Context Sensitive Design (CSD) : Curricula/Courses/Research

Conceptual Frameworks: Teaching and Research on CSD:

What is Context?

***Context** is a human construction that incorporates scientific, social scientific, artistic, and humanistic data in both separate and aggregated/integrated formats.*

***Context** is that combination of physical elements, ecological systems and cultural and social practices that define specificity of place, i.e., that in aggregate, establish a commonly understandable realm and in particular, its critical constituent elements.*

***Context** includes more than the parameters of the environment currently encompassed by legislation.*

What are challenges to Context inherent in transportation projects?

Disruption of continuity and integrity of physical fabric
Disruption of community
Disruption of sustainability of cultural and social practices
Disruption of sustainability of natural systems
Enhanced mobility at the cost of multimodality, access to destinations
Diminished aesthetics, value

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What is Context Sensitive Design? How can it be evaluated?

*In transportation projects, can **context** be pre-assessed as a part of determination of project scope is? What histories, cultural narratives, technologies and scientific knowledge are needed and how can they be brought into play in the formal resolution of a project scope?*

***How is adverse impact measured and assigned dollar value as an estimate before the fact?** Are, for example, cost-savings measured by the difference between costs incurred by anticipating adverse impacts to **context** versus costs of mitigation after the fact? Is mitigation inherently less cost effective than design because of inflexibilities or incompleteness induced by the lack of a flexible and comprehensive approach?*

***What constitutes adverse impact on context? Project scoping** should involve processes to build consensus about: (1) the impacts on **context** to be considered, (2) the basis for analyzing them, (3) the information that will be used, and (4) the stakeholders that care.*

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Teaching:

*Practice is **Multi-disciplinary**:*
*Professional Curricula are **Disciplinary** > financial models of University in conflict with educational models*

Dual degrees
Certificates

Research: Transcending Boundaries
Multidisciplinary Teams and the Direction of the Research

Multiple Vocabularies, conceptual bases

Multiple non-parametric variables and/vs. the connectedness (composition) of design

Science, Engineering – quantitative measures
vs.
Perceptual, Poliitical – qualitative measures

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Curricular Opportunities/Challenges: University of Minnesota
Undergraduate: Multiple degrees affected

CSD course as part of infrastructure/transportation minor for professional (and non-professional?) engineering, urban studies and design students based in course offerings at basic level of issues involved:

Infrastructure systems
Hydrology – surface and subsurface interactions
Geomorphology – landforms and soils
Wildlife and plant ecology – landscape structure, habitat
Landscape architecture – site and regional design
Architecture – materials, scale and proportion
Historic preservation: American vernacular landscapes and architecture
Planning process and land use
Municipal and property law, real estate
Cultural anthropology
Sociology
Public health – toxins, obesity
Urban affairs – public processes

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Curricular Solutions:
Graduate
Dual Degrees
- *Master of CE/MURP*
- *MLA/MURP*

Grad/Post-grad/Professional
CTS Certificate
Civil Engineering · Planning/Public Policy · Supply Chain Management

- *CE 5211 Traffic Engineering(3 cr.)*Stat 3021 or equivalent*
  **CE 3201 Intro to Transportation Engineering*
- *PA 8202 Networks and Places: Transportation, Land Use, and Design (4 cr.)*
- *OMS 6072 Managing Technologies in the Supply Chain (4 cr.)*
- *CE 5214 Transportation Systems Analysis (3 cr.)*
- *PA 5202/Geography 5372 American Cities II (4 cr.) *No prerequisites*
- *OMS 6056 Managing Supply Chain Operations (4 cr.)*

Value of CSD: Design as Scoping/ Pre-emption of Mitigation = Streamlining?
Studio/Workshop and Research

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