



Technical Program Outline

Monday, November 17, 2025

- **Evening Welcome Reception**

Tuesday, November 18, 2025

- **Opening Session**
- **Keynote Speaker I**
- **Technical Sessions I, II, III and IV**

Wednesday, November 19, 2025

- **Keynote Speaker II**
- **Technical Sessions V and VI**
- **Dinner Banquet**

Thursday, November 20, 2025

- **Technical Tour**

Friday, November 21, 2025

- **Cultural Tour**

***Note:** The technical program is subject to change, and it may be necessary to make adjustments to the program.*



Integrating Technology for Advanced Practices in Structural Engineering and Construction
Joint Conference of ISEC 2025 and ASEA-SEC-7, Sydney, Australia, November 17-21, 2025



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Monday – November 17, 2025

17:00 - 19:00	Welcome Reception	Hall area of Level 24 Macquarie University 123 Pitt Street
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Tuesday – November 18, 2025

Registration and Coffee

08:00 - 17:00	Registration (<i>The registration desk will be open during conference hours</i>)	Hall area of Level 24 Macquarie University
08:30 - 09:00	Registration – Tea and Coffee	

Opening Session

09:00 - 09:25	Conference Briefings <i>Housekeeping, Health & Safety</i>	Room 2414/2415 Level 24 Macquarie University 123 Pitt Street
	Welcome and Acknowledgement of Country Address <i>Sorn Vimonsatit, Conference Chair</i>	
	Welcoming Address <i>Amarjit Singh, ISEC Society President</i>	
	Welcoming Remarks <i>Hossein Askarinejad, ASEA SEC President</i>	
	Welcome to College of Engineering <i>Harish Srivastava, Industry Advisory Committee for Civil Engineering</i>	
	Announcements, Macquarie University video <i>Sorn Vimonsatit, Conference Chair</i>	
	5-Minute Break	
09:25 - 09:30		
09:30 - 10:00	Keynote I: David Millar, Chief Executive Officer - Concrete Institute of Australia <i>Title: Strength in Connection: How Professional Associations Drive Innovation in an Era of Integrated Technology.</i>	

Morning Tea & Coffee Break
10:00 - 10:30



Technical Session I – Tuesday – November 18, 2025, 10:30 - 12:30

Location: 123 Pitt Street, Macquarie University

	Session chair: TBC Room 2408 I-A: Advances in Concrete Structures	Session chair: Hossein Askarinejad Room 2414 I-B: Construction Methods and Technologies	Session chair: Matt Pour Room 2415 I-C: Safety, Quality, and Project Management
1	STR-02 - LOADING TEST OF TUNNEL LINING CONCRETE STRENGTHENED WITH BOND-IMPROVED CARBON-FIBER COMPOSITE CABLES Authors: Isamu Yoshitake, Ryo Kodama, Shingo Morimoto, Masaki Ono	AAE-11 - BESTOBEAM COMPOSITE BEAM CHARACTERISTICS AND CONSTRUCTION CASE STUDIES Authors: HeeHoon Kim, InYong Jung, Jinwon Kim	CSA-09 - ANALYSIS OF HUMAN INJURIES IN LOW-HEIGHT FALLS Authors: Haeyoung Kim, Hiroki Takahashi, Yasumichi Hino, Katsutoshi Ohdo, Hideki Oyama, Masahiro Okamura
2	STR-53 - EXPERIMENTAL EVALUATION OF A NOVEL 3D-PRINTED PERMANENT CONCRETE FORMWORK Authors: Rajib Kumar Biswas, Takahiro Saitoh, Atsush Ito	CON-14 - CONSTRUCTION METHOD OF BREAKWATER RC CAISSON BY SLIPFORM ON SEA Authors: Kenichi Mizuno, Osamu Taniguchi, Tooru Masaki, Mitsuyasu Iwanami	CSA-01 - DEVELOPING A CHECKLIST FOR WORKING AT HEIGHTS ALIGNED WITH LEGAL AND SAFETY REGULATIONS Authors: Jorge Alexander Bucheli García, Wilson Oswaldo Cando Tipán, Oscar Patricio Jaramillo de León, Bolívar Mauricio Cely Velez, Samantha Nicole Muñoz Morales
3	STR-04 - ADVANCING DESIGN AND SAFETY: THE NEW AS 5216:2025 FOR FASTENING TO CONCRETE Authors: Benjamin Monavari, Mariana Oneto, Mohammed Hamdouna	CON-15 - STRUCTURAL PERFORMANCE AND ENVIRONMENTAL IMPACT ANALYSIS OF TEN-STORY RESIDENTIAL BUILDINGS: FEASIBILITY AND SUSTAINABILITY Authors: Saidur Rahman Chowdhury, Danish Ahmed, Andi Asiz, Tahar Ayadat	CSA-03 – BARRIERS TO THE ADOPTIONS OF PREVENTION THROUGH DESIGN (PtD) IN THE CONSTRUCTION INDUSTRY Author: Rakan Albalawi
4	CTE-41 - A STUDY ON THE REPAIR OF SALT-DAMAGED CONCRETE STRUCTURES USING PRESSURIZED INJECTION OF LITHIUM NITRIDE Authors: Yusuke Mori, Ryusei Kondo, Hirotaka Hazehara, Takashi Yamane	CON-16 - ENHANCING ON-SITE STAKEHOLDER-INTEGRATION AND STANDARDS' COMPLIANCES THROUGH OF AN EVOLVED ISTRUCTE PLAN-OF-WORK FRAMEWORK Authors: Andrew Whyte, Anas Aljanadi	QUA-03 - SYSTEMATIC QUALITY COST EVALUATION MODEL FOR MULTI-STORY RESIDENTIAL BUILDING CONSTRUCTION Authors: Sreedevi R Arayamparambil, Amarjit Singh, Kumar Neeraj Jha
5	STR-43 - INNOVATIVE NANO-MODIFIED EPOXY AND ITS IMPACT ON CONCRETE BONDS Authors: Naveen Kwatra, Mandeep Kaur, Himanshu Chawla	CON-43 - A SMART DIGITAL TWIN PLATFORM FOR REAL-TIME MONITORING OF POLLUTION IN BUILDING RENOVATION PROJECTS Authors: Veerasak Likhitrungsilp, Truong-An Pham, Photios G. Ioannou	QUA-01 - QUALITY AS A CONTRACTOR SELECTION CRITERION – MOVING BEYOND A QUALITATIVE ART Authors: Blair Toy, Stephen Urquhart, Johan Vandamme, Andrew Whyte
6	CTE-36 - MECHANICAL AND MICROSTRUCTURAL ATTRIBUTES OF CEMENTITIOUS COMPOSITES INCORPORATING SILICOMANGANESE FUME Authors: Asad Hanif, Shaiq Rashid, Hammad Raza Khalid	CON-44 - VISUALIZING CIVIL CONSTRUCTION PROJECTS BY INTEGRATING 4D BIM MODEL AND WEB-BASED AUGMENTED REALITY Authors: Jay Deep Kalita, Santu Kar	FAM-02 - QUANTITATIVE ANALYSIS ON HIGH-RISE BUILDING STOCK AND CHARACTERISTICS OF DEMOLISHED BUILDINGS Authors: Hitoshi Takeda, Tomoyuki Gondo
7	CTE-46 - SMART 3D-PRINTED CONCRETE: RECENT ADVANCES IN SELF-SENSING MIX DESIGN AND FUNCTIONAL REINFORCEMENTS Authors: Karnan Manickavasakam, Mohammed A. Al-Huri, Khaled M Kharna, Anwar Hosan, Mohammed A. AL-Osta, Md. Abdul Aziz	CON-27 - CASE STUDIES OF CONSTRUCTABILITY IMPROVEMENT IN PUBLIC TRANSPORTATION PROJECTS Authors: Samih Al-Sharabati, Panagiotis Mitropoulos	
8		AAE-25 - APPLICATION OF BUILDING INFORMATION MODELING (BIM) IN IMPROVING THE EFFECTIVENESS OF PREFABRICATION CONSTRUCTION Authors: Sin Ying Chan, Wing Chi Tsang	

Lunch Break 12:30 - 13:15



Technical Session II (Poster Session) – Tuesday – November 18, 2025, 13:15 - 14:00*

Main Lobby (Level 24) Location: 123 Pitt Street, Macquarie University	
1	STR-24 - INFLUENCE OF FIBER GEOMETRY AND MATERIAL PROPERTIES ON RESIDUAL FLEXURAL STRENGTH OF SFRC: A STATISTICAL APPROACH Authors: Shyamal Kumar, Bhupinder Singh
2	STR-25 - EFFECT OF CARBON GRID REINFORCEMENT ON THE PUNCHING SHEAR STRENGTH AND STIFFNESS OF CONCRETE SLABS Authors: Sun-Woo Kim, Hyun-Do Yun, Wan-Shin Park, Young-II Jang
3	CTE-44 - Sustainable Conductive Concrete: A Novel Material for Structural Energy Storage Authors: Karnan Manickavasakam, Mohammed A. Al-Huri, Mohammed Alhaji Mohammed, Md. Abdul Aziz
4	OTH-04 - Analyzing Speeding-Related Crash Involvement with Explainable Machine Learning: Evidence from Two Asian Cities Authors: Muhammad Abdullah, Muhammad Ashraf Javid, Charitha Dias, Nazam Ali
5	STR-69 - Experimental and Numerical Investigation of CFRP-Strengthened Stainless Steel Tubular Columns under Eccentric Loading Authors: Mohammed A. Al-Huri, Karnan Manickavasakam, Mohammed Alhaji Mohammed, Galal M. Al-Mekhlafi

**** The posters will be displayed in the lobby throughout the two days of the conference. However, this session is designated for the poster authors to stand by their posters and engage with attendees.***



Integrating Technology for Advanced Practices in Structural Engineering and Construction
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Technical Session III – Tuesday – November 18, 2025, 14:00 - 15:30

Location: 123 Pitt Street, Macquarie University

	Session chair: TBC Room 2408 III-A: Corrosion and Material Performance	Session chair: Matt Pour Room 2414 III-B: Digitalization and Sustainability in Construction	Session chair: TBC Room 2415 III-C: Low-Carbon & Sustainable Concrete
1	STR-18 - INVESTIGATION OF THE AFFECTED AREA OF GALVANIC CORROSION BY CURRENT MEASUREMENT BETWEEN SUS AND SM/SMA Authors: Kandai Ohara, Rina Hasuike, Toshihiko Aso, Riho Shimizu	AAE-19 - BIM-MOSTADAM ENERGY PLUG-IN DESIGN Author: Fatma Ahmed Hasanain	CTE-42 - ENVIRONMENTAL SOLUTIONS IN CONCRETE: EVALUATING CLASS C FLY ASH AND CRUSHED GLASS AS SUSTAINABLE REPLACEMENTS Authors: Mohammad Ramezaniapour, Hossein Askarinejad, Louree Gamboa, Syed Zaran Banoori
2	STR-19 - EVALUATION OF RUST CONDITION IN WEATHERING STEEL BY OPTICAL SPECTRA AND MACHINE LEARNING Authors: Makoto Kamakura, Marcelo Marques, Ryuichi Inoue, Rina Hasuike, Toshihiko Aso	CON-32 - ROLES OF QUANTITY SURVEYORS IN THE SUSTAINABILITY OF THE CONSTRUCTION INDUSTRY Authors: Katlego Plaatjies, Christopher Amoah, Opeoluwa Akinradewo	SUS-08 - UTILIZING GLASS WASTE IN GREEN CONCRETE: EVALUATING SUSTAINABILITY AND STRUCTURAL PERFORMANCE Authors: Aryan Aal-Fatla, Karol Sikora, Kamal Jaafar, Sana Amir
3	STR-20 - DETECTION OF CHLORIDE DISTRIBUTION ON RUST LAYER BY REFLECTION INTENSITY IN THE NEAR-INFRARED RANGE Authors: Masaki Hase, Rina Hasuike, Toshihiko Aso	CON-36 - ESTABLISHING RESEARCH METHODS FOR 3D CONCRETE PRINTING SUPPLY CHAIN STUDIES: INSIGHTS FROM LITERATURE AND PRACTICE Authors: Jiayue Ma, Don Amila Sajeevan Samarasinghe, James Olabode Bamidele Rotimi, Kelvin Zuo	CTE-39 - AN EVALUATION OF THE DECARBONIZATION POTENTIAL OF SUPPLEMENTARY CEMENTITIOUS MATERIALS Authors: Harish Kumar Srivastava, Simon Clark
4	STR-22 - INFLUENCE OF CORROSION DISTRIBUTION AND THICKNESS REDUCTION NEAR SUPPORTS ON PLATE GIRDERS' SHEAR STRENGTH Author: Naoyuki Asao	CON-48 - A BIM-ENABLED DIGITAL PLATFORM FOR PLANNING AND EXECUTING LEED-CERTIFIED EXISTING BUILDING RETROFIT PROJECTS Authors: Veerasak Likhitrungsilp, Phenkanya Phaisankiattikun, Sarin Pinich, Photios G. Ioannou	CTE-38 - A SYSTEMATIC APPROACH FOR OPTIMISING WATER TO BINDER RATIO FOR LOW CARBON CONCRETE Authors: Harish Kumar Srivastava, Sillawat Sathorn, Vanissorn Vimonsatit, Simon Clark
5	MAT-06 - EFFECT OF HYGRO-THERMAL ENVIRONMENT ON THE MECHANICAL PROPERTIES OF MAGNESIUM OXIDE BOARDS Authors: Azhar Uddin, Wahid Ferdous, Gary Elks, Allan Manalo	CON-47 - EVALUATING ENABLERS OF MODULAR CONSTRUCTION PROJECTS Authors: Yara Abu Jbarah, Salma Ahmed, Sameh El-Sayegh	SUS-11 - DEVELOPMENT OF SUSTAINABLE LIGHTWEIGHT CONCRETE USING WASTEPAPER AND EPS Authors: Rokebul Hasan, Wahid Ferdous, John Curry, Paulomi (Polly) Burey, Tristan Shelley, Allan Manalo
6	STR-48 - SOCIAL IMPLEMENTATION OF DEEP LEARNING RUST CONDITION ASSESSMENT SUPPORT SYSTEM FOR WEATHERING STEEL BRIDGES Authors: Makoto Ohya, Shuta Notsu, Yuta Ohya, Imai Atsumi	AAE-24 - Machine Learning Framework for Predicting Thermal Performance of Building Envelopes in Early-Stage Architectural Design Author: Osama Mohsen	SUS-22 - STORAGE DURATION EFFECTS ON CO ₂ UPTAKE CHARACTERISTICS OF CEMENT KILN DUST Author: Saheed Kolawole Adekunle
7	SUS-23 - VALORIZATION OF INDUSTRIAL/AGRICULTURAL WASTES AND LOW-VALUE CARBONACEOUS FEEDSTOCKS INTO HIGH-PERFORMANCE SUBMICRON/NANO-CARBON MATERIALS Authors: Shaik Inayath Basha, Mohammed Maslehuddin, Shamsad Ahmad, Md. Abdul Aziz	AAE-13 - POSITIVE EFFECTS OF GREEN INFRASTRUCTURE IN BUILDINGS ON URBAN SUSTAINABILITY Author: Razieh Mohammadzadeh	
Afternoon Tea & Coffee Break 15:30 - 16:00			



Technical Session IV – Tuesday – November 18, 2025, 16:00 - 17:30

Location: 123 Pitt Street, Macquarie University

	Session chair: TBC Room 2408 IV-A: Advances in Steel Structures	Session chair: Matt Pour Room 2414 IV-B: Sustainable Design and Construction	Session chair: TBC Room 2415 IV-C: Geotechnical Engineering, Pavement & Transportation Infrastructure
1	STR-08 - DESIGN OF TUBULAR CHS TRUSS GIRDERS WITH REINFORCED JOINTS USING LASER CUTTING TECHNOLOGY Authors: Luis Calado, João Maria Damião, Jose Oliveira Pedro	SUS-17 - COMPARISON OF LEED HEALTHCARE GOLD CERTIFIED HOSPITAL BUILDINGS FROM DEVELOPED AND DEVELOPING COUNTRIES Authors: Recep Ahmed Buyukcinar, Komurlu Ruveyda	GFE-16 - LONG-TERM SANDY SOIL STABILIZATION USING BIO-BASED POLYMERS AND GEP MODELING Authors: Fazal E. Jalal, Mubashir Aziz, Mohammed Ali Al-Osta
2	STR-09 - A MECHANICAL BEHAVIOR AND HEAT GENERATION CHARACTERISTICS OF PRE-TWISTED STEEL Authors: Haruna Hiromatsu, Haoda Teng, Natsuhiko Sakiyama, Kanta Toyoda, Issa Naito, Takumi Ito, Donghang Wu	SUS-16 - A COMPARISON OF SAMPLE SCHOOL BUILDINGS WITH LEED BD+C: SCHOOLS Authors: Izel Akyel, Ruveyda Komurlu	GFE-07 - BREAKAGE BEHAVIOR OF DESERT SAND, GLASS BEADS, AND HAIL SAND: INFLUENCE OF MINERALOGY AND PARTICLE MORPHOLOGY Authors: Izzeldeen Alhashlamoun, Umair Ali, Mubashir Aziz, Usman Ali
3	STR-10 - A STUDY ON MECHANICAL BEHAVIOR AND RESTORING FORCE CHARACTERISTICS OF PRE-TWISTED STEEL Authors: Haoda Teng, Haruna Hiromatsu, Natsuhiko Sakiyama, Kanta Toyoda, Issa Naito, Takumi Ito, Donghang Wu	SUS-06 - GREEN STAR BUILDING CERTIFICATION: A 6-STAR BIM FRAMEWORK ENHANCEMENT Authors: Lachlan Fitzgerald, Stephen Urquhart, Andrew Whyte, Johan Vandamme	GFE-04 - FULLY COUPLED SEISMIC STRESS-FLOW ANALYSIS IN TUNNELS WITH DIFFERENT DRAINAGE TYPES Authors: Byoungil Choi, Sangyoung Lee, Chungryeol Lee, Yuntae Sim
4	STR-59 - INNOVATIONS IN HIGH-RISE TRANSFER FLOORS: THE PRESTRESSED TRANSFER PLATE SYSTEM Author: Hin Foo Low	SUS-13 - OPTIMIZING WINDOW-TO-WALL RATIO: IMPACTS ON COOLING LOADS AND BUILDING SUSTAINABILITY Author: Nadia Arafah	MAT-09 - DEVELOPMENT OF A PLASTIC WASTE-MODIFIED ASPHALT MODEL FOR SUSTAINABLE ROAD CONSTRUCTION IN THAILAND Authors: Wechsawan Lakas, Sillawat Sathorn, Sirikanya Laosuwan
5	STR-30 - REPAIR STRATEGIES FOR BRIDGE ABUTMENT DAMAGE CAUSED BY THERMAL MOVEMENTS: A FINITE ELEMENT STUDY Authors: Jawad Gull, Sana Amir	STR-31 - INTEGRATING LIFE CYCLE ASSESSMENT INTO SUSTAINABLE BRIDGE DESIGN: EVALUATING ENVIRONMENTAL IMPACTS Authors: Hazem Gouda, Sana Amir, Zaid M. Farhad	PRO-02 - THEORETICAL FOUNDATIONS FOR ECOLOGICAL PROCUREMENT IN TRANSPORTATION INFRASTRUCTURE CONSTRUCTION Authors: Verena Gruber, Michael Dollmann
6	OTH-02 - FABRICATION OF STIFFENED COMPOSITE PLATES WITH INTEGRATED LONGITUDINAL AND TRANSVERSE STIFFENERS Authors: Ganesha Naik R, Paramasivan Alagusundaramoorthy	FAM-04 - ASSESSING PHYSICAL BARRIERS IN EDUCATIONAL INSTITUTIONS: A COMPREHENSIVE STUDY ON INCLUSIVITY AND DISABILITY ACCOMMODATIONS Authors: Zasia Zubair, Arina Tahrin Amin, Auhona Tahsin Purba, Syeda Nishat Tasnim, Anika Tahsin Nabila	INF-01 - MACROSCOPIC ESTIMATION OF ROAD CAPITAL STOCK AND FUTURE PROJECT COSTS BASED ON STATISTICAL DETERIORATION PREDICTION Authors: Yuta Ogata, Hironobu Inagaki, Kotaro Sasai, Kiyoyuki Kaito
7		SUS-24 - FROM VOLUNTARY TO CODIFIED SUSTAINABILITY: A MODULAR FRAMEWORK FOR INTEGRATING GREEN BUILDING RATING SYSTEMS INTO NATIONAL BUILDING CODES Authors: Saly Abdou, Osama Mohsen	GFE-12 - AUTOMATION AND DIGITIZATION OF FALLING HEAD TESTS FOR PRECISE HYDRAULIC CONDUCTIVITY MEASUREMENT Authors: Adil Ahmed Bhameshan, Ammar Mohammed Alshammari, Moayad Ahmed Alnammi



Wednesday – November 19, 2025

08:30 - 09:00	Registration – Tea and Coffee	Hall area of Level 24, Macquarie University
9:00 - 9:30	Keynote 2: Takashi Yamane, President - Kyokuto Kowa Corporation <i>Title: Construction of Sustainable Concrete Structures Using FRP as Reinforcement and Prestressing Tendons</i>	Room 2408, Level 24, Macquarie University 123 Pitt Street
Tea & Coffee Break 9:30 - 10:00		

Technical Session V – Wednesday – November 19, 2025, 10:00 - 12:00

Location: 123 Pitt Street, Macquarie University

	Session chair: Ruveyda Komorlu Room 2408 V-A: Advances in Structural Engineering	Session chair: TBC Room 2414 V-B: Concrete Material & Technology	Session chair: Matt Pour Room 2415 V-C: Reinforced Concrete Structures
1	STR-38 - WIND LOADS ON SCAFFOLDING WITH NOISE BARRIER PANELS DURING BUILDING DEMOLITION WORK Authors: Haeyoung Kim, Kichiro Kimura, Hiroki Takahashi, Yasumichi Hino, Katsutoshi Ohdo	CTE-09 - A NON-DESTRUCTIVE EVALUATION FOR EARLY-AGE STRENGTH USING A HYPERSPECTRAL CAMERA Authors: Simin Zhai, Sadoshito Ohmori, Tatsuo Shinmi, Miyu Kishida, Yoshitake Isamu	STR-03 - AN IMPROVED ACCURACY OF YIELD DEFORMATION EVALUATION METHOD FOR HIGH-STRENGTH RC BEAMS Authors: Yusuke Maida, Koki Kishimoto, Zelin Wang, Hiroyasu Sakata, Koichi Kusunoki
2	STR-34 - EXPERIMENTAL STUDY ON STRUCTURAL PERFORMANCE OF WOOD-STEEL HYBRID MEMBERS USING SOLID WOOD Authors: Misuzu Mori, Atsunori Kitano	CTE-19 - CONCRETE KIRIGAMI: LIGHTWEIGHT AND MODULAR SPRAYED CEMENT ARCHITECTURE Author: Luis Menendez	STR-23 - ANALYTICAL STUDY OF UNBONDED POST-TENSIONED PRECAST CONCRETE WALLS WITH FIBER-REINFORCED CONCRETE UNDER LATERAL LOADING Authors: Sandy Babich, Felipe J. Perez, Giuseppe Lomiento
3	STR-39 - COMPARATIVE RESULT OF SEISMIC ASSESSMENT METHODS OF EXISTING MASONRY BUILDINGS Authors: Ariunaa Ganbaatar, Sugar Mijir, Javkhlan Bayar, Duinkherjav Yagaanbuyant, Zorigt Tumurbaatar, Enkhgerel Dulamjav	CTE-03 - MICROSTRUCTURAL AND ELEMENTAL ANALYSIS OF BOND DEGRADATION IN ANCHORED FLEXURAL PRISMS UNDER SALINE EXPOSURE Authors: Prathibha Gowrishankar, Rami Hawileh, Jamal Abdalla	STR-49 - EXPERIMENTAL EVALUATION OF REINFORCED CONCRETE BEAM-COLUMN JOINTS STRENGTHENED WITH CFRP GRID Authors: Minhho Kwon, Wooyoung Jung
4	SUS-05 - BOW-BEAMS: A NOVEL ADAPTIVE LOAD BALANCING SYSTEM WITH SHAPE SHIFTING LATERAL JACKS Authors: Ramana N V Rao, Srinidhi Ananthraman	CTE-24 - SOME INSIGHTS ON ROLE OF WATER FILM-THICKNESS IN RHEOLOGY OF COARSE AGGREGATE-BASED 3D PRINTABLE CONCRETE Authors: Swapnil Balasaheb Ghodke, Bhupinder Singh, Shubhankar Roy Chowdhury	STR-44 - INVESTIGATION OF STEEL-TRUSS REINFORCED CONCRETE BEAMS UNDER LONGITUDINAL SHEAR LOADING Authors: Shyamal Kumar, Bhupinder Singh
5	CON-26 - 3D-PRINTED PIEZORESISTIVE NANOCOMPOSITE POLYMER FOR STRESS ASSESSMENT IN AXIAL LOAD-BEARING STRUCTURAL SYSTEMS Authors: Sillawat Sathorn, Milad Razbin, Shuyin Wu, Vanissorn Vimonsatit, Sajad Abolpour Moshizi, Mortaza Salehian	CTE-21 - ELASTIC MODULUS EQUATION FOR 24 MPA CONCRETE USING RECYCLED PAVERS AND LOCAL AGGREGATES Authors: Wilson Oswaldo Cando Tipán, Willington Comina, Jorge Alexander Bucheli Garcia, Oscar Patricio Jaramillo de León, Laura Camila Cando Salazar	CTE-02 - BEHAVIOUR OF CARBON FIBRE ANCHORS IN ALKALINE ENVIRONMENT Authors: Prathibha Gowrishankar, Rami Hawileh, Jamal Abdalla
6	EPE-02 - ENHANCING IMAGINATION AND UNDERSTANDING OF BEAM DEFORMATIONS THROUGH A GRAPHIC TOOL Authors: Li Li, Ayaka Fuchigami	CTE-37 - OPTIMIZING MECHANICAL PERFORMANCE OF RECYCLED AGGREGATE CONCRETE: A REVIEW Authors: Sana Amir, Karol S. Sikora, Kamal Jaafar	STR-41 - CASE STUDY – PERFORMANCE-BASED SEISMIC DESIGN OF A TALL BUILDING Authors: Thaung Htut Aung, Mir Shabir Talpur
7	EPE-03 - TRACKING CHANGES IN UNDERSTANDING STATICALLY DETERMINED BEAM DEFORMATIONS THROUGH REPEATED EXAMS AND GRAPHIC TOOL USE Authors: Li Li, Ayaka Fuchigami	CTE-27 - HYDRATION CHARACTERISTICS OF PHOSPHATE MINING WASTE BLENDED LOW-CARBON PORTLAND LIMESTONE CEMENT Authors: Abhishek Srivastava, Bhupinder Singh	STR-50 - ENHANCING CORROSION INHIBITION IN REINFORCED CONCRETE USING 2-AMINOPYRIDINE: A COMPARATIVE STUDY OF SURFACE APPLICATION AND ELECTRO-ASSISTED MIGRATION Authors: Shweta Goyal, Ashish Kumar Tiwari, Purnima Dogra



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8		SUS-26 - SHEAR AND FLEXURAL PERFORMANCE OF RECYCLED PLASTIC AGGREGATE CONCRETE Authors: Shaik I. Basha, Mohammed R. Ali, Mohammed Maslehuddin	STR-51- TENSILE PROPERTIES DEGRADATION OF FRP-REINFORCED CONCRETE UNDER FIRE EXPOSURE - A REVIEW Authors: Wijdane Kachach, Asad Hanif, Muhammad Aamir Basheer
Lunch Break: 12:00 - 13:00			

Technical Session VI – Wednesday – November 19, 2025, 13:00 - 15:00 Location: 123 Pitt Street, Macquarie University			
	Session chair: TBC Room 2408 VI-A: Advances in Structural Connections and Systems	Session chair: TBC Room 2414 VI-B: Engineering Materials and Composites	Session chair: Matt Pour Room 2415 VI-C: Infrastructure, Energy & Environmental Engineering
1	STR-15 - FINITE ELEMENT ANALYSIS OF BEAM-TO-BEAM FLANGE INTERMESHED STEEL CONNECTIONS Authors: Syed Naveed Raza Shah, Robert Duggan, Rory Burke, Patrick J McGetrick, Debra Laefer, Salam Al-Sabah, Jamie Goggins, Arturo E Schultz, Daniel McPolin, Ibukun Awolusi	MAT-12 - EFFECT OF LAYER THICKNESS AND PRINT ORIENTATION ON SURFACE HARDNESS OF FDM 3D-PRINTED PLA, PETG, AND PC Authors: Alireza Boostan, Faisal Ibney Hai, Aziz Ahmed	ENV-02 - IMPACTS OF CYCLONE FREDDY ON THE SOCIAL, ECONOMIC, AND INFRASTRUCTURAL ENVIRONMENT Authors: Jesinta Matemba, Opeoluwa Akinradewo, Christopher Amoah
2	STR-28 - STRUCTURAL DESIGN AND ASSEMBLY INNOVATION IN STEEL BUILDING ERECTION USING INTERMESHED STEEL CONNECTION Authors: Arturo Ernest Schultz, Ibukun Gabriel Awolusi, Samir Babu Thapa, Tolulope Odunayo Oyeyipo, Debra Fern Laefer, Salam Al-Sabah, Patrick McGetrick, Danny McPolin, Dev Paudel	MAT-03 - EXPERIMENTAL INVESTIGATION ON SETTING TIME OF ALKALI ACTIVATED MATERIAL Authors: Yoichi Mimura, Itaru Horiguchi	RAD-01 - THE ROLE OF URBAN GREEN INFRASTRUCTURE IN MANAGING WATER TO MITIGATE DISASTER RISKS Author: Razieh Mohammadzadeh
3	STR-21 - A STUDY ON THE MECHANICAL PROPERTIES OF BEAM-COLUMN FLAT JOINTS IN LIGHT STEEL STRUCTURES Authors: Ryotaro Mori, Jihang Feng, Nagi Hamada, Natsuhiko Sakiyama, Rui Hoshino, Katsunori Onishi, Takumi Ito	MAT-07 - CHARACTERIZATION OF BRICKS FOR RECYCLABILITY: STRENGTH, POROSITY, AND GEOLOGICAL INFLUENCES Authors: Arina Tahrin Amin, Zasia Zubair, Rashed Kabir Shoumik, A. S. M. A. Haseeb	WRE-01 - WATER INFRASTRUCTURE MAINTENANCE REPORTING PROCEDURES: A STRUCTURED FRAMEWORK TO REDUCE NON-REVENUE WATER (NRW) DISCHARGE Authors: Andrew Whyte, Chris Nyamu Gith
4	STR-07 - ENHANCED PERFORMANCE OF FLAT JOINT USING HIGH STRENGTH BOLT FRICTION IN LIGHT GAUGE STEEL STRUCTURES Authors: Jihang Feng, Nagi Hamada, Natsuhiko Sakiyama, Rui Hoshino, Ryotaro Mori, Katsunori Onishi, Takumi Ito	MAT-11 - INFLUENCE OF INFILL RATIO, PATTERN AND ORIENTATION ON IMPACT RESISTANCE OF 3D-PRINTED PLA, PETG, PC Authors: Alireza Boostan, Faisal Ibney Hai, Aziz Ahmed	ENR-02 - ENERGY CONSUMPTION ANALYSIS Author: Waralak Khongouan
5	STR-12 - NUMERICAL INVESTIGATION OF WELDING RESIDUAL STRESSES IN ORTHOTROPIC STEEL DECKS FOR FATIGUE DAMAGE PROGNOSIS Authors: Saman Karimi, Olivia Mirza, Fidelis Mashiri, Christophe Camille	MAT-14 - SILICA AEROGEL SYNTHESIS: FROM SOL-GEL TO DRYING Authors: Mohammed A. Al-Huri, Karnan Manickavasakam, Mohammed A. Al-Osta, Shakeel Ahmed, Mohammed Alhaji Mohammed	AAQ-01 - INVESTIGATING THE EFFECTS OF HOME FRAGRANCE AUTOSPRAYS ON INDOOR AIR QUALITY AND HUMAN HEALTH Authors: Rakan Albalawi, Kareema Albalawi
6	STR-37 - EFFECT OF BURRING SHEAR CONNECTOR NUMBER ON FLEXURAL STIFFNESS OF COMPOSITE BEAMS Authors: Yoshiteru Maruyama, Teruhisa Tanaka, Junichi Sakai	SUS-07 - INFLUENCE OF POTASSIUM HYDROXIDE ON THE PHYSICAL AND MECHANICAL PROPERTIES OF RECYCLED BRICK WASTE AGGREGATE Authors: Aderemi Muhammed Aderogba, Olivia Mirza, Brian G Falzon, Christophe Camille	PRO-03 - STATUS QUO OF THE APPLICATION OF ECOLOGICAL AWARD CRITERIA IN INFRASTRUCTURE CONSTRUCTION Authors: Verena Gruber, Maximilian Weigert, Jacqueline Raab, Michael Dollmann
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8			
	Afternoon Tea & Coffee Break 15:00 - 15:30		

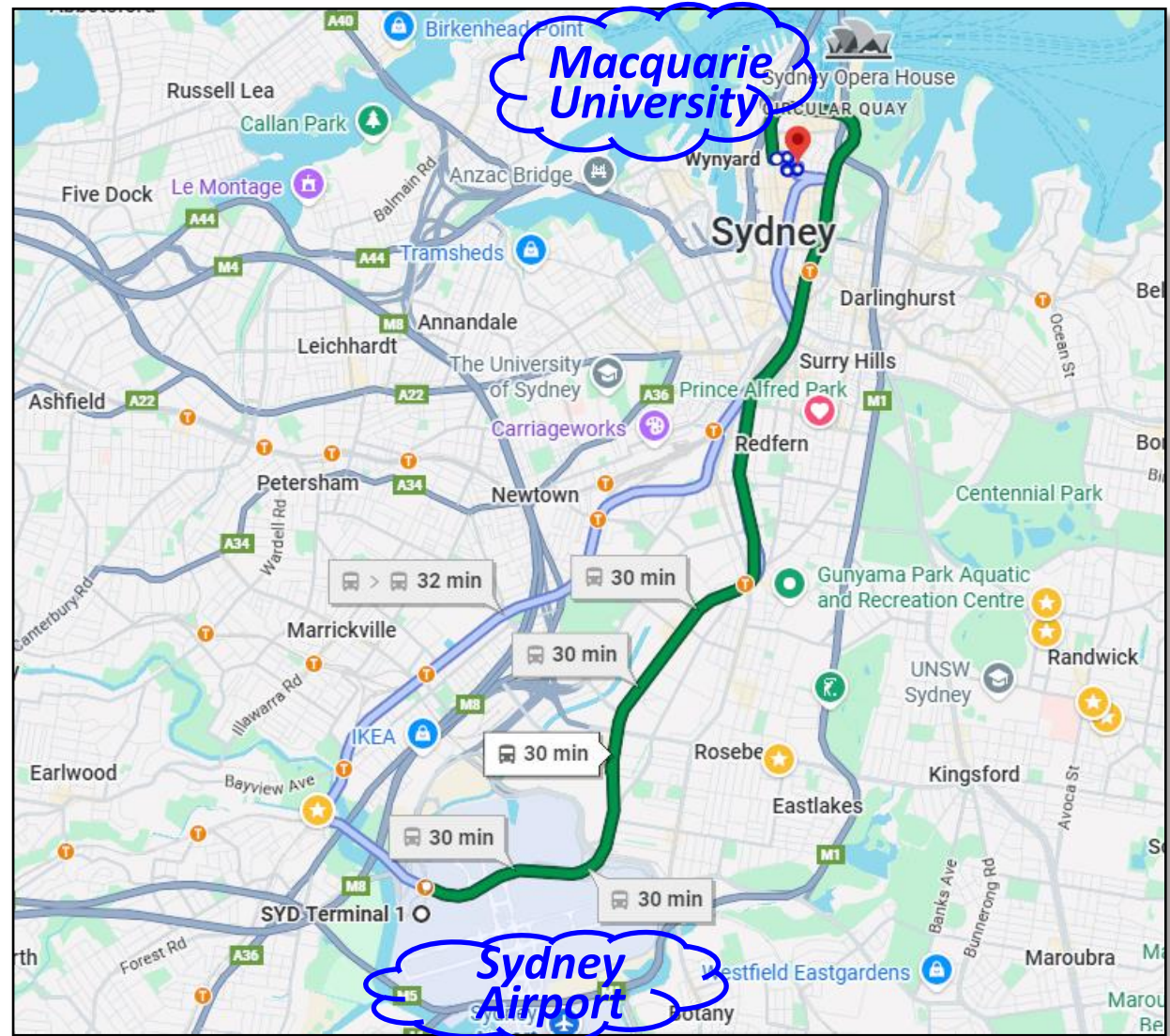
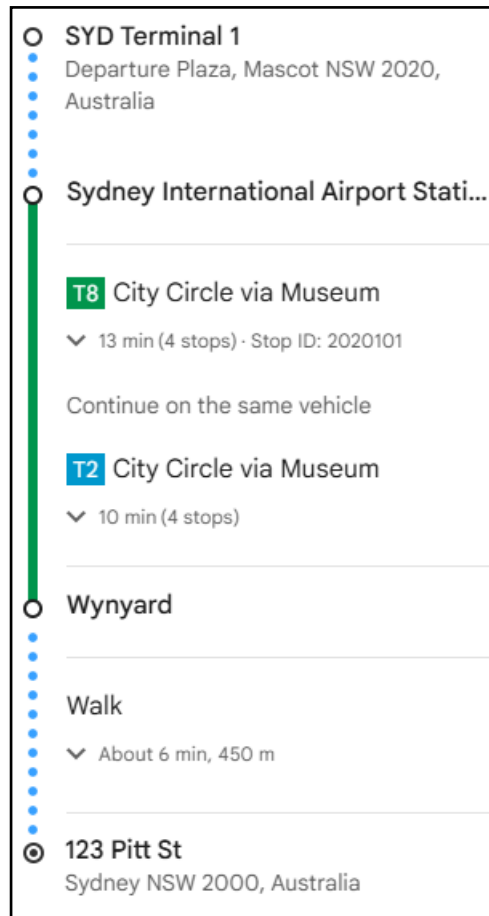
Wednesday – November 19, 2025		
15:30 – 16:30	Closing Session and Awards <i>Closing Statements</i> <i>Best paper/presentation awards</i>	Room 2408, Level 24, Macquarie University 123 Pitt Street
18:00 – 21:00	Dinner Banquet 	Sydney Harbour Marriott Hotel, Circular Quay 30 Pitt St, Sydney NSW 2000, Australia <i>meet at the Dinner Venue at 6.00 pm</i>
Thursday – November 20, 2025		
9:00 - 12:00	Technical Tour <i>Wynyard Walk – A Landmark in Urban Pedestrian Infrastructure</i> <i>Duration: 3 hours</i> <i>Price: US\$ 40</i> <i>The tour will be followed by lunch at a local restaurant [cost is included in the price of the tech tour]</i>	York Street, Wynyard Station Meeting point: York Street, Wynyard Station, at 9.00 am

Friday – November 21, 2025			
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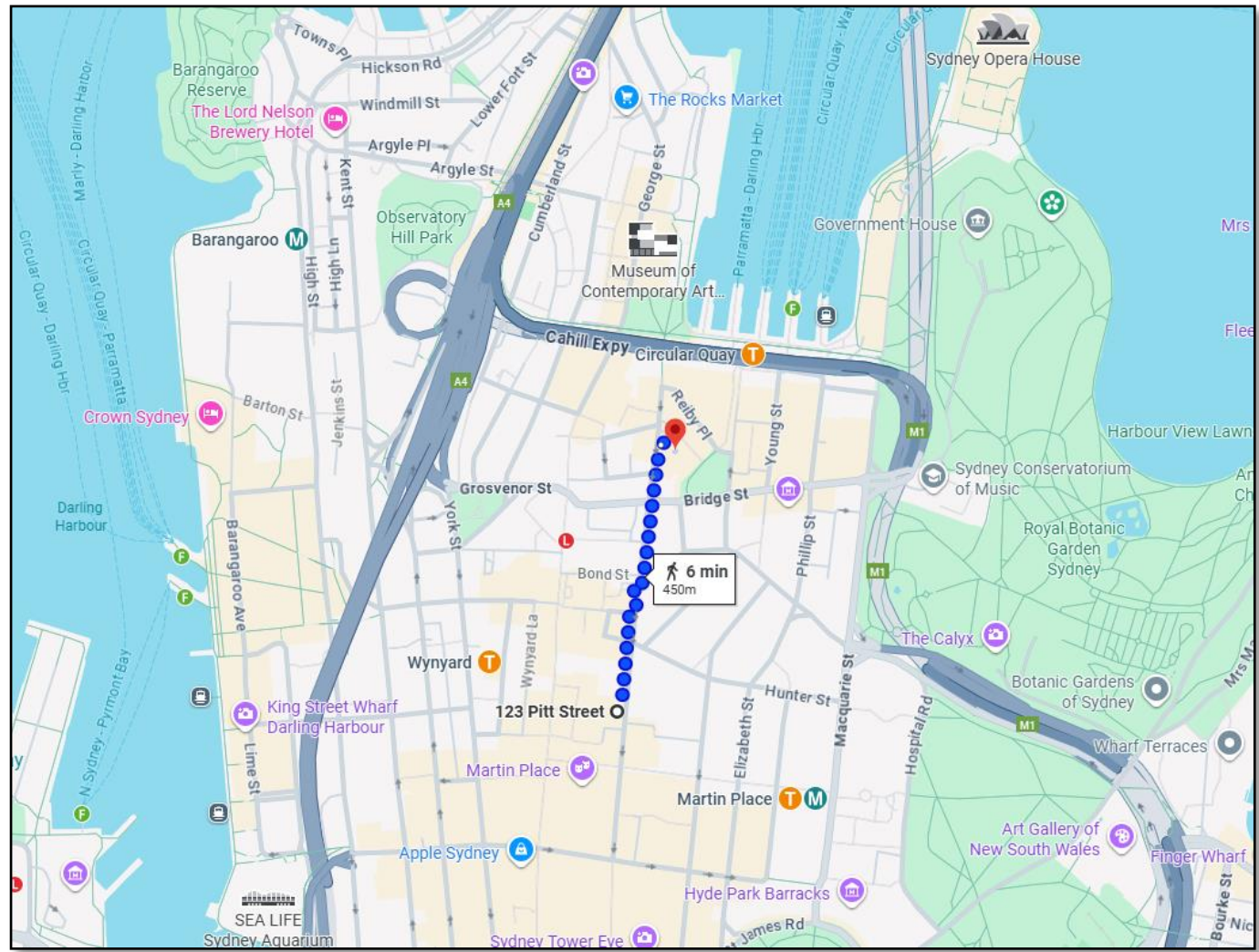
10:00 - 14:30	Cultural Tour Ferry from Circular Quay to Manly Beach and return Departure Time: 10:30 am from Circular Quay, Sydney https://myfastferry.com.au/manly-fast-ferry/ https://www.sydney.com/destinations/sydney/sydney-north/manly Duration: 20 mins on the ferry each way, and ~3 hours for Manly beach walk Price: \$50 Includes ferry, lunch at Manly, student guides	Location: Circular Quay Meeting point: Circular Quay Wharf 2 at 10.00 am walking shoes recommended
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Airport to Macquarie University:



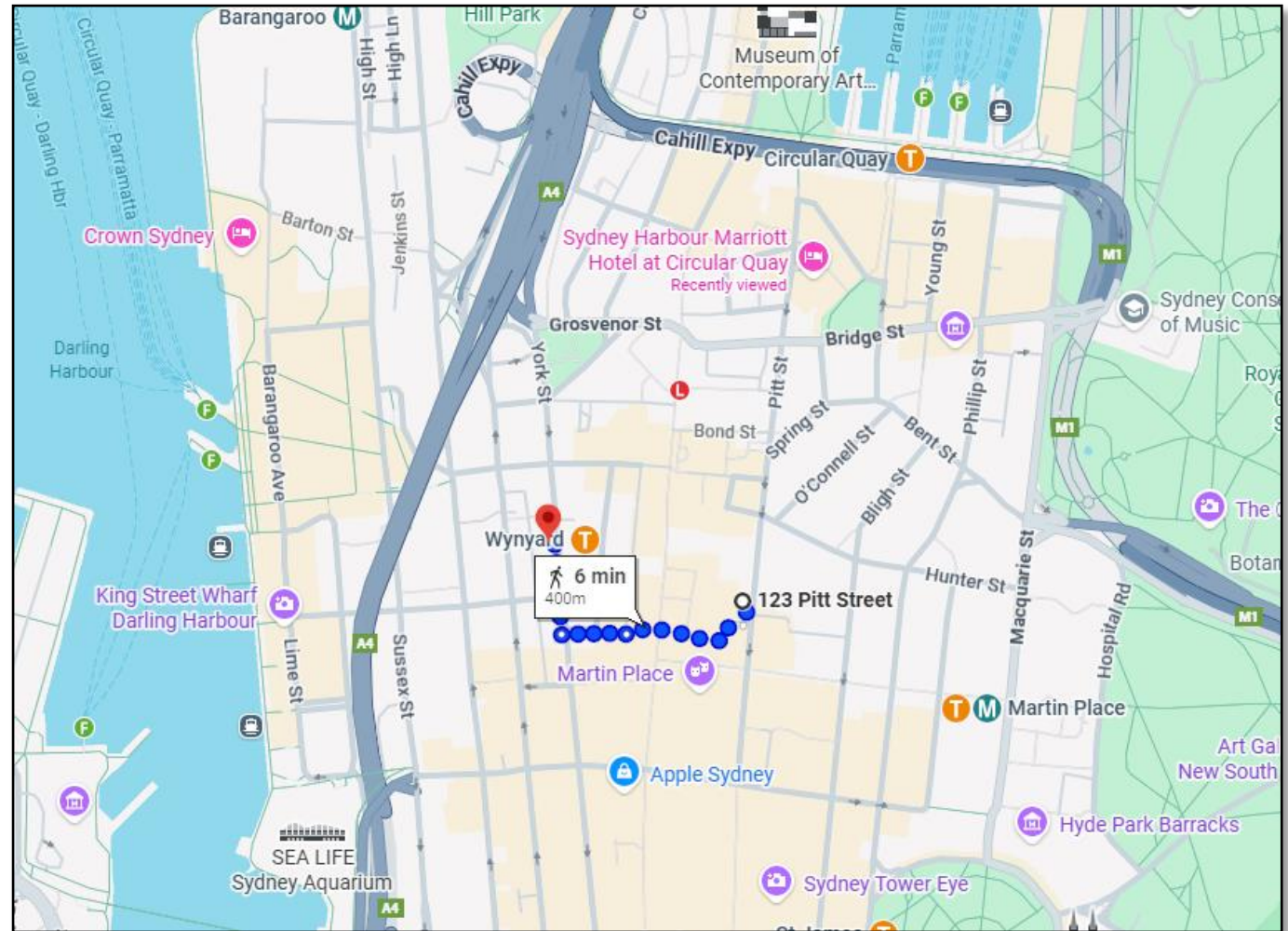


Dinner Banquet,
Sydney Harbour Marriott
Hotel





Technical Tour,
Wynyard Station:



Cultural Tour, Manly Beach:

