Landscaping Plan Review from Environmental Service Division of the City of Morgan Hill

***ALL Landscape Plans with a Design Review are subject to comply with 2 ordinances**: MHMC 18.64 and 18.148*
Below is a Checklist to help guide plans to compliance.
Every line on this list must be met/addressed in order for a project to be approved.

18.64.040 - Landscape Plan Required						
Requirement			Check	Page Location	LA Comments	ESD Comments
A.		Does the landscape plan include ALL of the following:				
	1	- Site boundaries				
	2	- Existing conditions on the property				
	3	- Structures immediately adjacent to the property				
	4	- New proposed structures/improvements in the development project				
	5	- Existing landscaping, trees, and vegetation including: Plant: location, species, and size Tree: diameter				
	6	- New proposed landscaping in the development project including; Plant: location, species, size				
	7	- Irrigation plan including; Location, type, and size of all components				
	8	- Proposed grading				

18.64.060 – General Landscape Requirement						
Requirement			Check	Page Location	LA Comments	ESD Comments
A.		General Standards:				
	1	Do all the plants and trees need low/very low water defined by WUCOLS?				
	2	Are turf areas flat?				
		Are all turf area exclusively for active recreation?				
	3	Does the turf not exceed 25% of the landscaped area? *If it does, must be approved by planning commission and can only be for functional recreation space.				
	4	Are the plants grouped into separate color coded hydrozones with plants of the same watering requirements?				
	5	Any there any decorative water features? *If so, they must be approved by planning commission and have recirculating water systems.				

	6	Is it notated and established that the watering times must be after 7:00pm and before 9:00am?				
	7	Do the plant species not interfere with pedestrian, bicycle, or vehicular circulation AND overhead lights/utility lines? *(Considering the planting location and plant maturity size)*				
B.		Irrigation and Water Efficiency:				
	1	Do all parts of the irrigation system meet a minimum efficiency of 75%?				
	2	Are there separate landscape water meters for landscape areas exceeding 5,000 sq ft?				
	3	Are irrigation controllers capable of ALL of the following: - percent adjustment, - multiple programming, and - rain sensors				
	4	Is drip or bubbler irrigation used in ALL non-turf areas?				
	5	If there is any overhead spray irrigation for turf areas, does it have a precipitation rate less than ¾ of an inch per hour?				
	6	Are there separated valves and circuits based on water use and sun exposure?				
	7	Are there separated valves for turf, non-turf, and berm areas?				
	8	Are all sprinkler heads and emitters selected for proper area coverage, application rate, operation pressure, adjustment capability, and ease of maintenance?				
	9	Are there rain-sensing override devices for all irrigation systems?				
	10	Are all trees irrigated by drip or bubbler irrigation?				
	11	Are State approved backflow prevention devices installed on all irrigation systems?				

18.148.060 – Landscape Project Application and Package					
Requirement		Check	Page Location	LA Comments	ESD Comments
A.	Planting Restrictions. **In addition to all of the requirements above, choose one** of the two paths described below and relay which path you have chosen in the LA Comment section to the right.				
1	Planting restrictions: a) the landscape area may include no turf or high-water using plants; and b) at least 80% of the plants in landscape areas shall be native plants, low-water using plants, or no water using plants				
	OR				

	2	Water budget calculation option *(section 18.148.080)*				
B.		Does the landscape project application include ALL of the following?				
	1	Project information: please provide on the L.0 Cover Sheet.				
	a.	- date				
	b.	- project applicant				
	c.	- project address/parcel or lot numbers				
	d.	- type (new, rehabilitated, public, private, cemetery, homeowner-installed)				
	e.	- total landscape area				
	f.	- water supply type (potable, recycled, well) and local retail water seller				
	g.	- checklist of all documents in landscape documentation package				
	h.	- contact information for the project applicant and property owner				
	i.	- applicant signature/date with the statement "I agree to comply with the requirements of the water efficient landscape ordinance and submit a complete landscape documentation package."				
	j.	- applicant signature/date with the statement "After installation of landscaping on property, I agree to have an irrigation audit, landscape audit, irrigation schedule, and maintenance schedule conducted by a Certified Irrigation Auditor and submit it to the City for final project sign off"				
	2	Soil management report/survey *(see requirements below)*				
	3	Landscape design plans *(see requirements below)*				
	4	Irrigation system design plans *(see requirements below)*				
	5	Landscape audit report *(see requirements below)*				
	6	Grading design plan or survey *(see requirements below)*				

18.148.070 – Soil Management Report						
Requirement			Check	Page Location	LA Comments	ESD Comments
A.		Indicate if the project has chosen to submit: a) a soil management report, *OR* b) a soil management survey (Appendix E)				
	1	Have soil samples been sent to a lab?				
	2	Does the soil analysis include the following?				
	a.	- soil texture				
	b.	- infiltration rate				
	c.	- pH				
	d.	- total soluble salts				

	e.	- sodium				
	f.	- % organic matter				
	g.	- lab recommendations				
	3	Indicate if this project is planning to conduct mass grading. **Choose one option from below, and indicate your choice in the LA Comments.**				
	a.	Mass grading is NOT planned, therefore a soil analysis report shall be submitted as part of the landscape documentation package.				
	b.	Mass grading is planned, therefore a soil analysis report can be submitted as part of certificate of completion.				

18.148.090 – Landscape Design Plans						
Requirement			Check	Page Location	LA Comments	ESD Comments
A.		Plant Material - Water Efficiency:				
	1	One or more of the following must be applied for water efficiency. **Select all that apply below** and relay which path you have chosen in the LA Comment section to the right.				
	a.	- protection and preservation of native species and natural vegetation				
	b.	- selection of water-conserving plant, tree and turf species, especially local native plants				
	c.	- selection of plants based on local climate suitability, disease and pest resistance				
	d.	- selection of trees based on applicable local tree ordinances or tree shading guidelines, and size at maturity as appropriate for the planting area				
	e.	- selection of plants from local and regional landscape program plant lists				
	f.	- selection of plants from local fuel modification plan guidelines.				
	2	One or more of the following must be applied for water efficiency. **Select all that apply below** and relay which path you have chosen in the LA Comment section to the right.				
	a.	- The Sunset Western Climate Zone System				
	b.	- Consideration of plant-specific attributes (ie. Mature plant size)				
	c.	- Consideration of the solar orientation of plant placement				
	3	Is there a defensible space around the structure where there are no fire-prone plant materials and highly flammable mulches?				
	4	Are there any plants used that are on the CA Invasive Plant List?				
B.		Water Features:				

	1	Are all water features solely using recirculating water? *must be approved by the Planning Commission.				
	2	Is the surface area of all water features included in the high water use Hydrozone Area of the Water Budget Calculation?				
	3	Do all pools and spas have a cover?				
C.		Soil Preparation, mulch and amendments. State the following in the exact language below:				
	1	- Prior to the planting of any materials, compacted soils shall be transformed to a friable condition. On engineered slopes, only amended planting holes need meet this requirement.				
	2	- Soil amendments shall be incorporated according to recommendations of the soil report and what is appropriate for the plants selected (see Section 18.148.070).				
	3	- For landscape installations, compost at a rate of a minimum of four cubic yards per one thousand square feet of permeable area shall be incorporated to a depth of six inches into the soil. Soils with greater than six percent organic matter in the top six inches of soil are exempt from adding compost and tilling.				
	4	- A minimum three-inch layer of mulch shall be applied on all exposed soil surfaces of planting areas except in turf areas, creeping or rooting groundcovers, or direct seeding applications where mulch is contraindicated. To provide habitat for beneficial insects and other wildlife, up to five percent of the landscape area may be left without mulch. Designated insect habitat must be included in the landscape design plan as such.				
	5	- Stabilizing mulching products shall be used on slopes that meet current engineering standards.				
	6	- The mulching portion of the seed/mulch slurry in hydro-seeded applications shall meet the mulching requirement.				
	7	- Organic mulch materials made from recycled or post-consumer shall take precedence over inorganic materials or virgin forest products unless the recycled post-consumer organic products are not locally available. Organic mulches are not required where prohibited by local fuel modification plan guidelines or other applicable local ordinances. *(The use of bark mulch, gorilla mulch, shredded cedar are strongly discouraged and should not be used in any project.)*				
D.		Does the landscape design plan do ALL of the following? (*All of these items must be true in order to be approved)*				
	1	- Delineate and label hydrozones by number/letter.				

	2	- Identify recreational areas				
	3	- Identify areas permanently and solely dedicated to edible plants				
	4	- Identify areas irrigated with recycled water				
	5	- Identify type of mulch and application depth				
	6	- Identify soil amendments, type, and quantity				
	7	- Identify type and surface area of water features				
	8	- Identify hardscapes (pervious and non-pervious)				
	9	- Identify location, installation details, and 24hr retention capacity of any applicable stormwater best management practices that encourage on-site retention and infiltration of stormwater.				
	10	- Identify any applicable rain harvesting technologies and their 24hr retention or infiltration capacity				
	11	- Identify any applicable graywater discharge piping, system components and area(s) of distribution				
	12	- Include the signature of a licensed landscape architect, licensed landscape contractor, or any other person authorized to design a landscape with the following statement "I have complied with the criteria of the ordinance and applied them for the efficient use of water in the landscape design plan"				

18.148.100 – Irrigation System Design Plans						
Requirement			Check	Page Location	LA Comments	ESD Comments
A.		Landscape Irrigation System:				
	1	Landscape water meters for all non-residential irrigated landscapes of 1,000sf but not more than 5,000sf (the level at which Water Code 535 applies) and residential irrigated landscapes of 5,000sf of greater.				
	2	Automatic irrigation controllers utilizing either evapotranspiration or soil moisture sensor data utilizing non-volatile memory shall be required for irrigation scheduling in all irrigation systems				
	3	If the water pressure is below or exceeds the recommended pressure of the specified irrigation devices, the installation of a pressure regulating device is required to ensure that the dynamic pressure at each emission device is within the manufacturer's recommended pressure range for optimal performance.				
	a.	If the static pressure is above or below the required dynamic pressure of the irrigation system, pressure-regulating devices such as inline pressure regulators, booster pumps, or other devices shall be installed to meet the required dynamic pressure of the irrigation system.				

	b.	Static water pressure, dynamic or operating pressure, and flow reading of the water supply shall be measured at the point of connection. These pressure and flow measurements shall be conducted at the design stage. If the measurements are not available at the design stage, the measurements shall be conducted at installation.				
	4	Sensors (rain, freeze, wind, etc.), either integral or auxiliary, that suspend or alter irrigation operation during unfavorable weather conditions shall be required on all irrigation systems, as appropriate for local climatic conditions. Irrigation should be avoided during windy or freezing weather or during rain.				
	5	Manual shut-off valves (such as a gate valve, ball valve, or butterfly valve) shall be required, as close as possible to the point of connection of the water supply, to minimize water loss in case of an emergency (such as a main line break) or routine repair.				
	6	Backflow prevention devices shall be required to protect the water supply from contamination by the irrigation system. A project applicant shall refer to the applicable local agency code (i.e., public health) for additional backflow prevention requirements.				
	7	Flow sensors that detect high flow conditions created by system damage or malfunction are required for all on non-residential landscapes and residential landscapes of five thousand square feet or larger.				
	8	Master shut-off valves are required on all projects except landscapes that make use of technologies that allow for the individual control of sprinklers that are individually pressurized in a system equipped with low pressure shut down features.				
	9	The irrigation system shall be designed to prevent runoff, low head drainage, overspray, or other similar conditions where irrigation water flows onto non-targeted areas, such as adjacent property, non-irrigated areas, hardscapes, roadways, or structures.				
	10	Relevant information from the soil management plan, such as soil type and infiltration rate, shall be utilized when designing irrigation systems.				
	11	The design of the irrigation system shall conform to the hydrozones of the landscape design plan.				
	12	All irrigation emission devices must meet the requirements set in the American National Standards Institute (ANSI) standard, American Society of Agricultural and Biological Engineers'/International Code Council's (ASABE/ICC) 802-2014 "Landscape Irrigation Sprinkler and Emitter Standard." All sprinkler heads installed in the landscape must document a distribution uniformity low quarter of 0.65 or higher using the protocol defined in ASABE/ICC 802-2014.				

	13	In mulched planting areas, the use of low volume irrigation is required to maximize water infiltration into the root zone.				
	14	Sprinkler heads and other emission devices shall have matched precipitation rates, unless otherwise directed by the manufacturer's recommendations.				
	15	Swing joints or other riser-protection components are required on all risers subject to damage that are adjacent to hardscapes or in high traffic areas of turf grass.				
	16	Check valves or anti-drain valves are required on all sprinkler heads where low point drainage could occur.				
	17	Areas less than ten feet in width in any direction shall be irrigated with subsurface irrigation or other means that produces no runoff or overspray.				
	18	Overhead irrigation shall not be permitted within twenty-four inches of any non-permeable surface. Allowable irrigation within the setback from non-permeable surfaces may include drip, drip line, or other low flow non-spray technology. The setback area may be planted or unplanted. The surfacing of the setback may be mulch, gravel, or other porous material. These restrictions may be modified if:				
	a.	The landscape area is adjacent to permeable surfacing and no runoff occurs; or				
	b.	The adjacent non-permeable surfaces are designed and constructed to drain entirely to landscaping; or				
	c.	The irrigation designer specifies an alternative design or technology, as part of the landscape documentation package and clearly demonstrates strict adherence to irrigation system design criteria in Section 18.148.100A.1. Prevention of overspray and runoff must be confirmed during the irrigation audit.				
	19	Slopes greater than twenty-five percent shall not be irrigated with an irrigation system with an application rate exceeding three-fourths of one inch per hour. This restriction may be modified if the landscape designer specifies an alternative design or technology, as part of the landscape documentation package, and clearly demonstrates no runoff or erosion will occur. Prevention of runoff and erosion must be confirmed during the irrigation audit.				
B.		Landscape Hydrozone:				
	1	Each valve shall irrigate a hydrozone with similar site, slope, sun exposure, soil conditions, and plant materials with similar water use.				
	2	Sprinkler heads and other emission devices shall be selected based on what is appropriate for the plant type within that hydrozone.				

	3	Where feasible, trees shall be placed on separate valves from shrubs, groundcovers, and turf to facilitate the appropriate irrigation of trees. The mature size and extent of the root zone shall be considered when designing irrigation for the tree.				
	4	On the landscape design plan and irrigation design plan, hydrozone areas shall be designated by number, letter, or other designation. On the irrigation design plan, designate the areas irrigated by each valve, and assign a number to each valve. Use this valve number in the hydrozone information table (see Appendix B, Section A). This table can also assist with the irrigation audit and programming the controller.				
C.		The irrigation design plan, at a minimum, shall contain:				
	1	Location and size of separate water meters for landscape				
	2	Location, type and size of all components of the irrigation system, including controllers, main and lateral lines, valves, sprinkler heads, moisture sensing devices, rain switches, quick couplers, pressure regulators, and backflow prevention devices				
	3	Static water pressure at the point of connection to the public water supply				
	4	Flow rate (gallons per minute), application rate (inches per hour), and design operating pressure (pressure per square inch) for each station				
	5	Recycled water irrigation systems as specified in Section 18.148.170				
	6	Include the signature of a licensed landscape architect, licensed landscape contractor, or any other person authorized to design a landscape with the following statement: "I have complied with the criteria of the ordinance and applied them accordingly for the efficient use of water in the irrigation design plan"				

18.148.110 – Grading Design Plan/Survey						
Requirement			Check	Page Location	LA Comments	ESD Comments
A.		Grading of project shall be designed to minimize soil erosion, runoff, and water waste for efficient use of water. **Indicate** in the LA comments if this project is planning to submit a grading plan or a grading survey (Appendix E).				
	1	Did the project applicant submit a landscape grading plan that indicates finished configurations and elevations of the landscape area including:				
	a.	- height of graded slopes				

	b.	- drainage patterns				
	c.	- pad elevations				
	d.	- finish grade				
	e.	- stormwater retention improvements (if applicable)				
	2	For prevention of excess erosion and runoff, project applicants are highly recommended to:				
	a.	Grade so that all irrigation and normal rainfall remains within property line and does not drain on to non-permeable hardscapes				
	b.	Avoid disruption of natural drainage patterns and undisturbed soil				
	c.	Avoid soil compaction in landscape areas				