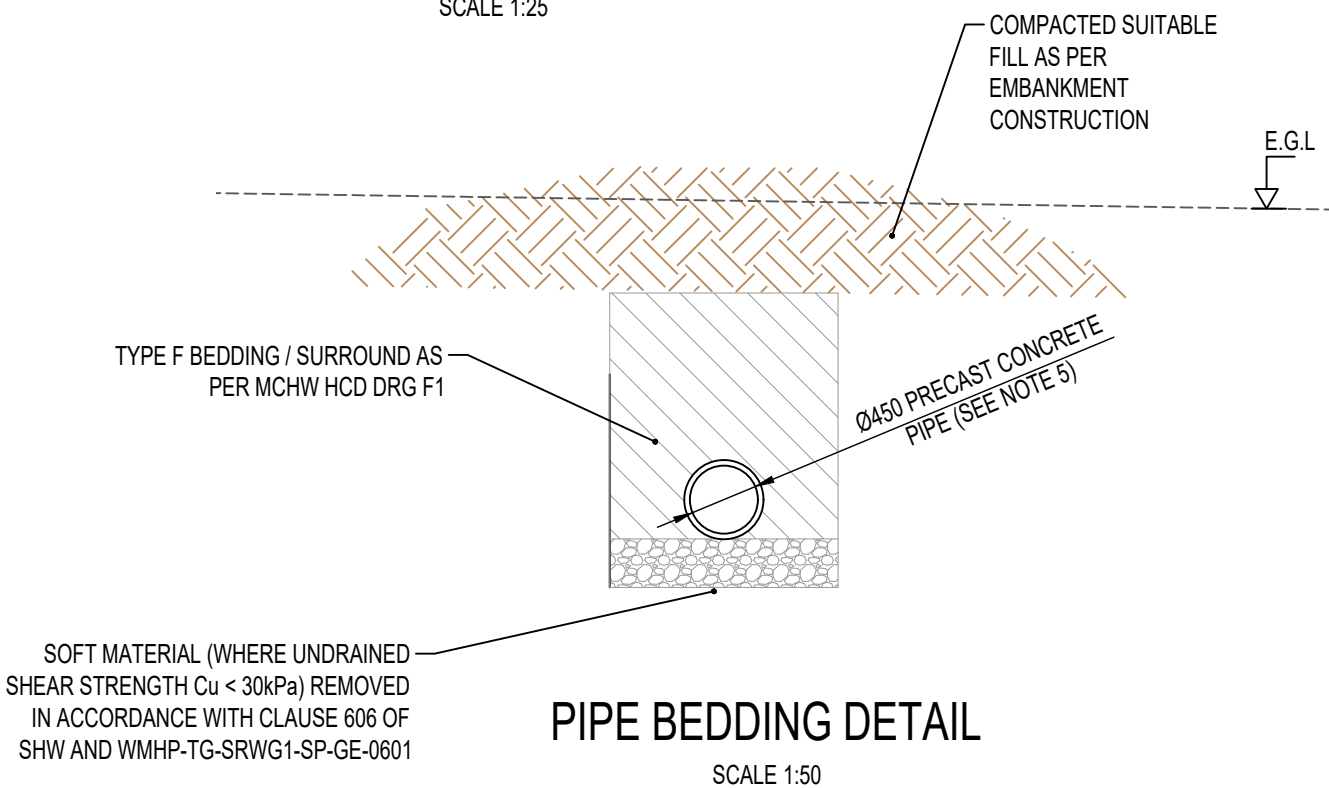
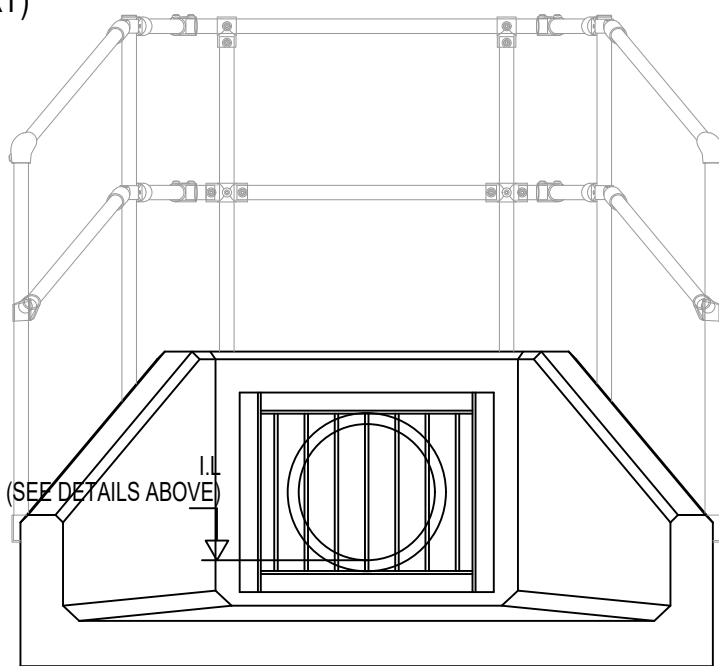
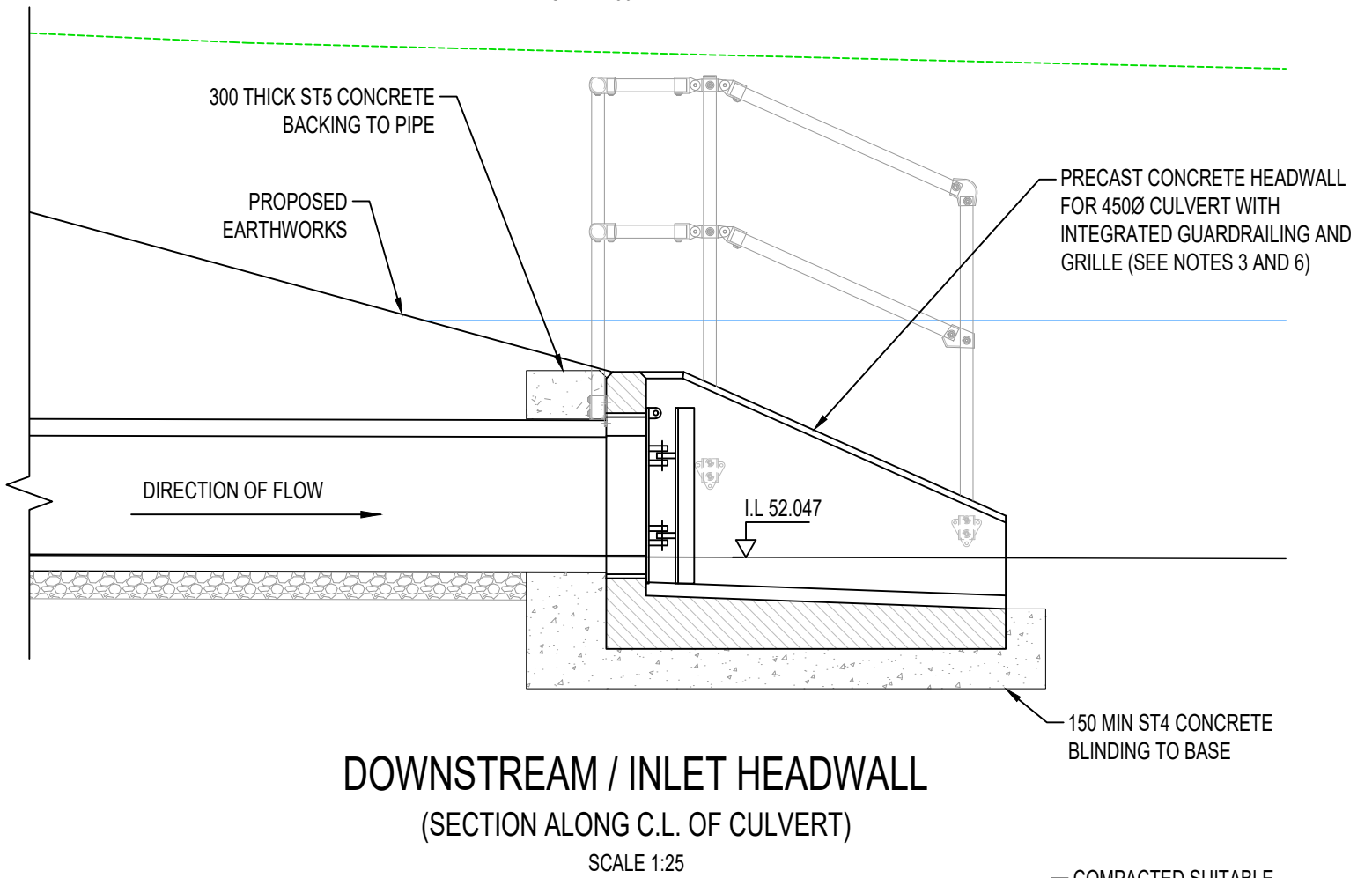
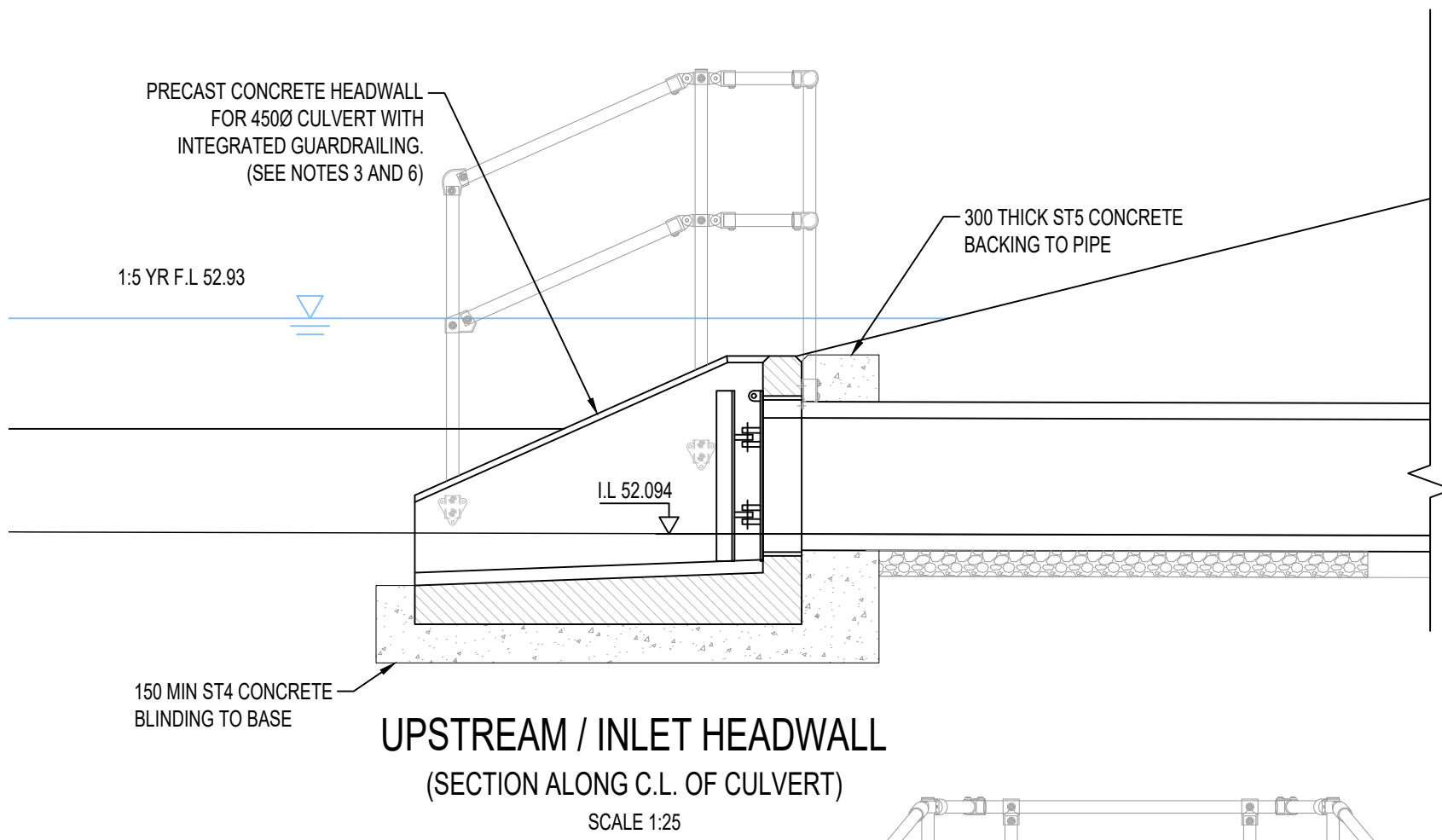
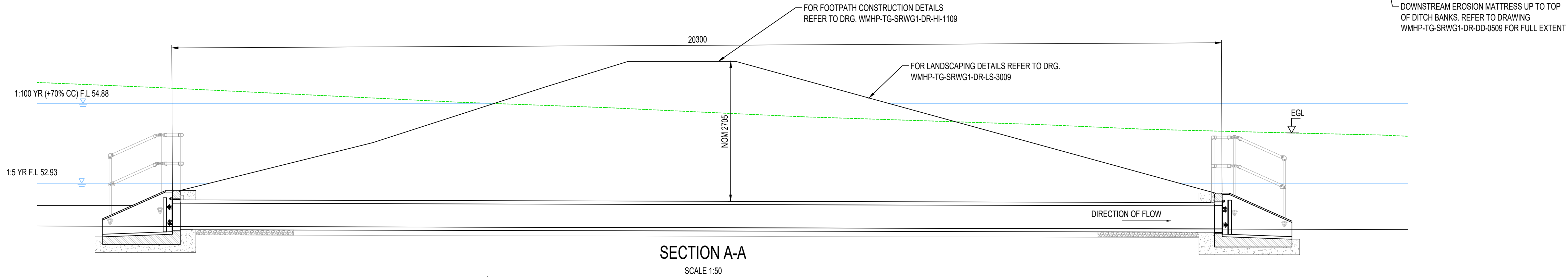
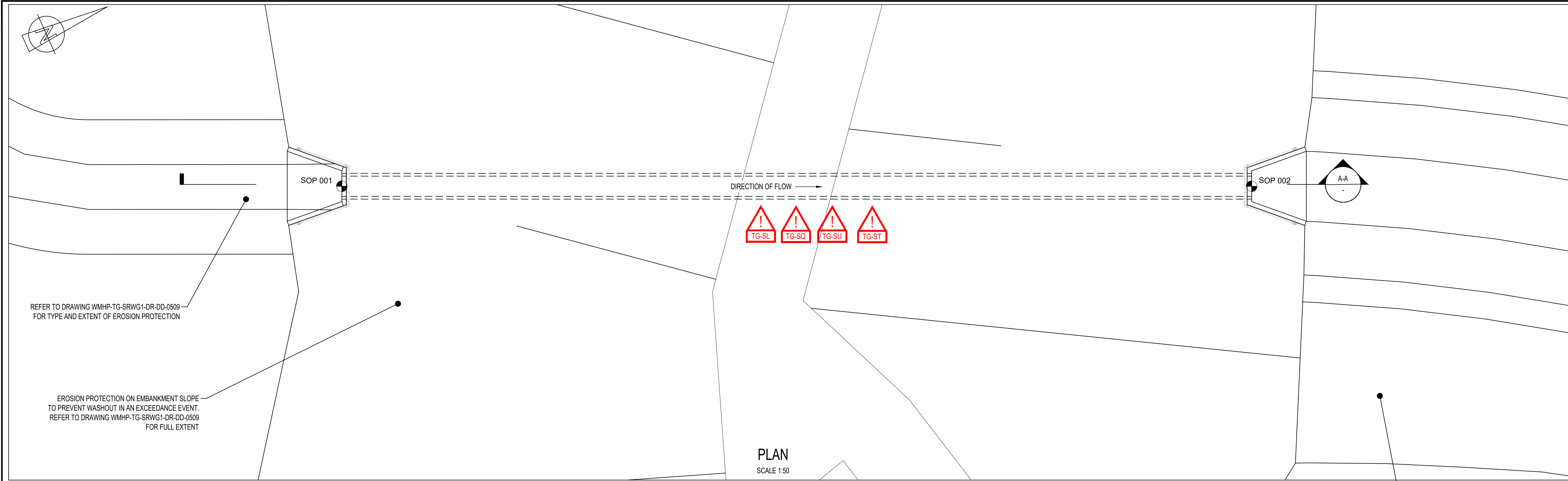




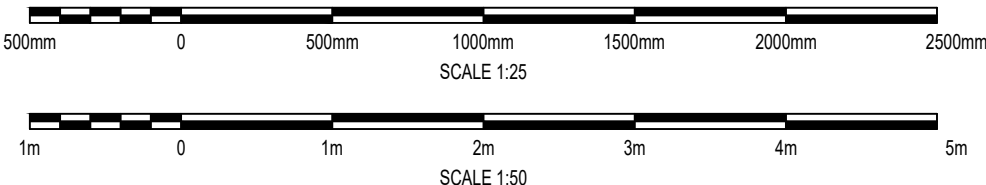
SETTING OUT COORDINATES

SOP_NO.	EASTING	NORTHING
SOP 001	482288.925	167499.120
SOP 002	482280.606	167480.603

SIGNIFICANT RESIDUAL HAZARDS

RESIDUAL HAZARD	STAGE	SUGGESTED CONTROL MEASURE
ACCESS INSIDE CULVERT - WORKING IN / AROUND WATER 	M	REMOTE METHODS OF INSPECTION TO BE USED. ENTRY INTO CULVERT SHOULD NOT OCCUR UNDER ANY CIRCUMSTANCES DUE TO THE SMALL DIAMETER OF THE CULVERTS. INSPECTION OF CULVERTS VIA REMOTE METHODS SHOULD TAKE PLACE DURING PERIODS OF LOW FLOW.
POSSIBLE PRESENCE OF BURIED SERVICES 	C/D	SEARCH RESULTS HAVE INDICATED NO SERVICES IN CULVERT LOCATION (SEE NOTE 9). HOWEVER, CONTRACTOR TO CONFIRM VIA LATEST STATUTORY UNDERTAKERS' SEARCHES AND SCAN AREA PRIOR TO CONSTRUCTION
ENCOUNTERING GROUNDWATER IN EXCAVATION 	C/D	CONTRACTOR TO IMPLEMENT SUITABLE WATER MANAGEMENT MEASURES AS NECESSARY
UNEXPLODED ORDNANCE 	C/D	"LOW RISK" CATEGORY IDENTIFIED BY "1ST LINE DEFENCE" DESK STUDY RA. UXO RISK MANAGEMENT PLAN AND SITE SPECIFIC UXO AWARENESS BRIEFINGS TO BE GIVEN TO ALL PERSONNEL CONDUCTING INTRUSIVE WORKS

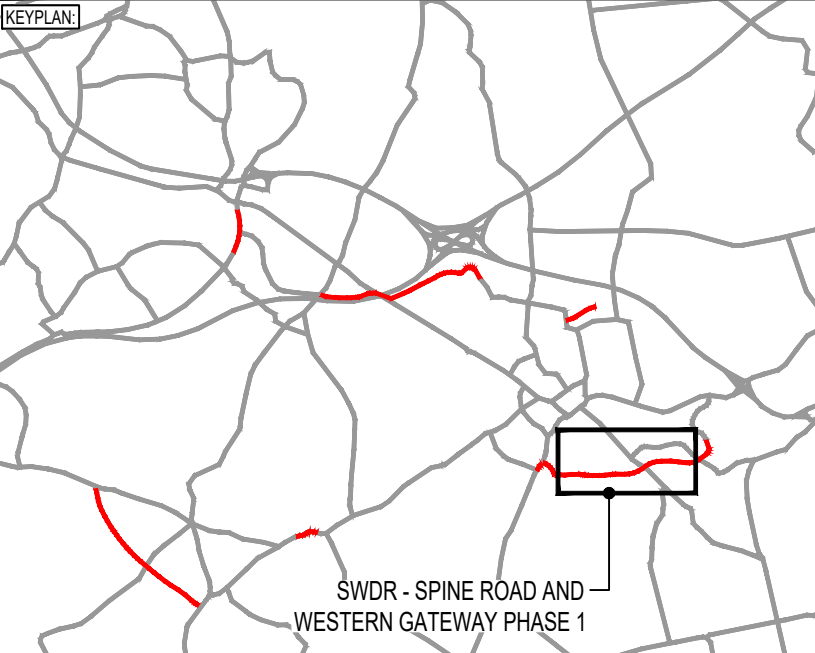
NOTE: The above hazards do not include every hazard or assumption, but identify significant residual construction hazards that are not likely to be obvious to a competent contractor and those that could be difficult to manage effectively. Refer also to the designer's risk documentation.



DO NOT SCALE

NOTES:

- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
- ALL LEVELS ARE IN METRES AOD UNLESS NOTED OTHERWISE.
- INTEGRATED GUARDRAIL AND GRILLE ON HEADWALL TO BE HOT DIP GALVANISED (TO BS EN ISO 1461). GUARDRAIL TO BE TUBE AND CLAMP "KEE KLAMP" OR EQUIVALENT AND MEET CLASS 1 LOADING OF 500N/m TO BS 7818. GRILLE TO BE ALTHON "SFA 1 450" OR EQUIVALENT IN ACCORDANCE WITH FIGURE C3 "TYPICAL OUTFALL SAFETY GRILLE FOR OUTFALLS 350 DIAMETER OR GREATER" TO SECTOR SEWERAGE GUIDANCE APPENDIX C (WATER UK) (FORMERLY "SEWERS FOR ADOPTION")
- DRAWING TO BE READ IN CONJUNCTION WITH CULVERT LOCATION PLAN WMHP-TG-SRWG1-DR-DD-0534
- CONCRETE PIPES TO BE CE-MARKED TO BS EN 1916. PIPES TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- PRECAST HEADWALL TO BE ALTHON SFA10 B FOR 4500 OR EQUIVALENT APPROVED. HEADWALL TO BE DESIGNED BY PRECASTER BASED ON BS EN1992-1-1 AND SHALL BE IN ACCORDANCE WITH BS EN13369.
- FORMATION LEVEL TO BE INSPECTED AND ANY SOFT AREAS (WHERE UNDRAINED SHEAR STRENGTH $C_u < 30 \text{ kPa}$) TESTED IN ACCORDANCE WITH EARTHWORKS SPECIFICATION WMHP-TG-SRWG1-SP-GE-0601 WITH HAND SHEAR VANE TESTING. SOFT AREAS TO BE DUG AND REPLACED WITH MIN 300 THK CLASS 6A SELF COMPACTING GRANULAR FILL.
- FLOOD LEVELS BASED ON FLOOD MODELLING BY WSP SHOWN ON DRG. 66439-CUL-001 REV A, DATED 30/09/20.
- EXISTING UTILITIES INFORMATION TAKEN FROM WSP DRAWING WMHP-WSP-SR-DR-UT-0001 BASED ON C2 SEARCH INFORMATION. THE CONTRACTOR SHALL UNDERTAKE FURTHER SURVEYS, SCANS AND TRIAL HOLES TO CONFIRM AND LOCATE UTILITIES PRIOR TO CONSTRUCTION. SEE RESIDUAL HAZARD TG-SQ.
- EXISTING BACKGROUND INFORMATION TAKEN FROM SURVEY FILE "XTOPOSURVEY" BY MURPHY SURVEYS, COMMISSIONED BY WSP, SUPPLIED BY WBC, AND FILE "XTOPO_ALL" SUPPLIED BY WSP. CONTRACTOR TO VERIFY SURVEY ACCURACY PRIOR TO CONSTRUCTION.



P04	18/06/2025	AJP	UPDATED FOR PLANNING CONDITION DISCHARGE	DJF	JC
P03	02/06/2022	HD	MATTERS OUTSTANDING WMHP-TG-SRWG1-RG-DM-0010	BH	JC
P02	15/11/2021	WA	BB / WBC COMMENTS ADDRESSED	KL	JC
REV	DATE	BY	DESCRIPTION	CHK	APP

DRAWING STATUS:

SUITABLE FOR APPROVAL

S5

DESIGNER:



Tony Gee
Consulting Civil, Structural and Geotechnical Engineers

Tony Gee and Partners LLP
Hardy House
140 High Street
Esher, Surrey
KT10 9QJ
Tel: 01372 461600
www.tonygee.com

CONTRACTOR:

Balfour Beatty

CLIENT:



WOKINGHAM BOROUGH COUNCIL

Shute End, Wokingham, Berkshire RG40 1BN
Tel: (0118) 974 6000 Web: www.wokingham.gov.uk

PROJECT:

WOKINGHAM MAJOR HIGHWAYS PROGRAMME
SPINE ROAD AND WESTERN GATEWAY PHASE 1

TITLE:

HIGHWAYS DRAINAGE DESIGN
CULVERT H

SCALE @ A1:	N/A	CHECKED:	KL	APPROVED:	CMF
PROJECT NO:	C118047	DESIGNED:	VIA	DRAWN:	BPH
DRAWING No:	WMHP-TG-SRWG1-DR-DD-0538	DATE:	June 21	REV:	P04