Responses to NTIA Program's current questions are as follows:

1. **Address-Level or Census Block:** Please clarify whether you are planning to request data at the address or census block/street segment level. If you are requesting data at the address level, please explain your anticipated action(s) if providers are unwilling to provide data at the address level.

We still plan to ask for voluntary submission of address level information. We realize however that with the changes made to the request at the NTIA level we may only receive census block or street segment data (or at least a larger portion of the submissions will not be at the address level). We can easily ingest the census block level information. Ingestion of the street segment level information will take some processing but can be achieved fairly easily in terms of defining service areas. It is our hope for some groups to possibly obtain both record types (block/segment & address) so as to provide some measure of conformity between approaches based on either. The assembled team has experience dealing with census block data and street segment data through work as the geospatial arm of Missouri's State Census Data Center and related support activities dealing with the block boundary suggestion program, voting tabulation district mapping, and other census programs. Regardless, we will deal with the data supplied through established processes or modifications of established processes to deliver the needed information. It is not our intent to preclude any source nor penalize any entity or provider. We will work diligently to compile the necessary standards from the supplied information.

2. **Address-Level or Census Block:** Please describe whether and how the address point file will be utilized if your project primarily receives census block level data.

The address information is critical to many aspects of the broadband mapping project as well as other broadband deployment and assessment methods that the state of Missouri needs to pursue. With many smaller broadband providers we feel that the mapping of their data to census blocks or even street segments may not be able to be achieved. As well, we are already collecting address level information from citizens through our broadband now portal that will provide – at least initially spot check information for the mapping QA/QC process. Finally, Missouri is a state with much rural lands where the density of housing units is very, very small – even within the 'block' structure of the census units. For the deployment and evaluation of broadband plans and coverage it is critically important to know 'where' in this huge block these housing units occur. Only then can we really provide an accurate measure of the availability and access to broadband that is the ultimate end goal of the process. This rural component and all the associated equity and digital divide issues can only be addressed through collection and use of address point files.

3. **Indian Tribes/Tribal Governments**: Please describe your planned outreach to specific Indian tribes or regional tribal groups. How will you ensure that these groups are involved in the process and that you will receive information about broadband availability on these lands.

There are no tribal lands in the state of Missouri. We do have the office of one federally recognized tribe in our state. That would be the Eastern Shawnee Tribe of Oklahoma.

4. **Verification:** Please provide more detail about your Project's verification plan. Specifically describe how your Project will utilize the verification measures currently listed on pages 11-16. For example, which of these methods do you plan to deploy first and most widespread, and which are secondary measures, or are focused only on areas where the verification method provides insufficient data, etc.? In short, how do these various methods all fit together as part of an overall verification plan? Is funding for all of the methods described in the narrative (mail-in surveys, wired/wireless footprints, geocoding of address lists, etc.) collectively rolled into the single "Field Verification" line item?

There are two aspects to the verification and validation aspects of Missouri's proposal:

1) The work being done by the subcontractor as they obtain information from providers and construct the data and information needed for reporting to NTAI and mapping support to the State of Missouri. The GeoDecisions group has methodologies in place to conduct checks, include feedback, crosscheck, and provide field-based validation (in cooperation with CBG and their survey and interview elements) to create the base information that will then go to the state.

2) The State has proposed to put in place a totally independent group that can check and validate the work of the subcontractor to provide a measure of confidence and a more complete understanding of the processes used, assumptions made, modeling approached deployed, and choices of representation applied. This side will gather from public sources and other sources that are able to be tapped a number of files to be used in a process of 'convergence of evidence' wherein a number of sources are compared to a product to compile both an accuracy assessment and a usability or utility measure to the product so that its application to policy and other decision making processes is completely understood and described. The effort will be split 70% rural and 30% urban in terms of area of focus for the general provider mapping. The State will be the primary for the Community Anchor Points and will work independently with agencies and entities that are the trusted source for these points of interest. The approach is to 'field' verify each community anchor point through the distribution of a map product with a high resolution aerial image, google map, and attribute information element to each target.

The distribution of effort or expected use from each of the approaches outlined in the proposal to check the products being created for the state by the subcontractor is as follows:

Mapping to census geography and associated relationship to imagery-based housing unit counts for these same blocks based on 2007-2009 imagery acquired by the state. When the new census counts at the block level become available in late 2010 and 2011 this will provide an additional check for these associations of households, housing units, and structures. The state has already compiled some structure information that can be used for this purpose across the bootheel area of Missouri comprising 13 rural counties.

Students will be used to compile wired footprints of provider service areas as portrayed on marketing materials and internet sites. These will be assembled and be another primary source for checking of the subcontractor provided data files.

Working with local governments through existing relationships we will create 'rose targets' against their internal parcel databases to provide a sampling scheme that can support the discovery of boundary edges and extents. This can be thought of as a field mapping or survey tool to be used in targeted communities.

The final big push is to use the web-based speed test website established by the state and to promote its use through our Department of Elementary and Secondary Education as well as our Department of Higher Education to create more independent points of potential assessment.

The methods to be used in more limited situations include wireless footprint modeling based on antenna height, surface terrain, attenuation, and wavelength. We have existing models for this but the results can be fairly suspect due to other, un-modeled, constraints. A small segment of field testing will be used by the subcontractor to verify or validate these modeled footprints to provide some measure of accuracy. Where this occurs a small proportion will be modeled as a check – more to ensure understanding of the modeling used by the subcontractor than to establish the lines are right or wrong.

For limited areas the independent validation will obtain address lists and conduct geocoding so that again an understanding of the approaches being used can be gained as well as the impact on the ability to make decisions and support policy or allocation of funds can be assessed. Most of the address geocoding will take place within the subcontractor arena – the independent check will be spot checks on particular gaps or other areas of interest as they are discovered to shore-up understanding.

The 'field verification line' is primarily tied to the field activities of the subcontractor. Field activities related to the independent validation are rolled into the travel budgets, materials, and computer costs as shown the budget.

5. **Planning Funds:** Please provide an overview of the Regional Technology Planning Teams mentioned on page 23 (and the corresponding Budget narrative). This section currently includes information about the proposed Infrastructure Summit rather than the RTP Teams.

That was a cut and paste error please find below the proper information for that introduction section for the budget narrative section on the Regional Technology Planning Teams.

This budget associated with the planning proposal to create Regional Technology Planning Teams in each of the State's 19 Regional Planning Councils will address these specific projects areas identified in the BDIA: Identify barriers to the adoption of broadband service and information technology services; Create and facilitate by county or designated region in a state, local technology planning teams; and Facilitate information exchange regarding use and demand for broadband services between public and private sector users.

There are varying problems, barriers, and opportunities for broadband deployment, adoption, and use across the state. Having RTPTs at the regional level will ensure the State creates a broadband plan that addresses the varying needs throughout the State. For instance, the broadband needs in the State's more urbanized counties will likely be significantly different from much more rural and sparsely populated counties. Our team members have extensive experience in the area of broadband planning. Specifically, they performed a study with the State of Washington to design a template to create broadband Local Technology Planning Teams (LTPT). Our proposal employs the findings and outcomes from that study to promote a successful regional planning process for the State of Missouri.

6. **Budget:** Please describe the experience level of your GIS Specialists ("Project Technical Staff") at GRC. Was the projected pay of $32,000/year for a GIS specialist determined utilizing current market rate pay scales in Missouri?

By working through and with the University we have access to advanced undergraduates and graduate students who have experience working on GIS projects but can be obtained for a relatively low salary as they complete other aspects of their research or build up their skill set (and resume) for future employment.

7. **Budget:** Why is there a distinction of the first line item #4 under Consulting Subcontracts (the first $25,000 vs. the balance)?

For any given subcontract within any given year only the first $25,000 of that subcontract has indirect costs calculated. This is University policy. So for example if in year one we have a subcontract for $250,000 and year two a subcontract with the same group for $25,000 the amount of indirect collected each year for these subcontracts is exactly the same. The other $225,000 in year one is 'duty free' pass through.

8. **Match:** Please provide more information about your cash match provided through the state's budget appropriation. For example, is the $800,000 available for any cost match towards this broadband technology opportunity, or per legislations is it required to be allocated specifically towards the generation of a point address file?

Direct statement from my fiscal officer:

"The state match can be used toward "broadband technology opportunities" and there is not additional limitations."

The match is not specified directly to the generation of a point address file. However, for a rural state like Missouri the need for compiling a point-based address file for those counties needing it is critical to get the coverage that we feel we will need to confidently address and deliver on the stated goals of the Broadband Data and Development Program. There have been significant investments already made across the state (and covering approximately 65% - 75% of the population) in geospatial point-based address files or parcel based files. The rub on this statement is that the actual area covered in the state to 'hit' the 75% of the population is only 35%. The rest of the state (65%) is rural and in many cases disenfranchised in many ways from the services and other amenities. It is a major focus of the State of Missouri's broadband plan to try to create equity in development, access, and opportunity to these areas. This is also not an inexpensive proposition to reach this final 25% of the state's population - so to use the funding provided for this build-out wisely and to be good stewards for our citizens - it is critical that we get it right the first time. The only way to adequately model and assess the build-out is by knowing where these rural residences are and taking that into account. We must do due diligence in trying to meet these needs and goals.