# **MONA VALE GOLF CLUB 3 GOLF AVE, MONA VALE NSW 2102**

# GENERAL FIRE SYMBOLS

02112101	
0	RISER
С	DROPPER
Õ	DROP/RISE
С	TEE DROPPER
С	PIPEWORK CAPPED
9	PIPEWORK SECTION
	PIPE FLOW DIRECTION ARROW
$\sim$	PIPEWORK CONTINUATION
$\geq$	CONTINUED LINE - UNDOCUMENTED
₩ ¢	PENETRATION
$\searrow$	BEAM PENETRATION
ннң	NEW CONNECTION/TEE/45° TEE
$\square$	CHECK VALVE
DD DCV	DOUBLE CHECK VALVE
rv 🔁	REFLUX VALVE / NON RETURN VALVE
	REFLUX VALVE & IN PIT
$\boxtimes$	STOP VALVE
$\bowtie$	3 WAY VALVE
M	MONITORED VALVE
No.	SOLENOID VALVE
$\bigotimes$	WATER VALVE IN PATHBOX
	ACCESS PANEL
jwd El	EXPANSION JOINT
$\triangleright$	PUMP
🖂 CP	CONTROL PANEL
WM	WATER METER
FHR	FIRE HOSE REEL
🚫 FH	FIRE HYDRANT
⊂Ø	FIRE HYDRANT WITH DROPPER
$\circ \otimes$	FIRE HYDRANT WITH RISER
$\phi \circ \phi$	FIRE HYDRANT – DUAL
JC V	DUAL SUCTION POINT
Å.	QUAD SUCTION POINT
ØØ	DUAL BOOSTER POINT
Q Q	QUAD BOOSTER POINT

# FIRE SPRINKLER SYMBOLS

- SPRINKLER WITH COVER PLATE FULLY RECESSED
- SPRINKLER SEMI-RECESSED
- SPRINKLER PENDANT CONCEALED SPACE
- SPRINKLER UPRIGHT CONCEALED SPACE
- 🕺 SPRINKLER c/w PROTECTIVE CAGE
- 🗢 SPRINKLER SIDEWALL
- SPRINKLER PENDANT EXPOSED
- SPRINKLER SCHEMATIC OR SECTIONAL VIEW
- SPRINKLER WALL-WETTING / DRENCHER

# FIRE EXTINGUISHER SYMBOLS

	FIRE EXTINGUISHER - WET CHEMICAL
	FIRE EXTINGUISHER - WATER TYPE
	FIRE EXTINGUISHER – FOAM TYPE
	FIRE EXTINGUISHER - AB(E) TYPE
	FIRE EXTINGUISHER - CO <sub>2</sub> TYPE
^	

FIRE BLANKET (FB)

A

# FIRE SERVICES SYMBOLS

× ۲	SMOKE DETECTOR Ex = EXISTING R = RELOCATED
	N = NEW
[5]	CONCEALED SPACE SMOKE DETECTOR
S),	SMOKE ALARM WITH SOUNDER BASE
L.	THERMAL/HEAT DETECTOR
$\Box$	CEILING MOUNTED SPEAKER
	HORN SPEAKER
	SURFACE MOUNTED SPEAKER c/W MOUNTING BOX
FIP	FIRE INDICATOR PANEL
FT	FIRE MAN'S TELEPHONE. FIRESENSE FFTS-NFC-FFT-AU OR APPROVED EQUAL
DNE	DO NOT ENTER SIGNAGE WITH VISUAL & AUDIBLE ALERT
GC	GAS CONTROL STATION, STOP GAS / DROP GAS CONTROLS
SFIP	GAS CONTROL PANEL/ SUB FIRE INDICATOR PANEL FOR LOCAL ALARMS
EVAC	EVACUATE AREA SIGNAGE TO CONTAIN VISUAL & AUDIBLE ALARMS
AAF	ALARM ACKNOWLEDGEMENT FACILITY
1/0	I/O DEVICE (FIRE RELAY)
$\square$	ALARM VALVE
$\bigotimes$	SINGLE STROBE
	DUAL STROBE
$\square$	WIP
$\overline{\mathcal{A}}$	WATER MOTOR GONG
$\square$	FIRE ALARM BELL
$\mathbf{\mathbf{Y}}$	MANUAL CALL POINT/BREAK GLASS ALARM
	MAGNETIC DOOR HOLDER

# ABBREVIATIONS

DCW	DOMESTIC COLD WATER	H/L	HIGH LEVEL
DFA	DROP FROM ABOVE	IS	ISOLATION VALVE
DL	DRAIN LINE	L/L	LOW LEVEL
DTB	DROP TO BELOW	RFB	RISE FROM BELOW
Ex	EXISTING	RL	REDUCED LEVEL
FFL	FINISHED FLOOR LEVEL	ТМ	TOWN MAIN
FH	FIRE HYDRANT	TS	TANK SUCTION
FHR	FIRE HOSE REEL	T/A	TO ABOVE
FP	FIRE PUMP	UPVC	UNPLASTICISED POLYVINYL CHLORIDE
FS	FIRE SERVICE	DR	DRAIN LINE
FT	FIRE TANK	PS	PUMPED SYSTEM
F/B	FROM BELOW		

# (GENERIC - NOT ALL ITEMS APPLY TO THIS PROJECT)

**FIRE SERVICES** PREPARED BY

# SERVICES LINETYPES

FH FHR FSTD	FH FHR FS
RP	
SP	
— E —	– E ––––
eCW	eCW ——
eFH	eFH
eFS	eFS
eAWM	

COLD WATER (CW) FIRE HYDRANT (FH) FIRE HOSE REEL (FHR) FIRE SERVICE (FS) FIRE SERVICE TEST DRAIN (FSTD) FIRE RANGE PIPEWORK (RP) FIRE SPRINKLER PIPEWORK (SP) ELECTRICAL SUPPLY EXISTING COLD WATER (eCW) EXISTING FIRE HYDRANT (eFH) EXISTING FIRE SERVICES (eFS) EXISTING AUTHORITY'S WATER MAIN (eAWM)

LOCALITY PLAN NTS

FIRE SERVICES DRAWING SCHEDULE					
DWG No.	DRAWING TITLE				
22731-001-F-000	COVERSHEET & LEGEND				
22731-001-F-001	SPECIFICATION & DETAILS SHEET				
22731-001-F-002	SITE PLAN				
22731-001-F-100	LOWER GROUND FLOOR				
22731-001-F-101	GROUND FLOOR				
22731-001-F-300	DETAILS & SCEMATIC				

# (GENERIC - NOT ALL ITEMS APPLY TO THIS PROJECT)

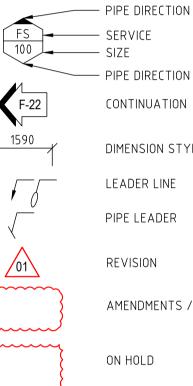
# FIRE NOTES:

- 1. THE TENDERER SHALL INCLUDE A DETAILED ON-SITE INSPECTION WITH THE OBJECTIVE TO SATISFY THEMSELVES AS TO THE EXTENT OF THE WORKS REQUIRED FOR CODE COMPLIANCE. THIS SHALL BE COMPLETED PRIOR TO SUBMITTING THEIR TENDER OFFER WITH THE DATE OF THEIR INSPECTION. VARIATION CLAIMS RAISED FROM OMISSIONS WITHIN THESE DOCUMENTS OR FOR OVERSIGHTS ON BEHALF OF TENDERER WILL NOT BE CONSIDERED.
- 2. THE PROJECT WORKS WILL INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:-2.1. FIRE HYDRANT SYSTEM VIA STREET HYDRANT COVERAGE 2.2. FIRE EXTINGUISHERS & BLANKETS
- CO-ORDINATE WITH ALL OTHER SERVICES ON SITE. З.
- PROVIDE UNIT RATES FOR FIRE DEVICE ADDITIONS, DELETIONS AND RELOCATIONS. 4.
- INCLUDE ALLOWANCES TO PROVIDE TACTICAL FIRE PLAN, AS BUILT DRAWING AND 0&M MANUALS. 5.
- PROVIDE A MINIMUM OF12 MONTHS (UNLESS OTHERWISE NOMINATED WITH THE PROJECT SCOPE) WARRANTY & 6 LIABILITY PERIOD, TO INCLUDE SERVICE AND MAINTENANCE.
- 7. NOTE THAT THE CEILING GRID LAYOUT DEPICTED ON THE DRAWING MAY NOT BE INDICATED ACCURATELY. THE FIRE SERVICES CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ALL NECESSARY ADJUSTMENTS TO THE FIRE SERVICES LAYOUT TO SUIT ACTUAL SITE CONDITIONS.

APPLICABLE STANDARDS:							
	SYSTEM:	STANDARD AND YEAR:					
	FIRE HYDRANT SYSTEM	AS2419.1-2005					
	FIRE EXTINGUISHERS & BLANKETS	AS2444-2001					
FIRE ENGINEERING DA LETTER		CAN01-S22003-REV:1 (29/03/22)					
	BCA/ NCC	2019					
	THE STANDARDS LISTED ABOVE INDICATE THE N	MINIMUM LEVEL OF COMPLIANCE.					

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	SERVICE ARCH CIVIL ELEC MECH RCP	TED REF	FERENCE DRAWINGS DRAWING NUMBER -	DATI -	<u> </u>
GENERAL DRAWING SYMBOLS PIPE DIRECTION FS 100 SERVICE SIZE	SYME     DO N	BOLS AR OT SCAL	IALL BE PRINTED IN COLOUR. IE DRAWN IN CORRECT LOCATION. LE THIS DRAWING. FIGURED DIMENSIONS TO BE USED ARE IN MILLIMETRES UNLESS OTHERWISE STATED ON		
PIPE DIRECTION CONTINUATION CONTINUATION DIMENSION STYLE LEADER LINE PIPE LEADER OIL	REPRO THE EX ENGINE PREJUI ENGINE PENDIN CONSU THIS DI	DUCE PRESE ERS F DICIAL ERS F IG ANI ILTING RAWIN <b>'NO</b>	NG IS CONFIDENTIAL AND IS NOT TO BE D IN ANY FORM AS A WHOLE OR IN PART S WRITTEN AUTHORITY OF EPICENTRE O PTY LTD. THIS DRAWING IS NOT TO BE US TO THE INTEREST OF EPICENTRE CONS PTY LTD. THIS DRAWING CONTAINS PATE D INTELLECTUAL PROPERTY OWNED BY S ENGINEERS PTY LTD. NG IS:- TFOR CONSTRUCTION S OTHERWISE STATED ON THIS DRAWIN © EPICENTRE CONSULTING ENGINEERS PTY LTD. ALL RIG	CONSUL SED ULTING NTS EPICEN	TING
AMENDMENTS / CHANGES ON HOLD	HGW Suite	PROJE 202, 30 s Nest, 1 0457 madd	Projects		
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DNS. AND O&M MANUALS. I PROJECT SCOPE) WARRANTY &	Project:		MONA VALE GOLF CLUB 3 GOLF AVE, MONA VALE NSW 2102		
BE INDICATED ACCURATELY. THE FIRE Y ADJUSTMENTS TO THE FIRE		CO	FIRE SERVICES VER SHEET & LEGEI		
/22) E.	North Point:		Design: Design Validated: Amendment Approved: Drawn: Scale:	MN TC JM MW	<b>N</b>
DEVELOPMENT APPLICATION	Job No.: <b>227</b>	JAN 31	-001 - F - 000 - F		ssue: )3

# GENERAL DRAWING SYMBOLS



### GENERAL REQUIREMENTS

# 1.1. PROJECT OVERVIEW

THIS PROJECT COMPRISES OF THE REFURBISHMENT OF THE MONA VALE GOLF LOCATED AT 3 GOLF AVE, MONA VALE, NSW 2102

- 1.2. THE TENDER PACKAGE IS COMPRISED OF:
- 1.2.1. ON DRAWING TECHNICAL SPECIFICATIONS
- 1.2.2. TENDER DRAWINGS
- 1.3. TENDER SUBMISSION
- 1.3.1. THE CONTRACTOR'S SUBMISSION MUST INCLUDE THE FOLLOWING INFORMATION AND DOCUMENTS:
- 1.3.2. PROVIDE A RETURN SCHEDULES WITH ALL MAJOR ITEMS (I.E. NEW /REMOVED, SPRINKLERS, DETECTORS, DEVICES, PIPE AND ETC.)
- 1.3.3. TECHNICAL INFORMATION IDENTIFIED IN THE DOCUMENTS1.3.4. COPIES OF INSURANCE CERTIFICATES OF CURRENCY

1.4. CONDITIONS OF TENDERING

ONLY FULLY CONFORMING TENDERS WILL BE ACCEPTED. ANY ALTERNATIVE PROPOSALS MUST BE DESCRIBED AND PRICED SEPARATE.

# 2. INTRODUCTIONS AND PRELIMINARIES

2.1. CONTEXT

- THIS DOCUMENT IS PART OF A SET OF TENDER DOCUMENTS AND MUST BE READ IN CONJUNCTION WITH ALL OTHER TENDER DOCUMENTS, INCLUDING:
- 2.1.1. REQUEST FOR TENDER
- 2.1.2. TECHNICAL SPECIFICATIONS2.1.3. TENDER DRAWINGS
- 2.2. COMPLY FULLY WITH THE TENDER DOCUMENTS.

THE WHOLE OF THE WORKS ARE TO BE CARRIED OUT IN ACCORDANCE WITH THE TENDER DOCUMENTS AND SUCH FURTHER INSTRUCTIONS AS MAY BE GIVEN DURING THE PROGRESS OF THE WORKS AND TO THE SATISFACTION OF THE PRINCIPAL.

THE CONTRACTOR SHALL PROVIDE ALL EQUIPMENT, SYSTEMS, WORKS AND SERVICES DESCRIBED IN THE TENDER DOCUMENTS, AND ADHERE TO ALL INSTRUCTIONS, METHODOLOGIES AND PROCEDURES DESCRIBED OR NOMINATED IN THE TENDER DOCUMENTS.

THE CONTRACTOR SHALL ENSURE THAT ALL INSTRUCTIONS, SYSTEM DESCRIPTIONS, IMPLEMENTATION REQUIREMENTS, INCLUSIONS IN THE TENDER DOCUMENTS PACKAGE ARE ADHERED TO, PROVIDED, CAUSED TO HAPPEN ETC..

INCLUDE ALL ALLOWANCES TO FULFIL THE TENDER DOCUMENTATION REQUIREMENTS. THE CONTRACTOR IS REMINDED TO CHECK THE TENDER DOCUMENTS AND EXISTING SITE CONSTRAINTS CAREFULLY TO INCLUDE ALLOWANCE ANY FOR OUT OF HOURS WORKS, SPECIFIC PROCEDURES, INSPECTIONS ETC.

#### 3. REGULATIONS, CODES AND AUTHORITIES

THE WORKS AND INSTALLATIONS SHALL COMPLY IN EVERY WAY WITH THE REQUIREMENTS OF ANY AUTHORITY HAVING JURISDICTION OVER THE FIRE SERVICES INSTALLATION AND ALL APPLICABLE STANDARDS AND CODES. USE REFERENCED DOCUMENTS THAT ARE EDITIONS, WITH AMENDMENTS, CURRENT 3 MONTHS BEFORE THE CLOSING DATE FOR TENDERS, EXCEPT WHERE OTHER EDITIONS OR AMENDMENTS ARE REQUIRED BY STATUTORY AUTHORITIES OR NOMINATED IN THE SPECIFICATION.

APPLICABLE AUTHORITIES, STANDARDS AND CODES INCLUDE:

- LOCAL PLANNING AUTHORITY.
- PRINCIPAL CERTIFYING AUTHORITY (PCA).
- NATIONAL CONSTRUCTION CODE OF AUSTRALIA.
- RELEVANT AUSTRALIAN STANDARDS.
   LOCAL GOVERNMENT REGULATIONS.
- THE WORKPLACE HEALTH AND SAFETY ACT.
- ATTENDING FIRE SERVICE REQUIREMENTS AND POLICIES.
- NOTE: REFER TO THE APPLICABLE STANDARDS TABLE FOR SPECIFIC CODE REQUIREMENTS.

#### 4. OBVIOUS WORKS

THE CONTRACT DOCUMENTS ARE INTENDED TO CALL FOR COMPLETE AND OPERATIONAL SYSTEMS. PROVIDE MINOR ITEMS, EQUIPMENT, ACCESSORIES AND INCIDENTAL WORK REQUIRED FOR THE COMPLETION OF THE INSTALLATION AND TO ENSURE FULL INTEGRATION OF EQUIPMENT AND SYSTEMS. IF NEITHER THE SPECIFICATION NOR PLANS CONTAIN ANY MENTION OF MINOR PARTS, WHICH IN THE OPINION OF THE PRINCIPAL ARE REASONABLY AND OBVIOUSLY NECESSARY FOR THE SATISFACTORY COMPLETION OF THE WORKS, AND THEN SUCH PARTS ARE TO BE PROVIDED WITHOUT EXTRA CHARGE.

#### 5. UNFORSEEN DIFFICULTIES

UNFORESEEN DIFFICULTIES IN PROVIDING THE CONTRACT GOODS AND SERVICES FOR WHICH PROVISION HAS NOT BEEN MADE IN THE TENDER SHALL NOT BE GROUNDS FOR A VARIATION.

#### 6. SITE SURVEY AND EXISTING SERVICES

THE CONTRACTOR SHALL BE DEEMED TO HAVE VISITED THE SITE DURING THE TENDER PERIOD AND FULLY ACQUAINTED THEMSELVES WITH THE ACTUAL SITE CONDITIONS. NO CLAIM FOR ADDITIONAL COSTS RESULTING FROM LACK OF KNOWLEDGE OF THE SITE CONDITIONS RELATING TO WORKS TO BE DONE WILL BE ACCEPTED ANY INCONSISTENCIES BETWEEN THE DESIGN DOCUMENTS AND THE INSTALLED SERVICES SHALL BE IDENTIFIED IN THE TENDER SUBMISSION AND SHALL BE INCLUDED WITHIN THE TENDER PRICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT ROUTING OF THE SERVICES TO CO ORDINATE WITH THE EXISTING STRUCTURE, SERVICES AND THE WORK OF OTHER TRADES.

#### 7. EXISTING SERVICES

IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN FULL INFORMATION REGARDING ALL EXISTING SERVICES, INCLUDING, BUT NOT LIMITED TO, WATER, FIRE HYDRANT, GAS, SEWER, STORMWATER, ELECTRICAL AND TELEPHONE – WHEREVER NEW IN-GROUND SERVICES ARE TO BE INSTALLED OR IN THE VICINITY OF ANY EXCAVATION. THE CONTRACTOR SHALL INVESTIGATE FOR EXACT LOCATION, DEPTH AND SIZE OF ALL EXISTING SERVICES PRIOR TO ANY INSTALLATION BEING CARRIED OUT.

SHOULD ANY EXISTING SERVICE BE DAMAGED, THE PRINCIPAL AND RELEVANT AUTHORITY SHALL BE NOTIFIED IMMEDIATELY. THE CONTRACTOR SHALL PAY ANY AND ALL COSTS INVOLVED IN MAKING GOOD ANY SERVICE DAMAGE WHILE EXCAVATING, INSTALLING OR BACKFILLING FOR ANY SERVICE NOTED HEREIN.

EXISTING SERVICES SHALL BE MAINTAINED AND OPERATIONAL UNTIL NEW WORKS ARE INSTALLED. ALLOW TRACING SERVICES AS NECESSARY TO DETERMINE IF SERVICES SHOWN ARE 'LIVE' AND PERFORM CONNECTION TO NEW SERVICES WITH THE MINIMUM OF DOWNTIME. ALL DISCONNECTIONS AND SHUT DOWNS SHALL BE APPROVED BY THE PRINCIPAL PRIOR TO WORK BEING COMMENCED.

ALL EXISTING SERVICES THAT ARE NO LONGER REQUIRED SHALL BE REMOVED, CAPPED OFF OR SEALED IN ACCORDANCE WITH THE RELEVANT AUTHORITY REQUIREMENTS AND STANDARDS, CODES AND REGULATIONS. THE COST OF REMOVING, CAPPING OFF AND SEALING OF SERVICES NOT SHOWN IN THE TENDER DOCUMENTS SHALL BE DEEMED TO BE INCLUDED IN THE CONTRACT AND SHALL NOT CONSTITUTE A VARIATION TO THE CONTRACT.

#### 8. CONTINUITY AND SHUTDOWNS OF EXISTING SERVICES

NO INTERRUPTION TO THE EXISTING BUILDING SERVICES SHALL BE MADE WITHOUT THE WRITTEN PERMISSION FROM THE PRINCIPAL.

- WHEN ARRANGING AND UNDERTAKING INTERRUPTION TO THE BUILDING'S EXISTING SYSTEMS THE CONTRACTOR SHALL
- ARRANGED THE INTERRUPTIONS FOR A TIME TO SUIT THE PRINCIPAL, TENANTS AND OTHER AFFECTED PARTIES.
   SCHEDULE FOR OUT OF HOURS WHEREVER FEASIBLE.
- COORDINATE WITH BUILDING MANAGEMENT.
- IMPLEMENT ANY ADDITIONAL MEASURES REQUESTED BY THE PRINCIPAL, BUILDING OWNER, BUILDING MANAGER, FIRE SERVICE OR INSURANCE COMPANY.
- ADVISE OCCUPANTS AS APPROPRIATE AND MINIMISE INCONVENIENCE.
- ADVISE ALL STAKEHOLDERS WHEN THE SERVICE IS RE-INSTATED.
   ADDITIONAL REQUIREMENTS FOR INTERRUPTIONS TO FIRE AND ESSENTIAL SERVICES:
- ADVISE THE ATTENDING FIRE SERVICE.
- ADVISE THE BUILDING OWNER'S INSURANCE COMPANY.
- EXERCISE DUE DILIGENCE IN COORDINATING ANY EXTENDED PERIODS OF FIRE SERVICES INTERRUPTIONS WITH BUILDING MANAGEMENT AND THE RELEVANT AUTHORITIES TO ENSURE THIS DOES NOT JEOPARDISE OCCUPANT SAFETY DURING WORKS.

#### 12. ALTERNATIVE SUBMISSIONS

THE CONTRACTOR'S SUBMISSION SHALL ADHERE TO THE TYPES OF PLANT AND EQUIPMENT DETAILED IN THE DRAWINGS AND SPECIFICATION. HOWEVER; WHERE THESE REQUIREMENTS PRECLUDE TENDERERS FROM OFFERING PLANT OF THEIR STANDARD MANUFACTURE, ALTERNATIVES MAY BE SUBMITTED FOR APPROVAL. UNLESS SUCH ALTERNATIVES ARE ACCEPTED IN WRITING, THE CONTRACTOR SHALL COMPLY WITH THE DETAILED REQUIREMENTS OF THE SPECIFICATION.

#### 13. PROTECTION OF PLANT AND MATERIALS

THE CONTRACTOR SHALL BE ENTIRELY RESPONSIBLE FOR ALL APPARATUS, EQUIPMENT AND APPURTENANCES FURNISHED BY HIM OR SUB-CONTRACTORS IN CONNECTION WITH THE WORKS. SPECIAL CARE SHALL BE TAKEN TO PROTECT ALL SUCH GOODS IN A SUITABLE MANNER.

THE PROTECTION SHALL INCLUDE COVERS TO PREVENT MOISTURE, GRIT, PLASTER OR OTHER FOREIGN SUBSTANCES FROM ENTERING THE WORKING PART OF PLANT AND EQUIPMENT. SEAL AND PROTECT ALL OPEN ENDS OF DUCTWORK, PIPING AND CONDUIT (AS APPLICABLE) WHILST IN STORAGE AND DURING COURSE OF INSTALLATION, AND TO PROTECT ADEQUATELY ALL ELECTRICAL AND CONTROL EQUIPMENT.

ALL MATERIALS, GOODS AND EQUIPMENT FORMING PART OF THIS CONTRACT MUST BE COMPLETED, INTACT AND IN NEW ORDER WHEN THE PROPRIETOR TAKES OVER THE RESPONSIBILITY FOR THE WORKS, AND IT SHALL BE THE LIABILITY OF THE CONTRACTOR TO SAFEGUARD SUCH MATERIALS, GOODS AND EQUIPMENT UNTIL THEN.

#### 14. MANUFACTURER'S DIRECTIONS

MANUFACTURED ARTICLES, MATERIALS AND EQUIPMENT ARE TO BE SUPPLIED, INSTALLED, CONNECTED, ERECTED, USED, CLEANED AND COMMISSIONED IN STRICT CONFORMITY WITH MANUFACTURER'S PRINTED DIRECTIONS UNLESS OTHERWISE SPECIFIED. IN ANY CASE, OBTAIN FROM THE SUPPLIER AGREEMENT THAT THE PRODUCT AS USED OR SPECIFIED IS BEING USED OR SPECIFIED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS AND PRACTICE. RETAIN THE MANUFACTURER'S DIRECTIONS OF SUCH ARTICLES ON SITE FOR THE PRINCIPAL'S REFERENCE.

#### 15. INSTALLATION BY SUPPLIERS OR INSTALLERS

SUBMIT FOR EXAMINATION AND APPROVAL, THE NAMES OF SUPPLIERS/INSTALLERS TO WHOM IT IS PROPOSED TO SUBLET PORTIONS OF THE HYDRAULIC WORKS. NON-ACCEPTANCE BY THE PRINCIPAL SHALL NOT CONSTITUTE GROUNDS FOR A VARIATION TO THE CONTRACT SUM.

#### 16. SETTING OUT

SET OUT AND IDENTIFY ALL PLANT EQUIPMENT POSITIONS SO THAT THE PRINCIPAL MAY READILY OBSERVE THE LOCATION WORKS. LARGER SCALE DRAWINGS ARE TO BE USED IN PREFERENCE TO SMALL SCALE WHERE NO DIMENSIONS ARE SHOWN.

ARCHITECTURAL DIMENSIONED DRAWINGS ARE TO BE USED IN PREFERENCE TO SCALED DRAWINGS REGARDLESS OF THEIR RELATIVE SCALE.

GAIN APPROVAL FOR THE PROPOSED LOCATION OF THE WORKS FROM THE PRINCIPAL PRIOR TO COMMENCEMENT OF ANY EXCAVATION. THE SET OUT OF PIPING, VALVES AND EQUIPMENT SHALL BE ARRANGED IN CONJUNCTION WITH OTHER TRADES SO AS TO BE READILY ACCESSIBLE FOR OPERATING, SERVICING, MAINTAINING AND REPAIRING OF IT. SERVICES INSTALLED IN UNSUITABLE LOCATIONS SHALL BE REMOVED AND RELOCATED AS DIRECTED BY THE PRINCIPAL. ALL EXPENSE CAUSED BY THIS ACTION SHALL BE MADE GOOD WITHOUT EXTRA CHARGE.

DO NOT CONCEAL ANY PIPES, VALVES, DUCTS, CABLES ETC. BEFORE INSPECTION AND APPROVAL BY THE PRINCIPAL'S REPRESENTATIVE.

#### 17. GOOD PRACTISE

WHERE A METHOD OF CONSTRUCTION, INSTALLATION AND FINISH IS USUAL AND PROPER, TO THE CLASS OF WORK GENERALISED IN THIS SPECIFICATION, THE SAME IS TO BE PROVIDED NOTWITHSTANDING THAT SUCH METHOD OR NECESSARY FINISH IS NOT SPECIFICALLY SPECIFIED OR INCLUDED IN THE DRAWINGS.

#### 18. INTERMEDIATE EXAMINATION AND TESTING OF INSTALLATION

THE PRINCIPAL MAY AT ANY TIME DURING THE PROGRESS OF THE WORKS, TEST AND EXAMINE ANY MATERIALS USED AND INSPECT THE WORKMANSHIP EMPLOYED, AND MAY REJECT ANY MATERIALS AND WORKMANSHIP THAT ARE NOT IN ACCORDANCE WITH THE SPECIFICATION AND DRAWINGS. THE CONTRACTOR SHALL PROVIDE SUCH ASSISTANCE AS MAY BE REQUIRED BY THE PRINCIPAL TO CARRY OUT THESE TESTS, INCLUDING FACILITIES FOR INSPECTION OF WORKS.

#### 19. HOLD AND WITNESS POINTS

GIVE SUFFICIENT NOTICE OF UPCOMING HOLD AND WITNESS POINTS TO ENABLE THE ENGINEER AND PRINCIPLE TO ARRANGE INSPECTIONS.

INCLUDE THE FOLLOWING HOLD POINTS IN THE PROGRAMME OF WORKS:

APPROVAL OF SHOP DRAWINGS AND TECHNICAL DATA. LABELLING SCHEDULES.

SAMPLES AS REQUESTED BY THE PROJECT MANAGER.

INCLUDE THE FOLLOWING HOLD POINTS IN THE PROGRAMME OF WORKS:

SITE SURVEY OF CONCEALED SERVICES PRIOR TO FALSE CEILINGS BEING INSTATED

WITNESS AND ACCEPTANCE TESTING (NOT COMMISSIONING TESTING)

RECORD THE RESULTS OF THE HOLD AND WITNESS POINT INSPECTIONS AND INCLUDE IN THE 0&M MANUALS.

#### 20. CLEANING UP AND FINISHING

THE SITE AND PRECINCTS MUST BE KEPT CLEAN AND TIDY AND ALL RUBBISH REMOVED DAILY, OR AT THE REQUEST OF THE PRINCIPAL. AT THE CONCLUSION OF THE WORK COVERED BY THIS SPECIFICATION CLEAR AWAY AND REMOVE TO THE NOMINATED LOCATIONS ALL DEBRIS AND RUBBISH AND LEAVE THE COMPLETE INSTALLATION THOROUGHLY CLEAN AND CAPABLE OF EFFICIENTLY OPERATING, TO THE ENTIRE SATISFACTION OF THE PRINCIPAL.

#### 21. PENETRATIONS, ACCESS & CHASING

CONTRACTOR TO PROVIDE DIMENSIONAL DETAILS OF PENETRATIONS AND CORE HOLES TO ENABLE APPROVAL OF ALL HOLES, OPENINGS AND PENETRATIONS THROUGHOUT THE BUILDING AND STRUCTURE FOR THE PASSAGE OF PIPE WORK.

ALL NEW PENETRATIONS MUST BE APPROVED BY THE PRINCIPAL BEFORE PROCEEDING WITH THE WORKS. DO NOT CUT ANY HOLES, OPENINGS, AND CHASES OR OTHERWISE INTERFERE WITH THE WORK OF OTHER TRADES WITHOUT THE SPECIFIC APPROVAL OF THE PRINCIPAL. ANY DAMAGE DONE TO OTHER TRADES SHALL BE MADE GOOD WITHOUT EXTRA CHARGE.

WHERE SUCH PENETRATIONS AND THE LIKE PASS THROUGH FIRE RATE FLOOR/WALLS OR THE LIKE THE SEALING COMPOUND SHALL PROVIDE THE REQUIRED FIRE RATING FOR THE BUILDING ELEMENT AS NOTED ON THE ARCHITECTURAL DRAWINGS. THIS INCLUDES PROVISION OF FIRE COLLARS, FIRE DAMPERS, FIRE RATED MASTIC AND THE LIKE.

GENERALLY THE CONTRACTOR SHALL CARRY OUT ALL MAKING GOOD OF PENETRATIONS AND ACCESS HOLES ETC.. WHERE OTHERWISE, PROVIDE DIMENSIONS TO ALLOW THE PRINCIPAL TO MAKE GOOD AND PATCH AROUND ALL HOLES AND PENETRATIONS. PROVIDE ANY FURTHER BUILDING WORKS OR NEGOTIATE WITH THE PRINCIPAL TO PROVIDE THEM. ANY BUILDING WORKS CARRIED OUT SHALL BE TO THE SATISFACTION AND APPROVAL OF THE PRINCIPAL.

#### SCOPE OF WORKS

A. EXTENT OF WORK

THE WORK SHALL BE CARRIED OUT BY A SPECIALIST FIRE SERVICES CONTRACTOR. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION, CO-ORDINATION, SUPPLY, DELIVERY, INSTALLATION, TESTING, COMMISSIONING, WARRANTY AND MAINTENANCE OF INSTALLED SYSTEMS. PROVIDE FULLY DESIGNED AND DOCUMENTED SYSTEMS, CO-ORDINATED WITH ALL OTHER SERVICES WHICH WILL MEET THE REQUIREMENTS OF THE TENDER DOCUMENTATION AND THE DESIGN BRIEFS AS PROVIDED BY THE CLIENT AND ARCHITECT. REFER ALSO TO ALL OTHER TENDER DOCUMENTS FOR GENERAL SCOPE INCLUSIONS AND REQUIREMENTS THAT ARE APPLICABLE TO THIS PROJECT.

- THE CONTRACTOR'S SCOPE OF WORKS GENERALLY INCLUDES THE PROVISION OF: • DEMOLITION OF EXISTING HYDRANT & HOSE REEL SYSTEM (LGF ONLY) SYSTEM
- NEW HYDRANT SYSTEM c/w TANKS & PUMPS
- PORTABLE FIRE EXTINGUISHERS AND BLANKETS.
- FIRE PROTECTION EQUIPMENT DURING CONSTRUCTION.
- DESIGN, CALCULATIONS, DETAILED LAYOUTS.
- SAMPLES AND TECHNICAL INFORMATION.
   COORDINATE FULLY WITH ARCHITECTURAL. STRUCTURAL. CIVIL. HYDRAULICS. ELECTRICAL. MECHANICAL AND SECURITY SERVICES PACKAGES.
- DOCUMENTATION INCLUDING
- •• OPERATION AND MAINTENANCE MANUALS OR UPDATES
- •• SUPPLY DETAILED AND COMPLETE FIRE DETECTION COMMISSIONING TEST REPORTS
- •• SUPPLY AS BUILT CONSTRUCTION DRAWINGS
- PROVIDE UPDATED/NEW TACTICAL FIRE PLANS
   SUPPLY FULL HYDRAULIC CALCULATIONS OF HYDRAULIC METHODOLOGY
- TESTING AND COMMISSIONING
- FULL FUNCTION FIRE TESTING
- MAINTENANCE, DEFECTS LIABILITY, WARRANTY.
- TRAINING
- CERTIFICATION.

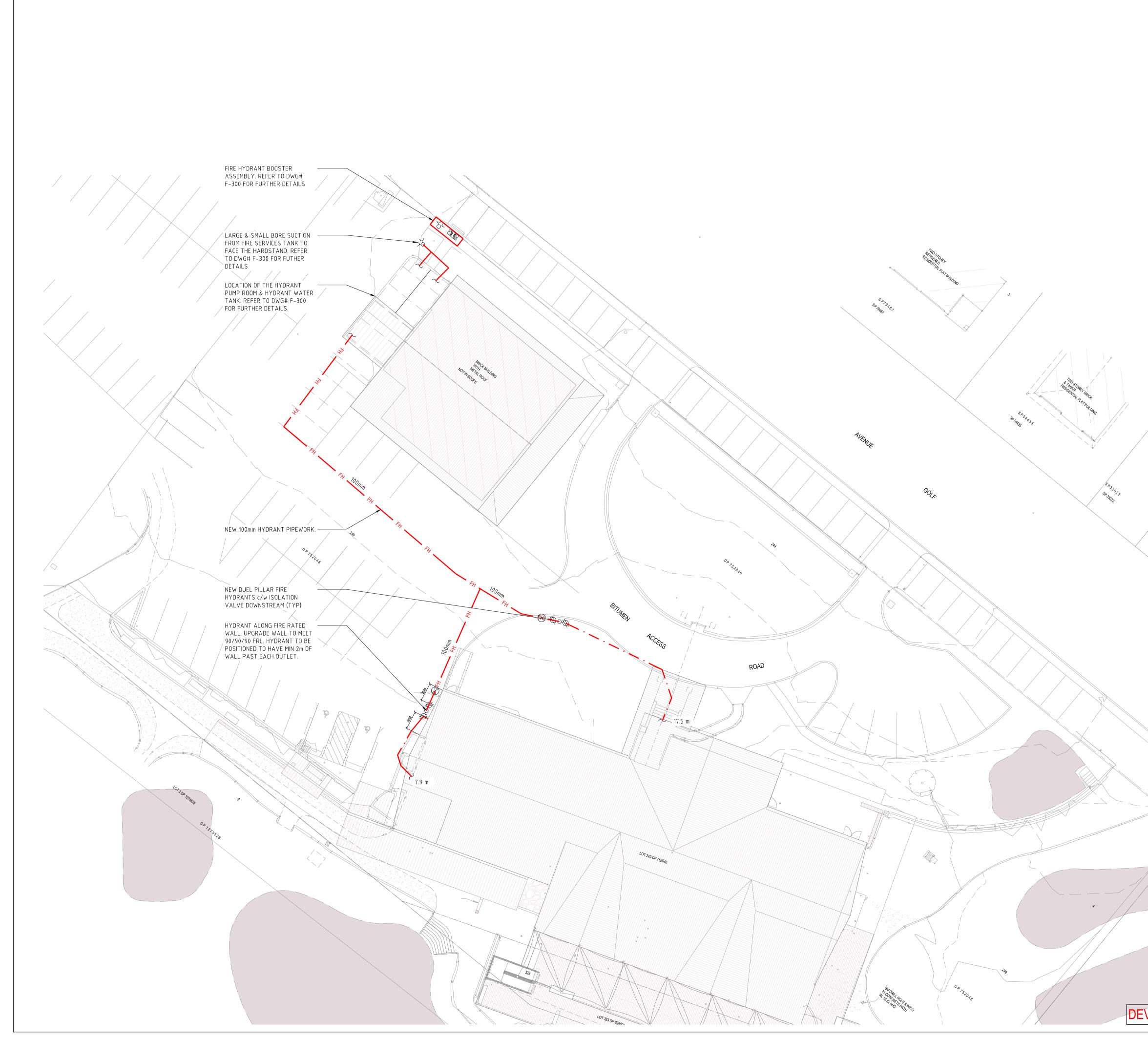
THE SCOPE AND REQUIREMENTS OF EACH SECTION IS DESCRIBED IN SUBSEQUENT SECTIONS (WET AND DRY FIRE SYSTEMS) OF THIS TECHNICAL SPECIFICATION. ALL PROVISIONS MUST COMPLY WITH THE DESCRIPTIONS, REQUIREMENTS AND METHODOLOGIES SET OUT IN SUBSEQUENT SECTIONS OF THIS SPECIFICATION AND ALL OTHER TENDER DOCUMENTS. NOTE: REFER TO THE APPLICABLE STANDARDS TABLE FOR FIRE SERVICES STANDARDS AND CODES.

B. WORKS BY OTHERS:

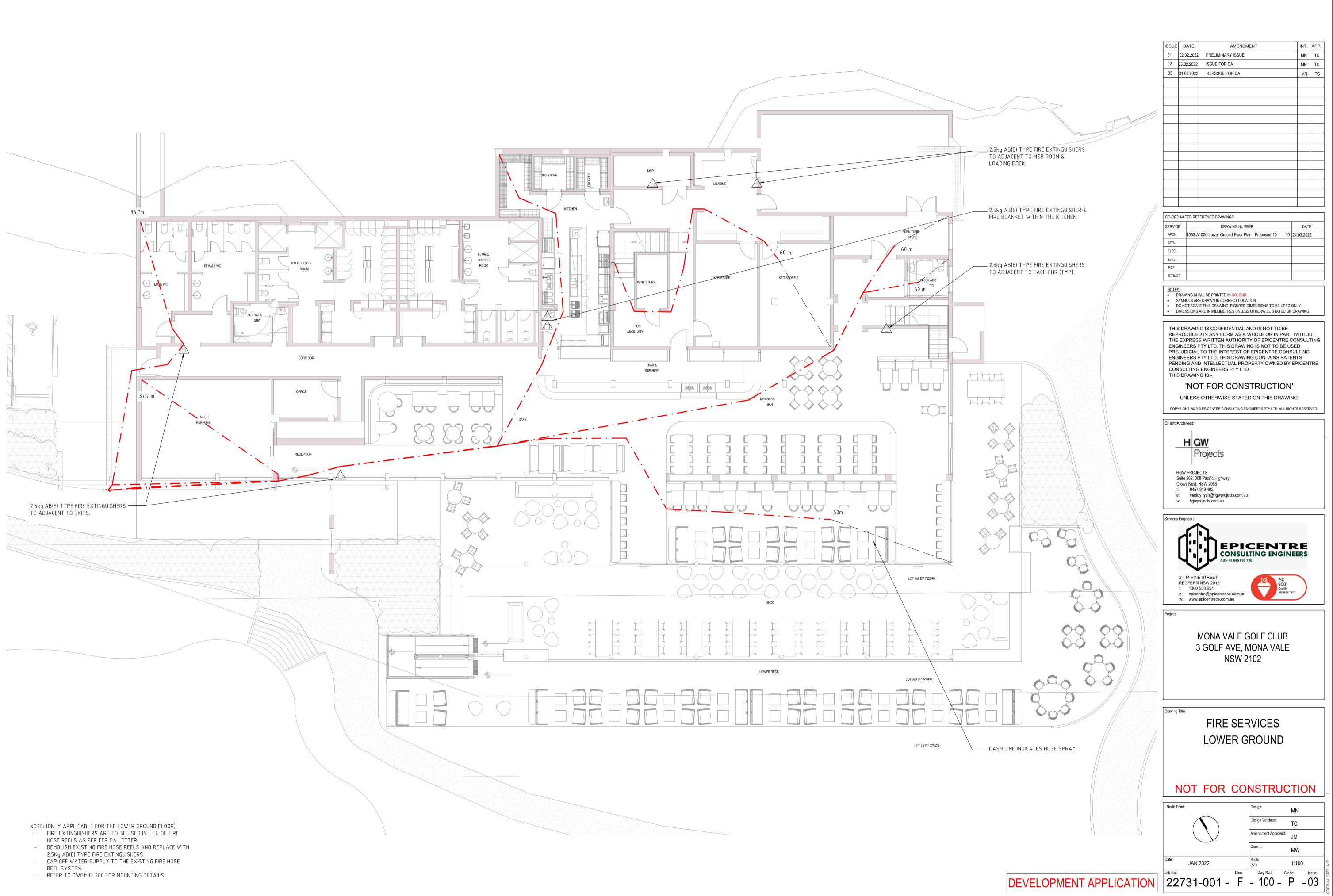
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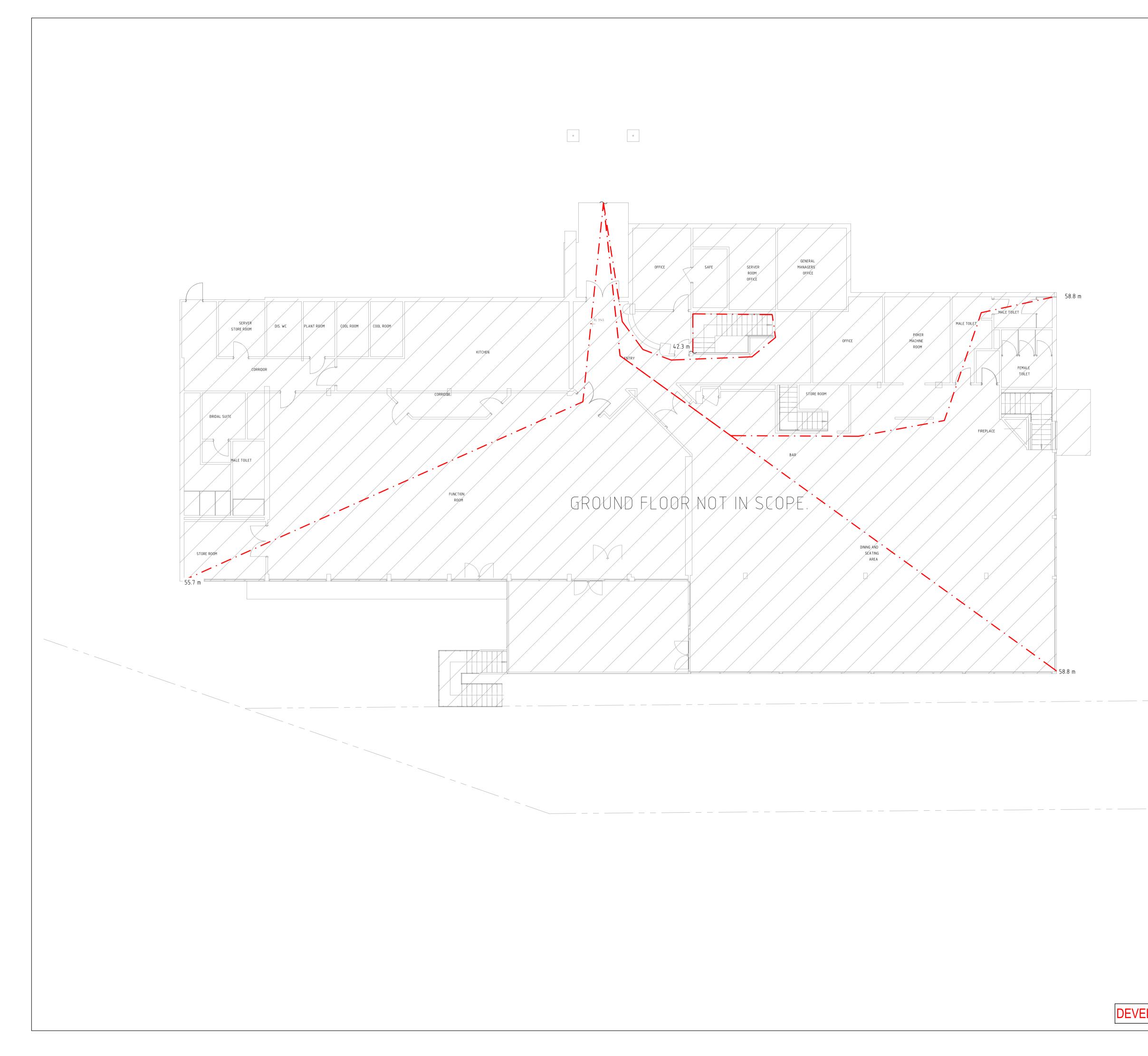
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SAND BEDDING 100mm <sub>-</sub>MIN

SCALE: NTS

BOOSTER

9

ASSEMBLY

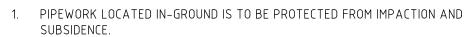
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100mm FIRE SERVICES

CONNECTION TO EXISTING

WATER MAIN PROVIDED FROM HYDRAULICS CONTRACTOR

SCALE: NTS

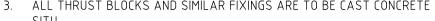


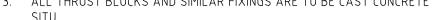


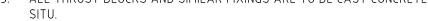




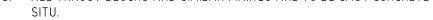


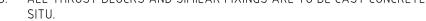


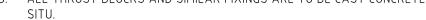


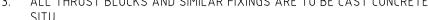




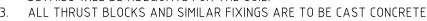






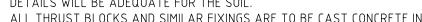




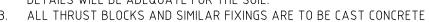














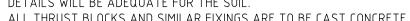


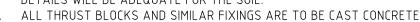










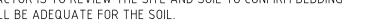












ASPHALT OR SLAB)

600mm

GRAVEL COVER

TO BE **36,000L (18,000L PER TANK)**.

OVERFLOW TO RUN TO GRADE -----

40mm SERVO VALVE ———

LARGE BORE & SMALL BORE —

DOUBLE CHECK —

CONNECTION POINTS

 $\bigotimes \bigotimes$ 

FIRE HYDRANT SCHEMATIC

100mm CONNECTION

FROM THE TANK

SUCTION

SCALE: NTS

\_\_\_\_FIXED VANDAL PROOF

PUMP TEST LINES BACK TO

FH100

LADDER ON TANK

—65mm DRAIN VALVE

TANKS

-M D HM

FP-2

 $\checkmark$ 

WATER SUPPLY SCHEDULE TOWN MAIN CAPACITY

SYSTEM DEMAND HYDRANT 2x5l/s @700kPa HYDRANT BOOSTER 201/s @150kPa

PUMP REQUIREMENTS

FP-1 DIESEL 10 L/s @850 KPa

TANK CAPACITY

31m

24m

14 m

0.5 L/s @850kPa

18 KL

18 KL

(EFFECTIVE CAPACITY)

(EFFECTIVE CAPACITY)

10L/s

15L/s

20L/S (max)

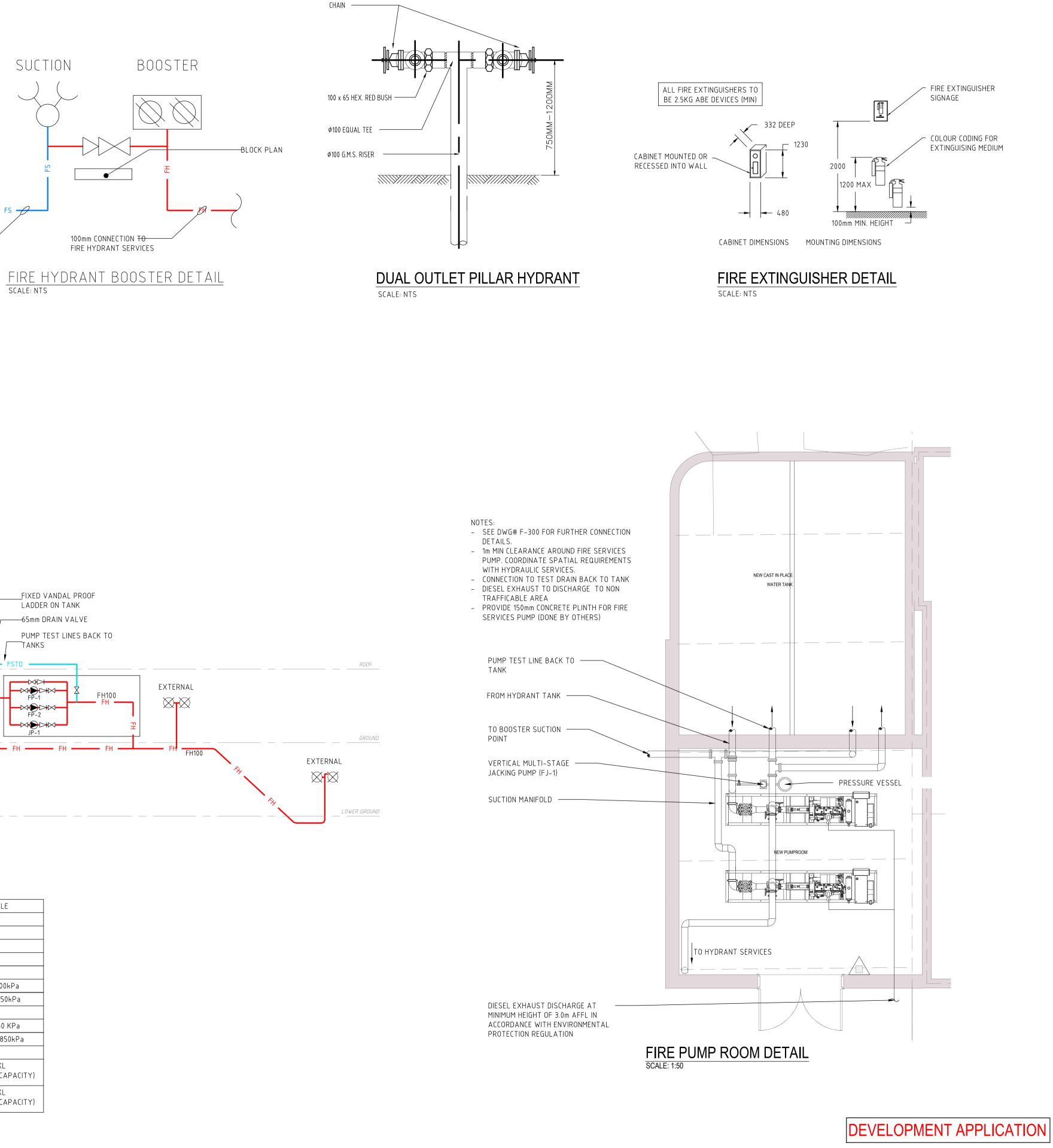
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FIRE TANK – 1

FIRE TANK – 2

DETAILS WILL BE ADEQUATE FOR THE SOIL.

FIRE SERVICES PIPEWORK BEDDING DETAIL



Ø65 NOM. BORE FIRE HYDRANT

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