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| Job Details | |  | | | | | | | | | |
| Job Title: | | **Senior Design Engineer** | | | | | | | | | |
| Function: | | **Route Services** | | | | | | | | | |
| Job Reports To: | | **Various** | | | | | | | | | |
| Location: | | **Various** | | | | | | | | | |
| Job Number: | |  | | | | | | | | | |
| Family: | | **Engineering** | Level: | | **2** | | | Band: | | **3C** | |
| (Full details on Family, Level and Band can be obtained from Human Resources) | | | | | | | | | | | |
| **Job Purpose** | | | | | | | | | | | |
| To be responsible for the engineering development of allocated proposals from clarification of remit to project completion developing the engineering solutions to proposals to best satisfy the business case. | | | | | | | | | | | |
| Safety Details | |  | | | | | | | | | |
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| 1. | This job MANAGES EMPLOYEES (*review and undertake safety accountabilities identified in ‘General Safety Responsibilities’ and management accountabilities in the Management Handbook*) | | | YES | | ü | NO | |  | |  |
| 2. | This is a KEY SAFETY POST *(Appendix 4, Chapter 3, Railway Safety Case)* | | | YES | |  | NO | | ü | |  |
| 3. | This job requires SECURITY CLEARANCE *(e.g. Running of Special Trains)* | | | YES | |  | NO | | ü | |  |
| 4. | This is a SAFETY CRITICAL WORK POST *(Appendix 4, Chapter 2, Railway Safety Case)* | | | YES | |  | NO | | ü | |  |
| 5. | The job holder is required to hold a relevant TRACK SAFETY competence | | | YES | |  | NO | | ü | |  |
|  | (*refer to the Job Description guidelines for detailed information on TRACK SAFETY competences*)  The TRACK SAFETY competences required by the job holder are listed below:   * PTS | | | | | | | | | |  |

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| **Key Accountabilities** |
| 1. Lead a team of designers undertaking design activities which is technically accurate and delivered to time and budget. 2. Manage and develop engineering solutions to meet the requirements, scope, operational performance targets and maintain a robust challenge to sponsoring engineers and managers, in order to monitor and value manage the business and technical remit and thereby optimise the business case. 3. Manage all engineering and development activities so that they result in schemes that are affordable, and that meet programme requirements in a safe & environmentally responsible manner for time, cost and quality. 4. Manage (or undertake where applicable) the development of suitable engineering options for a proposal giving full consideration to safety, reliability, operational capacity modelling, maintainability, ease of construction, and environmental/whole life issues. Engineering excellence is to be supported by:    * 1. Fulfilling the role of Contractors Engineering Manager (CEM) as required subject to suitability, competence assessment, and authority to work at the appropriate level      2. Secure all relevant base data.      3. Review compliance with appropriate standards.      4. Use Risk Identification and evaluation methods (e.g. HAZOP, QRA, LRM, and the GK/RT/14200 suite), as suitable, to evaluate and compare options.      5. Use feedback from all relevant past projects across the UK rail network, lessons learned etc.      6. Monitor and support designers training, technical briefings etc. 5. Confirm whether strict change control is maintained on scope development; evaluate cost, time and performance impacts in conjunction with development management. 6. Participate in the selection of a single option for further development, preparing or monitoring preparation of reports, papers etc as necessary. 7. Manage (or undertake where applicable) the development of the selected single option. 8. Manage (or undertake where applicable) the preparation of the full engineering data package required for commencement of the detailed design, and participate in answering clarifications/queries as needed. 9. Support the discharging of construction design management (CDM) Principal Designer and Designer duties and carry out or monitor cross-discipline engineering checks of all relevant aspects of the proposal. 10. Design, Check, Review and Approve deliverables within the individual’s area of competence to deliver project requirements. 11. Manage adequate resourcing of the feasibility stages of project development, in both the quality and quantity of Network Rail and supplier staff, and in the use of the most appropriate support equipment. 12. Manage the engineering interfaces of allocated proposals with concurrent work in other disciplines, or within other programmes. 13. Act as or liaise with the appropriate Project Engineer. Check method statements / Work Activity Safety Statements for site works and surveys in particular are produced and approved to the required standards. 14. Monitor, assess, evaluate and audit Consultants and Contractors during project stages 2-4. |

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| **Job Skills, Experience and Qualifications** | | | | | |
| Essential   * An engineering degree or equivalent industry-recognised training qualification. * IRSE Principles Designer licence or CEng / IEng equivalent relevant to the discipline. * A demonstrable aptitude for option development. * Strong evaluation and decision-making skills. * A working knowledge of rail engineering; relevant successful experience working in the principal discipline and an adequate understanding of all other related disciplines. * An ability to work and communicate effectively in a team context. * An appreciation of all the life cycle stages of rail infrastructure. * CDM, Auditing and risk assessment competencies.   Desirable   * Six Sigma Yellow Belt * Membership of a relevant engineering professional institution. * Experience in design, installation and maintenance. * Formal qualifications in risk identification and assessment. * Yellow book course. | | | | | |
| Job Description Briefing | | | | | |
| Date Job Description issued to, discussed with and understood by Post Holder  Name of Post Holder: Signature:  (I confirm I have been briefed on the requirements of this Job Description and other related documents)  Name of immediate superior: Signature:  (I confirm I have briefed the Post Holder on the requirements of this Job Description and other related documents) | | | | | |
| **Nominated Deputies** | | | | | |
| If this is a KEY SAFETY POST (2 in Safety Details above is YES) at least one nominated deputy must be identified. The Job Holder must confirm that the Nominated Deputy(ies) receives a copy of, and is briefed on this Job Description.  Name of Nominated Deputy: Signature: Date:  (As the Nominated Deputy for this post, I confirm I have been briefed on the requirements of this Job)  *If there are more nominated deputies, they should sign further copies of this Job Description.* | | | | | |
| Amended by: | D Mitchell | Dated: | August 2022 | Version: | 3.2 |