

NOTES:

1. REFER TO SPECIFICATIONS CLAUSE 14.06 FOR STREET TREE SPACING, LOCATION, AND SIZE.
2. ONLY PRODUCTS LISTED IN THE CITY'S APPROVED PRODUCTS LIST OR APPROVED BY THE CITY ENGINEER ARE ACCEPTED FOR INSTALLATION.

APPROVED TREE SPECIES
AS PER PLANTING PLAN

PRUNE FOR CLEARANCE AND FOR
TREE HEALTH AS PER SECTION 14.0

NOTE: PLANT TREE WITH NURSERY SOIL LINE
AT 50mm ABOVE FINISH GRADE. FORM 50mm
DEEP SAUCER AT BASE OF TREE.

75mm DEPTH BARK MULCH TO
600mm RADIUS AT TREE.

SOD ON 150mm DEPTH TOPSOIL
AS PER SPECIFICATION.

150mm MIN. DEPTH "A HORIZON"
AMENDED TOPSOIL PER SPECIFICATIONS.

PROVIDE 12mm FREEBOARD
BETWEEN FINISHED GRADE AND
ADJACENT PAVED SURFACES.

300 mm DEPTH IRRIGATION WITH MINIMUM
TWO TREE BUBBLERS AS PER SECTION
14.08.04 AND STANDARD DRAWING I10

300mm MIN. DEPTH IRRIGATION
TRENCH

UNTIE AND REMOVE TOP 1/3 OF BURLAP
FROM ROOTBALL.

NOTE: BALLED AND BURLAP TREE IS
ILLUSTRATED. IF CONTAINER OR BAG
GROWN TREES ARE USED, COMPLETELY
REMOVE IMPERISHABLE CONTAINERS.

SUBSOIL (REFER TO CLAUSE 14.17 OF
SPECIFICATIONS).

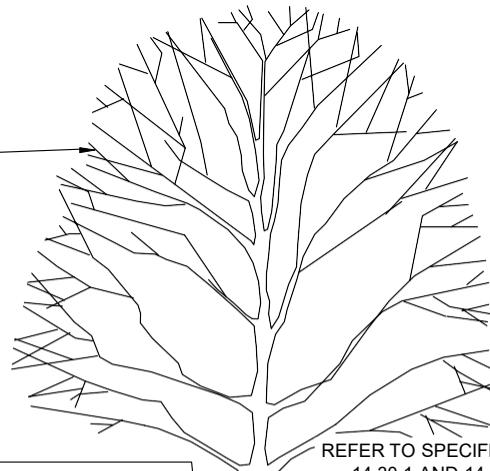
ROUGHEN PIT BOTTOM AND SIDES
TO REMOVE GLAZING.

UNDISTURBED NATIVE SOILS OR
COMPACTED SUBGRADE.

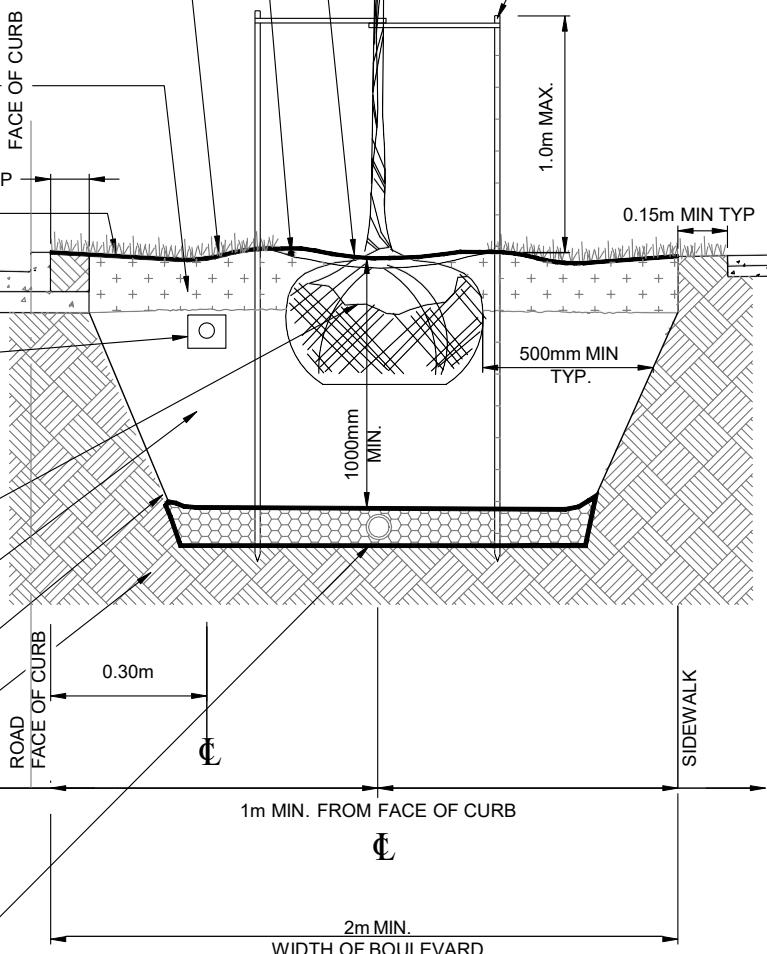
AS PER THE CITY ENGINEERS DIRECTION
INSTALL PVC DRAIN IN 150mm DEPTH DRAINROCK
C/W FILTERCLOTH AND DRAIN TO STORM SEWER.

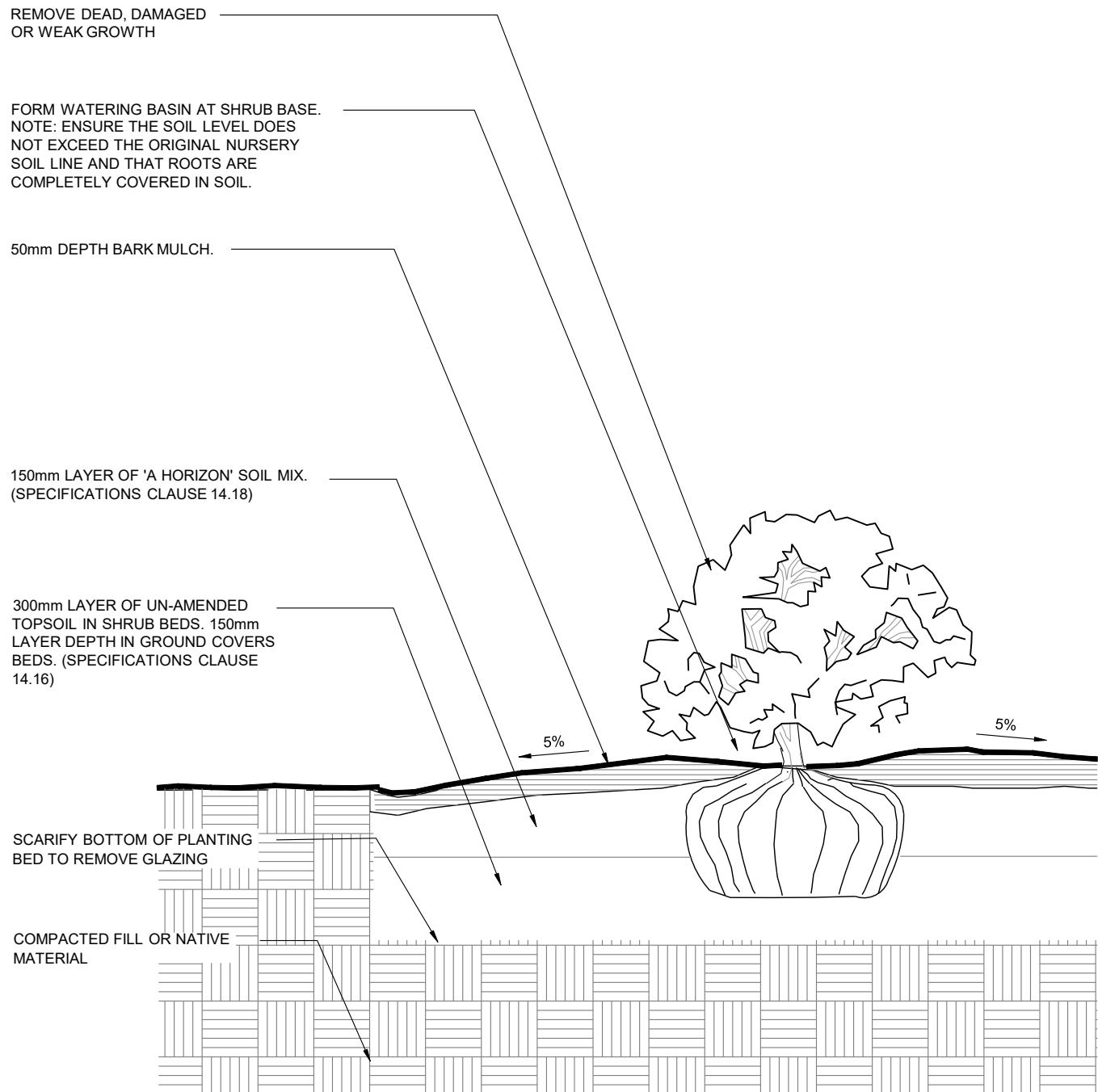
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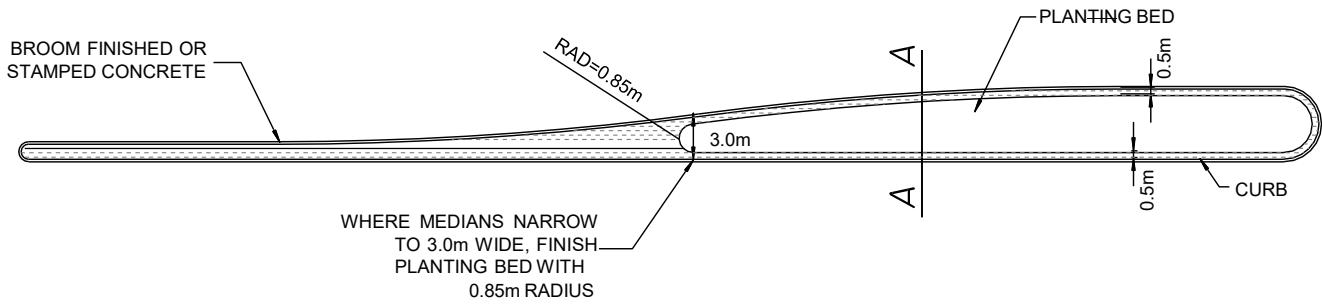
- ONLY PRODUCTS LISTED IN THE CITY'S APPROVED PRODUCTS LIST OR APPROVED BY THE CITY ENGINEER ARE ACCEPTED FOR
INSTALLATION.



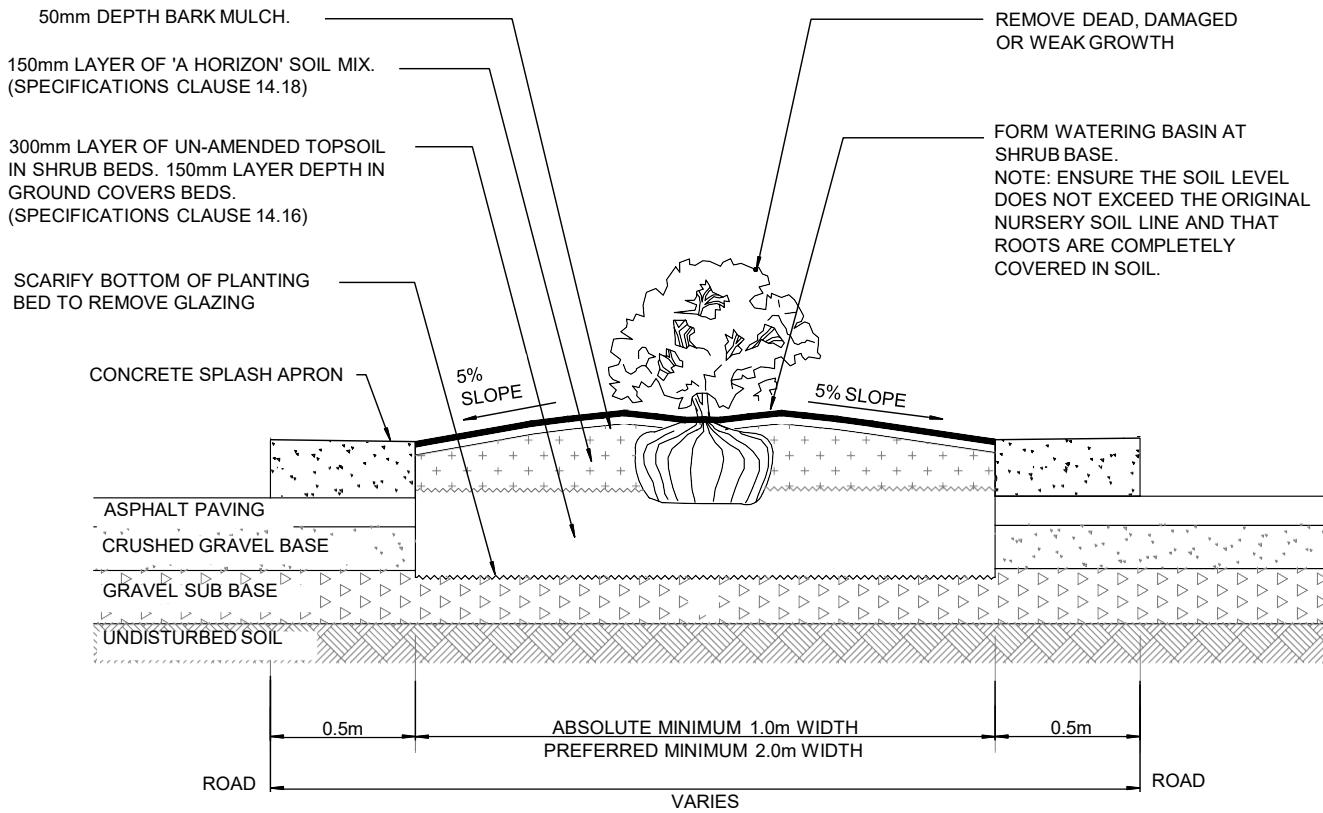
REFER TO SPECIFICATION CLAUSE
14.30.1 AND 14.59 FOR S
MATERIALS AND INSTALLATION.
STAKING SHALL BE
DONE AT THE
DISCRETION OF THE
CITY ENGINEER







PLAN VIEW



SECTION VIEW A

NOTES:

1. FOR CENTER MEDIAN DETAILS SEE SECTION 8, STD DWG CS-7
2. ONLY PRODUCTS LISTED IN THE CITY'S APPROVED PRODUCTS LIST OR APPROVED BY THE CITY ENGINEER ARE ACCEPTED FOR INSTALLATION.
3. BASE AND SUB-BASE REQUIREMENTS AS PER SECTION 9.0.
4. CONCRETE REQUIREMENTS AS PER SECTION 11.0.



SHRUB PLANTING IN MEDIAN

APPROVED TREE SPECIES AS PER SECTION 14.05,
PRUNE FOR CLEARANCE AS PER (REFER TO SECTION 14.02) AND FOR TREE HEALTH (CLAUSE AS PER SECTION 14.26).

NOTE: PLANT TREE WITH NURSERY SOIL LINE AT 50mm ABOVE FINISH GRADE. FORM 50mm DEEP EARTH SAUCER AT BASE OF TREE.

75mm DEPTH OF BARK MULCH.

PREPARE ROOTBALL PER CLAUSE 14.59.5

CONCRETE SIDEWALK
BASE

150mm DEPTH "A HORIZON"
AMENDED TOPSOIL PER CLAUSE 14.18

300 mm DEPTH IRRIGATION WITH MINIMUM TWO TREE BUBBLERS AS PER SECTION 14.08.04 AND STANDARD DRAWING I10

STRUCTURAL FILL IN LONGITUDINAL TRENCH (VERTICAL SIDES NOT NECESSARY)

UNDISTURBED NATIVE SOILS
OR COMPAKTED SUBGRADE.

REFER TO SPECIFICATION CLAUSE 14.30.1 AND 14.59 FOR STAKING MATERIALS AND INSTALLATION. STAKING SHALL BE DONE AT THE DISCRETION OF THE CITY ENGINEER

METAL TREEGRATE REFER TO SECTION 14.30

AIR SPACE, 50mm DEPTH
CONCRETE BENCHING FOR METAL TREE GRATE INSTALLATION.

REFER TO SECTION 14.59 STANDARD DRAWING P-6.

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40mm

SIDEWALK

BASE

GROWING MEDIUM TO BCLS (LATEST EDITION)

STRUCTURAL SOIL TO 95% M.P.D. (SEE PLAN)
OR ENGINEERING MODULAR SOIL CELL SYSTEM

SECTION VIEW

NOTES:

1. ALL WORK AND MATERIALS ARE TO BE AS DESCRIBED IN THE CITY OF NANAIMO MANUAL OF ENGINEERING STANDARDS & SPECIFICATIONS LATEST EDITION OR AS OTHERWISE APPROVED BY THE CITY ENGINEER.
2. REQUIRED VOLUME OF GROWING MEDIUM IS 10m³, TO A DEPTH OF 800mm FOR EACH TREE. REFER TO TABLE IN CLAUSE 14.58.8.
3. FINAL TREE LOCATIONS MAY BE VARIED IF CERTIFIED BY A LANDSCAPE ARCHITECT AND THE CITY OF NANAIMO.
4. IF POOR DRAINAGE CONDITIONS EXIST, PROVIDE POSITIVE SUB-SURFACE DRAINAGE AWAY FROM PLANTING EXCAVATION.
5. IRRIGATION REQUIRED TO CITY OF NANAIMO STANDARDS WHERE REQUIRED BY CITY ENGINEER.
6. SEE DRAWING P-2 FOR REQUIRED DETAILS AND WORKS.
7. ONLY PRODUCTS LISTED IN THE CITY'S APPROVED PRODUCTS LIST OR APPROVED BY THE CITY ENGINEER ARE ACCEPTED FOR INSTALLATION.
8. CURB AND SIDEWALK AS PER SECTION 8.0
9. BASE AND SUB-BASE REQUIREMENTS AS PER SECTION 9.0.
10. CAST-IN PLACE CONCRETE REQUIREMENTS AS PER SECTION 11.0.



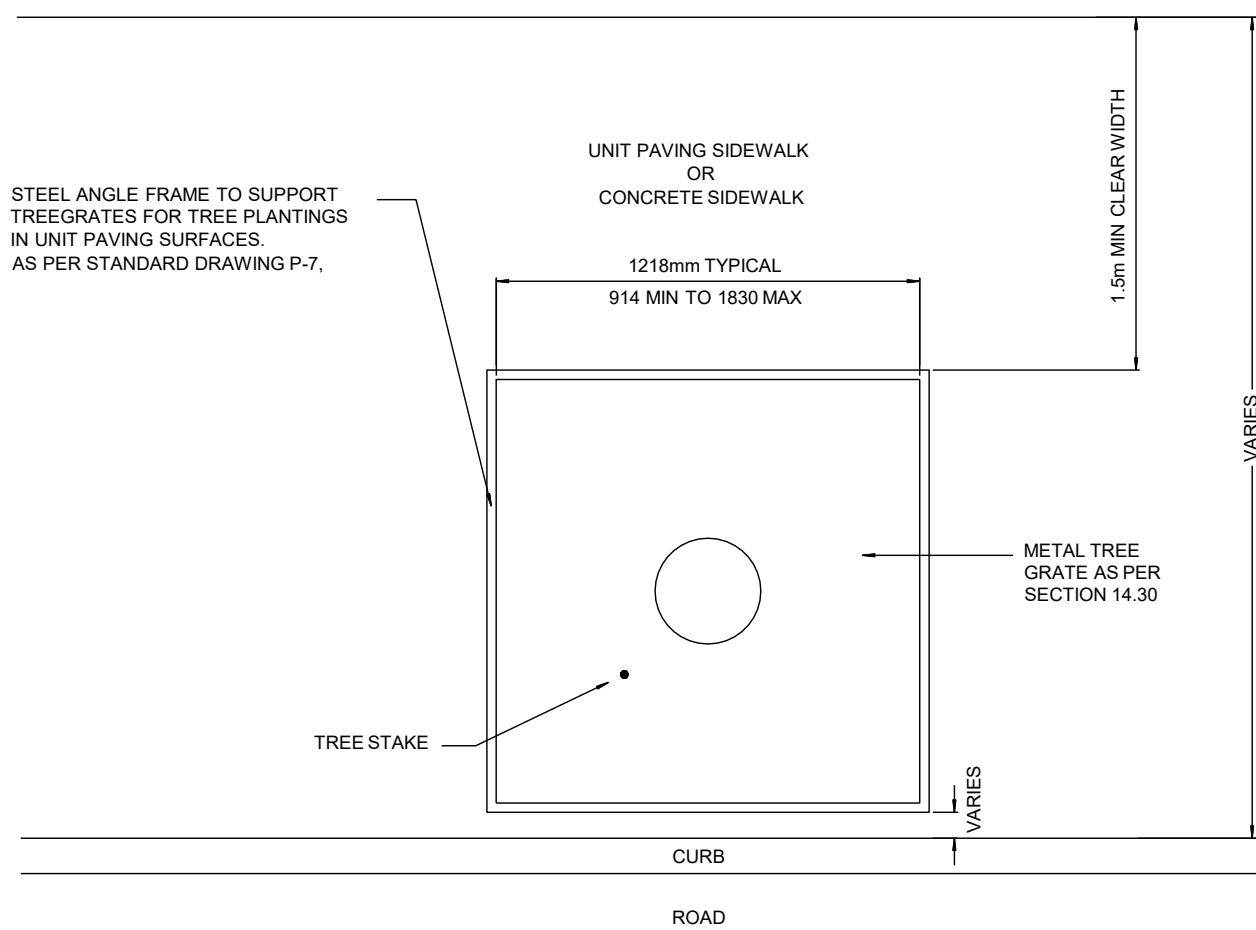
TREE PLANTING IN CONCRETE SIDEWALK

Scale: NTS

Created: MAY 2013

Rev Date: MAY 2020

Dwg No: P-5



NOTE:

1. REFER TO SECTION 14.30 FOR SPECIFICATIONS AND 14.59 FOR INSTALLATIONS.
2. ALLOWABLE TREE GRATE SIZE SHALL BE 1219mm x 1219mm WITH A MINIMUM SIZE OF 914mm AND A MAXIMUM SIZE OF 1830mm.
3. INSTALL TREES TO MINIMIZE CONFLICTS WITH UTILITIES, BUILDING, STRUCTURES, PEDESTRIAN, AND VEHICULAR TRAFFIC.
4. INSTALL TREE STAKES AS PER CITY ENGINEERS DIRECTION. REFER TO SECTIONS 14.30 AND 14.59 FOR MATERIALS AND INSTALLATION SPECIFICATIONS.
5. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE SHOWN.
6. ONLY PRODUCTS LISTED IN THE CITY'S APPROVED PRODUCTS LIST OR APPROVED BY THE CITY ENGINEER ARE ACCEPTED FOR INSTALLATION.
7. CURB AND SIDEWALK AS PER SECTION 8.0

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TREE GRATE PLAN VIEW

Scale: NTS
Created: MAY 2013
Rev Date: MAY 2013
Dwg No: P-6

NOTE: PLANT TREE WITH NURSERY SOIL LINE AT 50mm ABOVE FINISH GRADE. FORM 50mm DEEP EARTH SAUCER AT BASE OF TREE.

75mm DEPTH BARK MULCH.

METAL TREE GRATE

150mm DEPTH "A HORIZON" AMENDED TOPSOIL PER CLAUSE 14.18

UNIT PAVING SURFACE BASE

PREPARE ROOTBALL PER CLAUSE 14.59.5

300 mm DEPTH IRRIGATION WITH MINIMUM TWO TREE BUBBLERS AS PER SECTION 14.08.04 AND STANDARD DRAWING I10

UNDISTURBED NATIVE SOILS OR COMPACTED SUBGRADE.

AS PER THE CITY ENGINEERS DIRECTION

STRUCTURAL FILL IN LONGITUDINAL TRENCH (VERTICAL SIDES NOT NECESSARY)

100mm (4") PVC AIR VENT TO SURFACE

REFER TO SPECIFICATION CLAUSE 14.30.1 AND 14.59 FOR STAKING MATERIALS AND INSTALLATION. STAKING SHALL BE DONE AT THE DISCRETION OF THE CITY ENGINEER

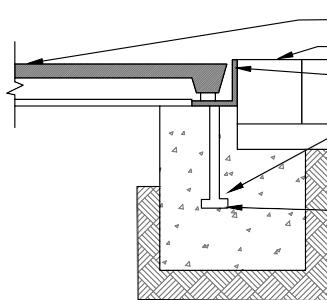
STEEL ANGLE IRON FRAME FOR TREE GRATE INSTALLATION
REFER TO DETAIL BELOW AND STANDARD DRAWING P-6.15

UNIT PAVING SURFACE

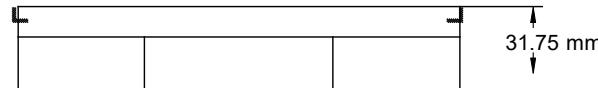
BASE

GROWING MEDIUM TO BCLS (LATEST EDITION)

SECTION VIEW



TREE GRATE FRAME INSTALLATION DETAIL FOR PAVERS WITHOUT CONCRETE BASE



SECTION

TREE GRATE STEEL ANGLE IRON FRAME DETAIL

NOTES:

1. PRUNE APPROVED TREE SPECIES FOR CLEARANCE AND FOR TREE HEALTH AS PER SECTION 14.0.
2. TREE GRATE INSTALLATION SHALL BE AS PER THE MANUFACTURERS SPECIFICATION.
3. ALL WORK AND MATERIALS ARE TO BE AS DESCRIBED IN THE CITY OF NANAIMO MANUAL OF ENGINEERING STANDARDS & SPECIFICATIONS LATEST EDITION OR AS OTHERWISE APPROVED BY THE CITY ENGINEER.
4. REQUIRED VOLUME OF GROWING MEDIUM IS 10m³, TO A DEPTH OF 800mm FOR EACH TREE. REFER TO TABLE IN SECTION 14.58.8
5. FINAL TREE LOCATIONS MAY BE VARIED IF CERTIFIED BY A LANDSCAPE ARCHITECT AND THE CITY OF NANAIMO.
6. IF POOR DRAINAGE CONDITIONS EXIST, PROVIDE POSITIVE SUB-SURFACE DRAINAGE AWAY FROM PLANTING EXCAVATION.
7. IRRIGATION REQUIRED TO CITY OF NANAIMO STANDARDS WHERE REQUIRED BY CITY ENGINEER.
8. SEE STANDARD DRAWING P-2 FOR REQUIRED DETAILS AND WORKS.
9. ONLY PRODUCTS LISTED IN THE CITY'S APPROVED PRODUCTS LIST OR APPROVED BY THE CITY ENGINEER ARE ACCEPTED FOR INSTALLATION.
10. BASE AND SUB-BASE REQUIREMENTS AS PER SECTION 9.0.
11. CAST-IN PLACE CONCRETE REQUIREMENTS AS PER SECTION 11.0.
12. CONCRETE SURFACE TREATMENT AS PER SECTION 13.0.

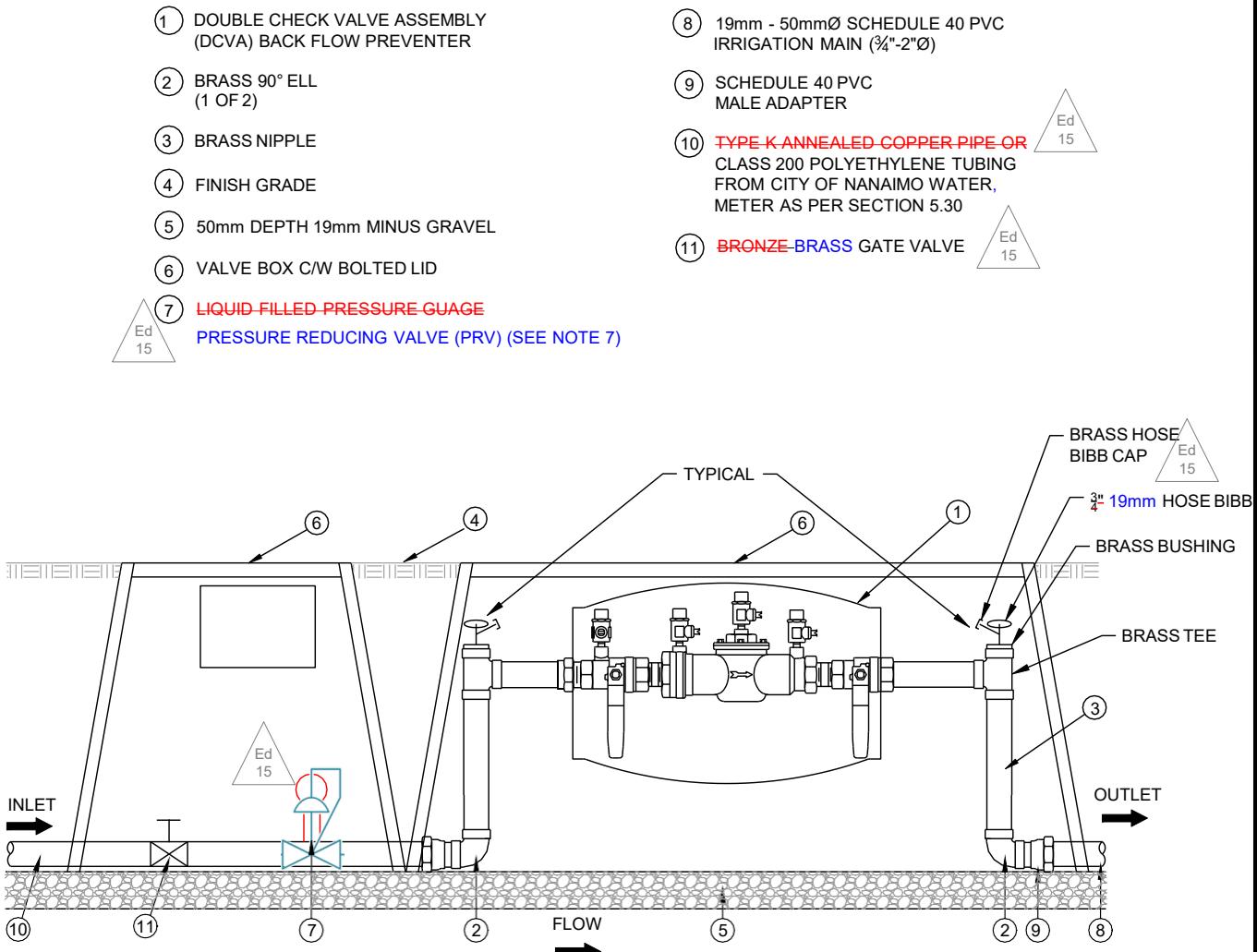
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CITY OF NANAIMO
THE HARBOUR CITY

TREE PLANTING IN UNIT PAVING SURFACE

Scale: NTS
Created: MAY 2013
Rev Date: MAY 2020
Dwg No: P-7



NOTES:

1. SUPPLY CONNECTION FROM MAIN TO WATER METER TO CITY OF NANAIMO ENGINEERING STANDARDS AND SPECIFICATIONS BY CITY FORCES AT OWNERS EXPENSE.
2. **ONLY PRODUCTS APPROVED BY THE CITY ENGINEER AND LISTED ON THE CITY OF NANAIMO APPROVED PRODUCTS LIST WILL BE ACCEPTED FOR INSTALLATION. ONLY PRODUCTS LISTED IN THE CITY'S APPROVED PRODUCTS LIST OR APPROVED BY THE CITY ENGINEER ARE ACCEPTED FOR INSTALLATION.**
3. AS PER SECTION 5 WATER SYSTEM CROSS CONNECTION CONTROL.
4. **DOUBLE CHECK VALVE ASSEMBLY (DCVA) FOR SYSTEMS WITHOUT INJECTION OF CHEMICALS. IF CHEMICALS ARE USED REDUCED PRESSURE (RP) ASSEMBLY SHALL BE REQUIRED.**
5. SUBJECT TO APPROVAL BY THE CITY ENGINEER, AN ASSE 1060 CLASS 2 FROST PROTECTION ENCLOSURE MAY BE USED.
6. **WHERE STATIC WATER PRESSURE MAY EXCEED 550 KPA (80 PSI), INSTALL A PRESSURE REDUCING VALVE (PRV).**



19MM mm TO 50MM mm DIAMETER
SERVICE IRRIGATION BACKFLOW
PREVENTER AND POINT OF CONNECTION

Scale: NTS

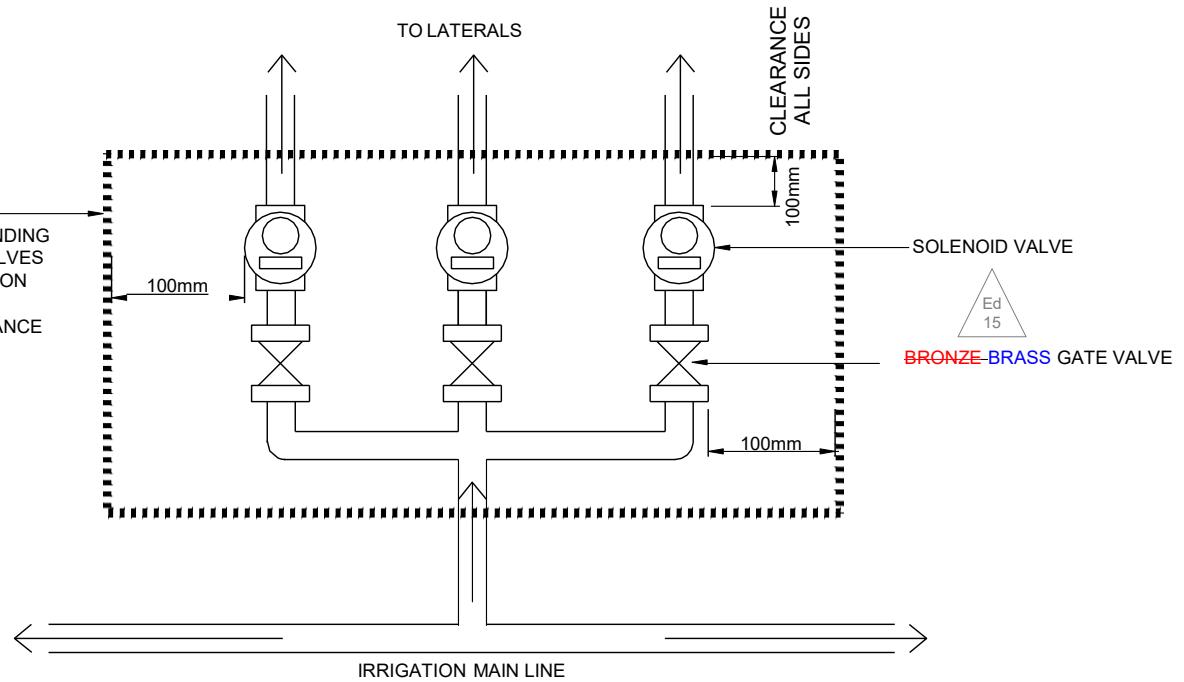
Created: MAY 2013

Rev Date: MAY 2020

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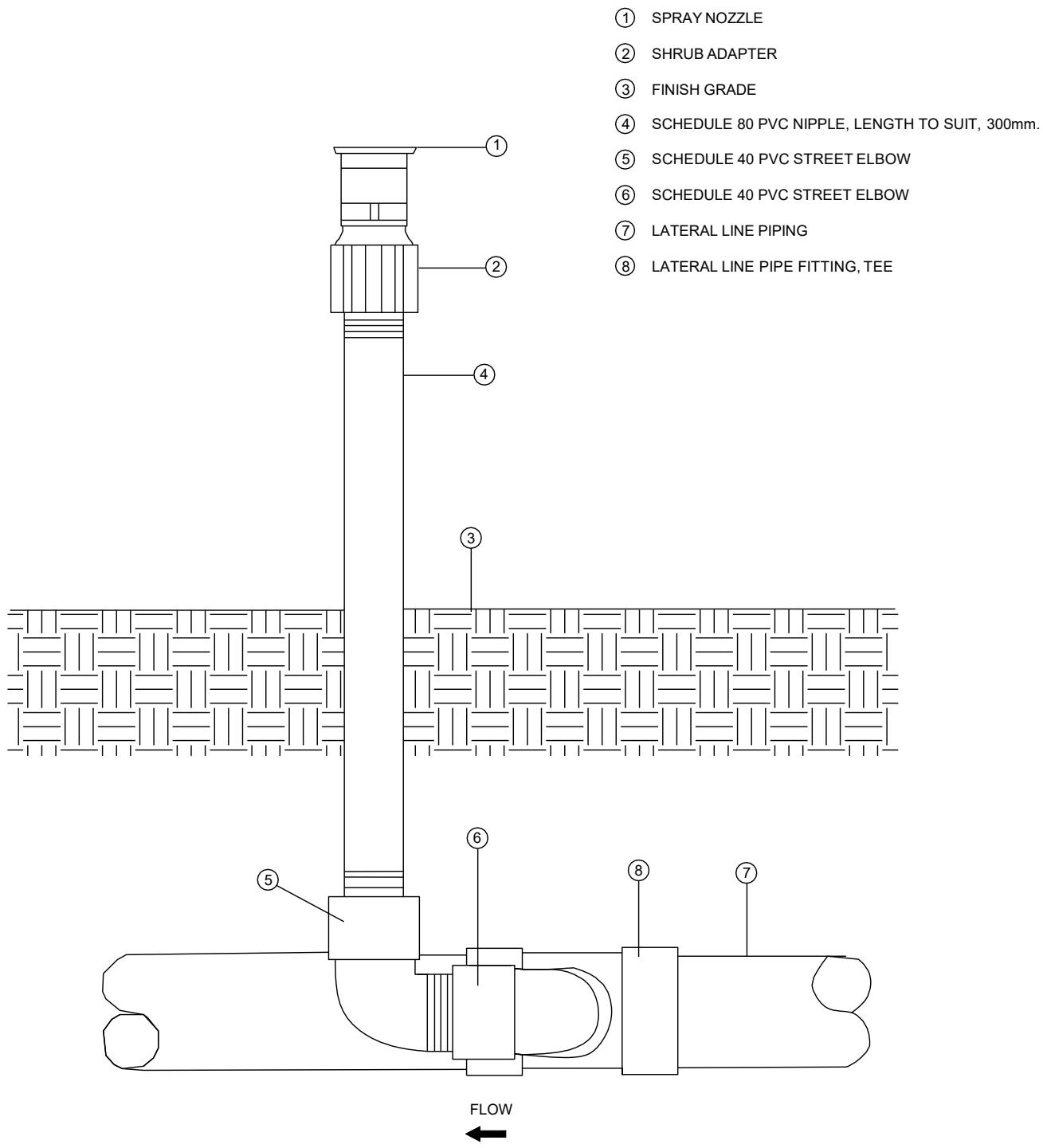
VALVE BOX SCHEMATIC
PIPING CONFIGURATION
AT VALVE CLUSTER



Scale: NTS
Created: MAY 2013
Rev Date: MAY 2020
Dwg No: I-3

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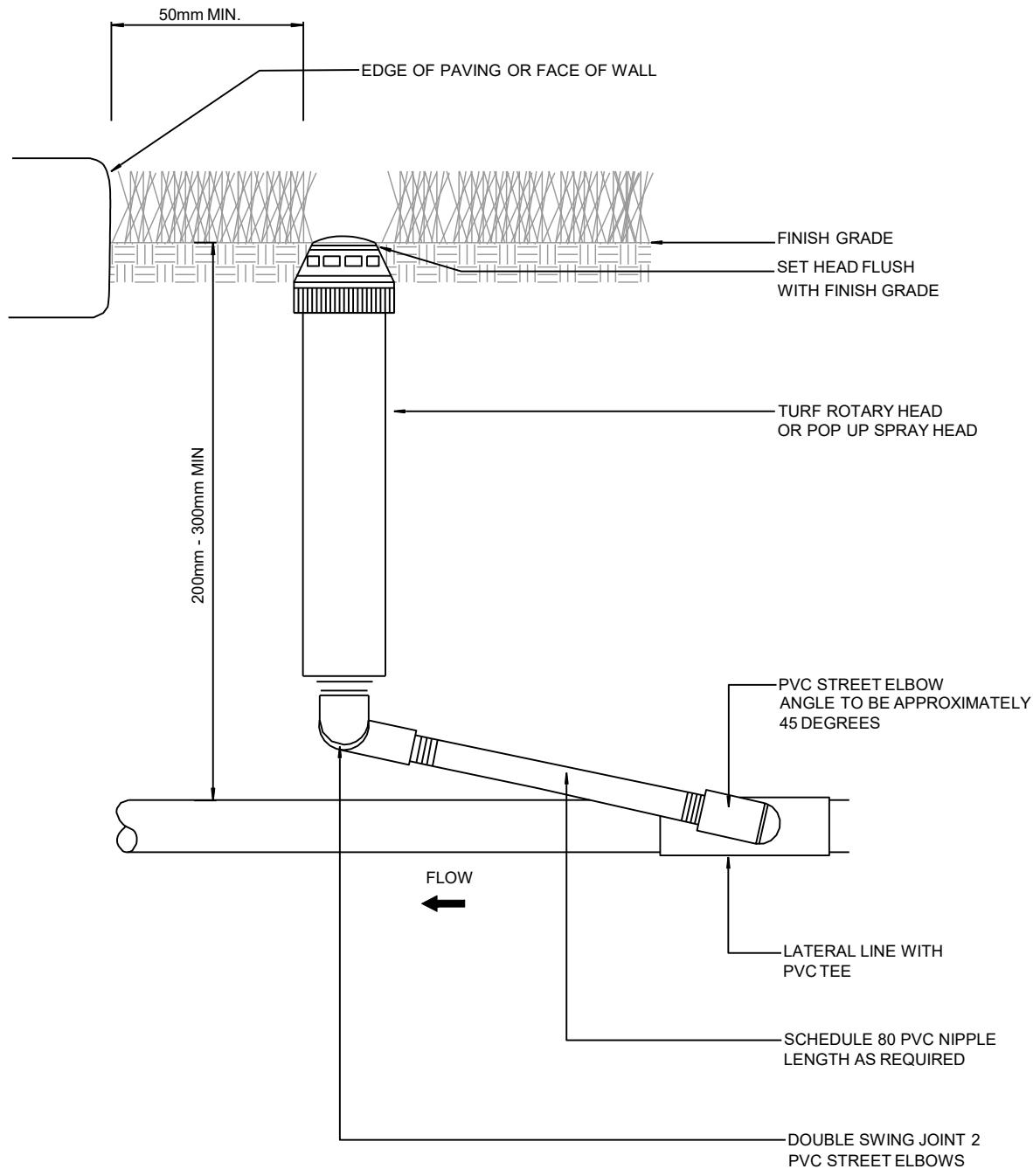
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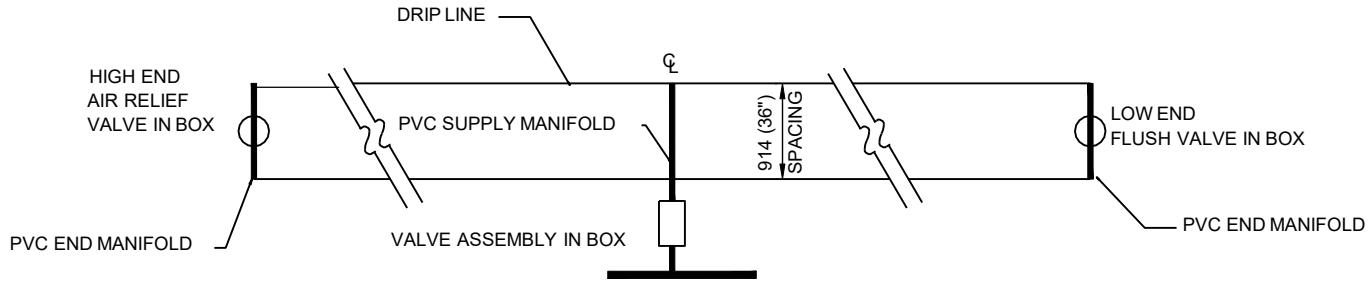
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1. THREAD SEAL TAPE (PTFE TAPE) ALL THREADED JOINTS.
2. FOR DESIGN CRITERIA, SPECIFICATION AND INSTALLATION REFER TO SECTION 14.0 WRITTEN SPECIFICATIONS.
3. **ONLY PRODUCTS APPROVED BY THE CITY ENGINEER AND LISTED ON THE CITY OF NANAIMO APPROVED PRODUCTS LIST WILL BE ACCEPTED FOR INSTALLATION. ONLY PRODUCTS LISTED IN THE CITY'S APPROVED PRODUCTS LIST OR APPROVED BY THE CITY ENGINEER ARE ACCEPTED FOR INSTALLATION.**

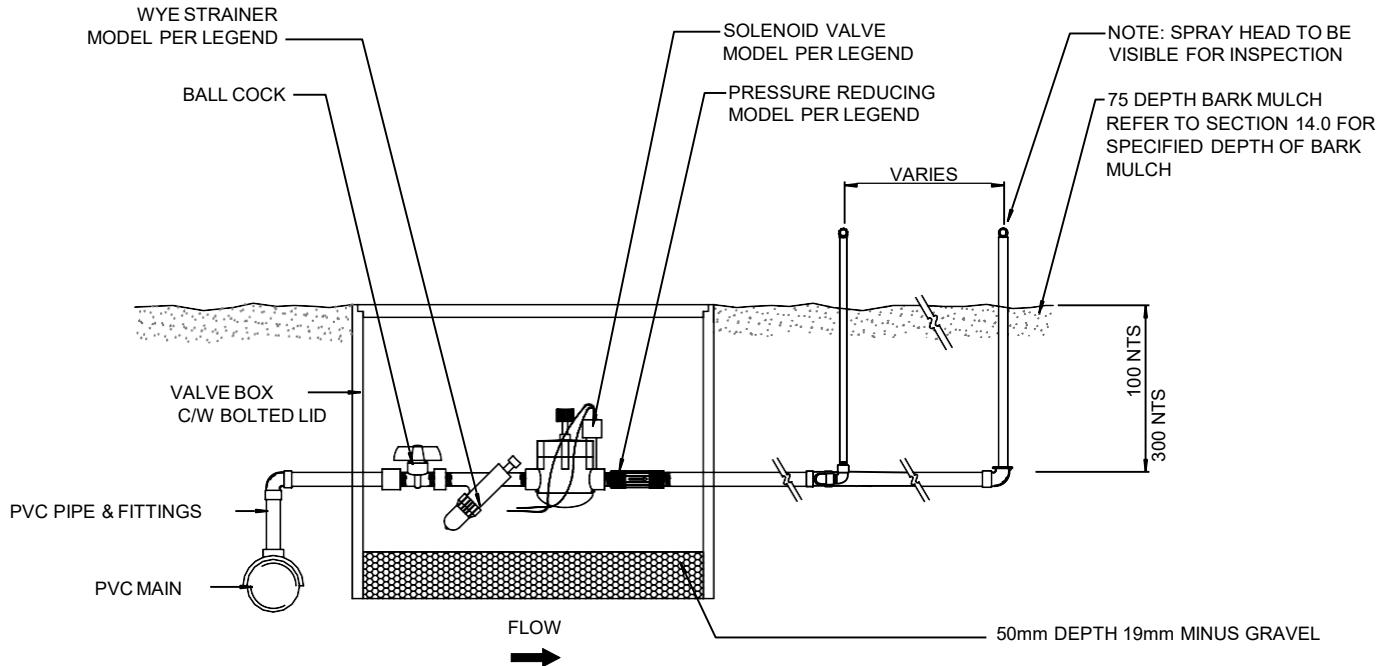


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2. FOR DESIGN CRITERIA SPECIFICATIONS AND INSTALLATIONS REFER TO SECTION 14.0 WRITTEN SPECIFICATIONS.



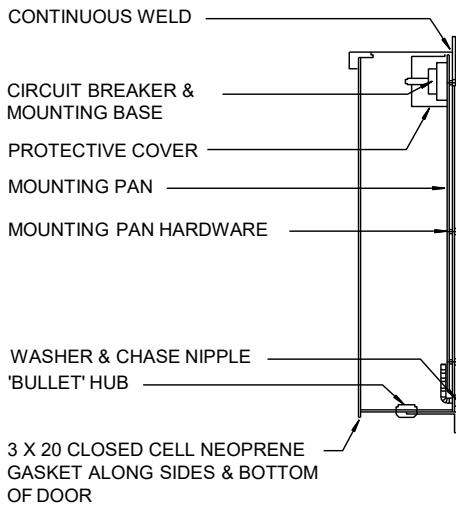
DRIP CIRCUIT SCHEMATIC LAYOUT



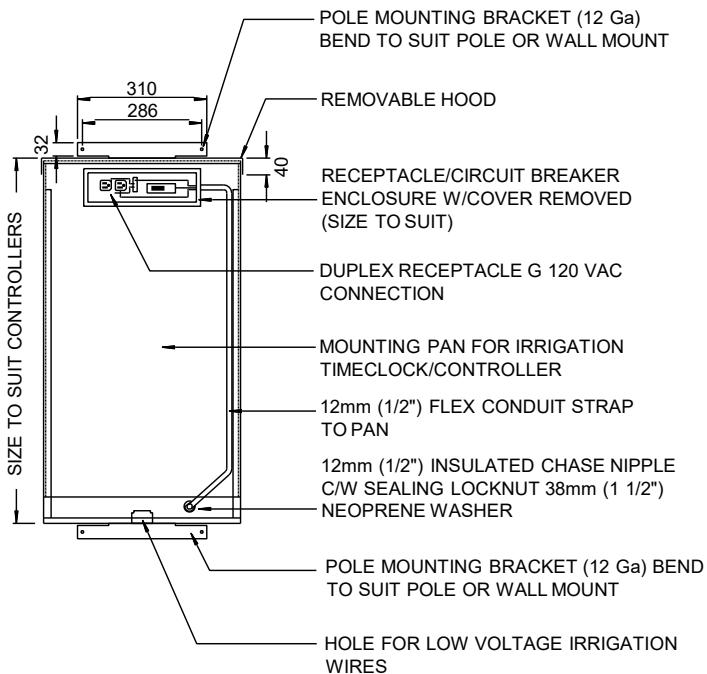
TYPICAL DRIP VALVE ASSEMBLY AND MANIFOLD

NOTES:

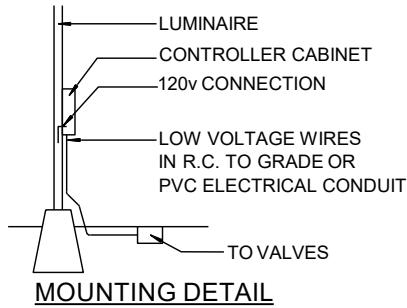
1. FOR DESIGN CRITERIA, SPECIFICATIONS AND INSTALLATIONS REFER TO SECTION 14.0 WRITTEN SPECIFICATIONS.
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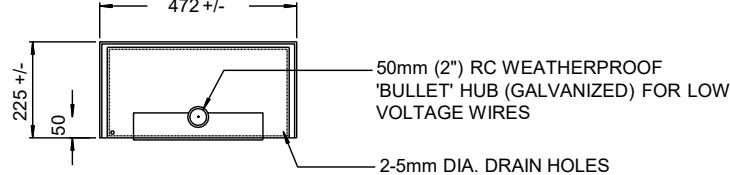
CROSS SECTION



FRONT VIEW WITH DOOR REMOVED



MOUNTING DETAIL



BOTTOM VIEW

NOTES:

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2. ENTIRE ENCLOSURE TO BE 16 GAUGE MILD STEEL OR ALUMINUM WITH THE EXCEPTION OF THE RECEPTACLE ENCLOSURE & MOUNTING PAN WHICH SHALL BE 14 GAUGE. STEEL FINISHED WITH GREY ENAMEL, ALUMINUM CLEAR ANODIZED. ALL SEAMS SHALL BE CONTINUOUSLY WELDED.
3. THE ENCLOSURE SHALL BE MANUFACTURED TO CONFORM TO C.S.A. ENCLOSURE 3 SPECIFICATIONS & SHALL BEAR APPROVAL FROM THE PROVINCIAL SAFETY BRANCH INSPECTOR.
4. ALL HARDWARE (SCREWS, NUTS, ETC.) SHALL BE STAINLESS STEEL.
5. DOOR TO BE FULLY GASKETTED & WITH PADLOCKING FACILITY.
6. THE PANEL SHALL BEAR THE MANUFACTURER & THE PROVINCIAL APPROVAL LABELS INSIDE THE PANEL.
7. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.

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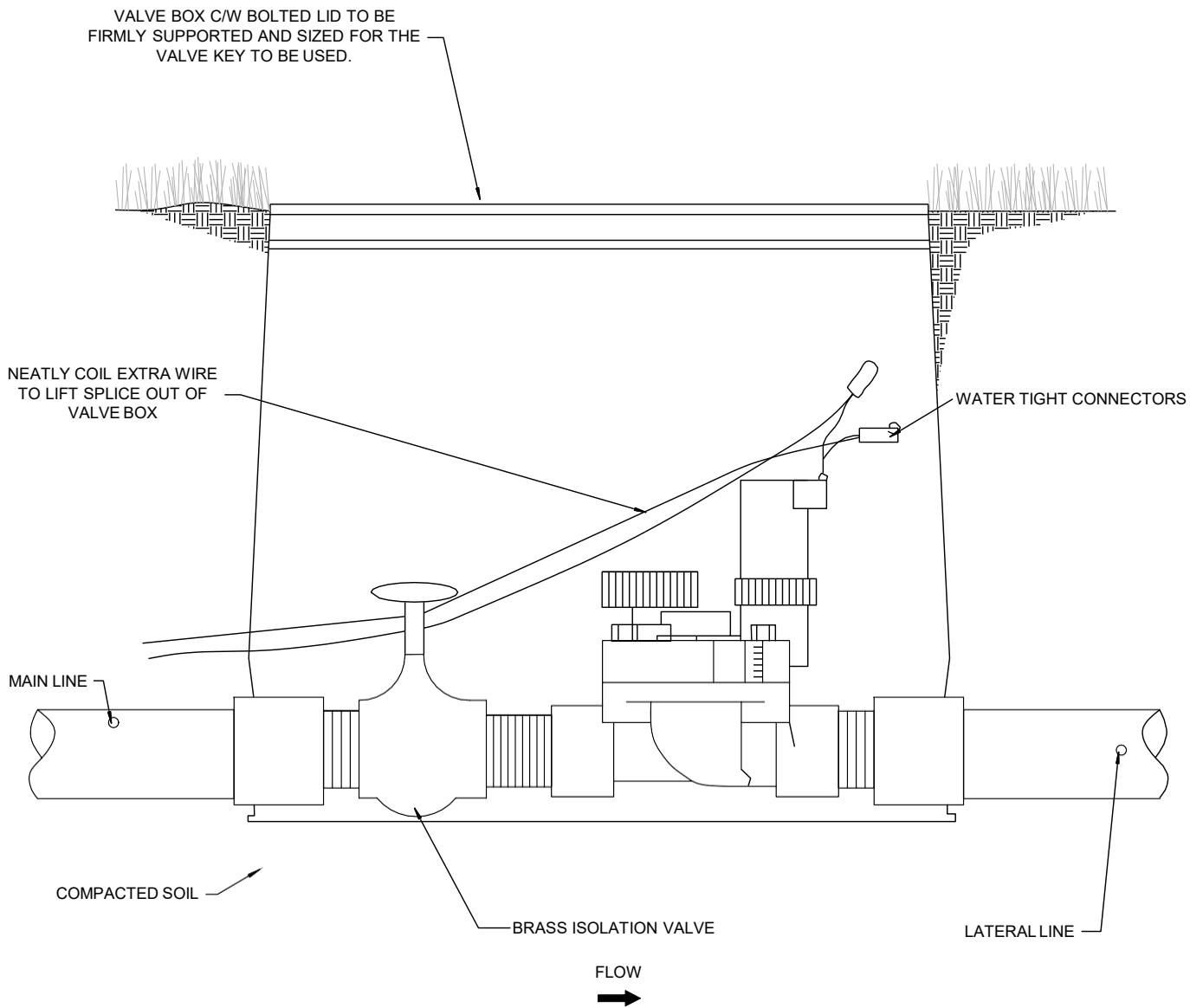
IRRIGATION CONTROLLER CABINET DETAILS

Scale: NTS

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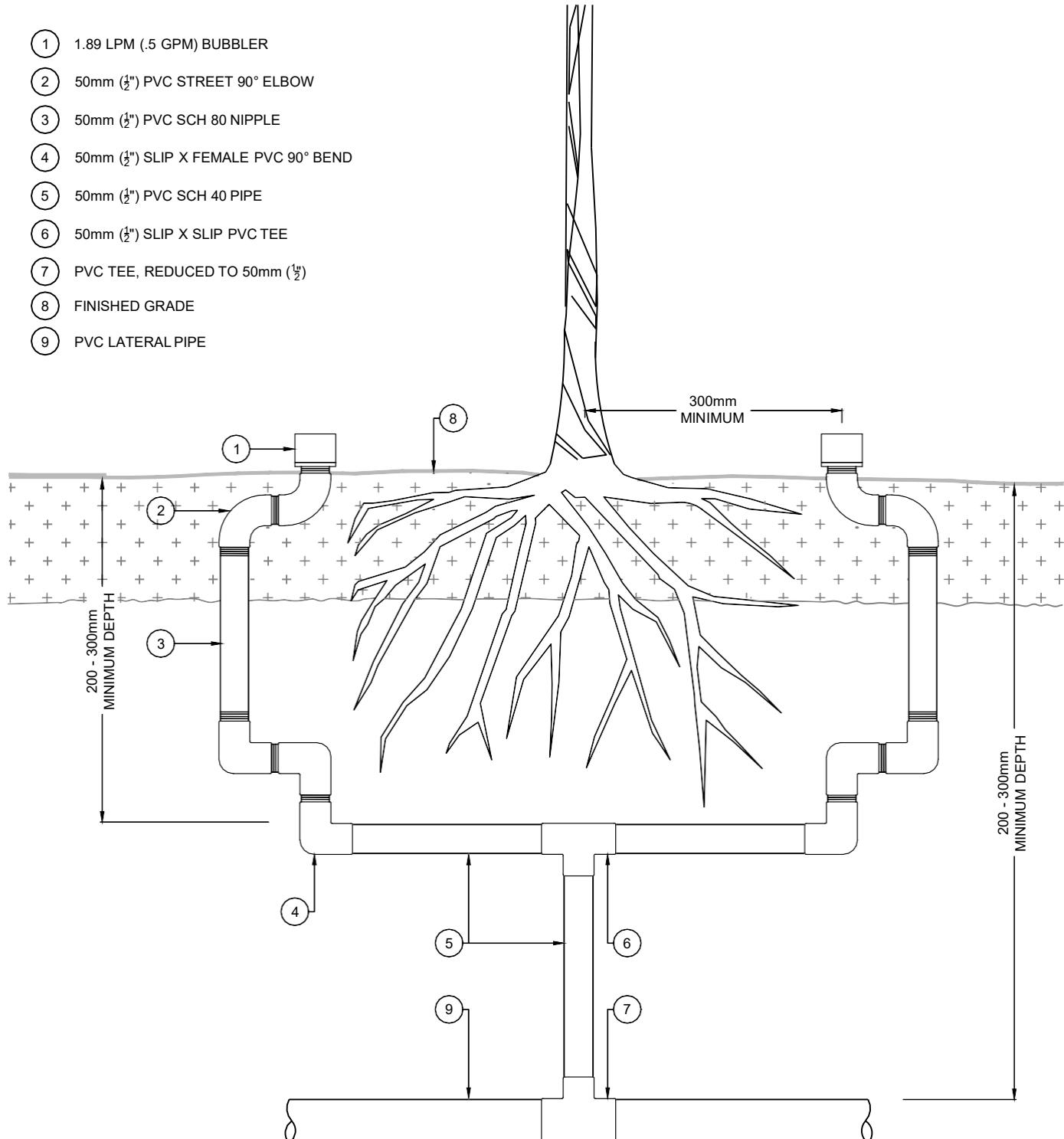


NOTES:

1. VALVE BOX TO BE INSTALLED FLUSH WITH FINISHED GRADE, AND IN A SHRUB AREA WHERE POSSIBLE.
2. **ONLY PRODUCTS APPROVED BY THE CITY ENGINEER AND LISTED IN THE CITY OF NANAIMO APPROVED PRODUCTS LIST WILL BE ACCEPTED FOR INSTALLATION. ONLY PRODUCTS LISTED IN THE CITY'S APPROVED PRODUCTS LIST OR APPROVED BY THE CITY ENGINEER ARE ACCEPTED FOR INSTALLATION.**

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- 1 1.89 LPM (.5 GPM) BUBLER
- 2 50mm (2") PVC STREET 90° ELBOW
- 3 50mm (2") PVC SCH 80 NIPPLE
- 4 50mm (2") SLIP X FEMALE PVC 90° BEND
- 5 50mm (2") PVC SCH 40 PIPE
- 6 50mm (2") SLIP X SLIP PVC TEE
- 7 PVC TEE, REDUCED TO 50mm (2")
- 8 FINISHED GRADE
- 9 PVC LATERAL PIPE



IRRIGATION BUBLER SECTION

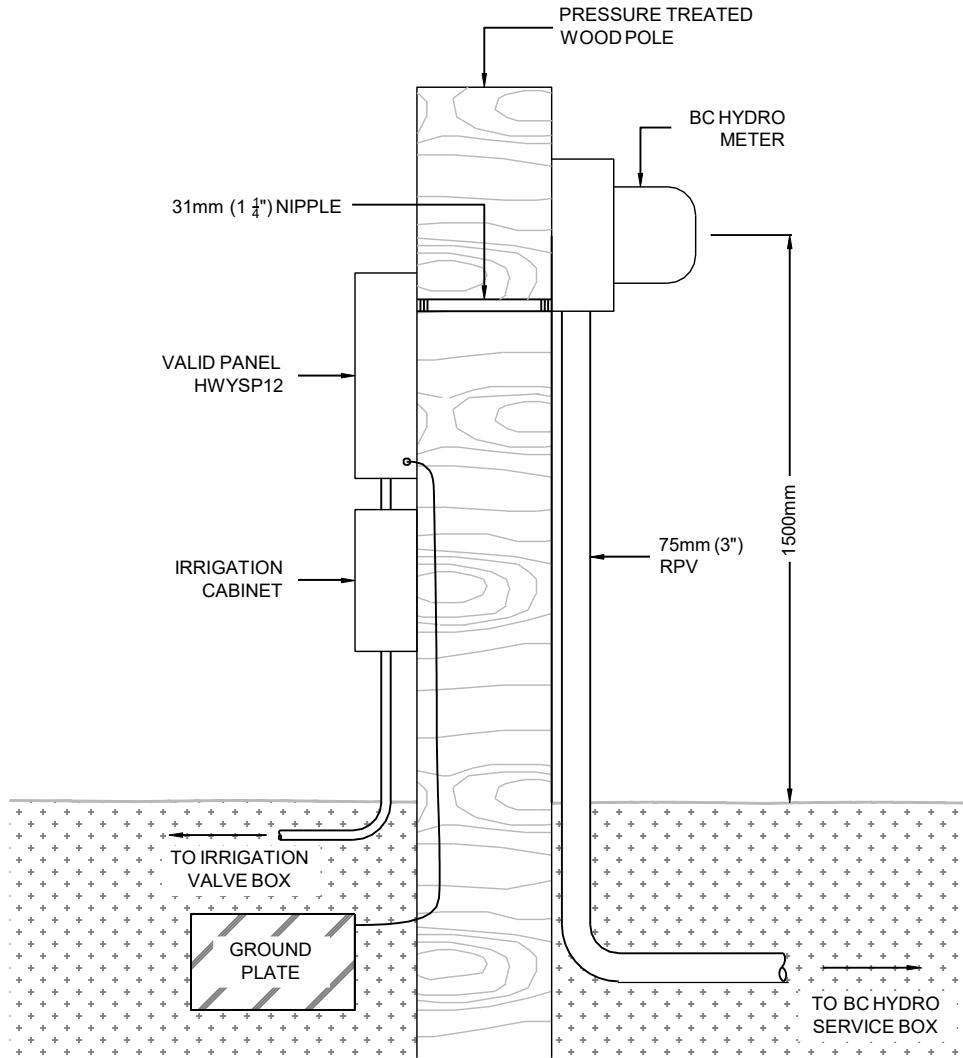
SCALE: 1:10



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SECTION

SCALE: 1:20

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2. INSTALLATION SHALL BE DONE FOR DESIGNATED PARK LAND.