







 $\widehat{\Box}$ 

Roof Height 62.855

## LEGEND:

- SPRINKLER TYPE 1: DAN MODULAR MINI SPRINKLER AND STAKE. 360°, 180°, 90°, STRIP OR CONE SPREADER AS NECESSARY WITH GREEN NOZZLE.
- SPRINKLER TYPE 2: HUNTER PROSPRAY MINIMUM 150mm POP UP SPRAY, 10', 12' OR 15' NOZZLES AS NOTED OR REQUIRED IN FINAL DESIGN AND LOCATION.
- SPRINKLER TYPE 3: HUNTER PROSPRAY MINIMUM 150mm POP UP SPRINKLER WITH HUNTER MP ROTATOR NOZZLE MP3000 OR MP 2000 AS NOTED OR AS NECESSARY IN FINAL DESIGN AND LOCATION.

----- 40/12.5 ------ IRRIGATION MAINLINE - TYPICALLY 40mm PE , PN12.5 WITH MINIMUM 350mm COVER AND INCLUDE "IRRIGATION BELOW" LIGHT BLUE ID TAPE.. ANY PIPE ABOVE GROUND TO NSW PLUMBING CODE AND TO BE Cu OF SIMILAR OR EQUAL ID -EG. MINIMUM 32mm TYPE B COPPER.

> STATION LATERAL PIPEWORK DOWNSTREAM FROM SOLENOID VALVE:

32/10 32/10 32/10 32/10 32/10 32/10 32/10 32/10 32/10 PE MINIMUM PN10 TO POP UP SPRINKLERS

19mm TYPE 30 LDPE TO DAN MODULAR MINI SPRINKLERS.

25mm TYPE B COPPER. - GENERALLY TO ACCESS PLANTER BOXES AND ALSO TO LINK BETWEEN

\_\_\_\_\_ DC/1 \_\_\_\_\_ IRRIGATION DECODER 2 WIRE CONTROL CABLE IN LIGHT DUTY PE ( GREEN STRIPE 20mm ) CONDUIT LAID ADJACENT TO THE IRRIGATION MAINLINE. OR TO BE LAID IN MINIMUM 32mm HD ORANGE ELECTRICAL CONDUIT WHERE DEVIATES FROM MAINLINE TO CONTROLLER.

----- c ----- c ----- IRRIGATION COMM CABLE- (NOT SHOWN) TO BE BETWEEN IRRIGATION CONTROLLER AND FLOW SENSOR/PULSE FLOW METER

> MASTER SOLENOID VALVE & SIZE - HUNTER ICV IN VALVE BOX AT GROUND LEVEL - (FSL).

> STATION SOLENOID VALVE - HUNTER ICV IN VALVE BOX AT GROUND LEVEL - (FSL), TO INCLUDE PRECEDING ISOLATION SERVICE BALL VALVE -REFER TO TYPICAL DETAIL.

## - VALVE NUMBER

- APPROXIMATE ZONE FLOW

FILTERS - ( NOT SHOWN) TO BE INSTALLED AFTER SOLENOID VALVE TO ALL STATIONS WITH DAN MODULAR SPRINKLERS. FILTERS TO BE MINIMUM ARKAL DISC TYPE MINIMUM 20mm RED DISC 120 MESH OR SIZE GREATER WHERE NECESSARY.

**IRRIGATION CONTROLLER - HUNTER 54 STATION** DECODER TYPE HYDRAWISE WITH INTERNET MODEM AND CONNECTIVITY. CONTROLLER TO BE LINKED TO HUNTER PULSE FLOW METER AND ALSO SYSTEM MASTER VALVE. CONTROLLER TO BE SECURE IN A METAL LOCKABLE CABINET WITH ITS OWN POWER SUPPLY (240v GPO.)

WATER METER AND OR POC. ( POINT OF IRRIGATION CONNECTION) - FINAL LOCATION TBC MINIMUM SYSTEM DESIGN FLOW AND PRESSURE 72LT/MIN @ 500kPa.

BACKFLOW PREVENTION DEVICE 25mm TESTABLE DOUBLE CHECK IN PROTECTIVE CAGE OR VALVE PIT TO AS3500.

**RAIN SENSOR - HUNTER INSTANT REMOTE RAIN** SENSOR TO BE INCLUDED AND CONNECTED TO CONTROLLER. FINAL LOCATION TO BE CONFIRMED ON SITE AS SUITABLE. (NOT SHOWN)

PULSE FLOW METER/SENSOR

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## GENERAL NOTE:

- CONTRACTOR TO VERIFY ALL DIMENSIONS ON SITE PRIOR TO COMMENCING WORK.
- THE CONTRACTOR SHALL BE FULLY SATISFIED WITH THE NATURE AND INTENT OF ALL WORK TO BE PERFORMED AND SHALL GUARANTEE THE THE FINAL SYSTEM PERFORMANCE AND ALL
- THE CONTRACTOR SHALL NOTIFY THE CLIENT AND/OR THE DESIGNER IN WRITING IMMEDIATELY IF ANY DISCREPENCIES ARE FOUND AND PRIOR TO COMMENCING WORK.
- THIS PLAN IS TO BE READ IN CONJUNCTION WITH OTHER LANDSCAPE, SITE AND SERVICES PLANS AS MAY BE AVAILABLE BY THE CLIENT THE CONTRACTOR IS TO ALLOW TO COORDINATE ALL WORK WITH ANY OTHER TRADES REQUIRED
- •THE CONTRACTOR IS TO RECEIVE WRITTEN APPROVAL FOR ANY VARIATIONS TO BE PERFORMED. • ALL ITEMS OF EQUIPMENT ARE INDICATIVE OF
- LOCATION AND SHALL BE ADJUSTED AS NECESSARY ACCORDING TO FINAL SITE CONDITIONS.

# AS BUILT RECORDS ARE TO BE KEPT AND UPDATED DAILY. FINAL AS BUILT PLANS ARE TO BE SUPPLIED & APPROVED PRIOR TO FINAL COMPLETION.

## CERTIFIED IRRIGATION DESIGN:





 
 B
 23-09-2022
 FINAL ISSUE FOR APPROVAL AND TENDER PRICING

 A
 21-09-2022
 DA ISSUE
REV' DATE: AMENDMENT: CLIENT:

PROJECT:

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vel 3. 7K				hitex	
02 9633 5					

itex.com.au

TOTAL IRRIGATION DESIGNERS

email: admin@irrigationdesign.com.au

P.O. BOX 577 BATHURST, NSW, 2795

PH: 0415 672204

Proposed Redevelopment 67 Mars St Lane Cove									
TITLE: PROPOSED IRRIGATION LAYOUT									
CAD BY:	DESIGN	BY:	CHECKED BY:						
M.W.	M.	W.							
DATE:	DATE:		DATE:						
20-09-22	20-0	9-22							
BASE BY:		DA	TE:						
Architext			14-09-2022						
SHEET:		SCALE:							
02 of 03		1:	200 @A1						
DRAWING No:	R	REV	SHEET No.						
2301-I-0	1-	B	- 02						

TOTAL irrigation DESIGNERS

## **GENERAL NOTES**

Introduction:

### 1. IRRIGATION SCOPE

The irrigation works shall include all pipes, valves, sprinklers cable, sleeves and conduits, connection to mains with backflow prevention master valve and flow meter, irrigation controller, cabinet, modem and all brackets, fixings and incidentals, etc, labour, trenching and backfilling for the installation of the proposed irrigation system as shown on the plans which are also to be referenced to the landscape planting plans and Architects plans noting that some garden beds are on grade and in ground while others are in raised planter boxes and maybe on concrete slab and hence the station zoning which takes into account the estimated flow available and microclimates.

Final location for the irrigation mains sprinklers valves and laterals irrigation controller and any other components are to be determined on site and are to be to the final approval of the head contractor, the client and any Council DA requirements.

The successful irrigation sub-contractor shall be required to liaise closely with the head contractor and also with all other trades as necessary and coordinate the timing and installation of any critical path items.

The irrigation works shall comprise, but is not limited to, the complete supply installation and commissioning of a fully working and operational system subject to final client requirements and Council DA determinations.

The head contractor to provide power to the controller and the final housing out of direct weather.

Final location of the irrigation pipes, cables, the location of solenoid valves and final lateral pipe routes to the sprinklers as shown shall or as required on site by the head contractor to ensure the construction timetable can be meet and all gardens as shown are adequately watered from the irrigation point of connection..

Irrigation mains shall include a blue Irrigation ID tape directly over the main in the final 200-250mm of trench backfill.

Irrigation mains under pavement to be to a depth as required by the site engineer and is to be sleeved in a straight line or a sweeping long curve of sufficient size to install the irrigation mains through.

Blue or Blue Striped PE pipe IS NOT to be used for irrigation supply on this site. Straight black pipe is preferred where PE pipe is to be used or lilac maybe used. PN10 maybe used for laterals where available.

The contractor shall also be required to conduct a full and complete, documented services search (Dial Before You Dig) for depth and location and marking of ALL and any possible services and work with the head contractor and all trades for services location and identification. Such, approvals and service identification work, exposure and protection of any services shall be the full and complete responsibility of the subcontractor.

The work is also to include and or allow for:

- Working in with any other site trades as required or nominated by the head contractor. Supply and include for all labour and machinery, for the installation of the system to the client's •
- approval. Adjustment and fine tuning of the completed and installed irrigation system as directed and or as necessary and to industry "Best Practice"
- Maintain continuity of use, repair and or replacement of any service affected by the installation of the irrigation system.
- Excavation in all classes of material, imported bedding material, compaction and final backfilling.
- Boring and or sleeving under all/any existing and established pavements, and roads etc Final determination and adjustment where necessary and seek approval for mains placement, valves,
- sprinklers etc. All incidental work as may be necessary for the required performance and operation of the irrigation svsten
- Minimum 12 month warranty defect liability period on all materials and workmanship.

## 2. DESIGN

The equipment shown on the plans are diagrammatic in scale. The Irrigation Contractor shall generally follow the design as shown and shall allow to make alterations of the general layout or zoning as maybe required by site constraints. The Irrigation sub-contractor shall check on site, all measurements and final location o equipment and notify the client by written notice and alternate option on any variations to the design should it be required due to site conditions. The contractor shall be responsible for the final working of all installed, and any alterations made to the specified irrigation equipment and design including sprinkler placement and nozzle selection.

## 3. QUALITY

All work is to be carried out under the direct supervision of suitably gualified and licensed personnel and shall conform to all and any relevant Australian Standards, and all local authority requirements. All materials are to be new and the best of their kind. Installation, methodology, fit and finish shall be to industry best practice.

### 4. MATERIALS AND COMPONENTS

All piping shall conform to Australian Standards and be of the type and size of that indicated on the drawings During construction all pipework shall be securely capped or plugged to prevent the entry of foreign matter. Pipes are to be sealed at all times when work is not expressly being carried out on that section of pipe.

Isolation valves other than with a solenoid valve shall be clearly shown on the "as constructed plans" with triangulated measurements and shall be located in a minimum 1419 commercial valve box with bolt tight lockable lids. Mainline isolation valves and solenoid valve boxes shall be fitted flush with ground level.

Sprinklers shall be: as shown in the legend. All sprinkler locations are indicative only, contractor to finalize as necessary on site with actual conditions. Nozzles to be installed as noted on the drawings or as otherwise determined by the contractor.

The sprinkler spacing may not be consistent due to the odd widths of areas, trees, grass swales, paths and other site obstructions. The contractor shall measure and adjust accordingly on site and make final adjustments as necessary with due consideration for other site obstructions.

Final sprinkler nozzle size, arc and radius to be adjusted as required on site. Final run times and approximate application rates are to be calculated by the contractor and added to the final WAE drawing which a copy is to be added inside the controller cabinet.

All sprinklers shall be fitted to "swing arm joint" of equal size or greater than the sprinkler inlet and only bottom entry is to be used.

Solenoid valves shall be of size as indicated on the drawings. They shall each be preceded by an isolation ball valve of at least the same size and housed in a protective valve box as generally shown on the detail in the drawing. Solenoid valves to include Hunter decoders and approved waterproof wire joiners.

Pipework cover shall be minimum 350mm over mains & 300mm on laterals unless site services, soil depth or other prevent such cover. Where cover is limited, this is to be approved by the client & noted on WAE plans. Cover under roads and carpark should be minimum 750mm or as required by site engineers and is to be sleeved. Cover for LDPE shall be final mulch layer or minimum 80mm soil in the absence of mulch layer.

Low voltage control cabling. The system shall be decoder two wire irrigation cable type system. Final cable size to be minimum 2.5mm2. to be designed by the contractor and sleeved in a PE conduit and laid in the shadow of a mainline or lateral pipework, otherwise they shall be in orange electrical conduit. Cables shall be laid on one continuous side in the shadow of the pipework and may only cross over the top of pipework at tee junctions.

All cables shall be joined or terminated using an approved waterproof Gel-Tite or DBY type cable joiner and a plastic zip cable tie shall be used at the base of each set of joints to bundle cables neatly together and provide extra mechanical strength.

Generally all other valve boxes shall be of "lay over" type, commercial grade minimum 1419 VB in size or larger as required complete with a bolt or other type of lockable lid. Rainbird Brand preferred.

INSPECTION, TESTING COMMISSIONING AND MAINTENANCE-IRRIGATION The contractor is to provide an experienced representative as may be required for inspections given 72hrs notice. Any work found not to be to the satisfaction of, this specification, the plans or the Project Supervisor is to be repaired or replaced as directed in a professional and workmanship like manner to the satisfaction of the Project Supervisor. The cost of repairing and or replacement of any unsatisfactory work shall be totally borne by the contractor.

### 5. COMPLETION

WORK AS EXECUTED DRAWINGS AND MANUALS. - IRRIGATION

Keep on site at all times and update daily a set of drawings showing final locations of all equipment as necessary. Allow to Submit final draft set of as built drawings for approval by the Project Manager the client and or the client's agent. Final drawings shall be of equivalent scale, look and feel as that which were originally supplied for tender and shall include all changes, the contractors name, contact details and date of completion and acceptance by Council.

Upon final inspection and acceptance by Council, make any adjustments/ add any additional information requested and submit with application for practical completion and operational acceptance along with irrigation plans in hard copy and electronically in dwg.

 2 sets of prints in A1 and 3 reduced sets in A3 • 1 x set drawings in AutoCAD .dwg format, and .pdf on email or thumb drive. • Laminated set of plans to be included in the Irrigation controller Cabinet.

Completion date and any compliance certificates from any authority having jurisdiction over the works to be referenced on the final WAE plans.







