CEE 08361-1/08361-2 TRANSPORTATION ENGINEERING

SPRING 2017

Semester Projects Instructions

Project 1

As a group your goal is to develop a 2-minute video to inspire your audience (can be anyone) to consider your transportation solution for the problem you selected.

There is no rubric for this project. Following are general guidelines that every group should follow.

1. Identify a country (Other than U.S., Canada, & United Kingdom). Consider transportation (and other if required) data sources available for the country when deciding.
2. Identify a problem related to transportation safety in the country.
3. Develop a creative yet implementable solution that can solve the problem without impacting the country's economy. (Hint: Implementation can take XX years.)
4. Utilize all available data sources to (probably develop nice infographics)
    a. Explain the severity of the problem to the audience (can be any one from any country)
    b. Compare the problem with the similar problem in U.S.
    c. Explain and justify your solution (benefits/cost OR any other creative technique)
5. Create a 2-minute (max) video that clearly and creatively explains/presents 4-a, b and c.

The final outcome of the project (the 2-minute video) will be graded based on the

1. Quality;
2. Creativity; and
3. Efforts (Hint: can you show 2.5 months of work in 2 minute video?!)

Remember,

- *Your audience can be anyone.*
- *Revolutionary ideas (as a solution of the problem) are welcomed as long as they are implementable.*
- *Creating video in the last week before the due date may result in a failing grade.*
- *Creative an original solution can NOT be developed from internet search, clicking the links that sounds COOL, and reading few lines of each paragraph on the first page. Reviewing/reading the journal papers, articles and strategic reports such as this and critically thinking about the problem is the essential step.*
- *A great solution is a result of multiple iterations of 'what-ifs', and critical thinking*

Here are the links for the data sources to jump start your project.

http://data.un.org/DataMartInfo.aspx
http://guides.lib.berkeley.edu/c.php?g=492303&p=4013357
http://data.worldbank.org/about/get-started
https://www.columnfivemedia.com/100-best-free-data-sources-infographic
http://www.itf-oecd.org/sites/default/files/docs/data-driven-transport-policy.pdf

Project 2

1. Identify a signalized intersection on a busy corridor.
2. Get approval from the instructor.
3. Establish boundaries for the project (1 mile North South or 1 mile East West)
4. Model all intersections with in your boundary area in synchro.
5. Suggest a solution that improves traffic conditions for the selected route/corridor.

Format/Rubric

	Description	Points
1	**Title page** Title, group members name, report written by, course-section numbers, Date submitted	3
2	**Table of contents, list of tables, list of figures**	2
3	**Executive summary** One page document summarizing the activities performed and results of the project	10
4	**Introduction, background/problem statement** Introduction with problem statement ending with objectives of the project.	5
5	**Effort Statement** A brief paragraph about what type of data you collected, who performed what kind of analysis… etc….	5
6	**Existing conditions** Collect traffic count at key locations. Utilize online resources to get other relevant information and data. Utilize synchro to model existing conditions Present results (base condition, LOS, Delays and Queues)	15
7	**No-build future scenario (year 2027)** Utilize online resources to get other relevant information and data. Utilize synchro to model future no-build conditions. Use 2.5% growth factor Present results (base condition, LOS, Delays and Queues)	15
8	**Future build scenario (year 2027)** Develop solution(s) for future conditions. Develop two synchro models. 2028 build and 2027 build. Compare results of both models with existing conditions	15
9	**Conclusions and recommendations** Summarize your findings Provide key recommendations based on your analysis	15
10	**References**	5
11	**Overall Presentation** Review “Paper Specification” section in the “InfoForAuthors” document provided on blackboard (from pages 5-15) *Maximum 10000 words (including, tables, figures, table of content, title page)*	10

***CEE 08466 Introduction to Transportation Systems Modelling ***

CEE 08566 Transportation Systems Modelling

Semester Project Outline

Deliverable 1: Vision, goal and objective statement (20%)

1. Identify a town/city (urban, suburban or rural area) within USA.
2. Identify primary transportation related problems/issues for the selected region.
3. Identify corridor(s) within selected region.
4. Develop Vision (10 year), goals and objectives statement for the selected region.
    a. Utilize Plan works website (https://fhwaapps.fhwa.dot.gov/planworks/Home) to develop the vision.
    b. Focus on "Visioning and Transportation" section. (website link: https://fhwaapps.fhwa.dot.gov/planworks/Application/Show/6)
    c. One of the goals/objectives must be related to the selected corridor.
    d. Format for the statement.
        i. Maximum Three 8.5 x 11 page; Minimum One page
        ii. 1 inch margin all side.
        iii. Times new roam, 11 points, single spacing.
        iv. Hint: Figures are sometimes better than words
        v. Hint: Examples are provided (linked) within the website.

Deliverable 2: Research Paper; Section 1: extensive review (50%)

This section focuses on improving performance of the corridor in your study area.

1. Complete Economic Analysis Training on Econ-works website (click here for the link).
2. Identify primary problem that deteriorates mobility/safety/environmental performance of the selected corridor.
3. Perform extensive literature review focusing on various solutions for the problem.
4. Identify/Develop solution(s) that may work for the selected corridor.
5. Perform analysis for the selected solution(s) and other alternatives. Utilize tools provided on plan-works website (click here for the link) to identify Performance Measures for the analysis process. Perform Economic Analysis using the tools provided on Econ-works website.

Deliverable 3: Research Paper; Section 2: Comparative Analysis (30%)

1. Identify a town/city from other country with the same population density as the town/city you selected in USA. The city must NOT be from USA, UK, CANADA.
2. Compare all outcomes from Deliverable 1 and 2 with this town/city.
3. Identify limitations/advantages of applying same solution(s) to this town/city.
4. Identify optimal solution for this town/city.
5. Follow authors guideline provided on blackboard or available here to develop final paper.