

## Element D: Identification, definition, and justification...

Identify and organize design goals, parameters, and constraints and have work validated by industry professionals

Type in the rubric criteria here for the target score your team agreed upon

#

Design goals, parameters, and constraints are listed, formatted, prioritized and are generally clear and somewhat detailed; these design goals, parameters, and constraints presented are generally objective and measurable, and have the potential to lead to a tangible and viable solution to the problem identified; there is evidence that goals, parameters, and constraints have been validated by at least one qualified representative end-user, stakeholder and field expert OR two representatives from two of

Project Management

DRI	...	Completed
Organize work	Ghufran	<input checked="" type="checkbox"/>
Contact Professionals	Nathan	<input checked="" type="checkbox"/>
Organize feedback meeting	Nathan	<input type="checkbox"/>

### Goals

List out design goals.

- Our team's overall goal for this project is to improve someone's living conditions in the Dallas County area by solving problems related to transportation, specifically access to necessary services.
- Increase radius of services provided by our solution
- We hope to break the poverty cycle for at least 1 person.
- We hope to eventually implement our solution to other people and cities
- We hope that our solution will increase the number of people who use public transportation

Are your goals, parameters, and constraints measurable and clear?

You can do the writing to the side or down below on this page

### Parameters

List out design parameters.

- For our end user, the cost of the solution should not be more than already existing solutions
  - For example we want to be under the cost of a used car (average of ~\$700 spent on a used car per month, this takes up about 55.4% of their income if they work a minimum wage job 40 hours 2 a week).
  - The estimated cost of ride share apps like Uber and Lyft is ~\$30 per day. Our solution needs to be less than the cost of using rideshare (\$30 a day is if they make two round trips a day, this would take up about 72.6% of their income if they work a minimum wage job 40 hours a week).
  - The cost of our solution should be less than the cost of a reduced price DART pass (It is \$48 a month for a reduced price DART pass that works for busses and trains, this is 3.8% of their income)
- Either keep the time needed to commute the same or less than amount of time it takes with current solutions
  - For example, the closest hospital to Cadillac Heights takes ~35 minutes to reach by public transit, and you still have to walk ~.5 miles to reach the hospital doors.
  - Our solution should either keep the same, or decrease the commute time.
  - The closest grocery store in Cadillac Heights takes around ~24 minutes by public transit to reach and you still have to walk ~.5 miles to reach the grocery store doors.
- Our solution needs to increase the amount of services accessible to our end user. Possibly increase the radius of available services our end user can access by .5 miles.
  - Cadillac heights local businesses currently around
    - Super Markets: 1
    - Hospital: 1
    - Schools:
      - 2 elementary
      - 1 highschool
    - Daycare: 2
- Our solution needs to decrease the physical exertion required to get to necessary services. As stated earlier, in order to get to the closest hospital to Cadillac Heights you are required to walk around .5 miles. It's the same for the closest Grocery store. When you consider how much people who live there have to walk outside of work, it makes sense that some will struggle with staying healthy at work. Furthermore there are instances where you can't physically exert yourself in your commute, for example, going to a hospital, or a job interview.

### Constraints

List out design constraints.

- Can't increase the number of buses and trains
- Can't reschedule the bus and train times
- City of Dallas banned dockless scooters and bikes, so can't use a dockless vehicle
- Can't change the phone type or technology our end user has access to
- Can't change where the services are located. Ex: can't change where a hospital or grocery stores is physically located
- Can't change where our end user lives
- Can't change where bus stops and train stations are located
- Can't change where and how far sidewalks and roads go.

Professional Contacts

	Name (First Last)	Company	Email	Best contact method	Best time to contact	Date report delivered	Date for feedback meeting
Contact 1	Andrew Pagano	City of Dallas Transportation Planner	<a href="mailto:andrew.pagano@dallascityhall.com">andrew.pagano@dallascityhall.com</a>	Email	Weekdays		
Contact 2	Jing Xu	DART	<a href="mailto:JXu@dart.org">JXu@dart.org</a>	Email	Weekdays		

### Feedback

