

LANDSCAPE ARCHITECTURAL DRAWINGS VILLAGE POND PARK



NOTES

PLANS WERE DESIGNED BY REFERENCING:

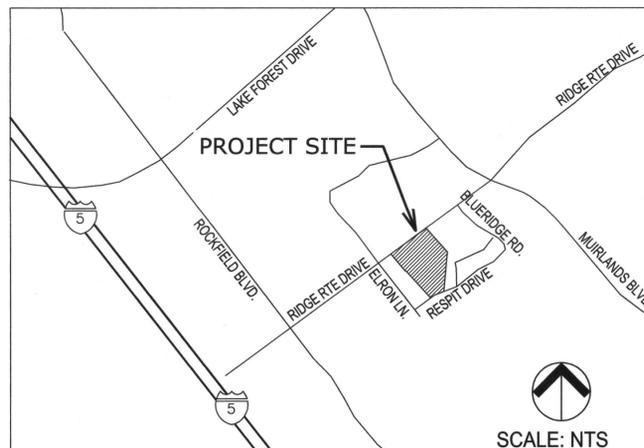
- | | |
|--|------------|
| 1. GRADING PLANS PREPARED BY VA CONSULTING INC. | 07/02/2015 |
| 2. GEOTECHNICAL REPORTS PREPARED BY CONVERSE CONSULTANTS | 05/31/2016 |
| 3. AGRICULTURAL SUITABILITY REPORT PREPARED BY A&L WESTERN AGRICULTURAL LABS | 03/04/2016 |

LANDSCAPE DOCUMENTATION PACKAGE CONTAINS THE FOLLOWING:

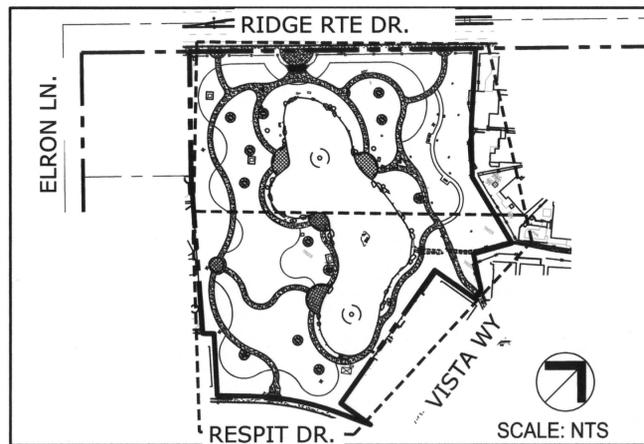
1. PROJECT INFORMATION REFER TO SHEET L-1
2. WATER EFFICIENT LANDSCAPE WORKSHEET REFER TO IRRIGATION PLANS
3. CONSTRUCTION PLAN NOTES, SHEETS L-5, L-6
4. PLANTING PLAN SHEETS L-17, L-18
5. IRRIGATION PLAN SHEETS L-11, L-12
6. GRADING PLAN NOTES, SHEETS C-1 THRU C-3

CITY OF LAKE FOREST

LOCATION MAP



KEY MAP



GENERAL NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE MUNICIPAL CODE ADOPTED BY THE CITY OF LAKE FOREST AND ANY SPECIAL REQUIREMENTS OF THE PERMIT.
2. THE DEVELOPER/CONTRACTOR SHALL KEEP A COPY OF THE CURRENT OC PUBLIC WORKS STANDARD PLANS ON THE CONSTRUCTION SITE AT ALL TIMES. http://ocpublicworks.com/about/oc_public_works_standard_plans
3. THE DEVELOPER/CONTRACTOR SHALL NOTIFY THE CITY OF LAKE FOREST'S PUBLIC WORKS OBSERVER AT (949) 461-3494 AT LEAST TWO WORKING DAYS (MINIMUM OF 48 HOURS) PRIOR TO STARTING CONSTRUCTION WORK WHICH REQUIRES PUBLIC WORKS' INSPECTION.
4. A CITY OF LAKE FOREST ENCROACHMENT PERMIT SHALL BE REQUIRED TO PERFORM WORK WITHIN THE PUBLIC RIGHT-OF-WAY. CITY APPROVED PLANS DO NOT RELIEVE THE CONTRACTOR AND/OR DEVELOPER FROM RESPONSIBILITY TO OBTAIN AN ENCROACHMENT PERMIT. A COPY OF THE PERMIT SHALL BE KEPT ON THE CONSTRUCTION SITE AT ALL TIMES.
5. ALL CONCRETE CURB AND GUTTER FLOWLINES WITH LESS THAN 1% GRADE SHALL BE WATER TESTED PRIOR TO FINAL FINISHING TO ENSURE PROPER DRAINAGE WITHOUT UNACCEPTABLE HIGH OR LOW SPOTS.
6. ALL UTILITY TRENCH BACKFILL AND COMPACTION INSPECTION OUTSIDE THE LIMITS OF DEDICATED STREET RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH CITY REGULATIONS.
7. ALL DAMAGED CONCRETE SIDEWALKS OR CURBS SHALL BE SAW-CUT TO THE NEAREST TRANSVERSE SCORE MARK, OR ADJUSTABLE CONTROL JOINT, OR WEAKENED PLANE JOINT AND REPLACED IN CONFORMANCE WITH THE APPLICABLE PROVISIONS OF OC PUBLIC WORKS STANDARD PLANS.
8. THE DEVELOPER/CONTRACTOR SHALL MAINTAIN ADJACENT STREETS IN A NEAT, CLEAN, DUST FREE AND SANITARY CONDITION AT ALL TIMES AND TO THE SATISFACTION OF CITY'S INSPECTOR. THE ADJACENT STREETS SHALL BE KEPT CLEAN OF DEBRIS, WITH DUST AND OTHER NUISANCE BEING CONTROLLED AT ALL TIMES. DEVELOPER SHALL BE RESPONSIBLE FOR ANY CLEAN UP ON ADJACENT STREETS AFFECTED BY HIS CONSTRUCTION. METHOD OF STREET CLEANING SHALL BE BY DRY SWEEPING OF ALL PAVED AREAS. NO STOCK PILING OF BUILDING MATERIALS WILL BE ALLOWED WITHIN THE PUBLIC RIGHT-OF-WAY WITHOUT THE PERMISSION OF CITY'S PUBLIC WORKS OBSERVER.
9. PRIOR TO FINAL ACCEPTANCE OF STREET IMPROVEMENTS, ALL STREET PAVEMENT, STRIPING AND PAVEMENT MARKINGS WITHIN THE PERIMETER OF THE CONSTRUCTION PROJECT WILL BE RESTORED TO A LIKE NEW CONDITION, AND IN A MANNER MEETING THE APPROVAL OF THE DIRECTOR OF PUBLIC WORKS/CITY ENGINEER OR HIS AUTHORIZED REPRESENTATIVE. ALL STRIPING AND PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH OC PUBLIC WORKS STANDARD PLAN NO.1801, NOTE 17.
10. TRAFFIC FLOWS SHALL BE MAINTAINED AT ALL TIMES AND PROTECTED WITH ADEQUATE BARRICADES, LIGHTS, SIGNS AND WARNING DEVICES IN ACCORDANCE WITH CURRENT STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION, TRAFFIC MANUAL AND TO THE SATISFACTION OF THE CITY'S PUBLIC WORKS OBSERVER.
11. THE OC PUBLIC WORKS STANDARD PLANS SHALL TAKE PRECEDENCE OVER ANY STANDARDS EXCEPT FOR STANDARD PLANS AFFECTING UTILITY COMPANIES THAT ARE MORE STRINGENT, THEN THE UTILITY COMPANY STANDARD PLANS SHALL TAKE PRECEDENCE.
12. ANY UTILITIES UNDER PAVED AREAS OF PRIVATE STREETS SHALL HAVE A MINIMUM OF 30" COVER AND DEVELOPER SHALL PROVIDE PRIVATE LABORATORY COMPACTION CERTIFICATION FOR ALL UNDERGROUND UTILITIES PRIOR TO ANY PAVING. DEVELOPER SHALL SCHEDULE A MEETING WITH THE INSPECTOR AND THE PRIVATE LABORATORY PRIOR TO ANY TESTING.
13. NO CONCENTRATED FLOWS ARE PERMITTED ACROSS ASPHALT PAVEMENT WITHOUT APPROVAL FROM THE CITY'S PUBLIC WORKS OBSERVER.
14. WHEREVER EXISTING PAVEMENT JOINS ANY PROPOSED PAVEMENT, THE CONTRACTOR SHALL SAW-CUT AND REMOVE EXISTING ASPHALT CONCRETE AND COLD PLANE A MINIMUM OF 5 FEET OR AS REQUIRED TO OBTAIN A 1 1/2" MINIMUM THICKNESS AND OVERLAY WITH C2-AR4000 PAVEMENT AS NECESSARY.
15. ROADWAY STRUCTURAL SECTION SHALL BE DETERMINED BY SOILS TESTS. THE CITY'S SOILS ENGINEER SHALL PERFORM SUCH TESTS AFTER STREET HAS BEEN ROUGH GRADED AND SHALL SUBMIT TO THE DIRECTOR OF PUBLIC WORKS/CITY ENGINEER, THE RECOMMENDED ROADWAY STRUCTURAL SECTION, BASED ON THE TRAFFIC INDEX ESTABLISHED BY THE CITY. THE DIRECTOR OF THE PUBLIC WORKS/CITY ENGINEER'S APPROVAL SHALL BE OBTAINED PRIOR TO BEGINNING THE CONSTRUCTION OF THE ROADWAY STRUCTURAL SECTION. THIS PLAN MUST SHOW THE ACTUAL ROADWAY STRUCTURAL SECTION TO BE CONSTRUCTED.
16. STATE LAW SB 3019 REQUIRES THE CONTRACTOR TO OBTAIN AN IDENTIFICATION NUMBER FROM UNDERGROUND SERVICE ALERT (USA) PRIOR TO THE ISSUANCE OF A CITY ENCROACHMENT PERMIT. THE CONTRACTOR SHALL NOTIFY USA TWO FULL WORKING DAYS (48 HOURS MINIMUM) PRIOR TO ANY CONSTRUCTION ACTIVITIES, INCLUDING PAVEMENT REMOVAL, EXCAVATION AND ASPHALT CONCRETE OVERLAY, WHICH COULD AFFECT ANY UNDERGROUND UTILITY.
17. ANY CONTRACTORS PERFORMING WORK ON THIS PROJECT SHALL FAMILIARIZE THEMSELVES WITH THE SITE AND SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING FACILITIES RESULTING DIRECTLY OR INDIRECTLY FROM THEIR OPERATIONS, WHETHER OR NOT SUCH FACILITIES ARE SHOWN ON THE PLANS.
18. PRIOR TO BEGINNING CONSTRUCTION WORK WHICH COULD DAMAGE OR CONFLICT WITH UNDERGROUND STRUCTURES OR UTILITIES, THE CONTRACTOR SHALL EXCAVATE INSPECTION HOLES TO DETERMINE THE LOCATION AND DEPTH OF SAID STRUCTURES AND UTILITIES.
19. IF EXISTING UTILITIES OR OTHER FACILITIES CONFLICT WITH THE PROPOSED IMPROVEMENTS, WORK SHALL STOP AND THE DIRECTOR OF PUBLIC WORKS/CITY ENGINEER OR HIS AUTHORIZED REPRESENTATIVE SHALL BE NOTIFIED IMMEDIATELY.
20. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY DAMAGED OR ALTERED EXISTING IMPROVEMENTS WITHIN THE PUBLIC RIGHT-OF-WAY AS DIRECTED BY THE DIRECTOR OF PUBLIC WORKS/CITY ENGINEER OR HIS AUTHORIZED REPRESENTATIVE.
21. THE CONTRACTOR SHALL MAINTAIN DUST CONTROL AT ALL TIMES.
22. SURVEY MONUMENTS SHALL BE PROTECTED AND PERPETUATED IN PLACE. DISTURBED OR COVERED MONUMENTS SHALL BE RESET BY A REGISTERED CIVIL ENGINEER, WHO IS AUTHORIZED TO PRACTICE LAND SURVEYING, OR A LICENSED LAND SURVEYOR.
23. IRRIGATION LINES SHALL BE REMOVED, RELOCATED OR RECONSTRUCTED AS SHOWN OR AS DIRECTED IN THE FIELD, BY THE DIRECTOR OF PUBLIC WORKS/CITY ENGINEER OR HIS AUTHORIZED REPRESENTATIVE.
24. NEW AND EXISTING MANHOLES AND WATER VALVES SHALL BE ADJUSTED TO GRADE.
25. UTILITIES SHALL BE INSTALLED, TESTED, AND APPROVED PRIOR TO STREET PAVING. THE CONTRACTOR SHALL CONTACT THE APPROPRIATE SERVING UTILITY COMPANY AND VERIFY THAT THE UTILITY FACILITY IS IN PLACE BEFORE PAVING.
26. TRENCH BACKFILL SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARD PROVISIONS LISTED ON THE ENCROACHMENT PERMIT.
27. THE CONTRACTOR SHALL NOT ORDER OR PLACE ANY CONCRETE OR ASPHALT CONCRETE PAVING UNTIL THE FORMS AND SUBGRADE OR AGGREGATED BASE HAVE BEEN INSPECTED AND APPROVED BY THE DIRECTOR OF PUBLIC WORKS/CITY ENGINEER OR HIS AUTHORIZED REPRESENTATIVE IN THE FIELD.
28. THE CONTRACTOR SHALL REMOVE AND REPLACE, IN KIND, A MINIMUM OF TWO FEET OF EXISTING ASPHALT CONCRETE AND AGGREGATE BASE ADJACENT TO NEWLY CONSTRUCTED CURB AND GUTTER.
29. THE FINAL OR SURFACE LAYER OF ASPHALT CONCRETE SHALL NOT BE PLACED UNTIL ALL ON-SITE IMPROVEMENTS, INCLUDING GRADING HAVE BEEN COMPLETED AND ALL UNACCEPTABLE WORK HAS BEEN CORRECTED UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF PUBLIC WORKS/CITY ENGINEER OR HIS AUTHORIZED REPRESENTATIVE.
30. THE CONTRACTOR IN ACCORDANCE WITH THE ADOPTED CITY STANDARD SHALL FURNISH STREET NAME SIGNS AND STOP SIGNS.
31. "AS-BUILT" RECORD DRAWINGS SHALL BE FURNISHED TO THE CITY UPON COMPLETION OF CONSTRUCTION.
32. APPROVAL OF THESE PLANS BY THE CITY OR ITS AGENT SHALL NOT RELIEVE THE CONTRACTOR OR THE APPLICANT FROM THE RESPONSIBILITY FOR THE CORRECTION OF ERRORS OR OMISSIONS DISCOVERED DURING CONSTRUCTION. UPON REQUEST, THE APPROPRIATE REVISIONS SHALL BE SUBMITTED TO THE DIRECTOR OF PUBLIC WORKS/CITY ENGINEER FOR REVIEW AND APPROVAL.

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PLAN LOG:

JULY, 2015 - PERMIT ISSUE #1

GOVERNING AGENCY

CITY OF LAKE FOREST
DEPARTMENT OF PUBLIC WORKS
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CONTACT PERSON: DOUGLAS ERDMAN, P.E.

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CD DESIGN GROUP
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COSTA MESA, CALIFORNIA
(949) 387-8476

DATE 10/10/16

SCALE N/A

DRAWN BY DL

CHECKED BY TM

REVISIONS/PLAN LOG

REVISED PER ADDENA No. 1

PROJECT AND CLIENT NAME

VILLAGE POND
PARK

LAKE FOREST, CA

CITY OF LAKE FOREST
25550 COMMERCENTRE DRIVE
SUITE 100
PHONE (949) 461-3420

SHEET DESCRIPTION

COVER SHEET



LANDSCAPE ARCHITECTURE
AND PLANNING

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SHEET NUMBER L-1 of 44

PROJECT NUMBER 13-237.03

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PLANS APPROVED BY THE
CITY OF LAKE FOREST

THOMAS E. WHEELER, P.E.
CITY ENGINEER / DIRECTOR OF PUBLIC WORKS

10/12/16

DATE



DATE 10/10/16
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VILLAGE POND PARK
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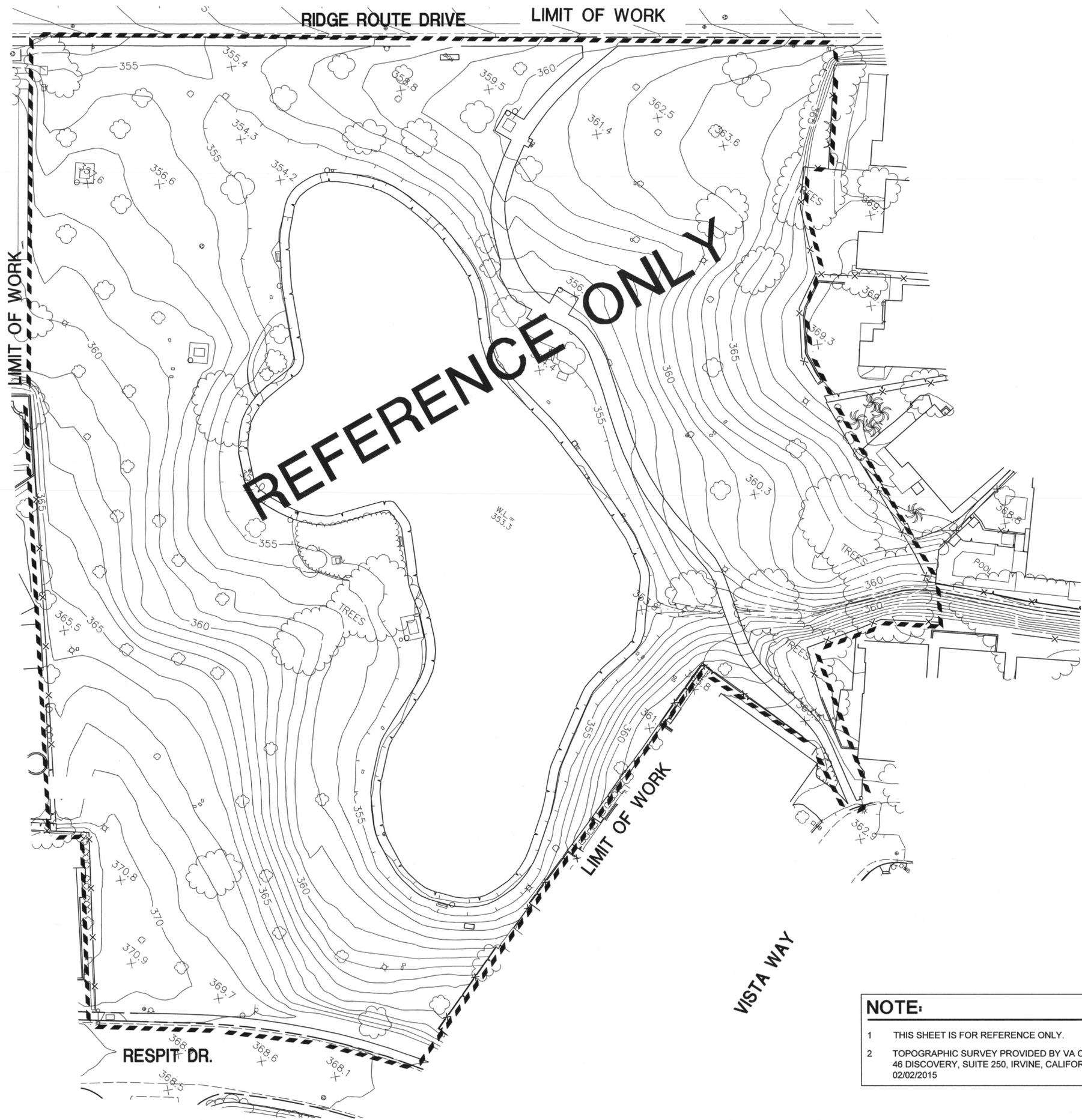


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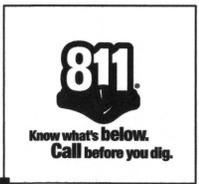
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NOTE:
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 2 TOPOGRAPHIC SURVEY PROVIDED BY VA CONSULTING, INC.
 46 DISCOVERY, SUITE 250, IRVINE, CALIFORNIA 92618
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PROJECT AND CLIENT NAME
VILLAGE POND PARK
 LAKE FOREST, CA

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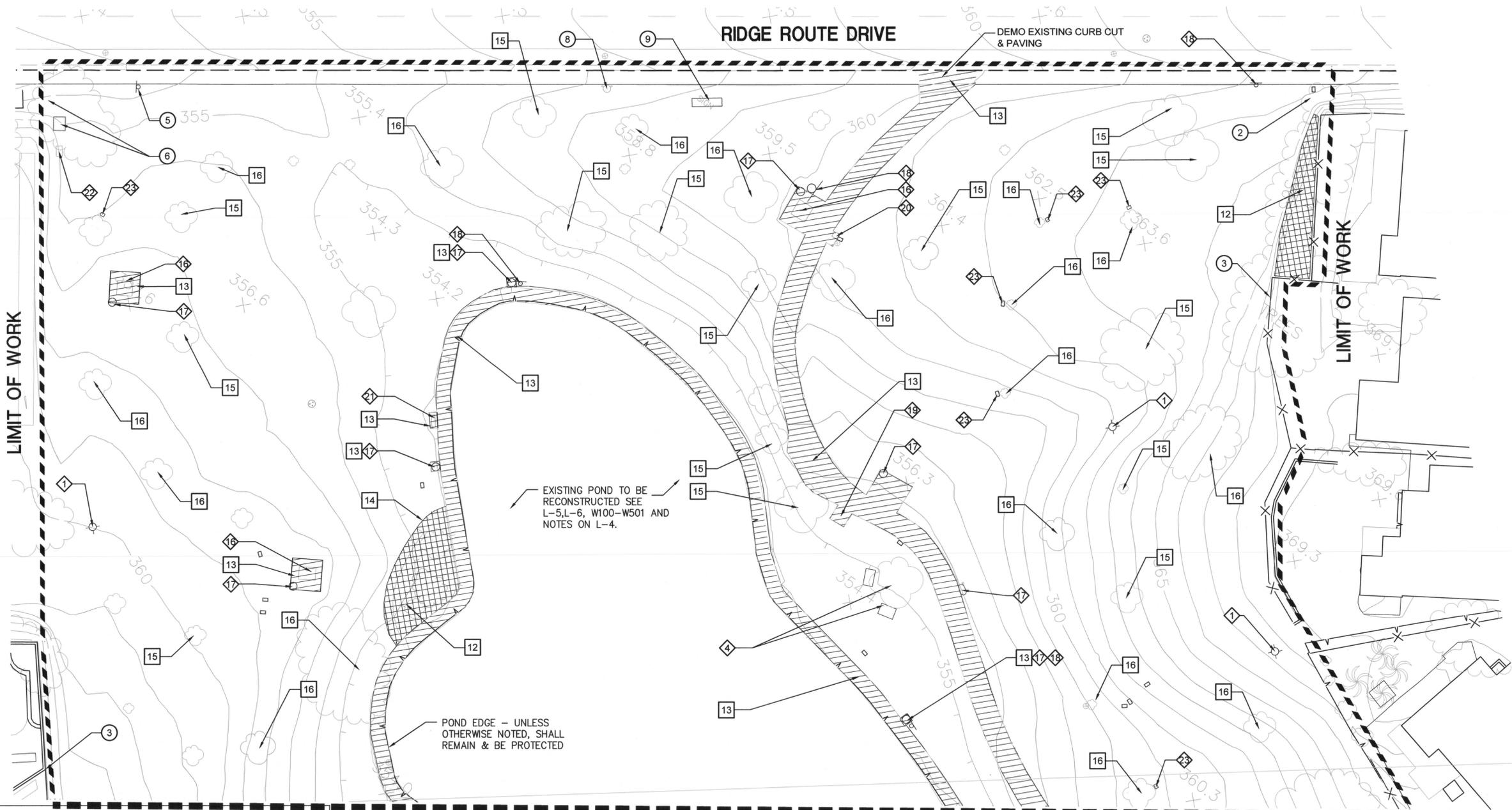
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DEMOLITION PLAN



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MATCHLINE, SEE SHEET L-4

- NOTES**
- SALVAGED ITEMS SHALL BE DELIVERED BY CONTRACTOR TO LOCATION REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
 - UNLESS OTHERWISE NOTED, ALL EXISTING TREES SHALL REMAIN AND BE PROTECTED.
 - REFER TO SHEET L-4 NOTES FOR INFORMATION REGARDING DRAINAGE OF POND.
 - CONTRACTOR SHALL INCLUDE IN THEIR BID A LINE ITEM FOR APPROXIMATELY 1,000 LF OF TEMPORARY CONSTRUCTION FENCE & TWO (2) SETS OF DOUBLE GATES. EXACT LIMITS SHALL BE VERIFIED & APPROVED BY ENGINEER PRIOR TO CONSTRUCTION. BID SHALL INCLUDE CHAIN, MASTER LOCK & KEYS FOR EACH GATE SET.
 - TREES BEING DEMOLISHED & REMOVED SHALL BE REVIEWED AND APPROVED PRIOR TO CONSTRUCTION WITH AUTHORIZED CITY REPRESENTATIVE FOR RELOCATION TO LOCATIONS SHOWN ON PLANTING PLANS. CONTRACTOR SHALL ALLOW FOR THE RELOCATION OF 30 TREES AND MEMORIAL PLAQUES IN THEIR BID.

SYMBOL LEGEND

- LIMIT OF WORK LINE
- RIGHT-OF-WAY LINE
- x 3335 EXISTING SPOT ELEVATION
- 3332 EXISTING CONTOUR LINES
- EXISTING CURB OR EDGE OF PAVEMENT
- EXISTING WALK
- EXISTING WALL & FENCE
- EXISTING WASTE RECEPTACLE
- EXISTING FIRE HYDRANT
- EXISTING LIGHT POLE
- EXISTING SIGN
- EXISTING TREE
- EXISTING MANHOLE
- EXISTING ELECTRIC BOX

DEMOLITION LEGEND

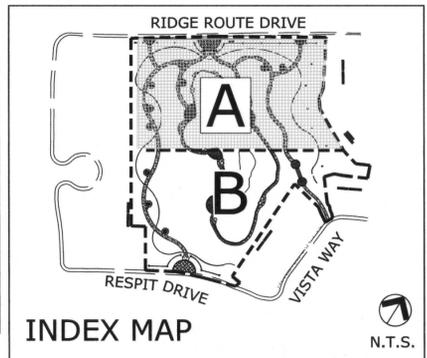
SYM.	QTY.	DESCRIPTION
◇	8 EA	RELOCATE / SALVAGE EXISTING LIGHT POLES
②	1 EA	PROTECT IN PLACE EXISTING BACKFLOW AND CAGE
③	-	PROTECT IN PLACE EXISTING WALL/FENCE
◇	1 EA	EXISTING BENCHES, TREE, & PLAQUE SHALL REMAIN & BE PROTECTED IN PLACE
⑤	1 EA	PROTECT IN PLACE EXISTING EXISTING DUCK X-ING SIGN
⑥	2 EA	PROTECT IN PLACE EXISTING ELECTRICAL BOX
⑦	-	PROTECT IN PLACE EXISTING CONCRETE GUTTER/CREEK
⑧	2 EA	PROTECT IN PLACE EXISTING FIRE HYDRANT
⑨	1 EA	PROTECT IN PLACE EXISTING PARK MONUMENT SIGN
◇	1 EA	RELOCATE / SALVAGE EXISTING CITY OF LAKE FOREST PARK RULES SIGN
⑪	1 EA	PROTECT IN PLACE EXISTING RECIRCULATING WATER PUMP OUTLET
■	-	DEMOLITION AND REMOVE EXISTING PLANTING MATERIAL

DEMOLITION LEGEND

SYM.	QTY.	DESCRIPTION
■	-	DEMOLITION AND REMOVE EXISTING CONCRETE PAVING
■	-	DEMOLITION AND REMOVE EXISTING CONCRETE MOW CURB
■	21 EA	DEMOLITION AND REMOVE EXISTING TREE
■	30 EA	RELOCATE EXISTING TREES TO LOCATIONS ON PLANTING PLANS
◇	4 EA	RELOCATE / SALVAGE EXISTING PICNIC BENCH
◇	12 EA	RELOCATE / SALVAGE EXISTING WASTE RECEPTACLE
◇	5 EA	RELOCATE / SALVAGE EXISTING PARK SIGN
◇	1 EA	RELOCATE / SALVAGE EXISTING BIKE RACK
◇	1 EA	RELOCATE / SALVAGE EXISTING WATER FOUNTAIN. CAP EXISTING WATERLINE AS NECESSARY
◇	2 EA	RELOCATE / SALVAGE EXISTING BENCH
◇	1 EA	RELOCATE / SALVAGE EXISTING IRRIGATION CONTROLLER
◇	5 EA	RELOCATE EXISTING MEMORIAL PLAQUES TO LOCATIONS ON CONSTRUCTION PLANS
■	1 EA	DEMOLITION AND REMOVE EXISTING PEDESTRIAN BRIDGE

DEMO SYMBOL LEGEND

- ② PROTECT IN PLACE
- DEMO / REMOVE
- ◇ RELOCATE / SALVAGE



MATCHLINE, SEE SHEET L-3



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REVISIONS/PLAN LOG
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PROJECT AND CLIENT NAME
VILLAGE POND PARK
 LAKE FOREST, CA

CITY OF LAKE FOREST
 25550 COMMERCENTRE DRIVE
 SUITE 100
 PHONE (949) 461-3420

SHEET DESCRIPTION
DEMOLITION PLAN

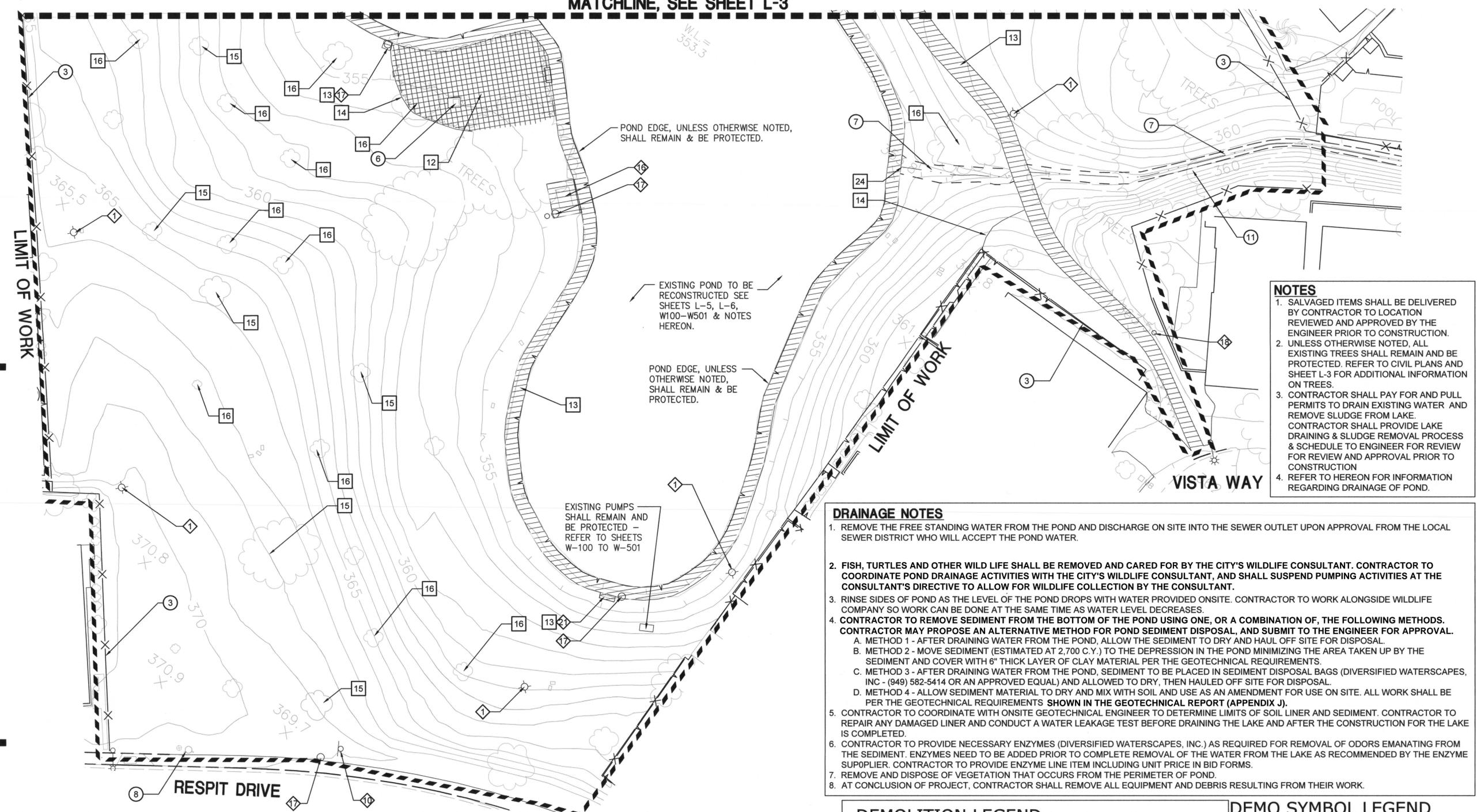


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 PROJECT NUMBER **13-237.03**

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NOTES

- SALVAGED ITEMS SHALL BE DELIVERED BY CONTRACTOR TO LOCATION REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
- UNLESS OTHERWISE NOTED, ALL EXISTING TREES SHALL REMAIN AND BE PROTECTED. REFER TO CIVIL PLANS AND SHEET L-3 FOR ADDITIONAL INFORMATION ON TREES.
- CONTRACTOR SHALL PAY FOR AND PULL PERMITS TO DRAIN EXISTING WATER AND REMOVE SLUDGE FROM LAKE. CONTRACTOR SHALL PROVIDE LAKE DRAINING & SLUDGE REMOVAL PROCESS & SCHEDULE TO ENGINEER FOR REVIEW FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION
- REFER TO HEREON FOR INFORMATION REGARDING DRAINAGE OF POND.

DRAINAGE NOTES

- REMOVE THE FREE STANDING WATER FROM THE POND AND DISCHARGE ON SITE INTO THE SEWER OUTLET UPON APPROVAL FROM THE LOCAL SEWER DISTRICT WHO WILL ACCEPT THE POND WATER.
- FISH, TURTLES AND OTHER WILD LIFE SHALL BE REMOVED AND CARED FOR BY THE CITY'S WILDLIFE CONSULTANT. CONTRACTOR TO COORDINATE POND DRAINAGE ACTIVITIES WITH THE CITY'S WILDLIFE CONSULTANT, AND SHALL SUSPEND PUMPING ACTIVITIES AT THE CONSULTANT'S DIRECTIVE TO ALLOW FOR WILDLIFE COLLECTION BY THE CONSULTANT.
- RINSE SIDES OF POND AS THE LEVEL OF THE POND DROPS WITH WATER PROVIDED ONSITE. CONTRACTOR TO WORK ALONGSIDE WILDLIFE COMPANY SO WORK CAN BE DONE AT THE SAME TIME AS WATER LEVEL DECREASES.
- CONTRACTOR TO REMOVE SEDIMENT FROM THE BOTTOM OF THE POND USING ONE, OR A COMBINATION OF, THE FOLLOWING METHODS. CONTRACTOR MAY PROPOSE AN ALTERNATIVE METHOD FOR POND SEDIMENT DISPOSAL, AND SUBMIT TO THE ENGINEER FOR APPROVAL.
 - METHOD 1 - AFTER DRAINING WATER FROM THE POND, ALLOW THE SEDIMENT TO DRY AND HAUL OFF SITE FOR DISPOSAL.
 - METHOD 2 - MOVE SEDIMENT (ESTIMATED AT 2,700 C.Y.) TO THE DEPRESSION IN THE POND MINIMIZING THE AREA TAKEN UP BY THE SEDIMENT AND COVER WITH 6" THICK LAYER OF CLAY MATERIAL PER THE GEOTECHNICAL REQUIREMENTS.
 - METHOD 3 - AFTER DRAINING WATER FROM THE POND, SEDIMENT TO BE PLACED IN SEDIMENT DISPOSAL BAGS (DIVERSIFIED WATERSCAPES, INC - (949) 582-5414 OR AN APPROVED EQUAL) AND ALLOWED TO DRY, THEN HAULED OFF SITE FOR DISPOSAL.
 - METHOD 4 - ALLOW SEDIMENT MATERIAL TO DRY AND MIX WITH SOIL AND USE AS AN AMENDMENT FOR USE ON SITE. ALL WORK SHALL BE PER THE GEOTECHNICAL REQUIREMENTS SHOWN IN THE GEOTECHNICAL REPORT (APPENDIX J).
- CONTRACTOR TO COORDINATE WITH ONSITE GEOTECHNICAL ENGINEER TO DETERMINE LIMITS OF SOIL LINER AND SEDIMENT. CONTRACTOR TO REPAIR ANY DAMAGED LINER AND CONDUCT A WATER LEAKAGE TEST BEFORE DRAINING THE LAKE AND AFTER THE CONSTRUCTION FOR THE LAKE IS COMPLETED.
- CONTRACTOR TO PROVIDE NECESSARY ENZYMES (DIVERSIFIED WATERSCAPES, INC.) AS REQUIRED FOR REMOVAL OF ODORS EMANATING FROM THE SEDIMENT. ENZYMES NEED TO BE ADDED PRIOR TO COMPLETE REMOVAL OF THE WATER FROM THE LAKE AS RECOMMENDED BY THE ENZYME SUPPLIER. CONTRACTOR TO PROVIDE ENZYME LINE ITEM INCLUDING UNIT PRICE IN BID FORMS.
- REMOVE AND DISPOSE OF VEGETATION THAT OCCURS FROM THE PERIMETER OF POND.
- AT CONCLUSION OF PROJECT, CONTRACTOR SHALL REMOVE ALL EQUIPMENT AND DEBRIS RESULTING FROM THEIR WORK.

SYMBOL LEGEND

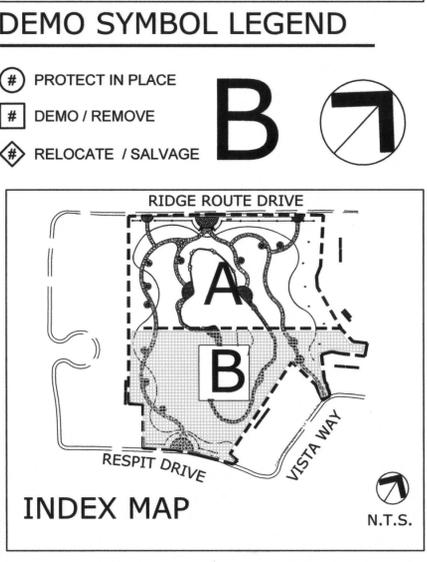
- LIMIT OF WORK LINE
- RIGHT-OF-WAY LINE
- 3335 EXISTING SPOT ELEVATION
- 3332 EXISTING CONTOUR LINES
- EXISTING CURB OR EDGE OF PAVEMENT
- EXISTING WALK
- EXISTING WALL & FENCE
- EXISTING WASTE RECEPTACLE
- EXISTING FIRE HYDRANT
- EXISTING LIGHT POLE
- EXISTING SIGN
- EXISTING TREE
- EXISTING MANHOLE
- EXISTING ELECTRIC BOX

DEMOLITION LEGEND

SYM.	QTY.	DESCRIPTION
①	8 EA	RELOCATE / SALVAGE EXISTING LIGHT POLES
②	1 EA	PROTECT IN PLACE EXISTING BACKFLOW AND CAGE
③	-	PROTECT IN PLACE EXISTING WALL/FENCE
④	1 EA	EXISTING BENCHES, TREE, & PLAQUE SHALL REMAIN & BE PROTECTED IN PLACE
⑤	1 EA	PROTECT IN PLACE EXISTING EXISTING DUCK X-ING SIGN
⑥	2 EA	PROTECT IN PLACE EXISTING ELECTRICAL BOX
⑦	-	PROTECT IN PLACE EXISTING CONCRETE GUTTER/CREEK
⑧	2 EA	PROTECT IN PLACE EXISTING FIRE HYDRANT
⑨	1 EA	PROTECT IN PLACE EXISTING PARK MONUMENT SIGN
⑩	1 EA	RELOCATE / SALVAGE EXISTING CITY OF LAKE FOREST PARK RULES SIGN
⑪	1 EA	PROTECT IN PLACE EXISTING RECIRCULATING WATER PUMP OUTLET
⑫	-	DEMOLITION AND REMOVE EXISTING PLANTING MATERIAL

DEMOLITION LEGEND

SYM.	QTY.	DESCRIPTION
⑬	-	DEMOLITION AND REMOVE EXISTING CONCRETE PAVING
⑭	-	DEMOLITION AND REMOVE EXISTING CONCRETE MOW CURB
⑮	21 EA	DEMOLITION AND REMOVE EXISTING TREE
⑯	4 EA	RELOCATE / SALVAGE EXISTING PICNIC BENCH
⑰	12 EA	RELOCATE / SALVAGE EXISTING WASTE RECEPTACLE
⑱	5 EA	RELOCATE / SALVAGE EXISTING PARK SIGN
⑲	1 EA	RELOCATE / SALVAGE EXISTING BIKE RACK
⑳	1 EA	RELOCATE / SALVAGE EXISTING WATER FOUNTAIN. CAP EXISTING WATERLINE AS NECESSARY
㉑	2 EA	RELOCATE / SALVAGE EXISTING BENCH
㉒	1 EA	RELOCATE / SALVAGE EXISTING IRRIGATION CONTROLLER
㉓	5 EA	RELOCATE EXISTING MEMORIAL PLAQUES TO LOCATIONS ON CONSTRUCTION PLANS
㉔	1 EA	DEMOLITION AND REMOVE EXISTING PEDESTRIAN BRIDGE



GRADING NOTES

- All work shall be in accordance with the Grading Code of the local jurisdiction and any special requirements of the permit. A copy of the Grading Codes shall be retained on the job site while work is in progress. When referenced on the plans, a copy of OC Public Works Standard Plan or local jurisdiction Standard Plans shall be retained on the site.
- Grading shall not be started without first notifying the Grading Inspector. A pre-grade meeting on-site will be required prior to start of grading operations which will include the presence of the following people: Owner, Grading Contractor, Design Civil Engineer, Soils Engineer, Geologist, Grading Inspector, and when required the Archaeologist and paleontologist. The required inspections for grading will be explained at this meeting.
- An approved copy of the Grading Plan shall be on the permitted site while work is in progress.
- Cut and fill slopes shall be no steeper than 2' horizontal to 1' vertical (2:1), except where specifically approved otherwise.
- Fills shall be compacted throughout to a minimum of 90 percent relative density. Aggregate base for asphalt areas shall be compacted to a minimum of 95 % relative density. Maximum density shall be determined by Uniform Building Code Standard No. 70-2 or approved equivalent.
- Areas to receive fill shall be properly prepared and approved in writing, by the Soils Engineer and the Engineer of City's Representative prior to placing fill.
- Fills shall be benched into competent material per local jurisdiction standard or OC Public Works Standard Plan No. 1322.
- All existing fills shall be approved by the Engineer or City's Representative or removed prior to placing additional fills.
- Any existing irrigation lines and cisterns shall be removed or crushed in place, and approved by the Engineer or City's Representative and Soils Engineer.
- Prior to excavation, the Engineer or City's Representative shall approve stockpiling of excess material.
- As a condition of rough grade approval, the Design Engineer shall provide a blue top with accompanying witness stake. These shall be set at the center of each pad reflecting the pad elevation for precise permits and a blue top with witness stake set at the drainage swale high point reflecting the high point elevation for Preliminary Permits.
- All trench backfill shall be tested and approved by the Soils Engineer pursuant to the grading code.
- After clearing and prior to the placement of fill in canyons, the Engineering Geologist and Soils Engineer shall inspect each canyon for area of adverse stability and to determine the presence or absence of subsurface water or spring flow. If needed, subdrains will be designed and constructed prior to the replacement of fill in each respective canyon.
- Subdrain outlets shall be completed at the beginning of the subdrain construction.
- The exact location of the subdrains shall be surveyed in the field for line/grade and reflected on as-built grading plans.
- All cut slopes shall be investigated both during and after grading by the Engineering geologist to determine if any slope stability problem exists. Should excavation disclose any geological hazards or potential geological hazards, the Engineering Geologist shall submit a recommended treatment to the Building Official for his or her approval.
- Where support or buttressing of cut and natural slopes is determined to be necessary by the Engineering Geologist and Soils Engineer, the Soils Engineer shall submit design, location, and calculations to the Building Official prior to construction. The Engineering Geologist and Soils Engineer shall inspect and control the construction of the buttressing and certify to the stability of the slope and adjacent structures upon completion.
- When cut pads are brought to near grade, the Engineering Geologist shall determine if the bedrock is extensively fractured or faulted and will readily transmit water. If considered necessary by the Engineering Geologist and Soils Engineer, a compacted fill blanket will be placed.
- The Engineering Geologist shall perform periodic inspections and submit a complete report and map upon completion of the rough grading.

- The compaction report and approval from the Soils Engineer shall indicate the type of field testing performed. Each test shall be identified with the method of obtaining the in-place density, whether sand cone or drive ring shall be so noted for each test. Sufficient maximum density determinations shall be performed to verify the accuracy of the maximum density curves used by the Field Technician.
- The Soils Engineer and Engineering Geologist shall perform sufficient inspections and be available during grading and construction to verify compliance with the plans, specifications, and code within their purview.
- The Civil Engineer shall be available during grading to verify compliance with the plans, specifications, code, and any special conditions of the permit within his or her purview.
- The permittee is responsible for dust control measures.
- Sanitary facilities shall be maintained on the site.
- The location and protection of all utilities is the responsibility of the permittee.
- Approved protective measures and temporary drainage provisions shall be used to protect adjoining properties during grading.
- Any existing water wells shall be abandoned in compliance with the specifications approved by the Engineer or City's Representative.
- Any existing oil wells shall be abandoned in compliance with the specifications approved by the Engineer or City's Representative.
- Any existing cesspools and septic tanks shall be abandoned in compliance with the Uniform Plumbing Code and to the satisfaction of the Engineer or City's Representative.
- Prior to final approval, the Civil Engineer shall provide to the City Representative, certification of the amount of earth moved during the grading operation.
- The permittee shall comply with the Grading Code requirements when transporting an excess of 5,0000 cubic yards of earth on public roadways to or from a permitted site.
- Asphalt concrete shall be constructed pursuant to the requirements of the City of Lake Forest or OC Public Works Standard Plan 1805.
- Aggregate base section shall be constructed pursuant to the requirements of the City of Lake Forest or OC Public Works Standard Plan 1804.
- All concrete structures that come in contact with the onsite soils shall be constructed with Type V cement, unless deemed unnecessary by soluble sulfate-content tests conducted by the Soils Engineer.
- Export soil must be transported to a legal dump or to a permitted site approved by the Grading Inspector.
- Slopes exceeding 5' in height shall be planted with an approved plant material. In addition, slopes exceeding 5' in height shall be provided with an approved irrigation system, unless otherwise approved by the Engineer or City's Representative.
- The Engineer shall submit a letter of certification to the City's Representative stating that the grading was done in compliance with the approved grading plan.
- Asphalt sections must be per code: Parking Stalls = 3"A Cover 6"AB, Drives 3"AC over 10"(Commercial) 12"(Industrial) Or: Prior to rough grade release for Building Permits by the Grading Inspector, the Soils Engineer shall submit for approval pavement section recommendations based on "R" Value analysis of the subgrade soils, and expected traffic indices.
- All existing drainage courses through this site shall remain open until facilities to handle stormwater are approved and functional; however, in any case, the permittee shall be held liable for any damage due to obstructing natural drainage patterns.
- Grading operations, including maintenance of equipment shall be accomplished within the confines of the noise ordinance and policies of the City of Lake Forest.
- Roof gutters shall be installed to prevent roof drainage from falling on manufactured slopes.
- The permittee shall give reasonable notice to the owner of adjoining lands and buildings prior to beginning excavations that may affect the lateral and subjacent support of the adjoining property. The notice shall state the intended depth of excavation and when the excavation will commence. The adjoining owner shall be allowed at least 30 days and reasonable access on the permitted property to protect his structure, if he so desires unless otherwise protected by law.

ORANGE COUNTY BENCH MARK
 DESIGNATION: 3B-90-79
 ELEV. 387.28 FEET (NAVD 88)

DESCRIBED BY OCS 2003 - FOUND 3-3/4" OCS ALUMINUM BENCHMARK DISK STAMPED "3B-90-79", SET IN THE NORTHERLY END OF A 2 FT. BY 10 FT. CONCRETE HEADWALL FOR A 6 FT. WIDE CULVERT. MONUMENT IS LOCATED IN THE NORTHWESTERLY CORNER OF RIDGE ROUTE DRIVE AND ITS UNDERCROSSING OF THE ATCHINSON/TOPEKA/SANTA FE RAILWAY, 36 FT. NORTHERLY OF THE CENTERLINE OF RIDGE ROUTE AND 18 FT. WESTERLY OF THE WESTERN MOST RAIL ALONG THE RAILWAY. MONUMENT IS SET 5.5 FT. ABOVE ROAD AND 12 FT. BELOW RAILWAY.



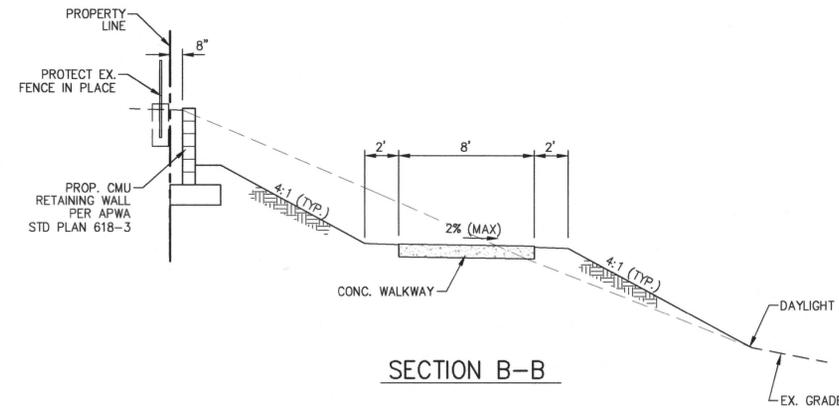
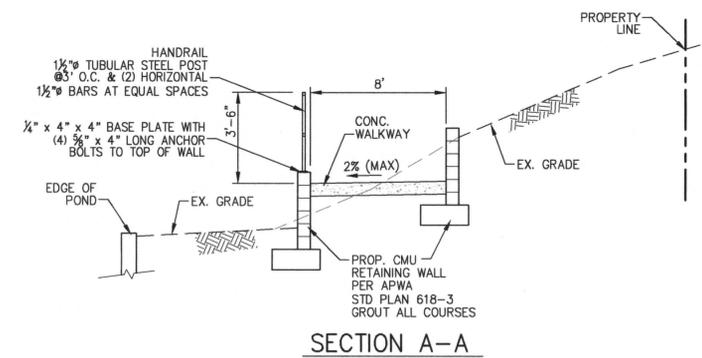
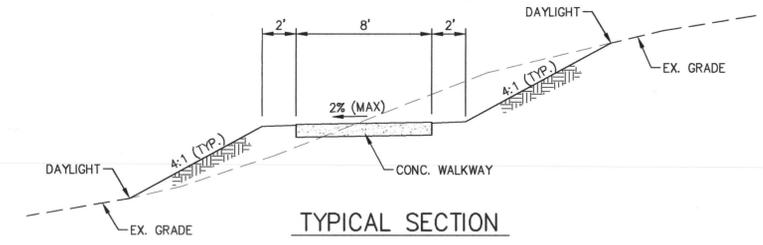
EROSION CONTROL

- Specify on plans:
 - In case of emergency call: (Name)
 Work Telephone No:
 Home Telephone No:
- Equipment and workers for emergency work shall be made available at all times during the rainy season. Necessary materials shall be available onsite or stockpiled at convenient locations to facilitate rapid construction of temporary devices when rain is imminent.
- Erosion control devices shall not be moved or modified without the approval of the Building Official.
- All removable erosion protective devices shall be in place at the end of each working day when the 5-Day Rain Probability Forecast exceeds 40 percent.
- After a rainstorm, all silt and debris shall be removed from streets, check berms, and basins.
- Graded areas on the permitted area perimeter must drain away from the face of slopes at the conclusion of each working day. Drainage to be directed toward desilting facilities.
- The permittee and contractor shall be responsible and shall take necessary precautions to prevent public trespass onto areas where impounded water creates a hazardous condition.
- The undersigned Civil Engineer shall inspect the erosion control work and ensure that the work is in accordance with the approved plans.

EARTHWORK QUANTITIES

RAW CUT VOLUME = 3,090 C.Y.
 CUT VOLUME = 2,781 C.Y. (10% SHRINKAGE)
 RAW FILL VOLUME = 2,225 C.Y.
 FILL VOLUME = 2,710 C.Y. (PLUS 0.1' SUBSIDENCE OVER 3 AC. GRADING AREA)
 NET VOLUME = 71 C.Y. (EXPORT)

(**NOTE: SHRINKAGE AND SUBSIDENCE WILL BE DETERMINED BY GEOTECHNICAL ENGINEERS)



DATE **10/10/16**
 SCALE **AS SHOWN**
 DRAWN BY **JL**
 CHECKED BY **CP**

REVISIONS/PLAN LOG
 REVISED PER ADDENA No. 1

PROJECT AND CLIENT NAME
VILLAGE POND PARK
 LAKE FOREST, CA

CITY OF LAKE FOREST
 25550 COMMERCENTRE DRIVE
 SUITE 100
 PHONE (949) 461-3420

SHEET DESCRIPTION

GRADING NOTES & SECTIONS

VA Consulting, Inc.
 ENGINEERS • PLANNERS • SURVEYORS

46 DISCOVERY, SUITE 250 (949) 474-1400 TEL
 IRVINE, CA 92618 (949) 261-8482 FAX

SHEET NUMBER **C-1 of 44**

PROJECT NUMBER **13-237.03**

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DATE 10/10/16
 SCALE AS SHOWN
 DRAWN BY JL
 CHECKED BY CP

REVISIONS/PLAN LOG
 REVISED PER ADDENA No. 1

PROJECT AND CLIENT NAME
VILLAGE POND PARK
 LAKE FOREST, CA

CITY OF LAKE FOREST
 25550 COMMERCENTRE DRIVE
 SUITE 100
 PHONE (949) 461-3420
 SHEET DESCRIPTION

GRADING PLAN

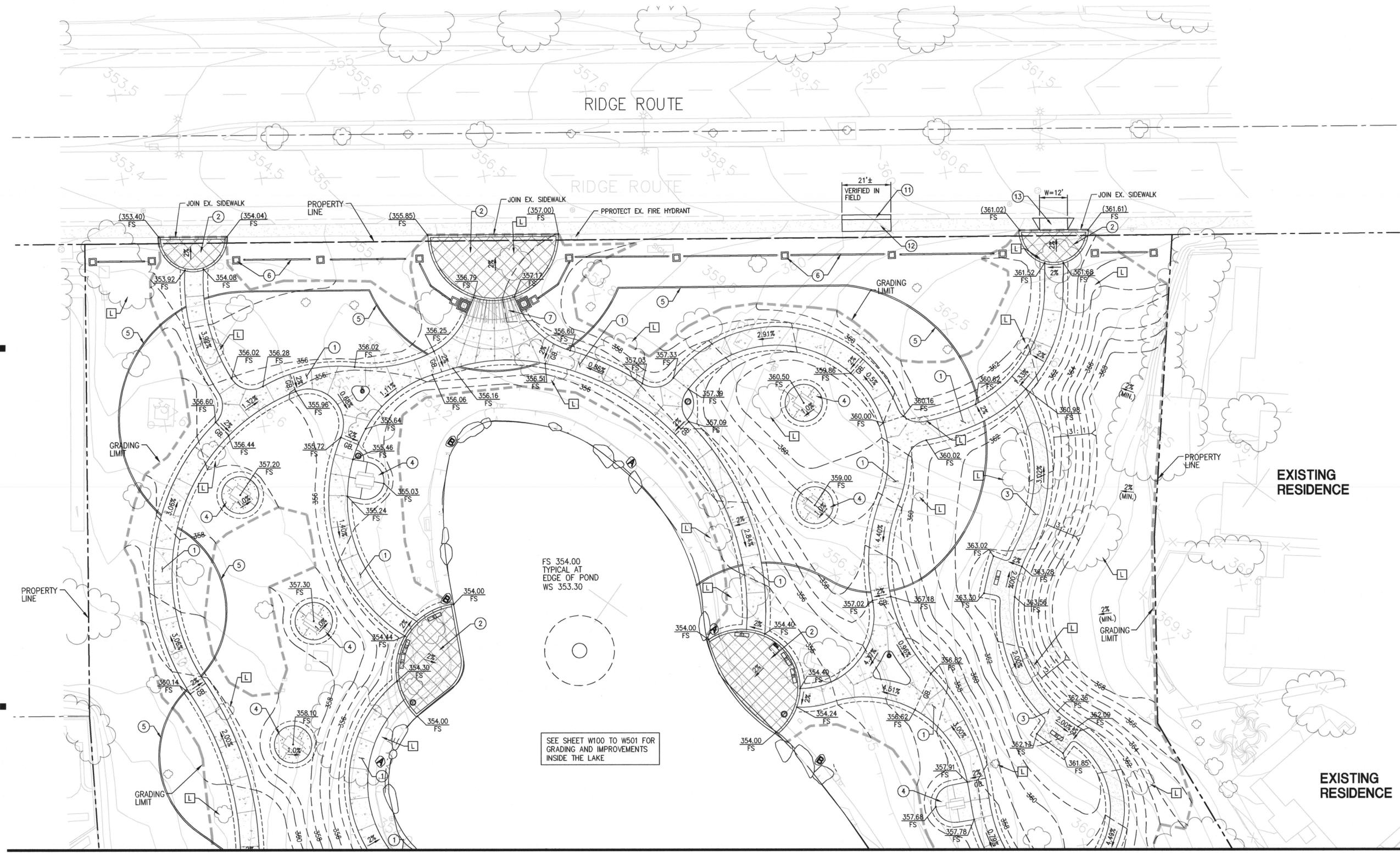
VA Consulting, Inc.
 ENGINEERS • PLANNERS • SURVEYORS

46 DISCOVERY, SUITE 250 (949) 474-1400 TEL
 IRVINE, CA 92618 (949) 261-8482 FAX

SHEET NUMBER **C-2** of 44

PROJECT NUMBER **13-237.03**

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FS 354.00
 TYPICAL AT
 EDGE OF POND
 WS 353.30

SEE SHEET W100 TO W501 FOR
 GRADING AND IMPROVEMENTS
 INSIDE THE LAKE

SEE SHEET C-3

TREE DEPOSITION NOTES

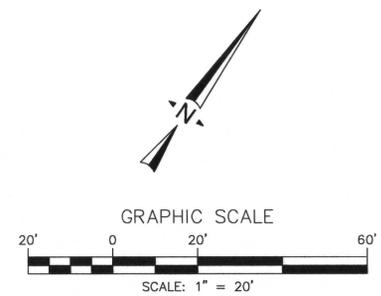
L DEMOLISH AND/OR RELOCATE PER LANDSCAPE DEMOLITION AND PLANTING PLANS.

ALL TREES SCHEDULED FOR DEMOLITION OR RELOCATION SHALL BE REVIEWED & APPROVED BY THE CITY REPRESENTATIVE PRIOR TO CONSTRUCTION.

CONSTRUCTION NOTES

- 1 5 1/2" CONCRETE PAVING WITH #4@12" BOTH WAYS OVER 6" COMPACTED NATIVE SOIL AND DETAILS ON LANDSCAPING PLAN
- 2 ENHANCED CONCRETE PAVING PER CITY OF LAKE FOREST STANDARDS AND DETAILS ON LANDSCAPING PLAN
- 3 DG PATH PER DETAILS ON LANDSCAPING PLAN
- 4 CONCRETE PAD PER DETAIL ON LANDSCAPING PLAN
- 5 CONCRETE MOW STRIP PER DETAIL ON LANDSCAPING PLAN
- 6 LODGE POLE FENCE AND PILASTER PER DETAIL ON LANDSCAPING PLAN
- 7 OVERHEAD STRUCTURE PER DETAIL ON LANDSCAPING PLAN
- 11 REMOVE EXISTING DRIVEWAY AND CONSTRUCT 8" CURB & GUTTER PER OCPW STD. PLAN 120-2-OC TO MATCH EXISTING.
- 12 CONSTRUCT 5' WIDE CONCRETE SIDEWALK PER OCPW STD. PLAN 1205 TO MATCH EXISTING.
- 13 CONSTRUCT DRIVEWAY APPROACH (W=12') PER OCPW STD. PLAN 1209.

NOTE: ALL WORKS ABOVE TO BE CONSTRUCTED PER HORIZONTAL CONTROL PLAN & SUBBASE COMPACTED 90% PER GEOTECHNICAL RECOMMENDATIONS.



SEE SHEET C-2



DATE 10/10/16
 SCALE AS SHOWN
 DRAWN BY JL
 CHECKED BY CP

REVISIONS/PLAN LOG
 REVISED PER ADDENA No. 1

PROJECT AND CLIENT NAME

VILLAGE POND PARK

LAKE FOREST, CA

CITY OF LAKE FOREST
 25550 COMMERCENTRE DRIVE
 SUITE 100
 PHONE (949) 461-3420

SHEET DESCRIPTION

GRADING PLAN



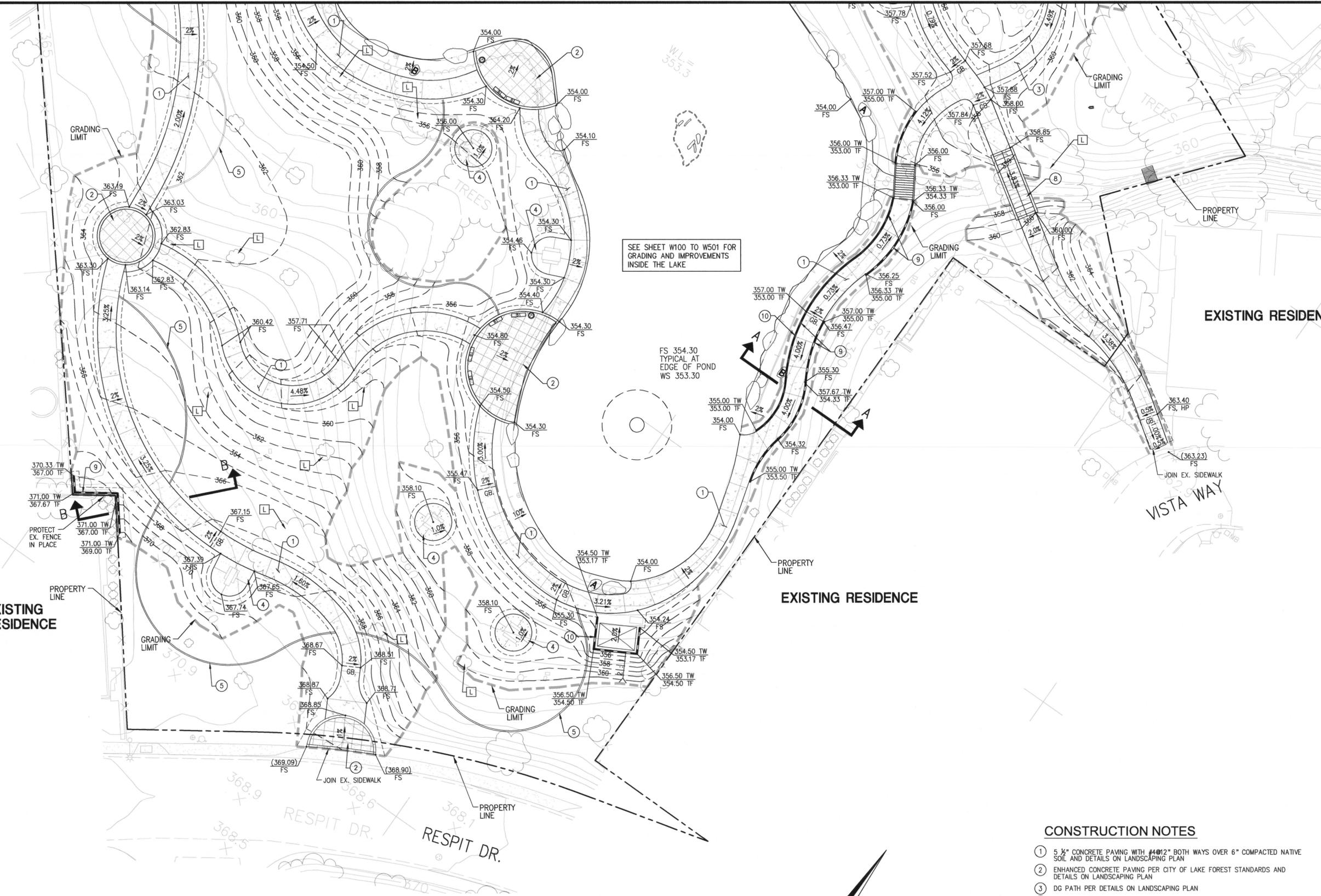
VA Consulting, Inc.
 ENGINEERS • PLANNERS • SURVEYORS

46 DISCOVERY, SUITE 250 (949) 474-1400 TEL
 IRVINE, CA 92618 (949) 261-8482 FAX

SHEET NUMBER **C-3** of 44

PROJECT NUMBER **13-237.03**

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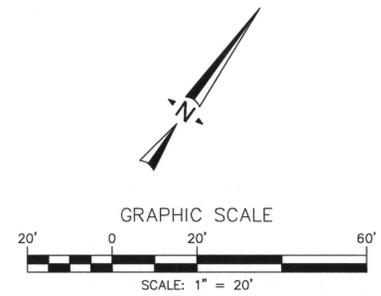
SEE SHEET W100 TO W501 FOR GRADING AND IMPROVEMENTS INSIDE THE LAKE

FS 354.30 TYPICAL AT EDGE OF POND WS 353.30

NOTE: SEE SHEET C-1 FOR SECTION A-A AND B-B

TREE DEPOSITION NOTES
 L DEMOLISH AND/OR RELOCATE PER LANDSCAPE DEMOLITION AND PLANTING PLANS.
 ALL TREES SCHEDULED FOR DEMOLITION OR RELOCATION SHALL BE REVIEWED & APPROVED BY THE CITY REPRESENTATIVE PRIOR TO CONSTRUCTION.

- CONSTRUCTION NOTES**
- 1 5 1/2" CONCRETE PAVING WITH #4@12" BOTH WAYS OVER 6" COMPACTED NATIVE SOIL AND DETAILS ON LANDSCAPING PLAN
 - 2 ENHANCED CONCRETE PAVING PER CITY OF LAKE FOREST STANDARDS AND DETAILS ON LANDSCAPING PLAN
 - 3 DG PATH PER DETAILS ON LANDSCAPING PLAN
 - 4 CONCRETE PAD PER DETAIL ON LANDSCAPING PLAN
 - 5 CONCRETE MOW STRIP PER DETAIL ON LANDSCAPING PLAN
 - 6 BRIDGE PER DETAIL ON LANDSCAPING PLAN
- NOTE: ALL WORKS ABOVE TO BE CONSTRUCTED PER HORIZONTAL CONTROL PLAN & SUBBASE COMPACTED 90% PER GEOTECHNICAL RECOMMENDATIONS.
- 9 CONSTRUCT TYPE 'A' MASONRY RETAINING WALL PER APWA STD. PLAN 618-3
 - 10 INSTALL HANDRAIL ON TOP OF WALL PER SECTION A-A ON SHEET C-1.



ICE

EXISTING RESIDENCE

EXISTING RESIDENCE

EXISTING RESIDENCE

RESPIR DR.

VISTA WAY



CURVE DATA				
CURVE	LENGTH	RADIUS	DELTA	TANGENT
C71	40.93'	66.00'	35°32'09"	21.15'
C72	15.24'	10.00'	87°19'49"	9.54'
C73	48.80'	78.16'	35°46'22"	25.23'
C74	47.05'	15.00'	179°42'28"	INFINITY
C75	55.08'	86.16'	36°37'29"	28.52'
C76	13.74'	10.00'	78°42'11"	8.20'
C77	126.58'	91.80'	79°00'13"	75.68'
C78	144.63'	125.53'	66°00'49"	81.54'
C79	6.44'	112.00'	3°17'33"	3.22'
C80	97.19'	69.00'	80°42'19"	58.63'
C81	35.05'	15.00'	133°53'22"	35.24'
C82	150.19'	83.80'	102°41'18"	104.77'
C83	153.83'	133.60'	65°58'13"	86.71'
C84	5.41'	104.00'	2°58'55"	2.71'
C85	63.63'	28.00'	130°12'48"	60.34'
C86	16.21'	15.00'	61°55'18"	9.00'
C87	24.63'	44.00'	32°04'40"	12.65'
C88	22.77'	65.00'	20°04'01"	11.50'
C89	90.14'	48.00'	107°36'00"	65.58'
C90	29.11'	52.00'	32°04'40"	14.95'
C91	25.53'	73.00'	20°02'23"	12.90'
C92	108.56'	56.00'	111°04'01"	81.58'
C93	31.97'	18.00'	101°45'29"	22.13'
C94	51.48'	26.00'	113°26'34"	39.61'
C95	62.76'	54.00'	66°35'14"	35.46'
C96	16.06'	85.00'	10°49'42"	8.06'
C97	7.02'	5.00'	80°26'08"	4.23'
C98	13.99'	23.00'	34°50'55"	7.22'
C99	22.67'	31.00'	41°53'30"	11.87'
C100	70.12'	46.00'	87°20'22"	43.91'
C101	48.81'	85.00'	32°54'12"	25.10'
C102	92.20'	25.00'	211°18'34"	INFINITY
C103	69.77'	44.00'	90°51'05"	44.66'
C104	55.07'	23.00'	137°10'37"	58.65'
C105	56.34'	58.00'	55°39'13"	30.61'
C106	57.09'	36.00'	90°52'09"	36.55'
C107	74.22'	31.00'	137°10'37"	79.06'
C108	49.13'	50.00'	56°17'55"	26.75'
C109	11.30'	13.36'	48°27'20"	6.01'
C110	24.79'	32.00'	44°23'37"	13.06'
C111	39.99'	73.00'	31°23'00"	20.51'
C112	154.50'	104.00'	85°07'01"	95.49'
C113	11.30'	13.36'	48°27'20"	6.01'
C114	18.60'	24.00'	44°23'37"	9.79'
C115	35.61'	65.00'	31°23'14"	18.26'
C116	166.99'	112.00'	85°25'29"	103.40'
C117	38.86'	15.00'	143°39'39"	47.23'
C118	47.61'	15.00'	181°51'10"	INFINITY
C119	4.38'	2.00'	125°22'39"	3.87'
C120	12.45'	77.00'	9°15'51"	6.24'
C121	5.17'	2.00'	148°00'54"	6.98'
C122	11.85'	53.00'	12°48'38"	5.95'
C123	4.24'	2.00'	121°29'19"	3.57'
C124	8.76'	39.20'	12°48'23"	4.40'
C125	3.52'	68.00'	2°57'59"	1.76'
C126	4.59'	2.00'	131°31'23"	4.44'
C127	3.02'	58.00'	2°59'00"	1.51'
C128	3.91'	2.00'	111°52'38"	2.96'
C129	2.73'	23.00'	6°47'43"	1.37'
C130	4.51'	2.00'	129°20'42"	4.23'

CURVE DATA				
CURVE	LENGTH	RADIUS	DELTA	TANGENT
C1	43.70'	80.00'	31°17'54"	22.41'
C2	26.66'	52.00'	29°22'16"	13.63'
C3	16.73'	60.00'	15°58'40"	8.42'
C4	32.58'	61.00'	30°36'10"	16.69'
C5	59.89'	95.00'	36°07'08"	30.98'
C6	77.68'	69.00'	64°30'25"	43.54'
C7	18.62'	55.92'	19°04'35"	9.40'
C8	13.58'	10.00'	77°48'00"	8.07'
C9	26.24'	89.50'	16°47'55"	13.22'
C10	68.05'	61.85'	63°02'22"	37.93'
C11	39.33'	72.00'	31°17'54"	20.17'
C12	30.76'	60.00'	29°22'16"	15.72'
C13	6.47'	4.00'	92°42'08"	4.19'
C14	40.09'	34.00'	67°33'48"	22.75'
C15	49.45'	50.00'	56°40'01"	26.96'
C16	54.96'	62.00'	50°47'29"	29.43'
C17	27.74'	36.00'	44°08'53"	14.60'
C18	22.18'	44.00'	28°53'20"	11.33'
C19	50.86'	63.00'	46°15'26"	26.91'
C20	54.73'	50.00'	62°43'02"	30.47'
C21	87.23'	74.00'	67°32'25"	49.48'
C22	89.73'	41.00'	125°23'33"	79.42'
C23	86.41'	57.00'	86°51'47"	53.96'
C24	72.00'	71.00'	58°06'24"	39.44'
C25	73.91'	35.00'	120°59'50"	61.86'
C26	3.09'	2.00'	88°37'56"	1.95'
C27	2.60'	2.00'	74°35'50"	1.52'
C28	55.49'	63.00'	50°28'02"	29.69'
C29	2.92'	2.00'	83°37'32"	1.79'
C30	16.41'	106.82'	8°48'13"	8.22'
C31	3.08'	2.00'	88°14'12"	1.94'
C32	6.63'	63.00'	6°02'02"	3.32'
C33	64.34'	65.00'	56°42'45"	35.08'
C34	59.25'	53.85'	63°02'22"	33.02'
C35	23.93'	81.50'	16°49'22"	12.05'
C36	13.55'	10.00'	77°39'08"	8.05'
C37	117.48'	55.92'	120°22'27"	97.59'
C38	14.93'	10.00'	85°33'23"	9.25'
C39	34.09'	116.00'	16°50'12"	17.17'
C40	30.00'	35.00'	49°06'22"	15.99'
C41	47.13'	15.00'	180°00'49"	INFINITY
C42	56.08'	31.20'	102°59'39"	39.22'
C43	44.68'	77.00'	33°14'51"	22.99'
C44	138.34'	47.92'	165°24'34"	374.32'
C45	14.00'	10.00'	80°14'12"	8.43'
C46	99.58'	116.00'	49°11'05"	53.09'
C47	14.82'	39.20'	21°39'31"	7.50'
C48	74.43'	45.00'	94°46'01"	48.91'
C49	10.48'	87.00'	6°54'02"	5.25'
C50	36.85'	69.00'	30°36'10"	18.88'
C51	6.95'	4.00'	99°35'21"	4.73'
C52	46.82'	42.00'	63°52'37"	26.18'
C53	41.54'	42.00'	56°40'01"	22.65'
C54	62.05'	70.00'	50°47'29"	33.23'
C55	26.12'	28.00'	53°26'28"	14.10'
C56	7.42'	10.00'	42°32'09"	3.89'
C57	14.73'	95.00'	8°52'58"	7.38'
C58	49.72'	42.00'	67°49'23"	28.24'
C59	7.32'	4.00'	104°52'02"	5.20'
C60	33.21'	42.00'	45°18'22"	17.53'
C61	74.42'	66.00'	64°36'23"	41.73'
C62	156.04'	108.00'	82°47'02"	95.19'
C63	40.05'	80.00'	28°40'53"	20.45'
C64	37.71'	50.00'	43°12'53"	19.80'
C65	94.37'	61.00'	88°38'11"	59.57'
C66	51.20'	68.00'	43°08'26"	26.88'
C67	78.79'	25.00'	180°34'59"	INFINITY
C68	88.43'	28.00'	180°56'32"	3405.03'
C69	20.54'	30.00'	39°13'37"	10.69'
C70	35.27'	60.00'	33°41'00"	18.16'

LINE DATA		
LINE	LENGTH	BEARING
L1	20.42'	N54°42'47"W
L2	0.56'	N56°38'25"W
L3	73.07'	N56°38'25"W
L4	12.89'	N72°37'05"W
L5	12.38'	N34°44'29"W
L6	20.58'	N54°42'47"W
L7	77.55'	N56°38'25"W
L8	16.41'	S15°46'16"E
L9	10.08'	N31°29'06"E
L10	11.14'	N31°29'06"E
L11	4.99'	S1°26'50"W
L12	13.91'	N88°42'17"W
L13	5.26'	N0°23'14"E
L14	5.52'	S65°24'06"W
L15	4.99'	N75°09'31"E
L16	12.29'	S34°44'29"E
L17	4.46'	N59°46'31"W
L18	6.17'	S72°37'05"E
L19	7.40'	S24°39'14"E
L20	14.00'	S15°46'16"E
L21	9.28'	S37°46'52"W
L22	8.94'	S12°03'19"E
L23	22.75'	S45°04'40"E
L24	18.43'	S16°50'37"W
L25	3.58'	S32°57'16"W
L26	4.54'	S32°57'16"W
L27	12.65'	N41°38'32"W
L28	11.98'	S36°35'59"W
L29	2.85'	N37°26'57"W
L30	3.85'	S37°26'57"E
L31	9.01'	N28°16'40"W
L32	4.75'	N28°16'40"W
L33	8.83'	N28°16'40"W
L34	4.75'	N28°16'40"W

LINE DATA		
LINE	LENGTH	BEARING
L51	98.73'	N54°29'25"E
L52	53.28'	N54°29'46"E
L53	22.36'	N89°18'09"W
L54	9.87'	N7°49'02"W
L55	13.01'	N7°49'02"W

CURVE DATA				
CURVE	LENGTH	RADIUS	DELTA	TANGENT
C151	20.29'	52.00'	22°21'22"	10.28'
C152	30.31'	52.00'	33°23'49"	15.80'
C153	19.07'	38.00'	28°45'12"	9.74'
C154	21.30'	38.00'	32°06'57"	10.94'
C155	70.01'	69.35'	57°50'28"	38.32'
C156	80.10'	65.15'	70°26'36"	46.00'
C157	35.08'	58.25'	30°51'03"	17.98'
C158	35.43'	58.25'	34°50'59"	18.28'
C159	37.99'	58.25'	37°22'04"	19.70'
C160	18.00'	55.00'	18°45'05"	9.08'
C161	105.38'	55.00'	109°46'43"	78.23'
C162	74.06'	41.00'	103°29'45"	52.00'
C163	69.75'	40.00'	99°54'34"	47.59'
C164	74.31'	31.77'	134°00'53"	74.87'
C165	81.98'	63.37'	147°50'50"	110.24'
C166	105.06'	40.25'	149°33'10"	147.90'
C167	25.66'	49.75'	29°33'07"	13.12'
C168	46.74'	50.00'	53°33'36"	25.23'
C169	100.26'	33.21'	172°58'27"	540.98'
C170	7.23'	30.00'	13°48'30"	3.63'
C171	29.34'	18.25'	92°06'46"	18.94'
C172	75.94'	25.75'	168°58'21"	266.75'
C173	40.82'	28.25'	82°47'24"	24.90'



CONCRETE PAVING CENTER POINT COORDINATES			
PAD	RADIUS	NORTHING	EASTING
A	8.00'	2174547.48	6117843.99
B	8.00'	2174521.28	6117900.73
C	8.00'	2174473.05	6117923.66
D	8.00'	2174453.91	6118063.07
E	8.00'	2174312.51	6118140.72
F	8.00'	2174293.49	6118196.12
G	8.00'	2174718.40	6118019.85
H	8.00'	2174685.23	6118048.79
J	12.50'	2174337.49	6117962.17
K	15.00'	2174840.64	6118065.40
L	28.00'	2174701.01	6117869.38
M	15.00'	2174626.50	6117764.02
N	15.00'	2174209.72	6118164.22



DATE 10/10/16
 SCALE AS SHOWN
 DRAWN BY JL
 CHECKED BY CP

REVISIONS/PLAN LOG
 REVISED PER ADDENA No. 1

PROJECT AND CLIENT NAME
VILLAGE POND PARK
 LAKE FOREST, CA

CITY OF LAKE FOREST
 25550 COMMERCENTRE DRIVE
 SUITE 100
 PHONE (949) 461-3420

SHEET DESCRIPTION

HORIZONTAL CONTROL



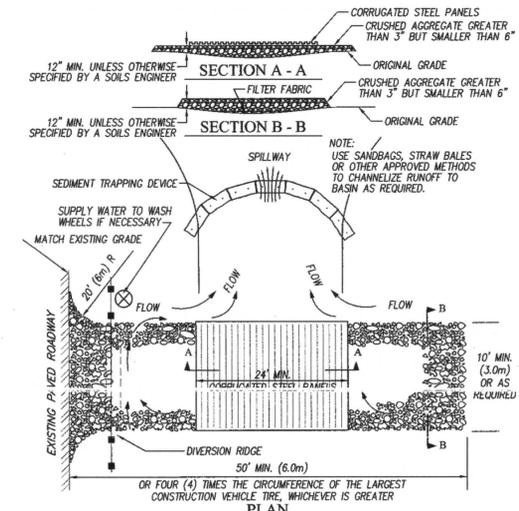
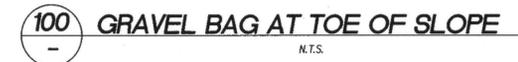
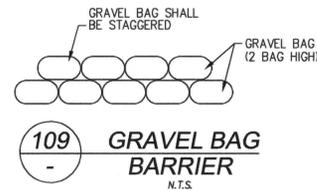
46 DISCOVERY, SUITE 250 (949) 474-1400 TEL
 IRVINE, CA 92618 (949) 261-8482 FAX

SHEET NUMBER **C-4** OF **44**

PROJECT NUMBER **13-237.03**

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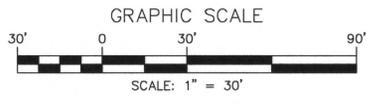


EROSION CONTROL NOTES

- 100 INSTALL GRAVEL BAG BARRIER PER CASQA BMP SE-6 AND DETAIL 100 HEREON.
- 101 INSTALL STABILIZED CONSTRUCTION ENTRANCE/EXIT PER CASQA BMP TC-1 AND DETAIL 101 HEREON.
- 102 INSTALL SILT FENCE PER CASQA BMP SE-1.

LEGEND

- STABILIZED CONSTRUCTION ENTRANCE
- SAND & GRAVEL BAGS
- SILT FENCE
- PROPERTY LINE / LIMITS OF GRADING
- PROPOSED CONTOUR
- EXISTING CONTOUR



STORM WATER POLLUTION PREVENTION NOTES:

Stormwater pollution prevention devices and practices shall be installed and/or instituted as necessary to ensure compliance to the City of Lake Forest Water Quality standards and any Erosion Control Plan associated with this project. All such devices and practices shall be maintained, inspected and/or monitored to ensure adequacy and proper function throughout the duration of the construction project.

Compliance to the Water Quality standards and any Erosion Control Plan associated with this project includes, but is not limited to the following requirements:

1. Effective combination of erosion and sediment control BMPs shall be implemented to protect the exposed portions of the site from erosion and to prevent sediment discharges.
2. Sediments and other pollutants shall be retained on site until properly disposed of, and may not be transported from the site via sheet flow, swales, area drains, natural drainage courses or wind.
3. Stockpiles of earth and other construction-related materials shall be protected from being transported from the site by the forces of wind and water flow.
4. Fuels, oils, solvents, and other toxic materials shall be stored in accordance with their listing and are not to contaminate the soil and surface waters. All approved storage containers are to be protected from the weather. Spills must be cleaned up immediately and disposed of in a proper manner. Spills may not be washed into the drainage system, nor be allowed to settle or infiltrate into soil.
5. Excess or waste concrete may not be washed into the public way or any other drainage system. Provisions shall be made to retain concrete wastes on site until they can be disposed of as solid wastes.
6. Trash and construction solid wastes shall be deposited into a covered receptacle to prevent contamination of rainwater and dispersal by wind.
7. Sediments and other materials may not be tracked from the site by vehicular traffic. The construction entrance roadways must be stabilized so as to inhibit sediments from being deposited into the public way. Accidental deposits shall be swept up immediately and may not be washed down by rain or other means.
8. Storm water pollution prevention devices and/or practices shall be modified as needed as the project progresses to ensure effectiveness.

NOTE: ANY ADDITIONAL EROSION/SEDIMENT CONTROLS MEASURED CALLED OUT BY THE SWPPP WOULD SUPERSEDE THOSE SHOWN ON THIS SHEET.



DATE 10/10/16
SCALE AS SHOWN
DRAWN BY JL
CHECKED BY CP

REVISIONS/PLAN LOG
REVISED PER ADDENA No. 1

PROJECT AND CLIENT NAME
VILLAGE POND PARK
LAKE FOREST, CA

CITY OF LAKE FOREST
25550 COMMERCENTRE DRIVE
SUITE 100
PHONE (949) 461-3420
SHEET DESCRIPTION

EROSION CONTROL PLAN



VA Consulting, Inc.
ENGINEERS • PLANNERS • SURVEYORS

46 DISCOVERY, SUITE 250 (949) 474-1400 TEL
IRVINE, CA 92618 (949) 261-8482 FAX

SHEET NUMBER **C-5 of 44**

PROJECT NUMBER **13-237.03**

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 DRAWN BY DL
 CHECKED BY TM

REVISIONS/PLAN LOG
 REVISED PER ADDENA No. 1

PROJECT AND CLIENT NAME
VILLAGE POND PARK
 LAKE FOREST, CA

CITY OF LAKE FOREST
 25550 COMMERCENTRE DRIVE
 SUITE 100
 PHONE (949) 461-3420

SHEET DESCRIPTION
CONSTRUCTION PLAN

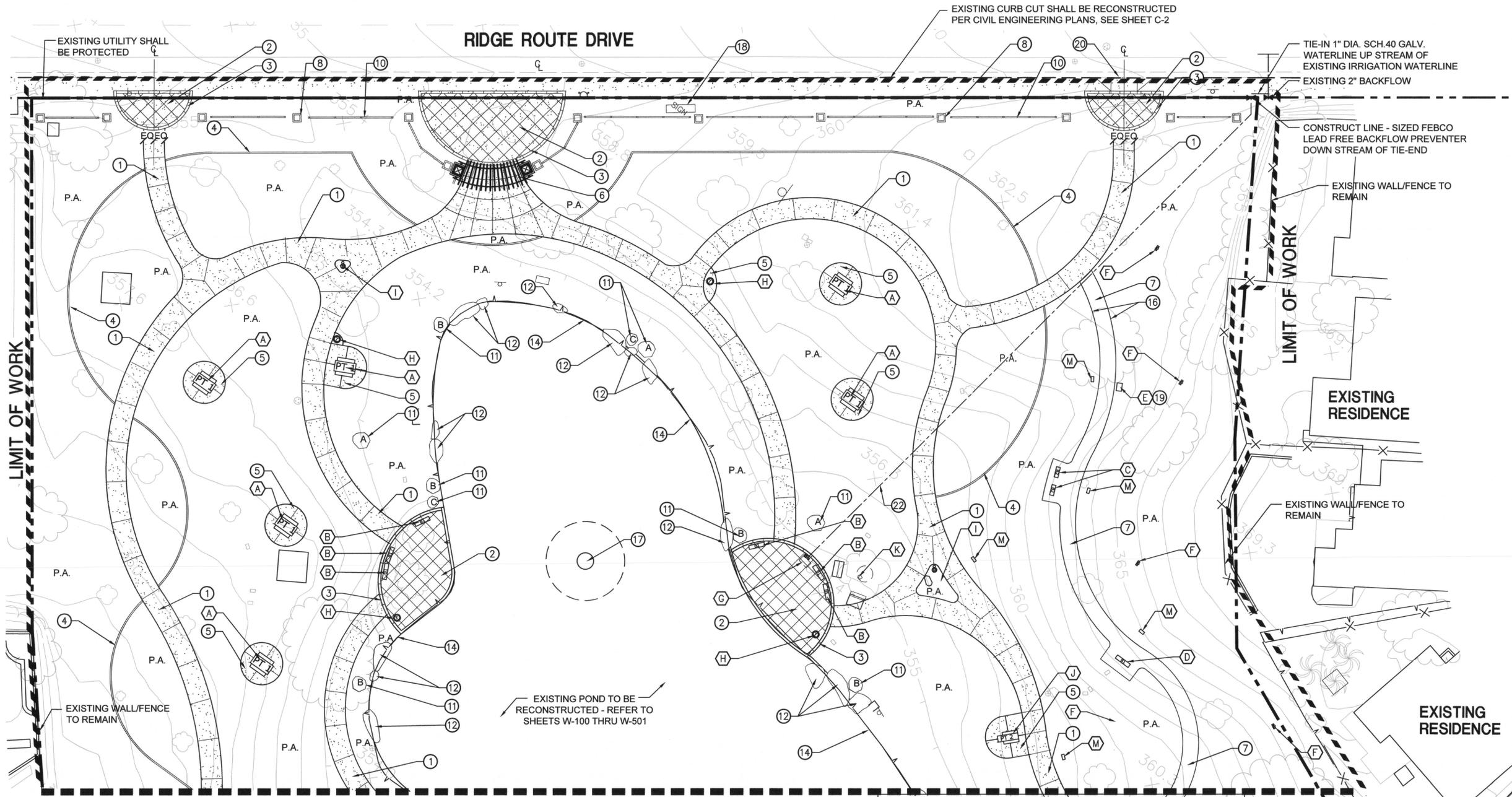


LANDSCAPE ARCHITECTURE
 AND PLANNING

3151 AIRWAY AVENUE, SUITE J-3
 COSTA MESA, CALIFORNIA
 U.S.A. 92626-4640
 FX: 714.754.7346
 PH: 714.754.7311

SHEET NUMBER **L-5** of 44
 PROJECT NUMBER 13-237.03

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MATCHLINE, SEE SHEET L-6

SYMBOL LEGEND

- LIMIT OF WORK LINE
- RIGHT-OF-WAY LINE
- x 3335 EXISTING SPOT ELEVATION
- 3332 EXISTING CONTOUR LINES
- EXISTING CURB OR EDGE OF PAVEMENT
- EXISTING WALK
- EXISTING WALL & FENCE
- PROPOSED WALK
- EXISTING SIGN
- WM EXISTING WATER METER
- ⊙ PROPOSED WASTE RECEPTACLE
- B1 BENCH
- PT 2 ADA PICNIC TABLE
- PT 1 STD. PICNIC TABLE
- DF DRINKING FOUNTAIN
- BH BIRD HOUSE
- ⊙ DOG-I-POT
- * EXISTING LIGHT POLE
- ⊙ EXISTING TREE
- ⊙ EXISTING FIRE HYDRANT
- ⊙ EXISTING MANHOLE
- PA PLANTING AREA
- A BOULDERS
- ⊙ GFRC BOULDERS

SITE AMENITIES LEGEND

- A PICNIC TABLE, WABASH VALLEY, MODEL # SG201D AND ADA MODEL #SG201P 6' SINGLE PEDESTAL IN GROUND, COLOR MINT GREEN RAL #6029, FINISH: POWDERCOAT, REFER TO DETAIL 'C', SHEET L-8. AVAILABLE FROM DAVE BANG ASSOCIATES. 800-669-2583
- B BACKLESS BENCH, CM-14, COLOR MINT GREEN RAL #6029, 6' LENGTH, AVAILABLE FROM VICTOR STANLEY, 800-368-2573 CM-14 PO DRAWER 330, DUNKIRK, MD 20754 - REFER TO DETAIL 'D', SHEET L-9
- C HUMMINGBIRD BENCH, COLOR MINT GREEN RAL #6029, AVAILABLE FROM CRICKET FORGE, 919 680-3513, 214 HUNT STREET, DURHAM, NC 27701- REFER TO DETAIL 'B', SHEET L-8
- D DRAGONFLY BENCH, COLOR MINT GREEN RAL #6029, AVAILABLE FROM CRICKET FORGE, 919-680-3513. 214 HUNT STREET, DURHAM, NC 27701- REFER TO DETAIL 'D', SHEET L-8
- E INTERPRETIVE SIGNS, - REFER TO DETAIL 'H', SHEET L-8
- F BIRD HOUSE, AVAILABLE FROM DUNCRAFT, 888-879-5095 OR APPR. EQUAL - REFER TO DETAIL 'I', SHEET L-8
- G DRINKING FOUNTAIN WITH VALVE, AVAILABLE FROM MDF MODEL 410 SM, ONE BOWL ON ADA ARM W/SS SURFACE CARRIER W/ PET FOUNTAIN, PEDESTAL SURFACE MOUNTED, COLOR MINT GREEN RAL #6029, SMOOTH FINISH, OR APPROVED EQUAL - REFER TO DETAIL 'A', SHEET L-8
- H TRASH RECEPTACLE, MODEL # TG2-3001, COLOR MINT GREEN RAL #6029, FINISH: DURACOAT, BY SITE SCAPES, 402-421-9464 OR APPROVED EQUAL - REFER TO DETAIL 'D', SHEET L-7
- I DOGGIE WALK, COLOR MINT GREEN RAL #6029, 10' GALVANIZED STEEL POST, #014TRASH BIN, #005DISPENSER, #010SIGN, AVAILABLE FROM DOGGIE WALK, 949-200-1148 REFER TO DETAIL 'E', SHEET L-7
- J PICNIC TABLE, WABASH VALLEY, MODEL # SG205D ADA, 8' MULTI PEDESTAL IN GROUND, COLOR MINT GREEN RAL #6029, FINISH: POWDERCOAT, REFER TO DETAIL 'C', SHEET L-8. AVAILABLE FROM DAVE BANG ASSOCIATES. 800-669-2583
- K MEMORIAL PLAQUE W/ TWO (2) BENCHES SHALL BE LEFT IN PLACE
- L SALVAGED / RELOCATED CITY OF LAKE FOREST PARK RULES SIGN
- M RELOCATE EXISTING MEMORIAL PLAQUE

CONSTRUCTION LEGEND

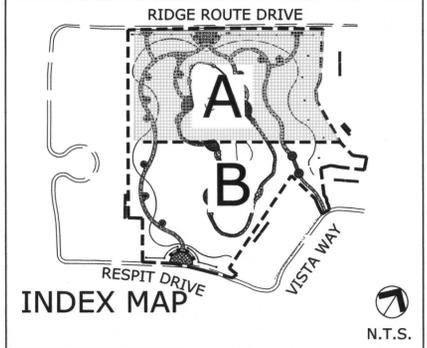
- 1 CONCRETE PAVING - REFER TO DETAIL 'A', SHEET L-7
- 2 ENHANCED CONCRETE PAVING - REFER TO DETAIL 'A', SHEET L-7
- 3 CONCRETE BAND - REFER TO DETAIL 'B', SHEET L-7
- 4 CONCRETE MOW STRIP - REFER TO DETAIL 'F', SHEET L-7
- 5 CONCRETE PAD(PICNIC TABLES) - REFER TO DETAIL 'C', SHEET L-8
- 6 ENTRY OVERHEAD STRUCTURE - REFER TO DETAIL 'E', SHEET L-9
- 7 DECOMPOSED GRANITE, COMPACTION REQUIRED - REFER TO DETAIL 'C', SHEET L-7
- 8 PILASTERS - REFER TO DETAIL 'G', SHEET L-8
- 9 PEDESTRIAN BRIDGE, BRIDGE 'B' - REFER TO DETAIL 'A', SHEET L-10
- 10 LODGE POLE FENCE - REFER TO DETAIL 'E', SHEET L-8
- 11 BOULDERS - AVAILABLE FROM SOUTHWEST BOULDERS 877 792-7625 TYPE-COLORADO MOSS-REFER TO DETAIL 'B', SHEET L-9
- 12 GFRC BOULDERS -TO BE CONSTRUCTED PER MANUFACTURER'S SPECIFICATIONS SEE DETAIL G, SHEET L-9
- 13 FLOATING LAKE ISLAND - AVAILABLE FROM AQUABIO, 310-397-3114, OR APPROVED EQUAL. AQUABIO SHALL PROVIDE SHOP DRAWING FOR REVIEW & APPROVAL PRIOR TO CONSTRUCTION, TO ENGINEER.
- 14 LAKE EDGE - REFER TO SHEET W-200
- 15 BRIDGE 'A' - REFER TO DETAIL 'F', SHEET L-9
- 16 RECYCLED HEADER BOARD - REFER TO DETAIL 'C', SHEET L-7
- 17 GEYSERS - REFER TO FOUNTAIN DETAIL 'C' SHEET W-252
- 18 MONUMENT SIGN/LOGO REPLACEMENT - REFER TO DETAIL 'F', SHEET L-8
- 19 INTERPRETIVE SIGN - REFER TO DETAIL 'C', SHEET L-9
- 20 NEW CURB CUT - REFER TO CIVIL ENGINEERING PLANS
- 21 ABUTMENT - REFER TO DETAIL G, SHEET L-7
- 22 1" DIA. SCH 40 PVC WATERLINE. CONSTRUCT AS SHOWN FROM NEW BACKFLOW TO DRINKING FOUNTAIN, SIM. TO IRRIG. MAINLINE @ 24" DEEP.

BOULDER LEGEND

- A 3'-3" x 3'-0"
- B 2'-10" x 2'-6"
- C 2'-2" x 2'-0"

NOTE

1. REFER TO SHEET L-7 THROUGH L-10 FOR CONSTRUCTION DETAILS AND CONSTRUCTION NOTES.
2. REFER TO SHEET C-4 & C-5 FOR HORIZONTAL CONTROL.





DATE 10/10/16
 SCALE 1"=20'-0"
 DRAWN BY DL
 CHECKED BY TM

REVISIONS/PLAN LOG
 REVISED PER ADDENA No. 1

PROJECT AND CLIENT NAME
VILLAGE POND PARK
 LAKE FOREST, CA

CITY OF LAKE FOREST
 25550 COMMERCENTRE DRIVE
 SUITE 100
 PHONE (949) 461-3420

SHEET DESCRIPTION
CONSTRUCTION PLAN

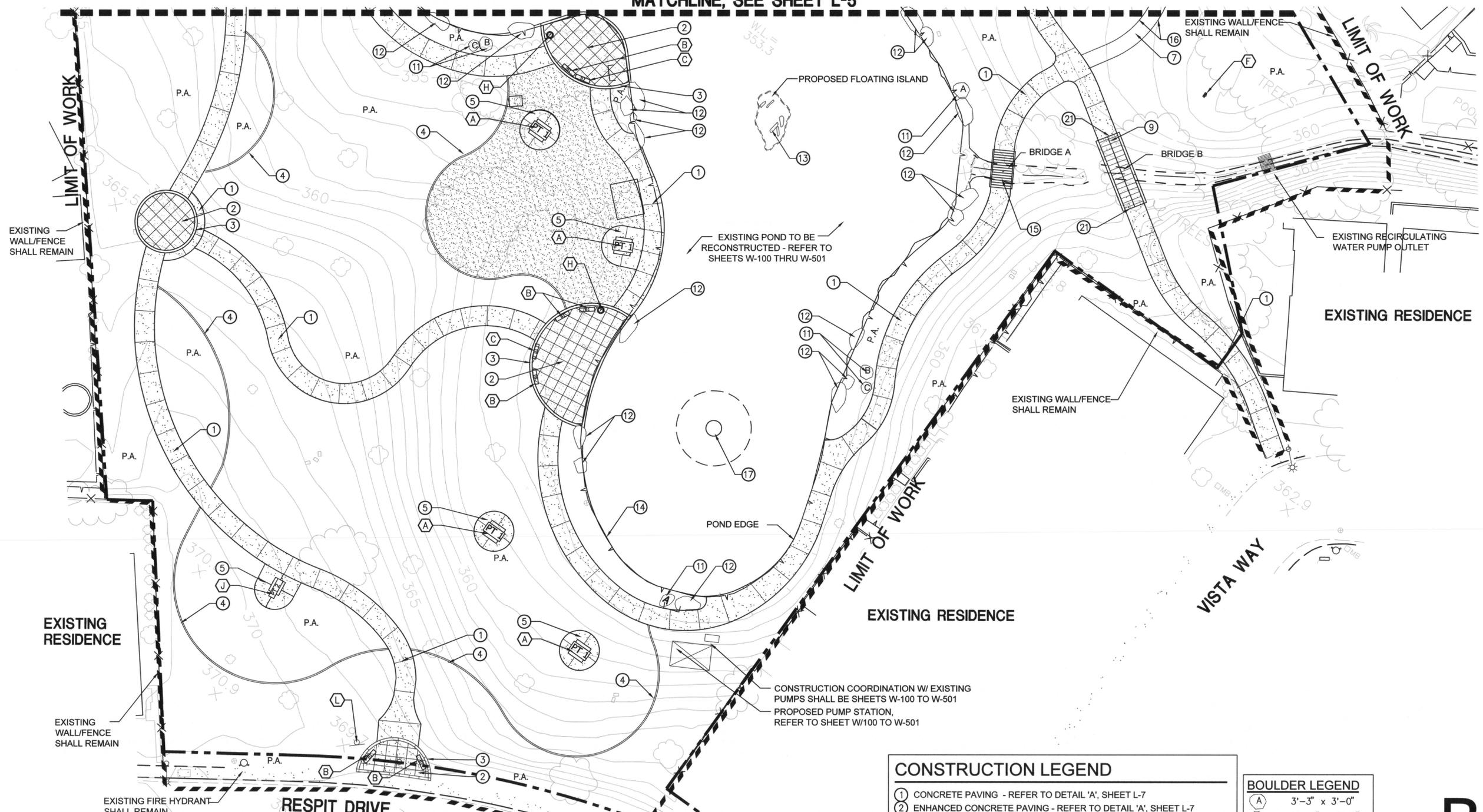


LANDSCAPE ARCHITECTURE
 AND PLANNING

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 COSTA MESA, CALIFORNIA
 U.S.A. 92626-4640
 FX: 714.754.7346
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SHEET NUMBER **L-6** of 44
 PROJECT NUMBER 13-237.03

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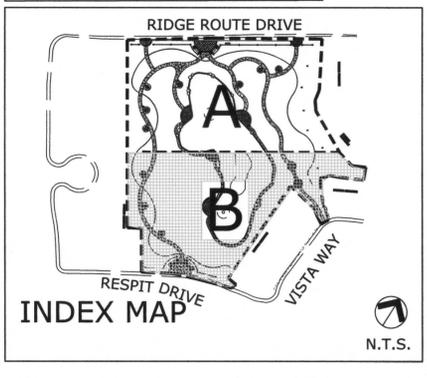
SYMBOL LEGEND	
	LIMIT OF WORK LINE
	RIGHT-OF-WAY LINE
	EXISTING SPOT ELEVATION
	EXISTING CONTOUR LINES
	EXISTING CURB OR EDGE OF PAVEMENT
	EXISTING WALK
	EXISTING WALL & FENCE
	PROPOSED WALK
	EXISTING SIGN
	EXISTING WATER METER
	PROPOSED WASTE RECEPTACLE
	BENCH
	ADA PICNIC TABLE
	STD. PICNIC TABLE
	DRINKING FOUNTAIN
	BIRD HOUSE
	DOGI-POT
	EXISTING LIGHT POLE
	EXISTING TREE
	EXISTING FIRE HYDRANT
	EXISTING MANHOLE
	PLANTING AREA
	BOULDERS
	GFRC BOULDERS

SITE AMENITIES LEGEND	
	PICNIC TABLE, WABASH VALLEY, MODEL # SG201D AND ADA MODEL #SG201P 6' SINGLE PEDESTAL IN GROUND, COLOR MINT GREEN RAL #6029, FINISH: POWDERCOAT, REFER TO DETAIL 'C', SHEET L-8. AVAILABLE FROM DAVE BANG ASSOCIATES. 800-669-2583
	BACKLESS BENCH, CM-14, COLOR MINT GREEN RAL #6029, 6' LENGTH, AVAILABLE FROM VICTOR STANLEY, 800-368-2573 CM-14 PO DRAWER 330, DUNKIRK, MD 20754 - REFER TO DETAIL 'D', SHEET L-9
	HUMMINGBIRD BENCH, COLOR MINT GREEN RAL #6029, AVAILABLE FROM CRICKET FORGE, 919 680-3513, 214 HUNT STREET, DURHAM, NC 27701- REFER TO DETAIL 'B', SHEET L-8
	DRAGONFLY BENCH, COLOR MINT GREEN RAL #6029, AVAILABLE FROM CRICKET FORGE, 919-680-3513, 214 HUNT STREET, DURHAM, NC 27701- REFER TO DETAIL 'D', SHEET L-8
	INTERPRETIVE SIGNS, - REFER TO DETAIL 'H', SHEET L-8
	BIRD HOUSE, AVAILABLE FROM DUNCRAFT, 888-879-5095 OR APPR. EQUAL - REFER TO DETAIL 'I', SHEET L-8
	DRINKING FOUNTAIN WITH VALVE, AVAILABLE FROM MDF MODEL 410 SM, ONE BOWL ON ADA ARM W/SS SURFACE CARRIER W/ PET FOUNTAIN, PEDESTAL SURFACE MOUNTED, COLOR MINT GREEN RAL #6029, SMOOTH FINISH, OR APPROVED EQUAL - REFER TO DETAIL 'A', SHEET L-8
	TRASH RECEPTACLE, MODEL # TG2-3001, COLOR MINT GREEN RAL #6029, FINISH: DURACOAT, BY SITE SCAPES, 402-421-9464 OR APPROVED EQUAL - REFER TO DETAIL 'D', SHEET L-7
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	MEMORIAL PLAQUE W/ TWO (2) BENCHES SHALL BE LEFT IN PLACE
	SALVAGED / RELOCATED CITY OF LAKE FOREST PARK RULES SIGN
	RELOCATE EXISTING MEMORIAL PLAQUE

CONSTRUCTION LEGEND	
1	CONCRETE PAVING - REFER TO DETAIL 'A', SHEET L-7
2	ENHANCED CONCRETE PAVING - REFER TO DETAIL 'A', SHEET L-7
3	CONCRETE BAND - REFER TO DETAIL 'B', SHEET L-7
4	CONCRETE MOW STRIP - REFER TO DETAIL 'F', SHEET L-7
5	CONCRETE PAD (PICNIC TABLES) - REFER TO DETAIL 'C', SHEET L-8
6	ENTRY OVERHEAD STRUCTURE - REFER TO DETAIL 'E', SHEET L-9
7	DECOMPOSED GRANITE, COMPACTION REQUIRED - REFER TO DETAIL 'C', SHEET L-7
8	PILASTERS - REFER TO DETAIL 'G', SHEET L-8
9	PEDESTRIAN BRIDGE, BRIDGE 'B' - REFER TO DETAIL 'A', SHEET L-10
10	LODGE POLE FENCE - REFER TO DETAIL 'E', SHEET L-8
11	BOULDERS - AVAILABLE FROM SOUTHWEST BOULDERS 877 792-7625 TYPE-COLORADO MOSS-REFER TO DETAIL 'B', SHEET L-9
12	GFRC BOULDERS - TO BE CONSTRUCTED PER MANUFACTURER'S SPECIFICATIONS SEE DETAIL G, SHEET L-9
13	FLOATING LAKE ISLAND - AVAILABLE FROM AQUABIO, 310-397-3114, OR APPROVED EQUAL. AQUABIO SHALL PROVIDE SHOP DRAWING FOR REVIEW & APPROVAL PRIOR TO CONSTRUCTION, TO ENGINEER.
14	LAKE EDGE - REFER TO SHEET W-200
15	BRIDGE 'A' - REFER TO DETAIL 'F', SHEET L-9
16	RECYCLED HEADER BOARD - REFER TO DETAIL 'C', SHEET L-7
17	GEYSERS - REFER TO FOUNTAIN DETAIL 'C' SHEET W-252
18	MONUMENT SIGN/LOGO REPLACEMENT - REFER TO DETAIL 'F', SHEET L-8
19	INTERPRETIVE SIGN - REFER TO DETAIL 'C', SHEET L-9
20	NEW CURB CUT - REFER TO CIVIL ENGINEERING PLANS
21	ABUTMENT - REFER TO DETAIL G, SHEET L-7
22	1" DIA. SCH 40 PVC WATERLINE. CONSTRUCT AS SHOWN FROM NEW BACKFLOW TO DRINKING FOUNTAIN, SIM. TO IRRIG. MAINLINE @ 24" DEEP.

BOULDER LEGEND	
	3'-3" x 3'-0"
	2'-10" x 2'-6"
	2'-2" x 2'-0"

NOTE
 1. REFER TO SHEET L-7 THROUGH L-10 FOR CONSTRUCTION DETAILS AND CONSTRUCTION NOTES.



CONSTRUCTION PLAN NOTES

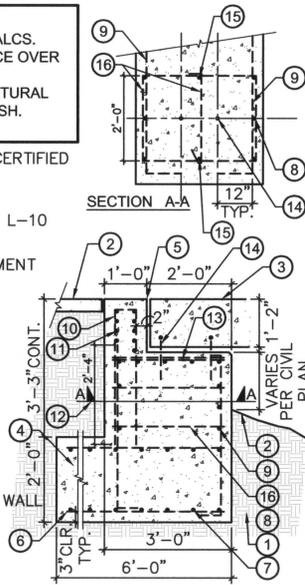
- CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, AND EQUIPMENT FOR THE INSTALLATION OF ALL IMPROVEMENTS AS SHOWN ON THE DRAWINGS AND AS DESCRIBED IN THE SPECIFICATIONS.
- CONTRACTOR SHALL REVIEW ALL EXISTING SITE CONDITIONS PRIOR TO SUBMITTING BID AND PRIOR TO COMMENCING INSTALLATION. IF ANY DISCREPANCIES EXIST, THEY SHOULD BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CITY'S/OWNER'S AUTHORIZED REPRESENTATIVE.
- DEVIATIONS BETWEEN THE DRAWINGS AND ACTUAL FIELD CONDITIONS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CITY'S/OWNER'S AUTHORIZED REPRESENTATIVE.
- COSTS INCURRED DUE TO REPAIR, RESTORATION, OR REPLACEMENT OF EXISTING IMPROVEMENTS WHICH ARE DESIGNATED "TO BE PROTECTED" OR "TO REMAIN" WHICH ARE DAMAGED AS A RESULT OF CONSTRUCTION OPERATIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- UNLESS DESIGNATED ON THE DRAWINGS OTHERWISE, ALL MATERIALS DESIGNATED FOR REMOVAL SHALL BE DISPOSED OF IN A LEGAL MANNER OFF-SITE.
- HARDSCAPE AND STRUCTURAL ELEMENTS SHALL BE PLACED ON SUITABLE NATIVE GRADE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND STAKING ALL SEWER, WATER AND UTILITY LINES ABOVE OR BELOW GRADE THAT MIGHT BE DAMAGED AS A RESULT OF CONSTRUCTION OPERATIONS. CONTRACTOR SHALL ASSUME SOLE RESPONSIBILITY FOR ANY COST INCURRED FOR REPAIR, RESTORATION, OR REPLACEMENT OF AFOREMENTIONED UTILITIES DAMAGED AS A RESULT OF CONSTRUCTION OPERATIONS.
- ABANDONED PIPES SHALL BE CAPPED OR PLUGGED IN A MANNER APPROVED BY THE CITY'S/OWNER'S AUTHORIZED REPRESENTATIVE.
- CONCRETE INDICATED FOR SAWCUTTING AND REMOVAL SHALL BE CUT TO A TRUE LINE WITH NEATLY SAWED EDGES. IF A SAWCUT IS WITHIN THREE FEET (3') OF AN EXISTING EXPANSION OR CONTROL JOINT, CONCRETE SHALL BE REMOVED TO THAT NEAREST JOINT.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS, MANUFACTURER'S CUT OR DATA SHEETS FOR REVIEW & APPROVAL PRIOR TO ORDERING MATERIALS. CONTRACTOR SHALL FURNISH TO THE CITY'S/OWNER'S AUTHORIZED REPRESENTATIVE A CERTIFICATE OF COMPLIANCE FOR SUCH FURNISHED MATERIALS.
- UNLESS DESIGNATED ON THE DRAWINGS OTHERWISE, MATERIALS TO BE PURCHASED AND FURNISHED BY THE CONTRACTOR SHALL BE NEW. ALL MANUFACTURED AMENITIES SHALL BE AVAILABLE OR APPROVED EQUAL BASIS.
- PROJECT RECOMMENDATIONS BY A STRUCTURAL ENGINEER SHALL TAKE PRECEDENCE FOR ALL SOIL CONDITIONS, MATERIALS, REINFORCEMENT, DIMENSIONS, AND SUBBASE.

NOTES:

- REFER TO SPECS FOR STRUCTURAL CALCCS.
- STRUCTURAL CALCCS TAKE PRECEDENCE OVER DETAIL HEREON.
- ALL EXPOSED CONCRETE SHALL BE NATURAL COLOR WITH MEDIUM SAND BLAST FINISH.
- CONCRETE STRENGTH $f_c=4500$ psi

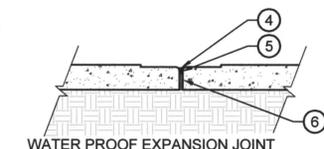
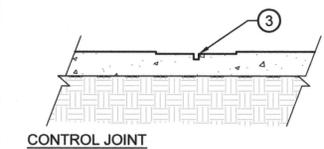
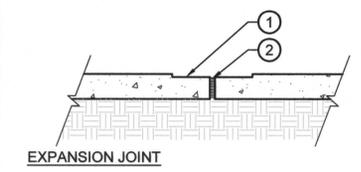
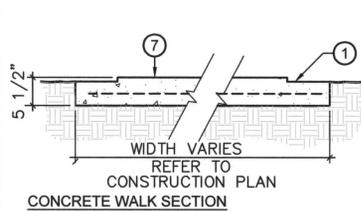
- UNDISTURBED NATIVE GRADE OR CERTIFIED COMPACTED FILL
- FINISH SURFACE
- BRIDGE DETAILS, REFER TO SHEET L-10
- CONCRETE FOOTING W/ REBAR
- NATURAL COLOR CONCRETE ABUTMENT
- #6 LATITUDE REBAR @ 16" O.C.
- #6 LONGITUDE REBAR @ 16" O.C.
- #7 VERT. REBAR @ 12" O.C. EACH FACE
- #7 HORZ. REBAR @ 12" O.C. EACH FACE
- #4 VERT. REBAR @ 12" O.C. EACH FACE
- #4 HORZ. REBAR @ 12" O.C. EACH FACE
- (2) #4 TIES @ 2" O.C. AT TOP OF WALL
- ANCHOR BOLTS BY EXCEL MANUF.
- #7 VERTICAL REBAR
- #4 REBAR @ 8" O.C. TIE

G ABUTMENT
SCALE: 1/2"=1'-0"



NOTES:

- EXPANSION JOINTS SHALL BE AS SHOWN ON THE CONSTRUCTION PLAN(S) AND/OR ADJACENT TO LARGE SLABS, STRUCTURES, AND AT INTERVALS NOT TO EXCEED 20' O.C.
- CONTROL JOINTS SHALL BE AS SHOWN ON THE CONSTRUCTION PLAN(S) AND/OR AT 10' INTERVALS.
- UNLESS OTHERWISE NOTED, NEW FINISH SURFACE SHALL BE FLUSH WITH ADJACENT EXISTING SURFACES.
- FINISH GRADE: 1" BELOW FINISH SURFACE ADJACENT TO TURF AND 2" BELOW ADJACENT TO NON-TURF AREAS.
- FOR ADDITIONAL INFORMATION REFER TO CONSTRUCTION NOTES.
- TOP CAST AVAILABLE FROM GRACE DECORATIVE CONCRETE CONCRETE, 888-336-9303, OR AN APPROVED EQUAL. CONTRACTOR SHALL PROVIDE SAMPLES TO ENGINEER FOR REVIEW & APPROVAL PRIOR TO CONSTRUCTION.



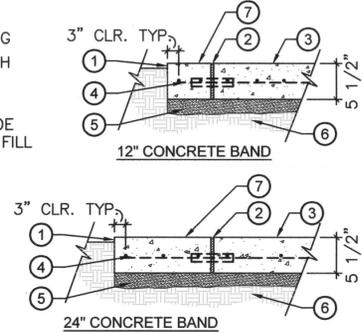
A CONCRETE PAVING
SCALE: 1"=1'-0"

NOTES:

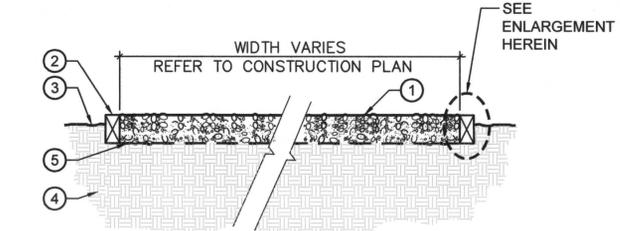
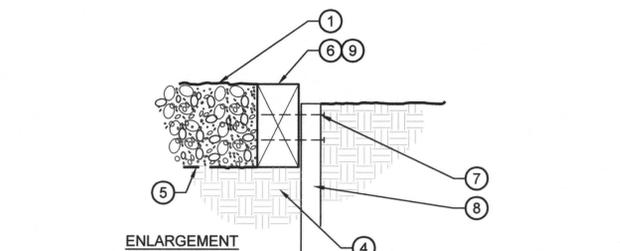
- REFER TO DETAIL 'A' HEREON FOR COLOR & FINISH OF CONCRETE.
- EXPOSED EDGES SHALL RECEIVE A 1/2" RADIUS.
- CONTROL JOINTS FOR BANDING SHALL BE AS SHOWN ON THE CONSTRUCTION PLANS AND AS STATED IN DETAIL 'A' HEREON.
- EXPANSION JOINTS SHALL BE AS SHOWN ON PLAN VIEW AND DETAILS - REFER TO DETAIL 'A' & 'B' HEREON FOR CONCRETE PAVING AND JOINTS RESPECTIVELY

- FINISH GRADE, 1" FOR TURF AND 2" FOR SHRUB AREAS, TYP.
- EXPANSION JOINT
- 4" THICK CONCRETE PAVING
- #4 REBAR @ 12" O.C. EACH WAY, CENTER ON SLAB
- SUB-BASE
- UNDISTURBED NATIVE GRADE OR CERTIFIED COMPACTED FILL
- NATURAL COLORED BAND WITH LIGHT BROOM FINISH BAND SHALL RECEIVE A #4 DOWEL 12" LONG 18" O.C. WITH 6" INTO ADJACENT PAVING

B CONCRETE BAND
SCALE: 1"=1'-0"



- 4" THICK DECOMPOSED GRANITE (D.G.) W/ STABILIZER FLUSH W/ HEADERBOARD. GRANITE MATERIALS ARE AVAILABLE FROM GAIL MATERIALS, 951-279-1095 OR AN APPROVED EQUAL. COLOR SHALL BE 'CALIFORNIA GOLD'
- HEADERBOARD - REFER TO ENLARGEMENT HEREIN
- FINISH GRADE - 2" BELOW HEADER BOARD FOR SHRUB/GROUND COVER AREAS; 1" BELOW AT TURF AREAS
- UNDISTURBED NATIVE GRADE OR CERTIFIED COMPACTED SUBGRADE
- FILTER FABRIC (WEED BARRIER) - BIO-BARRIER II FABRIC AVAILABLE FROM VILLA ROOT BARRIER 800-654-4067 OR AN APPROVED EQUAL.
- 2x4 BEND-A-BOARD (RECYCLED PLASTIC HEADER BOARD - BROWN) OR 4 1/2"x4 LAMINATED BOARDS FOR CURVES-CONTINUOUS
- PLATED SCREWS OR RING SHANK NAILS AT EACH STAKE
- 1"x1"x12" RECYCLED PLASTIC STAKE AT A MAXIMUM OF 2' O.C. TYPICAL
- PROVIDE A 1"x2"x24" LONG CONNECTING BOARD AT THE CONNECTION BETWEEN 2 TWO SEPARATE HEADER BOARDS. PROVIDE A STAKE AT A MAXIMUM OF 2'-0" AT EACH SIDE OF THE SPLICE.

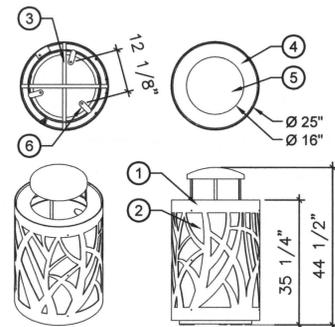


C DECOMPOSED GRANITE
SCALE: NTS

sitescapes P.O. Box 23326 Lincoln, NE 68542
 PHONE: 402.421.9464 FAX: 402.421.9478 E-MAIL: info@sitescapesonline.com
 WEBSITE: www.sitescapesonline.com
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- CONTAINER - 7 GAUGE LASER CUT STEEL
- BAILER - 1/16" ALUM. SHEET
- SUPPORT BARS - 1"x3/4" STEEL FLAT BAR
- LID - Ø 24"x.075" WALL STEEL LID ATTACHED TO BASKET WITH STAINLESS STEEL AIRCRAFT CABLE
- DOMES - Ø16"x.105" WALL STEEL DOME.
- SURFACE MOUNT PLATES - 1/4"x1 1/2" STAINLESS STEEL PLATE W/ 9/16" MOUNTING HOLE
- MOUNTED W/ THREE Ø1/2"x4-5 STAINLESS STEEL ANCHOR BOLTS (CUSTOMER SUPPLIED)
- 36 GALLON RIGID PLASTIC LINER W/ HANDLES INCLUDED

- NOTES:**
- DURACOAT FINISH.
 - COLOR MINT GREEN RAL #6029.
 - CONTAINER SHALL BE BOLTED TO FINISH SURFACE W/ STAINLESS STEEL BOLTS.
 - REFER TO SITE AMENITIES LEGEND, SHEET L-5 FOR AVAILABILITY.



D TRASH RECEPTACLE
SCALE: NTS

Doggie Walk Bags DISPENSERS
THE #1 SOLUTION FOR A #2 PROBLEM

DISPENSER QUALITIES & CONSTRUCTION

- Long lasting/durable
- Weatherproof
- Reusable
- Capable resistant
- Lightweight
- Easy to open/clean
- Made locally in Southern California
- Constructed from recycled plastic
- Same process/materials as outdoor play places
- Stainless bag roll holder
- Ability to store multiple bag pouches inside
- Dispense one at a time (no "over-pulling")

IDEAL DISPENSER LOCATIONS & CLIENTS

- HOLAs
- Apartment
- Condominiums
- Cities/Countries
- Hospitals
- Municipalities
- Parks
- Property Mgmt.
- Landscapes Co.
- Hotels/Resorts
- Hotels
- Rest Stops
- Carports
- Community Centers
- Spawning Centers
- Veterinary Offices/Clinics
- Animal Rescues/Shelters
- Groomers (Shop/Mobile)
- Police Stations
- Pet Stores
- Animal Boarding
- Dog Day Care
- Service Dog Areas
- Etc. Hospitals

DISPENSER COLORS

- Black
- Blue
- Forest Green
- Grey
- Yellow
- White
- Custom Colors

DISPENSER BAGS

- 70 Bag Pouches
- Blue Screened
- Black Nonrecycled
- Green Nonrecycled
- Single Case - \$125.00
- 2,000 Bags (50 Pouches)
- Double Case - \$250.00
- 4,070 Bags (61 Pouches)
- Rolls of 250 Black
- Nonrecycled Bags
- 8 Rolls - \$49.60
- 12 Rolls - \$56.40

DISPENSER SET

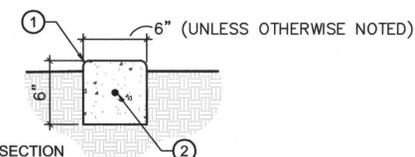
- #005 Dispenser
- #010 Sign
- #007 Combo Lock
- #014 Trash Bin
- #017 (2) 5' Galvanized Steel Posts
- Dispenser Set

DOGGIE WALK BAGS • (877)-DOG-BAGS • Locally: 949-200-1148 • ddbwholesale.com • info@doggiebag.com

E DOGGIE WALK
SCALE: NTS

- NOTES:**
- SAWCUT OR SCORE JOINTS @ 10' O.C. MAX.
 - CONCRETE SHALL BE NATURAL COLOR WITH LIGHT BROOM FINISH.
 - UNLESS OTHERWISE NOTED, NEW FINISH SURFACE SHALL BE FLUSH WITH ADJACENT EXISTING SURFACES.
 - FINISH GRADE: 1" BELOW FINISH SURFACE ADJACENT TO TURF AND 2" BELOW ADJACENT TO NON-TURF AREAS.
 - FOR ADDITIONAL INFORMATION REFER TO CONSTRUCTION NOTES.

- CONCRETE MOW STRIP 1/2" RADIUS ON EXPOSED EDGES.
- #3 REBAR, CONTINUOUS, 3" CLEAR.



F CONCRETE MOWSTRIP
SCALE: 1 1/2"=1'-0"

CONSTRUCTION DETAIL NOTES

- THE FOLLOWING NOTES APPLY TO ALL DETAILS AS SHOWN IN THIS SET OF DOCUMENTS, UNLESS OTHERWISE NOTED.
- FOR ADDITIONAL INFORMATION REFER TO CONSTRUCTION NOTES.
- UNLESS OTHERWISE NOTED, NEW FINISH SURFACE SHALL BE FLUSH WITH ADJACENT EXISTING SURFACES.
- FINISH GRADE: 1" BELOW FINISH SURFACE ADJACENT TO TURF AND 2" BELOW ADJACENT TO NON-TURF AREAS.
- FINAL LOCATION OF CONSTRUCTION ELEMENTS, DRAINAGE DEVICES, SITE AMENITIES, IRRIGATION EQUIPMENT, AND PLANT MATERIAL MAY REQUIRE ADJUSTMENT DUE TO FIELD CONDITIONS AND SHALL BE APPROVED PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL VERIFY ALL MATCHING MATERIALS AND COLORS PRIOR TO INSTALLATION. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO INSTALLATION.



DATE 10/10/16
 SCALE AS SHOWN
 DRAWN BY DL
 CHECKED BY TM

REVISIONS/PLAN LOG
 REVISED PER ADDENA No. 1

PROJECT AND CLIENT NAME
VILLAGE POND PARK
 LAKE FOREST, CA

CITY OF LAKE FOREST
 25550 COMMERCENTRE DRIVE
 SUITE 100
 PHONE (949) 461-3420

SHEET DESCRIPTION
CONSTRUCTION DETAILS



LANDSCAPE ARCHITECTURE
 AND PLANNING

3151 AIRWAY AVENUE, SUITE J-3
 COSTA MESA, CALIFORNIA
 U.S.A. 92626-4640
 FX: 714.754.7346
 PH: 714.754.7311

SHEET NUMBER **L-7** of 44
 PROJECT NUMBER 13-237.03

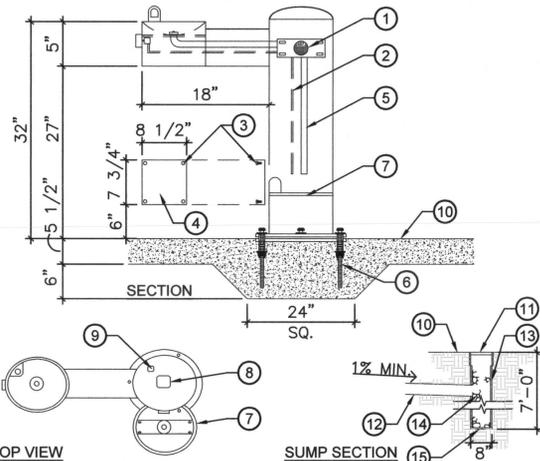
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FAX: (901) 867-0159
www.mostdependable.com

- NOTES:**
1. MEETS ADA REGULATIONS.
 2. STAINLESS STEEL SURFACE CARRIER INCLUDED.
 3. SHOWN WITH 10SS SURFACE CARRIER, ATTACHED PET FOUNTAIN.
 4. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
 5. DO NOT SCALE DRAWING.
 6. 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.
 7. COLOR SHALL BE MINT GREEN RAL #6029. FINAL COLOR SHALL BE REVIEWED & APPROVED BY THE ENGINEER PRIOR TO PURCHASE.

- 1 CONTROL VALVE FOR PET FOUNTAIN
- 2 3/8" NYLON REINFORCED NYLONBRAID TUBING W/ 1/2" MIP (WATER SUPPLY)
- 3 4-STAINLESS STEEL 1/4-20SS TORX BOLT W/ PIN
- 4 ACCESS DOOR
- 5 1 1/2" PVC DRAINLINE, REFER TO SUMP DETAIL HEREON
- 6 1/2"x12" ZINC PLATED ROD
- 7 PET FOUNTAIN
- 8 2", 3", 4" OPEN HUB DRAIN, IF POSSIBLE, OR RIGID CONNECTION WATER
- 9 FINISH SURFACE
- 10 CAST IRON COVER MARKED 'S'
- 11 MIN. 2" PVC WASTE PIPE FROM DRINKING FOUNTAIN L=5' MAX.
- 12 8" PERFORATED PVC PIPE WRAPPED W/ "MIRAFI" OR APPROVED EQUAL.
- 13 3/4" ROCK
- 14 OPEN END

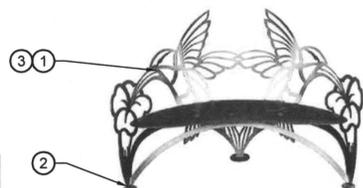


MODEL 410 SM
W/ 10SS SURFACE CARRIER, PF

A DRINKING FOUNTAIN
SCALE: NTS

- NOTES:**
1. REFER TO SITE AMENITIES LEGEND, SHEET L-6 FOR BENCH AVAILABILITY & MODEL NUMBER.
 2. BENCHES LOCATED ON DECOMPOSED GRANITE SHALL BE SURFACE MOUNTED TO 6" DIA. X 12" DEEP CONCRETE FOOTING - REFER TO PLAN.
 3. ALL BENCHES SHALL BE INSTALLED PER MANUFACTURER'S DETAILS AND SPECIFICATIONS.

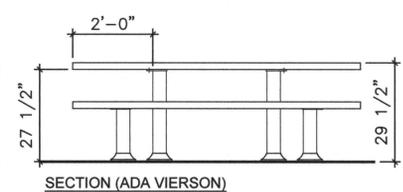
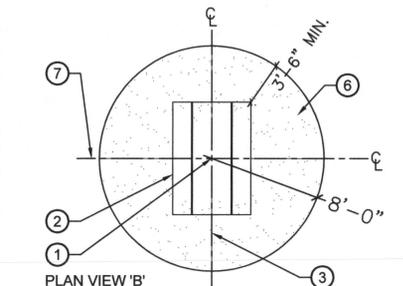
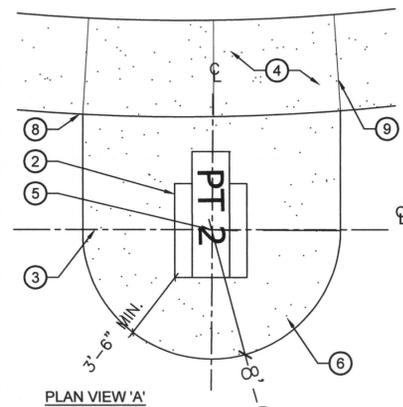
- 1 CRICKET FORGE 62"Wx45"Hx29"D 1/4" STEEL ZINC GALVANIZED, HAND PAINTED OR AIRBRUSHED W/ MARINE GRADE EPOXY PAINTS
- 2 ANCHOR BOLTS PER MANUFACTURER'S DETAILS AND SPECIFICATIONS - ONE (1) BOLT PER LEG
- 3 COLOR SHALL BE MINT GREEN RAL #6029.



ELEVATION

B HUMMINGBIRD BENCH
SCALE: NTS

- NOTES:**
1. EXPANSION JOINTS SHALL BE LOCATED AS SHOWN ON THE CONSTRUCTION PLAN AND/OR ADJACENT TO LARGE SLABS STRUCTURES.
 2. FINISH SURFACE SHALL BE MEDIUM BROOM FINISH, NATURAL COLOR CONCRETE.
 3. FINAL ORIENTATION OF TABLE & FINAL LOCATION OF TRASH RECEPTACLE SHALL BE REVIEWED & APPROVED PRIOR TO CONSTRUCTION BY THE ENGINEER.
 4. TABLE AND TRASH RECEPTACLES SHALL BE INSTALLED AS NOTED ON CONSTRUCTION PLAN, SITE AMENITIES LEGEND.
 5. REFER TO CIVIL PLANS FOR SUBBASE.



C CONCRETE PAD (PICNIC TABLE)
SCALE: NTS

- NOTES:**
1. REFER TO SITE AMENITIES LEGEND, SHEET L-6 FOR BENCH AVAILABILITY & MODEL NUMBER.
 2. BENCHES LOCATED ON DECOMPOSED GRANITE SHALL BE SURFACE MOUNTED TO 6" DIA. X 12" DEEP CONCRETE FOOTING - REFER TO PLAN.
 3. ALL BENCHES SHALL BE INSTALLED PER MANUFACTURER'S DETAILS AND SPECIFICATIONS.

- 1 CRICKET FORGE 60"Wx40"Hx26"D 1/4" STEEL ZINC GALVANIZED, HAND PAINTED OR AIRBRUSHED W/ MARINE GRADE EPOXY PAINTS
- 2 ANCHOR BOLTS PER MANUFACTURER'S DETAILS AND SPECIFICATIONS - ONE (1) BOLT PER LEG
- 3 COLOR SHALL BE MINT GREEN RAL #6029.

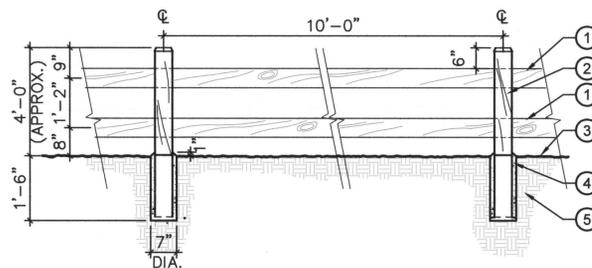


ELEVATION

D DRAGONFLY BENCH
SCALE: NTS

- NOTES:**
1. RAIL FENCING AVAILABLE FROM C&E LUMBER & HARDWARE AT 909-686-3591 OR APPROVED EQUAL.
 2. INSTALLATION SHALL BE PER MANUFACTURER'S SPECIFICATIONS.

- 1 3 1/2" DIA. LODGE POLE DOWLED RAILS
- 2 4' LONG, 5" DIA. WOOD POST W/ DOMED TOP
- 3 FINISH GRADE
- 4 EXPOSED PORTION OF FOOTING SHALL BE SLOPED TO DRAIN AT 2% FROM POST
- 5 UNDISTURBED NATIVE GRADE OR CERTIFIED COMPACTED SUBGRADE



E LODGE POLE FENCE
SCALE: 1/2"=1'-0"

- NOTES:**
1. REFER TO SHEETS L-5 & L-6, FOR LANDSCAPE SITE AMENITIES.

- 1 VENEER - 4"-10" RIVER ROCK TO MATCH 'SIERRA SELECT' BOULDERS AVAILABLE FROM SOUTHWEST BOULDER AND STONE, 760-751-3333, OR APPROVED EQUAL.
- 2 8x8x16 CMU - GROUT ALL CELLS
- 3 #4 VERTICAL REBAR EACH CORNER & CENTER VOID
- 4 #4 HORIZONTAL REBAR - TOP, MIDDLE & BOTTOM
- 5 FINISH GRADE
- 6 CONCRETE FOOTING WITH REBAR
- 7 UNDISTURBED NATIVE GRADE OR CERTIFIED COMPACTED SUBGRADE
- 8 #4 HORIZONTAL CONT. REBAR LOCATED 12" O.C. EACH WAY.
- 9 #4 HORIZONTAL REBAR AT APPROX. 12" O.C. EA DIRECTION WITHIN FOOTING.

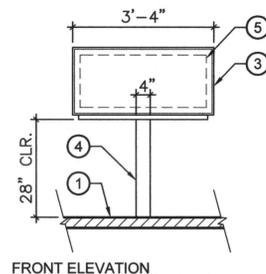
PLAN VIEW

SECTION

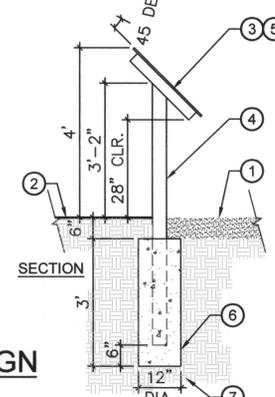
G PILASTER
SCALE: 1/2"=1'-0"

- NOTES:**
1. ALL METAL SHALL BE GALV. & PAINTED. PAINT COLOR SHALL BE MINT GREEN RAL #6029

- 1 DECOMPOSED GRANITE
- 2 FINISH GRADE
- 3 STEEL PANEL PLATE WITH COLOR KRYSTALKOTE (OR EQUAL) OR INDUSTRIAL OIL BASED PRIMER & EXTERIOR ENAMEL OR POWDER COAT.
- 4 4x4 GALV. METAL POST
- 5 INTERPRETIVE PANEL REFER TO DETAIL 'C' SHEET L-9.
- 6 CONC. FOOTING
- 7 UNDISTURBED NATIVE GRADE OR CERTIFIED COMPACTED SUBGRADE



FRONT ELEVATION

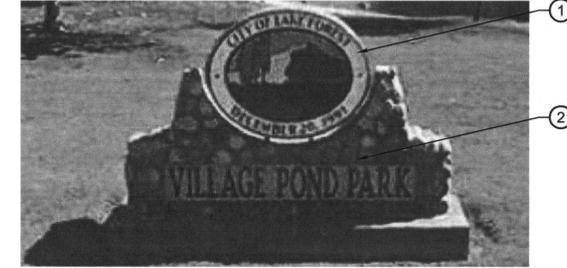


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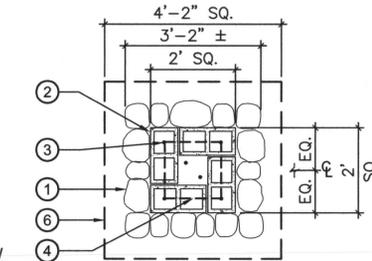
H INTERPRETIVE SIGN
SCALE: 1/2"=1'-0"

- NOTES:**
1. LOGO SIGN AVAILABLE FROM QUICKCRETE PRODUCTS, 951-737-6240, OR AN APPROVED EQUAL.
 2. CONTRACTOR SHALL PROVIDE SHOP DRAWING TO THE ENGINEER FOR REVIEW & APPROVAL PRIOR TO CONSTRUCTION. DRAWING SHALL INDICATE ANCHOR BOLT, SIZES, LOCATIONS, QUANTITY AND DEPTH INTO BASE.

- 1 CONTRACTOR SHALL DEMO & SALVAGE THE EXISTING LOGO SIGN. EXISTING ANCHOR BOLTS SHALL REMOVE ON PLACE FOR REUSE. CONTRACTOR SHALL REPLACE EXISTING LOGO SIGN WITH NEW QUICKCRETE LOGO SIGN, MODEL # QCL 2015. CONTRACTOR SHALL COORDINATE WITH QUICKCRETE IN PROVIDING HOLES, CORRESPONDING WITH CURRENT BOLT LOCATIONS.
- 2 EXISTING MONUMENT SIGN BASE SHALL BE PROTECTED IN PLACE

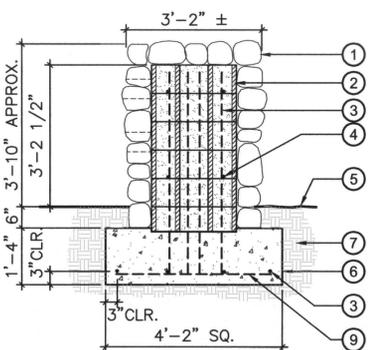


F MONUMENT SIGN / LOGO REPLACEMENT
SCALE: NTS



PLAN VIEW

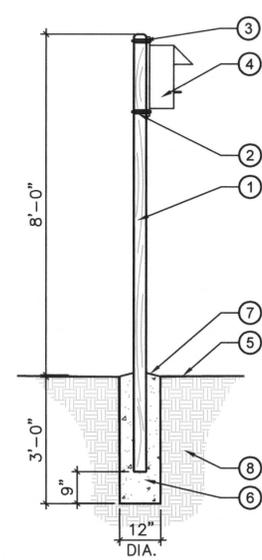
SECTION



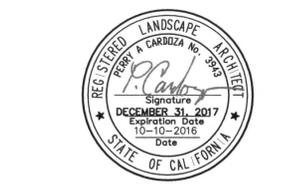
SECTION

- NOTES:**
1. FACE BIRDHOUSE IN AN EASTWARDLY DIRECTION.
 2. BIRD HOUSE SHALL BE DUNCRAFT "FOUR SEASONS ROOSTING BOX".

- 1 4x4 DF TREATED POST
- 2 DRILL 5/16" HOLE THROUGH 4x4 POST
- 3 1/4" STOVE BOLTS 6" LONG GAL. WITH LOCK WASHER & NUT
- 4 BIRDHOUSE, AVAILABLE FROM DUNCRAFT, 888-879-5095 OR APPROVED EQUAL
- 5 FINISH GRADE
- 6 CONCRETE FOOTING W/ LIGHT BROOM FINISH ON EXPOSED SURFACE
- 7 SLOPE TO DRAIN
- 8 UNDISTURBED NATIVE GRADE OR CERTIFIED COMPACTED SUBGRADE



I BIRD HOUSE
SCALE: 1/2"=1'-0"



DATE 10/10/16
SCALE VARIES
DRAWN BY DL
CHECKED BY TM

REVISIONS/PLAN LOG
REVISED PER ADDENA No. 1

PROJECT AND CLIENT NAME
VILLAGE POND PARK
LAKE FOREST, CA

CITY OF LAKE FOREST
25550 COMMERCENTRE DRIVE
SUITE 100
PHONE (949) 461-3420

SHEET DESCRIPTION
CONSTRUCTION DETAILS



LANDSCAPE ARCHITECTURE AND PLANNING

3151 AIRWAY AVENUE, SUITE J-3
COSTA MESA, CALIFORNIA
U.S.A. 92626-4640
FX: 714.754.7346
PH: 714.754.7311

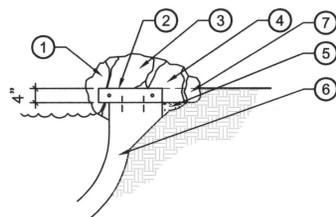
SHEET NUMBER **L-8** OF 44
PROJECT NUMBER 13-237.03

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- SOLID CONCRETE FILL GFRC BOULDER HAND PAINTED FINISH
- WATERPROOF JOINT AROUND GFRC BOULDER ALL SIDES ADJACENT TO CONCRETE PAVING
- 4" COPING (NEW) DOWN TO EXISTING BOND BEAM
- GFRC ROCK CONNECTION TO COPING/WALK
- CONCRETE BED
- EXISTING POND SHELL
- BURIED ROCK

NOTES:
1. REFER TO SHEET W250 DETAIL 'C' FOR ADDITIONAL BOULDER POCKET SHORELINE INFO.



A GFRC BOULDER
SCALE: 1/2"=1'-0"

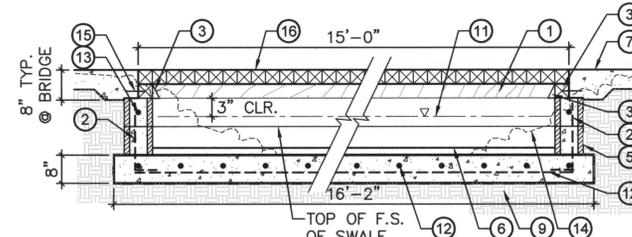
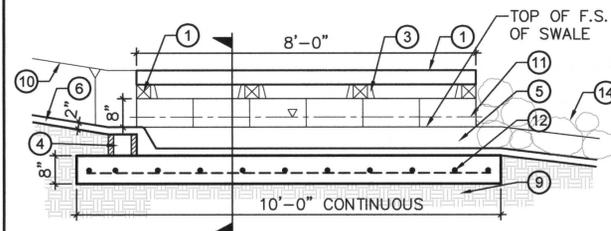
- NOTES:
- VICTOR STANLEY, MODEL: CM-14
 - BACKLESS SEATING WITH DUCTILE-IRON END FRAMES COLOR: MINT GREEN RAL #6029 WITH GREY RECYCLED PLASTIC SLATES 6' LENGTH
 - BOLT INTO CONCRETE PAVING W/ STAINLESS STEEL BOLTS - ONE (1) BOLT PER LEG.



D BENCH
SCALE: NTS

- 4x4 D.F. PRESSURE TREATED BEAM
- #4 VERTICAL REBAR @ 12"
- SIMPSON HANGER
- 6x8x16 BLOCK
- 8x8x16 BLOCK
- EXISTING GUNITE STREAM SWALE, CONTRACTOR SHALL PROTECT IN-PLACE & REPAIR AS NEC.
- TYPICAL SIDEWALK JOINT AT BRIDGE, FLUSH
- FINISH GRADE
- UNDISTURBED NATIVE GRADE OR CERTIFIED COMPACTED FILL
- ADJACENT STREAM EDGE
- ADJACENT WATER LINE OF POND
- #4 HORIZONTAL REBAR @ 12" O.C. EACH WAY
- #4 HORIZONTAL REBAR, CONT.
- BOULDERS AT MOUTH OF STREAM
- LEDGER BOLTS
- 4x4 D.F. PRESSURE TREATED PLANK

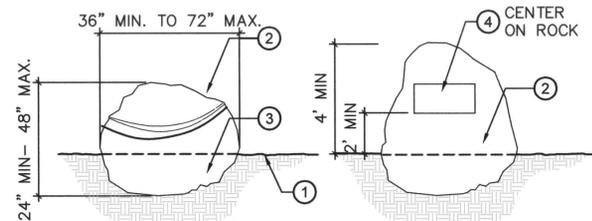
NOTES:
1. CONTRACTOR SHALL PAY FOR & INCLUDE IN THEIR BID THE REVIEW & ANALYSIS OF BRIDGE BY A LICENSED STRUCTURE ENGINEER'S RECOMMENDATION SHALL BE A PART OF THIS DETAIL THAT THE CONTRACTOR'S BID INCLUDES.



F BRIDGE 'A'
SCALE: NTS

- NOTES:
- BOULDER / ROCK - TO BE COLORADO MOSS FROM SOUTHWEST BOULDERS.
 - FINAL LOCATION OF BOULDERS SHALL BE APPROVED BY ENGINEER, LOCATED ON CONSTRUCTION PLAN SHEET L-5.
 - CONTRACTOR TO PROVIDE SAMPLES TO ENGINEER FOR REVIEW, APPROVAL AND PURCHASE PRIOR TO INSTALLATION.
 - REFER TO BOULDER LEGEND FOR BOULDER SIZES, SEE SHEETS L-5, L-6.

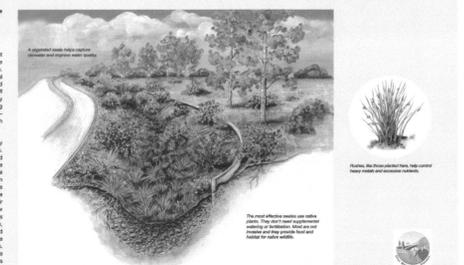
- FINISH GRADE, TYPICAL
- NATIVE SELECT BOULDER SEE SPEC.
- 1/3 - 1/2 OF BOULDER TO BE BURIED BELOW FINISH GRADE
- EXISTING BRONZE PLAQUE RELOCATED AND ATTACHED WITH EPOXY ON FLAT PART OF BOULDER



B LANDSCAPE BOULDER
SCALE: NTS

A "vegetated swale" is like having a water treatment plant in a garden.

Soil does not absorb water as fast as gravel. In fact, it can take a long time for water to infiltrate the ground. A vegetated swale is a shallow depression that is lined with gravel and contains plants that help filter and absorb water. The plants in these swales go one step further. They absorb and store water in their leaves and stems, and release it slowly to the soil. This helps to reduce the amount of water that runs off the site. By controlling runoff, these swales help keep our rivers and streams cleaner.

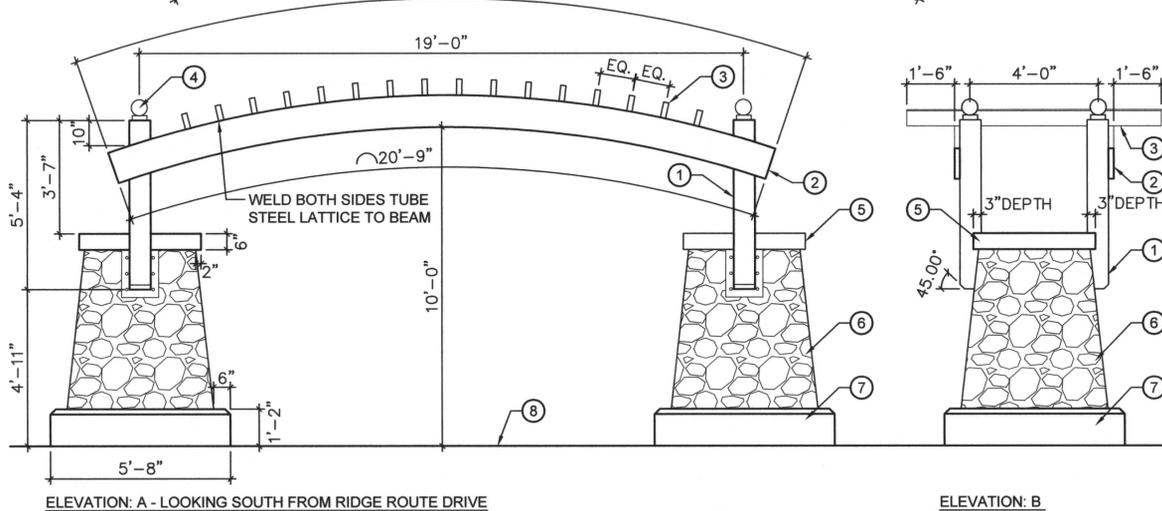
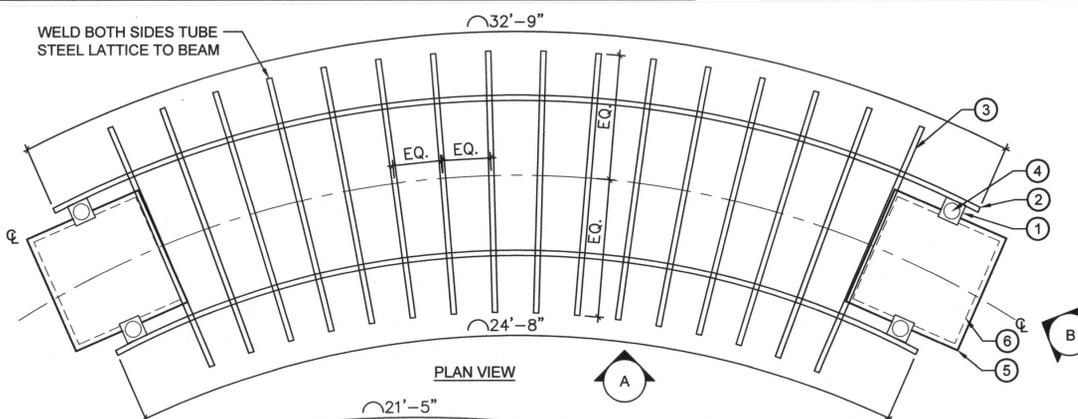
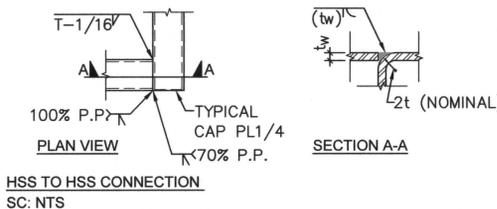


- NOTES:
- PANEL SHALL BE 24"x36", UV-RESISTANT INK PLOT MOUNTED ON 1 MIL SINTRA. SPECIAL: LAMINATE WRAPPED TO THE BACK OF PANEL. USE REPLACEABLE LEXAN COVER. BACKGROUND COLOR: PANTONE@293 AT 8 PERCENT.
 - JPEG COLOR READY FILE SHALL BE PROVIDED BY CITY TO CONTRACTOR.
 - CONTRACTOR SHALL INCLUDE IN THEIR BID A LINE ITEM TO PAY FOR & COORDINATE WITH IZONE IMAGING 254-778-0722, REGARDING SIGN PANELS. TOTAL OF ONE(1).
 - CONTRACTOR SHALL PROVIDE FULL SIZE MOCK-UP TO ENGINEER FOR REVIEW & APPROVAL PRIOR TO CONSTRUCTION.
 - CONTRACTOR SHALL ATTACH PANEL TO STEEL FRAME WITH METHOD REVIEWED & APPROVED BY ENGINEER PRIOR TO CONSTRUCTION.
 - REFER TO DETAIL 'H', SHEET L-8 FOR ADDITIONAL INTERPRETIVE SIGN INFORMATION.



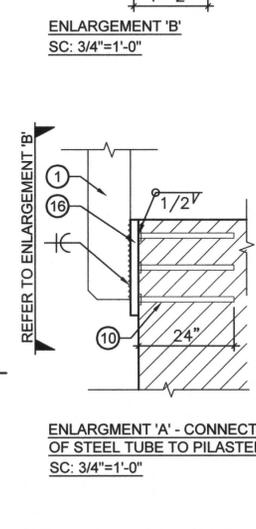
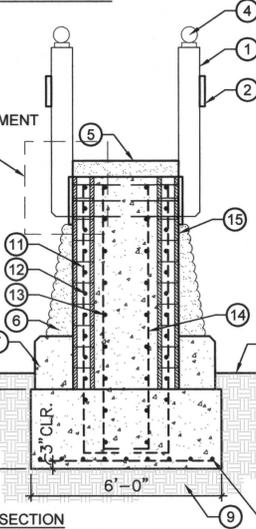
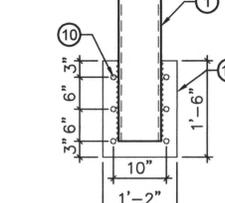
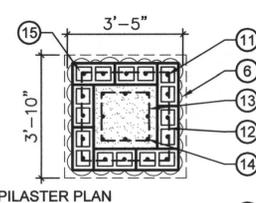
C INTERPRETIVE PANEL
SCALE: NTS

- NOTES:
- TUBULAR STEEL COLOR SHALL BE BLACK, FINISH SHALL BE POLISHED.
 - PRECAST CONCRETE AMENITIES AVAILABLE FROM QUICKCRETE PRODUCTS, 951-737-6240 OR APPROVED EQUAL.
 - ALL METAL MEMBERS SHALL BE GALVANIZED.
 - REFER TO STRUCTURAL ENGINEER'S CALCULATIONS & DETAILS IN SPECIFICATION APPENDIX. STRUCTURAL INFO TAKES PRECEDENCE.
 - OVERHEAD METAL STRUCTURE AVAILABLE FROM EXCEL BRIDGES AT 562-944-0701 OR AN APPROVED EQUAL.
 - CONTRACTOR SHALL PROVIDE SHOP DRAWINGS OF THE OVERHEAD STRUCTURES & PILASTERS TO THE ENGINEER FOR REVIEW & APPROVAL PRIOR TO CONSTRUCTION.
 - REFER TO THE SITE FURNISH SECTION WITHIN THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.



E ENTRY OVERHEAD STRUCTURE
SCALE: 3/8"=1'-0"

- 8"x8"x3/8"x5'-9" LENGTH TUBE STEEL POST
- 12"x3 1/2"x3/8"x22' LENGTH TUBE STEEL BEAM - REFER TO ELEVATION & PLAN VIEWS HEREON FOR LENGTHS
- 6"x2"x1/4"x10' LENGTH TUBE STEEL LATTICE AT APPROX. 16" O.C. EQUAL SPACED FROM CENTER LINE CURVE
- METAL BALL POST CAPS
- PRECAST CONCRETE CAP QCP-MODEL # Q-E48PC-800-230-1377, NATURAL COLOR, LIGHT SANDBLAST, STD.
- COBBLE STONE VENEER PILASTER- 'SIERRA SELECT', BY SOUTHWEST BOULDERS 760-751-3333 OR APPROVED EQUAL
- 5'x12" HIGH PRECAST CONCRETE BASE ALL AROUND
- FINISH SURFACE
- UNDISTURBED NATIVE GRADE OR CERTIFIED COMPACTED SUBGRADE
- #6
- #5 VERTICAL REBAR
- #4 HORIZONTAL REBAR @ 8" O.C.
- #4 HORIZONTAL REBAR @ 12" O.C.
- #4 VERTICAL REBAR
- 8"x8"x16" CMU, GROUT ALL CELLS SOLID TYP.
- 18"x14"x1/2" STEEL PLATE
- (9)#6 HORIZONTAL REBAR EACH WAY



DATE 10/10/16
SCALE VARIES
DRAWN BY DL
CHECKED BY TM

REVISIONS/PLAN LOG
REVISED PER ADDENA No. 1

PROJECT AND CLIENT NAME

VILLAGE POND PARK

LAKE FOREST, CA

CITY OF LAKE FOREST
25550 COMMERCENTRE DRIVE
SUITE 100
PHONE (949) 461-3420

SHEET DESCRIPTION

CONSTRUCTION DETAILS



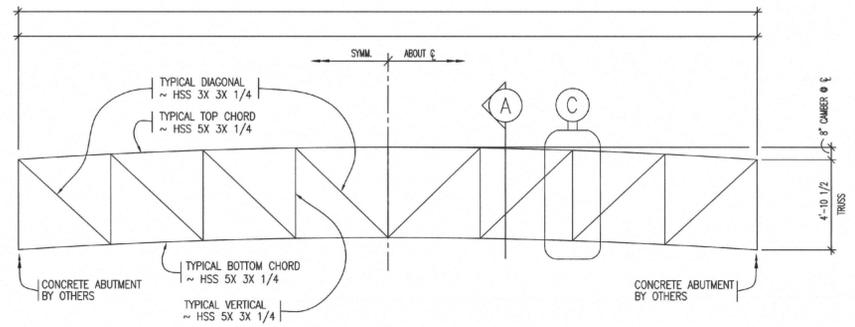
LANDSCAPE ARCHITECTURE
AND PLANNING

3151 AIRWAY AVENUE, SUITE J-3
COSTA MESA, CALIFORNIA
U.S.A. 92626-4640
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PH: 714.754.7311

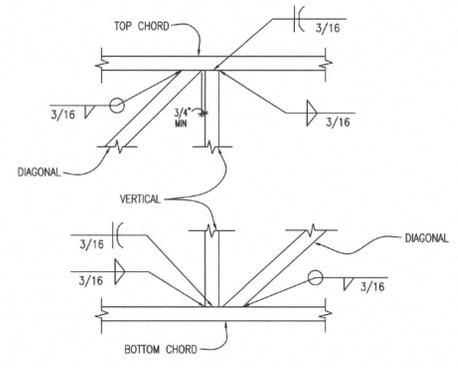
SHEET NUMBER **L-9** OF 44

PROJECT NUMBER 13-237.03

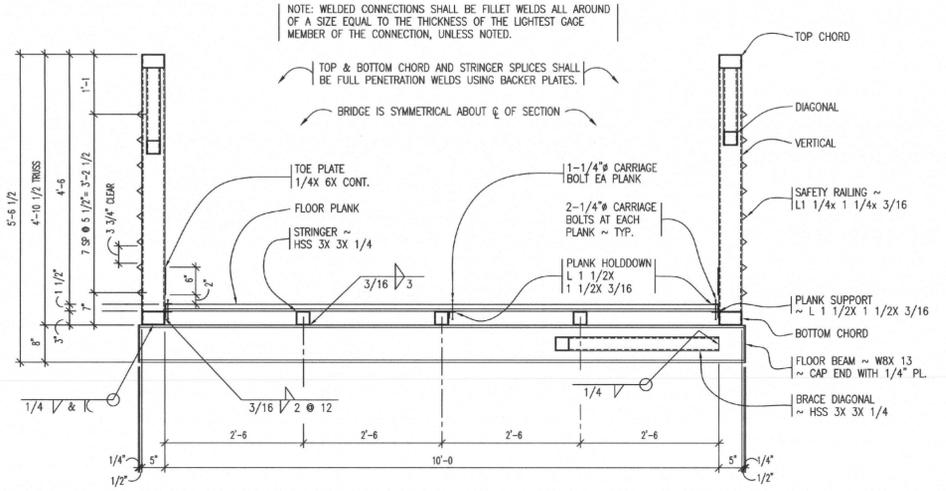
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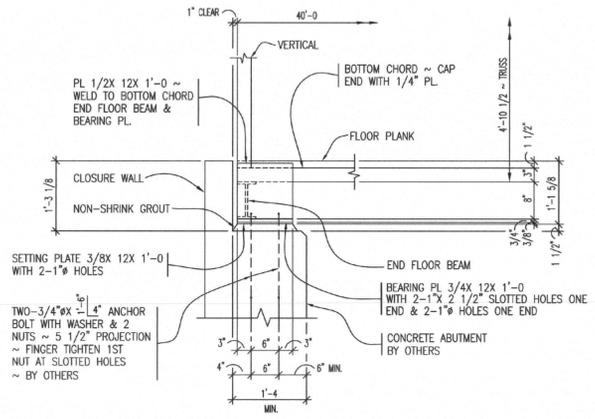
BRIDGE ELEVATIONS 1/4" = 1'-0"



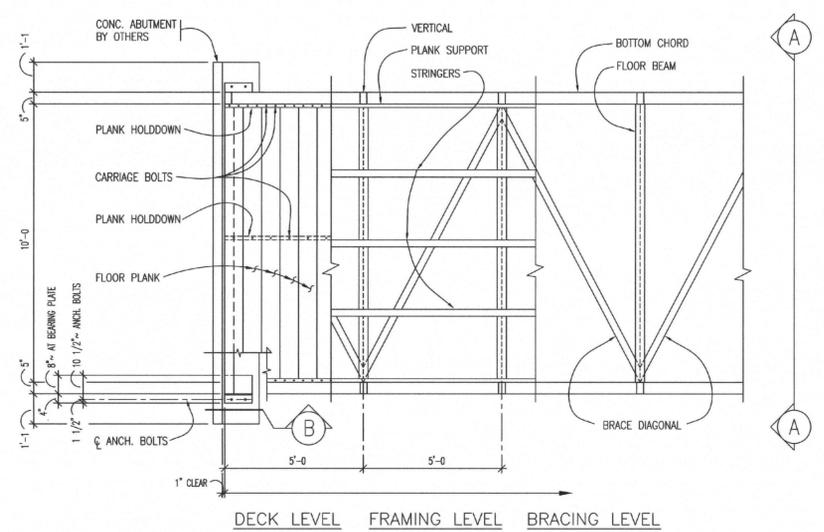
TRUSS WELDS 3/4" = 1'-0"



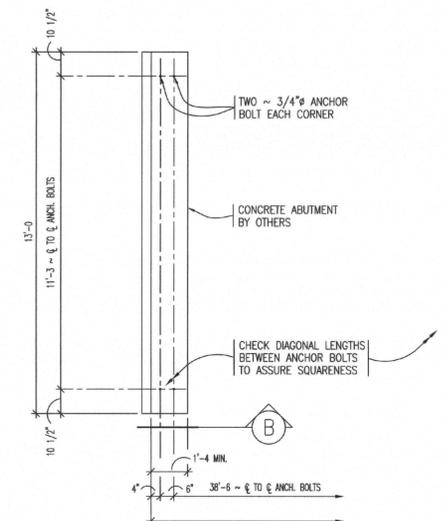
BRIDGE SECTION 3/4" = 1'-0"



BEARING DETAIL 3/4" = 1'-0"



BRIDGE PLAN 3/8" = 1'-0"



ABUTMENT PLAN ANCHOR BOLT SETTING 3/8" = 1'-0"

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GENERAL NOTES

- LIVE LOADS USED IN DESIGN:
 - A. Uniform live load..... 85 psf.
 - B. Vehicle..... 5,000 lbs. (equal wheel loads).
 - C. Wind 35 psf.
 - D. Seismic C.B.C. Ss=2.0.
- FOUNDATIONS:
 - A. Foundations are to be designed and provided by others.
 - B. Foundations shall provide minimum 2500 psi concrete bearing surface.
- TIMBER:
 - A. Wood for bridge decking shall be 2x8 naturally durable hardwood lpe (Tabebuia Spp) with Fv = 320 psi, Fb = 3700 psi, and E = 3000 ksi.
 - B. All planks shall be S4S and E4E (eased four edges).
- METALS:
 - A. All steel shall be high strength low alloy (Fy = 50,000 psi), self-weathering and atmospheric corrosion resistant.
 - 1. All structural steel tube shapes shall conform to ASTM A847.
 - 2. All other steel shapes and plates shall conform to ASTM A588.
 - 3. All standard bolts shall conform to ASTM A307. Anchor bolts, washers and nuts shall be galvanized. Carriage bolts, washers and nuts shall be zinc plated.
 - B. Structural steel shall be designed, detailed, and fabricated according to the latest provisions of the AISC Manual of Steel Construction and AASHTO Guide Specifications for the Design of Pedestrian Bridges.
 - C. All steel surfaces shall be cleaned in accordance with Steel Structures Painting Council standard SSPC-SP6-63.
 - D. All welded connections are pre-qualified joints per AWS Code unless otherwise detailed.
 - E. All welds of tube shapes shall assure a hermetic connection.
 - F. Minimum filler metal strength shall be Fy = 70 ksi, and minimum fillet weld size shall be 3/16", unless noted on plans. Refer to AISC Manual Section J2 for other minimum requirements.
 - C. Welding shall be electric arc process using SMAW end/or FCAW.
 - D. All welded connections are pre-qualified joints per AWS Code unless otherwise detailed.
 - E. All welds of tube shapes shall assure a hermetic connection.
 - F. Minimum filler metal strength shall be Fy = 70 ksi, and minimum fillet weld size shall be 3/16", unless noted on plans. Refer to AISC Manual Section J2 for other minimum requirements.
- WELDED CONNECTIONS:
 - A. All structural steel welds shall conform to the latest provisions of the Structural Welding Code AWS/AWS D1.1.
 - B. All welders shall be qualified in accordance with the above AWS Code.
 - C. Welding shall be electric arc process using SMAW end/or FCAW.
- EXCEL Bridge Manufacturing Company is certified for simple steel bridge construction with AISC, and for high strength fabrication under the City of Los Angeles License #1582.
- Inspection shall be provided by Excel Bridge Manufacturing Company's Quality Control Program to include: review of shop drawings, welding procedures, welder qualifications, verification of bridge dimensions and geometry, and visual inspection of welds.
- EXCEL Bridge Manufacturing Company is responsible for delivery of the fabricated bridge to the jobsite only. Unloading, erection and jobsite safety are the responsibility of others.
- BRIDGE REACTIONS in pounds per base plate - (4 per bridge unless noted):
 - Dead load 3250 lbs.
 - Uniform live load 8500 lbs.
 - Vehicle live load 2300 lbs.
 - Wind: vertical 4200 lbs.
 - transverse 1950 lbs.
 - Seismic: transverse 1300 lbs.
 - longitudinal (2) 2600 lbs.
- BRIDGE LIFTING WEIGHT: 13000 lbs.
- UNIFORM LIVE LOAD DEFLECTION: L/2280.

SHIPPING NOTES:

- Bridges will be shipped on over-the-road trucks. Truck must be unloaded as close as possible to paved streets or roads.
- Purchaser is responsible for coordinating and supplying unloading cranes, support dunnage, and other necessary items.
- Standard unloading time is 2 hours per truck. Purchaser will be responsible for all standby time and time over two hours, required by unloading.

MARK	DATE	PURPOSE

12001 SHOEMAKER AVE.
SANTA FE SPRINGS, CA. 90670
(562) 944-0701
FAX (562) 944-4025
OUTSIDE CA. (800) 548-0054



DATE	10/10/16
SCALE	VARIES
DRAWN BY	DL
CHECKED BY	TM

REVISIONS/PLAN LOG
REVISED PER ADDENA No. 1

PROJECT AND CLIENT NAME
VILLAGE POND PARK
LAKE FOREST, CA

CITY OF LAKE FOREST
25550 COMMERCENTRE DRIVE
SUITE 100
PHONE (949) 461-3420



LANDSCAPE ARCHITECTURE
AND PLANNING

3151 AIRWAY AVENUE, SUITE J-3
COSTA MESA, CALIFORNIA
U.S.A. 92626-4640
FX: 714.754.7346
PH: 714.754.7311

BRIDGE NOTE

- H SECTION PRATT TRUSS WEATHERED STEEL, IPE WOOD DECK, HORIZONTAL SAFETY RAILS. REFER TO DETAILS THIS SHEET FOR 10' X 30' PEDESTRIAN BRIDGE, 30' LENGTH
- REFER TO SHEET L-7, DETAIL 'G', FOR ABUTMENT DETAIL.
- ALL METAL MEMBERS SHALL BE PAINTED BROWN TO MATCH RAL #8002-COOPER BROWN. FINAL COLOR SHALL BE REVIEWED & APPROVED BY ENGINEER PRIOR TO CONSTRUCTION.
- REFER TO THE SITE FURNISHING SECTION WITHIN THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.



A PEDESTRIAN BRIDGES-EXCEL

SHEET 1 OF 1

SHEET NUMBER **L-10** OF 44
PROJECT NUMBER 13-237.03

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DATE 10/10/16
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REVISIONS/PLAN LOG
 REVISED PER ADDENA No. 1

PROJECT AND CLIENT NAME
VILLAGE POND PARK
 LAKE FOREST, CA
 CITY OF LAKE FOREST
 25550 COMMERCENTRE DRIVE
 SUITE 100
 PHONE (949) 461-3420

SHEET DESCRIPTION
IRRIGATION PLAN

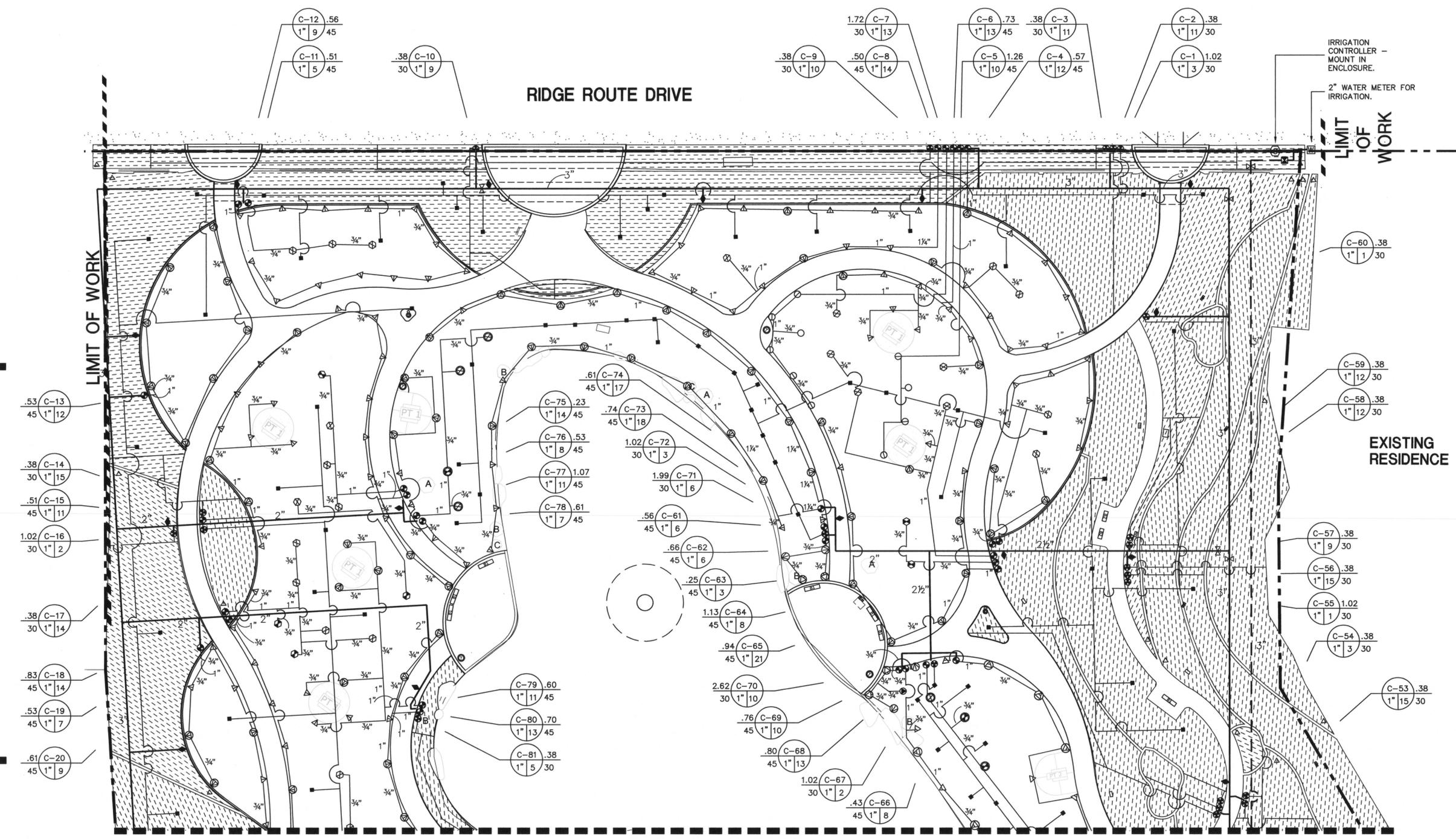


LANDSCAPE ARCHITECTURE
 AND PLANNING

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SHEET NUMBER **L-11** of 44
 PROJECT NUMBER **13-237.03**

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MATCHLINE, SEE SHEET L-12

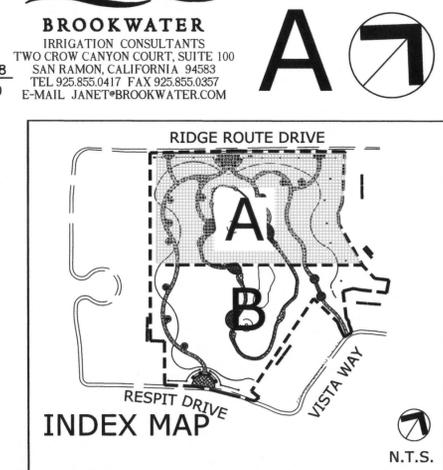
SYMBOL LEGEND

	LIMIT OF WORK LINE		TRASH RECEPTACLE
	RIGHT-OF-WAY LINE		BENCH
	EXISTING SPOT ELEVATION		ADA PICNIC TABLE
	EXISTING CONTOUR LINES		STD. PICNIC TABLE
	EXISTING CURB OR EDGE OF PAVEMENT		DRINKING FOUNTAIN
	EXISTING WALK		BIRD HOUSE
	EXISTING WALL AND FENCE		DOG-POT
	PROPOSED WALK		EXISTING LIGHT POLE
			EXISTING SIGN
			EXISTING TREE
			EXISTING FIRE HYDRANT
			EXISTING MANHOLE
			PLANTING AREA

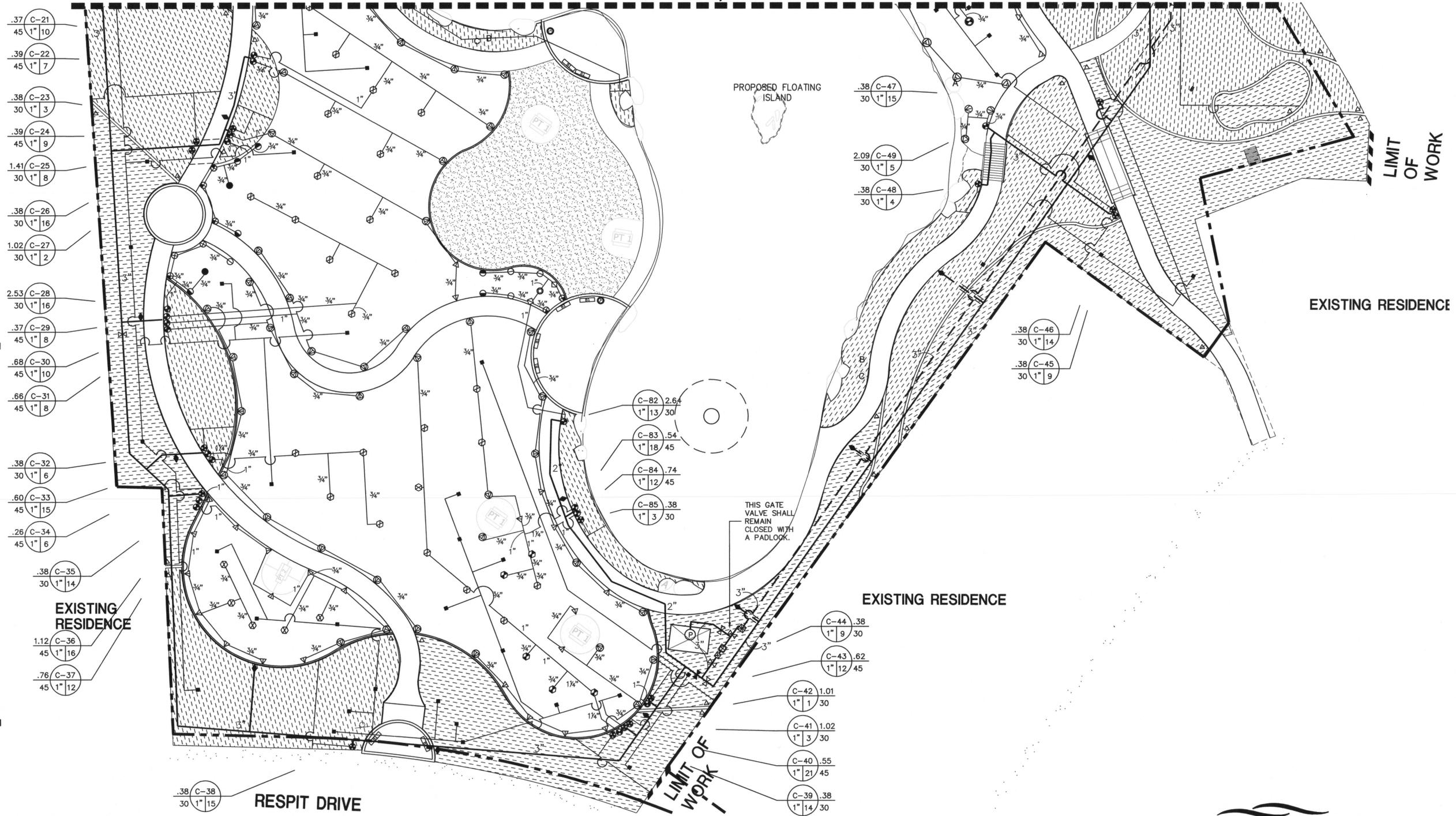


NOTE

- REFER TO SHEET L-13 FOR IRRIGATION NOTES AND LEGEND.
- REFER TO SHEETS L-14, L-15, AND L-16 FOR IRRIGATION DETAILS.
- IRRIGATION DEMAND: 88 GPM AT 90 PSI.
- POTABLE WATER LINE PRESSURE IN STREET IS APPROXIMATELY 90 PSI. POTABLE WATER TO ONLY BE USED IF PUMP GOES DOWN. IF POTABLE WATER IS TO BE USED, INSTALL REMOVABLE PIECE OF PIPE IN THE AIR GAP AND TURN ON THE BALL VALVES. TURN OFF GATE VALVE FROM THE PUMP.
- IRRIGATION CONTROLLER SHALL HAVE 120 VOLT A.C. ELECTRICAL SERVICE. ELECTRICAL SERVICE TO THIS LOCATION TO BE PROVIDED BY A LICENSED ELECTRICAL CONTRACTOR.



MATCHLINE, SEE SHEET L-11



DATE 10/10/16
 SCALE 1"=20'-0"
 DRAWN BY JL
 CHECKED BY JL

REVISIONS/PLAN LOG

REVISED PER ADDENDA No. 1

PROJECT AND CLIENT NAME
VILLAGE POND PARK
 LAKE FOREST, CA
 CITY OF LAKE FOREST
 25550 COMMERCENTRE DRIVE
 SUITE 100
 PHONE (949) 461-3420

SHEET DESCRIPTION
IRRIGATION PLAN



LANDSCAPE ARCHITECTURE
 AND PLANNING

3151 AIRWAY AVENUE, SUITE J-3
 COSTA MESA, CALIFORNIA
 U.S.A. 92 626-4640
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SHEET NUMBER **L-12** of 44
 PROJECT NUMBER 13-237.03

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SYMBOL LEGEND

	LIMIT OF WORK LINE		TRASH RECEPTACLE
	RIGHT-OF-WAY LINE		BENCH
	EXISTING SPOT ELEVATION		ADA PICNIC TABLE
	EXISTING CONTOUR LINES		STD. PICNIC TABLE
	EXISTING CURB OR EDGE OF PAVEMENT		DRINKING FOUNTAIN
	EXISTING WALK		BIRD HOUSE
	EXISTING WALL AND FENCE		DOG-POT
	PROPOSED WALK		EXISTING LIGHT POLE
			EXISTING SIGN
			EXISTING TREE
			EXISTING FIRE HYDRANT
			EXISTING MANHOLE
			PLANTING AREA



NOTE

- REFER TO SHEET L-13 FOR IRRIGATION NOTES AND LEGEND.
- REFER TO SHEETS L-14, L-15, AND L-16 FOR IRRIGATION DETAILS.
- IRRIGATION DEMAND: 88 GPM AT 90 PSI.
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- IRRIGATION CONTROLLER SHALL HAVE 120 VOLT A.C. ELECTRICAL SERVICE. ELECTRICAL SERVICE TO THIS LOCATION TO BE PROVIDED BY A LICENSED ELECTRICAL CONTRACTOR.

BROOKWATER
 IRRIGATION CONSULTANTS
 TWO CROW CANYON COURT, SUITE 100
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B

INDEX MAP

N.T.S.

IRRIGATION NOTES

- THE CONTRACTOR SHALL REVIEW RELATED DRAWINGS AND SHALL ENSURE COORDINATION WITH ALL APPLICABLE TRADES PRIOR TO SUBMITTING BID.
- THE IRRIGATION SYSTEM SHALL BE INSTALLED IN CONFORMANCE WITH ALL APPLICABLE STATE AND LOCAL CODES AND ORDINANCES BY LICENSED CONTRACTORS AND EXPERIENCED WORKMEN. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS AND FEES RELATING TO HIS WORK.
- THIS DESIGN IS DIAGRAMMATIC. ALL PIPING, VALVES, ETC. SHOWN WITHIN PAVED AREAS IS FOR DESIGN CLARIFICATION ONLY AND SHALL BE INSTALLED IN PLANTING AREAS WHERE POSSIBLE. AVOID ANY CONFLICTS BETWEEN THE SPRINKLER SYSTEM, PLANTING AND ARCHITECTURAL FEATURES. PARALLEL PIPES MAY BE INSTALLED IN COMMON TRENCH. PIPES ARE NOT TO BE INSTALLED DIRECTLY ABOVE ONE ANOTHER.
- DO NOT WILLFULLY INSTALL THE SPRINKLER SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT 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 AUTHORIZED REPRESENTATIVE. IN THE EVENT THAT THIS NOTIFICATION IS NOT PERFORMED, THE IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.
- IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO FAMILIARIZE HIMSELF WITH ALL GRADE DIFFERENCES, LOCATION OF WALLS, RETAINING WALLS, ETC. HE SHALL COORDINATE HIS WORK WITH THE GENERAL CONTRACTOR AND OTHER SUBCONTRACTORS FOR THE LOCATION AND THE INSTALLATION OF PIPE SLEEVES THROUGH WALLS, UNDER ROADWAYS, PAVING, STRUCTURES, ETC. CONTRACTOR TO VERIFY THE LOCATION OF EXISTING UNDERGROUND UTILITIES AND STRUCTURES PRIOR TO THE EXCAVATION OF TRENCHES. CONTRACTOR IS TO REPAIR ANY DAMAGE CAUSED BY HIS WORK AT NO ADDITIONAL COST TO THE OWNER.
- DUE TO THE SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, SLEEVES, ETC., WHICH MAY BE REQUIRED. THE CONTRACTOR SHALL CAREFULLY INVESTIGATE THE STRUCTURAL AND FINISHED CONDITIONS AFFECTING ALL OF HIS WORK AND PLAN HIS WORK ACCORDINGLY, FURNISHING SUCH FITTINGS, ETC., AS MAY BE REQUIRED TO MEET SUCH CONDITIONS. DRAWINGS ARE GENERALLY DIAGRAMMATIC AND INDICATIVE OF THE WORK TO BE INSTALLED. THE WORK SHALL BE INSTALLED IN SUCH A MANNER AS TO AVOID CONFLICTS BETWEEN IRRIGATION SYSTEMS, PLANTING, AND ARCHITECTURAL FEATURES.
- ELECTRICAL CONTRACTOR TO SUPPLY 120 VAC (2.5 AMP) SERVICE TO CONTROLLER LOCATION. IRRIGATION CONTRACTOR TO MAKE FINAL CONNECTION FROM ELECTRICAL STUB-OUT TO CONTROLLER. IRRIGATION TWO-WIRE PATH SHALL BE #14, U.L. APPROVED FOR DIRECT BURIAL. (REFER TO TWO-WIRE NOTES.)
- EACH CONTROLLER SHALL HAVE ITS OWN INDEPENDENT GROUNDING ROD OR PLATE. CONTROLLER AND VALVE GROUNDING SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS.
- REMOTE CONTROL VALVES SHALL BE PROGRAMMED IN SEQUENCE AS SHOWN ON PLANS.
- SPLICING OF 24-VOLT WIRES WILL NOT BE PERMITTED EXCEPT IN VALVE BOXES. LEAVE A 24" COIL OF EXCESS WIRE AT EACH SPLICE AND 100 FEET ON CENTER ALONG WIRE RUN.
- VALVE LOCATIONS SHOWN ARE DIAGRAMMATIC. INSTALL IN GROUND COVER/SHRUB AREAS WHERE POSSIBLE (NOT IN LAWN AREA.)
- INSTALL VALVE BOXES MINIMUM 12" FROM AND PERPENDICULAR TO WALK, CURB, LAWN, BUILDING OR LANDSCAPE FEATURE. AT MULTIPLE VALVE BOX GROUPS, EACH BOX SHALL BE AN EQUAL DISTANCE FROM THE WALK, CURB, LAWN, ETC. AND EACH BOX SHALL BE MINIMUM 12" APART. SHORT SIDE OF VALVE BOXES SHALL BE PARALLEL TO WALK, CURB, LAWN, ETC.
- LOCATE QUICK COUPLING VALVE 12" FROM HARDSCAPE AREA.
- ALL SPRINKLER HEADS SHALL BE SET PERPENDICULAR TO FINISH GRADE OF THE AREA TO BE IRRIGATED UNLESS OTHERWISE DESIGNATED ON THE PLANS.
- IN LOCATIONS WHERE LOW HEAD DRAINAGE WILL CAUSE EROSION AND EXCESS WATER, INSTALL KING BROS. CV SERIES CHECK VALVES IN LATERAL LINES FOR EVERY 10' OF ELEVATION CHANGE.
- ALL MAIN LINES SHALL BE FLUSHED PRIOR TO THE INSTALLATION OF IRRIGATION BUBBLERS OR DRILINE. AT 30 DAYS AFTER INSTALLATION EACH SYSTEM SHALL BE FLUSHED TO ELIMINATE GLUE AND DIRT PARTICLES FROM THE LINES.
- NOTIFY ARCHITECT OF ANY ASPECTS OF LAYOUT THAT WILL PROVIDE INCOMPLETE OR INSUFFICIENT WATER COVERAGE OF PLANT MATERIAL AND DO NOT PROCEED UNTIL HIS INSTRUCTIONS ARE OBTAINED.
- LOCATE BUBBLERS ON UPHILL SIDE OF TREES. TREE BUBBLERS ARE FOR ESTABLISHMENT AND DROUGHT CONDITIONS. THEY ARE TO BE TURNED OFF AFTER TREES ARE ESTABLISHED AND TURNED ON DURING DROUGHT CONDITIONS.
- IN ADDITION TO THE SLEEVES AND CONDUITS SHOWN ON THE DRAWINGS, THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF SLEEVES AND CONDUITS OF SUFFICIENT SIZE UNDER ALL PAVED AREAS.
- ALL EXCAVATIONS ARE TO BE FILLED WITH COMPACTED BACKFILL. CONTRACTOR TO REPAIR ALL SETTLED TRENCHES PROMPTLY, FOR A PERIOD OF 1 YEAR AFTER COMPLETION OF WORK. ADDITIONALLY, CONTRACTOR SHALL WARRANT THAT THE IRRIGATION SYSTEM WILL BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF 1 YEAR AFTER FINAL ACCEPTANCE OF WORK.
- THE SPRINKLER SYSTEM DESIGN IS BASED ON THE MINIMUM OPERATING PRESSURE SHOWN ON THE IRRIGATION DRAWINGS. THE IRRIGATION CONTRACTOR SHALL VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION. REPORT ANY DIFFERENCE BETWEEN THE WATER PRESSURE INDICATED ON THE DRAWINGS AND THE ACTUAL PRESSURE READING AT THE IRRIGATION POINT OF CONNECTION TO THE OWNER'S AUTHORIZED REPRESENTATIVE.
- IRRIGATION DEMAND: REFER TO IRRIGATION POINTS OF CONNECTION.
- CONTACT RAINMASTER REPRESENTATIVE (MIKE SMITH AT 707-448-1700) FOR INFORMATION ON INSTALLING AND PROGRAMMING IRRIGATION CONTROLLER AND DECODERS.
- OPERATE IRRIGATION CONTROLLER(S) BETWEEN THE HOURS OF 10:00 PM AND 7:00 AM.
- IRRIGATION CONTRACTOR TO NOTIFY ALL LOCAL JURISDICTIONS FOR INSPECTION AND TESTING OF INSTALLED BACKFLOW PREVENTION DEVICE.
- THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT AT 811 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION.

TWO-WIRE CONTROLLER NOTES:

- REFER TO MANUFACTURER'S DOCUMENTATION FOR COMPLETE INSTALLATION INSTRUCTIONS.
- PROVIDE EARTH GROUND PROTECTION. THE GROUND PATH MUST BE AS DIRECT AS POSSIBLE WITH NO SHARP BENDS AND MUST NOT EXCEED 50 OHM RESISTANCE. USE A 5/8" X 8' COPPER-CLAD STEEL ROD AND INSTALL NOT LESS THAN 8" AND NOT MORE THAN 12" FROM THE CONTROLLER. INSTALL THE TOP OF THE GROUND ROD IN A 10" ROUND VALVE BOX.
- INSTALL GROUNDING RODS EVERY 300' ALONG TWO WIRE PATH AND AT THE END OF THE CABLE RUN. INSTALL IN 6" VALVE BOX LOCATED AT THE NEAREST LINE DECODER PER MANUFACTURER'S INSTRUCTIONS.
- RUN A SEPARATE TWO-WIRE PATH FROM THE CONTROLLER TO EACH LEG OF THE IRRIGATION SYSTEM.
- THE STATION DECODER MODULES OPERATES UP TO TWO SOLENOIDS. INSTALL DECODERS IN VALVE BOX WITH A REMOTE CONTROL VALVE. DECODERS USE #14 AWG DIRECT BURIAL WIRE TO CONNECT TO REMOTE CONTROL VALVES. MAXIMUM DISTANCE BETWEEN DECODER AND SOLENOID IS 100'.
- USE CS-2W-POC DECODER FOR MASTER VALVE AND FLOW SENSOR.
- CONNECT DECODERS TO CONTROLLER USING TWO CONDUCTOR SOLID CORE, TWISTED PAIR, COLOR CODED DIRECT BURIAL PE JACKET 14 AWG COPPER WIRES (PAIGE P7354D.)
- CABLE SHOULD BE BURIED NO LESS THAN 24" DEEP.
- USE ONLY MANUFACTURER RECOMMENDED WIRE CONNECTORS (3M SCOTCHCAST 3570G.)

DRILINE NOTES:

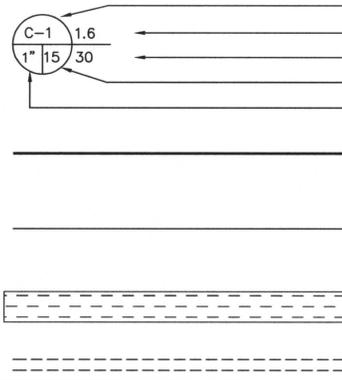
- PLANS ARE DIAGRAMMATIC. INSTALL DRILINE AND COMPONENTS PER MANUFACTURER'S INSTRUCTIONS AND INSTALLATION DETAILS.
- INSTALL DRILINE A MAXIMUM OF 18" APART WITH EMITTERS TRIANGULARLY SPACED. INSTALL 2' FROM PERIMETER OF PLANTED AREA. THERE SHOULD BE A MINIMUM OF TWO DRILINE LATERALS IN EACH PLANTED AREA. DRILINE SHALL BE INSTALLED AT A CONSISTANT DEPTH THROUGHOUT THE CIRCUIT.
- PLACE AIR/VACUUM RELIEF VALVES AT THE HIGHEST POINTS OF EACH ZONE AND JUST BELOW CHECK VALVES ON SLOPES. INSTALL ONE AIR/VACUUM RELIEF VALVE FOR EVERY 1125' OF TOTAL DRILINE PER ZONE. (FOR CONVENIENCE, THE NUMBER OF AIR RELIEF VALVES REQUIRED PER ZONE ARE LISTED ON THE HYDROZONE TABLES.)
- PLACE FLUSH VALVES AT THE HYDRAULIC CENTER OF THE EXHAUST HEADER OR AT LOW POINT ON SLOPES.
- INSTALL IN-LINE CHECK VALVES ON SLOPES GREATER THAN 3% AND WHERE LOW-LINE DRAINAGE COULD CAUSE WET AREAS IN THE LOWEST AREAS OF AN IRRIGATION ZONE. CHECK VALVES SHALL BE PLACED EVERY 4-5 FEET BETWEEN DRILINE LATERALS AND BEFORE THE FLUSH VALVE.
- ON ALL SLOPES AND MOUNDS, PLACE THE DRILINE LATERALS PARALLEL TO THE SLOPE CONTOUR WHERE POSSIBLE. INCREASE THE LATERAL SPACING BY 25% ON THE LOWER ONE-THIRD OF THE SLOPE TO AVOID EXCESS DRAINAGE.
 - PVC SUPPLY AND FLUSH LINE SIZING GUIDE (ALL SUPPLY AND FLUSH LINES SHALL BE THE SAME SIZE FOR THE ENTIRE ZONE):
 - 0-8 GPM - 3/4"
 - 8.1-15 GPM - 1"
 - 15.1-25 GPM - 1 1/4"
- FITTINGS SHALL BE OF THE SAME MANUFACTURER AS DRILINE.
- THOROUGHLY FLUSH EACH INSTALLATION SEGMENT TO ENSURE NO DEBRIS CONTAMINATION OCCURS.
- RUN THE DRILINE SYSTEM EVERY DAY OR EVERY OTHER DAY TO ESTABLISH PLANT MATERIAL. MAINTAIN A CONSISTENT MOISTURE BALANCE IN THE SOIL. IT IS IMPORTANT TO KEEP THE SOIL MOIST WITHOUT SATURATION.

LATERAL LINE SIZING CHART

SPRINKLER TYPE	GALLONS PER MINUTE	PIPE SIZE
SPRAYS & BUBBLERS	1-8	3/4"
	9-15	1"
	16-25	1 1/4"
	26-32	1 1/2"
	33-UP	2"

IRRIGATION LEGEND

SYMBOL	MODEL NUMBER	DESCRIPTION	PSI	FLOW RATE (GPM)	MAX. RADIUS	MAX. SPACING	DETAIL NO.
⊗	RD-06-P45-F/MP3000-360	RAIN BIRD POP-UP LAWN SPRAY W/ HUNTER MP NOZZLES	45	3.86	30'	19'-28'	L15/18
⊗	RD-06-P45-F/MP3000-90	RAIN BIRD POP-UP LAWN SPRAY W/ HUNTER MP NOZZLES	45	.91-2.25	30'	19'-28'	L15/18
⊗	RD-06-P45-F/MP2000-360	RAIN BIRD POP-UP LAWN SPRAY W/ HUNTER MP NOZZLES	45	1.56	20'	14'-18'	L15/18
▽	RD-06-P45-F/MP2000-90	RAIN BIRD POP-UP LAWN SPRAY W/ HUNTER MP NOZZLES	45	.42-.92	20'	14'-18'	L15/18
○ ⊕ ⊕	RD-06-P30-F/HE-VAN-15F,H,Q	RAIN BIRD POP-UP LAWN SPRAY	30	3.7,1.85,.93	15'	14'	L15/18
● ⊕ ⊕	RD-06-P30-F/HE-VAN-12F,H,Q	RAIN BIRD POP-UP LAWN SPRAY	30	2.37,1.18,.59	12'	11'	L15/18
⊕ ⊕ ⊕	RD-06-P30-F/HE-VAN-10F,H,Q	RAIN BIRD POP-UP LAWN SPRAY	30	1.78,.89,.45	10'	9'	L15/18
⊗	RD-012-P45-F/MP3000-360	RAIN BIRD POP-UP SHRUB SPRAY W/ HUNTER MP NOZZLES	45	3.86	30'	19'-28'	L15/18
⊗	RD-012-P45-F/MP3000-90	RAIN BIRD POP-UP SHRUB SPRAY W/ HUNTER MP NOZZLES	45	.91-2.25	30'	19'-28'	L15/18
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■	LF40-PC / PRO-318C	TORO PRESSURE COMPENSATING DRIP BUBBLER WITH ROOT WELL INSTALL TWO BUBBLERS WITH THREE ROOT WELL AERATION TUBES PER TREE	25	4 GPH			L15/16,17
△	T-FCH-H-FIPT	TORO DL2000 FLUSH VALVE					L15/19
□	T-YD-500-34	TORO DL2000 AIR VENT					L15/20,23
⊕	EFB-CP-PRS-D SERIES / LT-T SERIES / CS-2W-2ST	RAIN BIRD PRESSURE REGULATING REMOTE CONTROL VALVE WITH DC LATCHING SOLENOID, KBI BALL VALVE, AND CALSENSE TWO WIRE DECODER (TWO STATION OUTPUT)					L14/7,9
⊕	EFB-CP-PRS-D SERIES / QKCHK-100 / LT-T SERIES / CS-2W-2ST	RAIN BIRD PRESSURE REGULATING REMOTE CONTROL VALVE WITH DC LATCHING SOLENOID, RAIN BIRD QUICK CHECK BASKET FILTER, KBI BALL VALVE, AND CALSENSE TWO WIRE DECODER (TWO STATION OUTPUT)					L14/8,9
◆	44NP / SH-2	RAIN BIRD QUICK COUPLING VALVE WITH 1" HOSE SWIVEL (PROVIDE 1 HOSE SWIVEL FOR EVERY 10 QC'S)					L15/15
✂	T-113IRR	NIBCO GATE VALVE - 2" AND SMALLER (LINE SIZE)					L15/14
⊗	P-619-RW	NIBCO GATE VALVE - 2 1/2" AND LARGER (LINE SIZE)					L15/13
⊗	FM 1.5B	CALSENSE 1 1/2" FLOW SENSOR					L14/6
⊗	3200200	SUPERIOR 2" MASTER CONTROL VALVE - NORMALLY CLOSED					L14/5
⊗	IBC15LN-10-2-2.5/PACT/FSL	BARRETT ENGINEERED PUMPS BOOSTER PUMP / FILTER SYSTEM					L16/27
⊗	-	REMOVABLE PIPE AIR GAP TO POTABLE WATER SOURCE IN GS-2 GUARDSHACK ENCLOSURE					L16/25, L16/26
⊗	LF880V-2 1/2" / GS-NP1	FEBCO LEAD-FREE REDUCED PRESSURE BACKFLOW PREVENTER IN GUARDSHACK ENCLOSURE					L14/3,4
⊗	CS3-2W-S1-RRR/RB-1/GR-STUBBY/RRR-TRAN	CALSENSE CS3000 128 2-WIRE CONTROLLER ASSEMBLY - TOP ENTRY STAINLESS STEEL ENCLOSURE, RAIN BUCKET, ANTENNA, AND REMOTE ASSEMBLY					L14/1,2
		CONTROLLER AND STATION NUMBER					
		APPLICATION RATE (INCHES)					
		OPERATING PRESSURE (PSI)					
		APPROXIMATE GALLONS PER MINUTE					
		REMOTE CONTROL VALVE SIZE					
		MAIN LINE: 2 1/2" AND LARGER: 1120-200 PSI PVC RING-TITE PLASTIC PIPE WITH RING-TITE PLASTIC FITTINGS. 2" AND SMALLER: 1120-SCHEDULE 40 PVC SOLVENT WELD PLASTIC PIPE WITH SCHEDULE 80 AND SCHEDULE 40 PVC SOLVENT WELD FITTINGS. 24" COVER.					L15/12, L16/24
		LATERAL LINE: 1120-CLASS 200 PSI PVC SOLVENT WELD PIPE WITH SCHEDULE 40 PVC SOLVENT WELD FITTINGS. 12" COVER.					L15/12, L16/24
		SUB-SURFACE DRILINE: TORO DL2000 RGP-218-10 DRILINE WITH ROOT GUARD. USE ONLY DL2000 DRILINE LOC-EZE FITTINGS. 6" COVER. (18" EMITTER SPACING; .53 GPH PER EMITTER)					L15/21,22
		SLEEVE (SL): 1120-CLASS 200 PVC PLASTIC PIPE. 24" COVER.					



DATE **10/10/16**
 SCALE **NONE**
 DRAWN BY **JL**
 CHECKED BY **JL**

REVISIONS/PLAN LOG
 REVISED PER ADDENA No. 1

PROJECT AND CLIENT NAME
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 LAKE FOREST, CA

CITY OF LAKE FOREST
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 SUITE 100
 PHONE (949) 461-3420

SHEET DESCRIPTION
IRRIGATION LEGEND AND NOTES



LANDSCAPE ARCHITECTURE
 AND PLANNING

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SHEET NUMBER **L-13** OF **44**
 PROJECT NUMBER **13-237.03**

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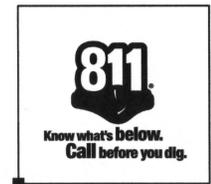
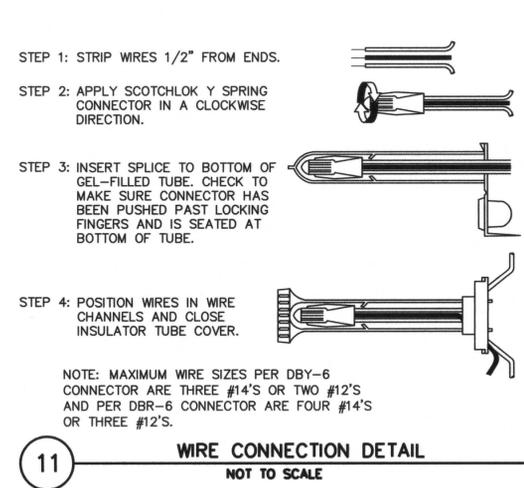
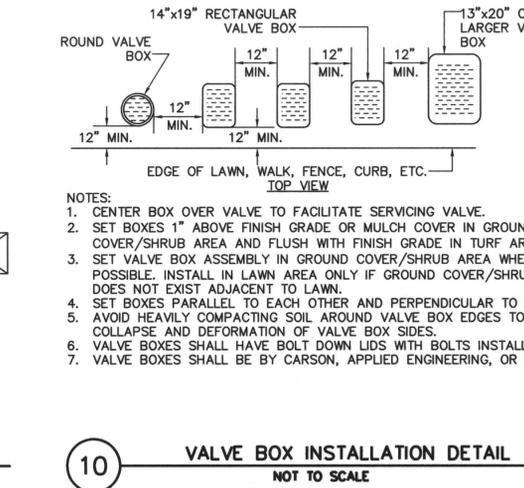
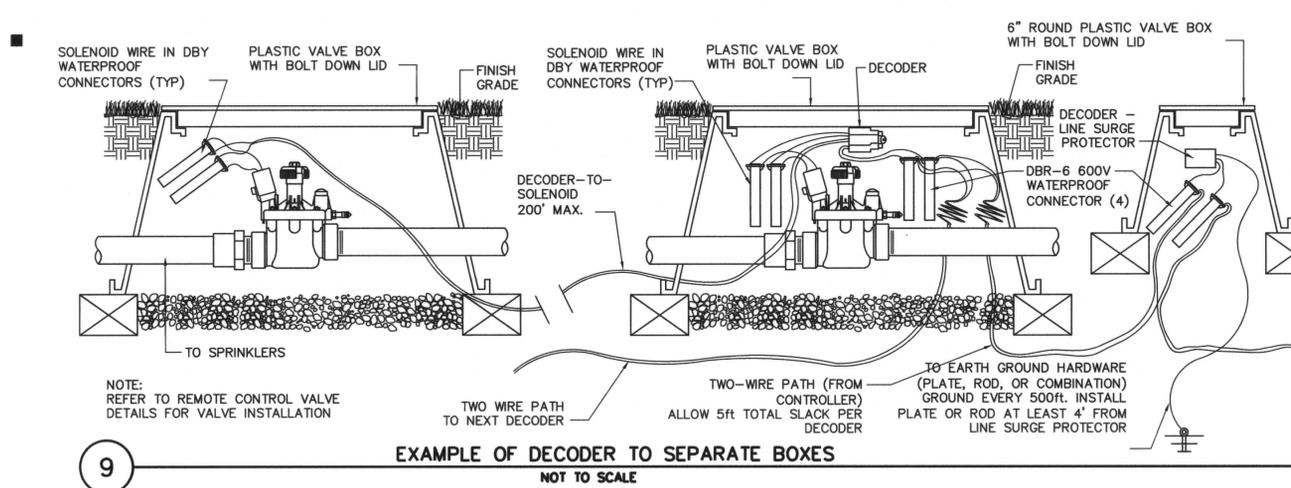
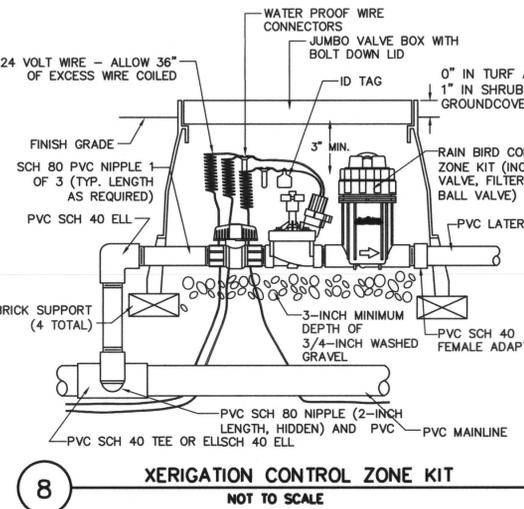
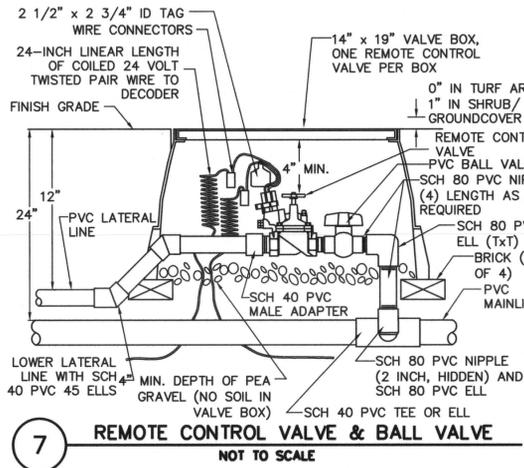
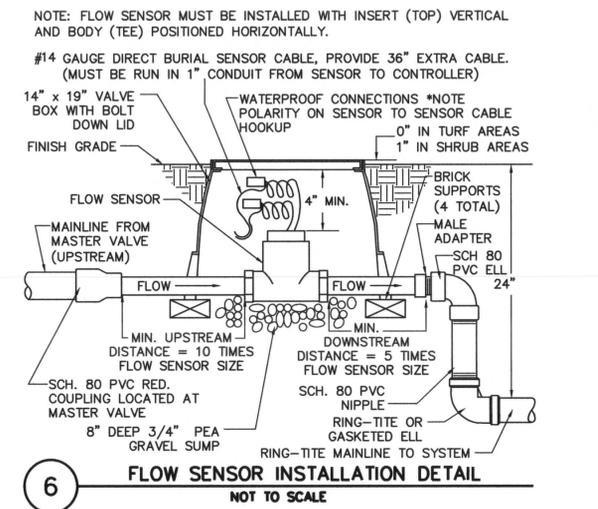
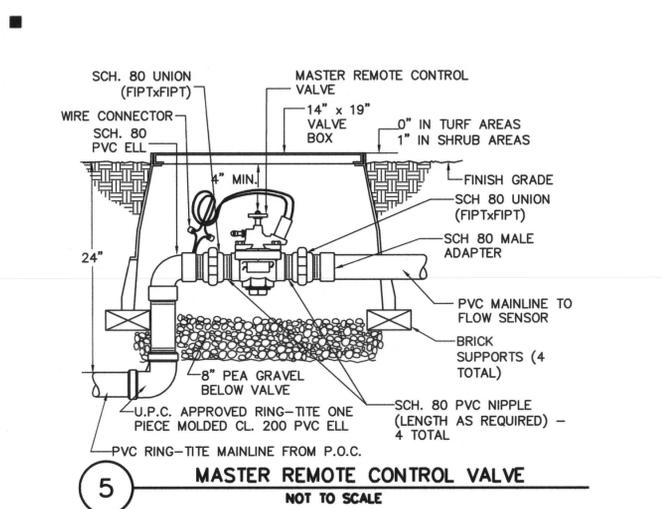
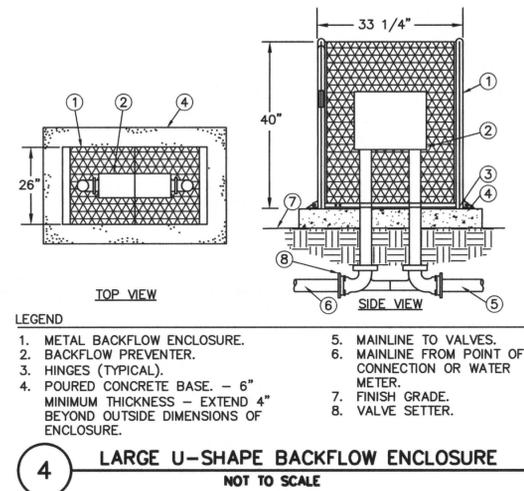
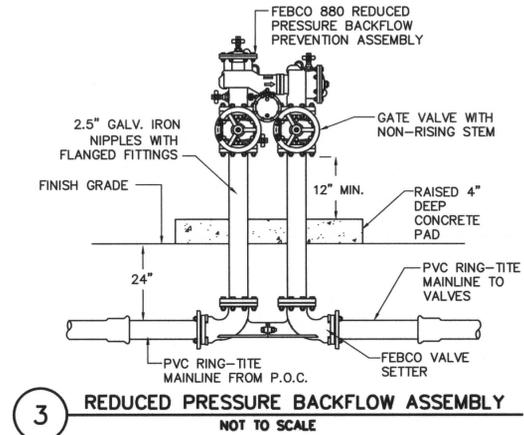
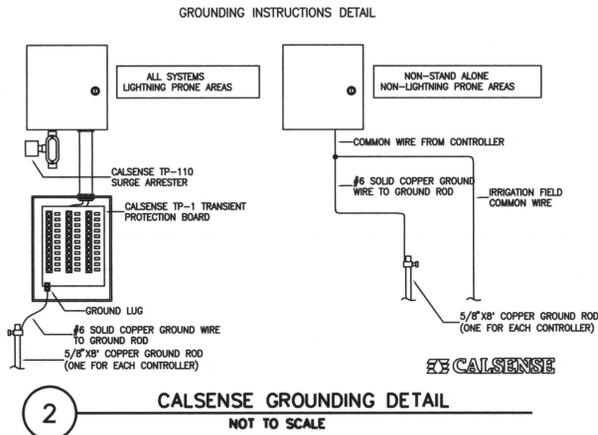
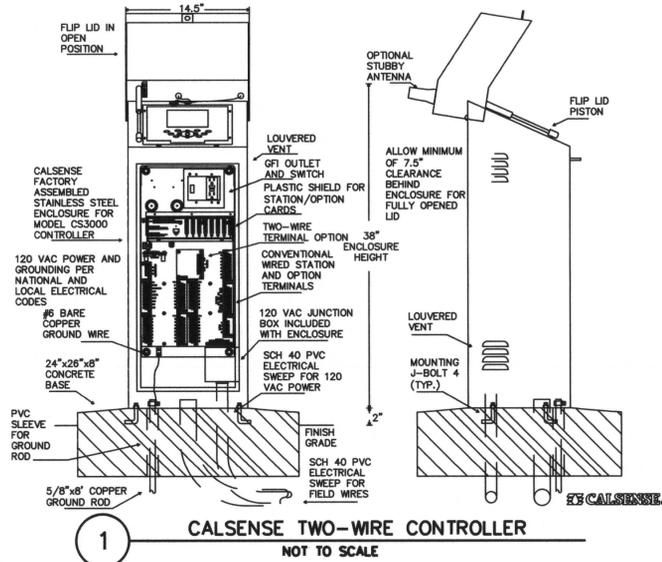
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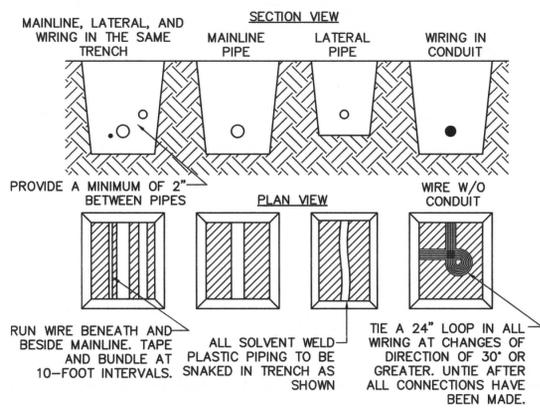
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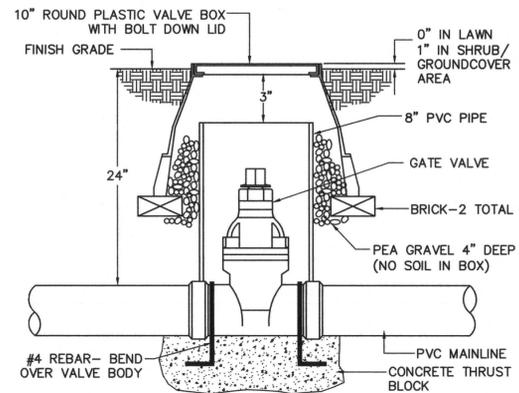
NOTE: EVENLY COAT METAL FITTINGS EXPOSED TO SOIL AND CONCRETE WITH 3M SCOTCHRAP PIPE PRIMER AND THEN WRAP WITH 3M SCOTCHRAP NO. 51 BLACK TAPE (3/4" OVERLAP). USE DIELECTRIC FITTINGS WHERE DISSIMILAR METALS COME INTO CONTACT.



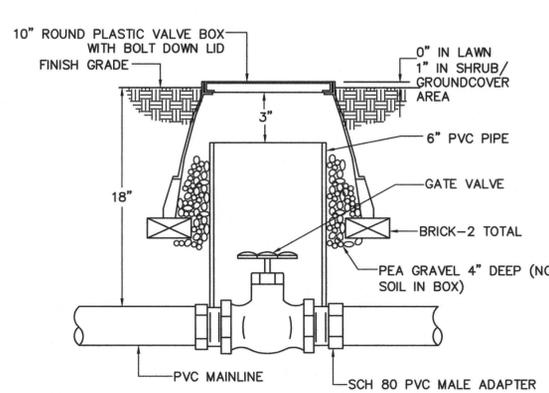
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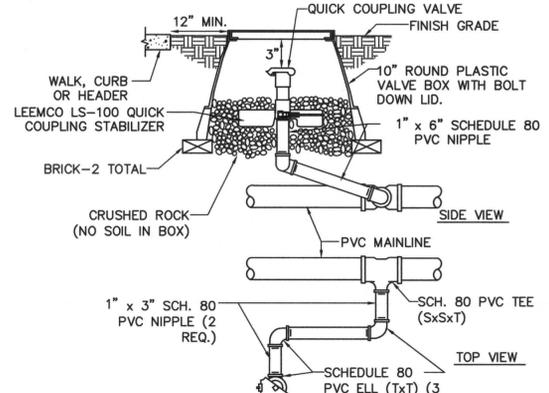
12 PIPE AND WIRE TRENCHING
NOT TO SCALE



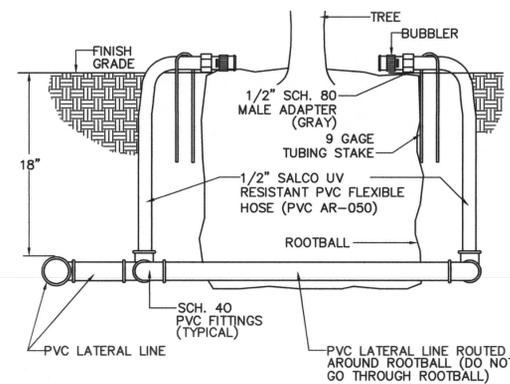
13 GATE VALVE DETAIL - 2 1/2" & LARGER
NOT TO SCALE



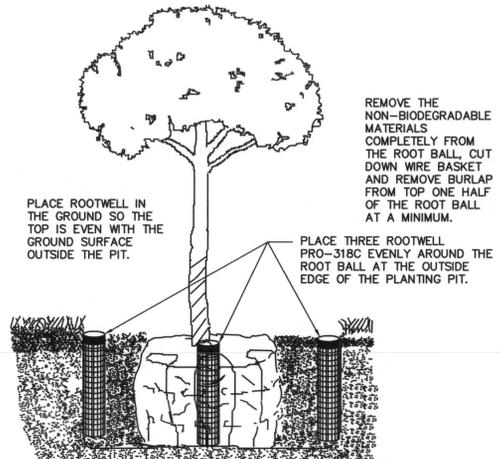
14 GATE VALVE DETAIL
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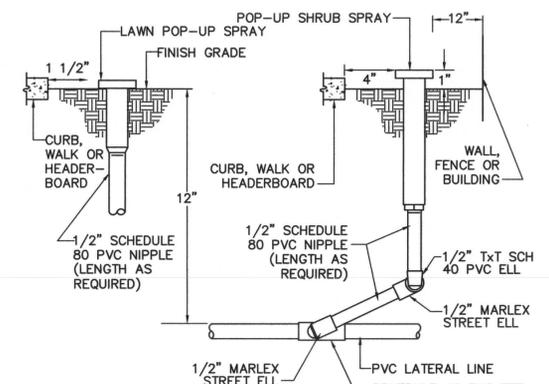
15 QUICK COUPLER IN BOX DETAIL
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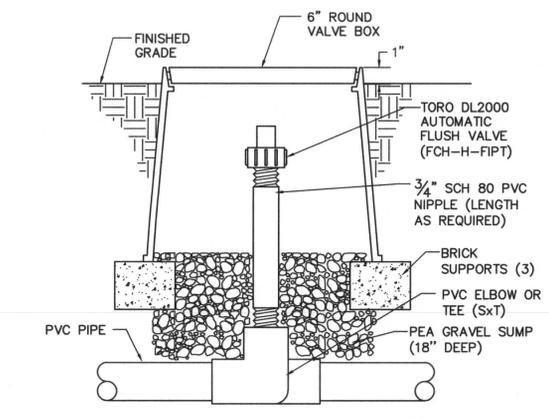
16 TREE BUBBLER DETAIL
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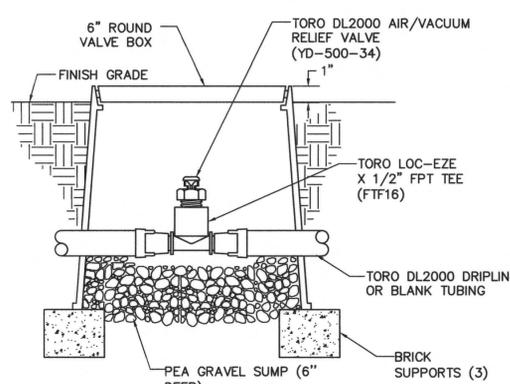
17 ROOTWELL INSTALLATION DETAIL
NOT TO SCALE



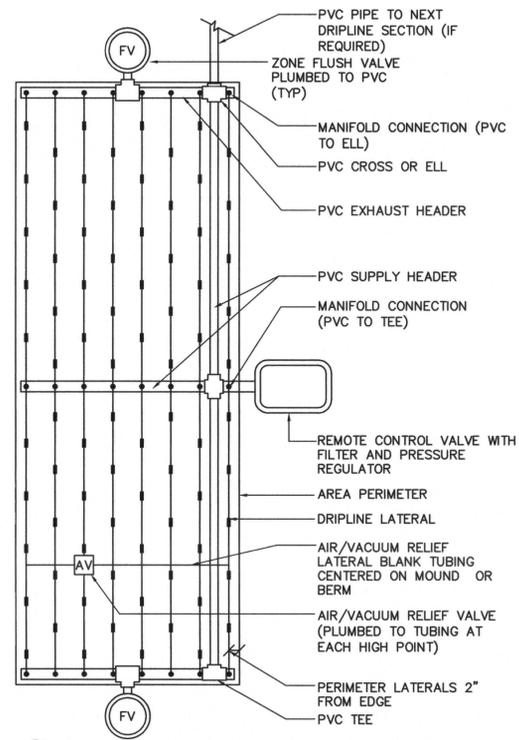
18 TYPICAL POP-UP INSTALLATION DETAIL
NOT TO SCALE



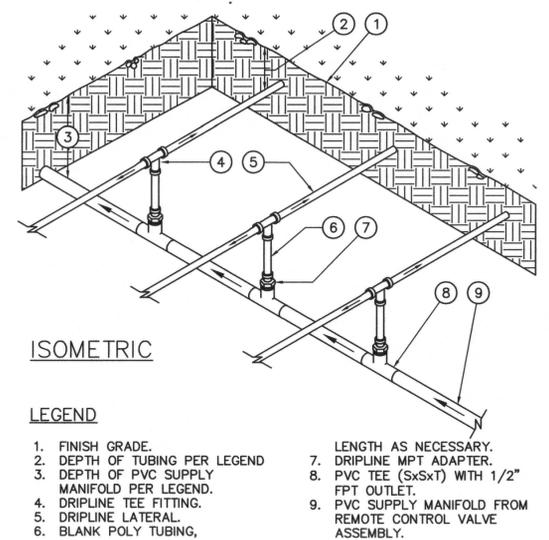
19 TORO DL2000 AUTOMATIC FLUSH VALVE -
PLUMBED TO PVC
NOT TO SCALE



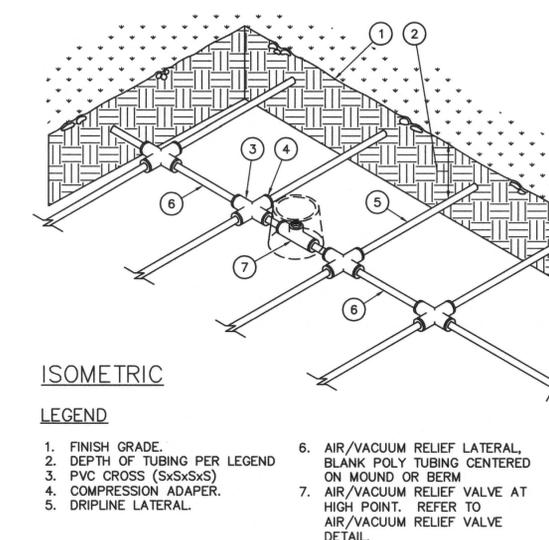
20 TORO DL2000 AIR/VACUUM RELIEF VALVE -
PLUMBED TO TUBING
NOT TO SCALE



21 CENTER FEED INLINE DRIP LAYOUT
NOT TO SCALE



22 CENTER FEED MANIFOLD
NOT TO SCALE



23 AIR/VACUUM RELIEF LATERAL
NOT TO SCALE



DATE 10/10/16
SCALE AS SHOWN
DRAWN BY JL
CHECKED BY JL

REVISIONS/PLAN LOG
REVISED PER ADDENA No. 1

PROJECT AND CLIENT NAME
VILLAGE POND PARK
LAKE FOREST, CA

CITY OF LAKE FOREST
25550 COMMERCENTRE DRIVE
SUITE 100
PHONE (949) 461-3420

SHEET DESCRIPTION
IRRIGATION DETAILS



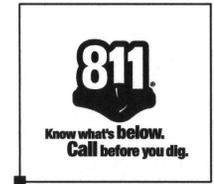
LANDSCAPE ARCHITECTURE
AND PLANNING

3151 AIRWAY AVENUE, SUITE J-3
COSTA MESA, CALIFORNIA
U.S.A. 92626-4640
FX: 714.754.7346
PH: 714.754.7311

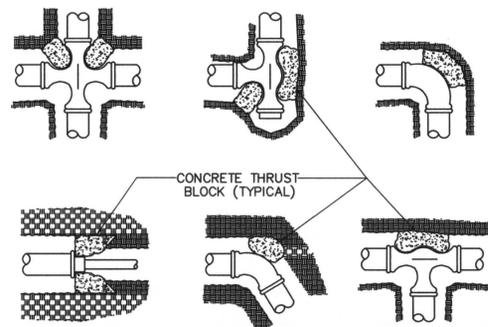
SHEET NUMBER **L-15** of 44

PROJECT NUMBER 13-237.03

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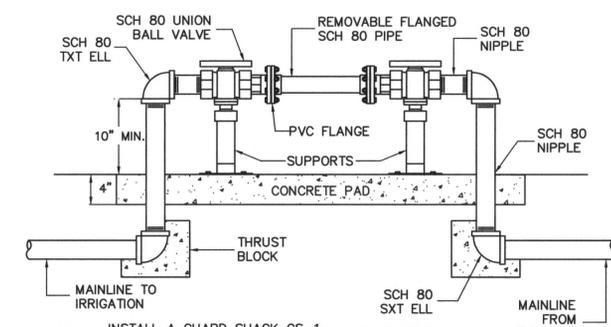


BROOKWATER
IRRIGATION CONSULTANTS
TWO CROW CANYON COURT, SUITE 100
SAN RAMON, CALIFORNIA 94583
TEL 925.855.0417 FAX 925.855.0357
E-MAIL JANET@BROOKWATER.COM



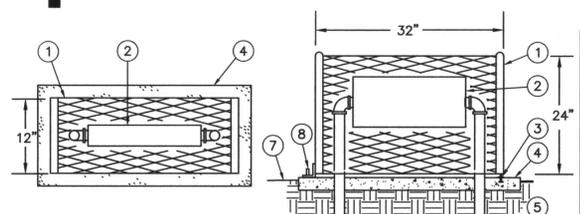
INSTALL MAIN LINE AS PER MANUFACTURERS INSTALLATION GUIDE. SIZE OF CONCRETE THRUST BLOCKS SHALL BE PER MANUFACTURERS INSTALLATION GUIDE.

24 THRUST BLOCK INSTALLATION DETAIL
NOT TO SCALE



INSTALL A GUARD SHACK GS-1 ENCLOSURE OVER THE AIR GAP ASSEMBLY. REFER TO DETAIL L-16/26.

25 REMOVABLE PIPE AIR GAP TO POTABLE WATER
NOT TO SCALE



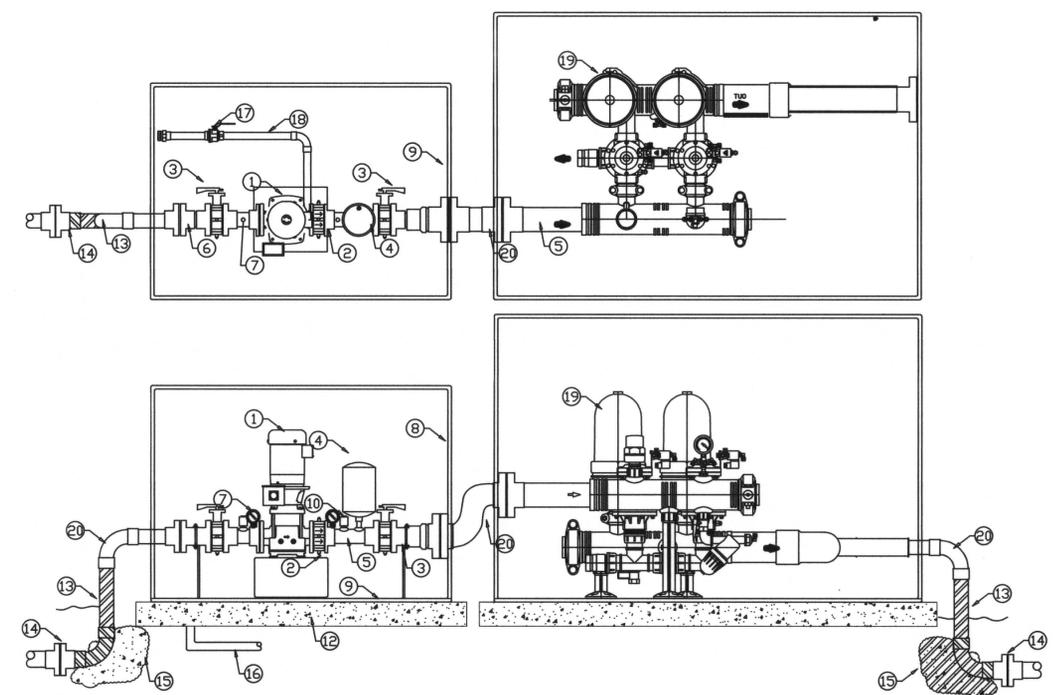
LEGEND

1. METAL ENCLOSURE.
2. AIR GAP.
3. HOLD DOWN ASSEMBLY (TYPICAL).
4. POURED CONCRETE BASE, - 6" MINIMUM THICKNESS - EXTEND 4" BEYOND OUTSIDE DIMENSIONS OF ENCLOSURE.
5. MAINLINE TO VALVES.
6. MAINLINE FROM POINT OF CONNECTION OR WATER METER.
7. FINISH GRADE.
8. SUPPORT ROD (TYPICAL).

26 U-SHAPE AIR GAP ENCLOSURE
NOT TO SCALE

1. VERTICAL MULTISTAGE STAINLESS FITTED CENTRIFUGAL PUMP.
2. WAFER CHECK VALVE.
3. FULL LUG BUTTERFLY VALVE.
4. BLADDER STYLE STORAGE TANK.
5. 2.5 INCH SCH 10S STAINLESS STEEL.
6. 150# STAINLESS ANSI FLANGE.
7. PRESSURE GAUGE, LIQUID FILLED.
8. MARINE GRADE ALUMINUM ENCLOSURE.
9. STRUCTURAL ALUMINUM BASEPLATE.
10. PRESSURE TRANSDUCER.
11. ELECTRICAL CONTROL PANEL.
12. 6 INCH CONCRETE PAD, ASTM C-94, ACI STD. 318-83 DESIGN MIX, 2500 PSI RATED. INSTALL ONE 42" X 102" PAD FOR BOTH ENCLOSURES.
13. DUCTILE IRON OR BRASS PIPE.
14. PVC SCHEDULE 80/BRASS OR CAST IRON COMPANION FLANGE CONNECTION.
15. 2 CU. FT. CONCRETE THRUST BLOCK.
16. MAIN POWER CONDUIT.
17. 24 VAC BRASS SOLENOID VALVE.
18. 1 INCH SELF CLEANING SUCTION STRAINER FEED LINE.
19. DISC STYLE MULTI-MODULE SELF CLEANING FILTER UNIT.
20. CONTRACTOR INSTALLED.

NOTE:
ALL COMPONENTS EXCEPT THE CONNECTING PIPE BETWEEN THE PUMP SKID AND THE FILTER SKID ARE INCLUDED IN THE BARRETT PUMP PACKAGE.



27 BOOSTER PUMP / FILTER DETAIL
NOT TO SCALE

15. If 24V control started, a Metal oxide varistor protected pump start relay shall be incorporated in panel to start pump with signal from an irrigation controller.
16. All system piping shall be type 304 stainless steel. All fittings shall be stainless, with unions or flanges to allow for system disassembly or major component removal. System shall incorporate an integral full pipe size bypass line with isolation valve to allow for pump removal and repair without disrupting water supply to system.
17. Isolation valves shall be all stainless quarter turn ball valves with hard chrome ball on lines 2" and less. Isolation valves shall be lug style butterfly valves with Buna-N elastomeric seats, ductile iron nickel coated disc, and stainless steel stem with handle and 10 position galvanized memory plate on lines 2 1/2" and greater.
18. Gauges shall be 2 1/2" diameter face, glycerin filled with stainless casing and brass internals.
19. Flow switch shall be a 316 stainless steel and solid state thermal sensor designed to measure change in flow velocity and in temperature. The flow switch shall include an integrated bar graph with 10 LED lights and shall be capable of providing indication of flow (green), closed (orange), and open (red) conditions.
10. Pump system shall be mounted on a structural aluminum skid with mounting flanges on front and back to allow for mounting of skid to concrete pad. Skid equipped with pipe support on suction and discharge piping. All nuts and bolts and washers shall be stainless steel on skid and piping. Skid shall include mounting hardware for integral aluminum enclosure.
11. Pump Assembly shall include the following option(s):
 - (PACT) Where specified by the System Design Parameters, the following items shall be provided to allow for stand-alone system pressure activation of pumping unit:
 - Variable Frequency Drive system to receive feedback signal from system mounted stainless steel pressure transducer, and in conjunction with internal software driven PID control loop maintain customer adjustable constant system discharge pressure by varying the speed of the pump in response to varying system load. Variable Frequency Drive shall provide for on/off control of pumping unit via system pressure monitoring
 - Bladder Style Pressure Storage Tank, piped to pump discharge, designed to maintain system pressure when pump is off and properly sized by the manufacturer to prevent short cycling of pumping system.
 - Spring loaded wafer style disc check valve with cast iron body, bronze disc, and stainless steel spring to maintain system pressure when pump is off.
 - (NDK2x2) The 2" x 2 Disc-Kleen Filter shall be rated 1-160 GPM (average water) with 80 mesh disks. The Filter shall have inlet and outlet manifolds with 4" grooved connection ends. The manifolds shall be made from high density polypropylene. The filter body shall be made of reinforced polyamide. The filter element shall be made of grooved polypropylene discs. The 2" back-flush valves are made of reinforced polyamide. Each back-flush Valve shall have a normally closed solenoid installed to its bonnet. The filter shall clean itself automatically when a pressure differential (PD) gauge triggers a back-flush controller to initiate a back flush.

- During flush, filtered water will continue to be supplied downstream of the filter. The filters will flush one at a time sequentially. The installing contractor shall be responsible for connecting to exhaust line to designated discharge location.
- (FSL) Where specified by the System Design Parameters, the system shall include either a Gripit™ pipe and conduit floats to support intake line to lake from pump suction inlet or hard piping suction inlet line directly fed to lake from pump inlet - to be determined by owner and designer. Piping and connections from lake to suction side of pump shall be the responsibility of the installing contractor.
 - (PSS3) Where specified in the System Design Parameters, a Pump Suction Screen shall prevent pond debris from entering the pump system. The Pump Suction shall be made of a Self-Cleaning Suction Screen Assy. of 15"L x 11"W polyethylene construction with aluminum mesh and 1" inlet connection for self cleaning jets. A foot valve assembly shall also be included. Contractor shall be responsible for field mounting the PSS and connecting a 2 1/2" inlet line from PSS to booster pump inlet. In addition, a separate 1" return water line shall be field installed from booster pump discharge connection (provided) to PSS for filter cleaning.
- 1.13 The services of a factory representative or trained service professional shall be made available on the job site to check installation and perform the startup and instruct the operating personnel. A startup report containing voltage and amperage readings, suction and discharge pressure readings, estimated flow conditions, and general operating characteristics shall be submitted to the Owner.
 - 1.14 One electronic set of operating and maintenance manual shall be provided to the owner after startup and shall include parts manuals for major components, performance curve for pump, general sequence of operation, and electrical schematic for control panel.
 - 1.15 The warranty period shall be a non-prorated period of 36 months from date of purchase.



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P.O. Box 13130 San Diego CA 92170-3130 • 1695 National Ave. San Diego CA 92113
Phone (619) 232-7867 • FAX (619) 232-3029
Represented by: Green Product Sales • (949) 584-7311 • gps10@earthlink.net

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BARRETT ENGINEERED PUMPS
SPECIALISTS IN PUMPS AND PUMPING SYSTEMS

PROJECT: VILLAGE POND PARK - Lake Forest May 28, 2015
SYSTEM DESIGN PARAMETERS

IBCR15LN-10-2-2.5/PACT/FSL System Model Number	88 GPM System Design Flow Rate	90 PSI System Design Pressure	2 1/2 INCH System Piping Size
0 PSI (12-14' lift) Minimum Suction Pressure	230 VAC System Electrical Voltage	1 PHASE 60 Hz System Electrical Phase and Frequency	
CR15-5 Pump Model Number	88 GPM Pump Capacity (GPM)	240 FEET Pump Total Head (Feet)	
10 HP Pump Horsepower	3500 RPM Pump RPM	49 AMPS @ 230/1 ph System Full Load Amperage	

SYSTEM DESIGN PARAMETERS - Filter

IBNDK2x2 System Model Number	180 GPM (Good) Filter Capacity (GPM)	90 PSI System Design Pressure	80 MESH Filter Mesh Size
2 INCH x 1 1/2 INCH System Pipe Size	120 VAC System Electrical Voltage	1 PHASE 60 Hz System Electrical Phase and Frequency	
35 PSI Minimum Backflush Pressure	120 GPM (Poor) Filter Capacity (GPM)	30" x 42" x 40" Enclosure Size	

- BOOSTER PUMP ASSEMBLY**
- 1.1 A simplex water pressure booster system as designed and fabricated by Barrett Engineered Pumps (619) 232-7867. The system shall be a completely prefabricated system with pump, piping, electrical and structural elements. The entire booster pump assembly shall be UL Listed and Approved.
 - 1.2 Pump shall be:
 - 1.2.1 (CR15LN Series - LOW NPSH) Vertical Multi-Stage Centrifugal. Pump construction shall be cast iron stainless fitted with cast iron casing, stainless steel impellers and bowls. Pump shall be equipped with tungsten carbide mechanical seal. Pump shall be directly coupled to a C-face electric motor.
 - 1.3 Electric motor shall be of the squirrel cage induction type suitable for full voltage starting. Motor shall be ODP to aid in cooling. Electric motor shall be rated for continuous service. The motor shall have horsepower ratings such that the motor will carry the maximum possible load to be developed under the designed pumping conditions and not overload the motor beyond the nameplate rating of the motor. Motor shall have a 1.15 service factor. The motor shall conform to the latest NEMA Standards for motor design and construction.
 - 1.4 Pump Control Panel shall have a NEMA 3R plain front non-metallic enclosure with padlock latches. This includes power and control re-settable thermal circuit breakers, heavy duty magnetic starter with adjustable overload protection, Hand-Off-Auto switch to select mode of operation, and heavy duty numbered terminal strips for power and control wiring lead terminations.

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DATE 10/10/16
SCALE AS SHOWN
DRAWN BY JL
CHECKED BY JL

REVISIONS/PLAN LOG
REVISED PER ADDENA No. 1

PROJECT AND CLIENT NAME
VILLAGE POND PARK
LAKE FOREST, CA

CITY OF LAKE FOREST
25550 COMMERCE DRIVE
SUITE 100
PHONE (949) 461-3420

SHEET DESCRIPTION
IRRIGATION DETAILS



LANDSCAPE ARCHITECTURE AND PLANNING

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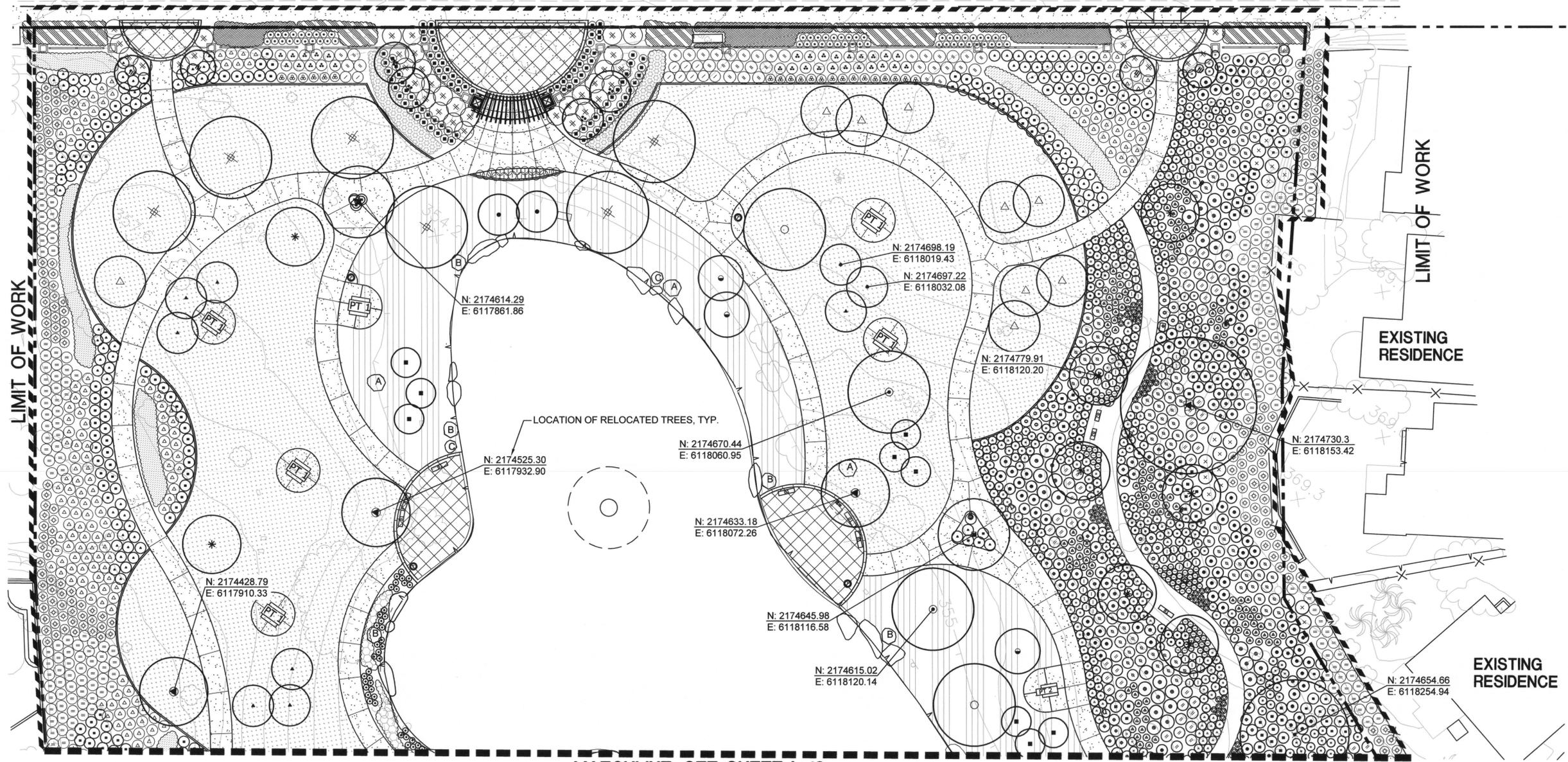
SHEET NUMBER **L-16** OF 44

PROJECT NUMBER 13-237.03

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RIDGE ROUTE DRIVE



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VILLAGE POND PARK
 LAKE FOREST, CA

CITY OF LAKE FOREST
 25550 COMMERCENTRE DRIVE
 SUITE 100
 PHONE (949) 461-3420

SHEET DESCRIPTION
PLANTING PLAN



LANDSCAPE ARCHITECTURE
 AND PLANNING

3151 AIRWAY AVENUE, SUITE J-3
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SYMBOL LEGEND	
	LIMIT OF WORK LINE
	RIGHT-OF-WAY LINE
	EXISTING SPOT ELEVATION
	EXISTING CONTOUR LINES
	EXISTING CURB OR EDGE OF PAVEMENT
	EXISTING WALK
	EXISTING WALL AND FENCE
	PROPOSED WALK
	TRASH RECEPTACLE
	BENCH
	ADA PICNIC TABLE
	STD. PICNIC TABLE
	DRINKING FOUNTAIN
	BIRD HOUSE
	DOG-POT
	EXISTING LIGHT POLE
	EXISTING SIGN
	EXISTING TREES
	EXISTING FIRE HYDRANT
	EXISTING MANHOLE
	PLANTING AREA

PLANTING PLAN NOTES

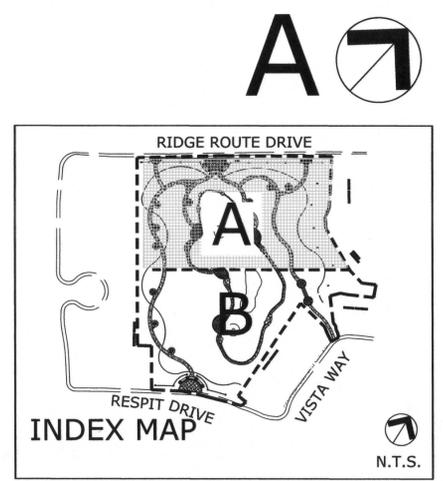
- CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO FURNISH AND INSTALL PLANT MATERIAL AS SHOWN ON THE DRAWINGS AND AS DESCRIBED IN THE SPECIFICATIONS.
- UNLESS DESIGNATED ON THE DRAWINGS OTHERWISE, STRUCTURAL IMPROVEMENTS AND HARDSCAPE SHALL BE INSTALLED PRIOR TO PLANTING OPERATIONS.
- ALL WORK ON THE IRRIGATION SYSTEM, INCLUDING HYDROSTATIC, COVERAGE, AND OPERATIONAL TESTS AND THE BACKFILLING AND COMPACTION OF TRENCHES SHALL BE PERFORMED PRIOR TO PLANTING OPERATIONS.
- PLANT LIST ON THE DRAWINGS SHALL BE USED AS A GUIDE ONLY. CONTRACTOR SHALL TAKEOFF AND VERIFY SIZES AND QUANTITIES BY PLAN CHECK.
- SAMPLES OF FERTILIZERS, ORGANIC AMENDMENT, SOIL CONDITIONERS, AND SEED SHALL BE SUBMITTED PRIOR TO INCORPORATION.
- LOCATIONS OF PLANT MATERIAL SHALL BE REVIEWED ON SITE BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
- PROPOSE ON AMENDMENTS AS STATED IN THE SPECIFICATIONS. OBTAIN AGRICULTURAL SOILS TESTING AND RECOMMENDATIONS AFTER GRADING OPERATIONS AND PRIOR TO PLANT INSTALLATION.
- IF, DURING PLANTING OPERATIONS THERE SEEMS TO BE MINIMAL OR NO PERCOLATION IN PLANTING PITS, CONTRACTOR SHALL CEASE PLANTING OPERATIONS AND IMMEDIATELY NOTIFY THE AUTHORIZED CITY REPRESENTATIVE TO DISCUSS ALTERNATIVE TO MAINTAINING POSITIVE ROOTBALL DRAINAGE MEASURES.
- FOR ADDITIONAL INFORMATION REFER TO SPECIFICATIONS.
- EXISTING IRRIGATION OUTSIDE SCOPE OF WORK SHALL REMAIN FULLY OPERATIONAL & BE PROTECTED IN PLACE.
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EXISTING TREE NOTE

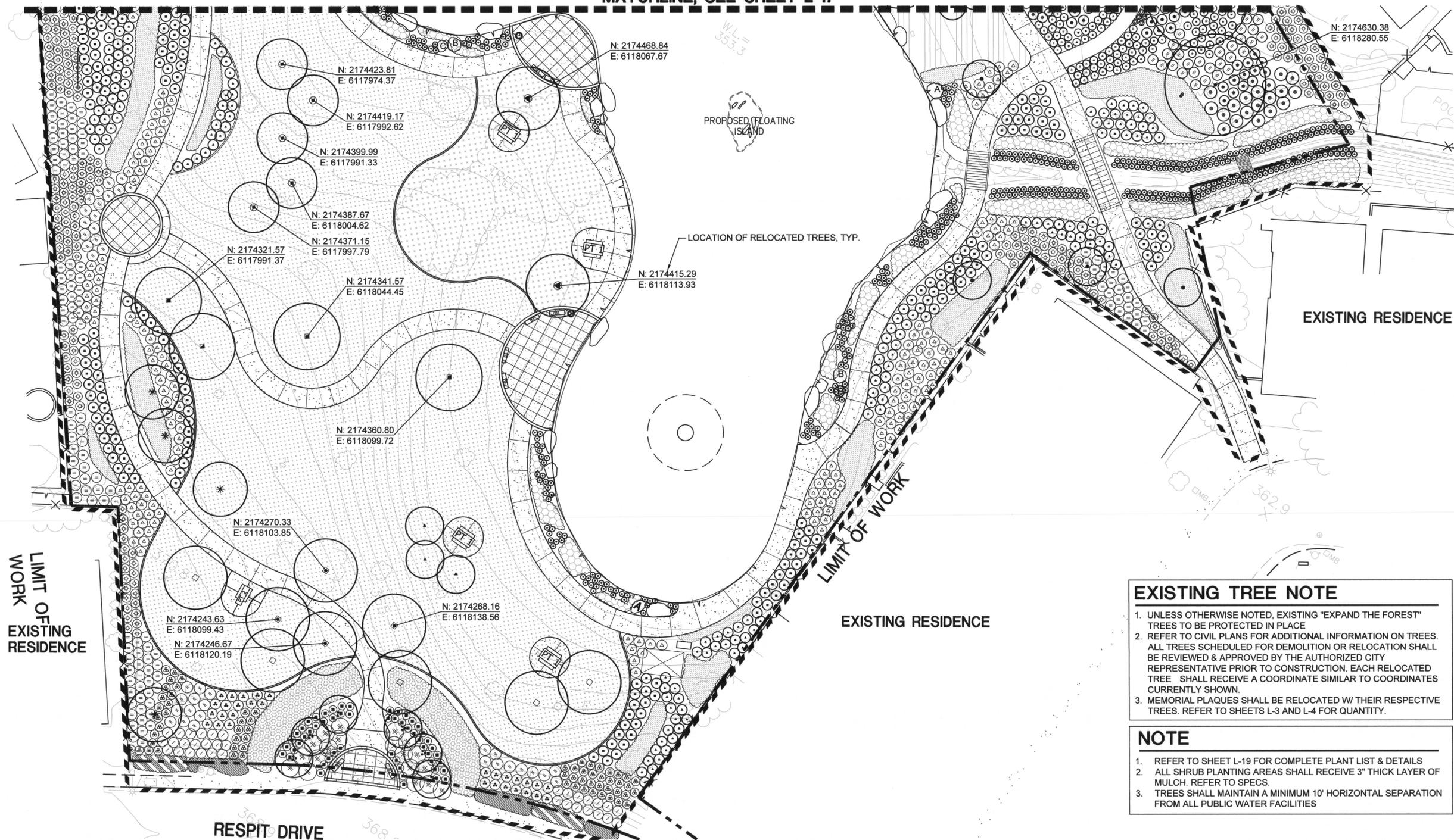
- UNLESS OTHERWISE NOTED, EXISTING "EXPAND THE FOREST" TREES TO BE PROTECTED IN PLACE
- REFER TO CIVIL PLANS FOR ADDITIONAL INFORMATION ON TREES. ALL TREES SCHEDULED FOR DEMOLITION OR RELOCATION SHALL BE REVIEWED & APPROVED BY THE AUTHORIZED CITY REPRESENTATIVE PRIOR TO CONSTRUCTION. EACH RELOCATED TREE SHALL RECEIVE A COORDINATE SIMILAR TO COORDINATES CURRENTLY SHOWN.
- MEMORIAL PLAQUES SHALL BE RELOCATED W/ THEIR RESPECTIVE TREES. REFER TO SHEETS L-3 AND L-4 FOR QUANTITY.

NOTE

- REFER TO SHEET L-19 FOR COMPLETE PLANT LIST & DETAILS
- ALL SHRUB PLANTING AREAS SHALL RECEIVE 3" THICK LAYER OF MULCH. REFER TO SPECS.
- TREES SHALL MAINTAIN A MINIMUM 10' HORIZONTAL SEPARATION FROM ALL PUBLIC WATER FACILITIES



MATCHLINE, SEE SHEET L-17



DATE 10/10/16
 SCALE 1"=20'-0"
 DRAWN BY DL
 CHECKED BY TM

REVISIONS/PLAN LOG

REVISED PER ADDENDA No. 1

PROJECT AND CLIENT NAME
VILLAGE POND PARK
 LAKE FOREST, CA

CITY OF LAKE FOREST
 25550 COMMERCENTRE DRIVE
 SUITE 100
 PHONE (949) 461-3420

SHEET DESCRIPTION
PLANTING PLAN

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LANDSCAPE ARCHITECTURE AND PLANNING

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SHEET NUMBER **L-18** of 44
 PROJECT NUMBER 13-237.03

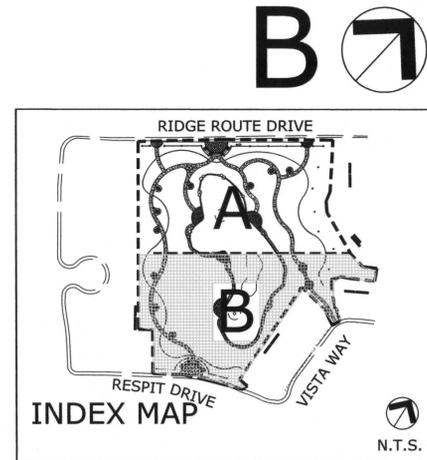
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SYMBOL LEGEND

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- PLANT MATERIAL SHALL BE REVIEWED AND APPROVED AUTHORIZED OWNER/CITY REPRESENTATIVE PRIOR TO PLANTING.
- FOR ADDITIONAL INFORMATION REFER SOILS REPORT, SHEET L-3 AND TO PLANTING NOTES AND SPECIFICATIONS.
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DATE **10/10/16**
 SCALE **NO SCALE**
 DRAWN BY **DL**
 CHECKED BY **TM**

REVISIONS/PLAN LOG
 REVISED PER ADDENA No. 1

PROJECT AND CLIENT NAME
VILLAGE POND PARK
 LAKE FOREST, CA

CITY OF LAKE FOREST
 25550 COMMERCENTRE DRIVE
 SUITE 100
 PHONE (949) 461-3420

SHEET DESCRIPTION
PLANT LIST, NOTES & DETAILS



LANDSCAPE ARCHITECTURE
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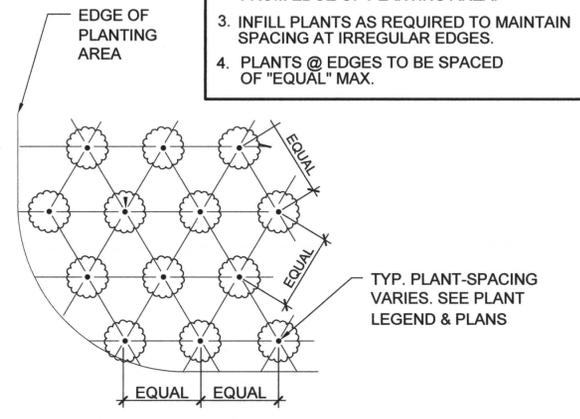
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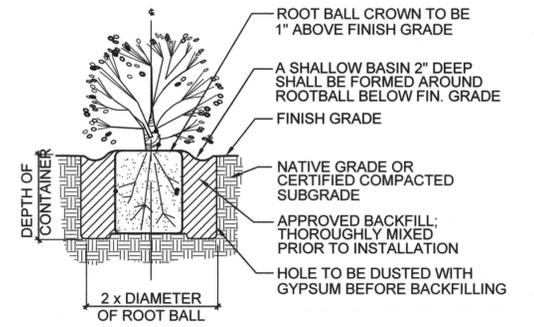
PLANTING LEGEND

SYMBOL	TREES	BOTANICAL NAME	COMMON NAME	SIZE	QTY
III	T-1	AGONIS FLEXUOSA	PEPPERMINT TREE	24" BOX	4
▽	T-2	ARBUTUS 'MARINA'	MARINA ARBUTUS	24" BOX	10
•	T-3	CERCIS OCCIDENTALIS	WESTERN REDBUD	24" BOX	6
△	T-4	CHITALPA X TASHKENTENSIS	CHITALPA	24" BOX	9
▲	T-5	GEIJERA PARVIFOLIA	AUSTRALIAN WILLOW	24" BOX	12
■	T-6	LAURUS 'SARATOGA'	SARATOGA LAUREL	24" BOX	9
○	T-7	MELALEUCA LINARIIFOLIA	FLAX LEAF PAPER BARK	24" BOX	3
*	T-8	QUERCUS ILEX	HOLLY OAK	24" BOX	12
□	T-9	CHORSIA SPECIOSA	FLOSS SILK TREE	24" BOX	6
⊕	T-10	MAGNOLIA GRANDIFLORA	SOUTHERN MAGNOLIA	24" BOX	9
⊖	T-11	PLATANUS ACERFOLIA	LONDON PLANE TREE	24" BOX	6
○	T-12	PINUS CANARIENSIS	CANARY ISLAND PINE	24" BOX	4
⊙	T-13	GINKGO BILOBA	MAIDENHAIR TREE	24" BOX	5
⊕	T-14	PYRUS KAWAKAMII	EVERGREEN PEAR	24" BOX	5
⊖	T-15	PINUS PINEA	ITALIAN STONE PINE	24" BOX	1
+	T-16	PLATANUS RACEMOSA	CALIFORNIA SYCAMORE	24" BOX	2
SHRUBS (PARK AREA)					
○	S-1	CALLISTEMON 'LITTLE JOHN'	LITTLE JOHN BOTTLEBRUSH	1 GAL.	57
△	S-2	CARISSA MAC. TOMLINSON	NATAL PLUM	1 GAL.	325
▽	S-3	CEANOTHUS M. 'VALLEY VIOLET'	VALLEY VIOLET CEANOTHUS	1 GAL.	73
●	S-4	DIETES BICOLOR	FORTNIGHT LILY	5 GAL.	147
▲	S-5	LEUCOPHYLLUM FRUT.	TEXAS RANGER	5 GAL.	60
○	S-6	RHAPHIOLEPIS INDICA 'PINK LADY'	PINK LADY INDIAN HAWTHORN	5 GAL.	298
⊗	S-7	ARCTOSTAPHYLOS DENSIFLORA	HARMONY MANZANITA	5 GAL.	61
⊕	S-8	ROSMARINUS O. 'TUSCAN BLUE'	TUSCAN BLUE ROSEMARY	5 GAL.	356
⊖	S-9	TEUCRIUM FRUTICANS	BUSH GERMANDER	1 GAL.	18
⊙	S-10	WESTRINGIA 'WYNYABBIE GEM'	WYNYABBIE GEM WESTRINGIA	5 GAL.	84
⊖	S-11	WESTRINGIA FRUITCOSA	WESTRINGIA	5 GAL.	43
SHRUBS (BUTTERFLY GARDEN AREA)					
●	B-1	ASCLEPIAS CURASSAVICA	TROPICAL MILKWEEED	4" POT	57
○	B-2	ASCLEPIAS FASCICULARIS	BUTTERFLY BUSH	1 GAL.	28
●	B-3	CISTUS X. SPP.	ROCK ROSE	1 GAL.	48
○	B-4	ENCELIA CALIFORNICA	ENCELIA	1 GAL.	32
○	B-5	ERIGERON GLAUCUS	SEASIDE DAISY	4" POT	49
○	B-6	ERIOGONUM FASCICULATUM	CALIFORNIA BUCKWHEAT	1 GAL.	93
○	B-7	ERIOPHYLLUM LANATUM	GOLDEN YARROW	1 GAL.	129
○	B-8	EURYOPS PECTINATUS	EURYOPS	1 GAL.	102
○	B-9	LAVANDULA SPP.	LAVENDER	1 GAL.	155
○	B-10	LUPINUS SPP.	BIGLEAF LUPINE	1 GAL.	103
○	B-11	MONARDELLA 'MOUNTAIN'	COYOTE MINT	1 GAL.	122
○	B-12	PERITYLE INCANA	GUADALUPE ISLAND ROCK DAISY	4" POT.	58
○	B-13	SALVIA CLEVELANDII	CLEVELAND SAGE	1 GAL.	98
○	B-14	SALVIA GREGII	AUTUMN SAGE	1 GAL.	181
○	B-15	TAGETES LEMONII	MEXICAN MARIGOLD	1 GAL.	49
○	B-16	VITEX SPP.	LILAC	5 GAL.	17
ORNAMENTAL GRASSES					
○	O-1	FESTUCA CALIFORNICA	CALIFORNIA FESCUE	PLUG/LINER	249
○	O-2	JUNCUS PATENS	CALIFORNIA GREY RUSH	PLUG/LINER	442
⬢	O-3	LOMANDRA LONGIFOLIA 'BREEZE'	BREEZE MAT RUSH	PLUG/LINER	860
○	O-4	MUHLENBERGIA RIGENS	DEER GRASS	1 GAL.	328
GROUND COVERS					
■	G-1	LANTANA MONTEVIDENSIS	PURPLE TRAILING LANTANA	1 GAL. @ 36" O.C.	141
■	G-2	BACCHARIS PILULARIS	COYOTE BRUSH	1 GAL. @ 36" O.C.	167
■	G-3	JUNIPERUS HORIZONTALIS 'BLUE CHIP'	BLUE CHIP JUNIPER	1 GAL. @ 36" O.C.	630
■	G-4	LANTANA CAMARA	LANTANA	1 GAL. @ 24" O.C.	612
TURF					
■	T-1	GRAND SLAM 'SALINE'	TURF GRASS	SEED (STOVER SEED)	62,402 SF
■	T-2	NO-MOW FESCUE	NO-MOW GRASS	SOD	12,056 SF
■		3" THICK LAYER OF MULCH	(REFER TO PLANTING PLAN NOTES FOR ADDITIONAL MULCH)		5,018 SF

NOTES:
 1. ALL PLANTS TO BE PLANTED @ EQUAL SPACING (TRIANG) UNLESS OTHERWISE INDICATED ON PLANS.
 2. OF PLANTS SHALL BE 8" MINIMUM FROM EDGE OF PLANTING AREA.
 3. INFILL PLANTS AS REQUIRED TO MAINTAIN SPACING AT IRREGULAR EDGES.
 4. PLANTS @ EDGES TO BE SPACED OF "EQUAL" MAX.



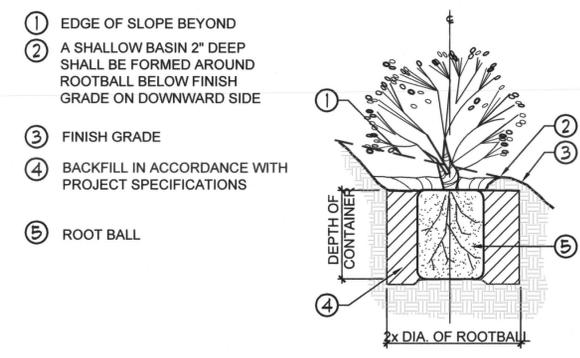
C GROUND COVER SPACING
 SCALE: N.T.S.



NOTES:
 - SEE PLANTING SPECIFICATIONS PRIOR TO INSTALLATION OF PLANT MATERIALS.

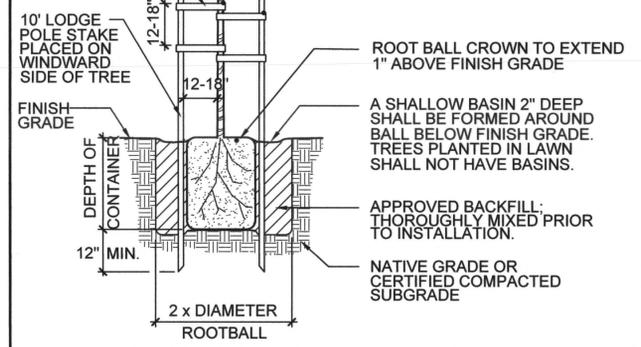
A SHRUB PLANTING
 SCALE: N.T.S.

NOTES:
 1. CROWN OF ROOTBALL TO BE 1/2"-1" ABOVE FINISH GRADE.
 2. FOR ADDITIONAL INFORMATION REFER TO PLANTING NOTES AND SPECIFICATIONS.



D SLOPE PLANTING - SHRUBS
 SCALE: NOT TO SCALE

PREVAILING WINDS
NOTES:
 - SEE PLANTING SPECIFICATIONS PRIOR TO INSTALLATION OF PLANT MATERIALS.
 - THIS DETAIL APPLIES TO 15 GAL & 24" BOX TREES
 - TREES INSTALLED WITHIN TURF AREAS SHALL BE INSTALLED WITH 'ARBOR-GARD' AT BASE OF TRUNK.



B TREE STAKING (DOUBLE STAKES)
 SCALE: 1/2"-1-0"



LEGEND:

INDICATES SHORELINE HINGE POINT

INDICATES SHORELINE

SHADED AREA INDICATES LIMIT OF CONCRETE

INDICATES BOULDERS WITH GRADUATED SIZES

2" Ø	=	10%
3" Ø	=	20%
4" Ø	=	40%
5" Ø	=	20%
6" Ø	=	10%

INDICATES RIVER COBBLE SHELL

INDICATES DISCHARGE RISER

INDICATES RECIRCULATION PIPE & SIZE—
SEE GENERAL NOTES #2 & #3

12" Ø

12" Ø — INDICATES RECIRCULATION INTAKE PIPE AND SIZE

INDICATES BIOFILTER

INDICATES WATER QUALITY FILTER

INDICATES WETLAND PLANTER

INDICATES TOTAL EFFECTIVE WEIR LENGTH

INDICATES TOP OF WEIR ELEVATION

1000 → INDICATES RECIRCULATION FLOW IN GALLONS PER MINUTE ±25%

INDICATES WATER SURFACE ELEVATION

INDICATES FINISH BOTTOM ELEVATION

INDICATES DETAIL LETTER DESIGNATION

INDICATES SHEET LOCATION

FOOT INDICATES SECTION DIRECTION

INDICATES AERATION VALVE BOX

INDICATES 1/2" Ø WEIGHTED AERATION TUBING

INDICATES AREA OF INFLUENCE

INDICATES AERATION POD

W — POTABLE WATER

SS — SANITARY SEWER

E — ELECTRICAL SERVICE

POINT OF CONNECTION



UTILITY PLAN VIEW

1" = 40'-0"

LAKE DATA:

DESCRIPTION	SURFACE AREA (ACRES)	VOLUME (GAL)	LENGTH OF SHORELINE (FT)	NORMAL WS (FT)	POND BOTTOM (FT)
POND	1.0	1,743,977	1,109	353.3	345.3

NOTE: POND DATA SHOULD BE CONSIDERED AS ENGINEER'S ESTIMATE ONLY. POND CONTRACTOR SHOULD INDEPENDENTLY VERIFY QUANTITIES.

UTILITY REQUIREMENT:

- CONTRACTOR TO INSTALL 2" POTABLE WATER POINT OF CONNECTION AT THE LAKE EDGE WITH A PRESSURE OF 90 PSI. INCLUDING PENETRATION THROUGH THE LINER. REFERENCE DETAIL C ON SHEET W251
- A NEW ELECTRICAL FEED @ 240V, 1Ø, DESIGN OF SERVICE FEEDERS, TO CONTROL PANEL, OVER-CURRENT DEVICE AND LOCATION OF POWER SOURCE DISTRIBUTION EQUIPMENT. REFER TO SHEET W400 AND SHEET E1-E5 FOR ELECTRICAL PLANS.
- CONNECT EXISTING STORM DRAIN LINE TO PROPOSED OVERFLOW BOX AT SHORELINE

LEGEND:

W — POTABLE WATER

SS — STORM DRAIN

E — ELECTRICAL SERVICE

POINT OF CONNECTION

GENERAL NOTES:

- THESE PLANS ARE INTENDED FOR WATER FEATURE CONSTRUCTION USE ONLY. SEE DRAWINGS BY RESPECTIVE DESIGNERS FOR OTHER ASPECTS OF CONSTRUCTION.
- ALL RECIRCULATION PIPE SHALL BE INSTALLED SO THE FLOW IS SLIGHTLY OFF LEVEL OR UPHILL TO PREVENT AIR TRAPS AND SHALL HAVE A 3'-0" (MIN) COVER OUTSIDE WATER FEATURE LIMITS AND A 1'-0" (MIN) COVER WITHIN UNLESS OTHERWISE NOTED.
- ALL PVC PIPE SHALL BE PER THE FOLLOWING SCHEDULE UNLESS OTHERWISE NOTED:

30" Ø AND LARGER	80 PSI PVC PIPE OR AS SPECIFIED ON PLAN
15" Ø - 27" Ø	80 PSI PVC IRRIGATION PIPE (P.I.P.)
10" Ø - 12" Ø	100 PSI PVC IRRIGATION PIPE (P.I.P.)
8" Ø	RING-TITE (RT) CLASS 160
6" Ø AND SMALLER	SCHEDULE 40 IPS
- PROVIDE THRUST BLOCK ON EVERY PIPE BEND AS REQUIRED. SEE THRUST BLOCK BEARING AREA TABLE ON DETAIL SHEET W254 FOR THRUST BLOCK SCHEDULING.
- WATER LEVELS SHOWN INDICATE AVERAGE SURFACE ELEVATIONS DURING OPERATION. ELEVATIONS MAY DIFFER DURING SHUTDOWN CONDITIONS.
- ALL MANUFACTURER PRODUCT CALL-OUTS SHOWN IN THESE PLANS SHALL BE CONSIDERED "OR APPROVED EQUAL" UNLESS OTHERWISE NOTED.
- THE LAKE CONTRACTOR SHALL VERIFY THE AVAILABLE ELECTRICAL POWER PRIOR TO PURCHASING EQUIPMENT.
- REFER TO NUVIS DRAWINGS FOR COLOR, TYPE OF BOULDERS TO BE USED, AND INSTALLATION REQUIREMENTS. THE LAKE CONTRACTOR SHALL FURNISH AND INSTALL BOULDERS SUBJECT TO APPROVAL OF THE OWNER. NOTIFY OWNER'S REPRESENTATIVE PRIOR TO SETTING ANY BOULDERS.
- PAINT ALL EXPOSED PVC PIPE WITHIN THE LAKE AREA AND VISIBLE FROM THE SHORELINE WITH BLACK OR DARK BLUE PAINT SUITABLE FOR PLASTIC SURFACES.
- TOP OF CONCRETE SHORELINE & CONTROL WEIR ELEVATIONS SHALL BE INSTALLED ± 0.05' OF ELEVATION AS SHOWN ON PLANS.
- CONCRETE FOR LAKE CONSTRUCTION UNLESS OTHERWISE SPECIFIED ON PLANS SHALL BE 6 SACK MINIMUM PEA GRAVEL PUMP MIX AND SHALL BE ABLE TO BE PUMPED AT A 3" SLUMP WITH A TRAILER MOUNTED GROUT PUMP WITH A 2" HOSE.
- REFER TO DEMOLITION PLANS L3-L4 FOR LAKE DRAINAGE INFORMATION.
- THE SPECIFICATION OF THE CLAY LINER SHALL BE USED AS THE REFERENCE FOR ANY WORK THAT REQUIRE EXCAVATION OR PENETRATION THROUGH THE CLAY LINER.

Sheet List Table

Sheet Number	Sheet Title
W100	UTILITY SHEET
W200	LAKE PLAN AND PIPING
W250	LAKE DETAILS
W251	LAKE DETAILS
W252	LAKE DETAILS
W253	LAKE DETAILS
W254	LAKE DETAILS
W300	PUMP STATION PLAN
W350	PUMP STATION DETAILS
W351	PUMP STATION DETAILS
W352	PUMP STATION DETAILS
W353	PUMP STATION DETAILS
W400	ELECTRICAL PLAN
W500	CONTROL PANEL SCHEMATIC
W501	CONTROL PANEL SCHEMATIC



DATE **10-10-16**

SCALE **AS SHOWN**

DRAWN BY **JD/RC**

CHECKED BY **SOS**

REVISIONS/PLAN LOG

REVISED PER ADDENA No. 1

PROJECT AND CLIENT NAME

VILLAGE POND PARK

LAKE FOREST, CA

CITY OF LAKE FOREST
25550 COMMERCENTRE DRIVE
SUITE 100
PHONE (949) 461-3420

SHEET DESCRIPTION
UTILITY SHEET



LANDSCAPE ARCHITECTURE
AND PLANNING

3151 AIRWAY AVENUE, SUITE J-3
COSTA MESA, CALIFORNIA
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SHEET NUMBER **W100** of **44**

PROJECT NUMBER **13-237.03**

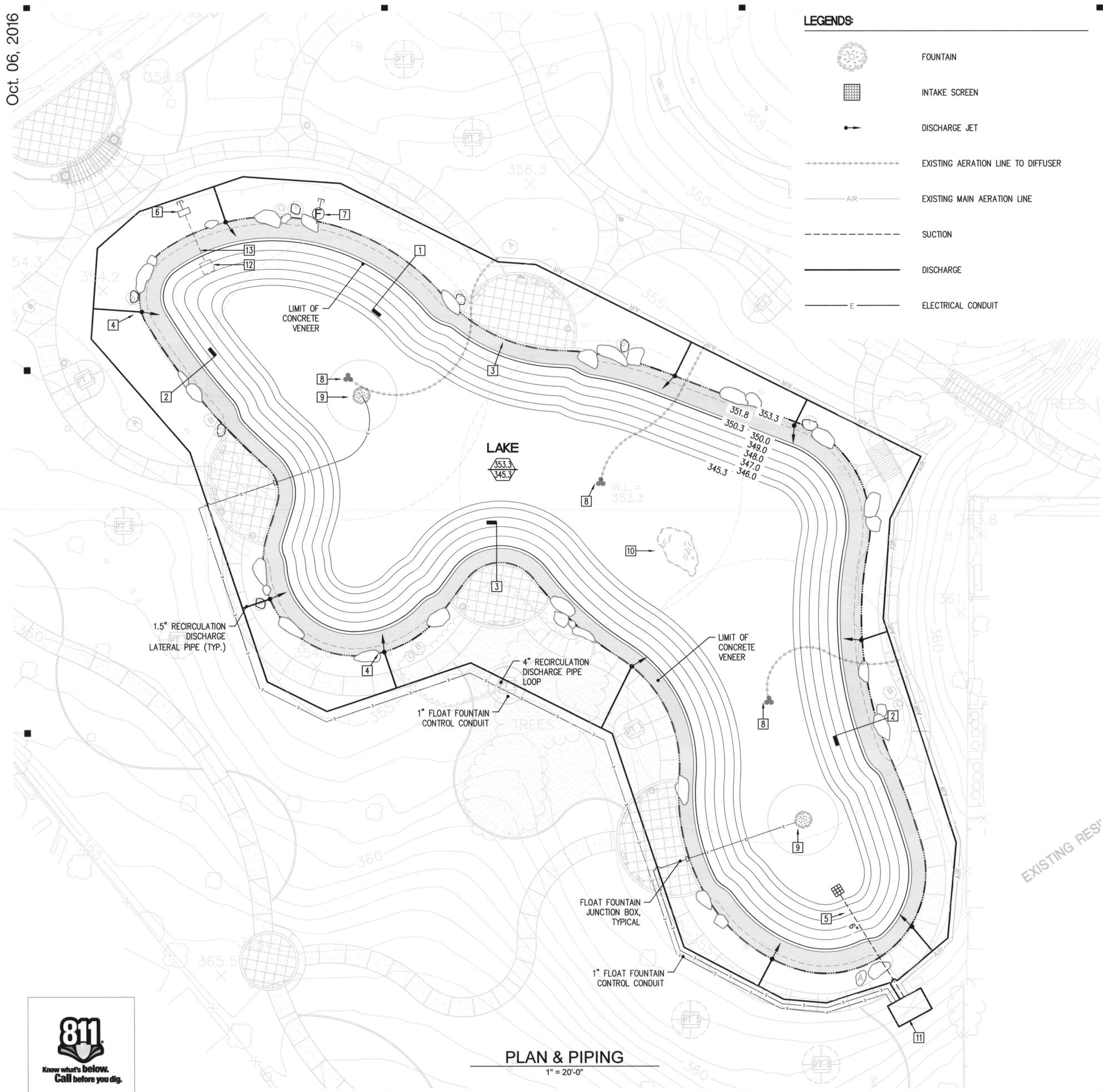
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Oct. 06, 2016



LEGENDS:

- FOUNTAIN
- INTAKE SCREEN
- DISCHARGE JET
- EXISTING AERATION LINE TO DIFFUSER
- EXISTING MAIN AERATION LINE
- SUCTION
- DISCHARGE
- ELECTRICAL CONDUIT

LAKE COMPONENTS:

- 1 TYPICAL SHORELINE
- 2 BOULDER POCKET
- 3 BULKHEAD SHORELINE
- 4 DISCHARGE JET
- 5 INTAKE PIPE
- 6 OVERFLOW BOX
- 7 MECHANICAL FILL
- 8 EXISTING AERATION DIFFUSER (CONTRACTOR TO RE-USE EXISTING AERATION EQUIPMENT)
- 9 FLOAT FOUNTAIN
- 10 FLOATING WETLAND (REFER TO LANDSCAPE ARCHITECT PLANS)
- 11 PROPOSED PUMP STATION
- 12 REMOVE EXISTING OVERFLOW STRUCTURE
- 13 REMOVE EXISTING OVERFLOW LINE

PIPING NOTES:

1. THE PIPING PLAN IS DIAGRAMMATIC. ROUTING AND FINAL LAYOUT TO BE FIELD DETERMINED BY CONTRACTOR AND APPROVED BY ENGINEER PRIOR TO CONSTRUCTION.
2. PIPE TYPE, MATERIALS, AND SUPPORTS SHALL CONFORM TO THE PROJECT SPECIFICATIONS. IN ADDITION, PIPE SHALL BE IN CONFORMANCE WITH UBC, UPC, LOCAL AND NATIONAL BUILDING CODE REQUIREMENTS.
3. PARALLEL PIPE RUNS SHALL BE INSTALLED WITHIN COMMON TRENCHES AND OR PIPE SUPPORTS WHENEVER POSSIBLE.
4. ALL PIPING SHALL BE UNIFORMLY AND CONTINUOUSLY SUPPORTED OVER ITS ENTIRE LENGTH AND ROUTE.
5. ALL ELECTRICAL CONDUITS SHALL BE INSTALLED USING SWEEP FITTINGS IN CONFORMANCE WITH LOCAL AND NATIONAL BUILDING CODES.
6. ALL PIPING SHALL BE INSTALLED WITH SLIGHT SLOPE BACK TO EQUIPMENT VAULTS AND SURGE TANK TO ALLOW FOR COMPLETE DRAINING.
7. PRESSURE TEST ALL PIPING PER PROJECT SPECIFICATIONS. KEEP PIPING UNDER PRESSURE TESTING CONDITIONS DURING TRENCH BACKFILL/COMPACTION AND DURING THE INSTALLATION OF WATER FEATURE CONCRETE BASIN.
8. ALL UNDERGROUND AND EQUIPMENT VAULT PIPING SHALL BE PVC SCHEDULE 40 UNLESS OTHERWISE DESIGNATED WITHIN PLANS AND SPECIFICATIONS.
9. ALL PIPING RUNS SHALL HAVE THRUST BLOCKS.



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 LAKE FOREST, CA

CITY OF LAKE FOREST
 25550 COMMERCENTRE DRIVE
 SUITE 100
 PHONE (949) 461-3420

SHEET DESCRIPTION
LAKE PLAN AND PIPING



LANDSCAPE ARCHITECTURE
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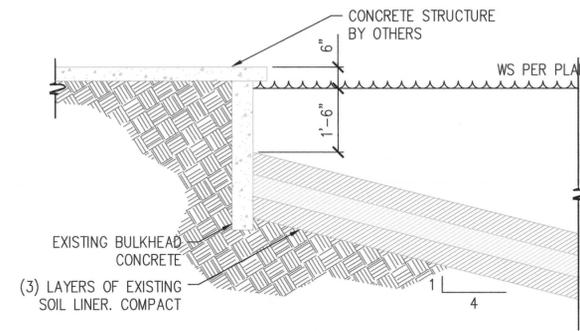
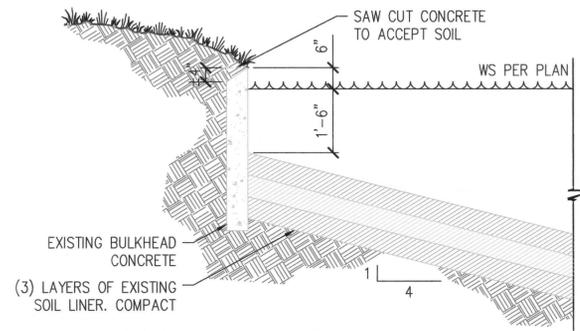
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PLAN & PIPING
 1" = 20'-0"





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A TYPICAL SHORELINE
SCALE: N.T.S.

B BULKHEAD SHORELINE
SCALE: N.T.S.

PROJECT AND CLIENT NAME
VILLAGE POND PARK
LAKE FOREST, CA

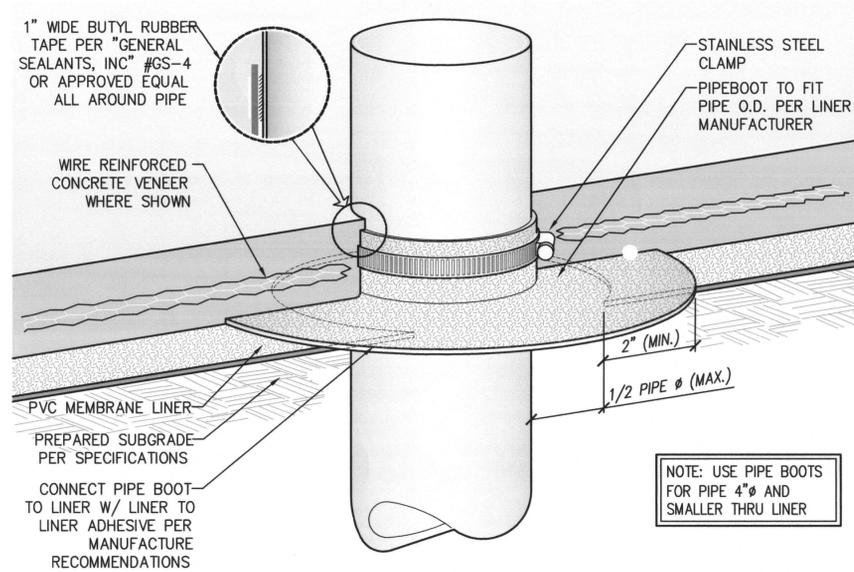
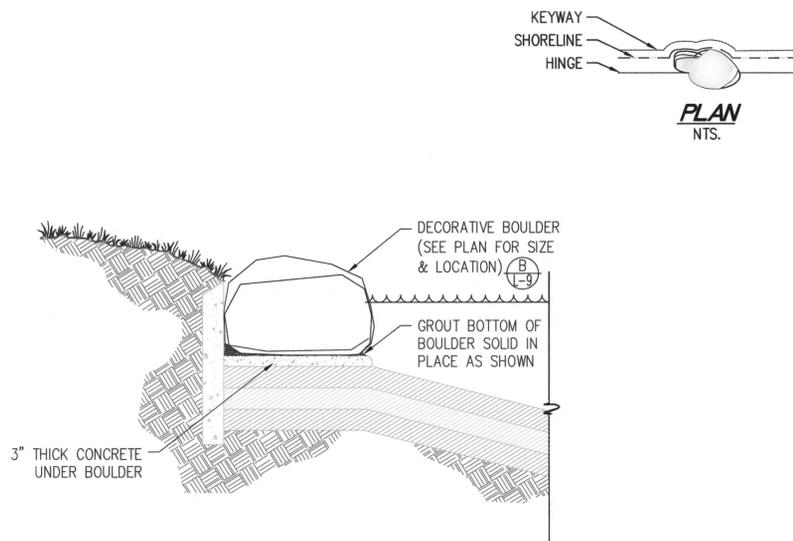
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SHEET DESCRIPTION
LAKE DETAILS



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NOTE: USE PIPE BOOTS FOR PIPE 4" AND SMALLER THRU LINER

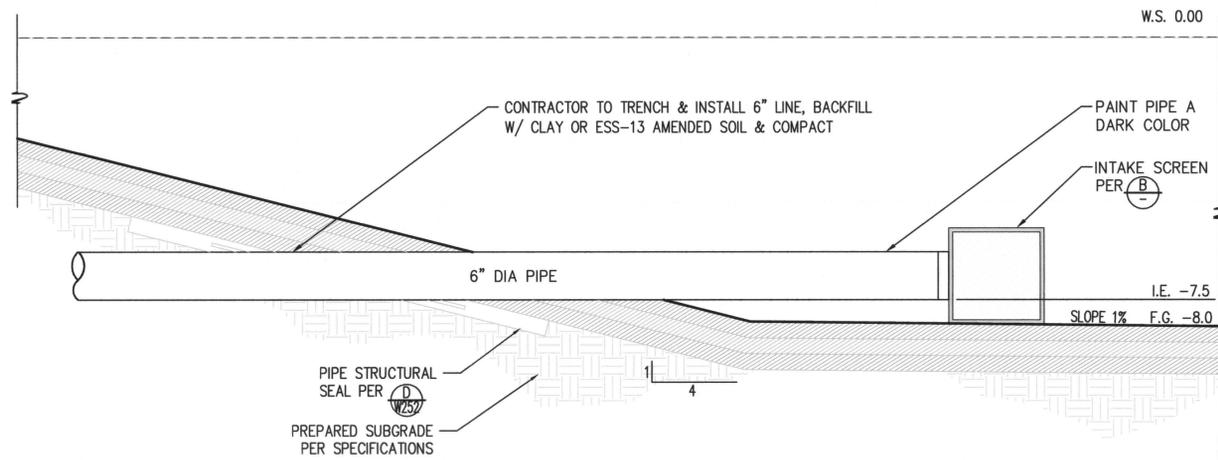
C BOULDER POCKET SHORELINE
SCALE: N.T.S.

D PIPE BOOT
SCALE: N.T.S.

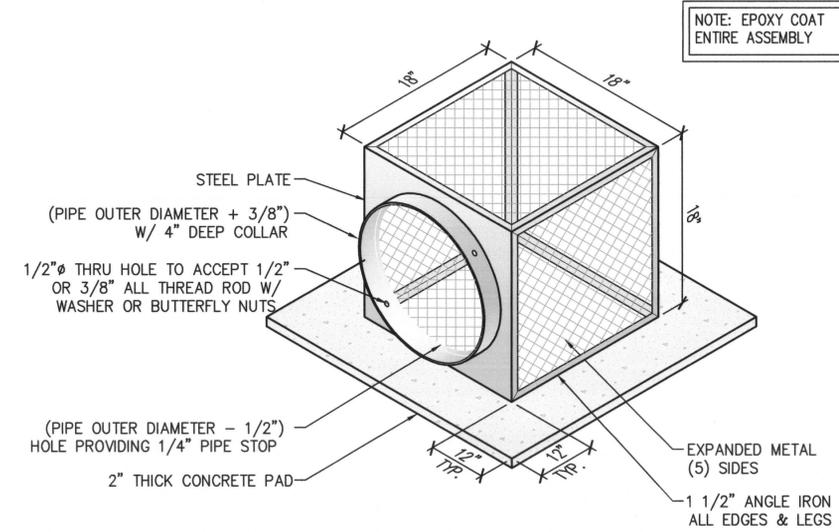


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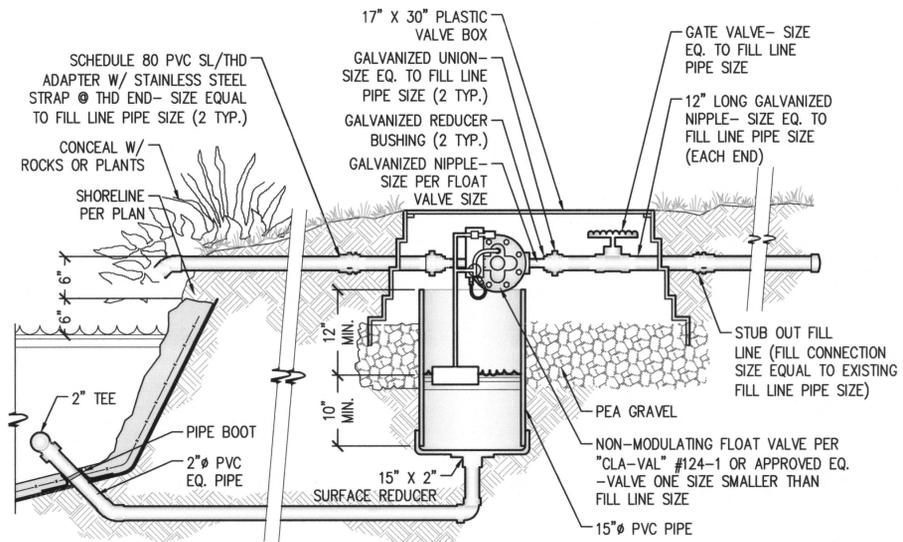
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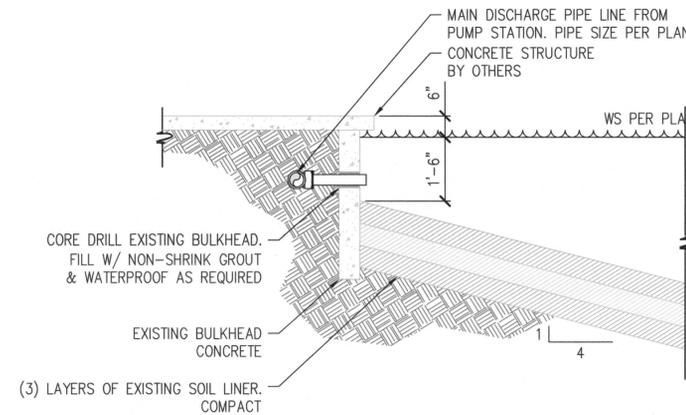
A INTAKE PIPE
SCALE: N.T.S.



B INTAKE SCREEN
SCALE: N.T.S.



C MECHANICAL LEVEL CONTROL 3" & BELOW
SCALE: N.T.S.



D DISCHARGE JET
SCALE: N.T.S.

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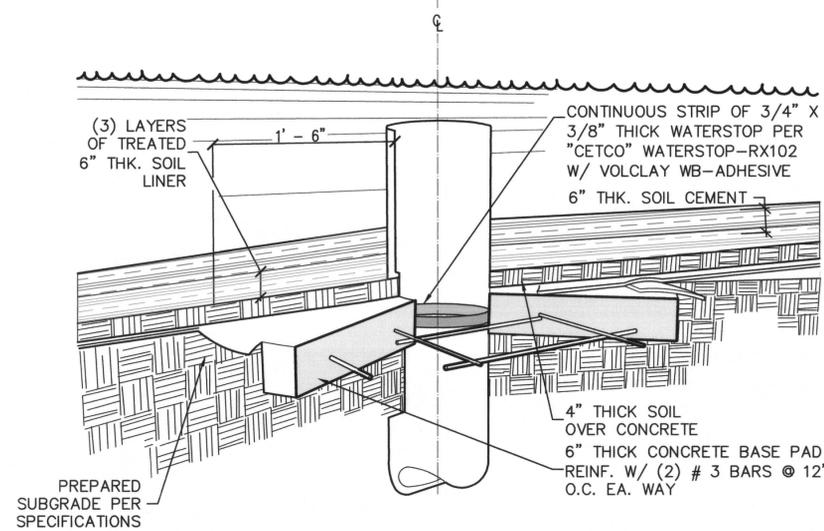
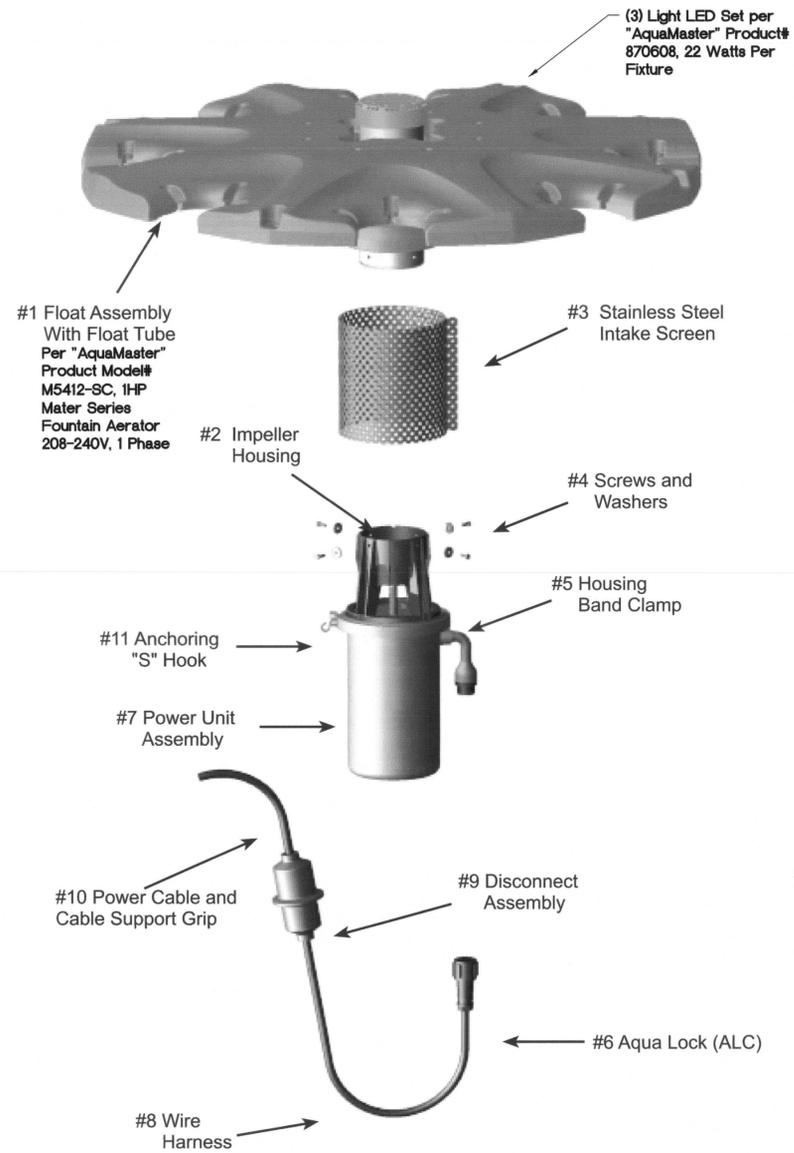
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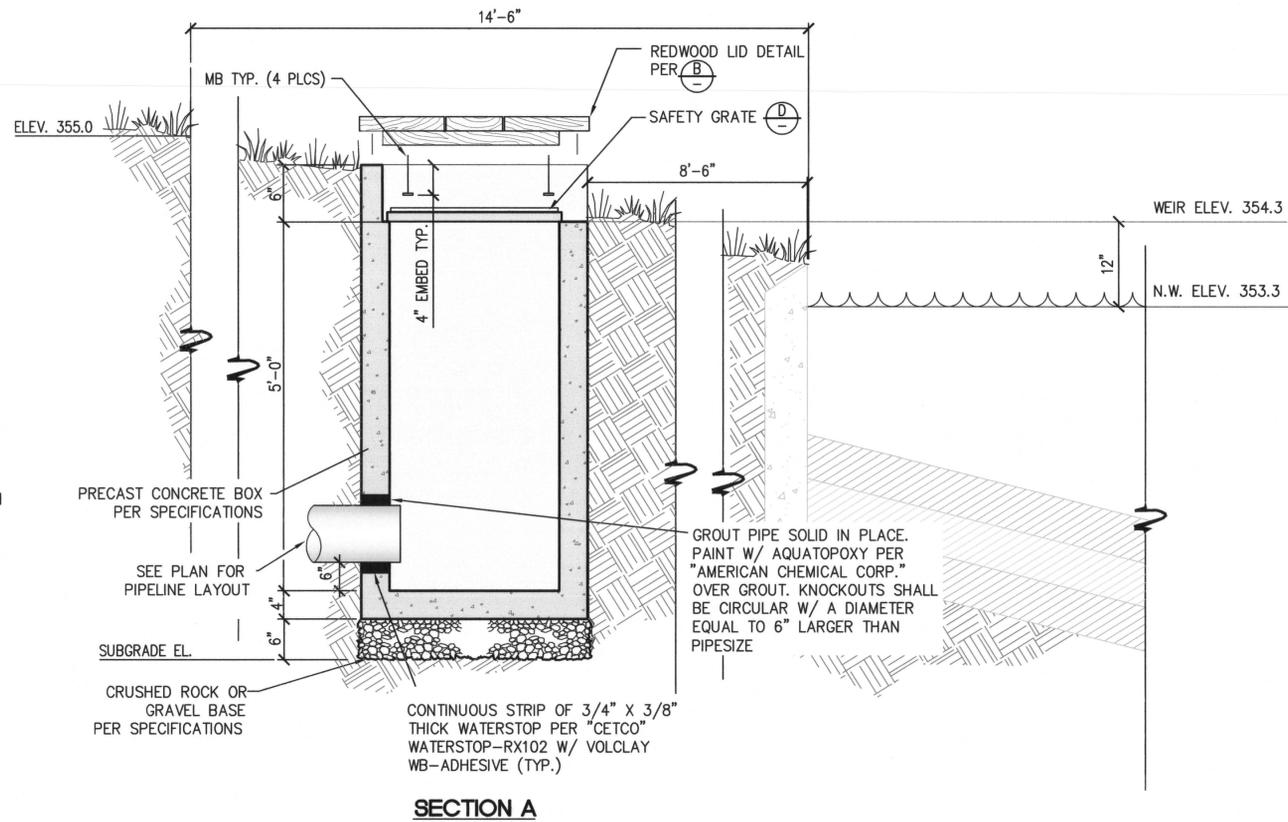
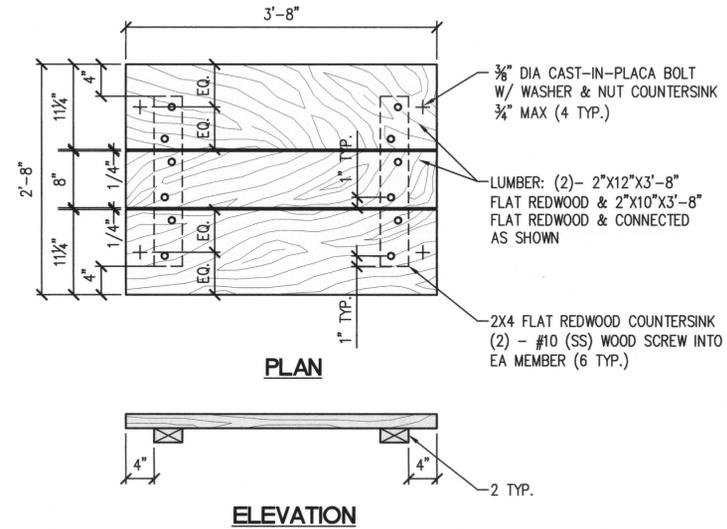
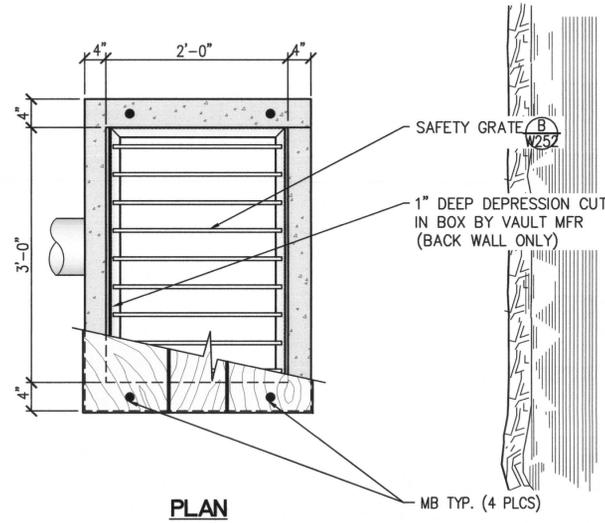
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C FOUNTAIN DETAIL
 SCALE: N.T.S.

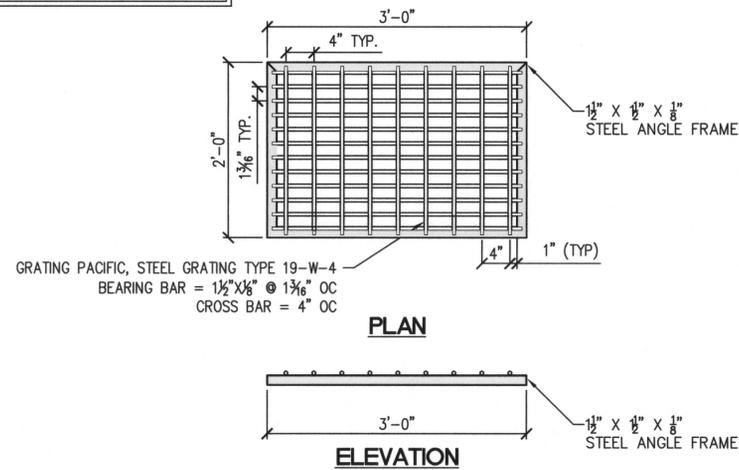
D PIPE STRUCTURAL SEAL W/ SOIL LINER
 SCALE: N.T.S.





B REDWOOD LID
 SCALE 1"=1'-0"

NOTE: HOT-DIP GALVANIZE OR EPOXY COAT ENTIRE ASSEMBLY



D SAFETY GRATE
 SCALE 1"=1'-0"

C OVERFLOW BOX
 SCALE 1"=1'-0"



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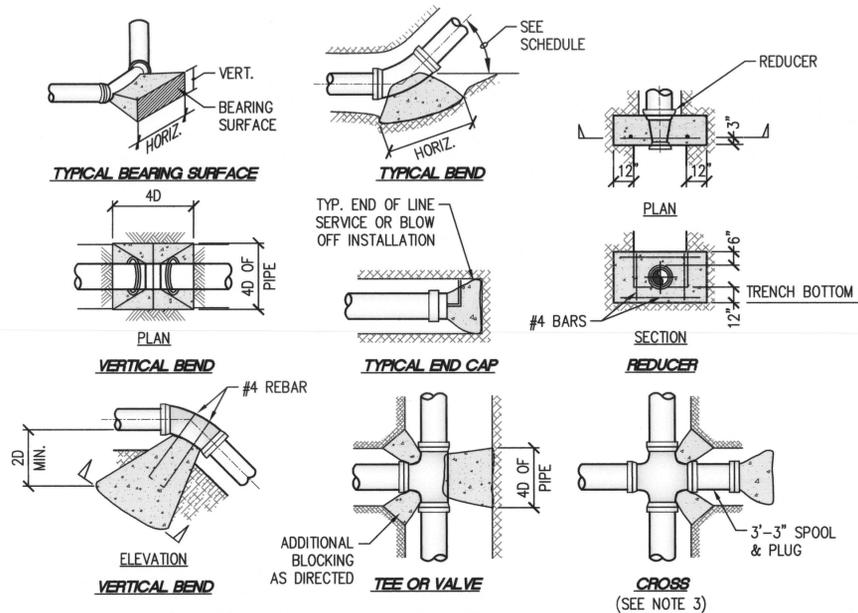


Know what's below.
 Call before you dig.



NOTES

1. THRUST BLOCK BEARING AREA BASED ON ALLOWABLE SOIL BEARING VALUE OF 2000 psf PRESSURE AND 150 psi LINE PRESSURE WITH 3'-0" COVER MINIMUM.
2. PORTLAND CEMENT CONCRETE SHALL BE 420-C-2000 CONCRETE. CONCRETE SHALL BE PLACED AGAINST UNDISTURBED SOIL.
3. THRUST BLOCKS ON CROSSES SHALL BE USED ONLY WHEN THERE IS A STUB-OUT ON ONE OR MORE SIDES.
4. REINFORCING STEEL SHALL CONFORM TO ASTM A15 AND A305 INTERMEDIATE GRADE.
5. CONCRETE SHALL NOT EXTEND INTO FLANGE OR ADJOINING PIPE.
6. THRUST BLOCK BEARING AREAS HAVE BEEN CALCULATED WITH A SAFETY FACTOR OF 1.5.



BEARING AREA TABLE						
PIPE	11 1/4' BEND	22 1/2' BEND	45° BEND	90° BEND	TEE	END CAP
SIZE	HORIZ. VERT.					
4"	1'-0" 0'-6"	1'-0" 0'-9"	1'-3" 1'-0"	1'-0" 1'-0"	1'-6" 1'-0"	1'-6" 1'-0"
6"	1'-0" 0'-9"	1'-3" 1'-0"	2'-0" 1'-6"	2'-3" 2'-0"	2'-0" 1'-9"	2'-0" 1'-9"
8"	1'-3" 1'-0"	1'-6" 1'-6"	2'-6" 2'-0"	3'-0" 2'-9"	3'-0" 2'-0"	3'-0" 2'-0"
10"	1'-9" 1'-0"	2'-0" 1'-9"	3'-0" 2'-6"	4'-0" 3'-3"	4'-0" 2'-3"	4'-0" 2'-3"
12"	2'-0" 1'-3"	2'-6" 2'-0"	3'-6" 3'-0"	4'-6" 4'-0"	4'-0" 3'-3"	4'-0" 3'-3"
15"	2'-0" 2'-0"	3'-0" 2'-9"	4'-0" 4'-0"	6'-0" 4'-9"	5'-0" 4'-0"	5'-0" 4'-0"



DATE **10-10-16**
 SCALE **AS SHOWN**
 DRAWN BY **JD/RC**
 CHECKED BY **SOS**

REVISIONS/PLAN LOG
 REVISED PER ADDENA No. 1

PROJECT AND CLIENT NAME
VILLAGE POND PARK

LAKE FOREST, CA

CITY OF LAKE FOREST
 25550 COMMERCENTRE DRIVE
 SUITE 100
 PHONE (949) 461-3420

SHEET DESCRIPTION
LAKE DETAILS



LANDSCAPE ARCHITECTURE
 AND PLANNING

3151 AIRWAY AVENUE, SUITE J-3
 COSTA MESA, CALIFORNIA
 U. S. A. 92626-4640
 FX: 714.754.7346
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SHEET NUMBER **W254** of **44**
 PROJECT NUMBER **13-237.03**

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EQUIPMENT SCHEDULE

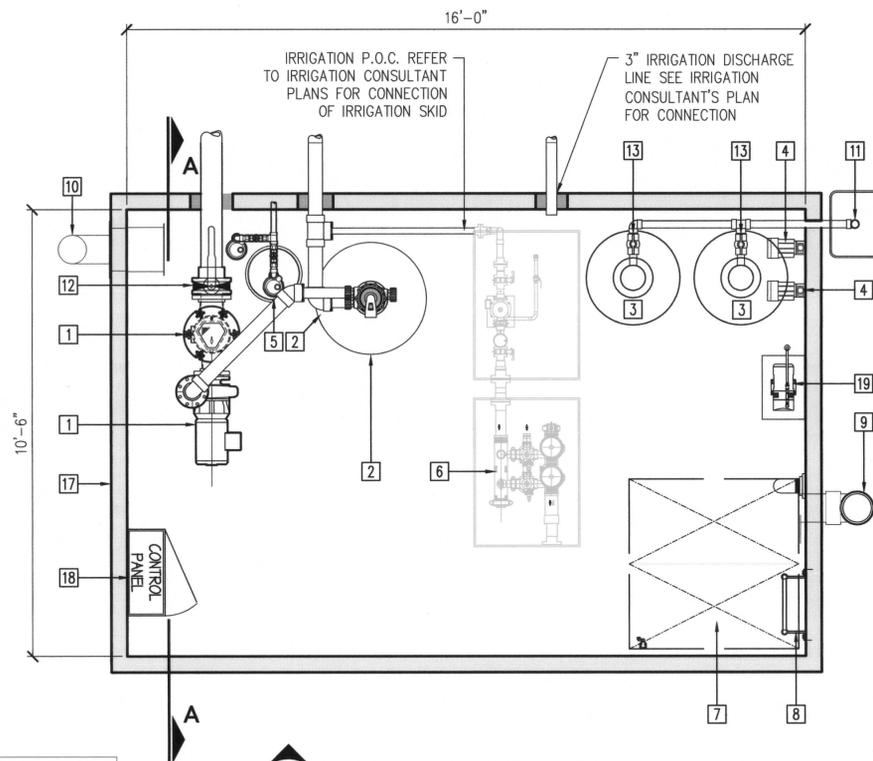
NO.	DESCRIPTION	MANUFACTURER	MODEL	QTY.	SPECIFICATIONS	DETAIL
1	FILTER PUMP	WEINMAN	4GL	1	FILTER PUMP PER PENTAIR 310-SERIES PUMP WITH "NEMATO" STRAINER BASKET PT# NSS-06-030-0605, MODEL 4GL, 4.5" IMPELLER, 300 GPM @ 10' TDH, 1 HP, 240V, 1 PHASE, 60 Hz WITH VFD CONTROL	-
2	BOG FILTER	AQUA ULTRAVIOLET	ULTIMA II - 30,000	1	MAX FLOW 340 GPM, MAX PRESSURE 10 ft TDH	DETAIL D SHEET W352
3	50 GAL ALUM TANKS	CHEM-TAINER	N-41865	2	20"Ø X 38"(H)	-
4	CHEMICAL FEED	STENNER	85M2	2	0.8 TO 17.0 GAL PER DAY	DETAIL D SHEET W351
5	SUMP PUMP	STA-RITE	DC250110V	2	½HP, 115V, SINGLE PHASE TETHERED	DETAIL D SHEET W353
6	IRRIGATION SKID			1	REFERENCE IRRIGATION PLANS (L11-L16)	DETAIL 15 SHEET L15
7	ACCESS HATCH	BILCO	JD-2ALH20	1	DOUBLE LEAF ACCESS DOOR WITH DRAIN. DIAMOND PLATE	DETAIL C SHEET W352
8	STEEL LADDER	UTILITY VAULT CO.	-	1	LENGTH PER DEPTH OF VAULT, HOT-DIPPED GALVANIZED	DETAIL B SHEET W352
9	GRAVITY AIR INTAKE	-	-	1	-	DETAIL B SHEET W353
10	AIR EXHAUST	DAYTON	4TM80	1	¼HP, 115V, 1160 CFM, 1750 RPM	DETAIL A SHEET W353
11	ALUM FILL PORT	-	-	1	PROVIDE FILL PORT CONNECTION IN A VALVE BOX INSTALLED FLUSHED ON THE GROUND	-
12	6" BUTTERFLY VALVE	-	-	2	-	-
13	4" BALL VALVE	-	-	2	-	-
14	4" CHECK VALVE	-	-	2	-	-
15	1" BALL VALVE	-	-	2	-	-
16	4" HIGH HOUSEKEEPING PAD	-	-	2	-	DETAIL B SHEET W351
17	PRE-CAST VAULT	UTILITY VAULT OR APPROVED EQUAL - PROVIDE C.I.P. VAULT AS ALTERNATIVE BID	-	1	16' x 10'-6" x 7' DEEP W/ (1) RISER	-
18	CONTROL PANEL	TOTAL CONTROLS	-	1	MOTOR CONTROLS, TIMER, HOA, NEMA 1 ENCLOSURE	SHEET W400
19	AERATION COMPRESSOR	-	-	1	USE EXISTING	-

PUMP STATION CONSTRUCTION NOTES:

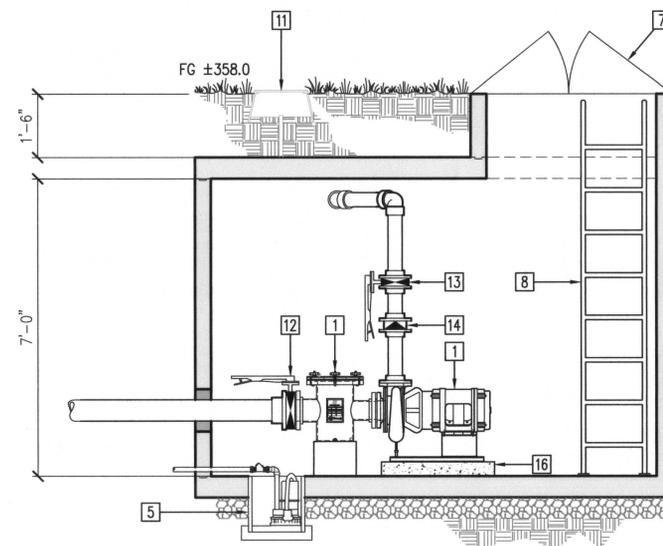
- ALL MAJOR EQUIPMENT (I.E., PUMPS, FILTERS, HEATERS, ETC.) SHALL BE LOCATED ON HOUSEKEEPING PADS AT A MINIMUM OF 4" ABOVE THE FINISHED FLOOR LEVEL.
- SERVICE FLANGES OR UNIONS SHALL BE PROVIDED FOR ALL MAJOR ELEMENTS OF THE SYSTEM (I.E., PUMPS, FILTERS, UV EQUIPMENT, HEAT EXCHANGERS, SOLENOID VALVES, ETC.) TO ALLOW FOR QUICK REMOVAL FROM SYSTEM WITHOUT THE NEED TO CUT PIPING OR BREAK THE PIPING INTEGRITY.
- ALL MAJOR EQUIPMENT SHALL BE IDENTIFIED BY CORROSION RESISTANT PERMANENT TAGS THAT CORRESPOND TO THE DESIGNATION ON THE AS-BUILT DRAWINGS AND DOCUMENTATIONS.
- ALL PIPING SHALL BE LABELED FOR FUNCTION (I.E., FILTER DISCHARGE, SKIMMER SUCTION, ETC.) AND FOR FLOW DIRECTION.
- CONTRACTOR SHALL PROVIDE AIR RELIEF VALVES FOR ALL PIPING HIGH POINTS GENERATED DURING PLUMBING OF ALL THE PIPING.
- EPOXY COAT REQUIRED SCOTCHKOTE 134 ON WETTED CAST IRON PARTS, INTERIOR AND EXTERIOR, NSF-50 CERTIFIED.
- PREPARE SUBGRADE PER SPECIFICATION
- THE PUMP STATION PRECAST CONCRETE VAULT SHOP DRAWINGS AND STRUCTURAL CALCULATIONS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL TO THE BUILDING DIVISION.
- POND CONTRACTOR TO VERIFY ALL EQUIPMENT DIMENSIONS PRIOR TO PURCHASE AND INSTALLATION OF EQUIPMENT.
- AS AN ALTERNATIVE TO PRE CAST CONCRETE VAULT - CONTRACTOR TO BID A CAST IN PLACE CONCRETE VAULT WITH THE SAME DIMENSIONS.
- IF DESIRE THE VAULT CAN BE CONSTRUCT AS CAST IN PLACE CONCRETE. CONTRACTOR HAS TO PROVIDE CALCULATION AND DESIGN FOR APPROVAL PRIOR CONSTRUCTION.

PRE-CAST CONCRETE BOX INSTALLATION:

- FIELD PREPARATION.** THE CONTRACTOR SHALL PREPARE EXCAVATION LARGE ENOUGH TO ACCOMMODATE THE OUTSIDE DIMENSION OF THE VAULT AS SHOWN ON THE DRAWINGS. PRIOR TO THE SETTING, THE CONTRACTOR SHALL PROVIDE A MINIMUM OF THREE (3) TO SIX (6) INCHES OF FINE GRAINED MATERIAL AS SPECIFIED BY THE VAULT MANUFACTURER TO BE SUITABLE AS A BASE TO RECEIVE THE VAULT. THE BASE MATERIAL SHALL BE COMPACTED AND GRADED LEVEL AT PROPER ELEVATION TO RECEIVE THE VAULT.
- JOINT SEALANT.** THE JOINT SEALANT SHALL BE AS PROVIDED BY THE VAULT MANUFACTURER AND SHALL BE INSTALLED IN QUANTITIES RECOMMENDED BY THE MANUFACTURER.
- PIPE PENETRATIONS.** PIPE PENETRATIONS SHALL BE LOCATED AND SIZED AS SHOWN ON THE PLANS, AND SHALL BE A MINIMUM OF 6" LARGER THAN THE PIPE DIAMETER. ALL PENETRATIONS SHALL BE SEALED WITH NON-SHRINK GROUT, AND SHALL BE WATERTIGHT.
- STRUCTURE BACKFILL.** THE CONTRACTOR SHALL BACKFILL AROUND WET WELL WHERE OR VAULT STRUCTURE WHERE SHOWN ON THE PLANS. THE FILL MATERIAL SHALL BE FREE OF FOREIGN MATTER, DEBRIS AND LARGE ROCKS OR CLODS, AND PLACED AROUND THE VAULT IN 6 INCH LIFTS AND COMPACTED TO 90% RELATIVE DENSITY. THE PIPING CONTRACTOR SHALL TAKE SPECIAL PRECAUTIONS TO INSURE UNIFORM COMPACTION AROUND PIPES WHERE THEY ENTER AND EXIT THE STRUCTURE AND TO INSURE THAT THE PIPES ARE NOT DAMAGED DURING THE BACKFILL OPERATION. CONTRACTOR SHALL COMPLY WITH THE ORANGE COUNTY PUBLIC WORKS ENGINEERING DESIGN GUIDELINES IN CONJUNCTION WITH THE ABOVE REQUIREMENTS AS APPLICABLE.
- DELIVERY.** DELIVERY OF THE PRODUCT WILL BE MADE TO SITE AS REQUIRED. THE LAKE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SUFFICIENT LABOR AND EQUIPMENT TO PLACE THE UNITS.



PUMP STATION - PLAN VIEW
 ½"=1'-0"



PUMP STATION - SECTION 'A'
 ½"=1'-0"



DATE **10-10-16**
 SCALE **AS SHOWN**
 DRAWN BY **JD/RC**
 CHECKED BY **SOS**

REVISIONS/PLAN LOG
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PROJECT AND CLIENT NAME
VILLAGE POND PARK
 LAKE FOREST, CA

CITY OF LAKE FOREST
 25550 COMMERCENTRE DRIVE
 SUITE 100
 PHONE (949) 461-3420

SHEET DESCRIPTION
PUMP STATION PLAN



LANDSCAPE ARCHITECTURE
 AND PLANNING

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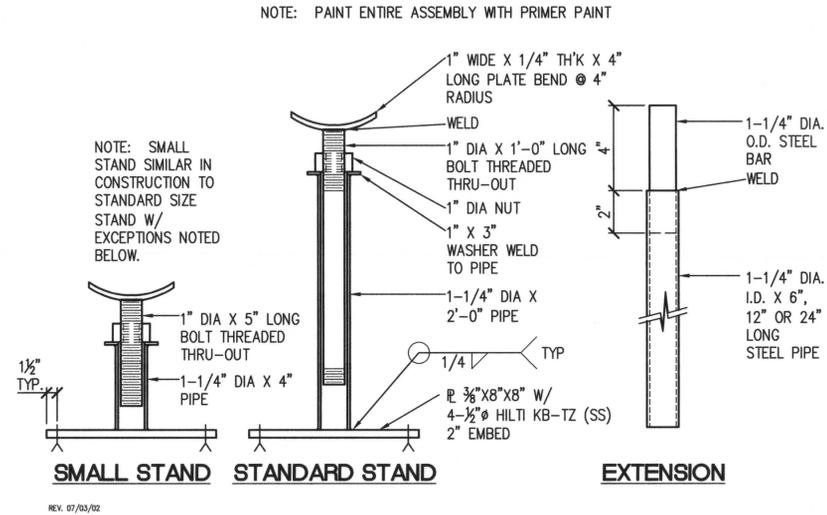
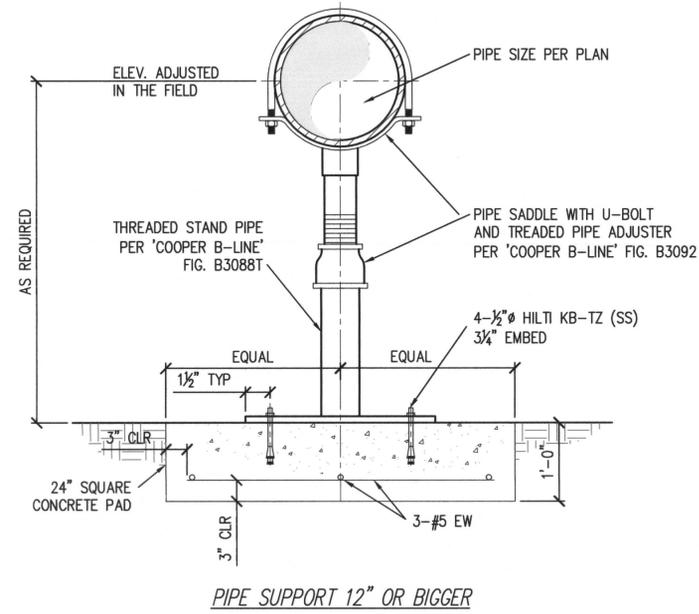


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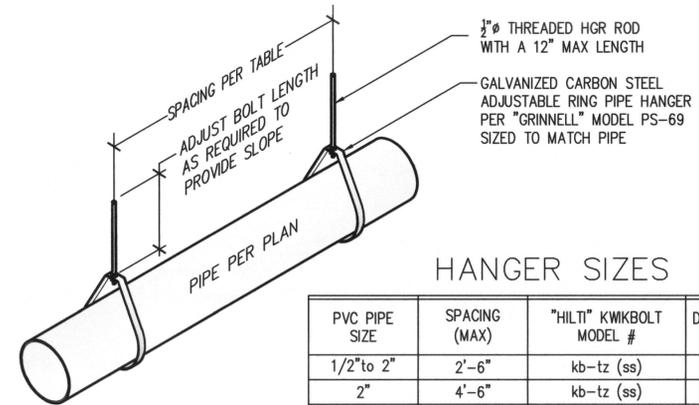
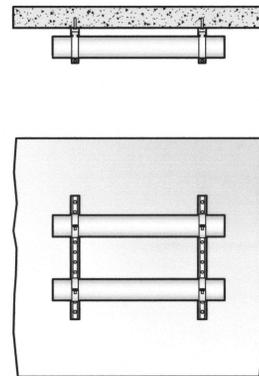
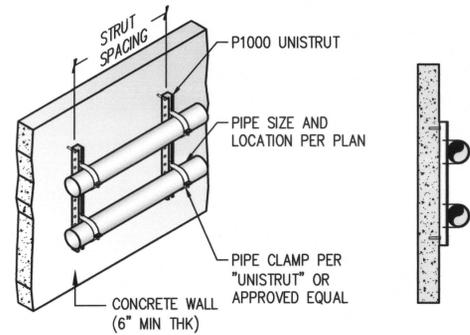
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PVC PIPE SIZE	MAX. HANGING LOAD RATING (LBS)	STRUT SPACING	"HILTI" KWKBOLT MODEL #	DIAMETER AND EMBED
3/8" TO 1/2"	400	4'-0"	KB-TZ (SS)	3/8"Ø, 2"
3/4" TO 1 1/4"	600	4'-5"	KB-TZ (SS)	3/8"Ø, 2"
1 1/2" TO 3"	800	5'-3/4"	KB-TZ (SS)	1/2"Ø, 2"
3 1/2" TO 5"	1000	8'-1/4"	KB-TZ (SS)	1/2"Ø, 3 1/4"
6" TO 12"	1000	10'-0"	KB-TZ (SS)	1/2"Ø, 3 1/4"



HANGER SIZES

PVC PIPE SIZE	SPACING (MAX)	"HILTI" KWKBOLT MODEL #	DIAMETER AND EMBED
1/2" to 2"	2'-6"	kb-tz (ss)	3/8"Ø, 2"
2"	4'-6"	kb-tz (ss)	1/2"Ø, 2"
3"	5'-0"	kb-tz (ss)	1/2"Ø, 2"
4"	6'-0"	kb-tz (ss)	1/2"Ø, 3 1/4"
6"	6'-6"	kb-tz (ss)	1/2"Ø, 3 1/4"
8"	7'-6"	kb-tz (ss)	1/2"Ø, 3 1/4"

NOTE: ATTACH EXPANSION ANCHORS INTO A CONCRETE SLAB WITH A 6" MINIMUM THICKNESS OR INTO A 3 1/2" CONCRETE OVER A 3" METAL DECK.



DATE 10-10-16
 SCALE AS SHOWN
 DRAWN BY JD/RC
 CHECKED BY SOS

REVISIONS/PLAN LOG
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PROJECT AND CLIENT NAME
VILLAGE POND PARK
 LAKE FOREST, CA

CITY OF LAKE FOREST
 25550 COMMERCE DRIVE
 SUITE 100
 PHONE (949) 461-3420

SHEET DESCRIPTION
PUMP STATION DETAILS



LANDSCAPE ARCHITECTURE
 AND PLANNING

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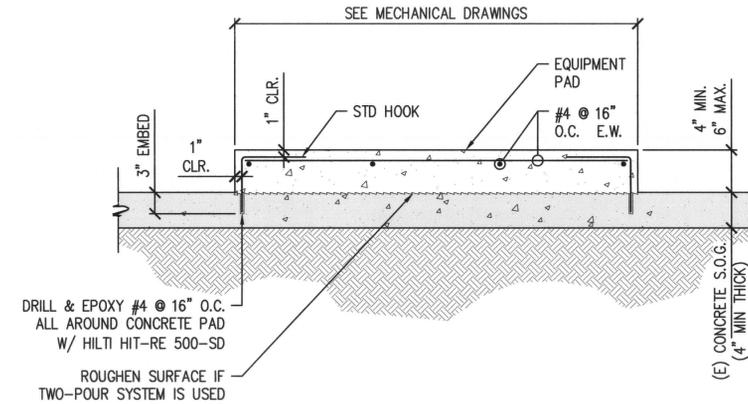
LINK SEAL PER "THUNDERLINE" MODEL AND SIZE PER TABLE 1

PIPE SIZE - PER PLAN

HOLE I.D.

CORED HOLES

PIPE SIZE NOMINAL	HOLE I.D.	LINK-SEAL SIZE	LINKS PER SEAL
1"	3"	LS - 300C	4
1 1/2"	3 1/2"	LS - 300C	5
2"	4"	LS - 300C	6
2 1/2"	4"	LS - 200C	9
3"	5"	LS - 300C	8
4"	6"	LS - 300C	10
5"	8"	LS - 425C	6
6"	10"	LS - 475C	9
8"	12"	LS - 475C	12
10"	14"	LS - 400C	10
12"	16"	LS - 400C	12
14"	18"	LS - 575C	16
16"	20"	LS - 575C	18
18"	22"	LS - 575C	20
20"	24"	LS - 575C	22



DATE **10-10-16**

SCALE **AS SHOWN**

DRAWN BY **JD/RC**

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REVISIONS/PLAN LOG

REVISED PER ADDENA No. 1

B HOUSEKEEPING PAD
SCALE: N.T.S.

LINK SEAL PER "THUNDERLINE" MODEL AND SIZE PER TABLE 2

PIPE SIZE - PER PLAN

SLEEVE I.D.

SLEEVE LENGTH

PLASTIC SLEEVE

SLEEVED HOLES

PIPE SIZE NOMINAL	ACTUAL O.D.	MODEL NUMBER	SLEEVE I.D.	LINK-SEAL SIZE	LINKS PER SEAL
1/2"	.840	CS - 2 - *	2.09	LS - 200C	4
3/4"	1.050	CS - 3 - *	2.94	LS - 315C	4
1"	1.315	CS - 3 - *	2.94	LS - 300C	4
1 1/4"	1.660	CS - 3 - *	2.94	LS - 275C	7
1 1/2"	1.900	CS - 3 1/2 - *	3.38	LS - 275C	8
2"	2.375	CS - 4 - *	4.03	LS - 300C	6
2 1/2"	2.875	CS - 4 - *	4.03	LS - 200C	9
3"	3.500	CS - 5 - *	5.14	LS - 300C	8
3 1/2"	4.000	CS - 6 - *	6.14	LS - 325C	5
4"	4.500	CS - 6 - *	6.14	LS - 300C	10
5"	5.563	CS - 8 - *	8.21	LS - 425C	6
6"	6.625	CS - 10 - *	10.19	LS - 475C	10
8"	8.625	CS - 12 - *	12.26	LS - 475C	12
10"	10.750	CS - 14 - *	14.14	LS - 400C	10
12"	12.750	CS - 16 - *	16.18	LS - 400C	12
14"	14.000	CS - 18 - *	17.45	LS - 400C	13
16"	16.000	CS - 20 - *	19.12	LS - 400C	15
18"	18.000	CS - 24 - *	22.76	LS - 525C	16
20"	20.000	CS - 25 - *	24.81	LS - 525C	18

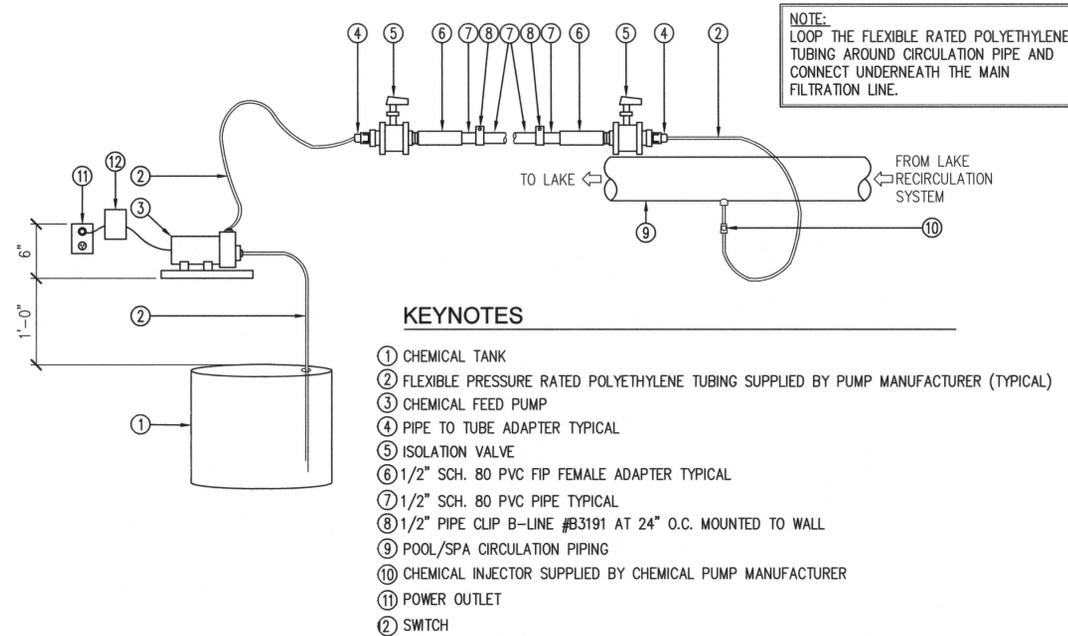
* - SPECIFY SLEEVE LENGTH IN INCHES

- NOTE:
- PIPE THROUGH WALL SHOULD BE SEALED WITH LINK SEALS BEFORE CONNECTION TO OTHER PIPES.
 - LINK SEAL SIZING CHART ABOVE IS FOR STEEL AND PLASTIC PIPE ONLY. CONSULT MANUFACTURER FOR DIFFERENT PIPE MATERIAL AND PIPE SIZES NOT SHOWN.

REV. 04/04/01



D ALUM FEED PIPING DETAIL
SCALE: N.T.S.



PROJECT AND CLIENT NAME

VILLAGE POND PARK

LAKE FOREST, CA

CITY OF LAKE FOREST
25550 COMMERCENTRE DRIVE
SUITE 100
PHONE (949) 461-3420

SHEET DESCRIPTION

PUMP STATION DETAILS



LANDSCAPE ARCHITECTURE AND PLANNING

3151 AIRWAY AVENUE, SUITE J-3
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SHEET NUMBER **W351** of 44

PROJECT NUMBER **13-237.03**

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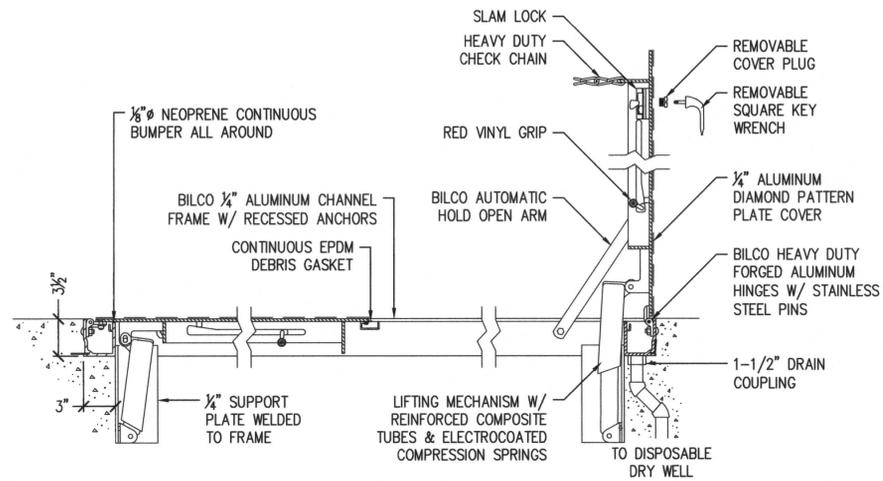
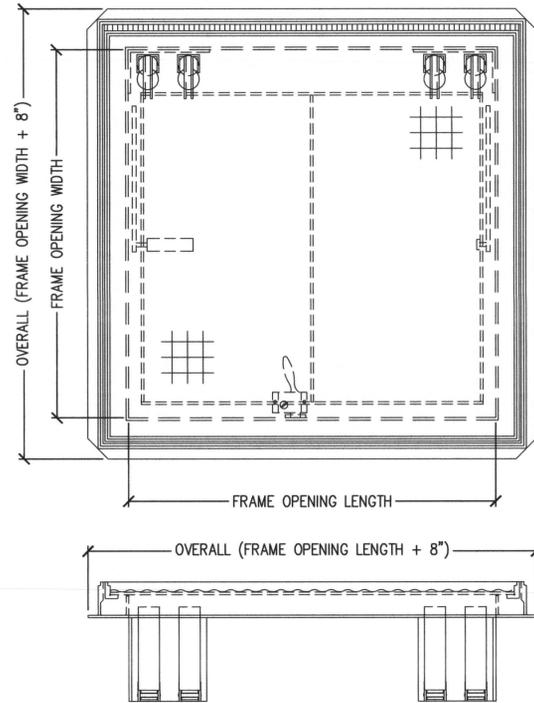
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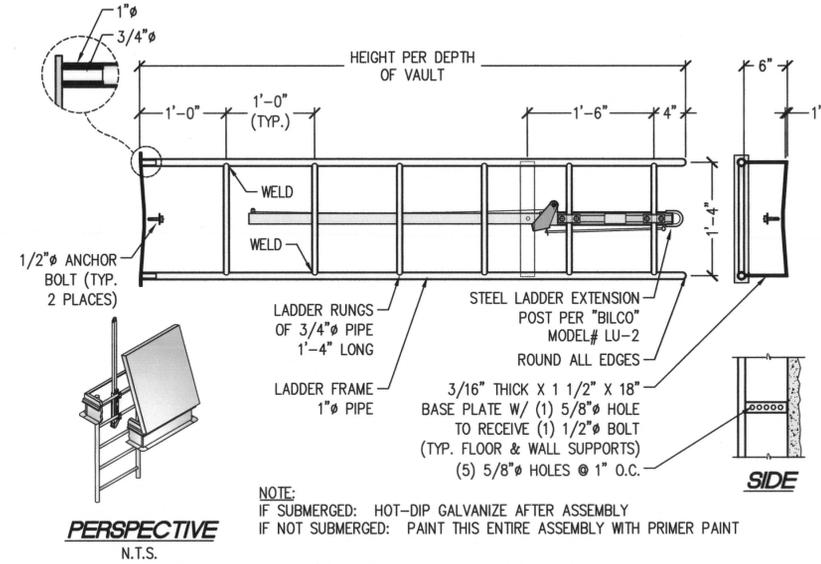
HATCH COVER INSTALLER NOTES:

A. USE CAUTION. COVER IS SPRING LOADED. DO NOT REMOVE SAFETY SHIPPING BOLT UNTIL UNIT IS TO BE INSTALLED AND IN NORMAL HORIZONTAL OPERATING POSITION.

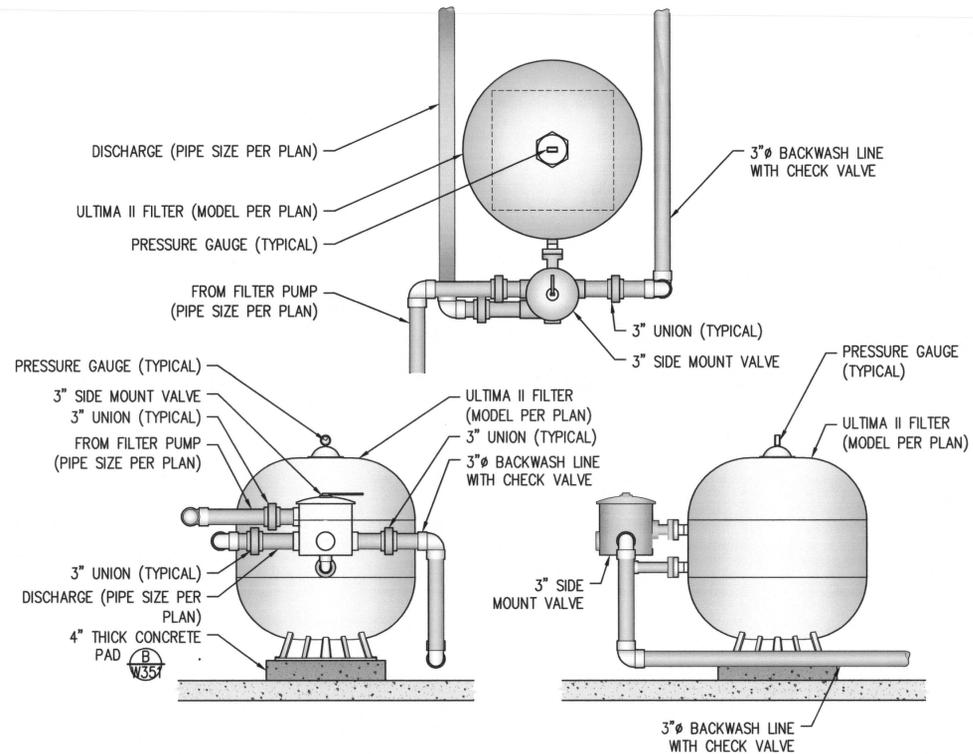
B. BEFORE ANCHORING IN PLACE OPEN AND CLOSE DOOR. CHECK TO SEE THAT THE DOOR IN THE CLOSED POSITION RESTS ON THE FRAME ALL AROUND. IF NOT, SHIM UNDER THE FRAME OF THE PROPER CORNER.



C ALUMINUM DOUBLE LEAF ACCESS HATCH
SCALE: NOT TO SCALE



B STEEL LADDER
SCALE: 1/4"=1'-0"



D TYPICAL FILTER CONFIGURATION
SCALE: 1/2"=1'-0"



DATE: 10-10-16
SCALE: AS SHOWN
DRAWN BY: JD/RC
CHECKED BY: SOS

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PROJECT AND CLIENT NAME
VILLAGE POND PARK
LAKE FOREST, CA

CITY OF LAKE FOREST
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SHEET DESCRIPTION
PUMP STATION DETAILS



LANDSCAPE ARCHITECTURE
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SHEET NUMBER **W352** OF 44
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VILLAGE POND PARK
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 25550 COMMERCENTRE DRIVE
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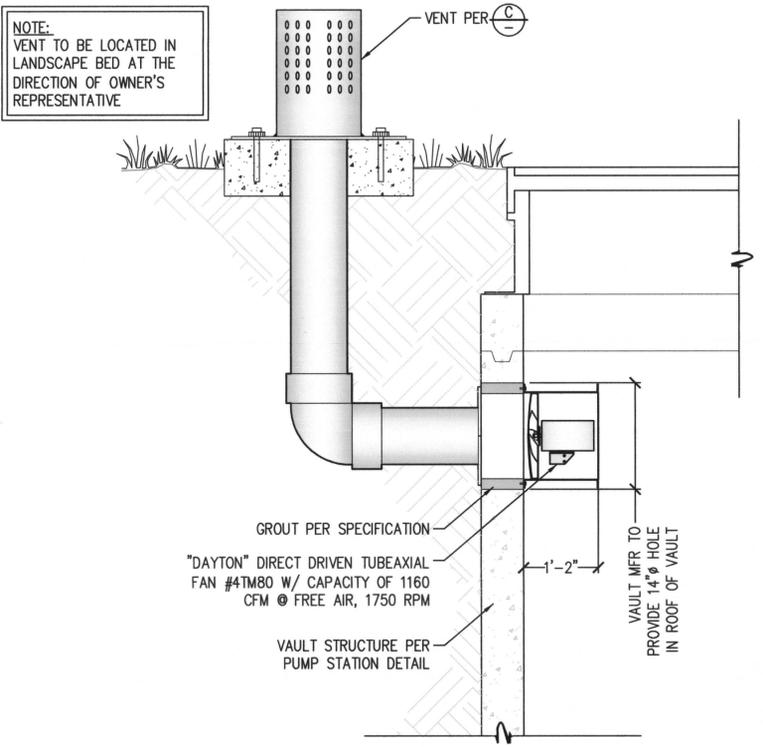


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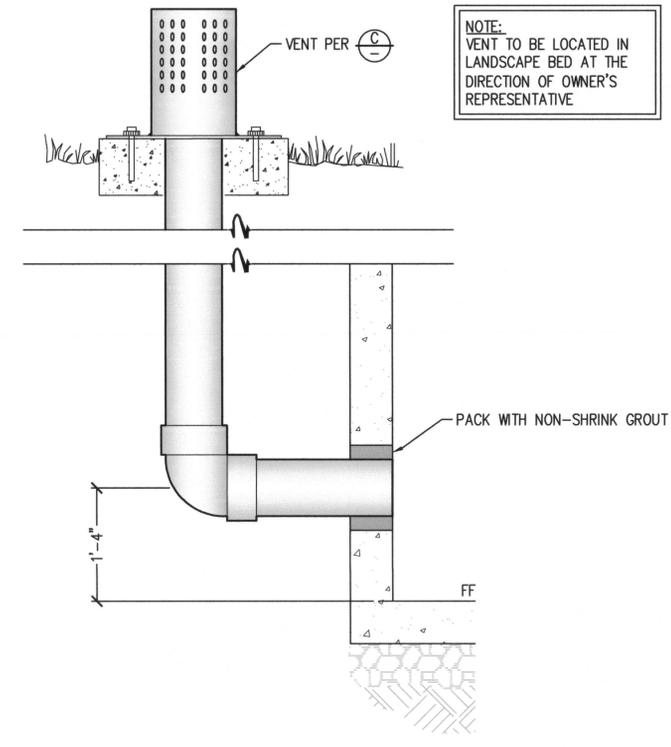
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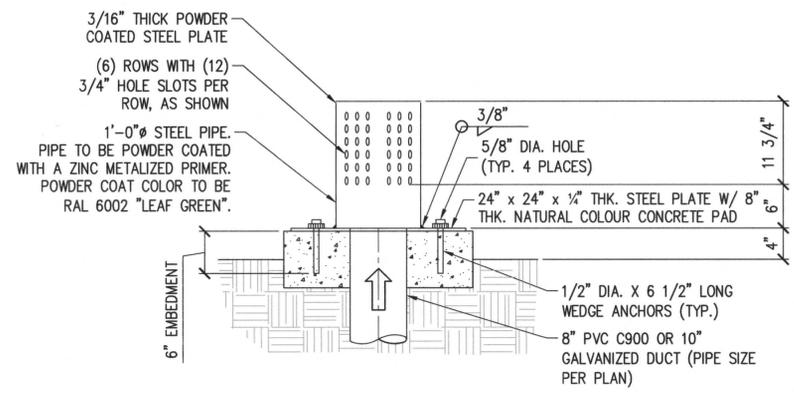
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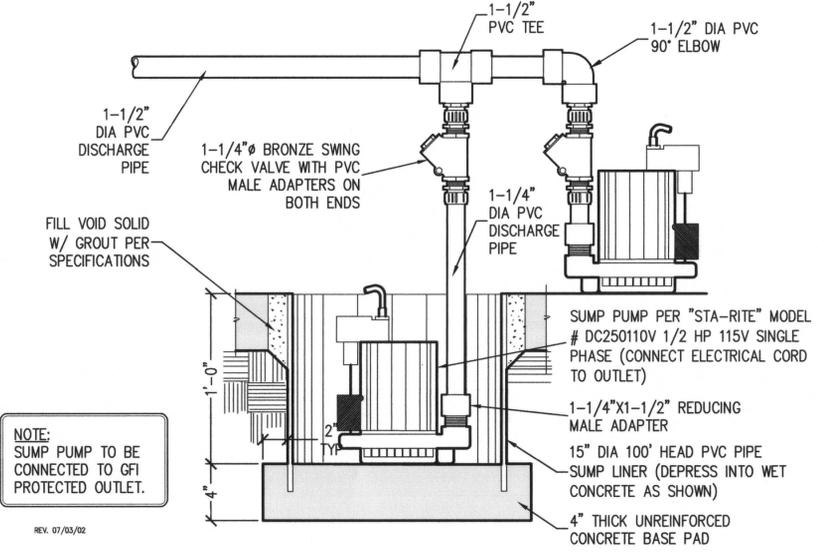
A EXHAUST VENT
 SCALE 1/4"=1'-0"



B GRAVITY AIR INTAKE
 SCALE 1/2"=1'-0"



C VENT
 SCALE 1/4"=1'-0"



NOTE:
 SUMP PUMP TO BE CONNECTED TO GFI PROTECTED OUTLET.

REV. 07/03/02

D SUMP W/ 2 PUMPS
 SCALE N.T.S.



GENERAL NOTES:

A. GENERAL
* ALL WORK SHALL COMPLY WITH CALIFORNIA CODE OF REGULATIONS 2013 TITLE 24, 2011 N.E.C., & 2013 C.E.C. AND LOCAL CODES. ALL EQUIPMENT AND SYSTEMS SHALL BE U.L. LISTED.

- 1. THE CONTRACTOR SHALL VISIT THE SITE, VERIFY THE EXACT CONDITIONS RELATING TO THE WORK AND SHALL OBTAIN SUCH INFORMATION AS MAY BE NECESSARY TO PRESENT A CONCLUSIVE BID. NO ALLOWANCE SHALL BE MADE FOR ANY EXTRA EXPENSE DUE TO FAILURE OF THE CONTRACTOR TO MAKE SUCH A FIELD VERIFICATION. BY SUBMITTING A PROPOSAL FOR THE WORK INCLUDED IN THE CONTRACT, THE CONTRACTOR SHALL BE DEEMED TO HAVE MADE THE FIELD VERIFICATION AND ACCEPTS ALL JOB SITE CONDITIONS.
2. THESE DRAWINGS ARE DIAGRAMMATIC ONLY. THE CONTRACTOR SHALL FOLLOW AS CLOSELY AS POSSIBLE.
3. LOCATIONS OF EQUIPMENT AND/OR DEVICES SHALL BE VERIFIED WITH THE OWNER/ARCHITECT PRIOR TO ROUGH-IN.
4. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIAL, INSURANCE, EQUIPMENT, ACCEPTANCE BY OWNER. ANY WORK, MATERIAL OR EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED AT ONCE. UPON WRITTEN NOTIFICATION AT THE EXPENSE OF THE ELECTRICAL CONTRACTOR.
5. ALL MATERIALS SHALL BE NEW, AND OF THE SAME MANUFACTURER FOR EACH CLASS OR GROUP OF EQUIPMENT. MATERIALS SHALL BE LISTED AND APPROVED BY UNDERWRITER'S LABORATORIES, AND SHALL BEAR THE INSPECTION LABEL WHERE SUBJECT TO SUCH APPROVAL MATERIALS SHALL MEET WITH THE APPROVAL OF THE DIVISION OF INDUSTRIAL SAFETY. AND ALL GOVERNING BODIES HAVING JURISDICTION. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDARDS ESTABLISHED BY A.N.S.I., U.L., N.E.M.A., AND N.B.F.U. INSTALL PER MANUFACTURERS, RECOMMENDATIONS.
6. CONTRACTOR SHALL SECURE AND PAY FOR ALL NECESSARY BUILDING PERMITS. COORDINATE TEMPORARY CONSTRUCTION REQUIREMENTS WITH ALL TRADES PRIOR TO CONSTRUCTION. INCLUDE ALL COSTS IN THE BID.
7. THE JOB SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER DATE OF ACCEPTANCE BY OWNER. ANY WORK, MATERIAL OR EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED AT ONCE. UPON WRITTEN NOTIFICATION AT THE EXPENSE OF THE ELECTRICAL CONTRACTOR.
8. USE ONLY COMPETENT SKILLED PERSONNEL. PERFORM ALL WORK CONSISTENT WITH THE BEST POSSIBLE TRADE PRACTICES.
9. WHERE A CONFLICT OCCURS BETWEEN THIS SPECIFICATION AND OTHER SPECIFICATIONS ISSUED AS A PART OF THE CONTRACT DOCUMENTS, THE MORE STRINGENT REQUIREMENT SHALL PREVAIL.
10. ALL ADDENDA AND CHANGE ORDERS SHALL BE APPROVED BY OWNER.
11. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL MAJOR PIECES OF ELECTRICAL EQUIPMENT, INCLUDING BUT NOT LIMITED TO SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, MOTION SENSORS, AND ALL LIGHTING FIXTURES. SUBMITTALS SHALL BE MADE TO THE ARCHITECT AS SOON AS IS PRACTICABLE AFTER AWARD OF CONTRACT.
12. ALL BROCHURES, OPERATING MANUALS, CATALOGS, SHOP DRAWINGS, "AS-BUILTS", ETC. SHALL BE TURNED OVER TO THE OWNER AT THE COMPLETION OF THE JOB. PROVIDE THE OWNER WITH ONE (1) SET OF COMPLETE ELECTRICAL "AS-BUILTS" INDICATING FINAL EQUIPMENT/DEVICE LOCATIONS, CONDUIT ROUTING, ETC.
13. ALL EXTERIOR EQUIPMENT SHALL BE WEATHERPROOF.
14. ALL ELECTRICAL EQUIPMENT SHALL BE LISTED BY U.L. OR A CITY APPROVED THIRD PARTY TESTING FACILITY. PER SECTION 110.3 (B).
15. PROVIDE EXPANSION AND DEFLECTION FITTINGS, WITH BONDING JUMPERS AT ALL BUILDING EXPANSION OR SEISMIC JOINT CROSSING.
16. PLASTIC ELECTRICAL BOXES ARE TO BE CLEARLY IDENTIFIED AS APPROVED FOR 1-HOUR CONSTRUCTION.
17. AS REQUIRED, ALL OVERSIZED FEEDERS THAT WERE ADJUSTED IN SIZE TO COMPENSATE FOR VOLTAGE DROP SHALL BE PROVIDED WITH ADAPTER LUGS OR SPLICE BOX. ADAPTER LUGS SHALL BE PROVIDED IF SIZE IS AVAILABLE, OTHERWISE PROVIDE CABLE SPLICES IN THE SPLICE SOX TO REDUCE CABLES TO THE MAXIMUM SIZE THAT THE BREAKER LUGS CAN ACCOMMODATE.
18. ALL BRANCH CIRCUITS CONDUCTORS ARE BASED ON COPPER, THHN/THWN UNLESS OTHERWISE NOTED. MINIMUM 3/4" CONDUIT FOR PVC UNDERGROUND CONDUIT. CIRCUIT BREAKER AND WIRING SIZE PER NEC TABLE 310.16, 1/2" MAY BE USED IN RESIDENT UNITS ONLY. IN COMMON AREA PANEL FULL SIZE CIRCUIT BREAKER SHALL BE USED. CONDUCTORS SHALL BE INSTALLED IN CODE APPROVED RACEWAYS.
19. POOL, FOUNTAIN, AND SPA EQUIPMENT AND UNDERWATER LIGHTS, IF EXIST, SHALL BE PROPERLY BONDED TO GROUND.
20. ALL EQUIPMENT SHALL BE MOUNTED AND SUPPORTED ACCORDING TO THE OSHA REQUIREMENTS.
21. ELECTRICAL SYSTEM LAYOUTS ARE GENERALLY DIAGRAMMATIC. EXACT ROUTING OF WIRING, OUTLETS, AND EQUIPMENT TO BE GOVERNED BY STRUCTURAL CONDITIONS AND OBSTRUCTION.
22. COORDINATE ALL MECHANICAL AND PLUMBING EQUIPMENT POWER CONNECTION WITH MECHANICAL AND PLUMBING CONTRACTORS PRIOR TO ROUGH-IN.
23. ALL EQUIPMENT SHALL BE LISTED AND LABELED BY APPROVED TESTING AGENCY (UL OR EQUIVALENT).
24. ALL POOL/SPA LIGHTING SHALL BE GROUNDED PER "POOL & SPA BONDING DETAIL"
25. ALL CONSTRUCTION AND ELECTRICAL INSTALLATIONS FOR THE SWIMMING POOL, SPA, AND WADING POOL SHALL COMPLY WITH BUT NOT LIMITED TO 2013 CALIFORNIA ELECTRICAL CODE, ARTICLE 680
26. PROVIDE GROUND FAULT CIRCUIT INTERRUPTING TYPE OVER-CURRENT PROTECTION FOR POOL AND PA LIGHTING CIRCUITS PER CEC 680.22(B)
27. POOL LIGHTING FIXTURE GROUNDING CONDUCTOR SHALL BE "UNSPliced" AND SECURELY FASTENED TO GROUNDING TERMINAL AT FIXTURE PER CEC 680.23(F)(2)
28. ALL JUNCTION BOXES SHALL BE LOCATED 8" MINIMUM ABOVE WATER LINE AND 4" ABOVE POOL DECK SURFACE PER CEC 680.24(A)(2)
29. ALL UNDERGROUND CONDUIT LESS THAN 5'-0" FROM POOL & SPA SHALL BE RMC, IMC, OR RNC PER CEC 680.10
30. OUTDOOR JUNCTION BOXES AND/OR JUNCTION BOXES LOCATED IN WET/DAMP ENVIRONMENT SHALL BE WEATHER PROOF, NEMA 3R, AND LISTED AS SUCH PER CEC 315.15(A)
31. ALL DISCONNECTS, J-BOXES AND DEVICES LOCATED IN WET/DAMP ENVIRONMENT SHALL BE WEATHER PROOF TYPE, NEMA 3R AND LISTED AS SUCH PER CEC 404.4
32. REFER TO CONTROL WIRING AND FEEDER SCHEDULE FOR FEEDER SIZE

- B. GROUNDING
1. THE ELECTRICAL SYSTEM SHALL BE GROUNDED IN ACCORDANCE WITH THE PRESENTLY ADOPTED EDITION OF THE N.E.C. AND OTHER APPLICABLE CODES.
2. THE RESISTANCE TO GROUND SHALL NOT EXCEED 25 OHMS TO GROUND.
3. THE CONTRACTOR SHALL PROVIDE ALL INSTRUMENTATION AND TESTS FOR MEASURING THE RESISTANCE OF EACH PHASE TO GROUND. A PROPERLY CALIBRATED "MEGGER" TYPE INSTRUMENT SHALL BE USED. IN THE EVENT THAT HIGH RESISTANCE TO GROUNDS ARE FOUND THEY SHALL BE ISOLATED. MAKE PROPER CORRECTIONS TO RESTORE THE RESISTANCE TO AN ACCEPTABLE VALUE PROVIDED BY INDEPENDENT APPROVED LIST COMPANY.
4. TESTING OF EQUIPMENT SHALL BE REQUIRED FOR SWITCH GEAR OVER 1,000 AMPS.
5. PROVIDE BONDED GROUND TO ALL METALLIC PIPE WITHIN THE UNIT WHEN THERE IS NON METALLIC PIPING FEEDING INTO EACH UNIT MAKING EACH UNIT ISOLATED FROM THE MAIN PIPING SYSTEM WITHIN BUILDING. COMPLY WITH C.E.C 250.104(A)(1); 250.104(A)(2); 250.122.

ELECTRICAL SPECIFICATIONS:

A. GENERAL
* ALL WORK SHALL COMPLY WITH CALIFORNIA CODE OF REGULATIONS 2013, 2013 CBC, 2013 CEC, AND LOCAL CODES. ALL EQUIPMENT AND SYSTEMS SHALL BE U.L. LISTED. COMPLY WITH 2013 CEC, ARTICLE 680.

- 1. THE CONTRACTOR SHALL VISIT THE SITE. VERIFY THE EXACT CONDITIONS RELATING TO THE WORK AND SHALL OBTAIN SUCH INFORMATION AS MAY BE NECESSARY TO PRESENT A CONCLUSIVE BID. NO ALLOWANCE SHALL BE MADE FOR ANY EXTRA EXPENSE, DUE TO FAILURE OF THE CONTRACTOR TO MAKE SUCH A FIELD VERIFICATION. BY SUBMITTING A PROPOSAL FOR THE WORK INCLUDED IN THE CONTRACT THE CONTRACTOR SHALL BE DEEMED TO HAVE MADE THE FIELD VERIFICATION AND ACCEPTS ALL JOB SITE CONDITIONS.
2. THESE DRAWINGS ARE DIAGRAMMATIC ONLY. THE CONTRACTOR SHALL FOLLOW AS CLOSELY AS POSSIBLE.
3. LOCATIONS OF EQUIPMENT AND/OR DEVICES SHALL BE VERIFIED WITH THE RESPECTIVE CONTRACTOR PRIOR TO ROUGH-IN.
4. NOT USED
5. ALL ELECTRICAL EQUIPMENT SHALL BE BRACED OR ANCHORED TO RESIST A HORIZONTAL FORCE ACTING IN ANY DIRECTION USING THE FOLLOWING CRITERIA:
FIXED EQUIPMENT ON GRADE.....20% OF OPERATING WEIGHT
FIXED EQUIPMENT ON STRUCTURE.....30% OF OPERATING WEIGHT
FOR FLEXIBILITY MOUNTED EQUIPMENT, USE 4 X ABOVE VALUES. SIMULTANEOUS VERTICAL FORCE, USE 1/3 X HORIZONTAL FORCE. WHERE ANCHORAGE DETAILS ARE NOT SHOWN ON DRAWINGS, THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE ELECTRICAL ENGINEER AND THE OSA FIELD ENGINEER.

- B. CONDUITS
1. ALL CONDUIT SHALL BE INSTALLED CONCEALED WHERE PHYSICALLY POSSIBLE. ALL EXPOSED CONDUIT SHALL BE INTERMEDIATE METAL CONDUIT AND INSTALLED PARALLEL TO OR AT RIGHT ANGLES WITH THE BUILDING WALLS, CONTRACTOR SHALL PAINT CONDUIT TO MATCH SURROUNDING SURFACE COLOR. (OBTAIN MANUFACTURERS NAME AND COLOR NUMBERS FROM ARCHITECT AND/OR OWNER'S REP.)
2. ALL CONDUIT PENETRATIONS THROUGH FIRE-RATED FLOOR SLABS, SHAFTS AND WALLS SHALL BE SEALED TO PREVENT THE SPREAD OF FIRE OR SMOKE WITH AN APPROVED UL LISTED CABLE-AND-CONDUIT FIRE STOP OF FIRE RESISTANT SEALANT. THE RATING OF THE FIRE STOP OR SEALANT SHALL BE EQUAL TO THE RATING OF THE ELEMENT PENETRATED.
3. PVC SCHEDULE 40 NONMETALLIC CONDUIT WITH CODE SIZED GROUND CONDUCTOR SHALL BE USED BELOW GRADE ONLY, IF APPROVED AND INSTALLED PER LOCAL CODES. DO NOT ROUTE BELOW GRADE CONDUITS THROUGH AREAS OF FUTURE CONSTRUCTION.
4. CONDUIT SWEEPS AND RISERS BELOW GRADE SHALL BE PVC SCHEDULE 40. CONDUIT SWEEPS AND RISERS ABOVE GRADE SHALL BE I.M.C. WITH HALF-LAPPED TAPE COVERING OR PVC COATING.
5. ELECTRICAL METALLIC TUBING UP TO AND INCLUDING 4" MAY BE INSTALLED AS PERMITTED BY CODES, EXCEPT AS OTHERWISE REFERENCED WITHIN THE CONTRACT DOCUMENTS.
6. LIQUID-TIGHT FLEXIBLE METAL CONDUIT SHALL BE USED FOR FINAL CONNECTION TO MOTORS, CONTROL DEVICES MOUNTED ON VIBRATING EQUIPMENT, MECHANICAL PLUMBING AND KITCHEN EQUIPMENT INDICATED ON DRAWINGS TO HAVE FLEXIBLE CONDUIT CONNECTIONS, AND IN ALL AREAS WHERE EXPOSED FLEXIBLE CONNECTIONS ARE REQUIRED. ALL FINAL CONNECTIONS TO TRANSFORMERS SHALL BE MADE USING LIQUID - TIGHT FLEXIBLE METAL CONDUIT.
7. CONDUITS REFERENCED AS CONDUIT ONLY (C.O.) SHALL BE PROVIDED WITH A NYLON PULL STRING AND TAGS INDICATING THE ORIGINATION AND FUNCTION OR THE CONDUIT.
8. CONDUITS CROSSING BUILDING EXPANSION AND/OR SEISMIC JOINTS SHALL BE PROVIDED WITH EXPANSION/DEFLECTION FITTINGS AT THE EXPANSION AND/OR SEISMIC JOINT. FITTINGS SHALL BE MANUFACTURED BY OZ COMPANY. TYPE "DX" FITTINGS SHALL BE USED.
9. CONDUITS SHALL BE SUPPORTED AND BRACED PER OSHPD ANCHORAGE PRE-APPROVAL NO. R-0010 THE SMACNA "GUIDELINES FOR SEISMIC RESTRAINTS OF MECHANICAL SYSTEMS AND PLUMBING PIPING SYSTEMS" OR OSHPD ANCHORAGES PE-APPROVAL NO. R-003 THE SUPERSTRUT SEISMIC RESTRAINT SYSTEM FOR PIPES AND CONDUITS ONLY.

SYMBOL LIST

- (A) LIGHTING FIXTURE DESIGNATION. REFER TO LIGHTING FIXTURE SCHEDULE
(1) DETAIL REFERENCE
(1) SHEET NOTE REFERENCE
- FEEDER TAG
(1) REVISION REFERENCE

POWER

- (1) STANDARD 20A, 120V-1Ø GROUNDING TYPE DUPLEX RECEPTACLE WALL MOUNTED AT +18" A.F.F. - U.O.N.
(1) STANDARD 20A, 120V-1Ø GROUNDING TYPE GFCI DUPLEX RECEPTACLE WALL MOUNTED AT +18" A.F.F. - U.O.N.
(1) DISCONNECT SWITCH. AMPS - VOLTS & POLES AND FUSED OR NON-FUSED AS INDICATED
(1) COMBINATION STARTER DISCONNECT SWITCH. AMPS - VOLTS & POLE AS INDICATED
(1) JUNCTION BOX. SIZED BY THIS CONTRACTOR PER ACTUAL NUMBER OF CONDUITS AND/OR CONDUCTORS PASSING THRU ACCORDING TO NEC TABLE 370.16(a)(b)
(1) MOTOR OUTLET. H.P. OR F.L.A. - VOLTS & PHASE AS INDICATED. VERY ELECTRICAL CHARACTERISTICS AND CONNECTION REQUIREMENTS WITH INSTALLED EQUIPMENT MANUFACTURER PRIOR TO ANY ROUGH-IN WORK
(1) BRANCH CIRCUIT PANELBOARD. FLUSH OR SURFACE MOUNTED AS INDICATED ON PANELBOARD SCHEDULE.

CP ELECTRICAL PANEL SCHEDULE

Table with columns: EQUIP No., DESCRIPTION, NOTH, CAT, AMPS, LOADS (KVA), WIRE (N,PH,CB,P), CKT #, PHASE (A, B), CKT #, WIRE (N,PH,CB,P), LOADS (KVA), AMPS, CAT, NOTE, DESCRIPTION, EQUIP No.

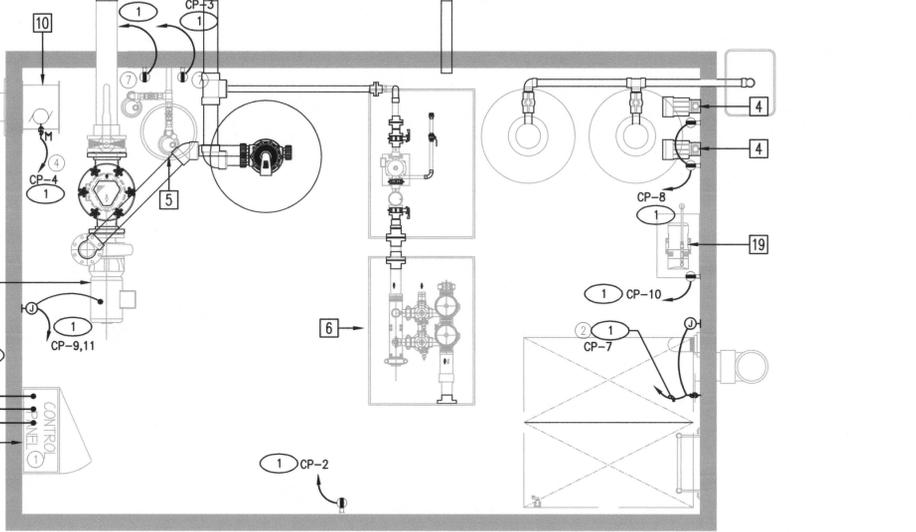
LOAD SUMMARY table with columns: TO, CONN, NEC, DIV, KVA, KVA, KVA, KVA. Includes sub-tables for PHASE "A", PHASE "B", CONN. AMPS, DIV. AMPS.

EQUIPMENT SCHEDULE

Table with columns: NO., DESCRIPTION, MANUFACTURER, MODEL, QTY., SPECIFICATIONS

FEEDER SCHEDULE

Table with columns: NO., CONDUIT, POWER, GROUND



ENLARGED PUMP STATION ELECTRICAL PLAN 1/2"=1'-0"

ELECTRICAL KEY NOTES:

- (1) CONTROL PANEL "CP" WITH INTEGRAL DISCONNECT SWITCH
(2) TO CONTROLLER, LIGHT SWITCH CONTACTORS (SEE CONTROL DIAGRAM FOR TERMINALS)
(3) FEEDERS FROM SOURCE (BY OTHERS, REFERENCE SHEET E1-E6).
(4) VAULT VENT FAN.
(5) TO UNDERWATER LIGHTS.
(6) TO FOUNTAIN PUMPS
(7) SUMP PUMP. VERIFY EXACT LOCATION.



DATE 10-10-16
SCALE AS SHOWN
DRAWN BY JD/RC
CHECKED BY SOS

REVISIONS/PLAN LOG
REVISED PER ADDENA No. 1

PROJECT AND CLIENT NAME
VILLAGE POND PARK
LAKE FOREST, CA

CITY OF LAKE FOREST
25550 COMMERCENTRE DRIVE
SUITE 100
PHONE (949) 461-3420

SHEET DESCRIPTION
ELECTRICAL PLAN



LANDSCAPE ARCHITECTURE AND PLANNING

3151 AIRWAY AVENUE, SUITE J-3
COSTA MESA, CALIFORNIA
U.S.A. 92626-4640
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SHEET NUMBER W400 OF 44
PROJECT NUMBER 13-237.03

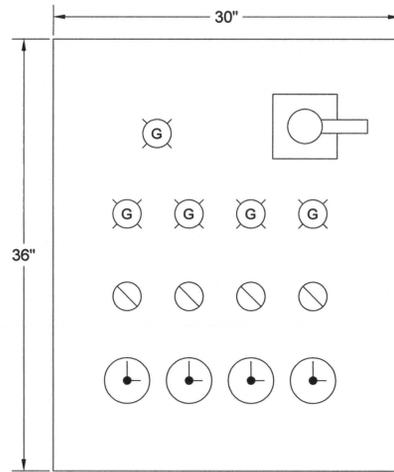
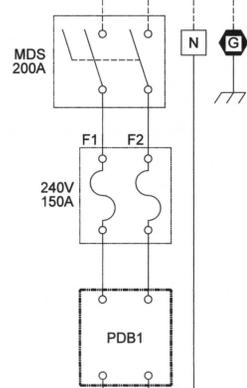
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PACE Advanced Water Engineering logo and contact info: 17520 Newhope Street, Suite 200 | Fountain Valley, CA 92708 P: (714) 481-7300 | www.pacewater.com



FEEDER SHORT
CIRCUIT PROTECTION
BY OTHERS
120/240, 1Ø, 3W&GND



12" DEEP
NEMA 1
WALL MOUNT
ENCLOSURE
TYPICAL DOOR LAYOUT
SIZE ESTIMATED

NOTES:

1. U.L. 508A LISTED INDUSTRIAL CONTROL PANEL TO BE FABRICATED & LABELED PER U.L. 508A.
2. GFI BEAKERS TO BE RATED AT 6MA GROUND FAULT FOR PERSONEL PROTECTION.
3. DOOR MOUNTED INDICATING LIGHTS TO BE LED TYPE.
4. CONTROL PANEL TO BE MANUFACTURED AND PURCHASED FROM RSD-TOTAL CONTROL

26021 ATLANTIC OCEAN DRIVE
LAKE FOREST, CA.
949-380-7878
apearson@rsd.net

DATE **10-10-16**

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**VILLAGE POND
PARK**

LAKE FOREST, CA

CITY OF LAKE FOREST
25550 COMMERCENTRE DRIVE
SUITE 100
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SHEET DESCRIPTION

**CONTROL PANEL
SCHEMATIC**



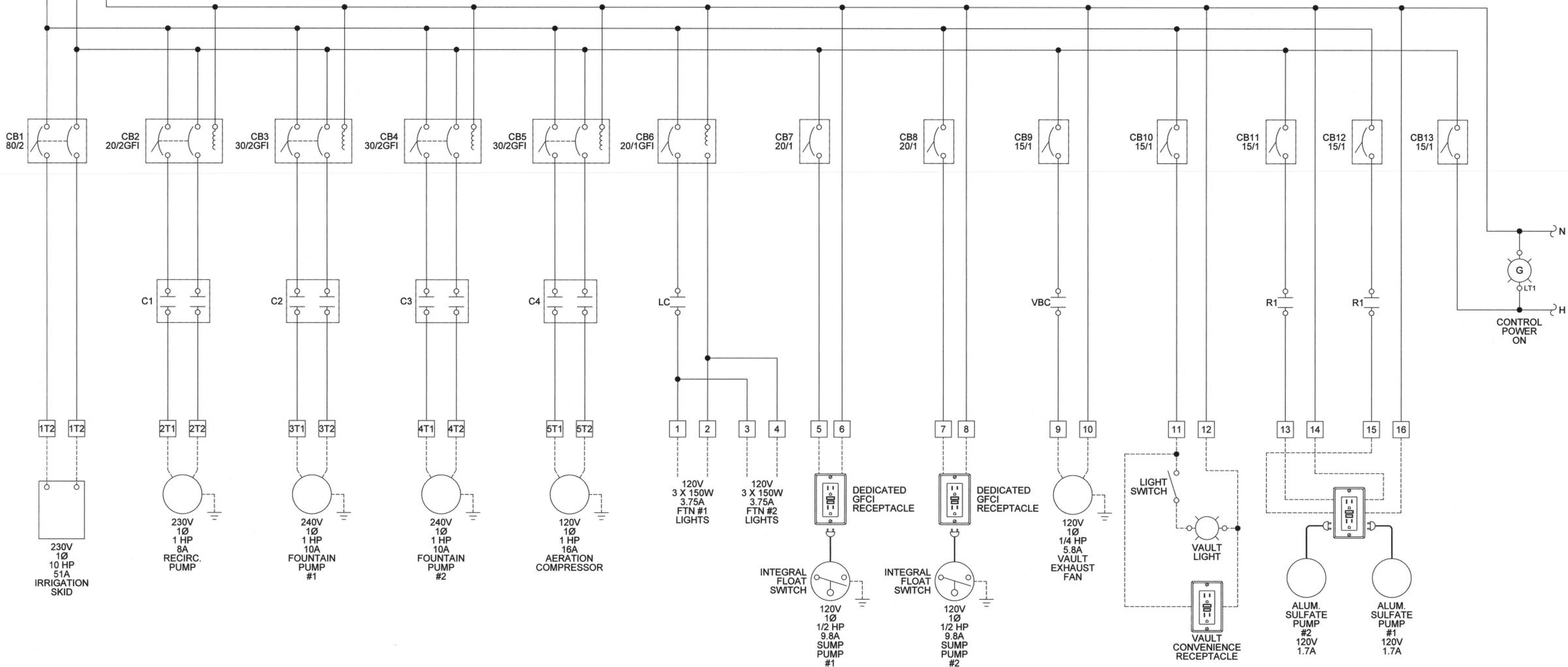
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949-380-7878 949-380-0755 Fax



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 LAKE FOREST, CA

CITY OF LAKE FOREST
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 SUITE 100
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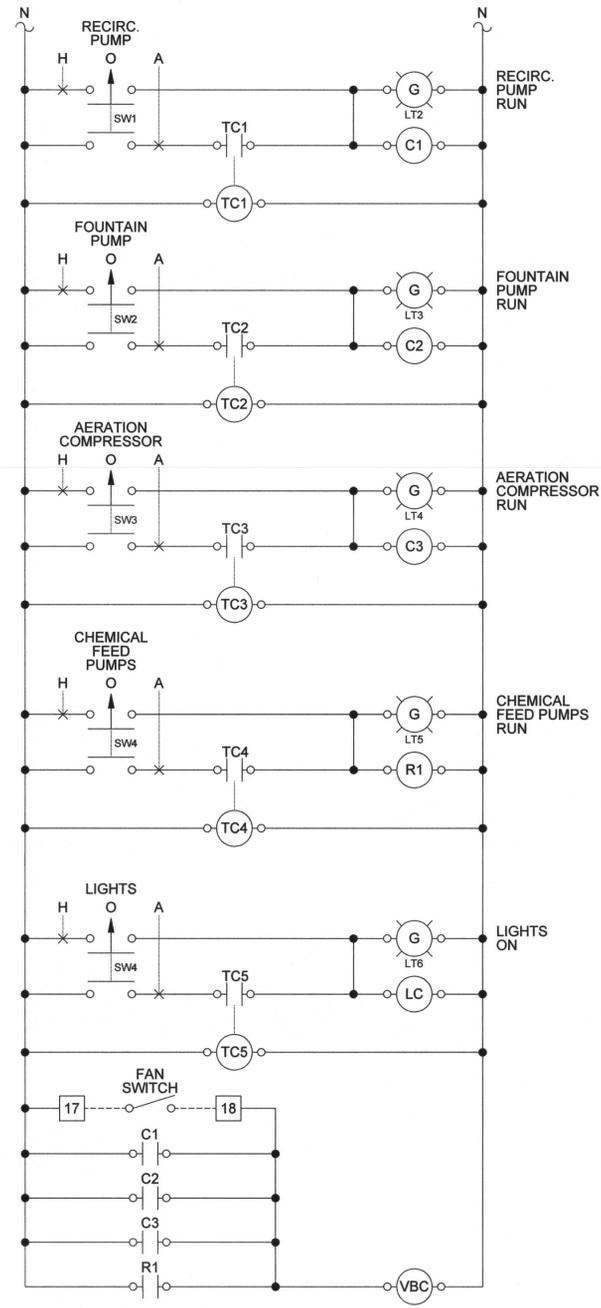
SHEET DESCRIPTION
CONTROL PANEL SCHEMATIC



LANDSCAPE ARCHITECTURE
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SHEET NUMBER **W501** of 44
 PROJECT NUMBER **13-237.03**



TOTAL CONTROL
 a Division of RSD
 26021 Atlantic Ocean Drive
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DATE 10/10/16
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 CHECKED BY DK

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 LAKE FOREST, CA

CITY OF LAKE FOREST
 25550 COMMERCENTRE DRIVE
 SUITE 100
 PHONE (949) 461-3420

SHEET DESCRIPTION
SINGLE LINE DIAG., DETAILS



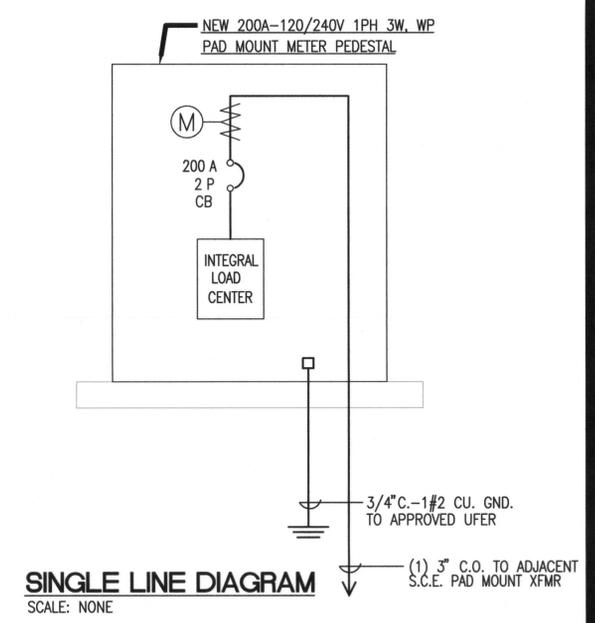
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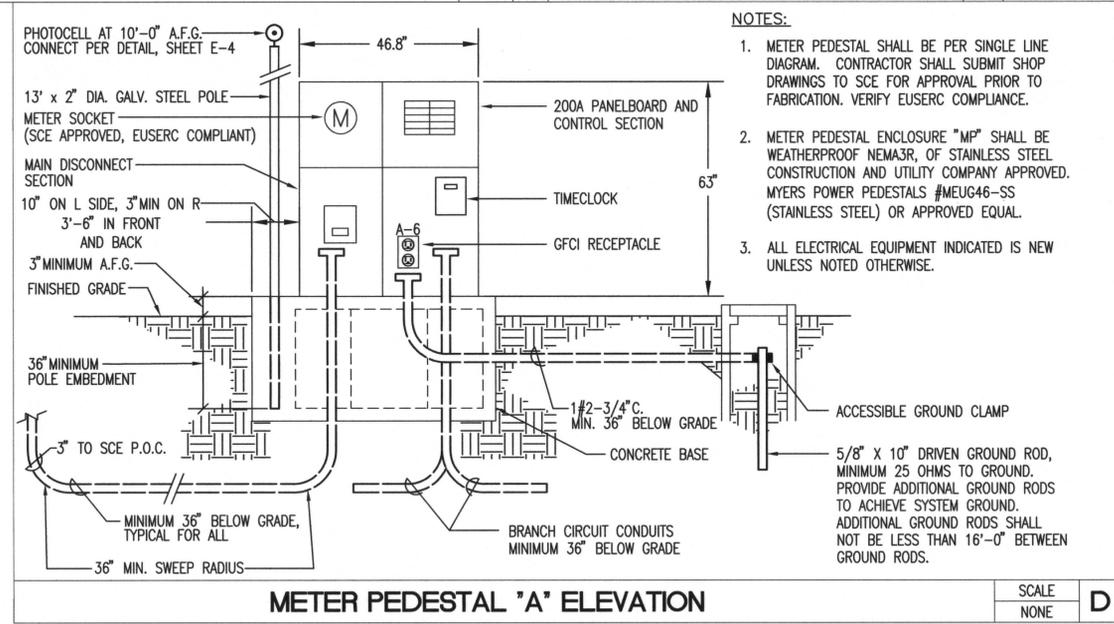
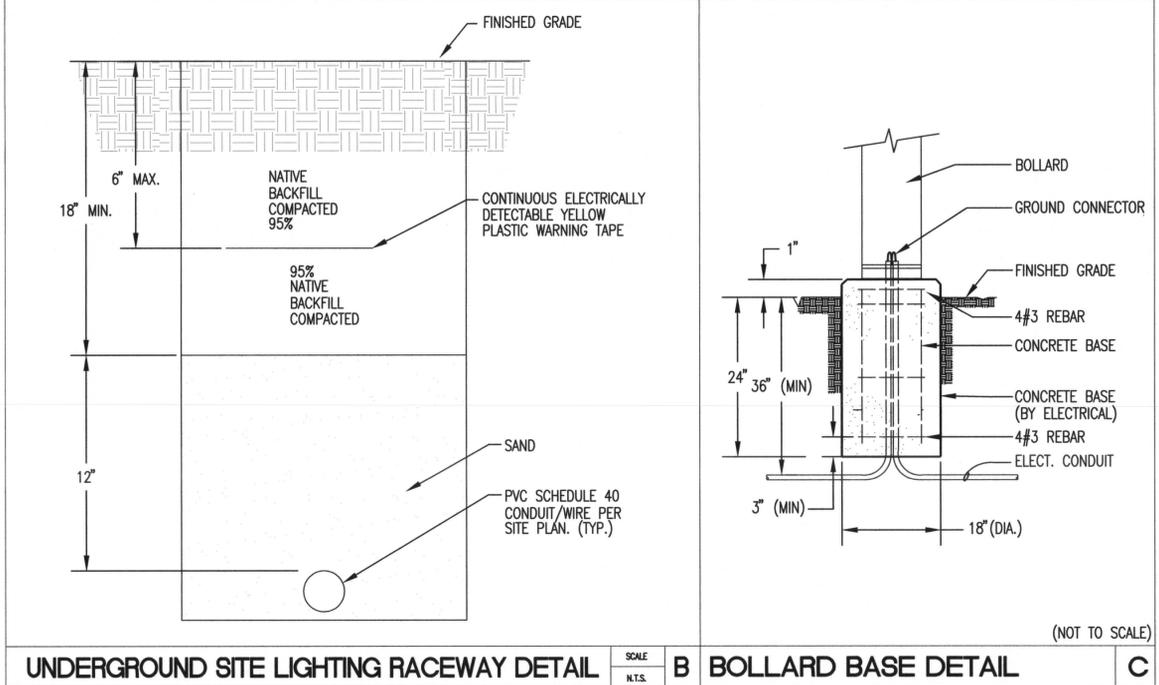
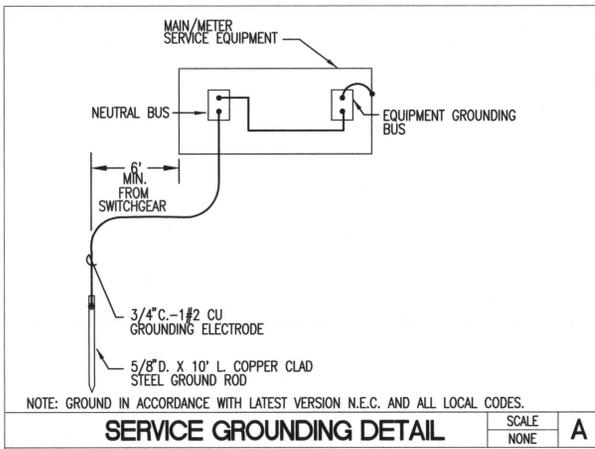
- ### SINGLE LINE NOTES
- ALL CIRCUIT BREAKERS IN LOAD CENTERS AND PANELBOARDS SHALL BE SERIES RATED FOR 42,000 AIC OR APPROVED EQUAL UNLESS OTHERWISE NOTED. VERIFY AVAILABLE FAULT CURRENT WITH SCE CO. REPRESENTATIVE.
 - ELECTRICAL SYSTEMS SHALL BE GROUNDED AS REQUIRED BY LOCAL CODES AND ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE.
 - WIRE AMPACITIES SHALL BE AS FOLLOWS:
 - 60° C. FOR 100 AMPS AND SMALLER.
 - 75° C. FOR 100 AMPS AND LARGER.
 - ALL FEEDERS HAVE BEEN SIZED FOR COPPER WITH 75° C THHN/THWN INSULATION. NO ALUMINUM SUBSTITUTION ALLOWED.
 - PROVIDE ENGRAVED PHENOLIC NAMEPLATES FOR EACH BREAKER, FUSIBLE SWITCH, PANEL, STARTER, RELAY OR CONTROLS INDICATING FUNCTION OR EQUIPMENT PROTECTED. NAMEPLATES SHALL BE SCREW-ON TYPE.
 - ALL EQUIPMENT LOCATED OUTDOORS TO BE WEATHERPROOF, NEMA 3R.
 - ALL WORK TO COMPLY WITH 2010 CALIFORNIA ELECTRICAL CODE.
 - THE UNGROUNDED AND GROUNDED CONDUCTORS OF EACH MULTIWIRED BRANCH CIRCUIT SHALL BE GROUPED BY WIRE TIES OR SIMILAR MEANS IN AT LEAST ONE LOCATION WITHIN THE PANELBOARD OR OTHER POINT OF ORIGIN. (210.4(D))
 - ALL INSTALLED MATERIALS AND EQUIPMENT SHALL BE U.L., NRTL OR LISTED AND APPROVED BY A CITY OF LAKE FOREST APPROVED TESTING LABORATORY.
 - PROVIDE ARC FLASH LABELING AS REQUIRED PER (110.16).
 - EACH MULTIWIRED BRANCH CIRCUIT SHALL BE PROVIDED WITH A MEANS THAT WILL SIMULTANEOUSLY DISCONNECT ALL UNGROUNDED CONDUCTORS AT THE POINT WHERE THE BRANCH CIRCUIT ORIGINATES. (210.4)



PANEL: A		PANEL VOLTAGE: 120/240 1P, 3W		CIRCUIT CODE: N: NON-CONTINUOUS								
Location: PEDESTAL		BUS: 200A		L: LONG-CONTINUOUS								
Mounting: FLUSH		MAIN: 200A		R: DEMANDABLE RECEPTACLES								
		AIC RATING: 42,000 AIC		K: KITCHEN								
CKT NO	VALOAD		LOAD DESCRIPTION	TYPE CNT	C.B.	BUS	C.B.	TYPE CNT	W D O O	VALOAD	CKT NO	
	A	B										A
1	625		WEST LIGHTING	L		25	20	2	X	150	2	2
3		625		L					X			4
5	547		EAST LIGHTING	L		23	20	2	X	20	1	6
7		547		L					X	20	1	8
9			SPARE	N		20	1		X	20	1	10
11	200		IRRIGATION CONTROLLER	N		15	1		X	20	1	12
13			SPACE						X			14
15			SPACE						X			16
17			SPACE						X			18
19			SPACE						X			20
21			SPACE						X			22
23			SPACE						X			24
	1172	1372	PHASE TOTALS							14200	11570	
	Total Phase A:					15372				CONNECTED VA (CODE N):		25970
	Total Phase B:					12942				CONNECTED VA (CODE L):		2344
										CONNECTED VA (CODE R):		0
										CONNECTED VA (CODE K):		0
										TOTAL CONNECTED KVA:		28.4
										DEMAND KVA:		0.0
										TOTAL ADJUSTED KVA:		28.4
										TOTAL PANEL AMPS:		128.1
										AMPS WLCL:		130.6

ROUTE THROUGH PHOTOCELL/TIMECLOCK. PHOTOCELL-ON, TIMECLOCK-OFF

8/5/15 4:58 PM





DATE 10/10/16
 SCALE 1"=20'-0"
 DRAWN BY JE
 CHECKED BY DK

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 REVISED PER ADDENA No. 1

PROJECT AND CLIENT NAME
VILLAGE POND PARK
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SHEET DESCRIPTION
ELECTRICAL SITE PLAN

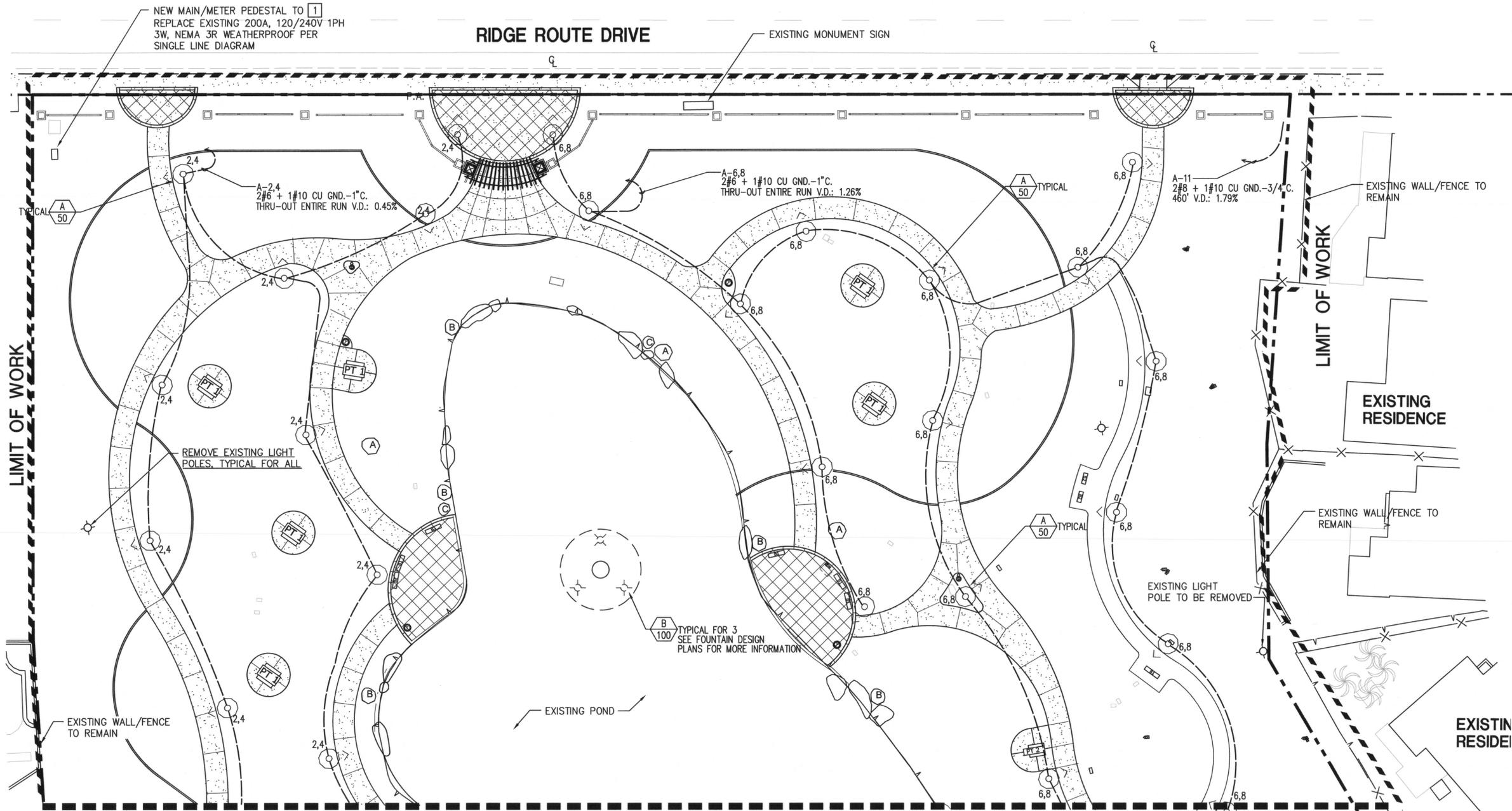


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MATCHLINE, SEE SHEET E-3

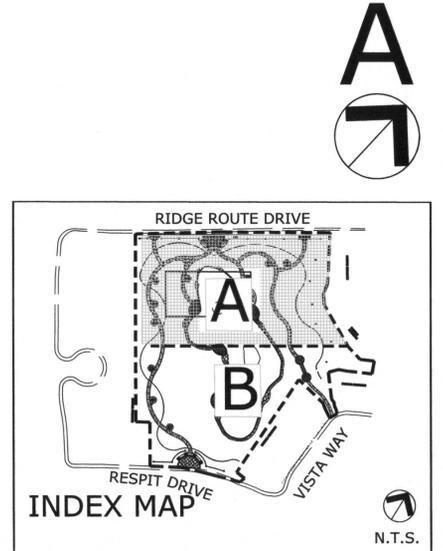
SYMBOL LEGEND

	LIMIT OF WORK LINE		TRASH RECEPTACLE
	RIGHT-OF-WAY LINE		BENCH
	EXISTING SPOT ELEVATION		ADA PICNIC TABLE
	EXISTING CONTOUR LINES		STD. PICNIC TABLE
	EXISTING CURB OR EDGE OF PAVEMENT		DRINKING FOUNTAIN
	EXISTING WALK		BIRD HOUSE
	EXISTING WALL AND FENCE		DOG-POT
	PROPOSED WALK		EXISTING LIGHT POLE
	EXISTING SIGN		EXISTING TREE
			EXISTING FIRE HYDRANT
			EXISTING MANHOLE
			PLANTING AREA
			BOULDERS
			GFRC BOULDERS

FIXTURE SCHEDULE - SITE LIGHTING

TYPE	DESCRIPTION	TOTAL WATTS	LAMP QUAN	LAMP WATTS	LAMP TYPE	MOUNTING
A 50	POST-TOP CAST ALUMINUM WEATHERPROOF LED PATHWAY LIGHTING FIXTURE, LED ARRAY, 4K LAMPING, TYPE 2 DISTRIBUTION, CLEAR POLYCARBONATE LENS. CUSTOM POWDERCOAT FINISH RAL#6029. MOUNT ON SAME MANUFACTURER 14' POLE, WET LOCATION LABEL. LUMEC # 50W120LED4K-MP-PC-LE2 WITH COLOR-MATCHED P120 14' POLE.	50	ARRAY	50	LED	POLE AT +15' A.F.G.
B 100	UNDERWATER DECORATIVE FOUNTAIN LIGHT. SEE FOUNTAIN PLANS FOR MORE INFORMATION AND CONTROLS.	100	1	100	INC.	UNDERWATER
C 22	CAST ALUMINUM WEATHERPROOF LED PATHWAY BOLLARD, INTEGRAL LOUVERS, 36" TALL, 180 DEGREE DISTRIBUTION, 4K LAMPING, CUSTOM POWDERCOAT FINISH RAL#6029. WET LOCATION LABEL. GARDCO # BRM830-42-CWL-NW-180-UNIV-OC	22	ARRAY	22	LED	ON 12" BASE AT +48" A.F.G.

NOTE: FINISH FOR ALL FIXTURES & POLES SHALL BE VERIFIED WITH LANDSCAPE ARCHITECT PRIOR TO ORDERING



MATCHLINE, SEE SHEET E-2



DATE 10/10/16
 SCALE 1"=20'-0"
 DRAWN BY JE
 CHECKED BY DK

REVISIONS/PLAN LOG
 REVISED PER ADDENA No. 1

PROJECT AND CLIENT NAME

VILLAGE POND PARK

LAKE FOREST, CA

CITY OF LAKE FOREST
 25550 COMMERCENTRE DRIVE
 SUITE 100
 PHONE (949) 461-3420

SHEET DESCRIPTION
ELECTRICAL SITE PLAN



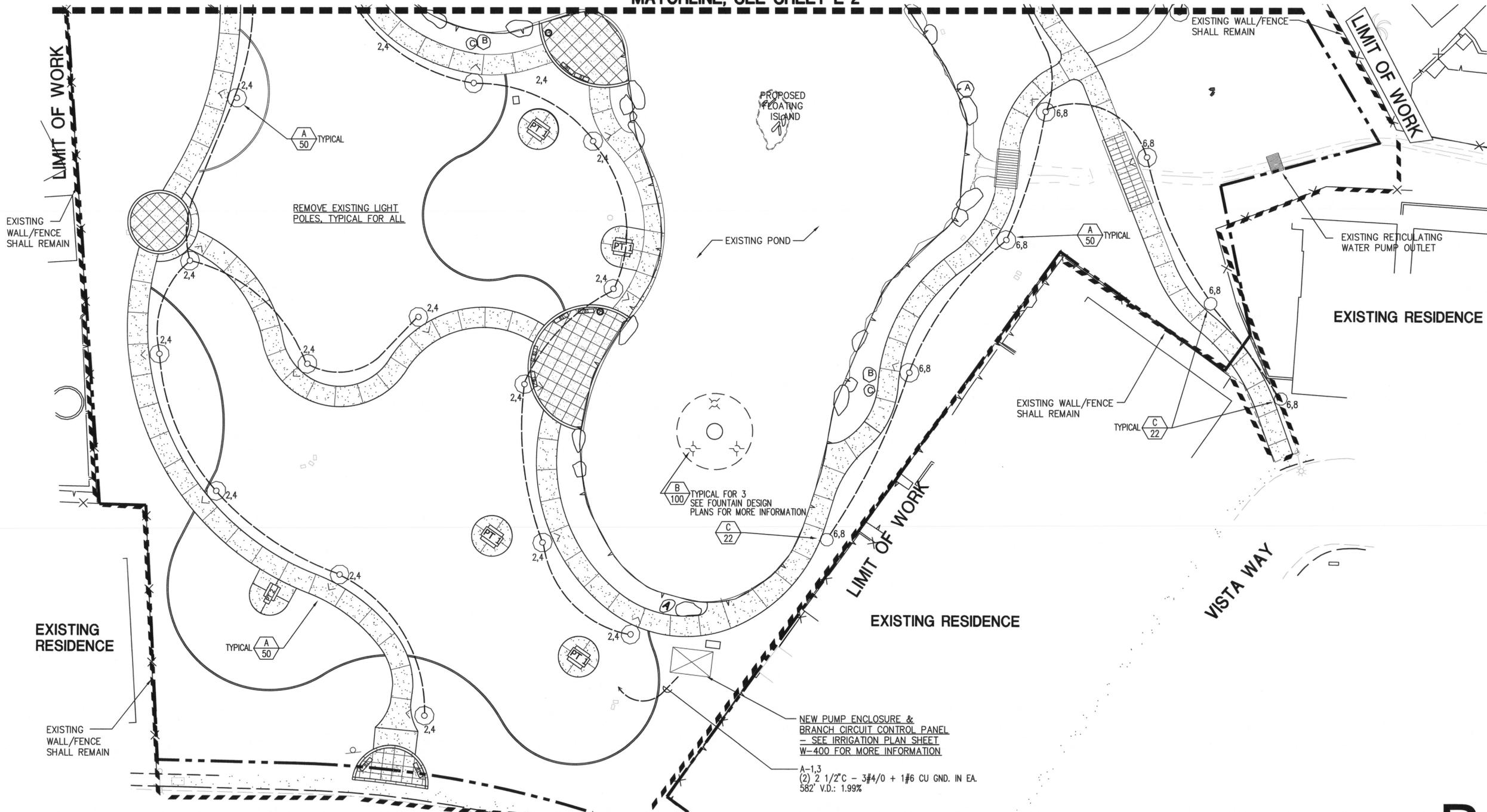
LANDSCAPE ARCHITECTURE
 AND PLANNING

3151 AIRWAY AVENUE, SUITE J-3
 COSTA MESA, CALIFORNIA
 U.S.A. 92626-4640
 FX: 714.754.7346
 PH: 714.754.7311

SHEET NUMBER **E-3** of 44

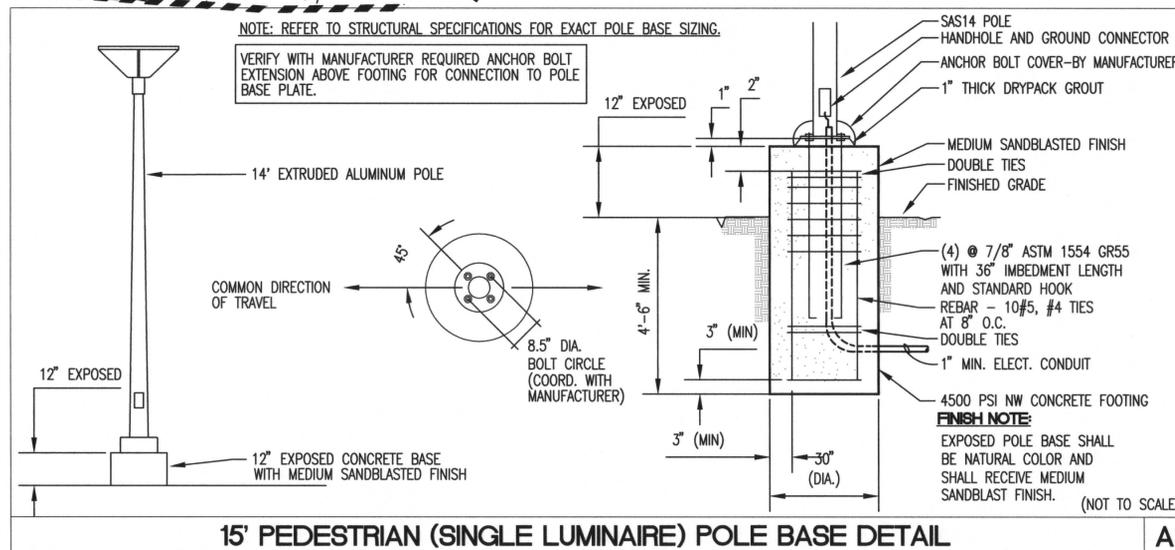
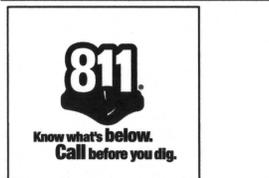
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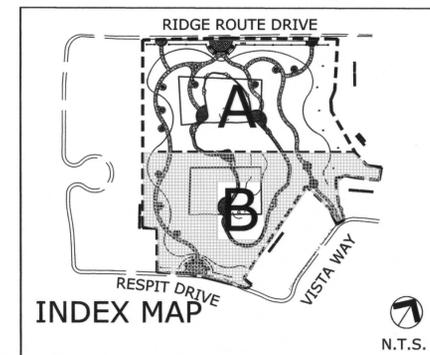


SYMBOL LEGEND

	LIMIT OF WORK LINE		TRASH RECEPTACLE
	RIGHT-OF-WAY LINE		BENCH
	EXISTING SPOT ELEVATION		ADA PICNIC TABLE
	EXISTING CONTOUR LINES		STD. PICNIC TABLE
	EXISTING CURB OR EDGE OF PAVEMENT		BIRD HOUSE
	EXISTING WALK		DOG-I-POT
	EXISTING WALL AND FENCE		EXISTING LIGHT POLE
	PROPOSED WALK		EXISTING TREE
	EXISTING SIGN		EXISTING FIRE HYDRANT
			EXISTING MANHOLE
			PLANTING AREA
			BOULDERS
			GFRC BOULDERS



B





DATE 10/10/16
 SCALE 1"=20'-0"
 DRAWN BY JE
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REVISIONS/PLAN LOG
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PROJECT AND CLIENT NAME
VILLAGE POND PARK
 LAKE FOREST, CA

CITY OF LAKE FOREST
 25550 COMMERCENTRE DRIVE
 SUITE 100
 PHONE (949) 461-3420

SHEET DESCRIPTION
PHOTOMETRIC CALCULATIONS

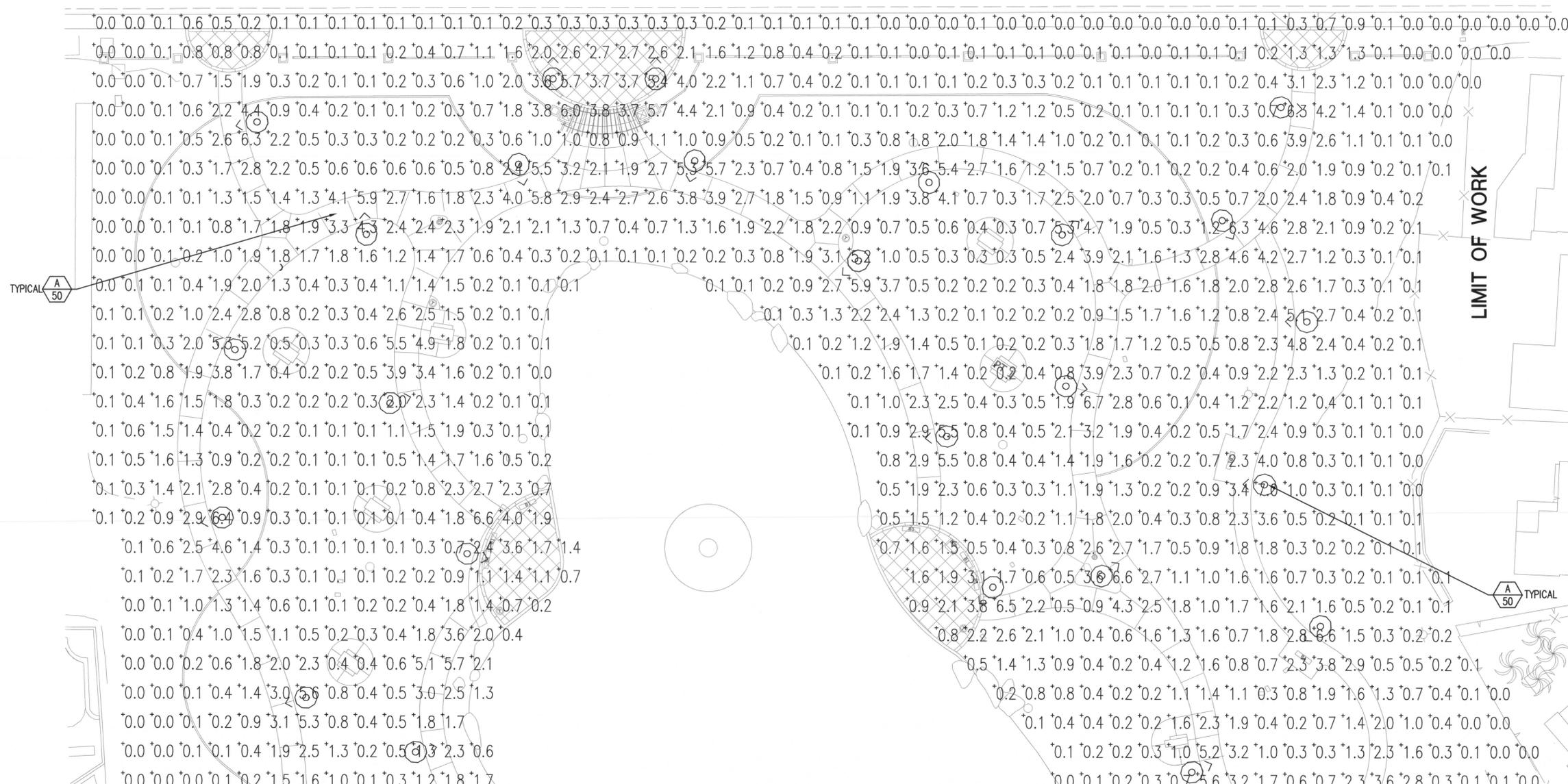


LANDSCAPE ARCHITECTURE
 AND PLANNING

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SHEET NUMBER **E-4** of 44
 PROJECT NUMBER **13-237.03**

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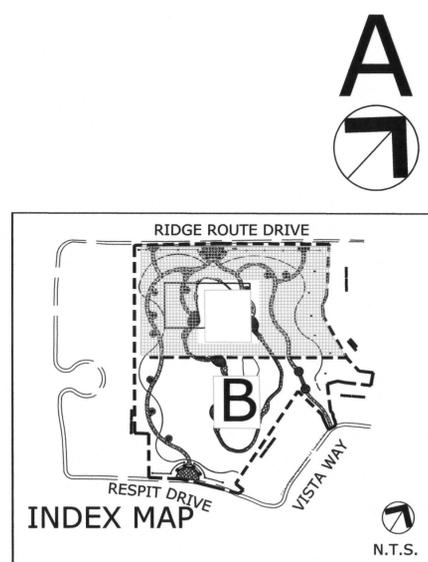
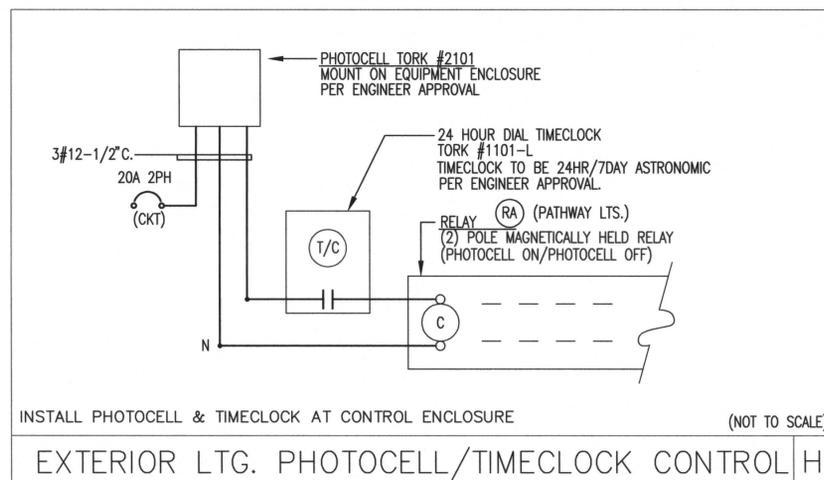
LIMIT OF WORK

TYPICAL A 50

TYPICAL A 50

MATCHLINE, SEE SHEET E-5

SYMBOL LEGEND			
	LIMIT OF WORK LINE		TRASH RECEPTACLE
	RIGHT-OF-WAY LINE		BENCH
	EXISTING SPOT ELEVATION		ADA PICNIC TABLE
	EXISTING CONTOUR LINES		STD. PICNIC TABLE
	EXISTING CURB OR EDGE OF PAVEMENT		DRINKING FOUNTAIN
	EXISTING WALK		BIRD HOUSE
	EXISTING WALL AND FENCE		DOG-HOLE
	PROPOSED WALK		EXISTING LIGHT POLE
	EXISTING SIGN		EXISTING TREE
			EXISTING FIRE HYDRANT
			EXISTING MANHOLE
			PLANTING AREA
			BOULDERS
			GFRC BOULDERS



MATCHLINE, SEE SHEET E-4



DATE 10/10/16

SCALE 1"=20'-0"

DRAWN BY JE

CHECKED BY DK

REVISIONS/PLAN LOG

REVISED PER ADDENA No. 1

PROJECT AND CLIENT NAME

VILLAGE POND PARK

LAKE FOREST, CA

CITY OF LAKE FOREST
25550 COMMERCENTRE DRIVE
SUITE 100
PHONE (949) 461-3420

SHEET DESCRIPTION

PHOTOMETRIC CALCULATIONS



LANDSCAPE ARCHITECTURE AND PLANNING

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