

URBAN95

Udaipur – An Urban95 City

Development of Dewali Sunset Point into an ITC Responsive Space- Project Report



**Bernard
van Leer**
FOUNDATION

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Project Report- Development of Dewali Sunset Point into an ITC Responsive Space'

Project – Urban95 Program, Udaipur

City Partner – Udaipur Municipal Corporation (UMC)

Funder cum Supporting Partner – Bernard Van Leer Foundation (BvLF)

Technical Partner – ICLEI South Asia

Preface

“Bernard van Leer Foundation (BvLF) believes that giving all young children a good start in life is both the right thing to do and the best way to build healthy, prosperous and creative societies.”

Udaipur Municipal Corporation (UMC) realizing the need to transform city’s urban built environment into more child responsive and child friendly, signed a MoU for initiating Urban95 program in Udaipur.

ICLEI- Local Government for Sustainability, South Asia (ICLEI SA) - the technical partner of BvLF for Urban95 project in Udaipur engaged Mr. Adarsha Kapoor (Urban Designer) to provide inputs to design interventions for Infant, Toddler and Caregivers (ITC) in Udaipur city.

This report focuses on the proposal finalised for the ‘Dewali Sunset Point’ site and may be read, along with the “Template of ITC Integration in Udaipur- Intervention Guidelines Report”. This report is a documentation of work underway and is based on site assessment studies, data collected and observations from site, information provided by UMC, BvLF and from stakeholder consultations conducted by ICLEI South Asia team. Udaipur Improvement Trust, agreed to develop the Dewali Sunset Point which is under their jurisdiction under the Urban95 program.

ICLEI SA is thankful to BvLF for supporting this initiative and to UMC, UIT, their representatives and the other local city based stakeholders for providing valuable inputs and feedbacks in preparation of this report.

ICLEI SA also acknowledges the contributions made by Mr. Adarsha Kapoor (Urban Designer) and his team including Ms. Somi Chatterjee (Conservation Architect), Ms. Vinshi Raj (Urban Regeneration Specialist), Ms. Sabreena Ashraf (Urban Regeneration Specialist) and Mr. Saad Yazdani (Architect) in preparation and completion of this report.

Contents

Preface	3
1. Introduction.....	7
1.1. Background.....	7
1.2. Methodology adopted	9
2. Site	10
2.1. Introduction	10
2.2. Existing site conditions (Site Survey)	13
3. Assessment of ITC Indicators	14
3.1. On Access Roads	14
3.2. Within Dewali Sunset Point.....	15
4. Summary of Findings	16
5. Concept	17
5.1. Proposed improvements of access roads around Dewali	17
5.2. Vision for Fatehsagar Pal	18
5.3. Vision for Dewali Sunset Point	19
5.4. Inspirations for ITC- play equipment for Zone 3.....	20
6. Design Options.....	24
6.1. Option 1	24
6.2. Option 2	25
7. Stakeholder Feedbacks.....	26
7.1. Comments received vide emails dated 4 th , 6 th and 9 th May 2020.....	26
8. O & M Strategies	27
9. Annexure A- Design details.....	28
9.1. Design details of Dewali sunset point	30
9.2. Design details of play equipment at ITC Park	32
10. Annexure B - Quantities and estimation	36
10.1. Outline Specifications	36
10.2. Estimation.....	38

List of Figures

Figure 1: Sites for ITC pilot Interventions in Udaipur	8
Figure 2: Methodology Adopted	9
Figure 3: Pilot Intervention Site- Dewali Sunset point	10
Figure 4: Dewali sunset point plaza and parking	10
Figure 5: Dewali sunset point plaza and viewing deck.....	11
Figure 6: Access road.....	11
Figure 7: Fatehsagar over flow canal under Dewali Sunset point	12
Figure 8: Cycle stand	12
Figure 9: Existing site conditions	13
Figure 10: Recommendations for access roads around Dewali.....	17
Figure 11: Vision (Long Term) for Fatehsagar Pal	18
Figure 12: Site zoning	19
Figure 13: Play equipment made out of reused tyres	20
Figure 14: Sound instruments for sensory development	21
Figure 15: Wooden logs for balancing	21
Figure 17: Play equipment made out of net	22
Figure 17: Swings for children	22
Figure 18: Resting and reading spaces for children and caregivers	23
Figure 19: Play mesh for children.....	23
Figure 20: Final design scheme for Dewali sunset point.....	24
Figure 21: Rejected Design Scheme for Dewali sunset point	25
Figure 22: Interventions for continuous public space and footpath.....	28
Figure 23: Detailed plans and section for the final design scheme	29
Figure 24: Scheme for location of streetlights, etc,.....	30
Figure 25: Design of the Viewing deck.....	30
Figure 26: Design of the Family park	31
Figure 27: Design of Family park	31
Figure 28: Design of Amphitheatre	31
Figure 29: Design of ITC Park	32
Figure 30: Design of access road	32
Figure 31: Design of sound instrument in the ITC Park	32
Figure 32: Design of climbing walls and rides for children in ITC Park	33

Figure 33: Design of resting and reading seats 33

Figure 34: Design of slides in ITC Park 33

Figure 35: Design of low height wooden logs for balancing..... 34

Figure 36: Design of play equipment for crawling and jumping 34

Figure 37: Design of play equipment for crawling and jumping 34

Figure 38: Design of benches with seats for children and space for pram..... 35

List of Tables

Table 1: Objectives for selection of Pilot Interventions 8

Table 2: Existing ITC indicators on access road 14

Table 3: Existing ITC indicators within Dewali sunset point 15

Table 4: Area Program 28

Table 5: Specifications 36

Table 6: Block cost estimates 38

1. Introduction

Creation of healthy, prosperous and vibrant cities needs to include the requirements of babies, toddlers and their families to thrive. Urban95 initiative is meant to make a lasting change in the urban landscape and provide opportunities that can shape the crucial first five years of children's lives. The goal of this initiative is to support healthier, safer, and more exciting urban neighbourhoods for young children, for those who care for them, and for everyone.

Urban95 is rooted in the belief that when urban neighbourhoods work well for pregnant women, babies, toddlers and young children, they also tend to nurture strong communities and economic development.

Udaipur Municipal Corporation (UMC) realizing the need to transform city's urban built environment into more child responsive and child friendly, has agreed to be part of Urban95 Program. Therefore in the process UMC joined the global Urban95 Program during early 2019 by signing a MoU and thus becoming the third Indian city to be part of the Program. The program is supported by Bernard van Leer Foundation and the implementation on ground is technically supported by ICLEI – Local Governments for Sustainability, South Asia.

As a part of this Program, a series of tactical (low cost solutions offering crucial learnings from the ground post implementation, catalyst to activate dead nooks and corners) and pilot interventions (capital intensive solutions, high impact) are planned to be implemented in few selected pilot demonstration wards, i.e. ward no. 3 and cluster of wards within the walled city i.e. ward nos. 10, 11, 12, 13 and 14. The interventions are aimed to apply ideas on ground in Udaipur to generate interest and show impact to the citizens and city officials.

1.1. Background

As a part of the ongoing support provided by BvLF, four sites for Pilot Interventions have been identified in Udaipur with distinct objectives. Figure 1 provides further details about the site locations followed by objectives of pilot interventions in table 1.

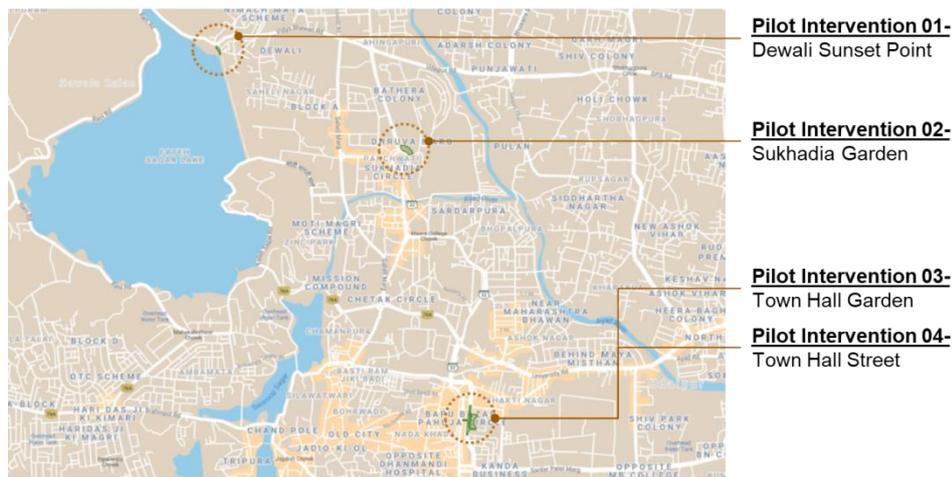


Figure 1: Sites for ITC pilot Interventions in Udaipur

The site-specific objectives for selection of the four pilot intervention sites are based on the areas of focus in BvLF's ITC Handbooks.

Table 1: Objectives for selection of Pilot Interventions

S/N	Intervention Site	Objective
1	Dewali Sunset Point	Testing strategies for integrating ITC features with a lake side public space
2	Sukhadia Garden	Testing strategies for regeneration of a derelict public space into an ITC enabled public space
3	Town Hall Garden	Revitalizing a city park with ITC enabled features
4	Town Hall Street	Comprehensive rejuvenation of a public street with ITC enabled features

This document is the **“Project Report for integrating ITC features within Dewali Sunset point in Udaipur.”**

1.2. Methodology adopted

The methodology as shown in the figure below discusses the approach adopted for developing the pilot projects. The methodology details out the steps carried out under various aspects such as surveys and documentation, ITC need assessment, development of vision, concept proposals, and discussions with various stakeholders from time to time and finalization of design schemes.



Figure 2: Methodology Adopted

2. Site

2.1. Introduction

Dewali sunset is a public space adjoining Fatehsagar Lake of Udaipur. It is located adjoining the northern entry to Fatehsagar pal. The site can be accessed by Vidya Bhawan road from the north and Fatehsagar pal from the south. Chat puja ghat is accessible from the sunset point and Khimach mata mandir is also situated in close proximity. Refer figure 3 for site location.



Figure 3: Pilot Intervention Site- Dewali Sunset point

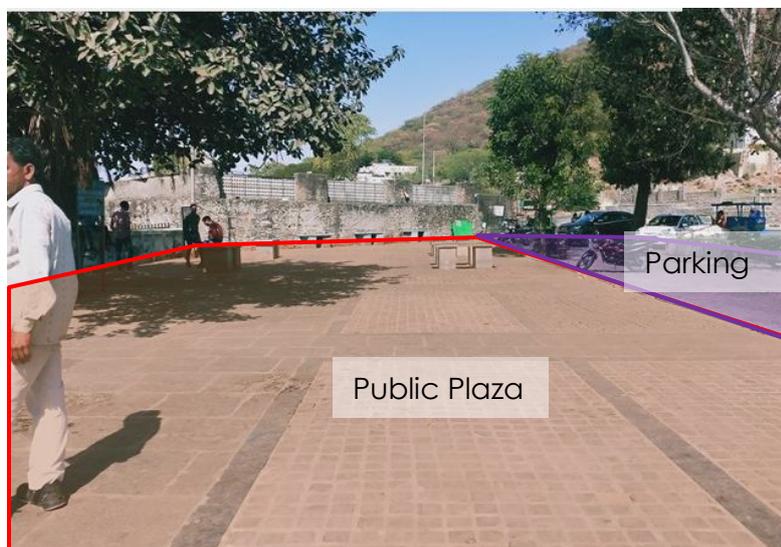


Figure 4: Dewali sunset point plaza and parking

Dewali Sunset Point has a wide plaza and Parking area for both 2 wheelers and 4 wheelers adjoining it as shown in Figure 4 above. The wide plaza has limited seating and no green surface. In summers, the plaza becomes extremely hot and hence is uncomfortable to use. Figure 5 below showcases the Dewali sunset point plaza with the adjoining view deck. The Public Plaza is devoid of facilities for ITC.



Figure 5: Dewali sunset point plaza and viewing deck

Figure 6 shows the access road towards Dewali sunset point. The adhoc parking, hawkers, and absence of ITC indicators can be clearly noted. In addition, parts of footpaths are encroached by hawkers and is used for parking.



Figure 6: Access road

Figure 7 shows an overflow canal that flows underneath Dewali Sunset Point Plaza, parking lot and the access road.

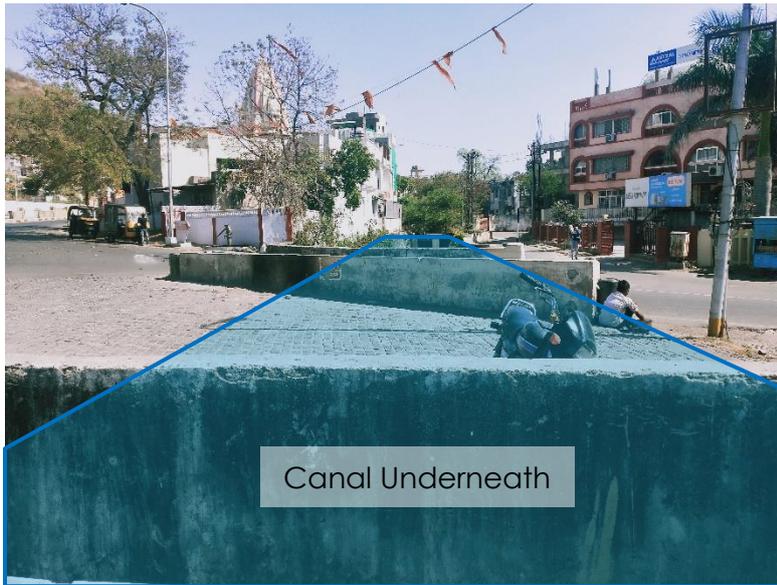


Figure 7: Fatehsagar over flow canal under Dewali Sunset point

Cycle stand adjacent to Dewali sunset point is showcased in Figure 8.



Figure 8: Cycle stand

2.2. Existing site conditions (Site Survey)



Figure 9: Existing site conditions

As shown in the figure 9 above, the site is located adjoining to the Fatehsagar Lake and next to the canal. Infrastructure such as parking areas, cycle stands, electric poles, transformers, public toilets, footpaths, drinking water facilities etc located on site have been studied and mapped along with the existing road network.

3. Assessment of ITC Indicators

As assessment of ITC indicators was done to document the status of facilities and indicators of Infant- Toddler and Caregivers friendly spaces. Following sections highlight the existing as well as the ones that are absent. As shown in the table below, it is observed that on the access roads only four indicators are present which include the footpaths, cycle stands, lightings and planters. The absence of indicators such as waiting areas, ITC play furniture, sidewalks, shading areas, benches, facilities for handicapped etc indicate that the area lacks very basic infrastructure. .

3.1. On Access Roads

Table 2: Existing ITC indicators on access road

ITC Indicator on access road	Availability
Footpath	✓
Kerb ramp	X
Cycle stand	✓
Cycle track	X
Ramps	X
Waiting area	X
Handicapped parking	X
Side walk games	X
Active façade along route	X
Surface material and textures	X
Shading devices	X
Benches	X
Lighting	✓
ITC play furniture	X
Planters	✓
Bollards	X
Seating along planters	X
Wayfinding Signages for directions and utilities	X
Safety signage for traffic	X
Kerb extensions	X
Rumble strips	X
Lane marking	X

3.2. Within Dewali Sunset Point

Table 3: Existing ITC indicators within Dewali sunset point

ITC Indicator within Dewali sunset point	Availability
Fencing / Permeable perimeter	✓
Camera monitoring	X
Ramps for ITC	X
Benches	✓
Ramps	X
ITC playful furniture	X
Play equipment	X
Planters	✓
Public art	X
Surface material and textures	X
Natural Play elements	X
Breast feeding booths	X
Drinking water facility	X
Toilets	✓
Dustbins	✓

The table above indicates the status of existing indicators at Dewali sunset point. It is observed that currently the site has fencing, benches, planters, toilets and dustbins whereas important indicators related to ITC infrastructure are missing. Indicators such as breast feeding booths, drinking water, ITC play furniture, ramps etc need to be developed in order to facilitate the user group.

4. Summary of Findings

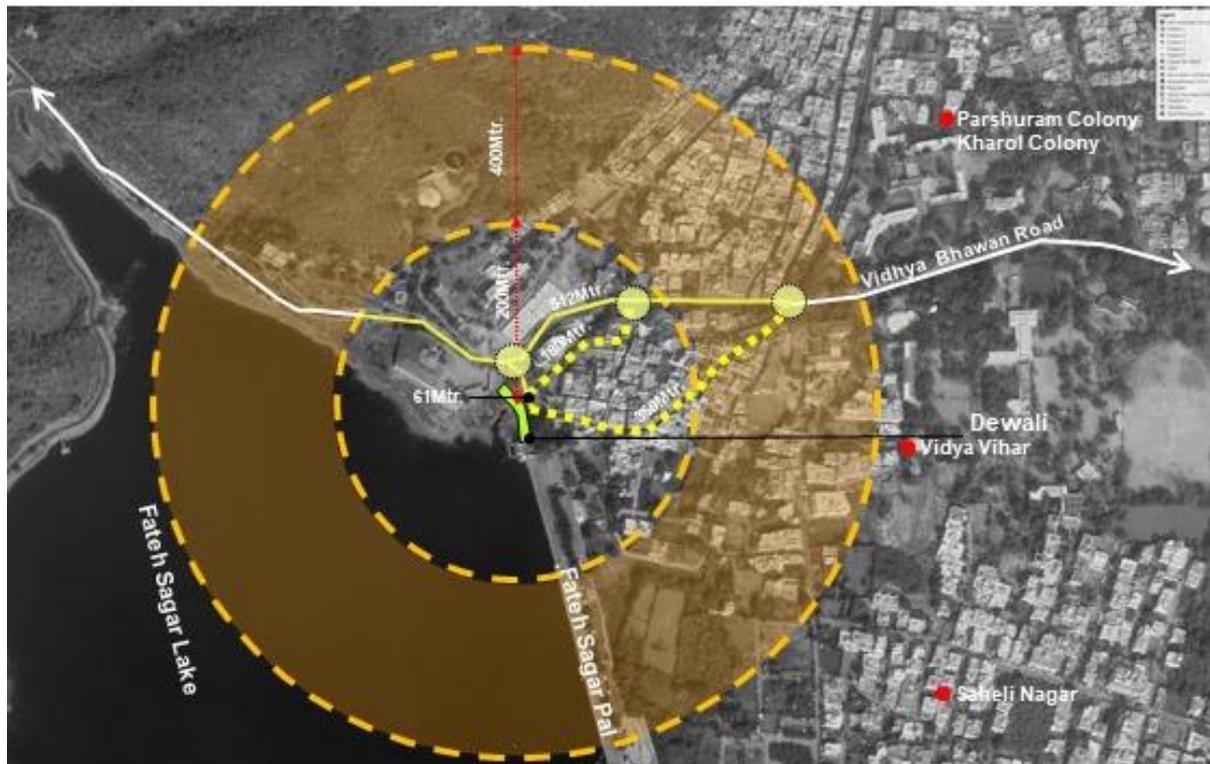
Following are the major findings from the Dewali sunset point site studies:

- Dewali sunset point has potential to become a major recreational destination for the city residents and visitors as it is located near Fatehsagar pal.
- Most of the footfall currently is in the Fatehsagar pal area, which is adjacent to Dewali sunset point. However, Fatehsagar does not have designated areas and facilities for ITC. Dewali sunset point provides space and opportunity to create designated space for Infants, Toddlers, Caregivers and other visitors to Fatehsagar Pal.
- The roads around Dewali sunset point and the ones leading to it, need facilities for pedestrians to cross over from one part of the site to other parts.

5. Concept

The proposals for making Dewali sunset point into an inclusive and vibrant public space with facilities for Infant, Toddlers and Caregivers have been outlined under the following heads-

5.1. Proposed improvements of access roads around Dewali



LEGEND

- Street Design and Street Improvement up to 200Mtr.
 - Footpaths to be added
 - Space for pedestrian, cyclists, infants and toddlers to be included.
 - Entry points to projects or sites and traffic junctions to be traffic calmed
 - Zebra crossing required every 80Mtr. to 100Mtr. interval.
- ⋯⋯⋯
 - Provide walkable surface
 - Traffic calming
 - Illumination
 - Street furniture
- Junction Improvement up to 200Mtr.
- Traffic Calming measures to be introduced within this zone
- Intervention Area

Figure 10: Recommendations for access roads around Dewali

Proposed recommendations around Dewali sunset point include street design and street improvement up to 200 m. These include footpath improvement, zebra crossing, junction improvement and traffic calming around the site.

5.2. Vision for Fatehsagar Pal

It is envisioned that in future, Fatehsagar Pal would be upgraded into an inclusive public space. Dewali Sunset Point would then become an entry point to Fatehsagar Pal area. The current recommendations for Dewali are in line with the future expectations from Fatehsagar Pal. Figure 11 portrays the Vision for Fatehsagar Pal development. The area is proposed to be divided into 3 zones. The details of each zone are provided below:

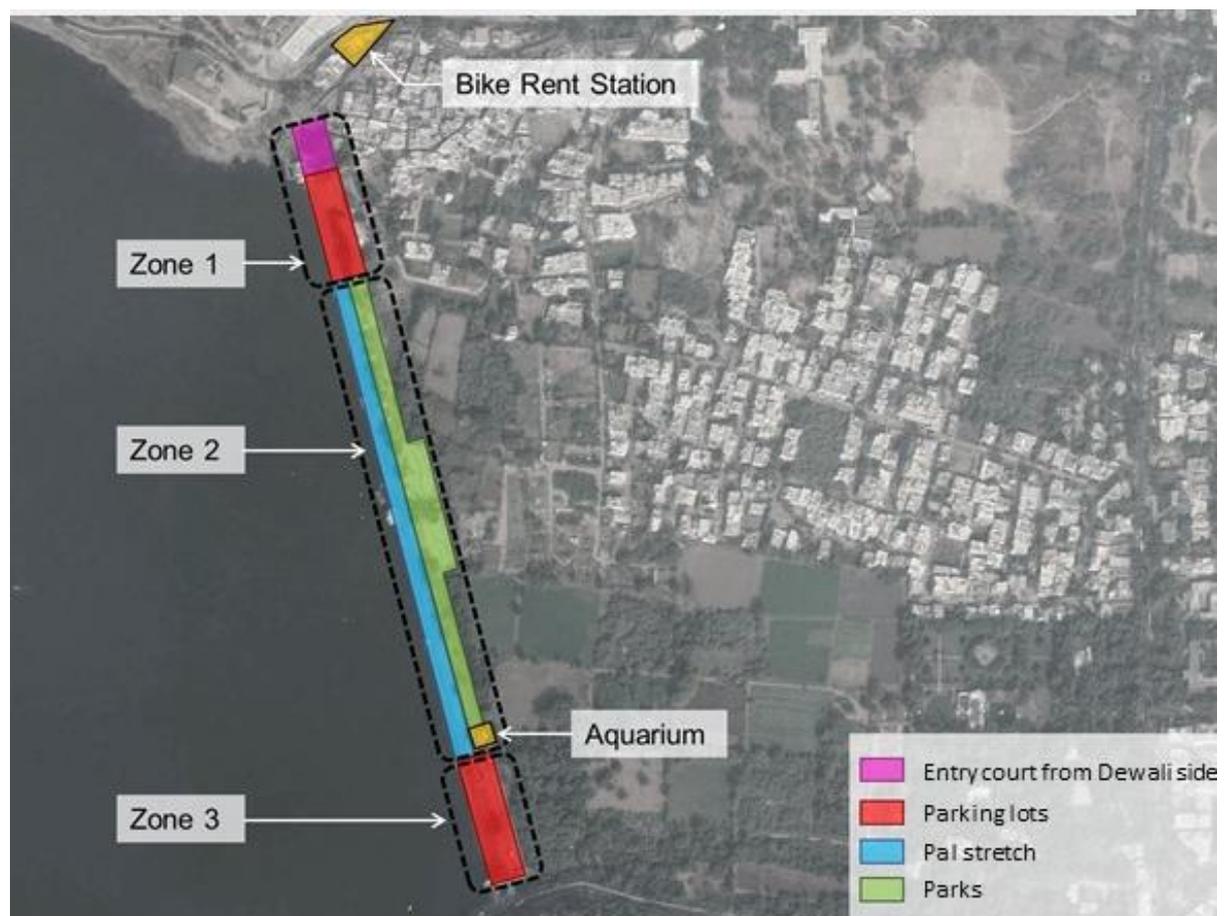


Figure 11: Vision (Long Term) for Fatehsagar Pal

1. **Zone 1: To be envisioned as an entry court with Parking Lot (Dewali Side):** The main features of this zone are recreational area, open air exhibition, educational exhibits sensitizing children (eg. related to water treatment)
An underground MLCP has already been constructed. Fatesagar Pal also has an on-street parking lot. This would allow removal of excess parking spaces from Dewali sunset point.

2. **Zone 2: Pal Linear Stretch and Parks:** The major features of this zone consist of Historical and Formal Recreation Zone, soft play elements (sand etc.), resting and seating points along the stretch and skating, cycling and other play areas
3. **Zone 3: Entry Court and Parking Lot (Moti Magri Side):** The major features of this zone consists of contemporary and Educational Zone along with parking lot, open amphitheatre.

5.3. Vision for Dewali Sunset Point

In line with the vision for Fatehsagar Pal in the previous section, Figure 12 shows the zoning for Dewali sunset point. The figure below specifies the location of developing the ITCN park along with family zone and necessary utilities as a part of the project. Zone 1 of this area is proposed to be developed as children play area having installations at low height along with fences, sandpits, seating areas for caregivers etc. Zone 2 is proposed to be developed as a family zone having open space with seating and viewing decks along with open air exhibits. It will also have components such as eateries, amphitheatres for workshops, puppet shows, kiosks for displaying art and craft of Udaipur. Zone 3 will have public utilities such as toilets, drinking water, changing rooms etc.



Figure 12: Site zoning

5.4. Inspirations for ITC- play equipment for Zone 3

Old tyres can be used to create play equipment like swings etc for children (Figure 13). This would help in physical development of children in the age groups of 4-5 and above.



Figure 13: Play equipment made out of reused tyres

Installations with sound instruments may be created for sensory development of children. Wooden logs may be installed for balancing. Play equipments made out of ropes and metal rings may be installed for physical development of children. Swings and other play equipment for children may be installed. Innovative resting and reading spaces can be created for children and their caregivers. A multilevel play mesh made out of wood and fabric mesh may be installed. Figure 14-19 showcase these proposed initiatives.



Figure 14: Sound instruments for sensory development



Figure 15: Wooden logs for balancing



Figure 16: Play equipment made out of net



Figure 17: Swings for children



Figure 18: Resting and reading spaces for children and caregivers



Inspired by the continuous play equipment done in the bicentennial park, a smaller installation has been designed and installed at the SDMC park
Source: CFSC Team

Figure 19: Play mesh for children

6. Design Options

6.1. Option 1

The design philosophy behind option 1 was to create an ITC enabled Public Space inspired by geometric designs of the public spaces of the city.

Multiple meetings and discussions were held with UMC officials and BvLF team to finalise the concept and based on the feedback received from UMC, UIT and other stakeholders, this design option is recommended for implementation and has been further detailed in this as a part of Annexure A in the report.

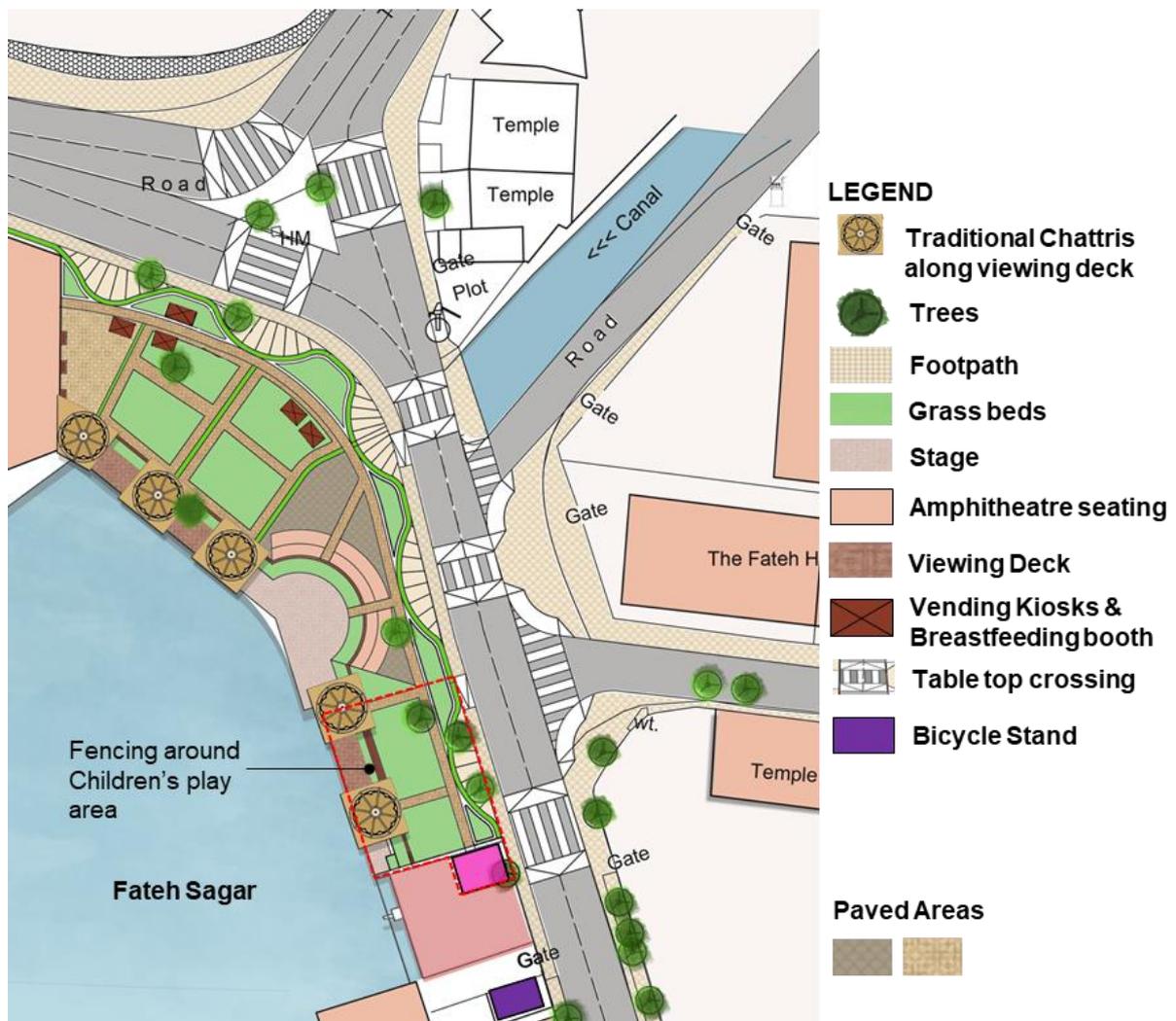


Figure 20: Final design scheme for Dewali sunset point

6.2. Option 2

This option had been designed to give a contemporary rendition of a public space for Udaipur. Designed as a collage of water bubbles, each circle represents different zones and activities.

This option (Figure 21) was rejected by local stakeholders as this reflected a drastic departure from the regular geometric design of other public spaces in Udaipur City.

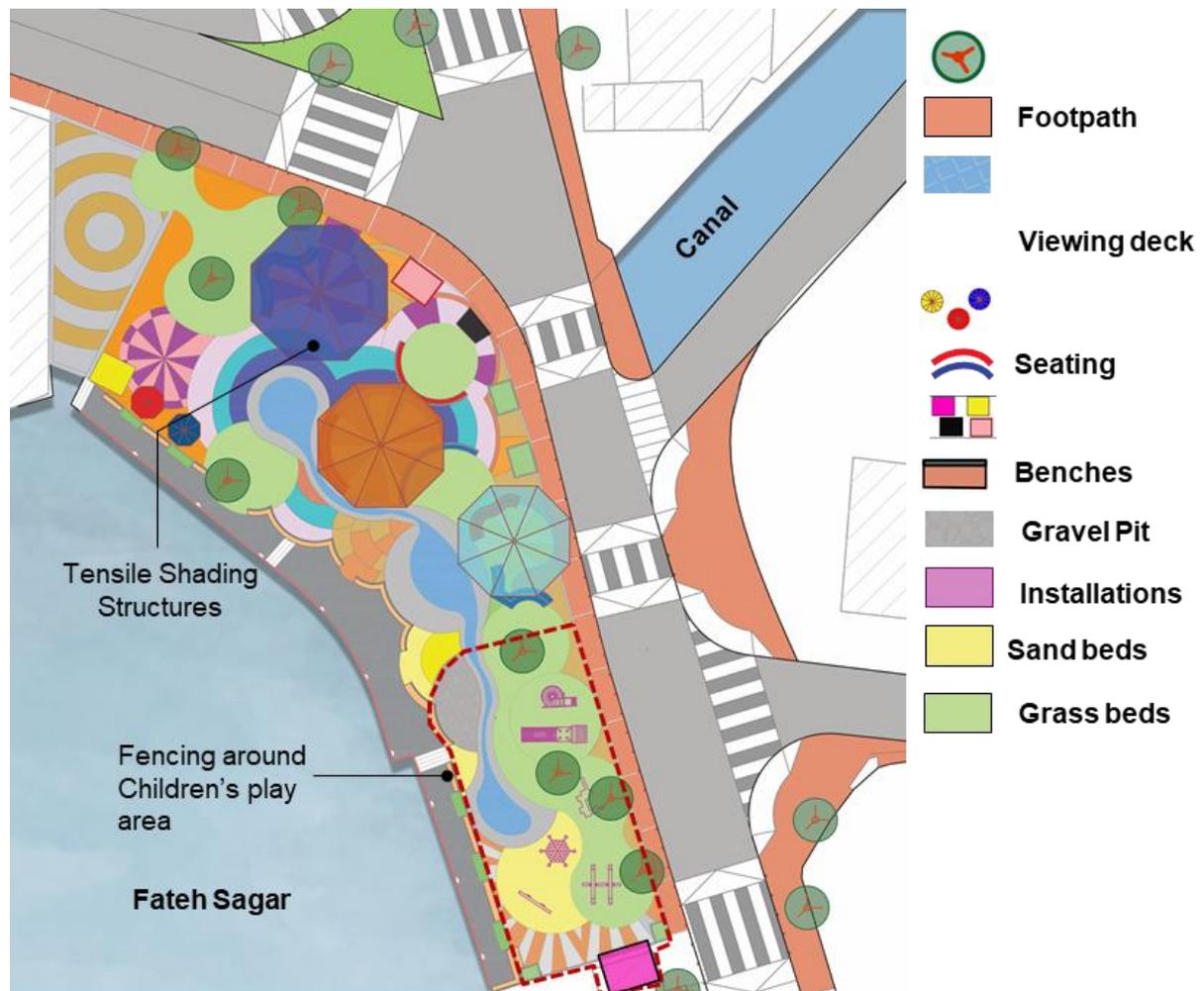


Figure 21: Rejected Design Scheme for Dewali sunset point

7. Stakeholder Feedbacks

7.1. Comments received vide emails dated 4th, 6th and 9th May 2020

The stakeholders at Udaipur agreed to adopt the option with Chatris, rather than the one with circles.

Action Taken - Option 1 adopted

- The idea of having a water body was appreciated. However, it was brought to notice that maintaining the water body, especially during the summers might be difficult.

Action Taken - Option 1 without water body has been adopted.

- It was recommended to make Option 1 more vibrant.
- **Action Taken**- Vibrancy has been introduced through play equipment and potted plants.

8. O & M Strategies

Following are the recommendations for Operation and Maintenance of the site-

- The Zone-1- ITC park within Dewali sunset point may be maintained as a gated park for security of children. Remaining parts of the plaza should be maintained as a barrier-free public space without boundary wall.
- Either of the two models for O&M of Dewali Sunset Point may be adopted-
 1. Under the Adopt a Park Scheme, corporates may be invited to adopt the park
 2. In the event, corporates do not come forward, a facility manager may be engaged against a fee.
- The payments made to the facility manager should be linked to the level of cleanliness, safety and accessibility maintained in and around the area, validated by periodic audits.
- The agency managing the park should depute two female and one male site managers, who should be available on all days of the year.
- Ideally, the site should be kept active for 24 x 7. It should at least be active from 5am in the morning to 9 pm in the evening.
- Charges for rewards and penal actions may be established.

9. Annexure A- Design details

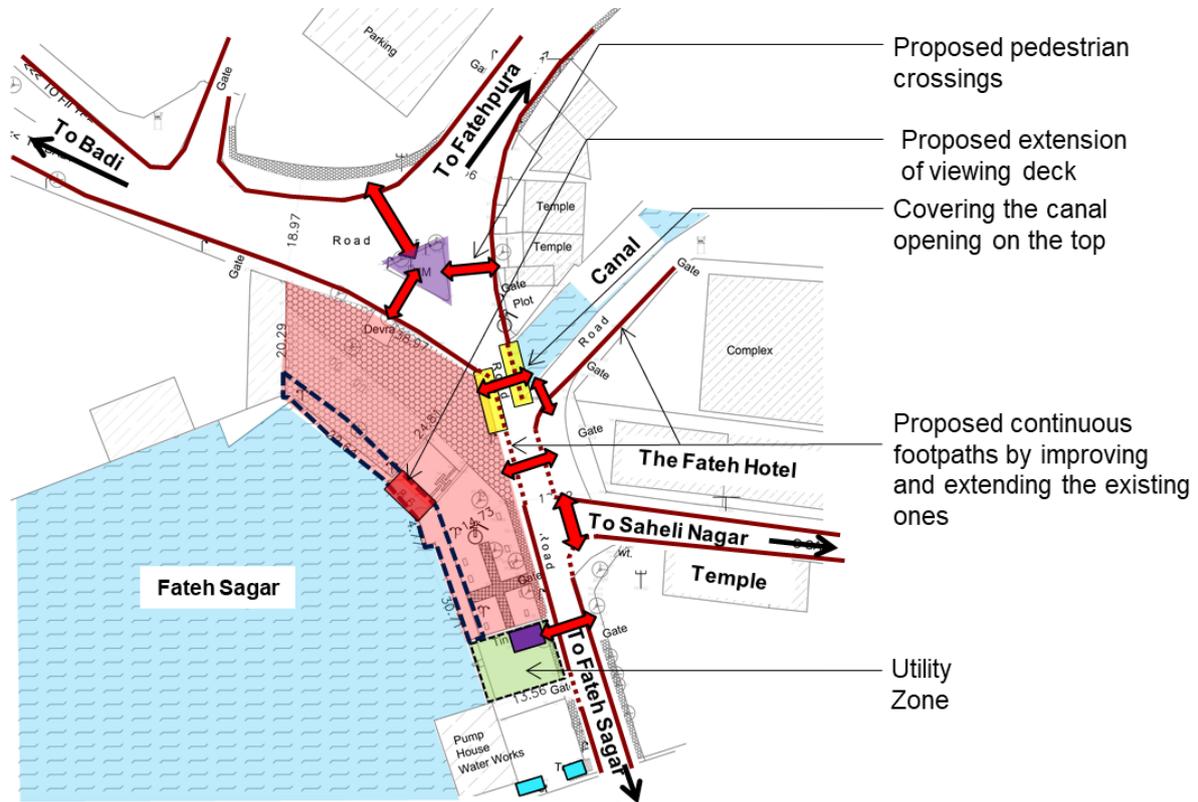


Figure 22: Interventions for continuous public space and footpath

Table 4: Area Program

Zones	Area (Sq.mtr.)
Zone 1	
ITC Park	140
Zone 2	
Family Park	551
Amphitheatre	150
Viewing Deck	105
Zone 3	
Utility Zone	130

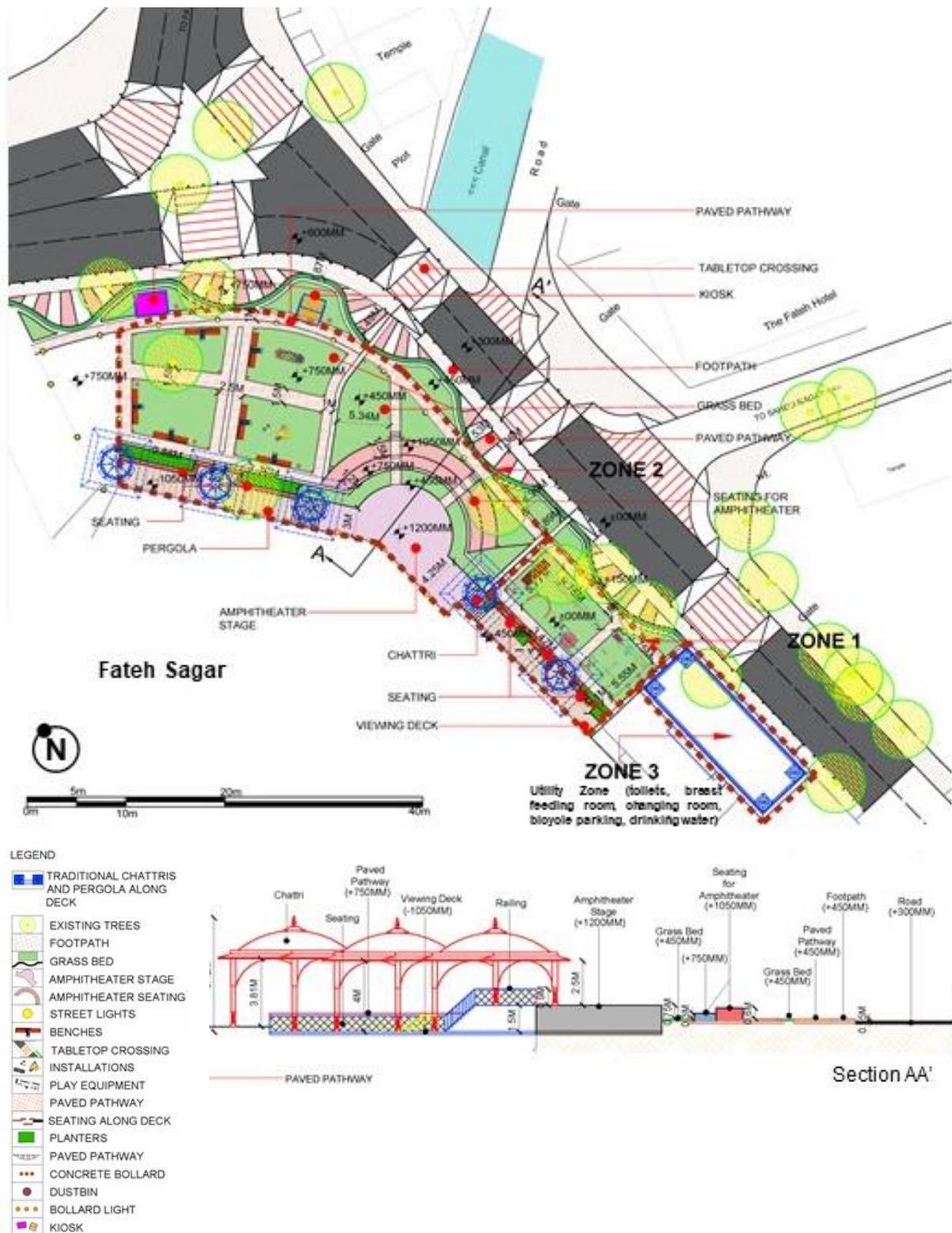


Figure 23: Detailed plans and section for the final design scheme

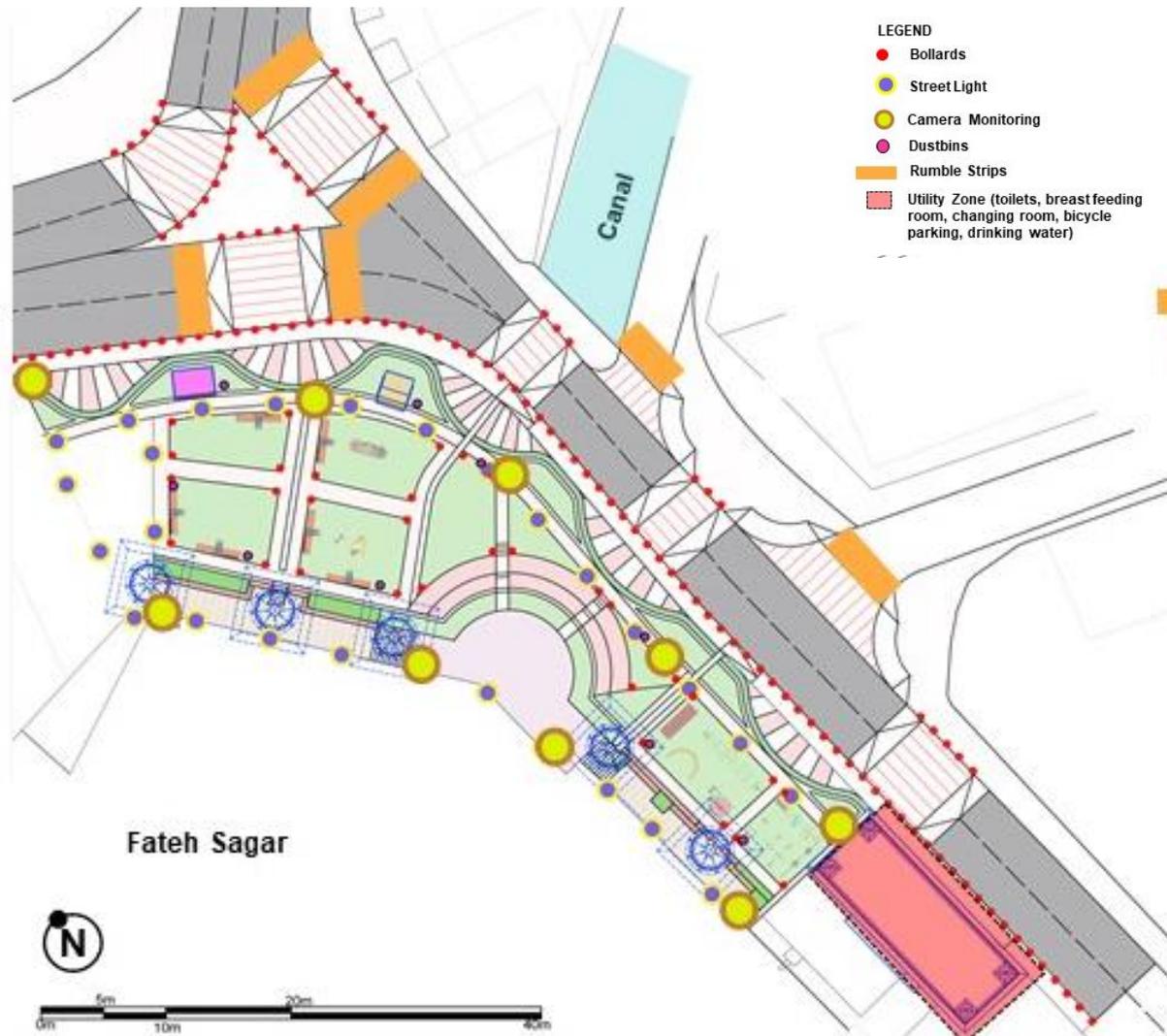


Figure 24: Scheme for location of streetlights, etc,

9.1. Design details of Dewali sunset point



Figure 25: Design of the Viewing deck



Figure 26: Design of the Family park



- Street Lights
- Benches
- Potted Plants
- Bollard Light
- Paved Pathway



Figure 27: Design of Family park



- Viewing Deck with Chattri and Pergola
- Kiosk
- Installations and Play Equipment
- Paved Pathway
- Dustbin
- Bollard Light



Figure 28: Design of Amphitheatre



- Street Light
- Amphitheatre Stage
- Amphitheatre Seating
- Fencing along the deck
- Paved Pathway
- Bollard Light





Figure 29: Design of ITC Park

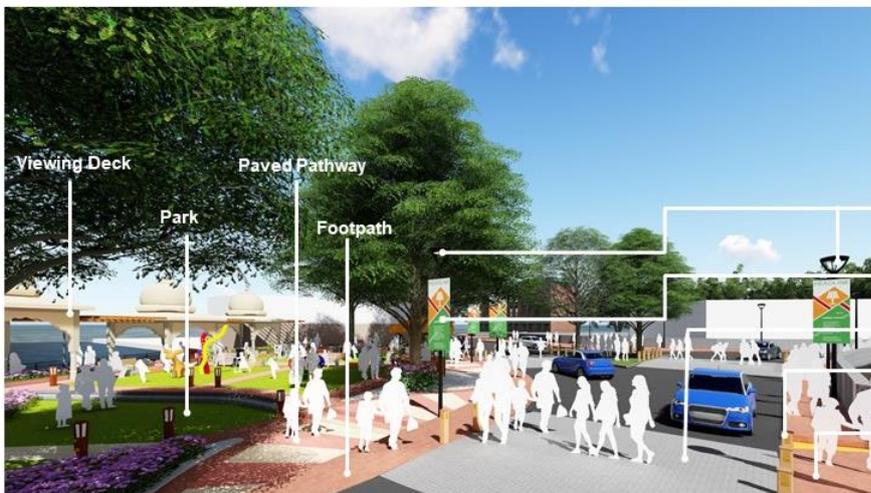


Figure 30: Design of access road

9.2. Design details of play equipment at ITC Park



Figure 31: Design of sound instrument in the ITC Park



Figure 32: Design of climbing walls and rides for children in ITC Park



Figure 33: Design of resting and reading seats



Figure 34: Design of slides in ITC Park



Figure 35: Design of low height wooden logs for balancing

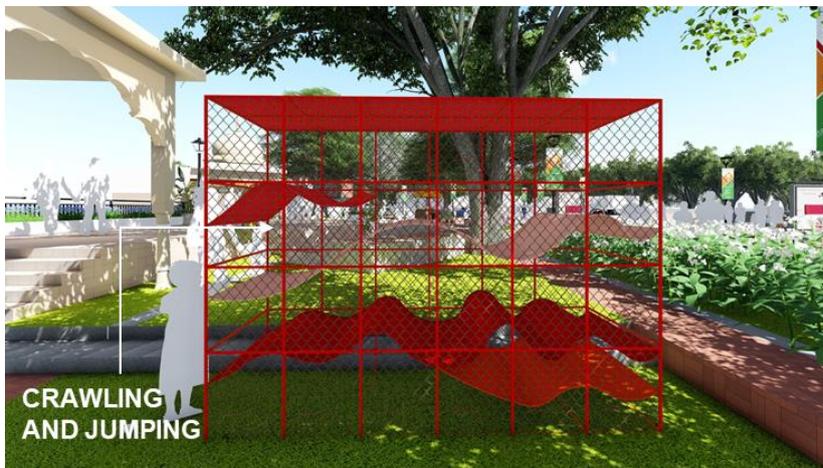


Figure 36: Design of play equipment for crawling and jumping



Figure 37: Design of play equipment for crawling and jumping



Figure 38: Design of benches with seats for children and space for pram

10. Annexure B - Quantities and estimation

10.1. Outline Specifications

Table 5: Specifications

Item	Brief Specification
Footpath (80%)	60 mm thick, precast concrete interlocking tiles of desired shape of M 30 grade
Laying red sand stone in Paving (20%)	Laying red sandstone with rough surface (natural finish) in paving
Kerb Stones	Laying precast concrete Kerbs-M25
Bollards	"SWISS" type bollard 134cm height made from 1.25mm thick M.S. sheet welded in conical section
Tree grits	Precast concrete Tree grits
Steel Garbage Bins	Steel garbage bins with separate compartments for wet and dry waste
Tabletop	Cobble stone of approx. Size 125x125x75 mm (thick) laid on 25 mm average thick cement mortar 1:3 (1 cement: 3 coarse sand)
Tabletop Crossing	100 mm Thk. precast concrete interlocking tiles of desired shape of M 30 grade
Signage-	Retro- reflectorized cautionary, mandatory, and informatory sign as per IRC: 67
60 cm equilateral triangle	Signage- 60 cm equilateral triangle- fabricated in metal
60 cm circular	Signage- 60 cm circular- fabricated in metal
60 x 45 cm rectangular	Signage- 60 x 45 cm rectangular- fabricated in metal
Lane Markings	Thermoplastic paint
Zebra Crossings	Thermoplastic paint
Canal Cover	RCC Deck
Paved Pathway	Laying interlocking cement concrete paver block (60mm Thk.)
Laying plants in planter beds	Laying drought resistant flowering plants in planter beds
Pedestrian Street Light pole	Pedestrian street light pole 6M high (ornamental cast iron)
Streetlight (LED)	Streetlight (LED)

Item	Brief Specification
Potted Plants	Potted Plants
Grass Base	Good earth and manure
Grass Cover	Local grass
Vending Kiosk	Vending kiosk fabricated in metal
Red Sandstone Benches	Made with cast Iron frame and red sandstone seats
Power Supply trench	Laying 150mm dia NP2 pipe for power supply
Storm Water Drains	RCC trench for storm water drains
Manhole for SWD	Construction of manhole for SWD
Manhole for other utilities	Construction of manhole for other utilities
Manhole Cover	Cast Iron manhole cover
Rainwater Harvesting Pits	Construction of rainwater harvesting pits
Play Equipment (Lump Sum)	Play equipment procured from supplier or constructed on site
Fencing	MS fencing
CCTV Camera	Procurement and installation of CCTV cameras including connecting them to the Smart City OCC.
Amphitheatre	Amphitheatre with granite and red sandstone floor finish
Chattri	Traditional style Chattri in red sandstone
Pergola	Wooden Pergola

10.2. Estimation

Table 6: Block cost estimates

ESTIMATE OF DEVELOPMENT OF GARDEN (ZONE-1 & 2) AT DEWALI SUNSET POINT, UDAIPUR										
S/n	RUIDP SOR- 2017	Item Description	Unit	Nos.	Length (m)	Breadth (m)	Depth (m)	Qty	Rate	Amount
1	2.4	Dismantling of existing structures like culverts, bridges, retaining walls, CC road and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts and lead of 50 metres as directed by Engineer.								
	2.4.5	Dismantling Stone Masonry								
	2.4.5.2	Rubble stone masonry in cement mortar.	Cum					20.00	256.00	5120.00
2	3.2	Dismantling tile work in floors and roofs laid in cement mortar including stacking material within 50 metres lead.								
	3.2.2	For thickness of tiles above 25 mm and upto 40 mm	Sqm					100.00	45.00	4500.00
3	4.2.1	Earth work in excavation for roadway, including trimming bottom and side slopes in accordance with requirement of line, grades and cross sections, including disposal of surplus material with all lift and lead upto 1000 metre as per MoRT&H specification clause 301. - In all type of soil								
		Excavation for Pathway	Cum	1	Area	424.00	0.30	127.20		
			Cum	5	Area	15.00	0.30	4.50		
		Total	Cum					131.70	145.00	19097.00
4	21.1	Providing and laying in position cement concrete of								

ESTIMATE OF DEVELOPMENT OF GARDEN (ZONE-1 & 2) AT DEWALI SUNSET POINT, UDAIPUR										
S/n	RUIDP SOR- 2017	Item Description	Unit	Nos.	Length (m)	Breadth (m)	Depth (m)	Qty	Rate	Amount
		specified grade excluding the cost of centering and shuttering - All work upto plinth level :1:5:10 (1 cement : 5 fine/ coarse sand : 10 graded stone aggregate 40 mm nominal size)								
		PCC for Pathway	Cum	1	Area	424.00	0.10	42.40		
			Cum	5	Area	15.00	0.10	1.50		
		Total	Cum					43.90	3120.00	136968.00
5	9.11	Providing and fixing of 60mm thick precast cement concrete interlocking paver block casted with rubber moulds in approved reflective colour and design having minimum compressive strength of 300 kg/ sq cm. The CC paving blocks be laid on average 50mm thick bed of coarse sand and the joint is to be filled with fine sand. Laying procedure on compacted sub-base as defined. Complete job is to be executed as per the instruction of Engineer incharge. The rates to be inclusive of all lead & Lifts etc. complete as per specifications.								
		Pavor blocks for Pavement	Sqm	1	Area	424.00		424.00		
				5	Area	15.00		15.00		
		Total	Sqm					439.00	641.00	281399.00
6	10.1	Providing and fixing precast cement concrete M-20 grade (Using mechanical Concrete Mixer) kerb stone top and bottom width 115and 165 mm respectively, 250 mm high on 150 mm thick PCC M-10 grade foundation as per design, including fixing at site as per clause 408 of MoRT&H Specification including all material, labour, machinery, lighting, guarding and maintenance of								

ESTIMATE OF DEVELOPMENT OF GARDEN (ZONE-1 & 2) AT DEWALI SUNSET POINT, UDAIPUR

S/n	RUIDP SOR- 2017	Item Description	Unit	Nos.	Length (m)	Breadth (m)	Depth (m)	Qty	Rate	Amount
		diversion.								
		Kerb stone on both side of Pathway	Rmt	2	299.00			598.00		
		Total	Rmt					598.00	254.00	151892.00
7	25.1.1	Random rubble masonry with hard stone in foundation and plinth : - Cement mortar 1:6 (1 cement : 6 coarse sand)								
		Footing	Cum	2	26.00	1.50	0.60	46.80		
			Cum	2	26.00	1.50	0.60	46.80		
		Above Plinth	Cum	2	26.00	1.50	1.00	78.00		
		Side wall	Cum	2	3.00	0.60	0.60	2.16		
			Cum	2	3.00	0.45	0.60	1.62		
		Stage								
		Footing	Cum		Area	95.00	0.60	57.00		
			Cum		Area	95.00	0.60	57.00		
		Above Plinth	Cum		Area	95.00	1.00	95.00		
		Total	Cum					384.38	3190.00	1226172.20
8	17.63.3	Earth filling with available surplus soil excavated from foundations and taken only from outside of building plinth in layers not exceeding 20 cm in depth, consolidating each deposited layer including ramming and watering and consolidation with lead up to 50 m and lift upto 1.5 m.	Cum					100.00	98.00	9800.00
9	32.49	Wall painting with plastic emulsion paint of approved	Sqm					100.00	80.50	8050.00

ESTIMATE OF DEVELOPMENT OF GARDEN (ZONE-1 & 2) AT DEWALI SUNSET POINT, UDAIPUR										
S/n	RUIDP SOR- 2017	Item Description	Unit	Nos.	Length (m)	Breadth (m)	Depth (m)	Qty	Rate	Amount
		brand and manufacture to give an even shade Two or more coats on new work								
	30.24	Kota stone slab flooring 25mm thick over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab including rubbing and polishing complete with base of cement mortar 1 : 4 (1 cement : 4 coarse sand) :								
	30.24.1	Area of each slab 900 to 2000 sqcm.								
		Stairs	Sqm	2	26.00	1.50		78.00		
		Stage	Sqm		Area	95.00		95.00		
		Total	Sqm					173.00	1020.00	176460.00
10	29.26	Steel work welded in built up sections/ framed work including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required. In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works.	Kg					1000.00	87.50	87500.00
11	1.1.3	Carriage of Materials by mechanical transport including loading, unloading and stacking :: - Stone, boulders, gravelly material up to 5 km	Cum					120.00	156.00	18720.00
12	Non SoR	Providing & Hosting fixing up to floor three level precast reinforced concrete work in nominal M20 grade mix including cost of required centering and shuttering finishing smooth with 6 mm thick cement plaster 1.3 on exposed surface complete including cost of reinforcement of approved drawing for CHHATRI 12*4 and inch 8 pillar size 0.15 mtr. dia 2.4 mtr. ht and complete with Todi, chajja, Tarana, lintel place span	Each	5				5	370000	1850000

ESTIMATE OF DEVELOPMENT OF GARDEN (ZONE-1 & 2) AT DEWALI SUNSET POINT, UDAIPUR										
S/n	RUIDP SOR- 2017	Item Description	Unit	Nos.	Length (m)	Breadth (m)	Depth (m)	Qty	Rate	Amount
		Dom(height 3` to 5` as per require) Mehrab, Brick, masonry and arish plaster with ornamental design work etc. as per approved by Engineer Incharge.								
Total Amount in Rs.										3975678.00

ESTIMATE OF DRAIN WORKS FOR PROPOSED GARDEN (ZONE-1 & 2) AT DEWALI SUNSET POINT, UDAIPUR										
S/n	RUIDP SOR- 2017	Item Description	Unit	Nos.	Length (m)	Breadth (m)	Depth (m)	Qty	Rate	Amount
1	4.10.1.1	Earth work in excavation in foundation, trenches etc. including dressing of sides and ramming of bottoms, including getting out the excavated material, refilling after laying pipe/ foundation and disposal of surplus excavated material at a lead upto 50m suitable site as per direction of Engineer for following depths, below natural ground / Road top level. In all types soils/ saturated soil such as moorum, sand, sandy silt, clay, black cotton soil, kankar, etc. Depth upto 1.5 m								
			Cum	1	200.00	0.60	0.45	54.00		
			Cum	1	220.00	0.75	0.45	74.25		
Total			Cum					128.25	175.00	22444.00
2	21.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level :1:5:10 (1 cement : 5 fine/ coarse sand : 10 graded stone aggregate 40 mm	Cum	1	420.00	0.60	0.10	25.20	3120.00	78624.00

ESTIMATE OF DRAIN WORKS FOR PROPOSED GARDEN (ZONE-1 & 2) AT DEWALI SUNSET POINT, UDAIPUR										
S/n	RUIDP SOR- 2017	Item Description	Unit	Nos.	Length (m)	Breadth (m)	Depth (m)	Qty	Rate	Amount
		nominal size)								
3	27.2	Providing at site, lowering & laying in trenches, aligning & jointing of RCC pipes NP2 class (with s/s ends IS: 458 - 1988 (amended up to date) marked and manufactured through spun process at all levels with Rubber gaskets (EPDM/SBR) for sewer lines as per IS: 5382 (including cost of Rubber gaskets lubricants) as per drawing, sectional hydro testing of the sewer pipe line (including cost and conveyance of water to site for testing) etc., complete as directed by 150 mm internal diameter	Metre	1	420.00			420.00	394.00	165480.00
4		Constructing brick masonry chamber for underground C.I. inspection chamber and bends with 75 class designation bricks in cement mortar 1:4 (1 cement : 4 coarse sand) C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover with frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg) R.C.C. top slab with 1:2:4 mix (1 cement :2 coarse sand : 4 graded stone aggregate 20 mm nominal size) foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete as per standard design :Inside dimensions 455x610 mm and 45 cm deep for single pipe line with brick	Nos					8.00	4120.00	32960.00
5	21.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level :1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm								

ESTIMATE OF DRAIN WORKS FOR PROPOSED GARDEN (ZONE-1 & 2) AT DEWALI SUNSET POINT, UDAIPUR										
S/n	RUIDP SOR- 2017	Item Description	Unit	Nos.	Length (m)	Breadth (m)	Depth (m)	Qty	Rate	Amount
		nominal size).								
			Cum	1	200.00	0.60	0.08	9.00		
			Cum	2	220.00	0.30	0.45	59.40		
		Total	Cum					68.40	4280.00	292752.00
6	12.5	Providing and fixing of reinforced Ferro-Cement drain covers designed for 'A' class loading duly marked on cover with adequate steel reinforcement having thickness 75mm to 150mm anti corrosive bitumen painted M.S. plate , Rim and M.S. lifting hooks, Admixtures like plasticizer, bond improving compound, shrinkage, resistance compound, abrasion resistant complete as per approved design etc. Standard Size 600x800mm (75mm thick) for span 300 to 450mm	Sqm	1	75.00	0.60		45.00	1400.00	63000.00
7	22.1	Centering and shuttering with plywood or steel sheet upto two stories or height upto 7.5 metre above plinth level including strutting, propping etc. and removal of form for Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	Sqm	2	75.00		0.35	52.50	162.00	8505.00
8	32.1	Cement plastering including T&P, scaffolding, material and complete labor, including cost of water, curing, racking of joints etc. with 12 mm cement plaster of mix 1:4 (1 cement : 4 fine/ coarse sand)	Sqm	2	420.00		0.45	378.00	150.00	56700.00
9	17.21	Add extra for manufacturing of RCC pipe with Sulphate Resistant Cement instead of OPC/PPC cement NP2 150 mm pipe	Metre	1	200.00	0.00		200.00	7.50	1500.00
		Total Amount in Rs.								721965.00

Estimate of horticulture works of proposed garden (zone 1 & 2) at Dewali Sunset Point, Udaipur					
Sl. No.	PARTICULAR	UNIT	QTY	RATE	AMOUNT
PART - A BSR					
1	Preparation of soil including cleaning & removing of unwanted shrubs removal of stones & garbage.	Sqm	408.00	1.06	432.48
2	Earth work in surface excavations not exceeding 30 cm. in depth but exceeding 1.5 metre in width as well as 10 sqm on plan including disposal of excavated earth upto 50 Mtr. And lift upto 1.5 Mtr. Disposed soil to be leveled and neatly dressed: All kinds of soil.	Sqm	408.00	17.00	6936.00
3	Earth work in excavation in foundation trenches or drains including dressing of sides and ramming of bottoms, lift up to 1.5 Mtr, including taking out the excavated soil and depositing and refilling of jhiri with watering & ramming and disposal of surplus excavated soil as directed with in lead of 50 mtr. All kinds of soil.	Cum	122.40	109.00	13341.60
4	Laying of Lawns incl. ploughing levelling breaking of clods manuring & removal of stones etc. (Cost of manure or extra good earth to be paid separately) Maintenance of lawns for 30 days or more till the grass forms a thick lawns of planting if lawn die some where the contractor will replant it at his own cost. In rows 5 cms. apart in either direction.	Sqm	408.00	28.60	11668.80
5	Construction of tube well up to 100 mtr. depth and above in all type of rocks by DTH system and over burden to accommodate casing pipe of following size in all type of soil and over burden including lowering of casing pipes , but excluding cost of casing pipes as per IS 2800(Part -I&II) 1979 specifications . the work would be completed after obtaining sand free water. The tube well should have a through out bore as per nominal dia of casing pipe 100 mm dia nominal bore	Metre	100.00	315.00	31500.00
6	Supply of ERW M.S. black casing pipe ISI marked (IS 4270/1992) of grade Fe 410 of following size at site of work :150 mm Nominal bore pipe 168.3mm Outside dia of pipe 5.00 mm thickness of pipe 20.13 Kg/m Mass of plane tube	Metre	24.00	900.00	21600.00
7	Supplying and fixing tube well cover of M.S. sheet (6mm thick) with nuts and bolts complete for casing size 125 mm dia	Each	1.00	195.00	195.00
8	P&F PVC Storage tank (IS 12701) marked (indicating) the BIS license no) of approved make with approved make with cover 25 mm dia 1 Mtr Long GI over flow pipe & 25 Cm long wash cut pipe with plug & socket incl. Making connections etc complete of approved design 1000 Ltr.	Each	2.00	5841.00	11682.00

Estimate of horticulture works of proposed garden (zone 1 & 2) at Dewali Sunset Point, Udaipur					
Sl. No.	PARTICULAR	UNIT	QTY	RATE	AMOUNT
9	Supplying and Installation of submersible pumping motor pump sets I.S.I Marked (IS 8034-1989) of approved make with required accessories including making connection suitable for T.W./D.C.B/open well the job including screwing and welding of flanges on G.I. riser pipes installation of complete fitting and accessories with riser pipes , jointing of electrical cables ad other connections making switch board electrical connection all labour for testing of submersible pump set and supply of water to eater mains, complete in all respect. 100mm dia mtr Submersible pump shall have 10.0 H.P. single phase Head 45-89 Mtr, (100-33) LPM	Each	1.00	20852.00	20852.00
10	Providing & Fixing synthetic rope for submersible pump ISI marked (IS: 5176) of following sizes 12 mm (suitable up to 50 mm OD pipes)	Metre	100.00	15.00	1500.00
11	Providing of HDPE pipe ISI mark (IS498495) for water supply (suitable of submersible & jet pump) with required fittings 50mm OD (40 mm ID) 6kg / Cm2	Metre	100.00	52.00	5200.00
12	Providing and laying of PVC insulated submersible cable , confirming to IS 694 with flexible copper conductor or superior quality including making connection etc in the following size: 4.00 Sq.mm .3 core flat/ Round.	Metre	110.00	75.10	8261.00
13	Supplying and Fixing M.S. clamp , set of 50x 6mm flat from iron with nuts and bolts etc. for holding the riser pipe assembly of submersible pump set.	Each	2.00	250.00	500.00
14	S /F of oil / Air break starter panel made out of sheet steel powder coated enclosure comprising of over load protection relay, short circuit & Single phasing protection , ON / OFF push buttons, ammeter, voltmeter, indicating lamps etc. complete in all respect suitable for following rating motors. For single phase submersible / Monoblock pump 0.5 HP to 3.0 HP	Each	1.00	2835.00	2835.00
15	Wiring for sub mains ISI marked (IS : 694) 1100 Volts grade PVC insulated flat twin core sheathed solid aluminium conductor with 10 SWG G.I. Support wire duly clipped etc. as required. 6.0 sq.mm	Metre	50.00	28.10	1405.00
16	Supply of dry manure including loading unloading, transportation & stacking at site. Farm yard manure (organic).	Cum	75.00	418.00	31350.00
17	Supply of dry manure including loading unloading, transportation & stacking at site. Farm yard manure (organic). Compost	Cum	38.00	484.00	18392.00

Estimate of horticulture works of proposed garden (zone 1 & 2) at Dewali Sunset Point, Udaipur					
Sl. No.	PARTICULAR	UNIT	QTY	RATE	AMOUNT
18	Supply of dry manure including loading unloading, transportation & stacking at site.Fram yard manure (organic).Goat dung manure.	Cum	38.00	715.00	27170.00
19	Supply & Stacking good earth at site complete including loading unloading & transportation etc.	Cum	225.00	110.00	24750.00
20	Spreading of manure and good earth in required thickness (cost of manure and good earth to be paid separately).	Cum	151.00	7.00	1057.00
21	Supply of different varieties of tree / shrubs / climbers according to height and age of the plant at site including loading/ unloading & transportation etc. complete Different flowering plants 900 mm to 1500 mm. <i>Vinca rose</i> 1', <i>wadalia</i> 1' ,, <i>Plumbago</i> sp.1' , <i>juhi shrilankan</i> 1 ' , <i>Rhodolatia</i> sp.1' , <i>Erentthemum laxiflorum</i> 1' , <i>verbina</i> 1' , <i>pentas</i> 1' , <i>horn lily</i> 1' , <i>salvia</i> 1' , <i>Kalanchoe</i> 1' , <i>Malpighia coccigera</i> 1 '(pink , white) , <i>ratrani</i> 1' , <i>mogra</i> 1' , <i>Europhorbia mili</i> big leaf 1' , <i>Ixora</i> sp. 2' , <i>Euphorbia pulcherna</i> 2' , <i>canna</i> big 2' , <i>Hamelia patens</i> 2' <i>Tecoma rosea</i> 2' (yellow), <i>Tecoma capensis</i> 2' (yellow'), silver chnadani 2' , <i>Hibiscus rosea</i> 2' (gudal), <i>Malpighia coccigera</i> white 2' , <i>Torch glory</i> 2' , <i>Allamanda</i> sp. 2' , <i>russelia</i>	Each	100.00	43.00	4300.00
22	Supply of different varieties of tree / shrubs / climbers according to height and age of the plant at site including loading/ unloading & transportation etc. complete : Different varieties of shrubs 600 mm to 900. <i>Duranta golden</i> ,, <i>Schefflera</i> sp. , <i>Alternanthera red</i> , <i>Clerodendrum inereme</i> (koinal), <i>duranta green</i> , <i>berbina</i> , <i>lal bhaji iris</i> , <i>Levendula dentata</i> , <i>Hamelia dwarf</i> , <i>Acalypha tricolour</i> , <i>Furcaria</i> , <i>golden bamboo</i> etc .	Each	50.00	32.00	1600.00
23	Supply of different varieties of tree / shrubs / climbers according to height and age of the plant at site including loading/ unloading & transportation etc. complete Different varieties of climbers 900 mm to 1500 mm.	Each	100.00	55.00	5500.00
24	Supply of different varieties of Bougainvillea in poly bags / earthen pots according to height growth & age of plant at site including loading. unloading & transportation etc. complete :Local variety of Bougainvillea 600 mm to 900 mm.	Each	10.00	31.00	310.00
25	Different varieties of Bougainvillea 600 mm to 900 mm.	Each	15.00	49.00	735.00
26	Supply of different varieties of Rose plants in polythene bags / earthen pots according to eight. growth & age of the plant at site including loading, unloading & transportation etc. complete :Desi Rose / Root stock Plants / Ganganagri.	Each	20.00	25.00	500.00

Estimate of horticulture works of proposed garden (zone 1 & 2) at Dewali Sunset Point, Udaipur					
Sl. No.	PARTICULAR	UNIT	QTY	RATE	AMOUNT
27	Different varieties of Grafted Rose Plant.	Each	20.00	58.00	1160.00
28	Supply of different varieties of palms indoor plants in polyethylene bags / earthen pots according to height, growth & age of the plant at site including loading, unloading & transportation etc. complete :Desi Crotons.	Each	20.00	52.00	1040.00
29	Supply of different varieties of palms indoor plants in polyethylene bags / earthen pots according to height, growth & age of the plant at site including loading, unloading & transportation etc. complete. Selective Varieties of Crotons.	Each	20.00	70.00	1400.00
30	.Supply of different varieties of palms indoor plants in polyethylene bags / earthen pots according to height, growth & age of the plant at site including loading, unloading & transportation etc. complete Rubber plants etc.	Each	10.00	118.00	1180.00
31	.Supply of different varieties of palms indoor plants in polyethylene bags / earthen pots according to height, growth & age of the plant at site including loading, unloading & transportation etc. complete Daffen Bachia.2 ft	Each	30.00	190.00	5700.00
32	Supply of different varieties of palms indoor plants in polyethylene bags / earthen pots according to height, growth & age of the plant at site including loading, unloading & transportation etc. complete Areca Palm.(ht. 8 ft th.of trunk 60mm)	Each	10.00	370.00	3700.00
33	.Supply of different varieties of palms indoor plants in polyethylene bags / earthen pots according to height, growth & age of the plant at site including loading, unloading & transportation etc. complete. (Ht. 3ft th. of trunk 60mm)	Each	30.00	148.00	4440.00
34	Supply of different varieties of palms indoor plants in polyethylene bags / earthen pots according to height, growth & age of the plant at site including loading, unloading & transportation etc. complete Aglonmia 2ft ht.	Each	50.00	123.00	6150.00
35	Supply of different varieties of palms indoor plants in polyethylene bags / earthen pots according to height, growth & age of the plant at site including loading, unloading & transportation etc. complete Aglonmia 1ft-2ft ht.	Each	20.00	118.00	2360.00

Estimate of horticulture works of proposed garden (zone 1 & 2) at Dewali Sunset Point, Udaipur					
Sl. No.	PARTICULAR	UNIT	QTY	RATE	AMOUNT
36	Supply of different varieties of Tree Plants in polyethylene bags / earthen pots according to height(6 to 8 ft). growth & age of the plant at site including loading. unloading & transportation etc.complete.(Amaltas,kachnar,jacranda,gulmohur,neem,cyzillia,Spathodia, Peltophorum, Alstonia, , Tabubia rosea, bottle palm, paras pipal, rain tree, Ficus benjamina) Syngonium with Moss stick.	Each	10.00	140.00	1400.00
37	.Supply of different varieties of palms indoor plants in polyethylene bags / earthen pots according to height. growth & age of the plant at site including loading. unloading & transportation etc. complete. Planting of trees / Shrubs / hedge & climbers plants at desired distance in a row & watering.	Each	300.00	0.17	51.00
38	Mixing earth and manure in proportion as specified or directed for pots.	Cum	15.00	50.00	750.00
39	Supply of different sized pots at site store including loading unloading & transportation etc. Complete :Cement pot 300 mm size	Each	300.00	72.00	21600.00
40	Watering of Group plantation at the bed.	Sqm	1400.00	0.25	350.00
41	P& F G I pipes (external work) with G I fittings (I S: 1239 mark) including trenching & refilling earth etc. "B" Class (a) 15mm dia nominal bore	Metre	10.00	131.00	1310.00
42	(b) 25mm dia nominal bore	Metre	5.00	208.00	1040.00
43	(c) 32mm dia nominal bore	Metre	5.00	286.00	1430.00
44	Providing And Fixing full way valve (IS: 778 Mark) of wheel valve of approved make. (a) Gun metal 25 mm	Each	2.00	413.00	826.00
45	(B) Non Return Valve 25mm. (Horizontal)	Each	2.00	360.00	720.00
46	P & F Bib cock (IS: 8931 Mark) superior quality of approved make Brass 400 gm. 15 mm nominal bore.	Each	10.00	222.00	2220.00

Estimate of horticulture works of proposed garden (zone 1 & 2) at Dewali Sunset Point, Udaipur					
Sl. No.	PARTICULAR	UNIT	QTY	RATE	AMOUNT
47	Providing of HDPE pipe ISI mark (IS498495) for water supply (suitable of submersible & jet pump) with required fittings 50mm OD (40 mm ID) 6kg / Cm2	Metre	15.00	52.00	780.00
Total Amount in Rs.					313180.00
Non B.S.R. PART B					
1	Supplying & Laying of mexican grass carpet lawn including ploughing leveling breaking of clods manuring & removal of stones etc.(Cost of manure or extra good earth to be paid separately). Watering etc. complete .	Sqm	408.00	410.00	167280.00
2	Supply & planting of different varieties of ornamental plants in polyethylene bags/earthen pots according to height & age of the plant at site , loading , unloading & transportation etc complete . <i>Cycus revoluta</i> 3ft ht. with thick trunk .	Each	10.00	2500.00	25000.00
3	Supply & planting of different varieties of ornamental plants in polyethylene bags/earthen pots according to height & age of the plant at site , loading , unloading & transportation etc complete . <i>Ficus revoluta</i> of 8 to 10ft height with thick trunk . black topari 5ft ht.	Each	5.00	2500.00	12500.00
4	Supply & planting of different varieties of ornamental plants in polyethylene bags/earthen pots according to height & age of the plant at site , loading , unloading & transportation etc complete . <i>Bottle Palm</i> of 10 to 12 feet height with thick trunk	Each	5.00	4000.00	20000.00
5	Sprinkler's and Drip Irrigation system with following accessories of approved size and shape complete as per manufacturing specification ISI mark (Rain bird/ Automat) (a) RQRL/ Sprinkler / Roter /popups (Full part circle in single)	Each	5.00	2000.00	10000.00
6	,-----do----- Fitter / Header	Each	1.00	10000.00	10000.00

Estimate of horticulture works of proposed garden (zone 1 & 2) at Dewali Sunset Point, Udaipur					
Sl. No.	PARTICULAR	UNIT	QTY	RATE	AMOUNT
7	,-----do----- Lateral Pipe 16mm	P Metre	50.00	10.00	500.00
8	,-----do----- Control valve	Each	4.00	600.00	2400.00
9	,-----do----- Connection and caps other accessories as per requirement of system	Each	10.00	20.00	200.00
Total Amount in Rs.					247880.00
Total of Part A + Part B					561060.00

Estimate Toilet Block with Breast Feeding Room and Other Facilities at Garden (Zone-3), Dewali Sunset Point Udaipur										
Sl. No.	RUIDP SOR-2017	Description	No	Unit	L	B	D	Qty	Rate	Amount
1	4.10	Earth work in excavation in foundation, trenches etc. including dressing of sides and ramming of bottoms, including getting out the excavated material, refilling after laying pipe/ foundation and disposal of surplus excavated material at a lead upto 50m suitable site as per direction of Engineer for following depths, below natural ground / Road top level.								
	4.10.1	In all types soils/ saturated soil such as moorum, sand, sandy silt, clay, black cotton soil, kankar, etc.								
	4.10.1.1	Depth upto 1.5 m								

Estimate Toilet Block with Breast Feeding Room and Other Facilities at Garden (Zone-3), Dewali Sunset Point Udaipur										
Sl. No.	RUIDP SOR-2017	Description	No	Unit	L	B	D	Qty	Rate	Amount
		Long wall	2	Cum	18.00	0.75	0.50	13.50		
		Short wall	5	Cum	6.00	0.75	0.50	11.25		
		Total		Cum				24.75	175.00	4331.25
2	4.10.2	In ordinary rock.								
	4.10.2.1	Depth upto 1.5 m								
		Long wall	2	Cum	18.00	0.75	1.00	27.00		
		Short wall	5	Cum	6.00	0.75	1.00	22.50		
		Total		Cum				49.50	712.00	35244.00
3	21.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level :								
	21.1.7	1:4:8 (1 Cement : 4 fine/ coarse sand : 8 graded stone aggregate 40 mm nominal size).								
		Long wall	2	Cum	18.00	0.75	0.15	4.05		
		Short wall	5	Cum	6.00	0.75	0.15	3.38		
		Total		Cum				7.43	3360.00	24948.00
4	25.1.1	Random rubble masonry with hard stone in foundation and plinth : -Cement mortar 1:6 (1 cement : 6 coarse sand)								
		For footing								
		Long wall	2	Cum	18.00	0.75	0.45	12.15		
			2	Cum	18.00	0.60	0.45	9.72		

Estimate Toilet Block with Breast Feeding Room and Other Facilities at Garden (Zone-3), Dewali Sunset Point Udaipur										
Sl. No.	RUIDP SOR-2017	Description	No	Unit	L	B	D	Qty	Rate	Amount
			2	Cum	18.00	0.45	0.45	7.29		
		Short wall	4	Cum	6.00	0.75	0.45	8.10		
			4	Cum	6.00	0.60	0.45	6.48		
			4	Cum	6.00	0.45	0.45	4.86		
		Total		Cum				48.60	3190.00	155034.00
5	24.5	Brick work with bricks of class designation 75 in superstructure above plinth level upto two stories in all shapes and sizes in :								
	24.5.1	Cement mortar 1:4 (1 cement : 4 coarse sand)								
		Long wall	2	Cum	18.00	0.23	3.00	24.84		
		Short wall	5	Cum	6.00	0.23	3.00	20.70		
		B/W for parapet wall								
		Long wall	2	Cum	18.00	0.23	0.75	6.21		
		Short wall	2	Cum	6.00	0.23	0.75	2.07		
		Deductions								
			-1	Cum	3.46	0.23	2.10	-1.67		
			-1	Cum	1.36	0.23	2.10	-0.66		
			-1	Cum	1.20	0.23	2.10	-0.58		
			-1	Cum	1.70	0.23	2.10	-0.82		
		Total		Cum				50.09	4500.00	225410.58
6	24.12	Half brick masonry with bricks of class designation 75 in superstructure above plinth level upto two stories.								

Estimate Toilet Block with Breast Feeding Room and Other Facilities at Garden (Zone-3), Dewali Sunset Point Udaipur										
Sl. No.	RUIDP SOR-2017	Description	No	Unit	L	B	D	Qty	Rate	Amount
	24.12.1	Cement mortar 1:3 (1 cement :3 coarse sand)								
		Partition wall	2	Sqm	4.00		2.10	16.80		
		Handicap toilet wall	1	Sqm	4.30		2.10	9.03		
		Total		Sqm				25.83	550.00	14206.50
7	22.1	Centering and shuttering upto two stories or height upto 7.5 metre above plinth level								
	22.1.5	Lintels, beams, plinth beams, girders, bressumers and cantilevers.								
		Lintel beam								
			1	Sqm	18.00	0.23		4.14		
			2	Sqm	18.00		0.15	5.40		
		Chhajja	1	Sqm	18.00	0.60		10.80		
		Beam for roof slab								
		Long wall	2	Sqm	18.00		0.30	10.80		
			4	Sqm	18.00		0.30	21.60		
		Short wall	5	Sqm	6.00		0.30	9.00		
			10	Sqm	6.00		0.30	18.00		
		Total		Sqm				79.74	269.00	21450.06
8	22.1.3	Suspended floors, roofs, landings, balconies and access platform.								
		For roof slab	1	Sqm	18.00	6.00		108.00	287.00	30996.00
9	23.3	Reinforced cement concrete work in beams,								

Estimate Toilet Block with Breast Feeding Room and Other Facilities at Garden (Zone-3), Dewali Sunset Point Udaipur										
Sl. No.	RUIDP SOR-2017	Description	No	Unit	L	B	D	Qty	Rate	Amount
		suspended floors, roofs having slope upto 15° landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral stair cases upto two stories excluding the cost of centering, shuttering, finishing and reinforcement:								
	23.3.3	M-25 Grade Concrete (1:1:2 (1 cement : 1 coarse sand : 2 graded stone aggregate 20 mm nominal size) -As per design mix)								
		Plinth beam								
		Long wall	2	Cum	18.00	0.30	0.30	3.24		
		Short wall	5	Cum	6.00	0.30	0.30	2.70		
		Chhajja	1	Cum	18.00	0.60	0.08	0.81		
		Beams for roof slab								
		Long wall	2	Cum	18.00	0.23	0.30	2.48		
		Short wall	5	Cum	6.00	0.23	0.30	2.07		
		For roof slab	1	Cum	18.00	6.00	0.15	16.20		
		Total		Cum				27.50	5590.00	153747.36
10	23.19	Reinforcement for R.C.C. work at all levels including straightening, cutting, bending, placing in position and binding all complete.								
	23.19.6	Thermo-Mechanically Treated bars.		Kg				4318.00	51.50	222377.00
11	30.3	Grading roof for water proofing treatment with-Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)								

Estimate Toilet Block with Breast Feeding Room and Other Facilities at Garden (Zone-3), Dewali Sunset Point Udaipur										
Sl. No.	RUIDP SOR-2017	Description	No	Unit	L	B	D	Qty	Rate	Amount
	30.3.1	40 mm thick								
		Above roof slab	1	Cum	18.00	6.00	0.05	5.40	4370.00	23598.00
12	30.34	Random rubble dry stone Kharanja (soling) under floor.								
		Soling below the PCC of flooring	1	Cum	18.00	6.00	0.20	21.60	1360.00	29376.00
13	21.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level :								
	21.1.5	1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size).								
		P.C.C. for flooring	1	Cum	18.00	6.00	0.10	10.80	3750.00	40500.00
14	32.1	Cement plastering including T&P, scaffolding, material and complete labour, including cost of water, curing, racking of joints etc. with 12 mm cement plaster of mix:								
	32.1.2	1:6 (1 cement : 6 fine/ coarse sand)								
		Long wall	4	Sqm	18.00		3.00	216.00		
		Short wall	10	Sqm	6.00		3.00	180.00		
		B/W for parapet wall								
		Long wall	4	Sqm	18.00		0.75	54.00		
		Short wall	4	Sqm	6.00		0.75	18.00		
		Long wall	2	Sqm	18.00		0.23	8.28		
		Short wall	5	Sqm	6.00		0.23	6.90		

Estimate Toilet Block with Breast Feeding Room and Other Facilities at Garden (Zone-3), Dewali Sunset Point Udaipur										
Sl. No.	RUIDP SOR-2017	Description	No	Unit	L	B	D	Qty	Rate	Amount
		Partition wall	4	Sqm	4.00		2.10	33.60		
		Handicap toilet wall	2	Sqm	4.30		2.10	18.06		
		Chhajja	2	Sqm	18.00	0.60		21.60		
			2	Sqm	0.60		0.10	0.12		
		Deductions								
			-1	Cum	3.46		2.10	-7.27		
			-1	Cum	1.36		2.10	-2.86		
			-1	Cum	1.20		2.10	-2.52		
			-1	Cum	1.70		2.10	-3.57		
		Total		Sqm				540.35	138.00	74568.02
15	32.7.1	6 mm cement plaster of mix : - 1:3 (1 cement : 3 fine sand)								
		Plaster for ceiling	1	Sqm	18.00	6.00		108.00	122.00	13176.00
16	32.15	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete		Sqm				648.35	126.00	81691.85
17	32.29	Distempering with dry distemper of approved brand and manufacture (two or more coats) and of required shade on new work, over and including priming coat of whitening to give an even shade.		Sqm				648.35	65.50	42466.79
18	32.50	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade :								
	32.50.1	Two or more coats on new work		Sqm				50.00	69.00	3450.00

Estimate Toilet Block with Breast Feeding Room and Other Facilities at Garden (Zone-3), Dewali Sunset Point Udaipur										
Sl. No.	RUIDP SOR-2017	Description	No	Unit	L	B	D	Qty	Rate	Amount
19	27.11	Providing and fixing 1st quality standard white, grey, ivory, fume red brown, light green, light blue and other light shades glazed tiles confirming to IS : 13753 & IS :15622 of size 200mm x 300mm in walls, floors, steps, pillars etc. laid on a bed of neat cement slurry finished with flush pointing in the white cement mixed with pigment to match the shade of the tile complete (excluding the cost of cement plaster on walls and pillar).								
		For floor	1	Sqm	18.00	6.00		108.00		
		For Walls								
			6	Sqm	5.61	1.80		60.59		
			4	Sqm	12.62	1.80		90.86		
		Total		Sqm				259.45	679.00	176167.91
20	36.3	Providing and fixing white vitreous china pedestal type water closet (European type) with seat and lid, 10 litre low level white vitreous china flushing cistern & C.P. flush bend with fittings & C.I. brackets, 40mm flush bend, overflow arrangement with specials of standard make and mosquito proof coupling of approved municipal design complete including painting of fittings and brackets, cutting and making good the walls and floors wherever required :								
	36.3.1	W.C. pan with ISI marked white solid plastic seat and lid.	2	Nos				2.00	4590.00	9180.00
21	36.4	Providing and fixing white vitreous china flat back or wall corner type lipped front urinal basin of 430x260x350mm and 340x410x265mm sizes								

Estimate Toilet Block with Breast Feeding Room and Other Facilities at Garden (Zone-3), Dewali Sunset Point Udaipur										
Sl. No.	RUIDP SOR-2017	Description	No	Unit	L	B	D	Qty	Rate	Amount
		respectively with automatic flushing cistern with standard flush pipe and C.P. brass spreaders with brass unions and G.I clamps complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required :								
	36.4.1	One urinal basin with 5 litre white P.V.C. automatic flushing cistern.	4	Nos				4.00	3510.00	14040.00
22	36.7	Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brass pillar taps,32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require :								
	36.7.1	White Vitreous China Wash basin size 630x450 mm with a pair of 15 mm C.P. brass pillar taps.	4	Nos				4.00	2050.00	8200.00
23	36.31	Providing and fixing 600x450 mm beveled edge mirror of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers complete	4	Nos				4.00	816.00	3264.00
24	28.14	Providing and fixing factory made laminated veneer lumber glazed shutter conforming to IS : 14616 and TADS 15:2001 (Part B) , using 4mm thick float glass panes for doors, windows and clerestory windows including ISI marked black enameled M.S butt hinges with necessary screws as per directions of Engineer-in-charge								
	28.14.1	30 mm thick shutters								
		Doors	4	Sqm	1.00		2.10	8.40		
		Total		Sqm				8.40	1990.00	16716.00

Estimate Toilet Block with Breast Feeding Room and Other Facilities at Garden (Zone-3), Dewali Sunset Point Udaipur										
Sl. No.	RUIDP SOR-2017	Description	No	Unit	L	B	D	Qty	Rate	Amount
25	28.100	Providing and fixing aluminum tower bolts ISI marked anodized (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc. complete :								
	28.100.2	250x10 mm	4	Each				4.00	88.00	352.00
26	28.103	Providing and fixing aluminum handles ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc. complete :								
	28.103.1	125 mm	8	Each				8.00	52.50	420.00
27	28.68	Providing and fixing ISI marked oxidised M.S. door latches conforming to IS:5930 with screws etc. complete :								
	28.68.2	250x20x6 mm	4	Each				4.00	45.00	180.00
28	37.1	Providing and fixing double glazed hermetically sealed glazing in aluminum windows, ventilators and partition etc. with 6 mm thick clear float glass both side having 12 mm air gap including providing EPDM gasket, perforated aluminum spacers, desiccants, sealant (Both primary and secondary sealant) etc. as per specifications, drawings and direction of Engineer-in-charge complete.								
		Window	4	Sqm	1.00		1.20	4.80		
		Total		Sqm				4.80	3280.00	15744.00
29	34.7	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings i/c fixing the pipe with clamps at 1.00								

Estimate Toilet Block with Breast Feeding Room and Other Facilities at Garden (Zone-3), Dewali Sunset Point Udaipur										
Sl. No.	RUIDP SOR-2017	Description	No	Unit	L	B	D	Qty	Rate	Amount
		m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing								
	34.7.1	15 mm nominal outer dia. Pipes.	1	Metre	50.00			50.00	171.00	8550.00
30	34.7.3	25 mm nominal outer dia. Pipes.	1	Metre	50.00			50.00	288.00	14400.00
31	34.15	Providing and fixing brass bib cock of approved quality :								
	34.15.1	15 mm nominal bore	4	Nos				4.00	215.00	860.00
32	34.16	Providing and fixing brass stop cock of approved quality :								
	34.16.1	15 mm nominal bore	4	Nos				4.00	240.00	960.00
33	19.1	Providing, lowering, laying in trenches, aligning, fixing in position and jointing socketed rubber gasket type ISI marked uPVC pipes of Class III (6 Kg/sqcm) suitable for potable water with rubber ring joints (as per IS 4985-2000) of following outer dia with all accessories (excluding specials) complete including all material, labour, hydraulic testing and commissioning as per Technical Specifications and as per direction of Engineer.								
	19.1.1	90 mm dia for urinal and wash basin	1	Metre	80.00			80.00	189.00	15120.00
34	19.1.2	110 mm dia for Toilet	1	Metre	60.00			60.00		
		110 mm dia for Rain water	1	Metre	40.00			40.00		
		Total		Metre				100.00	273.00	27300.00
35	34.47	Providing and placing on terrace (at all floor levels) polyethylene water storage tank ISI : 12701 marked with cover and suitable locking arrangement and	1	Per Lt.				1000.00	6.50	6500.00

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Sl. No.	RUIDP SOR-2017	Description	No	Unit	L	B	D	Qty	Rate	Amount
		making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank								
36	29.26	Steel work welded in built up sections/ framed work including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required. In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works.	Kg					1000.00	87.50	87500.00
37	9.10	Providing and fixing of precast concrete interlocking tiles of desired shape of M 30 grade manufactured from fully computerized automatic stationery hydraulic vibro pressed machine and fully computerized automatic batching plant of class A1/A2 as per BS 6717:2001. The CC interlocking paving blocks be laid on average 50mm. thick bed of coarse sand and the joint is to be filled with fine sand. Laying procedure on compacted sub-base as defined. Complete job is to be executed as per the instruction of Engineer incharge. The rates to be inclusive of all lead & Lifts etc. complete as per specifications. Tensile splitting strength, abrasion and braking load etc. as per BS 6717:2001, Grey cement.								
	9.10.2	80mm thick		Sqm	5.61	5.38		30.18	578.00	17445.08
38	Non SoR	Providing & Hosting fixing up to floor three level precast reinforced concrete work in nominal M20 grade mix including cost of required centering and shuttering finishing smooth with 6 mm thick cement plaster 1.3 on exposed surface complete including cost of reinforcement of approved drawing for CHHATRI 12*4 and inch 8 pillar size 0.15 mtr. dia 2.4 mtr. ht and complete with Todi, chajja, Tarana, lintel place	Each	4				4	370000	1480000

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Sl. No.	RUIDP SOR-2017	Description	No	Unit	L	B	D	Qty	Rate	Amount
		span Dom(height 3` to 5` as required) Mehrab, Brick, masonry and arish plaster with ornamental design work etc. as per approved by Engineer Incharge.								
		Total Amount in Rs.								3099470.00