

HORIZON DESIGN AND DEVELOPMENT PLANNING LANDSCAPE ARCHITECTURE DEVELOPMENT CONSULTING 16414 San Pedro Ave., Suite 630 San Antonio, Texas 78232



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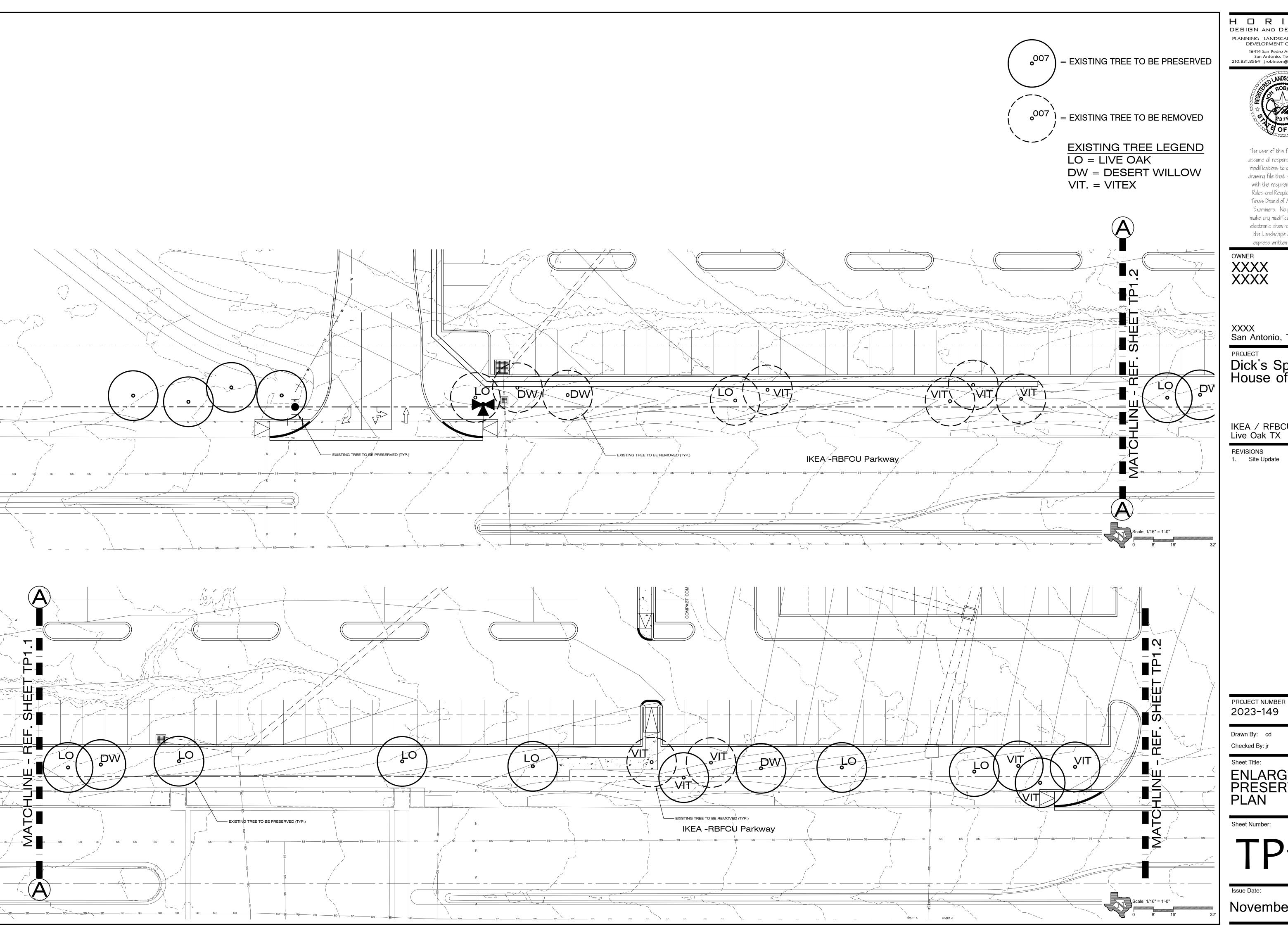
San Antonio, TX 782XX

Dick's Sporting Goods House of Sports

IKEA / RFBCU Pkwy. Live Oak TX 78233

PROJECT NUMBER

OVERALL TREE PRESERVATION PLAN



H O R I Z O N DESIGN AND DEVELOPMENT PLANNING LANDSCAPE ARCHITECTURE DEVELOPMENT CONSULTING

16414 San Pedro Ave., Suite 630 San Antonio, Texas 78232 210.831.8564 jrobinson@horizondesign-sa.com



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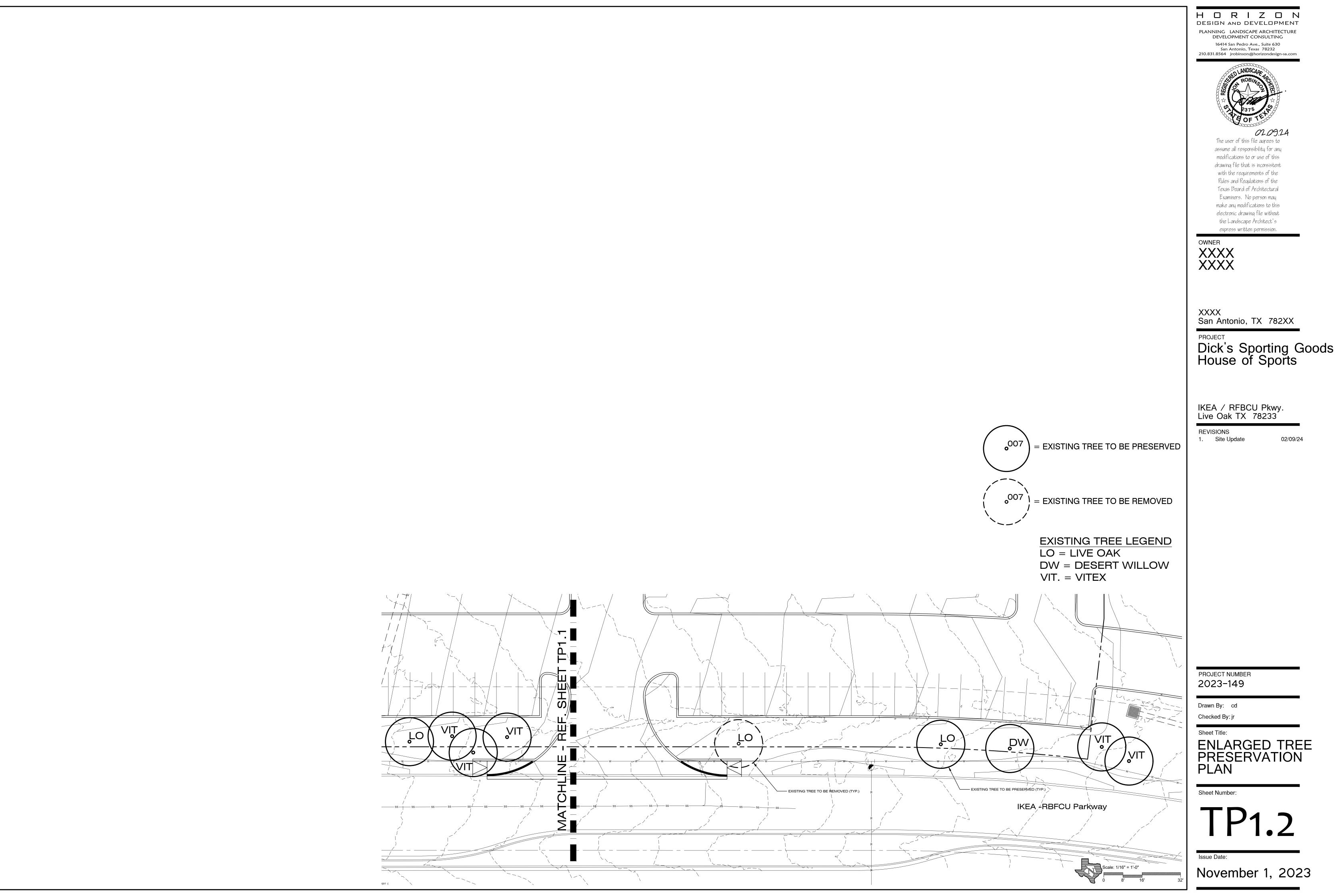


San Antonio, TX 782XX

Dick's Sporting Goods House of Sports

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ENLARGED TREE PRESERVATION



HORIZON DESIGN AND DEVELOPMENT PLANNING LANDSCAPE ARCHITECTURE

02/09/24

ENLARGED TREE PRESERVATION

PLAN	NT SCHEDULE					SIZE = CALIPER OR SPREAD
SYM.	SCIENTIFIC NAME	COMMON NAME	HGT.	SIZE	CONDITION	REMARKS
TREES	3					
PM	Platanus mexicana	MEXICAN SYCAMORE	-	3" CAL.	B and B	DECIDUOUS / SINGLE STEM
QV	Quercus virginiana	LIVE OAK	-	3" CAL.	B and B	EVERGREEN / SINGLE STEM
SS	Sophora secundiflora	MOUNTAIN LAUREL	-	2" CAL.	B and B	EVERGREEN / MULTI-TRUNKED
UC	Ulmus crassifolia	CEDAR ELM	-	3" CAL.	B and B	DECIDUOUS / SINGLE STEM
VA	Vitex anges-castus	CHASTE TREE	-	2" CAL.	B and B	DECIDUOUS / MULTI-TRUNKED
SHRU	BS					
LGC	Leucophyllum frutescens 'Gn. Cloud'	'GREEN CLOUD' CENIZO		5 GAL.		EVERGREEN / PLANT AT 4'-0" O.C.
LMY	Lantana montevidensis 'New Gold'	'NEW GOLD' LANTANA	-	1 GAL.		PERENNIAL / PLANT AT 30" O.C.
MS	Miscanthus gracillimus	SILVER GRASS		5 GAL.		ACCENT / PLANT AS SHOWN
NT	Nassella tenuissima	INDIAN FEATHER GRASS	-	1 GAL.		ACCENT / PLANT AS SHOWN
RRZ	Rosa 'Radrazz'	'RADRAZZ' KNOCK-OUT ROSE	-	5 GAL.		EVERGREEN / PLANT AT 3'-0" O.C.
SG	Salvia greggii	RED SALVIA	-	3 GAL.		EVERGREEN / PLANT AT 30" O.C.
SL	Salvia leucantha	MEXICAN BUSH SAGE	-	5 GAL.		EVERGREEN / PLANT AT 3'-0" O.C.
GROL	INDCOVERS AND GRASSE	S				
	Cynodon dactylon '419'	'419' HYBRID BERMUDAGRASS	-		SOLID SOD	SEE SPECIFICATIONS
ψ ψ ψ ψ	Cynodon dactylon 'Blackjack'	'BLACKJACK' BERMUDAGRASS	-		HYDROMULCH	SEE SPECIFICATIONS
		DECOMPOSED GRANITE	-			ACTED DEPTH OVER SUBGRADE W/ GEO-TEXTILE WEED EMERGENT HERBICIDE. FILL UNDER ADJACENT SHRUBS.
		3" - 4" 'TEXAS BLEND' RIVER ROCK	-			HOVER COMPACTED SUBGRADE W/ GEO-TEXTILE WEED EMERGENT HERBICIDE. FILL UNDER ADJACENT SHRUBS.

### GENERAL NOTES:

- 1. REFER TO SPECIFICATIONS FOR ALL CONTRACT PLANTING.
- INSTALL APPROVED IMPORTED PLANTING MIX TO MIN. DEPTH OF 6" IN ALL AREAS SCHEDULED AS LANDSCAPE PLANTING AREAS.
- 3. INSTALL APPROVED IMPORTED TOPSOIL TO 4" DEPTH IN ALL TURFGRASS AREAS. 4. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES IN THE FIELD PRIOR TO INSTALLATION AND MUST REPORT ANY DEVIATION IN
- SITE CONDITIONS TO THE LANDSCAPE ARCHITECT BEFORE PROCEEDING WITH WORK IN THE AFFECTED AREA.
  5. WHERE SHOWN ON THESE PLANS, UTILITY INFORMATION IS PROVIDED FOR REFERENCE ONLY. REF. CIVIL AND MEP PLANS FOR ALL UTILITY
  - INFORMATION.

    VERIEY LOCATION AND DEPTH OF ALL EXISTING AND PROPOSED LITITILIES PRIOR TO ANY EXCAVATION. IN THE EVENT POTENTIAL CONFLI
  - VERIFY LOCATION AND DEPTH OF ALL EXISTING AND PROPOSED UTITILIES PRIOR TO ANY EXCAVATION. IN THE EVENT POTENTIAL CONFLICT(S) OCCUR BETWEEN UTILITIES AND LANDSCAPE IMPROVEMENTS, IMMEDIATELY CEASE WORK IN THE AFFECTED AREA, REPORT THE CONFLICT(S) TO THE OWNER'S REPRESENTATIVE, AND DO NOT PROCEED UNTIL RECEIPT OF SPECIFIC WRITTEN DIRECTION.

### JRBAN DEER NOTES:

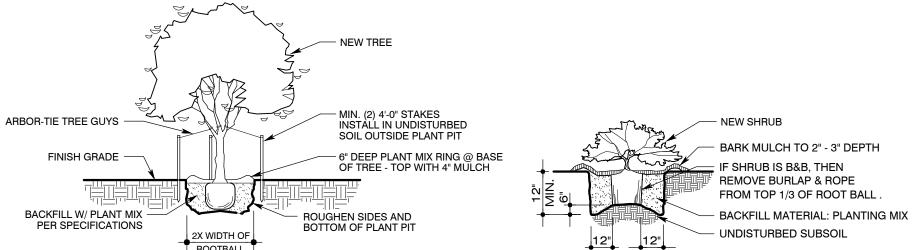
- 1. AT THE TIME THESE DOCUMENTS WERE PREPARED THE LANDSCAPE ARCHITECT WAS NOT AWARE OF A LOCAL URBAN DEER POPULATION.
  2. IN THE EVENT AN URBAN DEER POPULATION IS DISCOVERED, CONTRACTOR IS SOLELY RESPONSIBLE FOR PROTECTING ALL NEWLY-INSTALLED
- PLANTS THROUGH THE 30-DAY MAINTENANCE PERIOD.
  3. APPLY "LIQUID FENCE" (OR APPROVED EQUAL) TO ALL PLANTS AS NEEDED TO DISCOURAGE BROWSING BY DEER.
- 4. ANY NEWLY-INSTALLED PLANTS EATEN OR BROWSED BY DEER PRIOR TO THE EXPIRATION OF THE 30-DAY MAINTENANCE PERIOD SHALL BE REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER.

## OVERHEAD ELECTRIC NOTES:

- ALL PROPOSED LARGE SPECIES TREES (AS DEFINED BY THE UNIFIED DEVELOPMENT CODE IN EFFECT HEREOF) SHALL BE PLANTED NO CLOSER THAN 20' TO ALL OVERHEAD ELECTRIC UTILITY LINES.
- CONTRACTOR IS SOLELY RESPONSIBLE FOR FIELD LOCATING ALL OVERHEAD ELECTRIC UTILITY LINES AND ENSURING THAT NO LARGE SPECIES TREES ARE PLANTED WITHIN 20' OF ANY OVERHEAD ELECTRIC UTILITY LINES.
- WHERE CITY INSPECTORS FIND ANY PROPOSED LARGE SPECIES TREES TO BE IN VIOLATION OF PROXIMITY TO OVERHEAD ELECTRIC UTILITY LINES, THE CONTRACTOR SHALL RELOCATE TREES AT NO ADDITIONAL COST TO THE OWNER.

## EMPORARY IRRIGATION NOTES:

- PROVIDE TEMPORARY IRRIGATION TO SODDED OR SEEDED AREAS WHERE SHOWN ON PLAN AND
- NOT SCHEDULED TO RECEIVE PERMANENT IRRIGATION.
- WHERE TEMPORARY IRRIGATION IS REQUIRED, PROVIDE TEMPORARY IRRIGATION FOR A MIN. PERIOD OF 60 DAYS OR UNTIL A GRASS STAND IS FULLY ESTABLISHED (AS DETERMINED SOLELY BY THE OWNER'S REPRESENTATIVE).



1/8" = 1'-0"

TREE PLANTING DETAIL

NEW TREES
1/8" = 1'-0"

SHRUB PLANTING DETAIL
NEW SHRUBS

IKEA / RFBCU Pkwy. Live Oak TX 78233

HORIZON

DESIGN AND DEVELOPMENT

PLANNING LANDSCAPE ARCHITECTURE

DEVELOPMENT CONSULTING

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San Antonio, TX 782XX

REVISIONS

OWNER

XXXX

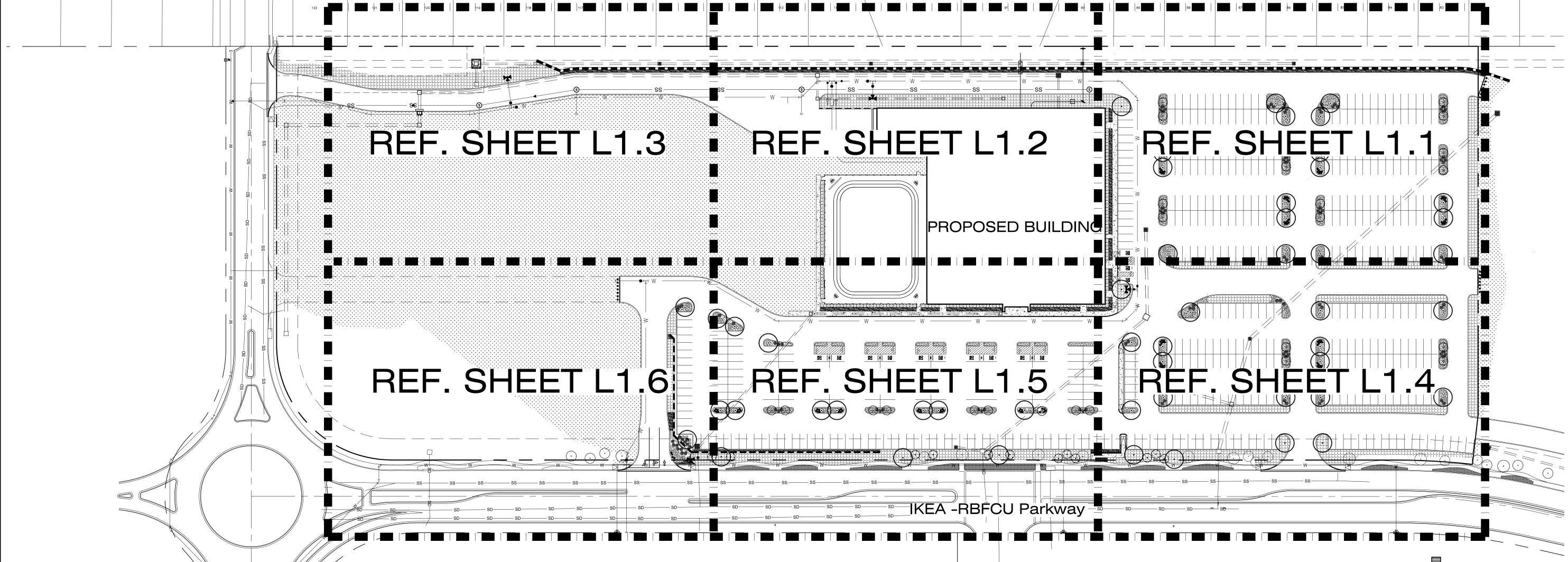
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PROJECT

1. Site Update

02/09/24



PROJECT NUMBER 2023-149

Drawn By:

Checked By

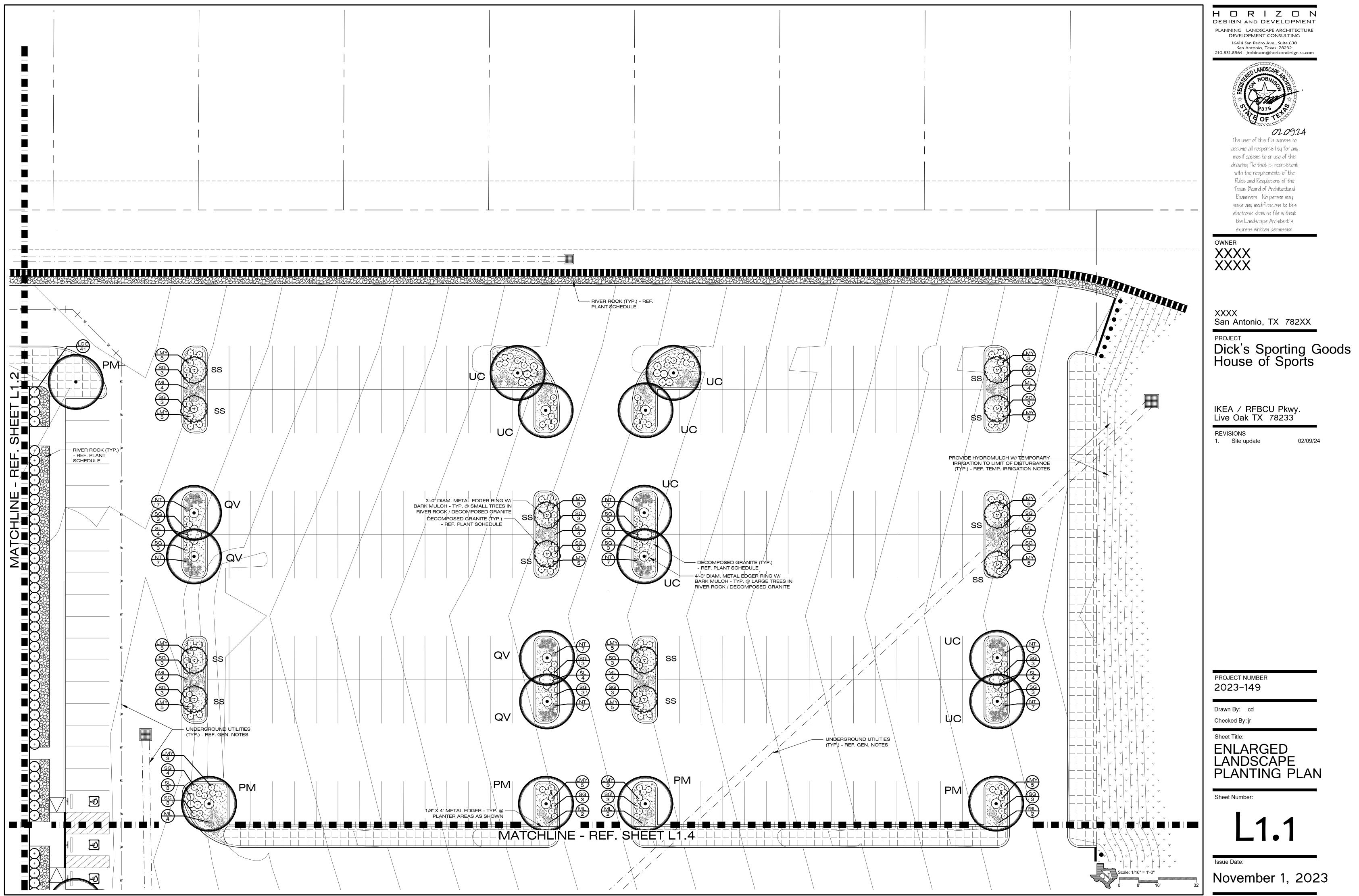
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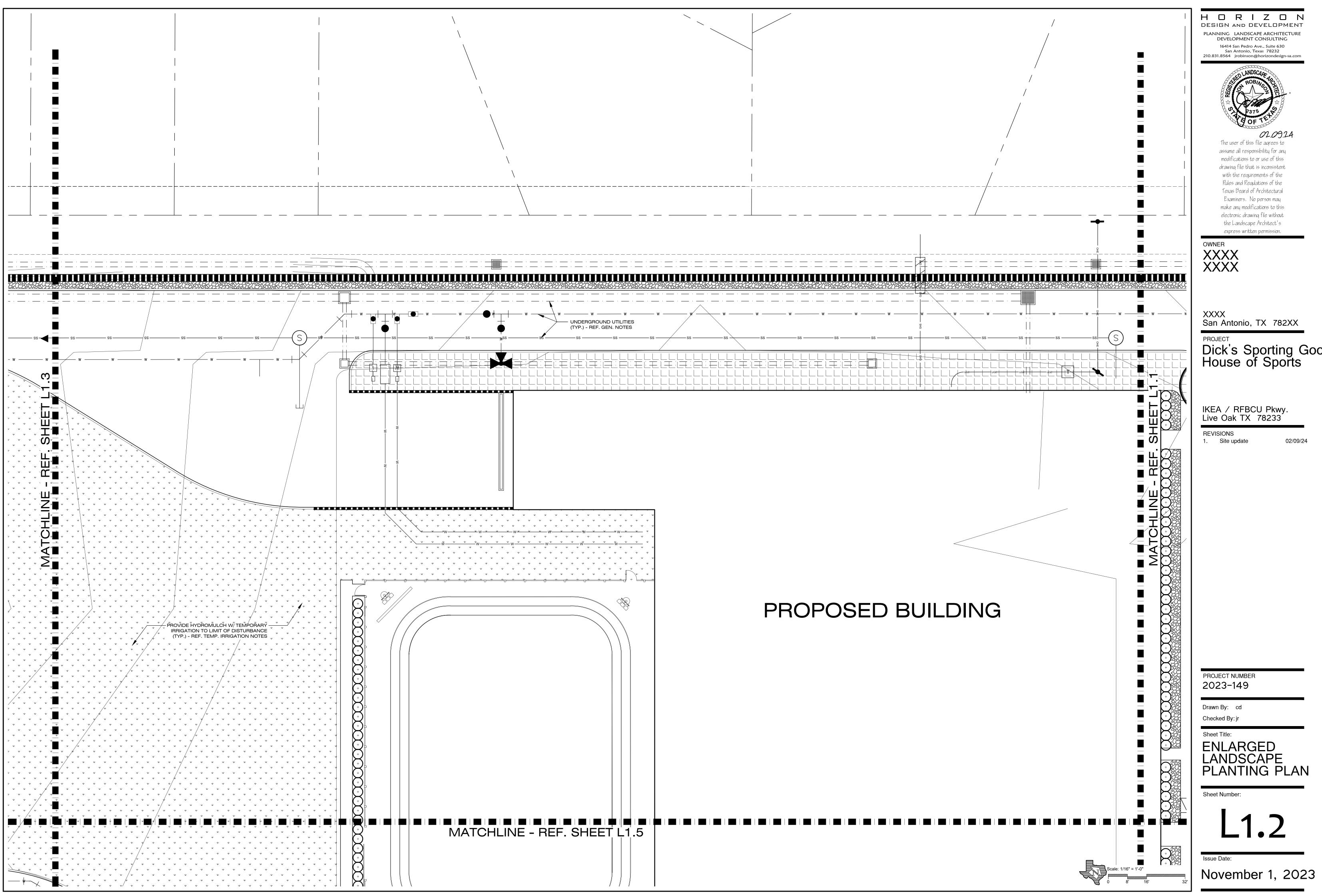
OVERALL LANDSCAPE PLANTING PLAN

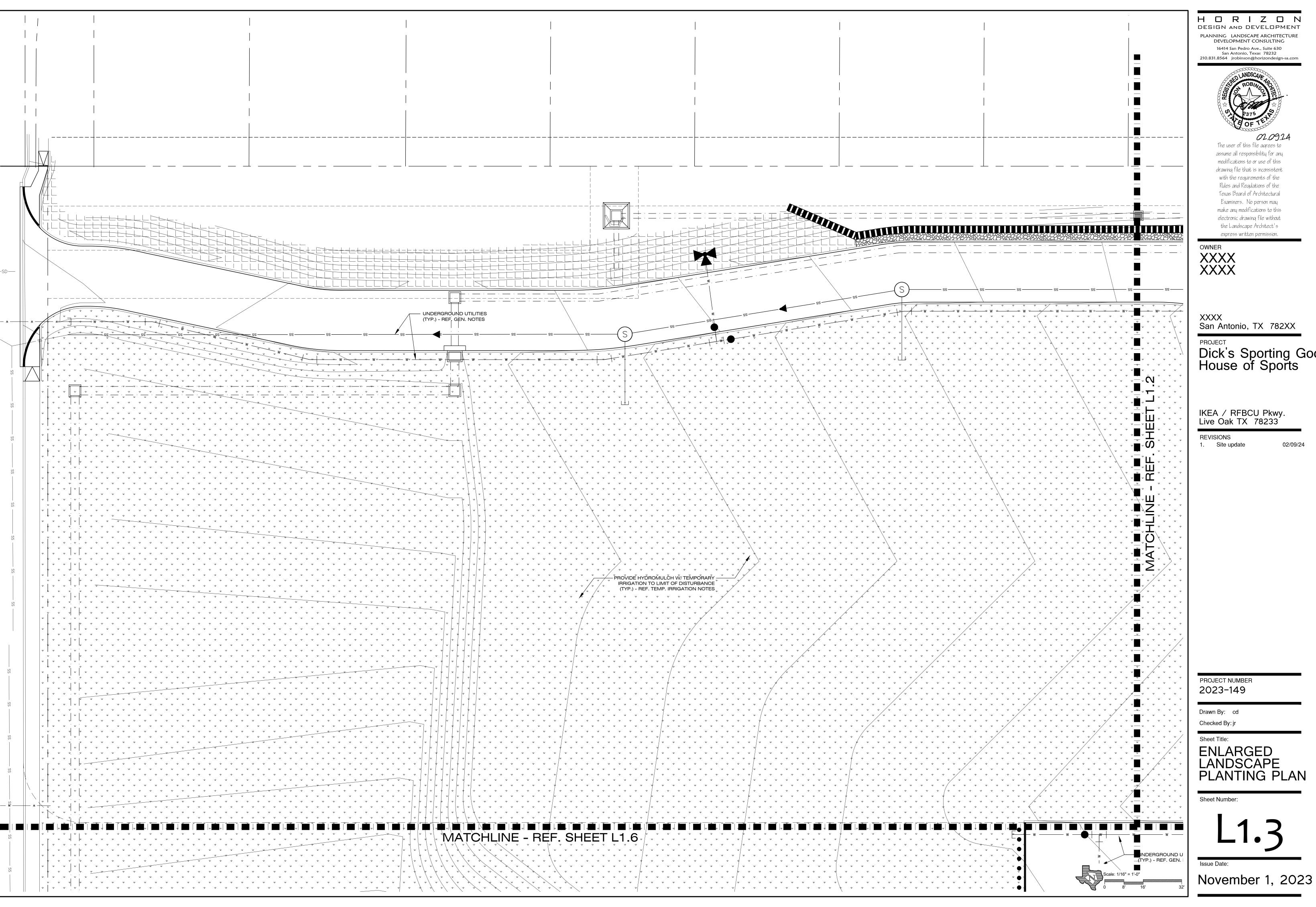
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Issue Date



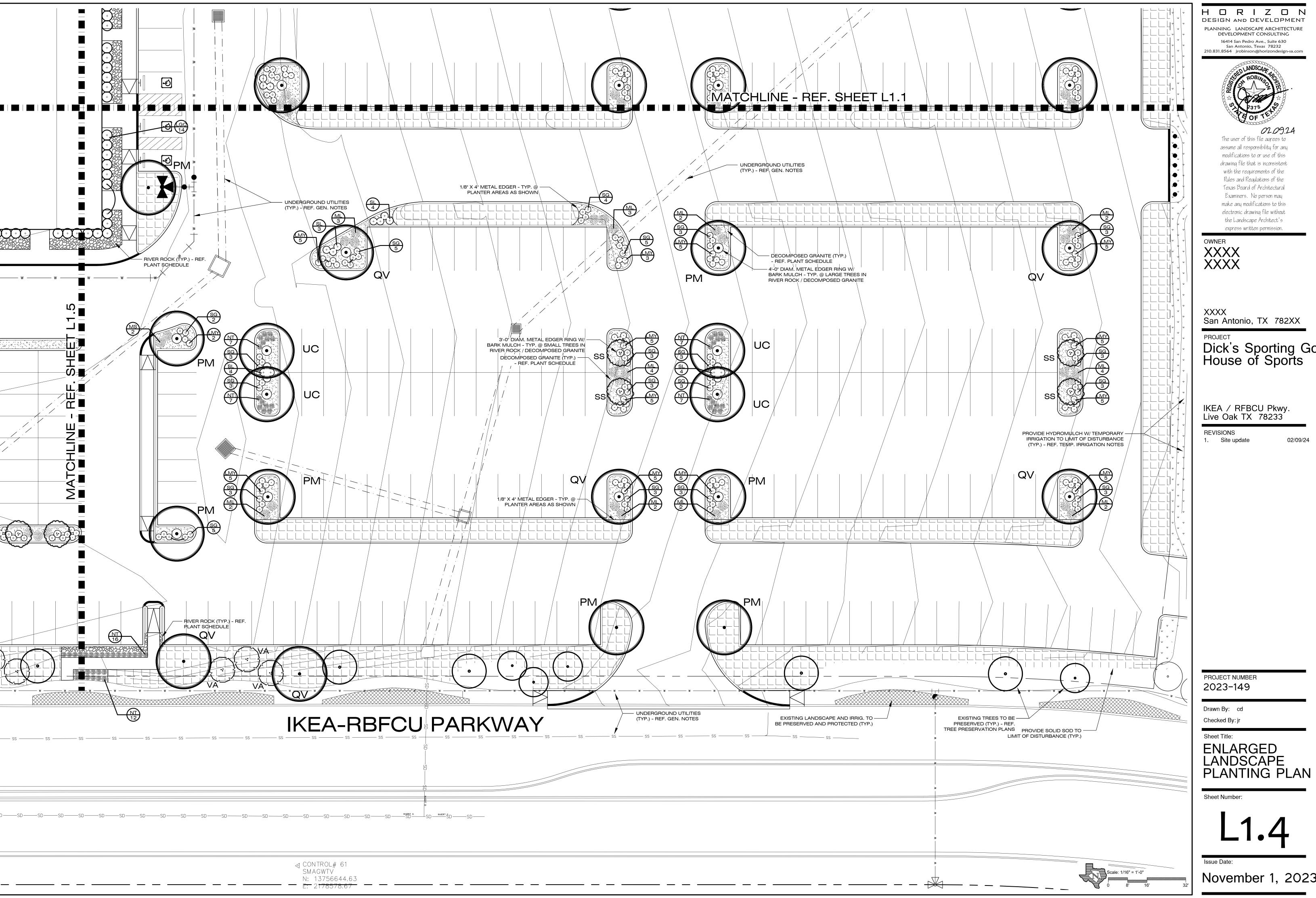




DESIGN AND DEVELOPMENT PLANNING LANDSCAPE ARCHITECTURE

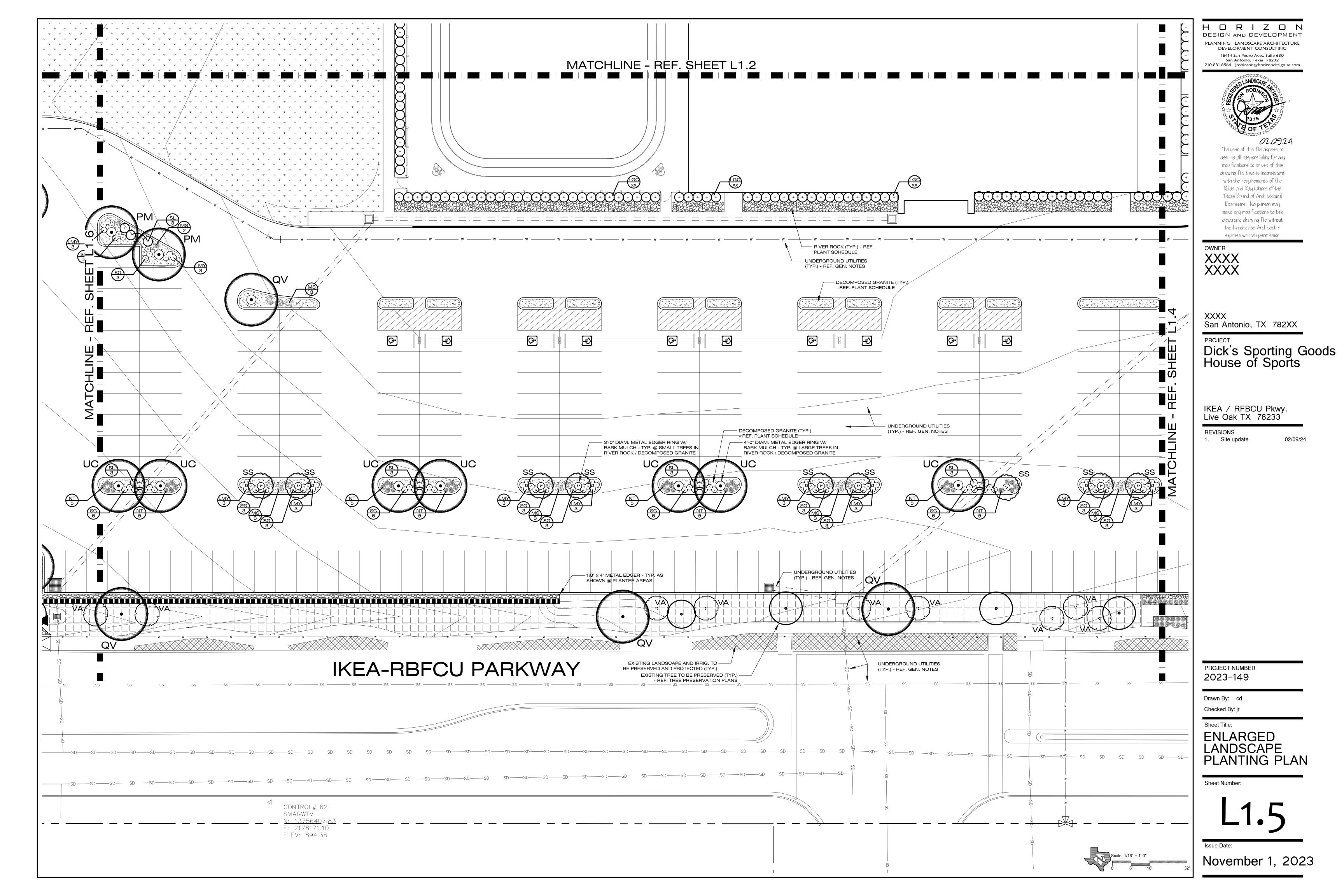
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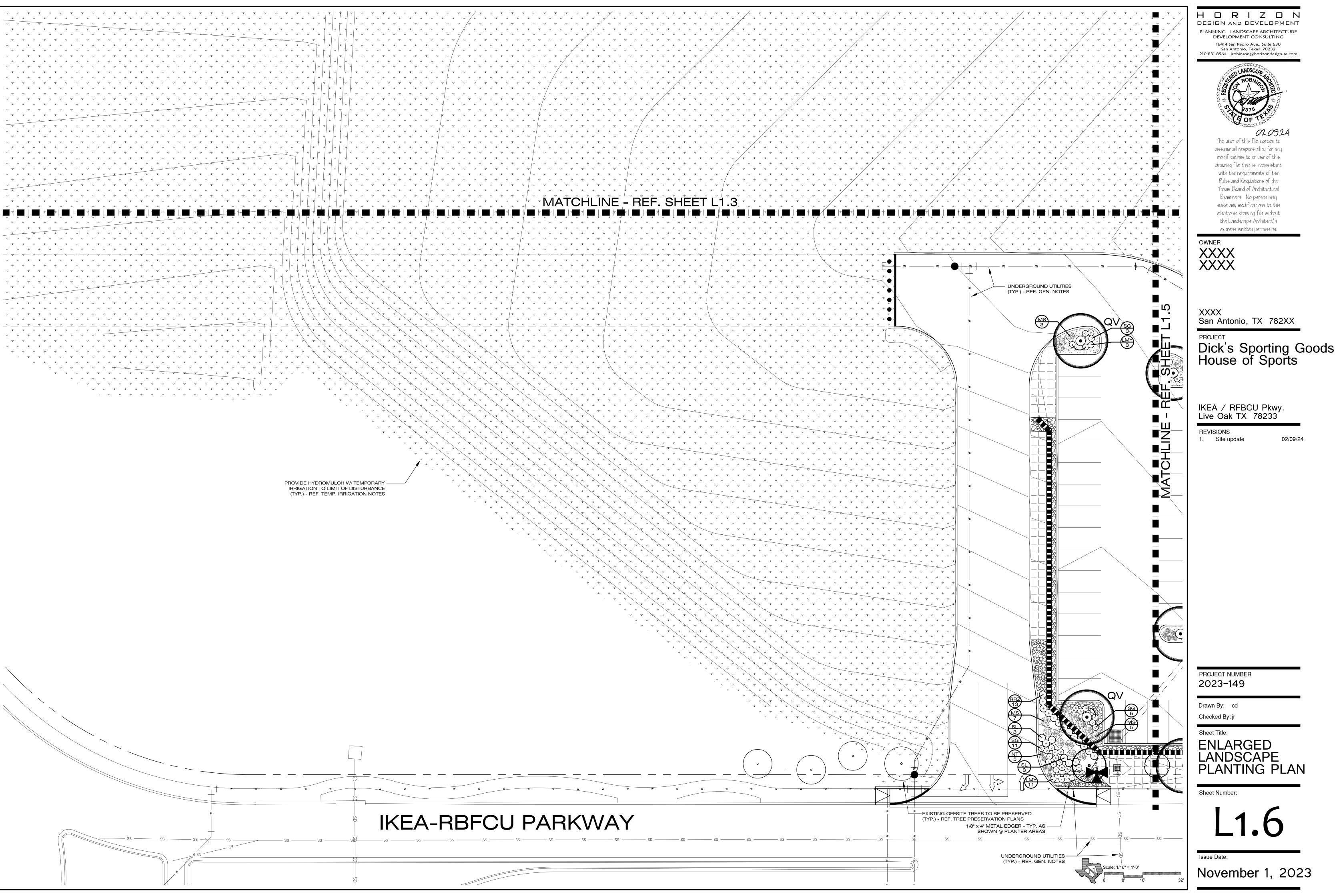
Dick's Sporting Goods House of Sports



HORIZON DESIGN AND DEVELOPMENT

Dick's Sporting Goods House of Sports





PART 1 - GENERAL

1.1 Work Included

Prune plants.

Guarantee plants.

1.2 Reference Standards

standards:

1.3 Submittals

DC)

Apply mulch to planter areas.

Indicate topsoil supplier source.

Indicate planting mix supplier source.

Indicate bark mulch supplier source.

Indicate river rock supplier source.

1.4 Product Delivery, Storage, and Handling

1.7 Responsibilities of Owner and Contractor

irregularities which affect the guarantee.

sole responsibility of the Contractor.

will reset any plants not installed accordingly.

1.5 Existing Conditions

1.6 Guarantee

adequately.

1.8 Final Inspection

replacing any plants.

1.9 Quality Assurance

of the following submittals:

PART 2 - PRODUCTS

16% pine bark mulch.

2.2 Plant Materials

a minimum 50% organic form.

appropriate sections of the ASNS.

lbs. per 100 SF.

2.1 Materials

work was performed, and completion date.

and contact information for their bonding company.

7% nor more than 12% clay and not more than 12% silt.

meet all other requirements of the Contract Documents.

sources and containing available plant nutrients in the following percentages:

the drawings, the plant quantities shown on the drawings will be given precedence.

C. All plants will comply with state and federal inspection and diseases infestation laws.

diseases, insect eggs or larvae, borers, and all other forms of diseases or infestations.

Indicate decomposed granite supplier source.

B. Protect identified utilities from damage during installation.

guaranteed for an additional 12 months following their installation.

C. The Contractor will remove and replace all dead plants.

Install solid sod, hydromulch, or seed mix.

Inspect plants during the Guarantee Period.

(Mount Pleasant Press, J. Horace McFarland Co., Harrisburg PA)

A. Submit weed control program in accordance with Sec. 01300

animals if applied per the manufacturer's written instructions.

Submit topsoil sample (min. 1-gal. bag) in accordance with Sec. 01300

Submit planting mix sample (min. 1-gal. bag) in accordance with Sec. 01300

Submit bark mulch sample (min. 1-gal. bag) in accordance with Sec. 01300

Submit river rock sample (min. 1-gal. bag) in accordance with Sec. 01300

F. Submit irrigation system product data in accordance with Sec. 01300.

D. Handle and store all materials in such a manner as to prevent damage.

Submit decomposed granite sample (min. 1-gal. bag) in accordance with Sec. 01300

A. Nomenclature and size. All plants must be true to name and size in conformance with the following

B. American Joint Committee on Horticultural Nomenclature, 1942 ed. of Standardized Plant Names

1. Indicate chemicals to be employed, manufacturer's printed instructions as to dilution and application,

Provide laboratory test results indicating compliance w/ topsoil composition requirements.

Provide laboratory test results indicating compliance w/ planting mixl composition requirements

1. Provide manufacturers' cut sheets indicating compliance with all equipment specified in the Irrigation

A. Prior to commencement of work, investigate the site, locate and identify all existing underground utilities

Architect of the conflict and do not proceed with construction in the affected area without specific direction.

A. All plants will be guaranteed against defects, including death and unsatisfactory growth, for a period of

12 months following the date of Substantial Completion. If replacement plants are installed, they will be

A. The Contractor will provide monthly inspections of the project during construction and the guarantee

period and immediately provide to the Owner and the Landscape Architect a written report identifying any

B. The Contractor will monitor any construction, whether conducted by other trades or the Owner's

employees, adjacent to new and existing plants. The Contractor will identify and document any damage

to the plants and immediately notify the Landscape Architect of same. The Contractor will replace any

damaged plants at no expense to the Owner. Any reimbursement from other trades or contractors shall be the

D. The Contractor will ensure all plants are installed in an upright position and to proper finish grade and

E. The Contractor will have the sole responsibility for ensuring that all plants are maintained and watered

A. At the conclusion of the guarantee period, the Landscape Architect will inspect the planting to assess the final acceptance of the installation. Only plants that are alive and healthy will be accepted. The Contractor will

replace any plants that are dead or, in the sole opinion of the Landscape Architect, in an unhealthy or unsightly

condition or have lost their natural form due to dead or removed branches. The Contractor will bear the cost of

proposed subcontractor's reputation and ability to perform the work and determine whether the subcontractor is

stable, reputable, and skilled in this area of work. The General Contractor will require and review a minimum

1. Experience. The subcontractor will be a single firm specializing in landscape installation with a minimum

5 years documented experience. Documentation will demonstrate a minimum 10 installations of equal or

greater size. The subcontractor will furnish the name, address, and telephone number for both the General

Contractor and Owner on these projects, as well as the contract price, the company name under which the

complete the work, their years of experience in the industry, any formal training, and years of service with the

insurance certificate, contact information for their insurance company, bonding capacity and bonding company,

B. Should the subcontractor selected by the General Contractor default on the contract, fail to complete the

work in conformance with the Contract Documents, or enter into bankruptcy, the Owner will pay the Landscape

current company. If a separate irrigation subcontractor is to be used, the same information will be provided.

2. Personnel. The subcontractor will provide a list of the project manager and foreman proposed to

3. Business Expertise. The subcontractor will submit a current audited financial statement, current

Architect as an additional service for any additional work occasioned by the subcontractor's default

A. Topsoil. Provided by the landscape subcontractor from local sources, sandy loam which is fertile,

friable, surface soil. Topsoil will be free of rocks, stones, subsoil, building debris, weeds, grass, clay lumps,

and other materials which would be detrimental to turfgrass growth. Topsoil composition will be not less than

B. Planting Mix. Plant mix composition will be 35% compost, 33% red sand, 16% composted topsoil, and

C. Commercial Fertilizer. Complete fertilizer of neutral character, with some elements derived from organic

1. For trees and shrubs - Woodace Top Dress Special (20-4-11, 8 - 9 month formula) at a rate of 5 to 10

2. For lawns - Min. 1 lb. of actual nitrogen per 100 SF of lawn area, min. 4% phosphoric acid, and min. 2%

A. The drawings contain a complete list of plant species, quantities, sizes, and other requirements. In the

event that discrepancies occur between the quantities of plants indicated on the plant list and as indicated on

B. No substitutions of plants will be permitted without express prior written authorization by the Landscape

D. All plants will be typical of their species or variety, with normal, well-developed branches and vigorous

E. All plants will be healthy and vigorous, free from defects, disfiguration, knots, abrasions, sunscald,

F. All plants will be nursery stock. Any plants gathered from native stands must be kept under nursery

conditions for a minimum of 1 full growing season, must be free from all foreign plants and weeds, and must

G. Container-grown plants must exhibit development of fibrous roots and have a root mass that will retain

H. Container sizes of a large grade than listed in the American Standard for Nursery Stock (ASNS) shall be

All bare root plants must have a heavy, fibrous root system and dormant buds at the time of planting.

J. All plants must have average height and spread proportions and branching habit in accordance with the

K. All plants which have girdled roots, stem, or major branch, have deformities of the stem or major branch,

lack symmetrical growth habits, have dead or defoliated portions, or have any defect, injury, or conditions

its shape when removed from the container. Plants grown in smaller containers must have root growth

sufficient to reach the sides of the container. Root-bound container-grown plants will be rejected.

determined by the volume of the root ball specified in the ASNS for plants of the same size.

which in the sole opinion of the Landscape Architect renders them unsuitable, will be rejected.

potassium. Provide nitrogen in a form that will be available to turfgrass during the initial period of growth and in

A. Before entering into a contract with any subcontractor, the General Contractor will investigate the

that may conflict with the installation of the work described in the contract documents, and notify the Landscape

solution strength, application method, rates, and frequency, and frequency of manual weeding.

2. Submit chemical manufacturer's written certificate that material proposed for use meets local, state, and

federal regulations for the type of material proposed and that the material is not toxic to humans and

C. American Standard of Nursery Stock, 1973 ed. (American Association of Nurserymen, Inc., Washington

Balled and burlapped plants must have a solid ball of earth of minimum specified size held securely in place by burlap and stout rope. Oversized or exceptionally heavy plants will be accepted provided the size of the root ball or spread of the roots is increased proportionally. Root balls must be tight, unbroken, and free of A. Place and spread topsoil and planting mix. weed or foreign plant growth. Root balls shall have the following depth-to-diameter ratios: root ball diameters Install edging at planter areas. of less than 20" = minimum depth of 75% of the diameter; root ball diameters of 20" to 30" = minimum depth of 2/3 of the diameter; root ball diameters over 30" = minimum depth of 60% of the diameter. Excavate and prepare plant pits. Place plants in pits and backfill with planting mix. M. Plants delivered as a single unit of 25 or less of the same size, species, and variety must be clearly

marked and tagged. Plants delivered in large quantities of more than 25 must be segregated as to variety, grade, and size, and 1 plant in each 25 plants, or fraction thereof, of each size, species, and variety, must be N. Plants stored under temporary conditions will be the responsibility of the Contractor and must be

protected at all times from extreme weather conditions by insulating the root balls with sawdust, soil, mulch, or other approved measure. Plants stored on paved areas must be separated from the pavement with an insulating layer.

O. Protecting stored plants from theft or vandalism will be the sole responsibility of the Contractor. Any stolen plants will be replaced at no cost to the Owner.

2.3 Miscellaneous Materials

Mulch. Shredded native mulch applied to a depth of 4" beneath all new trees and 4" beneath all shrubs. Stakes. Sound new hardwood, treated softwood, or redwood stakes, free of knot holes and other defects, or metal stakes. Provide wire ties and guys of 2-strand, twisted, pliable galvanized iron wire, minimum 12-gauge, with zinc-coated turnbuckles. Provide minimum ½" diameter rubber or plastic hose, cut to required lengths and of uniform color, material, and size, to protect tree trunks and branches from damage by wires. All

C. Anti-Dessicant: Emulsion type, film-forming agent designed to permit transpiration but retard excessive loss of moisture from plants. Deliver in manufacturer's full identified containers and mix in accordance with manufacturer's instructions

D. Plastic trunk protectors: Provide ArborGard+, AG 9-4+ by Deep Root Partners, L.P. (or equal), (1-800-458-7668) to protect new trees from damage by string trimmers and mowers.

### PART 3 - EXECUTION

3.1 Inspection Inspect existing site conditions and progress of other trades before commencing landscape installation. Verify that construction has progressed to a point at which the landscape will not be adversely affected

by subsequent construction and that existing conditions are acceptable for landscape installation. C. Report adverse conditions to the Landscape Architect and do not proceed with the work until adverse conditions have been rectified.

D. Commencement of the landscape installation will constitute acceptance of the site conditions without qualification.

### 3.2 Preparation of Subsoil

Inspect subsoil for the presence of objectionable materials such as rocks (2" diameter and greater), concrete waste, building debris, weeds, grass, and other material that would be detrimental to the growth of plants and turfgrass. Protect existing underground improvements from damage.

B. Cultivate the subsoil to a depth of 3" or, if the subsoil is compacted due to heavy equipment traffic or storage, cultivate to a depth of 6".

## 3.3 Spreading Topsoil

See lawn installation for topsoil spreading procedures in turfgrass areas. Spread topsoil and planting mix to required finish grades. Fill turfgrass areas with topsoil to a minimum

depth of 4." C. Cultivate with a mechanical tiller to break up clods and cultivate by hand in inaccessible areas. Rake until the surface is smooth.

### D. Remove from the site any foreign or objectionable material collected during cultivation. E. Grade to eliminate rough spots and low spots where ponding may occur, maintaining smooth and

uniform grades that will encourage positive drainage. Continue to grade the topsoil until it is firm and settled with a smooth surface, watering, drying, and re-grading as necessary. F. The landscape Contractor is solely responsible for ensuring positive drainage regardless of the condition of the subgrade. If extreme pr objectionable conditions exist, notify the Landscape Architect before

G. Mix the specified soil amendments and fertilizers with topsoil at the specified rates. Do not mix fertilizers unless planting will follow the spreading of topsoil or planting mix within 48 hours.

All planting areas must be prepared so that they remain free of debris and weeds until planting occurs. Weed control in the planting areas will consist of killing all weeds and maintaining a weed-free condition in accordance with the weed control program until completion of the project.

J. Protect adjacent plants from damage due to overspray of weed control chemicals.

## 3.4 Planting

A. The Contractor will begin planting when other work divisions such as topsoil spreading have progressed sufficiently to permit planting. B. Planting will occur where it is shown on the Contract Documents unless obstruction overhead or

shrub or tree pits, the Contractor will locate and identify all underground utility lines, electrical cables, irrigation lines, and conduits. If such obstructions are found, promptly notify the Landscape Architect and do not proceed without clear direction. C. No planting pits will be excavated until the proposed locations and plant sizes have been reviewed and approved by the Landscape Architect. Each plant will be planted in an individual pit dug with straight vertical sides. All plants will be set such that their original soil level is equal to the ultimate finish grade. No filling will

be done around the trunks and stems. All ropes, wires, staves, etc., will be removed from the sides and top of the root ball and removed from the pit before filling. Burlap will be properly cut and removed from the sides of the root ball. When a depth is specified for the plant pit, it will be construed as the depth below adjacent finish grade. Excess excavation from plant pits shall be either used elsewhere or removed from the site entirely. D. The Landscape Architect will review and approve the location and orientation of all plants prior to excavation of their pits. All trees will be planted in pits a minimum 24" greater in diameter than the container size or spread of their roots. In the event that solid rock is encountered in the bottom of the pit, break up and loosen the sides and bottom of the pit so that water will drain effectively. The pit will be a minimum of 9" deeper than the depth of the root ball and will have a crown from the middle to the sides in order to direct drainage away from the root ball. Place planting mix in the bottom of the pit and tamp down to prevent settling. Backfill the pits with planting mix in layers no greater than 9" and tamp down to avoid settling. Provide enough planting mix to bring to finish grade and form a saucer with a minimum 4" lip around the perimeter of the tree's root ball so water will pond and soak into the root ball.

Stake trees immediately after planting, then remove the stakes after one (1) year. If deciduous trees are planted in full-leaf, spray with anti-dessicant to provide an adequate film over the

trunk, branches, stems, and foliage. G. Shrubs will be planted in pits a minimum of 12" greater in width than the diameter of the root ball or container. In the event that solid rock is encountered in the bottom of the pit, break up and loosen the sides and bottom of the pit so that water will drain effectively. The

depth of the pit will be sufficient to accommodate the root ball and to set the plant at finish grade. Backfill the pit with planting mix, tamp down and settle thoroughly, bring to finish grade, and form a slight saucer to hold additional water and soak the root ball. After planting has been approved, apply bark mulch to a depth of 2" around all plants in the planting area.

All ground cover material will be planted as follows: One gallon material will be planted the same as one gallon shrubs.

4" pot material will be planted in pits the same size as or larger than the root system, then firmly tamped by hand and watered in using a fine spray.

3. Where settlement occurs, backfill with additional planting mix to cover exposed roots and to bring to

finish grade. 4. After planting has been reviewed and approved, apply decomposed granite to a compacted depth of 2". Thoroughly water each plant using a root stimulator solution (Green Light or equal) mixed according to

6. Neatly prune and/or clip each plant as necessary to preserve the natural character. Conduct all pruning with sharp, clean tools and clip bruised or broken branches with a clean cut. Paint pruning cuts 2" in diameter and larger with an approved tree wound paint.

Apply water as required to keep the mulch damp at all times during germination and initial growth period or as directed by the Landscape Architect.

### 3.5 Lawn Installation A. Do not commence lawn installation until after the irrigation system has been completely installed and is

the manufacturer's recommendations.

operational. B. Do not commence any lawn installation until the Landscape Architect has reviewed and approved all areas prepared for sodding.

## 3.6 Sodded Lawns

A. Prior to spreading topsoil and in all areas to receive lawn, cultivate the subsoil to a minimum depth of 4". Cultivation may be conducted by disc, spring tooth harrow, rototiller, or similar mechanical means, and should be done in a direction perpendicular to the natural flow of water.

B. After the topsoil has been spread, mechanically till the area to a depth of 4", then roll rake and drag to remove all large clods, rocks, debris, and litter over 1" in diameter. Dispose of clutter at an off-site location. C. Using a lightweight, water-filled roller, roll the raked topsoil in two (2) opposite directions. D. Rake the rolled topsoil to a smooth, level surface, removing ridges and filling depressions. Remove all

remaining rocks and debris over 1" in diameter. Hold the finish grade 1-1/2" below adjacent curbs, sidewalks, paving, and other hard surfaces.

Apply the fertilizer at a rate of 2 lbs. per 1000 SF. Rake the fertilizer into the surface soil at a depth of ½" to 1".

Roll the fertilized topsoil in one (1) direction, water lightly of the surface soil is dry, then allow to dry. Lay the sod within 24 hours of stripping. Working from plywood boards to avoid disturbing the topsoil or sod, but the ends and sides of sod strips without overlapping, stagger strips to offset joints in adjacent courses, and tamp or roll lightly to ensure good contact with the surface soil. Sift topsoil into minor cracks between sod pieces, then remove excess from the top. Do not lay dormant sod.

On slopes in excess of 20% (5:1), anchor sod with wooden stakes. Water sod thoroughly with a fine spray immediately after application.

Erect a barrier of stakes and ropes around the perimeter of the sodded areas and post warning signs to deter foot traffic. M. Water as necessary to keep the sod damp at all times through germination and initial growth period.

3.7 Hydromulch

Fresh, clean, new-crop seed, meeting USDA rules and regulations under the Federal Seed Act and Texas Seed Law for purity and germination Free of objectionable foreign material.

Treated with approved fungicide by a commercial or state laboratory not more than 6 months prior to the date of planting.

4. Wet, moldy, or damaged seed will not be accepted.

Seed Mixture: If planting occurs between May 15 and September 1, provide Sultan bermudagrass seed at 2 lbs. PLS

per 1000 SF of seeded area. ii. If planting occurs between September 2 and May 14, provide Gulf annual ryegrass seed at 8 lbs. PLS per 1000 SF of seeded area. Return to jobsite between May 15 and May 30 after all ryegrass has died, till the hydromulch area, and re-apply the hydromulch with Sultan bermudagrass seed at 2 lbs. PLS per 1000 SF of

iii. If planting in shaded areas between September 2 and May 14, provide Hound Dog Fescue seed at 3 lbs PLS per 1000 SF of seeded area.

Fertilizer: Commercial lawn fertilizer, water soluble, 50% slow release.

Water: Clean, fresh, and free from foreign substances or material. Glue agent: Contractor's standard type, non-detrimental to seed.

Wood mulching agent: Contractor's standard type, non-detrimental to seed. Stakes: Softwood lumber, chisel pointed.

String: Organic fiber.

Hydromulching Slurry Mix Mix specified seed, fertilizer, and wood mulching agent in water, using equipment specifically designed for hydroseed application. Continue mixing until blended uniformly into a homogenous slurry suitable for hydraulic application

Proportion slurry mix as follows: Wood mulching agent: 45 lbs. per 1000 SF of seeded area

Water soluble fertilizer: 5 lbs. per 1000 of seeded area

Glue agent: 1 lb. per 1000 SF of seeded area

Subsoil Preparation

Remove from subsoil all objectionable material such as concrete waste, building debris, rubbish, weeds, grass, stumps, and rocks greater than 1" in diameter.

Protect existing underground improvements. Cultivate to a depth of 3" in areas to receive topsoil. If subsoil is compacted due to equipment traffic or storage, cultivate to a depth of 6".

Topsoil Spreading Spread topsoil at minimum specified depth to required finish grade.

Cultivate topsoil with a mechanical tiller to break up clods. In areas inaccessible by tiller, cultivate by

Rake until topsoil surface is smooth. Remove from the site any objectionable materials collected during cultivation.

Fine grade to eliminate rough and low spots where ponding or marcelling would occur. Maintain smooth uniform grades, working topsoil, watering, drying, and re-grading as necessary to produce a firm, smooth, and settled soil profile.

6. The landscape subcontractor shall be responsible for assuring positive drainage regardless of the subgrade condition. If extreme or objectionable subgrade conditions exist, notify the Landscape Architect prior

Mix the specified soil amendments and fertilizer with topsoil at rates specified. Do not mix fertilizers if hydromulch will not be applied within 3 days. Maintain all prepared planting areas free of weeds and debris.

Planting area weed control shall consist of removing all existing weeds and maintaining a weed-free condition in accordance with the approved weed control plan until project completion. 10. Protect adjacent vegetation from damage due to overspray or misplaced application of weed control chemicals. Replace all plants mistakenly treated with weed control chemicals at no cost to the Owner.

Examination Verify that the topsoil profile has been prepared in accordance with this Section and is ready to receive

Apply seeded slurry with a hydraulic seeder evenly in 2 intersecting directions.

Identify seeded areas with stakes and string around the entire perimeter. Space stakes at max. 15 feet O.C. and set string height to 12" above adjacent finish grade.

Maintain the construction, storage, and planting areas free from the accumulation of waste materials and 2. Clean all paved areas that become soiled during landscape installation. Remove dirt, planting materials,

3. Clean in accordance with Sections 01500 and 01700.

3.8 Cultivation and Cleanup

A. Upon completion of the planting, all excess material shall be removed and disposed of at a location off-site. Bring the finish grade in planter areas to a uniform grade, 1-1/2" below all adjacent paving or hard surfaces. Loosen the soil surrounding each individual plant to a distance of three (3) feet around each new tree and large shrub and 12" around each new small shrub and ground cover.

3.9 Maintenance and Restoration

A. The Contractor will ensure adequate and proper care of all plants and work done on this project until final acceptance, but in no case less than 30 days following Substantial Completion. This will include keeping all plants in a healthy growing condition by watering, cultivating, pruning, and spraying, keeping the planting areas free from insect infestation

weeds and grass, litter, and debris, and retaining the finish grade in a neat and uniform manner. Plant crowns,

runners, and branches will be kept free of mulch at all times. Protect all lawn areas from vehicle and pedestrian traffic.

Repair all sod areas damaged by any cause prior to final acceptance. D. The lawn establishment period will begin immediately after the lawn planting area has been accepted by the Landscape Architect, will extend for a minimum of 30 days or until the end of the contract, and will consist

of caring for all lawn areas within the project limits of work. E. During the lawn establishment period, the Contractor will be responsible for ensuring healthy growth of the turfgrass. This responsibility includes all labor and materials necessary keep the project in a presentable condition, including, but not limited to, litter removal, mowing, trimming, weed control, removal of grass clipping, edging, and any necessary re-sodding and repair.

F. During the lawn establishment period the Contractor will as often as conditions dictate mow the turfgrass to a cutting height of 1-1/2". The turfgrass shall never exceed 3" in height and all clipping will be removed from

 G. During the months of March through September, the Contractor will edge at least once every month or as directed by the Landscape Architect. H. During the months of March through September, the Contractor will apply water to sodded areas at an even rate of 1" of water per week, although the Landscape Architect may change this rate as conditions

I. Final acceptance of the lawn areas will be based on he presence of a uniform stand of grass at a uniform grade at the time of final inspection. Areas 24" square and large that are bare, have a poor stand of grass, or have an finish grade that is not uniform will be at the Contractor's expense re-graded, re-sodded, and

fertilized as specified herein. J. Upon completion of the initial planting, the Landscape Architect will make an inspection of all plantings and notify the Contractor in writing of any replacements or corrective actions necessary to meet the provisions of the Contract Documents. The Contract will then replace all the rejected or missing plants and perform the specified corrective measures

K. All replacement plants will be of the same species, size, and quality. All rejected plants will be replaced within 30 days of notification.

A. Upon receipt of a written request from the Contractor at least seven (7) prior, the Landscape Architect will inspect the planting and maintenance to determine its completion and the beginning of the guarantee period. All plants must be alive and healthy in order for the installation to be considered complete. Where inspected work does not comply with the requirements of the Contract Documents, replace rejected work and continue to perform the specified maintenance until the Landscape Architect re-inspects the work and finds it acceptable. Remove rejected plants and materials from the site.

**END OF SECTION** 

HORIZON DESIGN AND DEVELOPMENT

PLANNING LANDSCAPE ARCHITECTURE DEVELOPMENT CONSULTING 16414 San Pedro Ave., Suite 630 San Antonio, Texas 78232



assume all responsibility for any modifications to or use of this drawing file that is inconsistent with the requirements of the Rules and Regulations of the Texas Board of Architectural Examiners. No person may make any modifications to this electronic drawing file without the Landscape Architect's express written permission.

The user of this file agrees to

OWNER XXXX XXXX

San Antonio, TX 782XX

**PROJECT** 

Dick's Sporting Goods House of Sports

IKEA / RFBCU Pkwy. Live Oak TX 78233

REVISIONS

PROJECT NUMBER 2023-149

Drawn By: jr Checked By: jr

Sheet Title: LANDSCAPE

**Sheet Number:** 

PRESSURE REQUIREMENT CALCULATIONS @ ZON	IE No. 14		
DESIGN STATISTICS FOR CALCULATIONS			
Total Zone Flow:	42.3 g.p.m.		
Electric Valve Size:	1.5"		
Static Pressure Less 10% (static @ 65 psi):	58.5 p.s.i.		
ACCUMULATIVE LOSSES FROM CITY MAIN TO FURTHEST HEAD			
Sprinkler head requirement:	30 p.s.i		
Zone Pipe/Fitting Loss:	2.25 p.s.i.		
1.5" Electric Valve Loss:	2.2 p.s.i.		
Elevation Net Loss (+7 FT.):	3.03 p.s.i.		
System Mainline Loss (2.5" Sch-40 Loop Main):	2.06 p.s.i.		
Backflow Preventer Loss ( 2" ):	10.5 p.s.i.		
Water Meter Loss ( 1.5" ):	3.9 p.s.i.		
Master Electric Valve Loss ( 2" ):	0.8 p.s.i.		
Type K Copper Service Loss:			
Total Net Loss:	24.74 p.s.i.		
Design Pressure:	54.74 p.s.i.		

properly. Irrigation Contractor shall conduct on site pressure test to verify site pressure prior to starting work. Contractor shall notify Owner's Representative of pressure deficiencies or any other on site problems that may alter the effectiveness of the system. Pipe has been size to insure that velocity does not exceed 5 FPS. do not change pipe size in the field without consulting system designer.

PRESSURE REQUIREMENT CALCULATIONS @	ZONE No. 22
DESIGN STATISTICS FOR CALCULATION	ONS
Total Zone Flow:	44.0 g.p.m.
Electric Valve Size:	1.5"
Static Pressure Less 10% (static @ 65 psi):	58.5 p.s.i.
ACCUMULATIVE LOSSES FROM CITY MAIN TO FU	JRTHEST HEAD
Sprinkler head requirement:	30 p.s.i.
Zone Pipe/Fitting Loss:	3.38 p.s.i.
1.5" Electric Valve Loss:	2.2 p.s.i.
Elevation Net Loss (+8 FT.):	3.46 p.s.i.
System Mainline Loss (2.5" Sch-40 Loop Main):	2.06 p.s.i.
Backflow Preventer Loss ( 2" ):	10.5 p.s.i.
Water Meter Loss ( 1.5" ):	3.9 p.s.i.
Master Electric Valve Loss ( 2" ):	0.8 p.s.i.
Type K Copper Service Loss:	
Total Net Los	s: 26.31 p.s.i.
Design Pressure:	56.31 p.s.i.

Notes: System requires a minimum of 57 psi static pressure for system to operate properly. Irrigation Contractor shall conduct on site pressure test to verify site pressure prior to starting work. Contractor shall notify Owner's Representative of pressure deficiencies or any other on site problems that may alter the effectiveness of the system. Pipe has been size to insure that velocity does not exceed 5 FPS. do not change pipe size in the field without consulting system designer.

TYPICAL WEEKLY SCHEDULE BASED ON PRECIPITATION RATE						
	Precipitation Rate		Time/Cycle	No. of		Time *
(in/hr)		(in/wk)	(min)	Zones	Min.	Hrs.
Turf Rotor Zone	.64	.80				
MP Rotator Spray	.44	.80	107.0	9	963	16.05
Turf Drip Zones	.85	.80				
Drip Zones	.55	.80	88.0	5	440	7.35
Tree Bubblers	3.87	.80	12.0	5	60	1.0
Total System Hours of Operation Per Week 24.4					24.4	

\* IT WILL BE NECESSARY TO WATER MULTIPLE ZONES AT ONE TIME TO MEET WATERING WINDOW . A TYPICAL SCHEDULE WOULD ALLOW WATERING TO OCCUR TWO TIMES PER WEEK. TOTAL WATERING TIME WOULD BE DIVIDED BY THE NUMBER OF WATERING DAYS. THIS SCHEDULE IS DESIGNED FOR SUMMER WATER USAGE AND ESTABLISHMENT OF NEW PLANTING.

# → VALVE SCHEDULE

IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING HIMSELF FAMILIAR WITH THE SPECIFICATIONS AND ALL SUBMITTAL REQUIREMENTS. IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO NOTIFY THE OWNER'S REPRESENTATIVE FOR SITE INSPECTIONS AS SPECIFIED IN THE SPECIFICATIONS. FAILURE TO NOTIFY THE OWNER'S REPRESENTATIVE DOES NOT RELIEVE THE CONTRACTOR FROM INSPECTION APPROVAL AND WILL REQUIRE THE CONTRACTOR TO UNCOVER WORK AS REQUIRED FOR APPROVAL AT THE COST OF THE CONTRACTOR. IRRIGATION CONTRACTOR IS TO INFORM OWNER'S REPRESENTATIVE OF THE START DATE OF WORK.

- 2. THE IRRIGATION CONTRACTOR IS REQUIRED BY LAW TO NOTIFY TEXAS ONE CALL (800-245-4545) 72 HOURS PRIOR TO ANY EXCAVATION. IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING HIMSELF FAMILIAR WITH ALL UNDERGROUND UTILITIES, PIPES AND STRUCTURES. IRRIGATION CONTRACTOR SHALL TAKE SOLE RESPONSIBILITY FOR ANY COST INCURRED DUE TO DAMAGE OF SAID UTILITIES WHETHER OR NOT TEXAS ONE CALL IS NOTIFIED.
- 3. DO NOT WILLFULLY PROCEED WITH CONSTRUCTION AS DESIGNED WITHOUT VERIFYING ACTUAL ON-SITE WATER PRESSURE FROM THE SOURCE. DO NOT WILLFULLY PROCEED WITH CONSTRUCTION AS DESIGNED WHEN IT IS OBVIOUS THAT UNKNOWN OBSTRUCTIONS AND/OR GRADE DIFFERENCES EXIST THAT MAY NOT HAVE BEEN KNOWN DURING DESIGN. SUCH CONDITIONS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE. THE IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL NECESSARY REVISIONS DUE TO FAILURE TO GIVE SUCH NOTIFICATION.
- 4. IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COORDINATION WITH OTHER CONTRACTORS AS REQUIRED TO ACCOMPLISH IRRIGATION INSTALLATION.
- 5. DUE TO SCALE OF DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS SLEEVES, ETC., WHICH MAY BE REQUIRED. IRRIGATION CONTRACTOR SHALL CAREFULLY INVESTIGATE THE STRUCTURAL AND FINISHED CONDITIONS AFFECTING ALL OF HIS WORK AND PLAN HIS WORK ACCORDINGLY, FURNISHING SUCH FITTINGS, ETC., AS MAY BE REQUIRED TO MEET SUCH CONDITIONS. DRAWINGS ARE GENERALLY DIAGRAMMATIC AND INDICATIVE OF THE WORK TO BE INSTALLED. THE WORK SHALL BE INSTALLED IN SUCH A MANNER AS TO AVOID CONFLICTS BETWEEN IRRIGATION SYSTEM, PLANTING AND ARCHITECTURAL FEATURES. THIS DESIGN IS DIAGRAMMATIC. ALL PIPING, VALVES, ETC., SHOWN WITHIN PAVED AREAS IS FOR DESIGN CLARIFICATION ONLY AND SHALL BE INSTALLED IN PLANTING AREAS AND WITHIN PROPERTY LINES.
- 6. DURING INSTALLATION IT IS THE IRRIGATION CONTRACTOR'S RESPONSIBILITY TO COORDINATE PIPING WITH THE LANDSCAPE SUBCONTRACTOR TO AVOID CONFLICT WITH PROPOSED PLANTING. IT WILL BE THE RESPONSIBILITY OF THE IRRIGATION SUBCONTRACTOR TO MOVE PIPING TO ALLOW PROPER PLACEMENT OF PLANT MATERIAL. THE IRRIGATION CONTRACTOR SHALL MAKE MINOR ADJUSTMENTS TO ENSURE PROPER COVERAGE AT NO ADDITIONAL COST TO THE OWNER.
- NO MACHINE TRENCHING IS TO BE DONE WITHIN THE DRIPLINE OF EXISTING TREES. TRENCHING IS TO BE DONE BY HAND, AIR-SPADE OR BY TUNNELING UNDER ROOT SYSTEM BY METHOD APPROVED BY LANDSCAPE ARCHITECT. PIPING LAYOUT IS DIAGRAMMATIC AND PIPING SHALL BE ROUTED AROUND EXISTING TREES AS POSSIBLE TO AVOID DAMAGE TO THE ROOT SYSTEMS. DO NOT CUT ANY ROOT OVER 3/4" DIAMETER UNLESS APPROVAL FROM THE LANDSCAPE ARCHITECT IS FIRST OBTAINED. ANY CUTS MADE SHALL BE CLEAN AND WITHOUT
- 8. IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR SLEEVES AND CHASES WHEREVER PIPING OR CONDUIT PASSES, UNDER ALL PAVING, THROUGH WALLS, ETC. ALL SLEEVE LOCATIONS MAY NOT BE SHOWN ON PLAN, COORDINATE WITH ARCHITECTURAL AND CIVIL DRAWINGS, GENERAL CONTRACTOR AND OTHER SUBCONTRACTORS AS REQUIRED. ALL SLEEVE AND CHASE LOCATIONS ARE NOT NOTED ON PLAN. ALL SLEEVES 4" OR LESS SHALL BE SCH-40 PVC, ALL SLEEVES 6" OR GREATER SHALL BE CLASS-200 PVC. ALL SLEEVES TO BE SIZED TWICE THE DIAMETER OF PIPE OR COMBINATION OF PIPES ENCLOSED WITHIN THE SLEEVE.
- 9. CONFIRM STATIC WATER PRESSURE AT LEAST 7 DAYS BEFORE BEGINNING WORK. IF STATIC WATER PRESSURE IS LESS THAN STATED IN PRESSURE CALCULATIONS DO NOT PROCEED UNTIL DIRECTED SO BY THE LANDSCAPE ARCHITECT. IF ACTUAL SITE STATIC PRESSURE EXCEEDS DESIGN PRESSURE BY 15 P.S.I. IN ANY ZONE, A PRESSURE REDUCING VALVE SHALL BE INSTALLED. REFER TO DETAILS FOR MODEL.
- 10. ADJUSTABLE FLOW CONTROLS SHALL BE REQUIRED ON CIRCUIT REMOTE CONTROL VALVE. PRESSURE AT ANY POINT WITHIN A ZONE SHALL NOT VARY BY MORE THAN 10% FROM THE DESIGN SPRINKLER OPERATING PRESSURE. SEE SPECIFICATIONS FOR
- 11. THE CONTRACTOR SHALL BE A REGISTERED LICENSED IRRIGATOR IN THE STATE OF TEXAS. CONTRACTOR MUST CONFORM TO ALL CODES AS STATED IN SECTION 344 OF THE TEXAS WATER CODE AS OUTLINED BY TCEQ.
- 12. OBTAIN COVERAGE TEST APPROVAL FROM OWNER'S REPRESENTATIVE PRIOR TO PLANTING, SODDING OR SEEDING.
- 13. ALL UNDESIGNATED END LATERAL PIPING SHALL BE  $\frac{1}{2}$ " IN SPRAY ZONES AND  $\frac{3}{4}$ " IN ROTOR ZONES.
- 14. SPRINKLER HEAD SPACING SHALL NOT EXCEED 50% OF SPRAY DIAMETER BASED ON MANUFACTURERS OPERATING SPECIFICATIONS. SPRINKLER HEAD SPACING SHALL BE DESIGNED FOR HEAD-TO-HEAD COVERAGE OR HEADS SHALL BE SPACED AS PER MANUFACTURER'S RECOMMENDATIONS AND ADJUSTED FOR PREVAILING WINDS. THE SYSTEM SHALL BE DESIGNED SO THAT IRRIGATION IS NOT APPLIED TO VEHICULAR TRAFFIC LANES, OTHER PAVEMENT OR STRUCTURES.
- 15. ALL ROTORS SHALL BE LOCATED 12" FROM PAVEMENT, CURBS OR EDGE OF STRUCTURE, ALL SPRAY HEADS SHALL BE LOCATED 6" FROM PAVEMENT, CURBS OR EDGE OF STRUCTURE.
- 16. VALVE AND CIRCUITS SHALL BE SEPARATED BASED ON WATER USE, SO THAT TURF AREAS ARE WATERED SEPARATELY FROM SHRUB AND GROUND COVER AREAS. IRRIGATION HEADS IN THE TURF AREAS WILL BE VALVED SEPARATELY FROM SHRUB AND/OR GROUND COVER AREAS. IT IS RECOMMENDED THAT SEASONAL COLOR AREAS BE WATERED SEPARATELY. UNDER NO CIRCUMSTANCES ARE ZONE TYPES TO BE COMBINED I.E. ROTARY HEADS WITH SPRAYS, TURF AREAS WITH PLANTING BEDS.
- 17. IT IS THE CONTRACTORS RESPONSIBILITY TO CONFIRM STATIC PRESSURE ON SITE PRIOR TO STARTING WORK. REFER TO NOTES #9
- 18. IT IS THE IRRIGATION CONTRACTOR'S RESPONSIBILITY TO SECURE ALL REQUIRED PERMITS AND PAY ALL ASSOCIATED FEES UNLESS OTHERWISE NOTED. ALL LOCAL CODES SHALL PREVAIL OVER ANY DISCREPANCIES CONTAINED IN THESE DOCUMENTS.
- 19. UNSLEEVED PIPES MAY BE SHOWN UNDER PAVEMENT FOR GRAPHIC CLARITY. INSTALL PIPES IN ADJACENT SLEEVES WITHIN
- 20. 120 VAC ELECTRICAL POWER SOURCE AT CONTROLLER LOCATION SHALL BE PROVIDED BY OTHERS. THE IRRIGATION CONTRACTOR SHALL MAKE THE FINAL CONNECTION FROM THE ELECTRICAL SOURCE TO THE CONTROLLER WITH A HARDWIRE CONNECTION APPROVED AND INSTALLED BY A LICENSED ELECTRICIAN.
- 21. SPRINKLER HEADS SHALL HAVE MATCHED PRECIPITATION RATES WITHIN EACH CONTROL VALVE CIRCUIT.
- 22. SERVICEABLE CHECK VALVES SHALL BE REQUIRED ADJACENT TO PAVED AREAS WHERE ELEVATION DIFFERENCES MAY CAUSE LOW HEAD DRAINAGE.
- 23. ALL AUTOMATIC IRRIGATION SYSTEMS SHALL BE EQUIPPED WITH A CONTROLLER CAPABLE OF DUAL OR MULTIPLE PROGRAMMING. CONTROLLERS SHALL HAVE MULTIPLE CYCLE START CAPACITY AND A FLEXIBLE CALENDAR PROGRAM. INCLUDING THE CAPABILITY OF BEING SET TO WATER EVERY FIVE DAYS. ALL AUTOMATIC IRRIGATION SYSTEMS SHALL BE EQUIPPED WITH A RAIN SENSOR SHUT-OFF DEVICE.
- 24. ALL IRRIGATION WIRES SHALL BE UL LISTED FOR DIRECT UNDERGROUND BURIAL AND SHALL BE SIZED PER THE MANUFACTURER'S RECOMMENDATIONS. 3M-DBY WATERPROOF CONNECTORS TO BE USED ON ALL WIRE CONNECTIONS. SUBMIT SAMPLE TO LANDSCAPE ARCHITECT.
- 25. ALL IRRIGATION HEADS SHALL BE ADJUSTED TO MINIMIZE OVER-SPRAY ONTO ALL IMPERVIOUS SURFACES.
- 26. ALL PIPE CONNECTIONS SHALL BE PRIMED WITH AN APPROVED COLOR PRIMER BEFORE BEING CHEMICAL WELDED.
- 27. AFTER AWARD OF CONTRACT AND BEFORE ANY IRRIGATION SYSTEM MATERIALS ARE ORDERED FROM SUPPLIERS OR DELIVERED TO THE JOB SITE, SUBMIT TO THE OWNER A COMPLETE LIST OF ALL IRRIGATION SYSTEM MATERIALS, OR PROCESSES PROPOSED TO BE FURNISHED AND INSTALLED AS PART OF THIS CONTRACT. THE LANDSCAPE ARCHITECT OR OWNER'S AUTHORIZED REPRESENTATIVE WILL ALLOW NO SUBSTITUTIONS WITHOUT PRIOR WRITTEN ACCEPTANCE. MANUFACTURER'S WARRANTIES SHALL NOT RELIEVE THE CONTRACTOR OF HIS LIABILITY UNDER THE GUARANTEE. SUCH WARRANTIES SHALL ONLY SUPPLEMENT THE
- 29. ALL TEMPORARY IRRIGATION SHALL BE DESIGNED PRIOR TO INSTALLATION BY A STATE OF TEXAS LICENSED IRRIGATOR. THE DESIGN IS TO BE SUBMITTED FOR APPROVAL PRIOR TO COMMENCING INSTALLATION OF THE TEMPORARY SYSTEM.
- 30. IRRIGATION CLOSEOUT DOCUMENTS SHALL INCLUDE A WATER BUDGET. A LAMINATED COPY OF THE WATER BUDGET SHALL BE PERMANENTLY INSTALLED INSIDE THE IRRIGATION CONTROLLER DOOR.
  - A. CHART CONTAINING ZONE NUMBER, PRECIPITATION RATE AND GPM. B. LOCATION OF EMERGENCY IRRIGATION SYSTEM SHUT-OFF VALVE.

LANDSCAPE AREAS.

W DEDICATED 1.5" IRRIGATION WATER METER.

REDUCED PRESSURE BACKFLOW DEVICE, 2" FEBCO 860 PER

LOCAL CODES. MASTER VALVE, SUPERIOR MODEL 3200-200 NORMALLY CLOSED

VALVE LOCATE AND INSTALL ONE (1) HUNTER DUAL-S SURGE ARRESTOR AFTER THE CONTROLLER GROUNDING AND BEFORE THE FIRST ZONE VALVE AND EZ-1 DECODER. REFER TO DTL. 14/LI 2.1

MP ROTATOR NOZZLE 90°-210°; SIZE AS SPECIFIED ON PLAN.

♠ MP ROTATOR NOZZLE 210°-270°; SIZE AS SPECIFIED ON PLAN.

MP ROTATOR NOZZLE 360°; SIZE AS SPECIFIED ON PLAN.

MP ROTATOR: M35-M3500, M3-MP 3000, M2-MP 2000, M1-MP 1000, M8-M800SR, MC-MP CORNER, MR,MS,ML- MP SIDESTRIPS AND END STRIPS PROS-06-PRS40-CV SPRAY BODY; PROVIDE CHECK VALVE AT LOW HEAD

(1) INSTALL TWO ROWS OF DRIP LINE EVENLY SPACED. USE TLHCVXR7-18. IF BED AREA EXCEEDS 36", INSTALL THREE ROWS EVENLY SPACED. INSTALL STAPLES @ MAX. 3' O.C TO SECURE

© NETAFIM DRIP CONTROL ZONE VALVE - REFERENCE DETAILS

REMOTE CONTROL VALVE, HUNTER ICV, SIZE AS INDICATED ON PLANS

HUNTER HQ-33-DRC QUICK COUPLING VALVE WITH HK-33 KEY

MANUAL VALVE- SIZE OF MAINLINE

# ZONE IDENTIFICATION
#"## ZONE SIZE IN GALLONS PER MINUTE ——— VALVE SIZE THIS ZONE

# ZONE IDENTIFICATION
ZONE SIZE IN GALLONS I —— ZONE SIZE IN GALLONS PER MINUTE

> ———— HATCH PATTERN INDICATES BED/TURF AREAS TO BE INCLUDED THIS ZONE — VALVE SIZE THIS ZONE

─ DRIPLINE; NETAFIM TLHCVXR7-18 FOR SURFACE PLANTING BEDS, ROWS SPACED AT 18 INCHES NETAFIM TLHCVXR7-12 FOR SURFACE PLANTING BEDS WITH SLOPES GREATER THAN 3:1 NETAFIM TLHCVXR5-12 FOR SUBSURFACE TURF, ROWS SPACED AT 12 INCHES

- DRIP SUPPLY LINE, SCH 40 PVC, SIZE PER PLAN.

TREE BUBBLER ASSEMBLY ON 6" POP UP

CONTROLLER - HUNTER ICC2 CONTROLLER WITH EZ-DM TWO-WIRE MODULE, FINAL LOCATION IS TO BE DETERMINED AFTER CONSULTING WITH LANDSCAPE ARCHITECT.

(W) WEATHER SENSOR - HUNTER SOLAR-SYNC WEATHER SENSOR. FINAL LOCATION IS TO BE DETERMINED AFTER CONSULTING WITH LANDSCAPE

MAIN LINE - USE SCH-40 PVC PIPE, SIZE AS INDICATED ON PLANS

1-1/2" LATERAL LINE - USE CLASS 315 ON 1/2" PIPE AND CLASS 200 IPS PVC ON 3/4" AND LARGER PIPE. DO NOT DEVIATE ON SIZING WITHOUT CONSULTING WITH PROJECT DESIGNER.

SLEEVE - USE TWO (2) SIZES LARGER THAN SPRINKLER PIPE DESIGNATED FOR CROSSING PAVING ON ALL LATERAL LINES. USE SCH-40 PVC PIPE, VALVE WIRING MAY BE RUN IN THE SAME

NOTE: REFER TO SHEET LI 2.1 to LI 2.2 FOR DETAILS

FIELD LOCATE BY STAKING, THE CONTROLLER, WATER METER, BACKFLOW DEVICE, MASTER VALVE AND FLOW SENSOR FOR APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

## LEGEND

STATEMENT OF IRRIGATION DESIGN STANDARDS CONFORMITY: This plan is complete and conforms to the design and installation parameters of the irrigation design and equipment standards set out by the City of Live Oak, TX and TCEQ (Texas Commission on Environmental Quality).

Wade O. Radlet TX LI # 22397

1. THE IRRIGATION CONTRACTOR SHALL COMPLY WITH ALL LOCAL AND STATE MANDATED IRRIGATION ORDINANCES AND CODES AND WILL SECURE ALL REQUIRED PERMITS.

2. ALL WIRES, CONTROL VALVES, AND PRESSURIZED WATER SUPPLY LINES SHALL NOT BE LOCATED WITHIN THE EXISTING ROW OR OUTSIDE PROPERTY BOUNDARIES.

"Irrigation in Texas is regulated by the Texas Commission on Environmental Quality (TCEQ), MC-178, PO Box 13087, Austin, Texas 78711-3087 TCEQ's website is: www.tceq.state.tx.us"

HORIZON DESIGN AND DEVELOPMENT PLANNING LANDSCAPE ARCHITECTURE DEVELOPMENT CONSULTING 16414 San Pedro Ave., Suite 630 San Antonio, Texas 78232 210.831.8564 jrobinson@horizondesign-sa.com



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REVISIONS

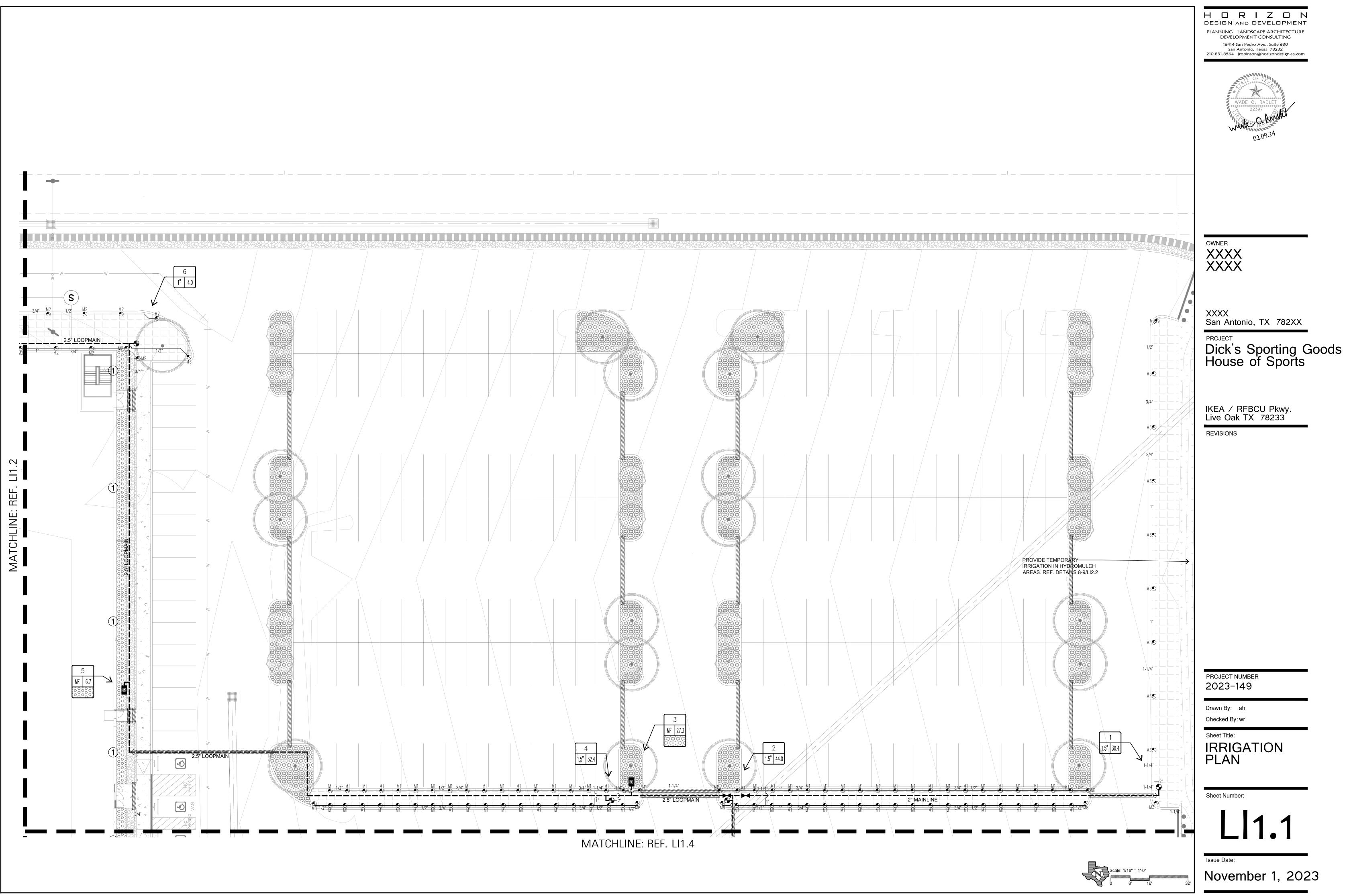
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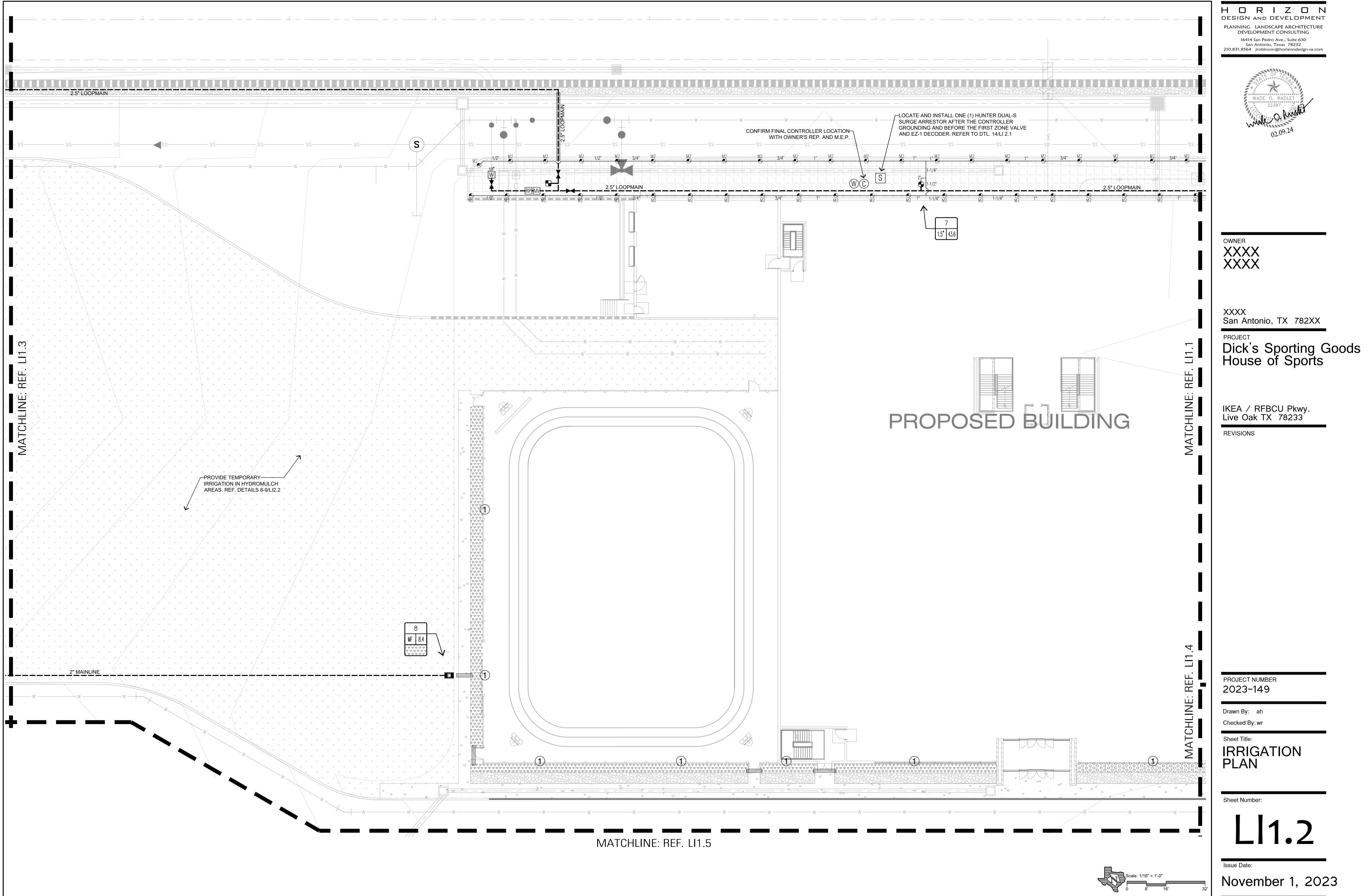
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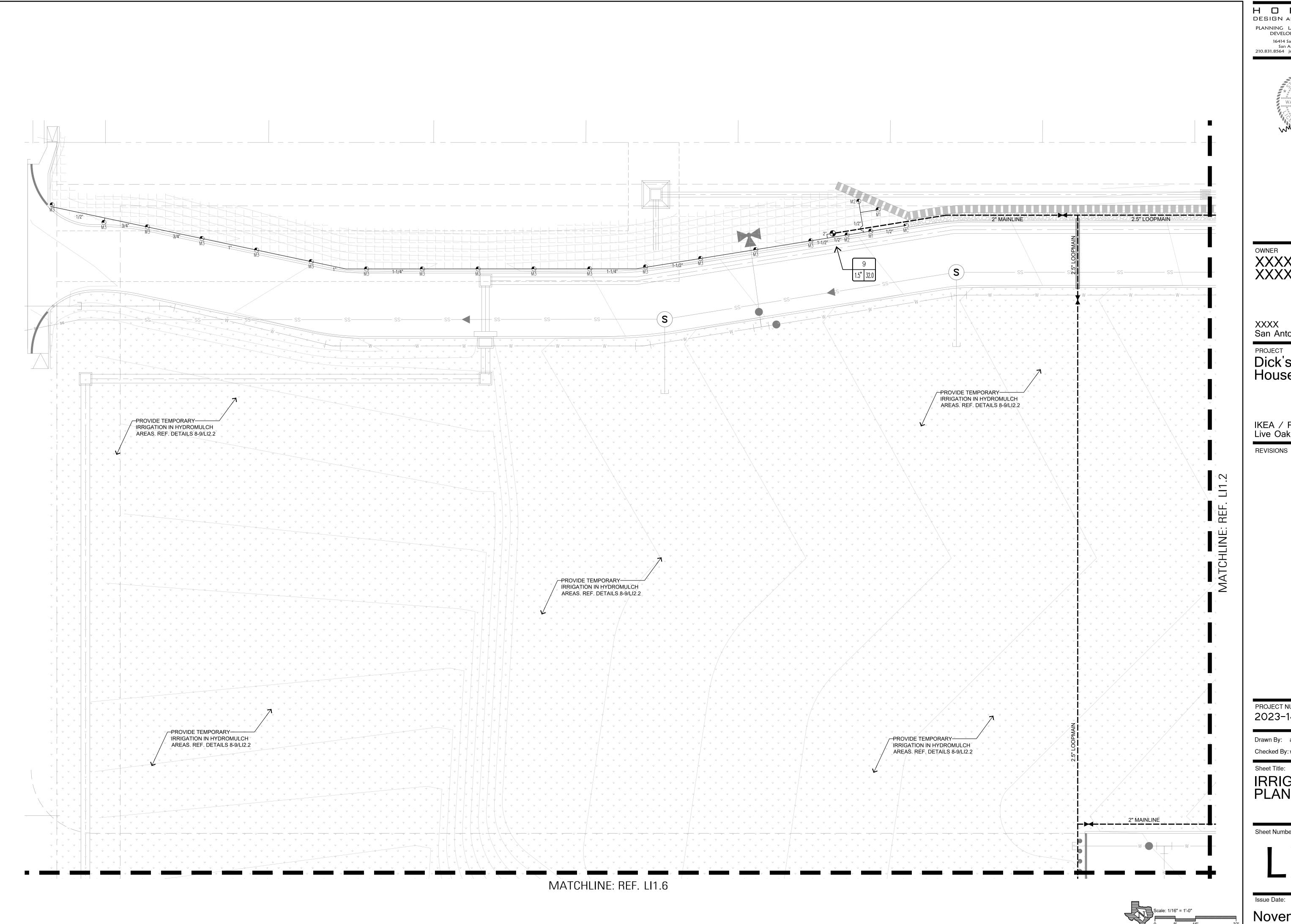
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IRRIGATION **NOTES AND** LEGEND

Sheet Number:







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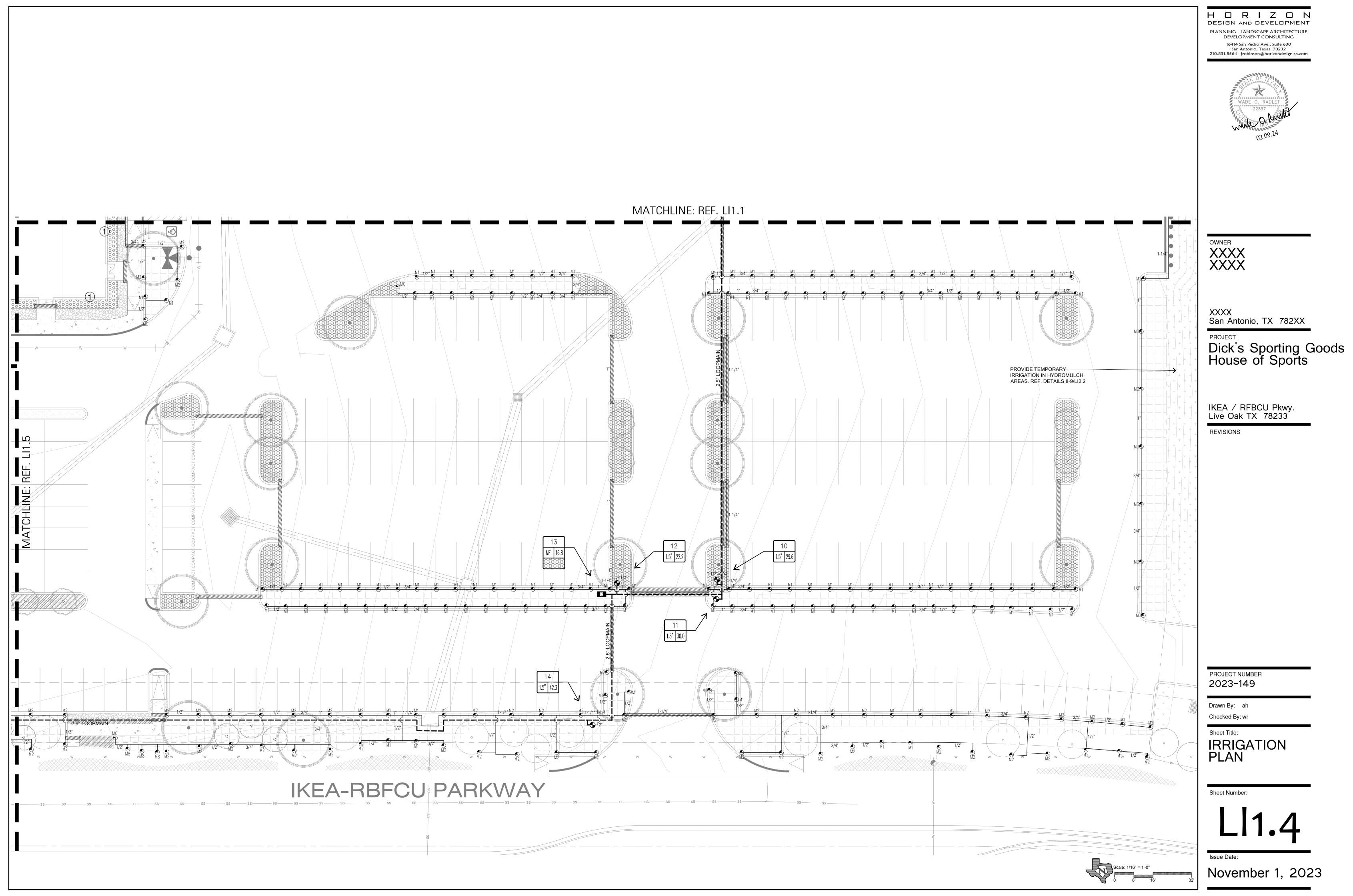
Dick's Sporting Goods
House of Sports

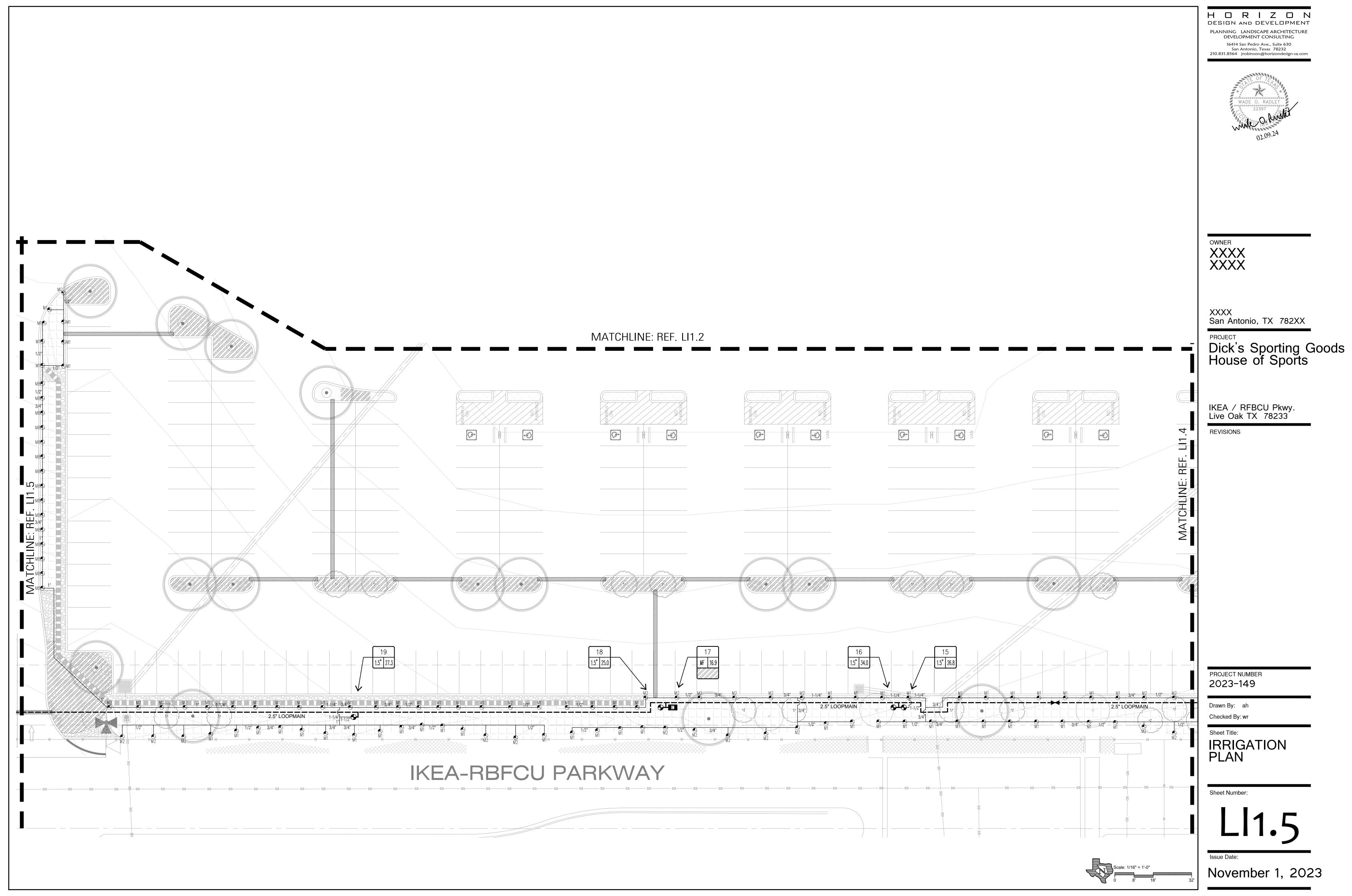
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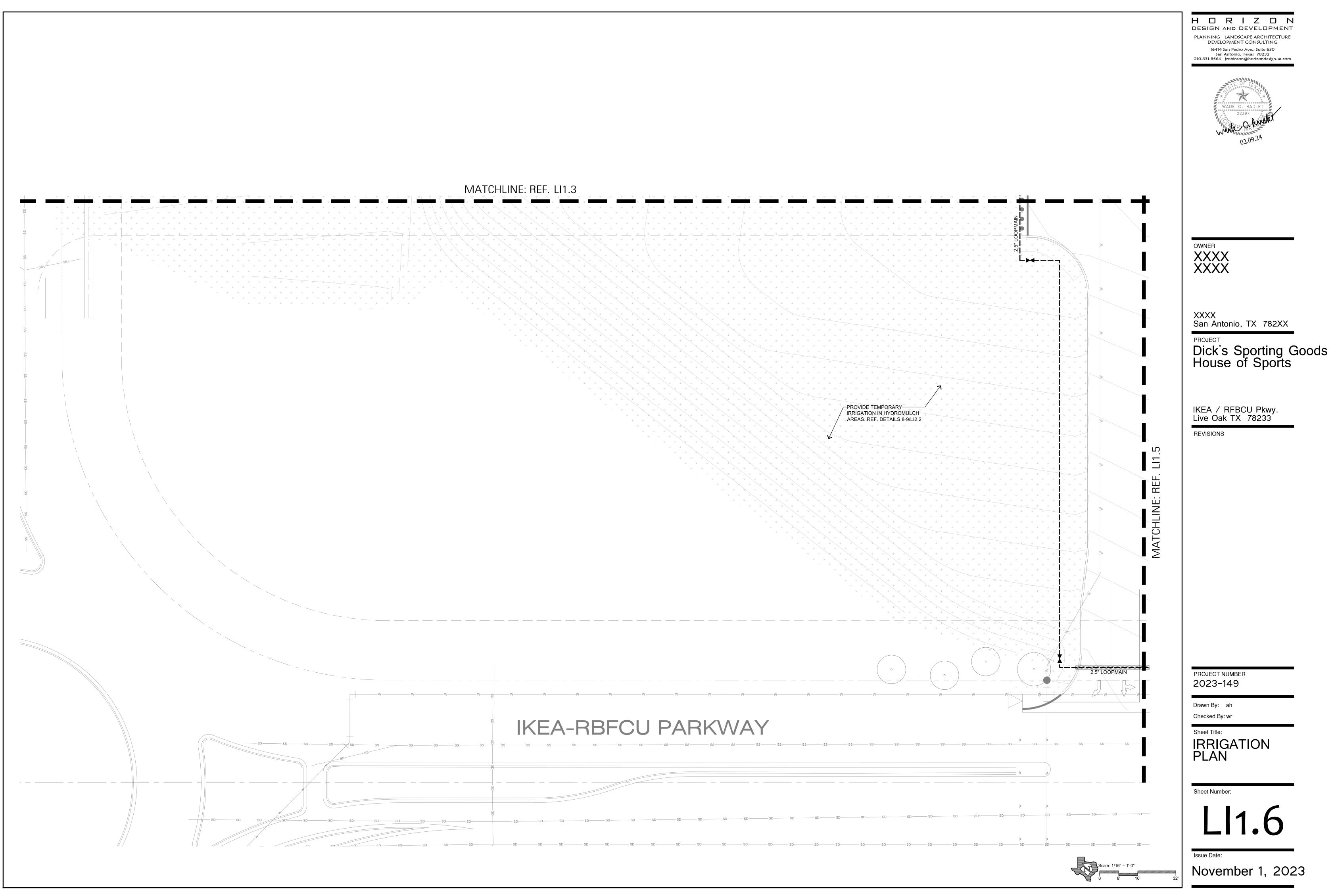
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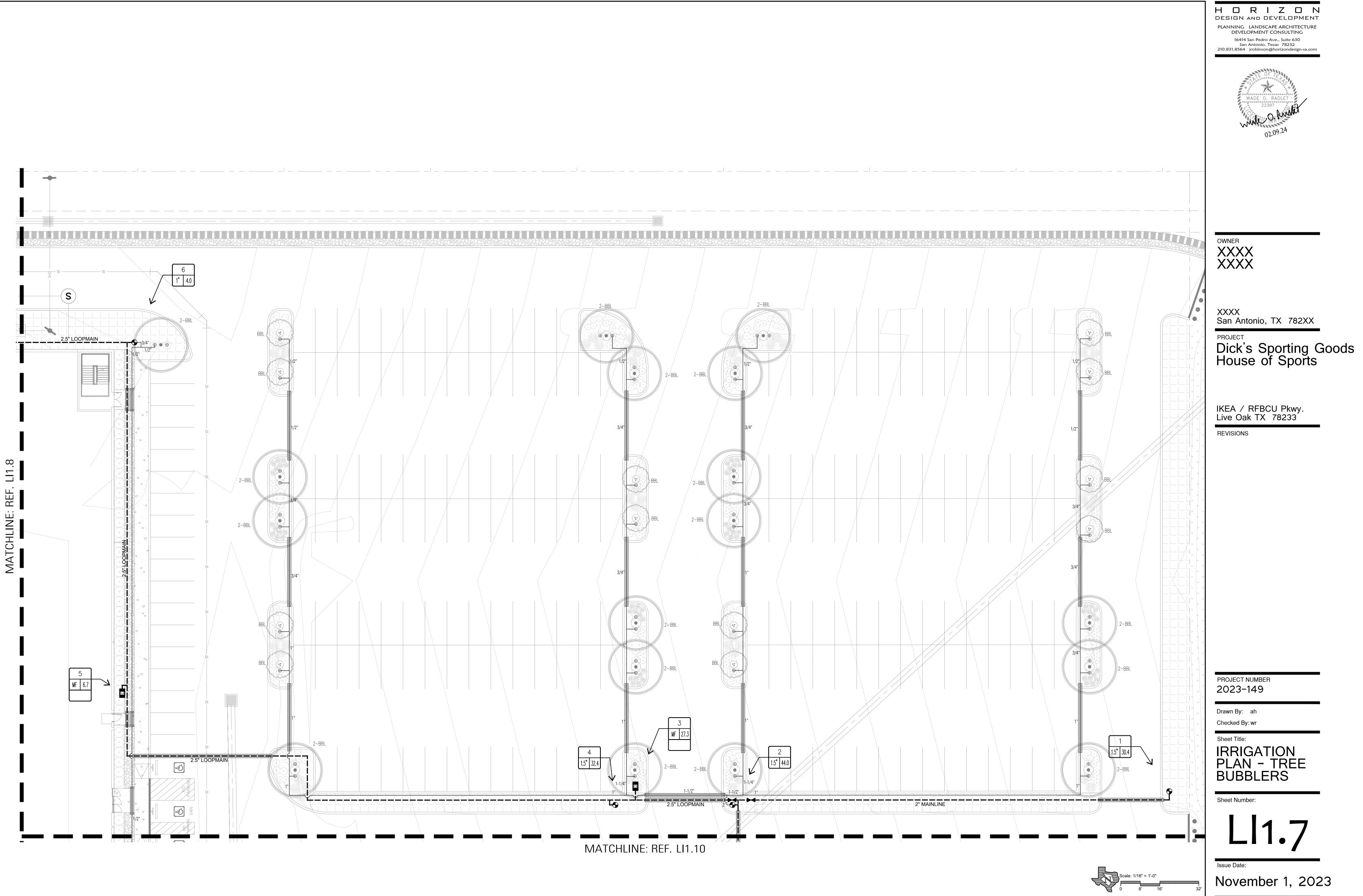
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IRRIGATION PLAN



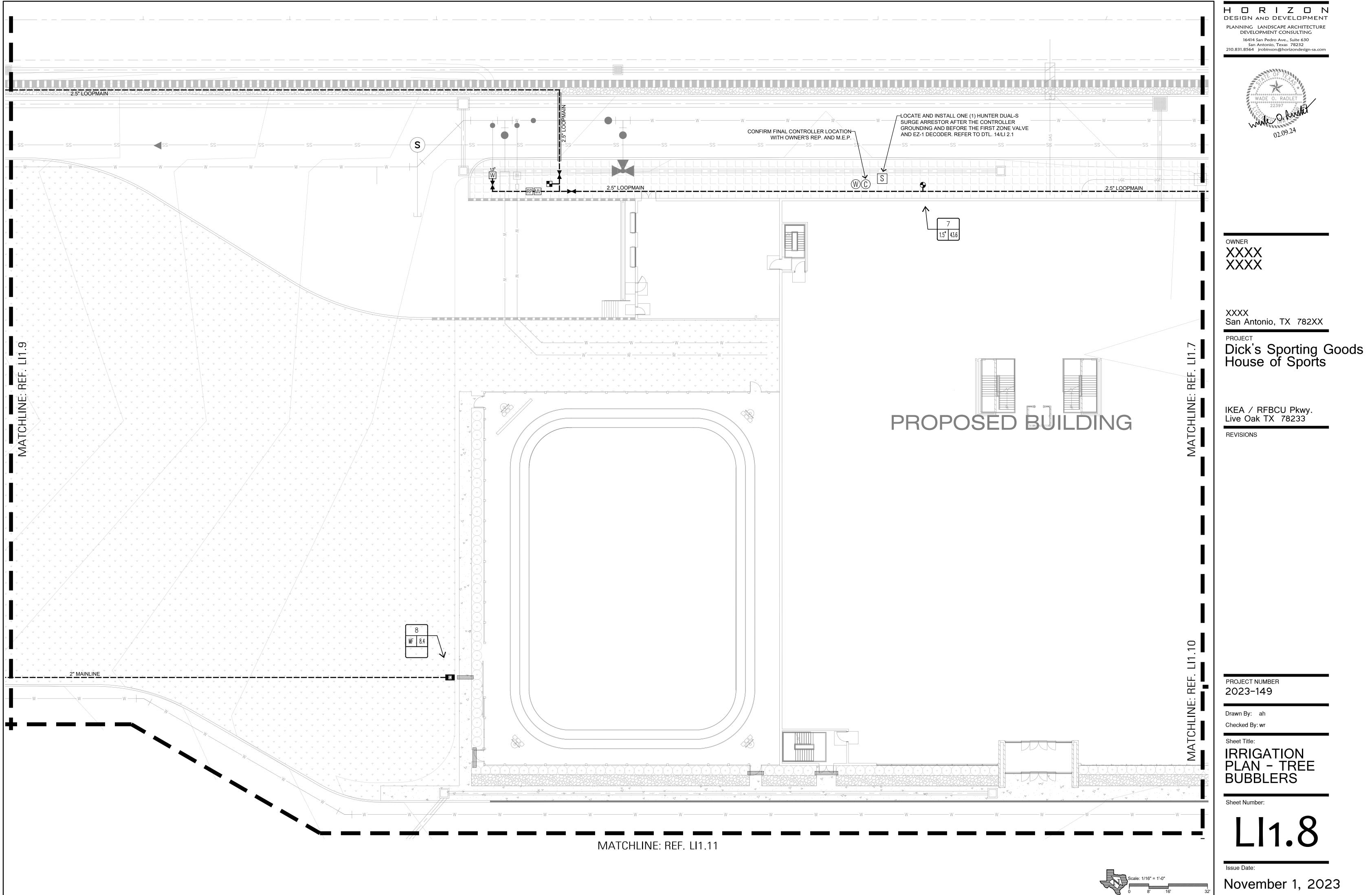


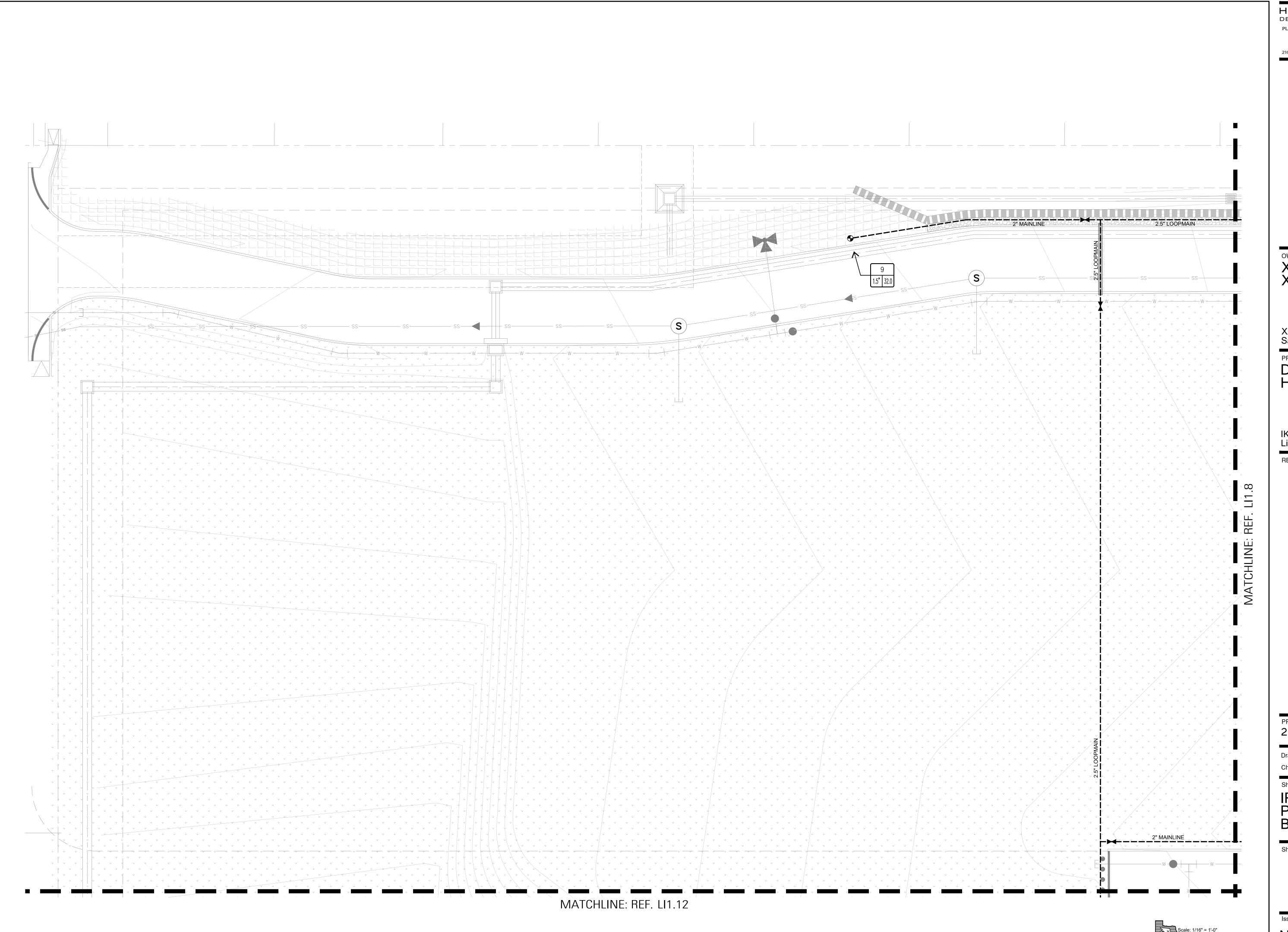




H O R I Z O N design and development PLANNING LANDSCAPE ARCHITECTURE DEVELOPMENT CONSULTING







H O R I Z O N design and development PLANNING LANDSCAPE ARCHITECTURE DEVELOPMENT CONSULTING 16414 San Pedro Ave., Suite 630 San Antonio, Texas 78232 210.831.8564 jrobinson@horizondesign-sa.com



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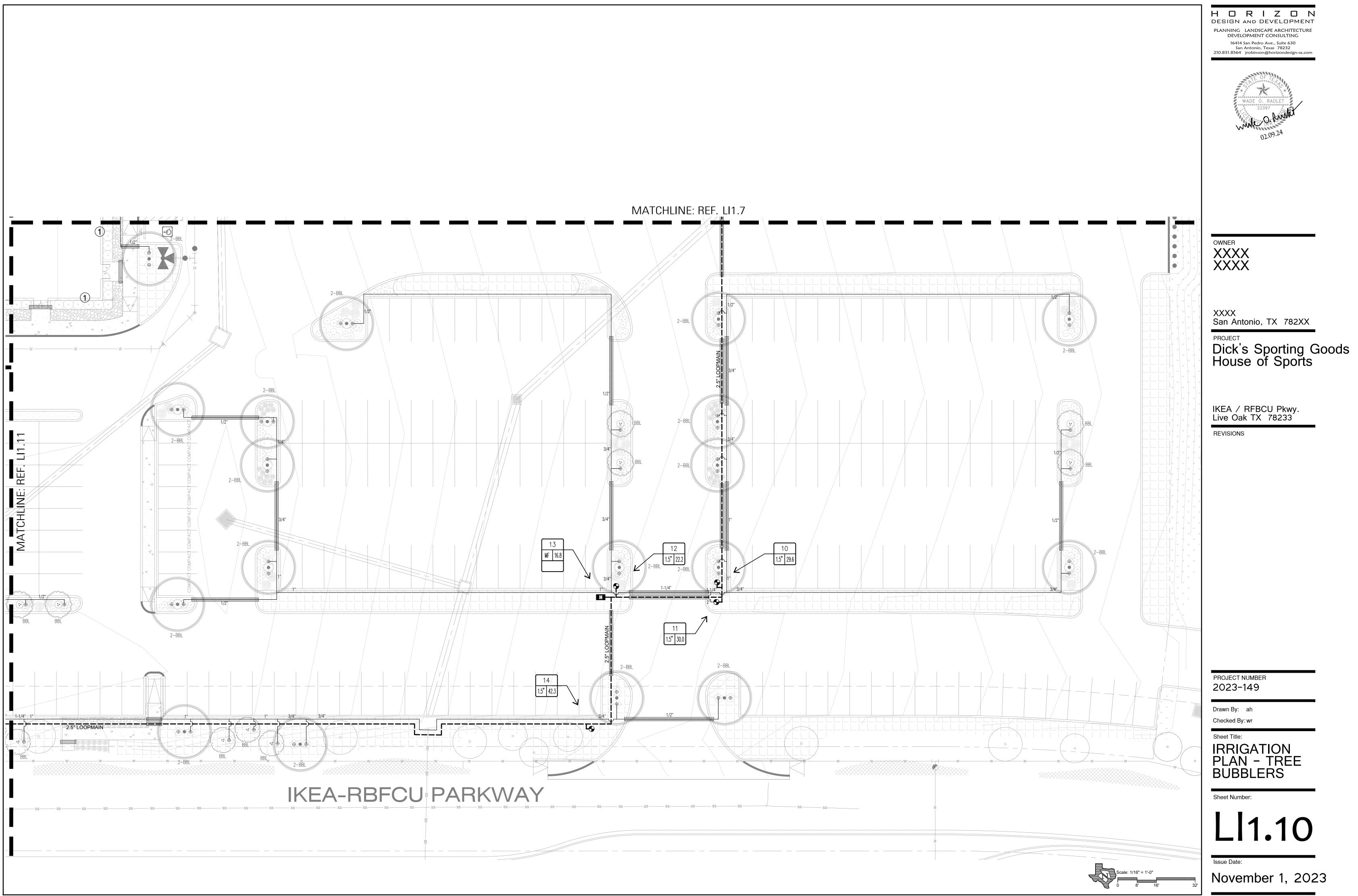
Dick's Sporting Goods
House of Sports

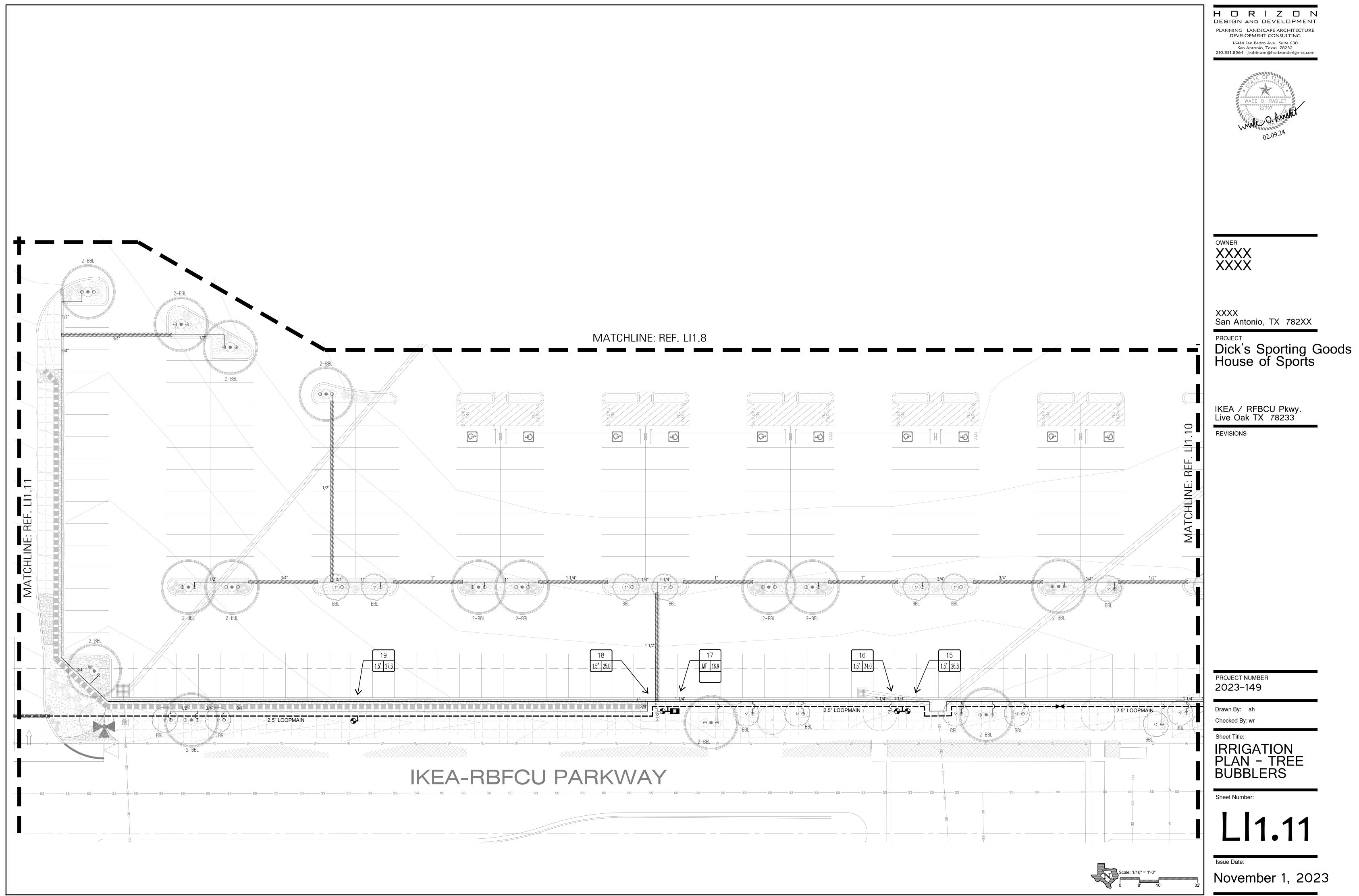
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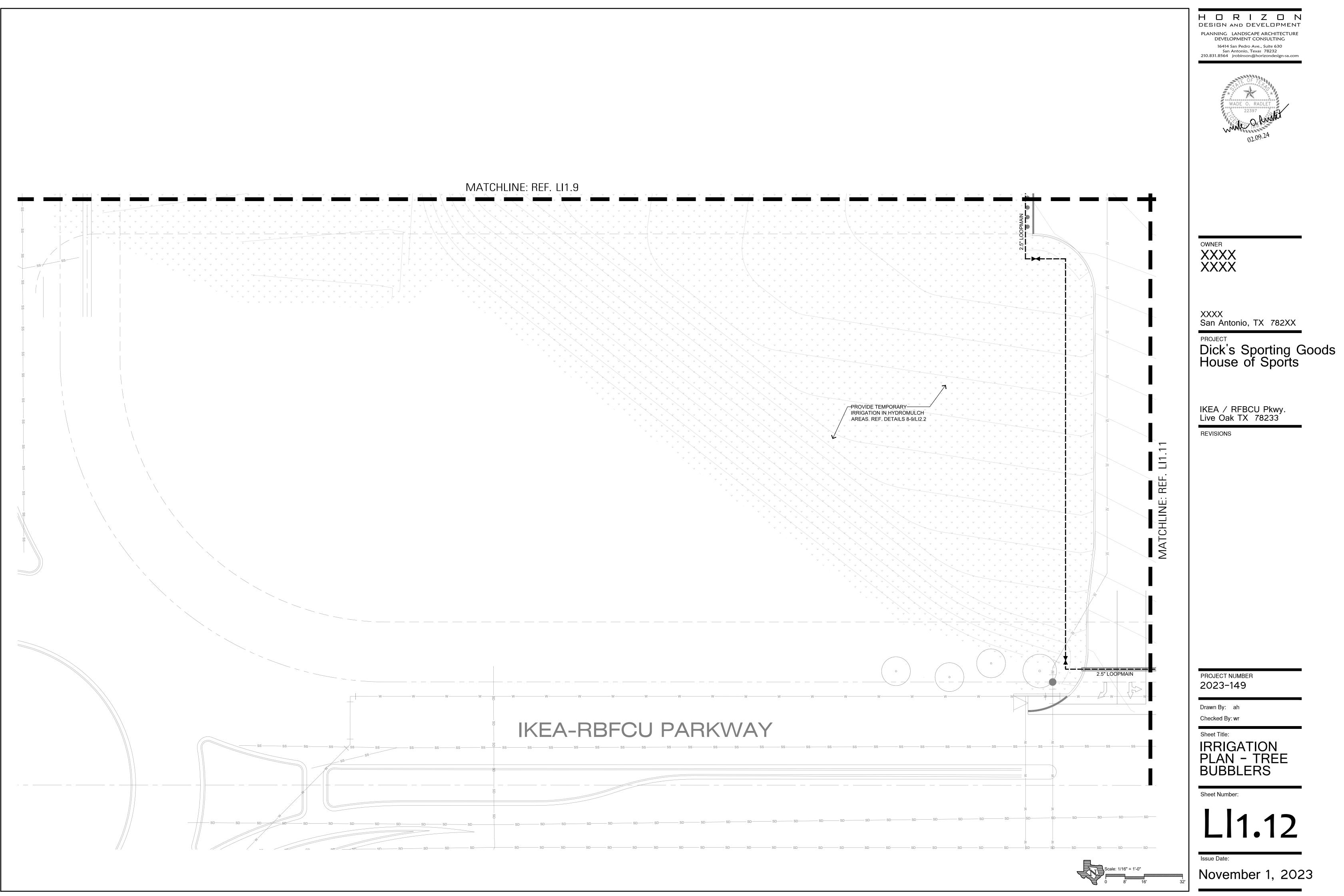
REVISIONS

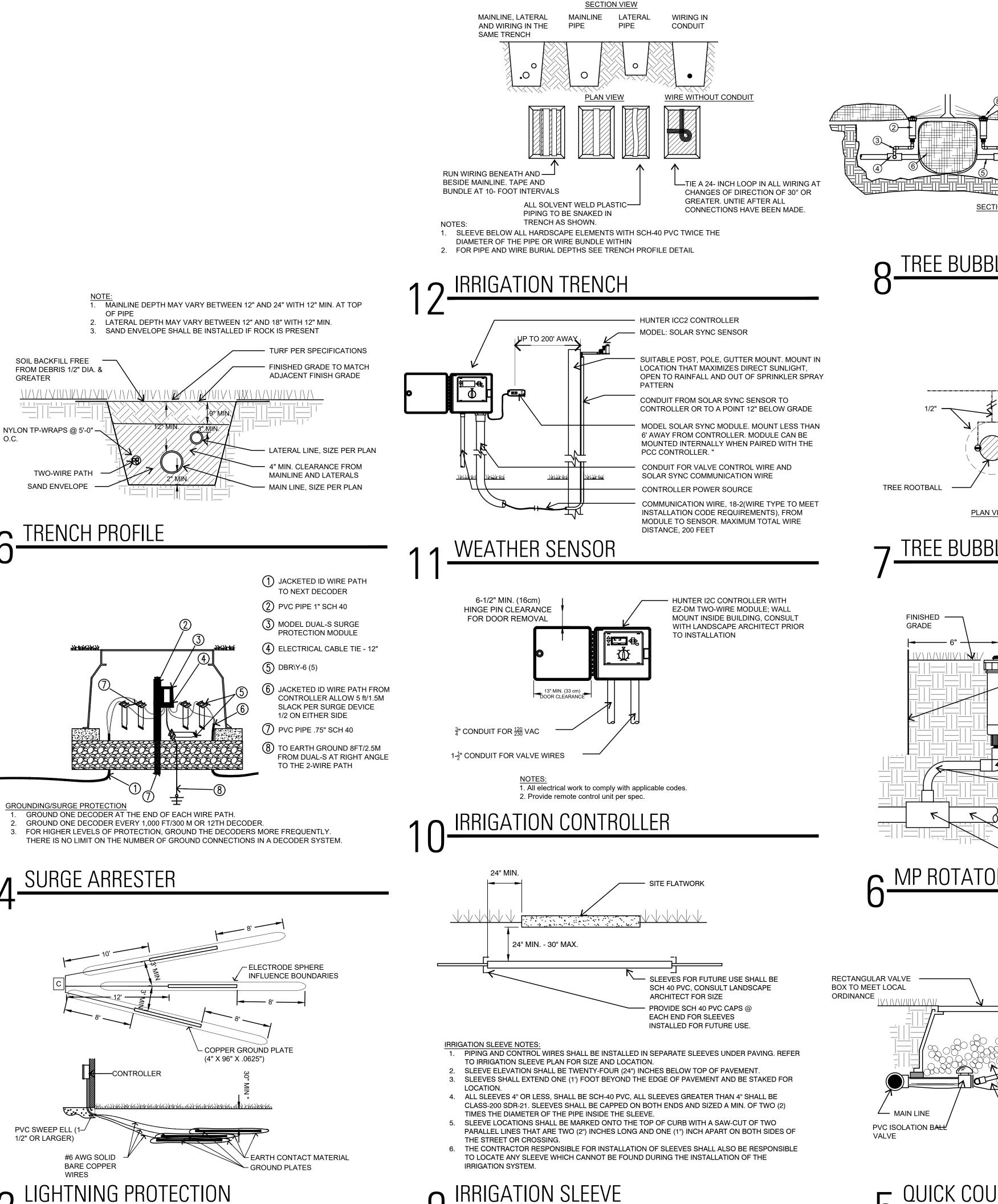
PROJECT NUMBER 2023-149

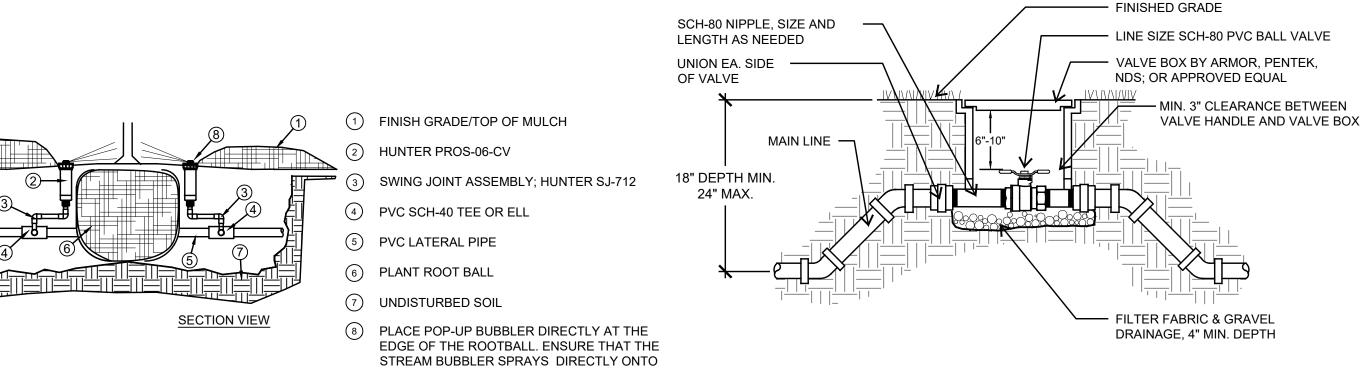
IRRIGATION PLAN - TREE BUBBLERS





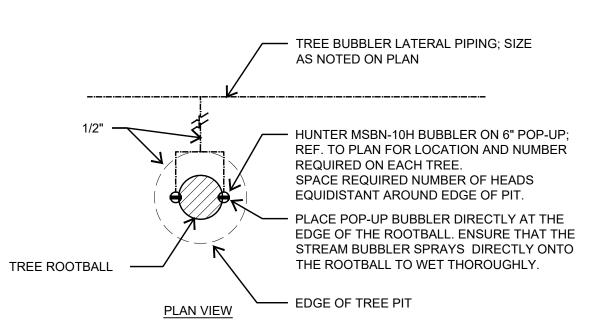




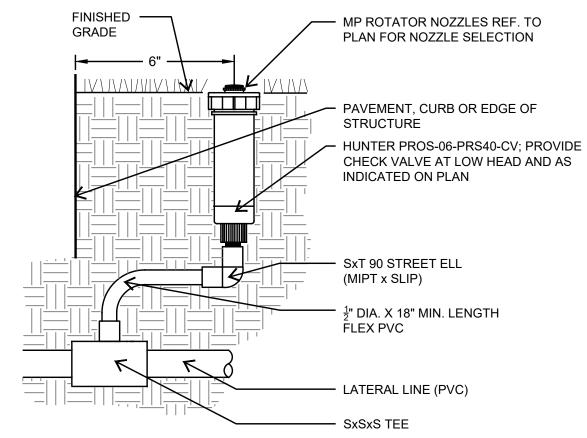


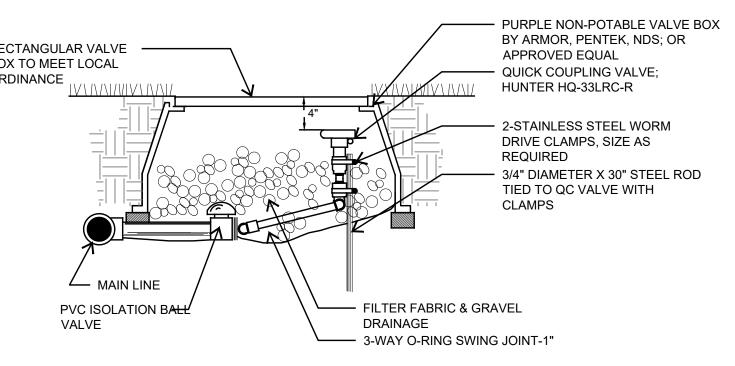
## REE BUBBLER ASSEMBLY- SECTION

THE ROOTBALL TO WET THOROUGHLY.

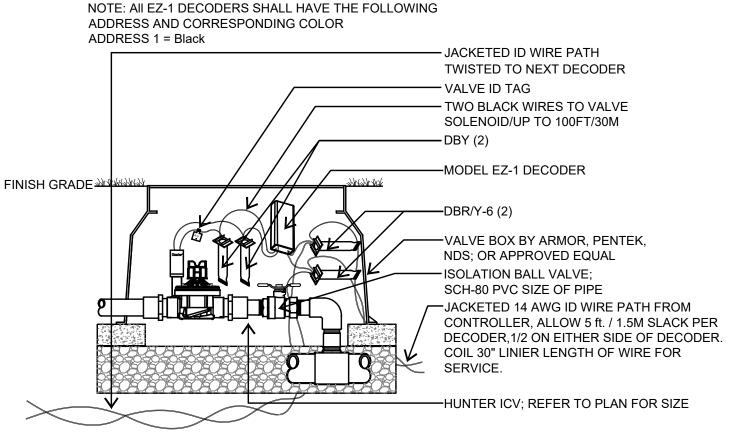


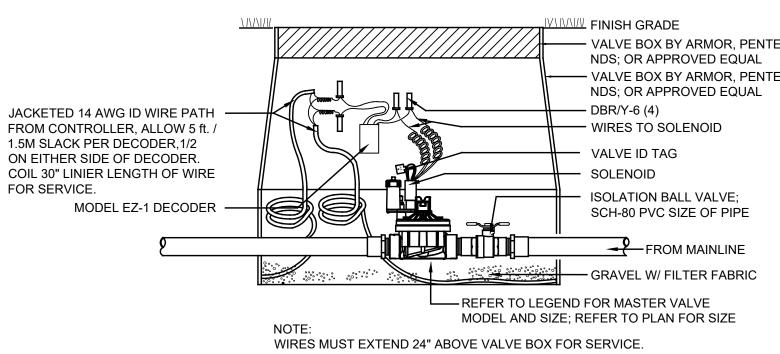
## TREE BUBBLER ASSEMBLY- PLAN



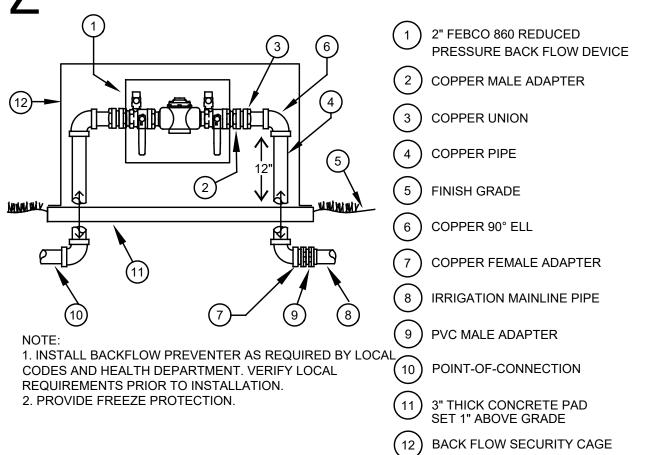


**QUICK COUPLER VALVE** 



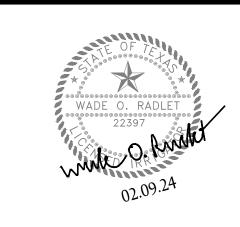


## MASTER VALVE



BACKFLOW DEVICE

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**PROJECT** 

Dick's Sporting Goods House of Sports

IKEA / RFBCU Pkwy. Live Oak TX 78233

**REVISIONS** 

VALVE BOX BY ARMOR, PENTEK VALVE BOX BY ARMOR, PENTEK

> PROJECT NUMBER 2023-149

> > Drawn By: ah Checked By: wr

Sheet Title: IRRIGATION DETAILS

Issue Date:

Sheet Number:

- 1.) DRIP LINE SHALL BE BURIED 3" TO 5" BELOW FINISHED SOIL GRADE IN PLANTING BEDS AFTER PLANTING AND BEFORE MULCH AND 4" TO 6" BELOW FINISHED GRADE
- IN TURF AREAS. 2.) STAGGER EMITTER SPACING IN PARALLEL ROWS TO CREATE TRIANGULAR WETTING PATTERN.
- 3.) ALL DRIP LINE SHALL BE SECURED USING SOIL STAPLES AS SUPPLIED BY THE
- MANUFACTURER SPACED A MAX. OF 3' ON CENTER. 4.) DRIP LATERALS SHOWN ON THE PLANS ARE USED TO INDICATE ZONING SIZES AND RELATIONSHIPS. INSTALLATION OF DRIP ZONES SHALL FOLLOW ONE OF THE TWO METHODS DESCRIBED IN DTLS. 2/3-LI 2.2. AND NETAFIM'S RECOMMENDED INSTALLATION SPECIFICATIONS.
- 5.) NETAFIM HCVXR SERIES DRIP LINE SHALL BE USED AS FOLLOWS; TURF AREAS; TLHCVXR5-12, ROWS SPACED AT 12 INCHES BED AREAS; TLHCVXR7-18, ROWS SPACED AT 18 INCHES BED AREAS WITH SLOPE 3:1 OR MORE; TLHCVXR7-12
- 6.) WHEN CONFLICTS OCCUR BETWEEN THESE DRAWINGS AND THE MANUFACTURER'S SPECIFICATIONS DEFER TO THE MANUFACTURER'S

1-1/2" CLASS 200 PVC

RECOMMENDED SPECIFICATIONS. 7.) EACH DRIP ZONE SHALL HAVE A DRIP SYSTEM OPERATION INDICATOR, AS MANUFACTURED BY NETAFIM. INSTALL PER NETAFIM RECOMMENDATIONS.

### PROPER SIZING OF SUPPLY AND EXHAUST HEADERS (17MM HCVXR SERIES DRIPLINE)

	(TYMM TICVAR SERIES BIRT EINE)				
	TOTAL ZONE FLOW	PIPE SIZE			
	UP TO 5 GPM	1/2" SCH 40 PVC or 1/2" CLASS 315 PVC			
5.1 TO 8 GPM 3/4" CLASS 200 PVC		3/4" CLASS 200 PVC			
	8.1 TO 13 GPM	1" CLASS 200 PVC			
	13.1 TO 22 GPM	1-1/4" CLASS 200 PVC			

 $\underline{\text{NOTE:}}$  A 45 PSI PRESSURE REGULATOR IS RECOMMENDED TO OBTAIN MAXIMUM RUN LENGTHS AND MAXIMIZE ZONE SIZE WHEN INSTALLING HCVXR SERIES DRIPLINE.

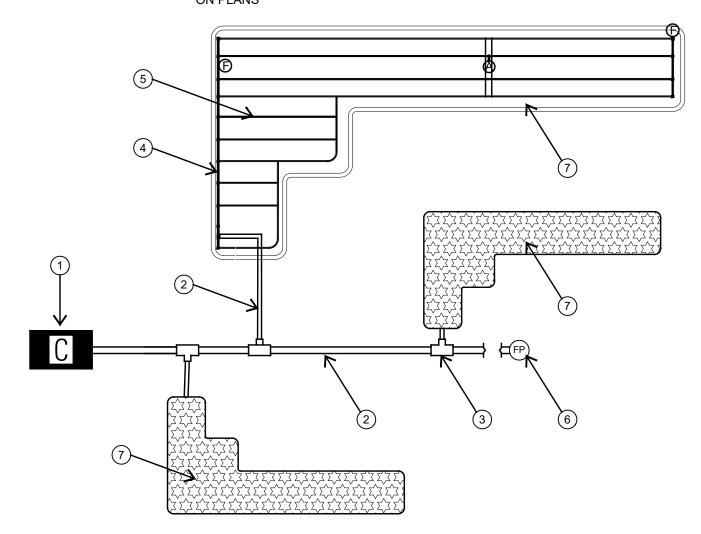
## DRIP DESIGN NOTES

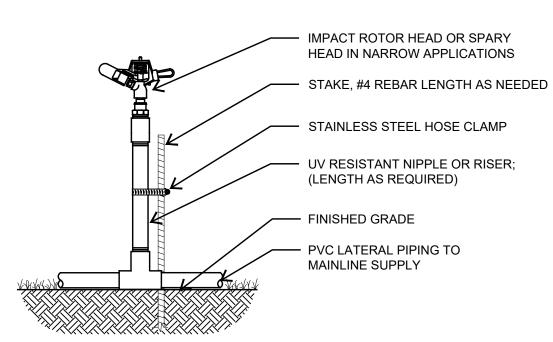
22.1 TO 31 GPM

- 1 CONTROL ZONE KIT; NETAFIM
- 2) PVC SUPPLY LINE; SIZE PER CHART BELOW

TOTAL LENGTH OF DRIPLINE	MINIMUM PIPE SIZE		
UP TO 300 FT	1/2" SCH 40 PVC or 1/2" CLASS 315 PVC		
300 TO 550 FT	3/4" CLASS 200 PVC		
550 TO 850 FT	1" CLASS 200 PVC		
850 TO 1700 FT	1-1/4" CLASS 200 PVC		
1700 TO 2450 FT	1-1/2" CLASS 200 PVC		

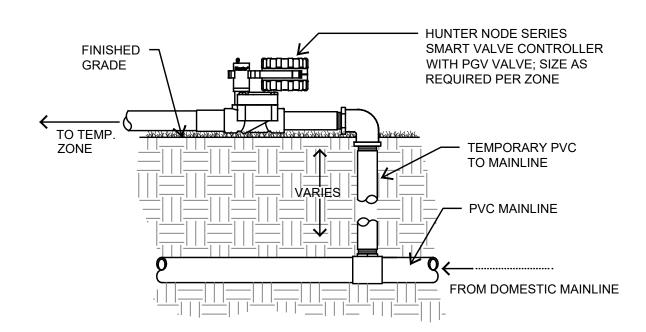
- 3 PVC SCH-40 TEE OR EL (TYPICAL)
- (4) SUPPLY HEADER; PVC SCH 40 WITH INSERT FITTINGS
- 5 LANDSCAPE DRIPLINE TUBING; NETAFIM TLHCVXR7-18 FOR PLANTING NETAFIM TLHCVXR5-12 FOR TURF
- (6) DRIPLINE FLUSH POINT (SEE NETAFIM DETAIL: FLUSH VALVE)
- (7) DRIP AREA; DEFINED BY HATCH ASSOCIATED TO ZONE TAG



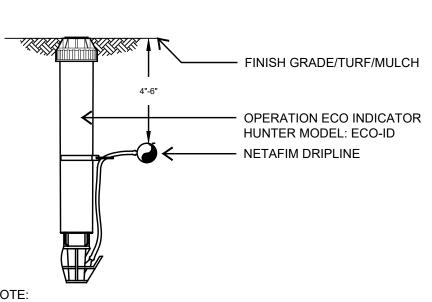


- TEMPORARY IRRIGATION SYSTEMS MUST BE INSTALLED BY A LICENSED IRRIGATOR OR AN
- IRRIGATION TECHNICIAN UNDER THE SUPERVISION OF A LICENSED IRRIGATOR. 2. TEMPORARY IRRIGATION SYSTEMS MUST MEET THE BACKFLOW PREVENTION REQUIREMENTS IN SUBCHAPTER E OF THIS CHAPTER (RELATING TO BACKFLOW
- PREVENTION AND CROSS-CONNECTIONS). 3. TEMPORARY IRRIGATION SYSTEMS MUST BE INSTALLED IN ACCORDANCE WITH §344.1(45)
- OF THIS TITLE (RELATING TO DEFINITIONS). 4. TEMPORARY IRRIGATION SYSTEMS MUST HAVE ESTABLISHED A DEFINITE END DATE AT
- WHICH TIME THE TEMPORARY IRRIGATION SYSTEM MUST BE REMOVED.
- 5. ALL COVERAGE SHALL BE HEAD TO HEAD.
- SYSTEM SHALL BE DESIGNED TO AVOID ANY OVERSPRAY ONTO SIDEWALKS AND STREETS. TEMPORARY IRRIGATION SYSTEM ZONE VALVES SHALL BE HUNTER NODE CONTROLLER VALVES, CONTRACTOR SHALL CLUSTER VALVE LOCATIONS WHERE POSSIBLE TO COMBINE
- ZONES ON MULTIPLE VALVE CONTROLLERS (NODE-200, NODE-400, ETC...) 8. NO PIPING SHALL BE RUN WITHIN THE PROTECTION ZONE OF EXISTING TREES UNLESS APPROVED BY LANDSCAPE ARCHITECT.
- 9. CONTRACTOR SHALL VERIFY ON-SITE AND BY CONSULTING WITH LANDSCAPE ARCHITECT AREAS THAT WILL REQUIRE TEMPORARY IRRIGATION PRIOR TO DESIGN AND INSTALLATION
- 10. USE #4 X 24" REBAR ROD WITH "J" HOOKED RADIUS AT ONE END TO HOLD PIPE SECURELY IN PLACE. INSTALL AT INTERVALS OF 10 FEET.

# **Q** IEMPORARY IRRIGATION ROTOR

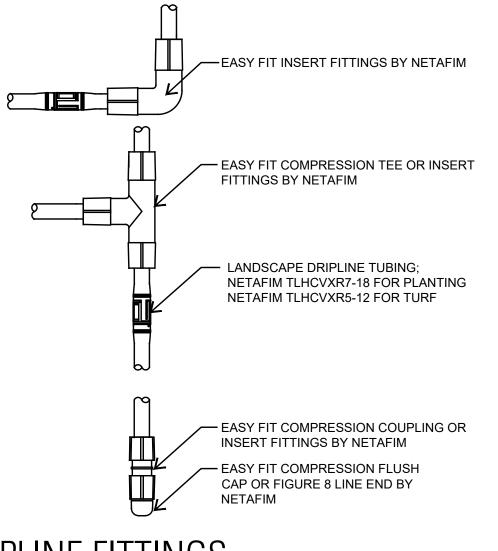


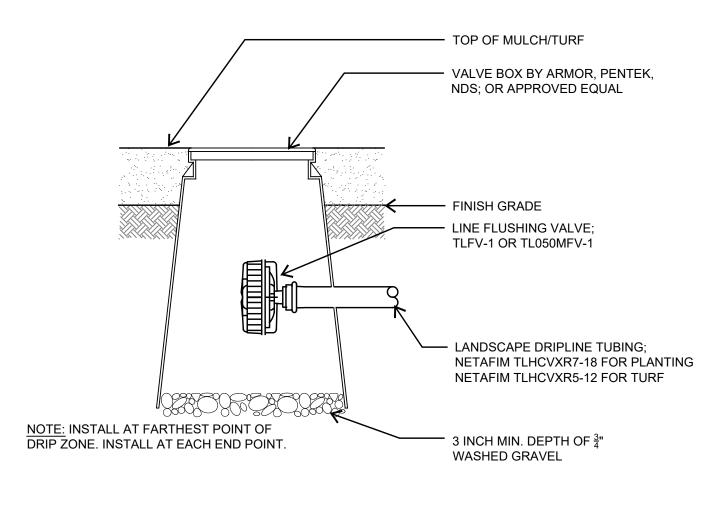
## TEMPORARY IRRIGATION NODE



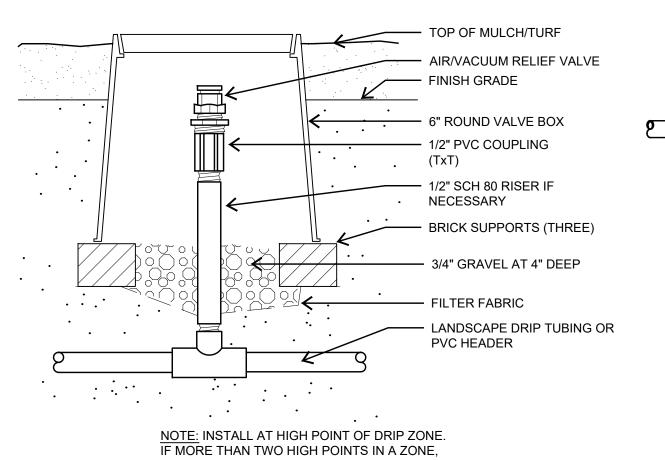
1. INSERT BARB TRANSFER FITTING DIRECTLY INTO DRIPLINE TUBING. 2. VAN NOZZLE MAY BE SET TO CLOSED, OR IF IT IS DESIRED TO SEE SPRAY FROM THE NOZZLE. SET THE ARC TO ½ PATTERN. THE FLOW FROM THE NOZZLE. 0.3 GPM, SHOULD BE ACCOUNTED FOR IN THE SYSTEM DESIGN.

OPERATION INDICATOR

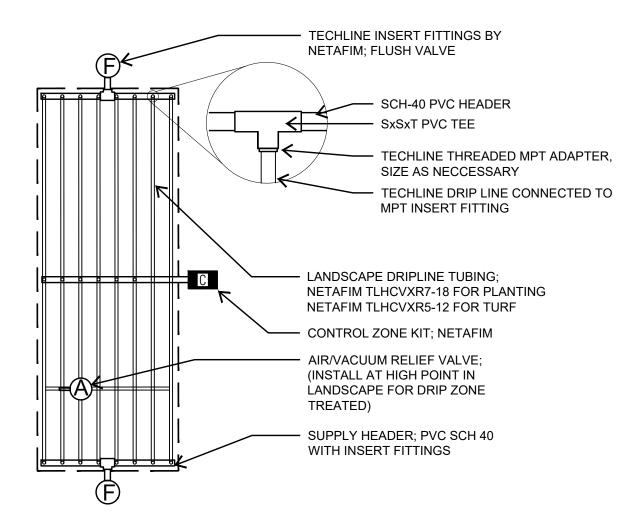




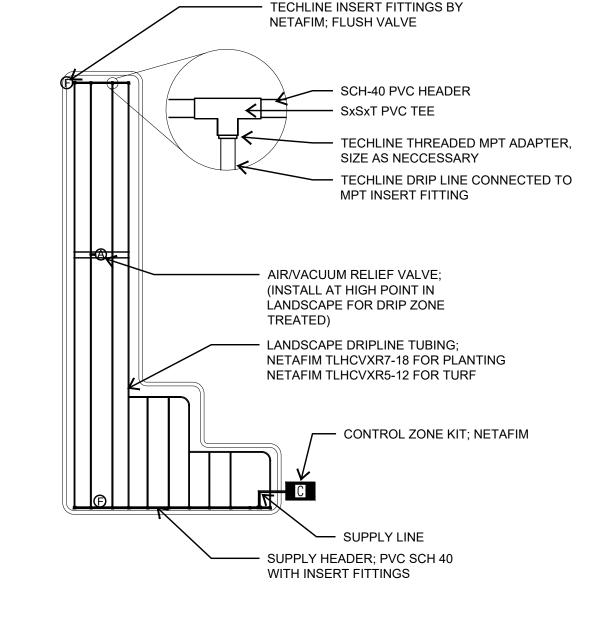
## DRIPLINE FLUSH VALVE

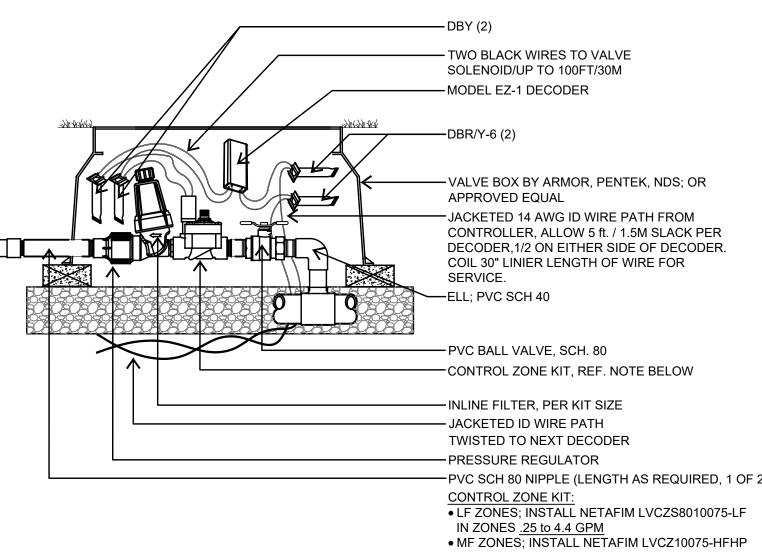


**INSTALL AT EACH HIGH POINT** 



## ORIPLINE INSTALLATION (CENTER FEED)





IN ZONES <u>4.5 to 17.6 GPM</u>

IN ZONES 11.0 to 35.0 GPM

• HF ZONES; INSTALL NETAFIM LVCZ150HP

**CONTROL ZONE KIT** 

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ORIPLINE INSTALLATION (END FEED)

PROJECT NUMBER 2023-149 Drawn By: ah Checked By: wr Sheet Title:

IRRIGATION **DETAILS** 

Sheet Number:

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