



Order Plans

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Job Number: 17070
Date: 02/16/18
Drawn by: MC
Checked by: MR

Notes:
BIDDING DOCUMENTS
Not for Construction

Revisions:

Irrigation Plan
IR100
1 of 4
Bidding Documents

IRRIGATION SCHEDULE

| SYMBOL | MANUFACTURER/MODEL/DESCRIPTION |
|----------|---|
| [Symbol] | Hunter PROS-06-PRS30 5' strip spray |
| [Symbol] | Turf Spray, 30 psi regulated 6.0" Pop-Up. Co-molded wiper seal with UV Resistant Material. |
| [Symbol] | Hunter PROS-06-PRS30 ADJ Turf Spray, 30 psi regulated 6.0" Pop-Up. Co-molded wiper seal with UV Resistant Material. |
| [Symbol] | Hunter PROS-12-PRS30 5' strip spray Shrub Spray, 30 psi regulated 12.0" Pop-Up. Co-molded wiper seal with UV Resistant Material. |
| [Symbol] | Hunter PROS-12-PRS30 ADJ Shrub Spray, 30 psi regulated 12.0" Pop-Up. Co-molded wiper seal with UV Resistant Material. |
| [Symbol] | Hunter MP1000 PROS-06-PRS40 Turf Rotator, 6" pop-up, pressure regulated to 40 psi, MP Rotator nozzle. M=Maroon adj arc 90-210, L=Light Blue 210 to 270 arc, O=Olive 360 arc. |
| [Symbol] | Hunter MP2000 PROS-06-PRS40 Turf Rotator, 6" pop-up, pressure regulated to 40 psi, MP Rotator nozzle. K=Black adj arc 90-210, G=Green adj arc 210-270, R=Red 360 arc. |
| [Symbol] | Hunter MP3000 PROS-06-PRS40 Turf Rotator, 6" pop-up, pressure regulated to 40 psi (2.76 bar), MP Rotator nozzle. B=Blue adj arc 90-210, Y=Yellow adj arc 210-270, A=Gray 360 arc. |
| [Symbol] | Hunter MP3500 PROS-06-PRS40 Turf Rotator, 6" pop-up, pressure regulated to 40 psi, MP Rotator nozzle. LB=light brown adjustable arc, 90-210. |
| [Symbol] | Hunter MP Corner PROS-06-PRS40 Turf Rotator, 6" pop-up, pressure regulated to 40 psi, MP Rotator nozzle. T=Turquoise adj arc 45-105. |

| SYMBOL | MANUFACTURER/MODEL/DESCRIPTION |
|----------|---|
| [Symbol] | Hunter I-20-04-SS Turf Rotor, 4.0" Pop-Up. Adjustable and Full Circle. Stainless Steel Riser. Drain Check Valve. Standard Nozzle. |
| [Symbol] | Hunter I-20-04-SS Turf Rotor, 4.0" Pop-Up. Adjustable and Full Circle. Stainless Steel Riser. Drain Check Valve. Standard Nozzle. |
| [Symbol] | Hunter I-20-04-SS Turf Rotor, 4.0" Pop-Up. Adjustable and Full Circle. Stainless Steel Riser. Drain Check Valve. Standard Nozzle. |
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| [Symbol] | Hunter I-20-04-SS Turf Rotor, 4.0" Pop-Up. Adjustable and Full Circle. Stainless Steel Riser. Drain Check Valve. Standard Nozzle. |
| [Symbol] | Hunter I-25-04-SS Turf Rotor, 4.0" Pop-Up. Adjustable and Full Circle. Stainless Steel Riser. Drain Check Valve. Standard Nozzle. |
| [Symbol] | Hunter I-25-04-SS Turf Rotor, 4.0" Pop-Up. Adjustable and Full Circle. Stainless Steel Riser. Drain Check Valve. Standard Nozzle. |
| [Symbol] | Hunter I-25-04-SS Turf Rotor, 4.0" Pop-Up. Adjustable and Full Circle. Stainless Steel Riser. Drain Check Valve. Standard Nozzle. |
| [Symbol] | Hunter I-25-04-SS Turf Rotor, 4.0" Pop-Up. Adjustable and Full Circle. Stainless Steel Riser. Drain Check Valve. Standard Nozzle. |
| [Symbol] | Hunter I-25-04-SS Turf Rotor, 4.0" Pop-Up. Adjustable and Full Circle. Stainless Steel Riser. Drain Check Valve. Standard Nozzle. |
| [Symbol] | Hunter I-25-04-SS Turf Rotor, 4.0" Pop-Up. Adjustable and Full Circle. Stainless Steel Riser. Drain Check Valve. Standard Nozzle. |

| SYMBOL | MANUFACTURER/MODEL/DESCRIPTION |
|----------|--|
| [Symbol] | Hunter ICV-G 1", 1-1/2", 2", and 3" Plastic Electric Remote Control Valves, Globe Configuration, with NPT Threaded Inlet/Outlet, for Commercial/Municipal Use. |
| [Symbol] | Hunter HQ-4LR-AW Quick coupler valve, yellow rubber locking cover, rod brass and stainless steel, with 1" NPT inlet, 2-piece body. A=Key with Anti-Rotation Wings. |
| [Symbol] | Nibco T-113 Class 125 bronze gate shut off valve with wheel handle, same size as mainline pipe diameter at valve location. Size Range - 1/4" - 3" |
| [Symbol] | 2-Wire Grounding Point Install as per plan details. |
| [Symbol] | Point of Connection 2-1/2" Existing 2-1/2" mainline. |
| [Symbol] | Irrigation Lateral Line: PVC Class 200 SDR 21 |
| [Symbol] | Irrigation Mainline: PVC Class 200 SDR 21 |
| [Symbol] | Pipe Sleeve: PVC Schedule 40 |
| [Symbol] | Valve Callout |
| [Symbol] | Valve Number |
| [Symbol] | Valve Flow |
| [Symbol] | Valve Size |

REFERENCE NOTES SCHEDULE

| SYMBOL | DESCRIPTION |
|--------|--|
| [1] | Irrigation system water source to be the existing well and pump control system. Excavate 2-1/2' below immediately downstream of existing zone C9. Install a 2-1/2" tee with isolation valve to the fields irrigation system and an isolation valve to the Recreation Center Irrigation. System requires 55 gpm at an operational pressure of 72 psi. Verify available constant flow and pressure from the well prior to construction. If either the pressure of flow is insufficient notify the owners representative. |
| [2] | Control system for the Recreation Center Irrigation system will be the existing Hunter ACC-590 controller. Either run a new 2-wire cable from the controller to the new irrigation system or connect to the 2-wire cable at existing zone C9 with appropriate splice kits. |
| [3] | Coordinate exact location of the mainline pipe and control wire with the owners representative. Insure they stay out of the future storm rotation basin and future sidewalk. |
| [4] | Any excavation done within the tree protection areas is to be done by hand. No roots larger than 3/4" diameter are to be cut. Any roots cut are to be done so with sharp shears that will make a clean cut. |
| [5] | Route mainline outside of tree protection area. Coordinate route with owners representative. |
| [6] | Pipe location is diagrammatic. Install all pipe and wire as per plan notes and details. |
| [7] | Coordinate exact location of the sprinklers along the road edge with the owners representative. |

VALVE SCHEDULE

| NUMBER | MODEL | SIZE | TYPE | GPM | PSI | PSI @ POC | PRECIP |
|--------|--------------|--------|-------------|-------|-------|-----------|-----------|
| C26 | Hunter ICV-G | 1-1/2" | Turf Spray | 25.72 | 33.51 | 36.09 | 1.56 in/h |
| C28 | Hunter ICV-G | 1-1/2" | Shrub Spray | 30.35 | 35.35 | 38.89 | 1.55 in/h |
| C27 | Hunter ICV-G | 1" | Shrub Spray | 19.10 | 37.76 | 40.78 | 1.29 in/h |
| C29 | Hunter ICV-G | 1" | Turf Spray | 20.75 | 36.18 | 39.66 | 1.52 in/h |
| C30 | Hunter ICV-G | 1-1/2" | Shrub Spray | 23.75 | 34.75 | 39.18 | 1.51 in/h |
| C30 | Hunter ICV-G | 1-1/2" | Shrub Spray | 40.22 | 36.44 | 41.91 | 1.19 in/h |
| C31 | Hunter ICV-G | 1-1/2" | Turf Rotary | 32.13 | 46.79 | 50.39 | 0.25 in/h |
| C32 | Hunter ICV-G | 1-1/2" | Turf Rotary | 24.83 | 47.34 | 49.56 | 0.22 in/h |
| C33 | Hunter ICV-G | 1-1/2" | Turf Rotor | 26.00 | 50.24 | 52.97 | 0.64 in/h |
| C34 | Hunter ICV-G | 1" | Turf Rotary | 11.08 | 43.96 | 44.52 | 0.39 in/h |
| C35 | Hunter ICV-G | 1-1/2" | Turf Rotor | 42.00 | 49.70 | 50.36 | 0.6 in/h |
| C36 | Hunter ICV-G | 1-1/2" | Turf Rotor | 39.00 | 50.07 | 56.53 | 0.8 in/h |
| C37 | Hunter ICV-G | 1-1/2" | Turf Rotor | 41.50 | 50.02 | 57.16 | 0.8 in/h |
| C38 | Hunter ICV-G | 1" | Turf Rotary | 13.39 | 43.76 | 45.31 | 0.3 in/h |
| C39 | Hunter ICV-G | 1-1/2" | Shrub Spray | 40.87 | 37.52 | 42.12 | 1.15 in/h |
| C40 | Hunter ICV-G | 1-1/2" | Turf Rotor | 47.00 | 53.35 | 60.42 | 1.00 in/h |
| C41 | Hunter ICV-G | 1-1/2" | Turf Rotor | 21.30 | 52.23 | 63.41 | 0.3 in/h |
| C42 | Hunter ICV-G | 1-1/2" | Turf Rotor | 22.40 | 53.11 | 64.13 | 0.3 in/h |
| C43 | Hunter ICV-G | 1-1/2" | Turf Rotor | 37.70 | 53.77 | 64.93 | 0.5 in/h |
| C44 | Hunter ICV-G | 1-1/2" | Turf Rotary | 40.60 | 55.45 | 66.52 | 0.5 in/h |
| C45 | Hunter ICV-G | 1-1/2" | Turf Rotary | 40.60 | 53.03 | 66.52 | 0.5 in/h |
| C46 | Hunter ICV-G | 1-1/2" | Turf Rotor | 44.80 | 55.40 | 68.56 | 0.39 in/h |
| C47 | Hunter ICV-G | 1-1/2" | Turf Rotor | 44.80 | 55.40 | 68.56 | 0.39 in/h |
| C48 | Hunter ICV-G | 1-1/2" | Turf Rotor | 44.80 | 55.40 | 68.56 | 0.39 in/h |
| C49 | Hunter ICV-G | 1-1/2" | Turf Rotor | 44.80 | 55.40 | 68.56 | 0.39 in/h |
| C50 | Hunter ICV-G | 1-1/2" | Turf Rotor | 44.80 | 53.16 | 64.20 | 0.31 in/h |
| C51 | Hunter ICV-G | 1-1/2" | Turf Rotor | 44.80 | 54.96 | 56.82 | 0.87 in/h |
| C52 | Hunter ICV-G | 1-1/2" | Turf Rotor | 44.80 | 56.49 | 59.66 | 0.89 in/h |
| C53 | Hunter ICV-G | 1-1/2" | Turf Rotor | 44.80 | 54.55 | 56.81 | 0.37 in/h |
| C54 | Hunter ICV-G | 1-1/2" | Turf Rotor | 44.80 | 56.49 | 59.66 | 0.89 in/h |
| C55 | Hunter ICV-G | 1-1/2" | Turf Rotor | 39.00 | 53.53 | 55.59 | 1.05 in/h |
| C56 | Hunter ICV-G | 1-1/2" | Turf Spray | 48.36 | 36.31 | 39.80 | 1.03 in/h |

CRITICAL ANALYSIS

| | |
|------------------------------------|---------------------------|
| Operator: | 2018-03-19 16:40 |
| P.O.C. NUMBER: 01 | |
| Water Source Information: | Existing 2-1/2" mainline. |
| FLOW AVAILABLE | |
| Point of Connection Size: | 2-1/2" |
| Flow Available: | 112.10 gpm |
| PRESSURE AVAILABLE | |
| Static Pressure at POC: | 70.00 psi |
| Pressure Available: | 70.00 psi |
| DESIGN ANALYSIS | |
| Maximum Station Flow: | 54.00 gpm |
| Flow Available at POC: | 112.10 gpm |
| Residual Flow Available: | 58.10 gpm |
| Critical Station: | C52 |
| Design Pressure: | 50.00 psi |
| Friction Loss: | 0.01 psi |
| Filtrage Loss: | 0.36 psi |
| Elevation Loss: | 0.00 psi |
| Loss through Valve: | 2.52 psi |
| Pressure Req. at Critical Station: | 58.59 psi |
| Loss for Fittings: | 0.60 psi |
| Loss for Main Line: | 5.08 psi |
| Loss for POC to Valve Elevation: | 0.00 psi |
| Loss for Backflow: | 0.00 psi |
| Critical Station Pressure at POC: | 63.08 psi |
| Pressure Available: | 70.00 psi |
| Residual Pressure Available: | 6.92 psi |

CENTRAL CONTROL SYSTEM NOTES

- PROGRAM ALL NEW ZONES INTO THE CONTROLLER AND IMMS CENTRAL CONTROL SYSTEM.
- PROGRAM ALL FLOW MONITORING INFORMATION FOR THE NEW ZONES INTO THE CENTRAL SYSTEM.
- DEVELOP ALL SITE MAPS WITHIN CENTRAL CONTROL SOFTWARE FOR THE SITE.
- MAKE A MINIMUM OF 3 SITE VISITS AFTER PLANT GROW IN AND WITHIN WARRANTY PERIOD TO WALK SITE, DETERMINE SOIL MOISTURE LEVELS IN IRRIGATED AREAS AND ADJUST CONTROL SYSTEM AS NECESSARY TO MINIMIZE WATER USE WHILE MAINTAINING A HEALTHY LANDSCAPE. PROVIDE WRITTEN DOCUMENTATION OF DATE OF SITE REVIEW AND CHANGES MADE TO CENTRAL SYSTEM TO OWNER, LANDSCAPE ARCHITECT AND IRRIGATION CONSULTANT.

TWO WIRE CONTROL SYSTEM NOTES

- ALL DECODER WIRE SPLICE CONNECTORS TO BE 3M DBY-6 OR BETTER.
- ALL DECODER TO VALVE SOLENOID SPLICE CONNECTORS TO BE 3M DBY-6 OR BETTER.
- ALL TWO WIRE CONTROL WIRE OUTSIDE OF MAINLINE TRENCH TO BE IN 1" PVC ELECTRICAL CONDUIT.
- ALL GROUNDING POINTS TO BE AS PER MANUFACTURER'S REQUIREMENTS AND OR PER DETAIL.
- WEATHER SENSOR TO BE WIRED TO SITE CONTROLLER.
- ALL CONTROL PRODUCTS TO BE INSTALLED AND OPERATED AS PER THE MANUFACTURER'S RECOMMENDATIONS AND OR REQUIREMENTS.
- IRRIGATION CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY MANUFACTURER INSTALLATION TRAINING PRIOR TO PROJECT START. NOTIFY IRRIGATION CONSULTANT WHEN TRAINING HAS BEEN COMPLETED.
- IRRIGATION CONTRACTOR IS RESPONSIBLE FOR ALL REQUIREMENTS NECESSARY TO OBTAIN 5 YEAR WARRANTY. PROVIDE WRITTEN 5 YEAR WARRANTY PRIOR TO SUBSTANTIAL COMPLETION.
- IRRIGATION CONTRACTOR IS RESPONSIBLE FOR TRAINING OWNERS STAFF, AS NEEDED, ON THE OPERATION AND MAINTENANCE OF CONTROL SYSTEM.
- IRRIGATION CONTRACTOR IS RESPONSIBLE FOR COMPLETE PROGRAMMING AND OPERATION OF CONTROL SYSTEM UNTIL ACCEPTED BY THE OWNER.
- CONTROLLER AND FLOW SENSOR IN THE PUMP STATION ARE TO BE PROGRAMMED FOR OVERUNDER FLOW MONITORING, WITH SHUT DOWN AND ALARM.

