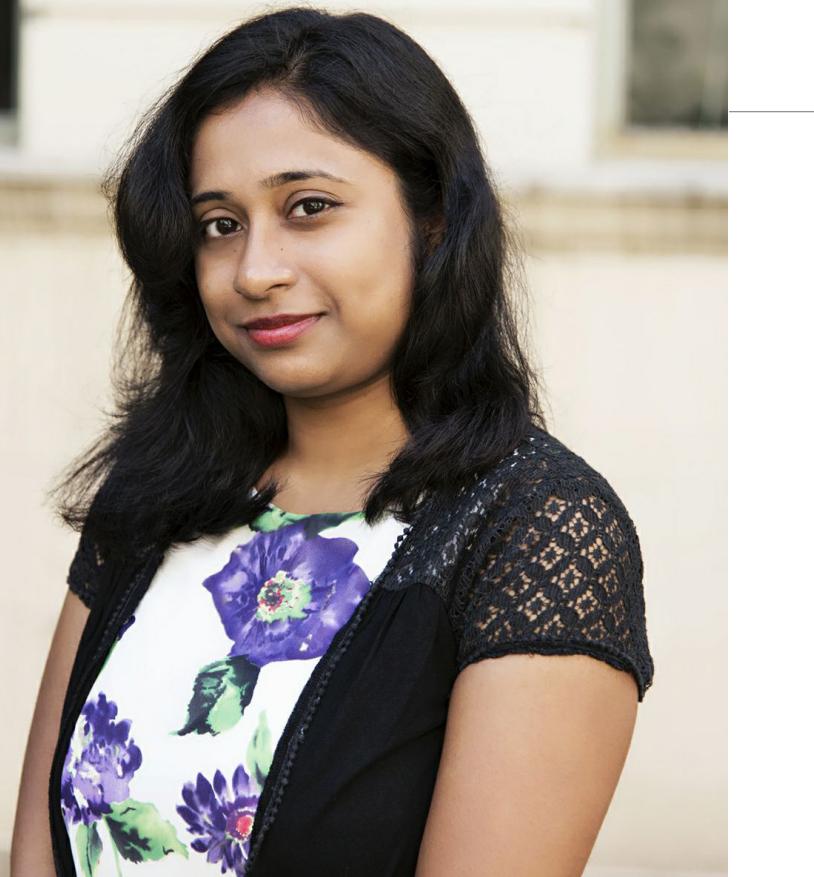


PORTFOLIO

Sagnika Das

# RESUME



## Sagnika Das

**A:**1109 S Pleasant Valley Road, Apt # 714 C,  
Austin, TX - 78741  
**E:**sagnika.d@gmail.com  
**T:**(541)-887-9227

## EDUCATION

### MS in Community and Regional Planning

The University of Texas at Austin  
School of Architecture  
Expected Graduation : May 2019

### Bachelor of Architecture

Biju Patnaik University of Technology  
Piloo Modi College of Architecture  
September 2010 - July 2015

## SCHOLARSHIPS AND AWARDS

### Mebane Travel Scholarship

The University of Texas at Austin  
School of Architecture

### Travel Scholarship

The City Foundation

### Klamath Basin Home Builder's Scholarship

Klamath Basin Home Builder's Association, Oregon

### Leadership and Diversity Scholarship

Oregon Institute of Technology

### NTESCL Building Design Competition 2016

First Position, under a b consultants (p) ltd.

### Bachelor in Music (Bhatarnatyam)

Classical Dance, under Pracheen Kala Kendra, Chandigarh

## EXPERIENCE

### The University of Texas at Austin

CM2 Cooperative Mobility for Competitive Megaregions  
Graduate Research Assistant | September 2018 - Present | Austin, TX  
Analyze general walkability indices and articles found in scholarly literature  
Assist in public outreach and organize focus groups for research  
Interpret data for research.

### The University of Texas at Austin

Community on Diversity + Equity  
Graduate Research Assistant | November 2017 - May 2018 | Austin, TX  
Addressed the social, diversity, equity and inclusion issues within the School of Architecture, through student, faculty, curriculum and courses  
Analyzed other peer school's initiatives and diversity plans

### a b consultants (p) ltd

Architect | July 2015 - July 2017 | Kolkata, India  
Analyzed, conceptualized and executed the final designs.  
Drafted on measured drawings, submission drawings and completion drawings, working drawings to be issued to site for execution, site visits.  
Prepared estimates for interior design works, issuing of tenders, comparative statements and site supervision.

### a b consultants (p) ltd

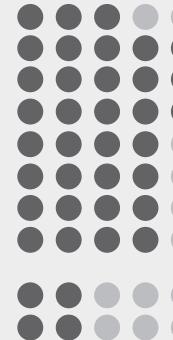
Junior Architect | June 2014 - November 2014 | Kolkata, India  
Developed skills on -  
practicality of the project, cost and importance of space.  
site inspection and supervision.  
various site techniques used by laborers for construction process, usage of newer and alternative construction materials.

## PLANNING EXPERTISE

Data Analysis and Synthesis  
Communication Skills  
Public Outreach and Community Participation

## SOFTWARE PROFICIENCY

TransCAD GIS  
AutoCAD 2D  
Adobe Photoshop  
Adobe InDesign  
Adobe Illustrator  
Google Sketch Up  
ArcGIS  
Microsoft Office  
(Word, Excel, Powerpoint, Access)  
Envision Tomorrow  
REVIT



## SKILLS

Creative Thinker  
Problem Solver  
Multitask Organizer  
Client Server  
Team Player  
Visual Communicator

# COURSES UNDER GRADUATE

## MEMBERSHIPS

**Professional Membership:**  
Registered Architect under Council Of Architecture, India.

**Student Membership:**  
Diversity Co-Chair, Community and Regional Planning Student Organization (CRPSO), 2018  
APA Student Member, 2018  
Community On Diversity + Equity Student Member , (2017- 2018)

## VOLUNTEERING

Explore UT (Event CRPSO Shape Your Community) for CRPSO (2019)  
Triangle Telangana Association (Banner Design for Annual Event) (2019)

## GRADUATE

**CRP 380F-2 Foundations of Planning Law**  
Background of Land Use laws, important land use regulation court cases that have shaped the US land use context.

**CRP381M-1 Quantitative Methods**  
Communicate and analyze data, understand the equity implications of socio-economic demographics, hypothesis testing and regression models.

**PA 388K What is a Smart City?**  
Understanding the meaning of "Smart Cities" and analyzing policies, challenges and themes (IoT,open data, digital inclusion, transportation, planning and performance measures) at a regional and global level.

**CRP 386-9 Sustainable Land Use Planning**  
Land use planning practiced in US in today's context. Project based on analyzing one of Imagine Austin's neighborhood centers and employing scenario based planning alternatives to produce sustainable land use plan options.

**CRP 386-6 Introduction Visual Communication and GIS**  
Learning basic geo-spatial analysis techniques together using ArcGIS, utilizing computer graphic programs like Adobe InDesign, Google Sketchup, Adobe Photoshop as tools for visual/ spatial thinking.

**CRP381M2 Qualitative and Participatory Methods**  
Developing research questions, conducting field research, case study research, Survey design, methods like Interviews and focus groups,observation/participant observation, public deliberation, workshops etc that can be used for citizen and stakeholder engagement in planning.

Semester 1

Semester 3

Semester 4

Semester 2

Semester 5

**CRP N685D Planning Practicum**  
Employing urban design and planning principles, produce key values and approaches for the Old Oak Common site in London, come up with design approaches that can serve as an alternative to the Mayor's Proposal, at the same time providing relief to the local stakeholder groups. Project included initial design considerations, interaction and presentation of the proposals to the local stakeholder groups in London, development of individual schemes of designs based on the initial proposal.

**CRP 380F-3 Public Economics and Finance**  
Analyzing urban regions and local and state governments, addressing the role of federal policy and finance in specific areas of state and local finance.

**CRP 380F-1 Planning History, Theory, Ethics**  
Understanding the various factors that helped to shape human settlement, planning histories and theories that helped to shaped the past and present planning practices, ethical principles and normative goals associated with planning.

**CRP 384-Metropolitan Transportation Studies -- Applications with TransCAD GIS**  
Understanding and learning operational and spatial analysis skills in TransCAD, utilizing those skills in analyzing land use/urban form with travel, employing it to the four step travel demand forecasting and modeling, and linking the applications to relevant metropolitan transportation studies like travel demand management policy etc.

**CRP 384-Transportation Accessibility and Equity Analysis with ArcGIS:**  
Applying operational and spatial analysis operations specific to ArcGIS to address accessibility and equity challenges in transportation. Learning how to calculate, compare and critically evaluate different measures of multimodal accessibility, as well as operationalize and assess equity conditions in cities and regions in the United States.

**AR0412-Thesis/ Dissertation: Development of Spaces In Between and Around Flyovers:** Utilized negative spaces left due to flyovers, allocated various activities in these spaces leading to a better arrangement of urban spaces, creating a buffer to eradicate anti-social activities of a site.

**EAR843- Urban Design Studio**  
Analyzing and Revitalization of a Local Urban Street at Chadni Chowk, Cuttack

**AR868- Architecture Design VI**  
Planning of a Five Star Hotel at Bhubaneswar, India.

**AR743- Principles of Town Planning**  
Analyzing a Local Municipality at Garia, Kolkata.

**AR76- Architecture Design V**  
Redevelopment of Bermunda, Bhubaneswar Bus Stand for A New Interstate Bus Terminus.

**AR666- Architecture Design IV**  
Planning of an Apartment Complex at Bhubaneshwar Documentation Rameshwar Deul: Analysis of an OdishanTemple.

**AR566- Architecture Design III**  
Designing of a 200 bedded Hospital at Mohali, India.

**AR466- Architecture Design II**  
Planning of a Skill Development Centre, Naraj- Odisha, India.

**AR366- Architecture Design I**  
Analyzing an Architect's Residence for Design Development at Bhubaneswar, India.

# SELECTED WORKS

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## Transit Oriented Development : Robinson Ranch at Austin, TX

Course: Transit Oriented Development

Instructor: Ming Zhang

Group Members: Asmita Dahal, Sagnika Das, Emma Patton, Olivia Posner

Masters of Science in Community and Regional Planning

The University of Texas at Austin

## Bridging the Gap : Old Oak Common Transit Development at London, UK

Course: Planning Practicum/ Advanced Architecture Studio

Instructor: Simon Atkinson

Masters of Science in Community and Regional Planning

The University of Texas at AustinSchool of Architecture

## Scenario Planning : Cameron Well's Ranch at Austin, TX

Course: Sustainable Land Use Planning

Instructor: Robert Paterson

Group Members: Laura Atlas, Sagnika Das, Louis Alcorn, Clare Zutz

Masters of Science in Community and Regional Planning

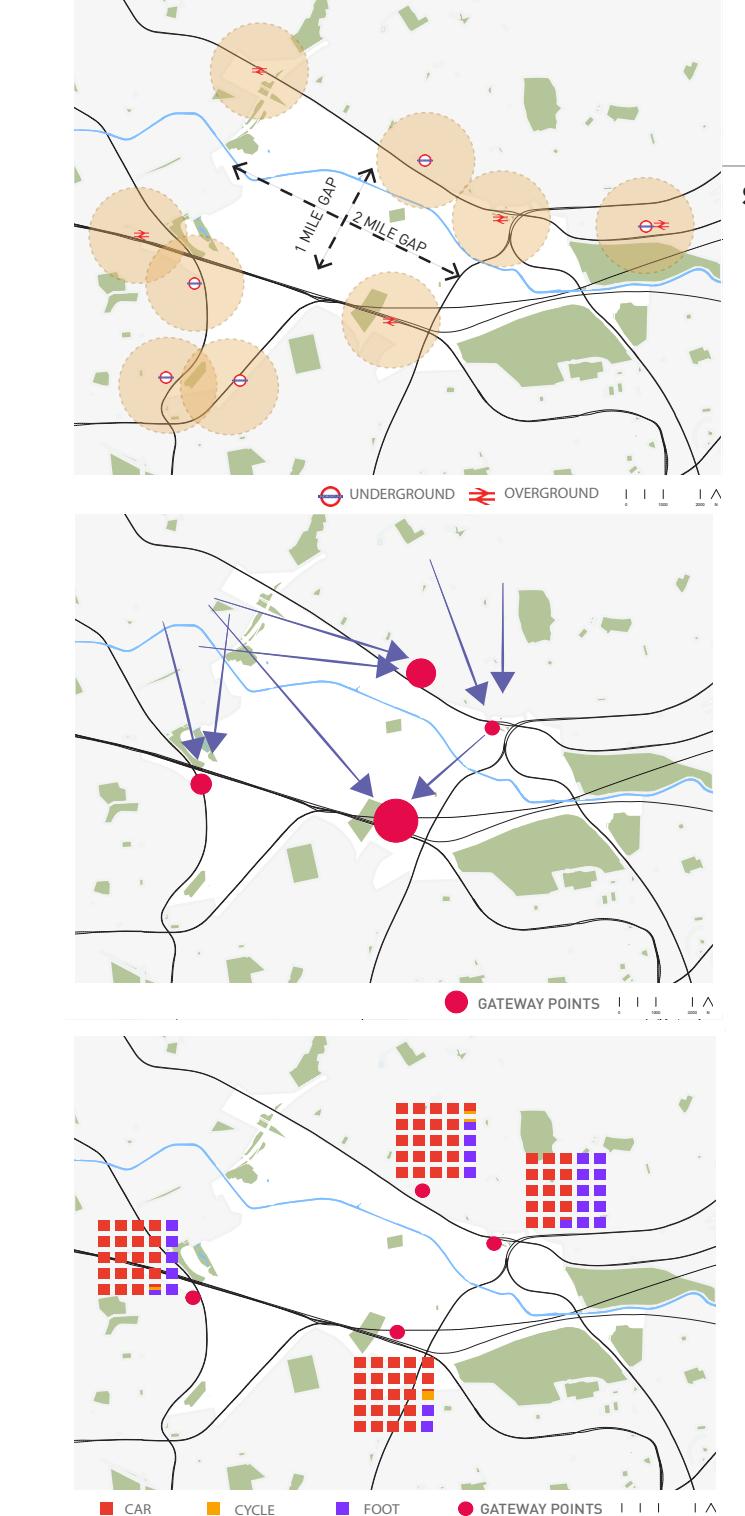
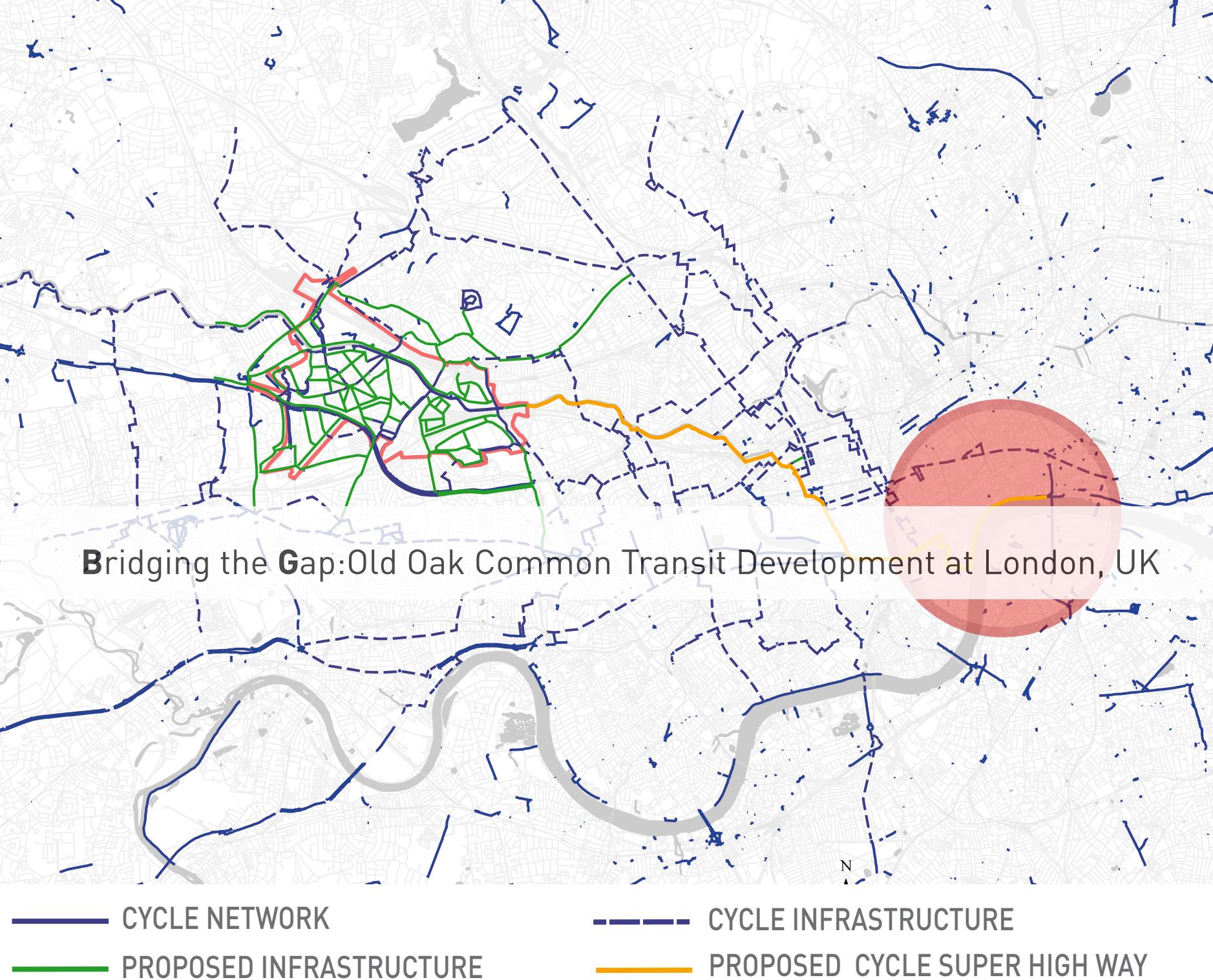
The University of Texas at AustinSchool of Architecture

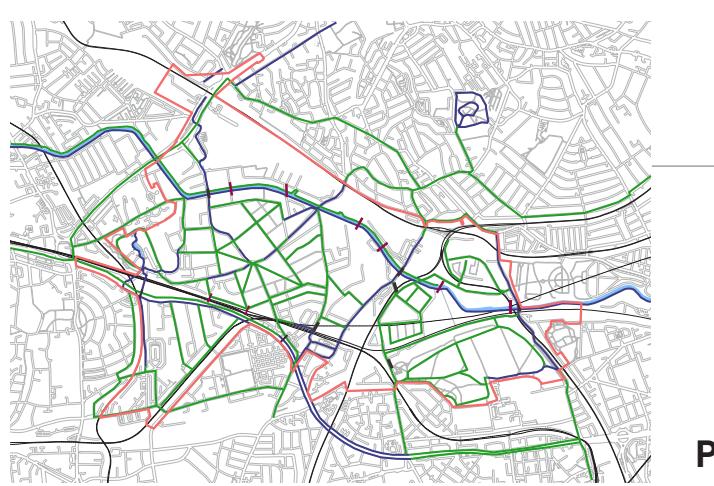
## NTESCL Customer Care Center : New Town, Kolkata

Firm: a b consultants

Principal Architect and Designer: Ar. Nabarun Biswas

2016



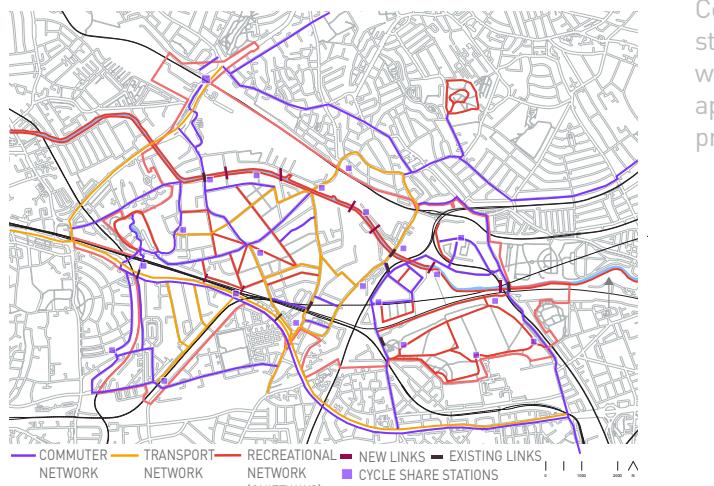
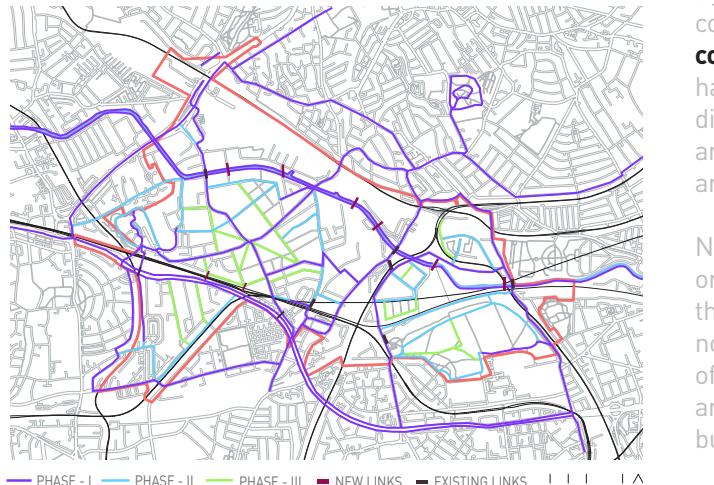


## Proposal

Cycling as a form of commute has been increasingly recognized in cities throughout the world. It is considered the most sustainable form of transportation option. Our proposal **aims to increase local connectivity, as well as to the neighboring areas and finally to rest of London**. Various challenges have been addressed through this proposal which includes lack of continuous cycle ways and directness, narrow uncomfortable cycle routes, along with the lack of proper cycling infrastructure and facilities. Cycling has become a trend and a lifestyle. It is a healthy option for the millennials and future generation.

Nowadays so many different forms of infrastructure are available for the future cycle enthusiasts. In order to increase the usage of cycles as a mode of a **sustainable transport option**, it is necessary that the ride should be easy, **convenient, comfortable** and easily **accessible** to all. Some routes will not only serve just for **commute**, but also for **recreation and fun**. Designated protected cycle lanes of proper width, that not only caters to commuters but also for **transporting goods**, with buffers and curbs to prevent collisions, should be present. Adequate lighting, smooth pavements without bumps would help to provide a more safe journey.

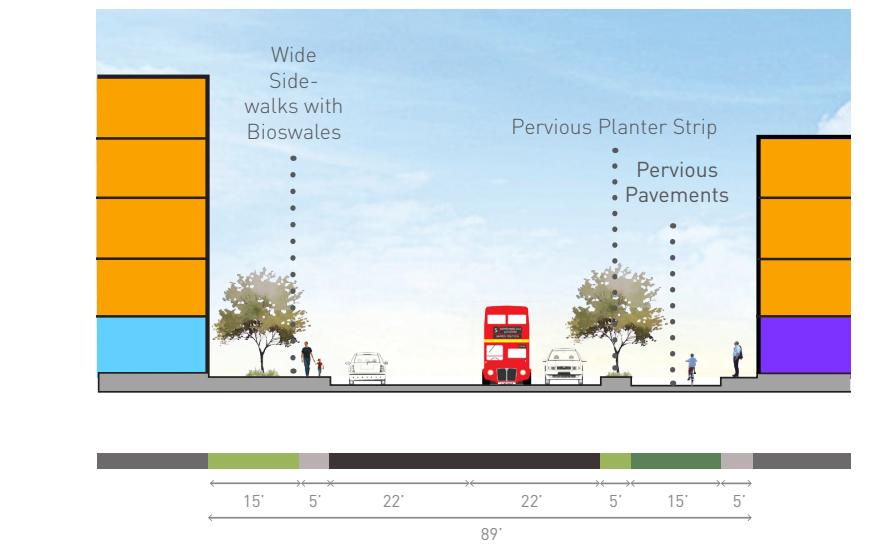
Continuous network routes will enable cyclists a faster journey, with minimum stops. **Bike Share** stations at regular intervals, will enable commuters to opt for a healthy choice of commute. Along with these stations, **bike parking hubs** will ensure safe parking. Mobile and Smartphone enabled apps can help to provide **GPS information** about traffic as well as route information, along with providing open places for cycle parking.



## Street Typology

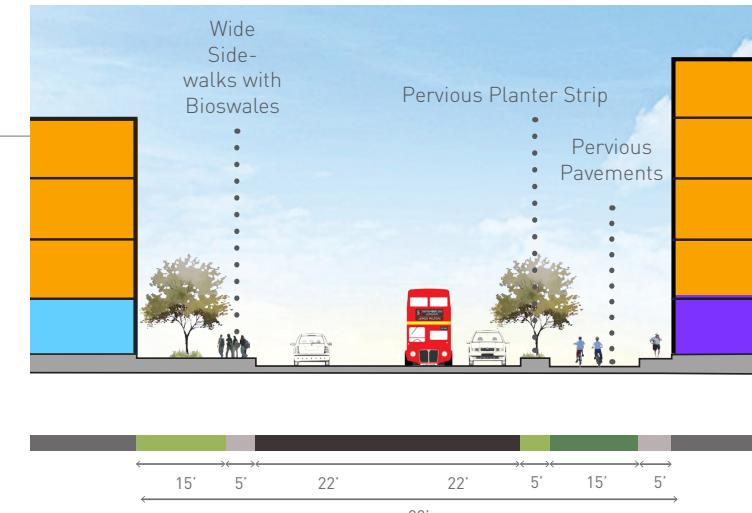
### Commuter Street

The Commuter Street will be the primary type of cycle network, incorporating cycle ways on one side on the main road. These will be constructed where new development in fill will take place in such a way that the new buildings will be made with an easement of 20 feet on each side to accommodate the new changes made for cycle and pedestrian infrastructure.



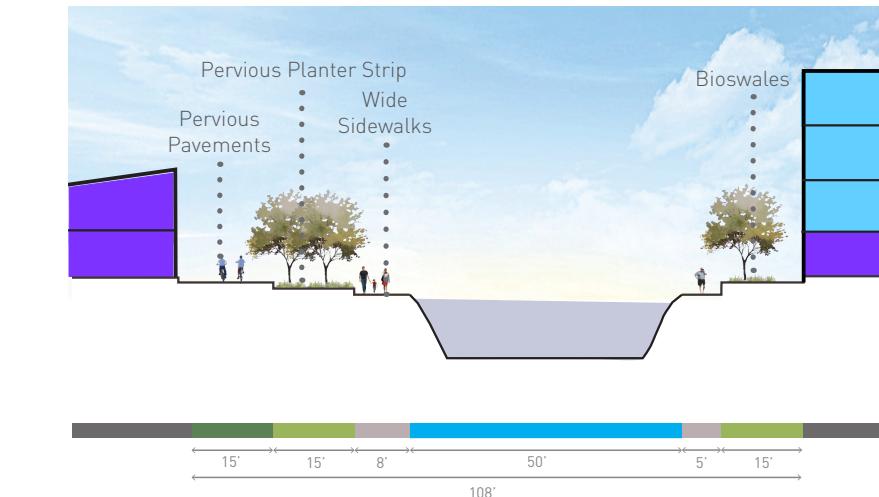
### Canal

The Canal pathways forms a unique experience altogether. Incorporating cycle ways with pedestrian walkways long the canal gives it an exciting edge over the rest of the routes within the site. This serves as a leisure route, maintaining the original width of the canal area, but including new infrastructure.



### Transport Street

The Transport Street Type A will also cater as the primary type of cycle network, incorporating cycle ways on one side on the main road, allowing ample space for commercial/small industries to transport goods. Both sides of the street will have shade due to increase in canopy space. The allotted planter strips along with trees will act as buffers to prevent collisions from taking place. These will be constructed where new development in fill will take place in such a way that the new buildings will be made with an easement of 20 feet on each side to accommodate the new changes made for cycle and pedestrian infrastructure.

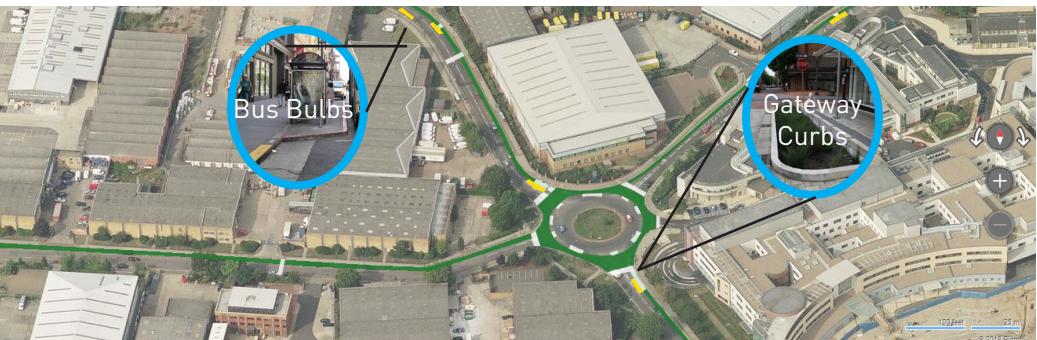




## Treatment of Roads

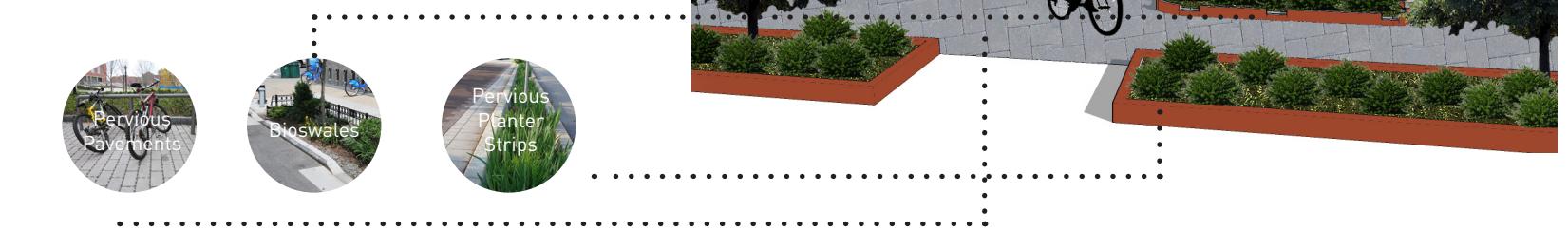
### Treatment of Roundabouts

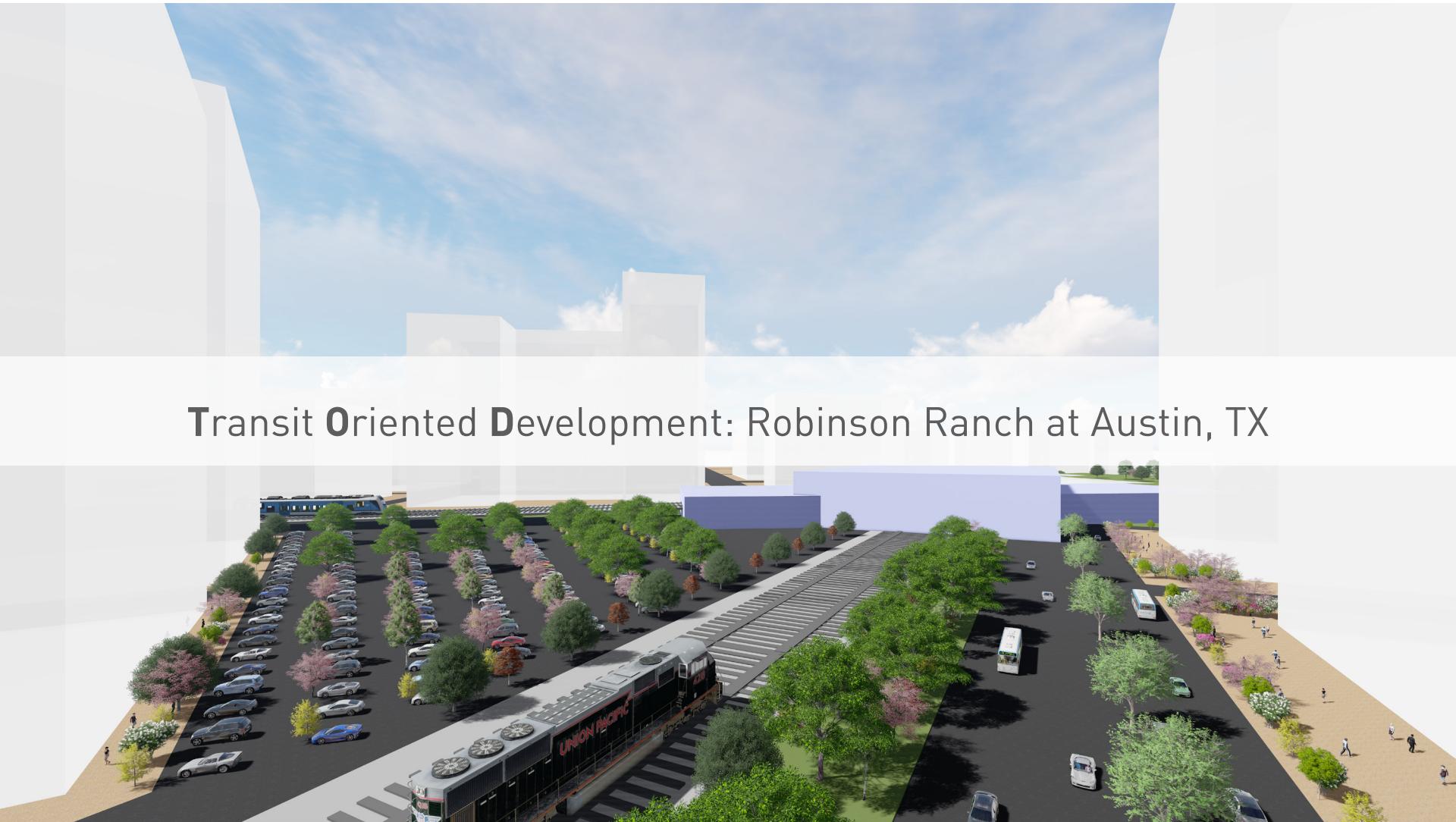
Learning from Holland's innovative roundabout design, the roundabouts on site Park Royal will be treated in such a way that it will force cars and buses to slow down during its entry and exit of the roundabouts are constantly developing. It will give more emphasis on cyclists and pedestrians in terms of design. Drivers will face cyclists at right angles, rather than driving parallel to them and risking losing them in their blind spots once inside the roundabout. Gateway curbs will reduce the speed of the cars and buses once it reached the intersection before entering or after exiting the roundabouts.



## Green Infrastructure Elements used in Complete Streets

Green infrastructure in the form of bioswales, pervious planter boxes, and pervious pavements will help in slowing runoff velocity and cleansing water while recharging the underlying groundwater table. They will allow runoff to soak through the soil and filter into the under drain system. Side by side, this will help increase pervious cover.

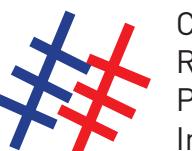




## Robinson Ranch: A Connected, Transit Oriented Development for Austin's Downtown 2.0

Imagine Austin's growth map foresees "Robinson Ranch Station" as one of three regional centers in Northwest Austin. The intersection of Austin's red line and the Union Pacific Railroad provides **opportunity** for a **future transit hub including high-speed rail**.

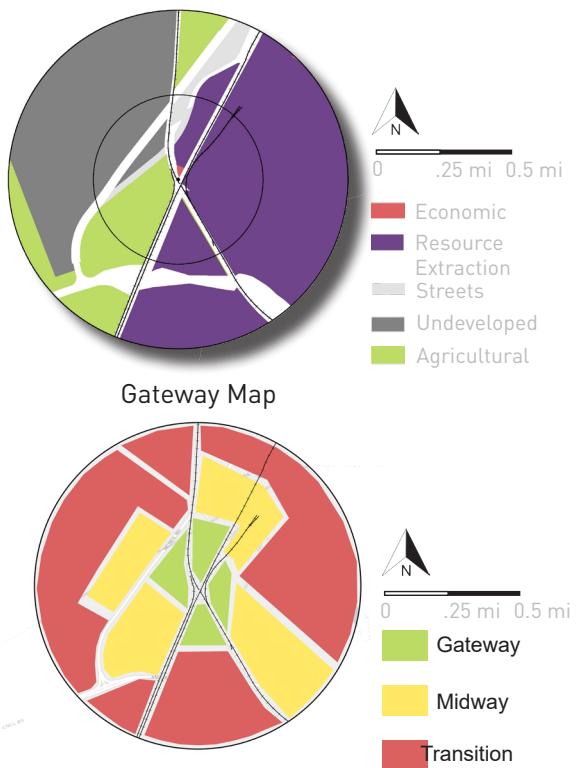
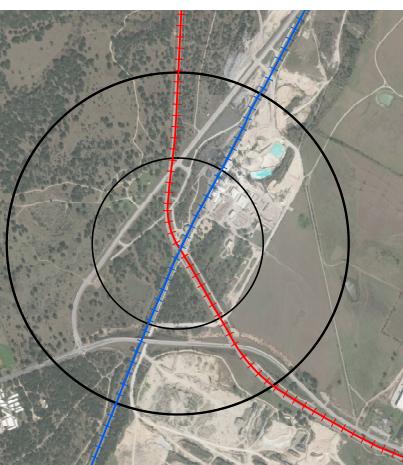
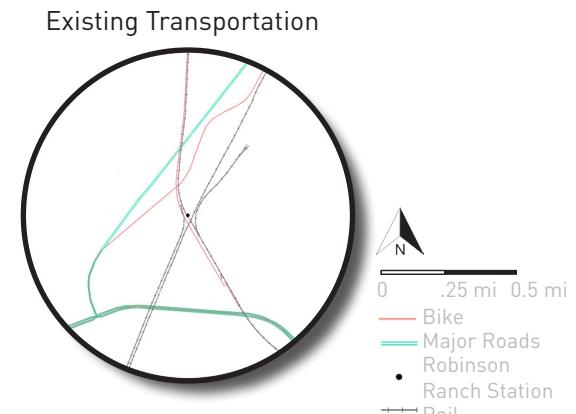
The Robinson Ranch development is connected to the local community, and the area around the station is a place for residents to **live, work, and play**. The **high density** near the station accommodates future employees who will work in **Austin's Downtown 2.0**.



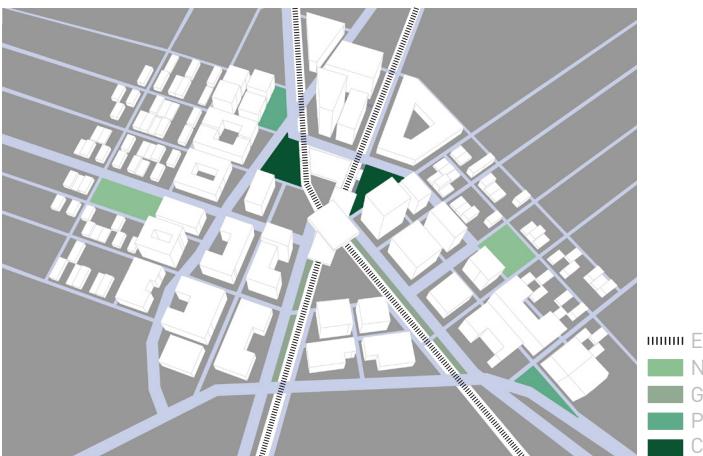
Commuter  
Rail + Union  
Pacific Railroad  
Intersect



Undeveloped  
Land Provides  
High Opportunity



### Open Spaces



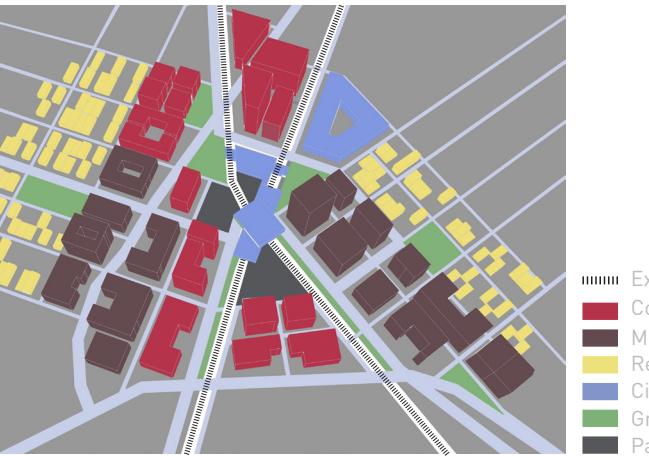
### Transportation



### Land Use By FAR



### Land Use



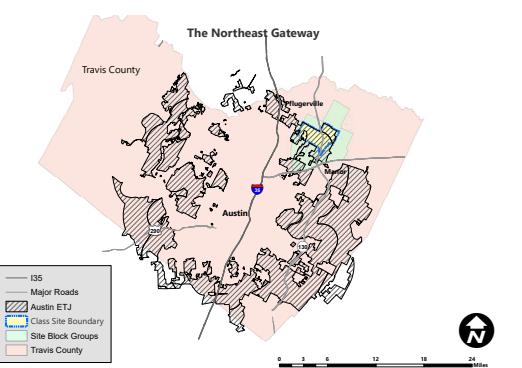
BICYCLE LANE PARKING VEHICULAR ROAD PARKING BICYCLE LANE GREEN BELT



# Scenario Planning: Cameron - Wells Branch at Austin, TX

Preserving the pastoral beauty, natural affordability and prime agriculture in the re-creation of the community of Gregg.

## Historical significance



"I looked at a number of places and finally made a purchase of 738 acres of good prairie land with 50 acres in cultivation. . . a creek running through the tract with a sufficiency of fine wood and some rail timber, and a never failing spring. . . I believe the lands I have seen are generally equally rich as the best lands."

--William Hickman Hill, Sr. 1852

## Demographics

### Our "Average" Resident



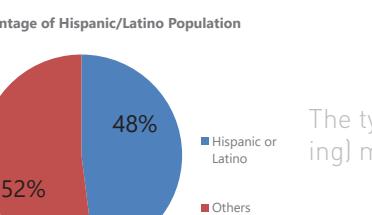
Hispanic man  
35 to 39 years of age  
High school degree  
HH income \$75,200 a year.  
Drives a car and commutes for 30-34 minutes every day to and from home to work.  
Lives in a mobile home.



82.5% of the residents 25 years and above have a regular **high school diploma**.

**19,609** residents in 2016

### Hispanic Population



Women make up **22.5%** of the jobs in our study site.

The types of industries available (manufacturing) most likely account for this discrepancy.

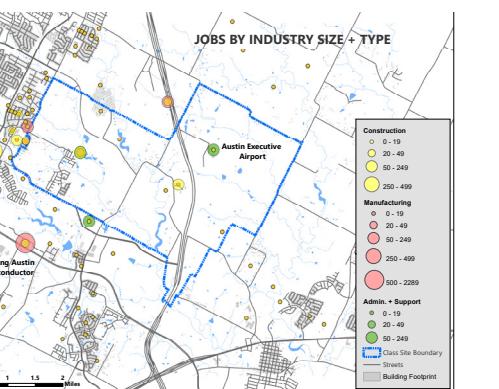
Jobs of residents in our area are very different than jobs available. **Health care and social assistance** (12.7%), makes up the largest share.

Our site area has a **high unemployment rate** of 7.6%.

## Smart + Pastoral

### Economy

**Manufacturing** grew the most from 35.9% to 53.5%, due to Tech Ridge and large employers based to the west of our site area.



### Environment

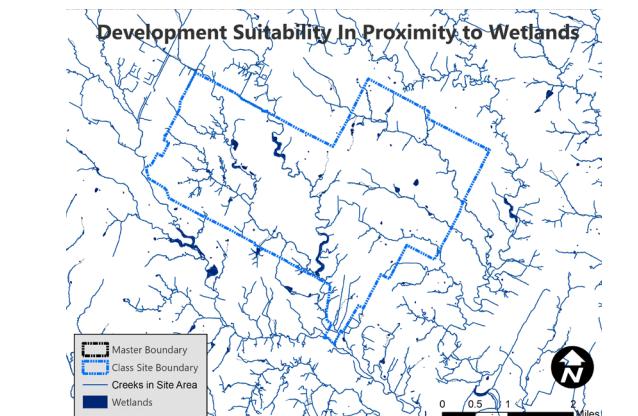
**Overall Drainage Capacity** is **Low**, especially in a low elevation of slope.

**Wetland** is **11.43%** of site area within **100--year Flood plain**.

**Slope Low** grade difference within site area.

**Soil suitability: Not well-suited** for building construction.

**Wildfire** risk is **Low** to moderate.



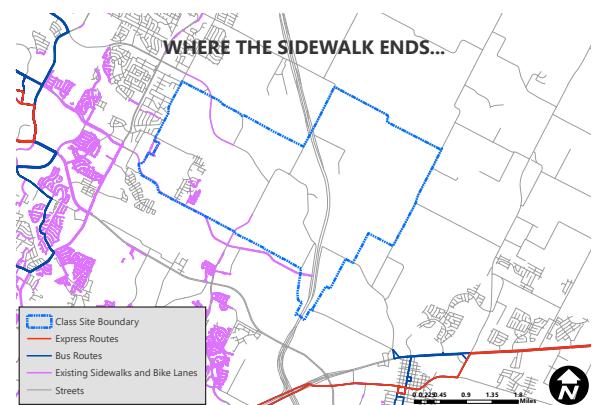
### Infrastructure

Howard Lane and Wells Branch Boulevard have recently been [re]constructed with standard sidewalks and **painted, on-street bicycle lanes** that traverse our site.

All other roads in the study area are rural in character with **narrow lane widths, no shoulder, sidewalks or bicycle facilities** and **mediocre pavement** conditions.

Site is bisected by **Limited Access SH- 130 Toll Road** offering automobile.

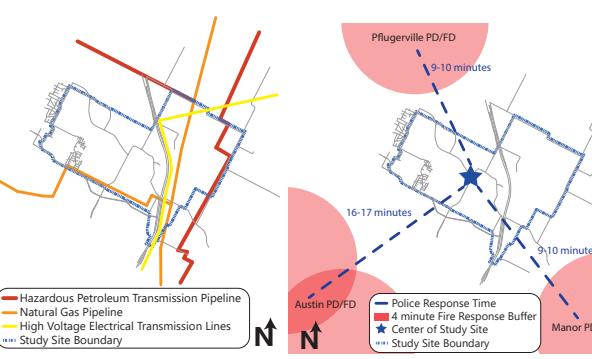
**WALKSCORE** at the center of our study site is **1/100**



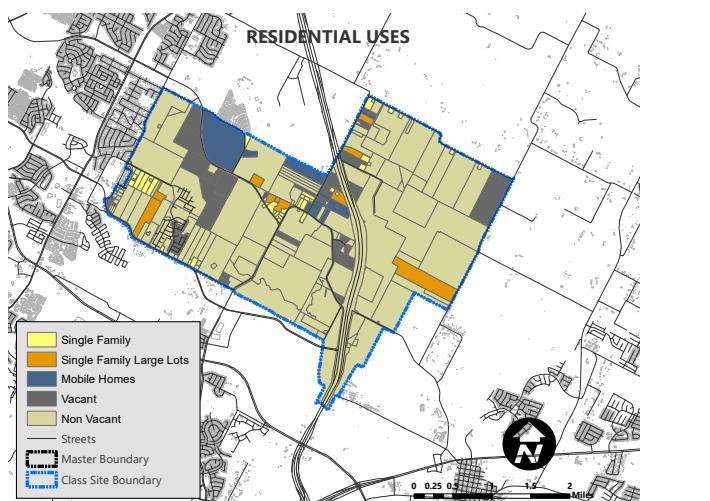
There is **NO current or future public transit** plan for our site.

The closest park and ride is a **15 to 18 min. drive** away.

Site development would be **costly**, mitigating existing transmission lines and building out **police, fire, health care** and **school facilities**.



## Land Use and Housing



## Community

### Rural area undergoing a transition.

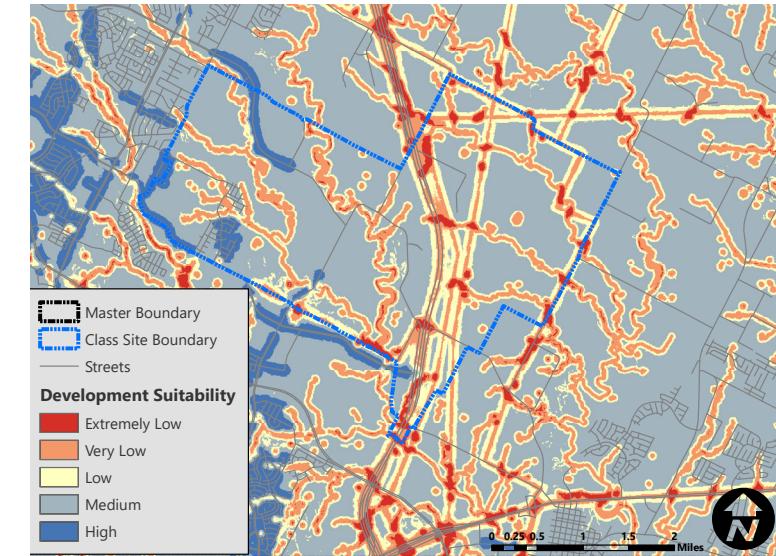
60% of the area consisting of agricultural land  
**Horse-related activities.**

Developments occurring to the west and **future growth** in the surrounding area will undoubtedly change the character of our site.



## SWOTs & Suitability Analysis

STRENGTH	WEAKNESS	OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> <li>High-quality, paved trail system north of site</li> <li>Toll road → good automotive access</li> <li>Parcels are large.</li> <li>Wildfire risk is low to moderate.</li> <li>Land already flat, graded &amp; ready for development</li> </ul>	<ul style="list-style-type: none"> <li>General lack of site amenities</li> <li>Poor pedestrian, bike and street connectivity</li> <li>Presence of many hazardous transmission lines</li> <li>Noise and air pollution from SH-130 and airport.</li> <li>Existing new development = auto-dependent</li> <li>Gilliland Creek = impaired waterway, due to bacterial pollution</li> <li>Existing large parcels for sale at low prices</li> <li>Shortage of park land within site</li> <li>21 buildings are in the 100-year floodplain</li> </ul>	<ul style="list-style-type: none"> <li>Women comprise 53.6% of the labor force, yet make up only 22.5% of the workforce.</li> <li>Proximity to three growing jurisdictions</li> <li>Wetlands provide habitat for native plants and wildlife.</li> <li>Proximity to Austin Executive Airport &amp; ABIA = business opportunities</li> <li>Intense development will destroy pastoral environment/character.</li> <li>Erodibility of soil = negative impacts on water quality</li> </ul>	<ul style="list-style-type: none"> <li>Economic development may displace current residents.</li> <li>High cost to build out ALL infrastructure &amp; community services</li> <li>No existing or future transit services are planned for this area.</li> <li>Existing legacy septic systems nearing end of lives</li> <li>Intense development will destroy pastoral environment/character.</li> <li>Erodibility of soil = negative impacts on water quality</li> </ul>



## Recommendations

- To maintain the rural character of the land.
- To preserve and protect existing agricultural land.
- To protect natural habitat by developing outside the wetland buffer area.
- To expand the bike network and link it to the existing trail system.
- To provide affordable housing options for all income levels.



### Trend

Single-family suburban development replaces agricultural land, promotes a car-dependent lifestyle, and alters the community character.



Demographics  
Displacement of vulnerable communities

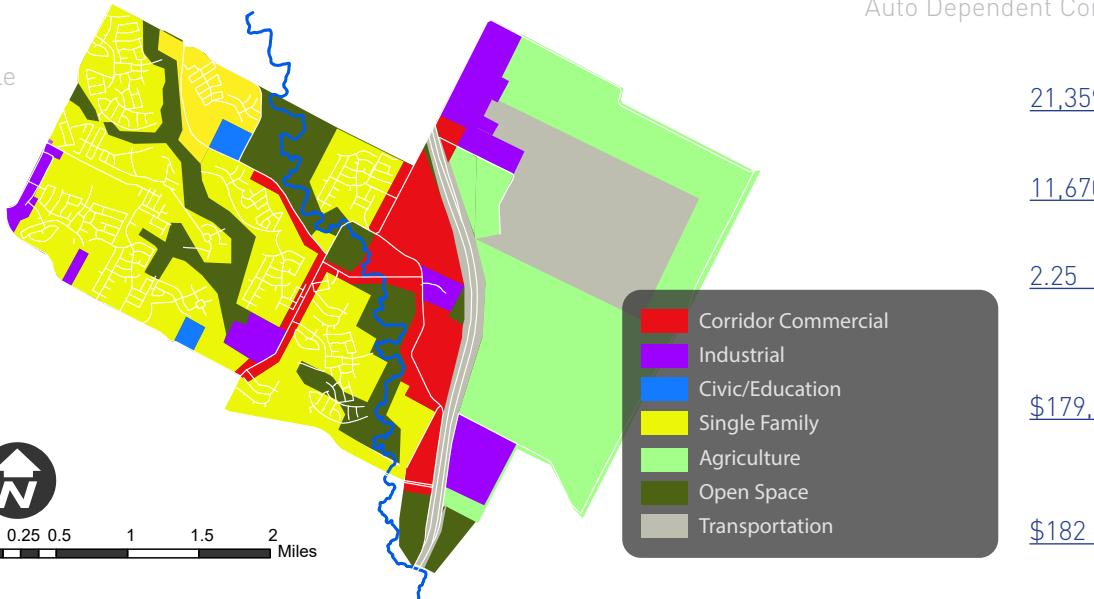
Economy  
Poor job-housing fit

Environment  
Conventional water + energy use

Infrastructure  
Auto-dependent transportation

Land Use  
Suburban-style neighborhoods

Housing  
Single-family housing



Population	21,359
New Jobs	11,670
Household Size	2.25
Average Home Price	\$179,037
Energy Cost per HH/month	\$182
Jobs/Housing balance	1.2
New Schools	0



### Scenario One: Peri-Urban Agrihoods

The vibrant town of Gregg engages the community by enhancing the agricultural landscape and offering affordable housing.



Demographics  
Close-knit community

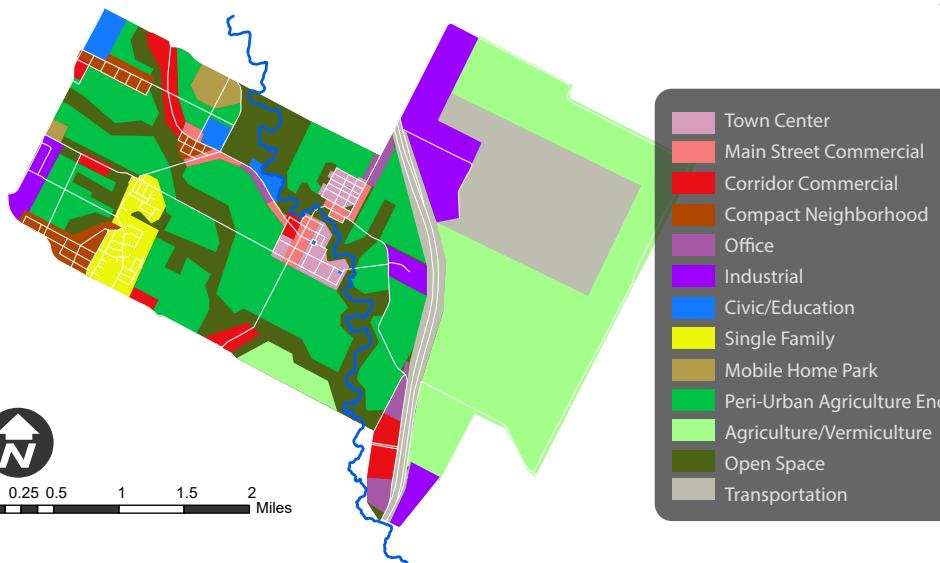
Economy  
Innovative + sustainable agricultural pursuits

Environment  
Pristine waterways + Blackland Prairie

Infrastructure  
Hike+bike network

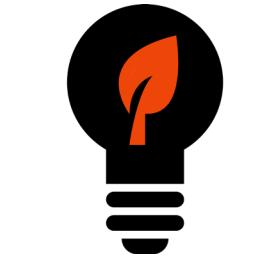
Land Use  
Protected + promoted agricultural land

Housing  
Agrihood model housing



Population	16,690
New Jobs	20,690
Household Size	1.80
Average Home Price	\$146,799
Energy Cost per HH/month	\$122
Jobs/Housing balance	2.1
New Schools	2

# RTFolio

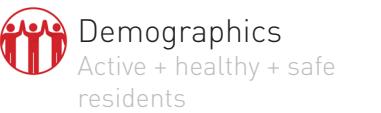


## Scenario Two: Innovative Eco Hubs

The regenerative town of Gregg fully integrates nature and smart technology throughout the community.



Regenerative Practices



### Demographics

Active + healthy + safe residents



### Economy

Sustainable small businesses + start-ups



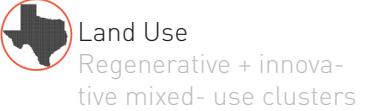
### Environment

Environmentally integrated design



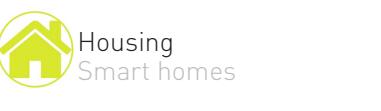
### Infrastructure

Green + affordable



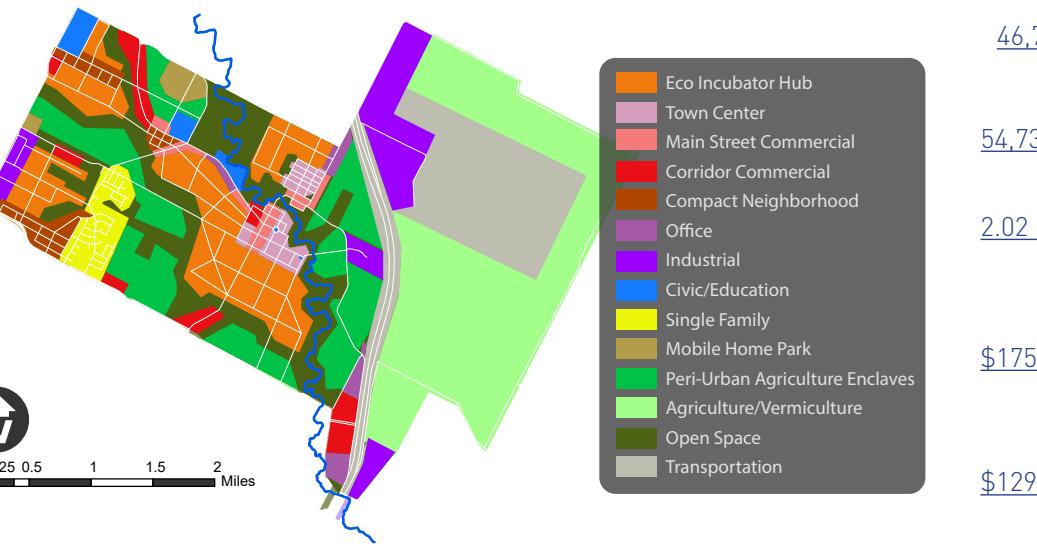
### Land Use

Regenerative + innovative mixed-use clusters



### Housing

Smart homes



## Outcomes

### Population

46,772

### Population

54,734

### New Jobs

2.02

### Household Size

\$175,398

### Average Home Price

\$129

### Energy Cost per HH/month

2.2

### Jobs/Housing balance

2

### New Schools



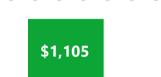
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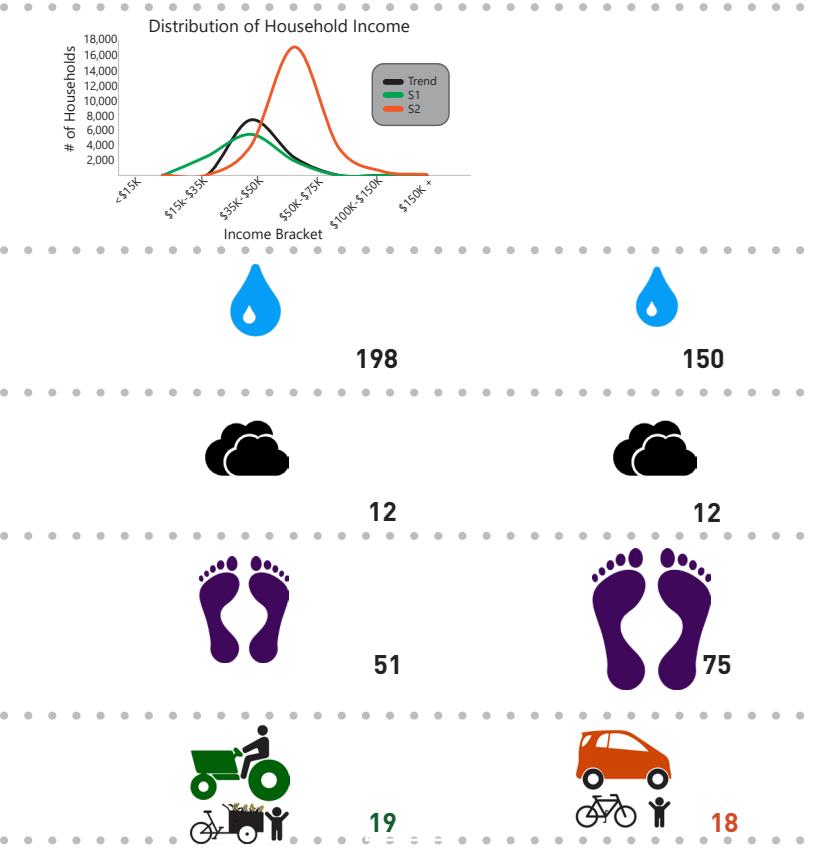


S2



## Vision

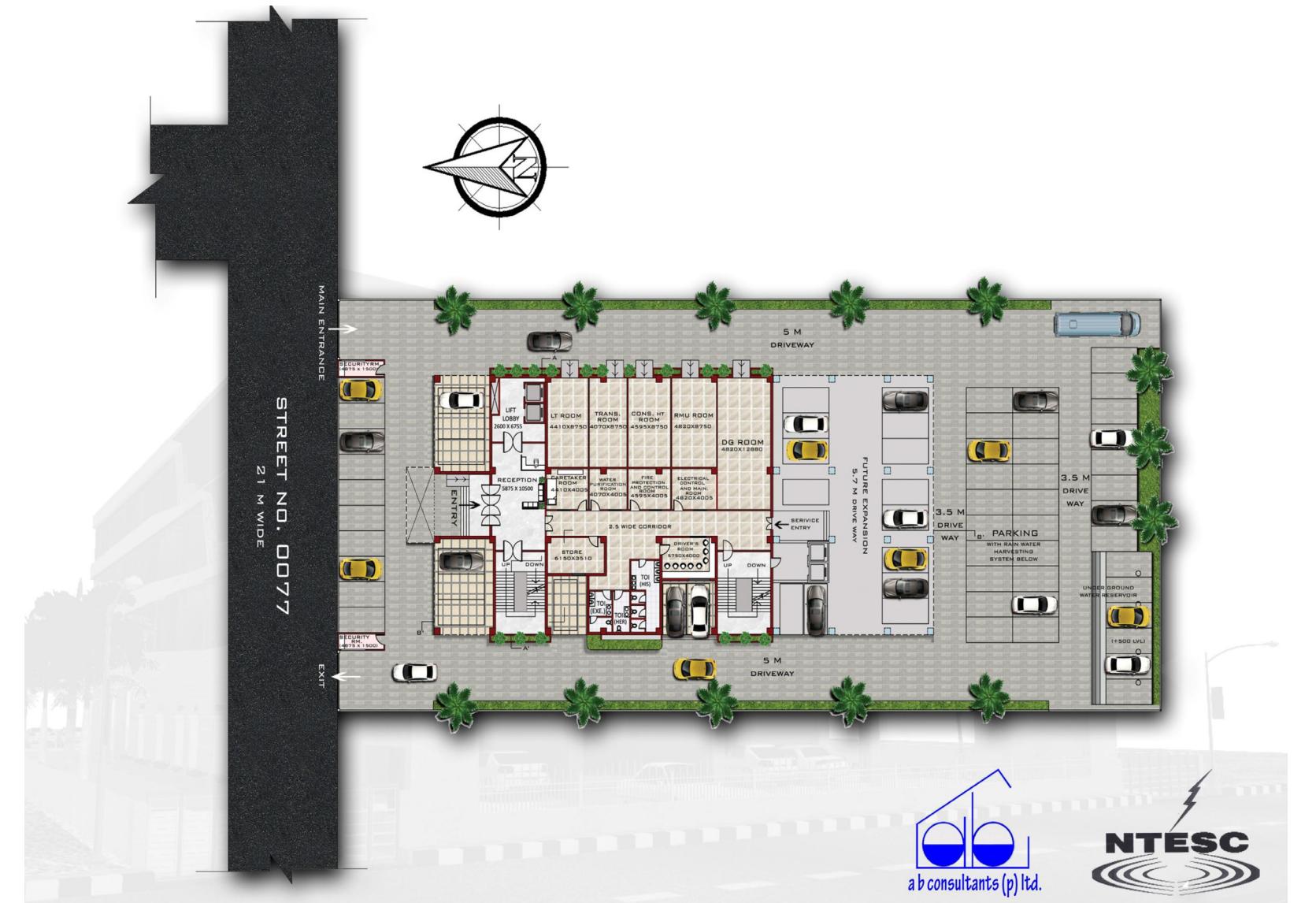
Smart + Pastoral



In the spirit of Gregg's agrarian roots, we envision diverse community ties, cooperative agricultural enclaves, and sustainable transportation. The town will leverage green technologies to maintain harmony with the historic, pastoral landscape that defines Gregg.



**Site Plan with Ground Floor**



## Floor Plans

