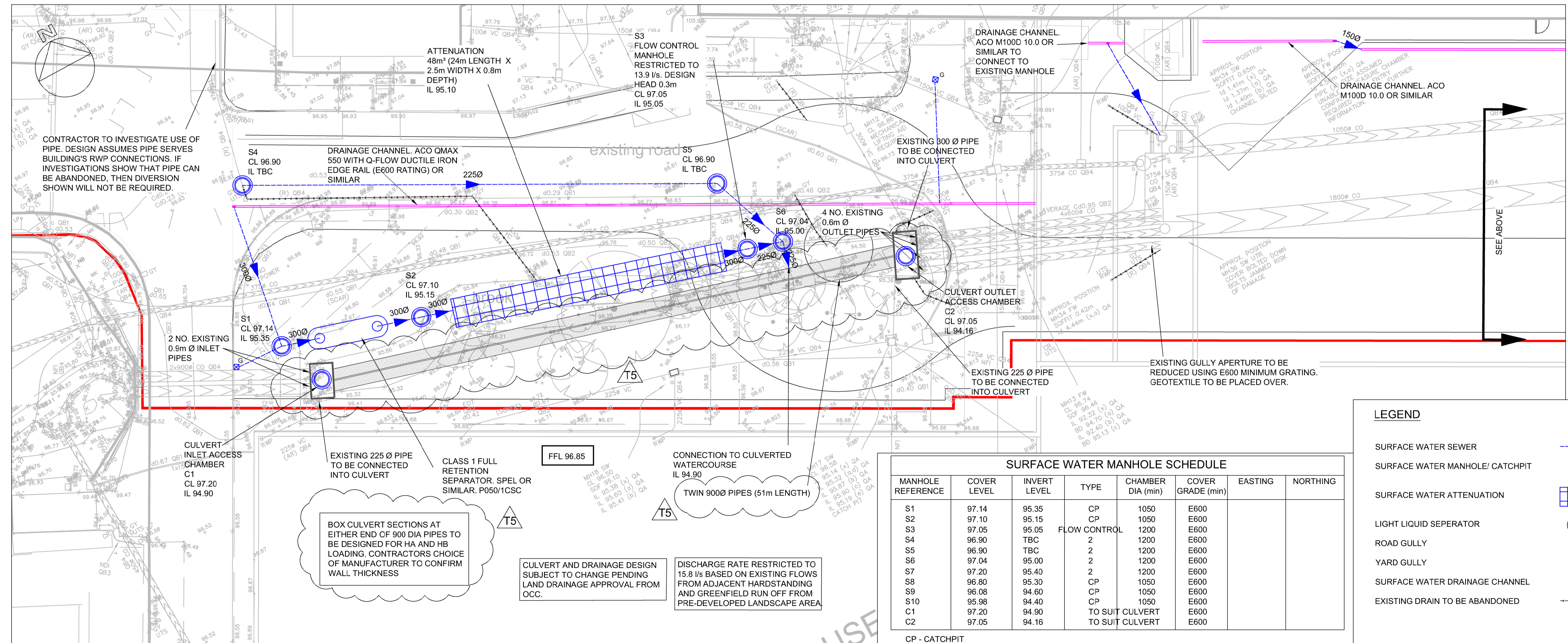


- NOTES:
- THIS DRAWING IS NOT TO BE SCALED.
 - THE CONTRACTOR SHALL CHECK ALL DIMENSIONS AND LEVELS ON SITE. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ARCHITECT & ENGINEER FOR VERIFICATION. FIGURED DIMENSIONS ONLY ARE TO BE TAKEN FROM THIS DRAWING.
 - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEERS' AND SERVICE ENGINEERS' DRAWINGS AND SPECIFICATIONS.
 - THE CONTRACTOR SHALL ALLOW FOR THE PROTECTION, TEMPORARY AND PERMANENT SUPPORT AND DIVERSION WORKS AS NECESSARY, TO ALL EXISTING SERVICES TO THE SATISFACTION OF THE PUBLIC UTILITIES.
 - THE CONTRACTOR SHALL ALLOW FOR DEALING WITH SURFACE WATER RUN-OFF INTO EXCAVATION AND FROM GROUNDWATER BY MEANS OF PUMPS, PUMPING AND DE-WATERING AS APPROPRIATE, IN ORDER TO KEEP THE EXCAVATION AS REASONABLY DRY AS POSSIBLE DURING THE CONSTRUCTION OF THE WORKS.
 - ALL EXTERNAL DRAINAGE WORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH 'CIVIL ENGINEERING SPECIFICATION FOR THE WATER INDUSTRY 7th EDITION FOR ADOPTABLE DRAINAGE, AND TO THE RELEVANT PROJECT SPECIFICATION AS DIRECTED BY THE ENGINEER FOR PRIVATE DRAINAGE.
 - PIPE MATERIAL SHALL BE AS FOLLOWS:
1000 TO 2250 - CLAYWARE TO BS EN 285
3000 AND ABOVE - CONCRETE TO BS EN 1916.
N.B PVCu PIPE TO BE EN 1401-1:1998 MAY BE USED SUBJECT TO THE APPROVAL OF THE ENGINEER. PIPES OF LESS THAN 400MM DIAMETER TO HAVE A RESISTANCE OF 270 BAR.
 - SURFACE WATER PIPE DIAMETERS ARE AS INDICATED
PIPE GRADIENTS UNLESS SHOWN ARE:
SURFACE WATER:
MINIMUM GRADIENT 1:80.
 - CLAY AND CONCRETE PIPES SHALL BE BEDDED ON CLASS S BEDDING UNLESS COVER IS LESS THAN 1.2m IN TRAFFICKED AREAS, THEN CLASS Z BEDDING.
 - UPVC PIPES SHALL BE BEDDED ON CLASS P BEDDING UNLESS COVER IS LESS THAN 1.2m IN TRAFFICKED AREAS, THEN CLASS Q OR Z BEDDING.
 - BACKFILL TO TRENCHES MAY BE SUITABLE EXCAVATED MATERIAL IN LANDSCAPED AREAS. TYPE 1 GRANULAR MATERIAL TO BE USED UNDER HARDSTANDINGS AND ROADS.
 - ROAD GULLY CONNECTIONS SHALL BE 150mm DIAMETER AND WITH CLASS Z BEDDING.
 - ROAD GULLIES SHALL BE TRAPPED 450mm DIAMETER x 900mm DEEP WITH CLASS D400 FRAME AND GRATINGS TO BS EN 124.
 - ALL MANHOLE AND DRAINAGE CHANNEL COVERS SHALL COMPLY WITH BS EN 124. FOR DETAILS OF COVER TYPE & LOCATION, PLEASE REFER TO THE MANHOLE SCHEDULE. MANHOLE COVERS WITHIN BLOCK PAVED AREAS & BUILDINGS SHALL BE RECESSED, DOUBLE SEALED WITHIN BUILDING.
 - ALL LIGHT LIQUID SEPARATORS SHALL BE INSTALLED TO MANUFACTURERS RECOMMENDATIONS AND VENT LATED BY VENTILATION PIPEWORK TO MANUFACTURERS RECOMMENDATIONS AND FITTED WITH AN ALARM. LOCATIONS OF VENTS TO BE AGREED.
 - COVER LEVELS SHOWN ARE APPROXIMATE. COVERS SHOULD BE ADJUSTED TO MATCH SURROUNDING FINISH LEVELS.
 - MANHOLE COVERS TO BE RETAINED TO BE ADJUSTED TO PROPOSED LEVEL.
 - DRAINAGE LAYER TO BE LAID OVER EXISTING SLAB. REFER EXTERNAL WORKS DRAWING. DRAINAGE LAYER TO CONNECT INTO DRAINAGE CHANNEL.
 - ABANDONED PIPES TO BE FILLED WITH GROUT OR REMOVED.
 - VENTILATION TO BE PROVIDED TO ATTENUATION AS REQUIRED BY MANUFACTURER.
 - DRAINAGE LAYER TO BE LAID OVER EXISTING SLAB. REFER EXTERNAL WORKS DRAWINGS FOR LOCATIONS. DRAINAGE LAYER TO DRAIN TO DRAINAGE CHANNEL.



Rev	Date	Description	By	Ckd
T5	27.09.17	CULVERT AMENDED TO TWIN 900 DIA PIPES	GW	JH
T4	13.09.17	CULVERT SIZE AND ATTENUATION AMENDED	AB	JH
T3	11.08.17	AMENDED TO SUIT JDE COMMENTS.	AB	JH
T2	07.08.17	AMENDED TO SUIT JDE COMMENTS.	GW	JH
T1	27.07.17	TENDER ISSUE	GW	JH

Architect:

Hydrock Consultants Ltd
Hydrock Valley Innovation Centre
Central Boulevard
Salford
S90 6AJ
T +44 (0)121 506040
www.hydrock.com

Client:

db symmetry

Project Title:

JDE BUILDING SEPARATION

Drawing Title:

DRAINAGE LAYOUT

Drawing Status:

TENDER ISSUE

Hydrock Job No:

C161279

Drawn	Checked	Scale @ A1	Date	Issue Date
GW	JH	1:200	27.07.17	27.07.17

Drawing Number:

C161279-HYD-XX-XX-DR-C-0102

Revision:

T5

SURFACE WATER MANHOLE SCHEDULE

MANHOLE REFERENCE	COVER LEVEL	INVERT LEVEL	TYPE	CHAMBER DIA (mm)	COVER GRADE (mm)	EASTING	NORTHING
S1	97.14	95.35	CP	1050	E600		
S2	97.10	95.15	CP	1050	E600		
S3	97.05	95.05	FLOW CONTROL	1200	E600		
S4	96.90	TBC	2	1200	E600		
S5	96.90	TBC	2	1200	E600		
S6	97.04	95.00	2	1200	E600		
S7	97.20	95.40	2	1200	E600		
S8	96.80	95.30	CP	1050	E600		
S9	96.08	94.60	CP	1050	E600		
S10	95.98	94.40	CP	1050	E600		
C1	97.20	94.90	TO SUIT CULVERT		E600		
C2	97.05	94.16	TO SUIT CULVERT		E600		

CP - CATCHPIT

LEGEND

- SURFACE WATER SEWER
- SURFACE WATER MANHOLE/ CATCHPIT
- SURFACE WATER ATTENUATION
- LIGHT LIQUID SEPARATOR
- ROAD GULLY
- YARD GULLY
- SURFACE WATER DRAINAGE CHANNEL
- EXISTING DRAIN TO BE ABANDONED