



## PART C3: SCOPE OF WORKS

- c) Standard for Indirect Targeting for Enterprise Development through Construction Works Contracts, published in Gazette Notice No.36190 of 25 February 2013
- d) Guidelines for the Implementation of Labour-Intensive Infrastructure Projects Under the Expanded Public Works Programme (EPWP) – Third Edition 2015

### C3.3. DRAWINGS

#### C3.3.1. Tender Drawings

Tender drawings are provided in order to give an overview of the project. Any ambiguities shall be clarified by the tenderer with the **employer** prior to the submission of tenders

The drawings that form part of the tender documents shall be used for tender purposes only

Drawings for construction purposes will be issued to the appointed **contractor** during the execution of the contract

The following drawings are annexed on the E- PORTAL, and form part of the contract. The drawings issued to tenderers must be regarded as provisional and preliminary for the tenderer's benefit to assess the scope generally.

#	DESCRIPTION	DRAWING No.	REVISION
1.0	ARCHITECTURAL DRAWINGS		
1.1.	SITE DEVELOPMENT PLAN	UKU-A-1000-01	0
1.2.	SDP WITH LANDSCAPING	UKU-A-1000-02	0
1.3.	SDP WITH SHADOW STUDY AND SITE SECTIONS	UKU-A-1000-03	0
1.4.	SITE ELEVATIONS	UKU-A-1000-04	0
1.5.	RENDERS	UKU-A-1000-05	0
1.6.	SITE PLAN	UKU-A-1000	0
1.7.	ROOF PLAN	UKU-A-1001	0
1.8.	GROUND STOREY PLAN	UKU-A-1002-01	0
1.9.	GROUND STOREY PLAN 02	UKU-A-1002-02	0
1.10.	WASH BAY AND SERVICES BLOCK DETAILS	UKU-A-1002-03	0
1.11.	FIRST FLOOR PLAN	UKU-A-1003-01	0
1.12.	GROUND STOREY CEILING PLAN	UKU-A-1003-02	0
1.13.	HOARDING PLAN	UKU-A-1003-03	0
1.14.	SECTIONS	UKU-A-1004	0
1.15.	ELEVATIONS	UKU-A-1005	0
1.16.	SEWER ELEVATIONS 01	UKU-A-1005-01	0
1.17.	SEWER ELEVATIONS 02	UKU-A-1005-02	0
1.18.	WINDOW SCHEDULE	UKU-A-1006-01	0
1.19.	DOOR SCHEDULE 01	UKU-A-1006-02	0
1.20.	DOOR SCHEDULE 02	UKU-A-1006-03	0
1.21.	DETAILS 01	UKU-A-1007-01	0
1.22.	DETAILS 02	UKU-A-1007-02	0

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#	DESCRIPTION	DRAWING No.	REVISION
<b>1.0</b>	<b>ARCHITECTURAL DRAWINGS</b>		
1.23.	DETAILS 03	UKU-A-1007-03	0
1.24.	DETAILS 04	UKU-A-1007-04	0
1.25.	DETAILS 05	UKU-A-1007-05	0
1.26.	DETAILS 06	UKU-A-1007-06	0
1.27.	3D VIEWS	UKU-A-1007-07	0
1.28.	SIGNAGE SCHEDULE 01	UKU-A-1008-01	0
1.29.	SIGNAGE SCHEDULE 02	UKU-A-1008-02	0
1.30.	SIGNAGE SCHEDULE 03	UKU-A-1008-03	0
1.31.	FINISHES 01	UKU-A-1010-01	0
1.32.	FINISHES 02	UKU-A-1010-02	0
1.33.	SANITARY SCHEDULE	UKU-A-1010-03	0
1.34.	ROOM DATA SHEET 01	UKU-A-1010-04	0
1.35.	ROOM DATA SHEET 02	UKU-A-1010-05	0
1.36.	ROOM DATA SHEET 03	UKU-A-1010-06	0
1.37.	GROUND FLOOR FLOOR COVERINGS	UKU-A-1010-07	0
1.38.	FIRST FLOOR FLOOR COVERINGS	UKU-A-1010-08	0
1.39.	COORDINATED SITE PLAN	UKU-A-1011-01	0
1.40.	COORDINATED GROUND FLOOR ELECTRICAL PLAN	UKU-A-1011-03	0
1.41.	COORDINATED GROUND FLOOR DOMESTIC WATER PLAN	UKU-A-1011-05	0
1.42.	COORDINATED GROUND FLOOR SEWER PLAN	UKU-A-1011-06	0
1.43.	COORDINATED FIRST FLOOR ELECTRICAL PLAN	UKU-A-1011-09	0
1.44.	COORDINATED FIRST FLOOR DOMESTIC WATER PLAN	UKU-A-1011-11	0
1.45.	COORDINATED FIRST FLOOR SEWER PLAN	UKU-A-1011-12	0
1.46.	COORDINATED GROUND FLOOR LIGHTING LAYOUT	UKU-A-1011-13	0

#	DESCRIPTION	DRAWING No.	REVISION
<b>2.0</b>	<b>CIVIL ENGINEERING DRAWINGS</b>		
2.1.	PROPOSED EARTHWORKS AND SETTING OUT LAYOUT	FEC-23022-GEN-LAY-001	D
2.2.	TYPICAL DETAILS	FEC-23022-GEN-TYP-001	D
2.3.	TYPICAL DETAILS	FEC-23022-GEN-TYP-002	D
2.4.	PROPOSED ROAD LAYOUT	FEC-23022-GRM-LAY-001	D
2.5.	PROPOSED SERVICES LAYOUT	FEC-23022-SER-LAY-001	D
2.6.	PROPOSED SEWER LAYOUT	FEC-23022-SEW-LAY-001	D
2.7.	SEWER LONGSECTIONS	FEC-23022-SEW-LSC-001	D
2.8.	PROPOSED STORMWATER LAYOUT	FEC-23022-STW-LAY-001	D
2.9.	PROPOSED WATER LAYOUT	FEC-23022-WTR-LAY-001	D

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#	DESCRIPTION	DRAWING No.	REVISION
3.0	<b>STRUCTURAL ENGINEERING DRAWINGS</b>		
3.1.	SITE PLAN	23022-STR-001	H
3.2.	FOUNDATION PLAN & SECTIONS	23022-STR-002	H
3.3.	GROUND FLOOR PLAN & SECTIONS	23022-STR-003	G
3.4.	FIRST FLOOR & ROOF PLAN	23022-STR-004	H
3.5.	SECTIONS & DETAILS	23022-STR-005	H
3.6.	ATTENUATION TANK – 2 No. OFF	23022-STR-006	
3.7.	FOUNDATION REINFORCEMENT 1	23022-STR-REBAR-001	B
3.8.	FOUNDATION REINFORCEMENT 2	23022-STR-REBAR-002	B
3.9.	FOUNDATION REINFORCEMENT 3	23022-STR-REBAR-003	B
3.10.	SCHEDULES	23022-STR-REBAR-004	B
3.11.	BOUNDARY WALL REINFORCEMENT	23022-STR-REBAR-005	
3.12.	BEAM LAYOUT 1	23022-STR-REBAR-006	B
3.13.	BEAM LAYOUT 2	23022-STR-REBAR-007	B
3.14.	STAIRCASES, BASES, PLINTH & COLUMN REINFORCEMENT	23022-STR-REBAR-008	C
3.15.	CONCRETE BENCHES & RC WALLS REINFORCEMENT	23022-STR-REBAR-009	A
3.16.	BOTTOM REINFORCEMENT LAYOUT 1	23022-STR-REBAR-010	B
3.17.	BOTTOM REINFORCEMENT LAYOUT 2	23022-STR-REBAR-011	B
3.18.	TOP REINFORCEMENT LAYOUT 1	23022-STR-REBAR-012	B
3.19.	TOP REINFORCEMENT LAYOUT 2	23022-STR-REBAR-013	B

#	DESCRIPTION	DRAWING No.	REVISION
4.0	<b>ELECTRICAL ENGINEERING DRAWINGS</b>		
4.1.	SITE PLAN ELECTRICAL INSTALLATION	322307-001	A
4.2.	GROUND FLOOR LIGHTING LAYOUT	32307-100	B
4.3.	FIRST FLOOR LIGHTING LAYOUT	32307-101	B
4.4.	GROUND FLOOR SMALL POWER LAYOUT	32307-200	B
4.5.	FIRST FLOOR SMALL POWER LAYOUT	32307-201	B
4.6.	GROUND FLOOR CEILING SMALL POWER LAYOUT	32307-210	A
4.7.	FIRST FLOOR CEILING SMALL POWER LAYOUT	32307-211	A
4.8.	GROUND FLOOR MECHANICAL POWER LAYOUT	32307-220	B
4.9.	FIRST FLOOR MECHANICAL POWER LAYOUT	32307-221	B
4.10.	GROUND FLOOR ELECTRONICS LAYOUT	32307-300	0
4.11.	GROUND FLOOR ELECTRONICS LAYOUT	32307-301	0
4.12.	OVERALL DISTRIBUTION BOARD SCHEMATIC LAYOUT	32307-400	0
4.13.	MAIN LV KIOSK SINGLE LINE DIAGRAM – SHEET 1 OF 2	32307-401	0
4.14.	MAIN LV KIOSK SINGLE LINE DIAGRAM – SHEET 2 OF 2	32307-401	0
4.15.	DB-A SINGLE LINE DIAGRAM – SHEET 1 OF 2	32307-402	0
4.16.	DB-A SINGLE LINE DIAGRAM – SHEET 2 OF 2	32307-402	0
4.17.	DB-B SINGLE LINE DIAGRAM – SHEET 1 OF 2	32307-403	0
4.18.	DB-B SINGLE LINE DIAGRAM – SHEET 2 OF 2	32307-403	0

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#	DESCRIPTION	DRAWING No.	REVISION
4.0	<b>ELECTRICAL ENGINEERING DRAWINGS</b>		
4.19.	DB-C SINGLE LINE DIAGRAM	32307-404	0
4.20.	DB-A1 SINGLE LINE DIAGRAM – SHEET 1 OF 2	32307-405	0
4.21.	DB-A1 SINGLE LINE DIAGRAM – SHEET 2 OF 2	32307-405	0
4.22.	DB-INVERTER LOAD SINGLE LINE DIAGRAM	32307-406	0
4.23.	DB-AE SINGLE LINE DIAGRAM – SHEET 1 OF 3	32307-407	0
4.24.	DB-AE SINGLE LINE DIAGRAM – SHEET 2 OF 3	32307-407	0
4.25.	DB-AE SINGLE LINE DIAGRAM – SHEET 3 OF 3	32307-407	0
4.26.	DB-A1E SINGLE LINE DIAGRAM – SHEET 1 OF 3	32307-408	0
4.27.	DB-A1E SINGLE LINE DIAGRAM – SHEET 2 OF 3	32307-408	0
4.28.	DB-A1E SINGLE LINE DIAGRAM – SHEET 3 OF 3	32307-408	0
4.29.	DB-BE SINGLE LINE DIAGRAM – SHEET 1 OF 3	32307-409	0
4.30.	DB-BE SINGLE LINE DIAGRAM – SHEET 2 OF 3	32307-409	0
4.31.	DB-BE SINGLE LINE DIAGRAM – SHEET 3 OF 3	32307-409	0
4.32.	DB-CE SINGLE LINE DIAGRAM – SHEET 1 OF 2	32307-410	0
4.33.	DB-CE SINGLE LINE DIAGRAM – SHEET 2 OF 2	32307-410	0
4.34.	DB-DE SINGLE LINE DIAGRAM	32307-411	0
4.35.	DB-MECH E SINGLE LINE DIAGRAM	32307-412	0
4.36.	INVERTER OUTPUT SYSTEM SINGLE LINE DIAGRAM	32307-413	0
4.37.	RETICULATION SCHEMATIC FOR 2No. 12Kw INVERTERS WITH 15 No. 10kWh BATTERIES	32307-414	0
4.38.	MANUAL CHANGEOVER DISTRIBUTION BOARD SINGLE LINE DIAGRAM	32307-415	0
4.39.	MANUAL LV PANEL SINGLE LINE DIAGRAM – SHEET 1 OF 2	32307-416	0
4.40.	MANUAL LV PANEL SINGLE LINE DIAGRAM – SHEET 2 OF 2	32307-416	0
4.41.	ELECTRICAL CABLE SCHEDULE	32307-600	0
4.42.	LUMINAIRE SCHEDULE – SHEET 1 OF 3	32307-601	0
4.43.	LUMINAIRE SCHEDULE – SHEET 2 OF 3	32307-601	0
4.44.	LUMINAIRE SCHEDULE – SHEET 3 OF 3	32307-601	0
4.45.	GENERATOR SCHEDULE – SHEET 1 OF 2	32307-602	0
4.46.	GENERATOR SCHEDULE – SHEET 2 OF 2	32307-602	0
4.47.	SOLAR PV INSTALLATION	32307-700	0
4.48.	GRID TIED PHOTOVOLTAIC SYSTEM – SYSTEM SCHEMATIC	32307-701	A

#	DESCRIPTION	DRAWING No.	REVISION
5.0	<b>MECHANICAL ENGINEERING DRAWINGS</b>		
5.1.	GROUND FLOOR FIRE PROTECTION	D3932-MF-A0-01	0
5.2.	FIRST FLOOR FIRE PROTECTION LAYOUT	D3932-MF-A0-02	0
5.3.	FIRE PUMP ROOM AND DEDICATED FIRE STORAGE TANK LAYOUT	D3932-MF-A0-03	0
5.4.	PROCESS FLOW DIAGRAM	D3932-MF-A0-04	0
5.5.	TRAVEL DISTANCES	D3932-MF-A0-05	0
5.6.	GROUND STOREY HVAC LAYOUT	D3932-ML-A0-01	0
5.7.	FIRST STOREY HVAC LAYOUT	D3932-ML-A0-02	0

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#	DESCRIPTION	DRAWING No.	REVISION
5.0	MECHANICAL ENGINEERING DRAWINGS		
5.8.	DOMESTIC WATER SITE PLAN	D3932-DW-A0-03	0
5.9.	GROUND STOREY DOMESTIC WATER PLAN	D3932-DW-A0-01	0
5.10.	FIRST STOREY DOMESTIC WATER PLAN	D3932-DW-A0-02	0
5.11.	GROUND STOREY SEWER PLAN	D3932-SW-A0-01	0
5.12.	FIRST STOREY SEWER PLAN	D3932-SW-A0-02	0
5.13.	KITCHEN EQUIPMENT LAYOUT	D3932-KE- A0-01	0

### C3.3.2. Construction Drawings

Construction drawings will, in terms of Clause 3.7 of the **JBCC** Principal Building Agreement Edition 4.1 of March 2005 be issued to the **contractor** by the **principal agent** on the site hand over date and from time to time as required

The successful **contractor** will be supplied with three (3) sets of unreduced paper prints of each drawing free of charge. Any additional prints required will be for the account of the **contractor**

The **contractor** shall conform in all aspects to the drawings and specifications and to any written instructions, which the **principal agent** may provide him with during the contract

It is the **contractor's** responsibility to ensure that work is carried out in accordance with the latest revision of the construction drawings

Only figured dimensions may be used, and the drawings shall not be scaled unless the **contractor** is so instructed by the **principal agent** in writing. The **principal agent** will upon written request provide any dimensions that may have been omitted from the drawings

Should any differences or contradictions exist in the documents or dimensions used in the documents, the **contractor** shall be responsible for obtaining clarification thereof from the **principal agent**. Such clarification shall be in writing and shall be final and binding

Should the **contractor** fail to seek clarification of any differences or contradictions, the **contractor** shall be solely liable for any costs that may arise due to his failure in this regard

### C3.3.3. As-built drawings

The **contractor** shall mark up on drawings provided to him for this purpose the exact positions and details of all infrastructure, pipelines, and the like constructed under the contract, as well as the details of all existing services found during the contract. The marked-up drawings shall be handed to the **principal agent** monthly as the work progresses.

## C3.4. PLANT AND MATERIALS

### C3.4.1. Plant and materials supplied by the employer

No plant and "free issue" materials are provided by the **employer**

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**C3.4.2. Materials, samples, and shop drawings**

The **contractor** shall, at his own cost, supply all samples that may be required. Material or **works** not conforming to the approved samples shall be rejected. The **employer's agent** reserves himself the right to submit samples to any tests to ensure that the material represented by the sample conforms to the requirements of the specifications

The recommendations of the manufacturers of patented materials must be strictly adhered to regarding the use, mixing, application, fastening, etc. thereof except when otherwise instructed in writing by the engineer

Where proprietary materials are specified, it is to indicate the quality or type of materials or articles required, and where the terms "or other approved", "or approved equivalent", or "similar approved" are used in connection with proprietary materials or articles, it is to be understood that the approval shall be at the sole discretion of the **employer**.

**C3.5. ACCESS TO WORKS SITE**

See item C4.5 of Part 4: Site Information

**C3.6. EXISTING SERVICES**

**C3.6.1. Known services**

Items have been allowed in the **bills of quantities** for dealing with and protecting existing services where they are known

The **contractor** shall take whatever extra precautions are required to protect all existing services from damage during the period of the contract. The **contractor** shall make use of hand excavation to expose services. Any damage to existing services indicated by the relevant service providers or other damage as a result thereof, shall be for the **contractor's** account

The **contractor** shall engage with the **employer**, local authority and **principal agent** to identify the positions of all existing services. Such service positions must be compared to those indicated on the drawings and any additional services so located, must be brought to the attention of the **principal agent** and marked up on the drawings. These will then become known services.

All existing services shall be regarded as live and operational until otherwise advised by the responsible service provider or official

**C3.6.2. Treatment of existing services**

Before the **contractor** commences operations, he must discuss with and have the approval of the **employer**, authority, or owner concerned regarding the method he proposes to use for relocating or safeguarding any services and existing **works** he may encounter during construction

**C3.6.3. Use of Detection Equipment**

Where the presence of underground cables is suspected the **contractor** shall use such methods as necessary, including cable or metal detectors, to prevent unnecessary damage and consequent delay and cost of repair

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**C3.6.4. Damage to services**

The **contractor** shall be responsible for any damage to such existing services and **works** in the execution of this contract and shall reimburse the **employer**, authority, or the owner concerned for any repairs required and for damages

The **contractor** shall be responsible for immediately notifying the **employer** or **employer's agent** and the authorities concerned regarding any damage caused to public services and existing **works**

**C3.7. ALTERATIONS, ADDITIONS, EXTENSIONS, AND MODIFICATIONS TO EXISTING WORKS**

The **contractor** shall satisfy himself within 14 days of moving onto a site that the dimensional accuracy, alignment, levels, and setting out of existing structures or components thereof are compatible with the proposed works and procedures. Any discrepancies shall immediately be brought to the attention of the **principal agent** in writing where this is not the case

Failure by the **contractor** to timeously give written notice to the **principal agent** in this regard shall result in any claim for additional time and/or costs being rejected

New structures shall, as far as possible, match existing structures regarding the type of materials and finishes unless otherwise stated. The **contractor** shall provide the **employer's agent** with samples of bricks, blocks, and other materials and finishes for approval at least 3 weeks prior to starting any work. Only once the **principal agent** has given approval may the **contractor** place orders for these materials

**C3.8. PERMITS AND WAY LEAVES**

The **contractor** shall obtain the necessary approvals and shall be required to comply with the authorities, service providers, and landowners' / occupiers' requirements at all times

The **contractor** will be required to take cognizance of, and comply with, the general wayleave and 'permission to occupy' requirements of the authorities, service providers, and landowners/occupiers during the construction of the works

The **contractor** will be required to confirm that permission has been granted and that the authorities, service providers, landowners/ occupiers, and all affected parties have been informed of the **contractor's** intentions before commencing work on each property

**C3.9. MANAGEMENT OF THE WORKS**

**C3.9.1. Planning and programming**

The programme shall be in the form of a bar chart (Gantt Chart) or similar acceptable time/activity form reflecting the proposed sequence and tempo of the various activities. The programme shall clearly indicate the critical path, the inter-dependency of activities, and the sequence in which the **contractor** proposes to construct the **works**

During the course of the contract, whenever a significant change occurs, the **contractor** shall submit a revised programme allowing the allocation of resources, to the **principal agent** for approval. The **contractor** shall update the programme whenever construction progress differs by more than a week from anticipated in the programme

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**C3.9.2. Quality plans and control**

The onus to produce work which conforms in quality and accuracy of detail to the requirements of the specifications and drawings rests with the **contractor**, and the **contractor** shall, at his own expense, institute a quality-control system and provide experienced engineers, foremen, surveyors, materials technicians, other technicians, and technical staff, together with all transport, instruments, and equipment, to ensure adequate supervision and positive control of the **works** at all times

The costs of all supervision and process control, including testing thus carried out by the **contractor** shall be deemed to be included in the rates tendered for the related items of work

The **contractor's** attention is drawn to the provisions of the various standardized specifications regarding the minimum frequency of testing that will be required for process control. The **contractor** shall, at his own discretion, increase this frequency where necessary to ensure adequate control

On completion of every part of the work and submission thereof to the engineer for examination, the **contractor** shall furnish the **employer's agent** with the results of all relevant tests, measurements, and levels to indicate compliance with the specifications

The **contractor** shall at his own cost, supply all samples that may be required. Material or work not conforming to the approved samples shall be rejected. The engineer reserves the right to submit samples to any tests to ensure that the material represented by the sample conforms to the requirements of the specifications

No separate payment will be made for such testing by an approved independent laboratory, the costs of which will be deemed to be included in the **contractor's** tendered rates for the various items of work requiring testing in accordance with the specifications

The **contractor** shall provide a fortnightly progress report covering work that is the subject of a scope of works

**C3.9.3. Payment Certificates**

The **contractor** shall submit invoices at monthly intervals in terms of Clause 31.0 of JBCC Principal Building Agreement Edition 4.1 of March 2005 in respect of **works** completed during the preceding period and **materials and goods on site**. The work shall be measured according to the format of the **bills of quantities** and measurements should be taken together with the **employer's agent** (e.g quantity surveyor) and are subject to agreement as to the status of work completed

The **contractor** will submit his invoice, together with invoices and other supporting documentation to the **principal agent** in terms of contract

The **payment certificate** will be scrutinised by the **employer** prior to payment within the prescribed period stipulated on the contract. The **contractor** must ensure that, allowing for the time allowed for processing **payment certificates** by the **employer**, his invoice is submitted in good time to allow for the payment cycle to be met

The **contractor's** tendered rates for the relevant items in the **bills of quantities** shall include full compensation for all possible additional costs which may arise from this, and no claims for extra payment due to inconvenience as a result of the modus operandi will be considered

Each **payment certificate** must, where applicable, be accompanied by:

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- a) Monthly local content report
- b) **Tax Invoice**
- c) Labour intensive report
- d) Contract participation and contract skills development goals reports
- e) Supporting documentation for **materials and goods**

**C3.9.4. Community Liaison Officer**

It is the responsibility of the **contractor** to appoint a competent Community Liaison Officer (CLO) for the duration of the contract

The primary role of the CLO will be liaison and facilitation of communication which shall include

- a) Represent the community and assist the **employer**, the **employer's agent** and the **contractor** with communication between them and the community
- b) Inform community regarding the project detail, safety precautions and programme.
- c) Be available at the **site** offices when required in terms of the contract.
- d) Assist with relocation of people, where applicable
- e) Maintain and up-to-date record of potential employees within the community and provide the **contractor** with copies of this information
- f) To identify, screen and nominate labour from the community in accordance with the **contractor's** requirements and determine, in consultation with the **contractor**, the needs of local labour for employment and relevant technical training, where applicable.
- g) Liaise between principal **contractor** and labour regarding wages and conditions of employment.
- h) Communicate daily with the principal **contractor** on labour related issues such as numbers and skills.
- i) Identify possible labour disputes, unrest, strikes, etc., in advance and assist in their resolution.
- j) Have a good working knowledge of the contents of the contents of the contract document regarding labour and training matters.
- k) Attend all meetings at which the community and/or labour is represented or discussed.
- l) Attend contract site meetings and report on community and labour issues of these meetings.
- m) Co-ordinate and assist with the obtaining of information regarding the community's needs (questionnaires, etc.)
- n) Inform local labour of their conditions of temporary employment, to ensure their timeous availability and to inform them they will be relieved.
- o) Ensure that all labour involved in activities when tasks have been set, are fully informed of the principle of task based work.

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- p) Attend disciplinary proceedings to ensure that hearings are fair and reasonable.
- q) Keep a daily written record of interviews and community liaison.
- r) Arrange venues for training if required.
- s) Assist with the training and education of the community regarding the correct usage of the services, where applicable.
- t) Any other duties that may become necessary as the works progress.

The CLO shall have no authority to issue any instructions to the **contractor**. The CLO shall be neutral to all parties and endeavor to remain impartial should any conflict arise

Responsibility for identifying a pool of suitable labour shall rest with the CLO, although the **contractor** shall have the right to choose from the pool. The **contractor** (and sub-contractors) shall have the right to determine the total number of labourers required at any one time, which may vary throughout the contract

The **contractor** shall have the right to replace labour that is not performing adequately and the replacement of any labour shall be done in conjunction with the CLO

Due cognizance must be taken of the risk of the Community Liaison Officer not being a member of the targeted community, and/or the Community Liaison Officer not being recommended by the Ward Councilor(s)

C3.10. **LABOUR-INTENSIVE WORK**

Applicable: Yes ☒ No ☐

If yes;

Labour-intensive works shall be constructed/maintained using local workers who are temporarily employed in terms of the scope of work. Provided, however, that should adequate and appropriate labour not be available within the locality, other labour may be employed to satisfactory proof that reasonable endeavor has been made to employ labour from the immediate locality

The **contractor** through the appointed CLO shall communicate with the local community leaders or project steering committee where applicable with purpose of negotiating with them regarding the utilization of local labour in the construction process

In this regard, the **contractor** shall furthermore give preference, wherever possible to the employment of single heads of households, women and youth. The **contractor** shall in general maximize the involvement of the local community

C3.10.1. **Generic Labour-Intensive Specification**

**Contractors** are referred to the Guidelines for the Implementation of Labour-intensive Infrastructure Projects under the Expanded Public Works Programme (EPWP) for the generic labour-intensive specification (Hereinafter referred to as "Guideline") applicable to the contract

This specification establishes general requirements for activities which are to be executed by hand involving the following:

- a) trenches having a depth of less than 1.5 metres
- b) stormwater drainage
- c) roads

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- d) sidewalks and non-motorised transport infrastructure
- e) water and sanitation

**Precedence**

Where this specification is in conflict with any other standard or specification referred to in the C3: Scope of Works to this contract, the requirements of this specification shall prevail

**Hand excavatable material**

Hand excavatable material is:

**a) granular materials:**

- i. whose consistency when profiled may in terms of table 2 be classified as very loose, loose, medium dense, or dense; or
- ii. where the material is a gravel having a maximum particle size of 10mm and contains no cobbles or isolated boulders, no more than 15 blows of a dynamic cone penetrometer is required to penetrate 100mm;

**b) cohesive materials:**

- i. whose consistency when profiled may in terms of table 2 be classified as very soft, soft, firm, stiff and stiff / very stiff; or
- ii. where the material is a gravel having a maximum particle size of 10mm and contains no cobbles or isolated boulders, no more than 8 blows of a dynamic cone penetrometer is required to penetrate 100mm;

**Note**

- i. A boulder is material with a particle size greater than 200mm, a cobble and gravel is material between 60 and 200mm
- ii. A dynamic cone penetrometer is an instrument used to measure the in-situ shear resistance of a soil comprising a drop weight of approximately 10 kg which falls through a height of 400mm and drives a cone having a maximum diameter of 20mm (cone angle of 60° with respect to the horizontal) into the material being used

Table 2: Consistency of materials when profiled			
GRANULAR MATERIALS		COHESIVE MATERIALS	
CONSISTENCY	DESCRIPTION	CONSISTENCY	DESCRIPTION
Very loose	Crumbles very easily when scraped with a geological pick.	Very soft	Geological pick head can easily be pushed in as far as the shaft of the handle.
Loose	Small resistance to penetration by sharp end of a geological pick.	Soft	Easily dented by thumb; sharp end of a geological pick can be pushed in 30-40 mm; can be moulded by fingers with some pressure.

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Table 2: Consistency of materials when profiled			
GRANULAR MATERIALS		COHESIVE MATERIALS	
CONSISTENCY	DESCRIPTION	CONSISTENCY	DESCRIPTION
Medium dense	Considerable resistance to penetration by sharp end of a geological pick.	Firm	Indented by thumb with effort; sharp end of geological pick can be pushed in up to 10 mm; very difficult to mould with fingers; can just be penetrated with an ordinary hand spade.
Dense	Very high resistance to penetration by the sharp end of a geological pick; requires many blows for excavation.	Stiff	Can be indented by thumb-nail; slight indentation produced by pushing geological pick point into soil; cannot be moulded by fingers.
Very dense	High resistance to repeated blows of a geological pick.	Very stiff	Indented by thumb-nail with difficulty; slight indentation produced by blow of a geological pick point.

#### Trench excavation

All hand excavatable material in trenches having a depth of less than 1,5 metres shall be excavated by hand

#### Compaction of backfilling to trenches (areas not subject to traffic)

Backfilling to trenches shall be placed in layers of thickness (before compaction) not exceeding 100mm. Each layer shall be compacted using hand stampers;

- to 90% Mod AASHTO;
- such that in excess of 5 blows of a dynamic cone penetrometer (DCP) is required to penetrate 100 mm of the backfill, provided that backfill does not comprise more than 10% gravel of size less than 10mm and contains no isolated boulders, or
- such that the density of the compacted trench backfill is not less than that of the surrounding undisturbed soil when tested comparatively with a DCP

#### Excavation

All excavatable material including topsoil classified as hand excavatable shall be excavated by hand. Harder material may be loosened by mechanical means prior to excavation by hand. Any material which presents the possibility of danger or injury to workers shall not be excavated by hand

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**Clearing and grubbing**

Grass and bushes shall be cleared by hand

**Shaping**

All shaping shall be undertaken by hand

**Loading**

All loading shall be done by hand. Haulage equipment should be selected in a manner that allows loading by hand to the greatest extent possible

**Haul**

Excavation material shall be hauled to its point of placement by means of wheelbarrows where the haul distance is not greater than 150m

**Offloading**

All material, however transported, is to be off-loaded by hand, unless tipper-trucks are utilised for haulage

**Spreading**

All material shall be spread by hand

**Compaction**

Small areas may be compacted by hand provided that the specified compaction is achieved. Appropriate rollers should be used where higher (than can be achieved by hand) levels of compaction are required or for large areas

**Grassing**

All grassing shall be undertaken by sprigging, sodding, or seeding by hand

**Stone pitching and rubble concrete masonry**

All stone required for stone pitching and rubble concrete masonry, whether grouted or dry, must to be collected, loaded, off loaded and placed by hand

Sand and stone shall be hauled to its point of placement by means of wheelbarrows where the haul distance is not greater than 150m

Grout shall be mixed and placed by hand

**Manufactured Elements**

Elements manufactured or supplied by the Contractor, such as manhole rings and cover slabs, precast concrete planks and pipes, masonry units and edge beams shall not individually, have a mass of more than 320kg. Where the mass of an element exceeds 55 kg, consideration should be given to the size of the element relative to its total mass related to the number of workers who would be needed to lift such mass

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**C3.10.2. Labour-intensive competencies of supervisory and management staff**

Contractors shall only engage supervisory and management staff in labour-intensive works that have completed the skills programme including Foremen/ Supervisors at NQF level 4 "National Certificate: Supervision of Civil Engineering Construction Processes" and Site Agent/ Manager at NQF level 5 "Manage Labour-Intensive Construction Processes" or equivalent QCTO qualifications (See Appendix C of the Guideline) at NQF outlined in Table 1

**C3.11. CONTRACT PARTICIPATION GOALS AND CONTRACT SKILLS DEVELOPMENT GOALS**

The **contractor** shall achieve in the performance of the contract the following goals as specified below. Provision for pricing of the compliance with the achieving the goals is made in the Project Assessment Scheme section of the **bills of quantities** and it is explicitly pointed out that all requirements in respect of the aforementioned are deemed to be priced thereunder and no additional claims in this regards shall be entertained:

**C3.11.1. Minimum Targeted Enterprise Development Contract Participation Goal**

The Minimum Targeted Enterprise Development CPG: Applicable ☒ Not Applicable ☐  
If, applicable;

The Standard for Indirect Targeting for Enterprise Development through Construction Works Contracts, published in Gazette Notice No.36190 of 25 February 2013 (Hereinunder referred to as "Standard") applies to this section

The lead partner or main **contractor** shall dedicate a minimum of 30% of the tender amount at the time of award to provide developmental support to the targeted subcontractor or joint venture partner. Preference will be given to insert type of enterprises e.g. General Building, Electrical, Mechanical, Plumbing, etc. It could be either or any combination of all enterprises

The successful **contractor** shall:

- a) Subcontract a minimum of 30% of the total project value to targeted enterprises;
- b) develop the targeted enterprise/s in two development areas as specified in the Standard<sup>1</sup>, and agreed by both the main **contractor** and the targeted enterprise/s;
- c) perform needs analysis on the targeted enterprise to identify developmental goals;
- d) provide internal mentorship support to improve the targeted enterprise/s performance;

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Standard for Indirect Targeting for Enterprise Development through Construction Works Contracts, published in Gazette Notice No.36190 of 25 February 2013

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- e) develop a project-specific enterprise development plan to improve the targeted enterprise/s performance in the identified developmental areas;
- f) monitor and report the progress of the agreed development areas with the targeted enterprise/s; and
- g) submit a project completion report to the **employer's** representative for each targeted enterprise.

The development of the Targeted Enterprise shall be guided by the CIDB Competence Standard for Contractors Gazette No. 41237, 10 November 2017

The **contractor** shall attain or exceed the enterprise development goal in the performance of the contract. Failing to achieve the participation goal will result in a penalty of thirty percent (30%) of the value not achieved, excluding VAT, unless the **contractor** can prove to the **employer's** satisfaction that the non-achievement was beyond his/her control

The main **contractor** or lead partner in a joint venture in a leader of the awarded bid must;

- a) prepare needs analysis for indirect targeting and development in at least any two developmental areas as stipulated in paragraph 3.2.1 of the Standard;
- b) appoint an enterprise development coordinator in accordance with paragraph 3.2.3 of the Standard.
- c) provide a competent person/s to provide internal mentorship to the Targeted Enterprise/s in the two agreed developmental areas.

The enterprise development coordinator shall have the following competencies:

- a) Minimum experience of 5 years in the construction industry at a Managerial level as a Site Agent, Contracts Manager, Site Manager, Construction Manager, Business Development Manager, or Enterprise Development Manager
- b) Minimum experience of 2 years in training and development in Building or Construction; and
- c) National Diploma or B Degree in the Built Environment or Business Management

Format of communications

The **contractor** shall submit to the **employer's** representative:

- a) Project interim reports in the specified format (ED105P) detailing the interim value of the CPG that was achieved. Such a report shall also contain a monthly progress report, compiled by the **employer's** representative and the **contractor**, detailing an assessment of the enterprise development support provided
- b) Project completion report, in the specified format (ED101P), to the **employer's** representative for acceptance within 15 days of achieving practical completion. The report shall include the value of the CPG that was certified in accordance with the contract, cidb registration numbers of each and every targeted

  
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## PART C3: SCOPE OF WORKS

enterprise, and the value of the subcontracted works or the participation parameter of the joint venture entered into; and

- c) Enterprise development declaration (ED104P).

### Management Meetings:

The **contractor** shall report to the **employer's** Representative on the implementation and progress of the targeted enterprise development and CPG

### Forms for contract administration

The **contractor** shall submit to the **employer's** Representative the following proformas:

- a) Form ED 105P Project Interim Report
- b) Form ED 104P Enterprise Development Declaration
- c) Form ED 101P Project Completion Report

### Records:

The **contractor** shall:

- a) keep records of the targeted enterprise development,
- b) keep records of the payments made to the targeted enterprises in relation to the CPG,
- c) ensure all the documentation required in terms of the Standard is provided in a timely manner and according to a prescribed format where applicable.

### Payment Certificates:

The **contractor** shall:

- a) achieve the measurable CPG and provide enterprise development support to the targeted enterprise/s as per the Standard,
- b) submit payment certificates to the **employer** representative at intervals determined in the C1.2 Contract Data

### C3.11.2. Minimum Targeted Contract Skills Development Goal

Minimum Targeted Contract Skills Development Goal: Applicable ☒ Not Applicable ☐

If, applicable;

The **contractor** shall achieve or exceed in the performance of the contract the Contract Skills Development Goal (CSDG) established in Table 2 of the Standard for Developing Skills through Infrastructure Contracts (published in Government Gazette No 43495 of 3 July 2020, as amended (Hereinafter in this section referred to as "Standard") in cidb Best Practice Project Assessment Scheme Notice No. 43726 of 18 September 2020 – Condition of Contract

Failing to achieve the targeted Contract Skills Development Goal will result in A) a thirty percent (30%) penalty of the value of the portion not achieved, excluding VAT, and B) the issuing of completion certificates only after the completion certificate of achieving the skills development goal, counter-signed by the relevant individuals has been submitted, unless the

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**contractor** can prove to the **employer's** satisfaction that the non-achievement was beyond his/her control

The **contractor** shall apportion the learners in the different construction activities based on the scope of work. The cost of accommodating learners will be determined by using Table 3 in the Standard and this cost will be used to determine the value in Rand and will be added to the provision for training as provided for in the Preliminaries section in the Bill of Quantities

The **contractor** may only place 33% of employees employed by him or that of his sub**contractors** contributing to the CSDG

The **contractor** shall employ at least 60% of the learners from a Public FET / TVET college should the **contractor** select to have trade qualification learners (Method 2) contributing to the CSDG

The successful **contractor** may employ part/full occupational qualification learners, trade qualification learners, work integrated learners or candidates directly or through a Skills Development Agency (SDA), (A1 - List of cidb accredited SDAs).

The successful **contractor** shall ensure that no single method shall contribute more than seventy-five percent (75%) of the CSDG for the contract

### Training requirements

The **contractor** shall achieve the measurable CSDG by providing opportunities to learners requiring structured workplace learning using one or a combination of any of the Skills Methods as agreed:

- a) Part/Full Occupational Qualification Learners (**Method 1**)
- b) and/or Trade Qualification Learners (**Method 2**)
- c) and/or Work Integrated Learners (**Method 3**)
- d) and/or Candidates (**Method 4**) as per the Standard in relation to work directly related to the contract or order as indicated under clauses 4.2 and 4.3 in the Standard.

The **contractor** must ensure all beneficiaries of the Standard are registered with the CIDB Skills Development Agency (SDA)

### The Format of Communications:

The **contractor** shall, within 30 days of the award of the contract and in the specific format (Form A2 Baseline Training Plan), submit to the **employer's** representative a baseline training plan

The **contractor** shall submit to the **employers** representative:

- a) an interim contract compliance training report in the specific format (Form A3 Project Interim Report) at intervals that do not exceed 3 months; and
- b) a final contract compliance training report, in the specific format (Form A5 Project Completion Report). This report shall, respectively, be submitted within 15 days of; reaching completion, end of the service, the delivery date for all work required or practical completion (in the case of professional service), service, design, and construct contracts, and engineering and construction works contracts,

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**The Key Personal:**

For Structured Workplace Learning Opportunities for Learners (Method 1 and Method 2)

The **contractor** shall:

- a) appoint a responsible supervisor to allocate learning tasks, to learners in line with their training plans.
- b) appoint an artisan in the applicable trade with a minimum of 3 years to mentor learners associated with structured workplace learning.

For Structured Workplace Learning for Candidates (Method 3 and Method 4)

The **contractor** shall:

- a) appoint a supervisor who is actively engaged in work directly associated with the contract to issue tasks,
- b) appoint a suitable mentor as required by the professional body or statutory council.

**Management Meetings:**

The **contractor** shall report to the **employer's** representative on the implementation and progress of the CSDG

The Forms for Contract Administration:

The **contractor** shall submit to the **employer's** representative the following proformas:

- a) Form A2 Baseline Training Plan
- b) Form A3 Project Interim Report
- c) Form A5 Project Completion Report

**Records:**

The **contractor** shall:

- a) keep records for learners and candidates of the hours worked and registration with the cidb SDA, Sector Education Training Authorities SETA's (where required), and professional statutory councils (where required) particulars towards compliance with this Standard
- b) ensure all the documentation required in terms of clause 4 in the Standard is provided in a timely manner and according to a prescribed format where applicable
- c) upon termination of the opportunities provided to satisfy the CSDG, certify the quantum and nature of the opportunity and submit the certificate and counter-certified by the relevant individual, to the **employer's** representative for record-keeping purposes

**Payment Certificates:**

The **contractor** shall:

- a) achieve the measurable CSDG as agreed by providing opportunities to learners requiring structured workplace learning using one or a combination of any of the Skills



Methods as per the Standard in relation to work directly related to the contract or order as indicated under clause 4.2 and 4.3 in the Standard

- b) submit payment certificates to the **employer's** representative at intervals determined in the contract

**C3.12. ANNEXURES – REFER TO E - PORTAL**

SPECIFICATIONS FOR ALL DISCIPLINES (ARC, MECH, ELE, C&STR, OHS)

TENDER DRAWINGS FOR ALL DISCIPLINES (ARC, MECH, ELE, C&STR)

GEOTECHNICAL INVESTIGATION REPORT

GEOHYDROLOGICAL INVESTIGATION REPORT

TOPOGRAPHIC SURVEY REPORT

OCCUPATIONAL HEALTH & SAFETY BOQ IS ATTACHED TO OHS SPEC –

TOTAL TO BE BROUGHT TO MASTER BOQ

  
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**CONSTRUCTION OF NEW MAKHAZA POLICE STATION:WESTERN  
CAPE PROVINCE**

**BID: 19/1/9/1/34TB(25)**

**PART C:**

**CONTRACT**

**Part C4**

**Site information:**



## PART C4: SITE INFORMATION

# C4: SITE INFORMATION

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Document reference	Document title	No. of Pages
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## C4: SITE INFORMATION

**Project** : [Construction of New Makhaza Police Station]

**Employer** : South African Police Service

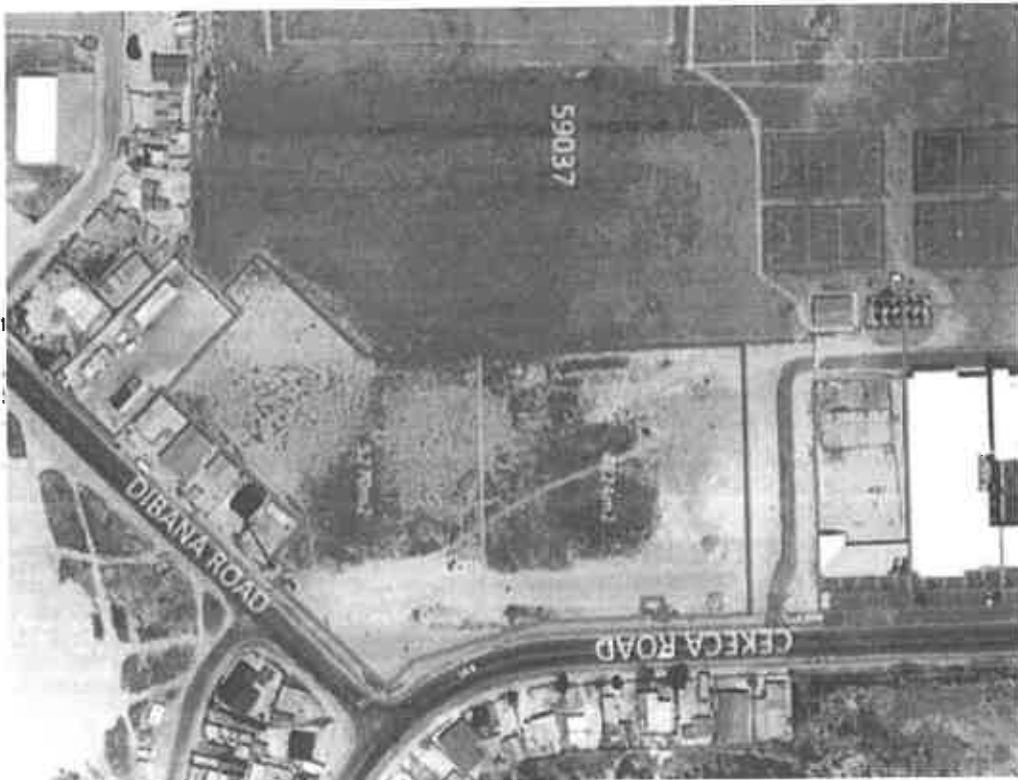
**Reference**

: 19/1/9/1/34 TB (25)]

### C4.1 SITE LOCALITY

Erf/stand number	Unregistered ERF 75169 Portion of ERF 59037 Khayelitsha
Site address	3 Cekeca Rd, Khayelitsha, Cape Town, 7783
Township / Suburb	Makhaza
City / Town	Cape Town
Province	Western Cape Province
Local authority	Stocks and Stocks Municipality
GPS Coordinates	34°02' 54.96"S 18°42' 14.16"E

Google Earth picture for site locality below:



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**C4.2 GEOTECHNICAL INFORMATION**

**C4.2.1 Nature of Ground**

The Geotechnical Investigation report is attached herein for detailed description of the nature of the ground.

Whilst the information provided above is given in good faith, the Engineer and Employer accept no responsibility for the accuracy thereof. It remains the responsibility of the Contractor to verify the actual ground conditions during construction and to take appropriate measures to ensure the safety of persons and the Works at all times.

**C4.3 EXISTING BUILDINGS**

There are temporary buildings on site.

**C4.4 EXISTING SERVICES, SERVITUDES AND WAYLEAVES**

The known existing services are shown on the drawings. The positions of the services cannot be guaranteed. On establishing on site, the contractor must determine the positions of all pipelines and cable routes with the assistance of the engineer and the employer's staff on Site. The contractor must take precautions to prevent any damage to existing services. Damages that might occur will be repaired at the cost of the contractor.

The contractor must also excavate to determine the position where the installed outfall starts and determine the invert level of the first manhole.

Wayleaves will be required.

**C4.5 ACCESS TO SITE**

Access is taken off 3 Cekeca Rd, Khayelitsha, Cape Town, 7783, as far as possible from the bend in the gravel road serving the site.

**C4.6 ADDITIONAL SITE INFORMATION**

**C4.6.1 Water Supply**

Water is not available for construction purposes and the Contractor must make his/her own arrangement for water supply to the site. The contractor will be responsible at his or her own cost for the supply and distribution of water for construction use.

**C4.6.2 Electricity Supply**

Electrical power is not available for construction purposes and the Contractor must make his/her own arrangement for electrical power supply to the site. The contractor will be responsible at his or her own cost for the supply and distribution of electricity for construction use.

**C4.6.3 Environmental Issues**

The site is not particularly sensitive from environmental perspective..

The police station construction does not trigger any listed activities in terms of the 2014 EIA Regulations and can therefore proceed without an application for environmental authorization in terms of the National Environmental Management Act, Act 107 of 1998, as amended

  
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**C4.6.4 Traffic assessment**

There is no need for traffic impact assessment since the site is anticipated increase in vehicular trips, associated with the proposed upgrade will not exceed the threshold which requires a traffic impact study.

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