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CENTENNIAL PARK PHASE 0.5 IMPROVEMENTS

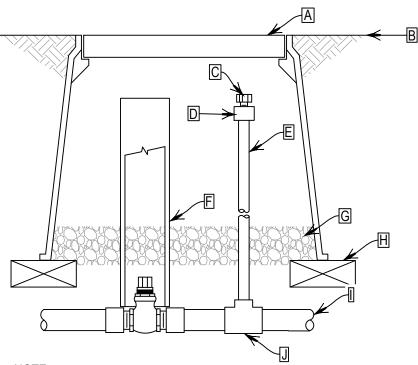
2201 23rd Ave Greeley, CO 80634 ISSUED NAME BID PLAN SET

1/22/2021 CBK PAPER SIZE 11"x17"

SHEET NAME IRRIGATION PLAN

SHEET IR2.2 OF 17

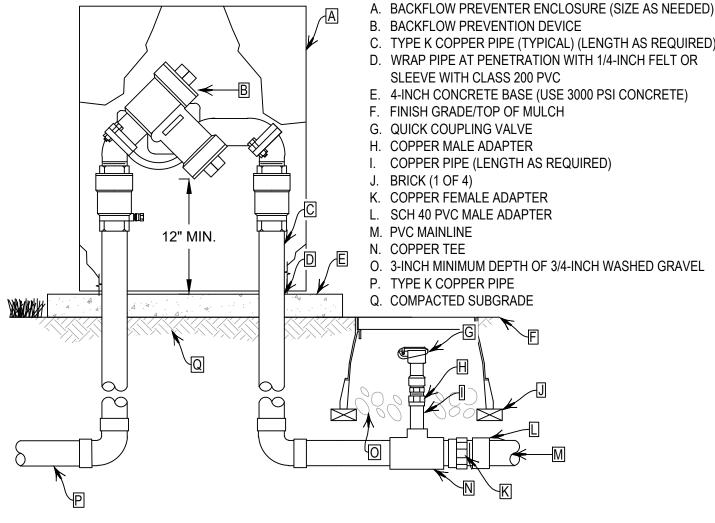
- A. 12" STANDARD VALVE BOX WITH COVER
- B. FINISH GRADE/TOP OF MULCH
- C. 1/4" THREADED BRASS CAP
- D. 1/2" REDUCING MALE ADAPTER
- E. 1/2" COPPER PIPE (LENGTH AS REQUIRED)
- F. 6" PVC CL 200 PIPE (LENGTH AS REQUIRED)
- G. 3" MINIMUM DEPTH OF 3/4" WASHED GRAVEL
- H. BRICK (1 OF 4)
- I. COPPER PIPE TO BACKFLOW PREVENTION ASSEMBLY (LENGTH AS REQUIRED)
- J. COPPER TEE
- K. COPPER MALE ADAPTER (1 OF 2)
- L. CURB STOP VALVE WITH COPPER SERVICE, THREAD BOTH ENDS
- M. COPPER PIPE TO EXISTING COPPER PIPE OUTSIDE EXISTING WATER METER



NOTE:

- 1. FURNISH NOMINAL PIPE AND FITTING SIZES IDENTICAL WITH NOMINAL TAP SIZE UNLESS OTHERWISE NOTED.
- 2. THIS ASSEMBLY IS INTENDED TO BE USED FOR WINTERIZATION OF BACKFLOW PREVENTION ASSEMBLY ONLY.





NOTES

- FURNISH FITTINGS AND PIPING SIZED IDENTICALLY WITH NOMINAL BACKFLOW PREVENTION DEVICE.
- 2. QUICK COUPLING ASSEMBLY IS TO BE USED FOR WINTERIZATION OF IRRIGATION SYSTEM.





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CENTENNIAL PARK PHASE 0.5 IMPROVEMENTS

Greeley, CO 80634

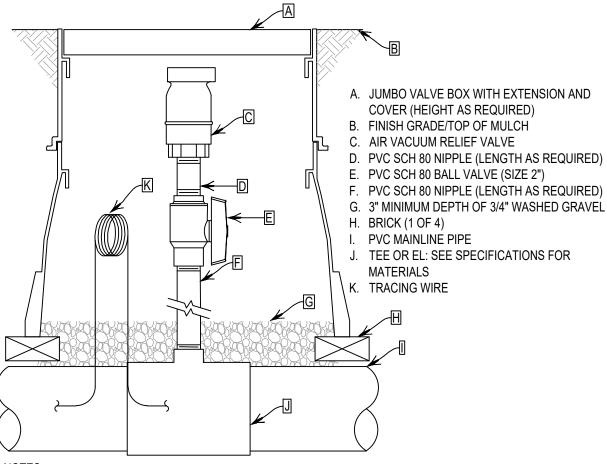
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IRRIGATION DETAILS

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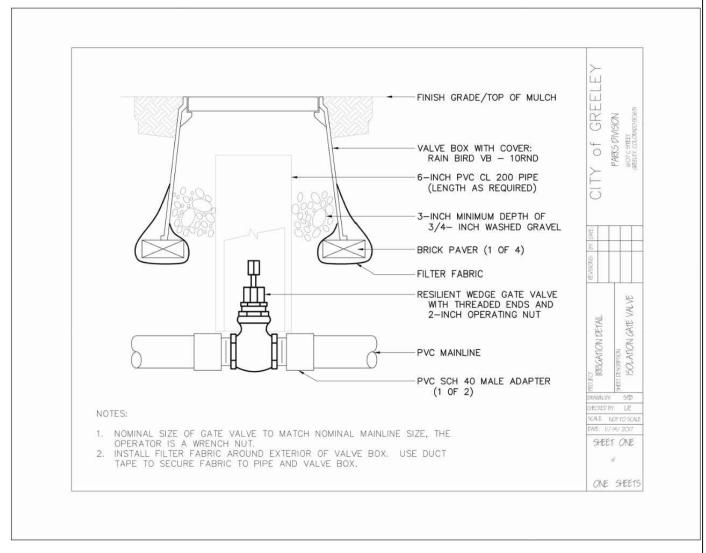
SHEET IR3.0 OF 17



NOTES

- 1. OPEN BALL VALVE IN ASSEMBLY 1/4 TURN UNTIL IRRIGATION SYSTEM IS FULLY CHARGED WITH WATER.
- 2. CLOSE VALVE DURING WINTERIZATION AND OPEN 1/2 TURN AFTER WINTERIZATION OF SYSTEM TO PROTECT VALVE DURING FREEZING WEATHER.
- 3. REPLACE PVC BALL VALVE WITH BRASS BALL VALVE IN THE EVENT AN AIR VACUUM RELIEF VALVE WITH MALE INLET IS USED.





ISOLATION GATE VALVE

ASSEMBLY

ENGINEERING PLANNING SURVEYING

40 + YEARS OF SERVICE

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PHASE 0.5
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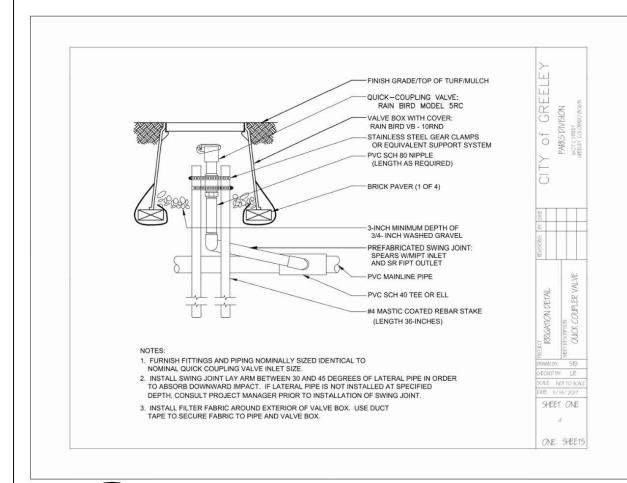
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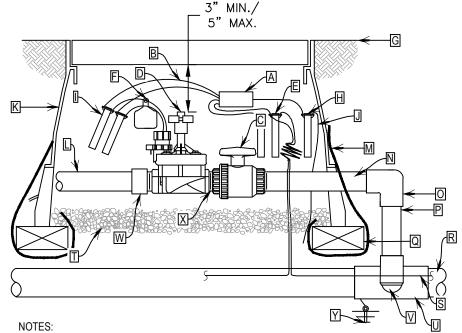
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IRRIGATION DETAILS

SHEET IR3.1 OF 17



QUICK COUPLING VALVE ASSEMBLY

N.T.S.



- 1. USE VALVE BOX EXTENSION AS NECESSARY TO ACHIEVE MINIMUM DIMENSIONS ABOVE ASSEMBLY.
- 2. NOMINAL SIZE OF ALL COMPONENTS ARE TO BE THE SAME NOMINAL SIZE AS THE SOLENOID VALVE (SIZED AS SHOWN).
- 3. INSTALL FILTER FABRIC AROUND EXTERIOR OF VALVE BOX. USE DUCT TAPE TO SECURE FABRIC TO PIPE AND VALVE BOX.
- 4. TRANSITION TO PROPER LATERAL PIPE BURIAL DEPTH USING 45° ELBOW FITTINGS DOWNSTREAM OF REMOTE CONTROL VALVE ASSEMBLY.
- 5. DO NOT CUT OUT ENDS OF VALVE BOX UNNECESSARILY.
- POSITION VALVE BOX OVER VALVE TO ALLOW ACCESS TO SOLENOID AND PROPER OPERATION OF BALL VALVE.
- 7. COIL 5-FEET OF WIRE FOR EACH DECODER FOR SERVICE PURPOSES.
- 8. SEE DECODER GROUNDING SCHEMATIC FOR ADDITIONAL DECODER GROUNDING INFORMATION.

- A. DECODER, REFER TO 'DECODER INSTALLATION' DETAIL
- B. WIRE FROM DECODER TO VALVE SEE SPECIFICATIONS
- C. PVC BALL VALVE
- D. REMOTE CONTROL VALVE
- E. WIRE CONNECTOR FROM TWO-WIRE CABLE TO DECODER (1 OF 2)
- F. CHRISTY ID TAG
- G. FINISH GRADE
- H. WIRE CONNECTOR FROM DECODER GROUND WIRE TO BARE COPPER GROUNDING WIRE
- I. WIRE CONNECTOR FROM DECODER TO SOLENOID VALVE (1 OF 2)
- J. BARE COPPER GROUNDING WIRE TO GROUNDING PLATE/ROD SEE SPECIFICATIONS
- K. JUMBO VALVE BOX WITH COVER (REFER TO LEGEND)
- L. PVC LATERAL PIPE
- M. FILTER FABRIC
- N. PVC SCH 80 TOE NIPPLE (LENGTH AS REQUIRED)
- O. PVC SCH 40 EL
- P. PVC SCH 40 PIPE (LENGTH AS REQUIRED)
- Q. BRICK PAVER (1 OF 4)
- R. PVC MAINLINE
- S. TWO-WIRE CABLE
- T. 3" MINIMUM DEPTH OF 3/4" WASHED GRAVEL
- U. TEE OR EL: SEE SPECIFICATIONS FOR MATERIALS
- V. PVC SCH 80 TOE NIPPLE (LENGTH AS REQUIRED, HIDDEN) AND PVC SCH 40 EL
- W. PVC SCH 40 MALE ADAPTER
- X. PVC SCH 80 CLOSE NIPPLE
- Y. GROUNDING PLATE/ROD (SEE DECODER GROUNDING SCHEMATIC)





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CENTENNIAL PARK
PHASE 0.5
IMPROVEMENTS

221 23rd Ave
Greeley, CO 80634

ISSUED DATE

BID PLAN SET

ISSUED DATE

ISSUED DATE

ISSUED DATE

PROJECT NAMBER

PAPER SIZE

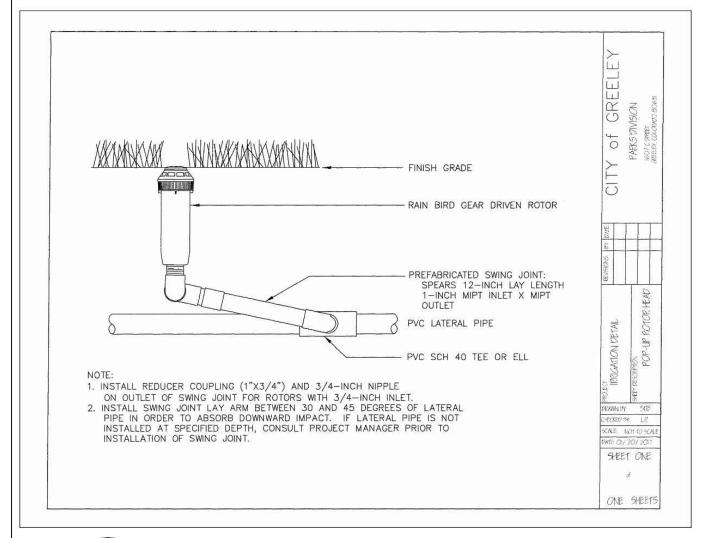
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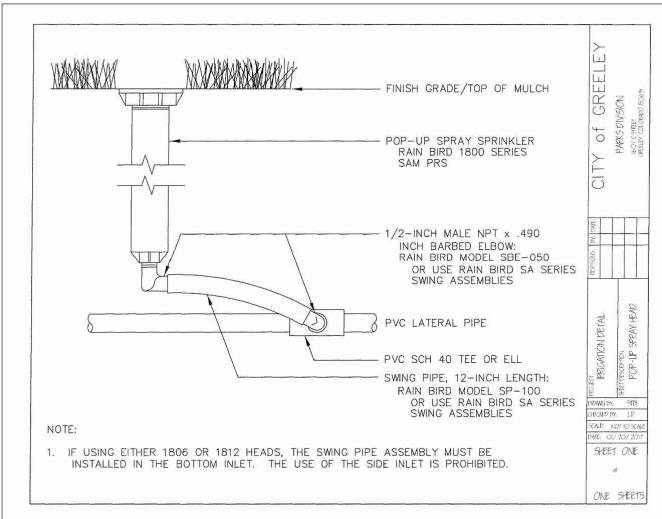
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SHEET IR3.2 OF 17

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POP-UP ROTOR SPRINKLER
ASSEMBLY

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CENTENNIAL PARK PHASE 0.5 IMPROVEMENTS

2201 23rd Ave Greeley, CO 80634 ISSUED NAME

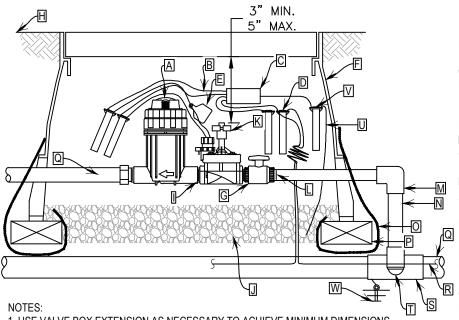
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IRRIGATION DETAILS

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SHEET IR3.3 OF 17



- 1. USE VALVE BOX EXTENSION AS NECESSARY TO ACHIEVE MINIMUM DIMENSIONS ABOVE ASSEMBLY.
- NOMINAL SIZE OF ALL COMPONENTS ARE TO BE THE SAME NOMINAL SIZE AS THE SOLENOID VALVE (SIZED AS SHOWN).
- 3. INSTALL FILTER FABRIC AROUND EXTERIOR OF VALVE BOX. USE DUCT TAPE TO SECURE FABRIC TO PIPE AND VALVE BOX.
- TRANSITION TO PROPER LATERAL PIPE BURIAL DEPTH USING 45° ELBOW FITTINGS DOWNSTREAM OF REMOTE CONTROL VALVE ASSEMBLY.
- 5. DO NOT CUT OUT ENDS OF VALVE BOX UNNECESSARILY.
- POSITION VALVE BOX OVER VALVE TO ALLOW ACCESS TO SOLENOID, AND PROPER OPERATION OF BALL VALVE.
- 7. COIL 3-FEET OF WIRE FOR EACH DECODER FOR SERVICE PURPOSES.
- 8. IN CASES OF DIRECT DRIP LATERAL PIPE CONNECTION INSTALL SCH. 40 PVC BARB FITTING TO PRESSURE REGULATING BASKET. SECURE CONNECTION WITH STAINLESS STEEL PINCH CLAMPS.
- SEE DECODER GROUNDING SCHEMATIC FOR ADDITIONAL DECODER GROUNDING INFORMATION.

- A. PRESSURE REGULATING FILTER
- B. WIRE FROM DECODER TO VALVE SEE SPECIFICATIONS
- C. DECODER
- D. WIRE CONNECTOR FROM TWO-WIRE CABLE TO DECODER (1 OF 2)
- E. CHRISTY I.D. TAG
- F. JUMBO VALVE BOX WITH COVER
- G. PVC BALL VALVE
- H. FINISH GRADE/TOP OF MULCH
- I. PVC SCH 80 NIPPLE
- J. 3" MINIMUM DEPTH OF $\frac{3}{4}$ " WASHED GRAVEL
- K. REMOTE CONTROL VALVE L. PVC SCH 80 TOE NIPPLE
- M. PVC SCH 40 EL
- N. PVC SCH 40 PIPE (TYPICAL) (LENGTH AS REQUIRED)
- © 0. FILTER FABRIC
 - P. BRICK (1 OF 4)
 - Q. MANIFOLD/DRIP LATERAL. SEE NOTE 8.
- R. TWO-WIRE CABLE
- S. TEE OR EL: SEE SPECIFICATIONS FOR MATERIALS
- T. PVC SCH 80 TOE NIPPLE (LENGTH AS REQUIRED, HIDDEN) AND PVC SCH 40 EL
- U. BARE COPPER GROUNDING WIRE TO GROUNDING PLATE/ROD SEE SPECIFICATIONS
- V. WIRE CONNECTOR FROM DECODER GROUND WIRE TO BARE COPPER GROUNDING WIRE
- W. GROUNDING PLATE/ROD (SEE DECODER GROUNDING SCHEMATIC)

- 1 LAWN OR SURFACE TREATMENT
- (2) 6" ROUND JUNCTION BOX, WITH PURPLE LID
- (3) FINISHED GRADE

TURF-2" TO 3" OR |

TOP ⅓ ROOT ZONE

- (4) RECTANGULAR STANDARD OR JUMBO VALVE BOX AS REQUIRED, WITH PURPLE LID
- **5** BURY DEPTH biSENSOR
- (6) SENSOR WIRE -50' INCLUDE WITH EA. SENSOR
- bisensor set length horizontally and blade in vertical position with wires out of bottom
- 8 SUPPORT BLOCK 2 REQUIRED

- RED TO RED AND BLK TO BLK
 IN WATER PROOF SPLICE CAP. DBR/Y OR EQ.
- ① 24 VOLT REMOTE CONTROL VALVE
- 12 TWO-WIRE GAUGE AS PER PLAN
- (3) 12" WIRE BURY OR PER NEC
- SUPPORT BLOCK and FABRIC TYPICAL EACH CORNER (4 REQUIRED)
- GRANULAR MATERIAL FOR DRAINAGE 2" MINUMUM DEPTH
- (6) PRESSURE LINE SIZE PER PLAN

NOTE: THIS BOX MAY BE A
VALVE BOX OR A ROUND BOX. IF
A VALVE BOX WITH VALVE,
CONNECT BICODER FOR
VALVES TO TWO-WIRE AND
WIRE TO THE BISENSOR.

SOIL MOISTURE SENSOR





PLANNING

2290 E. Prospect Road, Ste. 5 FL Collins, CO 80525 (970) 420-0086 CONSULTANT ROLE COMPANY NAME COMPANY ADDRESS CITY, STATE COMPANY PHONE NUMBER

Aqua

Innovative

Water Solutions

Engineering

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CENTENNIAL PARK PHASE 0.5 IMPROVEMENTS

2201 23rd Ave Greeley, CO 80634 ISSUED NAME BID PLAN SET

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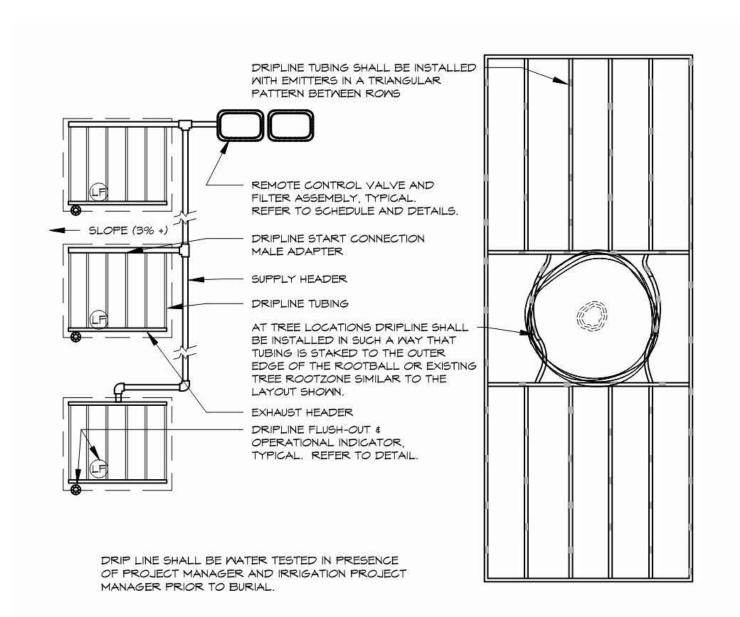
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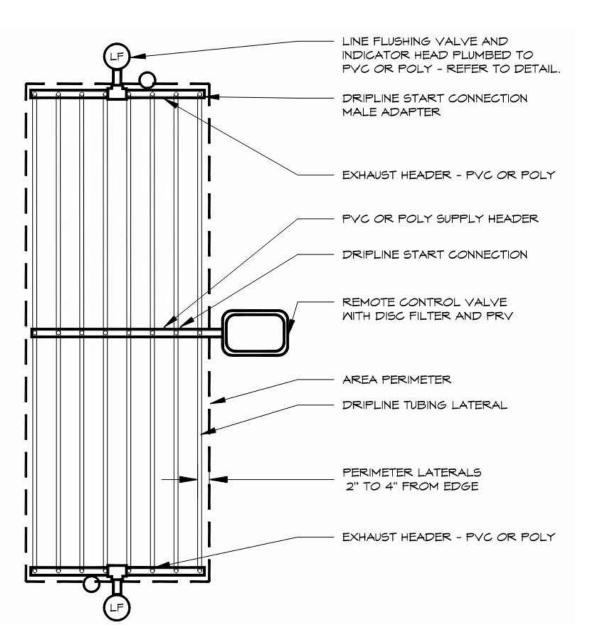
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SHEET IR3.4 OF 17

11"x17"









SUBSURFACE DRIP - TOP VIEW
CENTER FEED LAYOUT - TYPICAL N.T.S.



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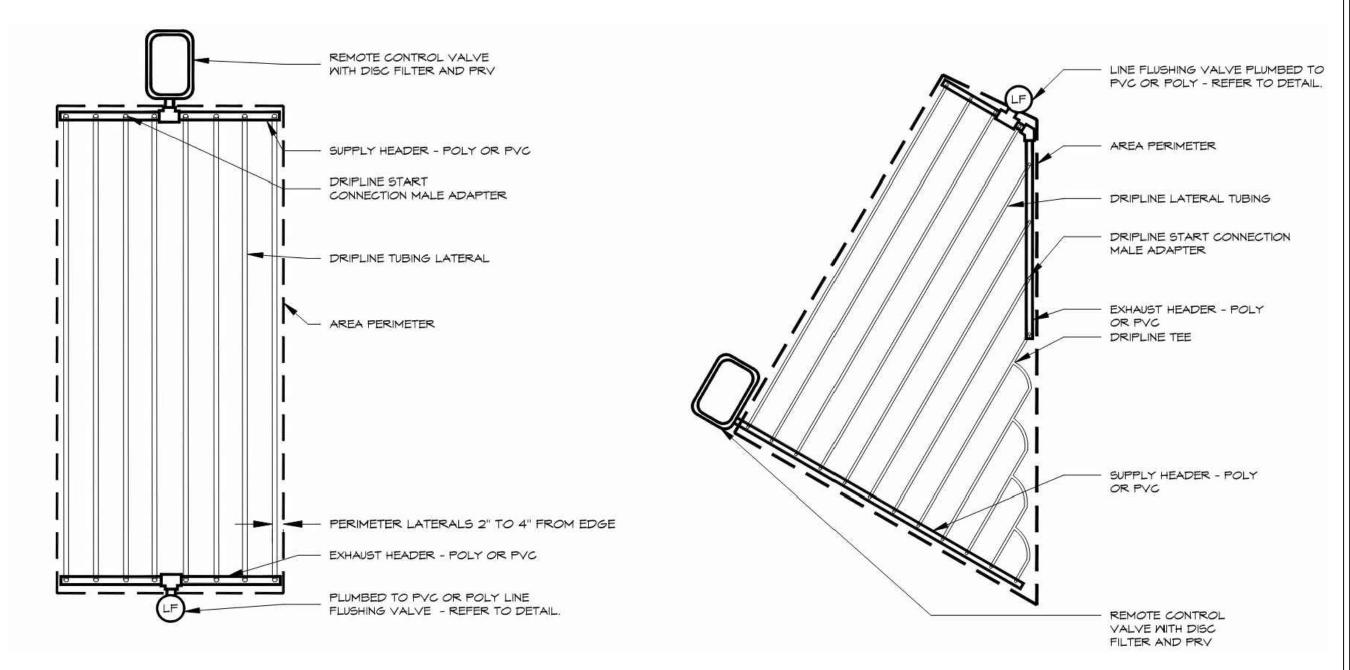
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1/22/2021 CBK
PROJECT NUMBER PAPER SIZE
11"x17"

IRRIGATION DETAILS

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SHEET IR3.5 OF 17



SUBSURFACE DRIP - TOP VIEW END FEED LAYOUT - TYPICAL





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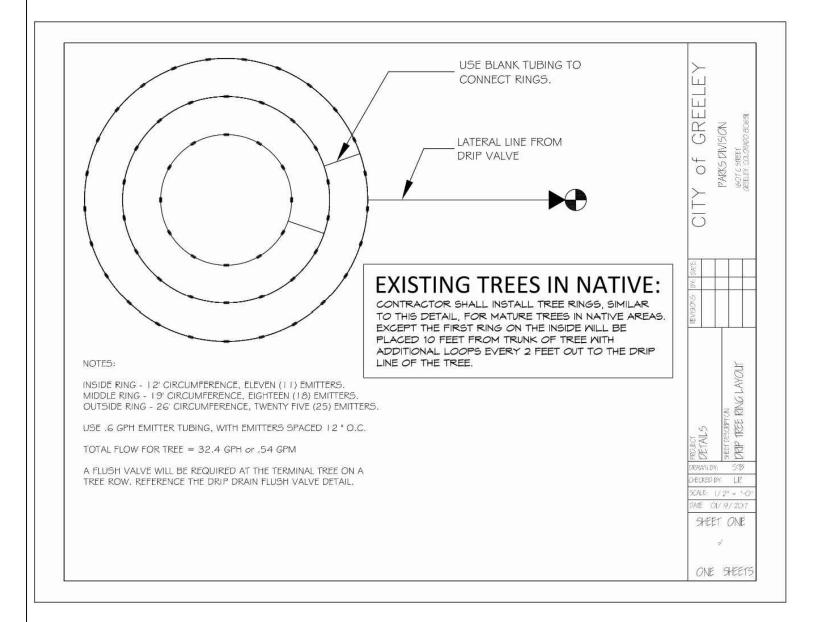
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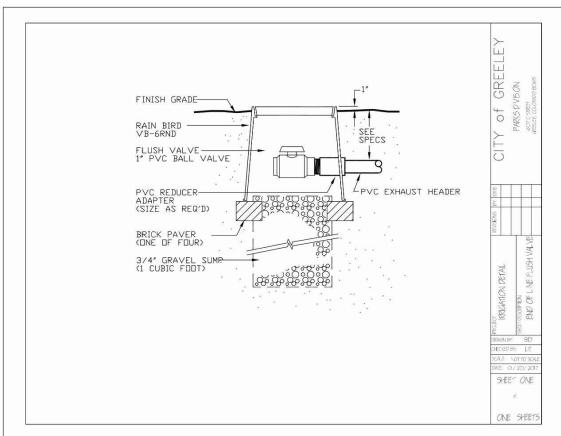
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IRRIGATION DETAILS

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SHEET IR3.6 OF 17









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CENTENNIAL PARK PHASE 0.5 **IMPROVEMENTS**

2201 23rd Ave Greeley, CO 80634

BID PLAN SET

1/22/2021 CBK 11"x17"

IRRIGATION DETAILS

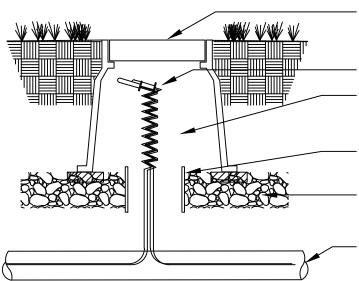
SHEET IR3.7 OF 17

- 1. ALL WIRE CONNECTION SHALL BE MADE WITH APPROVED CONNECTORS.
- 2. MAKE ALL WIRE SPLICES IN VALVE BOXES.
- 3. LEAVE A MINIMUM OF 5' EXTRA WIRE AT ALL SPLICE POINTS.
- 4. TEST EARTH TO GROUND RESISTANCE AT ALL GROUND POINTS.
- 5. EARTH TO GROUND RESISTANCE MUST MEET OR EXCEED MANUFACTURER REQUIREMENTS.
- 6. INSTALL ALL GROUND ASSEMBLIES IN VALVE BOXES.
- 7. INSTALL GROUNDING EQUIPMENT AS INDICATED ON THE IRRIGATION DOCUMENTS AND AS RECOMMENDED BY THE MANUFACTURER.
- A. TWO-WIRE CABLE
- B. VALVE BOX (10" ROUND OR AS NECESSARY)
- C. REMOTE CONTROL VALVE
- D. 5/8" X 8' U.L. LISTED GROUND ROD
- E. DECODER

N.T.S.

- F. LINE SURGE PROTECTOR
- G. BARE AWG #10 COPPER WIRE
- H. 3M DBR/Y-6 CONNECTION
- I. BARE COPPER CONNECTION ("CADWELD")
- J. REMOTE CONTROL VALVE ASSEMBLY





10" ROUND VALVE BOX WITH BOLT DOWN COVER.

FINISHED GRADE.

3M DBRY CONNECTORS, TYP.

2-WIRE ACCESS LOOP, COIL 24" OF WIRE AROUND A 3/4" PIPE NIPPLE (10 REVOLUTIONS MINIMUM).

4" CL200 PVC SLEEVE TO ALLOW FOR COMPACTION OF GRAVEL LEVELING BED.

3/4" CRUSHED GRANITE COMPACTED TO 95% M.P.D., EXTEND BEYOND VALVE BOX IN ALL DIRECTIONS AS SPECIFIED.

MAINLINE INSTALLED AT SPECIFIED DEPTH WITH 2-WIRE CABLE IN TRENCH ADJACENT TO MAINLINE. SEE IRRIGATION TRENCH DETAIL.

- 1. SET TOP OF BOX LEVEL WITH FINISHED GRADE IN TURF AREAS AND LEVEL WITH TOP OF MULCH IN SHRUB BEDS.
- 2. USE STANDARD RECTANGULAR VALVE BOX WITH BOLT DOWN LID FOR SPLICES OF MORE THAN TWENTY (20) WIRES.

WIRE SPLICE BOX

TWO-WIRE SYSTEM





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CENTENNIAL PARK PHASE 0.5 **IMPROVEMENTS**

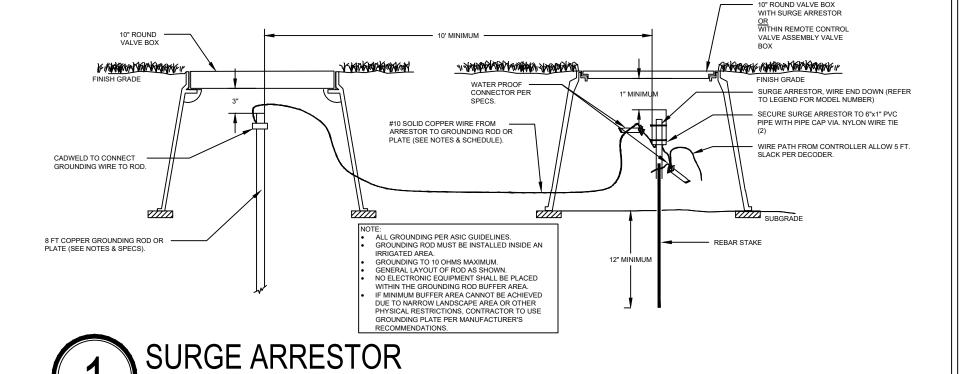
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BID PLAN SET

1/22/2021 11"x17"

IRRIGATION DETAILS

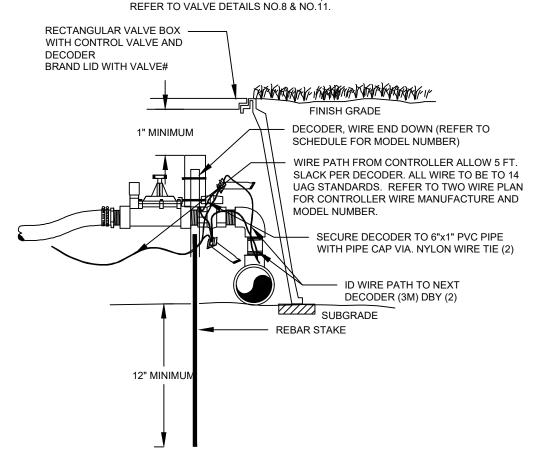
SHEET IR3.8 OF 17



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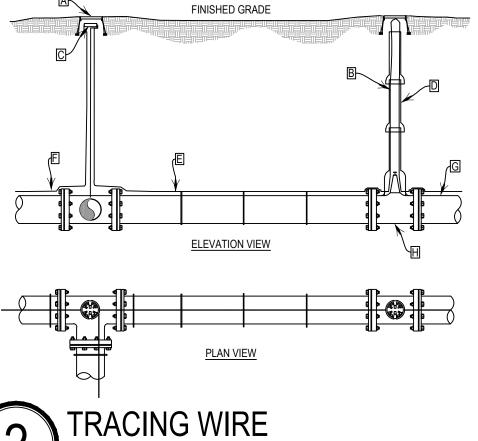
ASSEMBLY

2-WIRE SYSTEM, INSTALL DECODERS ON ALL CONTROL VALVES (COIL 5' OF 2-WIRE CABLE INTO EACH VALVE BOX)



DECODER INSTALLATION

TWO-WIRE SYSTEM



- A. 10" ROUND VALVE BOX
- B. INSTALL TRACING WIRE TO THE TOP OF VALVE BOX
- C. WATER PROOF CONNECTION (SEE SPECIFICATIONS)
- D. PIPE SLEEVE SEE VALVE DETAIL
- E. TAPE COPPER WIRE TO TOP OF PIPE EVERY 10 FT.
- F. CONTINUOUS LOOP COPPER TRACING WIRE (SEE SPECIFICATIONS)
- G. PVC PIPE
- H. TYP. VALVE

NOT

N.T.S.

- COPPER TRACING WIRE WILL START AT EACH PUMP STATION (DOGLEG DISCHARGE BELOW GRADE) AND WILL BE ROUTED WITH ALL MAINLINE PIPE AND CENTER PIVOT PIPE.
- 2. SPLICE TRACING WIRE IN IRRIGATION MAINLINE COMPONENT VALVE BOXES WHEN POSSIBLE, OTHERWISE, PLACE SPLICE IN SEPARATE VALVE BOX.



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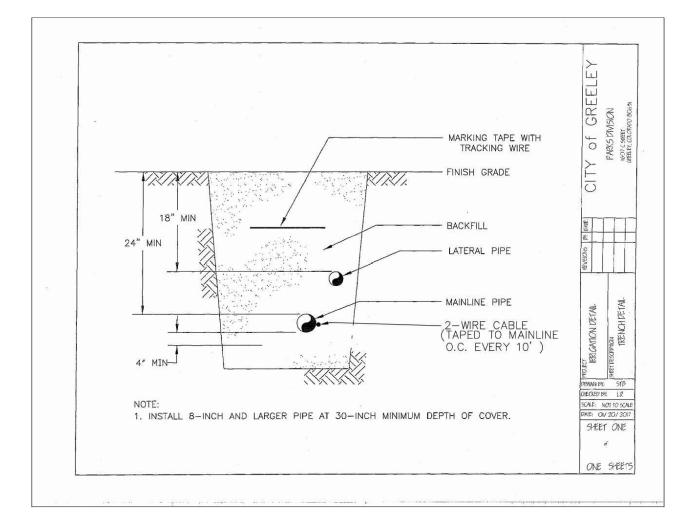
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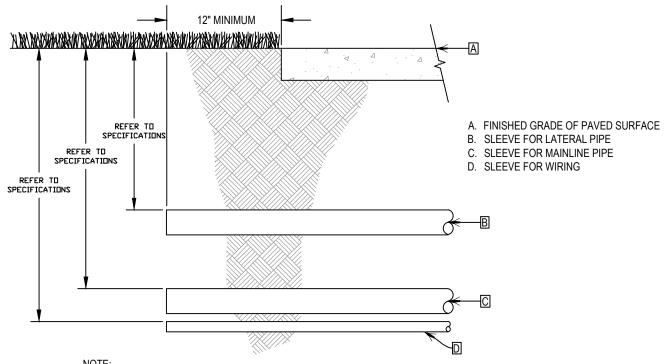
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IRRIGATION DETAILS

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SHEET IR3.9 OF 17





1. INSTALL SLEEVE SO THAT ITS LOWEST ELEVATION OCCURS AT ONE OR BOTH ENDS - NOT

1 TRENCH DETAIL



N.T.S.

ALONG ITS LENGTH.

N.T.S.

ENGINEERING PLANNING SURVEYING

Civil Engineering AVI Professional Corporation 2290 E. Prospect Road, Ste. 5 Ft. Collins, CO 80525 (970) 420-0086

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CENTENNIAL PARK PHASE 0.5 IMPROVEMENTS

2201 23rd Ave Greeley, CO 80634 ISSUED NAME

BID PLAN SET

1/22/2021 CBK
PROJECT NUMBER PAPER SIZE
11"X17"

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SHEET IR3.10 OF 17