Background/Discussion
The Shields Lake Stormwater Harvest and Irrigation Reuse Project was ordered by the Board on December 21, 2017. Since that time, Emmons & Olivier Resources (EOR) completed the 90% plans, and staff sent out mailers and held the first of two informational meetings on the project which featured a digital rendering of the final product of the proposed project (i.e. stormwater pond with surrounding native plant buffer).

The approximate deadline for bids will be the first week of September. EOR and staff will be prepared to provide a Recommendation for Award at the September 13, 2018 regular board meeting.

Recommended Action
Proposed Motion: Manager ____________ moves to adopt resolution 18-08-04 Approving Plans and Directing Solicitation of Bids for the Shields Lake Stormwater Harvest and Irrigation Reuse System Project. Seconded by Manager _____________. [Roll call vote]

Attached: Resolution 18-08-04, 90% Project Plans
RESOLUTION 18-08-04
COMFORT LAKE-FOREST LAKE WATERSHED DISTRICT
BOARD of MANAGERS

RESOLUTION APPROVING PLANS and DIRECTING SOLICITATION of BIDS for the
SHIELDS LAKE STORMWATER HARVEST AND IRRIGATION REUSE SYSTEM PROJECT

Manager _____________ offered the following resolution and moved its adoption, seconded by Manager _____________:

WHEREAS the District has adopted a watershed management plan (WMP) in accordance with Minnesota Statutes §103B.231, which, under project category 5228.B, calls for implementation of water quality protection measures as identified in the Forest Lake Diagnostic Study and Implementation Plan (5228A);

WHEREAS the Shields Lake Stormwater Harvest and Irrigation Reuse System ("Stormwater Project") is the first project in a multi-phase implementation plan which will result in a significant reduction to the total phosphorus load entering Forest Lake;

WHEREAS the Stormwater Project will impound and harvest water from a tributary to Shields Lake for irrigation reuse by Forest Hills Golf Club;

WHEREAS the District applied for and was awarded a Clean Water Fund grant in the amount of $824,000 for the Stormwater Project;

WHEREAS on December 21, 2017, in accordance with Minnesota Statutes § 103B.251, subdivision 3, the Board of Managers established the Project and the District engineer subsequently has prepared 90 percent construction plans consistent with the concept design and the grant work plan, which plans have been presented to the Board, and the engineer’s refined estimate for construction indicates that the Project remains cost effective;

WHEREAS the Stormwater Project location is land owned by the Forest Hills Golf Club ("Golf Club"), and the Golf Club and District have entered into an agreement affording the District the right to build and maintain the Stormwater Project and setting forth roles and responsibilities with respect to the Stormwater Project;

WHEREAS the District has obtained all necessary permits for the work;

WHEREAS District plans provide for Project construction to commence during Fall 2018;

THEREFORE BE IT RESOLVED as follows:

a. The 90 percent plans are approved for bid solicitation and the engineer shall complete and proceed to construction with final plans consistent with the approved plans;

b. The District administrator shall solicit sealed bids for construction of the Project and present to the Board a recommendation for award of contract.
The question was on the adoption of the above resolution and there were ____ ayes and _____ nays as follows:

<table>
<thead>
<tr>
<th></th>
<th>AYE</th>
<th>NAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jackie A. Anderson</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jackie M. McNamara</td>
<td></td>
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<tr>
<td>Wayne S. Moe</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stephen Schmaltz</td>
<td></td>
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<tr>
<td>Jon W. Spence</td>
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</tr>
</tbody>
</table>

The President declared the resolution adopted.

Dated: August 14, 2018

___________________________________
Wayne S. Moe, Secretary

* * * * * * * * *

I, Wayne S. Moe, Secretary of the Comfort Lake-Forest Lake Watershed District Board of Managers, do hereby certify that I have compared the above resolution with the original thereof as the same appears on record and on file in the District's offices and find the same to be a true and correct copy thereof.

IN TESTIMONY WHEREOF, I hereunto set my hand this 14th day of August, 2018.

___________________________________
Wayne S. Moe, Secretary
GOVERNING SPECIFICATIONS

THE 2018 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION “STANDARD SPECIFICATIONS FOR CONSTRUCTION” SHALL GOVERN ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL CONFORM TO MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING FIELD MANUAL FOR TEMPORARY CONTROL ZONE LAYOUTS.

PROJECT LOCATION

LOCATION MAP

EXISTING UTILITIES

DELETION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THE PLANS IS BASED ON AVAILABLE RECORD AT THE TIME THE PLANS WERE PREPARED AND ARE NOT GUARANTEED TO BE COMPLETE OR CORRECT. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL UTILITIES 72 HOURS PRIOR TO CONSTRUCTION TO DETERMINE THE EXACT LOCATION OF ALL FACILITIES AND TO PROVIDE ADEQUATE PROTECTION OF SAID UTILITIES DURING THE COURSE OF WORK.

CONSTRUCTION NOTE

IT IS THE LAW THAT ANYONE EXCAVATING AT ANY SITE MUST NOTIFY GOPHER STATE ONE CALL SO THAT UNDERGROUND ELECTRIC, NATURAL GAS, TELEPHONE OR OTHER UTILITY LINES CAN BE MARKED ON OR NEAR YOUR PROPERTY BEFORE ANY DIGGING BEGINS. A 48-HOUR NOTICE, NOT INCLUDING WEEKENDS, IS REQUIRED. CALLS CAN BE MADE TO GSOC AT 1-800-252-1166 OR (651) 454-0002, MONDAY THROUGH FRIDAY (EXCEPT HOLIDAYS) FROM 7 A.M. TO 5 P.M.

CONSTRUCTION NOTE

CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO MAINTAIN OPERATION OF EXISTING UTILITIES THROUGHOUT THE DURATION OF THE PROJECT. IN THE EVENT THAT AN INTERRUPTION OF SERVICE IS UNAVOIDABLE IN ORDER TO COMPLETE THE WORK, CONTRACTOR SHALL PROVIDE ADEQUATE NOTIFICATION TO ALL AFFECTED BUSINESSES A MINIMUM OF 3 WORKING DAYS IN ADVANCE OF ANY INTERRUPTION.

LEGEND

Legend

EXISTING PROPOSED

SILT FENCE
CONSTRUCTION FENCE
DELETED WETLAND
OVERHEAD ELECTRIC LINES
BURIED ELECTRIC LINES
FIBER OPTIC LINES
SPLIT RAIL WOODEN FENCE
CHAIN LINK FENCE
SANITARY SEWER LINE
SANITARY SEWER MAINLINE
SANITARY SEWER FORCE MAIN
SANITARY SEWER MANHOLE
STORM PIPE LINE
STORM MANHOLE
DRAIN TILE
WATERMAIN
WATERMAIN MANHOLE
HYDRANT
TREE PROTECTION
MAJOR CONTOUR
MINOR CONTOUR
DRAINAGE FLOW ARROW
TREE

EXISTING UTILITIES

THE LOCATION OF UNDERGROUND FACILITIES AND/OR STRUCTURES AS SHOWN ON THE PLANS IS BASED ON AVAILABLE RECORD AT THE TIME THE PLANS WERE PREPARED AND ARE NOT GUARANTEED TO BE COMPLETE OR CORRECT. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL UTILITIES 72 HOURS PRIOR TO CONSTRUCTION TO DETERMINE THE EXACT LOCATION OF ALL FACILITIES AND TO PROVIDE ADEQUATE PROTECTION OF SAID UTILITIES DURING THE COURSE OF WORK.

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1. GENERAL SITE WORK NOTES

2. GENERAL UTILITY NOTES

3. GRADING & EROSION CONTROL NOTES

4. SITE DEMOLITION & REMOVAL NOTES

5. STORM PIPE NOTES

6. GENERAL LANDSCAPE NOTES

7. GRADING & EROSION CONTROL NOTES (CONT)

8. SCHEDULE OF ESTIMATED QUANTITIES

9. SCHEDULE OF ESTIMATED QUANTITIES (BASE BID)

10. ADD ALTERNATE 1

11. ADD ALTERNATE 2
NOTES:
1. ALL TREES NOT MARKED FOR REMOVAL SHALL BE PROTECTED THROUGHOUT THE CONSTRUCTION PROCESS.
2. CONTRACTOR SHALL REFER TO SOIL BORING LOGS COMPLETED BY AMERICAN ENGINEERING TESTING.
3. CONTRACTOR SHALL REPLACE ANY AND ALL IRRIGATION INFRASTRUCTURE DAMAGED (SPRINKLER HEADS, IRRIGATION LINES, VALVES, ETC.)
NOTES:
1. ALL TREES NOT MARKED FOR REMOVAL SHALL BE PROTECTED THROUGHOUT THE CONSTRUCTION PROCESS.
2. CONTRACTOR SHALL REFER TO SOIL BORING LOGS COMPLETED BY ENGINEERING AMERICA TESTING FOR EXISTING SOIL CONDITIONS.
3. CONSTRUCTION TRAFFIC SHALL UTILIZE 210TH STREET NORTH OFF OF HARROW AVENUE ONLY.
1. NOTE: ALL ELEVATIONS WITHIN THIS NARRATIVE ARE REPRESENTED ON A 100.0 RELATIVE VERTICAL SCALE. ELEVATION 100.0 REPRESENTS THE TOP OF THE IRRIGATION PUMP WET WELL.

2. SUPPLEMENTAL WATER WHEN THE POND LEVEL IS LOW. THE DESIGN OBJECTIVE IS TO REDUCE THE AMOUNT OF BACKUP WELL WATER PUMPED INTO THE LOWER POND AND VOLUME CONTROL AND SUPPLEMENTAL WATER TO THE LOWER POND. THE EXISTING IRRIGATION SYSTEM AND BACKUP WELL SYSTEM WILL NOT BE OPTIMIZE THE ELEVATIONS AS REQUIRED ON SITE. A NEWLY PROVIDED FLOAT SWITCH TO OPEN AND CLOSE A 14" MOTORIZED BUTTERFLY VALVE DIAMETER INTERIOR SUMP IS HYDRAULICALLY CONNECTED TO THE ADJACENT POND. THE SUMP WILL CONTAIN AN ADDITIONAL FLOAT SWITCH AS A FAILSAFE 410 LF 3/4" 120V CONDUIT - 14 "GAUGE WIRE (SEE NOTES)

3. IRRIGATION LINE AS WITH FLOAT CHAIN AND ANCHOR. THE PRIMARY FLOAT SWITCH WILL BE LOCATED IN THE POND AND BE PROVIDED WITH 15' OF STAINLESS STEEL CHAIN AND

4. SO THE CONVEYANCE PIPE CANNOT DRAW WATER LOWER THAN ALLOWED. THE CONTROLS SUPPLIER SHALL ALSO PROVIDE A 14" MANUAL VALVE TO BE REROUTE AS NECESSARY.

5. CONTROL SUPPLIER SHALL PROVIDE A DETAILED WIRING DIAGRAM WITH SUBMITTAL INFORMATION INDICATING THE WIRING FOR THE RMS 200, FL OAT SWITCH AND VALVES.

6. CONTRACTOR SHALL RESTORE SURFACE AS NECESSARY FOR CONDUIT INSTALLATION; THIS SHALL BE INCIDENTAL TO NORTH OFF OF HARROW AVENUE ONLY.

7. CONTRACTOR SHALL PROVIDE A SEQUENCE OF OPERATIONS:

   1. WHEN WATER IN THE POD REACHES A LOW-LEVEL POINT OF 907.65' THE NORMALLY OPEN FLOAT SWITCH WILL DROP AND CLOSE THE CIRCUIT AND ENERGIZE THE 14" NORMALLY CLOSED MOTORIZE BUTTERFLY VALVE AND OPEN IT TO CONVEY WATER TO THE LOWER POND VIA GRAVITY. WHEN WATER IN THE SUMP REACHES A SPECIFIED HIGH-LEVEL POINT AS DEFINED AT 908.30 THE SAME FLOAT SWITCH WILL DEENERGIZE THE VALVE AND IT WILL CLOSE. SHOULD THERE BE A POWER LOSS OR FAILURE ON THE VALVE IT SHALL FAIL IN THE CLOSED POSITION.
Deciduous Tree Planting Schedule

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Quantity</th>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Size</th>
<th>Cont.</th>
</tr>
</thead>
<tbody>
<tr>
<td>GD</td>
<td>3</td>
<td>Gymnocalycium dioicum</td>
<td>Kentucky Coffee Tree</td>
<td>2.0'</td>
<td>B&amp;B</td>
</tr>
<tr>
<td>OB</td>
<td>13</td>
<td>Quercus bicolor</td>
<td>Swamp White Oak</td>
<td>2.0'</td>
<td>B&amp;B</td>
</tr>
<tr>
<td>CO</td>
<td>5</td>
<td>Celtis occidentalis</td>
<td>Hackberry</td>
<td>2.0'</td>
<td>B&amp;B</td>
</tr>
<tr>
<td>CH</td>
<td>4*</td>
<td>Crataegus crus-galli</td>
<td>Cockspur Hawthorn</td>
<td>1.0'</td>
<td>B&amp;B</td>
</tr>
<tr>
<td>CC</td>
<td>2*</td>
<td>Carpinus caroliniana</td>
<td>Blue Beech</td>
<td>1.0'</td>
<td>B&amp;B</td>
</tr>
<tr>
<td>OM</td>
<td>2</td>
<td>Quercus macrocarpa</td>
<td>Bur Oak</td>
<td>2.0'</td>
<td>B&amp;B</td>
</tr>
<tr>
<td>TV</td>
<td>29</td>
<td>Tree Total</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Coniferous Tree Planting Schedule

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Quantity</th>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Size</th>
<th>Cont.</th>
</tr>
</thead>
<tbody>
<tr>
<td>LL</td>
<td>7</td>
<td>Larix laricina</td>
<td>Tamarack</td>
<td>8</td>
<td>B&amp;B</td>
</tr>
<tr>
<td>TV</td>
<td>7</td>
<td>Tree Total</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Herbaceous Planting Schedule

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Quantity</th>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Size</th>
<th>Cont.</th>
</tr>
</thead>
<tbody>
<tr>
<td>LP</td>
<td>200*</td>
<td>Liriodendron tulipifera</td>
<td>Tall Blazing Star</td>
<td>4&quot;</td>
<td>POT</td>
</tr>
<tr>
<td>MF</td>
<td>125*</td>
<td>Monarda fistulosa</td>
<td>Wild Bergamot</td>
<td>4&quot;</td>
<td>POT</td>
</tr>
<tr>
<td>PV</td>
<td>225*</td>
<td>Physostegia virginiana</td>
<td>Obedient Plant</td>
<td>4&quot;</td>
<td>POT</td>
</tr>
<tr>
<td>ZA</td>
<td>100*</td>
<td>Zizia aurea</td>
<td>Golden Alexander</td>
<td>4&quot;</td>
<td>POT</td>
</tr>
<tr>
<td>TV</td>
<td>600</td>
<td>Tree Total</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* ADD ALTERNATE 1 (6 - 1" DECIDUOUS, 650 - PERENNIALS, 32 CY - HARDWOOD MULCH)
** ADD ALTERNATE 2 (OSPREY PLATFORM)
NOT FOR CONSTRUCTION

ZONE A - SEED MIX 32-241 / CATEGORY 3 EROSION CONTROL BLANKET (ERONET™ C125® OR APPROVED EQUAL)
ZONE B - SEED MIX 32-241 / TYPE 3 MULCH, DISC ANCHORED
ZONE C - SEED MIX 34-181 / CATEGORY 3 EROSION CONTROL BLANKET (ERONET™ C125® OR APPROVED EQUAL)
ZONE D - SEED MIX 25-131 / CATEGORY 3 EROSION CONTROL BLANKET (ERONET™ C125® OR APPROVED EQUAL)
ZONE E - SEED MIX 25-131 / CATEGORY 3 EROSION CONTROL BLANKET (ERONET™ C125® OR APPROVED EQUAL)
ZONE F - SEED MIX 25-131 / CATEGORY 3 EROSION CONTROL BLANKET (ERONET™ C125® OR APPROVED EQUAL); UTILIZE 8" IMPORTED TOPSOIL
ZONE G - SEED MIX 25-131 / CATEGORY 3 EROSION CONTROL BLANKET (ERONET™ C125® OR APPROVED EQUAL); SUPPLEMENT EXISTING TOPSOIL W/ 4" IMPORTED TOPSOIL
ZONE H - CATEGORY 3 EROSION CONTROL BLANKET (ERONET™ C125® OR APPROVED EQUAL)

NOTES:
1. BOUNDARY BETWEEN ZONE A & B/C SHALL BE STAKED BY THE CONTRACTOR. ENGINEER APPROVAL IS MANDATORY PRIOR TO COMMENCE LANDSCAPING & SITE RESTORATION.
2. NO TURF SEED PERMITTED BEYOND THE BOUNDARY OF ZONE A.
3. AREAS WITHIN ZONES A, B & C NOT SEEN OR DISTURBED DISTURBED REQUIRE TWO SEPARATE HERBICIDE TREATMENTS (RODEO OR APPROVED WATER SAFE HERBICIDE). HERBICIDE TREATMENTS SHALL OCCUR BEFORE THE FIRST FROST AND A MINIMUM OF 30 DAYS APART. CONTRACTOR MAY TILL SOIL AFTER HERBICIDE TREATMENTS.
4. CONTRACTOR SHALL PLACE ROAD BASE AND BEGIN IMMEDIATELY FOLLOWING COMPLETION OF ROAD BY USE MATERIAL LATER THAN ONE (1) WEEK AFTER ROAD EXCAVATION.
5. CONTRACTOR SHALL STRIP, STOCKPILE AND REPLACE TOPSOIL TO A MINIMUM DEPTH OF 6" FOR ALL AREAS EXCEPT FOR ZONE F & G.
6. CONTRACTOR SHALL PLACE ROAD BASE AGGREGATE IMMEDIATELY FOLLOWING COMPLETION OF ROAD BY USE MATERIAL LATER THAN ONE (1) WEEK AFTER ROAD EXCAVATION.

ZONE E - SEED MIX 25-131 / CATEGORY 3 EROSION CONTROL BLANKET (ERONET™ C125® OR APPROVED EQUAL)
ZONE F - CATEGORY 3 EROSION CONTROL BLANKET (ERONET™ C125® OR APPROVED EQUAL)
ZONE G - SEED MIX 25-131 / CATEGORY 3 EROSION CONTROL BLANKET (ERONET™ C125® OR APPROVED EQUAL); SUPPLEMENT EXISTING TOPSOIL W/ 4" IMPORTED TOPSOIL

BITUMINOUS ROAD PATCH (SEE NOTE 4)
CONTRACTOR TO GRADE AND ESTABLISH TEE BOX TO SUBGRADE AND PLACE 6" TOP SOIL, EROSION CONTROL BLANKET (TEE BOX RESTORATION SEEDING AND FINAL GRADING - BY OTHERS)

SYMBOL LEGEND:
1. ZONE A - SEED MIX 32-241 / CATEGORY 3 EROSION CONTROL BLANKET (ERONET™ C125® OR APPROVED EQUAL)
2. ZONE B - SEED MIX 32-241 / TYPE 3 MULCH, DISC ANCHORED
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8. ZONE H - CATEGORY 3 EROSION CONTROL BLANKET (ERONET™ C125® OR APPROVED EQUAL)

SCALE IN FEET
25 50 100

NOTES ON SHEET:
ZONE A - SEED MIX 32-241 / CATEGORY 3 EROSION CONTROL BLANKET (ERONET™ C125® OR APPROVED EQUAL)
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BITUMINOUS ROAD PATCH (SEE NOTE 4)
CONTRACTOR TO GRADE AND ESTABLISH TEE BOX TO SUBGRADE AND PLACE 6" TOP SOIL, EROSION CONTROL BLANKET (TEE BOX RESTORATION SEEDING AND FINAL GRADING - BY OTHERS)

SYMBOL LEGEND:
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8. ZONE H - CATEGORY 3 EROSION CONTROL BLANKET (ERONET™ C125® OR APPROVED EQUAL)
NOT FOR CONSTRUCTION

CONSTRUCTION SHALL LIMIT CLOSURE OF 210TH ST N TO ONE WEEK. CONTRACTOR SHALL NOTIFY FOREST HILLS GOLF COURSE MINIMUM 3 WEEKS PRIOR TO ROAD CLOSURE.

2. TRAFFIC CONTROL MEASURES SHOWN REPRESENT THE MINIMUM SIGNAGE REQUIRED; ADDITIONAL SIGNAGE MAY BE NECESSARY AS SITE CONDITIONS DICTATE.

3. CONSTRUCTION TRAFFIC SHALL UTILIZE 210TH STREET NORTH OFF OF HARROW AVENUE ONLY.
NOTES:
1. FURNISH AND INSTALL TEMPORARY FENCE AT THE TREE'S DRIPLINE OR CONSTRUCTION LIMITS AS SPECIFIED, PRIOR TO ANY CONSTRUCTION.
2. WHEN POSSIBLE PLACE FENCE 25 FEET BEYOND THE DRIP LINE.
3. PLACE TREE PROTECTION SIGNS ALONG FENCE AT 50' INTERVALS.

ALL PVC PIPE SHALL BE SCHEDULE 40 OR APPROVED EQUAL.

SHIELDS LAKE REUSE
FOREST HILLS GOLF COURSE, FOREST LAKE, WASHINGTON COUNTY, MINNESOTA

STATE PROJECT NO. 15345  CITY PROJECT NO. ---

DESIGN BY DRAWN BY SLP BR EOR PROJECT NO. 00376-0157 SUBMISSION DATE: 08/03/2018

1        04/30/2018        BR       60% DRAFT PLANS - NOT FOR CONSTRUCTION
2        07/20/2018        BR       90% DRAFT PLANS - NOT FOR CONSTRUCTION
3        07/26/2018        BR       90% DRAFT PLANS - NOT FOR CONSTRUCTION
4        08/06/2018       SLP      95% DRAFT BID PLANS - NOT FOR CONSTRUCTION
NOT FOR CONSTRUCTION

STAINLESS STEEL CHAIN FLOAT TREE WITH XXXXXX AS CALLED OUT BY E.O.R. ATTACHED TO BUOY FLOAT FOR ACCESS AND MAINTENANCE

EXISTING FLOAT TREE TO BE LOWERED PER SPECIAL PROVISIONS

HIGH WATER LEVEL: 95.00
LOW WATER LEVEL: 95.00

HIGH WATER LEVEL: 95.50
LOW WATER LEVEL: 95.00

SUBMERSIBLE LEVEL SENSOR TO BE INSTALLED PER SPECIAL PROVISIONS

The Submersible Level Sensor is an easy-to-install and long-lasting measuring device. It is designed to be installed at a depth of 12" from the bottom of the tank and is suitable up to 205 ft (62m) in depth. Can be used in both underground or aboveground installations.

Technical Specifications:
- Stainless Steel Submersible pole level transducer
- FMCG Input
- 4-20mA Output
- 250 ft maximum readout depth
- Integrates with RMS Levely™ Level Transmitter, RMS 200, or RMS 250 Liner Controller

NOTES:
1. Contractor shall refer to special provisions for design and schematics.
2. Contractor shall coordinate with Golf Course and Engineer for exact placement of floats, transducer and controls within pump house.
The contractor is responsible for maintaining all trees in a plumb position through the warranty period. Staking is not permitted.

Prune any damaged branches after planting is complete.

Provide rodent protection on all deciduous trees unless otherwise specified.

Root ball set on mounded subgrade. Root bound container trees to be scarified on the sides and bottom.

Mulch - 3' deep - shredded hard or soft wood shall be substantially free of mold, dirt, shavings, and foreign material, and shall not be in an advanced state of decomposition. The material shall pass a 4-inch screen and not more than 20 percent by mass of the material shall pass a 0.1-inch sieve. Maximum length of individual pieces not to exceed 20 inches. No mulch to lay against collar.

PLANTING SOIL - LOAM TOPSOIL BORROW

HARDWOOD MULCH - 3' DEPTH

LOGEN - ROOTS OF PLANT MATERIAL PRIOR TO PLANTING

NOTES:

1. IF POLE SHALL BE A 30' STANDARD TELEPHONE POLE.

2. INSTALLATION: CONTRACTOR SHALL AUGER AND BURY 1/3 POLE LENGTH AND SECURE WITH CONCRETE FOOTING.