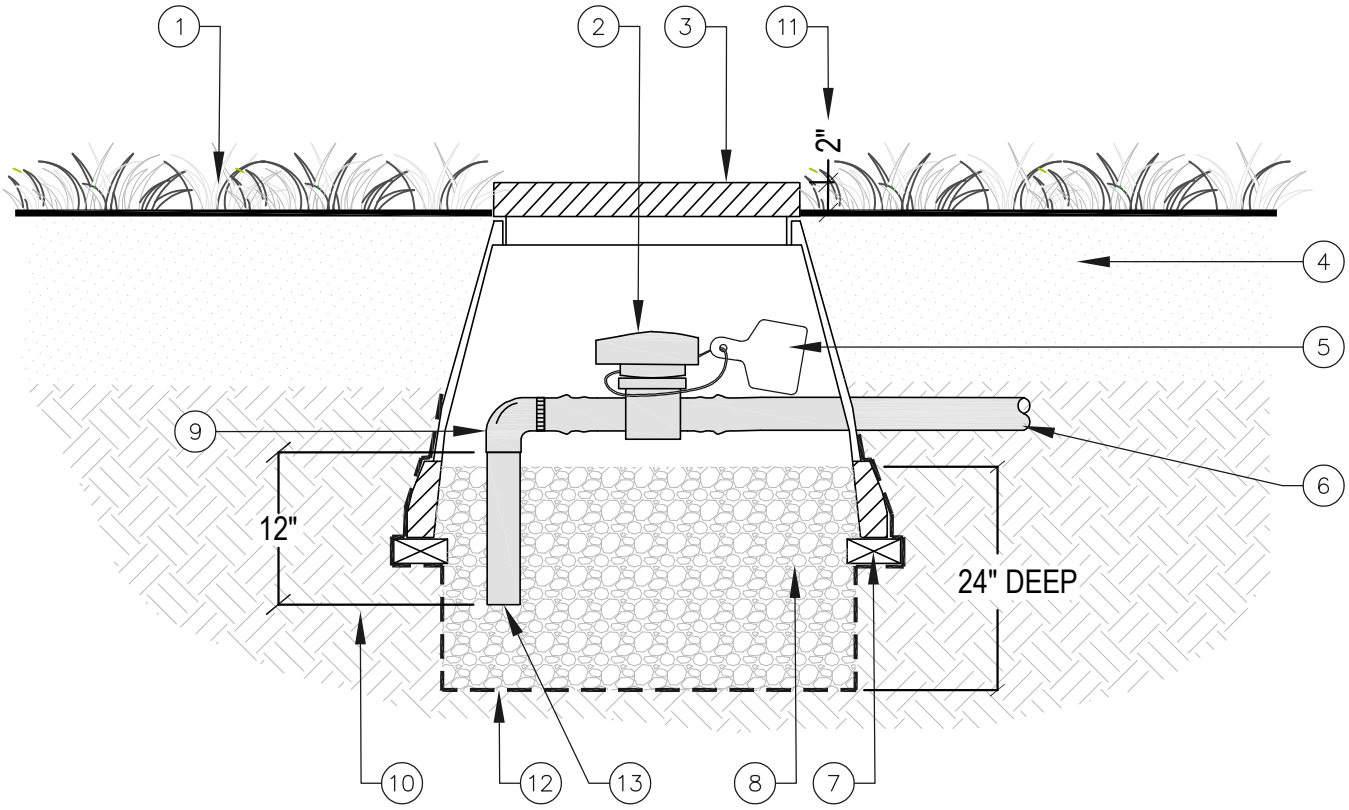
VALLEY-WIDE RECREATION AND PARK DISTRICT

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SUBSURFACE TUBING SPACING AND DEPTH

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

ID-44



1. FINISH GRADE.
2. FLUSH VALVE BARB x BARB.
3. 10" ROUND PLASTIC VALVE BOX (HEAT BRAND "AR" ON THE LID). SET FLUSH WITH FINISH GRADE.
4. AMENDED SOIL MIX (REFER TO PLANTING PLANS).
5. I.D. TAG (PER LOCAL STANDARDS).
6. SUBSURFACE DRIP TUBING PER SPECS.
7. COMMON BRICK (2 EA PER 6" ROUND BOX).
8. 1.5 CU.FT. OF 3/4" GRAVEL BELOW FLUSH VALVE.
9. SCHEDULE 40 PVC 90 ELL S x FT W/ DRIP CONNECTION MALE ADAPTER BARB X MPT.
10. NATIVE SOIL COMPACTED TO ORIGINAL DENSITY.
11. SET BOX 2" ABOVE GRADE.
12. FILTER FABRIC BELOW GRAVEL.
13. 12" LONG SCH 40 PIPE.

NOTES

USE TWO FLUSH VALVES PER DRIP ZONE PLACED AT THE END AND LOWEST POINT OF DRIP SYSTEM. REFER TO MANUFACTURER'S RECOMMENDATIONS.

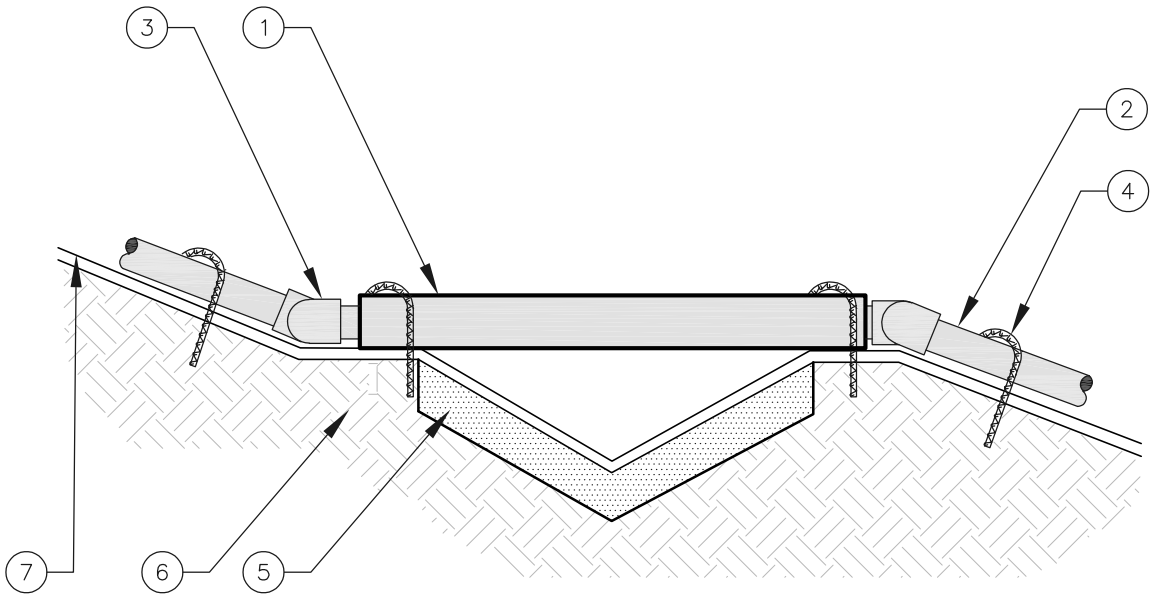
VALLEY-WIDE RECREATION AND PARK DISTRICT

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SUBSURFACE DRIP FLUSH VALVE

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
DATE: 09/21/26	DATE: 09/21/26		

ID-45



1. GALVANIZED SCHEDULE 40 STEEL TWO TIMES DIAMETER OF LATERAL SLEEVE SECURED TO GRADE. EXTEND 6" PAST BENCH DRAIN.
2. UVR LATERAL LINE (PER IRRIGATION PLAN AND SPECS).
3. SCHEDULE 40 UVR STREET ELL SWING JOINT (2 PLACES TYP.).
4. #4 x 18" LONG EPOXY COATED REBAR J HOOK STABILIZER PER SPECS.
5. CONCRETE BENCH DRAIN PER ENGINEER'S PLAN.
6. NATIVE SOIL ON SLOPE.
7. GRADE ON SLOPE.

NOTES

EXTEND GALVANIZED STEEL SLEEVE A MIN. OF 6" PAST BENCH DRAIN EDGE.

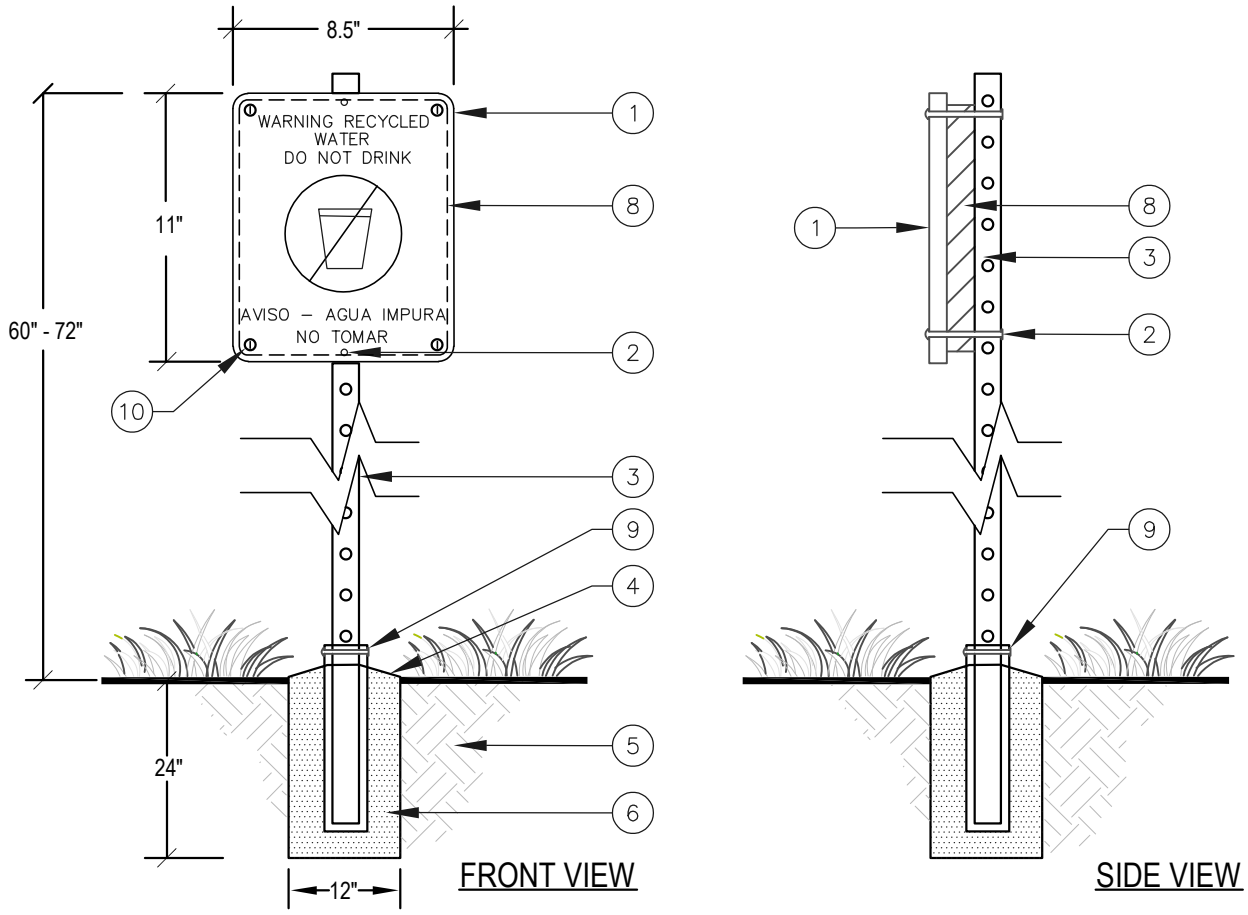
VALLEY-WIDE RECREATION AND PARK DISTRICT

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BENCH DRAIN CROSSING

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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ID-46



(1) RECYCLED WATER SIGNAGE PER EASTERN MUNICIPAL WATER DISTRICT. SIGNAGE CAN BE PURCHASED FROM EASTERN MUNICIPAL WATER DISTRICT (951) 928-3777.

(2) HD GALVANIZED DRIVE RIVETS (2 PLACES) TO SECURE SIGN TO POST.

(3) 2" GALVANIZED STEEL SQUARE TELSPAR POST (SET PLUMB TO GRADE).

(4) SLOPE FOOTING.

(5) UNDISTURBED NATIVE SOIL.

(6) 2500 PSI CONCRETE FOOTING.

(7) TELSPAR SLEEVE - EXTEND 4" ABOVE FOOTING.

(8) 3/16" THICK STEEL BACKING PLATE (SECURE TO SIGN AND POST). SIZE TO BE 7" X 9" WITH ROUNDED EDGES.

(9) HD DRIVE RIVET (2 PER SLEEVE).

(10) HD DRIVE RIVET OR VANDAL-RESISTANT BOLT (4 PLACES) TO SECURE SIGN TO BACKING PLATE.

NOTES

SIGNAGE MUST COMPLY WITH EMWD REQUIREMENTS.

PROVIDE SIGNAGE AT ALL PROJECT ENTRIES AND AT EACH WATER METER CONNECTION.

PROVIDE ADDITIONAL SIGNAGE ALONG PARKWAYS AND TRAILS AS DIRECTED BY EMWD.

NO SIGN SHALL BE WITHIN COUNTY OR CITY RIGHT OF WAY SITE DISTANCE OBSTRUCTION.

VALLEY-WIDE RECREATION AND PARK DISTRICT

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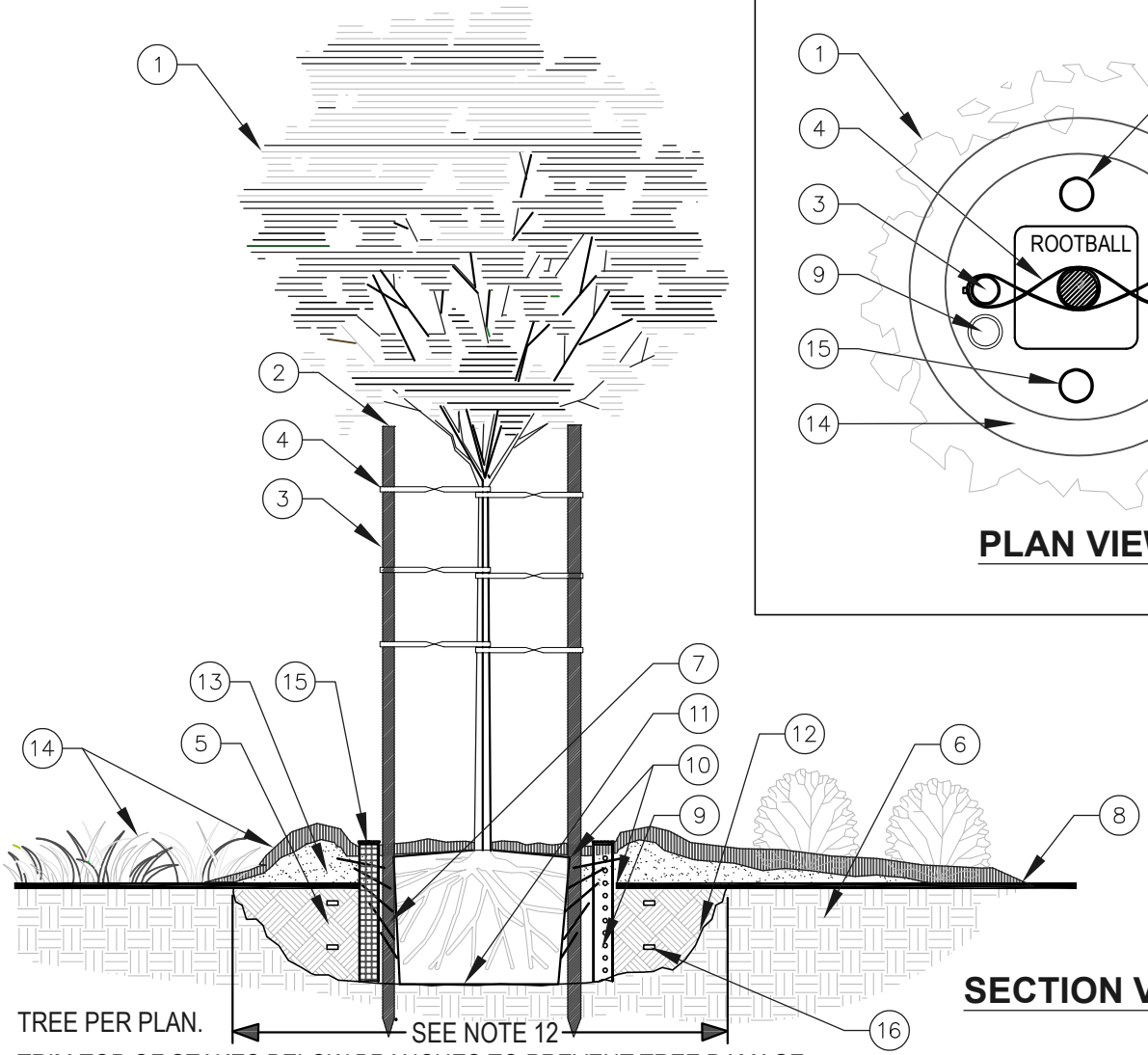
RECYCLED WATER SIGN

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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ID-47

VALLEY-WIDE RECREATION AND PARK DISTRICT
PLANTING DETAILS

DETAIL NO.	DETAIL DESCRIPTION
PD-1	TYPICAL TREE
PD-2	TYPICAL TREE ON SLOPE
PD-3	TYPICAL TREE PARKING LOT
PD-4	TYPICAL TREE WITH POOR DRAINAGE
PD-5	TREE ROOT BARRIER
PD-6	PARKING LOT TREE ROOT BARRIER
PD-7	TYPICAL SHRUB
PD-8	TYPICAL SHRUB ON SLOPE
PD-9	TYPICAL SHRUB IN PARKWAY
PD-10	SHRUB PLACEMENT
PD-11	VINE PLANTING
PD-12	GROUNDCOVER PLANTING
PD-13	FINISH GRADING AND MULCHING
PD-14	BOULDER PLACEMENT
PD-15	PALM TREE
PD-16	TREE GUYING



SECTION VIEW

PLAN VIEW

1. TREE PER PLAN.
2. TRIM TOP OF STAKES BELOW BRANCHES TO PREVENT TREE DAMAGE.
3. 2" DIA. X 10' LONG TREE STAKE W/GALV. NAILS PER SPECS. (3X 3" DIA. X 10' STAKES WHEN NEEDED PER SPECS.).
4. CINCH TIE TREE TO STAKE (6 PLACES MIN,) PER SPECS.
5. CLEAN COMPACTED BACKFILL SOIL PER SPECS AND SOIL REPORT.
6. UNDISTURBED NATIVE SOIL.
7. TAMP SOIL IN 6" LIFTS TO LIGHTLY COMPACT BACKFILL AGAINST ROOT BALL.
8. FINISH GRADE.
9. 3" DIA. BY ROOT BALL DEPTH PERFORATED PIPE W/FILTER SOCK AND FLAT DRAIN GRATE (1" ABOVE ROOT BALL).
10. TOP OF ROOT BALL SURFACE AND ROOT FLARE TO BE POSITIONED 3" ABOVE FINISH GRADE.
11. BOTTOM OF ROOT BALL TO REST ON EXISTING OR RECOMPACTED SOIL.
12. LOOSENED SOIL 2X ROOT BALL WIDTH (3X ROOT BALL WIDTH IN HARD SOILS).
13. 4" HIGH X 8" WIDE ROUNDED COMPACTED BERM 6" OUTSIDE OF ROOTBALL.
14. 4" THICK MULCH RING 12" PAST TREE STAKE WHEN IN TURF AREAS (TAPER TO 1" THICK OVER ROOT BALL).
15. DEEP ROOT WATER SYSTEM BUBBLER AND RISER PER PLAN AND SPECS. (1" ABOVE ROOT BALL).
16. PLANTING TABLETS PER SPECS. AND SOILS REPORT.

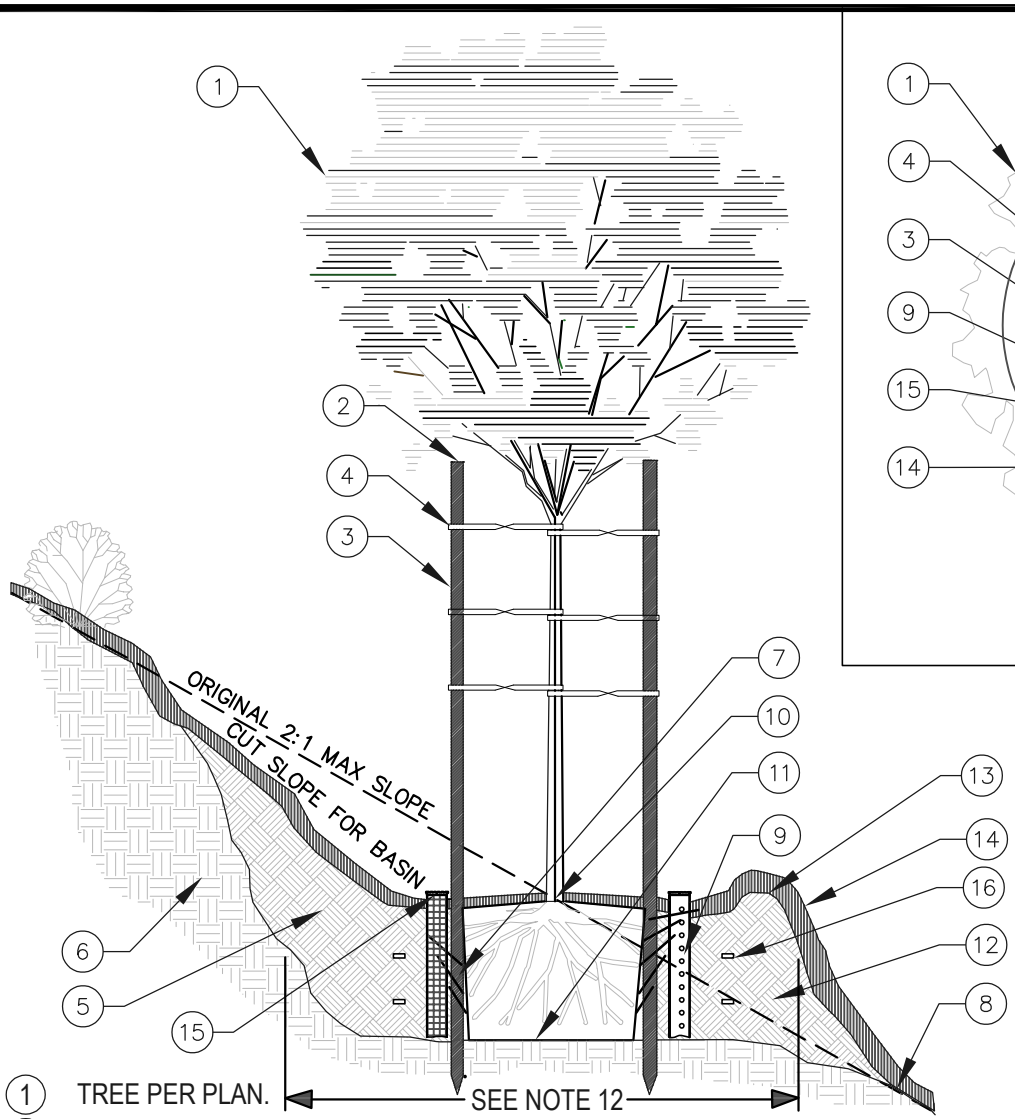
VALLEY-WIDE RECREATION AND PARK DISTRICT

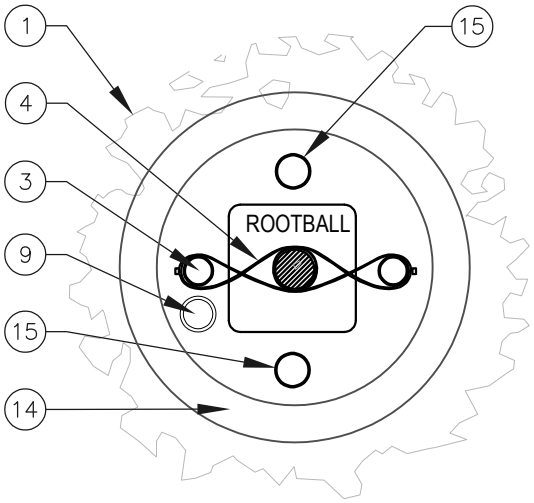
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TYPICAL TREE

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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PD-1





PLAN VIEW

SECTION VIEW

1. TREE PER PLAN.
2. TRIM TOP OF STAKES BELOW BRANCHES TO PREVENT TREE DAMAGE.
3. 2" DIA. X 10' LONG TREE STAKE W/GALV. NAILS PER SPECS. (3X 3" DIA. X 10' STAKES WHEN NEEDED PER SPECS.).
4. CINCH TIE TREE TO STAKE (6 PLACES MIN,) PER SPECS.
5. CLEAN COMPACTED BACKFILL SOIL PER SPECS AND SOIL REPORT.
6. UNDISTURBED NATIVE SOIL.
7. TAMP SOIL IN 6" LIFTS TO LIGHTLY COMPACT BACKFILL AGAINST ROOT BALL.
8. SLOPE FINISH GRADE.
9. 3" DIA. BY ROOT BALL DEPTH PERFORATED PIPE W/FILTER SOCK AND FLAT DRAIN GRATE.
10. ROOT BALL SURFACE AND ROOT FLARE TO BE POSITIONED TO BE ALIGNED WITH ORIGINAL SLOPE PLANE.
11. BOTTOM OF ROOT BALL TO REST ON EXISTING OR RECOMPACTED SOIL.
12. LOOSENED SOIL 2X ROOT BALL WIDTH (3X ROOT BALL WIDTH IN HARD SOILS).
13. 4" HIGH X 8" WIDE ROUNDED COMPACTED BERM 6" OUTSIDE OF ROOTBALL (WITH 1:1 MAX SLOPE AT BERM).
14. 4" THICK MULCH RING (TAPER TO 1" THICK OVER ROOT BALL).
15. DEEP ROOT WATER SYSTEM BUBBLER AND RISER PER PLAN AND SPECS.
16. PLANTING TABLETS PER SPECS. AND SOILS REPORT.

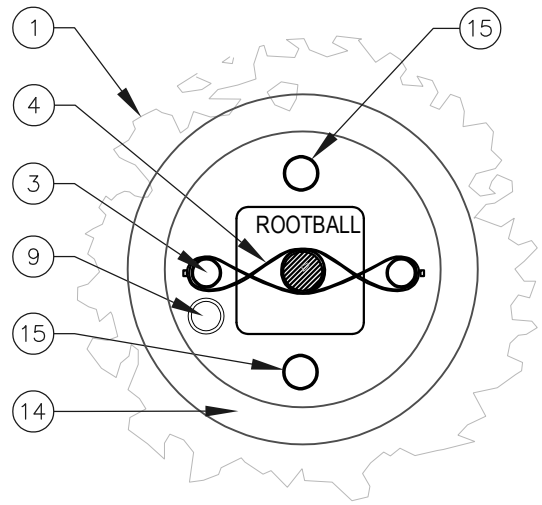
VALLEY-WIDE RECREATION AND PARK DISTRICT

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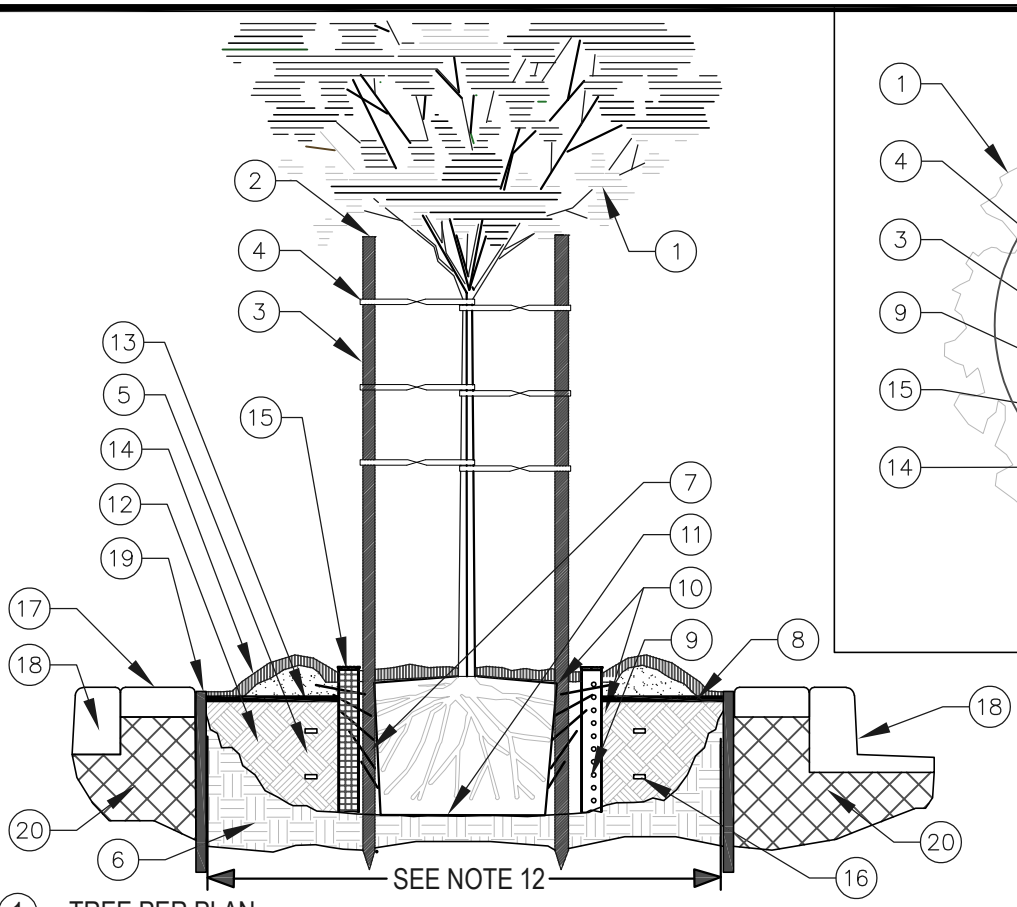
TYPICAL TREE ON SLOPE

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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PD-2



PLAN VIEW



SECTION VIEW

1. TREE PER PLAN.
2. TRIM TOP OF STAKES BELOW BRANCHES TO PREVENT TREE DAMAGE.
3. 2" DIA. X 10' LONG TREE STAKE W/GALV. NAILS PER SPECS. (3X. 3" DIA. X 10' STAKES WHEN NEEDED PER SPECS.).
4. CINCH TIE TREE TO STAKE (6 PLACES MIN,) PER SPECS.
5. CLEAN COMPACTED BACKFILL SOIL PER SPECS AND SOIL REPORT.
6. UNDISTURBED NATIVE SOIL.
7. TAMP SOIL IN 6" LIFTS TO LIGHTLY COMPACT BACKFILL AGAINST ROOT BALL.
8. FINISH GRADE 2" BELOW TOP OF ADJACENT CURB OR WALKWAY.
9. 3" DIA. BY ROOT BALL DEPTH PERFORATED PIPE W/FILTER SOCK AND FLAT DRAIN GRATE (1" ABOVE ROOT BALL).
10. TOP OF ROOT BALL AND ROOT FLARE SURFACE TO BE POSITIONED 3" ABOVE ADJACENT CURB OR WALKWAY.
11. BOTTOM OF ROOT BALL TO REST ON EXISTING OR RECOMPACTED SOIL.
12. LOOSENED SOIL 2X ROOT BALL WIDTH (3X ROOT BALL WIDTH IN HARD SOILS).
13. 4" HIGH X 8" WIDE ROUNDED COMPACTED BERM 6" OUTSIDE OF ROOTBALL.
14. 4" THICK MULCH RING (TAPER TO 1" THICK OVER ROOT BALL).
15. DEEP ROOT WATER SYSTEM BUBBLER AND RISER PER PLAN AND SPECS. (1" ABOVE ROOT BALL).
16. PLANTING TABLETS PER SPECS. AND SOILS REPORT.
17. CONCRETE CURB AND GUTTER.
18. CONCRETE WALKWAY OR MAINTENANCE STEP OUT STRIP.
19. 24" DEEP ROOT BARRIER PER SPECS AND ROOT BARRIER DETAIL.
20. 95% COMPACTED HARDSCAPE SUBGRADE SECTION PER PLAN AND SPECS.

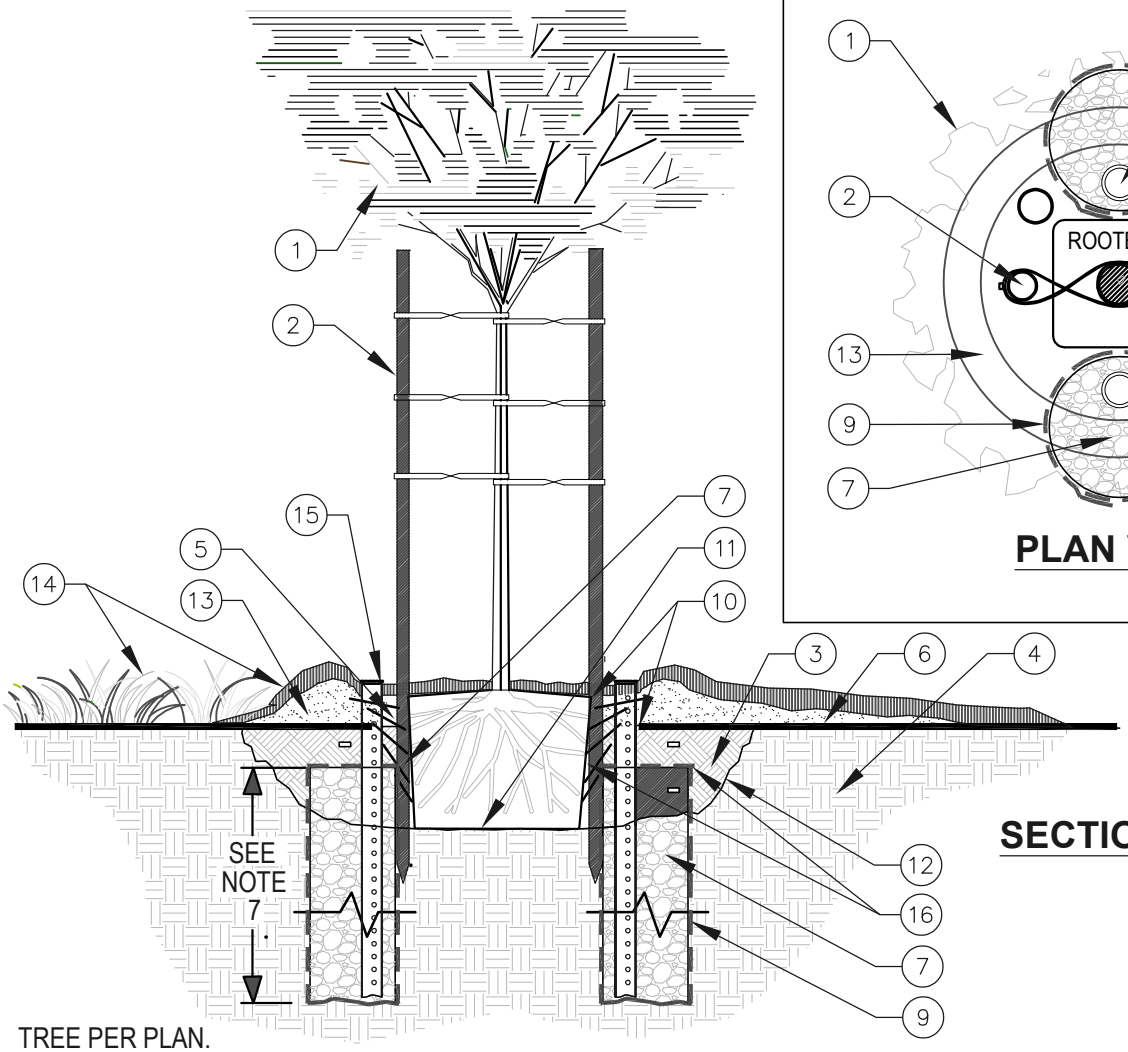
VALLEY-WIDE RECREATION AND PARK DISTRICT

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TYPICAL TREE PARKING LOT

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PD-3



SECTION VIEW

PLAN VIEW

1. TREE PER PLAN.
2. TREE STAKES PER TYPICAL TREE DETAIL.
3. CLEAN COMPACTED BACKFILL SOIL PER SPECS AND SOIL REPORT.
4. UNDISTURBED NATIVE SOIL.
5. TAMP SOIL IN 6" LIFTS TO LIGHTLY COMPACT BACKFILL AGAINST ROOT BALL.
6. FINISH GRADE.
7. 12" DIA. GRAVEL SUMP X 4 FEET MIN. (DEPTH AS REQUIRED TO ENSURE PERCOLATION PER SPECS.).
8. 3" DIA. X SUMP DEPTH PERFORATED PIPE W/FLAT DRAIN GRATE (1" ABOVE ROOT BALL).
9. FILTER FABRIC PER SPECS (WRAP ENTIRE GRAVEL SUMP.
10. TOP OF ROOT BALL SURFACE AND ROOT FLARE TO BE POSITIONED 3" ABOVE FINISH GRADE.
11. BOTTOM OF ROOT BALL TO REST ON EXISTING OR RECOMPACTED SOIL.
12. LOOSENED SOIL 2X ROOT BALL WIDTH (3X ROOT BALL WIDTH IN HARD SOILS).
13. 4" HIGH X 8" WIDE ROUNDED COMPACTED BERM 6" OUTSIDE OF ROOTBALL.
14. 4" THICK MULCH RING 12" PAST TREE STAKE WHEN IN TURF AREAS (TAPER TO 1" THICK OVER ROOT BALL).
15. DEEP ROOT WATER SYSTEM BUBBLER AND RISER PER PLAN AND SPECS. (1" ABOVE ROOT BALL).
16. TOP OF SUMP TO START AND CENTER DEPTH OF ROOT BALL.

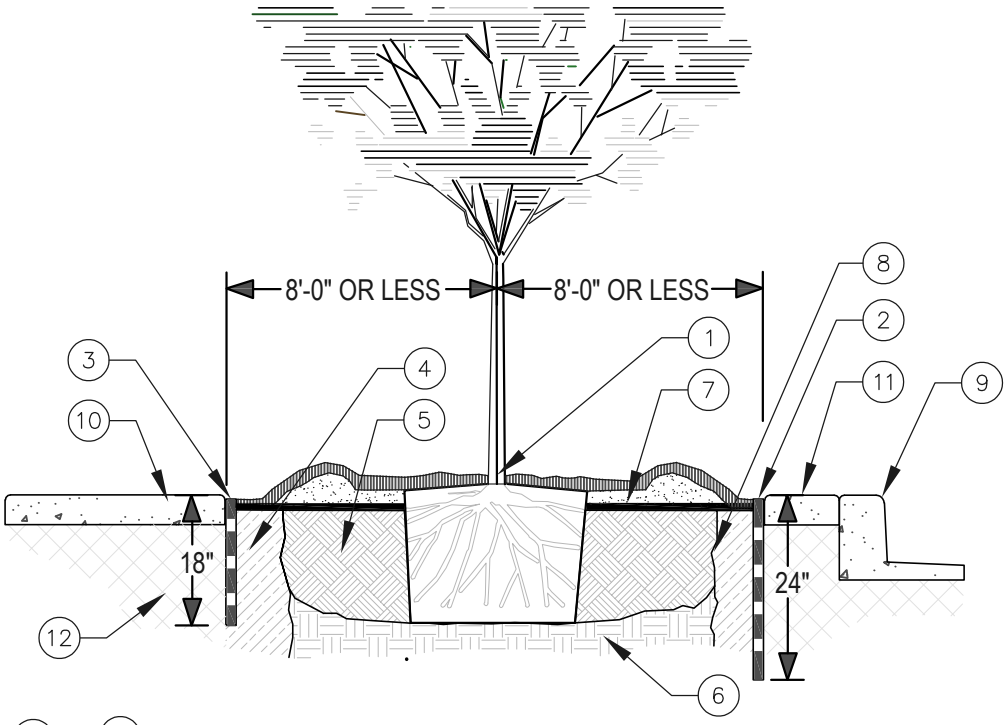
VALLEY-WIDE RECREATION AND PARK DISTRICT

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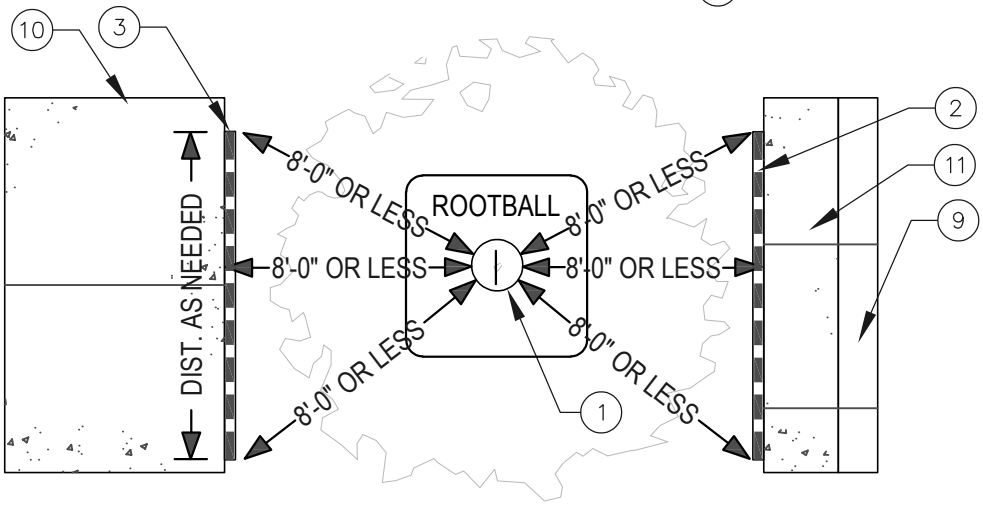
TYPICAL TREE WITH POOR DRAINAGE

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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PD-4



SECTION VIEW



PLAN VIEW

1. TREE TRUCK AT TREE PER PLAN.
2. 24" DEEP ROOT BARRIER PER SPECS. WHEN TREE IS WITHIN 8' OF CURB OR MAINTENANCE STRIP.
3. 18" DEEP ROOT BARRIER PER SPECS. WHEN TREE IS WITHIN 8' OF HARDSCAPE SURFACE.
4. COMPACTED FILL.
5. CLEAN COMPACTED BACKFILL SOIL PER SPECS AND SOIL REPORT.
6. UNDISTURBED NATIVE SOIL.
7. FINISH GRADE 2" BELOW TOP OF ADJACENT CURB OR WALKWAY.
8. LOOSENED SOIL 2X ROOT BALL WIDTH (3X ROOT BALL WIDTH IN HARD SOILS).
9. CONCRETE CURB.
10. CONCRETE WALKWAY.
11. CONCRETE MAINTENANCE STEP OUT STRIP.
12. 95% COMPACTED HARDSCAPE SUBGRADE SECTION PER PLAN AND SPECS.

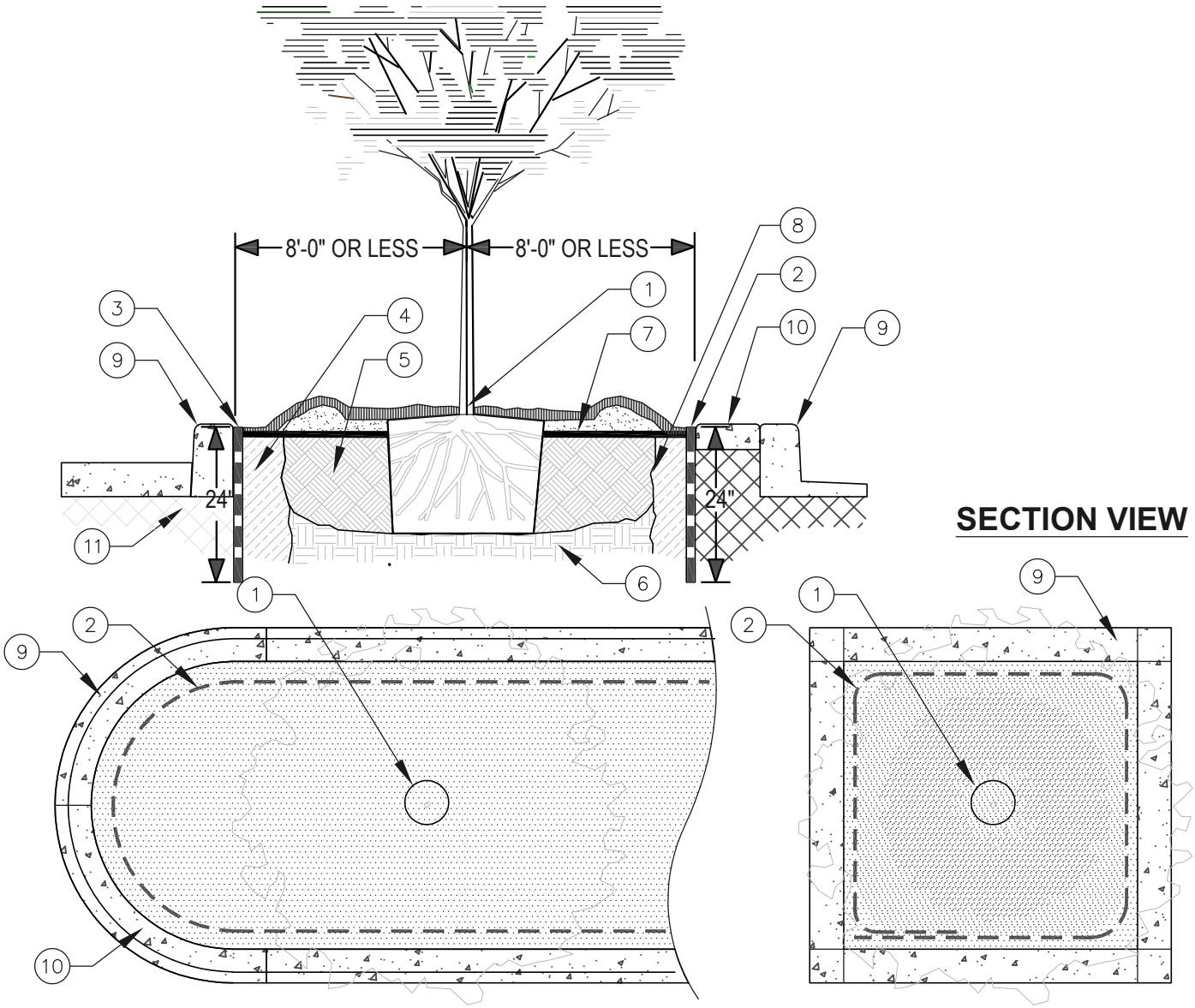
VALLEY-WIDE RECREATION AND PARK DISTRICT

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TREE ROOT BARRIER

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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PD-5



SECTION VIEW

PLAN VIEW

PLAN VIEW

1. TREE TRUCK AT TREE PER PLAN
2. 24" DEEP ROOT BARRIER PER SPECS. WHEN TREE IS WITHIN 8' OF CURB OR MAINTENANCE STRIP
3. 18" DEEP ROOT BARRIER PER SPECS. WHEN TREE IS WITHIN 8' OF HARDSCAPE SURFACE
4. COMPACTED FILL
5. CLEAN COMPACTED BACKFILL SOIL PER SPECS AND SOIL REPORT
6. UNDISTURBED NATIVE SOIL
7. FINISH GRADE 2" BELOW TOP OF ADJACENT CURB OR WALKWAY
8. LOOSENED SOIL 2X ROOT BALL WIDTH (3X ROOT BALL WIDTH IN HARD SOILS)
9. CONCRETE CURB
10. CONCRETE MAINTENANCE STEP OUT STRIP
11. 95% COMPACTED HARDSCAPE SUBGRADE SECTION PER PLAN AND SPECS.

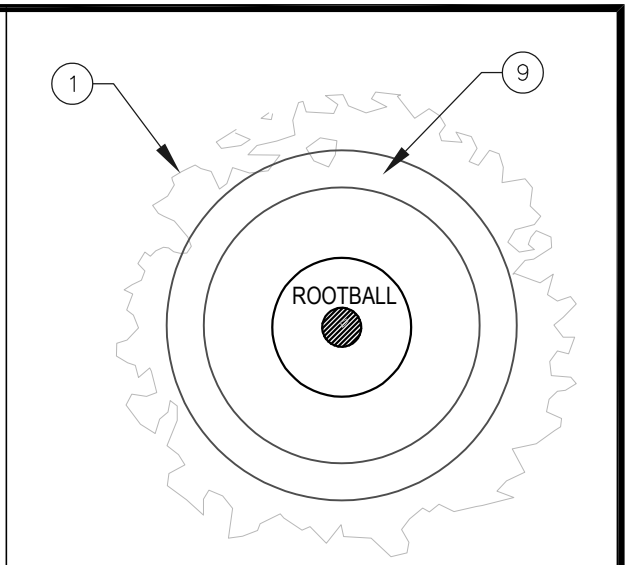
VALLEY-WIDE RECREATION AND PARK DISTRICT

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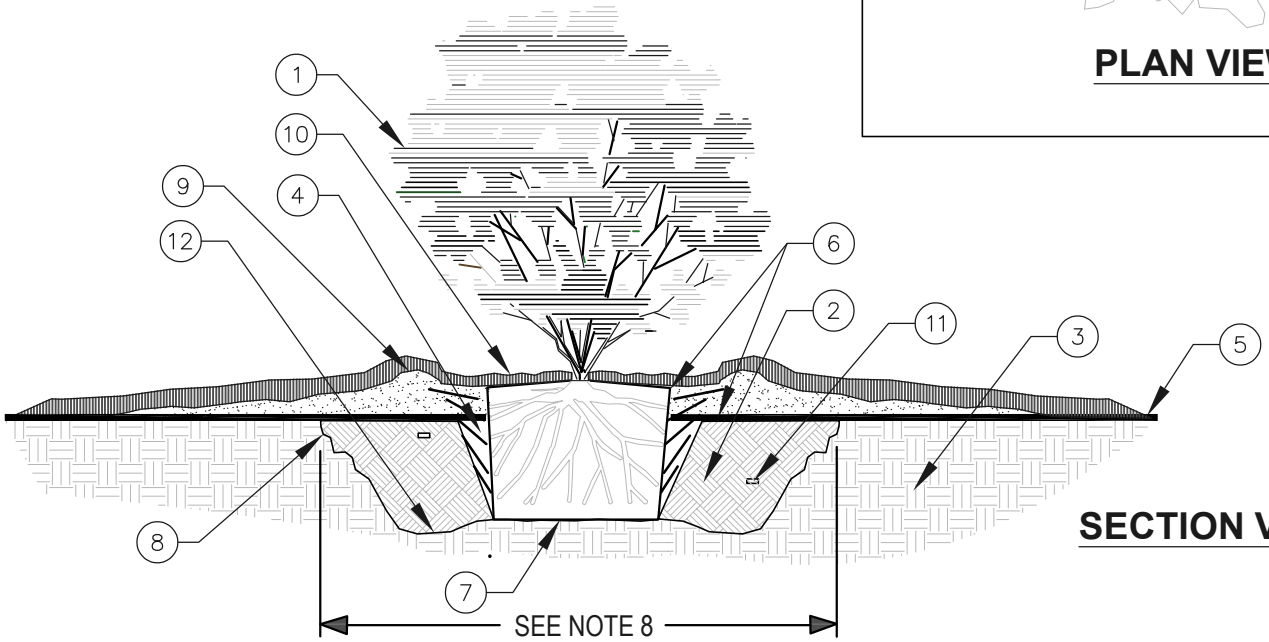
PARKING LOT TREE ROOT BARRIER

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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PD-6



PLAN VIEW



SECTION VIEW

1. SHRUB PER PLAN.
2. CLEAN COMPACTED BACKFILL SOIL PER SPECS AND SOIL REPORT.
3. UNDISTURBED NATIVE SOIL.
4. TAMP SOIL IN 6" LIFTS TO LIGHTLY COMPACT BACKFILL AGAINST ROOT BALL.
5. FINISH GRADE.
6. TOP OF ROOT BALL SURFACE AND ROOT FLARE TO BE POSITIONED 2" ABOVE FINISH GRADE.
7. BOTTOM OF ROOT BALL TO REST ON EXISTING OR RECOMPACTED SOIL.
8. LOOSENED SOIL 2X ROOT BALL WIDTH (3X ROOT BALL WIDTH IN HARD SOILS).
9. 2" HIGH X 6" WIDE ROUNDED COMPACTED BERM 6" OUTSIDE OF ROOTBALL.
10. TAPER MULCH TO 1" THICK OVER ROOT BALL.
11. PLANTING TABLETS PER SPECS. AND SOILS REPORT.
12. EXCAVATE OUTSIDE EDGES OF PLANTING PIT 1"-2" BELOW BOTTOM OF ROOTBALL.

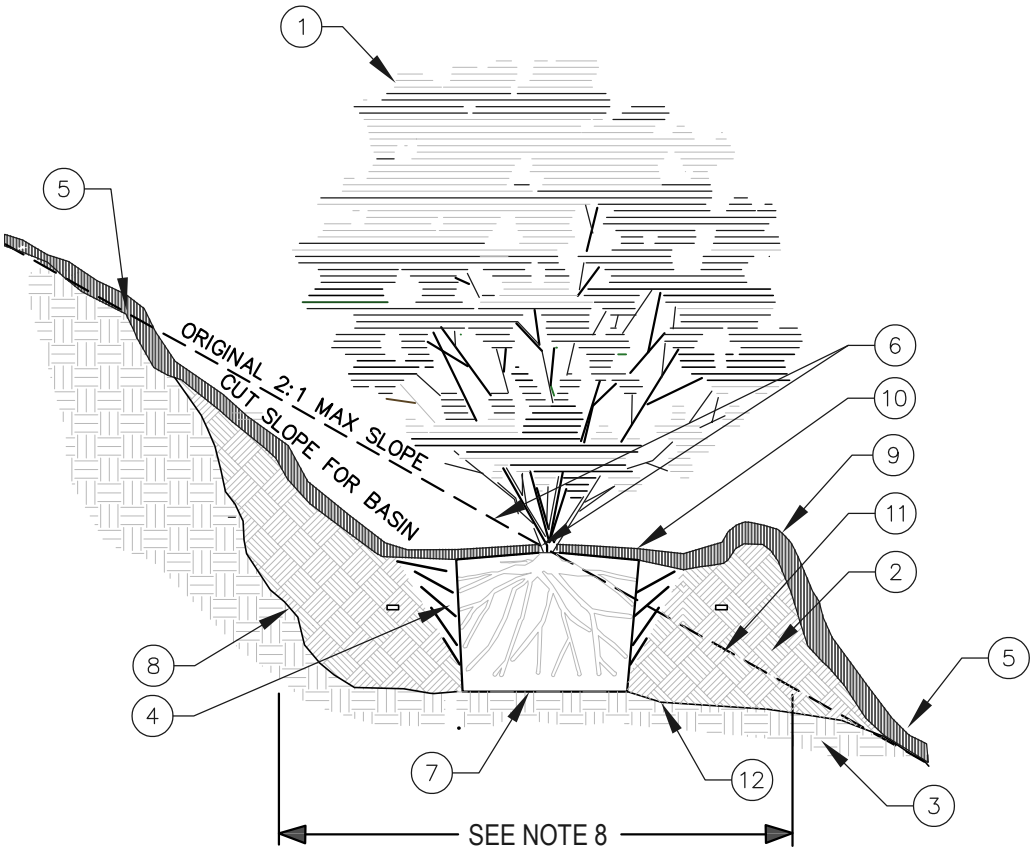
VALLEY-WIDE RECREATION AND PARK DISTRICT

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TYPICAL SHRUB

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PD-7



SECTION VIEW

1. SHRUB PER PLAN.
2. CLEAN COMPACTED BACKFILL SOIL PER SPECS AND SOIL REPORT.
3. UNDISTURBED NATIVE SOIL.
4. TAMP SOIL IN 6" LIFTS TO LIGHTLY COMPACT BACKFILL AGAINST ROOT BALL.
5. SMOOTH TRANSITION TO EXISTING SLOPE GRADE.
6. ROOT BALL SURFACE AND ROOT FLARE TO BE POSITIONED TO BE ALIGNED WITH ORIGINAL SLOPE PLANE.
7. BOTTOM OF ROOT BALL TO REST ON EXISTING OR RECOMPACTED SOIL.
8. LOOSENED SOIL 2X ROOT BALL WIDTH (3X ROOT BALL WIDTH IN HARD SOILS).
9. 4" HIGH X 6" WIDE ROUNDED COMPACTED BERM 6" OUTSIDE OF ROOTBALL.
10. TAPER MULCH TO 1" THICK OVER ROOT BALL.
11. PLANTING TABLETS PER SPECS. AND SOILS REPORT.
12. EXCAVATE EDGES OF PLANTING PIT ALONG BOTTOM SIDE OF SLOPE 1"-2" BELOW BOTTOM OF ROOTBALL.

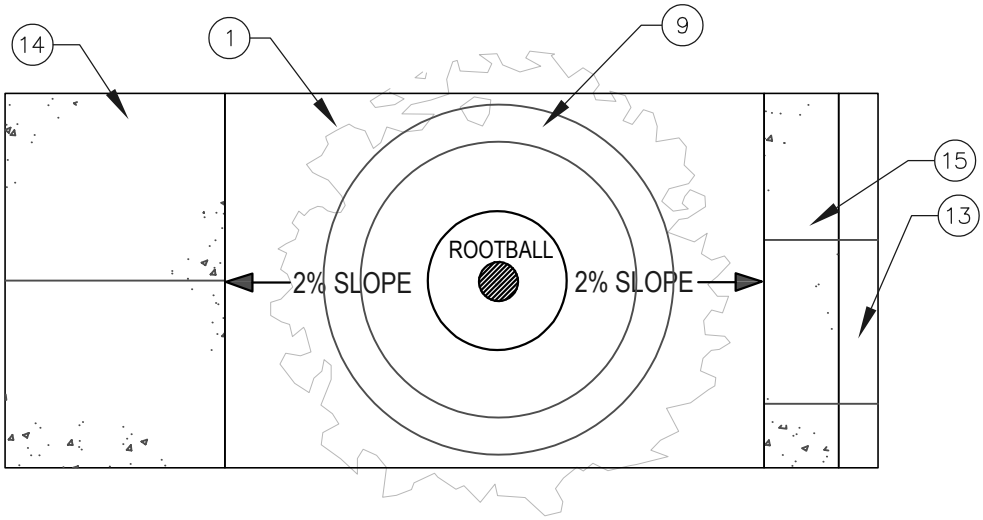
VALLEY-WIDE RECREATION AND PARK DISTRICT

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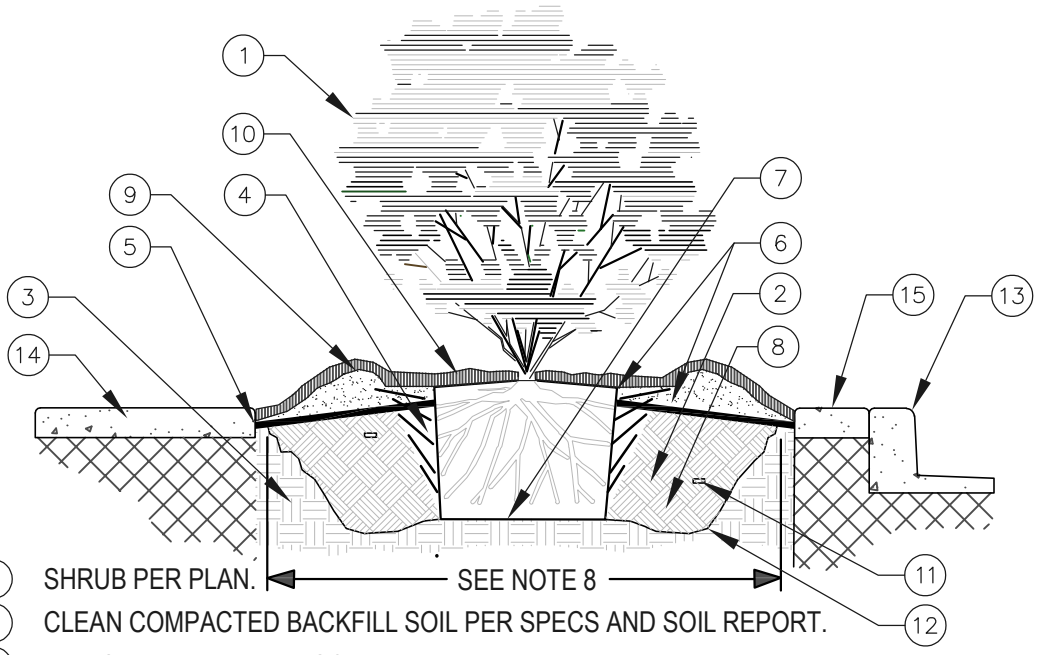
TYPICAL SHRUB ON SLOPE

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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PD-8



PLAN VIEW



SECTION VIEW

1. SHRUB PER PLAN.
2. CLEAN COMPACTED BACKFILL SOIL PER SPECS AND SOIL REPORT.
3. UNDISTURBED NATIVE SOIL.
4. TAMP SOIL IN 6" LIFTS TO LIGHTLY COMPACT BACKFILL AGAINST ROOT BALL.
5. NATIVE SOIL FINISH GRADE TO BE 2" BELOW EDGE OF HARDSCAPE SURFACE AND SLOPE AWAY FROM SHRUBS.
6. TOP OF ROOT BALL SURFACE AND ROOT FLARE TO BE POSITIONED 2" ABOVE FINISH GRADE.
7. BOTTOM OF ROOT BALL TO REST ON EXISTING OR RECOMPACTED SOIL.
8. LOOSENED SOIL 2X ROOT BALL WIDTH (3X ROOT BALL WIDTH IN HARD SOILS).
9. 2" HIGH X 6" WIDE ROUNDED COMPACTED BERM 6" OUTSIDE OF ROOTBALL.
10. TAPER MULCH TO 1" THICK OVER ROOT BALL.
11. PLANTING TABLETS PER SPECS. AND SOILS REPORT.
12. EXCAVATE OUTSIDE EDGES OF PLANTING PIT 1"-2" BELOW BOTTOM OF ROOTBALL.
13. CONCRETE CURB.
14. CONCRETE WALKWAY.
15. CONCRETE MAINTENANCE STEP OUT STRIP.

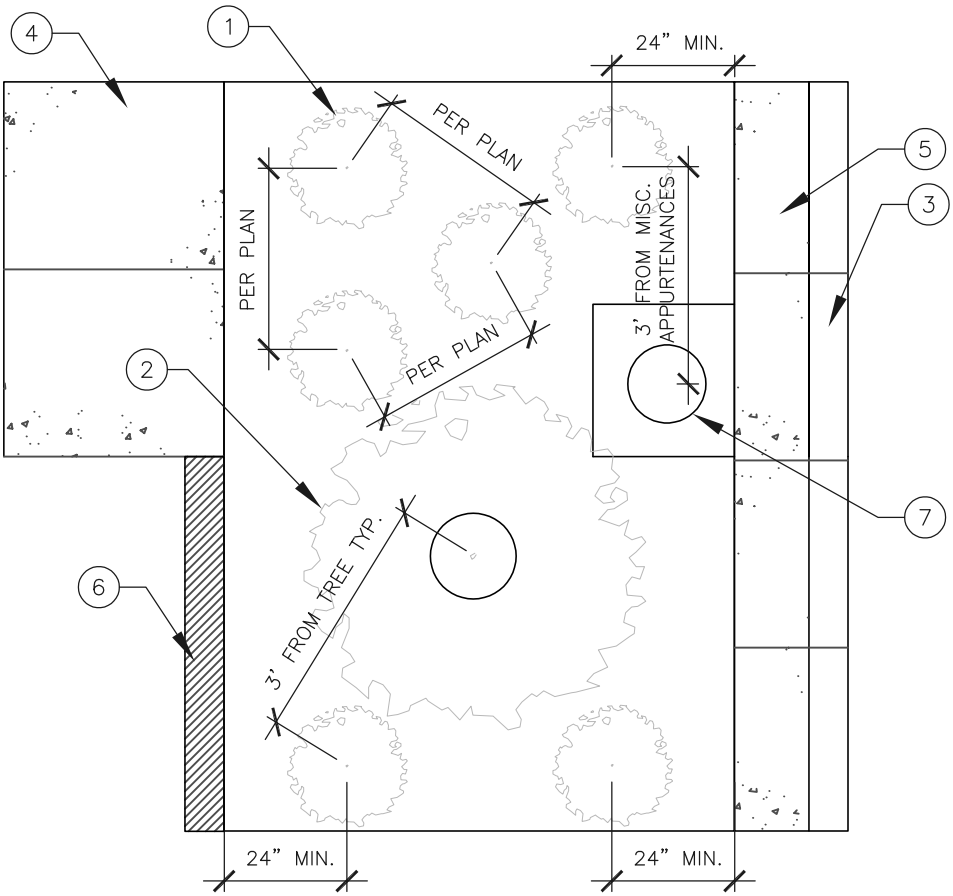
VALLEY-WIDE RECREATION AND PARK DISTRICT

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TYPICAL SHRUB IN PARKWAY

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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PD-9



PLAN VIEW

1. SHRUB PER PLAN.
2. TREE PER PLAN.
3. CONCRETE CURB.
4. CONCRETE WALKWAY.
5. CONCRETE MAINTENANCE STEP OUT STRIP.
6. WALL OR FENCE.
7. MISC. APPURTENANCES (IE. VAULTS, BOXES, FIRE HYDRANTS, STREET LIGHTS ETC.).

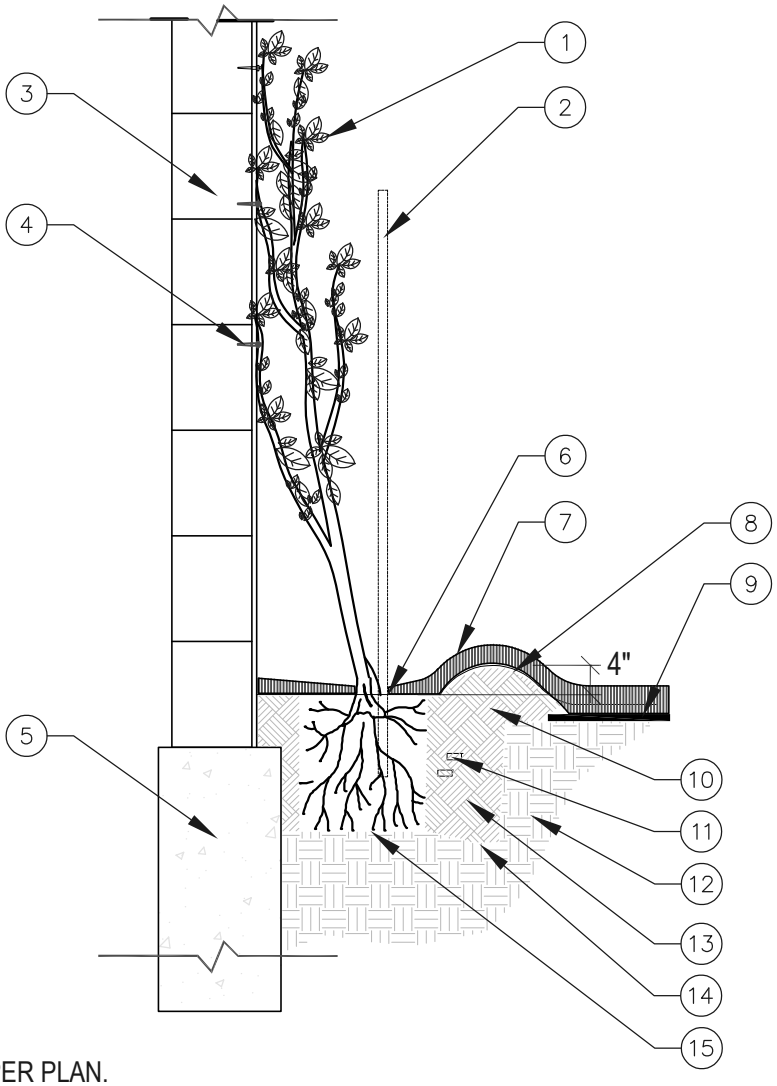
VALLEY-WIDE RECREATION AND PARK DISTRICT

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SHRUB PLACEMENT

VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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PD-10



1. VINE PER PLAN.
2. NURSERY STAKE (LEAN AGAINST WALL FOR SELF CLINGING VINES).
3. WALL OR BUILDING.
4. GALVANIZED OR STAINLESS STEEL ANCHOR WHEN NEEDED PER SPECIFICATIONS.
5. WALL FOOTING PER WALL PLANS.
6. TOP OF ROOT BALL SURFACE AND ROOT FLARE TO BE POSITIONED 2" ABOVE FINISH GRADE.
7. TAPER MULCH TO 1" THICK OVER ROOT BALL.
8. 4" HIGH X 6" WIDE ROUNDED COMPACTED BERM 6" OUTSIDE OF ROOTBALL.
9. FINISH GRADE.
10. CLEAN COMPACTED BACKFILL SOIL PER SPECS AND SOIL REPORT.
11. PLANTING TABLETS PER SPECS. AND SOILS REPORT.
12. UNDISTURBED NATIVE SOIL.
13. LOOSENED SOIL 2X ROOT BALL WIDTH (3X ROOT BALL WIDTH IN HARD SOILS).
14. EXCAVATE OUTSIDE EDGES OF PLANTING PIT 1"-2" BELOW BOTTOM OF ROOTBALL.
15. BOTTOM OF ROOT BALL TO REST ON EXISTING OR RECOMPACTED SOIL.

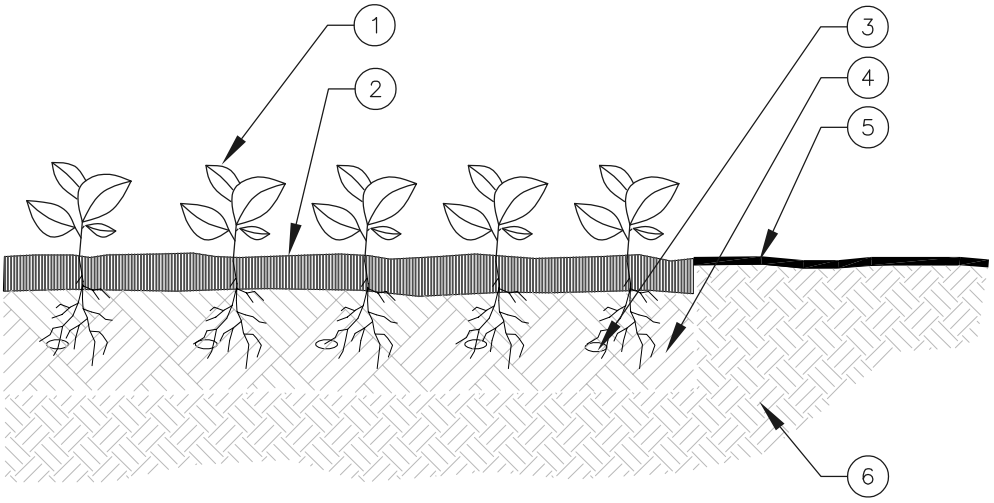
VALLEY-WIDE RECREATION AND PARK DISTRICT

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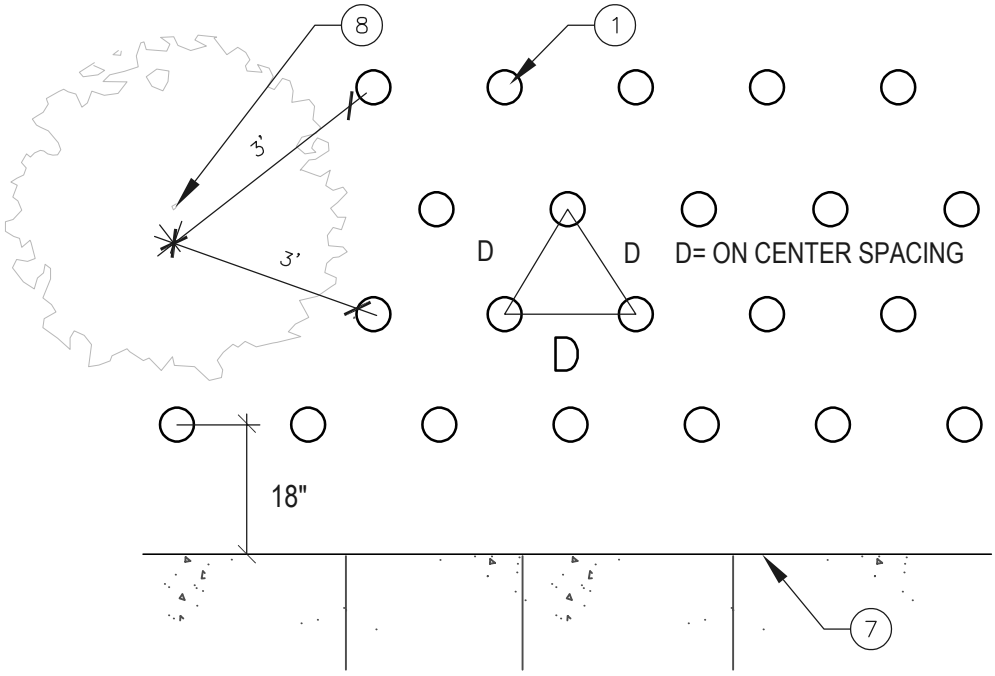
VINE PLANTING

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SECTION VIEW



SECTION VIEW

1. GROUND COVER PER PLAN.
2. 2" MIN. THICK BARK MULCH FOR ALL PLANTERS AND SLOPES TYP. WITH GROUNDCOVER ON OVERHEAD IRRIGATION.
3. 1 EA. 5 GRAM FERTILIZER TABLET PER SPECS. AND SITE SOIL REPORT RECOMMENDATIONS.
4. AMENDED SOILS PER SPECS. AND SITE SOIL REPORT RECOMMENDATIONS.
5. NATIVE SOIL FINISH GRADE PER GRADING AND MULCHING DETAIL.
6. UNDISTURBED NATIVE SOIL.
7. CONCRETE WALKWAY OR CURB.
8. SPACE GROUNDCOVER 3' FROM TREES AND SHRUBS TYP.

VALLEY-WIDE RECREATION AND PARK DISTRICT

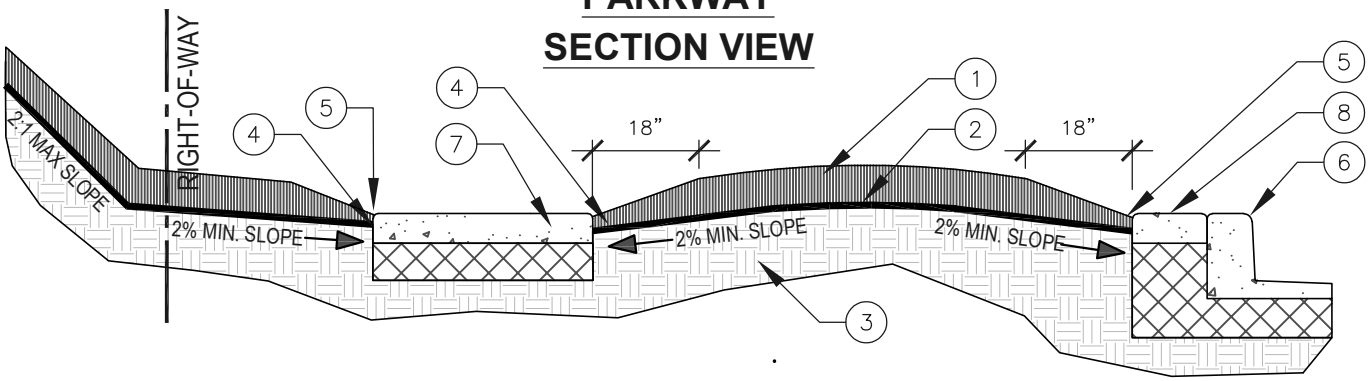
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GROUNDCOVER PLANTING

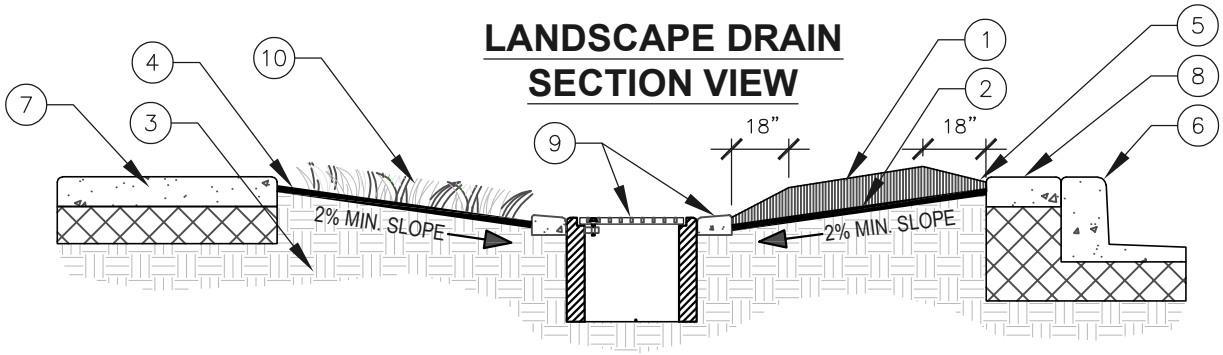
VALLEY-WIDE APPROVAL	LDC RECOMMENDED	REV:	DATE:
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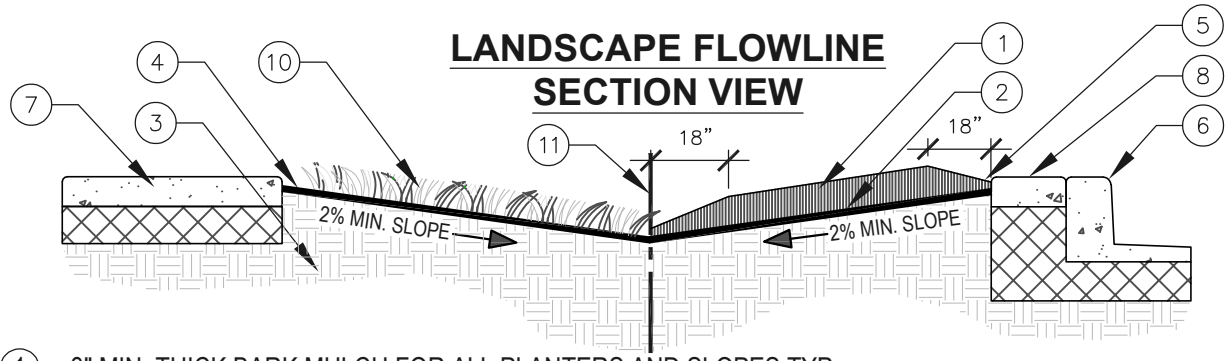
PARKWAY
SECTION VIEW



LANDSCAPE DRAIN
SECTION VIEW



LANDSCAPE FLOWLINE
SECTION VIEW



1. 3" MIN. THICK BARK MULCH FOR ALL PLANTERS AND SLOPES TYP.
2. FINISH GRADE PER PLAN (2% MIN. SLOPE IN ROW TO SLOPE TO STREET CURB TYP.) BERM WHEN SPECIFIED.
3. UNDISTURBED OR AMENDED COMPACTED NATIVE SOIL.
4. NATIVE SOIL FINISH GRADE TO BE 2" BELOW EDGE OF HARDSCAPE SURFACE.
5. TAPER MULCH TO 1" THICK AT HARDSCAPE EDGE TYP.
6. CONCRETE CURB.
7. CONCRETE WALKWAY.
8. CONCRETE MAINTENANCE STEP OUT STRIP (IF SPECIFIED).
9. DRAIN AND DRAIN CONCRETE COLLAR PER PLAN (ENSURE 90% MIN. COMPACTION).
10. FINISH GRADE BELOW HARDSCAPE AND DRAINS TO BE $\frac{1}{2}$" FOR BERMUDA GRASS AND 1" FOR FESCUE GRASS.
11. 1% MIN. SLOPE FLOW LINE PER APPROVED PLAN (TAPER MULCH TO 1" AT FLOW LINE TYP.).

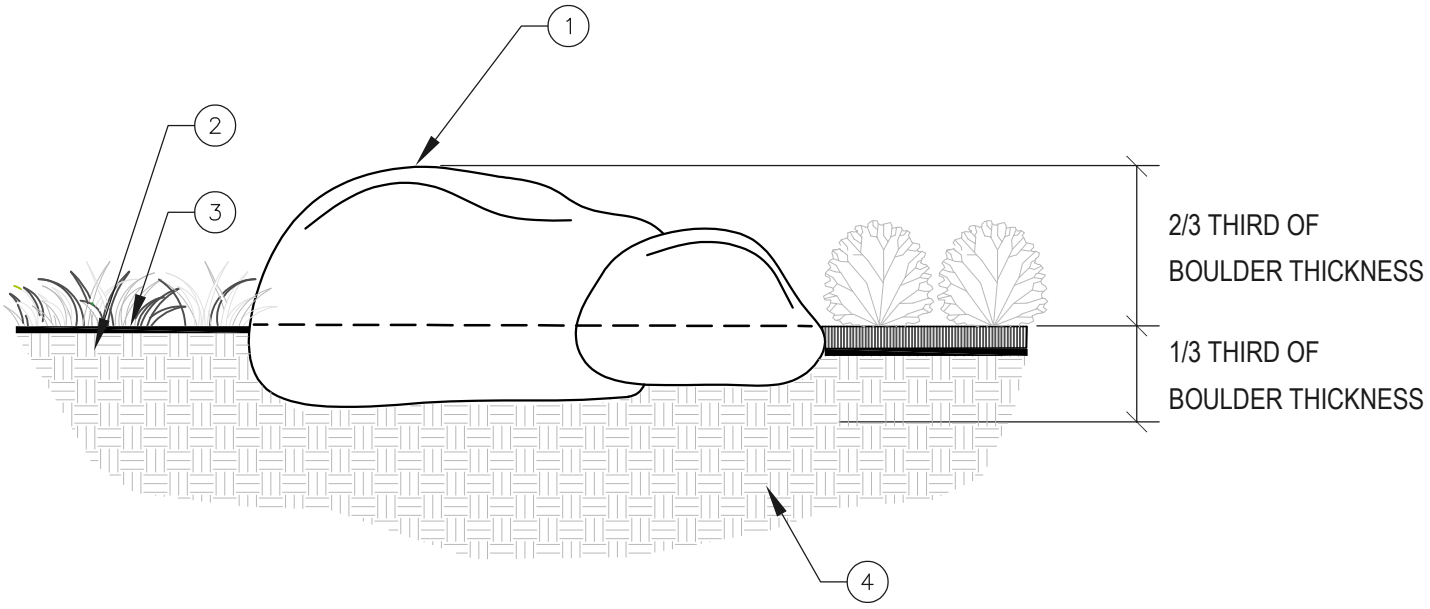
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FINISH GRADING AND MULCHING

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1. BOULDER SIZE AND TYPE PER PLAN (APPROVED PRIOR TO DELIVERY).
2. NATIVE SITE SOIL FINISH GRADE.
3. BARK MULCH PER PLAN AND SPECS.
4. UNDISTURBED OR AMENDED COMPACTED NATIVE SOIL.

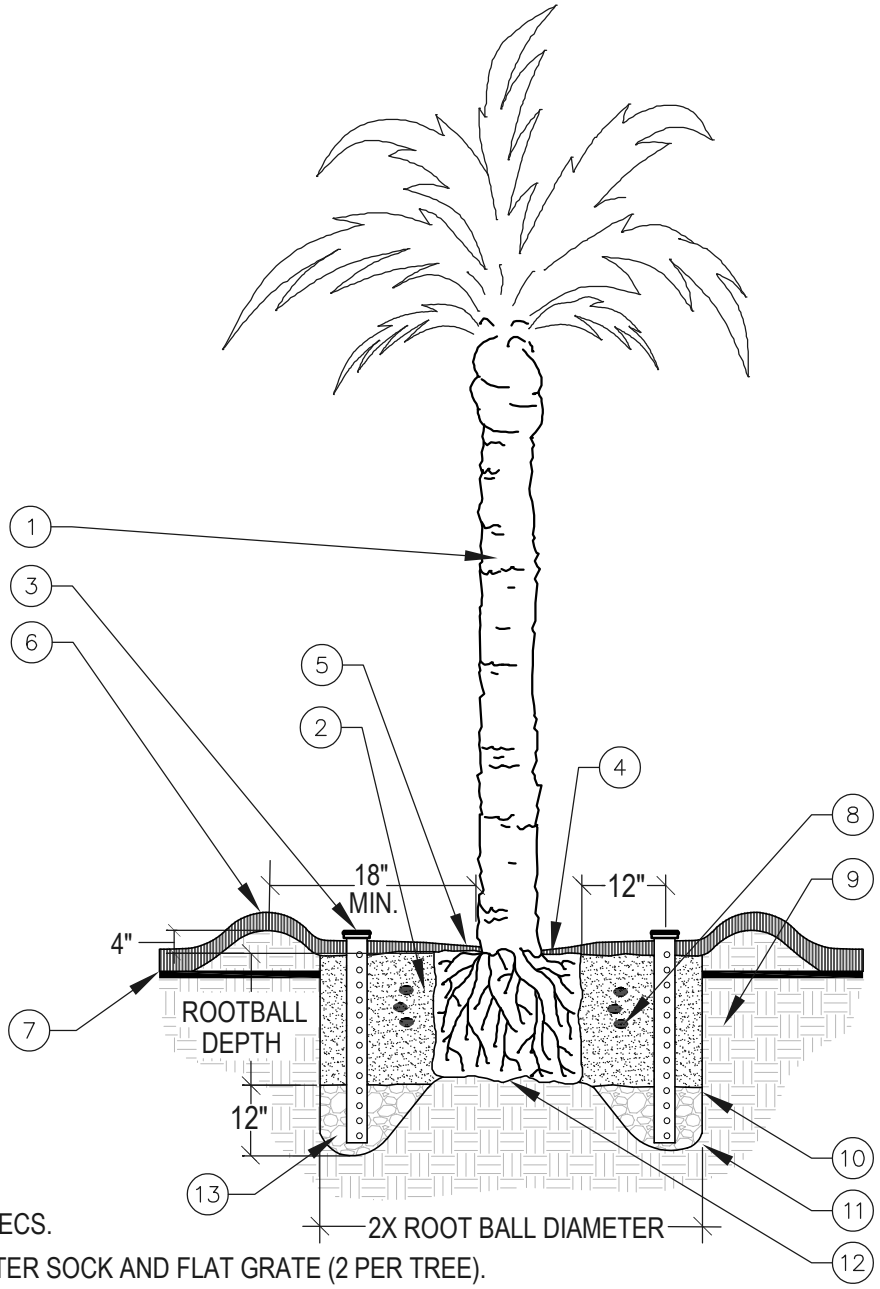
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BOULDER PLACEMENT

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1. PALM TREE PER PLAN.
2. CLEAN SAND BACKFILL PER SPECS.
3. 4" SCH 40 PERF. PIPE WITH FILTER SOCK AND FLAT GRATE (2 PER TREE).
4. TOP OF ROOT BALL SURFACE AND ROOT FLARE TO BE POSITIONED 2" ABOVE FINISH GRADE.
5. TAPER MULCH TO 1" THICK OVER ROOT BALL.
6. 6" HIGH X 12" WIDE ROUNDED COMPACTED BERM 18" OUTSIDE OF ROOTBALL.
7. FINISH GRADE.
8. PALM TREE PLANTING TABLETS PER SPECS. AND SOILS REPORT.
9. UNDISTURBED NATIVE SOIL.
10. LOOSENED SOIL 2X ROOT BALL WIDTH (3X ROOT BALL WIDTH IN HARD SOILS).
11. EXCAVATE OUTSIDE EDGES OF PLANTING PIT 12" BELOW BOTTOM OF ROOTBALL.
12. BOTTOM OF ROOT BALL TO REST ON EXISTING OR RECOMPACTED SOIL.
13. 12" MIN. DEPTH $\frac{3}{4}$" WASHED ROCK PER SPECS.

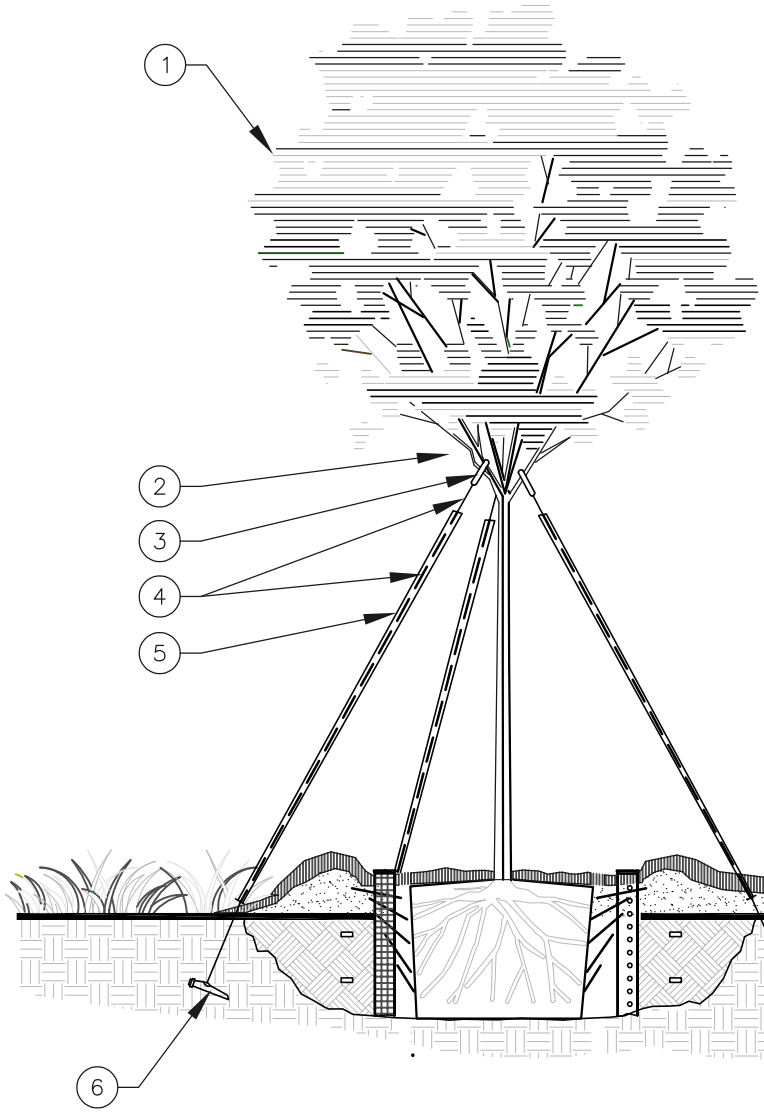
VALLEY-WIDE
RECREATION AND PARK DISTRICT

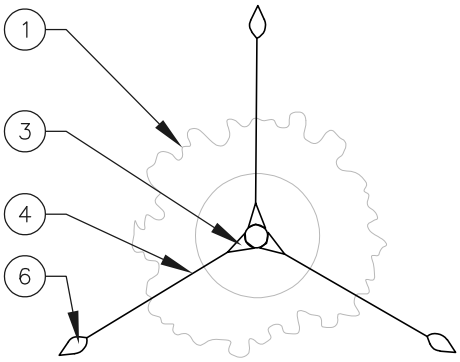
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PALM TREE

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PLAN VIEW

SECTION VIEW

1. TREE PER PLAN.
2. TRIM SMALL BRANCHED AS NEEDED TO CLEAR GUY WIRE.
3. GUY WIRE HOSE TRUCK PROTECTOR PER SPECS.
4. GUY WIRE PER SPECS.
5. 1" SCH. 40 PVC PIPE PLACED OVER GUY WIRE (EXTEND FROM BRANCH CONNECTION TO GROUND TYP.).
6. DEADMAN ANCHOR TO SECURE GUY WIRE PER SPECS.

NOTES

PROVIDE 3 EA. DUCKBILL GUYING SYSTEM PER TREE PER SPECS.

REFER TO TREE PLANTING DETAILS FOR TREE PLANTING.

VALLEY-WIDE RECREATION AND PARK DISTRICT

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TREE GUYING

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END OF STANDARDS AND SPECIFICATIONS