TSSDS Structural Issues

1. Does the structure (Entity, Sets, Class, etc.) of the standards satisfy your needs?

- It is not clear how environmental impact projects such as new highway corridor impacts relate to the entity classes - it is a road entity class, an environmental entity class or both?
- Would like to see some minor changes in structure.
- In an environmental impact study, one would not break out entity classes by workspace (Arc/Info). The workspace would be the overall project, with coverages being entity types or features.
- It will support my needs because it will make me more efficient.
- Even at the project level, you will often have more than one entity set involved in a particular analysis. In fact, the ability to integrate entity sets is what makes GIS such a great tool. So a one to one correspondence between entity set and project does not exist.
- It would benefit from the ability to subset classes and to subset types. There are some valid class subsets that would not correspond to types and some type subsets that you would want to maintain as features, not attributes.

2. Is the structure adequately defined?

- In the utilities segment, we found that there needs to be some consistency in structure. While above ground structures i.e. utility poles are separated from what equipment they support (electric, phone, etc.), below ground structures are grouped with the equipment that they support.
- Regarding a Utilities General category, there needs to be some capability built into the schema to differentiate between complete ownership of infrastructure (DOD ownership of pole and all associated equipment) vs. utility ownership by specific utility types. (Phone cable attached to electric utility poles.) This scenario would require the electric utility owns the pole, so it would be an electric pole regardless of other attachments. In the DOD expample, it needs to be placed in a general category because support structure and attachments are all owned and managed by DOD.

3. Are the relationships between sets, classes, types, entities, tables and attributes clear?

- The structure should flow set - class- type- entity-attribute. Domain, and tables seem to confuse the issue.
- It is the nature of cascading hierarchical sytems.
- There does not appear to be a need for entity_class other than to deal with implementation issues. From a semantic point of view, entity_set, entity_type and entity would be sufficient. In a GIS environment, entity would be word attribute.
- For the most part the relationships are clear. However, there were some entity types placed under different entity sets that did not seem self explanatory to me. i.e, Why is a non-potable well considered under the improvement entity set.

4. What would you change to meet your needs?

- Some of the definitions could be more simplified for the general public to understand.
- Add Hydrogeology as an entity set by placing the subsurface classes currently located in hydrography entity set.
- The structure should allow for making it apparent that a entity type is a point line or polygon.
- Make the entity type titles and definitions the same. Don't have _area in title and then start a definition as "The point of". Exmaple water_source_area and the definition was The point from which the utility…. This is somewhat confusing.
- Add types and defintions to fill observed and commented gaps.
- If there is not a geo-spatial element to the structure the use of geo-spatial descriptors should be eliminated. If there is a geo-spatial element it needs to be much more clearly delineated and/or made technology specific.
- Utilities_electrical_ system entity class has both switching and protection devices grouped together. These need to be split into separate entity types.

- Separate hydrography enetity set into two entity sets: Hydrology and Hydrogeology. There is enough subsets to each to justify the two entity sets.

- Utilities_electrical_system is missing electrical characteristics i.e. kVa ratings etc.

5. Do you desire a structure that is specific to a certain hardware/software suite?

- Software should be more compatible to all systems.

- No, especially if we are looking for a standard.

- No, it should go the other way. Soft/hard should build structures to standards.

- Should be compatible with basic format for RDBMS. I use Access but can communicate with colleagues using other RDBMS software.

- There is a level at which standards can cross the boundaries of software and hardware and there is a level beyond which standards have to be made specific to a hardware or software. There seems to be a need to identify where that level is (and it may not be the same place for all entity sets).

- Stay with ANSI standards, but beware vendor specific issues.

6. General Comments

- The two naming conventions seem to add confusion. Dropping the domain naming convention or taking the best of both may clear up confusion and aid in promoting the standard concept.

- What about Streets as a utility type. They have many utility like qualities. They are part of the "public infrastructure", need maintenance, have attributes (paved or not, width, medians, etc), have spatial relevance and definately have a relationship with other utilities.