



GRANT ROAD

Improvement Plan



The Grant Road Improvement Plan is Funded by the Regional Transportation Authority.

Grant Road – Phase II Frequently Asked Questions February 2014

General/Design

1. What are the project limits?

The project limits are from Castro Avenue (just west of Stone Avenue) to Fremont Avenue (just east of Park Avenue).

2. Will any of the side streets be affected?

The most significant side street improvements will occur at Stone, Euclid and Park Avenues. These improvements will typically consist of minor widening in the vicinity of the intersection, pavement mill and overlay, new sidewalk, median improvements and line striping.

3. What is a Design Concept Report (DCR)?

The Design Concept Report (DCR) is essentially a 15% design plan for an infrastructure project that sets general standards and criteria for further design and construction and is created by an experienced, professional engineering and design firm working alongside other firms which have special areas of expertise.

This detailed design and assessment of a construction project (in the case of Grant Road, a major roadway) usually includes, but may not be limited to the following decisions:

- An analysis of existing conditions on the roadway including land use, urban form, real estate, environmental examinations, and infrastructure.
- Geometric design criteria such as the design speed, sight distance, a determined cross-section for the roadway, including the total width, number of driving lanes and median and their width, and the width of pedestrian, bicycle and landscape amenities.

Details about the full plan are available at www.RTAmobility.com.

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- The DCR will include a recommended, approximate, roadway alignment. In instances where there is an existing road the recommended final DCR alignment will not differ too significantly as the proposed road location will encompass some if not all of the existing road. However, the final roadway alignment will change somewhat as it will be based on a more detailed examination of roadway geometry, traffic signal timing, existing adjacent uses and access locations, minor street crossings, etc.
- Additional design criteria such as those for access, turning locations, pavement, drainage, and lighting criteria. These items may also be revised during the engineering design phases of the project as a more detailed examination of a specific area's needs is reviewed.
- Streetscape, landscape, and public art recommendations.
- Recommendations and analysis of utilities and utility relocation.
- Recommendations on project implementation and costs.

An important part of the creation of a DCR is input from the user public – both residents and property owners along the roadway and an on-going Citizens' Committee or Task Force that reviews plans and assists in communicating with other citizens. It also involves other professional and technical experts via a Technical Advisory Committee.

A DCR is considered complete when it has been reviewed and approved by the owner agency (the City of Tucson, Department of Transportation, for example) and approved by political leadership following a public hearing.

4. What is the current status of the project?

The design consultant submitted a 30% plan for review and comment in December 2013. A public open house is anticipated when 60% plans are submitted in early September 2014.

5. Who is the design consultant?

The design consultant for this phase of the project is Psomas. However, any specific project questions should be directed to Genna Dreier, Public Information Coordinator at 520-624-4727. Genna will direct your question to the person/department who can best answer it.

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6. When will construction start?

Construction is anticipated to start in late 2015.

7. How long will the construction take?

Construction could take up to two years to complete; however, the Tucson Department of Transportation is anticipating the construction will be substantially complete in approximately 18 months.

8. What does 'substantially complete' mean?

After the completion of the work the contractor and City of Tucson representatives walk the site. At that time any minor items or items in need of correction are identified. These items typically do not impact the overall functionality of the project and could include things such as replacement/ completion of landscape items, damaged concrete curb or sidewalk, lighting that isn't functioning as anticipated, adjustments to irrigation or water harvesting systems or restoration of temporary construction easements.

9. What is the purpose of the Indirect Left Turns? What is the empirical data that supports the decision?

When the Grant Road Project is complete, there will be seven Indirect Left Turn intersections between Oracle and Swan. This innovative concept resulted from recommendations by the Grant Road Planning consultant that was awarded the planning contract for all five miles of Grant Road in 2007. This consultant had experience in Michigan where several hundred Indirect Left Turn intersections have been constructed in past years with great success. After much consideration, the Tucson Department of Transportation agreed with the proposed concept and the idea was presented to the Grant Road Citizen Task Force and the general public during one of the most involved roadway planning efforts in the City's history. The Indirect Left Turn concept was approved during this planning process because it offered the following benefits:

- a. These left turn designs reduce vehicular crashes by 16% and injury crashes by 30% by reducing the number of potential conflict points at each intersection

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- b. They reduce pedestrian crossing distance by approximately 20 feet by eliminating the left turn lanes at the intersection.
- c. Studies over the past 50 years have shown the average wait times at Indirect Left Turn intersections are much shorter than if that same intersection had a traditional four-phase traffic signal with protected left-turn movements. They increase the green time for through movements east-west and west-east by about 40% by eliminating the left turn signal phase.
- d. They reduce fuel consumption by approximately 9% by reducing the amount of time cars spend idling at the intersection.
- e. By reducing the intersection size, right-of-way costs are reduced.

TDOT understands that the Indirect Left Turn is a concept new to Tucson and there will be some issues to be worked out as the signal timing and phasing are calibrated. However, TDOT has constructed one Indirect Left Turn on Grant Road at Oracle as part of Phase I of the Grant Road Improvement Plan. This Turn has worked well so far, delivering the benefits of safety, fuel savings, and right-of-way savings that were anticipated by the designers. TDOT expects this will be the case with additional Indirect Left Turns as they are designed and constructed in future phases of the Grant Road Project.

Real Estate

1. Who is Tierra Right-of-Way and what is their role in the project?

Tierra Right-of-Way is a business providing real estate-related services and is under contract to the City of Tucson. Please contact Dorothy Weideman at the City of Tucson, (520) 837-6720 for more information.

2. How does the property acquisition process work?

The property acquisition process can vary depending on a number of details. It is best that you contact Dorothy Weideman at the City of Tucson, (520) 837-6720.

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3. How far in advance will I be notified if my property is to be acquired?

Again, answers can vary depending on the situation. It is best for you to contact Dorothy Weideman at the City of Tucson, (520) 837-6720.

4. Is there an early acquisition program?

Although there was at one point consideration of an early acquisition program, funding levels do not currently allow for one.

Public Art

1. How does the public art process work?

In each RTA project there is a portion of the budget allocated for public art (1% of construction budget.) The artist is selected by a public art panel that consists of stakeholders that represent respective groups such as neighborhood, business, etc. After artist selection, the panel provides the artists with aesthetic ideas. The artist then provides concepts. These concepts are shown to the public at open houses for input and a final decision is made.

Pothole Information

1. How is the City addressing potholes on Grant Road?

- Phase 2 (Castro Avenue to Santa Rita Avenue): Scheduled to be constructed and improved starting in late 2015
- Phase 3 + 4 (Palo Verde Avenue to Swan Road): Scheduled to be constructed and improved starting in late 2017

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- c. Phase 5 + 6 (Santa Rita Avenue to Palo Verde Avenue): These segments aren't going to be constructed until 2021; however, the City understands the need for pothole and general roadway improvements. The City is planning to improve the roadway via a mill and overlay pavement preservation tactic late this year or early next year. This will resolve the pothole issue in this segment until the roadway undergoes widening improvements.
- d. If you have any specific concerns regarding potholes, please report them to the Pothole Hotline: 520-291-3154 or email TDOTStreetsTrafficMaint@tucsonaz.gov. Please note that when you report potholes, the more detailed information you can provide on the location of the pothole, including approximate address, direction (eastbound, northbound, etc.), lane information, the easier it is for our City personnel to find these problem areas in order to fix them.

Utilities on Grant Road

1. Will utilities be underground on the Grant Road Corridor?

Utilities will not be relocated underground on the Grant Road Corridor.

While underground power lines are more aesthetically pleasing and less subject to storm and other types of damage incidents than overhead pole lines, they are also much more difficult and costly to design, accommodate, build, repair and relocate.

The Grant Road project currently includes both overhead distribution (14kV) and sub-transmission feeder (46kV) facilities, as well as some underground service connections.

Underground electrical infrastructure design, construction, right of way and environmental requirements differs from overhead pole line infrastructure.

- a. Underground construction has a larger excavation footprint to the project in terms of land area and increased environmental impacts occur, increasing costs for installation and maintenance.

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- b. Construction is a more costly build due to the excavation of civil tranches, as well as underground equipment such as ducts & pull boxes and above ground cabinets and transformers. As well as the loss of vegetation during and after construction.
- c. Equal or greater quantities of right of way for construction are required for occupancy of electrical ducts, electrical conductor, pull boxes and above ground appurtenances such as pedestals, transformers and above ground cabinets including maintenance access.
- d. The design and construction of underground distribution and transmission lines require separate subsurface pull boxes which increases the number of pull boxes required overall, within the right of way of the project.
- e. Construction criteria and costs increase from distribution class to sub-transmission class infrastructure for overhead and underground. However, the cost for undergrounding is a significant cost increase related to the underground duct system and more so when sub-transmission is involved. For example all 46kV underground requires larger duct sizes and is concrete encased for insulation of the lines, which significantly increase costs and construction time.
- f. Please note that the majority of the existing electric services to the homes and businesses on Grant Road are overhead. Underground would connect to existing overhead services via risers located within the right-of-way, with services extending to the residences or businesses.
- g. When overhead lines get knocked down, it is a pretty straightforward task for power crews to see where the problem is and get the lines put back up quickly. However, when there is a fault on an underground power line, finding the problem and fixing it is not as straightforward. If there is a problem with underground wire, specialized locating equipment must be brought in to find the problem, every other utility that is buried in the area must be located so that they don't get damaged during the repair process and heavy equipment must be brought in. It is a much longer and much more involved process to fix underground power lines.

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Safety is also an issue when dealing with any power lines, overhead and underground power lines. Overhead power lines are in plain sight to the public while underground power lines are not nearly as visible. A change from overhead to underground facilities does not eliminate the need for the residences and businesses to be aware of power line and underground safety regulations.

And lastly, utility companies are regulated by various agencies. TEP is an overhead utility company, and is monitored by regulatory agencies and requirements. As an overhead utility company the cost to construct underground facilities in lieu of overhead facilities cannot just be passed on to their customer base/rate payers. In this case the City of Tucson would have to agree to participate in the cost of undergrounding overhead facilities as the project is the driver for the TEP relocation work. That would result in the City paying for the cost of the design and construction of the civil infrastructure as well as a cost differential between the estimated overhead electrical construction cost and the actual underground electrical costs.

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For more information:



www.tucsonaz.gov/projects/grant-road-stone-park-design



www.grantroad.info



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