

GENERAL NOTES

1. The contractor shall become familiar with the project site prior to bidding the work. The contractor shall field verify all existing conditions and location of proposed improvements prior to initiating any construction.
2. Location of all utilities and base information is approximate. contractor shall verify all underground utilities and obstructions prior to initiating work. Contractor shall be responsible for repair or replacement of any damage to existing elements above or below ground to its original condition and to the satisfaction of the owner's representative.
3. The owner's representative shall have the right, at any stage of the operations, to reject any and all work and material which, in their opinion, do not meet with the requirements of these plans and specifications.
4. Contractor shall verify all grades, dimensions, and existing conditions on the job site prior to start of construction and/or fabrication. Contractor shall notify owner's representative of any variations from the dimensions and conditions shown on these drawings.
5. Report any discrepancies between the construction drawings and field conditions to the owner's representative.
6. The contractor shall provide all necessary safety measures during construction operations to protect the public according to all applicable codes and recognized local practices.
7. The contractor shall coordinate access and staging areas with the owner's representative. The contractor shall maintain all existing erosion and sedimentation control measures during construction. Provide additional measures as necessary to minimize adverse impacts in accordance with all applicable federal, state, and local codes.
8. No substitutions shall be made without written consent of the owner's representative. During the course of this work, excess waste material shall be removed daily from the site.
9. The contractor shall be responsible for scheduling and coordination of work with other trades and the owner's representative.
10. The contractor shall notify all necessary utility companies 48 hrs minimum prior to digging for field verification of all underground utilities. Utility locating shall be scheduled by the contractor with owner's representative present.
11. Utilities to be located by flagging only; painting of hardscape areas is prohibited. Contractor shall be responsible for notifying utility locating companies of this requirement.
12. All existing site roads, parking lots, curbs, utilities, sewers, and other elements to remain shall be fully protected from any damage unless otherwise noted.
13. Not all items shown on this sheet appear in the construction documents. Contractor is responsible for obtaining ALL permits related to construction including, but not limited to: Building, Landscape, Irrigation and Right-Of-Way utilization permits.

TREE PROTECTION AND PRESERVATION NOTES

1. Protect designated existing trees scheduled to remain against:  
–Unnecessary cutting, breaking, or skinning of roots  
–Skinning and bruising of bark  
–Smothering of trees by stockpiling construction or excavation materials within protection barrier
2. Protection barriers (tree barricades) shall be plainly visible and shall create a continuous boundary around trees or vegetation clusters in order to prevent encroachment within the barricade.
3. For all trees to be preserved, see Tree Protection and Barricade Elevation detail.
4. No grade changes shall be made within the protective barrier zones without prior approval.
5. The method of protection is to make certain that 50% of the area under the canopy dripline remains undisturbed (no grade change or root cut) and there shall be no disturbance to the root plate.
6. General contractor shall be responsible for the replacement and mitigation costs of trees damaged beyond repair that have been identified as protected and preserved. If trees are harmed through lack of protection or through negligence on the part of the contractor, the contractor shall bear the burden of the cost of repair or replacement.
7. Root pruning shall be done by or under supervision of an ISA certified arborist, and meet or exceed ANSI A300 or approved tree care industry standards. A certified arborist must be onsite during the entirety of root pruning.
8. No root pruning shall be done within a distance of 3x the diameter the tree unless authorized by the arborist.
9. No more than 30% of the trees roots may be pruned.
10. A pruning trench shall be cleared in a way that exposes the roots while leaving them intact. Use hand tools or an air knife. Limits of trench to be determined by the arborist.
11. All roots outside of the protective barricade to be removed during the development shall be severed clean using a sharp tool to provide a clean cut. Roots shall be left with clean smooth ends and no ragged edges and a two-inch layer of mulch shall be applied over the surface of exposed roots during development within one hour of damage or exposure.
12. After pruning, tree roots shall be covered and kept moist. Fill pruning trench with topsoil and water daily for a period determined by the arborist.
13. See City of Miami Beach Sec. 46–62 for all tree preservation and protection requirements, root cutting, tree relocations and tree pruning.

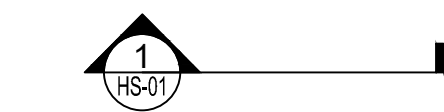
LANDSCAPE NOTES

1. The contractor shall review plans to become thoroughly familiar with surface and subsurface utilities.
2. The plant quantities shown on the landscape contract documents are for the convenience of the contractor. The contractor is responsible for verifying all quantities and reporting any discrepancies to the landscape architect for clarification prior to contract award and commencement of work.
3. All installation of plant material shall comply with applicable jurisdictional codes. The contractor is responsible for obtaining all permits associated with this work.
4. Prior to planting installation, the contractor shall confirm the availability of all the specified plant materials. Submit dated photographs of all tree material and specimen material as to the owner's representative for review.
5. All plant material sizes specified are minimum sizes. Container size shall be increased if necessary to provide overall plant size specified.
6. If plant material does not comply with the requirements as specified herein, the owner's representative reserves the right to reject such plants and require the contractor to replace rejected work and continue specified maintenance until re-inspected and found to be acceptable.
7. The contractor shall provide an approved planting soil mixture for all plant material. See specifications for requirements.
8. The contractor shall be responsible for stability and plumb condition of all trees and shrubs, and shall be legally liable for any damage caused by instability of any plant materials. Staking of trees or shrubs shall be done in accordance with plans and specifications.
9. The contractor shall insure adequate vertical drainage in all plant beds and planters. If inadequate vertical drainage is encountered, the contractor shall submit recommendations for providing adequate drainage to the owner's representative.
10. Peg sod on slopes greater than 3:1.
11. Contractor shall protect existing vegetation to remain as shown on drawings or by means approved by the owner's representative.
12. Contractor to clean, prune, and shape edges of existing vegetation as directed by owner's representative. Create smooth bed lines around existing vegetation.
13. The contractor shall bear all costs of testing of soils, amendments, etc. associated with the work. See specifications for additional testing requirements.
14. Contractor shall field-adjust location of plant material prior to initiating installation for the review and approval of the owner's representative.
15. All plant material shall be in full and strict accordance with Florida No. 1 grade, according to the "Grades and Standards for Nursery Plants" published by the Florida Department of Agriculture and Consumer Services.
16. All planting beds shall be top-dressed with a 3" layer of dark brown mulch. Contractor to submit sample to owner for approval.
17. Contractor shall coordinate all planting work with irrigation work. Contractor shall be responsible for all hand watering as required to supplement irrigation watering and rainfall.
18. Contractor shall be responsible for hand watering in all planting areas, regardless of the status of existing or proposed irrigation.
19. Contractor shall re-grade all areas disturbed by plant removal, relocation, and/or installation work.
20. Contractor shall replace (by equal size and quality) any and all existing plant material disturbed or damaged by plant removal, relocation, and/or installation work.
21. Maintenance shall begin after each plant has been installed and shall continue until the project has been deemed substantially complete. Maintenance includes watering, pruning, weeding, mulching, replacements of sick or dead plants, and any other care necessary for the proper growth of the plant material.
22. Upon completion of all landscaping, an inspection for substantial completion of the work shall be held. The contractor shall notify the owner's representative for scheduling the inspection at least seven (7) days prior to the anticipated inspection date.
23. Contractor shall submit written guarantee of survivability of all plant material for a period of one year from date of substantial completion.
24. Contractor must review and accept, approve all graded areas prior to the commencement of planting.
25. Trees adjacent to buildings should be planted at least the diameter of the tree canopy or a min. of 10'–0" (whichever is greater) away from the building wall.
26. Contractor is responsible for the repair of any existing lawn areas or planting areas disturbed during the construction process.
27. Contractor to follow Florida friendly guidelines for planting and maintenance.
28. The landscape contractor is responsible for coordinating at least 48 hours in advance with the City of Miami Beach (Greenscape, Parks and Recreation and Urban Forestry) for the inspection of all planting materials prior to delivery and installation.

HARDSCAPE NOTES

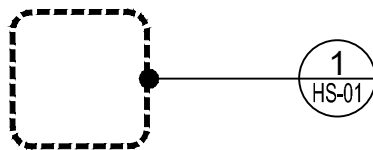
1. All dimensions are taken from center of wall, face of curb and/or centerline of roads at 90 degree, angles, unless otherwise noted on plan. The dimensions are shown for approximate line and all radii and curves are to have continuous and smooth transitions without abrupt changes or bends.
2. All forms and alignment of paving, pilasters and walls shall be inspected and approved by the owner's representative prior to pouring (give a min. of 48 hrs. notice).
3. For site grading and drainage, see civil engineer's plans
4. Contractor shall verify location of all surface and subsurface utilities prior to construction.
5. These notes shall be used in conjunction with the plans and any discrepancies shall be brought to the attention of the owner's representative.
6. Contractor must check all dimensions, framing conditions and site conditions before starting work. Owner's representative shall be notified immediately of any discrepancies or possible deficiencies.
7. Do not willfully install or construct items as shown on the drawings when it is obvious in the field that unknown obstructions, grade differences or differences in the area dimensions exist that might not have been considered in the engineering. Such obstructions or differences should be brought to the attention of the owner's representative. In the event this notification is not performed, the contractor shall assume full responsibility for all revisions necessary.
8. Conditions not specifically shown shall be constructed similar to the details for the respective materials.
9. The drawings and specifications represent the finished structure. All bracing, temporary supports, shoring, etc. is the sole responsibility of the contractor. Observation visits to the job site by the owner's representative do not include inspection of construction methods and for safety conditions at the work site. These visits shall not be construed as continuous and detailed inspections.
10. Contractor shall refer to soils engineer's report for percentages of compaction required for all concrete flatwork and footings.
11. All construction and workmanship shall conform to the current uniform and Florida Building Code.
12. All concrete walks shall not exceed a slope of 1:20, and cross slopes on all concrete sidewalks shall not exceed 2%. If the sidewalk does exceed this slope, ADA compliant handicap ramps will be required.
13. All handicap ramps shall not exceed a 1:12 slope and shall meet all ADA requirements for landings and handrails.
14. Site furnishings shall be installed per manufacturer's recommendations, or as recommended in the drawings. Details provided in the drawings for anchoring and furnishings are provided for intent only. It shall be the contractor's responsibility to coordinate with the manufacturer & submit anchoring details for approval by owner's representative prior to installation.
15. The contractor shall stake and layout all improvements using the geometric data provided. It is the contractor's responsibility to completely stake and check the alignment both vertical and horizontal, and to insure adequate positioning prior to the installation of any improvement. The contractor shall notify the owner immediately in writing if any discrepancies are found and not proceed with the work until directed.
16. Refer to civil engineer's drawings for roadway pavement grading, curb information, all site drainage/grading information and handicap ramp detailing
17. Unless otherwise expressly approved in writing by the owner all control joints shall be hand tooled. Saw cutting will not be acceptable.

STANDARD DRAWING SYMBOLS



SECTION DETAIL REFERENCE

Detail Number  
Sheet Number



GENERAL DETAIL REFERENCE

Detail Number  
Sheet Number

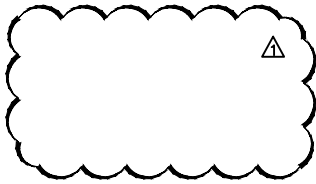


MATCHLINE



FINISH REFERENCE

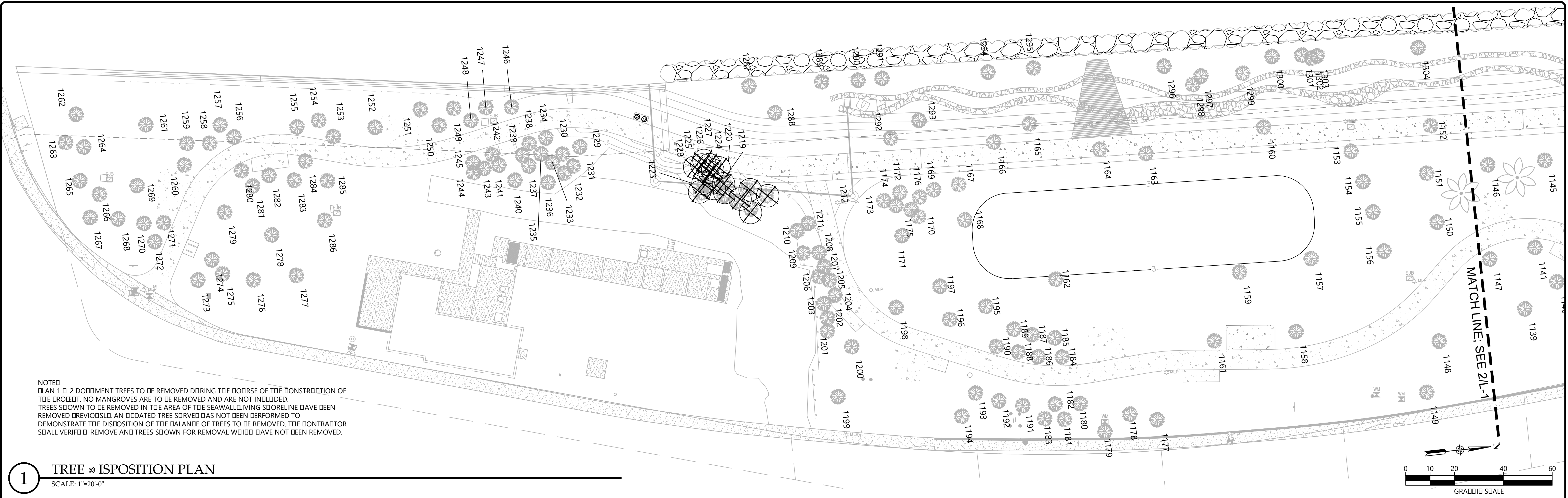
See Finish Schedule



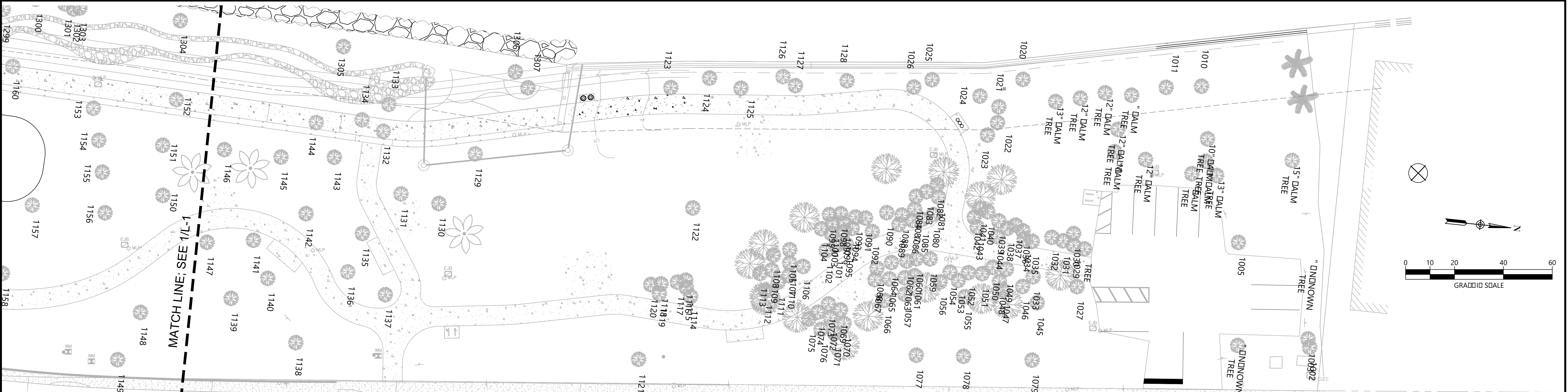
REVISIONS

Revision Area  
Revision Number





1 TREE DISPOSITION PLAN  
SCALE: 1"=20'-0"



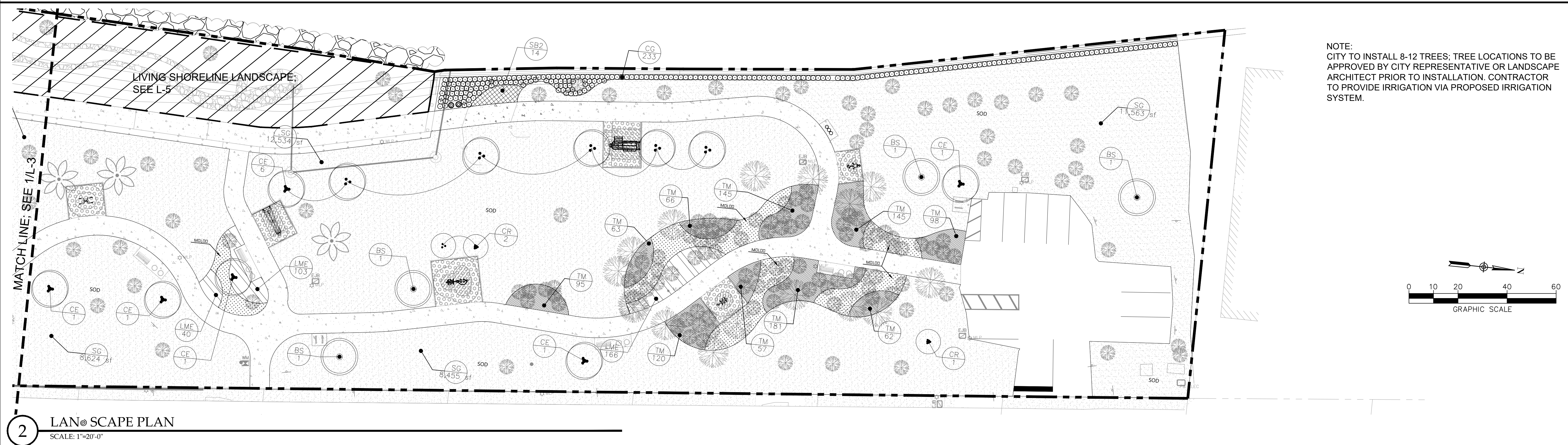
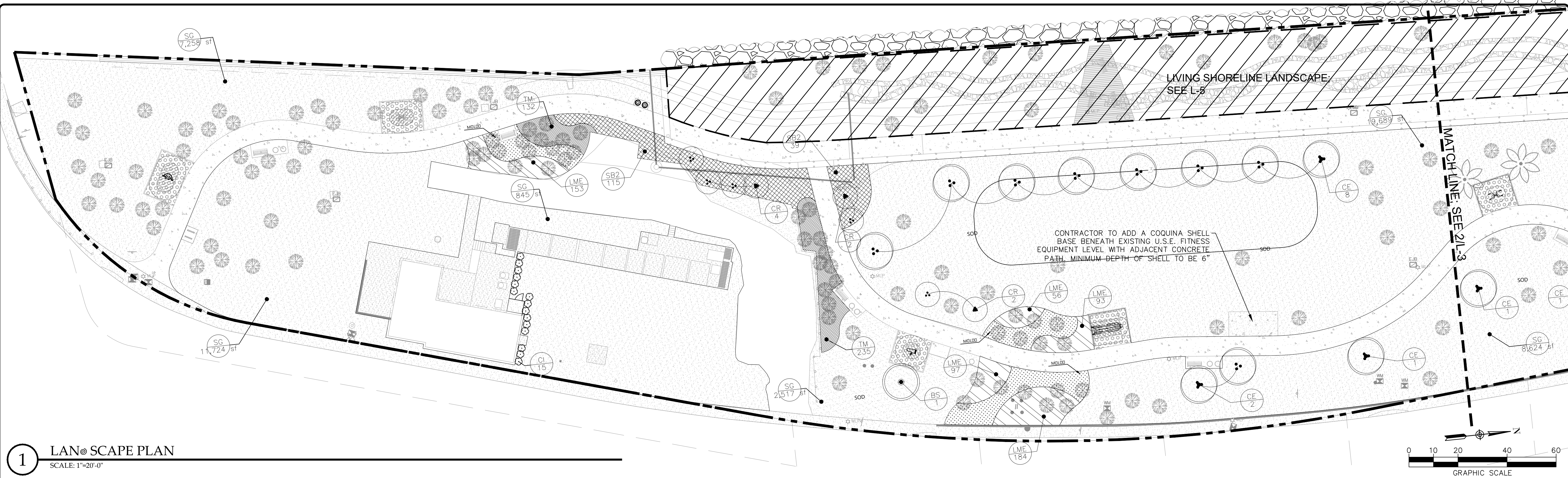
2 TREE DISPOSITION PLAN  
SCALE: 1"=20'-0"



Tree Data Table												
Tree #	DBH (in.)	Common Name	Botanical Name	Height (ft.)	Spread (ft.)	Canopy Area (sq. ft.) (calculated)	Condition	Regulated Tree	Specimen Tree	Disposition	Canopy Area (sq. ft.) to Mitigate	
1001	7.5	Tallow Tree	Pongamia pinnata	20	20	314	Fair	No		Remain	N/A	
1002	3.5	Silver Buttonwood	Conocarpus erectus var. sericeus	7	5	20	Poor			Remain	N/A	
1003	11	Silver Buttonwood	Conocarpus erectus var. sericeus	25	30	707	Fair			Remain	N/A	
1004	12.5	Tallow Tree	Pongamia pinnata	25	35	962	Poor	No	Yes	Remain	N/A	
1005	13.5	Tallow Tree	Pongamia pinnata	25	30	707	Fair	No	Yes	Remain	N/A	
1006	10	Washingtonia Palm	Washingtonia robusta	40	-	-	Fair	No	Yes	Remain	N/A	
1007	12.5	Washingtonia Palm	Washingtonia robusta	30	-	-	Fair	No	Yes	Remain	N/A	
1008	10	Washingtonia Palm	Washingtonia robusta	25	-	-	Fair	No		Remain	N/A	
1009	7	Cabbage Palm	Sabal palmetto	25	-	-	Fair			Remain	N/A	
1010	16	Royal Palm	Roystonea regia	35	-	-	Fair		Yes	Remain	N/A	
1011	16	Royal Palm	Roystonea regia	40	-	-	Fair		Yes	Remain	N/A	
1012	11	Cabbage Palm	Sabal palmetto	23	-	-	Fair			Remain	N/A	
1013	11.5	Cabbage Palm	Sabal palmetto	25	-	-	Fair			Remain	N/A	
1014	11.5	Cabbage Palm	Sabal palmetto	25	-	-	Fair			Remain	N/A	
1015	11.5	Cabbage Palm	Sabal palmetto	25	-	-	Fair			Remain	N/A	
1016	9	Cabbage Palm	Sabal palmetto	20	-	-	Fair			Remain	N/A	
1017	10	Cabbage Palm	Sabal palmetto	25	-	-	Fair			Remain	N/A	
1018	10	Cabbage Palm	Sabal palmetto	20	-	-	Fair			Remain	N/A	
1019	11	Cabbage Palm	Sabal palmetto	25	-	-	Fair			Remain	N/A	
1020	12	Cabbage Palm	Sabal palmetto	22	-	-	Fair		Yes	Remain	N/A	
1021	11	Cabbage Palm	Sabal palmetto	20	-	-	Fair			Remain	N/A	
1022	12	Cabbage Palm	Sabal palmetto	30	-	-	Fair		Yes	Remain	N/A	
1023	15	Cabbage Palm	Sabal palmetto	20	-	-	Fair		Yes	Remain	N/A	
1024	9	Cabbage Palm	Sabal palmetto	20	-	-	Fair			Remain	N/A	
1025	11	Cabbage Palm	Sabal palmetto	25	-	-	Fair			Remain	N/A	
1026	12	Cabbage Palm	Sabal palmetto	30	-	-	Fair		Yes	Remain	N/A	
1027	14	Tallow Tree	Pongamia pinnata	30	40	1257	Fair	No	Yes	Remain	N/A	
1028	10	Ligustrum	Ligustrum japonicum	10	10	79	Fair			Remain	N/A	
1029	5	Ligustrum	Ligustrum japonicum	10	10	79	Fair			Remain	N/A	
1030	12.5	Ligustrum	Ligustrum japonicum	10	10	79	Fair		Yes	Remain	N/A	
1031	5	Ligustrum	Ligustrum japonicum	10	10	79	Fair			Remain	N/A	
1032	9	Ligustrum	Ligustrum japonicum	10	10	79	Fair			Remain	N/A	
1033	5.5	Silver Buttonwood	Conocarpus erectus var. sericeus	20	15	177	Fair			Remain	N/A	
1034	4	Silver Buttonwood	Conocarpus erectus var. sericeus	15	8	50	Poor			Remain	N/A	
1035	9	Ligustrum	Ligustrum japonicum	10	10	79	Fair			Remain	N/A	
1036	10	Silver Buttonwood	Conocarpus erectus var. sericeus	25	20	314	Fair			Remain	N/A	
1037	3.5	Silver Buttonwood	Conocarpus erectus var. sericeus	20	10	79	Fair			Remain	N/A	
1038	3	Silver Buttonwood	Conocarpus erectus var. sericeus	30	10	79	Fair			Remain	N/A	
1039	6.5	Silver Buttonwood	Conocarpus erectus var. sericeus	30	20	314	Fair			Remain	N/A	
1040	6.5	Silver Buttonwood	Conocarpus erectus var. sericeus	25	20	314	Fair			Remain	N/A	
1041	5	Silver Buttonwood	Conocarpus erectus var. sericeus	25	15	177	Fair			Remain	N/A	
1042	10	Silver Buttonwood	Conocarpus erectus var. sericeus	30	20	314	Fair			Remain	N/A	
1043	6	Silver Buttonwood	Conocarpus erectus var. sericeus	30	30	707	Fair			Remain	N/A	
1044	6	Silver Buttonwood	Conocarpus erectus var. sericeus	35	20	314	Fair			Remain	N/A	
1045	8	Silver Buttonwood	Conocarpus erectus var. sericeus	25	20	314	Fair			Remain	N/A	
1046	3	Silver Buttonwood	Conocarpus erectus var. sericeus	15	10	79	Fair			Remain	N/A	
1047	10	Silver Buttonwood	Conocarpus erectus var. sericeus	20	20	314	Fair			Remain	N/A	
1048	15	Coconut Palm	Cocos nucifera	30	-	-	Fair		Yes	Remain	N/A	
1049	6.5	Silver Buttonwood	Conocarpus erectus var. sericeus	20	15	177	Fair			Remain	N/A	
1050	4.5	Silver Buttonwood	Conocarpus erectus var. sericeus	30	20	314	Fair			Remain	N/A	
1051	4	Silver Buttonwood	Conocarpus erectus var. sericeus	25	15	177	Fair			Remain	N/A	
1052	4	Silver Buttonwood	Conocarpus erectus var. sericeus	25	20	314	Fair			Remain	N/A	
1053	5	Silver Buttonwood	Conocarpus erectus var. sericeus	25	15	177	Fair			Remain	N/A	
1054	5.5	Silver Buttonwood	Conocarpus erectus var. sericeus	25	20	314	Fair			Remain	N/A	
1055	15	Coconut Palm	Cocos nucifera	30	-	-	Fair		Yes	Remain	N/A	
1056	14	Coconut Palm	Cocos nucifera	30	-	-	Fair		Yes	Remain	N/A	
1057	9.5	Coconut Palm	Cocos nucifera	30	-	-	Fair			Remain	N/A	
1058	8	Coconut Palm	Cocos nucifera	30	-	-	Fair			Remain	N/A	
1059	6.5	Ligustrum	Ligustrum japonicum	10	10	79	Fair			Remain	N/A	
1060	6	Ligustrum	Ligustrum japonicum	10	10	79	Fair			Remain	N/A	
1061	8	Ligustrum	Ligustrum japonicum	10	10	79	Fair			Remain	N/A	
1062	9	Ligustrum	Ligustrum japonicum	10	10	79	Fair			Remain	N/A	
1063	5.5	Ligustrum	Ligustrum japonicum	10	10	79	Fair			Remain	N/A	
1064	9	Ligustrum	Ligustrum japonicum	10	10	79	Fair			Remain	N/A	
1065	6.5	Ligustrum	Ligustrum japonicum	10	10	79	Fair			Remain	N/A	
1066	14.5	Ligustrum	Ligustrum japonicum	10	10	79	Fair		Yes	Remain	N/A	
1067	9.5	Ligustrum	Ligustrum japonicum	10	10	79	Fair			Remain	N/A	
1068	5.5	Ligustrum	Ligustrum japonicum	10	10	79	Fair			Remain	N/A	
1069	16	Ligustrum	Ligustrum japonicum	10	10	79	Fair		Yes	Remain	N/A	
1070	13.5	Ligustrum	Ligustrum japonicum	10	10	79	Fair		Yes	Remain	N/A	
1071	11	Ligustrum	Ligustrum japonicum	10	10	79	Fair			Remain	N/A	
1072	12	Ligustrum	Ligustrum japonicum	10	10	79	Fair		Yes	Remain	N/A	
1073	15	Ligustrum	Ligustrum japonicum	10	10	79	Fair		Yes	Remain	N/A	
1074	16	Ligustrum	Ligustrum japonicum	10	10	79	Fair		Yes	Remain	N/A	
1075	14	Ligustrum	Ligustrum japonicum	10	10	79	Fair		Yes	Remain	N/A	
1076	13.5	Ligustrum	Ligustrum japonicum	10	10	79	Fair		Yes	Remain	N/A	
1077	11	Coconut Palm	Cocos nucifera	25	-	-	Fair			Remain	N/A	
1078	11.5	Coconut Palm	Cocos nucifera	30	-	-	Fair			Remain	N/A	
1079	12	Coconut Palm	Cocos nucifera	35	-	-	Fair		Yes	Remain	N/A	
1080	3.5	Silver Buttonwood	Conocarpus erectus var. sericeus	25	15	177	Fair			Remain	N/A	
1081	15.5	Silver Buttonwood	Conocarpus erectus var. sericeus	30	30	707	Fair		Yes	Remain	N/A	
1082	8	Silver Buttonwood	Conocarpus erectus var. sericeus	35	10	79	Fair			Remain	N/A	
1083	12	Silver Buttonwood	Conocarpus erectus var. sericeus	25	20	314	Fair		Yes	Remain	N/A	
1084	5	Ligustrum	Ligustrum japonicum	30	10	79	Fair			Remain	N/A	
1085	8.5	Silver Buttonwood	Conocarpus erectus var. sericeus	15	20	314	Fair			Remain	N/A	
1086	5	Ligustrum	Ligustrum japonicum	30	10	79	Fair			Remain	N/A	
1087	4	Ligustrum	Ligustrum japonicum	10	10	79	Fair			Remain	N/A	
1088	5.5	Ligustrum	Ligustrum japonicum	25	10	79	Fair			Remain	N/A	
1089	4.5	Ligustrum	Ligustrum japonicum	10	10	79	Fair			Remain	N/A	
1090	8.5	Ligustrum	Ligustrum japonicum	10	10	79	Fair			Remain	N/A	
1091	6.5	Ligustrum	Ligustrum japonicum	10	10	79	Fair			Remain	N/A	
1092	8	Ligustrum	Ligustrum japonicum	10	10	79	Fair			Remain	N/A	
1093	9	Silver Buttonwood	Conocarpus erectus var. sericeus	20	10	79	Fair			Remain	N/A	
1094	5	Silver Buttonwood	Conocarpus erectus var. sericeus	30	20	314	Fair			Remain	N/A	
1095	5.5	Silver Buttonwood	Conocarpus erectus var. sericeus	25	15	177	Fair			Remain	N/A	
1096	4.5	Silver Buttonwood	Conocarpus erectus var. sericeus	10	10	79	Fair			Remain	N/A	
1097	6.5	Silver Buttonwood	Conocarpus erectus var. sericeus	35	30	707	Fair			Remain	N/A	
1098	9	Silver Buttonwood	Conocarpus erectus var. sericeus	20	15	177	Fair			Remain	N/A	
1099	12	Silver Buttonwood	Conocarpus erectus var. sericeus	25	15	177	Fair		Yes	Remain	N/A	
1100	15	Coconut Palm	Cocos nucifera	35	-	-	Fair		Yes	Remain	N/A	
1101	8.5	Silver Buttonwood	Conocarpus erectus var. sericeus	25	20	314	Fair			Remain	N/A	
1102	11	Silver Buttonwood	Conocarpus erectus var. sericeus	30	20	314	Fair			Remain	N/A	
1103	9	Silver Buttonwood	Conocarpus erectus var. sericeus	25	20	314	Fair			Remain	N/A	

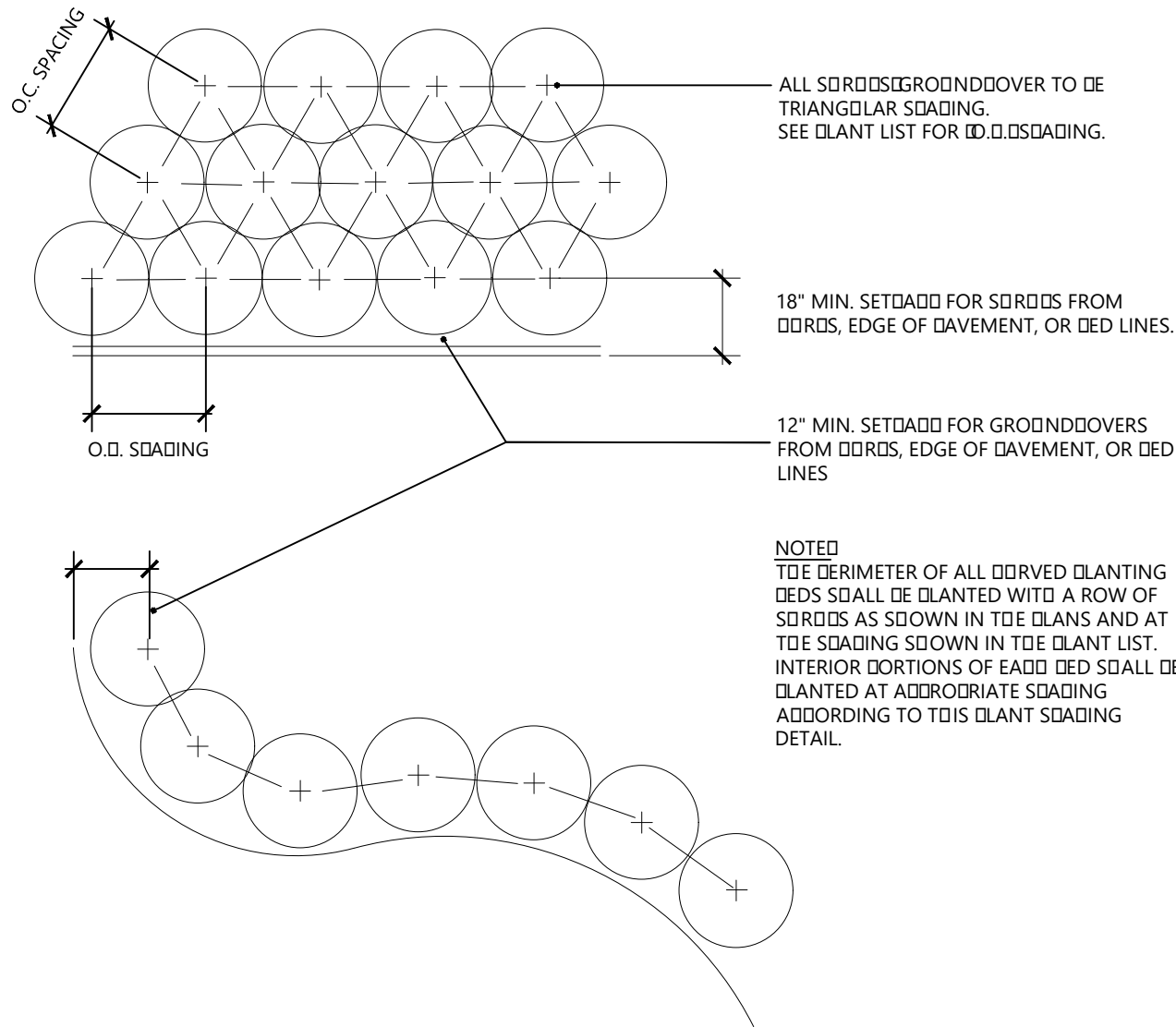
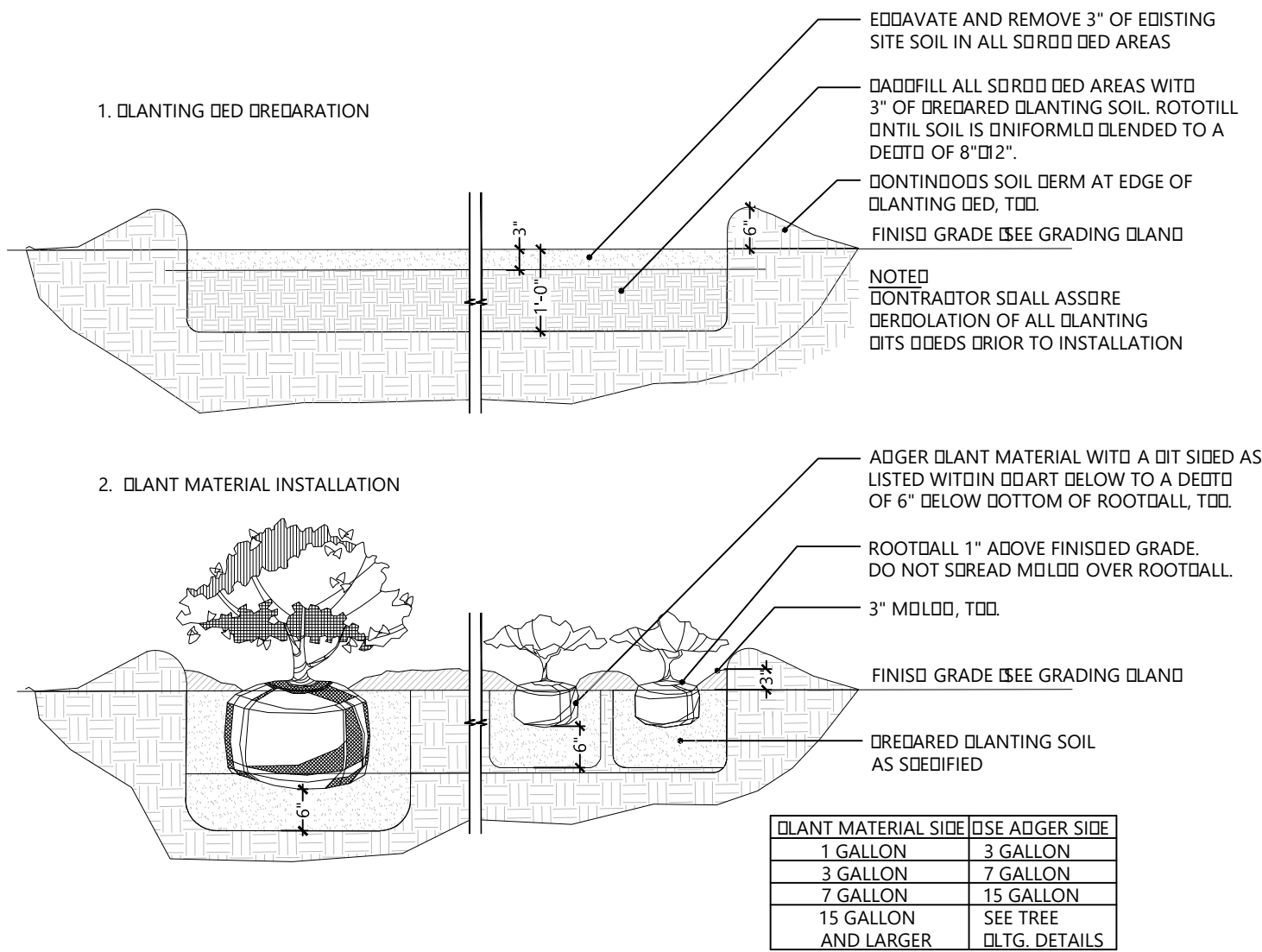
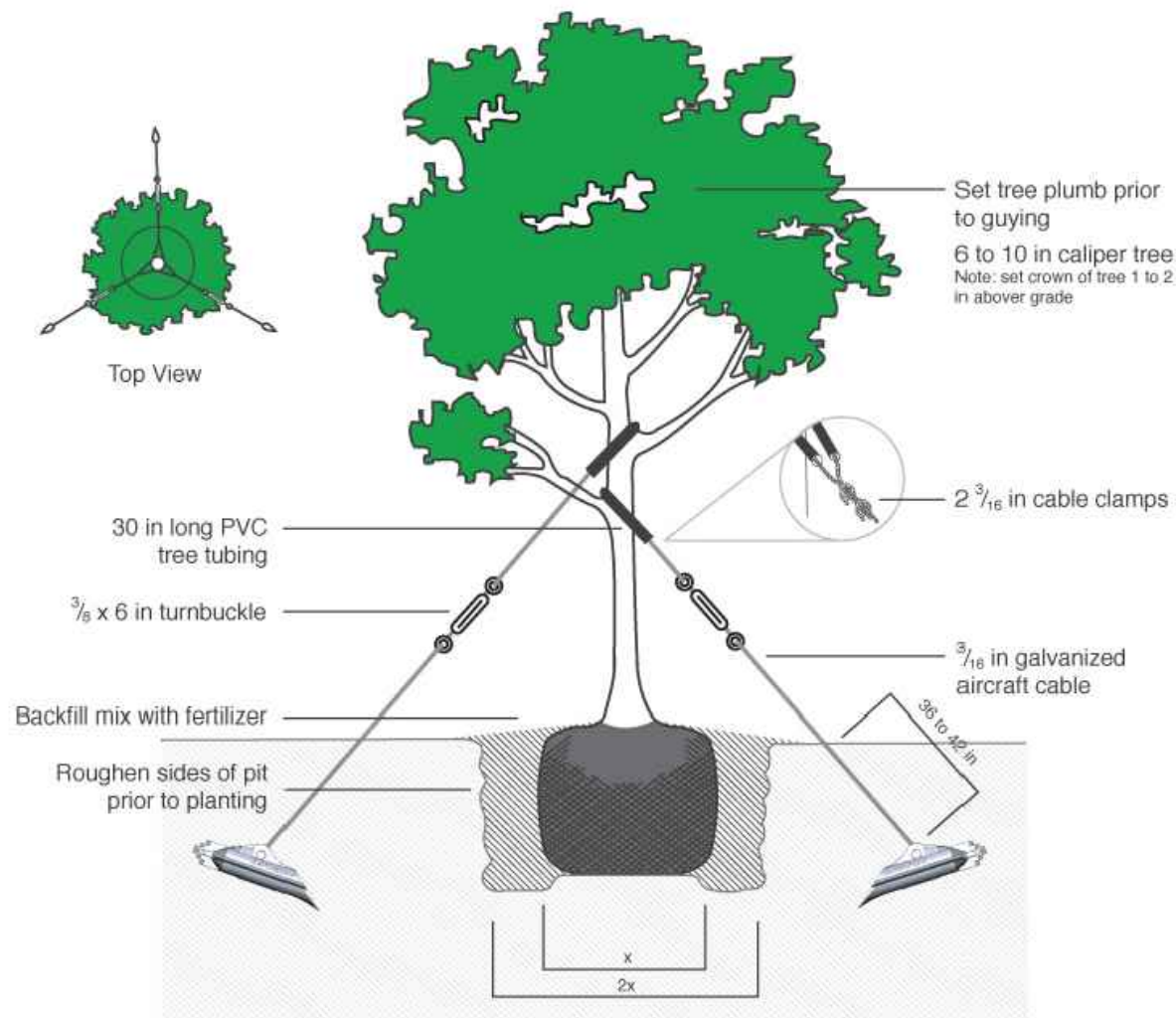
Tree #	DBH (in.)	Common Name	Botanical Name	Height (ft.)	Spread (ft.)	Canopy Area (sq. ft.) (calculated)	Condition	Regulated Tree	Specimen Tree	Disposition	Canopy Area (sq.ft.) to Mitigate	
1104	11.5	Silver Buttonwood	Conocarpus erectus var. sericeus	30	30	707	Fair			Remain	N/A	
1105	14	Ligustrum	Ligustrum japonicum	10	10	79	Fair		Yes	Remain	N/A	
1106	13.5	Ligustrum	Ligustrum japonicum	10	10	79	Fair		Yes	Remain	N/A	
1107	14.5	Ligustrum	Ligustrum japonicum	10	10	79	Fair		Yes	Remain	N/A	
1108	14	Ligustrum	Ligustrum japonicum	10	10	79	Fair		Yes	Remain	N/A	
1109	8	Ligustrum	Ligustrum japonicum	10	10	79	Fair			Remain	N/A	
1110	12	Ligustrum	Ligustrum japonicum	10	10	79	Fair		Yes	Remain	N/A	
1111	17	Ligustrum	Ligustrum japonicum	10	10	79	Fair		Yes	Remain	N/A	
1112	18.5	Ligustrum	Ligustrum japonicum	10	10	79	Fair		Yes	Remain	N/A	
1113	21.5	Ligustrum	Ligustrum japonicum	10	10	79	Fair		Yes	Remain	N/A	
1114	9	Silver Buttonwood	Conocarpus erectus var. sericeus	25	20	314	Fair			Remain	N/A	
1115	20.5	Silver Buttonwood	Conocarpus erectus var. sericeus	25	25	491	Fair		Yes	Remain	N/A	
1116	8.5	Silver Buttonwood	Conocarpus erectus var. sericeus	25	20	314	Fair			Remain	N/A	
1117	5	Silver Buttonwood	Conocarpus erectus var. sericeus	20	10	79	Fair			Remain	N/A	
1118	7.5	Silver Buttonwood	Conocarpus erectus var. sericeus	25	15	177	Fair			Remain	N/A	
1119	9.5	Silver Buttonwood	Conocarpus erectus var. sericeus	25	15	177	Fair			Remain	N/A	
1120	8	Silver Buttonwood	Conocarpus erectus var. sericeus	25	15	177	Fair			Remain	N/A	
1121	13	Gold Tree	Tabebuia Aurea	20	30	707	Fair			Yes	Remain	N/A
1122	16.5	Royal Poinciana	Delonix regia	30	60	2827	Fair		Yes	Remain	N/A	
1123	13	Cabbage Palm	Sabal palmetto	25	-	-	Fair		Yes	Remain	N/A	
1124	12	Cabbage Palm	Sabal palmetto	30	-	-	Fair		Yes	Remain	N/A	
1125	12.5	Cabbage Palm	Sabal palmetto	30	-	-	Fair		Yes	Remain	N/A	
1126	11	Cabbage Palm	Sabal palmetto	20	-	-	NP			Remove	50	
1127	12	Cabbage Palm	Sabal palmetto	20	-	-	Fair		Yes	Remain	N/A	
1128	13	Cabbage Palm	Sabal palmetto	20	-	-	Fair		Yes	Remain	N/A	
1129	5.5	Pitch A...le	Clusia rosea	10	12	113	NP			Remove	113	
1130	8.5	Coconut Palm	Cocos nucifera	20	-	-	Fair			Remain	N/A	
1131	8	Coconut Palm	Cocos nucifera	20	-	-	NP			Remove	50	
1132	7.5	Coconut Palm	Cocos nucifera	25	-	-	Fair			Remain	N/A	
1133	9	Coconut Palm	Cocos nucifera	20	-	-	Fair			Remain	N/A	
1134	9	Coconut Palm	Cocos nucifera	20	-	-	Fair			Remain	N/A	
1135	9	Coconut Palm	Cocos nucifera	20	40	1257	Poor			Remain	N/A	
1136	8	Coconut Palm	Cocos nucifera	20	-	-	Fair			Remain	N/A	
1137	9	Coconut Palm	Cocos nucifera	20	-	-	Fair			Remain	N/A	
1138	15.5	Royal Poinciana	Delonix regia	40	-	-	Fair			Yes	Remain	N/A
1139	8	Coconut Palm	Cocos nucifera	15	-	-	Fair			Remain	N/A	
1140	11	Coconut Palm	Cocos nucifera	20	-	-	Fair			Remain	N/A	
1141	8	Coconut Palm	Cocos nucifera	20	-	-	Fair			Remain	N/A	
1142	14	Coconut Palm	Cocos nucifera	25	-	-	Fair			Yes	Remain	N/A
1143	8	Coconut Palm	Cocos nucifera	15	-	-	Poor			Remove	N/A	
1144	8	Coconut Palm	Cocos nucifera	20	-	-	Fair			Remain	N/A	
1145	8	Coconut Palm	Cocos nucifera	15	-	-	Fair			Remain	N/A	
1146	8	Coconut Palm	Cocos nucifera	20	-	-	Fair			Remain	N/A	
1147	8	Coconut Palm	Cocos nucifera	15	-	-	Fair			Remain	N/A	
1148	12	Royal Poinciana	Delonix regia	20	30	707	Fair		Yes	Remain	N/A	
1149	9	Gold Tree	Tabebuia Aurea	20	20	314	Fair			Remain	N/A	
1150	8	Coconut Palm	Cocos nucifera	15	-	-	Fair			Remain	N/A	
1151	11	Coconut Palm	Cocos nucifera	35	-	-	Fair			Remain	N/A	
1152	7.5	Coconut Palm	Cocos nucifera	15	-	-	Fair			Remain	N/A	
1153	10	Wild Tamarind	Lysitoma latissagum	25	35	962	NP			Remove	962	
1154	9	Wild Tamarind	Lysitoma latissagum	20	20	314	Fair			Remain	N/A	
1155	9.5	Wild Tamarind	Lysitoma latissagum	25	25	314	Fair			Remain	N/A	
1156	8	Wild Tamarind	Lysitoma latissagum	20	20	314	Fair			Remain	N/A	
1157	9	Royal Poinciana	Delonix regia	20	25	491	Poor			Remove	50	
1158	8	Royal Poinciana	Delonix regia	20	25	491	Fair			Remain	N/A	
1159	8	Royal Poinciana	Delonix regia	15	20	314	Fair			Remain	N/A	
1160	22	Mast Wood	Calophyllum antillarum	40	50	1963	Fair	No	Yes	Remove	N/A	
1161	6	Royal Poinciana	Delonix regia	20	25	491	Fair			Remain	N/A	
1162	26	Frax	Frax	25	35	962	Fair			Remain	N/A	
1163	7.5	Mast Wood	Calophyllum antillarum	25	20	314	Fair	No		Remove	N/A	
1164	6.5	Mast Wood	Calophyllum antillarum	25	15	177	Fair	No	No	Remove	N/A	
1165	20	Mast Wood	Calophyllum antillarum	50	30	707	Fair	No	Yes	Remove	N/A	
1166	19	Mast Wood	Calophyllum antillarum	40	30	707	Fair	No	Yes	Remove	N/A	
1167	6.5	Paradise Tree	Simarouba glauca	25	15	177	Poor			Remove	177	
1168	8	Paradise Tree	Simarouba glauca	25	20	314	Poor			Remove	314	
1169	8	Christmas Palm	Adonia merrelli	30	-	-	NP			Remove	50	
1170	8	Christmas Palm	Adonia merrelli	35	-	-	Poor			Remove	50	
1171	8	Christmas Palm	Adonia merrelli	30	30	707	Poor			Remove	50	
1172	7	Christmas Palm	Adonia merrelli	35	-	-	NP			Remove	79	
1173	3	Lignum Vitae	Guaicum officinale	10	10	79	NP			Remove	108	
1174	3	Lignum Vitae	Guaicum officinale	108	10	79	NP			Remove	50	
1175	2.5	Lignum Vitae	Guaicum officinale	8	8	50	NP			Remove	28	
1176	2.5	Lignum Vitae	Guaicum officinale	15	6	28	Fair			Remain	N/A	
1177	15	Silver Buttonwood	Conocarpus erectus var. sericeus	25	20	314	Fair		Yes	Remain	N/A	
1178	15	Silver Buttonwood	Conocarpus erectus var. sericeus	25	30	707	Fair		Yes	Remain	N/A	
1179	18.5	Silver Buttonwood	Conocarpus erectus var. sericeus	15	20	707	Fair		Yes	Remain	N/A	
1180	2.5	Silver Buttonwood	Conocarpus erectus var. sericeus	15	10	79	Fair			Remain	N/A	
1181	12	Ligustrum	Ligustrum japonicum	15	10	79	Fair		Yes	Remain	N/A	
1182	12.5	Ligustrum	Ligustrum japonicum	15	10	79	Fair			Remain	N/A	
1183	14.5	Ligustrum	Ligustrum japonicum	15	10	79	Fair		Yes	Remain	N/A	
1184	21	Ligustrum	Ligustrum japonicum	15	10	79	Fair		Yes	Remain	N/A	
1185	19	Ligustrum	Ligustrum japonicum	15	10	79	Fair		Yes	Remain	N/A	
1186	9.5	Ligustrum	Ligustrum japonicum	15	10	79	Fair			Remain	N/A	
1187	12.5	Ligustrum	Ligustrum japonicum	15	10	79	Fair		Yes	Remain	N/A	
1188	11.5	Ligustrum	Ligustrum japonicum	15	10	79	Fair			Remain	N/A	
1189	22	Ligustrum	Ligustrum japonicum	15	10	79	Fair		Yes	Remain	N/A	
1190	15.5	Ligustrum	Ligustrum japonicum	15	10	79	Fair		Yes	Remain	N/A	
1191	32	Silver Buttonwood	Conocarpus erectus var. sericeus	25	30	707	Fair		Yes	Remain	N/A	
1192	10.5	Silver Buttonwood	Conocarpus erectus var. sericeus	25	15	177	Fair			Remain	N/A	
1193	7	Silver Buttonwood	Conocarpus erectus var. sericeus	20	20	314	Fair			Remain	N/A	
1194	26	Silver Buttonwood	Conocarpus erectus var. sericeus	25	30	707	Fair		Yes	Remain	N/A	
1195	14	Tallow Tree	Pongamia pinnata	30	40	1257	Fair	No	Yes	Remain	N/A	
1196	9.5	Tallow Tree	Pongamia pinnata	25	25	491	Fair	No		Remain	N/A	
1197	9.5	Tallow Tree	Pongamia pinnata	25	30	491	Fair	No		Remain	N/A	
1198	14	Tallow Tree	Pongamia pinnata	30	30	707	Fair	No	Yes	Remain	N/A	
1199	21	Tallow Tree	Pongamia pinnata	40	50	1963	Fair	No	Yes	Remain	N/A	
1200	11	Tallow Tree	Pongamia pinnata	35	30	707	Fair	No		Remain	N/A	
1201	13	Coconut Palm	Cocos nucifera	30	-	-	Fair			Yes	Remain	N/A
1202	6.5	Silver Buttonwood	Conocarpus erectus var. sericeus	25	10	177	Fair			Remain	N/A	
1203	5	Silver Buttonwood	Conocarpus erectus var. sericeus	15	10	79	Fair			Remain	N/A	
1204	6	Silver Buttonwood	Conocarpus erectus var. sericeus	20	10	79	Fair			Remain	N/A	
1205	6	Silver Buttonwood	Conocarpus erectus var. sericeus	25	20	314	Fair			Remain	N/A	







Model 88 - DTS Kit

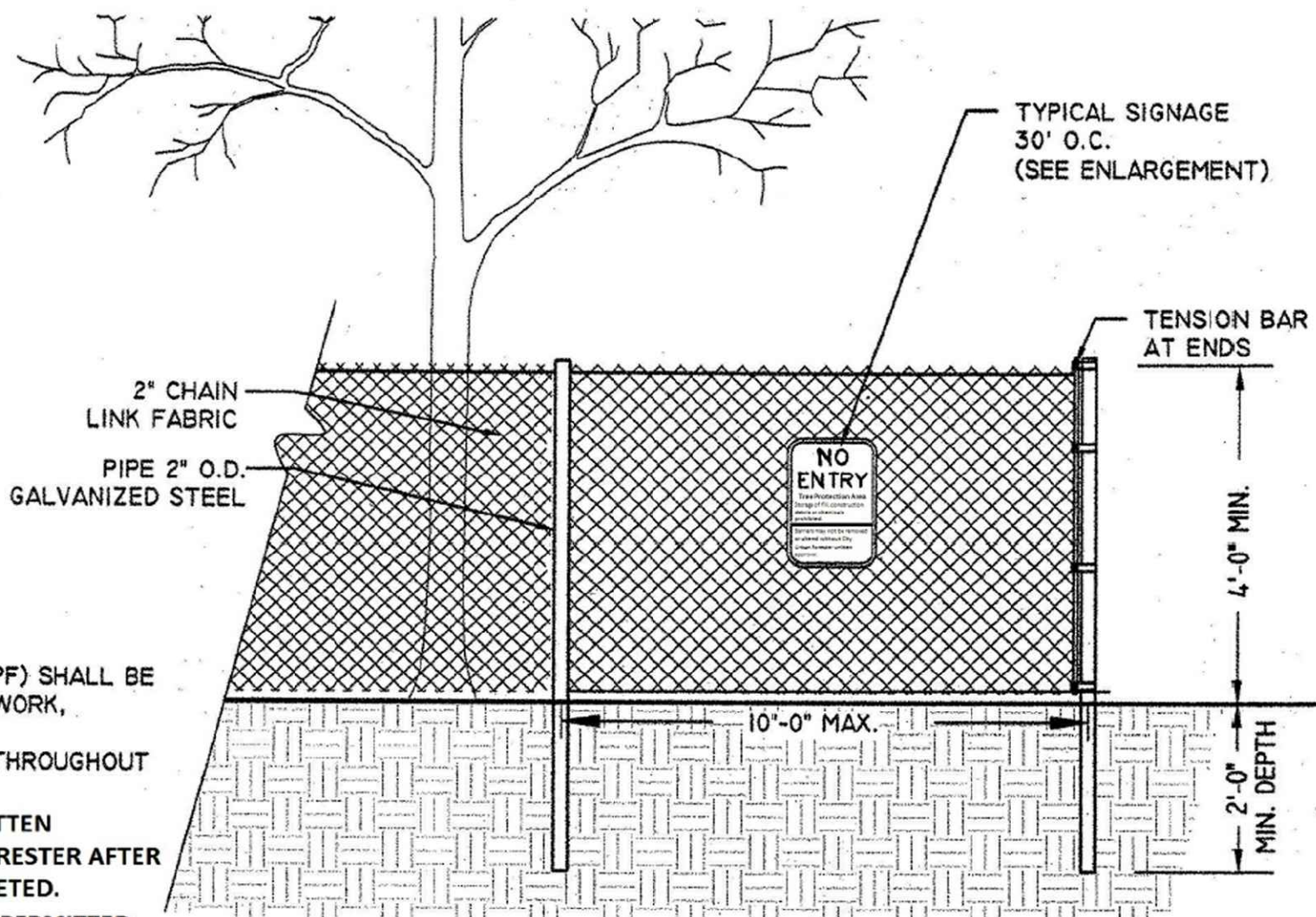


Note:  
Contractor to review planting soil and depth of beds within living shoreline on sheets L5.1 & L5.2

1 TREE PLANTING  
SCALE: N=1"=6'

2 SO RES AND GRO NO CO ER PLANTING  
SCALE: N=1"=6'

SO RES AND GRO NO CO ER SPACING  
SCALE: N=1"=6'



- NOTES:
1. TREE PROTECTION FENCE (TPF) SHALL BE INSTALLED PRIOR TO ANY SITE WORK, CLEARING OR DEMOLITION.
  2. TPF SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.
  3. REMOVE TPF ONLY WITH WRITTEN APPROVAL FROM CITY URBAN FORESTER AFTER ALL SITE WORK HAS BEEN COMPLETED.
  4. NO CONSTRUCTION ACTIVITIES PERMITTED WITHIN TPF WITHOUT URBAN FORESTER APPROVAL

3 TREE PROTECTION FENCE  
SCALE: N=1"=6'

- Note:
1. A final onsite inspection shall be required with Urban Forestry staff prior to any official acceptance of tree or plant material, in order to verify proper planting depth, spacing and quality of the material. Failure to conduct the inspection could result in rejection of the plant material.
  2. Mulch shall not be applied within 6" of any tree or palm trunks that are installed or incorporated into the project.
  3. All guying and staking shall be removed from all trees and palms within twelve months after planting. Exceptions require written authorization from the City Urban Forester. They should be removed after expiration of warranty.
  4. All tree stakes shall be branded with installation dates.
  5. All planting beds above high tide line shall be top-dressed with a 3" layer of dark brown mulch. Contractor to submit sample to owner.
  6. Contractor to follow Florida Friendly Landscaping Guidelines for planting and maintenance.

PLANT SCHEDULE

TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT.	CALIPER	SIZE
	BS	5	BURSERA SIMARUBA	GUMBO LIMBO	FG	5.5"	20' HT. MIN.
	CR	11	CLUSIA ROSEA 'PITCH APPLE'	BALSAM APPLE	FG	6"	20' HT. MIN.
	CE	22	CONOCARPUS ERECTUS	BUTTONWOOD	FG	5.5"	20' HT. MIN.
SHRUBS	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT.	SIZE	SPACING
	CI	15	CHRYSOBALANUS ICACO	COCO PLUM	7 GAL.	3'-4' HT.	
	CG	233	CLUSIA GUTTIFERA NANA	DWAFT CLUSIA	3 GAL.	18"HT.X18" SPRD., FULL IN POT	
SHRUB AREAS	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT.	SIZE	SPACING
	LME	892	LIRIOPE MUSCARI 'EMERALD GODDESS'	LIRIOPE	1 GAL.	10"-14" HT., 5-7 PPP	18" o.c.
	SB2	168	SPARTINA BAKERI	SAND CORD GRASS	3 GAL.	24"-30" OA, FULL	36" o.c.
	TM	1,399	TRACHELOSPERMUM ASIATICUM 'MINIMA'	MINIMA JASMINE	1 GAL.	4"-6" X 12"-18"	18" o.c.
GROUND COVERS	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT.	SIZE	SPACING
	SG	83,091 SF	STENOTAPHRUM FLORANDUM	ST. AUGUSTINE GRASS	SOD		
	MULCH						

TOPSOIL  
2,660 CUBIC FEET OF IMPORTED TOPSOIL AT A DEPTH OF 3"  
NO IMPORTED TOPSOIL WILL BE USED FOR SOD AREAS



PLANT SCHEDULE

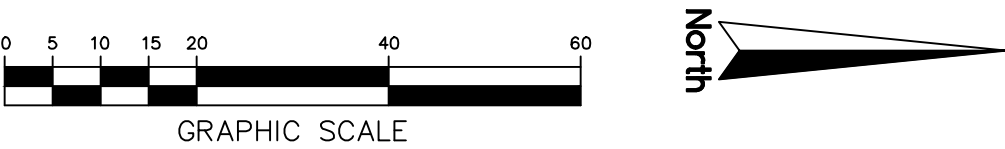
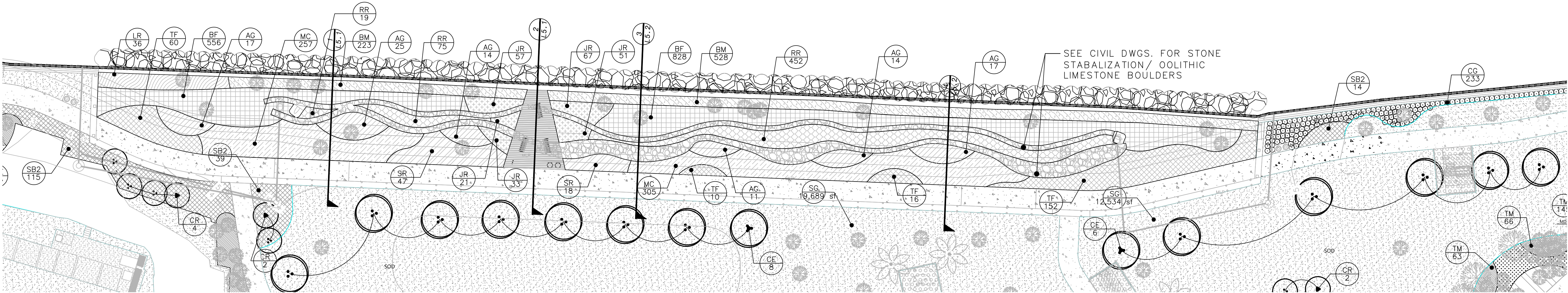
SHRUB AREAS	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT.	SPACING
	AG	98	AVICENNIA GERMINANS	BLACK MANGROVE	3 GAL.	36" o.c.
	BM	751	BATIS MARITIMA	TURTLEWEED	1 GAL.	18" o.c.
	BF	1,384	BORRICHIA FRUTESCENS	SEA OXEYE DAISY	1 GAL.	18" o.c.
	JR	229	JUNCUS ROEMERIANUS	BLACK NEEDLEGRASS RUSH	1 GAL.	18" o.c.
	LR	36	LAGUNCULARIA RACEMOSA	WHITE MANGROVE	3 GAL.	36" o.c.
	MC	562	MUHLENBERGIA CAPILLARIS	PINK MUHLY	3 GAL.	24" o.c.
	RR	546	RHIZOPHORA MANGLE	RED MANGROVE	1 GAL.; SINGLE LEADER, STAKED	18" o.c.
	SR	65	SERENOA REPENS	SAW PALMETTO	7 GAL.	36" o.c.
	TF	238	TRIPSACUM FLORIDANUM	DWARF FAKAHATCHEE	3 GAL.	30" o.c.

BOTTOM OF SWALE  
50/50 SAND/ORGANIC SOIL MIX IN THE BOTTOM OF SWALE: 5,332 CUBIC FEET  
57 STONE: 1,333 CUBIC FEET

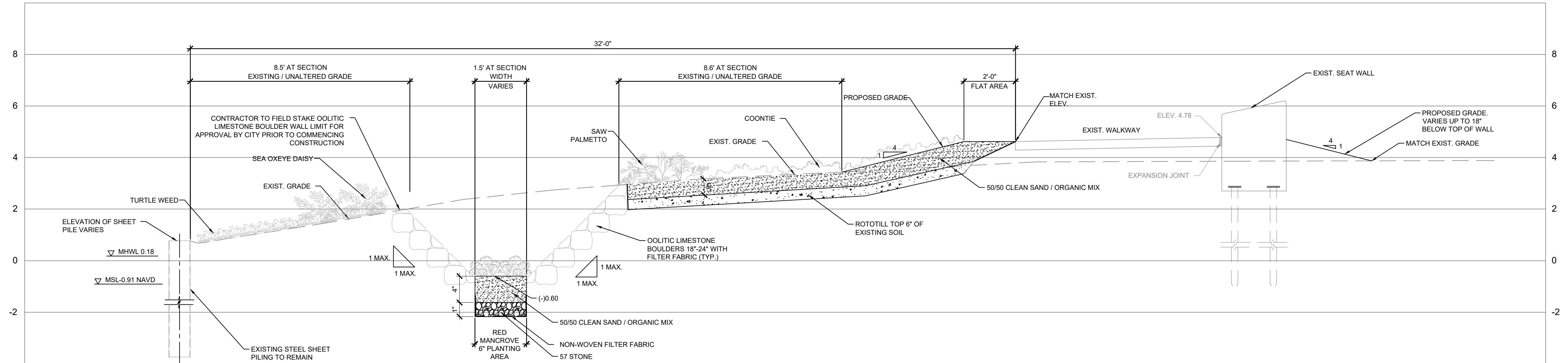
EAST OF SWALE  
50/50 SAND/ORGANIC SOIL MIX EAST OF SWALE: 7,559 CUBIC FEET

NOTE:

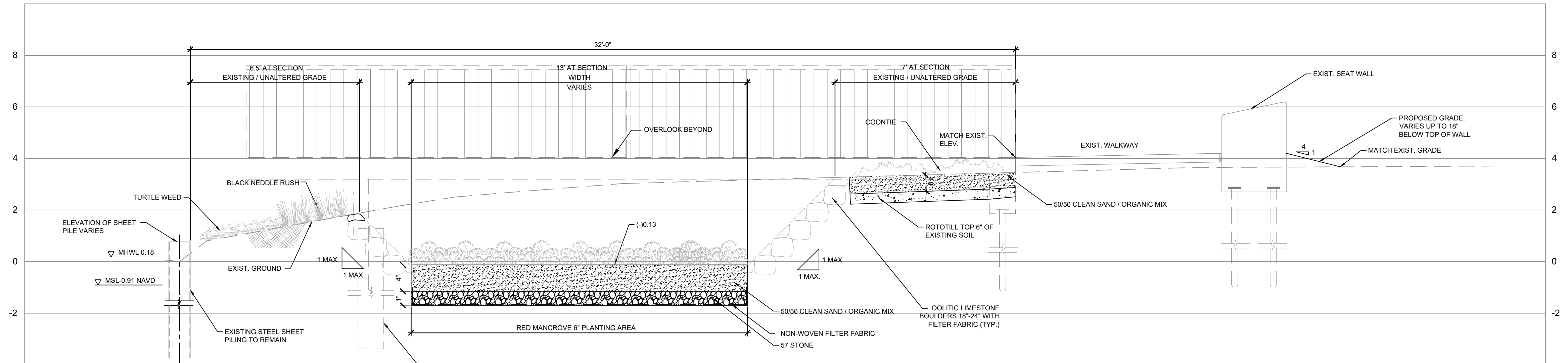
1. PRIOR TO PLANTING, THE CONTRACTOR SHALL STAKE AND MARK TREE LOCATIONS AND PLANTING BEDS FOR REVIEW BY THE CITY ARBORIST AND PROJECT LANDSCAPE ARCHITECT.
2. PRIOR TO EXCAVATION AND CONSTRUCTION OF STONE STABILIZATION OOLITHIC LIMESTONE WALLS. THE CONTRACTOR IS TO STAKE THE WALL ALIGNMENT W/ PROPOSED GRADES FOR REVIEW / ADJUSTMENT AS NECESSARY BY THE CITY REPRESENTATIVE.
3. CONTRACTOR TO MULCH ALL AREAS IN LIVING SHORELINE ABOVE HIGH TIDE LEVEL.
4. CONTRACTOR TO ROOT PRUNE EXISTING MANGROVE TREES WHERE RIPRAP INSTALLATION OCCURS ACCORDING TO INDUSTRY STANDARDS AND ARBOR'S PRESENCE.
5. PER URBAN FORESTER'S DIRECTION, RED & WHITE MANGROVE SHALL BE PROCURED PRIOR TO INSTALLATION IN ORDER FOR UF/IFAS VERIFICATION FOR SUITABILITY PLANTING PER URBAN FORESTER.
6. THE RED & WHITE MANGROVE SOURCE SHALL PROVIDE A CERTIFICATE OF ACCLIMATION TO SALT CONDITIONS AT THE NURSERY.
7. UPON REQUEST BY THE CONTRACTOR, S&ME WILL PROVIDE AUTOCAD DESIGN FILES FOR THEIR USE IN LAYOUT OF THE LIVING SHORELINE AND OTHER PROJECT FEATURES.







1 LIVING SHORE SECTION  
1/2" = 1'-0"

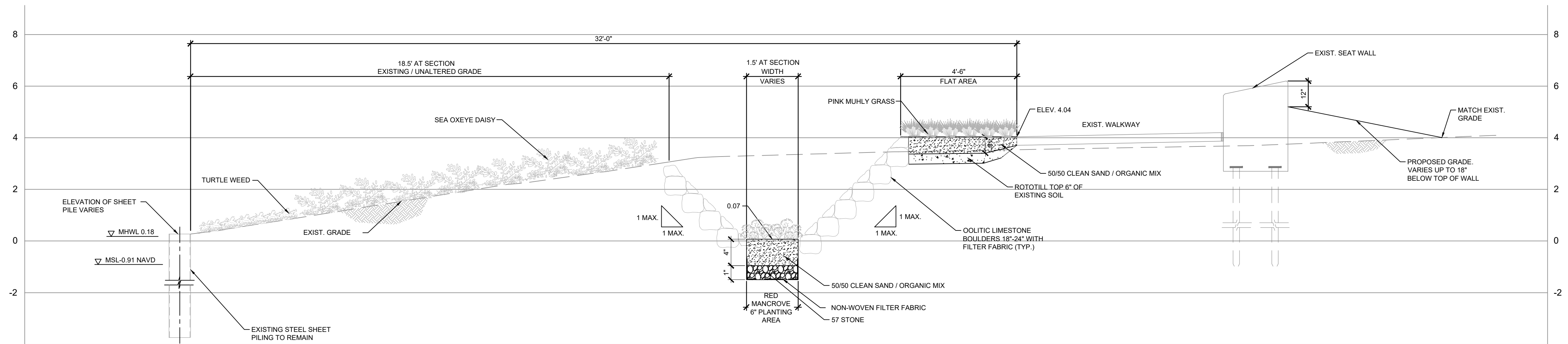


2 LIVING SHORE SECTION  
1/2" = 1'-0"

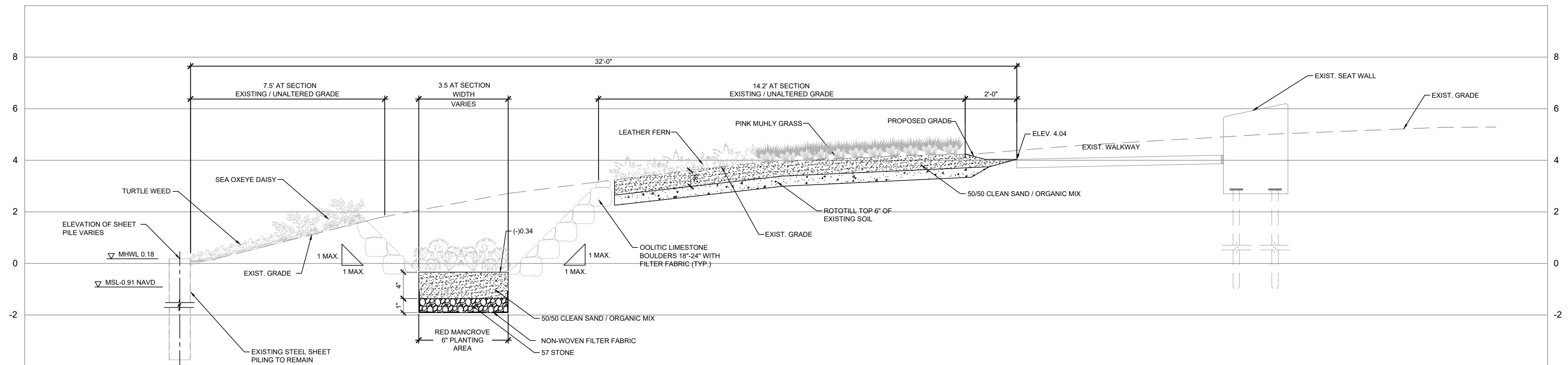
NOTES:

- CONTRACTOR TO LOCATE & HAND DIG AROUND EXISTING SEAWALL & TIEBACKS.
- CONTRACTOR TO ROOT PRUNE AROUND EXISTING TREES FOR SOIL AMENDMENTS & OOLITIC LIMESTONE BOULDER IN THE PRESENCE OF A CERTIFIED ARBORIST.
- CONTRACTOR TO REVIEW PLANTING PLAN FOR LIMITS OF ROOT PRUNING & EXCAVATION.
- ALL PLANTING AROUND EXISTING MANGROVE & BUTTWOOD TREES SHALL OCCUR 5' FROM EXISTING TRUNKS. PLANTING SHALL BE HAND DUG SO AS TO MINIMIZE ROOT DAMAGE.
- CONTRACTOR TO ROOT PRUNE EXISTING MANGROVE TREES WHERE RIPRAP INSTALLATION OCCURS ACCORDING TO INDUSTRY STANDARDS AND ARBOR'S PRESENCE.
- SEE CIVIL DETAILS FOR PROTECTION OF EXISTING STEEL TIE-BACKS AT EXCAVATED AREA.





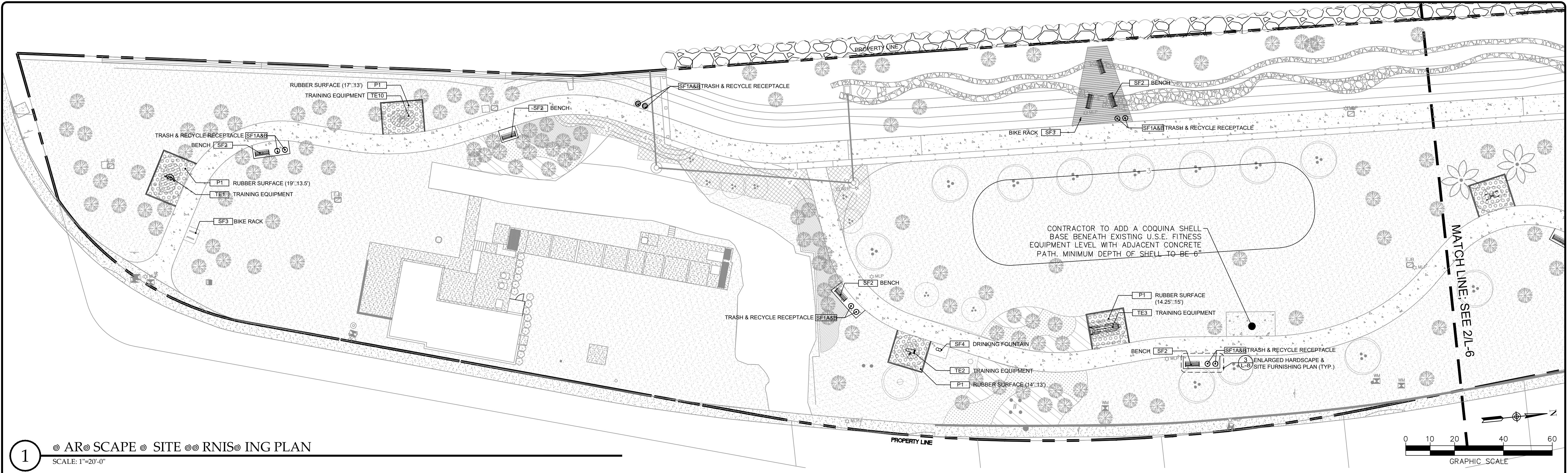
3 LIVING SHORE SECTION  
1/2" = 1'-0"



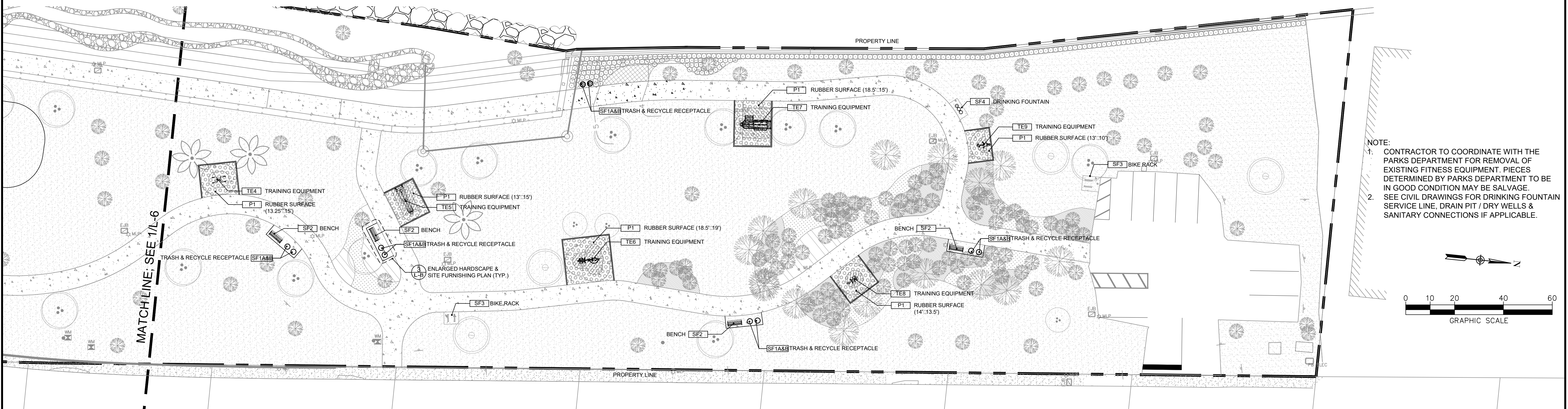
4 LIVING SHORE SECTION  
1/2" = 1'-0"

- NOTES:
- CONTRACTOR TO LOCATE & HAND DIG AROUND EXISTING SEAWALL & TIEBACKS.
  - CONTRACTOR TO ROOT PRUNE AROUND EXISTING TREES FOR SOIL AMENDMENTS & OOLITIC LIMESTONE BOULDER IN THE PRESENCE OF A CERTIFIED ARBORIST.
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  - ALL PLANTING AROUND EXISTING MANGROVE & BUTTWOOD TREES SHALL OCCUR 5' FROM EXISTING TRUNKS. PLANTING SHALL BE HAND DUG SO AS TO MINIMIZE ROOT DAMAGE.
  - CONTRACTOR TO ROOT PRUNE EXISTING MANGROVE TREES WHERE RIPRAP INSTALLATION OCCURS ACCORDING TO INDUSTRY STANDARDS AND ARBOR'S PRESENCE.
  - SEE CIVIL DETAILS FOR PROTECTION OF EXISTING STEEL TIE-BACKS AT EXCAVATED AREA.





1 AR@SCAPE SITE @@RNIS@NG PLAN  
SCALE: 1"=20'-0"



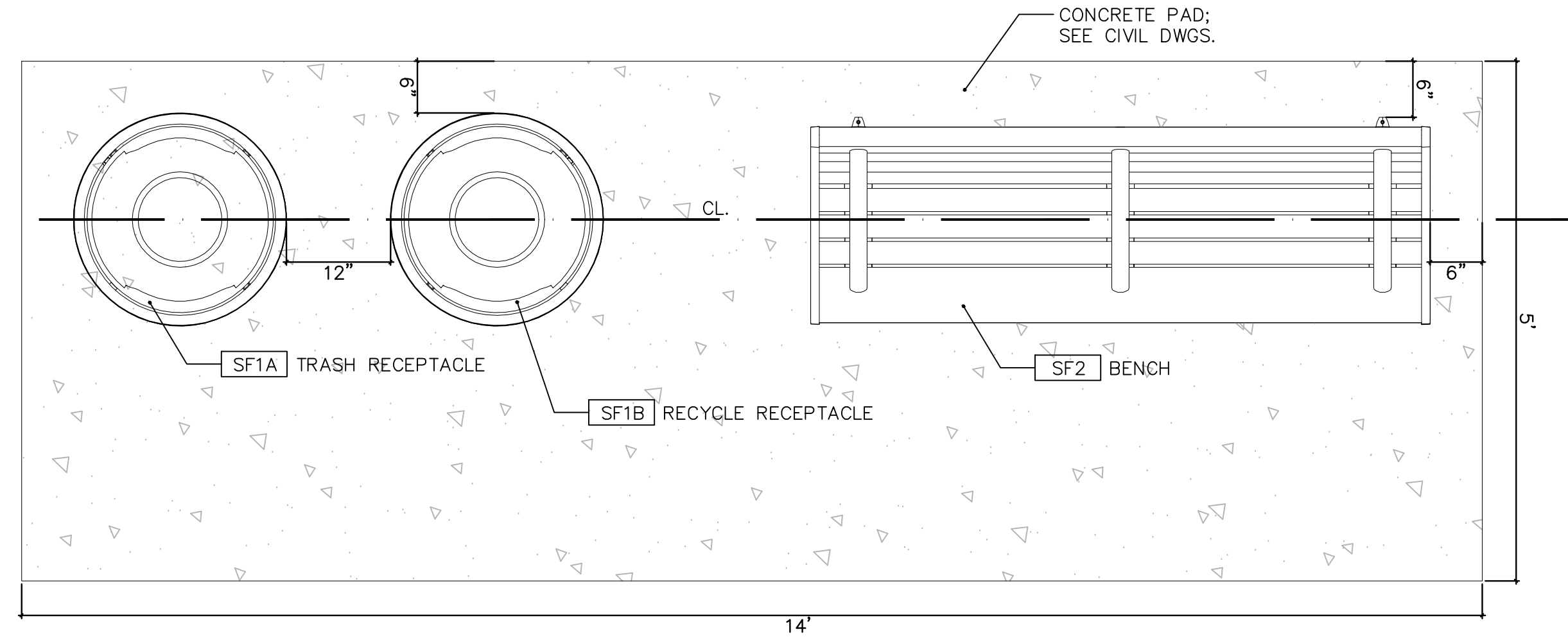
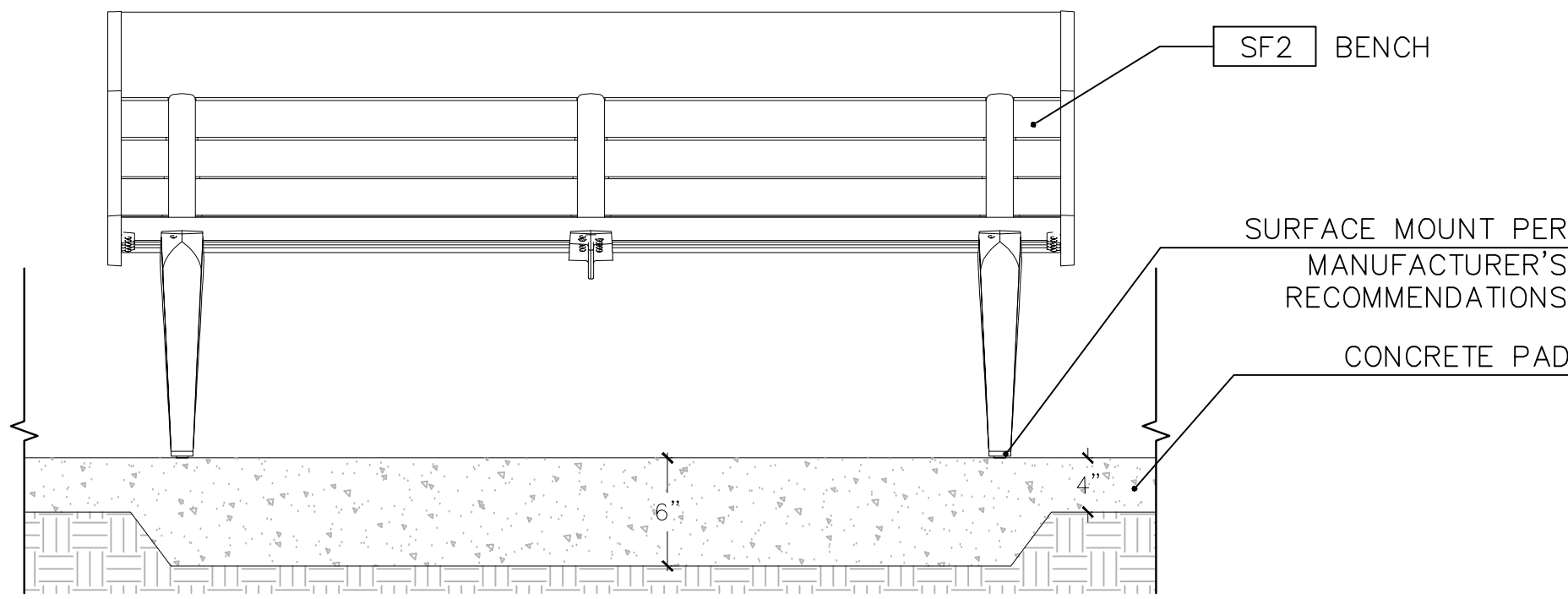
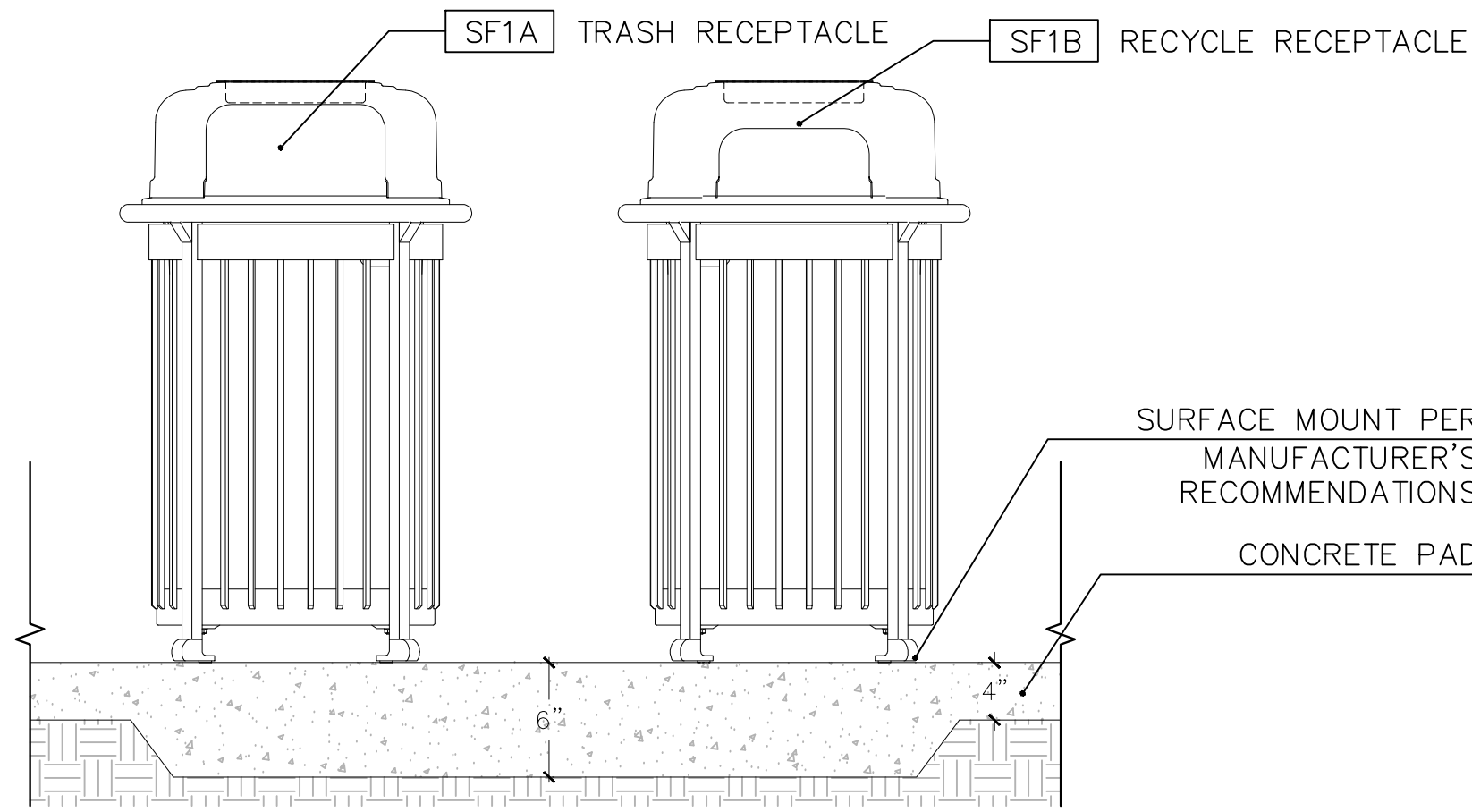
2 AR@SCAPE SITE @@RNIS@NG PLAN  
SCALE: 1"=20'-0"



FINISH SCHEDULE								
	Tag	Item/ Material	Color/ Pattern/ Finish	Model/Style	Dimensions	Manufacturer/ Supplier	Note	Detail
Site Furnishings	SF1A	Trash Receptacle	SF1A Silver, Metallic	Scarborough (side-opening)	25" DIA., 41" HT.	Landscape Forms or Approved Equal Kelly Moore (800)430-6206 x 1322 kmoore@landscapeforms.com	Surface Mount, see manufacturer's recommendations. SF1A - label "WASTE or TRASH" on lid. SF1B - With a smaller opening & label "CAN & BOTTLE RECYCLING" on top and side of bin	1/L-8 3/L-8
	SF1B	Recycle receptacle	SF1B Blue bell, Powdercoated					
	SF2	Bench	Silver, Metallic	Austin (backed Arms)	24"x72"x33"	Landscape Forms or Approved Equal	Surface Mount	2,3/L-8
	SF3	Bike Rack	Electrolyte zinc plated & powder coat finish - Glossy Silver	U201	35.5"x4"x27.5" (HT.)	EMU Americas or Approved Equal (800)726-0368	Bolted down	2/L-11
	SF4	Drinking Fountain	Color: Chrome Stainless Steel wBottle Filler	10145-18 SMSS	53" HT.	Most Dependable Fountains, Inc. (800)552-6331	Surface Mount Stainless Steel Pedestal; Installation per manufacturer's recommendation	3/L-11
Paving	P1	Rubber Surface	85% Lt Gray (RH65) 15% Black(0525)	Dura Turf	See plans	Sport Surface Specialties (716)652-2039 www.sportsurface.net	PIP	4,5/L-8
Training Equipment	TE1	Free Runner	Black & Silver	KPX120	4'-10"x2'-3"x5'-3" (HT.)	Kompan Inc. or Approved Equal (800)426-9788 USSales@kompan.com	Installation per manufacturer's recommendation	1/L-9
	TE2	Sit-up Bench	Black & Silver	KPX121	3'-10"x2'-8"x5'-3" (HT.)	Kompan Inc. or Approved Equal (800)426-9788 USSales@kompan.com	Installation per manufacturer's recommendation	2/L-9
	TE3	Parallel Bars	Black & Silver	FAZ10400	3'-6"x12'-10"x10'-11" (HT.)	Kompan Inc. or Approved Equal (800)426-9788 USSales@kompan.com	Installation per manufacturer's recommendation	3/L-9
	TE4	Leg Lift Station	Black & Silver	KPX126	2'-6"x5'-8"x5'-3" (HT.)	Kompan Inc. or Approved Equal (800)426-9788 USSales@kompan.com	Installation per manufacturer's recommendation	4/L-9
	TE5	Core Twist	Black & Silver	FAZ10500	3'-6"x12'-10"x10'-11" (HT.)	Kompan Inc. or Approved Equal (800)426-9788 USSales@kompan.com	Installation per manufacturer's recommendation	1/L-10
	TE6	Cardio	Black & Silver	KPX225	9'x2'-9"x6" (HT.)	Kompan Inc. or Approved Equal (800)426-9788 USSales@kompan.com	Installation per manufacturer's recommendation	2/L-10
	TE7	Pull Up Bars	Black & Silver	FAZ10300	5'-11"x12'-10"x10'-11" (HT.)	Kompan Inc. or Approved Equal (800)426-9788 USSales@kompan.com	Installation per manufacturer's recommendation	3/L-10
	TE8	Cross Trainer	Black & Silver	KPX125	5'x2'-2"x6" (HT.)	Kompan Inc. or Approved Equal (800)426-9788 USSales@kompan.com	Installation per manufacturer's recommendation	4/L-10
	TE9	Cycle Trainer	Black & Silver	KPX129	5'-7"x2'-7"x5'-3" (HT.)	Kompan Inc. or Approved Equal (800)426-9788 USSales@kompan.com	Installation per manufacturer's recommendation	1/L-11
	TE10	Twist & Step	Black & Silver	FST220	17'-10"x1'-6"-7"x4'-6" (HT.)	Kompan Inc. or Approved Equal (800)426-9788 USSales@kompan.com	Installation per manufacturer's recommendation	4/L-11

NOTES:  
CONTRACTOR TO SUBMIT SAMPLES OF SILVER & BLACK EXERCISE EQUIPMENT FOR APPROVAL. ORANGE COLOR WILL NOT BE ACCEPTED

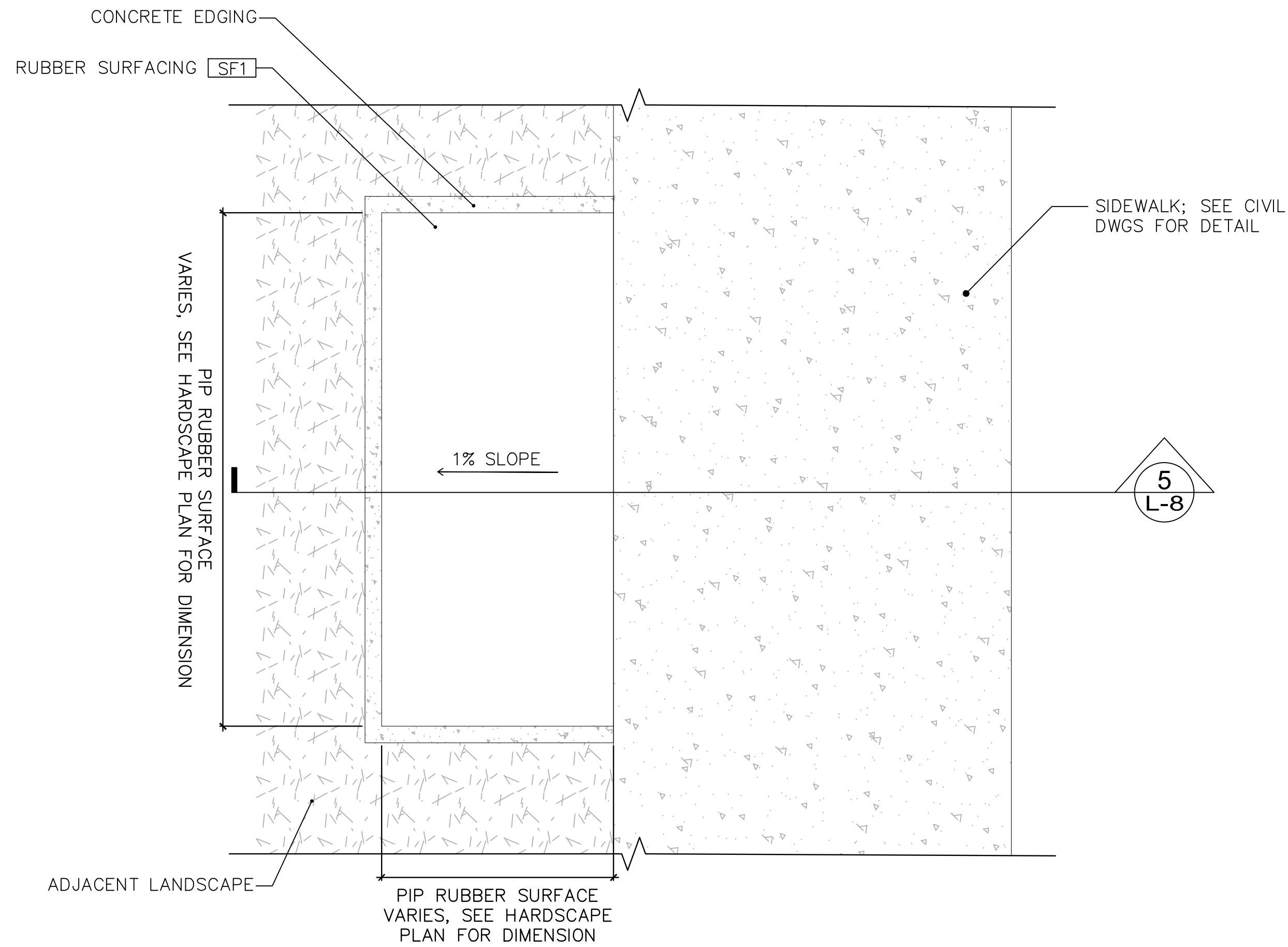




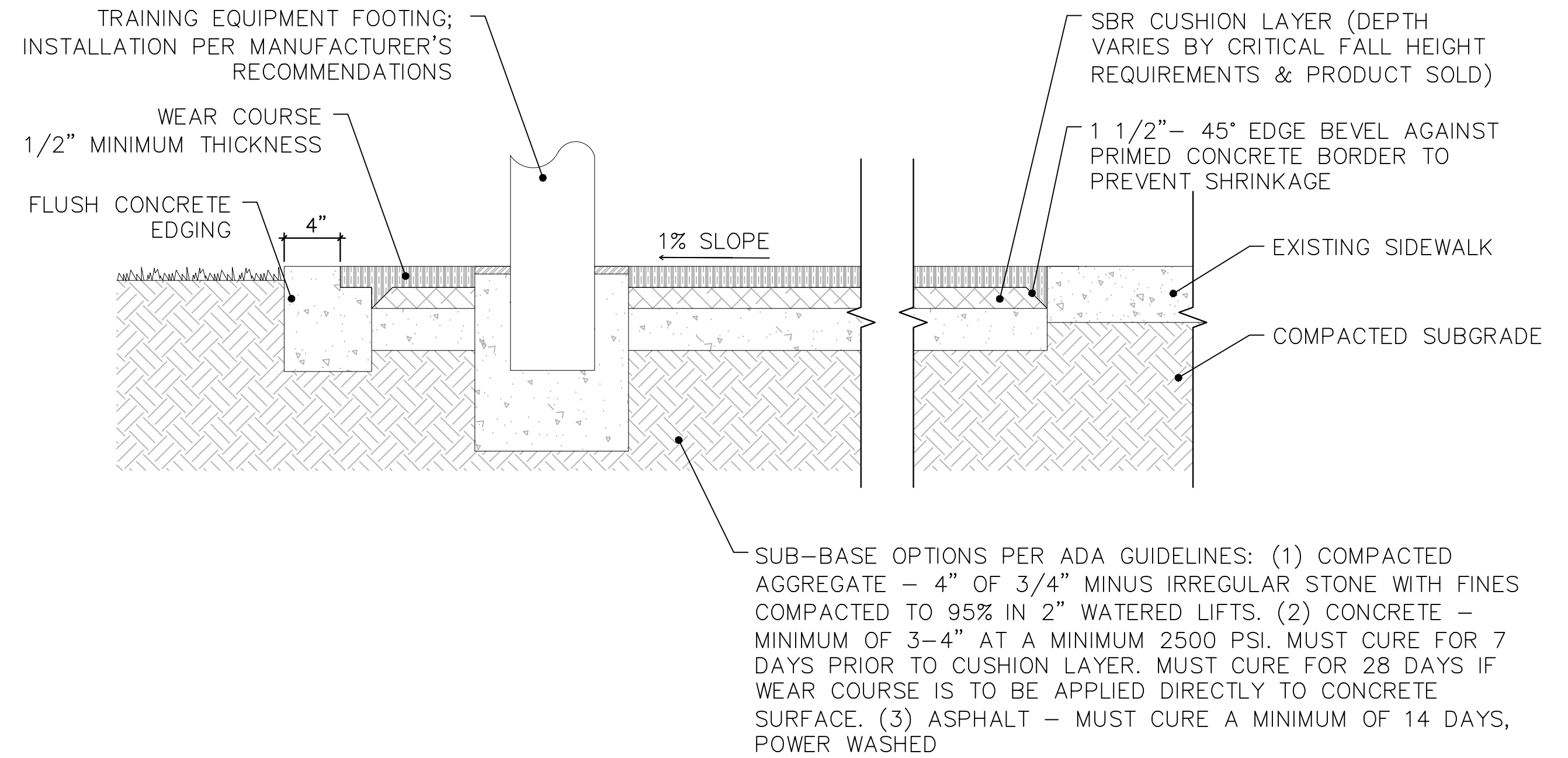
1 TRAS® RECEPTACLE  
SCALE: 1"=1'-0"

2 ENC®  
SCALE: 1"=1'-0"

ENC® TRAS® LITTER RECEPTACLE PLACEMENT  
SCALE: 1"=1'-0"



ERCISE PA® TOPICAL PLAN  
SCALE: 1/4"=1'-0"



ERCISE PA® TOPICAL SECTION  
SCALE: 1-1/4"=1'-0"

NOTES:  
- ALL HARDSCAPE EQUIPMENT (ELECT/ PLUMBING/ FIXTURES/ EQUIPMENT) SHALL BE STAINLESS STEEL 316.



**KOMPAN®**  
Let's play



<b>Product Line</b>	Outdoor Fitness
<b>Category</b>	Circuit Training
<b>Age from</b>	13 - 16+
<b>Max. fall height (CM)</b>	80
<b>Total height (CM)</b>	159
<b>Safety Zone</b>	17.9 m2



\* = Highest designated play surface  
\*\* = Total height of product.

<b>Weight/heaviest parts</b>	kg.	<b>Installation (Manpower)</b>	Persons
<b>Concrete required</b>	NaN m3	<b>Installation (Hours)</b>	Hours
<b>Foundation amount/footing</b>	NaN	<b>Excavation</b>	NaN m3



To verify product certification  
visit [www.ipema.org](http://www.ipema.org)

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The mark of responsible forestry

**KOMPAN®**  
Let's play

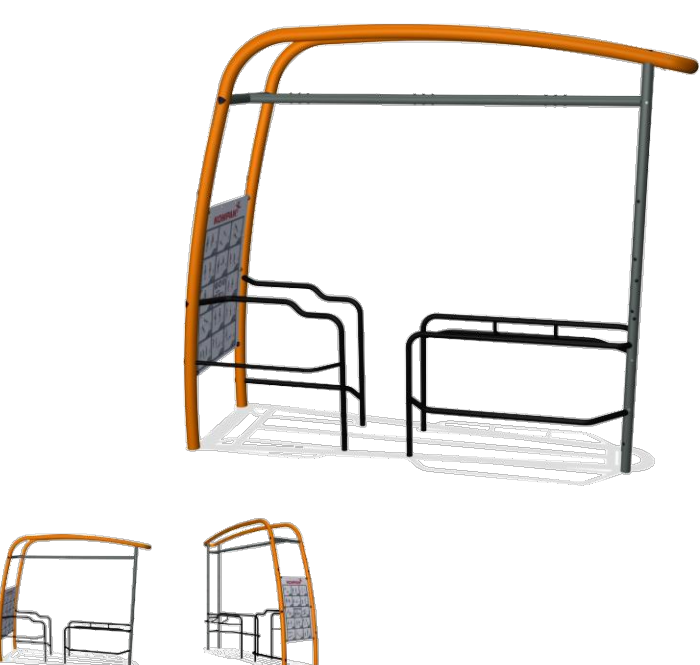


Product Line	Outdoor Fitness
Category	Circuit Training
Age from	13 - 16+
Max. fall height (CM)	43
Total height (CM)	159
Safety Zone	12.5 m2



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Product Line	Outdoor Fitness
Category	Cross Training
Age from	13 - 16+
Max. fall height (CM)	124
Total height (CM)	334
Safety Zone	18.3 m2



FAZ1040  
 4'-0" / 121  
 12'-10" / 390  
 12'-0" / 360  
 3'-0" / 90

FAZ1040 x00  
 1:100

\* = Highest designated play surface  
\*\* = Total height of product

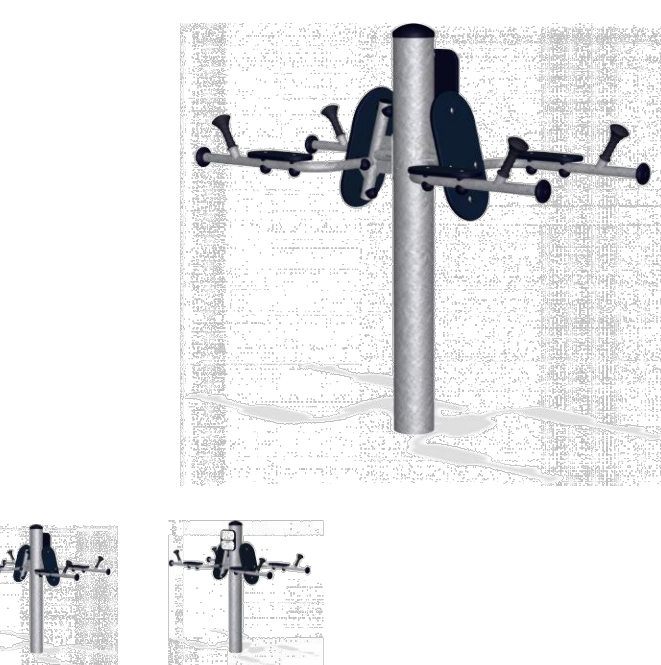
<b>Weight/heaviest parts</b>	kg.	<b>Installation (Manpower)</b>	1 Person
<b>Concrete required</b>	NaN m3	<b>Installation (Hours)</b>	9 Hours
<b>Foundation amount/footing</b>	NaN	<b>Excavation</b>	NaN m3



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Product Line	Outdoor Fitness
Category	Circuit Training
Age from	13 - 16+
Total height (CM)	159
Safety Zone	14.8 m2



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## SCALE: NTS

ADDRESS: 6444 INDIAN CREEK DRIVE, MIAMI BEACH, FL. 33141

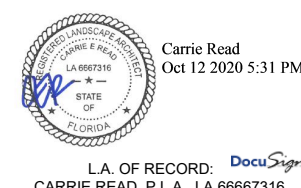


SUB-CONSULTANT



1615 EDGEWATER DRIVE, STE 200  
ORLANDO, FLORIDA 32804  
T 407.975.1273  
F 407.975.1278  
[www.smeinc.com](http://www.smeinc.com)

L.A. OF RECORD: BH  
DRAWN BY: BW  
CHECKER: IM  
SCALE: AS INDICATED



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Filename: 20150738\_L-7-11\_SITE FURNISHINGS DETAILS.dwg

Drawing No.:

L-9







## KPX129 Cycle Trainer



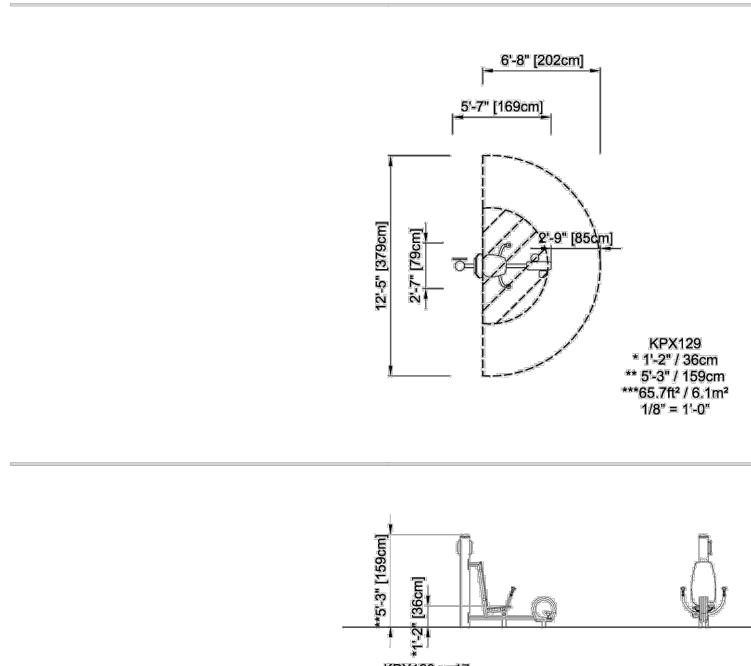
The Cycle Trainer is an excellent way to improve your cardiovascular fitness. Furthermore, it goes easy on knees and joints, making it ideal for everyone while still offering an exercise. The intensity of the exercise is defined entirely by yourself, as the Cycle Trainer itself offers no resistance. It can suit both those looking for a warm-up as they get ready for further exercise on other equipment and those looking for a full aerobic workout. Improved cardiovascular fitness gives you increased energy and a better health.

<b>Product Line</b>	Outdoor Fitness
<b>Category</b>	Circuit Training
<b>Age from</b>	13 - 16+
<b>Max. fall height (CM)</b>	36
<b>Total height (CM)</b>	159
<b>Safety Zone</b>	13.6 m2



KOMPAN INC 605 W Howard Lane, Suite 101  
Austin, TX 78753 Phone: 1 (800) 426-9788  
USSales@koman.com | www.koman.us

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\* = Highest designated play surface.  
\*\* = Total height of product.

<b>Weight/heaviest parts</b>	kg.	<b>Installation (Manpower)</b>	Persons
<b>Concrete required</b>	NaN m3	<b>Installation (Hours)</b>	Hours
<b>Foundation amount/footing</b>	NaN	<b>Excavation</b>	NaN m3



Highest designated play surface and space required are according to ASTM F1487. Equipment must be installed over resilient surfacing appropriate to the safety guidelines in your area. Product development is an ongoing process. We reserve the right to make modifications on all our products. This product may not be mirrored, scaled or altered in any way. Safety zones must be retained for proper placement of equipment. If any changes are required, please contact your KOMPAN representative at 1.800.426.9788.

To verify product certification, visit [www.koman.org](http://www.koman.org)

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## FST220 Twist + Step



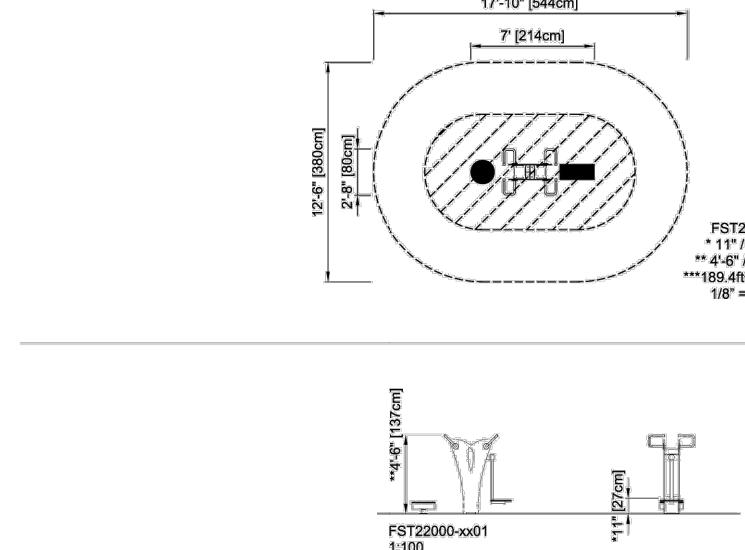
Doing twists will help you improve your core strength and is excellent for lumbar mobility. Toning your core muscles and increasing your lumbar range of motion is essential for a lot of daily activities. The step is probably the most simple and versatile device available; many functional exercises can be done with a step. For example, the step up, which is a great exercise to improve your ability to walk the stairs. Beginners and people with balance problems can use the handles, they will provide a good grip and support.

<b>Product Line</b>	Outdoor Fitness
<b>Category</b>	Circuit Training
<b>Age from</b>	13+
<b>Max. fall height (CM)</b>	27
<b>Total height (CM)</b>	147
<b>Safety Zone</b>	14.3 m2



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\* = Highest designated play surface.  
\*\* = Total height of product.

<b>Weight/heaviest parts</b>	kg.	<b>Installation (Manpower)</b>	1 Persons
<b>Concrete required</b>	NaN m3	<b>Installation (Hours)</b>	2 Hours
<b>Foundation amount/footing</b>	NaN	<b>Excavation</b>	NaN m3



Highest designated play surface and space required are according to ASTM F1487. Equipment must be installed over resilient surfacing appropriate to the safety guidelines in your area. Product development is an ongoing process. We reserve the right to make modifications on all our products. This product may not be mirrored, scaled or altered in any way. Safety zones must be retained for proper placement of equipment. If any changes are required, please contact your KOMPAN representative at 1.800.426.9788.

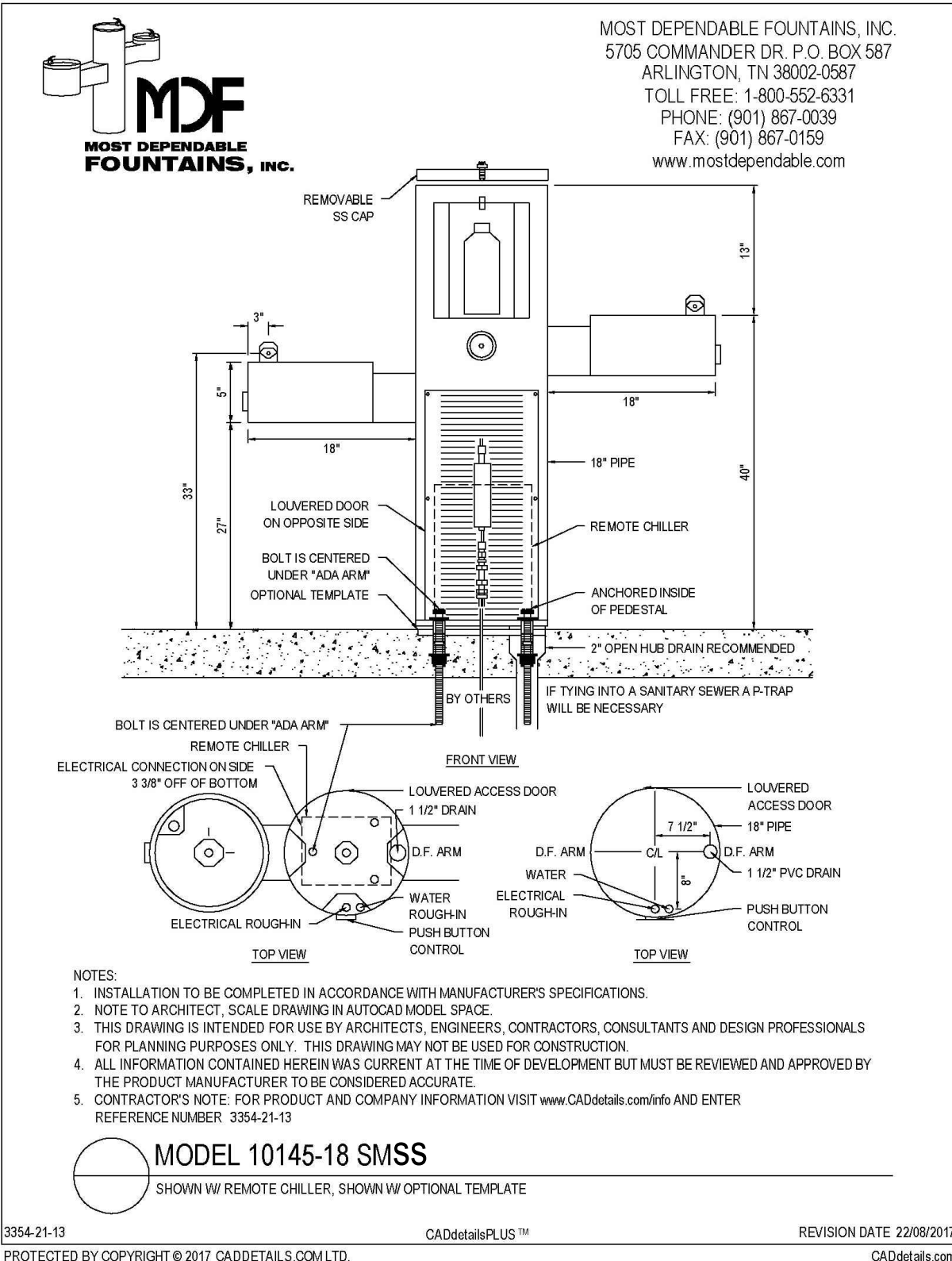
To verify product certification, visit [www.koman.org](http://www.koman.org)

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## 1 CICLE TRAINER

SCALE: NTS



- NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
  2. NOTE TO ARCHITECT: SCALE DRAWING IN AUTOCAD MODEL SPACE.
  3. THIS DRAWING IS INTENDED FOR USE BY ARCHITECTS, ENGINEERS, CONTRACTORS, CONSULTANTS AND DESIGN PROFESSIONALS FOR PLANNING PURPOSES ONLY. THIS DRAWING MAY NOT BE USED FOR CONSTRUCTION.
  4. ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT BUT MUST BE REVIEWED AND APPROVED BY THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.
  5. CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT [www.CADDdata.com/info](http://www.CADDdata.com/info) AND ENTER REFERENCE NUMBER: 3394-21-13

MODEL 10145-18 SMSS  
SHOWN W/ REMOTE CHILLER, SHOWN W/ OPTIONAL TEMPLATE

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## MDF PEDESTAL BOTTLE FILLER CHILLED SPECIFICATIONS

**WATER QUALITY (LEAD FREE)** Section 9, California Proposition 6 and the Federal Safe Drinking Water Act. One piece weld construction with MDF standard 3/16" wall thickness.

**STAINLESS STEEL PEDESTAL** One piece weld construction with MDF standard 304 schedule 10 stainless steel. 18 gauge electro-polished stainless steel bowl. Bowl overlaps pedestal, preventing buildup of residue in visual drinking area. Optional stainless steel Bowl Strainer recommended for areas with sand. Not applicable on Model 1012518 SM/SMSS. Sanitary recessed nozzle.

**BOTTLE FILLER SPOUT** Stainless steel anti-squirt head (weighing a pound and a half) mounted with a lock nut and washer to prevent tampering. Lock nut pin holds bubbler in locked position to prevent twisting or turning. The MDF bubbler head has a unique design that features a steady stream trajectory and a built in natural shield from contamination. Not applicable on Model 1012518 SM/SMSS.

**PUSH BAR** 304 stainless steel with circumference exceeding 8.6". Mushroom style push bar overlaps and prevents sand and other objects from sticking push bar in the ON position. Stainless steel bubbler housing standard.

**CONTROL VALVE** Requires less than 5 lbs to operate. Non-cartridge O-ring valve delivers steady stream of water through an adjustable valve. This valve design is to operate and function at 30 to 80 PSI. Ideal operating pressure is 60 PSI.

**WATER SUPPLY (LEAD FREE)** Maintenance free reinforced nylon tubing that is NSF-61 certified. **This tubing is not plastic.** It is supplied with a 1/2" MPT threaded inlet with stainless steel strainer. Union fittings at every connection. Supply line stops above grade. Water Filter is standard on this model.

**DRAIN** 1 1/2" schedule 40 PVC pipe. Drain line stops above grade.

**FAUCET** Oven baked powder coat. Choice of colors are: green, blue, black, red, yellow, orange, brown and white. Textured color choices: emerald, sapphire, pyrite, text-black, burgundy, gold vein, copper and sand-stone. Stainless steel models are powder coated for added protection. The color chrome is available for stainless steel models only.

**INSTALLATION** **Surface Mount** installation, is designed to be anchored on top of an existing surface (concrete, etc.) with anchor bolts through a mounting plate that is welded to the fountain. Surface Mount Fountains provide an access door with vandal resistant stainless steel screws. Surface mount carrier recommended for all surface mount installations. Access door standard on all pedestal fountains.

**CHILLER AND WINTERIZATION** Chilling capacity 8 gallons per hour. NO lead design. 115 VAC. Shut off water and drain down. Remove water filter and chiller if applicable.

**WARRANTY** One year warranty, labor not included.

**SHIPPING WEIGHT** Model 1012518 SM..... 290 lbs Model 1014518 SM..... 408 lbs Model 1015518 SM..... 320 lb Model 1012518 SMSS..... 290 lbs Model 1014518 SMSS..... 408 lbs Model 1015518 SMSS..... 320 lb Model 1013518 SM..... 390 lbs Model 1015018 SM..... 380 lbs Model 1013518 SMSS..... 390 lbs Model 1015018 SMSS..... 380 lbs

MOST DEPENDABLE FOUNTAINS, INC.™  
(800) 552-6331 • (901) 867-0039 • Fax (901) 867-4008  
5705 COMMANDER DR. • ARLINGTON, TN 38002-0587  
[www.mostdependable.com](http://www.mostdependable.com)



## INSTALLATION INSTRUCTIONS

Most Dependable Fountains, Inc.™

All SM (surface mount) products are designed to be installed on the surface of a new or existing concrete slab. Your contractor needs to provide a 1 ½" PVC drain line (when applicable) and water line thru finish grade. Connections are made to our SM products thru our access door, as shown on detail drawings. The water tubing is provided with a ½" male iron pipe connection. This is an excellent location for a cutoff valve. Surface Mount units are anchored to the existing concrete by means of ½" concrete shields with bolts or we recommend ½" quick bolts.

**Note:** We offer an optional template which is designed to be poured in the concrete slab. It comes with the necessary vandal resistant stainless steel bolts and washers needed to anchor.

All DB (direct bury) products are designed to be installed to a depth of 14" below grade. MDF provides 1 ½" PVC drain line inside the pedestal (when applicable) to point of connection by others. MDF also provides reinforced nylon tubing with a ½" male iron pipe thread for connection to water supply by others. MDF recommends an optional valve box using a PVC conduit to the pedestal. By using this option you have complete control of your product.

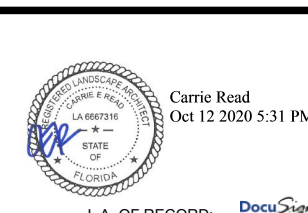
Individual detail drawings available Online or by request.



For more information:  
Most Dependable Fountains, Inc.™  
[www.mostdependable.com](http://www.mostdependable.com)  
Info@mostdependable.com  
800-552-6331  
901-867-0039

SUB-CONSULTANT  
1615 EDGEWATER DRIVE, STE 200  
ORLANDO, FLORIDA 32804  
T 407.975.1273  
F 407.975.1278  
[www.smefc.com](http://www.smefc.com)

L.A. OF RECORD: BH  
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SCALE: AS INDICATED



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Date: 10/12/20	Sheet: 37 of 48

MIAMI BEACH  
OFFICE OF CAPITAL IMPROVEMENT PROJECTS  
1701 MERIDIAN AVENUE, MIAMI BEACH, FL 33139

PROJECT: BRITTANY BAY PARK RENOVATION  
ADDRESS: 6444 INDIAN CREEK DRIVE, MIAMI BEACH, FL. 33141

BPA  
Brindley Pieters & Associates, Inc.  
815 NW 67th Avenue  
Suite 200-11, Miami, FL 33126  
Certificate of Authorization Number 5993

## 2 I E RAC

SCALE: NTS

## Omega Bike Rack #U201

Designer: Benito

DETAILS	H	W	D	Lbs
	27.5"	35.5"	4"	27.5

Outdoor Bike Rack

Electrolyte zinc plated & powder coat finish

May be bolted down

Made in Spain

Frame: Steel

SHIPPING

Master Pack Quantity: 1

Freight Class: 150

FOB: PA 17042



Quick Ship Finishes:

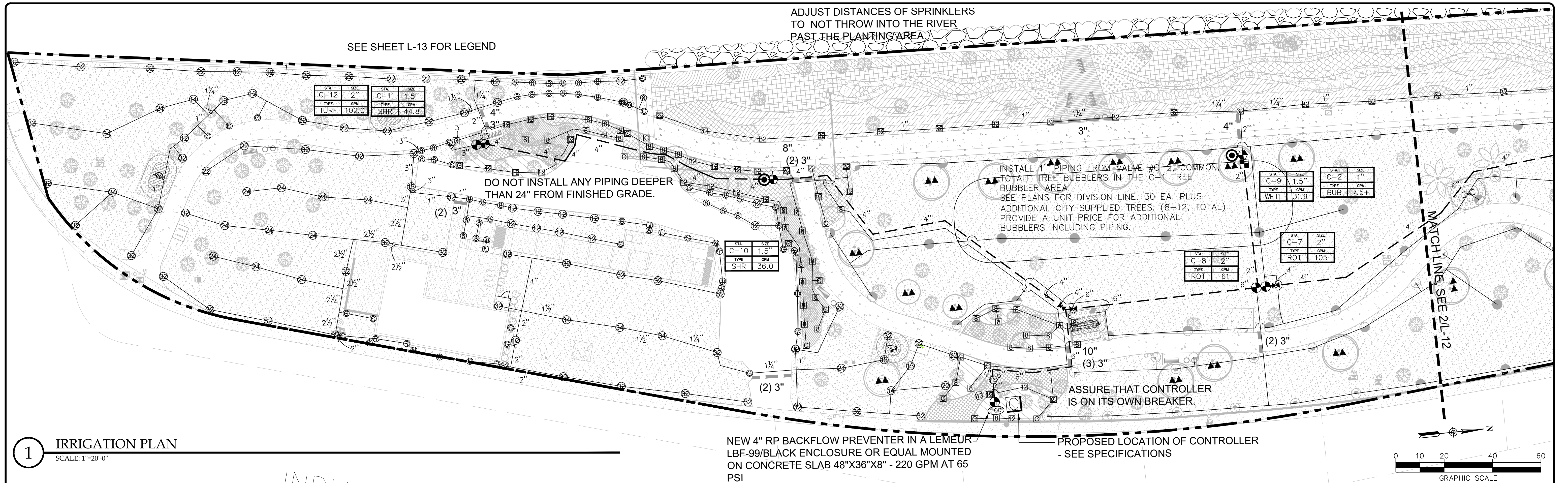


Glossy Silver

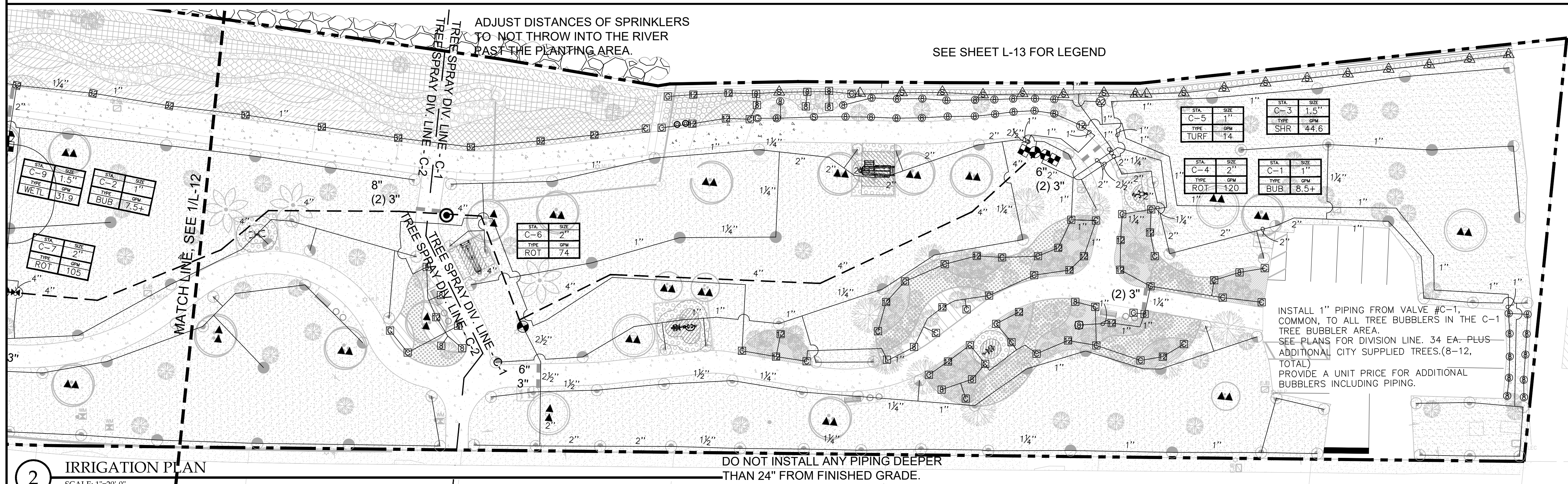
emuamericas LLC  
T: (800) 726-0368  
[emuamericas.com](http://emuamericas.com)







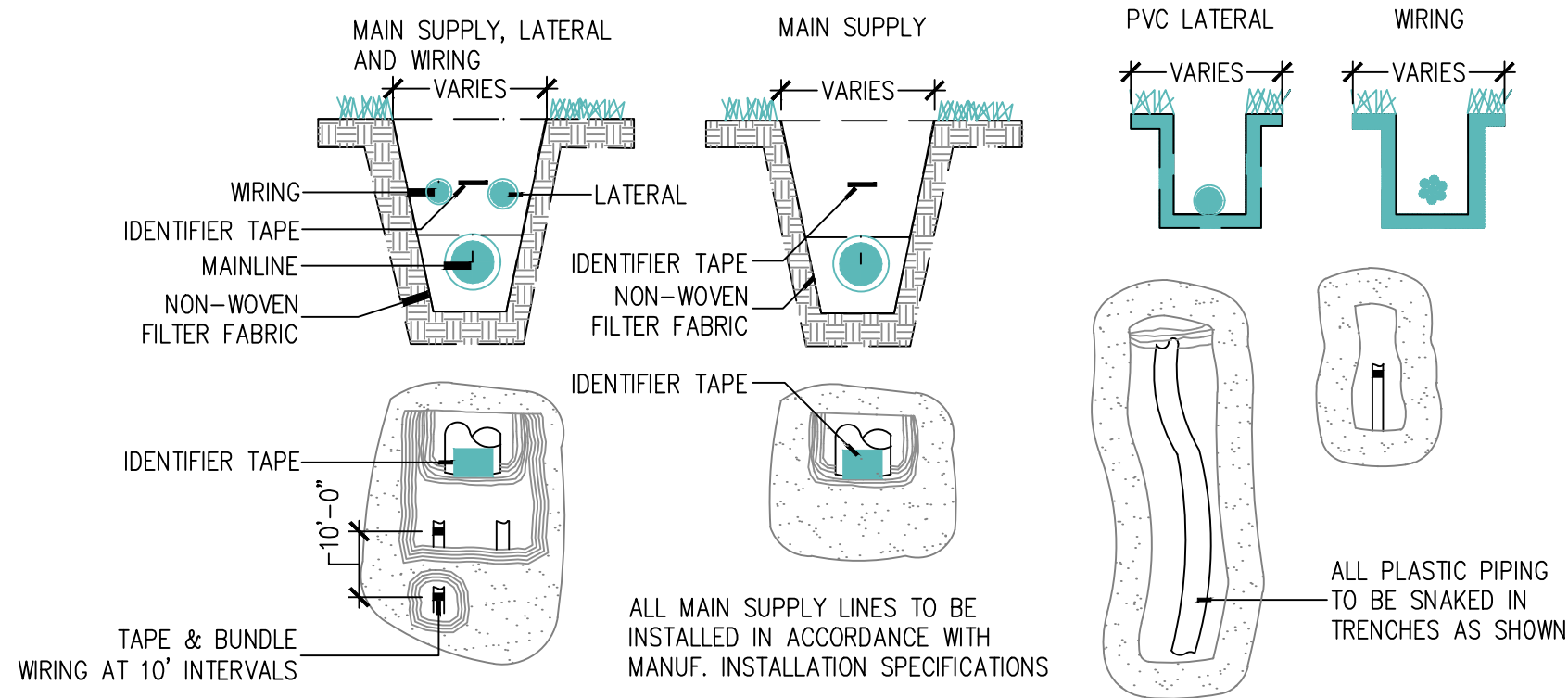
1 IRRIGATION PLAN



2 IRRIGATION PLAN

NOTE:  
CITY TO INSTALL 8-12 TREES;  
TREE LOCATIONS TO BE  
APPROVED BY CITY  
REPRESENTATIVE OR  
LANDSCAPE ARCHITECT  
PRIOR TO INSTALLATION.  
CONTRACTOR TO PROVIDE  
IRRIGATION VIA PROPOSED  
IRRIGATION SYSTEM.





1 PIPE AND WIRE TRENCH CONFIGURATION  
SCALE: N.T.S.

PIPE SIZE (inches)	90° BEND (Sq. Ft.)	45° BEND (Sq. Ft.)	22½° BEND (Sq. Ft.)	11¼° BEND (Sq. Ft.)	TEE OR PLUG (Sq. Ft.)	DESIGN PRESSURE (P.S.I.)
2	.5	.3	.2	.1	.4	150
2.5	.8	.4	.2	.1	.6	150
3	1.2	.6	.3	.2	1.0	150
4	2.0	1.0	0.5	0.25	1.4	150
6	4.0	2.2	1.1	0.6	2.9	150
NOTE: Thrust block areas computed on basis of 2000 lbs. per sq. ft. soil resistance bearing.						

2 SCHEDULE OF THRUST BLOCK AREAS  
SCALE: N.T.S.

- THRUST BLOCK BEARING AREAS SHALL BE POURED AGAINST UNDISTURBED MATERIAL. WHERE TRENCH WALL HAS BEEN DISTURBED, EXCAVATE ALL LOOSE MATERIAL AND EXTEND TO UNDISTURBED MATERIAL.
- EXTEND THRUST BLOCK FOR FULL LENGTH OF FITTINGS. PUT BOARD IN FRONT OF PLUG BEFORE POURING CONCRETE. JOINTS SHALL NOT BE COVERED BY THRUST BLOCK.
- ROUGH BLOCKING FORMS SHALL BE USED ALONG SIDES OF THRUST BLOCKS.
- THRUST BLOCKS SHALL BE USED IN COMBINATION, AS REQUIRED, TO SUIT THE SPECIFIC FITTING ARRANGEMENT.
- ALTERNATE DESIGNED RESTRAINING SYSTEMS SHALL BE PROVIDED WHERE STANDARD THRUST BLOCKING IS NOT SUITABLE.
- ALL WOOD BLOCKING SHALL BE PRESSURE TREATED WITH PRESERVATIVE.
- INSTALL A PLASTIC BEARIER (VISQUINE) BETWEEN FITTINGS AND THRUST BLOCK.

3 THRUST BLOCK NOTES  
SCALE: N.T.S.

LEGEND

- ▲ RAIN BIRD 1401 BUBBLER
- △ RAIN BIRD 1804–SAM WITH HUNTER MPLCS–515 NOZZLE
- △ RAIN BIRD 1804–SAM WITH HUNTER MPRCS–515 NOZZLE
- △ RAIN BIRD 1804–SAM WITH HUNTER MPSS–530 NOZZLE
- Ⓢ RAIN BIRD 1806–SAM WITH HUNTER MP800SR–90 NOZZLE
- Ⓢ RAIN BIRD 1806–SAM WITH HUNTER MPCORNER NOZZLE
- Ⓢ RAIN BIRD 1806–SAM WITH HUNTER MP1000–90 NOZZLE
- Ⓢ RAIN BIRD 1806–SAM WITH HUNTER MP1000–210 NOZZLE
- Ⓢ RAIN BIRD 1806–SAM WITH HUNTER MP1000–360 NOZZLE
- Ⓢ RAIN BIRD 1806–SAM WITH HUNTER MP2000–90 NOZZLE
- Ⓢ RAIN BIRD 1806–SAM WITH HUNTER MP2000–360 NOZZLE
- Ⓢ RAIN BIRD 1806–SAM WITH HUNTER MP3000–90 NOZZLE
- Ⓢ RAIN BIRD 1806–SAM WITH HUNTER MP3000–360 NOZZLE
- Ⓢ RAIN BIRD 1806–SAM WITH HUNTER MPLCS–515 NOZZLE
- Ⓢ RAIN BIRD 1806–SAM WITH HUNTER MPRCS–515 NOZZLE
- Ⓢ RAIN BIRD 1806–SAM WITH HUNTER MPSS–530 NOZZLE
- Ⓢ RAIN BIRD 1812–SAM WITH HUNTER MP800SR–90 NOZZLE
- Ⓢ RAIN BIRD 1812–SAM WITH HUNTER MP800SR–360 NOZZLE
- Ⓢ RAIN BIRD 1812–SAM WITH HUNTER MPCORNER NOZZLE
- Ⓢ RAIN BIRD 1812–SAM WITH HUNTER MP1000–90 NOZZLE
- Ⓢ RAIN BIRD 1812–SAM WITH HUNTER MP2000–90 NOZZLE
- Ⓢ RAIN BIRD 1812–SAM WITH HUNTER MP3000–90 NOZZLE
- RAIN BIRD 5006+–SAM–6.0 FC SPRINKLER
- RAIN BIRD 5006+–SAM–4.0 PC SPRINKLER
- RAIN BIRD 5006+–SAM–3.0 PC SPRINKLER
- RAIN BIRD 5006+–SAM–1.5 PC SPRINKLER
- RAIN BIRD 5006+–SAM–20LA FC SPRINKLER
- RAIN BIRD 5006+–SAM–1.5LA PC SPRINKLER
- RAIN BIRD 5006+–SAM–1.0LA PC SPRINKLER
- RAIN BIRD 5–NP QUICK COUPLING VALVE IN A LOCKING VALVE BOX
- RAIN BIRD PESB–100–PRS–D 1” GLOBE ELECTRIC VALVE
- RAIN BIRD PESB–150–PRS–D 1.5” GLOBE ELECTRIC VALVE
- RAIN BIRD PESB–200–PRS–D 2” GLOBE ELECTRIC VALVE
- POC POINT OF CONNECTION AND 4” REDUCED PRESSURE BACKFLOW PREVENTER TO CODE IN LEMEUR BF–99/BLACK ENCLOSURE OR EQUAL – 220 GPM AT 75 PSI REQUIRED UPSTREAM OF BFP
- ESP RAIN BIRD ESP–LXME 16 STATION CONTROLLER WITH BLACK LXMMSS ENCLOSURE AND LXMMSSPED PEDESTAL WITH (WIRELESS) WEATHER STATION ON A 4” PRESSURE TREATED POST SECURED WITH CONCRETE UNDERGROUND LOCATED IN THE WEATHER NEAR THE CONTROLLER AND COMPATIBLE WITH THE CONTROLLER . SEE SPECIFICATIONS FOR WEATHER STATION TYPE.
- FS 4” SADDLE TYPE FLOW SENSOR OUTPUT TO BE COMPATIBLE WITH CONTROLLER
- CL 200 GASKETED PVC MAIN LINE ROUTING
- LINE SIZE GATE VALVE
- CL 200 OR BETTER SOLVENT WELD PVC ZONE PIPE ROUTING
- SCH 40 PVC SLEEVE LOCATION (SIZED ON PLANS)
- VALVE PROGRAMMING, SIZE, APPLICATION AND GALLONAGE

4 LEGEND  
SCALE: N/A



NOTES

INSTALL ALL PIPING SHOWN BETWEEN DIFFERENT PIPE SIZES AS THE LARGER SIZED PIPE.

INSTALL ALL PIPING TO INDIVIDUAL HEADS AS 3/4".

INSTALL PIPING BETWEEN THE LAST MARKED PIPE AND PIPING TO INDIVIDUAL HEADS (WHERE NO OTHER MARKINGS SHOW) AS 3/4".

ANY IRRIGATION ITEMS NORMALLY INSTALLED IN LANDSCAPE AREAS THAT ARE SHOWN OUTSIDE OF LANDSCAPE AREAS OR OUTSIDE OF THE PROPERTY LINES ARE SHOWN AS SUCH FOR GRAPHIC CLARITY ONLY. INSTALL THESE ITEMS INSIDE OF PROPERTY LINES AND IN LANDSCAPE AREAS.

THIS SYSTEM REQUIRES 220 GPM AT 65 PSI AT THE POINT OF CONNECTION. VERIFY GALLONAGE AND PRESSURES AND REPORT ANY DISCREPANCIES TO THE LANDSCAPE ARCHITECT BEFORE COMMENCING WITH THE INSTALLATION.

PROVIDE PROOF TO THE LANDSCAPE ARCHITECT THAT ALL AVAILABLE MAINTENANCE MANUALS FOR EACH OF THE PRODUCTS INCLUDED IN THIS INSTALLATION HAVE BEEN PROVIDED TO THE OWNER OR OWNER'S REPRESENTATIVE.

ADJUST THE IRRIGATION SYSTEM COMPONENTS AND EXISTING SYSTEM TO PROVIDE UNIFORM COVERAGE. ASSURE THAT THE SYSTEM PROVIDES 100% COVERAGE OF ALL LANDSCAPE MATERIALS INCLUDING SHRUBS, GROUND COVER, TREES AND TURF.

ADJUST THE VERTICAL ORIENTATION OF SPRINKLERS ON SLOPES TO PROVIDE UNIFORM COVERAGE OF THE SLOPED AREA.

AFTER FINAL SYSTEM ADJUSTMENTS HAVE BEEN MADE, APPLY "SUPER GLUE" TO ALL VARIABLE ARC NOZZLES TO AID IN KEEPING THE ADJUSTMENT OF THE SPRAY. DO NOT APPLY THE GLUE IN AREAS THAT MIGHT HINDER THE ADJUSTMENT OR MAINTENANCE OF ANY SPRINKLER.

IRRIGATION HEADS SHALL BE LOCATED MINIMUM ONE (1) FOOT FROM ANY WALL, COLUMN, OR BUILDING EDGE/FACE.

IRRIGATION HEADS SHALL BE DIRECTED AWAY FROM BUILDING AT ALL TIMES, SO THAT SPRAY DOES NOT HIT BUILDING FACE, COLUMN, WALL, ETC.

ANY EXISTING TREE ROOTS, WHEN ENCOUNTERED DURING INSTALLATION OF UTILITIES, SHALL BE CUT OFF EVENLY WITH CLEAN SHARP PRUNING TOOLS AND COVERED WITH SOIL AS SOON AS POSSIBLE TO REDUCE DEHYDRATION. THE CONTRACTOR/DEVELOPER SHALL MINIMIZE THE DAMAGE TO EXISTING TREE ROOT SYSTEMS.

PROVIDE HAND WATERING FOR ESTABLISHMENT PERIOD FOR ALL TREES NOT LOCATED IN IRRIGATED AREAS OR THAT DO NOT HAVE BUBBLERS INSTALLED AT THOSE TREES.

INSTALL THE SYSTEM IN ACCORDANCE WITH THE APPLICABLE LOCAL LANDSCAPE AND IRRIGATION STANDARDS AND CITY'S IRRIGATION REQUIREMENTS.

INSTALL ALL MAIN LINE PIPING FROM THE POC TO THE GATE VALVES ACROSS THE ROAD NEAR THE POC AS RESTRAINED JOINT PIPING.

INSTALL MARLEX STREET ELLS FOR ALL ROTORS, ALL HEADS ON RISERS AND ALL SPRINKLERS IN TURF.

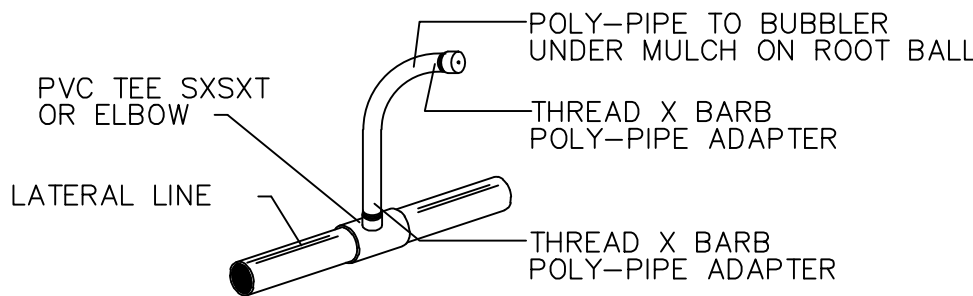
INSTALL ALL OTHER SPRINKLERS WTH VIRGIN POLYETHYLENE AND SBE-050 FITTING. (USE SBE-075 IF THREADED FITTING ON PIPE IS 3/4".)

CONNECT TO THE 4" POTABLE STUB-OUT AS THE POINT OF CONNECTION.

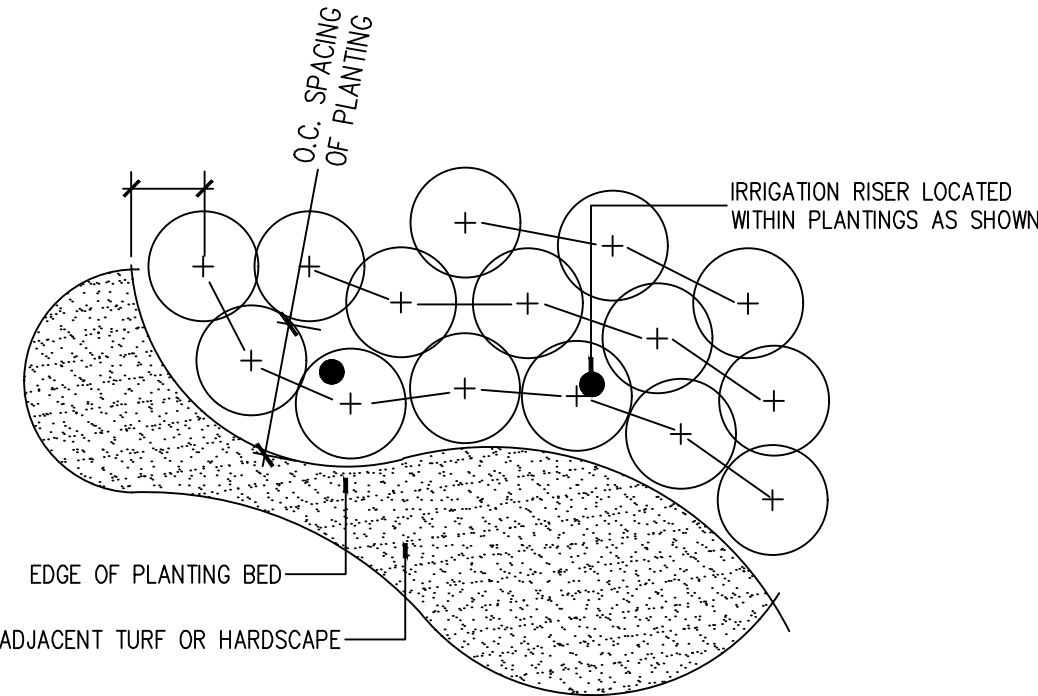
ALL IRRIGATION HEADS IN SHRUBS/GROUNDCOVER AREAS SHALL BE INSTALLED ON RISERS. SEE DETAILS.

1 GENERAL NOTES

SCALE: N.T.S.

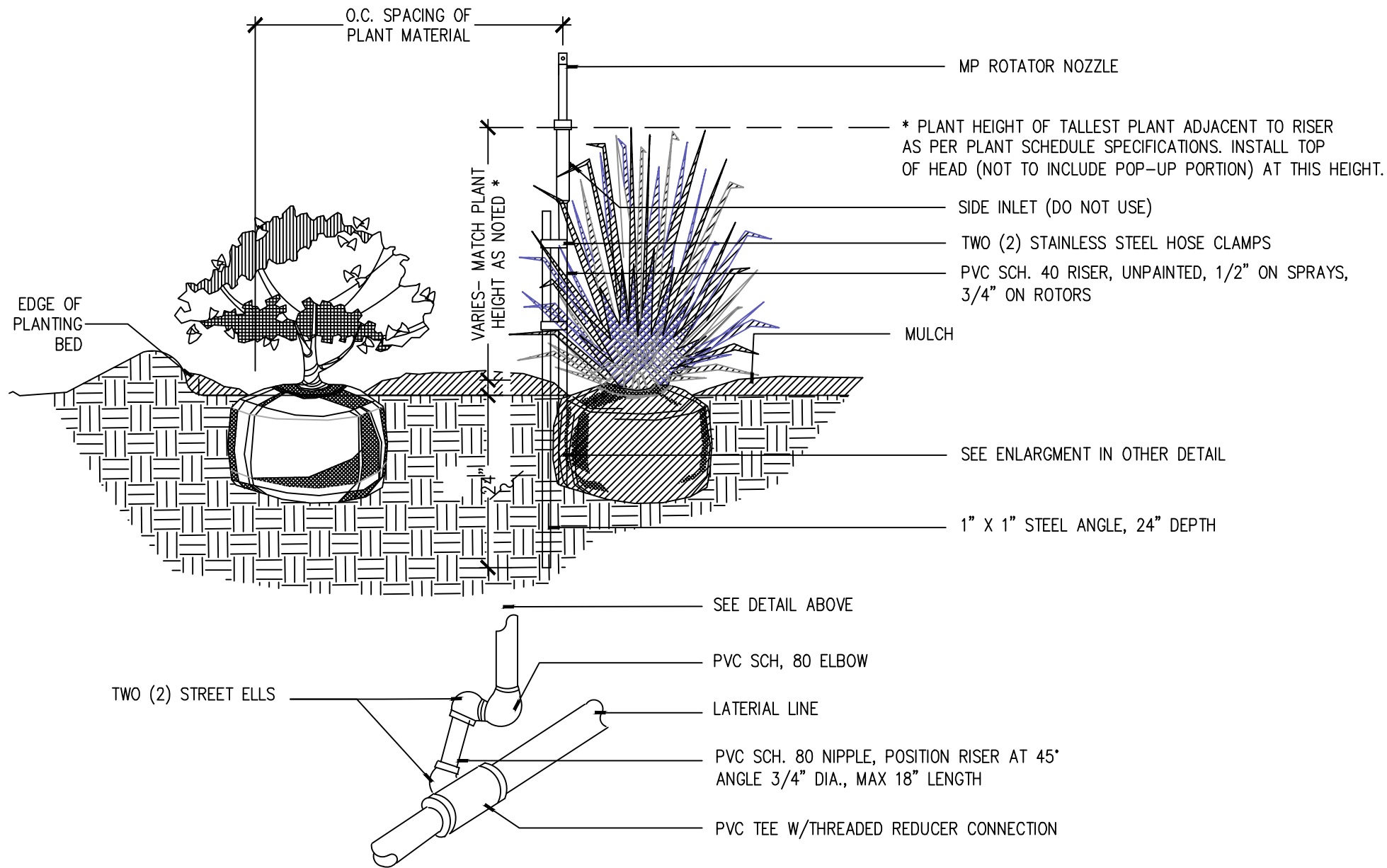


NOTE : INSTALL 2 BUBBLERS PER TREE.  
NOTE : INSTALL BUBBLERS ON OPPOSING SIDES OF TREE BALL.  
NOTE : USE VIRGIN POLYETHYLENE PIPE. NO "FLEX PVC" WILL BE ALLOWED.



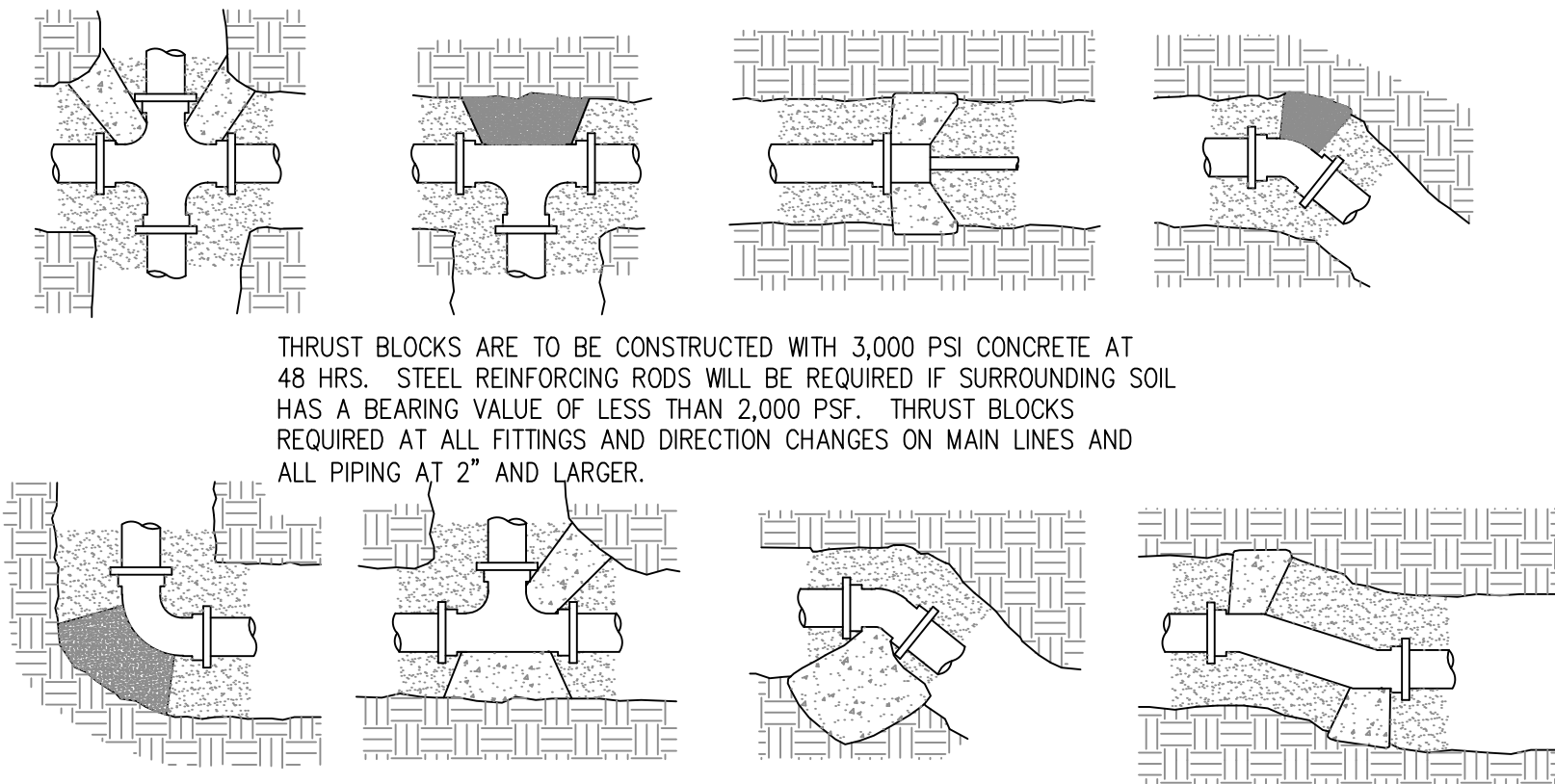
3 SPRAY/ROTOR LAYOUT IN SHRUB BED: PLAN

SCALE: N.T.S.



4 SPRAY/ROTOR LAYOUT IN SHRUB BED: SECTION

SCALE: N.T.S.



THRUST BLOCKS ARE TO BE CONSTRUCTED WITH 3,000 PSI CONCRETE AT 48 HRS. STEEL REINFORCING RODS WILL BE REQUIRED IF SURROUNDING SOIL HAS A BEARING VALUE OF LESS THAN 2,000 PSF. THRUST BLOCKS REQUIRED AT ALL FITTINGS AND DIRECTION CHANGES ON MAIN LINES AND ALL PIPING AT 2" AND LARGER.

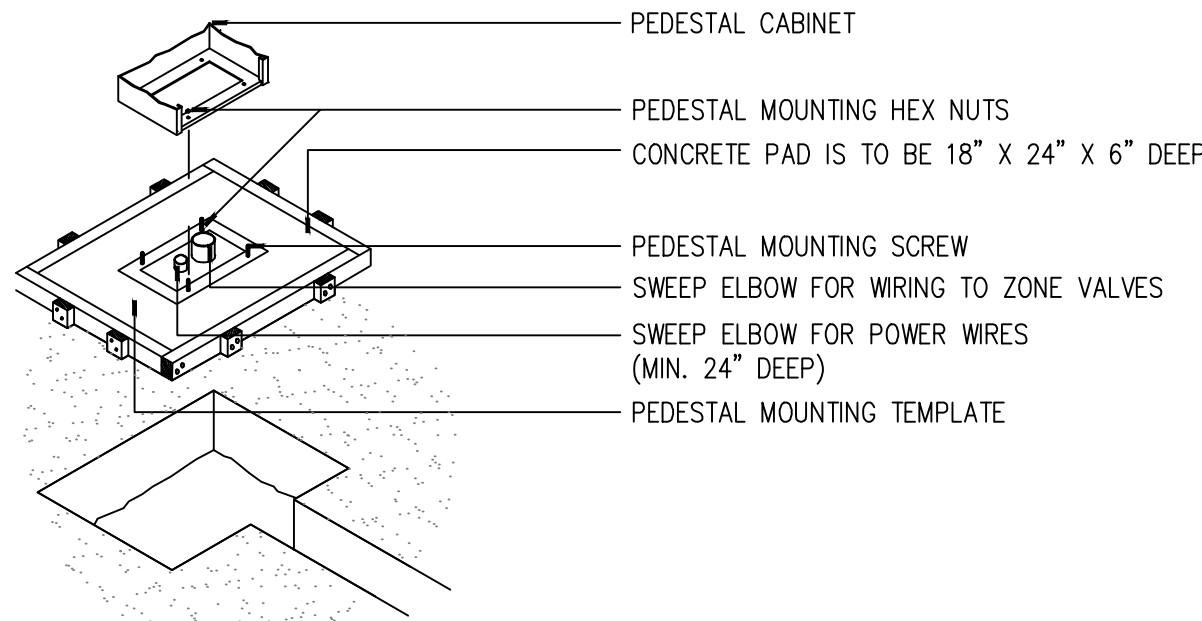
NOTE:

CONNECT CONTROLLER GROUND TO A GROUNDING ELEMENT WITH A MAXIMUM RESISTANCE AS RECOMMENDED BY THE CONTROLLER MANUFACTURER AND NOT MORE THAN 10 OHMS

WIRE PER LOCAL CODES

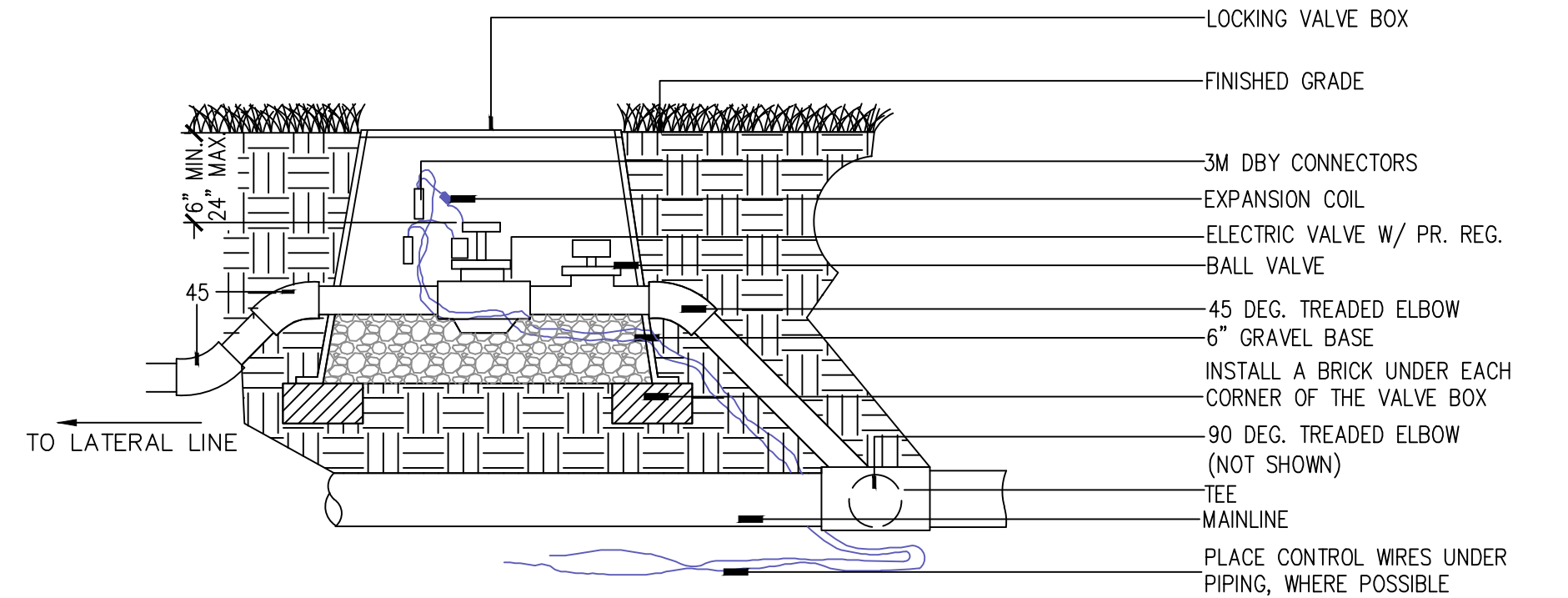
INSTALL WEATHER STATION IN LOCATION IN THE WEATHER

INSTALL A 2" MASTER VALVE AND FLOW SENSOR AT THE POC AND WIRE INTO THE CONTROLLER



6 PEDESTAL MOUNT CONTROLLER INSTALLATION

SCALE: N.T.S.



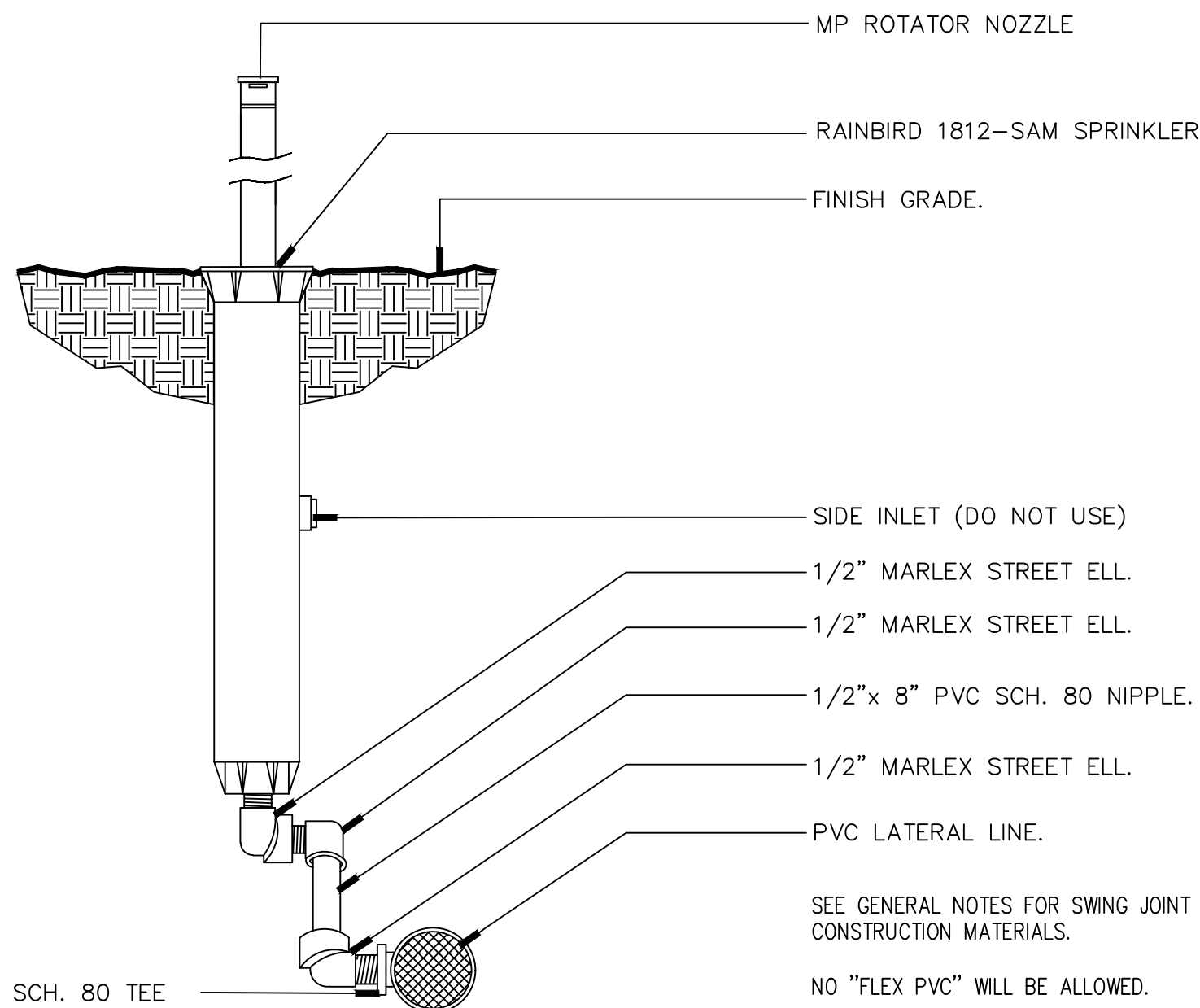
ASSURE THAT ALL CHANGES IN DIRECTION IN THE PIPING ARE THRUST BLOCKED OR RESTRAINED USING MECHANICAL MEANS ACCORDING TO INDUSTRY STANDARDS.

NOTE:  
ALL VALVE BOXES SHALL BE MARKED WITH THE CHRISTY I.D. TAGS OR SUBSTITUTION ACCEPTABLE TO OWNER

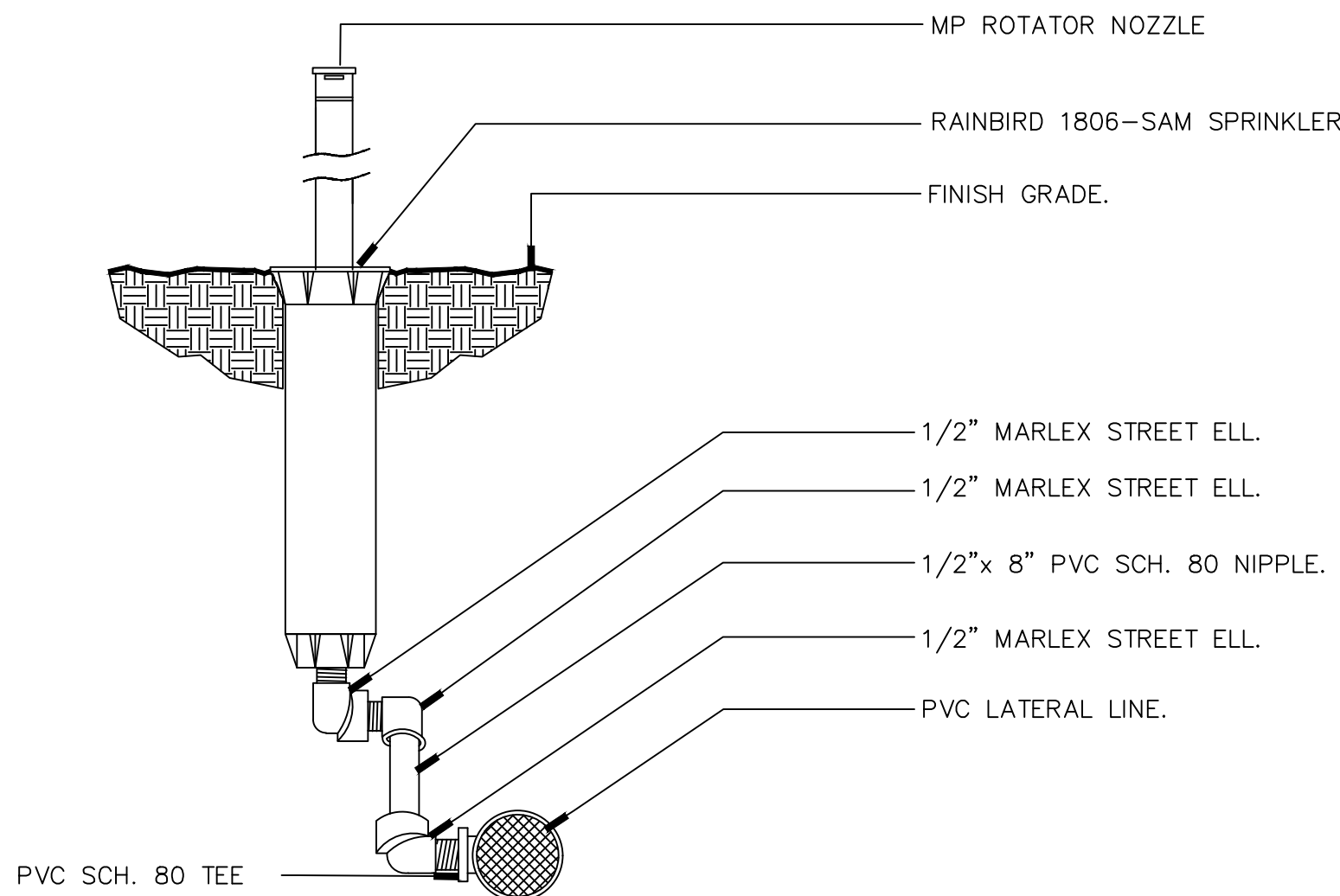
7 ZONE VALVE INSTALLATION

SCALE: N.T.S.

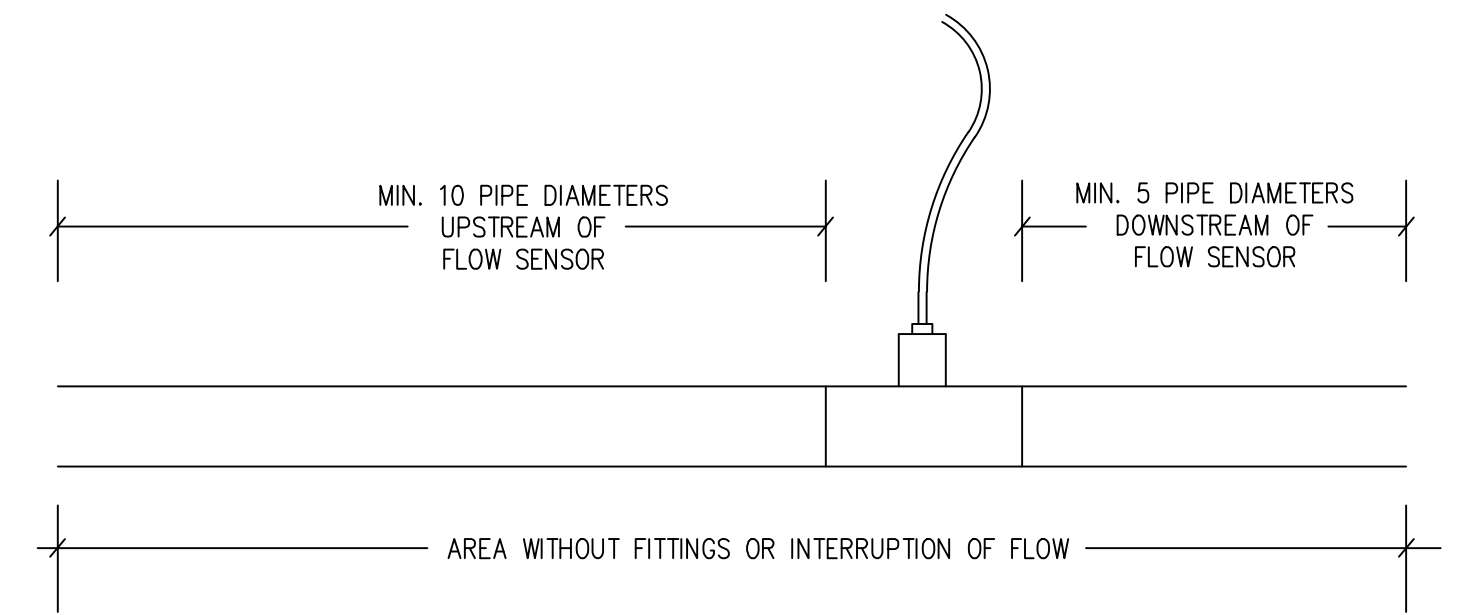




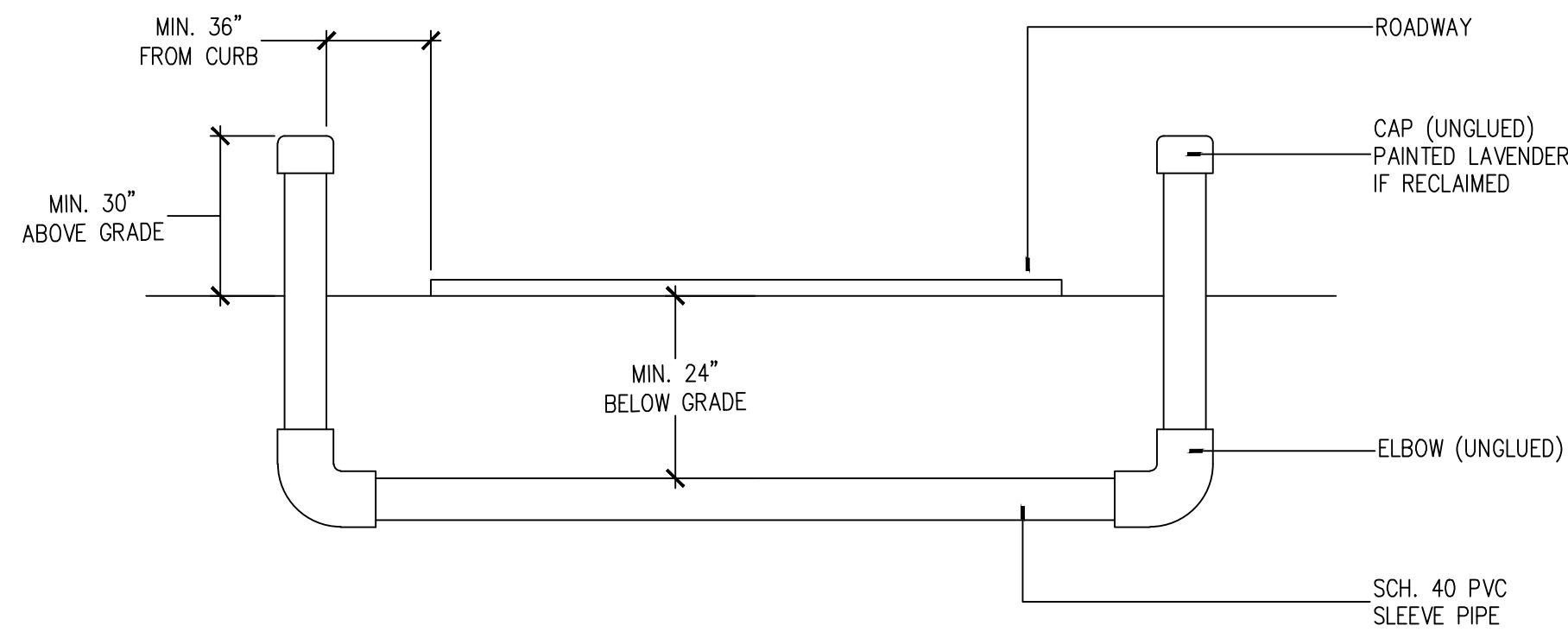
1 12" SPRAY HEAD AT GRADE DETAIL  
SCALE: N.T.S.



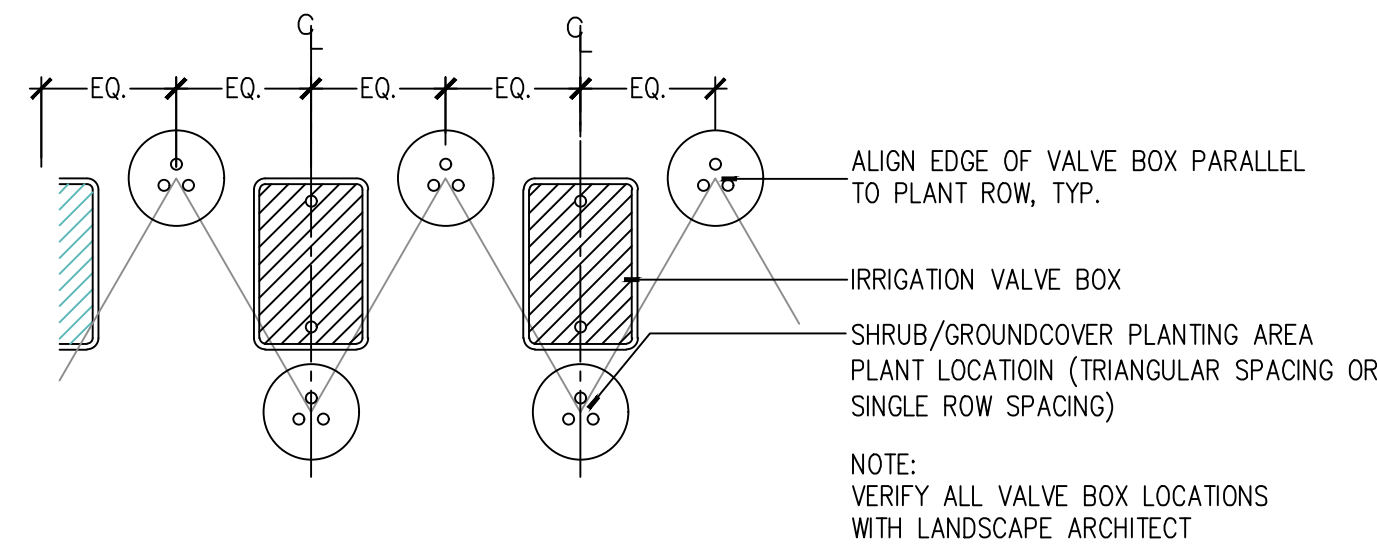
2 6" SPRAY HEAD AT GRADE DETAIL  
SCALE: N.T.S.



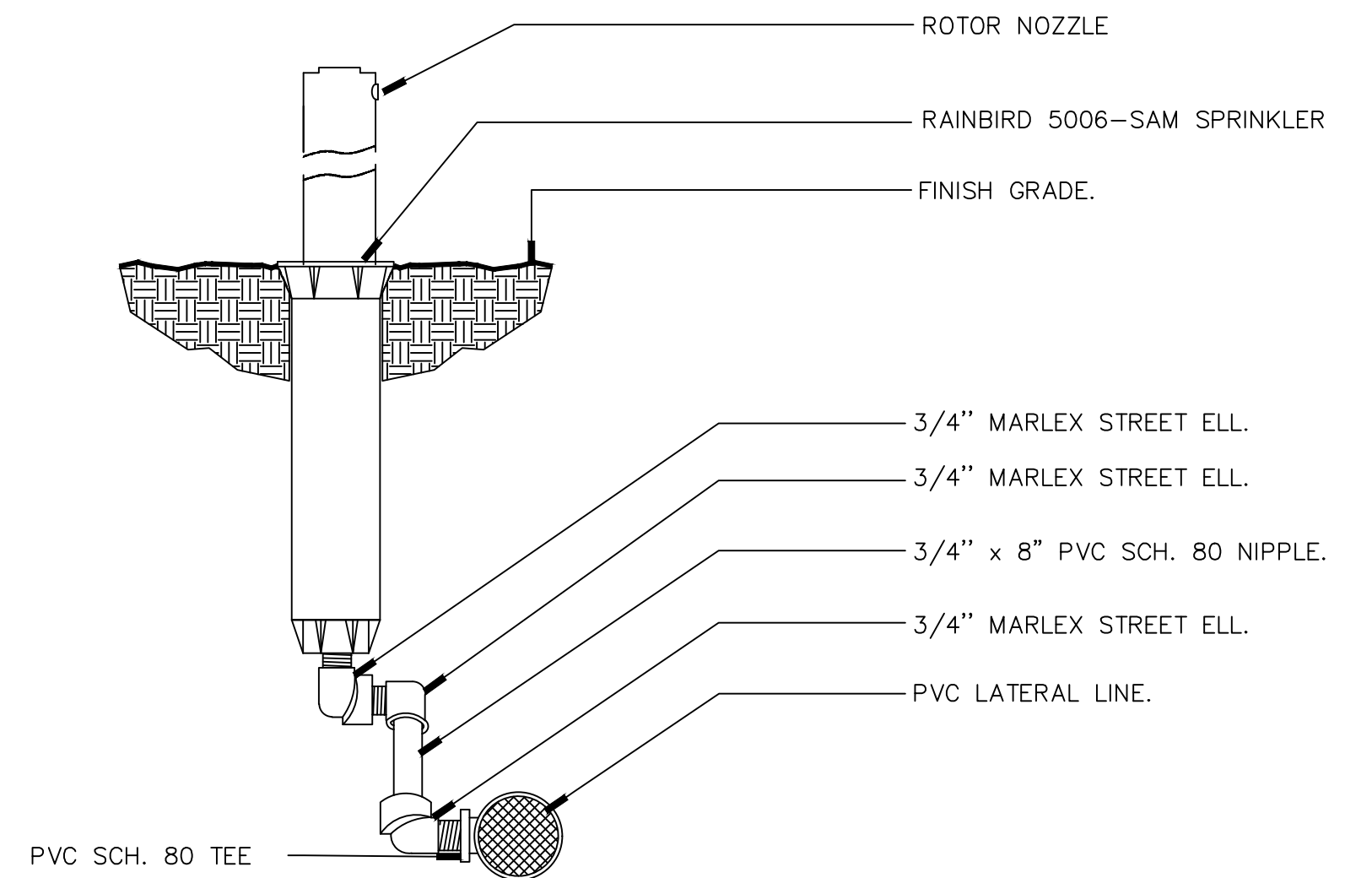
3 FLOW METER MINIMUM DISTANCE SCHEMATIC  
SCALE: N.T.S.



4 SLEEVE DETAIL  
SCALE: N.T.S.



5 TYPICAL VALVE BOX GROUPING  
SCALE: N.T.S.



6 6" ROTOR HEAD AT GRADE DETAIL  
SCALE: N.T.S.



PART 1 – GENERAL

DESCRIPTION

FURNISH ALL MATERIALS, LABOR, EQUIPMENT, TOOLS, AND TRANSPORTATION, UNLESS OTHERWISE SPECIFIED, NECESSARY TO PROVIDE AN AUTOMATIC IRRIGATION SYSTEM FOR LANDSCAPE PLANT MATERIALS AND TURF AND MULCH AREAS.

APPLICABLE STANDARDS

AMERICAN SOCIETY OF AGRICULTURAL ENGINEERS S376.1, "DESIGN, INSTALLATION AND PERFORMANCE OF UNDERGROUND, THERMOPLASTIC IRRIGATION PIPELINES."

ASTM D2774, "UNDERGROUND INSTALLATION OF THERMOPLASTIC PRESSURE PIPING."

ASTM D1785, POLY (VINYL CHLORIDE) (PVC) PLASTIC PIPE, SCHEDULES 40, 80, AND 120.

ASTM D2241 POLY (VINYL CHLORIDE) (PVC) PLASTIC PIPE (SDR–PR).

SUBSTITUTIONS

WHEREVER BRAND NAMES ARE USED IN THESE SPECIFICATIONS, USE ONLY THE BRAND SPECIFIED. MAKE NO SUBSTITUTIONS AS A PART OF THIS BID PACKAGE.

PART 2 – MATERIALS

PIPE

FURNISH ALL UNDERGROUND PIPING AS PVC EXCEPT FOR THE FLEXIBLE POLYETHYLENE (POLY PIPE) PIPING THAT IS TO BE USED BETWEEN THE LATERALS AND SPRINKLER HEADS. ALL MAIN LINE PVC PIPE SHALL BE GASKETED SDR 21 (CL 200) PVC AND ALL ZONE PIPE SHALL BE CL 200 PVC OR BETTER.

SIZE EACH SLEEVE AT LEAST TWICE (2X) THE SIZE OF THE PIPE BEING ROUTED THROUGH IT EXCEPT FOR 6" PIPE WHICH REQUIRES A 10" SLEEVE. INSTALL EACH CONTROL WIRE SLEEVE OF SUFFICIENT SIZE FOR THE REQUIRED NUMBER OF WIRES BEING ROUTED THROUGH IT UNDER THE AREA SPECIFIED. CONSULT WITH THE OWNER OR OWNER'S REPRESENTATIVE FOR THE LOCATION, DEPTH, NUMBER AND SIZE OF ANY AVAILABLE EXISTING SLEEVES.

INSTALL ANY ABOVE GROUND PIPE AS D.I.P. OR GALVANIZED PIPE.

PIPE FITTINGS

FOR MAIN LINE PVC PIPE FITTINGS, USE HARCO D.I.P. GASKETED PUSH–ON FITTINGS AND USE THREADED FITTINGS FOR CONNECTION TO VALVES.

FOR PVC ZONE PIPE, USE SCHEDULE 40, SOLVENT WELD FITTINGS, MANUFACTURED FROM PVC 12454–B COMPOUND AND TESTED IN ACCORDANCE WITH ASTM D2466, EXCEPT FOR THREADED FITTINGS. FOR THREADED APPLICATIONS, USE SCHEDULE 80 FITTINGS MANUFACTURED FROM PVC 12454– B COMPOUND AND TESTED IN ACCORDANCE WITH ASTM D2467.

CONNECT ALL "POLY PIPE" AND RISER ASSEMBLIES TO THE IRRIGATION PIPELINE WITH A SCHEDULE 80 TEE, AS DESCRIBED ABOVE.

DO NOT USE MALE ADAPTERS FOR ANY APPLICATIONS. INSTEAD, USE A "TOE" NIPPLE GLUED INTO A SCHEDULE 40 COUPLER.

SEE DETAILS FOR SPRINKLER TO PIPE CONNECTIONS. NO "FLEX PVC".

SOLVENT CEMENT AND PRIMER

USE A MEDIUM OR HEAVY BODY GRAY SOLVENT CEMENT MANUFACTURED IN ACCORDANCE WITH ASTM D2564 AND PRIMER MANUFACTURED IN ACCORDANCE WITH ASTM F656.

VALVE BOXES

USE 12 X 18 VALVE BOXES FOR ALL APPLICATIONS.

ELECTRIC VALVES

USE RAIN BIRD ELECTRIC VALVES WITH PRESSURE REGULATORS FOR ALL APPLICATIONS.

WEATHER STATION

INSTALL A WEATHER STATION THAT IS COMPATIBLE WITH THE CONTROLLER AND SENSES RAINFALL, TEMPERATURE AND USES ZIP CODE BASED WEATHER INFORMATION. THE WEATHER STATION SHALL USE THE HARGREAVES FORMULA FOR CALCUATION OF THE PRECIPITATION NECESSARY FROM THE INFORMATION GATHERED.

POINT OF CONNECTION

CONNECT TO THE STUBOUT PROVIDED BY THE CITY FOR THE POC.

CONTROLLER

USE A CONTROLLER PER THE LEGEND WITH THE FLOW SENSOR AND WEATHER STATIONCOMPATIBLE WITH THE CONTROLLER FOR THIS SYSTEM.

WIRE

USE U.F. WIRE APPROVED FOR DIRECT BURIAL UNDERGROUND FOR ALL 24 VAC APPLICATIONS.

USE RED #14 AWG WIRE FOR ALL VALVE POWER WIRES.

USE WHITE #14 AWG WIRE FOR ALL VALVE COMMON WIRES.

PART 3 – EXECUTION

A. GENERAL

INSTALL PVC PIPE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. REVIEW CONSTRUCTION PLANS WITH THE OWNER OR OWNER'S REPRESENTATIVE BEFORE ANY WORK BEGINS. THE CONTRACTOR SHALL CONTACT THE LANDSCAPE ARCHITECT/OWNER PRIOR TO INSTALLATION IF THERE IS ANY DOUBT AS TO HEAD LINE OR ZONE PLACEMENT.

INSPECT THE CONSTRUCTION SITE BEFORE ANY WORK BEGINS AND FLAG LOCATIONS OF MAINLINE PIPE, SLEEVES, HEADS AND VALVES FOR REVIEW BY THE LANDSCAPE ARCHITECT/OWNER. FLAGS SHALL BE CLEARLY MARKED OR COLORED TO DESIGNATE THE TYPE OF EQUIPMENT TO BE INSTALLED AT THAT POINT. INSTALLATION SHALL NOT COMMENCE UNTIL THE STAKING/ FLAGGING HAS BEEN APPROVED.

COORDINATE THE INSTALLATION OF THE IRRIGATION SYSTEM WITH THE LANDSCAPE CONTRACTOR TO PROVIDE FOR CORRECT APPLICATION OF WATER TO THE PLANT MATERIAL.

PIPE TRENCH CONSTRUCTION

PROVIDE FOR A MINIMUM DEPTH OF COVER OF 18" FOR ALL MAIN LINE PIPE AND 12" OF COVER FOR ALL ZONE PIPE AS MEASURED FROM FINISHED GRADE.

PROVIDE THE MINIMUM DEPTH OF COVER, AS SPECIFIED ABOVE, OVER THE TOP OF THE PIPE BEFORE THE TRENCH IS WHEEL–LOADED.

GROUNDING

GROUND THE CONTROLLER TO A GROUNDING ELEMENT PER LOCAL ELECTRICAL CODES AND A MINIMUM OF 10 OHMS RESISTENCE..

USE A "CADWELD" CONNECTOR TO CONNECT THE WIRING TO THE GROUNDING ELEMENT.

BACK FILL

PROVIDE INITIAL BACK FILL MATERIAL THAT IS FINE–GRAINED MATERIAL FREE FROM COMPACTED EARTH GREATER THAN TWO INCHES IN DIAMETER, ROCKS, OR STONES.

TAMP THE BACK FILL IN LAYERS NOT TO EXCEED SIX INCHES. LIFT AND COMPACT FIRMLY AROUND THE PIPE AND UP TO AT LEAST SIX INCHES ABOVE THE TOP OF THE PIPE. SUFFICIENTLY MOISTEN THE BACK FILL TO PERMIT THOROUGH COMPACTION UNDER AND ON EACH SIDE OF THE PIPE TO PROVIDE SUPPORT FREE FROM VOIDS. AVOID DEFORMING, DISPLACING, OR DAMAGING PIPE DURING THIS PHASE OF THE OPERATION. ASSURE THAT WHEN FINISHED, THE SOIL COMPACTION EQUALS THE ORIGINAL CONDITION.

FITTING AND PIPE CONNECTIONS

SQUARE CUT, CLEAN AND PRIME ALL JOINTS BEFORE CEMENTING.

FULLY ENGAGE ALL JOINTS WHILE CEMENTING.

PVC FITTINGS – MAKE ALL SOLVENT WELD JOINTS IN ACCORDANCE WITH ASTM D2855. PRIME ALL FITTINGS WITH PURPLE PRIMER BEFORE MAKING SOLVENT WELD CONNECTIONS. ALLOW SOLVENT WELDED JOINTS AT LEAST ONE (1) HOUR TO SET UP BEFORE MOVING OR HANDLING. DO NOT PERMIT WATER IN THE PIPE FOR AT LEAST TWENTY–FOUR HOURS AFTER MAKING A SOLVENT WELD ON THAT PIPE UNLESS RECOMMENDED OTHERWISE BY THE SOLVENT CEMENT MANUFACTURER. SEAL ALL THREADED PVC FITTINGS WITH LIQUID TEFLON EXCEPT SPRINKLER HEADS, ELECTRIC VALVE CONNECTIONS AND SWING JOINTS. INSTALL ALL OF THESE EXCEPTIONS USING ONE INCH TEFLON TAPE.

FLUSHING PIPELINES

FLUSH ALL PIPELINES BEFORE DRIP PIPE IS CONNECTED. MAINTAIN A MINIMUM PIPE VELOCITY OF THREE FEET PER SECOND AND FLUSH FOR A MINIMUM TIME OF:

T = 2L/3 WHERE T = TIME IN SECONDS  
& L = PIPE LENGTH IN FEET FROM INLET POINT TO MOST DISTANT POINT IN PIPELINE.

VALVE INSTALLATION

INSTALL ALL AUTOMATIC ZONE VALVES AND GATE VALVES IN VALVE BOXES. NUMBER EACH ZONE VALVE BOX ON THE UNDERSIDE AND TOPSIDE OF EACH VALVE BOX COVER WITH BLACK WATERPROOF MARKER FOR REFERENCE.

THRUST BLOCKING

THRUST BLOCK PIPING AT ALL CHANGES IN DIRECTION 2" AND LARGER. POUR CONCRETE THRUST BLOCKS SIZED PER INDUSTRY STANDARDS FOR PIPE SIZE, PRESSURE, SOIL TYPE, DEPTH, ETC.

INSTALL A BARRIER (VISQUINE) BETWEEN THE CONCRETE THRUST BLOCK AND THE PIPE AND FITTINGS.

POUR THRUST BLOCKS AGAINST UNDISTURBED SOIL.

INSTALLING ELECTRIC VALVE IDENTIFICATION

ATTACH PERMANENT MARKINGS AT EACH END OF EACH WIRE TO IDENTIFY IT BY VALVE NUMBER.

BEDDING VALVE BOXES

INSTALL 6" OF PEA GRAVEL OR RIVER ROCK IN THE BOTTOM OF EACH VALVE BOX.

INSPECTIONS

THE FOLLOWING INSPECTIONS ARE REQUIRED. NOTIFY OWNER OR OWNER'S REPRESENTATIVE IN ADVANCE THAT EACH ITEM IS READY FOR INSPECTION AS INDICATED BELOW:

INSPECTION OF FLAGGED UNDERGROUND MAINLINE PIPING, SLEEVES, SPRINKLER AND VALVE LOCATIONS PRIOR TO BEGINNING CONSTRUCTION – NOTIFY 48 HOURS IN ADVANCE.

COVERAGE TEST – NOTIFY 48 HOURS IN ADVANCE.

FINAL INSPECTION – NOTIFY 48 HOURS IN ADVANCE.

COVERAGE TESTS – CONDUCT SPRINKLER COVERAGE TESTS UNDER NORMAL OPERATING PRESSURE CONDITIONS BEFORE ANY GROUND COVER OR TURF IS PLANTED. CORRECT AND FIELD ADJUST SPRINKLER ORIENTATION TO PROVIDE UNIFORM PRECIPITATION OVER THE IRRIGATED AREA AND MINIMIZE OVER SPRAY ONTO PAVED SURFACES AND BUILDINGS.

SUBMITTALS

THE CONTRACTOR SHALL PROVIDE SUBMITTTALS FOR EACH OF THE FOLLOWING :

POINT OF CONNECTION ASSEMBLY ITEMS, INCLUDING BFP  
VALVES  
FLOW SENSOR  
GATE VALVES  
EACH TYPE OF ELECTRIC VALVE  
QUICK COUPLING VALVE  
QUICK COUPLING KEY AND HOSE SWIVEL ASSEMBLY  
ISOLATION BALL VALVE  
MAIN LINE PIPING  
ZONE PIPING  
SLEEVES  
MAIN LINE FITTINGS  
ZONE PIPE FITTINGS  
EACH SPRINKLER CONNECTION TYPE  
EACH SPRINKLER TYPE  
EACH SPRINKLER NOZZLE  
BUBBLERS  
GROUNDING ITEMS  
CONTROLLER  
WEATHER STATION  
WEATHER STATION MOUNTING (SHOP DRAWING)

WARRANTY

THE CONTRACTOR SHALL ISSUE TO THE OWNER OR OWNER'S REPRESENTATIVE A CERTIFICATE OF WARRANTY OF THE IRRIGATION SYSTEM FOR A PERIOD OF NOT LESS THAN ONE YEAR ON ALL SPRINKLERS, VALVES, THE CONTROLLER, AND HIS LABOR.

DRAWING OF RECORD

THE CONTRACTOR SHALL SUPPLY TO THE OWNER A DRAFTED, SCALED, REPRODUCIBLE PLAN SHOWING ALL CHANGES MADE TO THE EXISTING IRRIGATION SYSTEM AND ALL NEWLY INSTALLED COMPONENTS INCLUDING ALL SPRINKLERS, INCLUDING BODY TYPES AND NOZZLES, PIPE, INCLUDING SIZE AND THE ENDS OF SLEEVE LOCATIONS AS MEASURED FROM AT LEAST TWO FIXED OBJECTS, CONTROLLER, AND WIRE ROUTING. THIS PLAN MAY BE AN ADAPTATION OF THE IRRIGATION DESIGN WITH ANY CHANGES DRAFTED ON THIS PLAN. THE DRAWING SHALL ALSO PROVIDE A MINIMUM OF TWO (2) DIMENSIONS TAKEN FROM FIXED OBJECTS TO EACH AUTOMATIC VALVE AND MANUAL CONTROL VALVE.

ADDITIONAL SUBMITTALS

SUPPLY TO THE OWNER ALL INSTRUCTION SHEETS AND PARTS LISTS COVERING ALL OPERATING AND ELECTRICAL–RELATED EQUIPMENT, BOUND IN ONE FOLDER. FURNISH THE OWNER WITH ANY KEYS FOR LOCKABLE ITEMS ON THIS SYSTEM.

QUICK COUPLING KEY AND HOSE SWIVEL

PROVIDE THE OWNER WITH A QUICK COUPLING KEY THAT CORRESPONDS TO THE QUICK COUPLING VALVES AND WITH A HOSE SWIVEL ASSEMBLY BUILT ONTO THE QUICK COUPLING KEY.

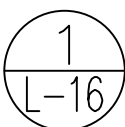
MISCELLANEOUS

ANY IRRIGATION ITEMS NORMALLY INSTALLED IN LANDSCAPE AREAS THAT ARE SHOWN OUTSIDE OF LANDSCAPE AREAS OR OUTSIDE OF THE PROPERTY LINES ARE SHOWN AS SUCH FOR GRAPHIC CLARITY ONLY. INSTALL THESE ITEMS INSIDE OF PROPERTY LINES AND IN LANDSCAPE AREAS. CONTACT THE OWNER OR LANDSCAPE ARCHITECT PRIOR TO INSTALLATION IF IN ANY DOUBT OF HEAD, LINE OR ZONE PLACEMENT.

ASSURE THAT THE SYSTEM PROVIDES 100% COVERAGE OF ALL LANDSCAPED AREAS. REPORT ANY DISCREPANCIES TO THE LANDSCAPE ARCHITECT BEFORE COMMENCING WITH THE INSTALLATION.

ALL APPLICABLE CODES SHALL TAKE PRECEDENCE OVER THESE PLANS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH ALL APPLICABLE CODES.

THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO MAKE MINOR FIELD CHANGES.



SPECIFICATIONS

SCALE: N/A