



Appendix A

Public Involvement



Date	Document		
2/12/2007	Community Advisory Committee (CAC) formation Notice, <i>Daily</i> <i>Territorial</i> newspaper		
7/23/2007	Letter from the Carol Brichta, PCDOT to the CAC re meeting		
8/7/2007	CAC meeting agenda		
8/7/2007	CAC meeting summary		
8/7/2007	CAC meeting sign-in sheet		
8/7/2007	Project Features handout		
8/7/2007	Presentation of photos and maps of the project		
9/24/2007	Letter from Carol Brichta, PCDOT to the CAC re meeting		
10/2/2007	CAC meeting summary		
10/2/2007	CAC meeting agenda		
10/2/2007	Project information bookmark		
10/2/2007	CAC meeting sign-in sheet		
10/9/2007	CAC meeting agenda		
10/9/2007	CAC meeting summary		
10/9/2007	CAC meeting handouts		
11/23/2007	Letter from Carol Brichta, PCDOT to the CAC re meeting		
12/6/2007	CAC meeting agenda		
10/9/2007	CAC meeting summary		
12/6/2007	CAC meeting sign-in sheet		
12/6/2007	CAC meeting handouts		
12/6/2007	Letter from Dean Papajohn, PCDOT to the CAC re encouraging written submission of concerns to the County		
12/7/2007	PCDOT Interoffice Memorandum from Dean Papajohn to Priscilla Corneli re CAC concerns about the project		
1/15/2008	Letter from CAC to the RTA and PCDOT re CAC/Project		
1/24/2008	Letter from Priscilla Cornelio, PCDOT to the CAC re 1/15/08 letter from CAC		
1/31/2008	Letter from the CAC to Prescilla Cornelio, PCDOT re 1/24/2008 letter from Priscilla Cornelio		
2/11/2008	Letter from Priscilla Cornelio, PCDOT to the CAC re 1/31/2008 letter from CAC		
2/2008	Meeting notices for 3/6/2008 Open House		
3/6/2008	Open House comment sheet		
3/6/2008	Open House sign-in sheet		

 Table A-1.
 Public Involvement Documents

ate	Document		
3/6/2008	Open House project information handout		
3/6/2008	Open House meeting boards		
3/6/2008	Open House meeting summary		
3/6/2008	Open House comment forms from Bon	ny Bass and Chad Miller	
4/8/2008	Letters from Dean Papajohn replying to	o comments from the Open House:	
	Tom Danelhy	Laura Steakman	
	William Mattausch	Terry and Patricia Plog	
	Svein and Carol Larsen	Gloria King	
	Stephen Schweska	Robert Gaona	
	Chad Miller	Doris Chardukian	
	Donald Williams	Cheryl Carrig	
	Jay Van Echo	Celia Betancourt	
6/5/2008	Letter from Dean Papajohn to CAC re update on project activities		
7/10/2008	Letter from the Carol Brichta, PCDOT to the CAC re meeting		
7/24/2008	CAC meeting agenda		
8/4/2008	CAC meeting notice		
8/12/2008	CAC meeting agenda		
8/12/2008	CAC meeting summary		
8/12/2008	CAC meeting sign-in sheet		
9/2008	Meeting notice for 9/11/2008 Open Ho	buse	
9/3/2008	Project questionnaire, letter and fact sh	leet	
9/11/2008	Open House meeting summary		
9/11/2008	Open House sign-in sheet		
9/11/2008	Open House comment summary		
9/11/2008	Open House meeting boards		
9/2008	Open House public comments		
9/18/2008	Letter from City of Tucson—Suntran r	e bus stops	
10/6/2008	Summary of Public Opinion Questionnaire of September 2008		
***	Main Street Business Assistance Program Information		

 Table A-1.
 Public Involvement Documents



To receive an application for membership, please contact Community Relations at 740-6410. The deadline for submitting an application is March 5, 2007.



PIMA COUNTY DEPARTMENT OF TRANSPORTATION 201 NORTH STONE AVENUE, THIRD FLOOR TUCSON, ARIZONA 85701-1207



PRISCILLA S. CORNELIO, P.E. DIRECTOR

520.740.6410 FAX 520.838.7537

July 23, 2007

Re: La Cholla Boulevard: Ruthrauff Road to River Road Community Advisory Meeting (CAC)

Dear CAC Members:

The Pima County Department of Transportation will be hosting a Community Advisory Committee (CAC) meeting for the La Cholla Boulevard: Ruthrauff Road to River Road improvement project.

The meeting will be held on Tuesday, August 7th, 2007 from 6:00 - 7:30pm at the Metro Water District office located at 6265 N. La Canada.

The purpose of this meeting is to orient the CAC with the Community Participation and Mitigation Ordinance and to explain operating procedures, duties and responsibilities of committee membership. The project scope and schedule will also be presented.

If you have questions regarding the meeting, please contact me at (520)740-6410 or e-mail Carol.Brichta@dot.pima.gov.

Sincerely,

Carol Brichta, Community Relations, -Program Coordinator

xc: Annabelle Quihuis - Community Relations Manager Dean Papajohn, Project Manager



La Cholla Boulevard: Ruthruaff Road to River Road



<u>Agenda</u>

Community Advisory Committee (CAC) Meeting Tuesday, August 7, 2007 6-7:30 p.m. Metro Water Conference Room

La Cholla Boulevard: Ruthrauff Road to River Road

- 1. Welcome and Introductions (Dean Papajohn & Rick Ellis)
- 2. CAC Purpose (Carol Brichta)
 - a. Role and Responsibility
 - b. Pima County Ordinance
 - c. Communications with the Project Team/Board of Supervisors
 - d. Electing Chairperson
 - e. EAMR/Comment Process/Recommendation Letter
- 3. Project Overview (Dean Papajohn, Ted Buell, René Tanner)
- 4. Future Meetings
- 5. Questions/Open Discussion (All)



La Cholla Boulevard: Ruthrauff Road to River Road Community Advisory Committee Meeting



Community Advisory Committee (CAC) Tuesday, August 7, 2007, 6 to 7:30 p.m. Metropolitan Domestic Water Improvement District Board Room

CAC Members Present at Meeting:

- Fred Bass
- Ellen Clark
- Jason Kai
- Ann Girvin
- Norma Metz
- Robert Schwartz
- Ellie Towne

CAC Members Not in Attendance:

- Humbert Arce
- Carol Gawrychowski
- Andy Hernandez
- William Mattausch
- Gretchen Ochoa
- Kaye Swinford
- Ian Stewart
- Edythe Walther
- Juergen Walther

Attending from Project Team:

- Pima County Department of Transportation: Carol Brichta, Rick Ellis, John McManus, Dean Papajohn
- HDR Engineering: Larry Barela, Ted Buell, Scott Stapp, René Tanner
- Gordley Design Group: Barb Alley, Jan Gordley, Arizeder Urreiztieta

Materials Distributed:

- Agenda
- Fact Sheet
- Binder for CAC members
 - o Welcome Letter
 - Project Features
 - Project Area Maps
 - Pima County Community Participation and Mitigation Ordinance

Dean Papajohn, Pima County Department of Transportation (PCDOT) Project Manager, welcomed the Community Advisory Committee (CAC) members to their first meeting. Dean mentioned that there would be presentations from Rick Ellis, PCDOT Engineering Division Manager; Ted Buell, HDR Engineering Project Manager and René Tanner, HDR Engineering Project Scientist. Dean spent a few

minutes introducing himself to the group and what his role would be throughout this project. All of the project team members then introduced themselves and the committee members followed suit.

Dean began his portion of the presentation by telling the members that the essence of this project will be to "enhance life for people in Pima County." Dean stated that roads build community and by community he meant getting to homes, schools, hospitals, shopping, friends, family and work. The CAC meetings are intended to analyze and discuss issues throughout the project and for the members to not only be the eyes and ears for the community, but to also educate those located in the project area to become more informed citizens.

Dean stated that the agenda for the meeting consisted of introductions, a brief presentation on how a CAC operates, an overview of the project, and receiving comments from the members.

Dean introduced Rick Ellis, PCDOT Engineering Division Manager. Rick started out thanking the members for their commitment to this project. He stated there would be a lot of work and a lot of value with some key elements to come. Rick said there are three roles for the CAC on this project and wanted the members to know what to expect. First of all, the project team would be looking for feedback, real-life observations, and would be hearing from the CAC members about what is going on out in the community affected by the project. Secondly, the members were chosen because of the different interests they represent, from homeowners to business owners to community groups, and the project team would be looking for those perspectives. And third, Rick said this group needed to be advocates – allies to the project out in the community. He reiterated Dean's comment regarding educating the public and portraying a positive attitude.

Rick turned the floor back to Dean who introduced Carol Brichta, from PCDOT Community Relations. Carol gave a brief overview of what the CAC members would be responsible for during their time on the committee. Carol first went over what each member would find in his or her notebook. She went on to explain: 1) Each member needs to provide Pima County with feedback from the community; 2) CAC members would be responsible for preparing a collaborative letter hopefully of acceptance of the project that will accompany an Environmental Assessment and Mitigation Report (EAMR) to the Board of Supervisors for approval; 3) Carol referenced the Pima County Participation and Mitigation Ordinance that was in each member's notebook. She stated that each member should take time to read through this document so that they would fully understand his or her role as a part of this committee. Carol also wanted the members to know that they would also have the opportunity to comment on the artwork that would be a part of the project.

Carol described how each member was chosen. People within the project area were mailed an application. A notice was also in the newspaper. From the signed applications, Dean and Carol plotted each applicant on a map, and then members were chosen in a way that assured that different areas of the project would be represented.

Carol said that is was important that all CAC members read page eight of the Ordinance. This page outlines what the CAC members are responsible to cover during their time on the committee. Carol also stated that although only eight meetings will be scheduled, there would be the possibility of the group meeting on their own when necessary. She also said that it was important for the group to choose a chairperson or co-chairpersons for this committee. It will become more important when the members start to write the letter that will go to the Board of Supervisors.

Carol stated that the next CAC meeting would be in about a month. The CAC members and the public would be notified about the date, time and place when that information becomes available. The suggestion was made that future meetings be held at the new Community Center that will open September 15, 2007. It is closer to the project area and one CAC member thought there might be more community involvement if the meetings were in a more central location.

Carol concluded by emphasizing how community outreach is extremely important to this project.

A question was asked about how soon the meeting summary would be ready to review. Barb Alley, Public Involvement Coordinator for Gordley Design Group, stated that she would start putting them together and they should be up and on the Web site in approximately two weeks. Carol also stated that the Web site was on the bookmark included in their binders. The members would be able to view not only information on this project, but they could get information on all Pima County projects.

A member asked how to give information out to neighbors. Carol stated that the member could make copies of what was passed out at the meetings to distribute or to point residents to the County Web site, which will have additional information for interested parties.

Dean introduced Ted Buell, Project Manager for HDR Engineering, to start the PowerPoint presentation that would take the members down La Cholla Boulevard for a project overview.

Ted started out by informing the group that La Cholla Boulevard between Ruthrauff Road and River Road would be widened from the two existing lanes to six lanes. Other project features:

- Total length of the project will be 1 1/2 miles with .7 of those miles being on La Cholla Boulevard and the rest would be intersection work at Ruthrauff Road and Curtis Road
- Bike lanes (6 feet wide), also referred to as "multiuse lanes"
- Close coordination with Sun Tran regarding the bus stops in the project area
- Drainage issues will be addressed at the Rillito River
- Storm drains will be addressed where La Cholla Boulevard meets the Rillito River (built in 1984)
- Ponding problems will be addressed

Dean spoke on available right-of-way (ROW) on La Cholla Boulevard. There is a 150-foot ROW; 75 feet on each side of the center line of the street. There is a mixture of residential and commercial properties in the area and the goal of the project is to make sure there is safe access into and out of these areas. Dean also touched on the fact that there will be landscaping in the project area. The decisions on what type of landscaping that would be needed would have to wait until it is decided on how the configuration of the roadway will unfold.

Dean also discussed utilities. He asked the group what utilities they thought were in the project area. Dean furthered the discussion by stating that multiple utilities were in the area; sewer, electric, gas, water, cable, etc. Dean also told the group that there is a gas regulator station in the area. Ideally, this should not be a problem, but if it should become an issue, Southwest Gas can only work on one regulator station at a time, and they are currently working on a station in Marana. The next one is scheduled for an area south of the project in Tucson. If work needed to be done on this station, Southwest Gas' schedule would have to be accommodated. Again, this is not anticipated work at this time, although it could become an issue in the future. Ted introduced René Tanner, Environmental Planner for HDR, to give a short report on the status of the environmental findings. René stated that one of the tasks of the CAC members would be to review cultural resources as a part of the EAMR. During the research of the project area, there were two cultural sites identified. The next step would be to determine if those sites were within the project limits. Desert Archeology will be surveying the property in order to make that determination for the project team and advise them accordingly. They will also be looking at biological resources, endangered species and wildlife. René informed the group that no bats were located under the bridge, as the current structure was not built in a way so as to support bat colonies. There were swallow nests found, but they were not active and they were deteriorating; however, they will continue to be monitored.

René also told the CAC members that there were a couple of old landfills in the area. They were currently looking at historic photos and documents to see what the limits are, and that would take some further investigation. There would also be soil testing done at the intersection of Ruthrauff Road and La Cholla Boulevard since there are some gas stations in the area. Noise level is another area that will be monitored and studied. The monitors used by HDR Engineering are calibrated each year to ensure their accuracy. HDR Engineering uses the Traffic Noise Model, which was developed by the Federal Highway Administration (FHWA), to assess levels of noise in an area.

Ted talked about the Rillito River Bridge. This bridge was built in 1980 and is a four-span bridge. The design of bridges was changed in 1983 to include drill shaft foundations, which are deeper and more robust. Ted showed a rendering of what the bridge may look like. It would have three lanes in each direction along with a sidewalk and bike lanes on both sides. Ted also mentioned that it is possible to build the bridge one side at a time so that the bridge would remain open to traffic during construction.

Dean took a few minutes to talk to the members about the public art that will be present along the project area. The ideas are wide open at this point and there is nothing to present to the group today. An invitation was sent to members of the Tucson Pima Arts Council (TPAC), to apply for the artist position on this project, and the team received more than 60 applications. The list was cut to three finalists by a panel of citizens in which CAC member Ellie Towne was a part of. The person chosen was Vicki Scuri. Vicki had done other art along La Cholla Boulevard, but she was chosen because of the variety of experience she has in this area and professionalism she would bring to this project. Vicki would have one percent of the total budget of design and construction per Pima County policy to use for her art projects. Dean mentioned some areas that may include art along the project area; the bridge itself, the Rillito Park entrance, sidewalks, bus stops, etc.

Dean again mentioned the ongoing data collection and activities that have already begun on this project. Aerial photos have been taken of La Cholla Boulevard in its current state. There have also already been survey crews taking a look at the utilities and checking records. Pima County's Real Property division has already contacted residents and businesses with Right of Entry letters so that surveys could be made. Traffic engineers are already surveying the traffic flow and the noise levels will be measured once school is back in session.

Dean concluded the presentation portion of the meeting by stating that the design phase of this project will take a minimum of two years. It takes time to look at and resolve all the issues that will arise during the planning stage of the widening project improving La Cholla Boulevard between Ruthrauff Road and River Road. He pointed out that in the early fall of 2007 the team should have the Design Concept Report (DCR) and the EAMR ready for the CAC members to review. Once the committee reviews those documents, they will go to the Board of Supervisors for approval and upon approval the team can then go into the design phase of the project.

The floor at that time was opened up to questions and comments:

Ellie Towne: Concern about heading south on La Cholla Boulevard and making a right-hand turn onto Curtis Road; when vehicles are in the right-hand turn lane, there will be some cars that will go around them to turn in front of them: Dean said that traffic engineers are studying intersections and any problems they currently are experiencing.

Fred Bass: Concern about how close the new road will come to the houses in that area; also a concern about the safety of the middle-school kids who walk to and from school; cars do not always yield to the children, and often speed in the school zone. Dean reiterated that the traffic engineers would be surveying that area. One suggestion was that a median be put at the school crossing so that kids would have a place to stop if unable to make it all way across the new lanes on La Cholla Boulevard.

Jason Kai: Concern about how to access homes that are in the path of the widening project. He stated that on La Cañada Drive, those residents were given access to their homes from a street behind the main street. Dean talked about some of the options of what the widening may look like from narrowing the median to only putting a sidewalk on one side of the street. There are many alternatives to look at during this design phase to come up with the best one that would meet the needs of everyone involved. This may involve acquiring properties, building a frontage road for safe home and business access, etc.

Norma Metz: Concern about her home specifically. She is on the corner of La Cholla Boulevard and Curtis Road. Her concern was the amount of property the County would have to take in order to widen this stretch of road, leaving her home dangerously close to the busy intersection. She also referred to how difficult is was for her to get to and from her home turning from La Cholla Boulevard in a safe manner. Dean commented about how wide the intersection would be once four more lanes and turn lanes were added.

Robert Schwartz: Concerns about drainage problems. He has major problems on his own property on La Cholla Boulevard north of River Road with the vertical road profile that the County contractor did not build according to the plans has caused major issues on his own property. Dean said that that side of the road would have to be examined to determine what occurred.

Jason Kai: Concern about the additional three lanes in each direction causing back-ups due to the trains crossing Ruthrauff Road. Dean said the County is aware of the bottleneck in that area and they are taking the improvements one step at a time. Ruthrauff Road is on the long-range plan for improvements as well.

There was some discussion about how property might be acquired along the project area. It was stated that different options would be investigated, and the county would make sure if they needed to purchase property, it would be a fair transaction for all parties involved.

Dean adjourned the meeting at 7:30 p.m. letting the group know that the team would honor and respect the time of the group. He concluded with the opening statement: that the goal of this project is to: "enhance life for the people in Pima County."



La Cholla Boulevard: Ruthrauff Road to River Road Community Advisory Committee August 7, 2007



Initial	Name	Agency		E-mail
	Humbert Arce	1923 W. Alder Grove Dr. Tucson, AZ 85704	Phone Fax	
Ahy3	Fred Bass	2101 W. Calle Narciso Tucson, AZ 85705	Phone 4073767 Fax 4073768	FRED, BASS D WWM. PIMA. GOV
	Ted Buell	HDR Engineering 5210 E Williams Cir Ste 530 Tucson, AZ 85711	Phone 584-3600 	ted.buell@hdrinc.com
	Ellen Clark	2465 W. Diamond Street Tucson, AZ 85705	Phone 520-2937769 Fax	
	Carol Gawrychowski	4721 N. Warner Terrace Tucson, AZ 85705	Phone Fax	
alt	Ann Girvin	2440 W. Chris Oliver Way Tucson, AZ 85705	Phone 520-730-2920 Fax	anneholvalta con



La Cholla Boulevard: Ruthrauff Road to River Road Community Advisory Committee August 7, 2007



Initial	Name	Agency		E-mail
	Andy Hernandez	4655 N. Courtney Dr. Tucson, AZ 85705	Phone Fax	
	Jason Kai	2305 W. Ruthrauff Road Tucson, AZ 85705	Phone 602 - 402 - 59 Fax 878 - 0642	jasonu kaile Juhoo.com
	William Mattausch	2472 W. Kimberly Place Tucson, AZ 85705	Phone Fax	
	Wayne and/or Norma Metz	4901 N. La Cholla Blvd. Tucson, AZ 85705	Phone 520 - 887- Fax	NORMA.METZQ MORMA.METZQ MORN.COM
	Gretchen Ochoa	2015 W. Ruthrauff Road #163 Tucson, AZ 85705	Phone Fax	
R D	/Robert Schwartz	7898 N. Ancient Indian Drive Tucson, AZ 85718	Phone 520-444-5005 Fax	



La Cholla Boulevard: Ruthrauff Road to River Road Community Advisory Committee August 7, 2007



Initial	Name	Agency		E-mail
	Ian Stewart	2446 W. Rav River Road Tucson, AZ 85705	Phone Fax	
	Kaye Swinford	2430 W. Golda Place Tucson, AZ 85705	Phone Fax	
đ	Ellie Towne	Flowing Wells Neighborhood Association P.o. Box 5141 Tucson, AZ 85703	Phone 888-2085 	towebaz@msn.com
	Juergen and/or Edythe Walther	2242 W. Calle Comodo Tucson, AZ 85705	Phone Fax	

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La Cholla Boulevard: Ruthrauff Road to River Road Community Advisory Committee Meeting August 7, 2007



Initial Name	Agency		E-mail
Bonny Bass	2101 W Calle Muncise	Phone 293-6841 Fax N/A	
J- Mellaw	Pina County Traffic Eugineein	Phone -74-0 - 585-3 Fax	ر
Barek	HOR Engineer	Phone 584-3633 Fax 584-3624	Karry. Barele @ hdrine.com
Scott STAPP	HDR	Phone 584-3670 Fax 584-3624	Scott. Stapp@holring.com
		Phone Fax	
		Phone Fax	
		Phone Fax	

La Cholla Boulevard, Ruthrauff Road to River Road Project Features

August 7, 2007

Roadway

- It is anticipated that La Cholla Boulevard will be widened from two lanes to six lanes between Ruthrauff Road and River Road.
- Additional turn lanes will be added at Ruthrauff.
- Approximately 6-foot multiuse lanes than can be used by bicycles will be added in each direction along with sidewalks.
- The project team will work with SunTran to determine bus stop locations.
- Total length of project is approximately 1.5 miles including tapers required along and south of Ruthrauff.
- New Aerial Photogrammetry and field topography has been prepared.
- An alignment study is being prepared to determine the new roadway location.
- A Traffic Report is being prepared to determine future traffic needs, lane configurations, median opening locations and turn-bay requirements.
- Design Concept Report (DCR) Report will summarize the following discipline reports: Drainage; Traffic; and Bridge Structure Selection Report.
- Roadway design will follow December 2003 PCDOT Roadway Design Manual (RDM).

Drainage

- The most prominent drainage feature is the Rillito River which crosses La Cholla about 800 feet south of River Road. HDR will model the river using Pima County's HEC-RAS model.
- A 404 Clean Water Act Section Permit from the USACOE will likely be required. Not sure if it will be a nationwide permit or an individual permit.
- A major storm drain was installed in La Cholla Blvd from Ruthrauff to the Rillito River in 1984. It outfalls into the river on the southwest side of the bridge. The outfall may need to be re-built to accommodate the lowering of the pedestrian path if it is determined to be needed to provide clearance under the new bridge.
- The subdivisions to the east are drained with grated catch basins across the roadways at the intersections with La Cholla.
- There are two ponding/flooding problems on La Cholla at Noreen Street and Calle Narcisco. Both of these problems will be fixed with this project.
- The open channel along the west side of La Cholla north of Curtis will be investigated and possibly replaced with a box or pipe culver.

Right of Way

- Most of the corridor has 150' of right-of-way...existing right-of-way plans are being prepared.
- It will be tight to fit 6 lanes into the 150' right-of-way. We will look at design alternatives.
- Most of the native plants have been removed from the right of way over the years.
- Many property owners have been utilizing the right of way for car and truck parking, which will need to change with the new roadway.

Utilities

• Utility base maps will be compiled from survey/as-builts, and then confirmed with franchises. Existing utilities are Pima County Wastewater, Xspedius Communications, Southwest Gas, Tucson Electric Power, Tucson Water, Qwest, Comcast, SDT, and Metro Water.

La Cholla Boulevard, Ruthrauff Road to River Road Project Features

August 7, 2007

La Cholla Boulevard Utilities:

- 6" and 12" water
- 8" and 10" sanitary sewer
- 4" gas (crosses upstream of the Rillito River Bridge)
- Telephone (on bridge in 4" PVC)
- Overhead electric (including 46 Kv on Steel Poles)

Ruthrauff Road:

- 8", 12" and 16" water
- 15" sanitary sewer
- 4" gas
- Telephone
- Cable T.V.

Environmental/Public Involvement (Ted & Renee)

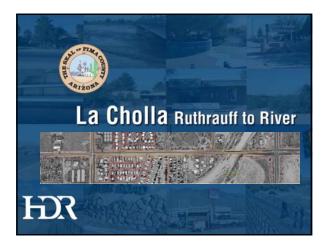
- The Community Advisory Committee will review and provide input on the Environmental Assessment and Mitigation Report (EAMR).
- Open Houses and Public Meetings will be held in accordance with Pima County requirements.
- Environmental Assessment and Mitigation Report per County requirements; Environmental Assessment per federal requirements.
- Environmental Discipline reports will include: Cultural Resources; Biological Evaluation; Native Plant Preservation Plan; Noise Study and Hazardous Materials
- USACOE Permit applications will be prepared.

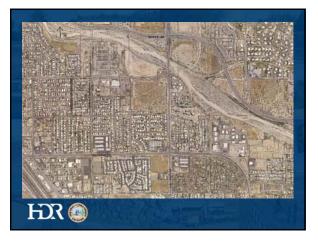
Rillito River Bridge

- Existing bridge was built in 1980 and has been determined to be scour critical. It will be removed.
- It is expected that the new bridge will accommodate 6 lanes of traffic and will include a raised median, bike lanes and sidewalk.
- Bridge will likely have three spans instead of four to avoid conflicts with the existing steel piles.

Public Art

- The Tucson Pima Arts Council has selected an artist to create public art to enhance the transportation improvements on this project.
- It has yet to be determined what type of art will be developed.



















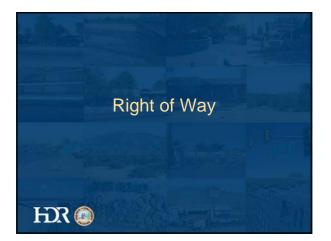














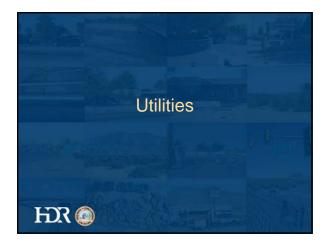




















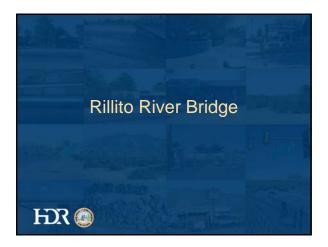


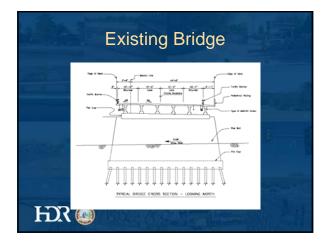


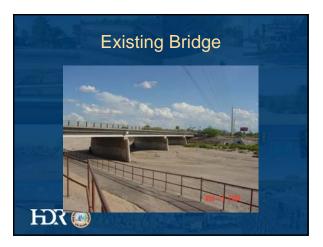


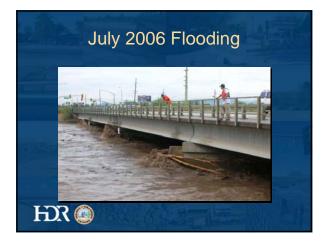


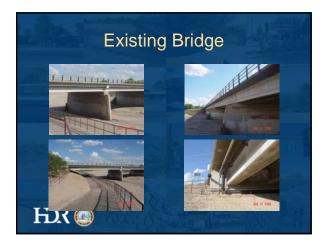


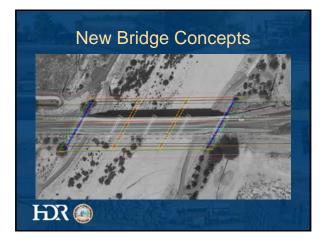


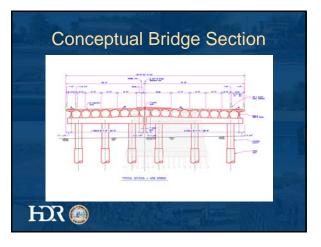


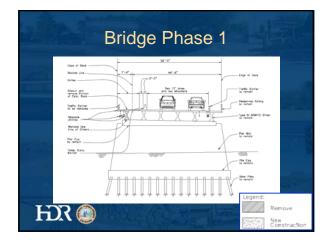


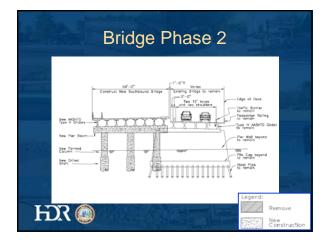


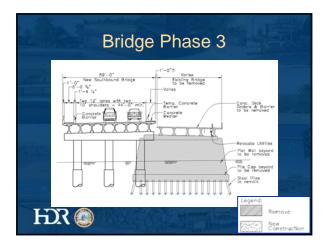


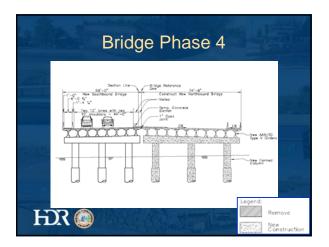


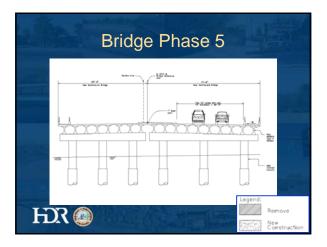




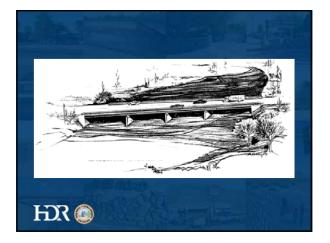




















PIMA COUNTY DEPARTMENT OF TRANSPORTATION 201 NORTH STONE AVENUE, THIRD FLOOR TUCSON, ARIZONA 85701-1207



(520) 740-6410 FAX (520) 740-6439

PRISCILLA S. CORNELIO, P. E. DIRECTOR

September 24, 2007

Re: La Cholla Boulevard: Ruthrauff Road to River Road Community Advisory Meeting (CAC)

Dear CAC Members:

The Pima County Department of Transportation will be hosting a Community Advisory Committee (CAC) meeting for the La Cholla Boulevard Ruthrauff Road to River Road improvement project.

The meeting will be held on Tuesday, October 2, 2007 from 6:00 - 7:30pm at the Natural Resources Parks and Recreations Building, 3500 W. River Road

Enclosed you will find a copy of the meeting minutes from our August 7th meeting. If you are unable to attend this meeting, please call our office so that we can make arrangement to send you any information that you will need.

If you have questions regarding the meeting, please contact me at (520)740-6410 or e-mail Carol.Brichta@dot.pima.gov.

Sincerely,

hta

Carol Brichta, Community Relations, Program Coordinator

c: Annabelle Quihuis - Community Relations Manager Dean Papajohn, Project Manager



La Cholla Boulevard: Ruthrauff Road to River Road Community Advisory Committee Meeting



Community Advisory Committee (CAC) Tuesday, Oct. 2, 2007, 6 to 7:30 p.m.

CAC Members Present at Meeting:

- Humbert Arce
- Fred Bass
- Ellen Clark
- Ann Girvin
- Andy Hernandez
- Norma Metz
- Wayne Metz
- Robert Schwartz
- Ellie Towne

CAC Members Not in Attendance:

- Carol Gawrychowski
- William Mattausch
- Gretchen Ochoa
- Kaye Swinford
- Ian Stewart

Attending from Project Team:

- Pima County Department of Transportation (PCDOT): Carol Brichta, Rick Ellis, John McManus, Dean Papajohn
- HDR Engineering: Larry Barela, Bob Brittain, Ted Buell, René Tanner
- Pima County District 3 Representative: Kiki Navarro
- Regional Transportation Authority (RTA): Britton Dornquast
- Gordley Design Group: Barb Alley, Jan Gordley

Materials Distributed:

• Agenda

.

- La Cholla Boulelvard Project contact information bookmark
- Map of Alternative E
- CAC Member individual contact sheet
 - Binder for CAC members:
 - Welcome Letter
 - Project Features
 - Project Area Maps
 - o Pima County Community Participation and Mitigation Ordinance

Dean Papajohn, Project Manager, PCDOT, opened the meeting by welcoming everyone to the second CAC meeting. Dean made a brief statement about what was discussed at the previous CAC meeting and again stated to the group that this project is being done to "enhance life in Pima County." The purpose of this meeting was to focus on the alignment and potential configuration of the roadway. Dean pointed out the rough draft of Alternative E that Bob Brittain, Design Engineer, HDR Engineering, would be presenting to the group.

Dean asked everyone to introduce themselves to the group. He started with the design team, consultants, then CAC members.

The first speaker was Carol Brichta, Community Relations Department, PCDOT. Carol briefly touched on the roles and responsibilities of the CAC members, and again, asked for someone to step forward to be chairperson. She stated that the chairperson or chairpersons would be the point of contact when it came time to write the letter summarizing their opinions regarding the Environmental Assessment and Mitigation Report (EAMR). Carol stated that it is helpful to have one person as the point of contact in this process and she would offer her assistance. Her presentation ended with no one volunteering for the open position.

Dean gave a brief overview of the project. He stated there are many disciplines in the design of a roadway including but not limited to, traffic, landscaping, art and bridge design. Dean went on to talk about the five key criteria of this project. They are: 1) safety, 2) function, 3) right-of-way, 4) aesthetics, and 5) budget and schedule. They are described as follows:

Safety: This includes drivers, pedestrians, buses and cyclists.

- a. Adequate timing for traffic flow and pedestrian crossings
- b. Sidewalks safe passage for pedestrians
- c. Paved shoulder safe riding for cyclists
- d. Driveway access safe entrance and exit Options include:
 - 1. Dedicated lane for entrance and exit into driveways
 - 2. Frontage roads: Two-way frontage road on one side or one-way frontage roads on both sides
- e. Medians
- f. Bus pullouts
- g. Storage lanes cueing up for turns
- h. Adequate sight distance
- i. Bridge safety

Function: The operations of the project.

- a. Looking at traffic needs current and future traffic patterns
- b. Turn movements off of La Cholla Boulevard onto cross streets
- c. Adequate lane width
- d. Accommodation of multiple users
- e. Median openings to access cross streets
- f. Frontage roads reducing friction of vehicles entering the mainline
- g. Utilities maintaining access to them
- h. Drainage

- a. Limit property easements
- b. Limit property acquisitions leave property owners where they are

Aesthetics

- a. Landscape design (currently limited from River Road to Ruthrauff Road)
- b. Urban design/public art (will go into detail at future meeting)
- c. Bridge modern design, clean lines
- d. Roadway profile- smooth design (rubberized asphalt for noise control)

Budget and Schedule – funded by the RTA and Pima County

- a. The public voted for the RTA La Cholla Boulevard project and its budget
- b. Limit acquisitions due to budget constraints
- c. Bridge careful where placed keep away from utilities

Dean commented that the main goal of this meeting was to discuss alignment, roadway and planning. All the options need to be researched so that a balance can be found and the team can move forward according to the schedule. This is important in order for this project to stay on course and on its projected time line.

Questions:

Ellen Clark: With the occasional high water in the Rillito, is there a way to deepen the riverbed or elevate the bridge?

Dean Papajohn: Those issues will be researched and addressed when the design is being done on the new bridge

Ted Buell: The girders are one foot above the 100-year flood level currently; however, they will be looking into options when reconstructing the bridge.

Ellen: There is a lot of debris in the riverbed. What can be done about that? Carol Brichta: That is a separate issue and an order can be placed with the county to have that area cleaned up.

Ellen Clark: Is there anything planned for Curtis Road like bike lanes? Dean: Curtis Road is not a part of this project.

Bob Brittain talked about Alternative E, which is the leading option for La Cholla Boulevard. He distributed a small version of the display map. Ann Girvin asked whether the traffic study had been done prior to the closing of the exit and entrance ramps on Interstate 10. Bob stated that the study is done mostly on projected traffic patterns into the year 2030. [Note: current traffic volumes were collected in Spring 2007 before school was out for the summer.] While current traffic patterns are observed, the overall study is over a 23-year period. Bob went into detail on what the map showed and the points are as follows:

- a. Lanes would be narrowed one foot from 12 feet to 11 feet this still meets lane width standards
- b. The median has been reduced two feet from 20 feet to 18 feet from the County standard detail.
- c. There will be double left turn lanes at Ruthrauff Road they would be as long as possible
- d. There will be left turn median openings at Jay Avenue and northbound Calle Narcisco
- e. Ruthrauff Road will need to be widened at the intersection

- f. South of Ruthrauff Road the lanes would be narrowed down to tie back in with the three lane section heading south
- g. Sidewalks would be included on both sides of the road through the entire project at a width of five feet

A study will be done, if the time comes that cars cannot turn through traffic from the left turn bays onto cross streets, to see if a light is warranted.

Fred Bass: What about the bus stops? Will there be pullouts in order to get the buses out of traffic? Bob: Stated that it was not shown in these preliminary drawings to have pullouts; however he felt there was enough room to put them in.

There was some discussion about just how close the sidewalks would come to resident's front doors. [Note: There is approximately 25' from the back of sidewalk to most front doors on the west side.] There was also discussion about the single, one-way frontage road. Residents would have to U-turn in order to get back to their homes. There was concern about the lack of visitor parking on La Cholla Boulevard on the frontage road, and there was also a comment about enhancing everyone's life by this improvement project except the people who live along the project area.

Dean stated that they will try to balance all the elements and that maybe a stake survey should be done for each resident to show the right-of-way so each resident can see where their property lines are and where the project would begin. [Note: pink whiskers were placed in the ground on the east and west side right-of-way lines on Oct. 8.]

Ellie: Where will the center line of the roadway be?

Bob: The center line will not change. The improvements will be added out from the original roadway's center.

Fred: What will happen to the noise level as the road moves closer to the houses?

Rick Ellis: The roadway paving material will be rubberized asphalt to help reduce the noise in the area.

Dean asked the CAC members to go around the table and make any comments they wanted so that each member had a chance to voice their concerns.

Andy Hernandez: It sounds like a sound plan – some issues, but we are in the planning stage. There will need to be more discussions and there will be time to keep talking.

Ellen: Since there will be two years prior to construction, there is time to discuss other options. Dean: They can study the alignment; however, the more time the process takes with the public, the further the project is pushed out, leading to increased costs.

Norma: There is a two-year time frame before construction will begin on the roadway.

Fred: I would like to see all the affected properties taken by the county so that the construction can take place without impacting anyone as described; however, I understand budget concerns.

Ann: She has concerns about the current condition of the bridge.

Fred: Asked about the total cost of the project.

Dean: The total cost of construction is approximately 17 million dollars. The bridge will be made mainly of concrete, which is very expensive and has gone up in price since the original estimates. In order to

purchase property in the project area, several million dollars would be needed around the order of magnitude of three to five million dollars.

Humbert Arce: What is going in on the corner of La Cholla Boulevard and Ruthrauff Road? Dean: There is a WalMart Market store going in at that corner.

Dean went over briefly what he heard the CAC members saying about the proposed Alternative E: positive reaction to additional lanes, wider bridge, turn lanes and lighting at intersections, sidewalk and bike lanes; concerns over proximity of residences that front La Cholla Boulevard. He stated that is was important for everyone to be on the same page during this process; the process is a collaboration between the County, consultants, and citizens. He thought it would be best for the members to meet back in a week or two. This would give the team a chance to discuss some possible changes and the CAC members will get a chance to see what their neighbors have to say about the proposed improvements.

A meeting date of October 9, 2007 was agreed upon and Carol stated she would check on the availability of the room and notify everyone to confirm the date.



La Cholla Boulevard: Ruthruaff Road to River Road



Agenda

Community Advisory Committee (CAC) Meeting Tuesday, October 2, 2007 6-7:30 p.m. Pima County Department of Natural Resources Parks and Recreation

La Cholla Boulevard: Ruthrauff Road to River Road

1. Welcome and Introductions (Dean Papajohn)	6:00 pm to 6:10 pm
2. CAC Participation(Carol Brichta)	6:10 pm to 6:20 pm
 3. Design Criteria (Dean Papajohn) Safety Function ROW Aesthetics Budget and Schedule 	6:20 pm to 6:40 pm
4. Roadway Alignment (Bob Brittain)	6:40 pm to 7:00 pm
5. Discussion (Dean Papajohn)	7:00 pm to 7:25 pm
6. Future Meetings (Dean Papajohn)• CAC• Open house	7:25 pm to 7:30 pm



Project Information 740-6410

www.roadprojects.pima.gov



La Cholla Boulevard River Road to Ruthrauff Road



Pima County Department of Transportation Community Relations Annabelle Quihuis Carol Brichta 740-6410

La Cholla Boulevard: River R d to Ruthrauff Road



Community Advisory Committee (CAC) Meeting Sign-In Sheet Tuesday, October 2, 2007



Initial	Name	Agency and Address		E-mail
	Ann Girvin	2440 W. Chris Oliver Way Tucson, AZ 85705	Phone 520-730-2920 Fax	ann@holualoa.com
	Andy Hernandez	4655 N. Courtney Dr. Tucson, AZ 85705	Phone 520-861-6741-0 Fax 520-293-830Z	A A V3044 COC. Com
	Jason Kai	2305 W. Ruthrauff Road Tucson, AZ 85705	Phone 602-402-5451 Fax 888-0642	jasonukai@yahoo.com
	William Mattausch	2472 W. Kimberly Place Tucson, AZ 85705	Phone Fax	
	Wayne and/or Norma Metz Wayn J Norma	4901 N. La Cholla Blvd. Tucson, AZ 85705	Phone 520-887-0553 Fax	norma.metz@msn.com
	Gretchen Ochoa	2015 W. Ruthrauff Road #163 Tucson, AZ 85705	Phone Fax	

La Cholla Boulevard: River R d to Ruthrauff Road



Community Advisory Committee (CAC) Meeting Sign-In Sheet Tuesday, October 2, 2007



Initial	Name	Agency and Address		E-mail
	Robert Schwartz Achurt	7898 N. Ancient Indian Drive Tucson, AZ 85718	Phone 520-444-5005 Fax	
	Ian Stewart	2446 W. Rav River Road Tucson, AZ 85705	Phone Fax	
	Kaye Swinford	2430 W. Golda Place Tucson, AZ 85705	Phone Fax	
A	Ellie Towne	Flowing Wells Neighborhood Association P.o. Box 5141 Tucson, AZ 85703	Phone 888-2085 Fax	towebaz@msn.com
	Juergen and/or Edythe Walther	2242 W. Calle Comodo Tucson, AZ 85705	Phone Fax	





Initial	Name	Agency and Address	\checkmark	520-	E-mail
	Humbert Arce	1923 W. Alder Grove Dr. Tucson, AZ 85704	Phone _c Fax	293-3156 Same	
	Bonny Bass	2101 W Calle Narciso Tucson, AZ 85705	Phone Fax	293-6841	
SCH	Fred Bass	2101 W. Calle Narciso Tucson, AZ 85705		407-3767 407-3768	fred.bass@wwm.pima.gov
	Ted Buell TWB	HDR Engineering 5210 E Williams Cir Ste 530 Tucson, AZ 85711		584-3600 584-3632	ted.buell@hdrinc.com
	Ellen Clark - Alon Qord	2465 W. Diamond Street Tucson, AZ 85705	Phone Fax	520-293-7769	
	Carol Gawrychowski	4721 N. Warner Terrace Tucson, AZ 85705	Phone Fax		



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Trai	isport	tation	
Auth	ority	Str. Aleriana	

Initial	Name	Agency and Address		E-mail
	Kiki Navarno	District 3- Sharon Bronson 130 W. Congress 1Hn Ft. 85701	Phone 740 8051 Fax	district 3@ Pimas gov
	Britton Dorr	iguast - RTA.	Phone Fax	
			Phone Fax	



La Cholla Boulevard: Ruthruaff Road to River Road



Agenda

Community Advisory Committee (CAC) Meeting #3 Tuesday, October 9, 2007 6-7:30 p.m. Pima County Department of Natural Resources Parks and Recreation

La Cholla Boulevard: Ruthrauff Road to River Road

1. Welcome and Introductions (Dean Papajohn)

6:00 pm to 6:10 pm

6:10 pm to 6:20 pm

- 2. Project Update (Ted Buell)
 - Activities completed and on-going
 - Activities dependent on roadway alignment
- 3. CAC Feedback from Neighbors (CAC, Dean Papajohn, Bob Brittain, Ted Buell)
 - Ordinance: 10.56.030 General Considerations and 10.56.220 CAC Review
 - Design criteria: Safety, Function, ROW, Aesthetics, Budget and Schedule
 - Summarize design needs
 - Discussion

6:10 pm to 6:55 pm

4. Future Meetings (Dean Papajohn)

6:55 pm to 7:00 pm

- CAC
- Open house



La Cholla Boulevard: Ruthrauff Road to River Road Community Advisory Committee Meeting



Community Advisory Committee (CAC) Tuesday, Oct. 9, 2007, 6 to 7:30 p.m.

CAC Members Present at Meeting:

- Humbert Arce
- Fred Bass
- Ann Girvin
- Norma Metz
- Wayne Metz
- Ellie Towne

CAC Members Not in Attendance:

- Ellen Clark
- Carol Gawrychowski
- Andy Hernandez
- Jason Kai
- William Mattausch
- Gretchen Ochoa
- Kaye Swinford
- Ian Stewart
- Robert Schwartz

Attending from Project Team:

- Pima County Department of Transportation (PCDOT): Carol Brichta, Rick Ellis, Dean Papajohn
- Pima County Department of Public Works; Real Property: Greg Foster, Kelley Hall
- HDR Engineering: Larry Barela, Bob Brittain, Ted Buell
- Kimley-Horn and Associates: Mary Rodin
- Gordley Design Group: Barb Alley, Jan Gordley

Materials Distributed:

- Agenda
- Map with Alternative E
- CAC Member individual contact sheet
 - Binder for CAC members:
 - Welcome Letter
 - Project Features
 - Project Area Maps
 - o Pima County Community Participation and Mitigation Ordinance

Dean Papajohn, Project Manager, PCDOT welcomed the CAC members and the public to the meeting. He stated that this meeting was being held as a follow-up to the previous week's meeting and the format would be a round table discussion rather than a presentation. The team members, CAC members, and the public made introductions.

Ted Buell, Project Manager, HDR Engineering, gave a brief update on the status of the project. The following tasks have been completed or are in progress:

- Mapping and surveys on adjacent properties along the project corridor
- Testing for hazardous materials
- Utility mapping
- Traffic reports
- Noise monitoring (monitoring the existing noise levels)
- Roadway alignment study
- Drainage
- Bridge research

Ted stated that a draft of the Design Concept Report (DCR) would include the information from these tasks.

There are several activities dependent on roadway alignment according to Ted, and they are as follows, along with the timeframe that has been planned for these activities to take place:

- Roadway alignment as soon as possible
- Open house to present the alignment to the public about a month after an alignment has been identified
- Environmental Assessment and Mitigation Report (EAMR) drafted by February 2008
- Soil testing for the bridge and roadway targeted for February 2008
- Roadway plans for design and elevation end of 2009 or January 2010

Dean stated that choosing an alignment is critical for this project to be able to move forward.

Dean went on to talk about the positives that the team heard from CAC members at the Oct. 2, 2007 meeting. He stated that he heard the CAC members liked proposed sidewalks, bus pullouts, turn lanes, median openings and bridge improvement. The area of concern seemed to be the approximate 1,000-foot stretch where homes are adjacent to the widening project. Dean stated he had wanted the CAC members to have time to think about the proposed alignment for a while and have a chance to talk with neighbors to get their input on Alignment E, the proposed alignment.

Dean asked Carol to comment on the debris in the Rillito River that was a concern brought up by some CAC members from the previous meeting. Carol stated that she needed to know the specific area and the debris that needs to be cleaned up, and then she would contact the Pima County Flood Control District. They would send out a representative from their department to survey the area and put in a request for cleanup. She asked that the CAC members approach her after the meeting, so that she could take down the information and start the process.

Mary Rodin, Traffic Planner, Kimley-Horn and Associates, gave a brief report of the traffic study. She stated that the report was based on traffic forecasts for the year 2030, which were obtained from the Pima Association of Governments (PAG). PAG does travel forecasting for the entire Tucson region. The PAG model, based on the Regional Transportation Plan (RTA), assumes that La Cholla Boulevard would become a major north/south parkway from Tangerine Road south to Interstate 10 (I-10). The I-10 connection would be made using Ruthrauff Road.

Dean pointed out that in the Community Participation and Mitigation Ordinance there is a section that states the project must follow the PAG model. The design team is doing its best to balance the guidelines set forth by PAG with the County and team's ideas with input from CAC members.

Questions were brought up regarding funding, and Dean stated that there were no additional funds for this project. The 17 million dollars that was budgeted for this project is what the team has to work with.

Dean also stated that he had pictures to pass around that showed the Right-Of-Way (ROW) lines staked by whiskers (a pink fuzzy on the top of a stake driven into the ground). Since the CAC members wanted to know exactly where the ROW lines were in relation to their property, the team felt the ROW being staked for the affected properties along the project area would be beneficial to the homeowners.

Dean opened up the discussion to the CAC members for their comments, and then expressed the desire to hear comments from the public that came to share their thoughts and ideas.

Fred Bass requested hearing the other options that were not presented.

Bob Brittain, HDR Engineering, gave a brief overview of the alternatives that were not discussed at earlier meetings. They are as follows:

Alternative A: Buys the adjacent residential properties on the east side of the road, portions of some business properties and shifts the roadway to the east

Pro – this option allows for a 30-foot wide two-way frontage road, potential noise wall and extra room on the west side of La Cholla Boulevard, and a 16-foot median

Con – the cost to purchase these properties would involve an additional cost of 4.3 million dollars or more

Alternative B: Buys the adjacent residential properties on the west side of the road and moves the roadway to the west

Pro - same as option A - except the extra room would be on the east side of La Cholla Boulevard Con - the cost to purchase these properties would involve an additional cost of 3.6 million dollars or more. The number of properties needed to buy on this side would be less than on Alternative A. Also, this option would have to take the existing well and move it (It can only move within 500 feet of its existing site).

Alternative C: Instead of a frontage road, this option would simply add an additional lane to the roadway for residents to turn directly in and out of their homes

Pro – none

Con - not considered a safe option if vehicles back out onto La Cholla

Alternative D: Buys residences only on both sides that have driveways directly on La Cholla Boulevard and widens the road from its existing center line

Pro – roadway centerline can remain in the center of the existing right-of-way

Con – still expensive at a cost of 3.6 million dollars or more that is not in the budget

Alternative F: Buys every other residential property in order to have room to put circular drives in at the homes that are left; this will allow for those residents to safely exit and enter their properties off La Cholla Boulevard without a frontage road

Pro - safe access, reduces number of residences to purchase

Con – additional budget still required; every other property would be County-owned; question remains as to who would maintain that property.

Bob briefly went over Alternative E – Not purchasing any property. City of Tucson well site is not disturbed. This option provides adequate lane width of 11 feet and median width of 18 feet, one-lane frontage roads and allows for safe access to residences.

Humbert Arce: Which alternative is more schedule-friendly?

Bob stated that they all have their issues, so they all involve about the same time frame. Those alternatives that would require purchasing property could potentially take a little longer due to the acquisition process.

Dean made the statement that the RTA's plan was for a six-lane roadway, which was voted on, and the six lanes are what are needed for future growth in the area. He also said that acquisitions on this project were not possible due to the budget constraints.

Some of the CAC members and others in attendance were concerned about the noise, reduced speed needed for six lanes of traffic and the safety of children playing in their front yards so close to the road, and the loss of parking; residents are currently using the street in front of their homes and that will no longer be available. The team stated that the noise would be buffered by the fact that the frontage road would be between the homes and the throughway. It was also stated that René Tanner, HDR Engineering, would be reporting at a future meeting on the noise study and the reduction of noise by using rubberized asphalt.

The other concerns brought up by the CAC members had to do with the socioeconomic status of the residents in the project area. The CAC members feel that because they are at a lower income level than those on some of the other County projects, the decision makers at upper levels in the County are not hearing their concerns. The CAC members feel that the County set precedents because they have purchased homes throughout the County on other projects – but it was not provided for in the budget for this project. The CAC members are also concerned about the safety of children crossing La Cholla Boulevard from the middle school.

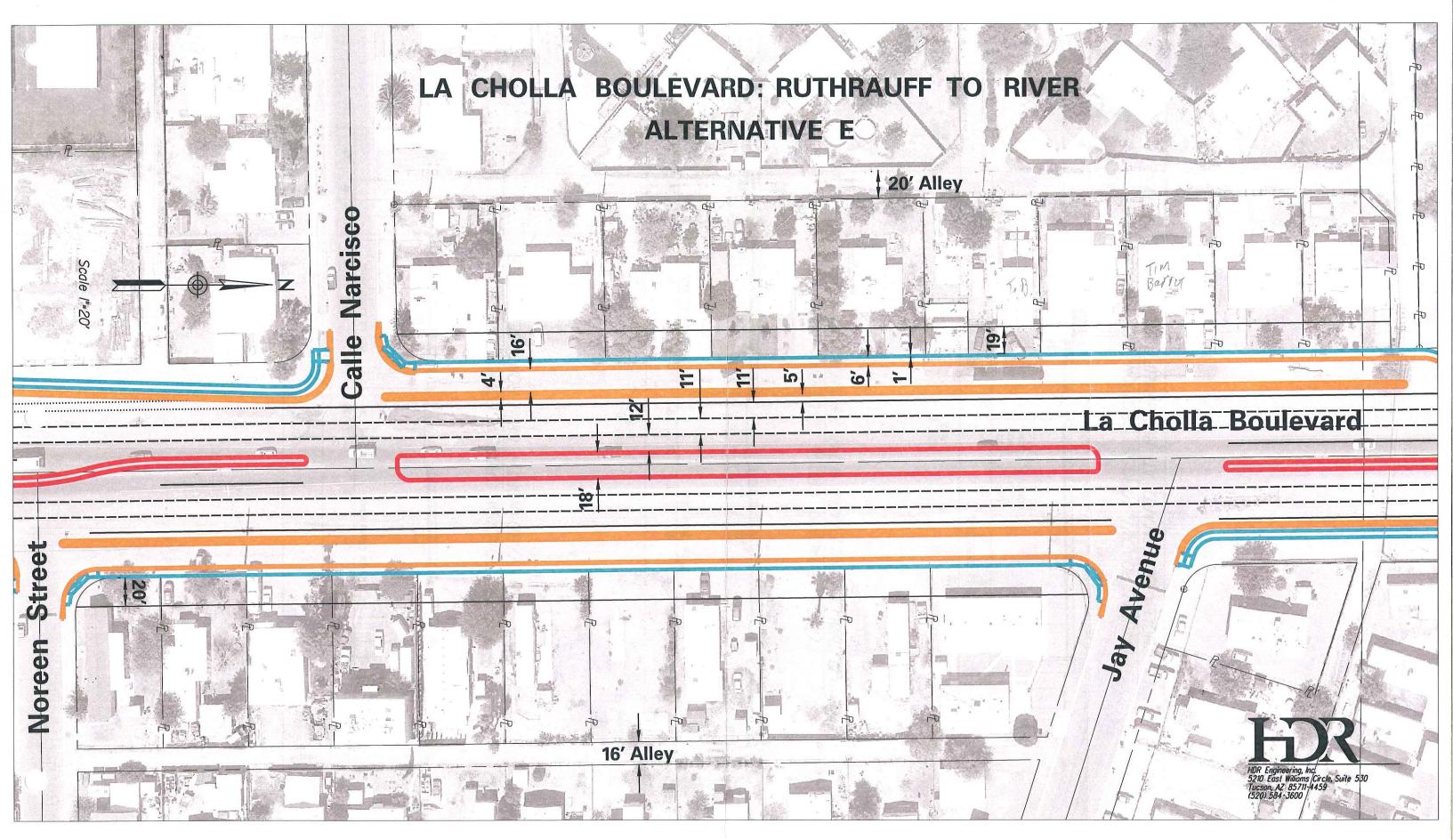
Dean suggested that if the CAC members wish to communicate their concerns to others at a higher level in the County, they could draft a letter, outlining their concerns, which he could present to his superiors. The CAC members agreed that would be a good idea.

The issues brought up by the public were as follows:

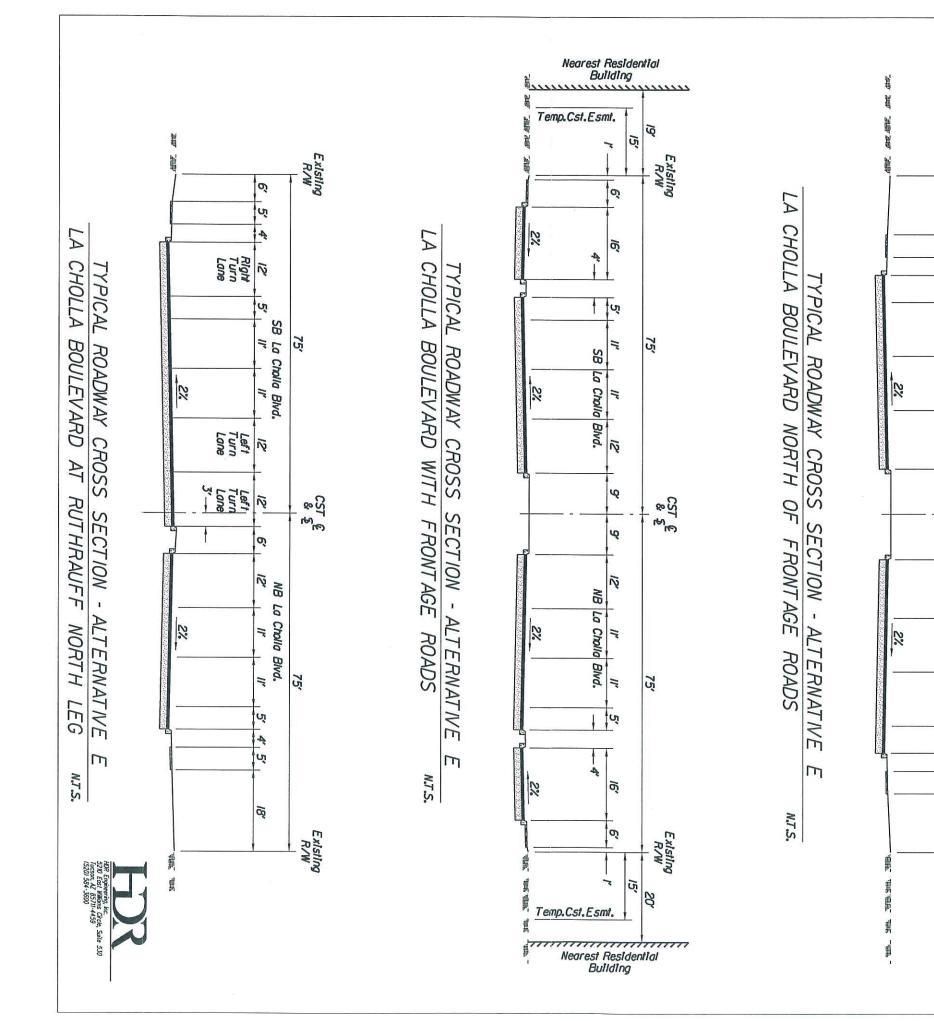
- Why were they not told of these proposed plans? The team stated that this project has been talked about for many years, has been of public record and had been voted on by the public.
- The bridge was not widened as originally planned because funds were shifted to other projects. The team stated that the County is no longer operating in that manner, and funds allocated for a project will stay for that project and within the budget that was set forth.

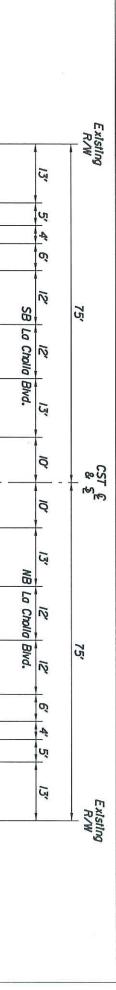
Fred Bass was chosen as the chairman for the CAC. The members decided to meet Monday, Oct. 15, 2007 to draft their letter.

Dean adjourned the meeting.



10/1/07 Handout





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PIMA COUNTY DEPARTMENT OF TRANSPORTATION 201 NORTH STONE AVENUE, THIRD FLOOR TUCSON, ARIZONA 85701-1207



PRISCILLA S. CORNELIO, P. E. DIRECTOR

(520) 740-6410 FAX (520) 740-6439

November 23, 2007

Re: La Cholla: River Road to Ruthrauff Road Community Advisory Meeting (CAC)

Dear CAC Members:

The Pima County Department of Transportation will be hosting a Community Advisory Committee (CAC) meeting for the La Cholla: River Road to Ruthrauff Road improvement project.

The meeting will be held on Thursday, December 6, 2007 from 6:00 - 7:30pm at the Ellie Towne Flowing Wells Community Center, 1660 W. Ruthrauff Road.

If you are unable to attend this meeting, please call our office so that we can make arrangements to send you any information that you will need.

If you have questions regarding the meeting, please contact me at (520)740-6410 or e-mail Carol.Brichta@dot.pima.gov.

Sincerely,

Carol Brichta Community Relations Program Coordinator

c: Annabelle Quihuis - Community Relations Manager Dean Pappajohn Project Manager



La Cholla Boulevard: Ruthruaff Road to River Road



Agenda

La Cholla Boulevard: Ruthrauff Road to River Road Community Advisory Committee (CAC) Meeting Thursday Dec. 6, 2007 6-7:30 p.m. Ellie Towne Community Center

6:00 Welcome and Introductions

6:10 Agenda and meeting format

6:15 Committee and community concerns

Previously stated Additional Prioritize

6:45 Discussion regarding CAC concerns

7:15 Project update

7:20 Next Steps

DCR and EAMR Public Involvement: Individuals CAC General Public

7:30 Adjourn meeting

Team will remain for individual questions



La Cholla Boulevard: Ruthrauff Road to River Road Community Advisory Committee Meeting



Community Advisory Committee (CAC) Thursday, Dec. 6, 2007 6:00 to 7:30 p.m. Ellie Towne Flowing Wells Community Center

CAC Members Present at Meeting:

- Fred Bass
- Ellen Currey
- Ann Girvin
- Norma Metz
- Wayne Metz
- Ellie Towne

CAC Members Not in Attendance:

- Carol Gawrychowski
- Andy Hernandez
- Jason Kai
- William Mattausch
- Gretchen Ochoa
- Kaye Swinford
- Ian Stewart
- Robert Schwartz

Attending from Project Team:

- Pima County Department of Transportation (PCDOT): Carol Brichta, Dean Papajohn
- HDR Engineering: Larry Barela, Ted Buell, Bethy McGehee, Scott Stapp, René Tanner
- Gordley Design Group: Barb Alley, Jan Gordley

Attending from the public:

- Timothy & Jamie Barrett
- Bonny Bass
- Marsha Brendlinger
- James Brendlinger
- Bill Erickson
- Norman Franzen
- Robert Gaona
- Marvin Horn
- Steve Schweska

Materials Distributed:

- Agenda
- Fact Sheet
- Travel Demand Volume Data for the project area
- Meeting Minutes from 10/09/07 CAC Meeting

Dean Papajohn, Project Manager, PCDOT, welcomed the CAC members and the public to the meeting. All who attended made introductions and Dean stated that the purpose of this CAC meeting was for the committee members to focus on the aspects of the project and the tasks that the CAC is charged with and responsible for. Dean told the group that the team members would stay after the meeting was adjourned in order to answer individual questions including those from members of the audience. Dean turned the meeting over to Jan Gordley, Gordley Design Group, to review the agenda and facilitate the meeting.

Jan stated the purpose of her facilitating the meeting was so that Dean and the rest of the team could really focus on what the members were saying about the issues and concerns. Prior to the meeting, Jan had checked with Dean and Fred Bass, chair of the CAC, to see what their goals were for the meeting.

In Jan's discussion with Fred, she found that he had three concerns. Those concerns were traffic, noise and drainage. The team was prepared to give an update on those three areas, and to address other concerns the members had.

Jan took this time to go over an exercise that would allow individuals, including the public, to participate and voice their concerns. Categories of concerns were written on white paper and taped to the wall. The categories chosen were based on discussion at the previous CAC meeting, namely: Safety, Noise, Access, Parking, Visual and Other. Each CAC member was given pink paper while the public received blue paper. Each person was given the opportunity to write down their major concerns and tape them on the relevant white concerns paper. After that exercise was complete, the group was given three dots to put on the issues that were most important to the individual. Once this exercise was over, everyone took their seats and Jan went over the results.

Jan asked Ted to speak a few minutes on lane width, which was a concern under safety. Ted Buell, Project Manager, HDR Engineering, stated that the width of the lanes met the requirements of the American Association of State Highway & Transportation Officials (AASHTO), which governs the design of the roadway. The lane width acceptable by AASHTO's standards is 10-12 feet. In this project, the projected lane width would be 11 feet, which is within the guidelines. Fred's issue with the 11-foot lane width relates to the large number of semi tractor-trailers that travel La Cholla Boulevard and Fred feels the 11-foot lanes will be a safety issue. Fred stated that he is aware of the budget constraints and voiced that this stretch of road needed to be built with the safety of drivers and pedestrians in mind. Fred also stated that this area should be widened to match what had been done farther north on La Cholla Boulevard in another widening project. Dean stated that the traffic projections for the year 2030 suggested a pavement cross-section between four and six lanes. Because of this, a six-lane section provides extra space for vehicles resulting in less benefit for 12-foot lanes. La Cholla Boulevard north of River Road has 10-foot wide paved shoulders for bikes. However, the County has learned that vehicles start driving in the shoulders or using it for turn lanes if the shoulders are that wide, which introduces conflicts between bicycle use and motorized vehicle use. The new bike lanes would be limited to five to six feet in order to avoid that problem in the future. At that point, Jan asked to move forward with some other concerns.

Dean commented on safety and asked Ted to talk about a High-intensity Activated crossWalK (HAWK) crossing. This is a crossing signal that is activated when there is a pedestrian present. They push a button that begins a yellow flashing light that turns to a red light so that a pedestrian can cross at the specified location. One of the guidelines for installing a HAWK crossing is 20 pedestrians per hour crossing the street during a peak time of day. Ted stated that to install a HAWK crossing is approximately \$100,000 and if the volume of pedestrians is not what was anticipated, drivers will learn to ignore the crossing, causing another safety issue. Ellie Towne asked when a decision would be made about the crossing and Dean stated that would be determined after the roadway was built. Ellie wondered how pedestrians would cross the street to get to the southbound bus stop. A study would be done to determine what would be best for that area; however, the team could also recommend what they feel would work best. Dean stated that no matter which roadway alignment is chosen for this project, pedestrians would have a safe place to cross the street at the signalized intersections.

Scott Stapp, Environmental Manager, HDR, gave a brief overview of noise and how it is measured. He reviewed some basic noise concepts including dBA – decibels within the range of human hearing, Leq – average sound level and NAC – Noise Abatement Criteria. Scott stated that to require consideration of mitigation with sound barriers, the sound level must be above 66 dBA. Scott explained that up to 66 dBA, people could hold a normal conversation without having to raise their voices. Once above that number, mitigation is generally sought to help reduce the noise level. There are three places where roadway noise comes from: tires hitting the pavement, engine noise and exhaust. Criteria for assessing noise mitigation includes whether it is Feasible in terms of topography, geometry, drainage and safety, whether it is Reasonable in terms of cost per benefited receiver and if it is wanted by the affected property owners.

In Scott's presentation, he stated that landscaping was not enough to substantially lessen noise levels and noise walls only work where drainage, safety (sight distances) and continuous walls are provided. When a wall is not continuous (i.e. breaks in a wall to allow people access to their driveways), the noise will enter through the opening and render the wall ineffective. The best method of lowering noise in this situation is through rubberized asphalt. The increase in noise that may occur through year 2030 due to the increased traffic should not amount to more than three-dBA. A three-dBA reduction is generally allowed when using rubberized asphalt. Scott also let the group know that monitoring of existing noise levels had already been done and a report will be prepared projecting the noise levels to the year 2030. All of the data will be analyzed and a recommendation will be made based on the information that was determined by the noise study. Scott stated that he couldn't move forward with his study until the final alignment and roadway profile are determined.

Ted stated that the traffic report was in draft form and would be completed shortly. He passed out the travel demand numbers so that the committee could see where the volume is now and what the projected numbers would be for 2030. On this section of La Cholla Boulevard, traffic volumes currently range from 23,000-28,000 vehicles per day, with traffic volumes for 2030 predicted at 41,000-44,000 vehicles per day.

Ted and Dean reported on the status of the drainage study letting the members know that drainage goes hand in hand with the design, so that process is on hold until they are able to move forward in the design process.

Jan suggested the members each take a turn to go over their main concerns, one more time, for the team.

Norma Metz: No more comments at that time.

Wayne Metz: Voiced displeasure with Alternative E and wanted the County to look at some of the other alternatives that he feels are a better fit for this improvement project. Wayne feels the county should pick the best option for this project, and if the money isn't available, they should wait until more funds could be allocated.

Fred Bass: The road should be built with the best option for the project.

Ellie Towne: She voiced some concerns about where the residents would have to U-turn safely in order to get on the frontage road to access their homes. Ellie also had a question about the bridge and its height and width.

Ann Girvin: Her comment was to restate that she was not a homeowner and would not be directly affected by the project. However, she voiced her concern for the residents that will be directly affected by the widening of La Cholla Boulevard and stated she would support the decision they felt was right.

Ellen Currey: She stated that she had lived in Pima County since 1969 and wanted to see this project done correctly.

Ted stated that they would take specific questions from the public following the CAC portion of the meeting.

Jan discussed what the CAC's role was in moving this process forward. She reiterated that it was extremely important for anyone who had a concern to write a letter to Pima County so that the County was aware of specific

concerns that either the group or individuals had. Jan let the members know that the public process was important and the County had made a commitment to this project.

Carol Brichta, Community Relations, PCDOT, wrote the contact information for PCDOT's management on a flip chart for members and the public at the meeting to write their letters to Priscilla Cornelio, Transportation Director, PCDOT, 201 N. Stone Ave., Tucson, AZ, 85701, so that she could see their concerns and issues in writing.

Jan indicated the project was ready for a public meeting and that one would be scheduled after the first of the year.

Dean distributed a project fact sheet and the meeting was adjourned.

The team stayed for individual questions and comments from the public as well as CAC members.





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-	TED BUELL	HDR	Phone 584-3632 Fax	
Ţ	ZAN PARAJOHN	PCDOT	Phone 740-6471 Fax	
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1 1	arry Barela	HOR	Phone Fax 584 - 3024	
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		4955 N. La Cholla Blud	Phone 293-3339 Fax 888-5144	
5	34ev <i>e</i> 5chw <i>e</i> 5	4846 NLACHDIA & 4846 , , , , , , , , , , , , , , , , , , ,	Phone Fax	





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	MARSHA BRENDLINGEC	4941 NLa Olpo IIà	Phone	
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	ROBERT V. GAONA	4921 W. C. CHalla	Phone 887-1395- Fax	
			Phone Fax	





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Cue	Ellen Clark	2465 W. Diamond Street Tucson, AZ 85705	Phone 520-293-7769 	
	Carol Gawrychowski	4721 N. Warner Terrace Tucson, AZ 85705	Phone Fax	
000	Ann Girvin	2440 W. Chris Oliver Way Tucson, AZ 85705	Phone 520-730-2920 Fax	ann@holualoa.com
	Andy Hernandez	4655 N. Courtney Dr. Tucson, AZ 85705	Phone 861-6741 	AAH3044@aol.com



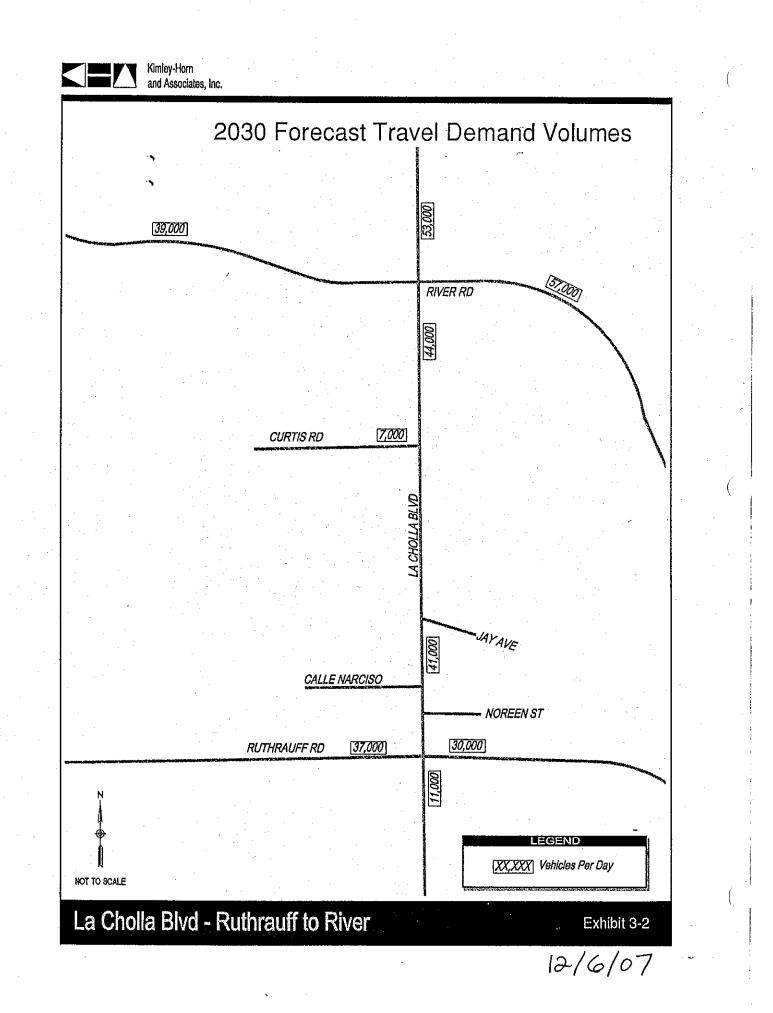


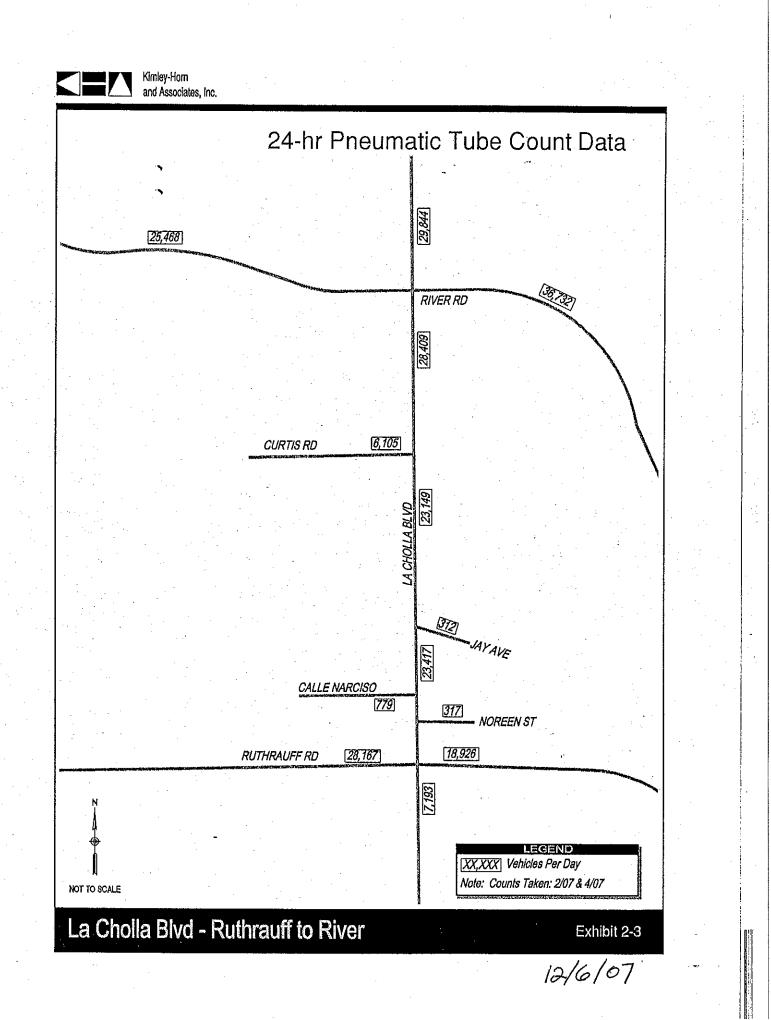
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	Jason Kai	2305 W. Ruthrauff Road Tucson, AZ 85705	Phone 602-402-5451 Fax 888-0642	jasonukai@yahoo.com
	William Mattausch	2472 W. Kimberly Place Tucson, AZ 85705	Phone Fax	
	Wayne and/or Norma Metz Wayne two the	4901 N. La Cholla Blvd. Tucson, AZ 85705	Phone 520-887-0553 Fax	norma.metz@msn.com
	Gretchen Ochoa	2015 W. Ruthrauff Road #163 Tucson, AZ 85705	Phone Fax	
	Robert Schwartz	7898 N. Ancient Indian Drive Tucson, AZ 85718	Phone 520-444-5005 Fax	
	Ian Stewart	2446 W. Rau River Road Tucson, AZ 85705	Phone Fax	





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ef	Ellie Towne	Flowing Wells Neighborhood Association P.o. Box 5141 Tucson, AZ 85703	Phone 888-2085 	towebaz@msn.com







PIMA COUNTY DEPARTMENT OF TRANSPORTATION 201 NORTH STONE AVENUE, THIRD FLOOR TUCSON, ARIZONA 85701-1207



PRISCILLA S. CORNELIO, P. E. DIRECTOR (520) 740-6410 FAX (520) 838-7537

December 7, 2007

Dear Community Advisory Committee for La Cholla:

Pima County appreciates your service on the Community Advisory Committee for the roadway improvement project on La Cholla Boulevard: Ruthrauff Road to River Road. You provide the local perspective that is helpful in identifying needs and wants for this project. Additionally, you have demonstrated your commitment to the project by meeting independently three times since the Oct. CAC meetings.

On Oct. 2 the County presented the recommended roadway alignment for La Cholla Blvd. Due to CAC concerns a follow-up meeting was held Oct. 9. At that meeting the County walked the committee through a number of design alternatives that were developed, but deemed less desirable for not meeting certain criteria. Multiple options were not presented as a menu for the CAC to choose from, but as background information so the CAC could see that the design team had performed due diligence in developing the design amidst competing project needs. During these meetings the CAC expressed a variety of opinions regarding design and alignment. You were asked to put your concerns in writing so that the County could communicate them to the appropriate people within the County and provide a formal response. We informed various people at the County that a written response was forthcoming from the CAC. When a written response was not received it was unclear whether concerns were not as great as first appeared, or if the committee was not in agreement, or if there was something else going on. It was expected that a letter from the CAC would be completed in a couple of weeks. Since two months have passed without receiving written comments, a CAC meeting was held last night to try and facilitate the process. It is apparent that the CAC still has concerns. I strongly encourage the CAC to submit their concerns in writing to Pima County Department of Transportation (DOT). Even if you have not finalized all of your arguments it is important for the County to receive your written feedback at this stage of design. In the meantime, I have informed the director of DOT of your concerns (please see attached memo). County staff continues to collect data to determine the best way to meet as many of the CAC's concerns as possible.

Once again, thank you for serving on this committee. If you have any questions, please let me know.

Regards,

Dean Papajohn, P.E. Project Manager

Encl.



MEMORANDUM



Department of Transportation

DATE: December 7, 2007

TO: Priscilla S. Cornelio, P.E., Director of the Department of Transportation

FROM: Dean Papajohn, P.E., Project Manager

SUBJECT: 4LCITR: La Cholla Blvd.: Ruthrauff Rd. to River Road CAC concerns

This memorandum is to inform you of the concerns that the Community Advisory Committee (CAC) has expressed regarding design of the new roadway on La Cholla Blvd. from Ruthrauff to River. Specifically, concerns revolve around the residences that front La Cholla.

Pima County has met with the CAC four times: Aug. 7, Oct. 2, Oct. 9, and Dec. 6. At this stage of design, the key element is alignment. The recommended alignment was presented to the CAC on Oct. 2. Since concerns were expressed, a follow-up meeting was scheduled Oct. 9 to provide additional information, including a review of alternative alignments that were deemed less desirable by the County. The County's recommended alignment alternative provides one-way access roads for approximately 1000' of the roadway to provide access to residences fronting La Cholla. CAC concerns with this alignment include safety, access, parking, noise, aesthetics, and property value. At the conclusion of the Oct. 9 meeting, the CAC was asked to put their concerns in writing so the County could formally respond to their concerns. It was expected that within a couple of weeks the CAC would submit a letter to the County. The CAC met independently on three separate occasions, but has not submitted a written summary of their concerns. In order to facilitate the process the County held another CAC meeting last night. Similar concerns were expressed last night as were expressed in Oct. The CAC was once again encouraged to submit their concerns in writing, which they said they were preparing to do.

In the meantime, the County has continued to gather design data. A number of local examples were identified where small residential lots are facing major arterial roadways, including: Broadway at Melville, Wilmot at Julia, and Speedway east of Wilmot. Our project team continues to explore ways to maximize benefits in the roadway design. Numerous project activities are on-going, including survey, utility mapping, traffic study, drainage study, environmental surveys, and bridge selection. The County continues to seek ways to meet as many of the expressed concerns of the CAC as possible.

Ultimately, the CAC does not believe the County can provide adequate access to residences on La Cholla, nor adequately mitigate noise in the existing right-of-way. Although AASHTO design standards are being met, the CAC does not feel like meeting these standards will produce the type of quality roadway they expect from Pima County. Therefore they believe the County should buy properties on one side of the road or the other. Please contact me with any question you may have.

Cc: Ana Olivares, Department of Transportation Deputy Director Rick Ellis, Department of Transportation Design Engineering Division Manager BARRY M. DAVIS MICHAEL L. PICCARRETA CARL A. PICCARRETA JEFFERSON KEENAN AMY HERNANDEZ 145 SOUTH SIXTH AVENUE TUCSON, ARIZONA 85701-2007. (520) 622-6900 FAX (520) 622-0521 www.pd-law.com

January 17, 2008

HAND-DELIVERED

Dean Papajohn Civil Engineering Manager Pima County Department of Transportation 201 N. Stone Avenue, 4th Floor Tucson, Arizona 85701

> Re: Community Advisory Committee La Cholla Boulevard, River Road to Ruthrauff Road

Dear Dean:

Enclosed is the original signed CAC letter to the RTA and PCDOT. I am awaiting signatures from Robert Swartz and Ellen Clark and will forward them to you as soon as I have them.

Thank you.

Very truly yours, has MIA Bonny L. Bass

Regional Transportation Authority Pima County Transportation Department

Re: La Cholla Boulevard: Ruthrauff Road to River Road Community Advisory Committee

The Community Advisory Committee (CAC) for the La Cholla Boulevard Improvement Project (4LCITR) would like to thank Pima County and the Regional Transportation Authority for the opportunity to serve and advise on this important project. It is hoped that with the ideas and cooperation of all involved, the citizens of Pima County will benefit from a safe and more efficient corridor in which to travel.

The Regional Transportation Authority (RTA) has several criteria to be considered in the design of La Cholla Boulevard improvement. These consist of: Safety, Budget, Function, Right of Way, Aesthetics and Schedule. The PCDOT studied several alignment alternatives and recommends alignment alternative E to the CAC. The CAC believes other alignment alternatives are preferable to alternative E.

The CAC would like to discuss each alternative beginning with their recommended Alternative, Alternative B.

I. <u>ALTERNATIVE B</u>:

Alternative B requires the purchase of the property on the west side of La Cholla Boulevard. This alternative is the recommended option of the CAC. In support of their recommendation, the CAC believes the benefits of Alternative B include, but are not limited to:

- 1. Alternative B would allow the travel lanes, bike paths and sidewalks to remain consistent with the widening project of La Cholla Boulevard north, River Road to Omar Road. The width of the travel lanes would be consistent with safe and efficient flow of traffic, bicycles and pedestrians as proven by the existing design of other road improvement projects including the La Cholla widening project, River to Omar Roads; Wetmore Road widening project between Fairview and Romero Roads, the Wetmore/Ruthrauff widening project between Romero and La Cholla Boulevard.
- Alternative B allows for improved safety precautions to be designed into the intersection of La Cholla Boulevard and Ruthrauff Roads for children walking to

> nearby elementary and junior high schools, including marked pedestrian crossings and additional room between the existing roadway and the pedestrian sidewalks.

- Alternative B allows for public transportation bus pull-outs, permitting more efficient vehicular travel.
- 4. Alternative B allows for additional crosswalks to public transportation bus stops for both existing north and southbound bus stops. Right now, pedestrians are running across traffic to catch their bus. A Hawk Light should be installed for safe crossing of pedestrians at the bus stops.
- 5. Alternative B eliminates the right of way issues for homes on both sides of La Cholla Boulevard. The CAC recommends moving the proposed roadway to the west after the acquisition of property. This would allow additional room for a two way street on the east side of La Cholla Boulevard for homeowners to access their property.
- The CAC suggests in addition to Alternative B, a 10 foot masonry wall sound barrier be installed on the west side of La Cholla Boulevard for noise abatement.
- The CAC would suggest in addition to Alternative B, a 10 foot masonry wall sound barrier be installed on the east side of La Cholla Boulevard for noise abatement.
- 8. Alternative B would allow for a two way side street to the east of the 10 foot masonry wall sound barrier on the east side of La Cholla Boulevard. This would allow a safe, convenient right of way for residents on the east side of La Cholla from all directions. This design would be consistent with the design of the River Road widening project from La Canada to Oracle Road on the south side of the road.
- Alternative B allows more room for improved aesthetics such as landscaping and artwork so as to comply with Federal law which mandates that part of the budget be used for artwork and landscaping.
- Alternative B allows more room for wider, safer sidewalks and pedestrian pathways for children walking to the nearby junior high and elementary schools, bus stops and businesses in the area.

- This alternative would allow the County to own the property surrounding the existing well located on the west side of La Cholla Boulevard, allowing safe efficient access to the well for maintenance and upkeep.
- 12. By reducing the likelihood of potential lawsuits for inverse condemnation, this alternative would allow the efficient scheduling of the project.
- 13. This alternative substantially reduces the liability potential to Pima County for roadway design defects.

The CAC recommends Alternative B as it requires less acquisition of properties, would affect fewer households and businesses at a greatly reduced cost over Alternative A.

II. <u>ALTERNATIVE A</u>:

Alternative A requires the purchase of the properties on the east side of La Cholla. This alternative has basically the same benefits as listed in Section I above. However, this alternative is considerably more expensive budget wise, and includes the acquisition of a greater number of residential and business properties, displacing significantly more people than Alternative B.

III. <u>ALTERNATIVE E</u>:

This CAC finds alternative E to be unacceptable for a number of reasons. Although this alternative is the least expensive, the CAC contends that it does not meet any of the other criteria necessary for approval of the project: safety, function, right of way, aesthetics and schedule. Allow us to explain.

- By using the existing right of way, the DOT proposes to significantly reduce the width of the travel lanes, bike paths and sidewalks, thereby constricting the safe and efficient flow of travel for trucks, public transportation, school buses, vehicles, bicycles and pedestrians.
- Of immediate concern for safety, reducing the width of travel lanes decreases the margin of error for traffic to avoid accidents and could compound its devastation by possibly ending in someone's front yard or worse, their house.

- The bike path will also be narrowed suffering the fate of once again reducing the margin of error.
- By not engineering out safety hazards, Pima County leaves itself open for potential lawsuits for negligent design of the roadway, bike path and pedestrian walkways.
- 5. The right of way to the houses situated on either side of La Cholla Boulevard is unsafe and unacceptable. Homeowners on either side La Cholla will be forced to make unsafe u-turns on a busy street in order to enter the "one way" side streets to access their property.
- 6. No U-turns are permitted at River Road & La Cholla. The CAC believes that conditions will exist requiring same at Curtis & La Cholla and Ruthrauff & La Cholla. This will require homeowners to take extensive alternative routes in order to access the one-way right of way to their homes.
- 7. This proposal will leave homeowners on either side of La Cholla Boulevard with issues regarding parking and right of way for any guests or family who come to visit them at their homes. The proposed 11 foot one way road does not leave room for any curbside parking.
- Further, the proposed 11 foot one way road along the homes on either side of La Cholla Boulevard does not allow room enough for larger trucks and vehicles to turn into the resident driveways.
- The suggestion to use the utility easements for access to homes is not allowed. Utility easements are not to be used for ingress and egress.
- 10. The noise level to the surrounding neighborhood, and especially the houses on the street itself, will be unacceptable. The noise abatement efforts suggested will be insufficient to properly address the livability within the households and their adjacent yards.
- 11. Aesthetics: with alternative E, there are none. It could viewed that since this is considered a lower income neighborhood, that the same provisions provided to the neighborhoods up north of River Road, perceived to be of a higher income, were not considered, i.e., sound barriers, etc. Further, it does not meet the criteria for Federal

funding which mandates a portion of the funding be used for artwork and landscaping.

In addition to its other shortcomings, Alternative E would impose adverse effects upon the houses situated on either side of La Cholla Boulevard and the surrounding neighborhoods. The inhabitability created by the road noise, air quality, access and safety issues, would greatly increase potential for lawsuit and could delay the schedule by years, substantially increasing the budget for this project due to increased legal fees and inflation of construction costs.

In short, it seems that all the criteria, with the exception of budget, were not considered by the RTA and PCDOT. The CAC does not approve this alternative.

The CAC recommends that if appropriate funding cannot be made available to institute Alternative B for this project, that the project be tabled until such time that the necessary funds can be obtained. The CAC recommends that the project be done correctly, with all aspects of the design criteria being considered. The CAC believes this project should be given the same consideration as other improvement projects in the neighborhoods on the north side of La Cholla.

Once again, we would like to thank the Regional Transportation Authority and Pima County for the opportunity to assist in this project.

Feel & Bas

Sincerely,

Joyne F Ma



PIMA COUNTY DEPARTMENT OF TRANSPORTATION 201 NORTH STONE AVENUE, FOURTH FLOOR TUCSON, ARIZONA 85701-1207



PRISCILLA S. CORNELIO, P. E. DIRECTOR

(520) 740-6410 FAX (520) 740-6437

January 24, 2008

La Cholla Boulevard, River Road to Ruthrauff Road Community Advisory Committee Attention: Bonny L. Bass 145 South Sixth Avenue Tucson, AZ 85701-2007

Subject: Your Letter Dated January 15, 2008, Regarding La Cholla Boulevard: Ruthrauff Road to River Road

Dear Community Advisory Committee Members:

We received your letter dated January 15, 2008, expressing your views on the roadway alignment design for La Cholla Boulevard. This project is one of the County's key Capital Improvement Projects in the first quarter of the Regional Transportation Authority (RTA) plan and we appreciate the Community Advisory Committee's (CAC) concern to "get it done right." We have communicated your concerns to County Administration and to Supervisor Sharon Bronson, Pima County Board of Supervisors. We would like to take this opportunity to clarify several important issues that may impact on how the CAC views the proposed alignment. Below is a clarification of the issues that relate to safety features of the roadway, aesthetics, utilities, access, and general right-of-way issues:

Roadway Features

Crosswalks: Marked pedestrian crossings are proposed for the Ruthrauff Road intersection.

Travel Lanes: The proposed width of travel lanes meets the national standards provided by the American Association of State Highway and Transportation Officials (AASHTO) and is not considered unsafe or substandard.

Sidewalk: The proposed sidewalk width meets Pima County standards.

Bike Lanes: Currently, bicyclists ride on the two-lane pavement or they ride in the dirt right-of-way where drivers turn in and out randomly. A proposed 5' paved shoulder that bicyclists can use will improve safety.

Bus Stops: Bus stops will be provided for SunTran.

La Cholla Boulevard, River Road to Ruthrauff Road Community Advisory Committee Your Letter Dated January 15, 2008, Regarding La Cholla Boulevard: Ruthrauff Rd to River Rd January 24, 2008 Page 2

HAWK Light: The use of HAWK lights for pedestrian crossings are carefully reviewed by the County Traffic Division. Specific criteria must be met to justify a HAWK light otherwise the HAWK light can turn into a liability rather than an asset. Currently, a HAWK light would not be justified at Jay Avenue. After the La Cholla Boulevard improvements are built the situation can be reviewed again to see if a HAWK light is warranted.

Aesthetics

Public Art: By Pima County policy, one percent of the planning, design and construction costs of arterial roadway projects should be designated for public art. Vicki Scuri of SiteWorks has been selected as the project artist. This selection process was managed by Tucson Pima Arts Council. Information about the artist can be found at <u>www.vickiscuri-siteworks.com</u>.

Landscape: Pima County provides appropriate roadway landscape in medians and parkways. Roadway landscape must take into consideration issues such as site distances and underground and above ground utilities. McGann and Associates has been selected as the landscape architect (www.mcgannland.com/).

Utilities

Well Site: The well site on the west side of La Cholla Boulevard is owned by the City of Tucson. Pima County does not have a need to acquire property adjacent to the City's well.

Access

Access and U-turns: Arterial roadways in Pima County frequently have raised medians which greatly improves safety. Drivers generally are able to adjust their travel patterns and/or utilize u-turns to access certain streets, businesses, and residences. This is necessary to provide safe access management.

Parking: Typically, Pima County does not provide parking on arterial roadways. Since La Cholla Boulevard was designated an arterial roadway prior to 1960 and prior to the development of the properties fronting La Cholla Boulevard, property owners should have been aware that it would be important to provide adequate on-site parking.

Frontage Road: The proposed frontage road is 16' wide, not 11' wide as stated in the letter. Examples of frontage roads in the community include Swan north of Speedway, Wilmot at Julia, and Broadway at Melville. Frontage roads provide managed access to properties fronting busy roadways.

Alley: Pima County will maintain access to all lots fronting La Cholla Boulevard. In your letter, the alley west of La Cholla Boulevard was described as a utility easement only; however, it is also available for ingress and egress and as such provides alternative access to properties.

La Cholla Boulevard, River Road to Ruthrauff Road Community Advisory Committee Your Letter Dated January 15, 2008, Regarding La Cholla Boulevard: Ruthrauff Rd to River Rd January 24, 2008 Page 3

Properties Adjacent to La Cholla

Accidents: The CAC has raised concerns that traffic on La Cholla Boulevard may create accidents that end up on private property. La Cholla Boulevard was designated as an arterial roadway prior to 1960 and before any residences were built north of Ruthrauff Road. The developer that built and the subsequent people that acquired property fronting La Cholla Boulevard did so with the knowledge that La Cholla Boulevard was designated a wide arterial roadway intended to carry large volumes of traffic. This urbanization is found in many parts of Pima County and the City of Tucson and does not pose unreasonable threats to safety.

Noise: Noise is a factor related to urbanization. Prior to 1960 and prior to development of properties adjacent to the road, La Cholla Boulevard was designated an arterial roadway and the adjacent properties were designated Multi-Use zoning. Noise walls are not effective when driveways are spaced closely and are better suited for residential zoning with large lots rather than for multi-use zoning areas with closely spaced lots.

Property Value: Roadway improvements generally help improve the value of adjacent properties. La Cholla Boulevard improvements will reduce traffic congestion, increase intersection capacity at the Ruthrauff Road intersection, improve capacity of the bridge, provide sidewalks for pedestrians, provide paved shoulders for bicyclists, provide landscape and public art for aesthetics, provide ADA access to bus stops, and provide access management. These capacity, safety, and aesthetic improvements generally help property values.

I hope this explanation helps to clarify the issues the community may have about the La Cholla Boulevard project. Many of these issues revolve around the fact that La Cholla Boulevard was designated an arterial roadway before adjacent properties were developed. This places the burden on property owners to correctly develop and use their properties for an urbanizing environment. The proposed alignment that includes one-way frontage roads for approximately 1000' for the properties north of Ruthrauff Road meets all the needs and many of the wants of Pima County residents. Other alternatives requiring right-of-way acquisition would unnecessarily increase the cost of the project, cause disruption to property owners and increases the schedule for the project. In your letter you have asked the County to build the road "correctly." Based on the information here, I trust you will have confidence that the improved La Cholla Boulevard will be built to National and County standards for a safe and efficient roadway. If you have any questions, please contact our Community Relations representative Carol Brichta at 740-6410, or the Project Manager Dean Papajohn at 740-6471.

Sincerely,

OVW.

Priscilla S. Cornelio, P.E. Director

PSC:DP:sap

c: Dean Papajohn, Project Manager, Engineering Division Carol Brichta, Community Relations January 31, 2008

HAND-DELIVERED

Priscilla S. Cornelio, P.E.
Director *Pima County Department of Transportation*201 N. Stone Avenue, Fourth Floor
Tucson, Arizona 85701

Re: La Cholla Boulevard: Ruthrauff Road to River Road Community Advisory Committee

Dear Priscilla:

Thank you for your letter dated January 24, 2008. We appreciate that you forwarded our comments to the Board of Supervisors.

Your response addressed several concerns presented in our January 15^{th} letter recommending that the Regional Transportation Authority (RTA) and the Pima County Department of Transportation (PCDOT) use Alternative B for the roadway design. You did not specify in your letter which Alternative you were addressing; however, the Committee assumes you were defending Alternative E – the only Alternative which the RTA and PCDOT propose. All other Alternatives have been suppressed. With this in mind, allow us to discuss the points contained in your January 24^{th} letter.

Roadway Features

1. Crosswalks:

Despite the fact that marked pedestrian crossings are proposed for the Ruthrauff/La Cholla intersection, the Committee continues to be concerned for the safety of school children crossing that intersection. There are two schools, Centennial Elementary School and Flowing Wells Junior High School south of the Ruthrauff/La Cholla intersection. This school crossing traffic increases the use of the crosswalk dramatically and the Committee believes the safety of these children and adults crossing that intersection is paramount. Extra precautions should be taken.

Priscilla S. Cornelio, P.E. Director *Pima County Department of Transportation* January 31, 2008 Page 2

2. Travel Lanes:

Although the 11 foot travel lanes may meet the national standards provided by the American Association of State Highway and Transportation Officials, it does not meet Pima County standards according to the *Pima County Roadway Design Manual* for this size of urban roadway. See chapter 2, p. 2-32, figure 2-10 and table 2-1, p. 2-6. Further, the Committee maintains this roadway project should be consistent with the La Cholla Road widening project, River to Omar Road.

3. Sidewalks:

The Committee agrees that the sidewalks should meet PCDOT standards which is six feet.

4. Bike Lanes:

Although bicyclists do ride on the two-lane paved road or on the dirt shoulder of La Cholla Boulevard, the Committee believes that since bike lanes are part of the improvement plan, they should be built consistent with the ones installed north of River Road in the La Cholla Road to Omar Road widening project. Further, according to the *Pima County Roadway Design Manual*:

"On curbed roadways, six feet are to be added to the typical width of outside travel lanes to accommodate bicycles." *Pima County Roadway Design Manual*, chapter 2, p. 2-15.

5. Bus Stops:

As presented to the Committee, Alternative E does not show bus stops long the corridor from Ruthrauff to River Road. Simply stating that bus stops will be provided is not sufficient for the Committee. The Committee believes, consistent with advertisements in support of the RTA election, pullout bus stops should be designed into roadway improvement projects. Pullout bus stops allow for the efficient flow of traffic and increased safety for bus passengers.

6. HAWK Light:

Installation of a HAWK light may require additional studies. The Committee suggests that a marked pedestrian crossing should be provided at Jay Avenue.

Priscilla S. Cornelio, P.E. Director *Pima County Department of Transportation* January 31, 2008 Page 3

Aesthetics

7. Public Art:

With Alternative E, there will essentially be no place for public art on the south end of the improvement project. This includes no room for art installed at bus stops or on sound abatement walls. Will all of the public art be installed at the north end of the project?

8. Landscape:

As pointed out in point 7 above, with Alternative E, there is no room for landscaping.

Essentially, the aesthetics contained in Alternative E are nonexistent and bodes unfavorably towards the "perceived" lower income neighborhood.

Utilities

9. Well site:

The Committee understands that the well site located on the west side of La Cholla Boulevard is owned and operated by the City of Tucson. However, when periodic maintenance occurs, large trucks carrying pipes and equipment park at the well site. These vehicles would be forced to park on the one way frontage road to perform maintenance on the well, thereby blocking the roadway and denying access to homes and businesses on the frontage road.

Access

10. Access and U-turns:

The Committee agrees that raised medians greatly improve safety. However, it appears that you did not get the point the Committee was making regarding U-turns. If you review the diagram of Alternative E, you will see that there is a break in the median at Jay Avenue for turns. However, the entrance to the one way frontage road for residents on the west side of La Cholla Boulevard is north of Jay Avenue. Therefore, residents coming from the south would have to make a U-turn somewhere else. Currently U-turns are prohibited at the River Road/La Cholla intersection. The Committee is assuming that no U-turns will be permitted at Curtis and La Cholla, since southbound traffic will be coming off a bridge. Priscilla S. Cornelio, P.E. Director *Pima County Department of Transportation* January 31, 2008 Page 4

Alternative E severely limits the access to properties on the west side of La Cholla Boulevard by forcing these residents to either find alternative access or by negotiating potentially dangerous U-turns. In doing so, Pima County is creating a unique subgroup for this neighborhood.

11. Parking:

It is true that several of the residents whose homes face La Cholla Boulevard have been living there since the homes were built, perhaps as early as 1960. However, these residents should not have been expected at that time to look into their crystal ball to see what the roadway design plans would be 40 years down the road. In 1960 and most assuredly prior to those homes being built along La Cholla Boulevard, Pima County did have engineers and planners who knew or should have known of the roadway design plans for the future. If indeed Pima County intended in 1960 to build an arterial roadway on La Cholla Boulevard, Pima County should have taken that into consideration prior to allowing these homes to be built.

12. Frontage Road:

Once again, the Committee fails to understand why frontage roads built many years ago in Tucson such as the ones mentioned in your letter have anything to do with the frontage road proposed in Alternative E. The frontage roads at Swan north of Speedway, Wilmot at Julia and Broadway at Melville all have entrances after turning off the main street onto a side street. Further, these frontage roads are wider than 16 feet and allow two-way traffic.

In contrast, the entrance to the proposed frontage road on the west side of La Cholla Boulevard is not off a side street such as Calle Narciso, it is off La Cholla Boulevard. There is no proposed turn lane or "slow down" lane for traffic entering this frontage road. Therefore, the Committee assumes that 45 mile per hour traffic must quickly slow in order to negotiate the right turn entrance onto the frontage road. This could potentially put Pima County at risk for lawsuits arising out of rear end type accidents for a faulty road design. The Committee believes this is a faulty road design.

13. Alley

Up to this time the alley has not been used as regular ingress or egress by the residents and most likely could not be considered a road. Coupled with the fact that the alley is dirt, residents who utilize it for said reason would be in violation of Pima County

Priscilla S. Cornelio, P.E. Director *Pima County Department of Transportation* January 31, 2008 Page 5

Code 17.16.090, A-E concerning air quality control. In order for the alley to be used for ingress and egress, it must be paved and/or dust abatement must occur. In addition, all drainage issues must be resolved. The Committee believes Pima County would be responsible for this mitigation.

Properties Adjacent to La Cholla

14. Accidents:

Once again, Pima County cannot seriously believe that residents who purchased their homes in 1960 would have the foresight to know that La Cholla Boulevard was designated as an arterial roadway. Further, the same argument applies to Pima County in allowing such residences to be built despite the fact that they did know that La Cholla Boulevard was designated as an arterial roadway. It simply stands to reason that increasing the traffic flow, decreasing the lane width and not reducing the speed limit will cause increased accidents. The statement made to the Committee that a six inch curb will eliminate vehicles from coming onto private property is not sufficient. The increased danger and negligent design will open Pima County to lawsuits.

15. Noise:

Although the Committee has asked repeatedly for the noise studies and the traffic flow studies, we have not been provided with any information other than they are in draft form and not available. The Committee believes that the noise levels of the roadway currently are above the levels allowed according to the *Pima County Roadway Design Manual*, chapter 1, Appendix 1-A-9, $\S7.1(1)(c)$.

The Committee understands that noise walls are not effective when driveways are spaced closely which is why the Committee recommends the taking of those residential lots along the west side of La Cholla Boulevard. This would allow for noise retention walls to be built to protect the other homes in the neighborhood which will are also effected by the noise level.

16. **Property Value:**

The CAC Committee does not concern itself with property values. The CAC Committee concerns itself with building the road correctly and consistent with the La Cholla to Omar Road widening project.

Priscilla S. Cornelio, P.E. Director *Pima County Department of Transportation* January 31, 2008 Page 6

A strong argument can be built against Pima County when it maintains that:

"La Cholla Boulevard was designated an arterial roadway **before** adjacent properties were developed. This places the burden on property owners to correctly develop and use their properties for an urbanizing environment." [emphasis added].

The Committee, which is not solely made up of those particular residents, is offended by this statement. Once again, the Committee believes the onus is on Pima County who did have the information and knowledge that this was an arterial roadway. Perhaps Pima County should not have allowed these homes and developments to be built. The fact remains that they were built, people live and work there and the proposed roadway design suggested in Alternative E does not consider how it would adversely effect the homes and businesses in this neighborhood.

It is clear to the Committee, especially after receipt of your letter, that Pima County's only criteria in proposing Alternative E is the cost of the project. Alternative E would impose adverse effects upon the homes situated on either side of La Cholla Boulevard and the surrounding neighborhood. The inhabitability created by the road noise, air quality, access and safety issues would increase the potential for lawsuits thereby delaying, possibly for years, the project and increasing substantially the budget for the project due to legal fees and inflation of construction costs. Further, the proposed road in Alternative E does not substantially meet Pima County standards as set out in the *Pima County Roadway Design Manual* and is not consistent with other roadway improvement projects in the surrounding area.

The Committee thanks you again for your time in reviewing our concerns. If you have any questions, please feel free to contact Frederick Bass at 407-3767.

Dean Papajohn, Project Manager, Engineering Division c: Carol Brichta, Community Relations



PIMA COUNTY DEPARTMENT OF TRANSPORTATION 201 NORTH STONE AVENUE, FOURTH FLOOR TUCSON, ARIZONA 85701-1207



PRISCILLA S. CORNELIO, P. E. DIRECTOR

(520) 740-6410 FAX (520) 740-6437

February 11, 2008

La Cholla Boulevard, River Road to Ruthrauff Road Community Advisory Committee Attention: Frederick Bass 145 South Sixth Avenue Tucson, AZ 85701-2007

Subject: Your Letter Dated January 31, 2008, Regarding La Cholla Boulevard: Ruthrauff Road to River Road

Dear Community Advisory Committee Members:

We received your letter dated January 31, 2008, expressing your views on the roadway alignment design for La Cholla Boulevard. It appears to me that we share many of the same goals for the project, such as improved mobility for motorized vehicles, facilities for pedestrians and bicyclists, efficient and safe intersections, access to bus transportation, a wider bridge, collection of storm runoff, and the integration of landscape and public art. The additional concerns your committee has raised with regards to noise, accessibility, parking, etc., are the concerns that our design team has been investigating even before the first Community Advisory Committee (CAC) meeting. Each time the CAC has provided input our design team has dug deeper and deeper to identify and evaluate possible solutions. Unfortunately, at this point, it appears that the County is proposing solutions that differ from the property acquisition proposal the CAC has provided.

As a public project there are certain procedures that must be followed in the design of La Cholla Boulevard. The next steps in the process include holding an open house to allow the community to learn more about the project and share their feedback. Two technical documents must be completed. The first is called the Design Concept Report or DCR. The second is the Environmental Assessment and Mitigation Report or EAMR. Drafts of each of these reports will be discussed at future CAC meetings. Each of these reports will have sections on Public Involvement which will clearly convey the CAC's concerns and the CAC's request for an increased budget for property acquisition. It is the intent of Pima County Department of Transportation to work with the CAC through all of these steps and continue to address issues and concerns as we are able. Ultimately, the EAMR is presented to the Board of Supervisors with a letter from the CAC supporting or not supporting the Pima County Department of Transportations. La Cholla Boulevard, River Road to Ruthrauff Road Community Advisory Committee Your Letter Dated January 31, 2008, Regarding La Cholla Boulevard: Ruthrauff Rd to River Rd February 11, 2008 Page 2

As you can see, there is still much work to be done on the La Cholla project and Pima County Department of Transportation is committed to continuing to work with the CAC. We appreciate the commitment the CAC has already given to the project and look forward to continuing to work with you in the months ahead. In the meantime, if you have any questions or concerns, please contact the project manager Dean Papajohn at (740-6471).

Sincerely,

1-v2s -1/10-

Priscilla S. Cornelio, P.E. Director

PSC:DP:sap

c: Dean Papajohn, Project Manager, Engineering Division Carol Brichta, Community Relations



PIMA COUNTY DEPARTMENT OF TRANSPORTATION



PUBLIC WORKS CENTER 201 N STONE 4TH FLOOR TUCSON AZ 85701-1207

RETURN SERVICE REQUESTED

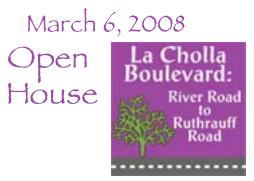


PIMA COUNTY DEPARTMENT OF TRANSPORTATION



PUBLIC WORKS CENTER 201 N STONE 4TH FLOOR TUCSON AZ 85701-1207

RETURN SERVICE REQUESTED



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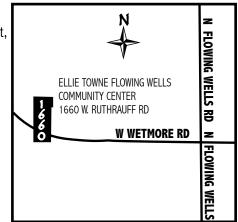
Pima County Department of Transportation La Cholla Boulevard: Ruthrauff Road to River Road OPEN HOUSE

Pima County Department of Transportation (P.C.D.O.T.) will be holding an open house meeting to provide information on the widening of La Cholla Boulevard from Ruthrauff Road to River Road. Proposed improvements consist of: six travel lanes, paved shoulders for bicycles, sidewalks, curbs and storm drains, intersection improvements at Curtis and at Ruthrauff, a new six-lane bridge over the Rillito river, a raised landscaped median, and urban design (public art). This two year design process is just beginning. The open house is intended to keep the public informed on project goals and to provide a forum for public input.

The Open House begins at 6:00 P.M. with a brief presentation to describe the project beginning promptly at 6:15 P.M. After the overview, public can interact with team members who will have displays and information regarding roadway, bridge, archeology, environment, landscape, urban design, business concerns, and right-of-way. We hope you will come to share your thoughts about the project.

Thursday, March 6, 2008 6:00-8:00 P.M. Introductory Overview at 6:15 Ellie Towne Flowing Wells Community Center 1660 W. Ruthrauff Road

Individuals with disabilities who require accommodations for effective participation and communication in the meeting may call Community Relations at 740-6410 by February 28 to make appropriate arrangements. All meeting sites are accessible.



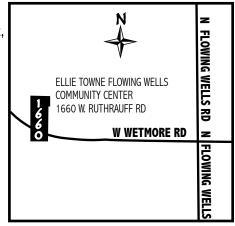
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La Cholla Boulevard: River Road to Ruthrauff Road



Comment Form March 6, 2008

1. What is your primary interest in La Cholla?

- □ I live in rented property adjacent to this section of La Cholla.
- □ I own the property in which I live in the area adjacent to this section of La Cholla.
- □ I own rental property in the area adjacent to this section of La Cholla.
- □ I work in a business on this section of La Cholla.
- □ I regularly drive through this section of La Cholla.
- □ I regularly walk or bike through this section of La Cholla.
- Other, please explain. _____

2. What do you like about this project?

3. Please list any questions or concerns about this project.

4. Please list any other comments you have concerning this project.

IMPORTANT! Please print the following information:				
Name:		Telephone:		
Address:				
		Zip:		
e-mail:				

Mail to: Pima County Community Relations Office, 201 N. Stone 4th floor, Tucson, Arizona 85701 or Fax to 740-6439





Representing	Address and Zip	Phone	E-mail
	5250 No Royal Palm Dr. 85705	987-1744	Sedaquel@ yahoo com
		887-1744	Sectarale 2 QLOL. COM
	510 E. Ath Street	370-5102	
	4967 NLachella	6096969	Bill E7511 CMSn, con
	1313 5. Missim Rd	7402835	Ali.Fermaniedet.pimeryo
	1965 W. CUSCO PLAZ		9 Patricia Mogeyahos com
	4941 M. Pg Cholly	SE) 7280	Spreudlinger a live, com
		5250 No Royal Palm Dro 85705 11 111 510 E. Ath Street 4967 N Lachella 1313 S. Missim Rd 1965 W. Chisle PUFE	5250 No Royal Palm 387-1744 Dr. 85705 11 11 887-1744 510 E. Ath Street 370-5102 4967 N Lachella 6096969 1313 S. Music Rd 7402835 1965 W. Cyslo PUT 236 026





Printed Name	Representing	Address and Zip	Phone	E-mail
D.STAPLENAN	GELF	4910~ JNY 05		
FRED BASS	CAC	1502 W Kilburn	2936841	
Benny Bass	Self	1502W Kilburn	243684	
DoneThen Crove	PEPST			
MARVIW Horn	Self	496 NLACIAINA	887-1056	
KEN DOCHERTY	SELF	5000 N. LA CHOULA	888 1244	
PRISAMA C,	PIM CoDa			
Willow Stokes	Self	4639 N Courthey Dr	888-0745	
Loura Steckman	SPIF	5484 M. Bramble Brog	888 9730	laurafree @ comcast.n
Terry Hendricks		2135 W, Calle Forhadd	888-4789	0
Terry Lynn Hendricks	Self	2135 W. Calle Fortuna	\$83-4789	
Sveralansea		2125 WalleFortur		





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Printed Name	Representing	Address and Zip	Phone	E-mail
Maren molanat	Jal P.	2100 Ruthhauff.Rd	237-720)	Jon Jon River Ma 7 30 John
Kin En trice				8 RAFICE 15 Concentrat
Stephen Schweska	SUK	415417 La Cho/la. Bloc/.	9062561	~
William MAHAUSO	h SELF	2462 W Komberle	an 293-295	8
ARNOLDTIBUTLER	SELE	4975 N. River Valley Loop	887-9722	ABABIQNetzeranet
GLORIA KING	Sell	2202 W Calle Nancis,	_	
Celia Betancours	Self	2121 W. Galle Naria	-	
Shinley James	SelF	HIOON RemeroRI #46	888-9694	JSJames 2@ Juno.com
STEVE TAYLOR	MAINSTREET			Stay 10- 1000 @ MSN, COM
TIKI Navarro	Dist 3	BD w - Congress	740.8051	district 30 pima gav
Harthon Tun at	Enig El dere	2100 N Rest Refd.	882-7064	
BARDARA ANN STONES	50/17	# 49 3H N. HACMOILABIUL	471-4105	





Printed Name	Representing	Address and Zip	Phone	E-mail
Martha Davis	HDR			
ARTURS LEDESMA	HDR			
Tawand Jochet	self	5000 N.La Cholla	520 888-1244	
Bethany Parajohn	Self			
Duniel Papajohn	hisself	<i>"</i>		
A netter Parts	Hown wells	1556 W. Punce TUCSON 85705	696-8201	
Genice Bottork /	self	HIOaNRomaro, -		
Mike Whelan?	self	1964 n. Jay aut 85705	888-2683	Ó
ACBERT & ELSA PESQUEIVA	Self	GESS (A SUS Adobes	792-630	2
J.S. Douman	Specialt	5190 N. LACholla	977-6355	
Daphne Lee	Silver Cholla	5000 H. La Cholla	8870891	
Don Williams		5242N. RoyA PALA DR	6900690	





18

Printed Name	Representing	Address and Zip	Phone	E-mail
DEAN PAPAJOHN	PCDOT	201 N. STONE	740-6471	
TED Buell	HDR			
Bethy McGehee	HDR		584-3045	
Larry Barela	HOR		384-3633	,
Larry Barela Scott LEWIS	DAIRY QUEEN		405-1314	
KARE LEWIS	si n		405-1314	
ARIZEDER	GDG			
Bob Britton				
Gaett Slopp				
Darlen Schowater	mcgarlas	2.		
Renetanner	HOR			
Scott Beck	KHA		615-9191	





12

Printed Name	Representing	Address and Zip	Phone	E-mail
Linda Jehle	Flowing wells	1556 N. PrinceRd 85705	696-8822	ehlel@flowingersils.K12.a 2.
JAY VAN ECHO	self	6750WEI CAMModel Leppo 85745	400-6207	Jay. venethoe Trinhmins, wm -s
Ellie Towne	FUNACC	5324 No. ROYA / FAIM DR TUC 05-1150	835 2365	towendzamsn.com
Charyl Carria	Self	4964N. Jay Are	888-5685	
ROBERT V. GAONA	SELF	4921 N. LA CHOLLA	887-1395	-
Dores M. Resolution	Self	5242 NRoyal Palm Dr.	690-0690	
WIMA FERRY	SelF	1924 W. ROOT LN		WTUC 849 @AUL. COM
Jane Hallell	TPAC	106 E. Broadway	624.0595	¢
Hoover Lee	Silver Cholla	HAP 5000 N. La Chola	887-0891	
Carole Shr=wsbu	ry Dain Queen	2120W Ruthalf	293-5198	
Beverly chapman	my self	2401 20, Jolda Sl 3	292-8833	
Bretty Sceans	my self	24016, Kumberly	887-9492	
			£	





epresenting	Address and Zip	Phone	E-mail
self	4911 M. La Cholla	572-2177	NDECPA @ QWCST.NeT
CAC			
Flowing Wells JH	4545 N. La Chella	696 - 855	
CAC	4901 N. CACHOLLA	887-055	3
CAC	EL (/	17 4	
UNI	2040 W Riber Rd	742-0060	Guessrat 23 @ Acl. can
self			
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Printed Name	Representing	Address and Zip	Phone	E-mail
Darlene Danehy	self	5880 N. Edenbrock LN 85741	245-8994	ddanehy@psomas.com
Cricket Lewis		1962 W. NARCISO PI-	293-8198 888-9294	
JAMIE BARRETT		4955NLa ChollaBin	293 3339	JMEBOIQMEN, COM
Timoth Barrett	Self			SMZBØLOMSN, Com
Bos Mickelson	self	3675 N. ELMoraga Dr 1	743-9838	
1303 LANNARIND	Dund Verfrey	2200 East Auna Ros Julie 150	571-2200	biongering clienter.com
TOM DANEHY	SELF	5880 N-EDENBROOKLA 55741	8874109	
	1	1		



La Cholla Boulevard: River Road to Ruthrauff Road



Design Project Information

- 1. What are the benefits of the project?
- Provides a safe parkway-type alternative north-south route to Oracle Road.
- Continues and connects recently completed widening projects on La Cholla south of Magee Road to River Road.
- Provides access to I-10 via Ruthrauff Road.
- Improves mobility, access, and safety for busses.
- Improves bicycle and pedestrian mobility and safety.
- Provides ADA accessible transit stops.
- Enhances the right-of-way with landscape and urban design (public art).

2. What type of improvements will the project contain?

- Proposed improvements include: six travel lanes, paved shoulders for bicycles, sidewalks, curbs and storm drains, intersection improvements at Curtis and at Ruthrauff, a new six-lane bridge over the Rillito river, a raised landscaped median, and urban design (public art).
- The voters of Pima County approved the scope of this project in the RTA vote of 2006.

3. How long will it take to improve La Cholla Boulevard?

• A new roadway design takes approximately 24 months. Procurement of a contractor takes approximately 3-9 months. Construction takes approximately 18-24 months. The design phase is just beginning.

4. How wide is the La Cholla Boulevard right-of-way?

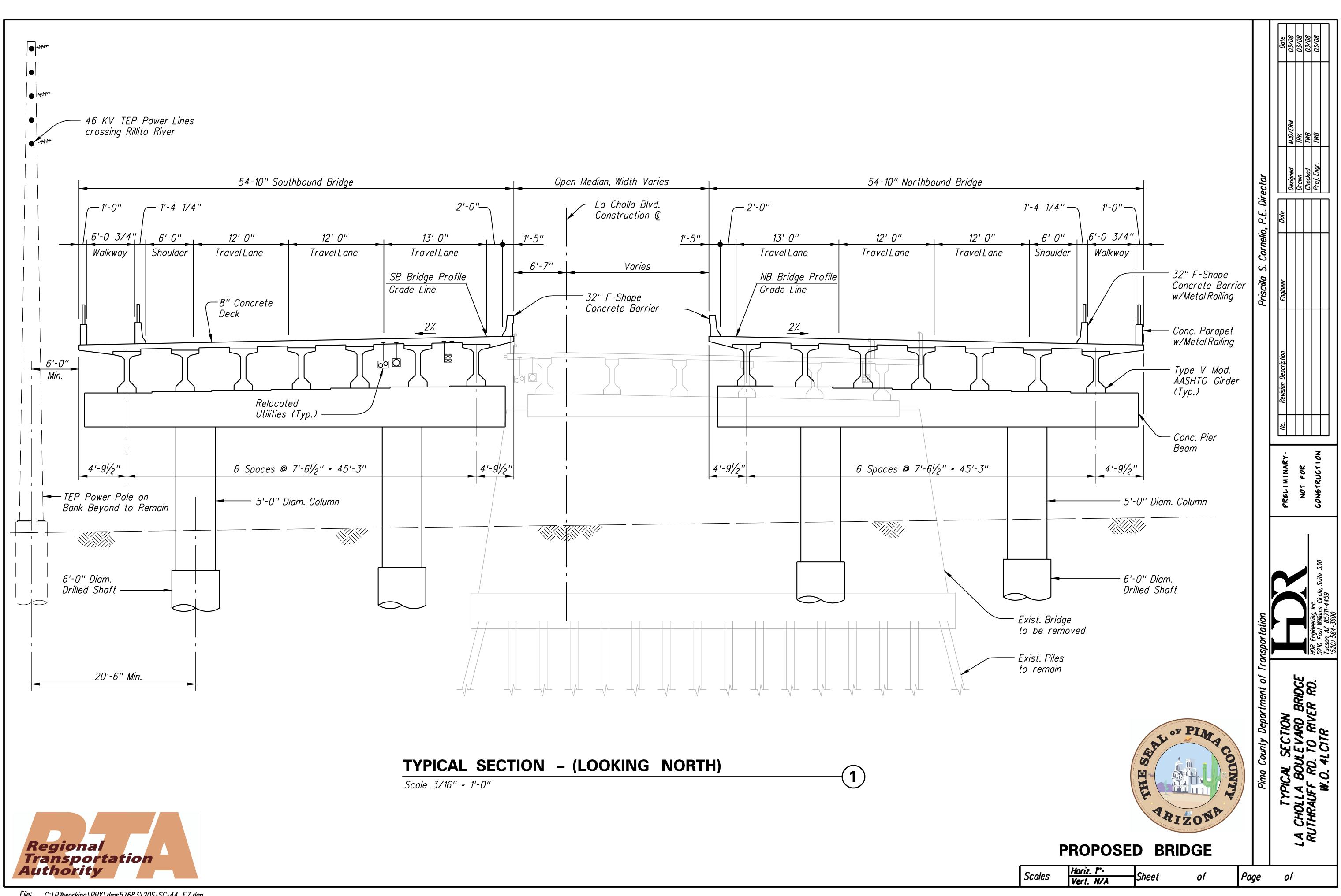
• The right-of-way is 150' wide. The County acquired this right-of-way prior to 1960 in anticipation of widening La Cholla Boulevard. Much of the property adjacent to La Cholla Boulevard was zoned multi-use prior to any development to allow flexibility with private property as La Cholla Boulevard became busier and expanded over the years.

5. Will there be public input on this project?

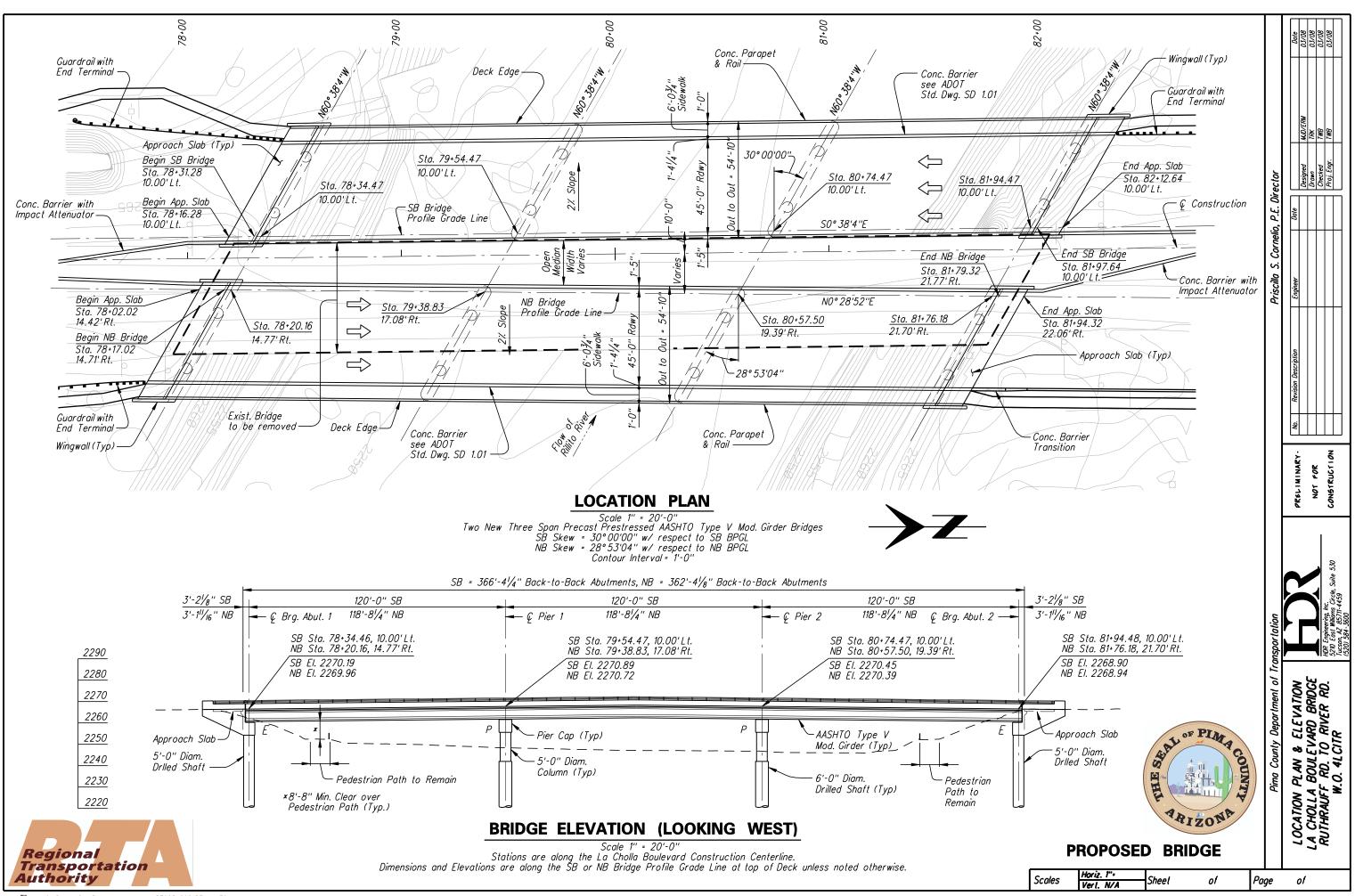
- A Community Advisory Committee (CAC) has been formed. The design team has met with the CAC four times so far. Input from the CAC is considered in design and all CAC input is shared with the Board of Supervisors before preliminary design concepts are approved.
- Open Houses are held to provide project updates to the public and to receive input from the public.

6. How can I learn more about the project?

- The project web site is at: http://www.roadprojects.pima.gov/LaChollaRiver/
- Specific questions can be directed to: Carol Brichta, Pima County Community Relations, 740-6410.

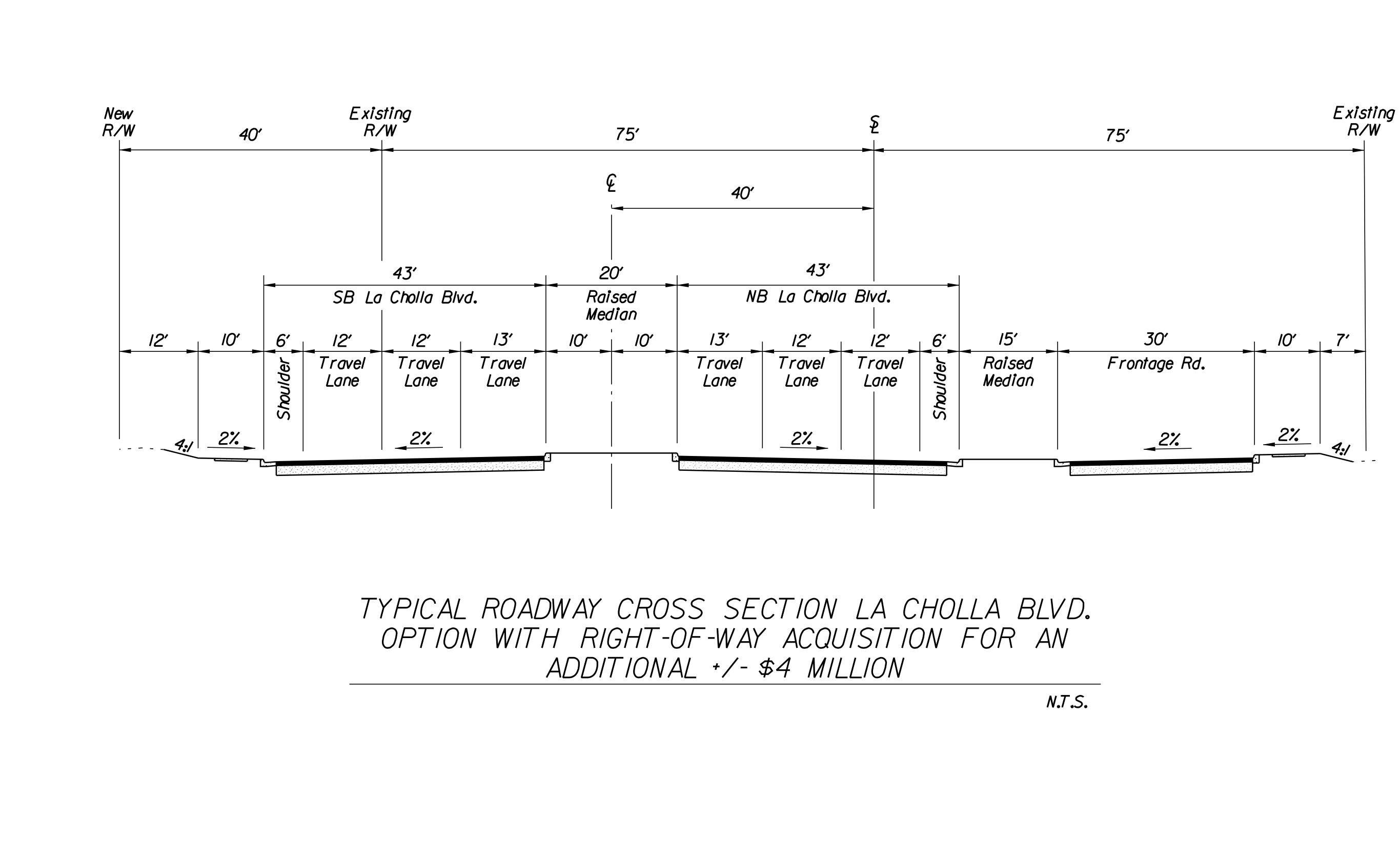


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Nota:





Common Outdoor and Indoor Noise Levels

Common Outdoor Noises	Noise Level (dBA*)	Common Indoor Noises
	110	Rock Band
Jet Flyover at 1,150 feet	100	
Gas Lawn Mower at 3 feet Diesel Truck at 50 feet	90	Food Blender at 3 feet
Noisy Urban Daytime	80	Garbage Disposal at 3 feet
Gas Lawn Mover at 100 feet	70	Shouting at 3 feet Vacuum Cleaner at 10 feet
Commercial area	60	Normal Speech at 3 feet
Quiet Urban Daytime	50	Large Business Office Dishwasher in next room
Quiet Urban Nighttime	40	Small Theater
Quiet Suburban Nighttime	30	Library
Quiet Rural Nighttime	20	Concert Hall
	10	Broadcast and Recording Studio
	0	Threshold of Hearing

Source: American Association of State Highway and Transportation Officials, 1993.

Distances less than 10 feet are rounded to the nearest whole foot and distances over 10 feet are rounded to the nearest 10 feet.

*dBA is a unit for measuring sound levels that is weighted to represent the range of human hearing.

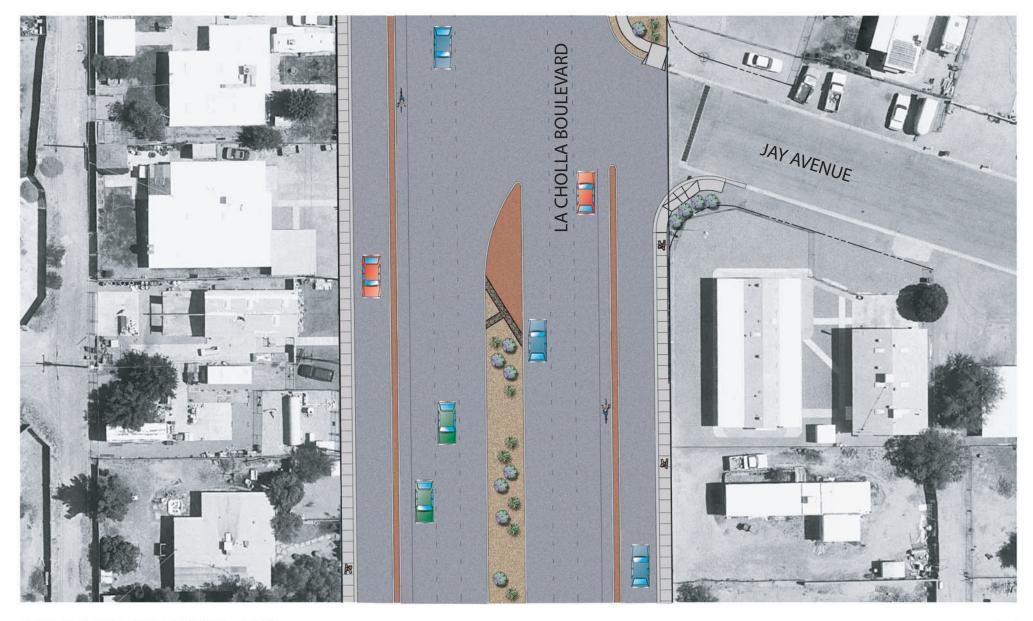
Environmental Assessment and Mitigation Report

These topics will be evaluated in the report for this project.

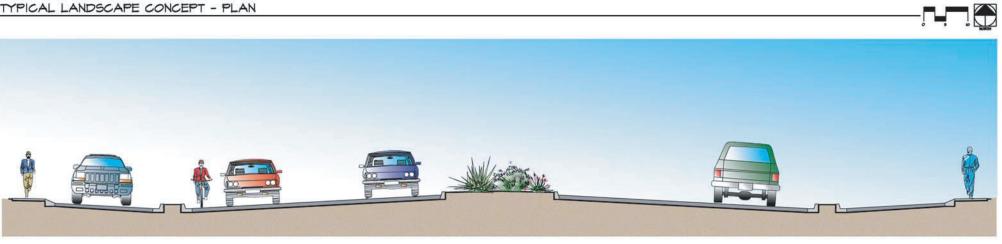
- ✤ Biological Resources
- Drainage and Water Quality
- Floodplains
- ✤ Air Quality
- ✤ Noise
- ✤ Utilities
- ✤ Hazardous Materials
- ✤ Cultural Resources
- ✤ Construction



- ✤ Visual Resources
- ✤ Right-of-way
- ✤ Access, Parking
- Neighborhood Disruption
- ✤ Parks and Recreation Areas
- Consistency with Other Plans
- ✤ Agency Coordination
- Public Participation
- ✤ Native Plant Preservation



TYPICAL LANDSCAPE CONCEPT - PLAN



LANDSCAPE CONCEPT - TYPICAL SECTION AT FRONTAGE ROADS

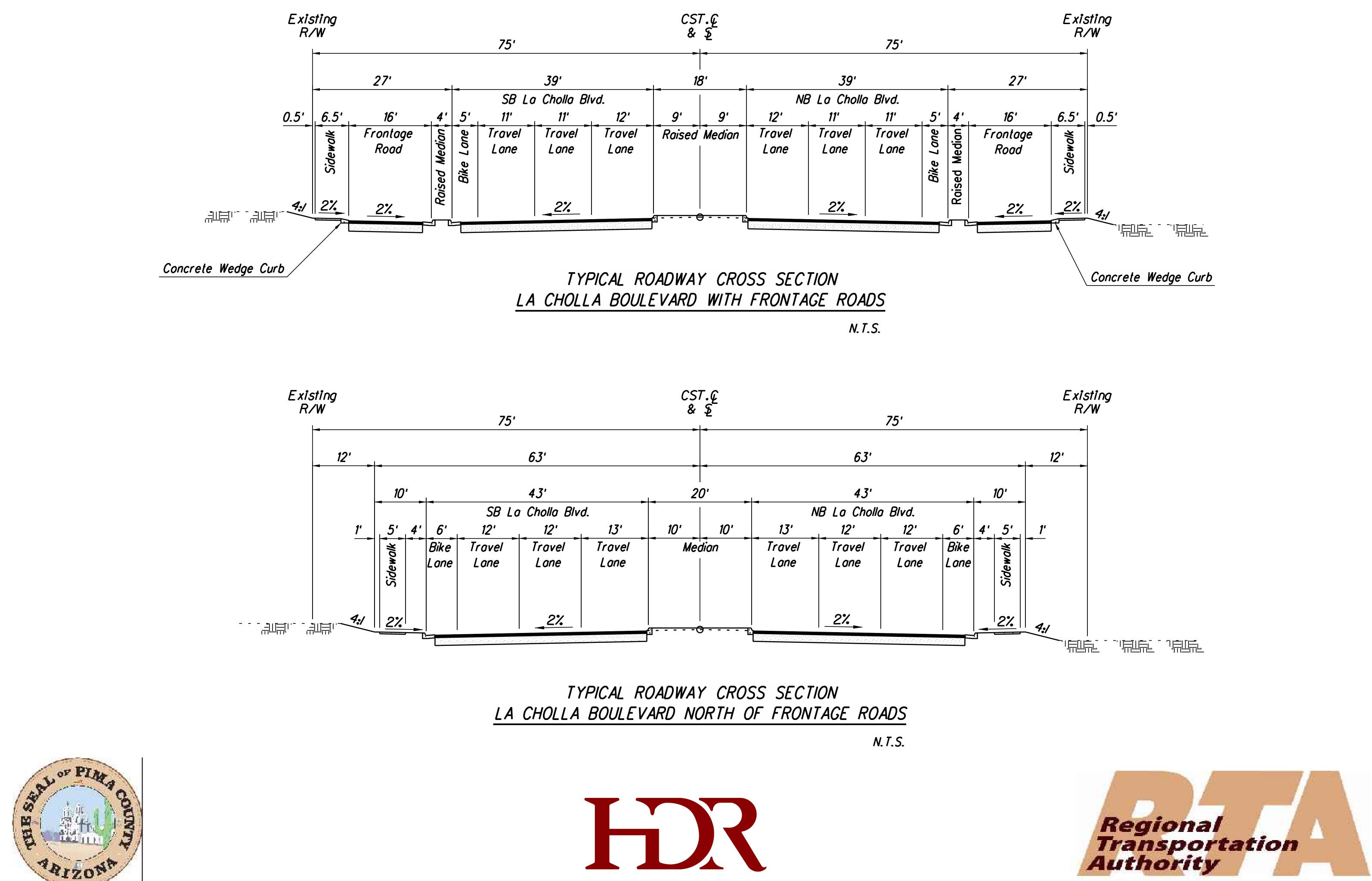


LA CHOLLA BOULEVARD - RIVER ROAD TO RUTHRAUFF ROAD

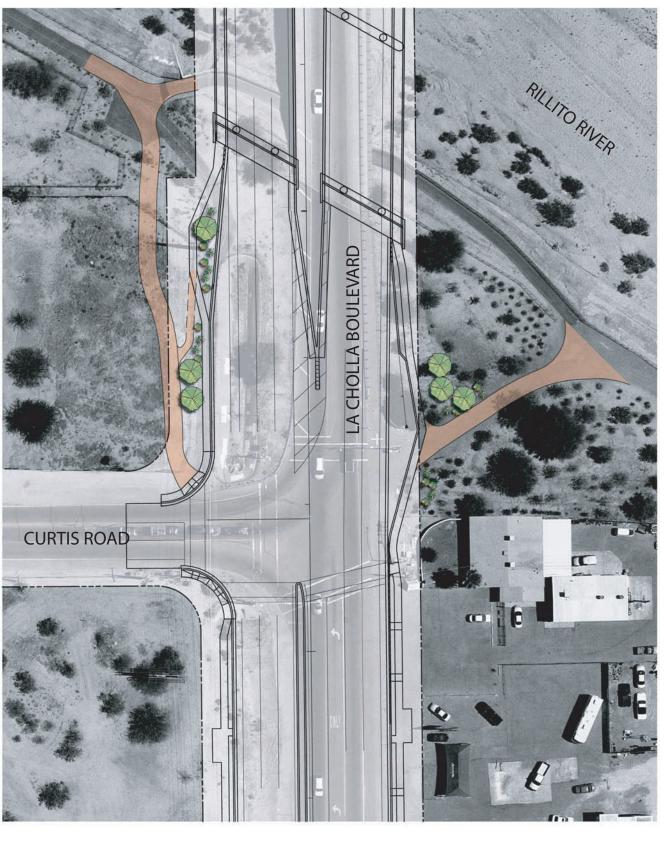
TYPICAL LANDSCAPE PLAN AND SECTION



McGann & Associates Landscape Architects and Planners 6814 North Oracle Rd, Suite 210 Tucson, Arizona 85704 Telephone: (520) 297-9540 Fax: (520) 297-9545







RIVER PARK ACCESS - NORTH BANK

RIVER PARK ACCESS - SOUTH BANK



LA CHOLLA BOULEVARD - RIVER ROAD TO RUTHRAUFF ROAD

PRELIMINARY CONCEPT - RIVER PARK ACCESS





McGann & Associates Landscape Architects and Planners 6814 North Oracle Rd, Suite 210 Tucson, Arizona 85704 Telephone: (520) 297-9540 Fax: (520) 297-9545





TYPICAL LANDSCAPE PLAN AND SECTION

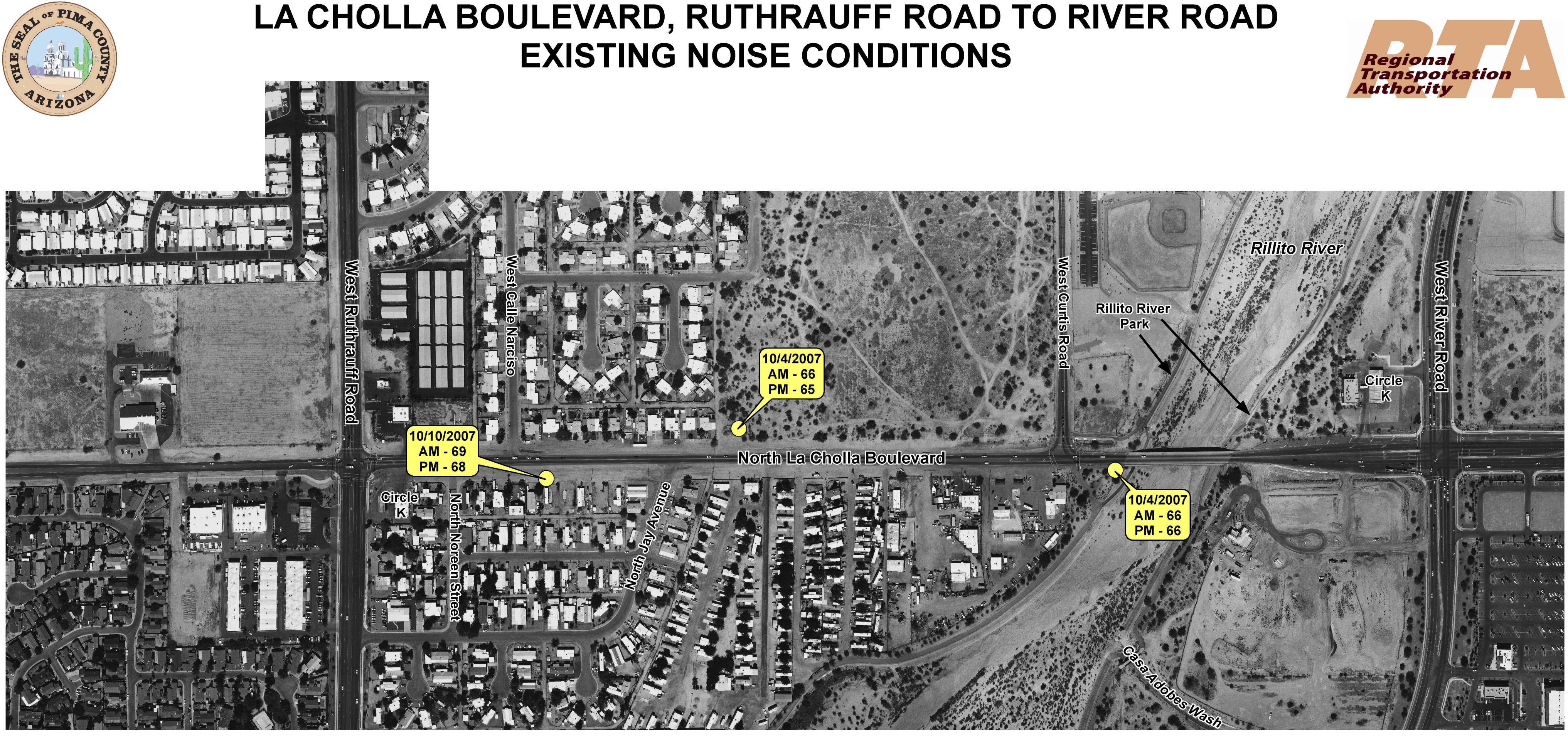


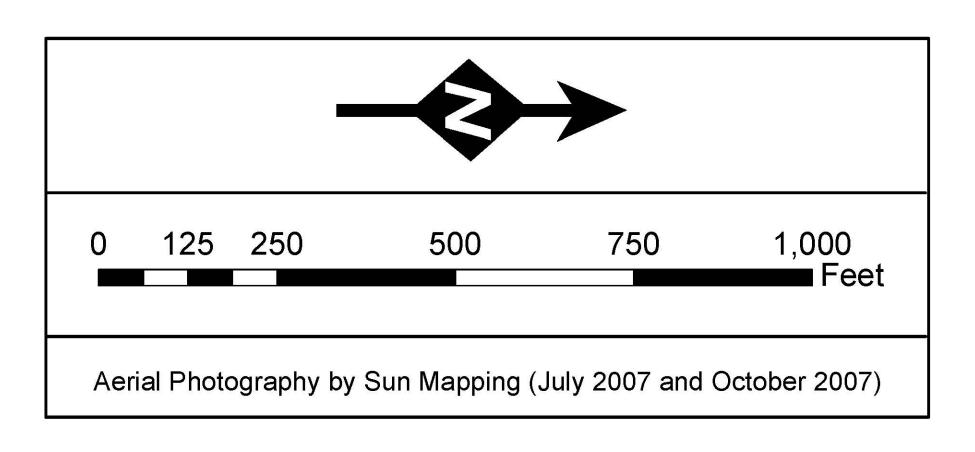


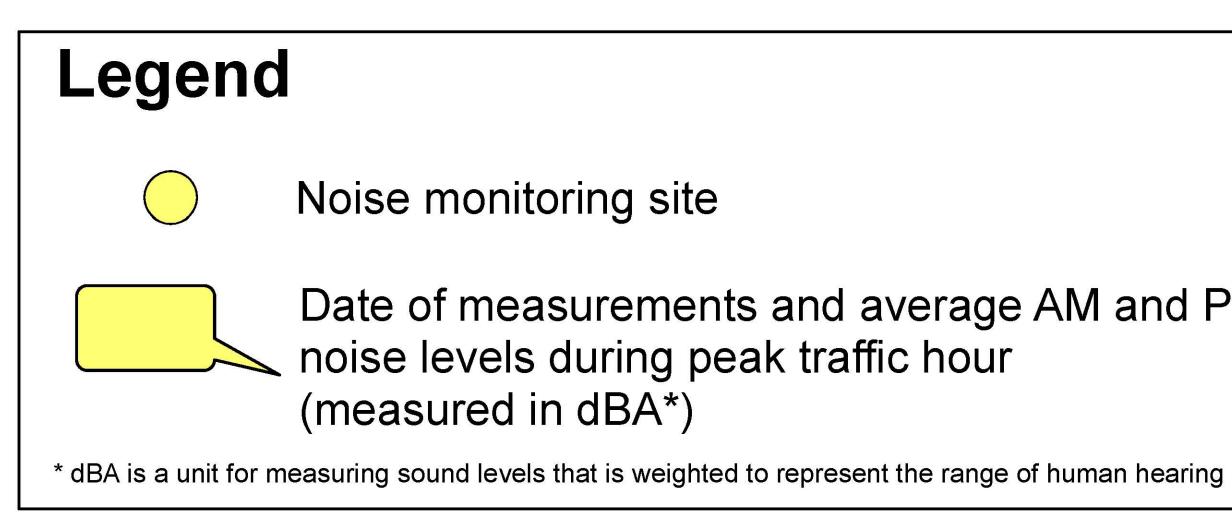




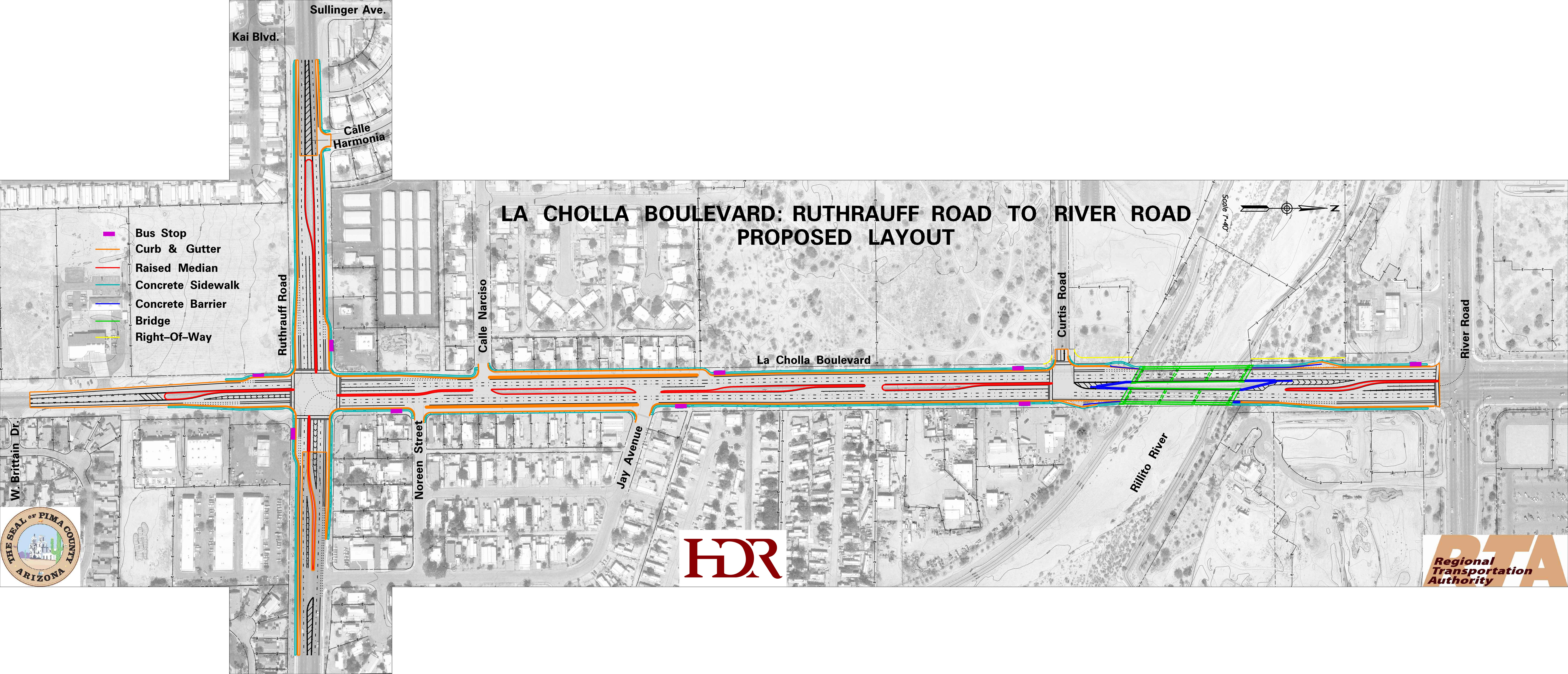
- TYPICAL SECTION







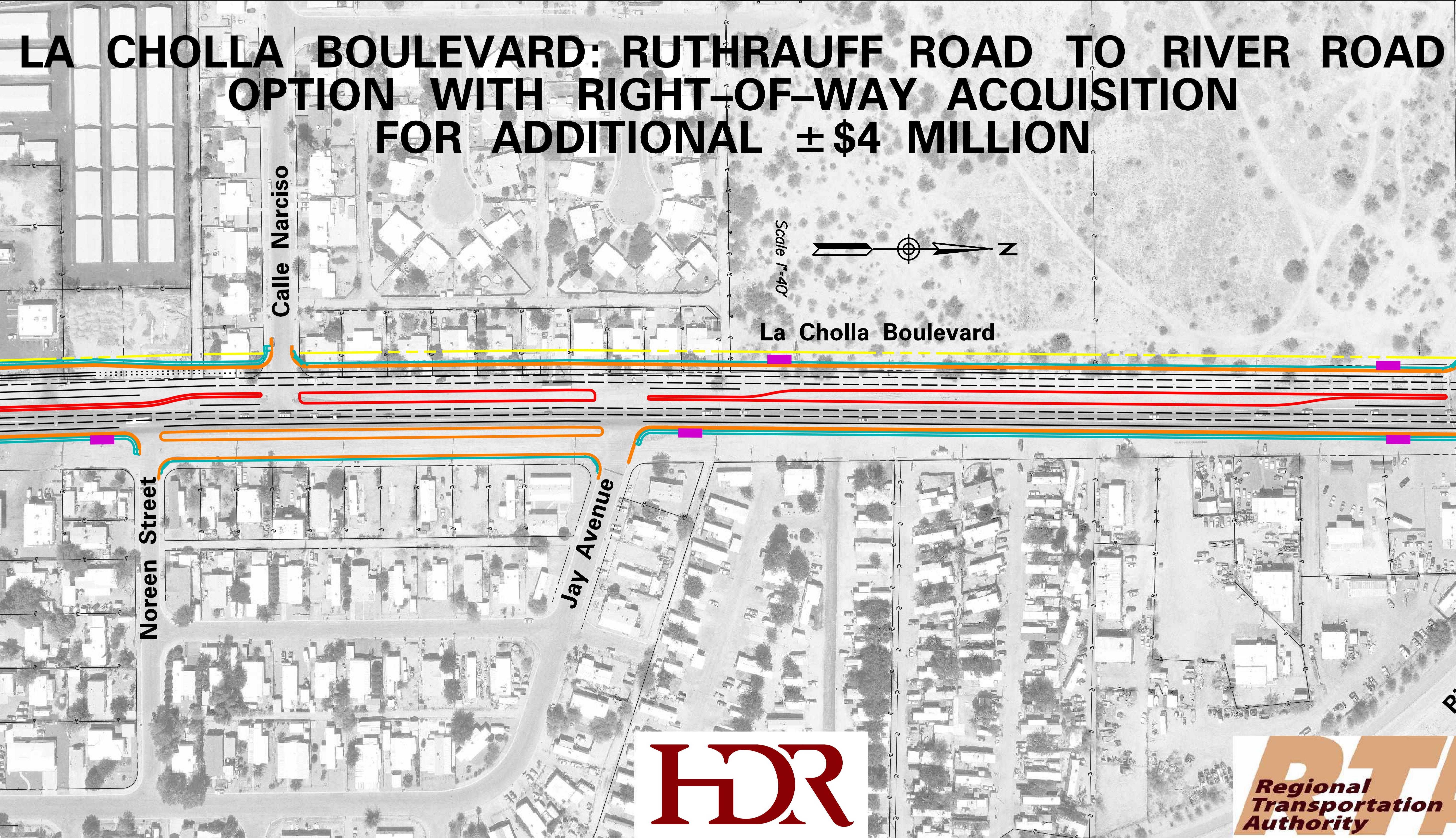
Date of measurements and average AM and PM

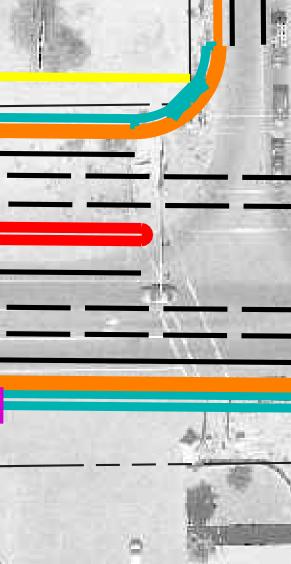


Bus Stop Curb & Gutter **Raised Median Concrete Sidewalk Right-Of-Way** 0

TITITI







105



Pima County Department of Transportation La Cholla Boulevard: River Road to Ruthrauff Road

The Pima County Department of Transportation (PCDOT) held an informational public meeting to address roadway improvement conceptual design on La Cholla Boulevard from River Road to Ruthrauff Road. Area residents, property owners, stakeholders and jurisdictional representatives attended the public meeting. PCDOT representatives and the design team conducted a formal presentation at 6:15 p.m. Before and after the presentation, the meeting followed an open house format with maps, displays and other informational materials available for the public to view. Those in attendance were encouraged to complete and submit comment forms.

Public Meeting

- Thursday, March 6. 2008
 - Ellie Towne Flowing Wells Community Center
 - 6 8:00 p.m.; Presentation at 6:15 p.m.

Public Notification

- Invitation-postcard announcing meeting mailed the week of Feb. 18, 2008
 - Mailing area included businesses and residences one half mile north of Ruthrauff Road and one half mile south of River Road; and one half mile east-west of La Cholla Boulevard between Ruthrauff Road and River Road
- Newspaper advertisements ran in the Arizona Daily Star on Feb. 24, 2008 and the Daily Territorial on Feb. 15, 2008
- Regional Transportation Authority (RTA) made contact with more than 100 businesses along the corridor providing them with information about the RTA Mainstreet program and invitations to the public meeting

Team Attendance

- PCDOT: Carol Brichta, Priscilla Cornelio, Ali Fermawi, Dean Papajohn, Annabelle Quihuis
- Pima County District III: Kiki Navarro Representative for Supervisor Sharon Bronson
- HDR: Larry Barela, Bob Brittain, Ted Buell, Scott Stapp, René Tanner
- Kimley-Horn and Associates: Scott Beck
- McGann & Associates: Darlene Showalter
- Public Artist: Vicki Scuri
- RTA: Britton Dornquast, Steve Taylor
- Tucson Pima Arts Council (TPAC): Jane Hallet
- Gordley Design Group: Susan Parcells, Arizeder Urreiztieta

Materials

- Fact Sheet
- Comment forms
- Sign-in sheets
- RTA brochures

Displays and Presentation

- Six information stations each with displays
 - $\circ~$ Aerial photos showing alignment and access management
 - Typical cross-sections
 - o Informational display board on noise
 - Notebook with examples of public art
 - Landscape design concepts and Rillito River Park access concepts
 - Brochures (RTA/Mainstreet; Pima County Real Property)
 - Concept bridge plans
- PowerPoint presentation

Name	Address	Phone	E-mail	Add to Mailing List	1. What is your primary interest in La Cholla?	2. What do you like about this project?	3. Please list any questions or concerns about this project.	4. Please list any other comments you have concerning this project.
Comments Receiv Betancourt, Celia	red at the Open House 2121 W. Calle Narciso Tucson, AZ 85705			yes	I own the property in which I live in the area adjacent to this section of La Cholla Boulevard. I regularly drive through this section of La Cholla Boulevard.	Side walks; Sound Barriers	More Traffic; Access into Calle Narciso in and out	Have a sound barrier or wall between house and road; narrowing of lanes further down the road.
Carrig, Cheryl	4964 N. Jay Ave. Tucson, AZ 85705	888-5685		Yes	I own the property in which I live in the area adjacent to this section of La Cholla Boulevard.	Kill the congestion.	If expansion is to the east, which I own property and reside in, what will happen to my property?	I am concerned with what will happen to my property, if anything.
Chardukian, Doris	5242 N. Royal Palm Dr. Tucson, AZ 85705	690-0690		Yes	I regularly drive through this section of La Cholla Boulevard. I regularly walk or bike through this section of La Cholla Boulevard. I own property off of Curtis Road.			When heading south on Curtis Road, there is a lane with a solid white line crossing out this lane. this was made into a right-turn lane now, it would help traffic some. I have almost been hit by vehicles in that lane.
Gaona, Robert	4921 N. La Cholla Blvd. Tucson, AZ 85705	887-1395		Yes	I own the property in which I live in the area adjacent to this section of La Cholla Boulveard.	Fix the traffic flow.	Drainage	Will we be bought out?
King, Gloria	2202 W. Calle Narciso Tucson, AZ 85705			Yes	I ownthe property in which I live in the area adjacent to this section of La Cholla Boulevard. I regularly drive through this section of La Cholla Boulevard.		There need to be sound barriers between roadway and housing areas - this was not mentioned, but there is a need for them. Where is the art work going to go? Wider roads attract more traffic.	Questions from the floor were no encouraged. What is the plan for access to an from Calle Narciso? The lanes south of River Road need to be the same width as north of River Road - they should not be narrower.
Larsen, Svein Larsen, Carol	2125 W. Calle Fortunado Tucson, AZ 85705	690-9091		Yes	I own the property in which I live in the area adjacent to this section of La Cholla Boulveard. I regularly drive through this section of La Cholla Boulevard.	This will be a wonderful north- south roadway.	I live at 2125 W. Calle Fortunado. Access is on La Cholla Boulevard at Calle Narciso. When La Cholla is completed, I believe access will be very difficult because of the closeness to the traffic light at Ruthrauff Road, and just in general because of a major thoroughfare. I have lived at this address since 1964.	I hope the traffic lights at Ruthrauff and Curtis Roads can somehow work as a team. The light at Ruthrauff Road now just

Name	Address	Phone	E-mail	Add to Mailing List	1. What is your primary interest in La Cholla?	2. What do you like about this project?	3. Please list any questions or concerns about this project.	4. Please list any other comments you have concerning this project.
Mattausch, William	2462 W. Kimberly Pl. Tucson, AZ 85705	293-2958		Yes	I own the property in which I live in the area adjacent to this section of La Cholla Boulevard. I regularly drive through this section of La Cholla Boulevard.	It is a good thing. It will move traffic quickly and safely.	Will we be able to pull heavy trucks off the residental streets, i.e.; Kain Avenue (north and south) between Ruthrauff Road and Curtis Road?	The three comanpies who move very large and heavy equipment; can they be required to use Curti Road and La Cholla Boulevard routes.
Plog, Patricia Plog, Terry	1965 W. Cusco Pl. # 2 Tucson, AZ 85705	235-0289	patriciaplog@ yahoo.com	Yes	I regularly drive through this section of La Cholla Boulevard. I regularly walk or bike through this section of La Cholla Boulveard. I live two blocks away from La Cholla Boulevard.	More space!! Traffic flow.	No questions.	I was hoping this project was further along. Need it now!!
Price, Robert	4950 N. La Cholla Bivd. Tucson, AZ 85705	888-2708	rprice15@ comcast.net	Yes	I live in rented property adjacent to this section of La Cholla Boulevard. I own rental property in which I live in the area adjacent to this section of La Cholla Boulevard.	No wall being put up.	A wall.	How long will it take?
	4846-4854 N. La Cholla Blvd. Tucson, AZ 85705	906-2961		Yes			Ingress/egress is needed for businesses on the east side of La Cholla Boulevard. I would like to enter straight in and straight out - no frontage road. I am concerned that the bus stop is too close to the intersection of Ruthrauff Road and La Cholla Boulevard.	

Name	Address	Phone	E-mail	Add to Mailing List	1. What is your primary interest in La Cholla?	2. What do you like about this project?	3. Please list any questions or concerns about this project.	4. Please list any other comments you have concerning this project.
Steakman, Laura	5484 N. Bramble Brook Ln. Tucson, AZ 85704	888-9730	laurafree@ comast.net	Yes	I regularly drive through this section of La Cholla Boulevard. I live in Riverside Place subdivision next to Bashas'.	Everything, especially relief from traffic congestion.	When is the widening of River Road to six lanes going to begin so we can make a U-turn at the intersection of La Cholla Boulevard and River Road to go east on River Road?	What is the tentative timeline to
Van Echo, Jay	6750 W. El Camino del Cerro, Tucson, AZ 85745	917-4534	jay.vanecho@ dmjmharris. com	Yes	I regularly drive though this section of La Cholla Boulevard: to and from work and to shop regularly at River Road and La Cholla Boulevard - also a regular at Dairy Queen!	Improve a.m. and p.m. peak turn movements; improve roadway safety and reduce congestion; new bridge at the river; improved access.	Please do not spend my tax money foolishly: if you can build it within existing Rignt-Of-Way and not spend \$4 million more - do it!! However, make sure landscape amenities and safe access are provided to homeowners - signal timing will be critical. Build it now - take advantage of a lull in construction activities to get a good bid!	The eastbound-to-northbound an conversely the southbound- to- westbound movements are extremely critical - please make sure turn-bay storages are sufficient. How about a free southbound-to-westbound right- turn lane into a dedicated westbound Ruthrauff Road acceleration lane to drop at a sufficient distance to the west?
Williams, Donald	5242 N. Royal Palms Dr. Tucson, AZ 85705	690- 0690		Yes	I regularly drive through this section of La Cholla Boulevard. I regularly walk or bike through this section of La Cholla Boulevard. I live off of Curtis Road.			Until this project is started or completed, is there any reaso going south on La Cholla Boulevard across the bridge, that drivers could merge right into a lane that is striped as a no-drive lane to make a right on Curtis Road? It might help the flow of traffic until completion of the project.
Anonymous					I regurlarly drive through this section of La Cholla Boulevard.	Looks nice.	Construction time - five years? This is a major way to the hospital.	
Anonymous					Commercial Development			Get this project bid!!! This is ; period one RTA commitment! Forget the Right-Of-Way purchase! Get the constructio cost more in line with the budget.

Name	Address	Phone	E-mail	Add to Mailing List	1. What is your primary interest in La Cholla?	2. What do you like about this project?	3. Please list any questions or concerns about this project.	4. Please list any other comments you have concerning this project.
Miller, Chad	4545 N. La Cholla Blvd. Tucson, AZ 85705	696- 8557	millerch@ flowingwells. K12.az.us		I regularly drive through this section of La Cholla Boulevard. I work at the school south of this section of La Cholla Boulevard.	To move traffic through the bridge and Curtis Road intersection while traveling southbound-northbound. Also, the sidewalks will be an added safety feature for students walking home from school.	Increase in the width of the intersection at La Cholla Boulevard and Ruthrauff Road. This will directly impact the safety of the students commuting to and from school.	I would like to request that the intersection at Ruthrauff Road have long enough "walk" time so students can safely travel through the intersection.
Bass, Bonny	1502 W. Kilburn Tucson, AZ 85705	293- 6841	bbass@pd-law .com		I own a rental property in the area adjacent to this section of La Cholla Boulevard. I regularly walk or bike through this section of La Cholla Boulevard.	I like the fact that the project is getting done. I think the section of road is long overdue for repairs and upgrading, and will ultimately be an asset to people who live in the area and commute through it.	See attached comments.	See attached comments.
Danehy, Tom	5880 N. Edenbrook Ln. Tucson, AZ 85741		c13yd@aol. com		I regularly drive through this section of La Cholla Boulevard.	It is a logical extension of the widening that has occurred on La Cholla Boulevard north of River Road.		I prefer the one-way frontage roads to the two-way frontage roads. Also, why are bus pullouts no included?

Public Attendance

• 84 attended

Public Comments

• Sixteen individuals submitted comment forms at the public meeting and during the two-week comment period ending March 20, 2008.



La Cholla Boulevard: River Road to Ruthrauff Road



r.,

Comment Form March 6, 2008

- 1. What is your primary interest in La Cholla?
 - I live in rented property adjacent to this section of La Cholla.
 - □ I own the property in which I live in the area adjacent to this section of La Cholla.

U. attached

- D I own rental property in the area adjacent to this section of La Cholla.
- □ I work in a business on this section of La Cholla.
- I regularly drive through this section of La Cholla.
- I regularly walk or bike through this section of La Cholla.
- └□ Other, please explain. _

2. What do you like about this project?

3. Please list any questions or concerns about this project. All attached

4. Please list any other comments you have concerning this project. le attached

IMPORTANT! Please print the following information: Name: Unny 12a 93-6841 Telephone: A Address: City: State: Zip; e-mail: un

Mail to: Pima County Community Relations Office, 201 N. Stone 4th floor, Tucson, Arizona 85701 or Fax to 740-6439

For more information visit http://www.roadprojects.pima.gov/LaChollaRiver/ ac parts it of

2. What did you like about this project?

I like the fact that the project is getting done. I think this section of road is long overdue for repairs and upgrading and will ultimately be an asset to people who live in the area and who commute through it.

3. Please list any questions or concerns about this project:

- a. I am disappointed by the design of the proposed project. It adversely affects people's homes, property and lives due to the increase of congestion and noise the improved roadway will bring to the neighborhood.
- b. I would like to know why bus pullouts will not be designed into the project. One selling point of the RTA prior to the election last year was that bus pullouts would be instituted on major arteries to aid in the efficient flow of traffic.
- c. The fact that Pima County sees no need for sound abatement bothers me. I do not believe that this project would be presented to neighborhoods where the "perceived" income of the residents is higher. I have always felt and continue to feel that Pima County does not care about the "lower income" citizens who reside in these neighborhoods and therefore does not care to rectify the noise problems.
- d. I continue to be distressed by the fact that Pima County believes it is okay to narrow the travel lanes along the stretch of roadway where the 10 or 11 homes are to "squeeze" the roadway in.
- e. I would like to know why no one, other than the RTA and Pima County, had a say in who the artist on this project would be. In attending other road widening projects, the CAC Committee members will be given the opportunity to choose the artist. We are stuck with some lady, even if she is nationally recognized, from Seattle. I find it hard to believe that there are no qualified artists in the entire State of Arizona. I am assuming we will be stuck with a "Sonora" or other similarly bad art projects in and around Tucson.
- f. As the project is proposed, there is no room for landscaping.
- g. I do not like the one way access roads proposed for the east and west sides of the street. It is unlike any other roadway projects in the Tucson area, except for some that were done perhaps in the 1980's. Pricilla Cornelio's solution is for residents to use the alley behind their homes to access their properties. This is not a viable solution and the arrogance of the suggestion is a slap in the face.
- I continue to be concerned how the City of Tucson will maintain its well site on La Cholla Boulevard after the access road is installed. The maintenance vehicles

will virtually close the access road to any through traffic since there will be no where for them to park.

i. The suggestion by an Engineer at the Open House that although this access road is proposed to be one way, it won't matter whether or not people drive two ways on it was insulting. His further suggestion that people will park along this access road even if they are told not to was also insulting. If there is no parking there, then the PCSO could issue parking citations.

j. I am confused why the road width and the sidewalk width will not be constructed according to guidelines set out in the *Pima County Roadway Design Manual*.

k,

If there is such a big problem with the budget then who is responsible for the shortfall? If the County knew they were going to do this project, and understood that the project needed to comply with the *Pima County Roadway Design Manual*, then why weren't the appropriate amount of funds set aside? Who fell down on the job?

- 1 ar



La Cholla Boulevard: River Road to Ruthrauff Road



Comment Form March 6, 2008

1. What is your primary interest in La Cholla?

- □ I live in rented property adjacent to this section of La Cholla.
- □ I own the property in which I live in the area adjacent to this section of La Cholla.
- □ I own rental property in the area adjacent to this section of La Cholla.
- W I work in a business on this section of La Cholla.
- I regularly drive through this section of La Cholla.
- □ I regularly walk or bike through this section of La Cholla.
- □ Other, please explain.

2. What do you like about this project? 6

3. Please list any questions or concerns about this project. Increase the width of La Challal P. Show of

4. Please list any other comments you have concerning this project.

Ken 1200171

IMPORTANT! Please print the following information:	
Name: Chud Miller	Telephone:696-8557
Address: 4545 N. La Challa Blud	
City: Tucson State:A2	Zip: \$5705
e-mail: millerch & floring wells, K/2, az us	

Mail to: Pima County Community Relations Office, 201 N. Stone 4th floor, Tucson, Arizona 85701 or Fax to 740-6439

For more information visit http://www.roadprojects.pima.gov/LaChollaRiver/ or contact Carol Brichta at 740-6410



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PRISCILLA S. CORNELIO, P.E. DIRECTOR

520.740.6410 FAX 520.740.6439

April 8, 2008

Tom Danehy 5880 North Edenbrook Lane Tucson, Arizona 85741

Re: La Cholla Boulevard, Ruthrauff Road to River Road, Project #4LCITR

Dear Mr. Danehy:

We are glad you were able to attend the Open House on March 6, 2008 for La Cholla Boulevard: Ruthrauff Road to River Road. We also appreciate the time you took to submit comments. All written public comments received at the open house were read by the project team and will be presented to the Board of Supervisors in the Environmental Assessment and Mitigation Report (EAMR) for La Cholla Boulevard. 1

In your comments you asked about sidewalk width and bus pullouts. The cross-section for the frontage roads includes a 5 foot sidewalk with a 1.5 foot wedge curb for a total of 6.5 feet. At this stage of planning, approximate locations for bus stops have been identified. The details of the bus stops will proceed in later stages of design.

Thank you for your interest in the project.

Sincerely,





PRISCILLA S. CORNELIO, P.E. DIRECTOR 520.740.6410 FAX 520.740.6439

April 8, 2008

William Mattausch 2462 West Kimberly Place Tucson, Arizona 85705

Re: La Cholla Boulevard, Ruthrauff Road to River Road, Project #4LCITR

Dear Mr. Mattausch:

We are glad you were able to attend the Open House on March 6, 2008 for La Cholla Boulevard: Ruthrauff Road to River Road. We also appreciate the time you took to submit comments. All written public comments received at the open house were read by the project team and will be presented to the Board of Supervisors in the Environmental Assessment and Mitigation Report (EAMR) for La Cholla Boulevard.

In your comments you mentioned the truck traffic on Kain Ave. We forwarded your concerns to the Pima County Traffic Engineering Division. They noted that Kain Avenue is a collector roadway with industrial complexes at both the north and south ends of the segment between Ruthrauff Road and Curtis Road, with some business access from Kain Avenue. Typically, the County does not limit truck traffic on public roadways unless there is some physical facility (bridge, culvert, pavement, etc.) that has a structural limitation. A review of the crash history for Kain Avenue and intermediate intersections found no applicable crash history. Kain Avenue is not a local roadway and is not within a subdivision and is therefore not defined as a "cut through" route. Given these considerations, no weight restrictions have been established for Kain Avenue.

Thank you for your interest in the project.

Sincerely,





PRISCILLA S. CORNELIO, P.E. DIRECTOR 520.740.6410 FAX 520.740.6439

April 8, 2008

Svein and Carol Larsen 2125 West Calle Fortunado Tucson, Arizona 85705

Re: La Cholla Boulevard, Ruthrauff Road to River Road, Project #4LCITR

Dear Mr. and Mrs. Larsen:

We are glad you were able to attend the Open House on March 6, 2008 for La Cholla Boulevard: Ruthrauff Road to River Road. We also appreciate the time you took to submit comments. All written public comments received at the open house were read by the project team and will be presented to the Board of Supervisors in the Environmental Assessment and Mitigation Report (EAMR) for La Cholla Boulevard.

In your comments you mentioned Calle Narciso and the intersections. A median opening is planned for Calle Narciso to leave access open from La Cholla Blvd., however, the close proximity of Calle Narciso to the Ruthrauff intersection may make access more challenging during busier parts of the day. Regarding the Ruthrauff intersection, the current plans call for two left turn lanes for southbound La Cholla and eastbound Ruthrauff and a right turn lane on all four legs of the intersection. Turn lanes are also planned for Curtis Road. The timing of traffic lighting will be studied and integrated into the project.

Thank you for your interest in the project.

Sincerely,





PRISCILLA S. CORNELIO, P.E. DIRECTOR 520.740.6410 FAX 520.740.6439

April 8, 2008

Stephen Schweska 4846-4854 North La Cholla Tucson, Arizona 85705

Re: La Cholla Boulevard, Ruthrauff Road to River Road, Project #4LCITR

Dear Mr. Schweska:

We are glad you were able to attend the Open House on March 6, 2008 for La Cholla Boulevard: Ruthrauff Road to River Road. We also appreciate the time you took to submit comments. All written public comments received at the open house were read by the project team and will be presented to the Board of Supervisors in the Environmental Assessment and Mitigation Report (EAMR) for La Cholla Boulevard.

In your comments you mentioned access and bus stops. A frontage road was recommended for the properties between Noreen and Jay in order to reduce traffic conflict with the new six lane road. Having multiple driveways and multiple vehicles exiting and entering La Cholla could be confusing. Regarding the bus stops, Sun Tran prefers their bus stops to be down stream but close to the intersections. The project team will continue to work with Sun Tran on the location and configuration of bus stops.

Thank you for your interest in the project.

Sincerely,





PRISCILLA S. CORNELIO, P.E. DIRECTOR 520.740.6410 FAX 520.740.6439

April 8, 2008

Robert Price 4950 North La Cholla Boulevard Tucson, Arizona 85705

Re: La Cholla Boulevard, Ruthrauff Road to River Road, Project #4LCITR

Dear Mr. Price:

We are glad you were able to attend the Open House on March 6, 2008 for La Cholla Boulevard: Ruthrauff Road to River Road. We also appreciate the time you took to submit comments. All written public comments received at the open house were read by the project team and will be presented to the Board of Supervisors in the Environmental Assessment and Mitigation Report (EAMR) for La Cholla Boulevard.

In your comments you mentioned walls and schedule. The County received varying opinions on the desirability of sound barriers. The alternative with right-of-way acquisition and sound barriers will be presented to the Board of Supervisors for consideration. It is important for the County to hear from the public on this issue to make sure all concerns are taken into account. Regarding schedules, to comply with all the regulations and policies it takes about 2 years to complete a roadway design if there are no political, financial, environmental, or cultural delays. Since rightof-way acquisition has appeared as an issue, it may take additional time to get the project under construction.

Thank you for your interest in the project.

Sincerely,





PRISCILLA S. CORNELIO, P.E. DIRECTOR

520.740.6410 FAX 520.740.6439

April 8, 2008

Bonny Bass 1502 West Kilburn Tucson, Arizona 85705

Re: La Cholla Boulevard, Ruthrauff Road to River Road, Project #4LCITR

Dear Ms. Bass:

We are glad you were able to attend the Open House on March 6, 2008 for La Cholla Boulevard: Ruthrauff Road to River Road. We also appreciate the time you took to submit comments. All written public comments received at the open house were read by the project team and will be presented to the Board of Supervisors in the Environmental Assessment and Mitigation Report (EAMR) for La Cholla Boulevard.

In your comments you asked about a number of issues the CAC has been discussing with the County. One item you asked about was the selection of the artist. The Pima County Public Art Program Policy is described in Board of Supervisors Policy C3.3, which can be found in the Roadway Design Manual, Appendix 3-E. Tucson Pima Arts Council (TPAC) is charged with managing the selection process. Section V.D.B. describes the make-up of the selection panel. In the case of La Cholla, the following people served on the panel: Ellie Towne (community representative), Dan Offret (community representative), Barbara Jo McLaughlin (local artist), Curt Brill (local artist), Barbara Macri (local arts professional), Lauren Harmon (District 3 Office representative), Roberta Zelikow (District 3 Appointee to Public Art & Community Design Committee, non-voting member), Ted Buell (design principal), Dean Papajohn (PCDOT Department designee), and Jane L. Hallet (panel facilitator – TPAC, non-voting member). TPAC takes great pride in running consistent and fair artist selection panels.

Thank you for your interest in the project

Sincerely,





PRISCILLA S. CORNELIO, P.E. DIRECTOR 520.740.6410 FAX 520.740.6439

April 8, 2008

Chad Miller 4545 North La Cholla Boulevard Tucson, Arizona 85705

Re: La Cholla Boulevard, Ruthrauff Road to River Road, Project #4LCITR

Dear Mr. Miller:

We are glad you were able to attend the Open House on March 6, 2008 for La Cholla Boulevard: Ruthrauff Road to River Road. We also appreciate the time you took to submit comments. All written public comments received at the open house were read by the project team and will be presented to the Board of Supervisors in the Environmental Assessment and Mitigation Report (EAMR) for La Cholla Boulevard. I

In your comments you asked about the intersection at La Cholla and Ruthrauff. Signal timing and pedestrian crossing times will be reviewed by our traffic engineers during design.

Thank you for your interest in the project.

Sincerely,

Dean Papajohn, P.E. Project Manager





PRISCILLA S. CORNELIO, P.E. DIRECTOR 520.740.6410 FAX 520.740.6439

April 8, 2008

Donald Williams 5242 North Royal Palms Drive Tucson, Arizona 85705

Re: La Cholla Boulevard, Ruthrauff Road to River Road, Project #4LCITR

Dear Mr. Williams:

We are glad you were able to attend the Open House on March 6, 2008 for La Cholla Boulevard: Ruthrauff Road to River Road. We also appreciate the time you took to submit comments. All written public comments received at the open house were read by the project team and will be presented to the Board of Supervisors in the Environmental Assessment and Mitigation Report (EAMR) for La Cholla Boulevard.

In your comments you asked if a right-turn lane for Curtis Road could be striped on the existing La Cholla bridge until the new improvements are built. This paved shoulder is designated for bicycles, allowing motorized vehicles to use it for a turn lane would create conflicts. The slanted striping was added to remind vehicles to stay out of the bicycle lane. The proposed improvements will provide separate space for right turns.

Thank you for your interest in the project.

Sincerely,





PRISCILLA S. CORNELIO, P.E. DIRECTOR 520.740.6410 FAX 520.740.6439

April 8, 2008

Jay Van Echo 6750 West El Camino del Cerro Tucson, Arizona 85745

Re: La Cholla Boulevard, Ruthrauff Road to River Road, Project #4LCITR

Dear Mr. Van Echo:

We are glad you were able to attend the Open House on March 6, 2008 for La Cholla Boulevard: Ruthrauff Road to River Road. We also appreciate the time you took to submit comments. All written public comments received at the open house were read by the project team and will be presented to the Board of Supervisors in the Environmental Assessment and Mitigation Report (EAMR) for La Cholla Boulevard.

In your comments you mentioned right-of-way, landscape, access, signal timing, turn bays, free southbound right turn lane, and schedule. The alternatives with and without right-of-way acquisition will be presented to the Board of Supervisors since additional money would be needed if property is acquired. The displays at the open house showed access, landscape, and turn lanes. If you have specific questions, please let us know. A free southbound right turn lane was considered at Ruthrauff but was rejected due to the need for property acquisition. Signal timing will be considered in the design of the intersections. Regarding schedules, to comply with all the regulations and policies it takes about 2 years to complete a roadway design if there are no political, financial, environmental, or cultural delays. Since right-of-way acquisition has appeared as an issue, it may take additional time to get the project under construction.

Thank you for your interest in the project.

Sincerely,

Dean Papajohn, P.E. Project Manager





PRISCILLA S. CORNELIO, P.E. DIRECTOR

520.740.6410 FAX 520.740.6439

April 8, 2008

Laura Steakman 5484 North Bramble Brook Tucson, Arizona 85704

Re: La Cholla Boulevard, Ruthrauff Road to River Road, Project #4LCITR

Dear Ms. Steakman:

We are glad you were able to attend the Open House on March 6, 2008 for La Cholla Boulevard: Ruthrauff Road to River Road. We also appreciate the time you took to submit comments. All written public comments received at the open house were read by the project team and will be presented to the Board of Supervisors in the Environmental Assessment and Mitigation Report (EAMR) for La Cholla Boulevard.

In your comments you mentioned the River Road and schedule. Currently there is no definite schedule for improvements to River Road, though the intersection may be widened before the main line. Regarding schedules, to comply with all the regulations and policies it takes about 2 years to complete a roadway design if there are no political, financial, environmental, or cultural delays. Since right-of-way acquisition has appeared as an issue, it may take additional time to get the project under construction.

Thank you for your interest in the project.

Sincerely,





PRISCILLA S. CORNELIO, P.E. DIRECTOR 520.740.6410 FAX 520.740.6439

April 8, 2008

Terry and Patricia Plog 1965 West Cusco Place #2 Tucson, Arizona 85705

Re: La Cholla Boulevard, Ruthrauff Road to River Road, Project #4LCITR

Dear Mr. and Mrs. Plog:

We are glad you were able to attend the Open House on March 6, 2008 for La Cholla Boulevard: Ruthrauff Road to River Road. We also appreciate the time you took to submit comments. All written public comments received at the open house were read by the project team and will be presented to the Board of Supervisors in the Environmental Assessment and Mitigation Report (EAMR) for La Cholla Boulevard.

In your comments you mentioned your desire for the project to move forward quickly. The project is fully staffed and will work toward getting construction started as soon as possible. To comply with all the regulations and policies it takes about 2 years to complete a roadway design if there are no political, financial, environmental, or cultural delays. Since right-of-way acquisition has appeared as an issue, it may take additional time to get the project under construction.

Thank you for your interest in the project.

Sincerely,





PRISCILLA S. CORNELIO, P.E. DIRECTOR 520.740.6410 FAX 520.740.6439

April 8, 2008

Gloria King 2202 West Calle Narciso Tucson, Arizona 85705

Re: La Cholla Boulevard, Ruthrauff Road to River Road, Project #4LCITR

Dear Ms. King:

We are glad you were able to attend the Open House on March 6, 2008 for La Cholla Boulevard: Ruthrauff Road to River Road. We also appreciate the time you took to submit comments. All written public comments received at the open house were read by the project team and will be presented to the Board of Supervisors in the Environmental Assessment and Mitigation Report (EAMR) for La Cholla Boulevard.

In your comments you mentioned sound barriers, public art, traffic congestion, lane width, and Calle Narciso. The County received varying opinions on the desirability of sound barriers. The alternative with right-of-way acquisition and sound barriers will be presented to the Board of Supervisors for consideration. Most of the congestion problems are due to the intersection. Six lanes should be more than adequate to handle traffic within the corridor. The lane width will be designed to meet or exceed national standards. A median opening is planned for Calle Narciso to leave access open from La Cholla Blvd., however, the close proximity of Calle Narciso to the Ruthrauff intersection may make access more challenging during busier parts of the day.

Thank you for your interest in the project.

Sincerely,





520.740.6410 FAX 520.740.6439

PRISCILLA S. CORNELIO, P.E. DIRECTOR

April 8, 2008

Robert Gaona 4921 North La Cholla Boulevard Tucson, Arizona 85705

Re: La Cholla Boulevard, Ruthrauff Road to River Road, Project #4LCITR

Dear Mr. Gaona:

We are glad you were able to attend the Open House on March 6, 2008 for La Cholla Boulevard: Ruthrauff Road to River Road. We also appreciate the time you took to submit comments. All written public comments received at the open house were read by the project team and will be presented to the Board of Supervisors in the Environmental Assessment and Mitigation Report (EAMR) for La Cholla Boulevard. I

In your comments you mentioned drainage and property acquisition. A thorough drainage analysis will be performed as part of the roadway design. Though improvements in the right-of-way don't necessarily improve flooding on private properties. Regarding property acquisition, the County's recommendation is to construct the new improvements in the existing right-of-way without purchasing property from adjacent landowners. This would eliminate uncertainty that some property owners are feeling. The alternative with right-of-way acquisition and sound barriers will be presented to the Board of Supervisors for consideration. If the Board approves right-of-way acquisition, some adjacent properties would need to be purchased by the County. It is important for the County to hear from the public on this issue to make sure all concerns are taken into account.

Thank you for your interest in the project.

Sincerely,

Dean Papajohn, P.E. Project Manager





PRISCILLA S. CORNELIO, P.E. DIRECTOR 520.740.6410 FAX 520.740.6439

April 8, 2008

Doris Chardukian 5242 North Royal Plam Drive Tucson, Arizona 85705

Re: La Cholla Boulevard, Ruthrauff Road to River Road, Project #4LCITR

Dear Ms. Chardukian:

We are glad you were able to attend the Open House on March 6, 2008 for La Cholla Boulevard: Ruthrauff Road to River Road. We also appreciate the time you took to submit comments. All written public comments received at the open house were read by the project team and will be presented to the Board of Supervisors in the Environmental Assessment and Mitigation Report (EAMR) for La Cholla Boulevard.

In your comments you asked if a right-turn lane for Curtis Road could be striped on the existing La Cholla bridge until the new improvements are built. This paved shoulder is designated for bicycles, allowing motorized vehicles to use it for a turn lane would create conflicts. The slanted striping was added to remind vehicles to stay out of the bicycle lane. The proposed improvements will provide separate space for right turns.

Thank you for your interest in the project.

Sincerely,





PRISCILLA S. CORNELIO, P.E. DIRECTOR 520.740.6410 FAX 520.740.6439

April 8, 2008

Cheryl Carrig 4964 North Jay Avenue Tucson, Arizona 85705

Re: La Cholla Boulevard, Ruthrauff Road to River Road, Project #4LCITR

Dear Ms. Carrig:

We are glad you were able to attend the Open House on March 6, 2008 for La Cholla Boulevard: Ruthrauff Road to River Road. We also appreciate the time you took to submit comments. All written public comments received at the open house were read by the project team and will be presented to the Board of Supervisors in the Environmental Assessment and Mitigation Report (EAMR) for La Cholla Boulevard.

In your comments you mentioned your property on the east side of La Cholla. The County's recommendation is to construct the new improvements in the existing right-of-way without purchasing property from adjacent landowners. This would eliminate uncertainty that some property owners are feeling. The alternative with right-of-way acquisition and sound barriers will be presented to the Board of Supervisors for consideration. If the Board approves right-of-way acquisition some adjacent properties would need to be purchased by the County. It is important for the County to hear from the public on this issue to make sure all concerns are taken into account.

Thank you for your interest in the project.

Sincerely,





PRISCILLA S. CORNELIO, P.E. DIRECTOR 520.740.6410 FAX 520.740.6439

April 8, 2008

Celia Betancourt 2121 West Calle Narciso Tucson, Arizona 85704

Re: La Cholla Boulevard, Ruthrauff Road to River Road, Project #4LCITR

Dear Ms. Betancourt:

We are glad you were able to attend the Open House on March 6, 2008 for La Cholla Boulevard: Ruthrauff Road to River Road. We also appreciate the time you took to submit comments. All written public comments received at the open house were read by the project team and will be presented to the Board of Supervisors in the Environmental Assessment and Mitigation Report (EAMR) for La Cholla Boulevard.

In your comments you mentioned access to Calle Narciso. A median opening is planned for Calle Narciso to leave access open from La Cholla Blvd., however, the close proximity of Calle Narciso to the Ruthrauff intersection may make access more challenging during busier parts of the day. You mentioned sound barrier and lane widths as concerns. The County received varying opinions on the desirability of sound barriers. The alternative with right-of-way acquisition and sound barriers will be presented to the Board of Supervisors for consideration. It is important for the County to hear from the public on this issue to make sure all concerns are taken into account.

Thank you for your interest in the project.

Sincerely,





(520) 740-6410

FAX (520) 838-7537

PRISCILLA S. CORNELIO, P. E. DIRECTOR

June 5, 2008

Ellie Towne 5324 N. Royal Palm Drive Tucson, AZ 85705 Sample Letter; Distributed to all CAC Members

RECEIVED

Dear Ms. Towne:

This letter provides a brief update on project activities for La Cholla Boulevard: Ruthrauff Road to River Road. There are numerous studies and reports required in order to complete a roadway project. Since the open house in March, the project team has been working on draft reports for Cultural Resources, Biological Evaluations, Geotechnical information, Noise studies, etc. The primary documents underway now are the Design Concept Report (DCR) and the Environmental Mitigation and Assessment Report (EAMR). These reports not only document the proposed plan, but also will include the background information that lead to the plan, alignment alternatives with pros and cons, impacts to the environment and community, and the specific concerns of the CAC. Next steps in the roadway design process include:

- Complete the DCR and EAMR.
- County review of DCR and EAMR.
- Present the DCR and EAMR to the CAC.
- CAC to compose a response letter to the EAMR for the Board of Supervisors. (Areas of concern have previously been escalated to County Administration and to your Supervisor, so they are familiar with the issues.)
- Present EAMR plans to the public at an open house.
- Present DCR to the Director of the Department of Transportation.
- Present EAMR to the Board of Supervisors. Public input is included in the EAMR document and can be shared at the Board of Supervisor's public hearing.

The next CAC meeting is anticipated for August. We will be contacting you about a specific meeting time as the date draws nearer. In the meantime, if you have any questions or concerns about the roadway design process, please feel free to contact me. The County appreciates your service on the Community Advisory Committee for La Cholla Boulevard.

Sincerely,

Dean Papajohn, P.E. Project Manager





PRISCILLA S. CORNELIO, P. E. DIRECTOR

(520) 740-6410 FAX (520) 740-6439

July 10, 2008

Re: La Cholla Boulevard: River Road to Ruthrauff Road Community Advisory Meeting (CAC)

Dear Neighbor:

The Pima County Department of Transportation will be hosting a Community Advisory Committee (CAC) meeting for the La Cholla Boulevard: River Road to Ruthrauff Road improvement project.

The meeting will be held on Thursday July 24, 2008 from 6:00 - 7:30pm at the **Ellie Towne Flowing Wells Community Center located at 1660 W. Ruthrauff Road.** The meeting agenda will include the review of the noise report.

If you have questions regarding the meeting, please contact me at (520)740-6410 or e-mail Carol.Brichta@dot.pima.gov.

Sincerely,

Carol Brichta, Community Relations, Program Coordinator

xc: Dean Papajohn, Project Manager Annabelle Quihuis - Community Relations Manager



La Cholla Boulevard: Ruthruaff Road to River Road



Agenda

La Cholla Boulevard: Ruthrauff Road to River Road Community Advisory Committee (CAC) Meeting Thursday July 24, 2008 6:00-7:30 p.m. Ellie Towne Community Center

6:00 Welcome and Introductions

6:10 Agenda and meeting format

6:15 Project Update

6:20 Presentation of Noise Report

7:00 Discussion

7:25 Next Steps

- CAC meeting on Thursday August 7, 2008 from 6:00-7:30 to distribute and discuss the draft Environmental Assessment and Mitigation Report (EAMR) and the draft Design Concept Report (DCR). CAC will be asked to write a response letter to the EAMR.
- Open House September 9 or 11.

7:30 Adjourn meeting

Team will remain for individual questions





PRISCILLA S. CORNELIO, P. E. DIRECTOR

(520) 740-6410 FAX (520) 740-6439

August 4, 2008

Re: La Cholla Boulevard: River Road to Ruthrauff Road Community Advisory Meeting (CAC)

Dear Neighbor:

The Pima County Department of Transportation will be hosting a Community Advisory Committee (CAC) meeting for the La Cholla Boulevard: River Road to Ruthrauff Road improvement project.

The meeting will be held on Tuesday, August 12, 2008 from 6:00 - 7:30pm at the **Ellie Towne Flowing Wells Community Center located at 1660 W. Ruthrauff Road.** The meeting agenda will include the review of the Environmental Assessment and Mitigation (EAMR) report.

If you have questions regarding the meeting, please contact me at (520)740-6410 or e-mail Carol.Brichta@dot.pima.gov.

Sincerely,

Carol Brichta, Community Relations, Program Coordinator

xc: Dean Papajohn, Project Manager Annabelle Quihuis - Community Relations Manager



La Cholla Boulevard: Ruthruaff Road to River Road



Agenda

La Cholla Boulevard: Ruthrauff Road to River Road Community Advisory Committee (CAC) Meeting Tuesday August 12, 2008 6:00-7:30 p.m. Ellie Towne Community Center

6:00 Welcome and Introductions

6:10 Presentation of Draft Design Concept Report

6:30 Presentation of Draft Environmental Assessment and Mitigation Report

7:00 Follow up on Noise Report

7:10 Discussion

7:25 Next Steps

• Open House September 11.

7:30 Adjourn meeting

Team will remain for individual questions



La Cholla Boulevard: Ruthrauff Road to River Road Community Advisory Committee Meeting



Community Advisory Committee (CAC) Meeting Thursday, Aug. 12, 2008 6 to 7:30 p.m. Ellie Towne Flowing Wells Community Center

CAC Members Present:

- Fred Bass
- Ann Girvin
- Norma Metz
- Wayne Metz
- Robert Schwartz
- Ellie Towne

CAC Members Not in Attendance:

- Ellen Currey
- Carol Gawrychowski
- Andy Hernandez
- Jason Kai
- William Mattausch
- Gretchen Ochoa
- Ian Stewart
- Kaye Swinford

Attending from Project Team:

- Pima County Department of Transportation (PCDOT): Carol Brichta, Rick Ellis, Dean Papajohn
- Representative from Supervisor Sharon Bronson's office: Kiki Navarro
- HDR Engineering: Larry Barela, Catherine Bolm, Bob Brittain, Ted Buell, Scott Stapp
- Regional Transportation Authority (RTA) Jim DeGrood
- Gordley Design Group: Barb Alley, Arizeder Urreiztieta

Attending from the Public:

- Bonny Bass
- Timothy Barrett
- Marvin Horn
- Bob lannarino
- Jerry Jones

Materials Distributed/Presented:

- Agenda
- Comment forms
- RTA booklets
- Draft Environmental Assessment and Mitigation Report and Draft Design Concept Report

Dean Papajohn, PCDOT Project Manager, welcomed the group to the CAC meeting, and again thanked the members for their commitment to the La Cholla Boulevard project. He took a moment to go around the room and have everyone introduce themselves and state their affiliation.

The purpose of tonight's meeting is to discuss two very important project documents. The CAC will be provided with the draft Design Concept Report (DCR) and the draft Environmental Assessment and Mitigation Report (EAMR). Although the DCR is in draft form, it is quite thorough at this stage and it includes all the documentation that has been presented to the CAC members over the past several months. The draft EAMR contains all the information to date and it summarizes all the investigations, analysis and design work that has been completed for this project.

With the amount of information in the reports, the team felt it would be beneficial to the members to present them with the documents in order to help them navigate through some of the major elements in the documents. It will be the role of the CAC members to respond to the DCR and the EAMR, and present that information back to the design team.

Dean took a moment to direct the CAC to the Community Participation and Mitigation Ordinance, section 10.56.200, which is located in their member notebooks. He stated that this section spells out the functions and the duties of the CAC. At this point in the process, the CAC is to provide written comments containing the CAC's recommendations on the DCR and the EAMR. The written summary and response will not only be presented to the design team, but will also be presented to the Pima County Board of Supervisors (BOS).

The CAC members on this project are further in the process than other CAC's; they had written a letter to the BOS in January. Dean stated that the team did their best to incorporate their concerns in the documents that the committee had received.

Dean stated that the group would need to come together after reviewing the documents in order to write their letter. He stated that PCDOT would be available to meet with the members if requested. Dean stated that the committee could use the comments that they submitted to the BOS in January, or they could write a new letter.

Dean informed the members that as a part of the process, the team would be getting the additional input from the community at a public meeting that has been scheduled for Sept. 11, 2008, at the Ellie Towne Flowing Wells Community Center from 5:30 – 7:30 p.m. The county will mail invitations to everyone that lives within one-half mile of the project area. The team will be there with displays and available to answer questions from the public. There will also be surveys that will be passed out to the attendees of the meeting as well as mailed to all who received the invitation for the public meeting. The results will be gathered and given to the project team and the CAC members so they can address the public's comments in their letter to the BOS.

Dean introduced Bob Brittain, HDR Engineering, who would present the draft DCR to the CAC members. The DCR is the report that is drafted to document the design approach on how to prepare the construction plans. This report summarizes all the reports, surveys, etc. that have been performed in the project area. Bob pointed out that at the front of the draft DCR there would be an Executive Summary and a Table of Contents. The following is a quick overview of each chapter:

Chapter 1 – Project Overview – how and why this project exists

Chapter 2 – Project Description – scope of work

Chapter 3 – Project Area Characteristics – existing conditions; environmental and physical **Chapter 4** – Traffic and Accident Data – summarizes traffic volumes, capacity, accidents, etc. The Arizona Department of Transportation (ADOT) did a safety study of the intersection of La Cholla Boulevard and River Road due to the number of accidents at that intersection. Even though that intersection is not a part of this RTA project, there will be some improvements under the recommendation of ADOT that will occur as a result of that study.

Chapter 5 – Design Standards and Criteria – 2003 Pima County Roadway Design Manual and the American Association of State Highway and Transportation Officials (AASHTO)

Chapter 6 – Major Design Features – horizontal and vertical alignment, access control, right-of-way, drainage, earthwork considerations, intersections, utilities, structures, pavement design, signalizing, construction issues, design exceptions

Chapter 7 – Social, Economic and Environmental Considerations – summarizes all environmental studies

Chapter 8 – Public Involvement – includes the Public Participation Plan, information from the CAC and summarizes public open houses; documentation including meeting minutes, can be found in Appendix B; information and documentation from the Sept. 11, 2008, open house will be added to this document

Chapter 9 – Agency Coordination – environmental review and intergovernmental agreements **Chapter10** – Alternatives – lists Roadway Alternatives A, B, C, D, E (recommended by PCDOT), F and variations of Alternative E

Chapter11 – Conclusions and Recommendations

Chapter12 – Cost Estimate and Budget Considerations

Chapter13 – References

Appendix A – Construction Costs and Estimate

Appendix B – Community Advisory Committee and Public Involvement Information

Appendix C – Stage 1 (15%) Construction Plans – bound separately

Appendix D – Right-of-Way Requirement Plans – bound separately

There were several questions from the CAC regarding the DCR as follows:

Where will the money come from to improve the La Cholla Boulevard and River Road intersections?

The River Road intersection is a separate project with a separate budget. The County has allocated money separate from the La Cholla Boulevard project to build the River Road intersection improvements.

Where will the money come from for the installation of the new drainage improvements along this corridor?

The project cost estimate has included the additional storm drain since early planning and design identified this as a need.

Was the cost of sound walls added into the cost estimate?

Yes. When the noise study found walls to be warranted, the cost became a part of the estimate.

When will the CAC need to write the letter to the BOS?

After the open house comments are received and documented. The summary of comments will be made available to the CAC prior to writing the letter to the BOS. The public has two weeks after the open house to return comments to be included in the EAMR.

What about the alternative that the CAC is going to recommend?

Dean stated that the team had brought both alignments with them to the meeting tonight. PCDOT is aware that the CAC wants to choose an option that is not being recommended by the County. Dean said that all of the alternatives are summarized in the draft DCR, but the County will only develop one set of plans. It is not cost-effective to design several roadway alternatives. At the 15-percent stage of plans, since the alternatives are not dramatically different, the team is able to show the CAC's alignment choice conceptually. However, further along in the process, it will not be feasible to continue to develop multiple alternatives in detail.

In Alternative B, how far would the road have to be moved over?

Bob stated that the lanes would be wider with Alternative B and he would most likely move the road over 40 feet. With Alternatives A and B, that would allow for wider lanes and a much wider frontage road since property would be purchased in those alternatives. In Alternative D, that alternative would be purchasing both sides of La Cholla Boulevard, reducing the need for frontage roads along the project corridor. This alternative would also keep the roadway on its current centerline.

Dean let the members know that on Page 60 of the draft DCR, there was a cost estimate of the different alternatives. Construction costs for Alternative B would be approximately \$23.8 million in comparison to Alternative D, which would be an approximate cost of \$23.5 million.

Would the CAC's alternatives be presented at the open house?

PCDOT plans to bring the county's recommended Alternative E to the open house. The team will also bring the CAC's alternative they will be recommending; however, they will not bring all of the alternatives to the public meeting.

How will south La Cholla Boulevard look with the intersection expanded at Ruthrauff Road and the possibility of La Cholla Boulevard being expanded past Wetmore Road?

After passing through the intersection, the roadway will gradually narrow back to two lanes. There are no plans in the 20-year plan to widen La Cholla Boulevard in that area. The traffic counts collected do not anticipate much growth.

If Alternative D purchases both sides of La Cholla Boulevard, there would not be frontage roads. Would the cost be reduced because frontage roads would not be needed?

No, there would be other costs incurred like wider lanes. Dean referred the members to Page 50 of their draft DCR to see which houses would be purchased and what the roadway would look like. Money is tight on this project and Dean stated that PCDOT already has the right-of-way needed to build Alternative E.

Dean stated that the team still had the EAMR to brief the members on. He said that the EAMR has a lot of the same information, as the DCR and Scott Stapp, HDR Engineering, would be presenting the EAMR to the members.

The EAMR begins with the executive summary. Scott stated that the summary only summarizes the information that is written in the report, so he is strongly urging everyone to read the entire report prior to reading the summary.

After the title page of the EAMR, there will be a table of contents that will outline what is in the report. The actual report begins on page one, after the executive summary. For your reference, the executive summary portion has ES before each page number.

Scott again stated that the draft EAMR has most of the same information as the draft DCR. This EAMR contains:

Chapter 1 – Background – project cost and funding, direction by BOS, and project design process
 Chapter 2 – Purpose and Need
 Chapter 3 – Project Setting

Chapter 4 – Proposed Project

Chapter 5 – Environmental Screening

Chapter 6 – Environmental Assessment and Mitigation – Natural/Physical Environment; biological resources, drainage and clean water act, floodplain, air quality, noise, utilities, hazardous materials, construction activities, cultural resources, visual resources; and Neighborhood/Social Environment; right-of-way acquisition, temporary and permanent access and parking impacts, neighborhood disruption, parks and recreational areas, consistency with other plans

Chapter 7 – Agency Coordination

Chapter 8 – Public Participation – public participation activities; community comments

Chapter 9 – Conclusions and Recommendations

Chapter10 – References

Chapter11 – Abbreviations and Acronyms

Scott told members to refer to Chapter 10 in order to get information on the documentation used in this report. He referred members to Chapter 11 for a list of acronyms that will be used throughout the documents. He also pointed members to the inside cover of their booklets where a CD is located that includes all the text and appendices in the document.

Scott referred everyone to table ES – 7, which is the summary for the environmental impacts and recommendations. He stated that in the summary it would show potential impacts, recommended mitigation, agency coordination and consultation and parties responsible for implementation. Scott mentioned was there were cultural sites found and the design of the roadway was slightly altered to avoid the sites. These sites will continue to be monitored during the course of construction. There was also a lot of past discussion regarding traffic noise. The entire study is contained in this report and what areas were found to warrant sound barriers as a result of the noise study. Another area of concern was hazardous material. Because of the potential of hazardous material from prior businesses, trenches were dug along the corridor and soil samples were gathered. The area was found to be free of any hazardous material. Borings were also done where known storage tanks were located once known to have been leaking. No concerns were noted with the extensive investigations that took place as a part of this report.

Scott took a moment to explain to everyone how to read the main report. He asked the members to turn to Page 18 of their report. Under Section 6.1.1, the CAC would find the Biological Resources section of the report. Under this section the members will find the existing conditions, what permits are needed, potential impacts and mitigation measures. Each chapter has this information available along with addititional supporting documentation as warranted.

This report was based on Alternative E. Scott stated that some of this information would change if another alternative were to be chosen. For example, if the design moves out of the existing right-of-way, there may need to be additional contamination testing done to ensure the area is safe to work in.

There were several questions from the CAC regarding the EAMR as follows:

Where are the cultural sites located that were mentioned?

That information is excluded from the public record to ensure the areas stay undisturbed.

I was under the understanding that there were not any sites located in this project area?

There are no cultural resources within the project site; however, there are some sites that are adjacent to the project area that will be monitored.

Dean took a moment to point everyone to Pages ES - 12 and 13. This section contains a summary of the CAC and public concerns within the project area. More detail on this subject could be found in the main document beginning on Page 67.

There is also information in the Appendix on public art. Ellie Towne, CAC member, was on the selection committee to choose the artist that will work on this project. Vicki Scuri from Seattle Wash. was chosen as the artist on this project. There is not a lot of information at this point. She has some preliminary concepts she is working on. When the project is further along, she will come to Tucson and meet with the CAC to discuss her ideas on the public art that will be along La Cholla Boulevard. She is currently exploring art on the railing of the bridge and noise barrier walls. She will want the input from the committee when she is ready to move forward in her designs.

Will she be aware of all the safety features that will be a part of this project?

Yes, she will have all the necessary information when it is time to move forward.

Are there noise walls needed for Alternative D?

Noise walls will not be needed with Alternative D because both sides of the roadway would be purchased eliminating the need for sound mitigation. Dean stated that Scott would be available for any noise questions.

What if some residents don't want walls where walls are warranted?

If noise walls are still warranted upon approval from the BOS, there is a process the team will go through to find out who wants the walls in the areas where noise walls could be added. There has to be a majority of approval for each wall in order for the wall to be constructed.

Are all the documents in this report specific to Alternative E?

All the alternatives are presented in this report. PCDOT's recommendation is Alternative E, which stays within the current right of way, meets the mandates of the County and disrupts as few residents in the area as possible.

Dean stated that since there were no further questions, he wanted to remind everyone of the public open house which would be held on Thursday, Sept. 11, 2008, from 5:30 – 7:30 p.m. at the Ellie Towne Flowing Wells Community Center.

Dean reminded the CAC that their responsibility would include reading through the documents to get prepared to write their letter to the BOS. Dean stated that it would be up to the CAC if they wanted to use the letter that the CAC sent to the BOS in January; however, they could write a new one if they felt it was necessary. The public has a two-week period after the open house in which comments can be received. Those comments will be given to the CAC for their review. The members should have their letter completed near the end of September.

Dean stated that if there were any individual questions, the team would stay to answer those specific questions.

Can the CAC get a copy of the mailing list? The members would like to send information to the people who received the invitation to the open house.

Carol Brichta, PCDOT Community Relations, stated she would have to check to see if that would be possible. Dean stated that he would like the CAC and PCDOT to work together on any mailing that goes out to the community; it is important the CAC and PCDOT work as a team in this process. Dean

stated the team would be happy to have questions on the survey if the CAC wanted specific concerns addressed with the public.

The meeting was adjourned at 7:05 p.m.



La Cholla Boulevard: Ruthrauff Road to River Road Community Advisory Committee (CAC) Meeting Sign-In Sheet Tuesday, Aug.12, 2008



Completion of this sign-in sheet is completely voluntary and helps the project team keep an accurate record of meeting attendees. Under state law, any identifying information provided below will become part of the public record, and as such, must be released to any individual upon request. **Please print clearly.**

Printed Name	Representing	Address	Zip Code	Phone	E-mail
Larry Barela	HOR			584-3637	
DEAN BAPAJOH	V PCDOT			740-6971	
TED BUELL	HOR			584-3632	
Carol Brickla					
Benur Bas		1502 WKillow	85.705	293-6841	
Vin De Groop	PAG/RTA				
Bob Schwartz					
MARVIN HEARS		\$961 NLACHOIN	85705	887-1056	
Yimo the Barret		4955 n. Ra 44967 Challa			
BOB / ANNARINO	Prome Verter	2200 E. R.UM RO # 115	8-778	577-0200	
Bob Batten	HOR			584-3671	



La Cholla Boulevard: Ruthrauff Road to River Road

Community Advisory Committee (CAC) Meeting Sign-In Sheet Tuesday, Aug. 12, 2008



Initial	Name	Agency and Address		E-mail
	Humbert Arce	1923 W. Alder Grove Drive Tucson, AZ 85704	Phone 293-3156 Fax	
	Fred & Bonny Bass	1502 W. Kilburn Street Tucson, AZ 85705	Phone 407-3767 Fax 407-3768	fred.bass@wwm.pima.gov
	Ellen Currey	2465 W. Diamond Street Tucson, AZ 85705	Phone 520-293-7769 Fax	
4				
	Carol Gawrychowski	4721 N. Warner Terrace Tucson, AZ 85705	Phone Fax	
	Carol Gawrychowski			ann@holualoa.com



La Cholla Boulevard: Ruthrauff Road to River Road

Community Advisory Committee (CAC) Meeting Sign-In Sheet Tuesday, Aug. 12, 2008



Initial	Name	Agency and Address			E-mail
	Jason Kai	2305 W. Ruthrauff Road Tucson, AZ 85705	9 	602-402-5451 888-0642	jasonukai@yahoo.com
	William Mattausch	2462 W. Kimberly Place Tucson, AZ 85705	Phone Fax	293-2958	
	Wayne and/or Norma Metz Ver off	4901 N. La Cholla Blvd. Tucson, AZ 85705	Phone Fax	520-887-0553	norma.metz@msn.com
	Gretchen Ochoa	2015 W. Ruthrauff Road #163 Tucson, AZ 85705	Phone Fax		
	Robert Schwartz	7898 N. Ancient Indian Drive Tucson, AZ 85718	Phone Fax	520-444-5005	
	Ian Stewart	2446 W. Rau River Road Tucson, AZ 85705	Phone Fax		



La Cholla Boulevard: Ruthrauff Road to River Road

Community Advisory Committee (CAC) Meeting Sign-In Sheet Tuesday, Aug. 12, 2008



Initial	Name	Agency and Address	E-mail	
	Kaye Swinford	2430 W. Golda Place Tucson, AZ 85705	Phone Fax	
A	Ellie Towne	Flowing Wells Neighborhood Association PO Box 5141 Tucson, AZ 85703	Phone 888-2085 Fax	towebaz@msn.com

Pima County Department of Transportation OPEN HOUSE La Cholla Boulevard from Ruthrauff Road to River Road Improvement Project

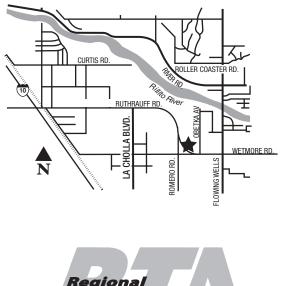
Pima County Department of Transportation (P.C.D.O.T.) will be holding an open house meeting to provide conceptual design information on the widening of **LaCholla Boulevard** from **Ruthrauff Road** to **River Road**.

Proposed improvements consist of: six travel lanes, paved shoulders for bicycles, sidewalks, curbs and storm drains, intersection improvements at Curtis and at Ruthrauff, a new six-lane bridge over the Rillito river, a raised landscaped median, and urban design (public art). Project design is approximately at the 30% stage. Information from the Design Concept Report (DCR) and the Environmental Assessment and Mitigation Report (EAMR) will be presented at the open house. Team members will be available to informally discuss roadway design, bridge design, drainage design, proposed sound barrier walls, and other project features. The open house is intended to keep the public informed on project progress and to provide a forum for public input that will be provided to the Board of Supervisors with the EAMR prior to Board approval.

With this open house format, you may **stop in any time between 5:30 to 7:30** to view the project displays and to interact with project staff. We hope you will come to share your thoughts about the project.

Individuals with disabilities who require accommodations for effective participation and communication in the meeting may call Community Relations at 740-6410 by September 4 to make appropriate arrangements. All meeting sites are accessible.

Thursday, September 11, 2008 Stop by between 5:30 -7:30 p.m. Ellie Towne Flowing Wells Community Center 1660 W. Ruthrauff Road



Transportation Authority



PIMA COUNTY DEPARTMENT OF TRANSPORTATION 201 NORTH STONE AVENUE, FOURTH FLOOR TUCSON, ARIZONA 85701-1207



PRISCILLA S. CORNELIO, P. E. DIRECTOR

(520) 740-6410 FAX (520) 838-7537

September 3, 2008

Dear Community Member:

Pima County is planning roadway improvements on La Cholla Boulevard from Ruthrauff Road to River Road and would like your input. Proposed improvements consist of: six travel lanes, paved shoulders for bicycles, sidewalks, curbs and storm drains, intersection improvements at Curtis and at Ruthrauff, a new six-lane bridge over the Rillito river, a raised landscaped median, and urban design (public art). The enclosed project information sheet provides additional background on the project

An open house to present preliminary design concepts has been planned for September 11, 2008, from 5:30-7:30 at the Ellie Towne Flowing Wells Community Center at 1660 W. Ruthruaff Road. If you were unable to attend or did not already complete a survey at the open house, we would still like to hear from you. Please consider completing the enclosed survey and returning it by Sept. 26 to the address listed at the bottom of the survey. All feedback received by this date will be summarized and placed in the project report given to the Community Advisory Committee and the Board of Supervisors.

We look forward to receiving your survey.

Sincerely,

Dean Papajohn, P.E. Project Manager

Encl.



La Cholla Boulevard: River Road to Ruthrauff Road



Project Information

- 1. What are the benefits of the project?
- Provides a safe parkway-type alternative north-south route to Oracle Road.
- Continues and connects recently completed widening projects on La Cholla south of Magee Road to River Road.
- Provides access to I-10 via Ruthrauff Road.
- Improves mobility, access, and safety for busses.
- Improves bicycle and pedestrian mobility and safety.
- Provides ADA accessible transit stops.
- Enhances the right-of-way with landscape and urban design (public art).

2. What type of improvements will the project contain?

- Proposed improvements include: six travel lanes, paved shoulders for bicycles, sidewalks, curbs and storm drains, intersection improvements at Curtis and at Ruthrauff, a new six-lane bridge over the Rillito river, a raised landscaped median, and urban design (public art).
- Walls to mitigate sound are feasible if determined desirable by adjacent property owners.
- The voters of Pima County approved the scope of this project in the RTA vote of 2006.

3. How long will it take to improve La Cholla Boulevard?

• Design is at approximately 30%, with approximately 16 months of design work remaining. Procurement of a contractor takes approximately 3-9 months. Construction takes approximately 18-24 months.

4. How wide is the La Cholla Boulevard right-of-way?

• The right-of-way is 150' wide. The County acquired this right-of-way prior to 1960 in anticipation of widening La Cholla Boulevard. Much of the property adjacent to La Cholla Boulevard was zoned multi-use prior to any development to allow flexibility with private property as La Cholla Boulevard became busier and expanded over the years.

5. Will there be public input on this project?

- A Community Advisory Committee (CAC) has met with the design team six times so far. Input from the CAC is considered in design and all CAC input is shared with the Board of Supervisors before preliminary design concepts are approved.
- Open Houses are held to provide project updates to the public and to receive input from the public. The first open house was held in March 2008. A community survey will be conducted in conjunction with the September 2008 open house.

6. How can I learn more about the project?

- The project web site is at: http://www.roadprojects.pima.gov/LaChollaRiver/
- Specific questions can be directed to: Carol Brichta, Pima County Community Relations, 740-6410.



La Cholla Boulevard: River Road to Ruthrauff Road



Public Opinion Survey September 11, 2008

- 1. What is your primary interest in La Cholla? (check all that apply)
 - □ I live in rented property adjacent to this section of La Cholla.
 - □ I own the property in which I live in the area adjacent to this section of La Cholla.
 - □ I own rental property in the area adjacent to this section of La Cholla.
 - □ I own or work in a business on this section of La Cholla.
 - □ I regularly drive through this section of La Cholla.
 - □ I regularly walk or bike through this section of La Cholla.
 - □ Other, please explain.
- 2. Please describe what you like about this project
- 3. Please list any comments you have about design elements of the proposed roadway improvements, such as vehicle lanes, bike lanes, sidewalk, median, intersections, utilities, drainage, access, etc.

4. Please list any other comments you have about environmental elements of the proposed roadway improvements, such as landscape, noise, visual impacts, etc.

5. Please provide any other general comments you have about the project.

Name:		Date:	
Address:			
City:	State:	Zip:	
e-mail:	Те	ephone:	

Please return by **Friday September 26, 2008** to: Carol Brichta, Pima County Community Relations Office, 201 N. Stone 4th floor, Tucson, Arizona 85701 or Fax to 740-6439 or email to carol.brichta@dot.pima.gov

Project information can be viewed at: http://www.roadprojects.pima.gov/LaChollaRiver/

Pima County Department of Transportation La Cholla Boulevard: Ruthrauff Road to River Road Open House Summary

Date, Location and Time

- o Thursday, Sept. 11, 2008
- Ellie Towne Flowing Wells Community Center
- 6 to 8 p.m.

Public Notification

- Postcard announcing meeting mailed:
 - Week of Aug. 11, 2008
 - Mailed to approximately 900 residents and businesses in a one-half-mile radius of the project area
- Newspaper notification:
 - Arizona Daily Star Aug. 27, 2008
 - Daily Territorial Aug. 27, 2008
- Web site:
 - Meeting date and time was posted on project Web site
- Business outreach
 - Sept. 2 and 3, 2008; attempted to or made contact with 62 businesses along the corridor

Team Attendance

- **Pima County**: Priscilla Cornelio, Rick Ellis, Ali Fermawi, Ana Olivares, Dean Papajohn, Annabelle Quihuis
- **HDR Engineering:** Larry Barela, Mike Barton, Catherine Bolm, Ted Buell, Martha Davis, Christine Jacobs-Donoghue, Bethy McGehee, Arturo Ledesma
- McGann & Associates: Darlene Showalter
- City of Tucson Water Department: Patricia Eisenberger
- Regional Transportation Authority (RTA); MainStreet Program: Britton Dornquast, Steve Taylor
- SunTran: Bea Paulus
- Gordley Design Group: Barb Alley, Arizeder Urreiztieta

Public Attendance

• 50

Comments

- · Six comments received at the open house
- Thirty one comments received during the two-week period following the open house

Materials

- Comment forms
- Fact sheets
- Sign-in sheets

Agenda

- Introductory remarks: Sharon Bronson, Pima County Board of Supervisor
- Question-and-answer session
- Team introductions

• Review displays with one-on-one interaction

Displays

- Bridge design
- City of Tucson Water
- Environmental
- Landscape design
- Roadway Design (two display tables)
- RTA MainStreet
- SunTran

Room Set-up

- Sign-in table
- Refreshment table
- Eight display tables set up around the room
- Seating for approximately 45 people with podium

Signs

• A-frame signs to direct traffic into parking lot and facility





Printed Name	Representing	Address	Zip	Phone	E-mail
David Swank	self		1		avenette le comastin et-
Jundia Medine	Gelf_	2081 W. borcen	85705	887-2228 154-7 154-7	
BONNI BASS	Self	1502 W Kilburn	85705	2936841	bbass@Pd-law.com
Fud BASS	11 CAC		U	vl	
Bethy M.					
MARCA HARO B.					
Arturo L					
Priscilla C					
Rick E					
Dean P					
Ted Bull					
Darkene S					





Printed Name	Representing	Address	Zip	Phone	E-mail
Rita Hernandez		4651 N Brightside Dr	85705	888 2221	
Charles Corralis	Corverles ENGINZERINI	1008 W. ST. MARYS. RAAD	85745	622-2553	SCEECORRALESENGINE ORIVE
D. STAPLEMAN	Me	4960 ~ JUY	05		
C. Carrig	Salf	4964N. JAY AVE	85	888 5685	
R. PRICE	Self	4950 N. La Cholla	05	8882108	
MARVIW HEIM	Self	4961 N LACIAN	6 05	887-1056	
BeaPaulus	SunTran	4220SParkAV	14	4049567	bea.paulus @tucsonaz.gov
Oakley Latterty	SELF/STLMIFG	5150 MLaChalla	05	408-7647	Oakley lofterty & Comestwat
Norman Charlene Franzen	Self Acentar, PC.	4911 N. La Cholla	85705	672.2177	elfapa@ quest office.net
Pan Potts	Surade Barbershop	-2005W. Rutheauf +161	85705	690 5474	Suadeo Jucson a Aolo
Bos Mickelson	Sett/ TAXPAYEr	3675 N. EL Moraga A Tucson AZ 35745	85745		





Printed Name	Representing	Address	Zip	Phone	E-mail
Patricia Eisenberg	City of TUGM	2702 E Seneca St	85716	400-2387	pat.eisenbez@tucsonaz.gor
Ellie Towne	CAC				
WendyKrueger		2211 W Calle Narci	50 05	349- 3844	
chelsea Helwig		it je	15		
James Jarvis	myself	4935 N. JAY AND	85705	888 21197	
JACKie BASterfield	MUSELF	5745N. LACholla			
GARY BASterfield	MU/Self				
Daim Rataczak	myself	4861 NRIver Valley	Lp85705	stac	· · · · · · · · · · · · · · · · · · ·
Joen Frondbarg on	nyself	1948hi, Pour R.			
Cutt FC'	Sielf	8.0 Box 87123		624-	
Joch Harner	Self	1957 Wares Pl	85705	240-9407	
for Hally	Self	4. ETZ-N. Rige VAlk, Louis	25705		
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Representing	Address	Zip	Phone	E-mail
	2150 W Culle	85705	888-009	3
	Fortunado			
Villa Caprifan Mobile Home	Kuthrauffld	85705	2255	-
			2150WCalle 85705 Fortunado	2150WCulle 85705 885009 Fortunado





Printed Name	Representing	Address	Zip	Phone	E-mail	
NURMA Metz	CAC	4901 IV, LACHOLL	1 (05)	857-053	³ norma.metz@tue	102,
WAYNE MET	(7	()	11	1		900
Nanette Reynolds		SSOS NShannon	05			
B-BAOR		и	05			
Mile Barton	HDR					
Britten D.						
RTA & Steve?						
Laura Steckman	Riverside Place HC	A 5484 N. Bramble A Brook Lone	04	888-9730	laurafice @ concast	inet
Sharon Bronson		•				
ROBERT V GAONA	+ EUA GAUNA	4921 N. LA CHOLLA.	os	087-1395		
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Sign-In Sheet La Cholla Boulevard: River Road to Ruthrauff Road Open House Ellie Towne Flowing Wells Community Center Thursday, Sept. 11, 2008



Printed Name	Representing	Address	Zip	Phone	E-mail
Timothy Barrett	Selfoura	4955 N. LaCholla	85705		JMZ & DMSM.
CHARLES FROMABARCER	11	1948 W PAUL	85765	888 3083	
JAMIE BARRett	Sell-	4955NLaCholla	85705	293-33?9	JMEBOIQMSN. Com
Debbie Rickgauer	Self	4831 N - River Valley	Loop	237-8853	
Martha Davis	HUR	J	1		
ELLEN CURREY		CAC			
Jamos Brendlinger	SelF	4941 M. P. Chella	8-217	88)-1240	
Cecil Kempton	4	1957 KI BETTAIN	9575	887572	Chext@hotman



R

Sign-In Sheet La Cholla Boulevard: River Road to Ruthrauff Road Open House Ellie Towne Flowing Wells Community Center Thursday, Sept. 11, 2008



Printed Name	Representing	Address	Zip	Phone	E-mail	
Macy mfornat		2100 Ruth Roul Rd	867-5	2777302		
CAPL CORONA	FWHS	3725 N. FW Kd	85705	696-5011	Coronace Flowingwells, K	12
Ana Olivaries	PCDOT	3675N. & Margi Dr	85445	740-6410		
John Couk	SELA	2612 Kmpuly	05	29354	29 -	
Helored X. Kempton	Self-	1951W Brittand	05	887-5874-		
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				La Cholla Bo	ulevard: River Road to Ruthrauff R Public Opinion Survey Sept. 11, 2008	oad		
Name	Address	Phone	E-mail	1. What is your primary interest in La Cholla Boulevard?	2. Please describe what you like about this project.	3. Please list any comments you have about design elements of the proposed roadway improvements, such as vehicle lanes, bike lanes, sidewalk, median, intersections, utilities, drainage, access, etc.	4. Please list any other comments you have about environmental elements of the proposed roadway improvements, such as landscape, noise, visual impacts, etc.	5. Please provide any other general comments you have about the project.
Comments receive Basterfield, Gary and Jackie	d at the Open House 5745 N. La Cholla Blvd. Tucson, AZ 85741			I regularly drive through this section of La Cholla Boulevard.	The reason we like this project is because it will help with traffic congestion in the area along La Cholla Boulevard.	Please make sure the bike lanes are wide enough. Also, at Ruthrauff Road and La Cholla Boulevard, is it possible to have right-turn arrows? Too many people make the right turn on red to beat out the people making a left turn off of Ruthrauff Road onto La Cholla Boulevard.		
Erickson, Bill	4967 N. La Cholla Blvd. Tucson, AZ 85705	609-6969		I own rental property in the area adjacent to this section of La Cholla Boulevard. I regularly drive through this section of La Cholla Boulevard. I regularly walk or bike through this section of La Cholla Boulevard.		Taggers spray painting on the sound barrier wall.		
Jarvis, James	4935 N. Jay Ave. P.O. Box 50703 Tucson, AZ 85705	888-2497		I own the property in which I live in the area adjacent to this section of La Cholla Boulevard. I regularly drive through this section of La Cholla Boulevard. I regularly walk or bike through this section of La Cholla Boulevard.	I like the three-lane each way design. Hopefully it will prevail.	Please include wide sidewalks and bike lanes.	Trees are great, but please don't put them too close to intersections. They are hard to see around when you are turning onto the busy, fast roadway. Bushes are great.	I am concerned about the "cut-through" traffic on Jay Avenue right now, as well as what can be planned to protect our neighborhood during construction.
Krueger, Wendy	2211 W. Calle Narciso Tucson, AZ 85705	349-3844		I own the property in which I live in the area adjacent to this section of La Cholla Boulevard.		La Cholla Boulevard and Calle Narciso raised median makes it very difficult to turn north.		
Metz, Wayne	4901 W. La Cholla Bivd. Tucson, AZ 85705	887-0553	ps341@msn.com	I own the property in which I live in the area adjacent to this section of La Cholla Boulevard.	More lanes.	The County plans to take away parking in front of my home, subjects me to increased noise as no wall will be built in front of my home. This also subjects me to increased safety risk due to increased lanes and will lower my property value.	The current plans will bring the road within 12 to 15 feet of my home. This will subject me to increased noise and air pollution and the County plans do not really provide for landscaping unless they opt for alternate plans.	Please approve Alternative D.
Steckman, Laura	5484 N. Bramble Brook Ln. Tucson, AZ 85704		laurafree@comcast.net	I own the property in which I live in the area adjacent to this section of La Cholla Boulevard.	Well organized presentations for the community.	Can drivers heading south on La Cholla Boulevard make U-turns? If not, please allow for them.		Please allow U-turns at double left-turn lanes. I cannot exit out of my house on the northeast corner of River Road to go east onto River Road because there is too much traffic.
	d after the Open House							
Bender, Dick Shamrock Dairy	1900 W. Ruthrauff Rd. Tucson, AZ 85705	887-0300		I regularly drive through this section of La Cholla Boulevard.	It will help to relieve congestion.			
Green, Mary	1949 W. Paul Pl. Tucson, AZ 85705	887-2932		I own the property in which I live in the area adjacent to this section of La Cholla Boulevard. I regularly drive through this section of La Cholla Boulevard.	It would no longer be necessary to merge to one lane when driving south on La Cholla Boulevard - it is dangerous. Also, it would considerably improve the whole area.		I hope the median landscaping will be well taken care of - landscaping along both sides of Ruthrauff Road needs trimming.	I hope it would require a general clean-up of properties around the area.

	La Cholla Boulevard: River Road to Ruthrauff Road Public Opinion Survey Sept. 11, 2008											
Name	Address	Phone	E-mail	1. What is your primary interest in La Cholla Boulevard?	2. Please describe what you like about this project.	3. Please list any comments you have about design elements of the proposed roadway improvements, such as vehicle lanes, bike lanes, sidewalk, median, intersections, utilities, drainage, access, etc.	4. Please list any other comments you have about environmental elements of the proposed roadway improvements, such as landscape, noise, visual impacts, etc.	5. Please provide any other general comments you have about the project.				
Horn, Marvin	4961 N. La Cholla Blvd. Tucson, AZ 85705	887-1056		I own the property in which I live in the area adjacent to this section of La Cholla Boulevard.	Everything about this project will in some way affect us negatively. By increasing traffic, smog and decreasing property values.	We feel that the design elements will be a problem because of limited space. The traffic and its elements will be too close to our home. We are disappointed about the proposed complicated roadways and lack of access to emergency vehicles and pedestrians.	Again, we feel all of these elements are not improvements and will increase noise, pollution, decrease street access and our overall property value will go down. We will no longer have a view.	We were not aware that this area was to become a business area. The quality of our neighborhood has vastly decreased. We will no longer have access for visitors.				
Hoxsie, Dolores	4661 N. Brightside Dr. Tucson, AZ 85705	603-9509		I own the property in which I live in the area adjacent to this section of La Cholla Boulevard. I regularly drive through this section of La Cholla Boulevard.	It will move traffic faster and safer.	What about the bridge?	Noise control?					
Langford, Dave and Patty	2049 W. Brittain Dr. Tucson, AZ 85705	203-6319	pattylangford@yahoo. com	I own the property in which I live in the area adjacent to this section of La Cholla Boulevard. We live in Edgebrook 1.	Making the road six lanes is great, along with better lanes for bicycles, etc great!	We would like something (and maybe this is in the plan) put up to hide the unsightly trailers and homes that are on the other side of Curtis Road. Also, the Quick Mart Family Foods needs to be cleaned up.	but would love to see that area cleaned	Sorry we couldn't make the meeting, my husband is out of town and I work until 7:30 or 8 p.m. We would be pleased to support this project!				
Moreno, Rosalino	4971 N. Mathews Ave. Tucson, AZ 85705	408-1160		I own the property in which I live in the area adjacent to this section of La Cholla Boulevard.	All proposed improvements.			A traffic signal is needed at the Calle Narciso and La Cholla Boulevard intersection. With all the improvements, the problem will be worse.				
Muhs, Peggy	5513 N. Silver Stream Way Tucson, AZ 85704	408-5235	pjmuhs@aol.com	I own the property in which I live in the area adjacent to this section of La Cholla Boulevard. I regularly drive through this section of La Cholla Boulevard. I regularly walk or bike through this section of La Cholla Boulevard.	Everything!!! Much needed project!	This should be a continuation of La Cholla Boulevard as far as design.	I think the art work should be minimal as the area is prone to taggers, and maintenance and clean-up is a real concern to be figured into the project.					
Loflin, Isabell	4921 N. River Vista Tucson, AZ 85705			I own the property in which I live in the area adjacent to this section of La Cholla Boulevard. I regularly drive through this section of La Cholla Boulevard. I regularly walk or bike through this section of La Cholla Boulevard.	Improved bicycle mobility, safety and better bridge crossing for bicycles. I am glad the area will be brightened up with public art and landscaping.	In the process of redoing the bridge, the bike and hiking path along the Rillito River should be repaved.						
Peterman, Dan and Eleanor	1940 W. Paul Pl. Tucson, AZ 85705	396-8099	nanapeterman7777@ comcast.net	I own the property in which I live in the area adjacent to this section of La Cholla Boulevard. I regularly drive through this section of La Cholla Boulevard.	There will be no more traffic congestion.	As long as there will be turning lanes, I will be happy.	Noise is a factor.	When will this work begin?				

	La Cholla Boulevard: River Road to Ruthrauff Road Public Opinion Survey Sept. 11, 2008										
Name	Address	Phone	E-mail	1. What is your primary interest in La Cholla Boulevard?	2. Please describe what you like about this project.	3. Please list any comments you have about design elements of the proposed roadway improvements, such as vehicle lanes, bike lanes, sidewalk, median, intersections, utilities, drainage, access, etc.	4. Please list any other comments you have about environmental	5. Please provide any other general comments you have about the project.			
Logan, Belinda	2232 W. Calle Fortunado Tucson, AZ 85705			I own the property in which I live in the area adjacent to this section of La Cholla Boulevard. I regularly drive through this section of La Cholla Boulevard. I regularly walk or bike through this section of La Cholla Boulevard.	I like the idea of the extra lane for traffic flow.	Why six lanes? I believe that is too many lanes. Will this affect the road between Wetmore Road and Ruthrauff Road with the schools?	Noise would be a concern.				

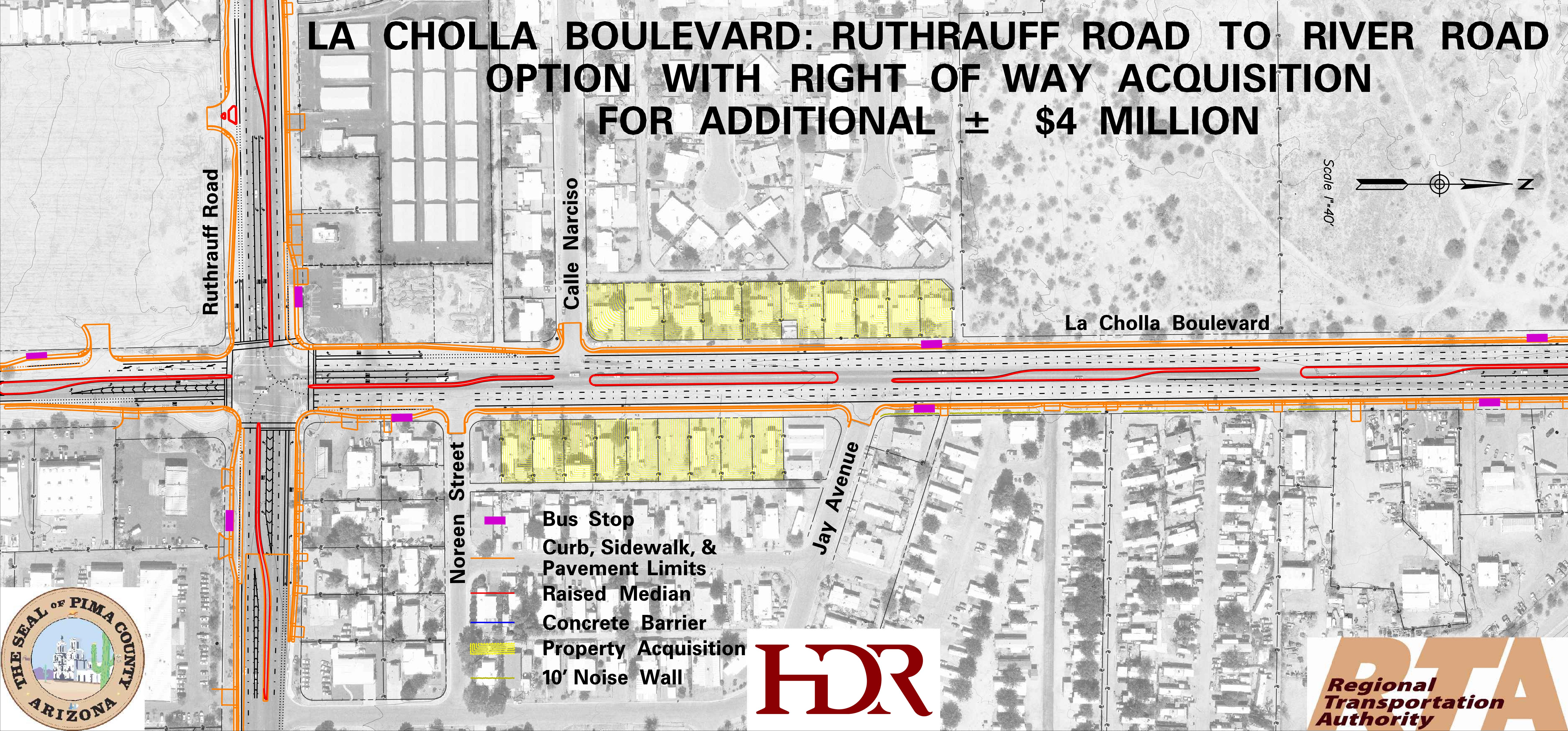
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Ratje, Jeff	1938 W. Alder Grove Dr. Tucson, AZ 85704	408-8269	jmratje@hotmail.com	I own the property in which I live in the area adjacent to this section of La Cholla Boulevard. I regularly drive through this section of La Cholla Boulevard. I regularly walk or bike through this section of La Cholla Boulevard.	I ride SunTran from this area to work each day. The bus improvements are a welcome addition. The landscape median over the bridge is also a nice design element.		The increased traffic around River Road and La Cholla Boulevard proves a problem for the growing number of residences and new home construction. Noise Mitigation is necessary. Also, graffiti is a big problem here. Anti- graffiti materials and a dedication to remove it quickly need to be factored in.	As someone who lives in the area, traffic has grown exponentially due to the work on I-10. I am concerned this area will become so busy it is not nice to live here anymore. Traffic mitigation needs to be looked at. Enhanced SunTran routes might help with this.				
Smith, William	5559 N. Silver Stream Rd. Tucson, AZ 85704	293-1153		I own property in which I live in the area adjacent to this section of La Cholla Boulevard.	Finish the major roadway improvements for River Road and La Cholla Boulevard.	Don't forget roadside visual barriers where needed.	Make sure there is good visual roadside barriers along ugly post development areas like La Cholla Boulevard - not like La Cholla Boulevard on the north side of River Road on the west side - ugly missing sections.	Consider roundabouts at major intersections. See attachment of Roundabout in Carmel, Indiana.				
Stash, Betty Ann	2151 W. Calle Narciso Tucson, AZ 85705	887-3273	cozetts@aol.com	I own the property in which I live in the area adjacent to this section of La Cholla Boulevard. I regularly drive through this section of La Cholla Boulevard.	A left-turn lane at La Cholla Boulevard and Calle Narciso. It is almost impossible to make a left turn onto La Cholla Boulevard.	Please give us an attractive wall - not the ugly multicolored wall north of River Road. The wall between Orange Grove Road and Ina Road is very pretty and would add to the neighborhood.	This work needs to be done and it will make getting around much easier.	I would like to be informed on the progress, I was unable to attend the meeting due to illness.				
Thompson, Lori	4783 N. Woodside Dr. Tucson, AZ 85705		thomploe@gmail.com	I own the property in which I live in the area adjacent to this section of La Cholla Boulevard. I regularly drive through this section of La Cholla Boulevard. I regularly walk or bike through this section of La Cholla Boulevard.	Upgrades! Newness!	I would prefer a more aesthetic and pleasing view of this area with provisions for safety components. I would prefer to see less of the unattractive homes and businesses along the La Cholla Boulevard and Curtis Road area.	Perhaps have medians with landscaping. Maybe a barrier wall hiding the homes and businesses along La Cholla Boulevard (south of River Road to Ruthrauff Road).					
Wiewel, Martha	1847 W. Waterleaf Dr. Tucson, AZ 85704	887-2957	marthawiewel@msn.com	I own property in which I live in the area adjacent to this section of La Cholla Boulevard. I regularly drive through this section of La Cholla Boulevard.	I would like to bike from La Cholla Boulevard to Ruthrauff Road and I would like to bike on Ruthrauff Road to Sweetwater Drive.	Bike lanes - sidewalk and other improvements as you desire.	Please do not plant trees or bushes. People throw trash under them and we do not have the dollars to keep them trimmed. Plant ocotillos, saguaros or golden barrels.	This project sounds good to me. I want to thank you for the work you accomplish for the County. I would like to see the debris picked up more often, especially along River Road. The trees need to be trimmed.				
Zumpano, Leonard	4716 N. Woodside Dr. Tucson, AZ 85705	690-7349		I own the property in which I live in the area adjacent to this section of La Cholla Boulevard. I regularly drive through this section of La Cholla Boulevard.	I feel this would help reduce traffic congestion.	This would help with traffic flow. Access and to be able to pull off the road with commuter traffic buses would not slow up the traffic flow, especially during rush hour.	Natural landscape trees, bushes and cactus would bring improvements.	This should improve traffic flow and hopefully reduce accidents due to impatience in long lines at the light.				

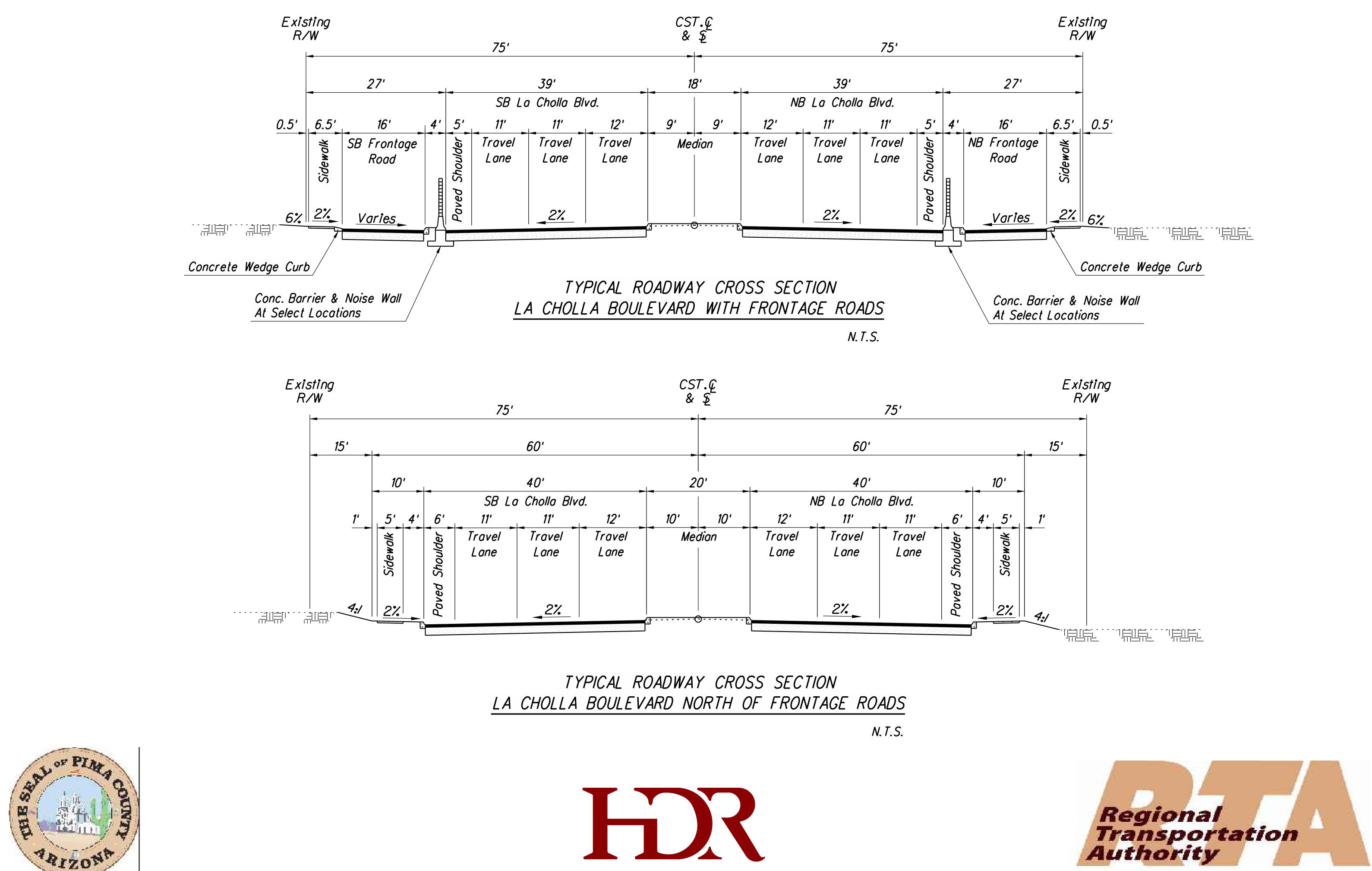
	La Cholla Boulevard: River Road to Ruthrauff Road Public Opinion Survey Sept. 11, 2008									
Name	Address	Phone	E-mail	1. What is your primary interest in La Cholla Boulevard?	2. Please describe what you like about this project.	3. Please list any comments you have about design elements of the proposed roadway improvements, such as vehicle lanes, bike lanes, sidewalk, median, intersections, utilities, drainage, access, etc.	4. Please list any other comments you have about environmental elements of the proposed roadway improvements, such as landscape, noise, visual impacts, etc.	5. Please provide any other general comments you have about the project.		
Anonymous				I own the property in which I live in the area adjacent to this section of La Cholla Boulevard. I regularly drive through this section of La Cholla Boulevard. I use Ruthrauff Road and La Cholla Boulevard at least once a day.	After widening Ruthrauff Road and all the improvements there, La Cholla Boulevard is woefully lacking in space for cars driving down it. I think this will improve La Cholla Boulevard.	the side of the roads. I would hope	Seasonally they get a lot of water in the wash. I hope diligence is taken to make sure that this area is safe, especially for businesses that are near the wash. I like those multi-colored walls that are further down on La Cholla Boulevard. I hope color is used on this project.	loop in terms of progress and suggestions for keeping us safe for those who are working in the area, and realize that this will take some time. Keep law enforcement in the		
Nita Ruth's, LLC (Nita Freeman)	5140 N. La Cholla Blvd. Tucson, AZ 85705	797-0603		I own or work in a business on this section of La Cholla Boulevard. I regularly drive through this section of La Cholla Boulevard.	Widening.	The islands make it impossible to get into my property from the north. We need a center lane.	This also affects other property owners and businesses south of the bridge.			
Molis, Frank	2385 W. Wave Hill Ct. Tucson, AZ 85705	888-2000		I regularly drive through this section of La Cholla Boulevard.	It is about time.	There needs to be two left turns off of Ruthrauff Road to go north on La Cholla Boulevard. There have been as many as 25 cars backed up trying to make that turn.				
Morse, Dwayne and Heather STL Manufacturing	5150 N. La Cholla Blvd. #2 Tucson, AZ 85705		dwayne@stlmfg.com	I own or work in a business on this section of La Cholla Boulevard. (We have owned our business in this location for 15 years.)	The road construction will beautify the area and hopefully move the traffic more efficiently down La Cholla Boulevard.	We have major concerns about the access in and out of the narrow drive off of La Cholla Boulevard. We have semi tractor trailers with steel loads in and out frequently. The inability to make a left-hand turn in and out of the property will cause time delays and safety concerns. There are four businesses that would be affected by this. Three of which utilize semi tractor trailers. We would like you to consider a southbound turn lane into the property for ease of access and also widening the driveway to facilitate ingress and egress with large/long loads.	We would like to see the improvement of the road and neighborhood, but not compromising our access for business.	We would also like to know about any plans for sewage service for any of the businesses. We (for the most part have septic systems) would like to know if a pump system will be put in place. We need to be able to maintain full- time access throughout the work week during construction. We have delivery trucks in and out, and also our own service trucks are in and out frequently.		
Calhoon, Don	4770 W. Benjamen Rd. Tucson, AZ 85743	572-8455 906-2344		I own a rental property in the area adjacent to this section of La Cholla Boulevard. (4932 N. La Cholla Boulevard)		I am not interested in a high wall in front of property or selling property as I just finished building a duplex. I question property values and relocation expenses if it comes to that.		I am not happy with a ten-foot high wall on one-way access roads		

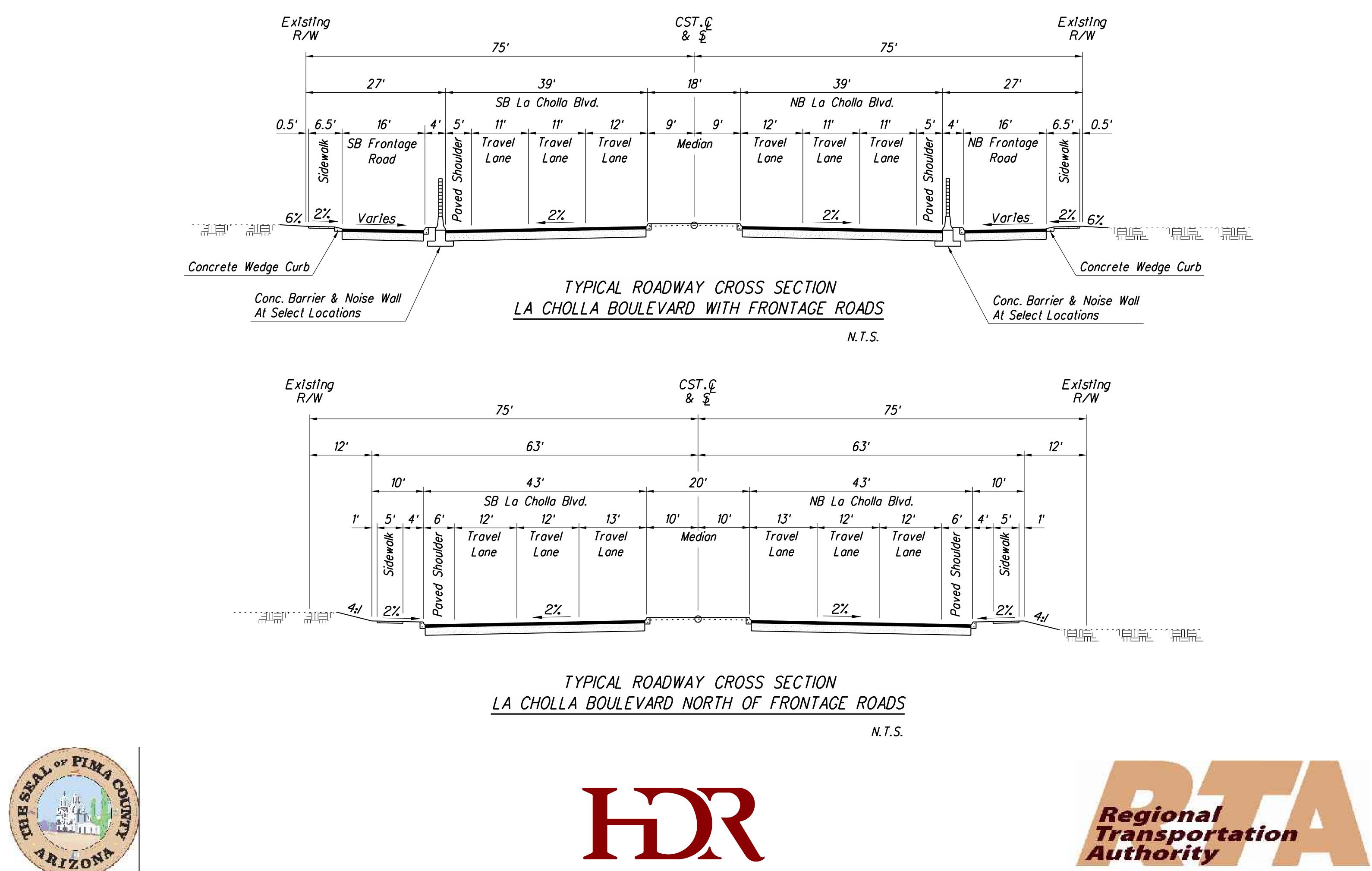
	La Cholla Boulevard: River Road to Ruthrauff Road Public Opinion Survey Sept. 11, 2008									
Name	Address	Phone	E-mail	1. What is your primary interest in La Cholla Boulevard?	2. Please describe what you like about this project.	3. Please list any comments you have about design elements of the proposed roadway improvements, such as vehicle lanes, bike lanes, sidewalk, median, intersections, utilities, drainage, access, etc.	4. Please list any other comments you have about environmental elements of the proposed roadway improvements, such as landscape, noise, visual impacts, etc.	5. Please provide any other general comments you have about the project.		
Shurtz, Bill	4944 N. Jay Ave. Tucson, AZ 85705			I own the property in which I live in the area adjacent to this section of La Cholla Boulevard.	I like the new look for this area.	Lighting.	I am looking forward to the new and improved look in this area.	I am hoping to get speed bumps on Jay Avenue from La Cholla Boulevard to Ruthrauff Road. This should not be a by-pass.		
Van Echo, Jay	6750 W. El Camino del Cerro Tucson, AZ 85745	299-8700	jay.vanecho@dmjmharris .com	I regularly drive through this section of La Cholla Boulevard. (Daily commute to/from work)	Intersection improvements to La Cholla Boulevard and Ruthrauff Road, the new bridge and the capacity improvements to River Road and Ruthrauff Road.		I appreciate the landscape (native vegetation) and public art on RTA projects within budgetary constraints. Control access points close to the intersection.	Be aware of the east- to- north and south- to- west movements at the intersection and time the signal accordingly. Be aware of the right- in/right-out access to Wal-Mart and police accordingly - the public is not obeying signage.		
Kunk, Clem and Donna	5120 N. La Cholla Blvd. #2 Tucson, AZ 85705	888-1923	cdgaragedoors@yahoo .com	I own or work in a business on this section of La Cholla Boulevard. I regularly drive through this section of La Cholla Boulevard.	at the bridge.	It is vital that there is a turn lane for southbound traffic into our parking lot that contains six businesses. We all have frequent deliveries including semi trucks at our business and the business located at 5050 N. La Cholla Bivd.	Those will not affect us.	If there is no turn lane incorporated in to the plan, many delivery trucks will not be able to turn around traveling southbound. This entrance is at the south end of other businesses.		
Franzen, Norman and Charlene Accutax P.C	4911 N. La Cholla Blvd. Tucson, AZ 85705	744-0600	clfcpa@qwestoffice.com norman@acstone.com	I own or work in a business on this section of La Cholla Boulevard. I regularly drive through this section of La Cholla Boulevard.	We like the improved traffic flow, safety features and aesthetic value to the area.	We do not like the proposed sound barrier. Our property is zoned MU. It was converted to business use many years ago. The value of the property is dependent on clear and convenient access from La Cholla Boulevard. Our ability to use the property for any type of business would be destroyed by the proposed wall. It would be difficult for drivers to find the entrance to the west side of the frontage road. The wall would make it. They would have to watch for the entrance between the end of the wall and the bus stop, at the same time as trying to see through three lanes of oncoming traffic and searching for a place to turn around in order to get to the properties on the west side. The bus stop, would obscure the entrance for southbound traffic. We do not like the proposed one-way access of the frontage roads. We would prefer two-way access.				

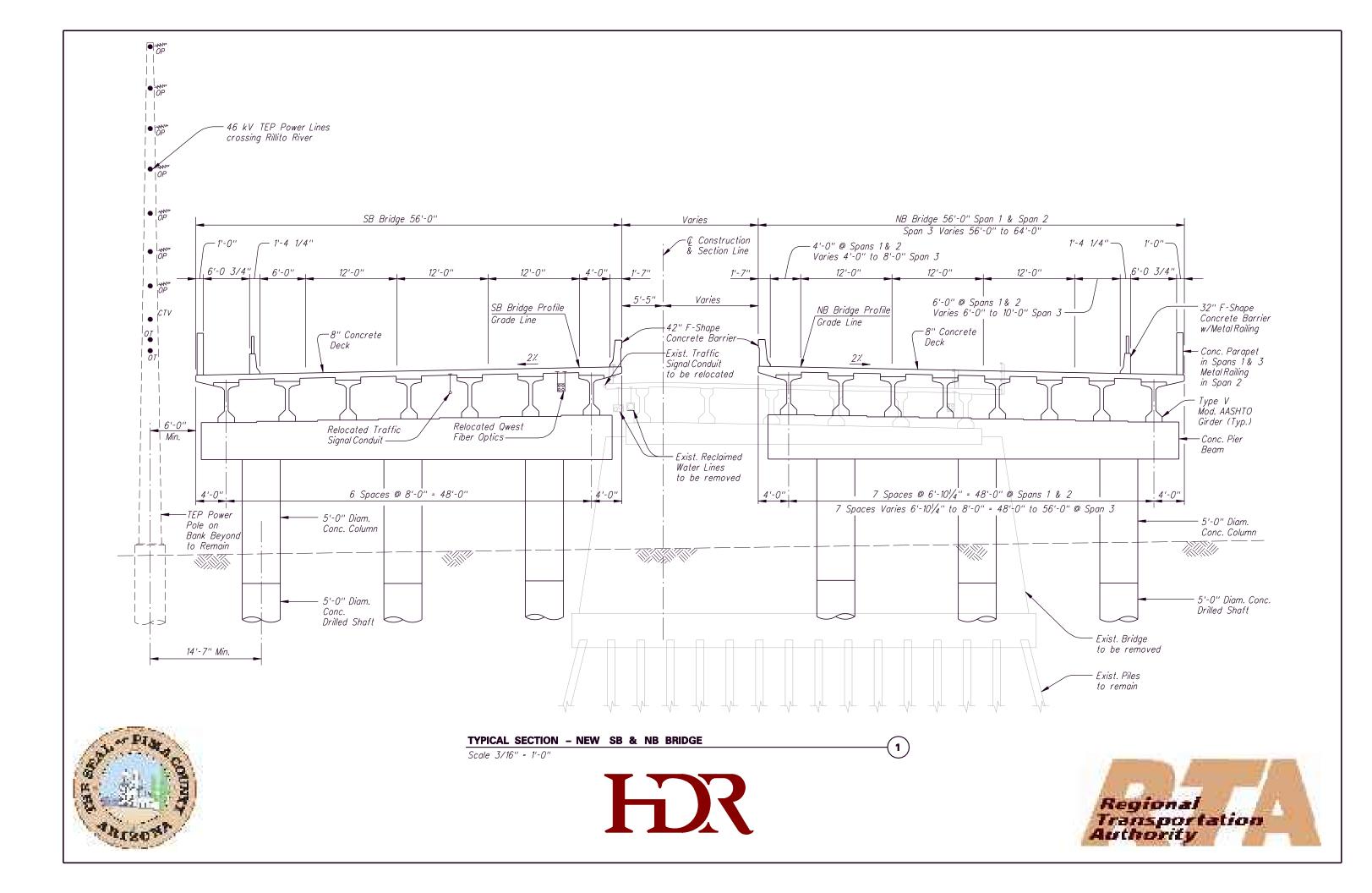
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Stallings, Doug Backwoods RV	5150 N. La Cholla Blvd. Tucson, AZ 85705	293-4400	dougie4723@aol.com	I own or work in a business on this section of La Cholla Boulevard.	It will help east traffic back-ups and reduce car accidents. It will improve the look of the area.	I am concerned that there is no turn lane going south to turn left, as there are may businesses that have large trucks and other vehicles in and out all day. How will anyone going south be able to get to our business? Will I lose my parking?		See attached.	
Lafferty, Oakley	5150 N. La Cholla Blvd., #2 Tucson, AZ 85705	408-7647	oakleylafferty@comcast .net	I own or work in a business on this section of La Cholla Boulevard.	Road improvements are sorely needed on this very busy section. Extra lanes and the bridge are a plus. The left-turn lane with arrow northbound onto Curtis Road is clearly needed.	The proposed bull nose at the entrance to 5150 N. La Cholla Boulevard is a restriction to our access. We have many vehicles, large trucks included, both from our business and our suppliers who will have difficulty with this plan.	Landscaping and other visual impacts, while important, should clearly be secondary to functionality.	We strongly request a southbound turn lane into our business from the southbound lane. A widened entrance would also be a great help with the traffic from the bar at the back of the complex. (See attached.)	
Iannarino, Robert Diamond Ventures, Inc.	2200 E. River Road, Ste. 115 Tucson, AZ 85718	577-0200	biannarino@diamondven. com	I own the property in which I live in the area adjacent to this section of La Choila Boulevard. I own rental property in the area adjacent to this section of La Cholla Boulevard.	Implementation of RTA Period I roadway improvements. It is expected the roadway will be completed by 2011 and will help traffic improvement.	 The project needs to meet the voter mandated budget of 14 million dollars. Based on number 1, the project should be designed for foru lanes instead of six lanes. The underground storm drainage should be value engineered to take care of the two-year storm event. The budget be value engineered to take corner, adjacent to the Circle K, should accommodate AFNI employees, inclusive of their handicapped employees who have asked for special bus accommodations. Please contact SunTran. It appears the access locations to serve the southeast corner of River Road and La Cholla Boulevard are adequate. 	Visual impact should be conducive to the marketability of our property. Hardscaping and landscaping should be consistent with the architectural theme already established for the southeast corner.	Adhere to the RTA budget and schedule for Period I completion! This includes capping the number of Citizen Advisory Committee (CAC) meetings to assure the Period I schedule can be met.	
Hendricks, Terry	2135 W. Calle Fortunado Tucson, AZ 85705	888-4789 243-1832		I regularly drive through this section of La Cholla Boulevard. My home is 300 feet from La Cholla Boulevard.	The extra travel lanes and medians.	A noise wall is needed when you look at future traffic counts.		Bus shelters are needed.	
Lee, Ken	5150 N. La Cholla Blvd. #2 Tucson, AZ 85705	292-1779		I own or work in a business on this section of La Cholla Boulevard.	It improves the neighborhood and traffic flow.	We need access through median for large semi truck deliveries to 5150 #2 N. La Cholla Boulevard.			
Montgomery Auto	5150 N. La Cholla Blvd. #A Tucson, AZ 85705	407-9456		I own or work in a business on this section of La Cholla Boulevard. I regularly drive through this section of La Cholla Boulevard.	The effort being made to keep businesses and residents along La Cholla Boulevard aware of what is being proposed and considering their input.	I am concerned about the lack of an entrance into the business center because of a raised median, on o parking outside the fenced area or room to stop to open gate. I am fully aware you can not accommodate everyone, but these are our concerns.	I think walls and any landscape would be a huge improvement.		

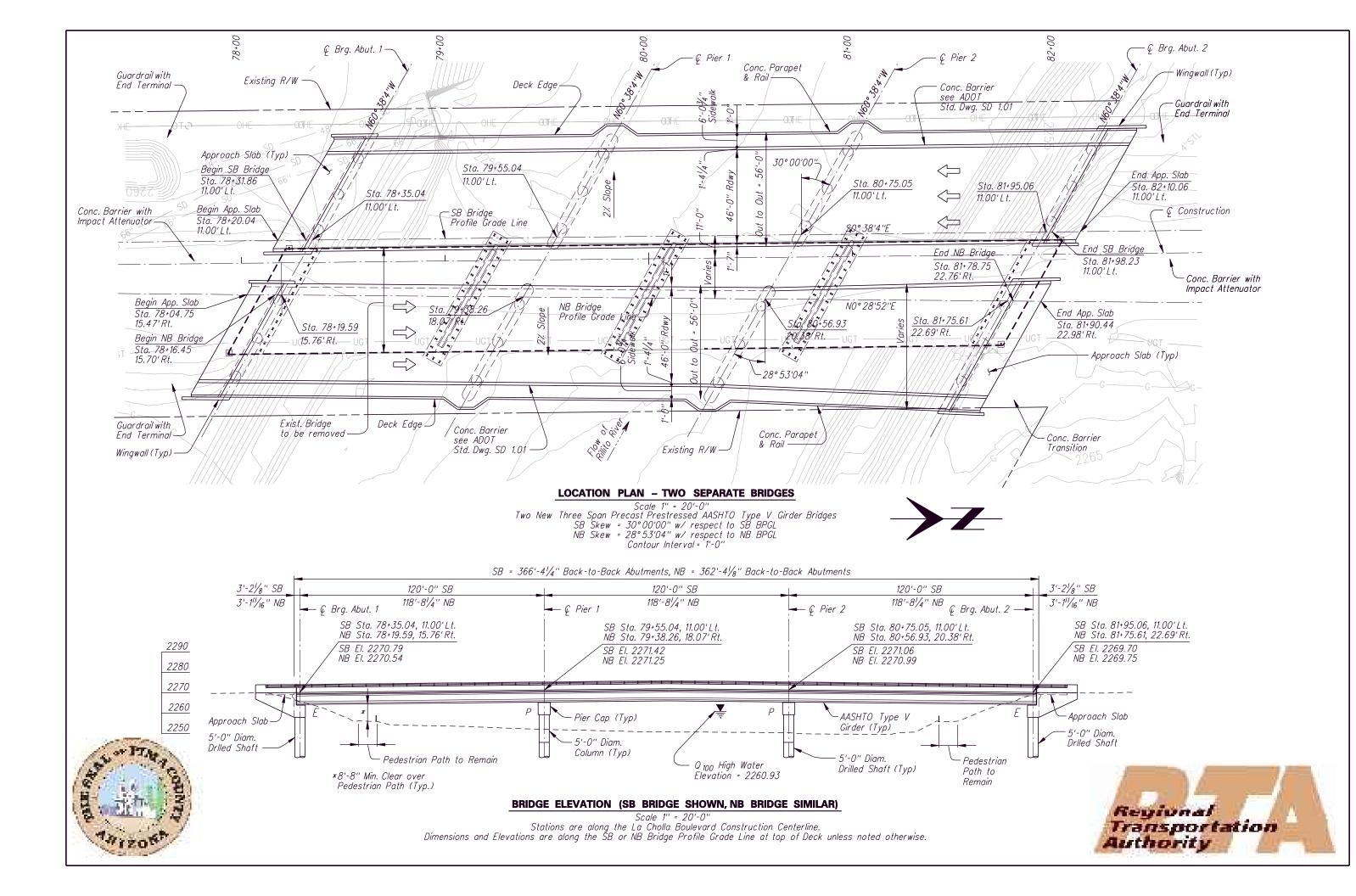


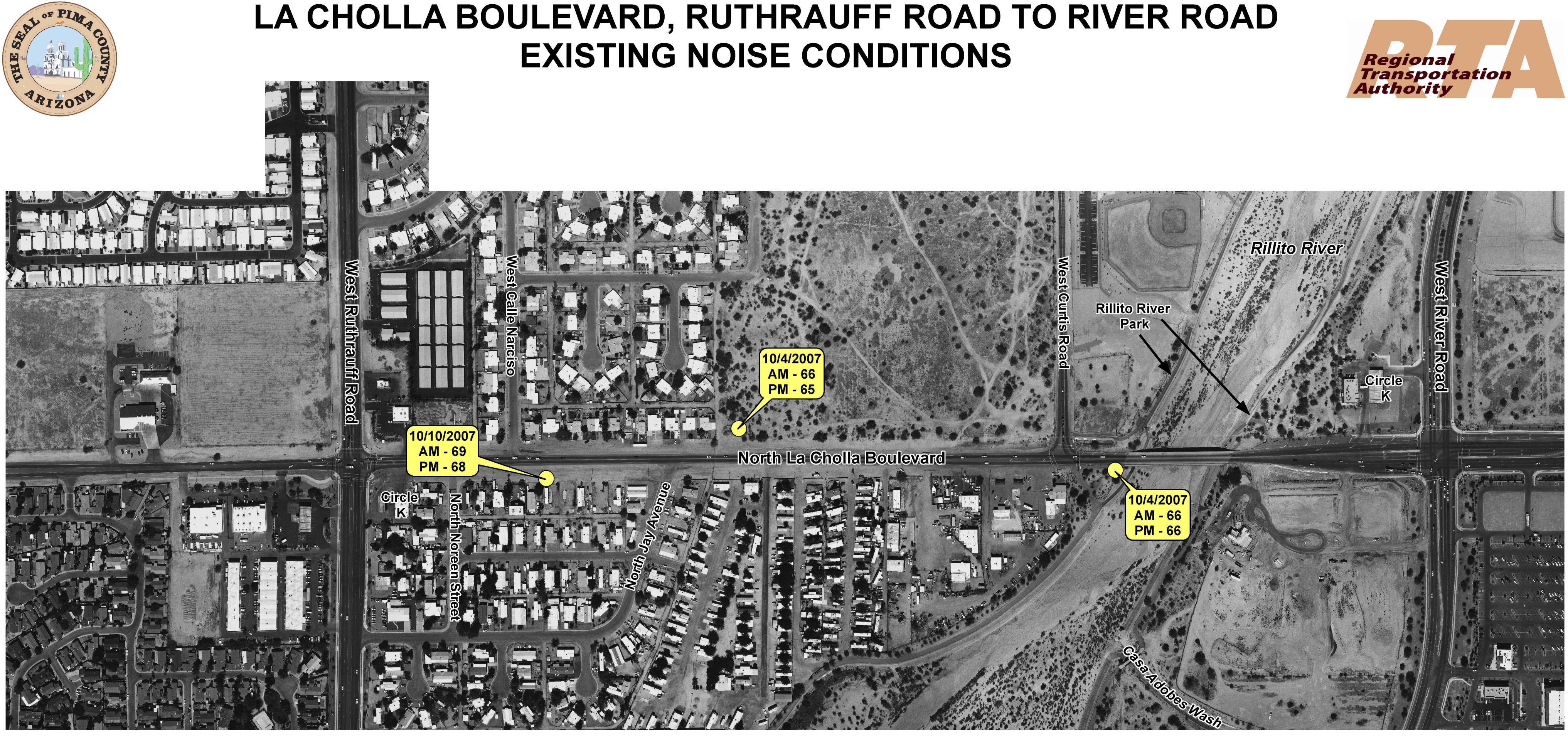


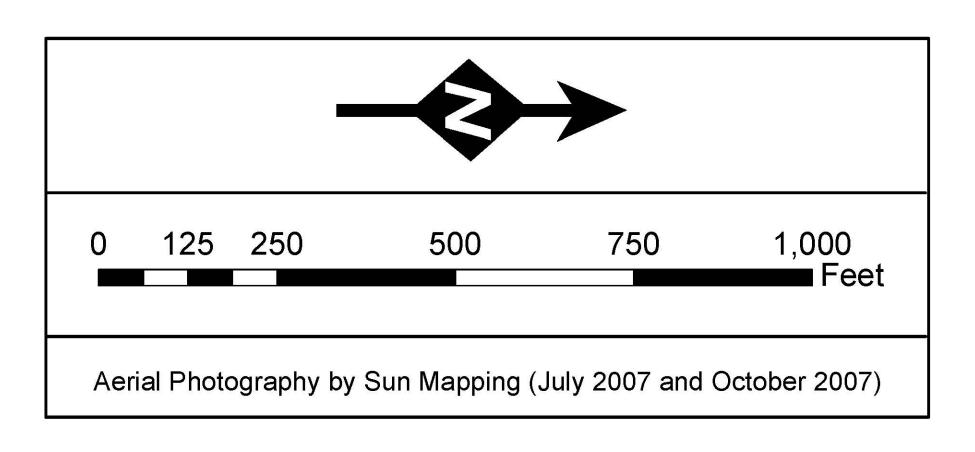


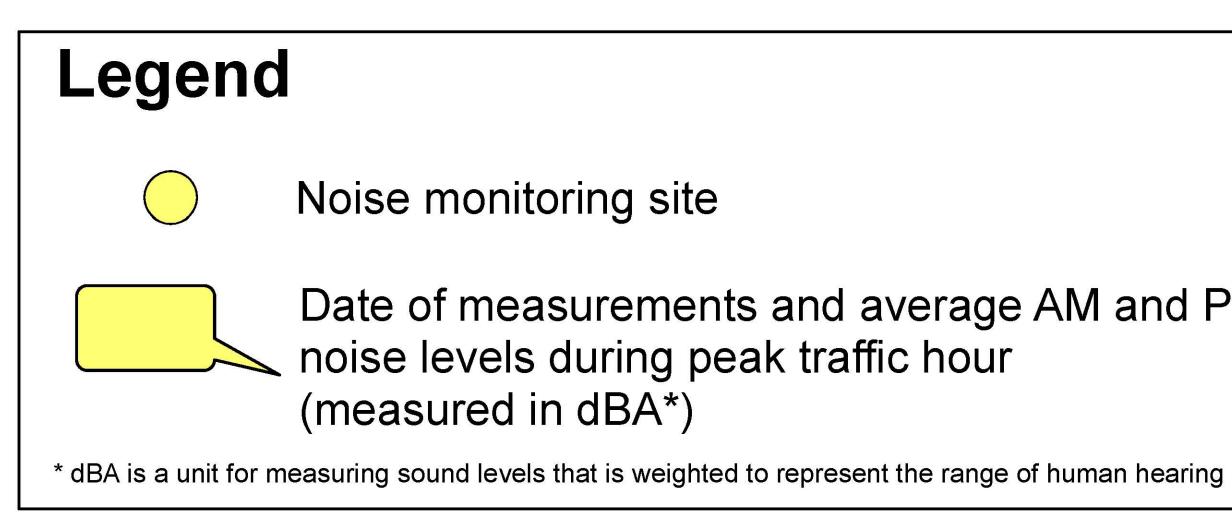








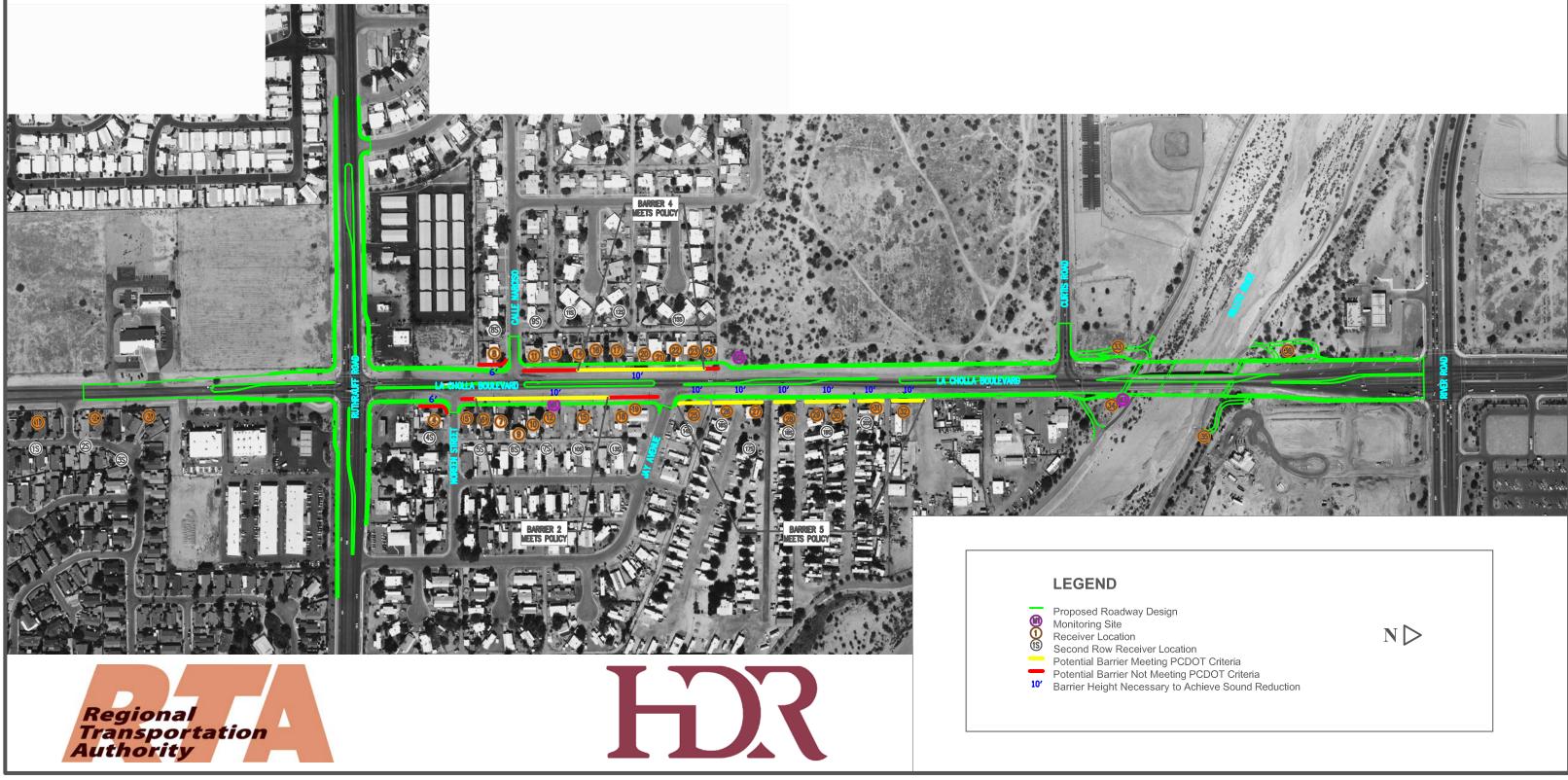




Date of measurements and average AM and PM



LA CHOLLA BOULEVARD RUTHRAUFF ROAD TO RIVER ROAD MONITORING SITES, RECEIVER LOCATIONS, AND POTENTIAL BARRIER LOCATIONS



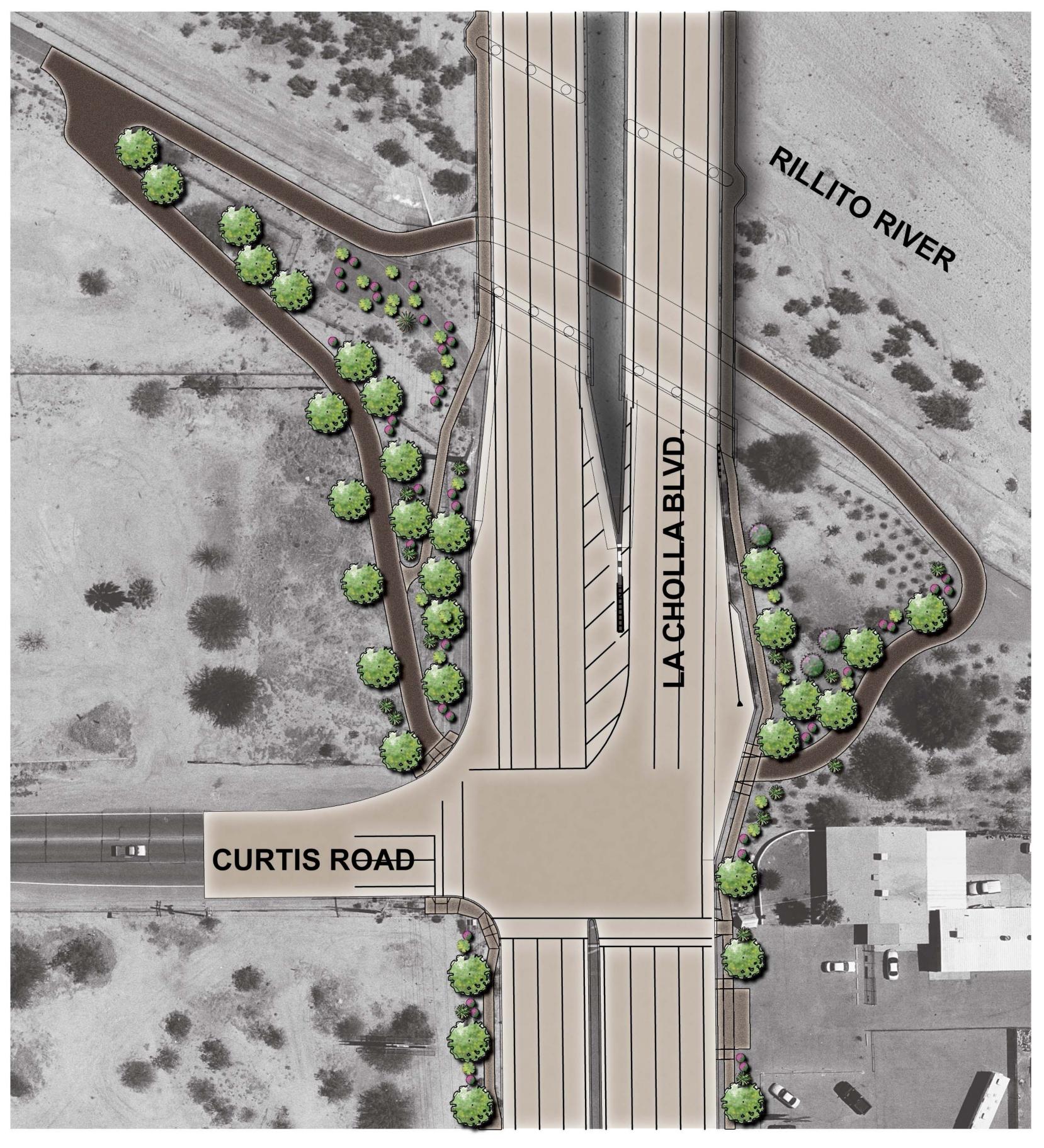


RIVER PARK ACCESS - NORTH BANK



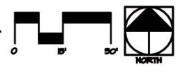






RIVER PARK ACCESS - SOUTH BANK

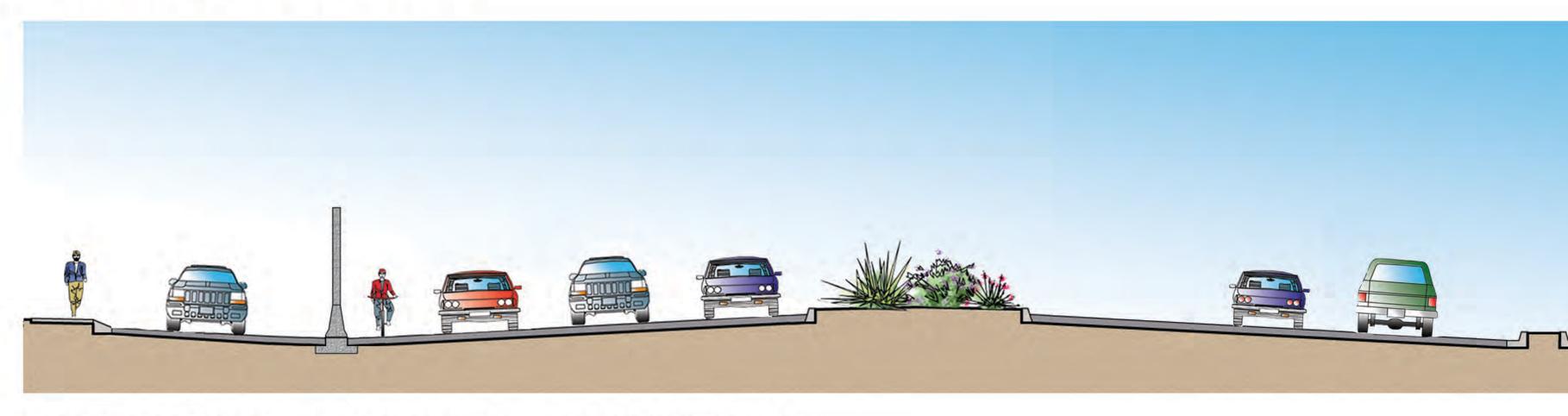
LA CHOLLA BOULEVARD - RIVER ROAD TO RUTHRAUFF ROAD





McGann & Associates Landscape Architects and Planners 6814 North Oracle Rd., Suite 210 Tucson, Arizona 85704 Telephone: (520) 297-9540 Fax: (520) 297-9545





LANDSCAPE CONCEPT - TYPICAL SECTION AT FRONTAGE ROADS



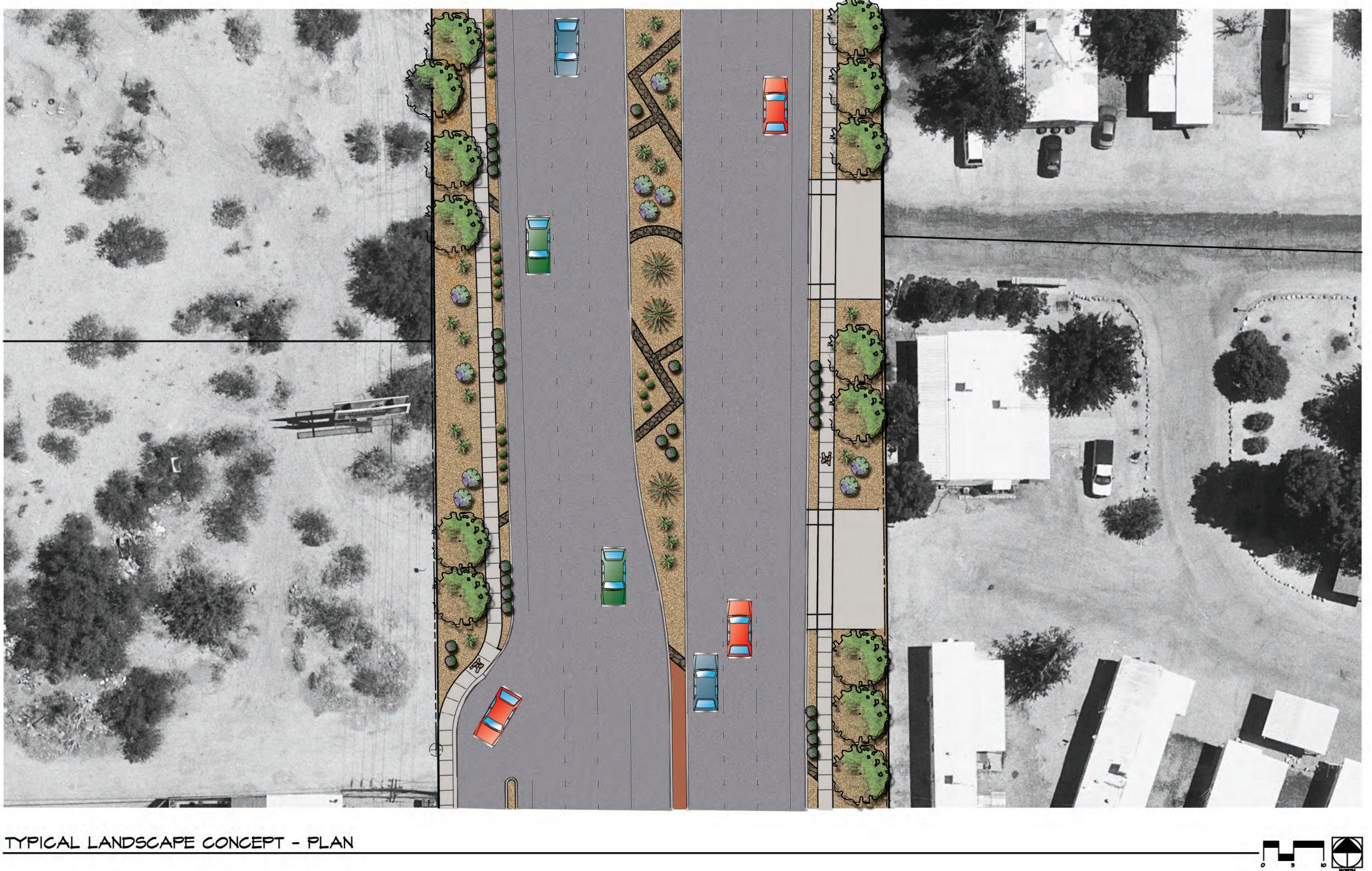
TYPICAL LANDSCAPE PLAN AND SECTION

LA CHOLLA BOULEVARD - RIVER ROAD TO RUTHRAUFF ROAD

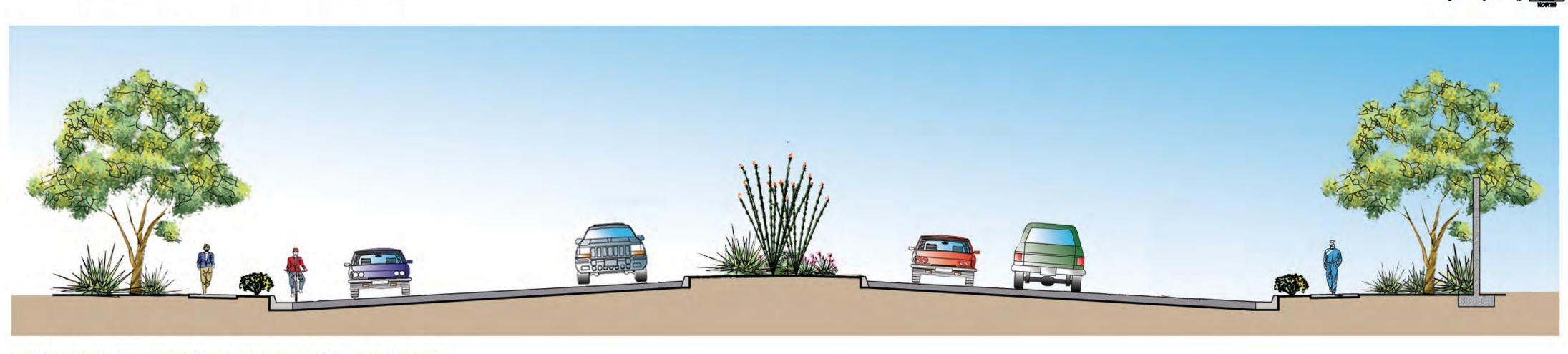


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TYPICAL LANDSCAPE CONCEPT - PLAN



LANDSCAPE CONCEPT - TYPICAL SECTION



TYPICAL LANDSCAPE PLAN AND SECTION

LA CHOLLA BOULEVARD - RIVER ROAD TO RUTHRAUFF ROAD



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La Cholla Boulevard: Ruthrauff Road to River Road (4LCITR)

Summary of Public Opinion Questionnaire of September 2008

La Cholla Boulevard is a capital improvement project that impacts many residents of Pima County. Currently 23,000-28,000 vehicles per day drive this segment of La Cholla Boulevard. By 2030 it is anticipated that 41,000-44,000 vehicles per day will drive this segment. This use comes from the local community as well as those coming to or driving through the area. According to the Public Participation and Mitigation Ordinance, section 10.56.130, a public opinion questionnaire was circulated to all property owners within a half mile of the project. Of the approximately 900 people contacted, 37 returned the questionnaire. County residents approved this project with the 2006 RTA vote. The RTA vote along with this low response rate suggests that the project is perceived as needed. The most common comment in the questionnaire responses, mentioned 22 times, was that additional lanes and congestion relief that the proposed plans provides is much needed. Eight responses indicated that the project would bring overall improvement to the area. Example responses to "please describe what you like about the project" include: "All proposed improvements." and "Everything!!! Much needed project!" However, not everyone is pleased as reflected in this comment, "Everything about this project will in some way affect us negatively, by increasing traffic, smog, and decreasing property values."

Depending on an individual's situation they may perceive the La Cholla Boulevard improvements as a negative or a positive change. Traffic was one area mentioned by a number of people. Three different people commented, "Making the road six lanes is great." and "I like the three-lane each way design." and "It will bring more traffic by our business." Two other people countered, "Why six lanes? I believe that is too many lanes." and "The project should be designed for four lanes instead of six lanes."

Safety is another issue drawing differing opinions. Five people specifically mentioned the safety benefits of the project. For example, one person stated, "This should improve traffic flow and hopefully reduce accidents due to impatience in long lines at the light." On the other hand, one person mentioned reduced safety and two mentioned the nearness of traffic to homes as a safety concern. One person commented on the proximity of the road to his home, noting, "This also subjects me to increased safety risk due to increased lanes…"

Sound barrier walls received varying comments as well, with six people commenting on them favorably and two commenting against them. Those in favor of walls explained, "I think walls and any landscape would be a huge improvement." and "Don't forget roadside visual barriers where needed." Those against walls for this project stated, "I am not interested in a high wall in front of property." and "We do not like the proposed sound barrier. Our property is zoned M.U. ... Our ability to use the property for any type of business would be

destroyed by the proposed walls." The property north of Jay Avenue on the east and north of Calle Narciso on the west is zoned MU. These properties vary from primary residences, to residential rentals, to commercial properties. Therefore, it is understandable that this mixed use bring mixed ideas on what the area should look like. While a number of people have asked the County to buy adjacent properties, a number of property owners do not want to sell their property, stating, "I am not interested in ...selling property as I just finished building a duplex." One resident felt like the County should not go over budget by acquiring property, stating, "Do not purchase right of way if not needed." How properties are used also relates to property value. This issue of value drew differing views as well. Some saw the project as enhancing value, stating, "I like the new look for this area." Another person believes, "...our overall property value will go down."

The issue of access is important to a number of people as well. Some see the medians as a means of increasing safety. One person in favor of medians stated, "Control access points close to the intersection." On the other hand, some people saw the medians as detrimental to their businesses. One person stated, "The islands make it impossible to get into my property from the north. We need a center lane." and another person said, "It is vital that there is a turn lane for southbound traffic into our parking lot…"

The comments received from the 37 respondents mentioned a variety of topics. In general, the respondents like the increased roadway capacity, turn lanes, bridge, sidewalk, bike lanes, transit access, park access, landscape, and public art. Opinions varied on issues such as number of lanes needed, level of safety, use of walls, type of landscape and art, impact to property values, whether property should be acquired, and whether medians should control access. This diversity of opinion is normal for a Capital Improvement Project since County residents have differing perspectives depending whether they own property adjacent to the right of way, or within a nearby neighborhood, or if they commute to or through the area.



CITY OF TUCSON

Department of Transportation September 18th, 2008

Mr. Dean Papajohn, Civil Engineering Manager Pima County Department of Transportation 201 N. Stone, 3rd Floor Tucson, Arizona 85701

Subject: Bus Stops on La Cholla Blvd. Widening Project

Dear Mr. Papajohn:

Per your request, I would like to confirm the City of Tucson's and Sun Tran's review of the La Cholla roadway widening project between Ruthrauff and River roads. Bea Paulus of Sun Tran as well as myself have reviewed the plans carefully to ensure bus stops meet spacing, safety, and ADA accessibility requirements. We also want to ensure that each stop is a pleasant and comfortable environment for transit riders in the area.

We are asking that bus pullouts be provided at all four legs of the La Cholla/Ruthrauff intersection and at the southbound La Cholla/River stop. Pullouts are necessary where there are a significant number of passenger boardings (usually at major intersections) that cause a substantial dwell time for the bus. Stops with minimal passenger boardings do not need bus pullouts. More pullouts can make it difficult for the bus driver to pull back into traffic, thus putting the bus behind schedule. We are confident that the five pullouts above are sufficient for this segment of La Cholla Blvd.

We are also asking that each bus stop be made accessible per the Americans with Disabilities Act (ADA) guidelines. Each stop should have a concrete pad for the installation of bus shelters coordinated by PCDOT and TDOT transit staff and provided by the contractor, Attention Transit Advertising. As we have discussed, shelter pad and/or shelter design specifications should be implemented to insure ADA compliance and compatibility with the anticipated bus shelters.

Thank you for the opportunity to review the La Cholla roadway plans. We look forward to the future improvements

Sincerely,

three trib

Thomas Fisher, TDOT Project Manager

Cc: Bea Paulus, Sun Tran Pat McGowan, Pima County Department of Transportation

TRANSIT SERVICES DIVISION 149 N. STONE AVE. - 2ND FLOOR • P.O. BOX 27210 • TUCSON, AZ 85726-7210 (520) 791-5883 • TTD/TTY (520) 791-5452 • FAX (520) 791-5453

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Business Assistance Program Contacts - RTA La Cholla Boulevard Project -

MainStreet is a regional small business assistance program focused on minimizing the construction impact on businesses located along Regional Transportation Authority (RTA) roadway projects. Our free services are available to any business that is located within the transportation projects construction outreach area and who wishes to participate. Our #1 goal is to reduce, or in some cases offset, the economic impact of the transportation improvement project on your business.

• Business Assistance Program Manager: Britton Dornquast - 838-4352 (MainStreet Hotline)



MainStreet is proud to have Steve Taylor from SAT Business Consulting as one of our business assistance consulting partners.

• Business Assistance Consulting Partner: Steve Taylor - 270-6309



For more general La Cholla Boulevard project information:

- La Cholla Boulevard information Carol Brichta Pima County Community Relations: 740-6410
- La Cholla Boulevard project website: <u>http://www.roadprojects.pima.gov/lachollariver/</u>



A program of the Regional Transportation Authority, managed by Pima Association of Governments 177 N. Church Ave., Suite 405 • Tucson, AZ 85701 • PHONE (520) 838-4352 • FAX (520) 620-6981 www.mainstreetinfo.org • info@mainstreetinfo.org





MainStreet Business Assistance Program - La Cholla Blvd Widening Project -

MainStreet Business Assistance Program

MainStreet's is a FREE regional small business assistance program focused on minimizing the construction impact on the business community along all Regional Transportation Authority (RTA) roadway projects. This program is provided as part of the Environmental and Economic Vitality Element within the 20 year regional transportation plan as approved by Pima County voters in May 2006.

Business Needs

Transportation construction projects have many significant effects on businesses, most notably the potential loss of revenue. Nationally average business losses due to transportation construction projects run 30%. Businesses have many unique needs and issues depending on the project. Some of these needs may include the following and often require some form of business assistance action.

- Information and Communication
- Questions and Concerns
- Empathy and Understanding
- Accommodations and Timing
- Signage and Access
- Maintaining Revenues and Cash Flow
- Sustainability and Future Opportunities

MainStreet Mission Statement

To help main street businesses struggle less and prosper more during transportation projects by providing information, facilitating communication and offering individual and group business consulting services.

MainStreet Primary Program Services

- Outreach of project information to area businesses
- Point-of-contact for area businesses
- An ombudsman approach to business concerns and solutions
- Referrals to appropriate organizations and agencies
- Continuous feedback loops for addressing issues, questions, suggestions, etc.
- Free individual one-on-one consulting services
- Free group or business association consulting services.

MainStreet Program Manager

Britton Dornquast (520) 838-4352

Primary La Cholla Business Outreach Consultant

Steve Taylor, MBA, SAT Business Consulting (520) 270-6309

Primary Business Outreach Consultant Roles and Responsibilities

The following business assistance program services began during the design and planning phase of the La Cholla project. Some of consultant's roles and responsibilities include:

- Offer MainStreet program services to all businesses in the outreach area (several years in advance of the project construction) to better prepare businesses to endure the length and scope of this project
- Identify key businesses within the project that may be more susceptible and vulnerable to project impacts.
 Implement a plan to continually check on the vulnerable businesses, leading up to and through construction
- Offer MainStreet's FREE individualized consulting services as identified through our proprietary Business Assessment program.









Appendix B

Environmental Screening Memorandum



Memo
Project: La Cholla Boulevard: Ruthrauff Road to River Road
Job No: 59914

RE: Results Memorandum for Environmental Screening

Multiple sources were consulted to complete the environmental screening inventory for the La Cholla Boulevard project. They include the scope of work, team discussions, a field review, the Pima County Geographic Information System (MapGuide), the *Initial Traffic Engineering Study for La Cholla Boulevard, River Road to Ruthrauff Road*, the Sun Tran bus route map, aerial photography, the Arizona Department of Transportation Environmental Planning Group Web site, the Regional Transportation Authority Web site, and information provided at the Citizen Advisory Committee meeting and monthly progress meetings.

The project will require:

- agency scoping,
- public involvement,
- cultural resources compliance,
- a biology review,
- western burrowing owl surveys,
- removal of unoccupied mud swallow nests on the bridge prior to construction,
- a noise analysis,
- Phase I and Phase II hazardous materials investigations and testing,
- Clean Water Act Section 404 permitting, and Clean Water Act Section 402 permitting (if disturbances are greater than 1 acre),
- asbestos testing of the bridge's concrete, and possible National Emission Standards for Hazardous Air Pollutants (NESHAP) notification through the Pima County Department of Environmental Quality (PCDEQ) for bridge demolition,
- possible Pima County Asbestos Removal/Demolition Activity Permit, and
- an Air Quality Activity Permit from PCDEQ, obtained by the contractor, for particulate matter control during construction.

Phase II hazardous materials testing at the intersection of Ruthrauff Road and La Cholla Boulevard was included in the original scope; however, Phase II testing in the area of two closed landfills within the project

area was not, but is recommended. Likewise, asbestos testing of the bridge's concrete structure and lead testing of any painted surfaces are also recommended. These items were not included in the original scope, but can be included in the Phase II testing work.

La Cholla Boulevard is a designated scenic route because of its proximity to the Rillito River and, therefore, environmentally sensitive roadway design guidelines would normally apply to this project. However, because the project area is visually characterized by mostly urban development and lacks areas of native vegetation, the Pima County Project Manager requested that the designation be waived. The design team was informed at the partnering workshop on July 24, 2007 that the requirement to use the environmentally sensitive roadway design guidelines had been waived.

Agency Scoping and Public Involvement

The agency scoping meeting will be scheduled prior to the 60% design phase. The first Community Advisory Committee (CAC) meeting was held on August 7, 2007. The second CAC meeting was held on October 2, 2007. Members of the public have identified concerns regarding the traffic on La Cholla Boulevard. In particular, they noted that traffic backs up on La Cholla Boulevard and it is difficult to make left-hand turns during morning and evening rush-hour traffic. Residents have expressed concern regarding noise and safety as they relate to the close proximity of the new travel lanes to their property. They have also expressed concern regarding parking areas adjacent to their properties, which will be eliminated as a result of the roadway widening.

Cultural Resources

During the field visit, the consultant archaeologist and Pima County archaeologist reviewed the project area. Following the cultural resources Class III survey, archaeological subsurface backhoe testing will be conducted in areas with no surface indications of archaeological sites but with a likelihood of containing subsurface archaeological deposits. Based on the results of the survey and testing, data recovery, if necessary, will be implemented based on Pima County and State Historic Preservation Office review and concurrence.

Biological Resources

The Arizona Game and Fish Department and U.S. Fish and Wildlife Service (USFWS) will be contacted for input during the preparation of the biological report. Based on a review of the USFWS list of threatened and endangered species for Pima County by a qualified biologist, there are no endangered or threatened species issues for the project. In addition, Pima County received confirmation from the USFWS that there is no suitable habitat for the cactus ferruginous pygmy-owl in the project area; therefore, surveys by others will discontinue. However, the project area has potential Western burrowing owl habitat near the Rillito River, and a survey for the species will be needed prior to construction. The existing bridge does not have expansion joints; therefore, bat habitat is not present and will not be a concern during construction. However, remnants

of mud swallow nests are present. Prior to construction and the nesting season, any intact, unoccupied mud nests must be removed from the bridge to prevent nesting. The Rillito River is a potential wildlife corridor. However, the completed project will not affect this function.

Noise Levels

The project is locally funded and falls under the Pima County noise policy, which considers noise mitigation when noise levels reach 66 dBA or greater. A 3 dBA noise reduction credit is given for the use of rubberized asphalt as a roadway surface treatment. While it is likely that future noise levels (2030) will exceed 66 dBA for residences closest to the road, feasibility issues, such as the need for adequate sight distance and driveway openings, may limit the ability to provide noise barriers.

Hazardous Materials

Phase II testing for hazardous materials is anticipated at the intersection of Ruthrauff Road and La Cholla Boulevard, where two gasoline stations and one former gasoline station site are located. Two closed landfills south of the Rillito River, one on the east side and one on the west side of La Cholla Boulevard, are also anticipated to require testing.

Clean Water Act

The project will occur within the Rillito River, which is assumed to be a water of the United States as defined by the U.S. Army Corps of Engineers. The Rillito River is also identified by the Pima County Regional Flood Control District as an important riparian resource. A mitigation plan will be developed to address any impacts to this resource. Work within waters of the United States is anticipated to affect less than 0.5 acre and, therefore, covered by a nationwide Clean Water Act, Section 404 permit.

The *Initial Traffic Engineering Study for La Cholla Boulevard, River Road to Ruthrauff Road* was completed during the environmental screening process. The following technical documents will be completed for the project: design concept report, noise analysis, biological report, hazardous materials report, and cultural resources report. No additional issues were identified during the environmental screening process.

Attachments:

Attachment A – Environmental Screening: Questionnaire for Establishing Potential Areas of Impact Attachment B – Environmental Screening Summary Impact Matrix

Attachment A

Environmental Screening: Questionnaire for Establishing Potential Areas of Impact

Environmental Screening: Questionnaire for Establishing Potential Areas of Impact Revised: October 31, 2007

INTRODUCTORY INFORMATION

Project Identification

- Project Name: La Cholla Boulevard: Ruthrauff Road to River Road
- Pima County Project Manager: Dean Papajohn

Project Location and Limits

- Location of project within Pima County: La Cholla Boulevard between Ruthrauff Road and River Road
- Limits of project:

From end to end: Ruthrauff Road to River Road From side to side: typical right-of-way width is 150 feet

Funding Source

• Funding source anticipated for use in construction project?

County funding: Y_x_N_

Federal funding: Y____ N __<u>x</u>__

Other: Regional Transportation Authority

Source: Team discussions

Primary Project Purpose

• Primary purpose of project:

Modernize roadway (e.g., resurface, restore, rehabilitate, reconstruct, add shoulders, or add auxiliary lanes): Y_x_N___

Increase capacity: Y_x_N_

Add bicycle lanes: $Y_{\underline{x}}$ (Paved shoulders will be included for bicycle use, but this is not a primary purpose for the project.)

Improve safety: Y_x_N_

Other:

Source: Team discussions, scope of work, and Pima County Department of Transportation Web site

Existing Conditions within Project Limits

- Roadway specifications?
 - Right-of-way: <u>150</u> feet

Pavement width: <u>24</u> feet

Number of through lanes in each direction: 1

• Number of turning lanes?

Right-turn lanes: <u>7</u>

Left-turn lanes: <u>11</u>

• Existing intersections?

Number of signalized intersections: <u>3</u>

Number of unsignalized intersections: <u>12</u>

- Existing parking (e.g., on-street)? Y<u>x</u> N (Parking occurs haphazardly within the right-of-way and in front of many residences along La Cholla Boulevard.)
- Existing bicycle lanes: Y_x_N___
- Existing sidewalk: Y____ N ____
- Existing transit stops: Y_x_N____
- Other:

Source: Pima County MapGuide; SunTran Bus Route

Project Components

• Anticipated specifications of the project?

Amount of additional right-of-way to be acquired:

Under 1 acre <u>x</u> 1-5 acres 5-10 acres Over 10 acres

Change in the vertical or horizontal alignment: Y_x_N_(The vertical alignment may need to be raised at the bridge.)

New alignment: Y____ N ___<u>x</u>___

Pavement width to be added: <u>48 feet</u>

Number of through lanes to be added: <u>4</u>

Number of turn lanes to be added: <u>5</u>

Right-turn lanes <u>2</u>

Left-turn lanes 3

Any associated parking (e.g., on-street): Y____N ___x

Bicycle lanes to be added: Y_x_N_

Sidewalk to be added: Y_x_N_

Landscaping to be added: Y_x_N___

- Number of intersections to be signalized: <u>0</u>
- Other: Additional components of the project include replacement of the bridge over the Rillito River and storm drain work to accommodate the roadway widening.

Source: Team discussions, Pima County Department of Transportation Web site

Phasing

• Is the project:

A portion or phase of a unified development plan? Y_x_ N ____

One of a series of projects that may result in a cumulative set of environmental impacts on an identifiable area? Y____N _x__

Source: Scope of work and team discussions

Traffic:

•	Existing average daily traffic (ADT) in the project area (2007)?		
	Street: _La Cholla Blvd. SB (btwn Wetmore Rd. & Ruthrauff Rd.)	ADT:	3,977
	Street: _La Cholla Blvd. NB (btwn Wetmore Rd. & Ruthrauff Rd.)	ADT:	<u>3,216</u>
	Street: _La Cholla Blvd. NB/SB (btwn Ruthrauff Rd. & Curtis Rd.)	ADT:	23,149
	Street: _La Cholla Blvd. SB (btwn Curtis Rd. & River Rd.)	ADT:	13,384
	Street: _La Cholla Blvd. NB (btwn Curtis Rd. & River Rd.)	ADT:	15,025
	Street: La Cholla Blvd. SB (btwn River Rd. & Sunset Rd.)	ADT:	14,101
	Street: _La Cholla Blvd. NB (btwn River Rd. & Sunset Rd.)	ADT:	15,743
	Street: _Ruthrauff Rd. EB/WB (btwn La Cholla Blvd. & Romero Rd.)	ADT:	18,926
	Street: _Ruthrauff Rd. WB (btwn Highway & La Cholla Blvd.)	ADT:	14,911
	Street: _Ruthrauff Rd. EB (btwn Highway & La Cholla Blvd.)	ADT:	13,256
	Street: _Curtis Rd. EB/WB (btwn Davis Ave. & La Cholla Blvd.)	ADT:	<u>6,105</u>
	Street: _River Rd. EB/WB (btwn La Cholla Blvd. & La Cañada Dr.)	ADT:	36,732

•	Projected ADT in the project area for the build year (2030)?	
	Street: La Cholla Blvd. NB/SB (btwn Ruthrauff Rd. & Curtis Rd.)	<i>ADT:</i> <u>41,000</u>
	Street: La Cholla Blvd. NB/SB (btwn Curtis Rd. & River Rd.)	<i>ADT:</i> <u>44,000</u>
	Street: _Curtis Rd. EB/WB_(W. of La Cholla Blvd.)	ADT:7,000
	Street: _Ruthrauff Rd. EB/WB (W. of La Cholla Blvd.)	ADT: <u>37,000</u>
	Street: _Ruthrauff Rd. EB/WB (E. of La Cholla Blvd.)	ADT:6,105
	Street: _River Rd. EB/WB (E. of La Cholla Blvd.)	ADT: <u>57,000</u>
	Street: _River Rd. EB/WB (W. of La Cholla Blvd.)	ADT: <u>39,000</u>
	Street: La Cholla Blvd. EB/WB (N. of River Rd.)	ADT: <u>53,000</u>
	Street: <u>La Cholla Blvd. EB/WB (S. of Ruthrauff Rd.)</u>	ADT: <u>11,000</u>

Source: *Initial Traffic Engineering Study for La Cholla Blvd., River Rd. to Ruthrauff Rd.* (Kimley-Horn and Associates, Inc.; September 2007)

Land Uses

• Existing adjacent land uses? Check all that apply and bold primary uses.

Commercial (e.g., **retail businesses**, service businesses): Y_x_N___ Institutional (e.g., schools, hospitals, social services agencies): Y___N_x_ Residential (e.g., **single family houses**, apartments, townhouses): Y_x_N___ Vacant lots: Y_x_N___

Industrial (e.g., light industry, heavy industry): Y_x_N___

Recreational (e.g., parks, sports fields): Y____N <u>x</u>___ Other:

Source: Pima County MapGuide

Property Ownership

• Existing land ownership:

Majority public: Y____N ____ Majority private: Y____N ____ About evenly divided between public and private: Y____N ____ Other:

Source: Pima County MapGuide

ENVIRONMENTAL CATEGORIES

Drainage

 Will any storm water drain from the project discharge into detention or retentions basins on site? Y____N x___

Source: Team discussions

Section 401/404

- Are any culverts likely to be installed, replace, or extended? Y x N
- Are there any bridges being upgraded, extended, or replaced? Y_x_N_
- Is there any bank protection required in the construction of this project? Y_x_N_ (No additional bank protection is anticipated; however, portions may need to be reconstructed.)
- Are there any wetlands within the project area? Y____ N ___x
- Are there any riparian areas within the project vicinity? Y_x_N___
- Is it anticipated that there will be any discharge of dredged or fill material into "waters of the United States"? Y_x_ N ____

Source: Team discussions, Pima County MapGuide

Floodplain

 Is the project area within a 100-year floodplain delineated on the Federal Emergency Management Agency Flood Insurance Rate Map? Y_x_N___ If "yes," will the project substantially modify the topography of the floodplain either by placement or removal of materials within the floodplain? Y____ N ____

Source: FEMA Floodplain Map Panel 1617 of 4700

Biological Resources

- Are there listed threatened, endangered, proposed, and/or candidate species likely to be found in the project vicinity? Y N x
- Are listed special status species likely to be found in the project vicinity? Y_x_N____
- Are protected native plants likely to be found in the project vicinity? Y_x_N____

- Are construction activities anticipated to remove/disturb any vegetation? Y_x_N___
- Is the project within the Conservation Land System? Y_x_N____
- Is the project along a designated Scenic Route? Y_x_N_ (River Road is a designated scenic route.)

Other: The Western burrowing owl is a special-status species in Pima County. In addition, mud swallows are protected by the Migratory Bird Treaty Act. Both may be present within the project area. A survey for the Western burrowing owl will be completed prior to construction. It is recommended that any mud swallow nests be removed from the bridge prior to construction.

A native plant inventory will be prepared by McGann and Associates. While there are native plants in the right-of-way, most have been removed over the years.

Air Quality

• Is the project in an:

Attainment area? Y_x_N___

Nonattainment area? Y_____N <u>x</u>__ If "yes," what are the pollutants of concern?

Maintenance area? Y_x_N_ If "yes," what are the pollutants of concern? Carbon monoxide

Source: ADOT Environmental Planning Group - Air Quality Maps

Noise

• Are there sensitive noise receptors in the area? Y_x_N____If "yes," identify type of noise receptors and briefly describe:

Residences: <u>x</u> (Residences are located along La Cholla Boulevard within the project area.)

Schools: ____

Hospitals: ____

Churches: ____

Parks: <u>x</u> (The Rillito River Park crosses under the Rillito River bridge.)

• When the project is completed and used as anticipated, is it likely to contribute to any exceedances of noise quality standards? Y_x_N___

Source: Aerial photographs and project scope

Utilities

• Will the construction include any utility involvement? Y x N If "yes," what kind of work is anticipated?

Utility relocation: <u>Comcast, Pima County Wastewater, Southwest Gas, Tucson Electric</u> <u>Power, Tucson Water, Qwest, and Xspedius Communications</u>

Temporary disconnection of service: <u>Comcast, Southwest Gas, Tucson Electric Power, and</u> <u>Qwest</u>

Utility replacement: <u>Comcast, Pima County Wastewater, Southwest Gas, Tucson Electric</u> <u>Power, Tucson Water, Qwest, and Xspedius Communications</u> • Are there any scheduled plans for utility upgrades in the vicinity that are related to the project? Y_x_N__ Tucson Water wants to extend its 12" line north to Curtis Rd. and then west on Curtis Rd. to the end of the road improvements.

Source: HDR project manager and team meetings

Hazardous Materials

- Is it likely that any hazardous wastes or hazardous substances in the past have been generated, treated, stored, released, discarded or disposed of on site or are any such wastes now accumulated on site? Y_x_N___Don't know____
- Have any test borings been performed? Y____N x___If "yes," were any wastes discovered on the premises in the course of the test borings or excavation work for the project?
 Y____N ____

Source: HDR hazardous materials specialist

Historic Preservation

- Are there any cultural resources (archaeological or historic) in the vicinity of the project area that are listed on or eligible for the National Register of Historic Places? Y_x_N___
- Are any of these sites considered "Priority Cultural Resources?" Y x N
- If the answer is "yes," to either or both the questions above, please list the resource(s)/site(s): Hodges Ruin AZ AA:12:18 (ASM) and a prehistoric scatter recorded as AZ AA:12:29 (ASM)
- Of those properties listed or eligible, are any located near enough to the project to be affected by the project location, construction, or anticipated future traffic? Y_x_N_____ If "yes," please specify the properties and very briefly the anticipated effect. Hodges Ruin AZ AA:12:18 (ASM) and a prehistoric scatter recorded as AZ AA:12:29 (ASM) will be adversely affected by the proposed construction.
- Are there any structures likely to be 50 years old or older within or adjacent to the project area? Y____N x__ If "yes," please list addresses below:

Source: HDR and Pima County archaeologists, and Pima County Assessor's Web site

Visual Impact

- Is the project likely to affect noticeably the views from adjacent properties? Y_x_N____ If "yes," briefly describe: If noise walls are constructed, some views from adjacent properties will be affected.
- Is the project likely to cause a noticeable change in the foreground, middle-ground, or background view from the road? Y_x_N_ (Foreground views will be changed with the addition of four travel lanes.)

Source: Project scope

Neighborhood/Social Impact

- Is there likely to be any commercial or residential displacement due to the construction of this project? Y____N ___X___
- Are there likely to be any temporary changes in:

Business access: Y_x_N_

Parking: Y_x_N_(No on- or off-street parking will be provided within the right-of-way.)

Other:

• Are there likely to be any permanent changes in:

Traffic service: Y<u>x</u> N

Traffic circulation: Y_x_N___

Parking: $Y_x N_{---}$ N (The current design will eliminate off-street parking. The project will not replace parking areas.)

Other:

• Is the project likely to affect continuity in neighborhoods in the vicinity? Y____N ____ Source: Project scope and team discussions

LOCAL JURISDICTION/AGENCY COORDINATION

• Are there local jurisdictions and governmental agencies with whom coordination is anticipated or has begun? Y_x_N __ If "yes," who are they?

City of South Tucson _____

City of Tucson <u>x</u>

Oro Valley ____

Pascua Yaqui Tribe <u>x</u>

Tohono O'odham Nation <u>x</u>

Town of Marana _____

Town of Sahuarita ____

Arizona Department of Environmental Quality (ADEQ) <u>x</u>

Arizona Department of Transportation _____

Arizona Game and Fish Department <u>x</u>

Arizona State Land Department _____

U.S. Army Corps of Engineers <u>x</u>

U.S. Bureau of Land Management _____

U.S. Environmental Protection Agency _____

U.S. Federal Highway Administration _____

U.S. Fish and Wildlife Service <u>x</u>

Pima County Parks and Recreation <u>x</u>

Pima County Department of Environmental Quality <u>x</u>

Regional Transportation Authority <u>x</u>

Sun Tran <u>x</u>

• Note any issues for coordination that have been identified to date: None.

- Briefly describe coordination efforts planned or underway:
 - Coordination with the tribes will be initiated during the cultural resources consultation.
 - The Arizona Game and Fish Department and the U.S. Fish and Wildlife Service will be invited to the agency scoping meeting to review the project scope.
 - The jurisdictional delineation and Nationwide 404 permit will be submitted to the U.S. Army Corps of Engineers.
 - The Arizona Department of Environmental Quality (ADEQ) was contacted for information regarding leaking underground storage tanks and other hazardous materials.
 - The project team will work with Sun Tran to plan bus pullout locations
 - The project team will work with the Pima County Parks and Recreation Department to gain Rillito River Park access
 - The County will coordinate funding for the project with the Regional Transportation Authority through an Intergovernmental Agreement.
 - The contractor will need to apply for a Clean Water Act Section 402 permit from ADEQ if soil disturbances are greater than one acre.
 - The contractor will need to apply for an air quality permit through the Pima County Department of Environmental Quality for the bridge demolition work.
 - The contractor may need to apply for a Pima County Asbestos Removal/Demolition Activity Permit.
 - The contractor may need to prepare a National Emissions Standards for Hazardous Air Pollutants (NESHAP) notification through the Pima County Department of Environmental Quality for the bridge demolition work.

Source: Scope of work and team discussions

PUBLIC INVOLVEMENT

- Has a Public Involvement Plan been developed for the project? Y_x_N___
- Has a Citizen Advisory Committee been formed, or is one being formed? Y_x_N____
- Have any public meetings been scheduled? Y_x_N ____ If "yes," have any meetings been held to date? Y_x_N ____

CAC meetings were held on August 7, 2007 and October 2, 2007.

Has any information useful to project development been identified through any public interaction to date? Y_x_N____If "yes," briefly describe:

Traffic backs up on La Cholla Boulevard and it is difficult to make left-hand turns during morning and evening rush-hour traffic. In addition, pedestrians are having difficultly crossing Ruthrauff Road at La Cholla Boulevard with the current timing of the light. Traffic backs up on La Cholla Boulevard at Curtis Road due to the presence of long trucks making left- and right-hand turns onto Curtis Road. Residents have expressed concern regarding the proximity of traffic to their homes as a result of the widening and the loss of their current parking.

Is there any known controversy over this project to date? Y x N If "yes," briefly . describe:

Residents are concerned about the proximity of traffic to their homes as a result of the widening and the loss of their existing parking.

Source: CAC meetings

PERMITS

Anticipated permits and/or approvals? • 404 Permit: <u>x</u> 401 Certification: _____ Sole Source Aquifer: _____ State Historic Preservation Officer (SHPO) clearance: <u>x</u> National Pollutant Discharge Elimination System (NPDES): <u>x</u> National Emissions Standards for Hazardous Air Pollutants (NESHAP) <u>x</u> Air Quality Activity <u>x</u> Pima County Asbestos Removal/Demolition Activity Permit <u>x</u>

u dum Completed by: René Tanner, Sr. Environmental Planner Date: 10-31-2007

Attachment B

Environmental Screening Summary Impact Matrix

Environmental Impact Screening Summary Impact Matrix

Project Name:La Cholla Boulevard: Ruthrauff Road to River RoadProject Limits:Ruthrauff Road to River RoadRevised: October31, 2007

	Potentially Affected Environmental Categories ->	Water Quality	100-year Floodplain	Protected Waterways	Visual Quality / Viewsheds	Protected Plants / Vegetation	Protected Animals / Wildlife	Cultural Res. (archaeological and historic)	Air Quality	Noise	Hazardous Materials	Land Uses / Community Character
Applicable to	_											
project (√)	Project Construction and Operation Activities Ψ											
\checkmark	Change in the vertical or horizontal alignment	Х	Х	Х	Х	0	0	0	0	М	0	Х
	New alignment											
\checkmark	Added capacity (i.e., through lanes)	Х	Х	Х	Х	Х	Х	Н	Х	Н	М	М
\checkmark	Milling/grading	0	0	0	0	0	0	Н	Х	0	0	0
\checkmark	Change in access (e.g., driveways, intersections)	0	0	0	0	0	0	Н	0	0	0	М
\checkmark	Clearing and grubbing	Х	0	Х	Х	Х	Х	Н	Х	Х	Х	Х
	Excavation											
	Cut slope											
\checkmark	Demolition	Х	Х	Х	Х	Х	Х	Н	Х	Х	М	0
\checkmark	Demolition debris disposal	0	0	0	0	0	0	0	0	0	М	0
\checkmark	Acquisition of additional right-of-way	0	0	0	Х	Х	Х	Х	0	0	М	0
\checkmark	Temporary Construction Easements	Х	Х	Х	0	Х	Х	Н	0	0	Х	0
\checkmark	Discharge of dredge or fill material	Х	Х	Х	0	Х	Х	Н	М	0	Х	0
\checkmark	Channeling and dredging	Х	Х	Х	Х	Х	Х	Н	Х	0	Х	0
	Hauling											
	New signals											
\checkmark	Storm water drainage	Х	0	Х	0	Х	0	Н	0	0	0	0
\checkmark	Construction equipment	Х	0	Х	0	Х	0	Н	Х	Х	Х	0
	Detour route											

Matrix Key:

0 = no involvement

X = potential involvement, but no or minimal impact

M = potential moderate impact

H = potential high impact





Appendix C

Biological Resources



La Cholla Boulevard Ruthrauff Road to River Road

Biological Review

July 2008

Pima County Department of Transportation Work Order No. 4LCITR





HDR

July 29, 2008

Mr. Dean Papajohn, PE Civil Engineering Manager Pima County Department of Transportation Public Works Building 201 N. Stone Avenue, 4th Floor Tucson, AZ 85701

RE: Biological Review La Cholla Boulevard, Ruthrauff Road to River Road Work Order No. 4LCITR HDR Job No. 59914

Dear Mr. Papajohn:

We are pleased to submit this *Biological Review* for the above-referenced project. This report was prepared by René Tanner, Senior Environmental Planner, and was reviewed by Christine Jacobs-Donoghue, Senior Environmental Planner.

If you have any questions, please contact me at (520) 584-3632.

Sincerely, HDR Engineering, Inc.

Ted Buell, PE Project Manager

Reviewed by:

Christine Jacobs-Donoghue Senior Environmental Planner

Phone: (520) 584-3600 Fax: (520) 584-3680 www.hdrinc.com

La Cholla Boulevard Ruthrauff Road to River Road

Biological Review

July 2008





Prepared for: Pima County Department of Transportation 201 N. Stone Avenue Tucson, AZ 85701 Work Order No. 4LCITR

Prepared by: HDR Engineering, Inc. 5210 E. Williams Circle, Suite 530 Tucson, AZ 85711-4459 HDR Project No. 59914

HDR





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List of Appendices

- Appendix A Protected Native Plants
- Appendix B USFWS List of Federally Listed Species
- Appendix C AGFD Online Environmental Review Tool
- Appendix D Letter from USFWS Regarding Technical Assistance
- Appendix E Articles Regarding Methods to Deter Swallow Nesting
- Appendix F Project Area Photographs







1.0 Project Location

The Pima County Department of Transportation's (PCDOT's) La Cholla Boulevard, Ruthrauff Road to River Road, road widening project is located in unincorporated Pima County, Arizona. The project is approximately 1 mile long and begins approximately 0.3 mile south of Ruthrauff Road and ends at River Road (see Figures 1 and 2). The Tucson city limits are located to the south, approximately 0.9 miles south of the intersection of La Cholla Boulevard and Ruthrauff Road.

The project is within Sections 15, 16, 22, and 23 of Township 13 South, Range 13 East (Gila and Salt River Meridian from the United States Geological Survey 7.5 minute "Tucson North, AZ" Quadrangle).

Throughout this Biological Review, the term "project limits" describes the construction footprint (area of disturbance), while the term "project area" includes surrounding land outside of but adjacent to the project limits. The term "project vicinity" is used to denote a more expansive landscape context.

2.0 Project Description

La Cholla Boulevard was widened to six lanes from approximately River Road north to Omar Drive in 2006. PCDOT proposes to continue the widening of La Cholla Boulevard south from River Road to Ruthrauff Road, transforming it from a two-lane, undivided roadway to an urban, six-lane divided roadway. This project is funded by the citizen-approved Regional Transportation Plan. Construction is anticipated to begin in the summer of 2010 and last 18 to 24 months.

The project involves the complete reconstruction of the road. The new roadway will have six travel lanes, a multiuse lane in each direction, a raised and landscaped median, sidewalks, and pedestrian trail improvements from La Cholla Boulevard to the north bank of the Rillito River. The project will also include replacing the existing two-lane bridge over the Rillito River with a six-lane bridge. The intersections of La Cholla Boulevard with Curtis Road and Ruthrauff Road will include additional right- and left-turn lanes. The total length of the project is approximately 1 mile.

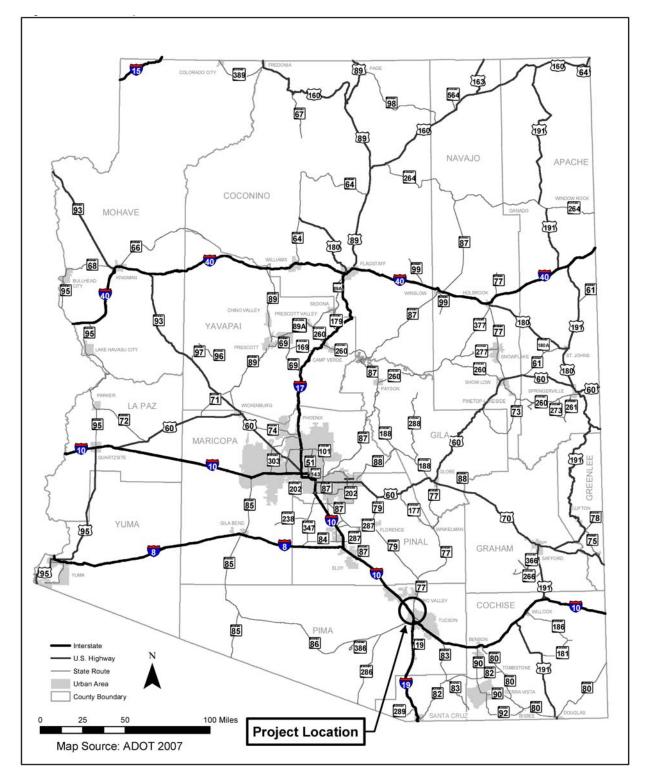
The Rillito River (conservation land) is located at the north end of the project and a cultural site (Hodges Ruins) at the south end of the project site. Due to these environmental and cultural conditions, this segment of La Cholla Boulevard corridor could be designated as an environmentally sensitive roadway and applicable design guidelines could be applied to the project. However, because the project area is predominantly urban and for the most part lacks native vegetation, environmentally sensitive roadway design guidelines were not applied to the project.

Traffic volumes on the roadway are expected to increase because of regional growth and expanded roadway capacity associated with the improvements. The increase in traffic volume will result in an increase in noise levels along the roadway. A separate noise report was prepared to evaluate noise and potential mitigation measures (HDR, Inc. 2008).





Figure 1. Project location in state



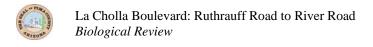
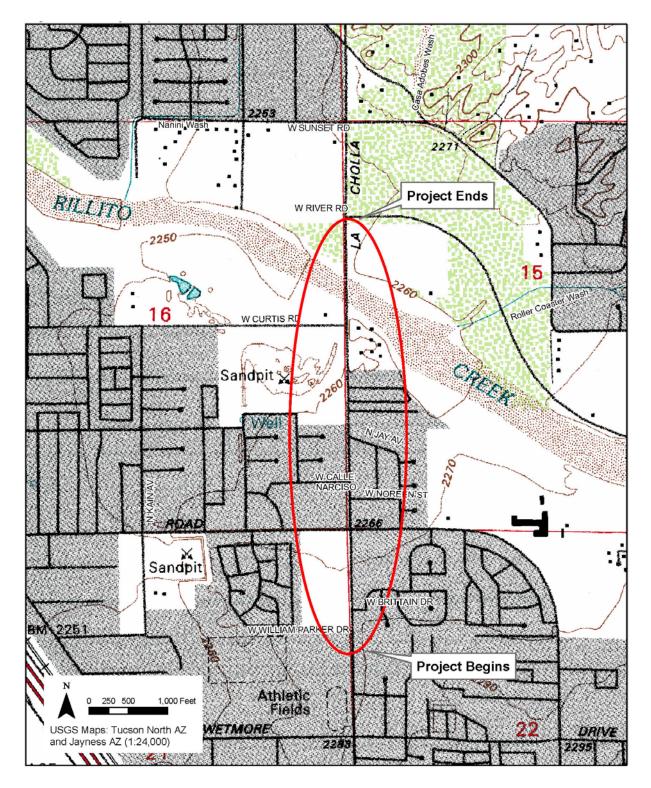




Figure 2. Project vicinity









Currently, the two-lane road has little to no access control and vehicles originating from residences and businesses can access La Cholla Boulevard from existing local streets. During construction, the project will create dust, noise, and traffic delays; however, access to businesses and residences will be maintained throughout the construction period and signs will be provided to identify business access points. No major detours or temporary roads would be constructed. Standard measures will be employed to reduce dust and noise during construction.

Project construction will require the acquisition of 0.43 acre of new right-of-way (R/W) from 3 parcels. Temporary construction easements will involve 1.63 acres of land from 49 parcels along the alignment. Staging areas will be determined by the contractor; however, any staging areas outside of the project area would need to be evaluated, by the contractor, prior to use, through a separate environmental analysis in accordance with Pima County, and state and federal requirements, unless the facility has already received prior clearance under local, state, and federal laws.

The project area has very limited vegetation, but does contain plant species subject to the County's Native Plant Preservation Ordinance and Arizona Native Plant Law, including mesquite, acacia, and palo verde. Applicable plants will be preserved in place, salvaged and relocated, or replaced, consistent with the Ordinance and the project landscape plan. The Arizona Department of Agriculture will be notified regarding plant removal.

Bridge construction over the Rillito River is expected to affect less than 0.5 acre of waters of the United States; therefore, if a Clean Water Act Section 404 permit is required, authorization under the terms and conditions of a United States Army Corps of Engineers' Nationwide Permit is anticipated. The Rillito River is the only potential water of the United States within the project area.

The project is expected to disturb more than 1 acre of soil; therefore, an Arizona Pollutant Discharge Elimination Permit from the Arizona Department of Environmental Quality and a stormwater pollution prevention plan (SWPPP) will be required. The SWPPP will involve implementing measures during construction that retain soil on site and prevent potential chemical spills that could contaminate soils. The SWPPP's implementation will not affect any listed species.

3.0 Location Description

The project area is located within the Basin and Range Geologic Province. Landforms present within the Basin and Range Province consist of predominantly northwest-to-southwest trending, block-faulted mountain ranges, separated by broad, gently sloping alluvial basins. Terrain in the project vicinity is primarily flat. Elevations range between 2,260 and 2,280 feet above mean sea level within the project limits.

The project area is located within the Arizona Upland Subdivision of Sonoran Desertscrub (Turner and Brown 1994); however, the area is largely developed and graded so there is minimal vegetation within the project limits. A mixture of native and nonnative weedy species has recolonized some previously graded areas near the Rillito River bridge. Landscaping improvements are present north of the Rillito River bridge to the intersection of River Road and La Cholla Boulevard, along the Rillito River Park, and east of La Cholla





Boulevard along Ruthrauff Road. A list of native plants found within the project area is listed in Appendix A.

The Rillito River, at its crossing with La Cholla Boulevard, is a 300-foot-wide ephemeral stream with lined banks. The streambed is comprised of medium to coarse sand with some gravel and cobbles. The bed is vegetated with a typical assortment of desert vegetation.

The other watersheds that affect this roadway are fairly minor, with an aggregate size of about 60 acres. The main offsite watershed is roughly bordered by the Rillito River on the north, Casas Adobes Wash that runs parallel to and 1,300 feet east of La Cholla Boulevard on the east, Wetmore Road on the south, and La Cholla Boulevard on the west. Storm runoff generated within the watershed generally flows to the northwest in streets, roadside swales, and existing storm drains. The watershed is developed with single-family homes, mobile home parks, and light commercial developments. The vegetative cover consists of natural desert scrub, even in most of the residential areas where property owners have generally elected to maintain the desert appearance of their land in lieu of lawns or formal landscaping.

North of the Rillito River, a small drainage area is currently being built into a commercial office center on the southeast corner of La Cholla Boulevard and River Road. The development plan shows that the runoff will be collected and conveyed to the south through the soil cement bank protection directly into the Rillito River.

The Rillito River has a drainage area of approximately 900 square miles, upstream of La Cholla Boulevard. It drains the southern portion of the Santa Catalina Mountains, the eastern portion of the Rincon Mountains, as well as several hundred square miles of desert. Watershed elevations range from 2,200 to 9,200 feet. Watershed slopes range from less than 1% to almost vertical relief in the mountains.

The Tucson Basin is an extensive basin containing alluvium varying up to approximately 12,000 feet in thickness. The alluvium is highly variable and ranges from sand, gravel, and cobble deposits to silts, clays and heavily cemented sandy clay. Characteristics of granular soils include high hydraulic transmissivity.

Land uses in the project area include residential (single-family homes and mobile homes), commercial, municipal (fire station), parks, vacant land, and flood control/river. Commercial development is largely concentrated at Ruthrauff Road and River Road. Within the project limits there is a linear park on both sides of the Rillito River bridge, with access to Rillito River Park multi-use use trails, and to Curtis Park, which is located on the northwest corner of Curtis Road and La Cholla Boulevard. Flowing Wells Middle School is located just south of the project limits.





4.0 Species Identification

The United States Fish and Wildlife Service's (USFWS's) list of federally listed species (Appendix B) and the Arizona Game and Fish Department's (AGFD's) list of special-status species (Appendix C) were reviewed by a qualified biologist, René Tanner, to determine if any species listed as endangered or threatened or identified as special-status have the potential to occur within the project area. The project will have no effect on species listed by the USFWS. Table 1 lists the exclusion justification for each species. Because the project will not impact federally listed species, consultation with the USFWS is not necessary. Table 2 contains a list of special-status species within 3 miles of the project area, as identified by the AGFD, and habitat requirements and recommendations for each species based on site specific conditions. Table 3 contains a list of species from Pima County's *Sonoran Desert Conservation Plan* along with habitat requirements and a comment section regarding a species potential to occur within the project area based on site specific conditions.







Table 1.	Threatened and endangered species listed by USFWS for Pima County that do not
	occur in the project area

Species Common name Scientific name	Status ^a	Habitat requirements	Exclusion justification
California brown pelican Pelecanus occidentalis californicus	PD	The subspecies is found on the Pacific Coast and associated islands. In Arizona, the species is found on many lakes and rivers. Elevation: varies	The subspecies is an uncommon transient in Arizona. In addition, there are no lakes or perennial waters within the project area.
Chiricahua leopard frog Lithobates (Rana) chiricahuensis	Т	Require permanent or nearly permanent water sources such as streams, rivers, backwaters, ponds, and stock tanks that are mostly free of nonnative fish, crayfish, and bullfrogs. Elevation: 3,300–8,900 feet	There are no permanent or semipermanent water sources in the project limits.
Desert pupfish Cyprinodon macularius	E	Shallow springs, small streams, and marshes. Elevation: < 5,000 feet	There are no permanent or semipermanent water sources in the project limits.
Gila chub Gila intermedia	Е	Pools, springs, cienegas, and streams. Elevation: 2,000–5,500 feet	There are no permanent or semipermanent water sources in the project limits.
Gila topminnow Poeciliopsis occidentalis occidentalis	E	Small streams, springs, and cienegas. Elevation: 4,500 feet	There are no permanent or semipermanent water sources in the project limits.
Huachuca water umbel Lilaeopsis schaffneriana ssp. recurva	Е	Cienegas, perennial low gradient streams, and wetlands. Elevation: 3,500–6,500 feet	There are no permanent or semipermanent water sources in the project limits.
Jaguar Panthera onca	Е	Found in Sonoran desertscrub up through subalpine conifer forest. Elevation: 1,600–9,000 feet	Very rare in Arizona. The level of human disturbance within the project area would preclude the species presence.
Kearney blue star Amsonia kearneyana	E	Found on west-facing drainages in the Baboquivari Mountains. Elevation: 3,600–3,800 feet	Range is extremely limited and does not extend into the project area.
Lesser long-nosed bat Leptonycteris curasoae yerbabuenae	E	Desert scrub habitat with agave and columnar cacti present as food plants. Elevation: < 6,000 feet	There are few, if any, food plants in the project area.
Masked bobwhite Colinus virginianus ridgewayi	Е	Desert grasslands with a diversity of dense native grasses, forbs, and brush. Elevation: 1,000–4,000 feet	Presently only known from reintroduced populations on Buenos Aires National Wildlife Refuge.
Mexican spotted owl Strix occidentalis lucida	Т	Nests in canyons and dense forests with multilayered foliage structure. Elevation: 4,100–9,000 feet	No suitable habitat; no forests or wooded canyons. (continued on next page)

(continued on next page)





Table 1. Threatened and endangered species listed by USFWS for Pima County that do not occur in the project area (*continued*)

Species Common name Scientific name	Status ^a	Habitat requirements	Exclusion justification
Nichol Turk's head cactus Echinocactus horizonthalonius var. nicholii	Е	Found in unshaded microsites in Sonoran desertscrub on dissected alluvial fans at the foot of limestone mountains and on inclined terraces and saddles on limestone mountain sides. Elevation: 2,400–4,100 feet	No suitable habitat; no alluvial fans or limestone present in the project area.
Ocelot Leopardus (=Felis) pardalis	Е	Found in humid tropical and subtropical forests, savannahs, and semiarid thornscrub. Elevation: < 8,000 feet	No suitable habitat; no dense cover in the project area.
Pima pineapple cactus Coryphantha scheeri var. robustispina	Е	Occurs in alluvial valleys or on hillsides in rocky to sandy or silty soils. Found in Sonoran desertscrub or semidesert grassland communities. Elevation: 2,300–5,000 feet	No suitable habitat; native vegetation has been cleared from the project limits.
Sonoran pronghorn Antilocapra Americana sonoriensis	Е	Found in broad intermountain alluvial valleys with creosote-bursage and palo verde-mixed cacti associations. Elevation: 500–2,000 feet	No suitable habitat; human disturbance within the project area would preclude the species presence.
Southwestern willow flycatcher Empidonax traillii extimus	Е	Cottonwood/willow and tamarisk vegetation communities along rivers and streams. Elevation: < 8,500 feet	No suitable habitat; the Rillito River does not support suitable riparian habitat in the project area.
Acuna cactus Echinomastus erectocentrus var. acunensis	С	Found on well-drained knolls and gravel ridges in Sonoran desertscrub Elevation: 1,300–2,000 feet	No suitable habitat; no knolls or gravel ridges in project area.
Sonoyta mud turtle Kinosternon sonoriense longifemorale	С	A pond turtle found in Quitobaquito Springs and Rio Sonoyta, Sonora, Mexico. Elevation: 1,100 feet	No suitable habitat; no permanent or semipermanent water in the project area.
Yellow-billed cuckoo Coccyzus americanus	С	Found in large blocks of riparian woodlands (cottonwood, willow, or tamarisk galleries). Elevation: < 5,500 feet	No suitable habitat; the Rillito River does not support suitable riparian habitat in the project area.
Gooddings onion Allium gooddingii	СА	Found in forested drainage bottoms and on moist north-facing slopes of mixed conifer and spruce fir forests. Elevation: > 7,500 feet	No suitable habitat; no forest habitat.
San Xavier talussnail Sonorella eremita	CA	Found on deep, limestone rockslides with outcrops of limestone and decomposed granite. Elevation: 3,850–3,920 feet	No suitable habitat; no limestone habitat.

Source: USFWS 2008. Listed, protected, and candidate species for Pima County.

^a E = endangered, T = threatened, PD = proposed delisted, C = candidate, CA = conservation agreement



Т



Table 2. Special status species occurring within 3 miles of the project vicinity as documented in the AGFD Heritage Data Management System

SpeciesCommon nameStatusaScientific name		Habitat requirements	Recommendation
Bat colony	N/A	The existing bridge does not have expansion joints; therefore, bat habitat is not present.	No suitable habitat; therefore, no additional survey or mitigation measures are recommended.
Black-bellied whistling-duck Dendrocygna autumnalis	WSC	Prefers shallow freshwater ponds, lakes, and marshes, especially those that are lined with trees because tree cavities provide nesting sites. The species is known to breed in southeastern Arizona.	No suitable habitat; therefore, no mitigation measures or survey are recommended.
California leaf-nosed bat <i>Macrotus californicus</i>	WSC	The species is known to occur in the Coronado National Forest, Organ Pipe National Monument, Cabeza Prieta National Wildlife Refuge, Tucson Mountain Park, and Colossal Cave Mountain Park. No roost sites are located within project area.	No suitable roosting habitat; therefore, no mitigation measures or survey are recommended.
Great Plains narrow- mouthed toad Gastrophryne olivacea	WSC	Breeds in mesquite grasslands during the summer rains.	No suitable habitat; therefore, no mitigation measures or survey are recommended.
Thornber fishhook cactus Mammillaria thornberi	SR	The plant is found in desert and woodland habitats in Arizona south of the Mogollon Rim into Sonora.	Unlikely to occur because of past soil disturbance. If present, the plant will be salvaged in accordance with local and state guidelines.
Tumamoc globeberry Tumamoca macdougalii	SR	The plant is found along sandy washes in Sonoran desertscrub and Sinaloan thornscrub communities.	Unlikely to occur because of existing soil disturbance. Therefore, no mitigation measures or survey are recommended.
Western burrowing owl Athene cunicularia hypugaea	SC	Nests in areas of short, open scrublands. The owl is tolerant of human presence, and will nest in human-modified landscapes.	The banks of the Rillito River were reviewed for potential habitat. Because the banks are soil cemented and without scour sufficient for a burrow, no habitat was identified. However, the vacant lot on the southwest quadrant of the bridge will require a survey if ground disturbance occurs during the species breeding season (March through mid-July).
Western yellow-billed cuckoo Coccyzus americanus	WSC	Found in large blocks of riparian woodlands (cottonwood, willow, or tamarisk galleries).	No suitable habitat; therefore, no mitigation measures or survey are recommended.

^a SC = species of concern (USFWS term), WSC = wildlife species of concern (AGFD term), SR = Salvage Restricted, N/A = not applicable





Table 3. Sonoran Desert Conservation Plan species with the potential to occur in the project area

Species Common name Scientific name	Status	Habitat requirements	Comments
Abert's towhee Pipilo aberti	Protected by the Migratory Bird Treaty Act	The species is found in dense riparian habitat and urban backyards.	Unlikely to occur. There is very little vegetation within the project limits.
Acuna cactus Echinomastus erectocentrus var. acunensis	Protected by Arizona Native Plant Law	Found on well-drained knolls and gravel ridges between major washes in Sonoran desertscrub.	Unlikely to occur. There is very little vegetation within the project limits.
Arizona shrew Sorex arizonae	WSC	No records of the species in Pima County. Species has been recorded in high mountain ranges in southeastern Arizona and western New Mexico.	Extremely unlikely to occur. No suitable habitat in the project area.
Bell's vireo Vireo belli	Protected by the Migratory Bird Treaty Act	Common summer resident in dense shrubs and trees within Pima County.	Unlikely to occur because of past vegetation removal.
Cactus ferruginous pygmy-owl Glaucidium brasilianum cactorum	WSC	The species is known to occupy a variety of vegetation communities from riparian habitat to semidesert grasslands.	Unlikely to occur. No suitable habitat in project area.
California leaf-nosed bat Macrotis californicus	WSC	Roosts in inactive mines and caves and occasionally in buildings.	Unlikely to occur. No potential roost sites in the project area.
Desert box turtle Terrapene ornate luteola	No federal or state status	Primarily a prairie turtle found in rolling grass and shrub lands.	Unlikely to occur. No suitable habitat.
Giant spotted whiptail Cnemidophorus burti stictogrammus	No federal or state status	Found in canyons and mesas. Formerly common in Sabino Canyon.	Unlikely to occur. No suitable habitat.
Lesser long-nosed bat Leptonycteris curasoae yerbabuenae	Federally listed as endangered	Desert scrub habitat with agave and columnar cacti.	Unlikely to occur. No suitable habitat and forage plants.
Lowland leopard frog Rana yavapaiensis	WSC	Inhabits aquatic systems	Extremely unlikely to occur. No permanent surface water.
Merriam's mouse Peromyscus merriami	No federal or state status	Known primarily from heavy, forest-like mesquite bosques.	Unlikely to occur. No suitable habitat.
Mexican garter snake Thamnophis eques megalops	WSC	Inhabits areas of permanent water with vegetation.	Extremely unlikely to occur. No suitable habitat.
			(continued on next page)





Table 3. Sonoran Desert Conservation Plan species with the potential to occur in the project area (*continued*)

Species Common name Scientific name	Potential to occur in project area	Habitat requirements	Comments
Pale Townsend's bat Plecotus townsendii	No federal or state status	Roosts in inactive mines and caves and occasionally in buildings.	Unlikely to occur because there are no roost sites in the project area.
Rufous-winged sparrow Aimophila carpalis	Protected by the Migratory Bird Treaty Act	The species is fairly widespread in Pima County in Sonoran Desertscrub vegetation.	Unlikely to occur because there is minimal vegetation in the project area.
Southwestern willow flycatcher Empidonax traillii extimus	Federally listed as endangered	Cottonwood/willow and tamarisk vegetation communities along rivers and streams.	No suitable habitat; the Rillito River does not support suitable riparian habitat in the project area.
Swainson's hawk Buteo swainsoni	Protected by the Migratory Bird Treaty Act	Species breeds in open grassland habitats.	Unlikely to occur because there is minimal vegetation in the project area.
Tucson shovelnose snake Chionactis occipitalis klauberi	No federal or state status	Found on lowland valley floors in areas with sand and loose soil.	Unlikely to occur because of the existing soil disturbances and urban development.
Tumamoc globeberry Tumamoca macdougalii	SR	The plant is found along sandy washes in Sonoran desertscrub and Sinaloan thornscrub communities.	Unlikely to occur because of the existing soil disturbances and urban development.
Western burrowing owl Athene cunicularia hypugaea	SC	The species nests in areas of short, open scrublands. The owl is tolerant of human presence, and will nest in human- modified landscapes.	A vacant lot is located southwest of the bridge. A survey for the species is recommended if soil disturbance or equipment staging is expected at this location.
Western red bat Lasiurus blossevillii	WSC	Occurs along riparian corridors.	Unlikely to occur because suitable vegetation is lacking.
Western yellow bat Lasiurus xanthinus	WSC	Occurs along riparian corridors.	Unlikely to occur because suitable vegetation is lacking.
Western yellow-billed cuckoo Coccyzus americanus occidentalis	WSC	Found in large blocks of riparian woodlands (cottonwood, willow, or tamarisk galleries).	High potential area is mapped in the northeast quadrant of River Road and La Cholla Boulevard, which has been developed.

WSC = wildlife of special concern, SR = salvage restricted, SC = species of concern Source: Pima County Geographic Information System database





5.0 Species Evaluation and Cumulative Impacts

None of the federally listed species require further evaluation (see Table 1). Surveys for the cactus ferruginous pygmy-owl (pygmy-owl) were conducted with negative results in 2005 and 2006 by SWCA. Due to the lack of habitat in the project area, Pima County sought technical assistance from the USFWS regarding the need for pygmy-owl surveys. The USFWS concurred with Pima County that no suitable pygmy-owl habitat occurred in proximity to the project (Appendix D). Therefore, no additional surveys for the species will be conducted in the project area. In addition, the only species from Table 2 or 3 that requires further consideration is the western burrowing owl, which is addressed in Section 6.0 of this report.

No cumulative impacts on listed species are anticipated as a result of the project. While adjacent residential homes may eventually convert to businesses within the project limits, as a result of this project, this action would not create additional disturbances to viable habitat and therefore, would not contribute to a trend toward listing any species.

While this project will not affect endangered species, two species protected under the International Migratory Bird Treaty Act, the swallow and burrowing owl, will require consideration prior to construction. Remnants of mud swallow nests were observed on the underside of the bridge over the Rillito River on July 24, 2007. Prior to the swallow breeding season (approximately March through July), it is recommended that any nest remnants be removed from the bridge. In addition, it may be necessary to coat the underside of the bridge deck with plastic (Salmon and Gorenzel 2005) or some other material such as netting to prevent the birds from rebuilding their nests (Arizona Wings-N-Stings LLC).

The project area was reviewed for potential burrowing owl habitat and the AGFD was contacted for technical assistance regarding burrowing owl habitat and survey requirements (personal communication on 6/16/08 with Tim Snow of AGFD). AGFD indicated that burrowing owls use burrows excavated by other animals, such as ground squirrels. They generally nest in areas with low and open vegetation, which may increase their ability to detect predators. In addition, they can be found nesting in the banks of washes, even those with soil cement, if there has been sufficient scour to produce a nesting cavity. In addition to accommodating migrating burrowing owls, southern Arizona also has a resident population, and burrows may be use used all year.

The banks of Rillito River are soil cemented and areas of scour sufficient for a burrow were not identified; therefore, no habitat for burrowing owls was identified along the banks of the Rillito River. Potential burrowing owl habitat was identified on a vacant lot at the northwest corner of Curtis Road and La Cholla Boulevard. The vacant lot has low and open native vegetation. Ground disturbance will occur at this location during the construction of a new path. The construction will require the acquisition of 50 feet of new R/W west of La Cholla Boulevard between Curtis Road and the Rillito River. Based on technical assistance from AGFD, preconstruction surveys for this area will be needed.





6.0 Recommendations

To avoid affects to swallows during construction it is recommended that:

- Bridge demolition be conducted outside of the swallow breeding season (after June and prior to March).
- Alternatively, if it is necessary to conduct bridge demolition during the breeding season (March through June), exclusion measures are needed. These measures include removing swallow nest remnants prior to the swallow breeding season, and preventing swallows from rebuilding their nests. More detail regarding exclusion measures is included in Appendix E. The swallow exclusion measures are ranked below based on their safety for birds:
 - The placement of plastic tarp across the bottom of the bridge to prevent nest attachment.
 - The placement of ³/₄ inch netting across the bottom of the bridge to prevent nest attachment.

To avoid affects to burrowing owls during construction it is recommended that:

- Ground disturbance at the northwest corner of La Cholla Boulevard and Curtis Road, be scheduled outside of the breeding season for the burrowing owl (after mid-July and prior to March).
- A burrowing owl survey be completed at the northwest corner of La Cholla Boulevard and Curtis Road at least 90 days before construction or equipment staging is expected at this location (AGFD 2008). If owls are absent during the 90 day survey, conduct a follow-up survey 30 days prior to planned activity to confirm continued absence of the owl.

7.0 Coordination

Pima County contacted the USFWS on September 25, 2007 to request technical assistance regarding the need to conduct cactus ferruginous pygmy-owl surveys for the project. The USFWS concurred with Pima County that no suitable pygmy-owl habitat occurred in proximity to the project (Appendix D).

The AGFD's Online Environmental Review Tool was accessed on September 27, 2007, to evaluate the potential effects of the project on species (Appendix C). No species listed by the USFWS required further analysis as a result of the data from the AGFD Heritage Data Management System. In addition, Tim Snow, non-game specialist with the AGFD, was contacted on June 16, 2008 for technical assistance regarding burrowing owl habitat. The results of his assessment are included in Section 5 of this document.





8.0 Project Area Photographs

Appendix F includes representative ground photographs of the project area and an aerial photograph of the vacant lot on the northwest corner of Curtis Road and La Cholla Boulevard.

9.0 Signature

Prepared by:

hune

René Tanner, Sr. Environmental Planner

Date: *July 23, 2008* HDR Engineering, Inc.







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11.0 Abbreviation and Acronyms

AGFD	Arizona Game and Fish Department
С	candidate
CA	conservation agreement
Ε	endangered
N/A	not applicable
PD	proposed delisted
SC	species of concern
SR	salvage restricted
SWPPP	stormwater pollution prevention plan
Τ	threatened
USFWS	United States Fish and Wildlife Service
WSC	wildlife species of concern







Appendix A

Protected Native Plants







Appendix A. Results of the native plant inventory for the La Cholla Boulevard: Ruthrauff Road to River Road project area. The inventory was prepared by McGann and Associates in accordance with the Pima County Zoning Code; Chapter 18.72. Protected Native Plants

Common Name	Botanical Name	Quantity
Blue Palo Verde	Parkinsonia floridum	8
Velvet Mesquite	Prosopis velutina	10
Catclaw Acacia	Acacia greggii	3
Desert Willow	Chilopsis linearis	5
Saguaro	Carnegia gigantea	1







Appendix B

USFWS List of Federally Listed Species



COMMON NAME	SCIENTIFIC NAME	STATUS	DESCRIPTION	COUNTY	ELEVATION	HABITAT	COMMENTS
California Brown pelican	Pelecanus occidentalis californicus	Proposed delisted	Large dark gray-brown water bird with a pouch underneath long bill and webbed feet. Adults have a white head and neck, brownish black breast, and silver gray upper parts.	Apache, Cochise, Coconino, Gila, Graham, Greenlee, La Paz, Maricopa, Mohave, Navajo, Pima, Pinal, Santa Cruz, Yavapai, Yuma	Varies	Coastal land and islands; species found around many Arizona lakes and rivers.	Subspecies is found on Pacific Coast and is endangered due to pesticides. It is an uncommon transient in Arizona on many Arizona lakes and rivers. Individuals wander up from Mexico in summer and fall. No breeding records in Arizona.
Chiricahua leopard frog	Lithobates [Rana] chiricahuensis	Threatened	Cream colored tubercules (spots) on a dark background on the rear of the thigh, dorsolateral folds that are interrupted and deflected medially, and a call given out of water distinguish this spotted frog from other leopard frogs.	Apache, Cochise, Coconino, Gila, Graham, Greenlee, Navajo, Pima, Santa Cruz, Yavapai	3,300-8,900 ft	Streams, rivers, backwaters, ponds, and stock tanks that are mostly free from introduced fish, crayfish, and bullfrogs.	Require permanent or nearly permanent water sources. Populations north of the Gila River may be a closely-related, but distinct, undescribed species. A special rule allows take of frogs due to operation and maintenance of livestock tanks on State and private lands.
Desert pupfish	Cyprinodon macularius	Endangered	Small (2 inches) smoothly rounded body shape with narrow vertical bars on the sides. Breeding males blue on head and sides with yellow on tail. Females and juveniles tan to olive colored back and silvery sides.	Cochise, Graham, La Paz, Maricopa, Pima, Pinal, Santa Cruz, Yavapai	< 5,000 ft	Shallow springs, small streams, and marshes. Tolerates saline and warm water.	Critical habitat includes Quitobaquito Springs, Pima County, portions of San Felipe Creek, Carrizo Wash, and Fish Creek Wash, Imperial County, California. Two subspeices are recognized: Desert Pupfish (C.m.macularis) and Quitobaquito Pupfish (C.m.eremus).
Gila chub	Gila intermedia	Endangered	Deep compressed body, flat head. Dark olive-gray color above, silver sides. Endemic to Gila River Basin.	Cochise, Coconino, Gila, Graham, Greenlee, Maricopa, Pima, Pinal, Santa Cruz, Yavapai	2,000 - 5,500 ft	Pools, springs, cienegas, and streams.	Found on multiple private lands, including the Nature Conservancy, the Audubon Society, and others. Also occurs on Federal and state lands and in Sonora, Mexico. Critical habitat occurs in Cochise, Gila, Graham, Greenlee, Pima, Pinal, Santa Cruz and Yavapai counties.
Gila topminnow	Poeciliopsis occidentalis occidentalis	Endangered	Small (2 inches), guppy-like, live bearing, lacks dark spots on its fins. Breeding males are jet black with yellow fins.	Cochise, Gila, Graham, La Paz, Maricopa, Pima, Pinal, Santa Cruz, Yavapai	< 4,500 ft	Small streams, springs, and cienegas vegetated shallows.	Species historically occurred in backwaters of large rivers but is currently isolated to small streams and springs.

COMMON NAME	SCIENTIFIC NAME	STATUS	DESCRIPTION	COUNTY	ELEVATION	HABITAT	COMMENTS
Huachuca water umbel	Lilaeopsis schaffneriana ssp. recurva	Endangered	Herbaceous, semi-aquatic perennial in the parsley family (Umbelliferae) with slender erect, hollow, leaves that grow from the nodes of creeping rhizomes. Flower: 3 to 10 flowered umbels arise from root nodes.	Cochise, Pima, Santa Cruz	3,500-6,500 ft	Cienegas, perennial low gradient streams, wetlands.	Species also occurs in adjacent Sonora, Mexico, west of the continental divide. Critical habitat in Cochise and Santa Cruz counties (64 FR 37441, July 12, 1999).
Jaguar	Panthera onca	Endangered	Largest species of cat native to Southwest. Muscular, with relatively short, massive limbs, and a deep-chested body. Usually cinnamon- buff in color with many black spots. Weights ranges from 40-135 kg (90-300 lbs).	Cochise, Santa Cruz, Pima	1,600 - 9,000 ft	Found in Sonoran desertscrub up through subalpine conifer forest.	Also occurs in New Mexico. A Jaguar conservation team is being formed that is being led by Arizona and New Mexico state entities along with private organizations.
Kearney blue star	Amsonia kearneyana	Endangered	A herbaceous perennial about 2 feet tall in the dogbane family (Apocynaceae). Thickened woody root and many pubescent (hairy) stems that rarely branch. Flowers: white terminal inflorescence in April and May.	Pima	3,600-3,800 ft	West-facing drainages in the Baboquivari Mountains.	Plants grow in stable, partially shaded, coarse alluvium along a dry wash in the Baboquivari Mountains. Range is extremely limited. Protected by Arizona Native Plant Law.
Lesser long-nosed bat	Leptonycteris curasoae yerbabuenae	Endangered	Elongated muzzle, small leaf nose, and long tongue. Yellowish brown or gray above and cinnamon brown below. Tail minute and appears to be lacking. Easily disturbed.	Cochise, Gila, Graham, Greenlee, Pima, Pinal, Maricopa, Santa Cruz, Yuma	< 6,000 ft	Desert scrub habitat with agave and columnar cacti present as food plants.	Day roosts in caves and abandoned tunnels. Forages at night on nectar, pollen, and fruit of paniculate agaves and columnar cacti. This species is migratory and is present in Arizona usually from April to September and south of the border the remainder of the year.
Masked bobwhite	Colinus virginianus ridgewayi	Endangered	Males brick-red breast and black head and throat. Females are generally nondescript but resemble other races such as the Texas bobwhite.	Pima	1,000-4,000 ft	Desert grasslands with diversity of dense native grasses, forbs, and brush.	Species is closely associated with Prairie acacia (Acacia angustissima). Formerly occurred in Altar and Santa Cruz valleys, as well as Sonora, Mexico. Presently only known from reintroduced populations on Buenos Aires NWR.

COMMON NAME	SCIENTIFIC NAME	STATUS	DESCRIPTION	COUNTY	ELEVATION	HABITAT	COMMENTS
Mexican spotted owl	Strix occidentalis lucida	Threatened	Medium sized with dark eyes and no ear tufts. Brownish and heavily spotted with white or beige.	Apache, Cochise, Coconino, Gila, Graham, Greenlee, Maricopa, Mohave, Navajo, Pima, Pinal, Santa Cruz, Yavapai	4,100-9,000 ft	Nests in canyons and dense forests with multi- layered foliage structure.	Generally nest in older forests of mixed conifer or ponderosa pine/gambel oak type, in canyons, and use variety of habitats for foraging. Sites with cool microclimates appear to be of importance or are preferred. Critical habitat was finalized on August 31, 2004 (69 FR 53182) in Arizona in Apache, Cochise, Coconino, Gila, Graham, Greenlee, Maricopa, Navajo, Pima, Pinal, Santa Cruz, and Yavapai counties.
Nichol Turk's head cactus	Echinocactus horizonthalonius var. nicholii	Endangered	Blue-green to yellowish- green, columnar, 18 inches tall, 8 inches in diameter. Spine clusters have 5 radial and 3 central spines; one downward short; 2 spines upward and red or vasally gray. Flower: pink fruit: woolly white.	Pima, Pinal	2,400-4,100 ft	Sonoran desertscrub.	Found in unshaded microsites in Sonoran desertscrub on dissected alluvial fans at the foot of limestone mountains and on inclined terraces and saddles on limestone mountain sides.
Ocelot	Leopardus (=Felis) pardalis	Endangered	Medium-sized spotted cat whose tail is about 1/2 the length of head and body. Yellowish with black streaks and stripes running from front to back. Tail is spotted and face is less heavily streaked than the back and sides.	Cochise, Pima, Santa Cruz	< 8,000 ft	Humid tropical and sub- tropical forests, savannahs, and semi-arid thornscrub.	May persist in partly-cleared forests, second-growth woodland, and abandoned cultivated areas reverted to brush. Universal component is presence of dense cover. Unconfirmed reports of individuals in the southern part of the State continue to be received.
Pima pineapple cactus	Coryphantha scheeri var. robustispina	Endangered	Hemispherical stems 4-7 inches tall 3-4 inches diameter. Central spine 1 inch long straw colored hooked surrounded by 6-15 radial spines. Flower: yellow, salmon, or rarely white narrow floral tube.	Pima, Santa Cruz	2,300-5,000 ft	Sonoran desertscrub or semi-desert grassland communities.	Occurs in alluvial valleys or on hillsides in rocky to sandy or silty soils. This species can be confused with juvenile barrel cactus (Ferocactus). However, the spines of the later are flattened, in contrast with the round cross-section of the Coryphanta spines. 80-90% of individuals on state or private land.
Sonoran pronghorn	Antilocapra americana sonoriensis	Endangered	Buff on back and white below, hoofed with slightly curved black horns having a single prong. Smallest and palest of the pronghorn subspecies	Pima, Yuma	500 - 2,000 ft	Broad intermountain alluvial valleys with creosote-bursage and palo verde-mixed cacti associations.	Typically, bajadas are used as fawning areas and sandy dune areas provide food seasonally. Historical range was probably larger than exists today. This subspecies also occurs in Mexico.

COMMON NAME	SCIENTIFIC NAME	STATUS	DESCRIPTION	COUNTY	ELEVATION	HABITAT	COMMENTS	
Southwestern willow flycatcher	ycatcher extimus inches) grayish-green bacl and wings, whitish throat, light olive-gray breast and pale yellowish belly. Two		inches) grayish-green back and wings, whitish throat, light olive-gray breast and pale yellowish belly. Two wingbars visible. Eye-ring	Apache, Cochise, Coconino, Gila, Graham, Greenlee, La Paz, Maricopa, Mohave, Navajo, Pima, Pinal, Santa Cruz, Yavapai, Yuma	<8,500 ft	Cottonwood/willow and tamarisk vegetation communities along rivers and streams.	Migratory riparian-obligate species that occupies breeding habitat from late April to September. Distribution within its range is restricted to riparian corridors. Difficult to distinguish from other members of the Empidonax complex by sight alone. Training seminar required for those conducting flycatcher surveys. Critical habitat was finalized on October 19, 2005 (50 CFR 60886). In Arizona there are critical habitat segments in Apache, Cochise, Gila, Graham, Greenlee, Maricopa, Mohave, Pima, Pinal, and Yavapai counties.	
Acuna cactus	Echinomastus erectocentrus var. acunensis	Candidate	<12 inches high; spine clusters borne on tubercles, each with a groove on the upper surface. 2-3 central spines and 12 radial spines. Flowers pink to purple.	Pima, Pinal	1,300-2,000 ft	Well drained knolls and gravel ridges in Sonoran desertscrub.	Immature plants distinctly different from mature plants. They are disc-shaped or spherical and have no central spines until they are about 1.5 inches. Radial spines are dirty white with maroon tips.	
Sonoyta mud turtle	Kinosternon sonoriense longifemorale	Candidate	Primarily a pond turtle, prefers mud or sandy bottoms. Body 3 1/2 to 6 1/2 inches. Head and neck mottled with contrasting light and dark markings. Found in Quitobaquito Springs.	Pima	1,100 ft	Ponds and streams.	Species also found in Rio Sonoyta, Sonora, Mexico.	

COMMON NAME	SCIENTIFIC NAME	STATUS	DESCRIPTION	COUNTY	ELEVATION	HABITAT	COMMENTS
Yellow-billed cuckoo	Coccyzus americanus	Candidate	Medium-sized bird with a slender, long-tailed profile, slightly down-curved bill, which is blue-black with yellow on the lower half of the bill. Plumage is grayish- brown above and white below, with rufous primary flight feathers.	Apache, Cochise, Coconino, Gila, Graham, Greenlee, La Paz, Maricopa, Mohave, Navajo, Pima, Pinal, Santa Cruz, Yavapai, Yuma	< 6,500 ft	Large blocks of riparain woodlands (cottonwood, willow, or tamarisk galleries).	Yellow-billed cuckoos are a neotropical migrant, wintering in primarily South America and breeding primarily in the United States (but also in southern Canada and northern Mexico). As a migrant it is rarely detected, but can occur outside of riparian areas. Cuckoos are found nesting statewide in Arizona below 7000 feet in elevation, but are mostly found below 5000 feet in central, western, and southeastern Arizona. Concern for cuckoos are primarily focused upon alterations to its nesting and foraging habitat. Nesting cuckoos are associated with relatively dense wooded streamside riparian habitat, with varying combinations of Fremont cottonwood, willow, velvet ash, Arizona walnut, mesquite, and tamarisk. Some cuckoos have also been detected nesting in velvet mesquite, netleaf hackberry, Arizona sycamore, Arizona alder, and some exotic neighborhood shade trees.
Gooddings onion	Allium gooddingii	Conservation Agreement	Herbaceous perenial plant; broad, flat, rather blunt leaves; flowering stalk 14-17 inches tall, flattened, and narrowly winged toward apex; fruit is broader than long; seeds are short and thick.	Apache, Greenlee, Pima	> 7,500 ft	Forested drainage bottoms and on moist north facing slopes of mixed conifer and spruce fir forests.	Conservation agreement between the Service and the Forest Service signed in February 1998. In New Mexico on the Lincoln and Gila National Forests.
San Xavier talussnail	Sonorella eremita	Conservation Agreement	Land snail, less than one inch in diameter (about .75 inches), 4.5 whorls, round shell, white to pinkish tint.	Pima	3,850-3,920 ft	Deep, limestone rockslide with outcrops of limestone and decomposed granite.	Conservation agreement signed by the Service, Arizona Game and Fish Department, El Paso Natural Gas Company, and Arizona Electric Power Cooperative, Inc. in September 1998.



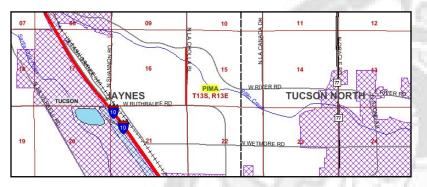


Appendix C

AGFD Online Environmental Review Tool



Project Location



The Department appreciates the opportunity to provide in-depth comments and project review when additional information or environmental documentation becomes available.

Special Status Species Occurrences/Critical Habitat/Tribal Lands within 3 miles of Project Vicinity:

Name	Common Name	ESA	USFS	BLM	State
Athene cunicularia hypugaea	Western Burrowing Owl	SC		S	
Bat Colony	1200				
Coccyzus americanus occidentalis	Western Yellow-billed Cuckoo	С	S		WSC
Dendrocygna autumnalis	Black-bellied Whistling-Duck				WSC
Gastrophryne olivacea	Great Plains Narrow-mouthed Toad				WSC
Macrotus californicus	California Leaf-nosed Bat	SC			WSC
Mammillaria thornberi	Thornber Fishhook Cactus				SR
Tumamoca macdougalii	Tumamoc Globeberry		S	S	SR

Project Name: La Cholla: River Road to Ruthrauff Road Submitted By: Rene Tanner On behalf of: PCDOT Project Search ID: 20070927004021 Date: 9/27/2007 1:28:10 PM Project Category: Transportation & Infrastructure, Road construction (including staging areas), Road widening (shoulders or additional or new lanes) Project Coordinates (UTM Zone 12-NAD 83): 498846.083, 3573484.604 meter Project Length: 1229.328 meter County: PIMA USGS 7.5 Minute Quadrangle ID: 1727 Quadrangle Name: JAYNES Project locality is not anticipated to change

Location Accuracy Disclaimer

Project locations are assumed to be both precise and accurate for the purposes of environmental review. The creator/owner of the Project Review Receipt is solely responsible for the project location and thus the correctness of the Project Review Receipt content.

Please review the entire receipt for project type recommendations and/or species or location information and retain a copy for future reference. If any of the information you provided did not accurately reflect this project, or if project plans change, another review should be conducted, as this determination may not be valid.

Arizona's On-line Environmental Review Tool:

1. This On-line Environmental Review Tool inquiry has generated recommendations regarding the potential impacts of your project on Special Status Species (SSS) and other wildlife of Arizona. SSS include all U.S. Fish and Wildlife Service federally listed, U.S. Bureau of Land Management sensitive, U.S. Forest Service sensitive, and Arizona Game and Fish Department (Department) recognized species of concern.

2. These recommendations have been made by the Department, under authority of Arizona Revised Statutes Title 5 (Amusements and Sports), 17 (Game and Fish), and 28 (Transportation). These recommendations are preliminary in scope, designed to provide early considerations for all species of wildlife, pertinent to the project type you entered.

3. This receipt, generated by the automated On-line Environmental Review Tool does not constitute an official project review by Department biologists and planners. Further coordination may be necessary as appropriate under the National Environmental Policy Act (NEPA) and/or the Endangered Species Act (ESA).

The U.S. Fish and Wildlife Service (USFWS) has regulatory authority over all federally listed species under the ESA. Contact USFWS Ecological Services Offices: http://arizonaes.fws.gov/.

Phoenix Main Office 2321 W. Royal Palm Road, Suite 103 Phoenix, AZ 85021 Phone 602-242-0210 Fax 602-242-2513 Tucson Sub-Office 201 North Bonita, Suite 141 Tucson, AZ 85745 Phone 520-670-6144 Fax 520-670-6154

Flagstaff Sub-Office 323 N. Leroux Street, Suite 101 Flagstaff, AZ 86001 Phone 928-226-0614 Fax 928-226-1099

Disclaimer:

1. This is a preliminary environmental screening tool. It is not a substitute for the potential knowledge gained by having a biologist conduct a field survey of the project area.

2. The Department's Heritage Data Management System (HDMS) data is not intended to include potential distribution of special status species. Arizona is large and diverse with plants, animals, and environmental conditions that are ever changing. Consequently, many areas may contain species that biologists do not know about or species previously noted in a particular area may no longer occur there.

3. Not all of Arizona has been surveyed for special status species, and surveys that have been conducted have varied greatly in scope and intensity. Such surveys may reveal previously undocumented population of species of special concern.

4. HDMS data contains information about species occurrences that have actually been reported to the Department.

Arizona Game and Fish Department Mission

To conserve, enhance, and restore Arizona's diverse wildlife resources and habitats through aggressive protection and

management programs, and to provide wildlife resources and safe watercraft and off-highway vehicle recreation for the enjoyment, appreciation, and use by present and future generations.

Project Category: Transportation & Infrastructure,Road construction (including staging areas),Road widening (shoulders or additional or new lanes)

Project Type Recommendations:

Based on the project type entered; coordination with State Historic Preservation Office may be required http://www.pr.state.az.us/partnerships/shpo/shpo.html#anchor561695

Based on the project type entered; coordination with U.S. Army Corps of Engineers may be required (http://www.spl.usace.army.mil/regulatory/phonedir.html)

During planning and construction, minimize potential introduction or spread of exotic invasive species. Invasive species can be plants, animals (exotic snails), and other organisms (e.g. microbes), which may cause alteration to ecological functions or compete with or prey upon native species and can cause social impacts (e.g. livestock forage reduction, increase wildfire risk). The terms noxious weed or invasive plants are often used interchangeably. Precautions should be taken to wash all equipment utilized in the project activities before leaving the site. Arizona has noxious weed regulations (Arizona Revised Statutes, Rules R3-4-244 and R3-4-245). See Arizona Department of Agriculture website for restricted plants http://www.azda.gov/PSD/quarantine5.htm. Additionally, the U.S. Department of Agriculture has information regarding pest and invasive plant control methods including: pesticide, herbicide, biological control agents, and mechanical control:

http://www.usda.gov/wps/portal/usdahome. The Department regulates the importation, purchasing, and transportation of wildlife and fish (Restricted Live Wildlife), please refer to the hunting regulations for further information http://www.azgfd.gov/h_f/hunting_rules.shtml.

During the planning stages of your project, please consider the local or regional needs of wildlife in regards to movement, connectivity, and access to habitat needs. Loss of this permeability prevents wildlife from accessing resources, finding mates, reduces gene flow, prevents wildlife from re-colonizing areas where local extirpations may have occurred, and ultimately prevents wildlife from contributing to ecosystem functions, such as pollination, seed dispersal, control of prey numbers, and resistance to invasive species. In many cases, streams and washes provide natural movement corridors for wildlife and should be maintained in their natural state. Uplands also support a large diversity of species, and should be contained within important wildlife movement corridors. In addition, maintaining biodiversity and ecosystem functions can be facilitated through improving designs of structures, fences, roadways, and culverts to promote passage for a variety of wildlife.

Hydrological considerations: design culverts to minimize impacts to channel geometry, or design channel geometry (low flow, overbank, floodplains) and substrates to carry expected discharge using local drainages of appropriate size as templates. Aquatic wildlife considerations: reduce/minimize barriers to migration of amphibians or fish (e.g. eliminate falls). Terrestrial wildlife: washes and stream corridors often provide important corridors for movement. Overall culvert width, height, and length should be optimized for movement of the greatest number and diversity of species expected to utilize the passage. Culvert designs should consider moisture, light, and noise,

while providing clear views at both ends to maximize utilization. For many species, fencing is an important design feature that can be utilized with culverts to funnel wildlife into these areas and minimize the potential for roadway collisions. Please contact the Project Evaluation Program for further fencing and culvert design recommendations and specifications.

Recommendations will be dependent upon goals of the fence project and the wildlife species expected to be impacted by the project. Please contact the Project Evaluation Program for further fencing recommendations and specifications.

The Department recommends that wildlife surveys are conducted to determine if noise-sensitive species occur within the project area. Avoidance or minimization measures could include conducting project activities outside of breeding seasons.

The Department requests further coordination to provide project/species specific recommendations, please contact Project Evaluation Program directly.

Vegetation restoration projects (including treatments of invasive or exotic species) should have a completed site-evaluation plan (identifying environmental conditions necessary to re-establish native vegetation), a revegetation plan (species, density, method of establishment), a short and long-term monitoring plan, including adaptive management guidelines to address needs for replacement vegetation.

Project Location and/or Species recommendations:

HDMS records indicate that one or more listed, proposed, or candidate species or Critical Habitat (Designated or Proposed) have been documented in the vicinity of your project (refer to page 1 of the receipt). Please contact:

Ecological Services Office US Fish and Wildlife Service

2321 W. Royal Palm Rd. Phoenix, AZ 85021-4951 Phone: 602-242-0210 Fax: 602-242-2513

HDMS records indicate that one or more native plants listed on the Arizona Native Plant Law and Antiquities Act have been documented within the vicinity of your project area (refer to page 1 of the receipt). Please contact:

Arizona Department of Agriculture

1688 W Adams Phoenix, AZ 85007 Phone: 602-542-4373

HDMS records indicate that western burrowing owls have been documented within the vicinity of your project area (refer to the species list on page 1 of the receipt). Please review the relocation procedures recommended for burrowing owls found on the Environmental Review Home Page.

http://mirror-pole.com/burr_owl/bur_owl1.htm

Recommendations Disclaimer:

1. Potential impacts to fish and wildlife resources may be minimized or avoided by the recommendations generated from information

Page 4 of 6 APPLICATION INITIALS: _

submitted for your proposed project.

2. These recommendations are proposed actions or guidelines to be considered during **preliminary project development**.

3. Additional site specific recommendations may be proposed during further NEPA/ESA analysis or through coordination with affected agencies.

4. Making this information directly available does not substitute for the Department's review of project proposals, and should not decrease our opportunity to review and evaluate additional project information and/or new project proposals.

5. The Department is interested in the conservation of all fish and wildlife resources, including those Special Status Species listed on this receipt, and those that may have not been documented within the project vicinity as well as other game and nongame wildlife.

6. Further coordination requires the submittal of this Environmental Review Receipt with a cover letter and project plans or documentation that includes project narrative, acreage to be impacted, how construction or project activity(s) are to be accomplished, and project locality information (including site map).

7. Upon receiving information by AZGFD, please allow 30 days for completion of project reviews. Mail requests to:

Project Evaluation Program, Habitat Branch Arizona Game and Fish Department 2221 West Greenway Road Phoenix, Arizona 85023-4312 Phone Number: (602) 789-3600 Fax Number: (602) 789-3928

Terms of Use

By using this site, you acknowledge that you have read and understand the terms of use. Department staff may revise these terms periodically. If you continue to use our website after we post changes to these terms, it will mean that you accept such changes. If at any time you do not wish to accept the Terms, you may choose not to use the website.

1. This Environmental Review and project planning website was developed and intended for the purpose of screening projects for potential impacts on resources of special concern. By indicating your agreement to the terms of use for this website, you warrant that you will not use this website for any other purpose.

2. Unauthorized attempts to upload information or change information on this website are strictly prohibited and may be punishable under the Computer Fraud and Abuse Act of 1986 and/or the National Information Infrastructure Protection Act.

3. The Department reserves the right at any time, without notice, to enhance, modify, alter, or suspend the website and to terminate or restrict your access to the website.

4. This Environmental Review is based on the project study area that was entered. The review must be redone if the project study area, location, or the type of project changes. If additional information becomes available, this review may need to be reconsidered.

Security:

The Environmental Review and project planning web application operates on a complex State computer system. This system is monitored to ensure proper operation, to verify the functioning of applicable security features, and for other like purposes. Anyone using this system expressly consents to such monitoring and is advised that if such monitoring reveals possible evidence of criminal activity, system personnel may provide the evidence of such monitoring to law enforcement officials. Unauthorized attempts to upload or change information; to defeat or circumvent security measures; or to utilize this system for other than its intended purposes are prohibited.

This website maintains a record of each environmental review search result as well as all contact information. This information is maintained

for internal tracking purposes. Information collected in this application will not be shared outside of the purposes of the Department.

If the Environmental Review Receipt and supporting material are not mailed to the Department or other appropriate agencies within six (6) months of the Project Review Receipt date, the receipt is considered to be null and void, and a new review must be initiated.

Print this Environmental Review Receipt using your Internet browser's
print function and keep it for your records. Further coordination
requires the submittal of this Environmental Review Receipt with a
cover letter and project plans or documentation that includes project
narrative, acreage to be impacted, how construction or project
activity(s) are to be accomplished, and project locality information
(including site map).

Please provide point of contact information regarding this Environmental Review.

Application or organization responsible for project implementation

Agency/organization:

Contact Name:

Address: _____

City, State, Zip:
Phone:
E-mail:
Mar Var
2025011
1755
Maria M
23





Appendix D

Letter from USFWS Regarding Technical Assistance





United States Department of the Interior U.S. Fish and Wildlife Service Arizona Ecological Services Field Office 2321 West Royal Palm Road, Suite 103 Phoenix, Arizona 85021-4951 Telephone: (602) 242-0210 Fax: (602) 242-2513



In Reply Refer to: AESO/SE 22410-2008-TA-0004

October 1, 2007

Ms. Karla Reeve-Wise Pima County Department of Transportation 201 North Stone Avenue, Third Floor Tucson, Arizona 85701-1207

Dear Ms. Reeve-Wise:

Thank you for your September 25, 2007 request for technical assistance related to two road projects: 1) La Cholla Boulevard – River Road to Ruthrauff Road and 2) Shannon Road – south of Curtis Road to south of the Rillito River. Specifically, you requested our input on the need to continue to conduct cactus ferruginous pygmy-owl (pygmy-owl) surveys for these projects. We have reviewed the information you provided and have the following comments regarding your request.

A final rule to remove the pygmy-owl from the Endangered Species list was published April 14, 2006, and became effective May 15, 2006. Therefore, the protective regulations of the Endangered Species Act no longer apply to the pygmy-owl. However, upon request, we continue to provide technical assistance related to the conservation of the pygmy-owl.

We agree with the conclusion in your September 25, 2007 correspondence that no suitable pygmy-owl habitat occurs in proximity to the two proposed road projects. Pygmy-owl habitat elements are lacking in these areas due to the extent and intensity of the surrounding land uses. Because of the lack of suitable pygmy-owl habitat, we do not recommend the continuation of pygmy-owl surveys in relation to these projects.

Thank you for the opportunity to provide input on these projects. If you have any questions regarding our comments, or need any additional information, please contact Scott Richardson at 520-670-6150 (x 242) or Sherry Barrett (x 223).

Sincerely,

Steven L. Spangle Field Supervisor





Appendix E

Articles Regarding Methods to Deter Swallow Nesting





HPDP Handbook

Part II, Section D, Subject Guidance: Fish and Wildlife - Appendix #6



CLIFF SWALLOWS

Terrell P. Salmon Extension Wildlife Specialist and Warner P. Gorenzel Research Associate Wildlife Extension University of California Davis, California

Damage Prevention and Control Methods

 Nest Removal Wash nests down with a wafer hose or knock down with a pole (permit required) Exclusion Netting and wire, Strip doors Repellents Not effective Toxicants None Registered Trapping Not allowed Shooting Not allowed **Frightening Devices** Not effective Substrate Modification Slick surfaces discourage nesting

 Architectural Design Some designs discourage nesting

Identification

Eight members of the swallow family *Hirundinidae* breed in North America and the Great Plains states: the tree swallow (*Tachycineta bicolor*), violet green swallow (*Tachycineta thalassina*), purple martin (*Progne subis*), bank swallow (*Riparia riparia*), northern rough-winged swallow (*Stelgidopteryx serripennis*), barn swallow (*Hirundo rustica*), cave swallow (*Hirundo fulva*), and the cliff swallow (*Hirundo pyrrhonota*). Of the eight species, only barn and cliff swallows regularly build mud nests attached to buildings and other structures, a habit that sometimes puts them into conflict with man. This is particularly true of the cliff swallow, which nests in use of alternate sites include: (1) deterioration of old nests and nesting substrate, (2) nest use by house sparrows, and (3) buildup of nest extoparasite levels. Ectoparasites can significantly increase deaths of cliff swallow nestlings. **Nest Construction**

Cliff swallow nests are gourd-shaped, enclosed structures built of mud pellets. They consist primarily of sand with smaller amounts of silt and clay. The nest chamber is lined sparingly with grasses, hair and feathers. In contrast, barn swallow nests are cup-shaped and the pellets contain coarse organic matter such as grass stems, horse hairs and feathers. The nest cup is profusely

Mn/DOT - OTS, PPG HPDP, Fish and Wildlife - Appendix #6

lined with grasses and feathers, especially white feathers. The cliff swallows nest chamber is globular and extends forward into an entrance tunnel which opens downward. The tunnel may be absent from some nests. Nest dimensions vary from 5.5 to 10.5 in. (14 to 27 cm) in length and 5.5 to 8.5 in. (14 to 22 cm) basal width, and the opening averages 1.75 in. (4.4 cm) in diameter. The nest is cemented with mud under the eave of a building, bridge or other vertical surface. On structures, the first nests usually are located at the highest point possible, with subsequent nests attached below it, forming a dense cluster. Both sexes construct nests, proceeding slowly to allow the mud to dry and harden. Depending on mud supply and weather, nest construction takes 1 to 2 weeks. Mud is collected at ponds, puddles, ditches and other sites up to half a mile (0.8 km) away with many swallows participating at the same mud source. A typical nest contains 900 to 1400 pellets, each representing 1 trip to and from the nest. Mud-gathering and nest construction are social activities; even unmated swallows will start nests. Mated swallows may build more than one nest per season, even though not all will be used. Therefore, a count of nests under construction will not give an accurate estimate of the number of breeding swallows. Egg Laying Egg laying usually begins before the entrance tunnel is completed. Each day one egg is laid until the clutch of 3 or 4 eggs is completed. Clutch size ranges from 2 to 6 eggs. In Texas, egg laying may begin as early as late March to early April, while in North Dakota nesting may not start until early to mid-June. Within a large colony, the date of egg laying varies due to the staggered arrival dates of the swallows. For small colonies, laying may be more synchronous. Nest Failures Re-nesting will occur if nests or eggs are destroyed. Nests may fall because they were built too rapidly or may crumble because of prolonged humid weather or rain. House sparrows sometimes usurp empty swallow nests and may also drive off swallows from new nets. A cliff swallow nest taken over by house sparrows is identified by the abundant nest lining (grasses, weeds, feathers and litter) protruding from the entrance. Hatching Both sexes incubate the eggs. Incubation begins the day before the last egg is laid and ranges in length from 11 to 16 days. Most studies typically report 14 or 15 days incubation. Whitewash on the lower rim of the nest entrance is a sign of newly hatched nestlings inside the nest. This marking occurs when adults remove fecal sacs from the nest and later when nestlings defecate from the nest entrance. Fledging and Post-Nesting Period The nestlings fledge 20 to 25 days after hatching. The juvenile swallows appear similar to adults but are dullish colored and have less sharply defined color patterns. The fledglings will return to the nest 2 or 3 days to be fed before leaving it permanently. Within a week, juveniles will join feeding flocks and leave the colony. There is some dispute concerning the number of broods produced each year. Most observers agree that at least some cliff swallows raise two broods in any one breeding season. Second broods are documented from Virginia and West Virginia, and suggested from Texas and Pennsylvania. On the other hand, one researcher suggested second broods were uncommon in central California and believed that late nests were made by swallows renesting after a first failure or by birds that were just late nesters. The time required from start of nest building to departure after raising a brood is 46 to 63 days: 7 to 14 days nest building, 3 to 6 days egg laying, 14 to 15 days incubation, 20 to 25 days to fledging, and 2 or 3 days to leave the nest. Reports of colony occupancy ranging from 110 to 132 days indicate ample time for two broods. A study in California reported that all broods of late nesting cliff swallows died and few second nests were successful. The study further suggested there is only a narrow span of time during which broods are reared. After leaving the nesting colony, cliff swallows may remain in the general area for several weeks. By late summer there is a general southward movement, and by the end of September few swallows remain, except in Texas where a few linger into late October. Fall migration of cliff swallows is not well documented. Damage Cliff swallows nest in colonies and often live in close association with man. Most cliff swallow colonies on buildings and other structures are innocuous. In some situations, however, they can become a nuisance, primarily because of the droppings they deposit. In such instances, they may interfere with man's activities by creating aesthetic problems, fouling machinery, and causing health hazards by contaminating foodstuffs. Their mud nests eventually fall to the ground and can cause similar problems. Cliff swallows are host to hematophagous (blood-sucking) arthropods including ticks, fleas, and various other insects including the swallow bur (Oeciacus vicarius). Man and his domestic animals may be threatened at various times by these ectoparasites, although they are not the usual hosts. In addition, cliff swallow nests are often used y house sparrows (Passer domesticus), introducing another avian pest with its attendant aesthetic damage and potential health hazards. Barn swallows nesting singly in small groups on a structure can cause similar problems but of a lesser magnitude due to the smaller numbers present. Legal Status In the United States, all swallows are classified under the Migratory Bird Treaty Act of 1918 as migratory insectivorous birds and are protected. The Treaty arose from a Convention between the United States and Great Britain concerning protection of migratory birds in Canada and the United States. Similar agreements have been signed by the United States with Mexico in 1936, Japan in 1972, and the U.S.S.R. in 1978. In the United States swallows are also protected by state regulations. Under the articles of the Convention, it is illegal for any person to take, possess, transport, sell or purchase swallows or their parts, such as feathers, nests or eggs, without a permit. As a result, certain

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activities affecting swallows are subject to legal restrictions. Permit Requirements Regardless of the time of year, a depredation permit issued by the Fish and Wildlife Service is required before swallow nests can be removed. This includes nests under construction, completed nests and nests abandoned after the breeding season. It is a common misconception that nests may be removed without a permit after the swallows complete nesting and depart. During nesting, permits authorizing nest removal are issued only if strong compelling reasons exist. Some examples are safety and health hazards posed by a nesting colony located over a doorway/entrance, near loading areas at warehouses and food-processing centers, or at airports where aircraft safety is impaired. During the nonbreeding season and before nests are completed at the start of nesting, the justification required to issue a permit for nest removal need not be as strong as during breeding. In such instances, aesthetics or a past history of problems and the expectation of future problems are sufficient reasons for a permit to be issued. A permit application may be obtained by contacting the U.S. Fish and Wildlife Service. The permit is usually valid for one nesting season only and is free of charge. The permit authorizes the permittee to use specified methods to remove nests. The permittee is required to record the number of nests removed and to report these removals within ten days after the permit expires. Timing is critical. It may take one to two weeks to obtain a permit. If a problem is expected, it is not advisable to wait until nest building begins before applying for a permit, since swallows build their nests and lay eggs in a short time. If eggs or young are in the nest, a permit probably will not be issued. Damage Prevention and Control Methods Nest Removal The method or nest removal will be specified by the permit. Usually nests may be washed down with a water hose or knocked down with a pole. Swallows are strongly attracted to old nests or to the remnants of deteriorated nests, so all traces of mud should be removed. Removing nests by these methods is a messy and time-consuming process and may cause dispersal of nest parasites and water damage to the building. As builders or mud nests, cliff swallows have evolved with nest failures from rain or moisture. Washing down nests is nothing more than an artificial rainstorm. Therefore, during nest building, nest removal will require many days because the swallows will persistently rebuild nests. Persistence is undoubtedly affected by the physiological condition of the swallows, past nesting history at the site, and the availability of alternate sites. The swallows usually return the following year, and unless additional control measures are implemented, the whole process must be repeated. **Exclusion** Exclusion refers to any control method that denies physical access to the nest site area. Exclusion represents a relatively permanent, long-term solution to the problem. A permit is not required for this method if it is applied before the swallows arrive or after they have left for the winter. If swallows ar nesting and have eggs or young, exclusion may not be used without a permit. Plastic net or poultry wire can provide a physical barrier between the swallows and the nest site. The mesh size should be 1/2 to 3/4 in. (1.3 to 1.9 cm); however, 1 in. (2.5 cm) has been used successfully. If plastic net is used, it should be attached so that it is taut. This reduces flapping in the wind, which looks unsightly and results in tangles or breakage at mounting points. Do not use mist net or any other thin, flexible net with loose pockets or wrinkles that could trap or entangle swallows. Net or poultry wire should be attached to buildings before the swallows arrive and may be left up permanently or removed after the nesting season. Attachment methods may vary according to site requirements and the degree of permanence desired. Net can be attached directly, using tape, staples, trash bag ties, or plastic fasteners. A more elaborate method uses hooks, such as brass cup hooks, mounted on the eaves and the side of the building. An advantage of hooks is that the net can be taken down easily during the nonbreeding period or for maintenance of light fixtures, painting, etc. If hooks or staples are used, they should be rust-resistant to avoid unsightly rust stains on the building. For net, a supporting framework of wooden dowels, wood laths or even metal rods along the edges can ease attachment to the hooks and create a more equal tension on the net (Figure 2). Net may also be stapled to or wrapped once or twice around a wood laths and nailed directly to the structure. On a concrete or cement structure, a power-activated tool, sometimes called a stud gun, can be used to nail the wood lath. The net or wire should extend from the outer edge of the eave down to the sides of the building so the protection from the elements given by the eaves is lost to the swallows (Figures 2, 3). No openings should remain where swallows might enter. Hanging a curtain of netting from the eave is reported effective (Figure 3). The curtain should be 3 to 4 in. (7.6 to 10 cm) from the wall and extend down from the eave 18 in. (46 cm) or more. Cliff swallows occasionally enter buildings through doors or other open entryways and nest inside on the rafters. In some instance simply closing the entrance or blocking it with net or wire is practical and effective. At one site, cliff swallows abandoned nests inside barn lofts when entrance ways were partially closed. At warehouses and other buildings with frequent pedestrian or equipment passage, opening a close entrance way may be bothersome and impractical. In these situations strip doors of vinyl plastic may be installed (Figure 4). Primarily used to control temperature in refrigerated areas, strip doors are approximately 8 in. (20 cm) wide strips of vinyl hung like a curtain. Strips overlap about 3 in. (8 cm). Strip doors do not require opening and closing like a conventional door and are not damaged by passage of equipment. The use of net hung as a curtain to block an entrance is recommended only where there is no possibility of its being caught and ripped by equipment.

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Weighting the bottom of the net will help keep it reasonably taut and in position during windy weather. Usually, swallows will not fly into a net or other obstruction, but will stop and hover in front of it. If only that section of a building where swallows have nested is netted, the swallows will often choose alternative sites on the same structure. Therefore, any part of a building suitable for nesting must be netted. Repellents Chemical roost repellents (e.g. sticky pastes, sprays) have not been proven effective. Unless a suitable nesting site is almost entirely covered with repellent, cliff swallows will still be able to land, gain a foothold, and begin nest construction. A sticky repellent may actually be counter-productive by improving nest adherence. Cliff swallow nests built over a sticky repellent have been observed. Toxicants, Trapping and Shooting There are no chemical toxicants currently registered by EPA for swallow control; and shooting, trapping or harming swallows is not permitted. Since state pesticide registrations vary, check with your local Extension Service office for information on toxicants (if any) and repellents. Frightening Devices Hawk, owl, or snake models, noise-makers, and revolving lights have shown little, if any, success or are unproven against cliff swallows. As evidenced by colonies on buildings, cliff swallows are relatively tolerant of human activity and other disturbances. Substrate Modifications Modification of the nest substrate has proven effective. Swallows prefer surfaces that provide a good foothold and nest attachment. Removal of the rough surface of a wall and/or overhang makes a site less attractive. This may be accomplished in various ways. Fiberglass panels installed between the eave and wall to form a smooth, concave surface make nest attachment difficult (Figure 3). A smooth surface is also created by a curtain of aluminum foil or plastic tarp draped from a wire strung along the junction of the wall and roof overhang. Other smooth-surfaced materials to deter nesting include glass and sheet metal. A fresh coat of paint that dries to a slick surface is sometimes cited as effective. However, with regard to fresh paint, any of a number of plausible reasons could result in the failure of cliff swallows to reoccupy a colony. The fact that cliff swallows do not occupy a newly painted site does not prove the method effective. On rough surfaces, painting is of doubtful value because it does nothing to alter the basic rough texture of the surface. Painting may be effective on smoother surfaces, but this technique has not been thoroughly tested. Metal projections are sharp, needle-like wire devices generally installed on building ledges and window sills to discourage pigeons and starlings from roosting. Although adaptable to mounting and use under eaves, metal spines have not been widely used for swallow control (Figure 3). In one instance, cliff swallows learned to land on the metal spines and eventually built nests attached to them. Architecture Although all the factors that constitute a suitable colony site are not yet understood or documented, architectural design does influence colony site suitability. Buildings with overhanging eaves at acute to right angles with the wall are potential nest sites. Conversely, sites where the overhang and wall meet at an obtuse angle or are rounded and concave are rarely used. The width of the overhang may be important to site suitability, although the point at which this becomes critical is unknown. Few colonies are observed with an overhang of less than 6 to 8 in. (15 to 20 cm). Texture is a factor; wood, stucco, masonry and concrete surfaces are favorable substrates. Metal as a substrate is rarely used, a statement supported by observation of road bridges. Nests on a metal surface are usually located at a crotch or joint where the swallow can gain a foothold. In situations where construction is planned and cliff swallows are present on a nearby structure, consideration to materials and design may eliminate future problems. Cliff swallows may move to nearby structures if control is applied at an existing colony. Economics of Damage and Control

Costs of damage are difficult to quantify and vary with the particular site and the method of control employed. The cost of actual or potential damage can range from the intangible nuisance factor of swallows on a house to thousands of dollars from swallows contaminating foodstuffs at a processing center or posing a danger to aircraft at an airport. Similarly, the cost of control varies greatly. Where hosing is used, costs are primarily labor-related and may be minimal. Net is relatively inexpensive (approximately \$35/1000 sq. ft. 1982 prices) and is reported to be effective for 3 to 5 years before replacement. But labor and other equipment costs can be quite high. For example, mounting net on a concrete versus a wooden structure, or 100 ft versus 10 ft above a ground can drastically increase costs. Costs for each site must be judged on an individual basis.

top

Questions and Comments regarding this HPDP Web site can be directed to: <u>ppgu@dot.state.mn.us</u> Revised: June 13, 2005





Appendix F

Project Area Photographs









Photo 1 – Southeast corner of the La Cholla Boulevard and Ruthrauff Road intersection, view to the north.



Photo 2 – Northeast corner of the La Cholla Boulevard and Ruthrauff Road intersection, view to the south.









Photo 3 – La Cholla Boulevard and Curtis Road intersection, view to the east.



Photo 4 - La Cholla Boulevard and Curtis Road intersection, view to the southeast.









Photo 5 – Circle K Store at the southwest corner of West River Road and North La Cholla Boulevard, view to the northwest.



Photo 6 – Southeast corner of West River Road and La Cholla Boulevard, view to the northeast.









Photo 7 – La Cholla Boulevard, bridge over the Rillito River, view to the southwest.



Photo 8 – Rillito River at La Cholla Boulevard, view to the east.

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Photo 9 –La Cholla Boulevard, view looking north from the south end of the project area.



Photo 10 - The vacant lot at the northwest corner of La Cholla Boulevard and Curtis Road.







Appendix D

Cultural Resources



Cultural Resources Assessment of the La Cholla Boulevard – Ruthrauff Road to River Road Project, Pima County, Arizona

Patricia Cook

Reviewed by

Patricia Castalia Desert Archaeology, Inc. 3975 N. Tucson Boulevard Tucson, Arizona 85716

Submitted to

HDR Engineering, Inc. 5210 E. Williams Circle, Suite 530 Tucson, AZ 85711-4459



Project Report No. 07-133 Desert Archaeology, Inc.

Project No. 07-124 3975 N. Tucson Blvd., Tucson, AZ 85716 • 2 May 2008

ABSTRACT

DATE: 16 June 2008

AGENCY: Pima County

REPORT TITLE: Cultural Resources Assessment of the La Cholla Boulevard – Ruthrauff Road to River Road Project, Pima County, Arizona

CLIENT PROJECT NAME: La Cholla Boulevard – Ruthrauff Road to River Road project

FUNDING LEVEL: Pima County Regional Transportation Authority, Arizona Highways Users Revenue Fund (HURF), impact fees

PROJECT DESCRIPTION: Assessment prior to road expansion

PERMIT NUMBERS: Arizona Antiquities Act Project Specific Permit No. 2008-069ps; Arizona State Museum Accession No. 2007-0670

LOCATION:

County: Pima

Description: Sections 15, 16, 21, and 22, Township 13 South, Range 13 East, on USGS 7.5-minute topographic quad Jaynes, Ariz., AZ AA:12 [SE]

Land Ownership: Pima County right-of-way

NUMBER OF SURVEYED ACRES: 1.5

NUMBER OF SITES: 2

LIST OF REGISTER-ELIGIBLE PROPERTIES: AZ AA:12:18 (ASM)

LIST OF OTHER PROPERTIES: AZ AA:12:29 (ASM) (Site not found within project area)

RECOMMENDATIONS: Two previously recorded archaeological sites, AZ AA:12:18 (ASM), Hodges Ruin, and AZ AA:12:29 (ASM), are intersected by the proposed project. Their boundaries were not well documented historically, and surface survey associated with this project indicates the sites currently have few visible surface components. Archaeological trenching in accessible portions of the right-of-way, including the area of the two sites, was undertaken to locate site boundaries and identify subsurface features that will be affected by the proposed road-widening project. Four features were identified at the Hodges Ruin and the boundary relocated with greater accuracy in the eastern part of the site. Subsurface features at AA:12:29 were not identified. Desert Archaeology recommends that the roadway improvement project proceed as planned, with archaeological monitoring of any work within 30 m of the Hodges Ruin boundary. A monitoring and discovery plan is included in this report. Should the proposed plans change, or previously undiscovered cultural materials be encountered during the undertaking, work should be halted immediately and a qualified archaeologist contacted to evaluate the materials.





Appendix E

Native Plant Protection Evaluation



Native Plant Inventory and Mitigation Summary

La Cholla Boulevard – Ruthrauff to River Road Pima County WO # 4LCITR

An inventory of native plants per Pima County Zoning Code; Chapter 18.72 was conducted for the La Cholla Boulevard – Ruthrauff Road to River Road Improvement Project. Protected native plants inventoried include: 8 Blue Palo Verde (*Parkinsonia floridum*), 10 Velvet Mesquite (*Prosopis velutina*), 3 Catclaw Acacia (*Acacia greggii*), 5 Desert Willow (*Chilopsis linearis*) and 1 Saguaro (*Carnegia gigantea*). Inventoried plants located outside of the grading limit will be preserved in place. All inventoried trees disturbed by project construction will be removed. In all cases, the boxing of trees for transplant is not feasible because of sandy soil conditions, inaccessible terrain or conflict with other plants and utilities. The 3' tall saguaro is located within the grading limit and can be transplanted to an undisturbed location in a single move. The following required mitigation quantities, 7 Blue Palo Verde (*Parkinsonia floridum*), 9 Velvet Mesquite (*Prosopis velutina*), 5 Desert Willow (*Chilopsis linearis*) and 1 Saguaro (*Carnegia gigantea*) will be planted within the project area as part of the landscape improvements.

NATIVE PLANT INVENTORY AND MITIGATION SUMMARY Project Name: La Cholla Boulevard - Ruthrauff Road to River Road Job No. PCDOT # 4LCITR

CATEGORY	BOTANICAL NAME	COMMON NAME	INVENTORIED	INVENTORIED	INVENTORIED	PERCENTAGE	QUANTITY	QUANTITY	QUANTITY OF	PERCENTAGE OF	QUANTITY	MITIGATION	TOTAL
0			-	-	OF MEDIUM			TO BE	SPECIMIN			REQUIREMEN	-
			VIABLE PLANTS	LOW VIABILITY	AND HIGH	PLANTS ON	PRESERVE	TRANSSPLA	PLANTS TO BE	PLANTS TO BE	VIABILITY	T FOR TOS	SITE AFTER
			(PLANTS RATED	PLANTS	VIABILITY	SITE	D-IN-PLACE	NTED ON-	REMOVED	REMOVED FROM	PLANTS TO	AND RFS	COMPLETION
			LOW, MEDIUM, AND		PLANTS		(PIP)	SITE (TOS)	FROM SITE	SITE		SPECIMEN	
			HIGH VIABILITY)		(SPECIMEN				(RFS)		-	PLANTS	
					PLANTS)						FROM SITE		
TREES													
	ACACIA GREGGII	CATCLAW ACACIA	3	0	3	100%	3	0	0	0%	0	0	3
	CHILOPSIS LINEARIS	DESERT WILLOW	5	2	3	60%	1	0	2	67%	2	5	8
	PARKINSONIA FLORIDUM	BLUE PALO VERDE	8	0	8	100%	4	0	4	50%	0	7	11
	PROSOPIS VELUTINA	VELVET MESQUITE	10	5	5	50%	3	0	2	40%	2	9	17
CACTI													
	CARNEGIEA GIGANTEA	SAGUARO	1	0	1	100%	0	1	0	0%	0	1	2
TOTALS			27	7	20		11	1	8		4	22	41





Appendix F

Noise Study



La Cholla Boulevard Ruthrauff Road to River Road

Final Noise Report

July 2008

Pima County Department of Transportation Work Order No. 4LCITR





HR

July 23, 2008

Mr. Dean Papajohn, PE Civil Engineering Manager Pima County Department of Transportation Public Works Building 201 N. Stone Avenue, 3rd Floor Tucson, AZ 85701

RE:

Final Noise Report La Cholla Boulevard, Ruthrauff Road to Ina Road Work Order No. 4LCITR HDR Job No. 59914

Dear Mr. Papajohn:

We are pleased to submit this *Final Noise Report* for the above-referenced project. This report was prepared by Catherine Bolm, Environmental Planner, and was reviewed by Christine Jacobs-Donoghue, Senior Environmental Planner.

Please feel free to contact me at (520) 584-3632 if you have any questions.

Sincerely,

HDR Engineering, Inc.

W. Buell

Ted Buell, PE Project Manager

Attachments

Phone: (520) 584-3600 Fax: (520) 584-3680 www.hdrinc.com

La Cholla Boulevard Ruthrauff Road to River Road

Final Noise Report

July 2008





Prepared for: Pima County Department of Transportation 201 N. Stone Avenue Tucson, AZ 85701 Work Order No. 4LCITR

Prepared by: HDR Engineering, Inc. 5210 E. Williams Circle, Suite 530 Tucson, AZ 85711-4459 HDR Project No. 59914

HDR





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- Appendix D Noise Analysis Summary: Second Row of Properties
- Appendix E Evaluation of Rubberized Asphalt Concrete and Noise Barriers as Mitigation
- Appendix F Traffic Noise Model (TNM 2.5) Output Files







1.0 Introduction

1.1 Study Location and Scope

Pima County Department of Transportation (PCDOT) and Regional Transportation Authority propose to widen La Cholla Boulevard from Ruthrauff Road to River Road. The project area is located in unincorporated Pima County. The Oro Valley town limits are located approximately 5 miles north of the northern project limit (River Road) and the Tucson city limits are located approximately 1 mile south of the southern project limit (Ruthrauff Road). The project location is displayed in Figure 1 and the project vicinity is displayed in Figure 2.

Stage 1 engineering drawings and aerial photographs taken in June of 2007 were used for this noise analysis. Traffic volumes for 2030 were obtained from the *Final Traffic Engineering Study for La Cholla Boulevard, Ruthrauff Road to River Road* (PCDOT 2008).

1.2 Existing Roadway Conditions and Land Use

La Cholla Boulevard is a major north-south arterial road between Oro Valley and Tucson. Within the Study Area, La Cholla Boulevard is a two-lane roadway with four-lane arterial street intersections. It is intersected by several two-lane collector streets. La Cholla Boulevard crosses the Rillito River as a two-lane bridge. North of the bridge, La Cholla Boulevard widens to a six-lane roadway approaching the River Road intersection.

Land use at the River Road and La Cholla Boulevard intersection is primarily commercial. A shopping plaza is located at the northeastern corner and a Circle K gas station is located at the southwestern corner. Commercial development is planned for the northwestern and southeastern corners.

The Rillito River passes under La Cholla Boulevard south of the River Road and La Cholla Boulevard intersection. Public use trails run adjacent to the river. A linear park is located on both sides of the Rillito River bridge, with access to the public use trails.

South of the river, Curtis Road intersects La Cholla Boulevard. Land use is primarily light commercial and industrial on the east side of La Cholla Boulevard at this intersection. Pima County-owned Curtis Park is located at the northwestern corner of the intersection. A vacant lot at the southwestern corner is the site of a closed landfill.

Between Ruthrauff Road and Curtis Road and south of the landfill and commercial properties, the adjacent land is zoned for multi-use and is primarily residential. Several medium- to highdensity neighborhoods are located along this segment of La Cholla Boulevard. A Circle K gas station is located at the northeastern corner of the La Cholla Boulevard and Ruthrauff Road intersection. The Family Food store is located at the northwestern corner and a Valero gas station is at the southeastern corner. The southwestern corner is currently under construction with commercial development. South of Ruthrauff Road, the Flowing Wells Fire Station and Flowing Wells Junior High School are located on the west side of the street. Centennial Elementary School is west of La Cholla Boulevard on Wetmore Road.





Figure 1. Project location

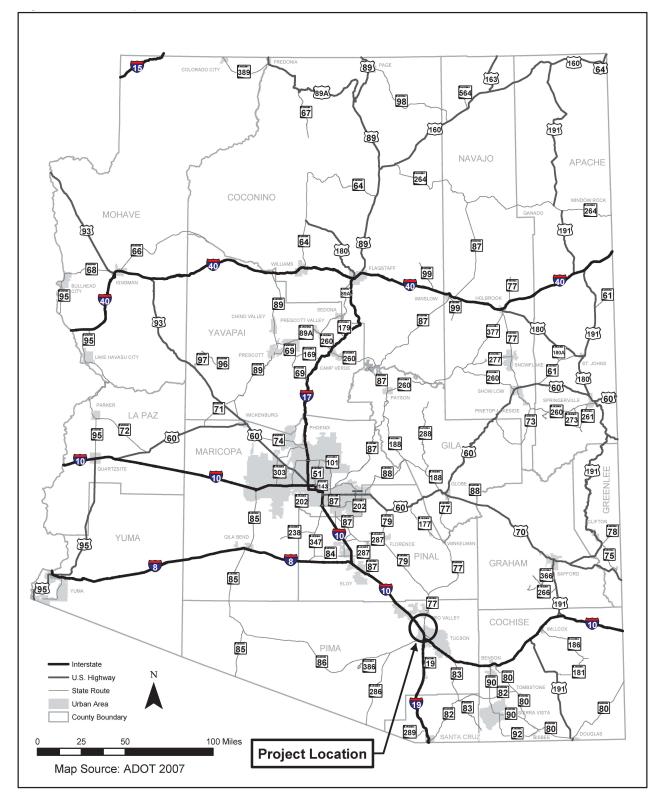
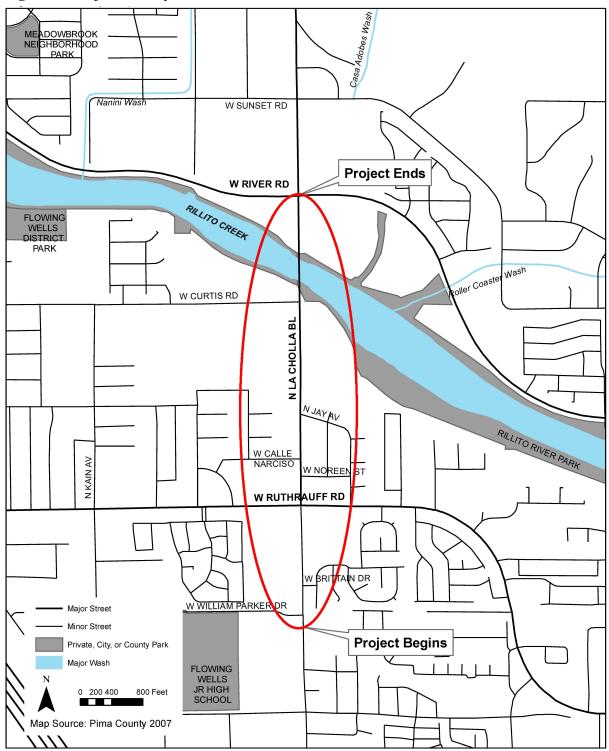






Figure 2. Project vicinity









1.3 Planned Project Improvements

The proposed project would widen La Cholla Boulevard between Ruthrauff Road and River Road from a two-lane undivided roadway to an urban six-lane divided roadway with dedicated turn lanes at the intersections. PCDOT recommends that frontage roads be constructed for the residential lots that directly access La Cholla Boulevard. However, the draft design concept report for this project includes alternatives that would eliminate one or both frontage roads and substitute residential property acquisitions. The potential property acquisitions and subsequent removal of homes along La Cholla Boulevard have been considered in this analysis.

2.0 Methodology

A new or expanded roadway will increase traffic-generated noise in the surrounding area. For this study, the methods for determining the future noise levels and identifying possible mitigation measures to address those increased noise levels included using the Federal Highway Administration (FHWA) Traffic Noise Model Version 2.5 (TNM 2.5) and following noise abatement criteria established by the governing agency, PCDOT.

To assess the potential change in noise levels, the existing noise environment was evaluated. Representative sites within the Study Area were chosen and the existing noise levels were measured at each site. The resulting measurements are the ambient noise levels. Roadway geometry and topography, traffic volumes, existing barriers, land features, and the representative sites were entered into TNM 2.5 to replicate the conditions under which the noise level measurements were taken. Noise levels were calculated and compared with the ambient levels. This process examines the accuracy of the traffic noise model in performing noise level calculations for this project. Discrepancies in the model's calculations were addressed prior to using it for predicting future noise levels. Four conditions were modeled using TNM 2.5. The model estimated the peak-hour traffic noise levels for:

- existing condition (2007)
- projected condition without noise mitigation (2030)
- projected condition with a credit of 3 dBA for the application of rubberized asphalt concrete (RAC) (2030)
- projected condition with noise barriers and a credit of 3 dBA for the application of RAC (2030)

The 2030 projected conditions were compared with the Pima County Noise Abatement Procedure to determine whether noise mitigation is warranted.

2.1 TNM 2.5 Modeling

The TNM 2.5 model translated the roadways in the Study Area into a series of endpoints on a three-dimensional X, Y, and Z coordinate system. This computer model was developed to comply with FHWA noise regulations and is considered the current standard for roadway noise analyses.





The TNM model requires input data regarding the geometry of roadways in the Study Area, vehicle mix, traffic volumes, and vehicle speeds. The proposed roadway and the surrounding arterial streets were defined by a series of roadway segment endpoints. Existing barriers, including residential privacy walls, were included in the model. Receivers were identified as single points and assigned an elevation of 5 feet above the ground to simulate the average height of human hearing. The sound levels were modeled using the A-weighted decibel (dBA), which is the measurement of sound that most closely approximates the sensitivity of the human ear. The noise level results—discussed in Section 3.0, *Existing Noise Environment*—are presented in L_{Aeq1h}, the equivalent average sound level measured for 1 hour, approximating the sensitivity of the human ear.

The vehicles were classified as automobiles (four wheels), medium trucks (six wheels), and heavy trucks (eight or more wheels). Each of these vehicle types generates noise from a different height above the roadway, called the source height.

TNM 2.5 uses the above-described information to calculate the noise contribution from each roadway segment to each receiver and then determine the cumulative effect of all roadway noise sources for each receiver. Validation studies conducted at the Volpe National Transportation Systems Center, a facility of the United States Department of Transportation Research and Innovative Technology Administration, show that the TNM 2.5 model typically predicts noise levels within an acceptable range of accuracy.

2.2 Noise Abatement Criteria

The PCDOT Procedure Number 03-5, entitled "Traffic Noise Analysis and Mitigation Guidance for Major Roadway Projects," dated December 1, 2003, was developed to provide guidance for the development of noise mitigation for Pima County's major roadway projects. It contains procedures for traffic noise abatement, noise analysis methodology, and requirements for noise reports. The procedure is most commonly called the Pima County Noise Abatement Procedure (PC NAP). Numerous existing state and county transportation agency policies were evaluated during the development of PC NAP and analyzed to determine the appropriate criteria to use in Pima County.

Effective April 7, 2008, the Pima County "Revision of Traffic Noise Analysis and Mitigation Guidance for Major Road Projects" was implemented to address changes in the cost of noise mitigation measures. This report reflects the updated mitigation costs per benefited receiver and barrier construction cost per square foot.

According to the PC NAP, noise abatement should be considered if noise levels reach 66 dBA or higher at noise-sensitive properties. Additionally, mitigation measures will be considered for noise-sensitive properties if predicted traffic noise levels substantially exceed existing levels. "Substantially exceed" is defined as a 15-dBA increase between the existing noise levels and the future noise levels. The area at noise-sensitive properties from which the noise level is used to determine abatement consideration, is at an out-of-doors location assumed to be most frequented by the residents. For example, the noise levels used in consideration for abatement at a residence would be from a location outside of the house, but near the house. Noise abatement is only considered for the first floor of multi-floor units.





Noise-sensitive properties are all residences. Residences include single family or multi-family housing units. Each first floor apartment in an apartment complex or duplex is counted as a separate housing unit. Noise-sensitive properties may also include facilities such as picnic areas, recreation areas, playgrounds, active sports areas, parks, schools, churches, libraries, hospitals, places of worship, and cemeteries. Commercial properties are not considered for noise abatement unless they include a sensitive receiver, as defined above (for example, a shopping center that includes a preschool).

Table 1 presents the noise levels, in A-weighted decibels, produced by several common indoor and outdoor activities and noise sources.

Common outdoor noise levels	Noise level (dBA ^a)	Common indoor noise levels
	110	rock band
jet flyover at 1,200 feet	100	
gas lawn mower at 3 feet, diesel truck at 50 feet	90	food blender at 3 feet
noisy urban daytime	80	garbage disposal at 3 feet
gas lawn mower at 100 feet	70	shouting at 3 feet, vacuum cleaner at 10 feet
commercial area	60	normal speech at 3 feet
quiet urban daytime	50	large business office, dishwasher next door
quiet urban nighttime	40	small theatre, large conference room (background)
quiet suburban nighttime	30	library
quiet rural nighttime	20	concert hall (background)
	10	broadcast and recording studio
	0	threshold of hearing

Source: American Association of State Highway and Transportation Officials, 1993

^a A-weighted decibels

The PC NAP contains a provision allowing a credit of 3 dBA for the use of RAC. As part of the noise abatement procedure described in the PC NAP, this credit is applied during the mitigation determination process as described below.

According to the PC NAP, noise abatement measures must be feasible, reasonable, and desired by the affected individuals. The following discussion covers feasibility, reasonability and desirability of noise abatement.

Feasibility

Feasibility deals with the engineering considerations of noise abatement. It is the ability to provide abatement in a given location with consideration to the physical and acoustical limitations of the site. This takes into account topography, access, drainage, safety considerations, maintenance requirements and whether or not other noise sources are present





in the area. PCDOT requires a noise reduction of at least 5 dBA for first-row receivers for noise abatement to be considered feasible.

Reasonability

Reasonability means that PCDOT believes mitigation measures are prudent, based on consideration of the following conditions:

- The noise barrier will provide a minimum 5-dBA noise reduction without being more than 10 feet in height.
- The noise barrier will benefit more than one sensitive property.
- The cost of the noise abatement shall not exceed \$35,000 per benefited receiver, at \$25 per square foot of constructed barrier.

Desired

Although noise barriers may be reasonable and feasible, a majority of the owners for the benefited properties must approve the barrier in order for it to be constructed. Signatures from 50 percent plus one of the affected property owners indicating a desire for the barrier is considered a majority.

2.3 Level of Service Traffic and Noise Levels

Traffic engineers describe the flow of traffic with a series of conditions called levels of service (LOS). LOS A describes free-flowing traffic that is able to travel at or above the posted speed limit with little or no difficulty in changing lanes. The conditions become more congested as the LOS progresses through the alphabet to LOS F, which represents stop-and-go traffic. From a noise perspective, the LOS C condition usually represents the worst hourly traffic noise impacts because traffic speeds are at or near the posted speed limit and lane capacity is high. Although more vehicles may be accommodated when LOS D is achieved, the lower speeds drastically reduce tire noise, a major source of traffic noise.

Traffic volumes for 2030 were obtained from the *Final Traffic Engineering Study for La Cholla Boulevard, Ruthrauff Road to River Road*, February 2008 (Appendix A). Peak-hour traffic data were used for the traffic analysis. These data approximate LOS E as current peak hour conditions and LOS B during the peak hour along the improved La Cholla Boulevard.

2.4 Noise Analysis Overview

Aerial photographs and field reconnaissance were used to determine the approximate locations and land use activities of potential sensitive receivers near the roadway. Field measurements were used to determine the existing noise levels throughout the Study Area, as described in Section 3.0, *Existing Noise Environment*. The TNM 2.5 model was used to predict the noise levels that would occur with the proposed improvements to La Cholla Boulevard. Standard English units of measurement were used for this study.

As noted earlier, traffic-generated noise levels are affected by traffic volumes, traffic speeds, and traffic mix (the percentage of cars, medium trucks, heavy trucks, buses, and motorcycles). These variables were used in the TNM 2.5 model to predict future noise levels at the sensitive





receiver locations. Traffic volumes and speeds used in the modeling for this project represent "worst case" peak-hour or LOS C traffic conditions.

Unmitigated noise levels for the 2030 traffic and roadway conditions were determined and compared with the appropriate noise abatement criterion to determine whether traffic noise mitigation should be considered. Generally, the mitigation considerations consist of noise barriers in the right-of-way (R/W). Although other mitigation considerations are possible, noise barriers are considered the most cost-effective and accepted technique when they are warranted. These barriers may consist of earth berms or concrete/masonry walls, or combinations of the two barrier types.

2.5 Potential Mitigation Strategies

A number of mitigation strategies are available that may be applied independently or in combination to achieve the desired results. These involve elements of the roadway design, roadway surface, and restrictions on the use of roadway, as well as construction of noise barriers. These mitigation strategies are introduced below and analyzed for reasonability, feasibility, and desirable qualities as they relate to this project in Section 5.0, *Traffic Noise Considerations and Mitigation Alternatives*.

Roadway Design

Roadway design measures include altering the roadway alignment or depressing roadway sections. Altering the roadway alignment could involve realigning the roadway along a new centerline to move the roadway away from a sensitive receiver. Depressing the roadway lowers the roadway below grade, also moving traffic farther away from affected receivers.

Rubberized Asphalt Concrete Surface

Rubberized asphalt pavement has been shown to reduce noise impacts, averaging 4 dBA or better, at adjacent properties when compared with standard concrete pavement (JHK and Associates 1996). Pima County uses RAC on all roadway projects and allows a noise analysis credit of 3 dBA to account for the noise reduction properties of the pavement. RAC will be used on the La Cholla Boulevard, Ruthrauff Road to River Road, project and the credit will be reflected in the noise analysis results.

Traffic Management

Traffic management measures include restricting truck traffic entirely or during certain hours of the day and reducing the posted speed limit. Both strategies would reduce the noise levels at adjacent properties because trucks produce more noise than automobiles and because higher vehicle speeds generate more noise than lower vehicle speeds (FHWA 1976).

Noise Barriers

Construction of noise barriers between the roadways and the affected receivers reduces noise levels by physically blocking the transmission of traffic-generated noise. Barriers can be constructed as walls or earthen berms. Noise barriers should be high enough to break the line-of-sight between the noise source and the receiver. They must also be long enough to prevent noise from transmitting around the ends of the barrier. Openings in a barrier, for driveways or sidewalks, can significantly reduce the barrier's effectiveness. Earthen berms





require more right-of-way than do walls. They are usually constructed at a 3-to-1 slope in each direction. Thus, a berm 8 feet high would slope 24 feet in each direction, for a total width of 48 feet.

2.6 Analysis Limitations

This noise analysis is based on design and traffic information available at the time of the analysis. The following assumptions were made to reach conclusions during the analysis phase:

- The project designs as evaluated in this report will not change.
- Future traffic volumes, vehicle mix and speed will remain consistent with those predicted in the traffic study for this project.
- The nature of the land use will remain consistent with current use and planned development (i.e., industrial businesses will not be constructed where retail and professional offices are currently planned)
- The area where people are most likely to spend time outside of their homes is in their yards, near their homes.

While the TNM 2.5 model has been calibrated and tested against actual noise measurements for several years, it should be noted that it is still a noise prediction model. The results of this analysis assume the predicting capabilities of TNM are sufficient.

Assumptions have been made to simplify the calculations for TNM.

- The receiver (representing human hearing) is 5 feet above ground.
- The angle of view from the receiver to the road is 180 degrees.
- The terrain between the roadway and the receiver is flat.
- The ground type is consistent throughout the project area.

The noise levels used in the predictions are measured in L_{Aeq1h} . As stated in Section 2.1, this is the A-weighted average that represents the steady level over 1 hour that would produce the same energy as the actual signal. The actual instantaneous noise levels fluctuate above and below the measured L_{eq} during the measurement period (e.g., a police siren, a particularly noisy truck, or unusually high traffic volumes). Therefore, the use of L_{Aeq1h} for predicting noise levels and conducting the noise evaluation does not consider the noise levels as they may occur in their full range. The fluctuation of instantaneous noise levels will result in sounds that temporarily exceed the noise levels as they have been presented in the noise evaluation. However, these instantaneous noise levels cannot be predicted. Therefore, they cannot be used in the noise analysis.





3.0 Existing Noise Environment

3.1 Description of Sensitive Noise Receiver Areas

Sensitive noise properties within the Study Area are mostly single-family residential properties. The linear park along the Rillito River is also considered a sensitive noise property.

Existing walls and fences within the Study Area were examined to determine whether they would reduce sound transmission. None of the existing fences were considered to provide adequate noise level reduction. Therefore, the existing fences were not included during the existing conditions noise model calculations.

Many of the residential properties have direct access onto La Cholla Boulevard. Direct-access driveways reduce the effectiveness of noise mitigation with barriers because gaps in noise barriers allow noise to travel beyond the barrier. If frontage roads are constructed or if the properties are acquired, the direct access to La Cholla Boulevard would be eliminated.

3.2 Roadway Geometry and Topography

The horizontal alignment for La Cholla Boulevard consists of one straight roadway segment. The vertical alignment follows the existing terrain with relatively mild grades. Immediately north of Ruthrauff Road, La Cholla Boulevard is two lanes across, with one lane in each direction. A dedicated northbound left-turn lane is located at the intersection with Curtis Road. North of the Rillito River bridge, La Cholla Boulevard widens from two lanes to six lanes with dedicated turn lanes at the River Road intersection.

The terrain within the Study Area is relatively flat, with elevations ranging from 2,280 to 2,260 feet above mean sea level, generally sloping to the northwest.

3.3 Existing Noise Levels

Field readings were taken at three monitoring sites within the Study Area to determine the existing noise levels (Table 2). These sites were selected to be representative of areas of differing land uses and traffic characteristics. The monitoring sites are described below and are shown in Appendix B, *Monitoring Sites, Receiver Locations, and Potential Barrier Locations*.

Existing noise levels were recorded at the monitoring sites with a Larson Davis Model 820 Type 1 integrating sound-level meter. The sound-level meter was placed approximately 5 feet above the ground at the monitoring sites. Three 10-minute-long sound level recordings were taken at each site.

The readings were taken during the peak-hour traffic flow on the following days:

- October 4, 2007, from 7 to 8:30 a.m. and from 4:45 to 6:15 p.m.
- October 10, 2007, from 7:30 to 8 a.m. and from 4:45 to 5:15 p.m.







Traffic data was also collected during each of the noise measurement readings, including the average speed, traffic volume traveling in both directions and the vehicle mix. Table 2 presents the total number of vehicles and the vehicle mix recorded at each monitoring location.

Monitoring site	Total vehicles per hour	Percentage automobiles	Percentage medium trucks	Percentage heavy trucks
1. 4908 N. La Cholla Blvd.	2,864	97	1	2
2. 4981 N. La Cholla Blvd.	1,857	97	1	2
3. Rillito River Park at La Cholla Blvd.	1,988	97	1	2

Table 2.	Monitoring	site vehicle	counts an	d mix
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The weather conditions during the October 4, 2007, readings were partly cloudy with temperatures at 78 degrees Fahrenheit in the morning and 91 degrees Fahrenheit in the evening. The relative humidity in the morning was 50%, with a breeze coming from the east averaging 3 mph. The evening had 32% relative humidity, with a breeze coming from the west averaging 3 mph and short wind gusts reaching 9 mph.

The weather conditions during the October 10, 2007, readings were clear skies with temperatures at 68 degrees Fahrenheit in the morning and 92 degrees Fahrenheit in the evening. The relative humidity in the morning was 36%, with a 1.5 mph breeze coming from the northeast. In the evening, the relative humidity was 15%, with a 1.5 mph breeze coming from the northeast.

The monitoring site conditions were modeled in TNM 2.5 to evaluate the accuracy of TNM 2.5 to predict noise levels for the Study Area. Ambient noise levels, as reflected in Table 3, are the average of the three noise level readings taken at each monitoring site during the morning and evening peak traffic hours. These levels were compared with predicted sound levels from the modeled conditions. This comparison was used to make any necessary adjustments to the model input to most accurately reflect site conditions.





Monitoring site	Ambient noise level (average dBA L _{Aeq1h})	Modeled noise level (dBA L _{Aeq1h})	
1. 4908 N. La Cholla Blvd. – approximately 53 feet from the edge of pavement.	68	69	
2. 4981 N. La Cholla Blvd. – approximately 66 feet from the edge of pavement.	66	66	
3. Rillito River Park at La Cholla Blvd. – approximately 42 feet from the edge of pavement.	66	69	

Table 3.	Ambient no	ise levels comr	pared with mo	deled noise levels

The ambient peak-hour noise levels ranged from 66 dBA L_{Aeq1h} to 68 dBA L_{Aeq1h} at the monitored sites, which ranged between 42 and 66 feet from the edge of pavement of La Cholla Boulevard. Monitoring site number 2 was equidistant from the road as the fenced yards at the adjacent properties. Monitoring sites 1 and 3 were at or near the R/W line for La Cholla Boulevard. Monitoring site 3 was located at Rillito River Park, near the bridge that crosses the Rillito River. The dominant noise source at each of the monitoring sites was traffic on La Cholla Boulevard.

Predicted existing peak-hour noise levels along La Cholla Boulevard ranged from 66 dBA $L_{Aeq1h to}$ 69 dBA L_{Aeq1h} at the receivers. TNM 2.5 calculated noise levels at or slightly higher than levels at the monitored locations, showing that the predictions are conservative. The modeled noise levels at monitoring site 3 shows a 3 dBA increase from the ambient noise levels. Because of the site's proximity to the bridge, TNM 2.5 makes certain adjustments to address higher noise levels produced by roadways on a structure. These adjustments may result in predicted noise levels that are higher than the ambient noise levels. The predicted noise levels that are higher than the ambient noise levels. Based on the results, TNM 2.5 was considered capable of accurately predicting noise levels for this project.

In addition to the ambient noise level monitoring at select locations, 56 sensitive receiver locations were identified within the Study Area. Existing noise levels were modeled at each of these receiver locations. The modeled existing peak-hour noise levels along La Cholla Boulevard ranged from 58 dBA L_{Aeq1h} to 68 dBA L_{Aeq1h} at the residential locations and 62 dBA L_{Aeq1h} to 69 dBA L_{Aeq1h} at Rillito River Park (see Appendices C and D).

The model's results show that noise levels at 26 of the sensitive receiver locations exceed the PC NAP mitigation criterion for the 2007 existing conditions. Of these 26 locations, 23 were at residences adjacent to La Cholla Boulevard. The remaining three sensitive receiver locations were located in Rillito River Park.





4.0 Future Conditions

4.1 Future Noise Levels

Noise levels were evaluated for 56 sensitive receiver locations within the Study Area. Thirty-six of the receivers were directly adjacent to La Cholla Boulevard and located within 120 feet of the proposed La Cholla Boulevard centerline (the exception being at Rillito River Park). To represent the second row of homes parallel to but set farther back from La Cholla Boulevard, 20 additional receivers were evaluated. These receivers were located within 260 feet of the proposed La Cholla Boulevard centerline. The information provided by the additional row of receivers is useful in understanding roadway noise impacts at these locations for the proposed design with the future (2030) peak-hour traffic volumes. In addition, the design concept report includes alternatives that would eliminate one or both frontage roads and substitute residential property acquisitions. Thus, the evaluation of second row properties also identifies the likely impact and mitigation needs for design concept report alternatives that would involve these residential property acquisitions. Please see Appendix B for future roadway design information and receiver locations.

4.2 Noise Analysis Results

The 56 sensitive receivers were evaluated for traffic noise levels resulting from 2030 peakhour traffic conditions. The results of the noise analyses are included in the *Noise Analysis Summary: Properties Adjacent to La Cholla Boulevard* (Appendix C) and the *Noise Analysis Summary: Second Row Properties* (Appendix D). The description of each column for both appendices follows:

- Column one lists an arbitrarily assigned number used to identify the receiver. Second row receivers (Appendix D) are identified by an "s" following the number. Identification numbers begin at the southern end of the project and progress numerically toward the northern end.
- Column two lists the distance and direction from the future roadway centerline to the sensitive receiver.
- Column three lists the address of the property the receiver represents.
- Column four provides the existing condition for the modeled noise level, in dBA L_{Aeq1h} (the equivalent average sound level within 1 hour).
- Column five provides unmitigated noise levels for the future build condition, using the proposed conditions and the 2030 peak-hour traffic volumes.
- Column six provides the future noise levels with the credit of 3 dBA for using RAC as the pavement surface.
- Column seven displays the mitigated future noise levels with RAC as the pavement surface, with the noise barriers constructed as presented in this study. The mitigated noise level is only provided for properties whose future noise levels with the credit of 3 dBA for RAC exceed the PC NAP mitigation criterion of 66 dBA or higher.
- Column eight provides a determination of whether mitigation measures should be considered at each location, based on the PC NAP criteria of noise levels reaching 66 dBA or higher.





The TNM 2.5 output files, from which the results came, are included in the *Traffic Noise Model (TNM 2.5) Output Files* (Appendix F). The files are entitled: *La Cholla, Existing Condition; La Cholla, Future-no RAC; La Cholla, Future-RAC;* and *La Cholla, Proposed-PC Criteria RAC.*

Predicted future peak-hour noise levels at the 36 existing sensitive receivers adjacent to La Cholla Boulevard would range from 59 dBA L_{Aeq} to 70 dBA L_{Aeq} , with the credit of 3 dBA applied for RAC. Of the 36 sensitive receiver locations, 32 receivers had a predicted future noise level exceeding the PC NAP mitigation criterion of 66 dBA or higher. Based on these noise levels, the 32 receivers are further evaluated for noise mitigation, as discussed in the next section.

The 20 second row sensitive receivers had noise levels ranging from 53 dBA L_{Aeq1h} to 66 dBA L_{Aeq1h} if the first row of homes were removed. Of the 20 sensitive receiver locations, 1 had a predicted future noise level exceeding the PC NAP mitigation criterion of 66 dBA or higher. This receiver is further evaluated for noise mitigation, as discussed in the next section.

5.0 Traffic Noise Considerations and Mitigation Alternatives

Several mitigation measures can be considered by Pima County to avoid, reduce, or otherwise mitigate environmental impacts associated with the proposed project. The discussion of these measures in this report does not obligate Pima County to implement them. Pima County may choose to modify, delete, or add measures to mitigate impacts.

Predicted future noise levels would exceed the PC NAP mitigation criterion for noise-sensitive properties at 32 sensitive receiver locations adjacent to La Cholla Boulevard and at 1 of the second row sensitive receiver locations. Noise mitigation measures were evaluated for these receivers. These measures are introduced in Section 2.5, *Potential Mitigation Strategies*. They have been individually analyzed for PC NAP defined feasibility and reasonability as they relate to this project.¹ The analysis is presented in Table 4.

¹Feasibility deals with the engineering issues associated with the mitigation strategy. For each strategy, the following question was asked: Can engineering plans be developed to provide the abatement with consideration to the physical and acoustical limitations of this project area?

Reasonability considers, even if the abatement can be achieved with the mitigation, whether the cost will be reasonable, enough receivers will be benefited, and whether the structural efforts will be unreasonable (a barrier is too high, the design causes access issues, etc.).

Feasibility and reasonability are defined, according to the PC NAP, in Section 2.2: Noise Abatement Criteria.





Mitigation	Feasibility	Reasonability
Roadway alignment changes	Design plans can be developed to shift roadway away from the sensitive receivers on one side.	May be reasonable where changing the roadway alignment can move traffic far enough away from sensitive receivers to achieve adequate noise reduction. A substantial amount of space would be necessary to move the roadway far enough away from the receivers on one side of the road. Acquisition of properties to create the necessary space, realignment of connecting roadways, and the relocation of utilities would make the cost unreasonable.
Depressed roadway	A depressed roadway along La Cholla Boulevard is not feasible because of the need for driveway access and the location of the sanitary sewers.	May be reasonable where an adequate noise reduction can be achieved by constructing the roadway below grade. Widening La Cholla Boulevard will put traffic closer to sensitive receivers. Therefore, the grade necessary to produce an adequate noise reduction would be substantially lower than the existing grade. This would affect alignment with intersecting roads and driveways, and it would be necessary to relocate utilities. Retaining walls would be necessary, affecting driveway access. Resulting construction costs would be more than is reasonable for the expected noise reduction.
Rubberized asphalt concrete	Feasible in that it is relatively easy to include in the project construction. It can be used effectively in the local climate and terrain.	Is reasonable because it can easily be included in the construction plans. It entails a low level of required maintenance. The high durability equates to a reasonable cost for the life cycle of the pavement. Not reasonable for use on the bridge because of maintenance considerations.
Truck restrictions	May be feasible if surrounding arterial streets are designed to handle the additional truck traffic. However, it is not feasible because displacing the truck traffic may conflict with the planned function of the roadway. An arterial road, such as La Cholla Boulevard, generally carries truck traffic. Businesses located along La Cholla Boulevard require trucks.	May be reasonable if an adequate noise reduction can be achieved. However, it is unlikely that the level of truck traffic on La Cholla Boulevard is high enough for truck restrictions to be effective in reducing noise levels. Displacing truck traffic may shift noise impacts to another area.

Table 4. Analysis of potential mitigation strategies





Mitigation	Feasibility	Reasonability	
Noise walls	Not feasible where the walls would limit sight distances for motorists and where crash barriers would limit the length of the walls.	May be reasonable where noise reduction is adequate and cost effective.	
Earthen berms	Not feasible to construct berms within the space limitations of the right-of- way of La Cholla Boulevard.	May be reasonable where noise reduction is adequate and cost effective. Not reasonable because to construct berms, homes would need to be removed to provide the necessary space and the required costs would be unreasonable.	

Based on this evaluation, noise walls and RAC are the most reasonable and feasible form of noise mitigation for La Cholla Boulevard, Ruthrauff Road to River Road. These two mitigation measures are thoroughly evaluated as they relate to the PC NAP criteria in Appendix E, *Evaluation of Rubberized Asphalt Concrete and Noise Barriers as Mitigation*. Each column is described below:

- Column one of the table lists the receivers potentially receiving sound reduction as a result of the barrier.
- Column two lists the number of residential units associated with the receivers.
- Column three provides the future noise levels for each receiver with the credit of 3 dBA for using RAC as the pavement surface.
- Column four displays the mitigated future noise levels with RAC as the pavement surface, assuming the potential noise barriers were to be constructed.
- Column five provides the number of units with noise levels reduced in full accordance with PC NAP requirements (5 dBA or more).
- Column six, *Potential barrier dimensions*, is divided into three sub-columns.
 - The first sub-column provides the potential barrier identification number—an arbitrarily assigned number increasing numerically as the barriers occur from south to north. This column also provides the approximate length of the barrier, in feet.
 - The second sub-column provides the barrier height, in feet, necessary to provide a noise reduction of 5 dBA or greater.
 - The third sub-column lists the total square footage of the barrier.
- Column seven, *Potential barrier costs*, provides the total cost for the barrier and the cost per benefited receiver.
 - The total barrier cost is calculated at \$25 per square foot. This cost per square foot criteria is a baseline number established by PCDOT to provide a county-wide guideline for determining the cost reasonability of any noise wall. The actual cost of the wall may be higher or lower depending on aesthetic treatments, structural requirements, and fluctuating labor and material costs.





• The cost per benefited receiver is the total cost divided by the number of benefited units (from the fifth column).

The final column provides the final determination of whether or not the barrier meets all of the PC NAP criteria for reasonability. These criteria state that:

- The noise barrier will provide a minimum 5-dBA noise reduction without being more than 10 feet in height.
- \circ $\,$ The noise barrier will benefit more than one sensitive property.
- The cost of the noise abatement shall not exceed \$35,000 per benefited receiver, at \$25 per square foot of constructed barrier.

For the proposed improvements, five potential barriers were evaluated. Three of the barriers were evaluated for placement within the R/W, between the residences and La Cholla Boulevard. These are barriers 1, 3, and 5. Barrier 1 was evaluated for placement in front of the residential property south of Noreen Street on the east side of La Cholla Boulevard. Barrier 3 was evaluated for placement in front of the residential property south of Calle Narciso, on the west side of La Cholla Boulevard. Barrier 5 was evaluated for placement in front of the residential properties on the east side of La Cholla Boulevard, north of Jay Avenue. Barriers 2 and 4 were evaluated for placement within the medians separating the proposed frontage roads from La Cholla Boulevard. The sight distance necessary for motorists was considered while determining the lengths and placement of the barriers. They would range in height from 6 feet to 10 feet and would reduce noise levels at the benefited receivers to between 60 dBA and 64 dBA, for an average noise level reduction of 5 dBA.

No potential barriers were considered for construction along the Rillito River Park, although 2030 predicted noise levels exceeded PC NAP criteria for noise mitigation. The park runs parallel to Rillito River, with access to the public use trail from La Cholla Boulevard at four points. This park provides minimal seating or other areas for prolonged stays. Other than use for access to the public use trail, the park areas adjacent to La Cholla Boulevard do not provide for fixed recreational use—most park users would be passing through the area on the trail rather than staying in the area near La Cholla Boulevard for prolonged periods of time. Furthermore, the topography of the park and its elevation in relation to the roadway would require walls taller than are permitted. The access trails would create breaks in the walls, minimizing their effectiveness. Wall construction could also present safety hazards for the public.

The noise levels at 11 of the residences could not be reduced in full accordance with the PC NAP requirements because the effectiveness of the barrier was limited by the placement of the barriers to provide adequate sight distance for motorists. These receivers would experience noise reductions of 0 dBA to 4 dBA, less than the required noise reduction of 5 dBA. The placement of the evaluated barriers provided the 17 other receivers adjacent to La Cholla Boulevard and the 1 second row receiver with adequate noise reduction to meet PC NAP criteria.

Of the five barriers evaluated along La Cholla Boulevard, only three barriers met the PC NAP requirements for noise reduction, cost per benefited receiver (at \$25 per square foot), and number of benefited receivers per wall. Barrier 2 is proposed for construction within the median separating the east frontage road from La Cholla Boulevard. This barrier would





benefit four sensitive receivers, at an approximate cost of \$29,902 per receiver. Barrier 4 is proposed for construction within the median separating the west frontage road from La Cholla Boulevard. This barrier would benefit five sensitive receivers at an approximate cost of \$22,840 per receiver. Barrier 5 is proposed for construction to provide noise mitigation for the residences north of Jay Avenue, on the east side of La Cholla Boulevard. This barrier would have openings to allow access to the adjacent properties. Seven sensitive receivers would be benefited by this barrier, including the 1 second row receiver. The cost per benefited receiver would be approximately \$25,285.

The three barriers would amount to approximately 16,431 square feet of wall. Following the standard cost of \$25 per square foot, as recommended by the PC NAP, the cost of noise mitigation along La Cholla Boulevard would be approximately \$411,000.

Should the homes adjacent to the planned frontage roads be removed, none of the second row receivers then exposed to La Cholla Boulevard would experience noise levels exceeding the PC NAP criteria for noise abatement. Therefore, no noise mitigation for these properties would be warranted.

6.0 Construction Noise

Construction of any part of the proposed improvements may cause temporary noise impacts. The quantification of such impacts is difficult without data on this project's construction schedule and equipment use. Therefore, certain assumptions were made to predict the approximate noise level at the R/W line. These predictions are based on the loudest equipment expected to be used during each construction stage of a typical roadway project. Data on construction equipment noise are available from the USDOT's *Highway Construction Noise: Measurement, Prediction and Mitigation* (1977).

An analysis was conducted during a freeway construction project in Arizona that assessed the collective impact of construction noise. The noise levels were calculated at the R/W line. The distance between the R/W line and the construction activity was estimated based on the type of work being performed.

The results of the preliminary estimates, shown in Table 5, indicate that sensitive receivers adjacent to the R/W would be affected by construction noise. The highest noise levels would occur during the grading/earthwork phase.





Phase	Equipment	Equipment L _{max} ^a	Number of feet to right-of-way	L _{max} ^a at right- of-way	
Site clearing	Dozer	84	50	- 88	
	Backhoe	85	50		
Grading/earthwork	Scraper	92	75	93	
	Grader	91	75		
Foundation	Backhoe	85	100	- 85	
	Loader	84	100		
Base preparation	Compressor	85	100	05	
	Dozer	84	100	85	

 Table 5.
 Construction equipment noise

^a maximum instantaneous sound level in decibels

The Pima County Noise Code (Chapter 9.30.070) limits construction activities to between 5 a.m. and 7 p.m. from April 15 to October 15 and between 6 a.m. and 7 p.m. from October 16 to April 14. Permits will be required if construction will need to occur outside of the allowed times.

7.0 Conclusion

Noise mitigation for the La Cholla Boulevard, Ruthrauff Road to River Road, project has been evaluated in this report. Future noise levels were predicted using TNM 2.5 with consideration of conditions with no mitigation, conditions with the application of RAC as the only mitigation, and conditions with the construction of noise walls and the application of RAC. Potential mitigation measures were evaluated for reasonability and feasibility with consideration of the existing conditions of La Cholla Boulevard and the proposed roadway design. The most reasonable and feasible mitigation measures for this project are the use of RAC for the roadway surface and the construction of noise walls where they meet Pima County's noise abatement criteria.

Three noise walls are recommended for construction along La Cholla Boulevard; barriers 2 and 4 would be placed in the proposed frontage road medians, and barrier 5 would be placed north of Jay Avenue on the east side of the road. These walls would benefit 16 individual residences at an approximate cost of \$411,000. If one or both of the frontage roads were eliminated and adjacent residential properties at these locations were acquired (based on consideration of one of the design concept report alternatives), no noise walls would be warranted along this portion of La Cholla Boulevard. Barrier 5 would still be recommended.

Although the recommended noise walls meet PC NAP criteria for construction, desire for the noise walls must be expressed by a majority of the property owners at the benefited residences for each wall. Walls are not always desired because they block sunlight and views, are





sometimes considered a vandalism concern, or can be considered unattractive. The affected property owners for each recommended wall are contacted to assess its desirability. Fifty-one percent of the benefited property owners must consent in order for the noise wall to be constructed.

Noise abatement for construction-related activities will involve limiting construction activities to between the identified hours as described by the Pima County Noise Code (Chapter 9.30.070).

8.0 Bibliography and References

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9.0 Glossary

ambient noise level: The noise level existing in an area before the introduction of a proposed roadway improvement project. This quantity is measured in dBA and expressed as L_{eq} ambient noise levels.

at-grade roadway: A roadway that is level with the immediate surrounding terrain.

automobiles: All vehicles with two axles and four wheels, designed primarily for passenger transportation of cargo (light trucks). Generally, the gross vehicle weight is less than 10,000 pounds.

barrier: A solid wall or earthen berm that breaks the line-of-sight between the roadway and noise receiver location, reducing the noise level at the receiver.

decibel (dB): A logarithmic unit that indicates the amount of sound energy.

decibel, A-weighted (dBA): The A-weighted decibel scale approximates the sensitivity of the human ear. The approximate threshold of hearing is 0 dBA, while the approximate threshold of pain is 140 dBA. Most suburban areas have daytime noise levels ranging from 50 to 70 dBA.

depressed roadway: A roadway that is constructed below the immediate surrounding terrain.

design year: The future year used to determine the probable traffic volume for which a highway is designed.

elevated roadway: A roadway that is constructed above the immediate surrounding terrain, either on an embankment or a structure.

existing noise levels: The noise resulting from the natural and mechanical sources and human activity usually present in a particular area.

heavy trucks: All vehicles having three or more axles and eight or more wheels that are designed for cargo transportation. Generally, the gross vehicle weight is greater than 26,400 pounds.

L_{Aeq1h}: The L_{eq} for one hour.

 L_{eq} : The equivalent steady-state, A-weighted sound level that, in a stated period of time, would contain the same acoustical energy as the time-varying sound levels during the same period.

level of service (LOS): The operating performance of a freeway, roadway, or intersection. Level of service is a qualitative description of operation based on the degree of delay and maneuverability.

light trucks: All vehicles with two axles and four wheels designed primarily for transportation of passengers and cargo. Generally, the gross vehicle weight is equal to or less than 10,000 pounds.

medium trucks: All vehicles having two axles and six wheels designed for the transportation of cargo. Generally, the gross vehicle weight is greater than 10,000 pounds but less than 26,400 pounds.





noise level reduction: The process of removing noise from an observer by the application of noise mitigation.

peak hour: The single morning or evening hour when the maximum traffic volume occurs.

receiver: The location at which noise levels are measured, modeled, and analyzed. Receivers of interest are typically residences, schools, parks, or other noise-sensitive properties.

right-of-way (**R/W**): Publicly owned land used or intended to be used for transportation and other purposes.

rubberized asphalt: This material consists of regular asphalt paving mixed with ground-up, used tires. Rubberized asphalt is generally smoother and quieter, helping to reduce tire noise.

sound level (noise level): Weighted sound level measured with a sound-level meter having metering characteristics and a frequency weighting of A, B, or C, as specified in the sound-level meter standard.

speed: The rate of movement of vehicular traffic, in miles per hour (mph).

traffic noise impacts: Impacts that occur when the predicted traffic noise equals or exceeds the noise abatement criteria levels.







Appendix A

Traffic Data







Traffic Data

Existing and projected traffic volumes were obtained from the *Final Traffic Engineering Study for La Cholla Boulevard, Ruthrauff Road to River Road,* February 2008.

Existing two-way 24-hour traffic volumes were collected in August 2007 at three locations along La Cholla Boulevard within the Study Area:

- 1. La Cholla Boulevard, between Wetmore Road and Ruthrauff Road
- 2. La Cholla Boulevard, between Ruthrauff Road and Curtis Road
- 3. La Cholla Boulevard, between Curtis Road and River Road

Existing peak-hour traffic volumes are as follows:

Table A-1. 2007 existing peak-hour traffic volumes

Location	Northbound vehicles	Southbound vehicles	
Between Wetmore Road and Ruthrauff Road	290	290	
Between Ruthrauff Road and Curtis Road	950	950	
Between Curtis Road and River Road	1,140	1,140	

Source: Kimley-Horn and Associates, Inc., Final Traffic Engineering Study for La Cholla Boulevard, Ruthrauff Road to River Road, February 2008

The future conditions were calculated based on traffic projections from the Pima Association of Governments (PAG) regional model. The PAG model is based on the *Adopted 2030 Regional Transportation Plan*, which considers conditions resulting from all future roadway projects included in the plan.

Table A-2. 2030 forecast peak-hour traffic volumes

Location	Northbound vehicles	Southbound vehicles	
Between Wetmore Road and Ruthrauff Road	440	440	
Between Ruthrauff Road and Curtis Road	1,640	1,640	
Between Curtis Road and River Road	1,760	1,760	

Source: Kimley-Horn and Associates, Inc., Final Traffic Engineering Study for La Cholla Boulevard, Ruthrauff Road to River Road, February 2008







The vehicle mix was measured in April 2007 during a 2-hour period from 9 a.m. to 11 a.m.

Table A-3.Vehicle mix

	Vehicle class type percentage			
Location	Automobiles	Medium trucks	Heavy trucks	
Between Ruthrauff Road and Curtis Road	90	5	5	
Between Curtis Road and River Road	90	5	5	

Source: Kimley-Horn and Associates, Inc., Final Traffic Engineering Study for La Cholla Boulevard, Ruthrauff Road to River Road, February 2008

The existing and future operating speeds for La Cholla Boulevard, between Ruthrauff Road and River Road, are 45 mph.



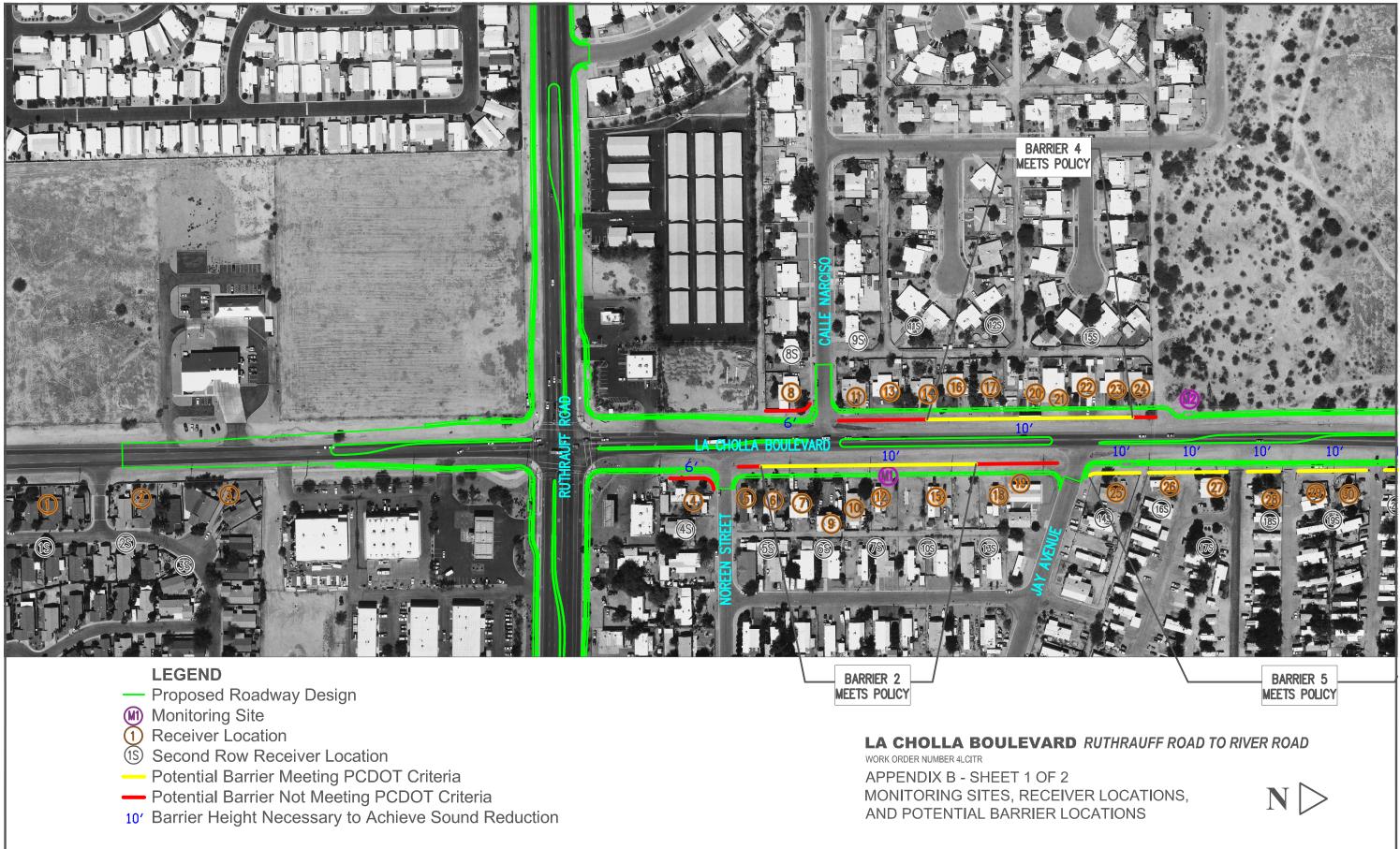




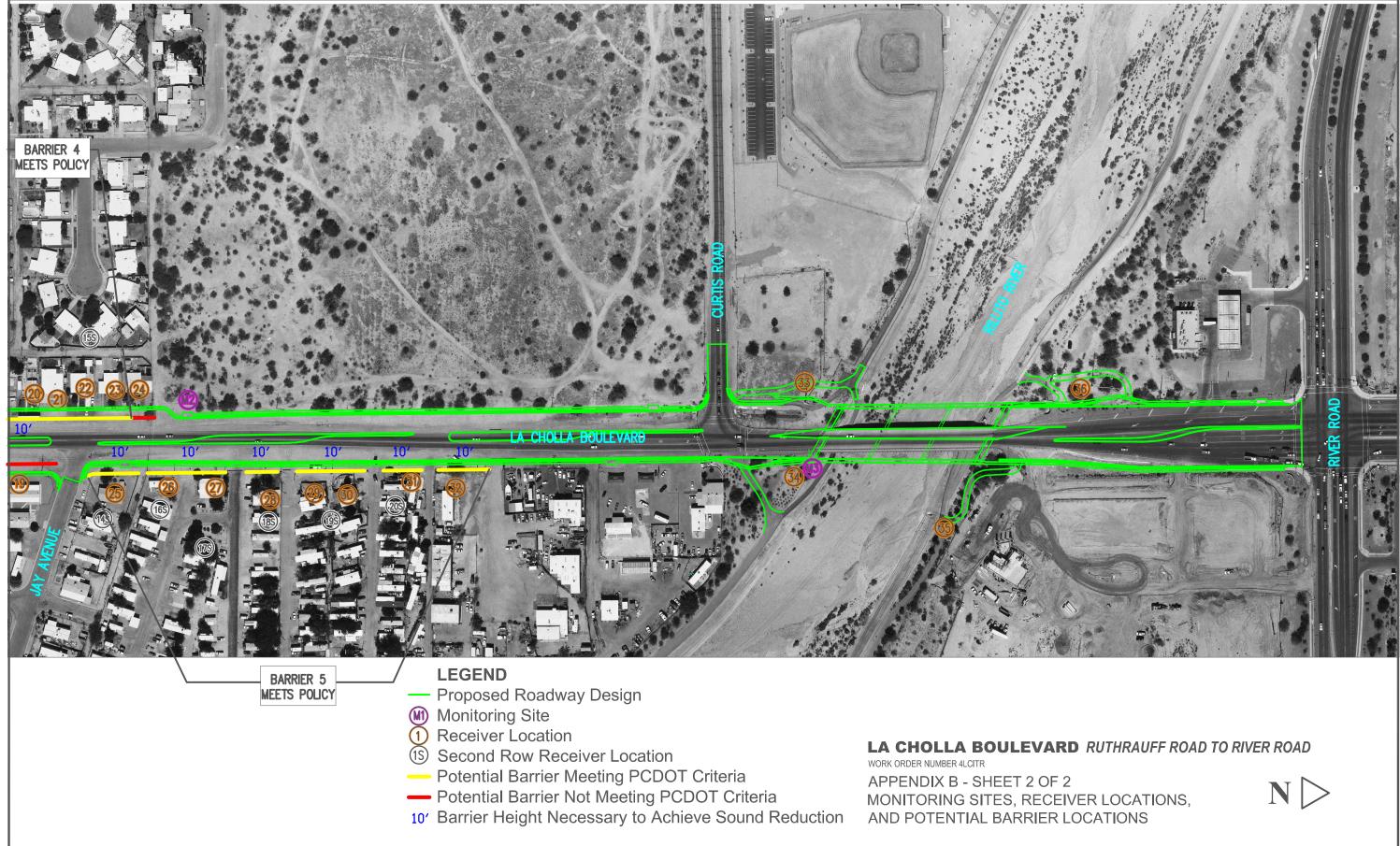
Appendix B

Monitoring Sites, Receiver Locations, and Potential Barrier Locations













Appendix C

Noise Analysis Summary

Properties Adjacent to La Cholla Boulevard



APPENDIX C – NOISE ANALYSIS SUMMARY PROPERTIES ADJACENT TO LA CHOLLA BOULEVARD

Receiver ID	Distance and Direction from Future Centerline (feet)	Property Address	Existing Condition (2007) dBA L _{Aeq1h}	Unmitigated Future Condition (2030) dBA L _{Aeq1h}	Future Condition* with RAC, no barrier (2030) dBA L _{Aeq1h}	Future Condition* with RAC and barrier (2030) dBA L _{Aeq1h}	Mitigation Considerations (For future build condition)
1	92 East	4631 N. Brightside Drive	58	62	59		None—Below PC NAP
2	92 East	4661 N. Brightside Drive	59	63	60		None—Below PC NAP
3	90 East	2088 W. Brittain Drive	59	63	60		None—Below PC NAP
4	114 East	2091 W. Noreen Street	65	70	67	62	Potential Barrier 1 (See Appendix E)
5	96 East	4830 N. La Cholla Boulevard	65	70	67	65	Potential Barrier 2 (See Appendix E)
6	102 East	4838 N. La Cholla Boulevard	65	69	66	63	Potential Barrier 2 (See Appendix E)
7	110 East	4846 N. La Cholla Boulevard	65	70	67	62	Potential Barrier 2 (See Appendix E)
8	90 West	2101 W. Calle Narciso	68	72	69	64	Potential Barrier 3 (See Appendix E)
9	145 East	4854 N. La Cholla Boulevard	63	68	65		None—Below PC NAP
10	112 East	4900 N. La Cholla Boulevard	66	70	68	61	Potential Barrier 2 (See Appendix E)
11	82 West	4901 N. La Cholla Boulevard	68	72	69	69	Potential Barrier 4 (See Appendix E)
12	98 East	4908 N. La Cholla Boulevard	66	70	68	61	Potential Barrier 2 (See Appendix E)
13	92 West	4911 N. La Cholla Boulevard	67	71	68	68	Potential Barrier 4 (See Appendix E)
14	93 West	4921 N. La Cholla Boulevard	68	72	69	66	Potential Barrier 4 (See Appendix E)
15	99 East	4924 N. La Cholla Boulevard	66	71	68	62	Potential Barrier 2 (See Appendix E)
16	97 West	4931 N. La Cholla Boulevard	67	71	68	63	Potential Barrier 4 (See Appendix E)
17	98 East	4941 N. La Cholla Boulevard	67	71	68	62	Potential Barrier 4 (See Appendix E)

APPENDIX C – NOISE ANALYSIS SUMMARY PROPERTIES ADJACENT TO LA CHOLLA BOULEVARD

Receiver ID	Distance and Direction from Future Centerline (feet)	Property Address	Existing Condition (2007) dBA L _{Aeq1h}	Unmitigated Future Condition (2030) dBA L _{Aeq1h}	Future Condition* with RAC, no barrier (2030) dBA L _{Aeq1h}	Future Condition* with RAC and barrier (2030) dBA L _{Aeq1h}	Mitigation Considerations (For future build condition)
18	98 East	4940 N. La Cholla Boulevard	66	71	68	67	Potential Barrier 2 (See Appendix E)
19	94 East	4950 N. La Cholla Boulevard	67	71	68	68	Potential Barrier 2 (See Appendix E)
20	83 West	4955 N. La Cholla Boulevard	68	72	69	62	Potential Barrier 4 (See Appendix E)
21	92 West	4961 N. La Cholla Boulevard	67	71	69	62	Potential Barrier 4 (See Appendix E)
22	98 West	4967 N. La Cholla Boulevard	67	71	68	62	Potential Barrier 4 (See Appendix E)
23	98 West	4973 N. La Cholla Boulevard	67	71	68	64	Potential Barrier 4 (See Appendix E)
24	99 West	4981 N. La Cholla Boulevard	67	71	68	66	Potential Barrier 4 (See Appendix E)
25	107 East	4968 N. Jay Avenue	66	70	67	62	Potential Barrier 5 (See Appendix E)
26	86 East	5000 N. La Cholla Boulevard	67	71	69	61	Potential Barrier 5 (See Appendix E)
27	88 East	5000 N. La Cholla Boulevard	67	71	68	63	Potential Barrier 5 (See Appendix E)
28	106 East	5000 N. La Cholla Boulevard	65	69	66	63	Potential Barrier 5 (See Appendix E)
29	119 East	5050 N. La Cholla Boulevard	66	70	67	62	Potential Barrier 5 (See Appendix E)
30	97 East	5050 N. La Cholla Boulevard	66	70	67	62	Potential Barrier 5 (See Appendix E)
31	88 East	5050 N. La Cholla Boulevard	68	71	68	63	Potential Barrier 5 (See Appendix E)
32	115 East	5100 N. La Cholla Boulevard	66	70	67	63	Potential Barrier 5 (See Appendix E)
33	108 West	Rillito River Park at La Cholla Boulevard southwest corner	66	70	-	-	Receiver location is not conducive to barriers
34	102 East	Rillito River Park at La Cholla Boulevard southeast corner	69	72	-	-	Receiver location is not conducive to barriers

APPENDIX C – NOISE ANALYSIS SUMMARY PROPERTIES ADJACENT TO LA CHOLLA BOULEVARD

Receiver ID	Distance and Direction from Future Centerline (feet)	Property Address	Existing Condition (2007) dBA L _{Aeq1h}	Unmitigated Future Condition (2030) dBA L _{Aeq1h}	Future Condition* with RAC, no barrier (2030) dBA L _{Aeq1h}	Future Condition* with RAC and barrier (2030) dBA L _{Aeq1h}	Mitigation Considerations (For future build condition)
35	214 East	Rillito River Park at La Cholla Boulevard northeast corner	62	67	-	-	Receiver location is not conducive to barriers
36	17 West	Rillito River Park at La Cholla Boulevard northwest corner	68	71	-	-	Receiver location is not conducive to barriers

Note: Shading indicates the noise level exceeds the Pima County Noise Abatement Procedure criterion for noise abatement. *Results reflect a 3-dBA credit for the application of rubberized asphalt concrete.





Appendix D

Noise Analysis Summary

Second Row Properties



APPENDIX D – NOISE ANALYSIS SUMMARY SECOND ROW OF PROPERTIES

Receiver ID	Distance and Dirction from Future Centerline (feet)	Property Address	Existing Condition (2007) (dBA L _{Aeq1h})	Unmitigated Future Condition (2030) dBA L _{Aeq1h}	Future Condition* with RAC, no barrier (2030) dBA L _{Aeq1h}	Future Condition* with RAC and barrier (2030) dBA L _{Aeq1h}	Mitigation Considerations (For future build condition)
1S	202 East	4630 N. Brightside Drive	53	57	54		None—Below PC NAP
25	202 East	4660 N. Brightside Drive	54	58	55		None—Below PC NAP
3S	250 East	2073 W. Brittain Drive	53	56	53		None—Below PC NAP
4S	175 East	2081 W. Noreen Street	61	66	63		None—Below PC NAP
5S	230 East	4837 N. Alicia Avenue	60	64	61		None—Below PC NAP
6S	235 East	4853 N. Alicia Avenue	60	64	61		None—Below PC NAP
7S	230 East	4909 N. Alicia Avenue	60	64	61		None—Below PC NAP
8S	170 West	2111 W. Calle Narciso	63	67	64		None—Below PC NAP
9S	220 West	2116 W. Calle Narciso	61	65	62		None—Below PC NAP
10S	235 East	4925 N. Alicia Avenue	60	64	61		None—Below PC NAP
11S	260 West	2115 W. Calle Cusco	59	63	60		None—Below PC NAP
12S	260 West	2116 W. Calle Cusco	59	63	60		None—Below PC NAP
13S	240 East	4941 N. Alicia Avenue	60	64	61		None—Below PC NAP
14S	175 East	4964 N. Jay Avenue	63	67	65		None—Below PC NAP
15S	230 West	2116 W. Calle Fortunado	60	64	61		None—Below PC NAP
16S	145 East	5000 N. La Cholla Boulevard	65	69	66	61	Potential Barrier 5 (see Appendix E)
17S	240 East	5000 N. La Cholla Boulevard	60	64	61		None—Below PC NAP

APPENDIX D - NOISE ANALYSIS SUMMARY SECOND ROW OF PROPERTIES

Receiver ID	Distance and Direction from Future Centerline (feet)	Property Address	Existing Condition (2007) (dBA L _{Aeq1h})	Unmitigated Future Condition (2030) dBA L _{Aeq1h}	Future Condition* with RAC, no barrier (2030) dBA L _{Aeq1h}	Future Condition* with RAC and barrier (2030) dBA L _{Aeq1h}	Mitigation Considerations (For future build condition)
18S	180 East	5000 N. La Cholla Boulevard	63	67	64		None—Below PC NAP
195	180 East	5050 N. La Cholla Boulevard	63	67	64		None—Below PC NAP
205	140 East	5050 N. La Cholla Boulevard	65	68	65		None—Below PC NAP

Note: Shading indicates the noise level exceeds the Pima County Noise Abatement Procedure criterion for noise abatement. *Results reflect a 3-dBA credit for the application of rubberized asphalt concrete.





Appendix E

Evaluation of Rubberized Asphalt Concrete and Noise Barriers as Mitigation



APPENDIX E EVALUATION OF RUBBERIZED ASPHALT CONCRETE AND NOISE BARRIER AS MITIGATION

Receiver	Number	2030 noise level with RAC,	2030 noise level with	Number of	Potential ba	arrier dimens	ions	Potential barrier costs	_
ID	of units	no barrier (L _{Aeq1h})	RAC, and barrier (L _{Aeq1h})	benefited units	Potential barrier ID and length	Height*	Potential barrier square footage (SF)	Total cost at \$25/SF and cost per benefited receiver	Comments
4	1	67	62	1	Potential Barrier 1 Approximately 106 feet	6 feet	639	\$15,.970 \$15,970	Does not meet minimum number of benefited receivers
5 6 7 10 12 15 18 19	10	67 66 67 68 68 68 68 68 68	65** 63** 62 61 61 62 67 ** 68**	4	Potential Barrier 2 Approximately 478 feet	10 feet	4,784	\$119,609 \$29,902	Potential Barrier 2 Meets PCDOT policy
8	1	69	64	1	Potential Barrier 3 Approximately 100 feet	6 feet	602	\$15,040 \$15,040	Does not meet minimum number of benefited receivers
11 13 14 16 17 20 21 22 23 24	10	69 68 69 68 69 69 69 68 68 68 68	$\begin{array}{c} 69^{**} \\ 68^{**} \\ 66^{**} \\ 63 \\ 62 \\ 62 \\ 62 \\ 62 \\ 64^{**} \\ 66^{**} \end{array}$	5	Potential Barrier 4 Approximately 457 feet	10 feet	4,568	\$114,202 \$22,840	Potential Barrier 4 Meets PCDOT policy
25 26 27 28 29 30 31 32 16S	9	67 69 68 66 67 67 68 67 66	62 61 63 63** 62 62 63 63** 61	7	Potential Barrier 5 Approximately 707 feet	10 feet	7,079	\$176,994 \$25,285	Potential Barrier 5 Meets PCDOT policy

Note: Gray shading indicates the barrier meets Pima County Department of Transportation criteria. * Potential barrier heights are measured from the ground surface and do not include sub-grades, footings, etc. ** Mitigation could not achieve 5-dBA reduction with maximum 10-foot-high barrier





Appendix F

Traffic Noise Model (TNM 2.5) Output Files



RESULTS: SOUND LEVELS				·			La Cholla							
HDR, Inc.							20 April 20 TNM 2.5	08						
С.В.							Calculated	l with TNM	2.5					
RESULTS: SOUND LEVELS PROJECT/CONTRACT:		La Cho	Ila											
RUN:			1 T	Conditions										
BARRIER DESIGN:			HEIGHTS	, ••••••				Average p	avement type	shall be used	d unless			
BARRER DEGIGIN.		••••						a State hig	ghway agency	v substantiate	s the us	e		
ATMOSPHERICS:		68 deg	F, 50% RH					of a differ	ent type with	approval of F	HWA.			
Receiver														
Name	No.	#DUs	Existing	No Barrier					With Barrier	,				
	1		LAeq1h	LAeq1h		Increase over	existing	Туре	Calculated	Noise Reduc	······································			
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc	Impact	LAeq1h	Calculated	Goal	Calcu minu: Goal	ulated s	
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB		
Receiver 1	20) 4	4 0.0	58.1	66	58.1	15		58.1	0.0		5	-5.0	
Receiver 2	21		3 0.0	59.3	66	59.3	15		59.3	0.0		5	-5.0	
Receiver 3	22	2 2	2 0.0	59.3	66	59.3	15		59.3	0.0		5	-5.0	
Receiver 4	23	3 -	1 0.0	65.1	66	65.1	15		65.1			5	-5.(
Receiver 5	24	1 ·	1 0.0	64.7				1	64.7			5	-5.0	
Receiver 6	25	5 .	1 0.0	64.5			5 15		64.5			5	-5.0	
Receiver 7	26	6 ·	1 0.0	65.4	66	65.4			65.4	<u> </u>		5	-5.	
Receiver 8	27	7	1 0.0	67.5	66	67.5	1		67.5			5	-5.	
Receiver 9	28	3	1 0.0	63.3		1		1	63.3			5	-5.	
Receiver 10	29		1 0.0	65.8					65.8			5	-5.0	
Receiver 11	30	D .	1 0.0	1					67.8			5	-5.0	
Receiver 12	3	.)	1 0.0		1		1		65.8			5	-5.	
Receiver 13	32		1 0.0			1		1	67.0		1	5	-5.0	
Receiver 14	3:		1 0.0					1	67.5		<u> </u>	5	-5.	
Receiver 15	34		1 0.0						66.4			5	-5.	
Receiver 16	3	-	1 0.0						66.6	<u>.</u>		5	-5.	
Receiver 17	3		1 0.0									5	-5.	
Receiver 18	3	-	1 0.0					1	66.4		<u>.</u>	5	-5.	
Receiver 19	3	-	1 0.0	-	-				67.1			5	-5.	
Receiver 20	3		1 0.0		•				67.7			5	-5.	
Receiver 21	4		1 0.0	1								5	-5.	
Receiver 22	4	-	1 0.0				1	-	67.1		. 1	5	-5.	
Receiver 23	4	2	1 0.0	66.9	9 66	66.9	9 15	S Snd Lvl	66.9	9 0.0	/	5	-5.	

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RESULTS: SOUND LEVELS							· 1	a Cholla					
Receiver 24	43	1	0.0	66.9		66	66.9	15	Snd Lvl	66.9	Q.0	5	-5.0
Receiver 25	44	1	0.0	66.0	1	66	66.0	15	Snd Lvl	66.0	0.0	5	-5.0
Receiver 26	45	1	0.0	67.3		66	67.3	15	Snd Lvl	67.3	0.0	5	-5.0
Receiver 27	46	1	0.0	66.5		66	66.5	15	Snd Lvl	66.5	0.0	5	-5.0
Receiver 28	47	1	0.0	65.2		66	65.2	15		65.2	0.0	5	-5.0
Receiver 29	48	1	0.0	65.7		66	65.7	15		65.7	0.0	5	-5.0
Receiver 30	49	1	0.0	65.8		66	65.8	15		65.8	0.0	5	-5.0
Receiver 31	50	2	0.0	67.6		66	67.6	15	Snd Lvl	67.6	0.0	5	-5.0
Receiver 32	51	1	0.0	66.3		66	66.3	15	Snd Lvl	66.3	0.0	5	-5.0
Receiver 33	52	1	0.0	65.9		66	65.9	15		65.9	0.0	5	-5.0
Receiver 34	53	1	0.0	69.1		66	69.1	15	Snd Lvl	69.1	0.0	5	-5.0
Receiver 35	54	1	0.0	62.3		66	62.3	15		62.3	0.0	5	-5.0
Receiver 36	55	1	0.0	68.0		66	68.0	15	Snd Lvl	68.0	0.0	5	-5.0
		#DUs	Noise Rec	uction							·		
Dwelling Units		<i>"</i> 200	Min	Avg	Max								
		1	dB	dB	dB								
All Selected		43	0.0	0.0)	0.0							
All Impacted		22	0.0	0.0		0.0							
All that meet NR Goal		0	0.0	0.0)	0.0							

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ESULTS: SOUND LEVELS							a Cholla						
IDR, Inc. .B.							19 April 20 TNM 2.5 Calculated		A 2.5				
RESULTS: SOUND LEVELS PROJECT/CONTRACT: RUN: BARRIER DESIGN:) Conditions	2nd Row			Average	pavement type				
TMOSPHERICS:		68 deg	F, 50% RH						rent type with				
Receiver													
lame	No.	#DUs	Existing	No Barrier					With Barrier Calculated	Noise Reduc	tion		
		1	LAeq1h	LAeq1h Calculated	Crit'n	Increase over Calculated	existing Crit'n Sub'l Inc	Type Impact	LAeq1h	Calculated	Goal	Calcu minus Goal	
			dBA	dBA	dBA	dB	dB	1	dBA	dB	dB	dB	
Receiver 1S	20	4	L 0.0	53.0	66	53.0	15	i	53.0	0.0		5	-
Receiver 2S	21					1	15	;	53.9	0.0		5	-
Receiver 3S	22					52.8	15	5	52.8	0.0	1	5	-
Receiver 4S	23			1		61.1	15	5	61.1	0.0		5	-
Receiver 5S	24		2 0.0	59.7	66	59.7	15	5	59.7	0.0		5	-
Receiver 6S	25		2 0.0	59.7	7 66	59.7	15	5	59.7	0.0		5	-
Receiver 7S	26		2 0.0	59.9	9 66	59.9			59.9	0.0	ł	5	
Receiver 8S	27			62.7	7 66	62.7	15	5	62.7	0.0	1	5	-
Receiver 9S	28	; · ·	1 0.0	61.3	3 66	61.3	8 15	5	61.3	3 0.0		5	
Receiver 10S	29		2 0.0	59.9	9 66	59.9	15	5	59.9			5	-
Receiver 11S	30) :	2 0.0	59.2			2 15	5	59.2			5	
Receiver 12S	31		2 0.0	59.2	2 66			5	59.2			5	-
Receiver 13S	32	2 :	3 0.0	59.9	1		9 15	5	59.9			5	-
Receiver 14S	33	3	1 0.0	62.9	9 60	62.9	9 15	5	62.9	.1		5	
Receiver 15S	34	i :	2 0.0	60.3	3 60	60.3	3 1:	5	60.3		1	5	-
Receiver 16S	35	5	1 0.0	64.0	6 6	64.6			64.6			5	•
Receiver 17S	36	3	2 0.0	59.9					59.9			5	
Receiver 18S	37	7	1 0.0						62.		<u> </u>	5	-
Receiver 19S	38	3	2 0.0						62.6			5	
Receiver 20S	39	9	2 0.0	64.	6 6	64.6	5 1:	5	64.0	6 0.0)	5	
Dweiling Units		# DUs		1		_							
			Min	Avg	Max dB	_							

C:\TNM25\NOISE MODEL\PROGRAM\LA CHOLLA\2nd Row Existing Conditions

RESULTS: SOUND LEVELS

All Selected	37	0.0	0.0	0.0
All Impacted	0	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	

La Cholla

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C:\TNM25\NOISE MODEL\PROGRAM\LA CHOLLA\2nd Row Existing Conditions

RESULTS: SOUND LEVELS							La Cholla						
HDR, Inc.							3 June 200	8					
С.В.							TNM 2.5						
							Calculated	with TNM	2.5			1	
RESULTS: SOUND LEVELS													
PROJECT/CONTRACT:		La Cho	lla										
RUN:		La Cho	olla, Future	- NO RAC									
BARRIER DESIGN:		INPUT	HEIGHTS					Average p	avement type	e shall be use	d unless	3	
								a State hig	ghway agency	y substantiate	es the us	se	
ATMOSPHERICS:		68 deg	g F, 50% RH					of a differ	ent type with	approval of F	HWA.		
Receiver													
Name	No.	#DUs	Existing	No Barrier					With Barrier	,			
			LAeq1h	LAeq1h		Increase over	existing	Туре	Calculated	Noise Reduc	tion		
			- -	Calculated	Crit'n	Calculated	Crit'n Sub'l Inc	Impact	LAeq1h	Calculated	Goal	Calcu minu: Goal	ulated s
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB	
Receiver 1	20) 2	4 0.0	62.2	: 66	62.2	15		62.2	0.0		5	-5.0
Receiver 2	21		3 0.0				15		63.1	0.0		5	-5.0
Receiver 3	22		2 0.0			63.2	15		63.2	0.0		5	-5.0
Receiver 4	23		1 0.0			70.2	15	Snd Lvl	70.2	2 0.0		5	-5.0
Receiver 5	24		1 0.0	69.7	66	69.7	15	Snd Lvi	69.7	0.0		5	-5.0
Receiver 6	25		1 0.0	69.3	66	69.3	15	Snd Lvi	69.3	0.0		5	-5.0
Receiver 7	26	3	1 0.0	70.1	66	70.1	15	Snd LvI	70.1	0.0		5	-5.0
Receiver 8	27	, .	1 0.0	72.1	66	72.1	15	Snd Lvl	72.1	0.0		5	-5.0
Receiver 9	28	3 .	1 0.0	67.7	66	67.7	15	Snd Lvl	67.7	0.0		5	-5.0
Receiver 10	29) ·	1 0.0	70.4	66	5 70.4	15	Snd Lvl	70.4	0.0	l	5	-5.0
Receiver 11	30) ·	1 0.0	72.1	66	5 72.1	15	Snd Lvl	72.1	0.0		5	-5.0
Receiver 12	31	1	1 0.0	70.4	66	5 70.4	15	Snd Lvl	70.4	0.0		5	-5.0
Receiver 13	32	2	1 0.0	71.3	66	71.3	15	Snd Lvl	71.3	3 0.0		5	-5.0
Receiver 14	33	3	1 0.0	71.7	66	5 71.7	15	Snd Lvl	71.7	0.0		5	-5.0
Receiver 15	34	1	1 0.0	70.8	3 66	70.8	15	Snd Lvl	70.8	3 0.0		5	-5.0
Receiver 16	35	5	1 0.0	70.8	3 66	70.8	15	Snd Lvl	70.8	3 0.0		5	-5.0
Receiver 17	36	3	1 0.0	71.1	66	5 71.1	15	Snd Lvl	71.1	0.0)	5	-5.0
Receiver 18	37	7	1 0.0	70.7	66	š 70.7	15	Snd Lvl	70.7	' 0.0		5	-5.0
Receiver 19	38	3	1 0.0	71.3	3 66	5 71.3	15	Snd Lvl	71.3	3 0.0)	5	-5.(
Receiver 20	39)	1 0.0	71.8	3 66	5 71.8	15	Snd Lvl	71.8	3 0.0)	5	-5.0
Receiver 21	4(1 0.0	71.4	66	5 71.4	15	Snd Lvl	71.4	0.0)	5	-5.0
Receiver 22	41	1	1 0.0	71.1	66	5 71.1	15	Snd Lvl	71.1	0.0)	5	-5.(
Receiver 23	42	2	1 0.0	70.9	66	3 70.9	15	Snd Lvl	70.9	0.0)	5	-5.0

C:\TNM25\NOISE MODEL\PROGRAM\LA CHOLLA\NOISE REPORT CURRENT\FUTURE NO RAC

RESULTS: SOUND LEVELS							a Cholla					
Receiver 24	43	1	0.0	70.9	66	70.9	15	Snd Lvl	70.9	0.0	5	-5.
Receiver 25	44	1	0.0	70.2	66	70.2	15	Snd Lvl	70.2	0.0	5	-5:
Receiver 26	45	1	0.0	71.4		71.4	15	Snd Lvl	71.4	0.0	5	-5.
Receiver 27	46	1	0.0	70.7	66	70.7	15	Snd Lvl	70.7	0.0	5	-5.0
Receiver 28	47	1	0.0	69.2	66	69.2	15	Snd Lvl	69.2	0.0	5	-5.0
Receiver 29	48	1	0.0	69.5	66	69.5	15	Snd Lvl	69.5	0.0	5	-5.0
Receiver 30	49	1	0.0	69.5	66	69.5	15	Snd Lvl	69.5	0.0	5	-5.9
Receiver 31	50	2	0.0	70.9	66	70.9	15	Snd Lvl	70.9	0.0	5	-5.
Receiver 32	51	1	0.0	70.0	66	70.0	15	Snd Lvl	70.0	0.0	5	-5:
Receiver 33	52	1	0.0	70.1	66	70.1	15	Snd LvI	70.1	0.0	5	-5.
Receiver 34	53	1	0.0	72.1	66	72.1	15	Snd Lvl	72.1	0.0	5	-5-
Receiver 35	54	1	0.0	67.2	66	67.2	15	Snd Lvl	67.2	0.0	5	-5.
Receiver 1S	55	4	0.0	56.8	66	56.8	15		56.8	0.0	5	-5.
Receiver 2S	56	3	0.0	57.9	66	57.9	15		57.9	0.0	5	-5.
Receiver 3S	57	1	0.0	56.0	66	56.0	15		56.0	0.0	5	-5.
Receiver 4S	58	5	0.0	65.5	66	65.5	15		65.5	0.0	5	-5.
Receiver 5S	59	2	0.0	63.6	66	63.6	15		63.6	0.0	5	-5.
Receiver 6S	60	2	0.0	63.5	66	63.5	15		63.5	0.0	5	-5.
Receiver 7S	61	2	0.0	63.8	66	63.8	15		63.8	0.0	5	-5.
Receiver 8S	62	1	0.0	67.2	66	67.2	15	Snd Lvl	67.2	0.0	5	-5.
Receiver 9S	63	1	0.0	65.3	66	65.3	15		65.3	0.0	5	-5.
Receiver 10S	64	2	0.0	63.7	66	63.7	15		63.7	0.0	5	-5.
Receiver 11S	65	2	0.0	62.9	66	62.9	15		62.9	0.0	5	-5.
Receiver 12S	66	2	0.0	62.8	66	62.8	15		62.8	0.0	5	-5.
Receiver 13S	67	3	0.0	63.8	66	63.8	15		63.8	0.0	5	-5.
Receiver 14S	68	1	0.0	67.4	66	67.4	15	Snd Lvi	67.4	0.0	5	-5.
Receiver 15S	69	2	0.0	64.1	66	64.1	15	·	64.1	0.0	5	-5.
Receiver 16S	70	1	0.0	68.7	66	68.7	15	Snd Lvl	68.7	0.0	5	-5.
Receiver 17S	71	2	0.0	63.7	66	63.7	15		63.7	0.0	5	-5.
Receiver 18S	72	1	0.0	66.6	66	66.6	15	Snd Lvl	66.6	0.0	5	-5.
Receiver 19S	73	2	0.0	66.7	66	66.7	15	Snd Lvl	66.7	0.0	5	-5.
Receiver 20S	74	2		68.2	66	68.2	15	Snd Lvl	68.2	0.0	5	-5.
Receiver 36	76	1	0.0	70.9	66	70.9	15	Snd Lvl	70.9	0.0	5	-5.
Dwelling Units		# DUs	Noise Red	luction	····							
Dweinig ones		# D00	Min	Avg	Max							
			dB	dB	dB							
All Selected			ļ		L							
All Impacted		42										
All that meet NR Goal												

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RESULTS: SOUND LEVELS						• .	La Cholla	·					<u> </u>
HDR, Inc.							3 June 201	08					
С.В.							TNM 2.5						
							Calculated	l with TNM	2.5				
RESULTS: SOUND LEVELS												·	
PROJECT/CONTRACT:		La Cho	lla										
RUN:		La Cho	lla, Future	RAC									
BARRIER DESIGN: INPUT HEIGHTS								Average p	avement type	e shall be use	d unles	s	
								a State hi	ghway agency	y substantiate	es the u	se	
ATMOSPHERICS:		68 deg	g F, 50% RH					of a differ	ent type with	approval of F	HWA.		
Receiver		-											
Name	No.	#DUs	Existing	No Barrier					With Barrier				
			LAeq1h	LAeq1h		Increase over	existing	Туре	Calculated	Noise Reduc	tion		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc	Impact	LAeq1h	Calculated	Goal	Calcu minus Goal	ulated S
		-	dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB	
Receiver 1	20) 4	1 0.0	59.2	66	59.2	15		59.2	2.0.0)	5	-5.0
Receiver 2	21	1 3	3 0.0	60.1	66	60.1	15		60.1	0.0)	5	-5.0
Receiver 3	22	2 2	2 0.0	60.2	66	60.2	15		60.2	2.0.0)	5	-5.0
Receiver 4	23	3 -	1 0.0	67.2	66	67.2	15	Snd Lvl	67.2	2 0.0)	5	-5.0
Receiver 5	24	1 -	1 0.0	66.7	66	66.7	15	Snd Lvl	66.7	0.0)	5	-5.0
Receiver 6	25	5 '	1 0.0	66.3	66	66.3	15	Snd Lvl	66.3)	5	-5.0
Receiver 7	26	,	1 0.0	67.1	66	67.1	15	Snd Lvl	67.1	0.0)	5	-5.0
Receiver 8	27	7 -	1 0.0	69.1	66	69.1			69.1			5	-5.0
Receiver 9	28		1 0.0	64.7	66	64.7			64.7			5	-5.0
Receiver 10	29	ə ·	1 0.0	67.4	66	67.4			67.4			5	-5.0
Receiver 11	30) ·	1 0.0	69.2	. 66	69.2			69.2			5	-5.0
Receiver 12	31	1 -	1 0.0	67.4	- 66	67.4			67.4			5	-5.0
Receiver 13	32		1 0.0						68.3			5	-5.0
Receiver 14	33		1 0.0						68.7			5	-5.0
Receiver 15	34		1 0.0				<u></u>		67.8			5	-5.0
Receiver 16	35		1 0.0						67.9		1	5	-5.0
Receiver 17	36		1 0.0						68.2			5	-5.0
Receiver 18	37		1 0.0						67.8			5	-5.0
Receiver 19	38		1 0.0						68.4			5	-5.(
Receiver 20	39		1 0.0						68.8			5	-5.0
Receiver 21	4(1 0.0						68.5			5	-5.0
Receiver 22	41		1 0.0						68.1			5	-5.(
Receiver 23	42	2 '	1 0.0	67.9	9 66	67.9	15	Snd Lvl	67.9	0.0)	5	-5.0

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RESULTS: SOUND LEVELS						1	La Cholla					
Receiver 24	43	1	0.0	67.9	66	67.9	15	Snd Lvl	67.9	0.0	5	-5.0
Receiver 25	44	1	0.0	67.2	66	67.2	15	Snd Lvl	67.2	0.0	5	-5.0
Receiver 26	45	1	0.0	68.4	66	68.4	15	Snd Lvl	68.4	0.0	5	-5.0
Receiver 27	46	1	0.0	67.7	66	67.7	15	Snd Lvl	67.7	0.0	5	-5.0
Receiver 28	47	1	0.0	66.2	66	66.2	15	Snd Lvl	66.2	0.0	5	-5.0
Receiver 29	48	1	0.0	66.5	66	66.5	15	Snd Lvl	66.5	0.0	5	-5.0
Receiver 30	49	1	0.0	66.5	66	66.5	15	Snd Lvl	66.5	0.0	5	-5.0
Receiver 31	50	2	0.0	68.0	66	68.0	15		68.0	0.0	5	-5.0
Receiver 32	51	1	0.0	67.1	66	67.1	15	Snd Lvl	67.1	0.0	5	-5.0
Receiver 33	52	1	0.0	68.5	66	68.5	15	Snd Lvl	68.5	0.0	5	-5.0
Receiver 34	53	1	0.0	70.2	66	70.2	1		70.2	0.0	5	-5.0
Receiver 35	54	1	0.0	66.7	66	66.7	15	Snd Lvl	66.7	0.0	5	-5.0
Receiver 1S	55	4	0.0	53.9		53.9	15		53.9	0.0	5	-5.0
Receiver 2S	56	3	0.0	55.0		55.0			55.0	0.0	5	-5.0
Receiver 3S	57	1	0.0	53.0	66	53.0			53.0	0.0	5	-5.0
Receiver 4S	58	5	0.0	62.6	66	62.6	15		62.6	0.0	5	-5.0
Receiver 5S	59	2	0.0	60.6	66	60.6	E		60.6	0.0	5	-5.0
Receiver 6S	60	2		60.5		60.5	1		60.5	0.0	5	-5.0
Receiver 7S	61	2	0.0	60.8		60.8	15		60.8	0.0	5	-5.0
Receiver 8S	62	1	0.0	64.3		64.3	15		64.3	0.0	5	-5.0
Receiver 9S	63	1	0.0	62.4		62.4	15		62.4	0.0	5	-5.0
Receiver 10S	64	2	0.0	60.8	66				60.8	0.0	5	-5.0
Receiver 11S	65	2		59.9	(59.9	0.0	5	-5.0
Receiver 12S	66			59.9					59.9	0.0	5	-5.0
Receiver 13S	67	3	0.0	60.8					60.8	0.0	5	-5.0
Receiver 14S	68			64.4				1	64.4	0.0	5	-5.0
Receiver 15S	69		0.0	61.2					61.2	0.0	5	-5.0
Receiver 16S	70	1	0.0	65.7					65.7	0.0	5	-5.0
Receiver 17S	71	2		60.8					60.8	0.0	5	-5.0
Receiver 18S	72		0.0						63.7	0.0	5	-5.0
Receiver 19S	73			63.8					63.8	0.0	5	-5.0
Receiver 20S	74			65.3				1	65.3	0.0	5	-5.0
Receiver 36	76	1	0.0	68.7	66	68.7	15	Snd Lvl	68.7	0.0	5	-5.0
Dwelling Units		#DUs	Noise Red	duction								I
			Min	Avg	Max							
			dB	dB	dB							ľ
All Selected		84	0.0	0.0	0.0	1						
All Impacted		33	0.0	0.0	0.0	1						
All that meet NR Goal		0	0.0	0.0	0.0							

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RESULTS: SOUND LEVELS							La Cholla						
HDR, Inc. C.B.							3 June 200 TNM 2.5	08					
							Calculated	d with TNM	2.5				
RESULTS: SOUND LEVELS PROJECT/CONTRACT:		La Cho	olla						·				
RUN:		La Cho	IIIa, Propos	ed - PC Criter	ia RAC								
BARRIER DESIGN:		INPUT	HEIGHTS						avement type				
									ghway agency			se	
ATMOSPHERICS:		_ 68 deg	j F, 50% RH					of a differ	ent type with	approval of F	HWA.		
Receiver	· · · · · ·								:				
Name	No.	#DUs	Existing	No Barrier					With Barrier				
			LAeq1h	LAeq1h		Increase over	. –	Туре	Calculated	Noise Reduc	tion		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc	Impact	LAeq1h	Calculated	Goal	Calcu minu: Goal	ulated s
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB	
Receiver 1	20) 4	F 0.0	0.0	66	0.0	15	inactive	0.0	0.0)	5	0
Receiver 2	21	:	3 0.0	0.0	66	0.0	15	inactive	0.0	0.0)	5	Ċ
Receiver 3	22	2 2	2 0.0	0.0	66	0.0	15	inactive	0.0	0.0		5	C
Receiver 4	23	3	0.0	67.4	66	67.4	15	Snd Lvl	62.2	5.2		5	0
Receiver 5	24	-	0.0	66.8	66	66.8	15	Snd Lvl	65.1			5	-3
Receiver 6	25	i ·	0.0	66.4	66	66.4	15	Snd Lvl	62.9	3.5	i	5	-1
Receiver 7	26	š -	I 0.0	67.2	66	67.2	15	Snd Lvl	61.7	5.6	i	5	C
Receiver 8	27	•	I 0.0	69.3	66	69.3			64.4			5	-0
Receiver 9	28	1	0.0	64.9	66	64.9	15		59.6			5	Ó
Receiver 10	29) -	I 0.0	67.5	66	67.5	15	Snd Lvl	60.7	6.8	i	5	1
Receiver 11	30) ·	I 0.0	69.2	66	69.2	15	Snd Lvl	69.1	0.1		5	-4
Receiver 12	31		I 0.0	67.5	66				60.7			5	1
Receiver 13	32	1	I 0.0						67.9			5	-4
Receiver 14	33							L	66.3			5	-2
Receiver 15	34		I 0.0			· · · · · · · · · · · · · · · · · · ·			62.2			5	0
Receiver 16	35	(63.0			5	0
Receiver 17	36	1	0.0						61.8			5	1
Receiver 18	37		1 0.0						66.8			5	-4
Receiver 19	38							1	68.0			5	-4
Receiver 20	39								61.9			5	2
Receiver 21	40		0.0	68.6					61.8			5	1
Receiver 22	41		1 0.0						62.2	· · · · · · · · · · · · · · · · · · ·		5	1
Receiver 23	42	2	0.0	68.0	66	68.0	15	Snd Lvl	64.1	3.9		5	-1

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RESULTS: SOUND LEVELS							La Cholla					
Receiver 24	43	1	0.0	68.0	66	68.0	15	Snd Lvl	66.4	1.6	5	-3.4
Receiver 25	44	1	0.0	67.3	66	67.3	15	Snd Lvl	62.4	4.9	5	-0.1
Receiver 26	45	1	0.0	68.6	66	68.6	15	Snd Lvl	60.9	7.7	5	2.7
Receiver 27	46	1	0.0	67.8	66	67.8	15	Snd Lvl	62.7	5.1	5	0.1
Receiver 28	47	1	0.0	66.4	66	66.4	15	Snd Lvl	62.9	3.5	5	-1.5
Receiver 29	48	1	0.0	66.8	66	66.8	15	Snd Lvl	62.2	4.6	5	-0.4
Receiver 30	49	1	0.0	66.8	66	66.8	15		62.2	4.6	5	-0.4
Receiver 31	50	2	0.0	68.1	66	68.1		Snd Lvl	62.8	5.3	5	0.3
Receiver 32	51	1	0.0	67.2	66	67.2	15	Snd Lvl	62.6	4.6	5	-0.4
Receiver 33	52	1	0.0	68.5	66	68.5	15	Snd Lvl	68.5	0.0	5	-5.0
Receiver 34	53	1	0.0	70.2	66	70.2		Snd LvI	70.2	0.0	5	-5.0
Receiver 35	54	1	0.0	66.7	66	66.7	15	Snd Lvl	66.7	0.0	5	-5.0
Receiver 1S	55	4	0.0	0.0	66	0.0	15	inactive	0.0	0.0	5	0.0
Receiver 2S	56	3	0.0	0.0	66	0.0	15	inactive	0.0	0.0	5	0.0
Receiver 3S	57	1	0.0	0.0	66	0.0	15	inactive	0.0	0.0	5	0.0
Receiver 4S	58	5	0.0	62.6	66	62.6	15		60.4	2.2	5	-2.8
Receiver 5S	59	2	0.0	60.7	66	60.7	15		58.3	2.4	5	-2.6
Receiver 6S	60	2	0.0	60.7	66	60.7	15		57.5	3.2	5	-1.8
Receiver 7S	61	2	0.0	61.0	66	61.0	15		57.5	3.5	5	-1.5
Receiver 8S	62	1	0.0	64.4	66	64.4	15		62.8	1.6	5	-3.4
Receiver 9S	63	1	0.0	62.4	66	62.4	15		61.5	0.9	5	-4.1
Receiver 10S	64	2	0.0	60.9	66	60.9	15		58.0	2.9	5	-2.1
Receiver 11S	65	2	0.0	60.0	66	60.0	15		58.5	1.5	5	-3.5
Receiver 12S	66	2	0.0	60.0	66	60.0	15		57.5	2.5	5	-2.5
Receiver 13S	67	3	0.0	60.9	66	60.9	15		59.0	1. 9	5	-3.1
Receiver 14S	68	1	0.0	64.6	66	64.6	15		61.7	2.9	5	-2.1
Receiver 15S	69	2	0.0	61.3	66	61.3	15		58.8	2.5	5	-2.5
Receiver 16S	70	1	0.0	66.0	66	66.0	15	Snd Lvl	61.1	4.9	5	-0.1
Receiver 17S	71	2	0.0	61.0	66	61.0	,		58.2	2.8	5	-2.2
Receiver 18S	72	1	0.0	64.0	66	64.0	15		60.7	3.3	5	-1.7
Receiver 19S	73	2	0.0	64.1	66	64.1	15		60.5	3.6	5	-1.4
Receiver 20S	74	2	0.0	65.4	66	65.4	15		61.8	3.6	5	-1.4
Receiver 36	76	1	0.0	68.7	66	68.7	15	Snd Lvl	68.7	0.0	5	-5.0
Dwelling Units		# DUs	Noise Rec	duction								
			Min	Avg	Max							
			dB	dB	dB							
All Selected	1	84	0.0	3.1	7.7							
All Impacted		34	0.0	3.8								
All that meet NR Goal		15	5.0	6.0								

C:\TNM25\NOISE MODEL\PROGRAM\LA CHOLLA\NOISE REPORT CURRENT\Proposed

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Appendix G

Hazardous Materials Investigations



Phase I Environmental Site Assessment North La Cholla Boulevard West Ruthrauff Road to West River Road

Tucson, Pima County, Arizona

Prepared for: Pima County Department of Transportation

Prepared by:

HDR Engineering, Inc. 5210 East Williams Circle, Suite 530 Tucson, Arizona, 85711 HDR project number 047-059914

October 2, 2007

ONE COMPANY | Many Solutions SM

October 2, 2007

Ms. Gloria Browne Pima County Department of Transportation Environmental Compliance Division 201 North Stone Avenue, 3rd Floor Tucson, Arizona 85701

Re: Phase I Environmental Site Assessment Report Submittal North La Cholla Boulevard, West Ruthrauff Boulevard to West River Road Pima County, Arizona

Dear Ms. Gloria Browne:

We are pleased to provide you with the above-referenced *Phase I Environmental Site Assessment* (ESA) report. The attached report presents our methodology, findings, opinions, conclusions, and recommendations regarding environmental conditions at the project site.

HDR appreciates the opportunity to serve Pima County Department of Transportation (PCDOT) on this important project. If you have any questions or comments, please feel free to contact Kelly W. Kading at 602.522.4321.

Cordially,

HDR ENGINEERING, INC.

Joel P. Hennings

Joel P. Hennings Hazardous Materials Specialist JH/KWK/ls

Kellentel

Kelly W. Kading CPG CHMM Environmental Project Manager

Distribution: Addressee: five bound originals for team distribution

33 West Congress Street Suite 205 Tucson, AZ 85701-1361 Phone: 52 Fax: 52 Web: ho

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List of Acronyms

AIRS	Aerometric Information Retrieval System
AST	aboveground storage tank
ASTM	American Society for Testing and Materials
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CORRACTS	Corrective Action Report
EPA	Environmental Protection Agency
ERNS	Emergency Response Notification System
ESA	Environmental Site Assessment
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FINDS	Facility Index System
FRDS	Federal Reporting Data System
FURS	Federal Underground Injection Control
HWS Permit	Active TSD facilities
LUST	leaking underground storage tank
MINES	Mines Master Index File
NFRAP	No Further Remedial Action Planned
NPL	National Priority List
NWI	National Wetlands Inventory
RCRA	Resource Conservation and Recovery Act
RCRIS LQG	Resource Conservation and Recovery Information System Large Quantity Generators
RCRIS SQG	Resource Conservation and Recovery Information System Small Quantity Generators
RCRIS TSD	Resource Conservation and Recovery Information System Treatment, Storage, and Disposal
REC	Recognized Environmental Condition
SI	Site Inspection
Spills	Spills Database
SRP	Site Remediation Program
SWF/LF	Solid Waste Facilities/Landfill
TSCA	Toxic Substances Control Act
USGS	United States Geological Survey
UST	underground storage tank
Note: A more compl	ete acronym list is located in the FDR Report Appendix C

Note: A more complete acronym list is located in the EDR Report, Appendix C.

1.0 Executive Summary

HDR Engineering, Inc. (HDR) has conducted a Phase I Environmental Site Assessment (ESA) of North La Cholla Boulevard between West Ruthrauff Road (southern terminus of the project) and West River Road (northern terminus of the project) in unincorporated Pima County, Arizona. The roadway segment, referred to as the "project area" or the "project corridor" in this report, includes a linear corridor approximately 0.75 miles in length. Land use along North La Cholla Boulevard consists of residential and light commercial uses, specifically active service stations, a historic service station, an inactive landfill, and residential properties. According to HDR's review of historical sources, including historical aerial photographs, city telephone directories, and personal interviews, the project corridor has developed over the past 40 years as a transportation facility that serves north central Tucson. Before development, the area was scrub desert.

This Phase I ESA identifies Recognized Environmental Conditions (RECs) for the project corridor that may adversely affect roadway construction or project corridor right-of-way acquisition (if required). This ESA was conducted in general conformance with the scope and limitations of the American Society for Testing and Materials (ASTM) Practice E 1527-05. This Phase I ESA includes a summary of the site reconnaissance conducted on March 18, 2007, a review of environmental databases, a review of historical data sources, and on-site and telephone interviews.

HDR has performed this Phase I ESA in general conformance with the scope and limitations of ASTM E 1527-05 for the project corridor, defined as North La Cholla Boulevard between West Ruthrauff Road and West River Road, in unincorporated Pima County, Arizona. Any exceptions to or deletions from these ASTM practices are described later in this report. This report has revealed evidence of RECs in connection with the project corridor.

HDR has concluded that the risk of contamination within the corridor exists due to the presence of operating service stations, former service stations, and inactive landfill facilities. Implementation of *Recommendations* will depend on proposed construction and property use, and property acquisitions. Because of this conclusion, HDR makes the following recommendation:

Recommendation 1

HDR recommends further investigation in the form of a Preliminary Site Investigation (PSI). In order to determine whether residual impacts exist at sites A, B, and C. A drilling and sampling program should be implemented to verify or refute the existence of actionable concentrations of released hazardous materials. A specific and targeted analytical program should be implemented to determine the concentration of residual impacts, if present. The analytical program should focus on hazardous compounds that are specifically regulated by ADEQ.

Recommendation 2

HDR recommends further investigation in the form of a sub-surface characterization of potential landfill material. Test pits will be advanced and excavated materials will be categorized into waste types. Any potentially hazardous materials will be collected for laboratory analysis for contaminants of concern. The analytical program should focus on hazardous compounds that are specifically regulated by ADEQ.

2.0 Introduction

2.1 Purpose and Involved Parties

This Phase I ESA documents the evaluation of the project area for indications of "recognized environmental conditions." A recognized environmental condition (REC) is defined by ASTM Practice E 1527-05 as: "The presence or likely presence of any hazardous substances or petroleum products on a project site under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the project site or into the ground, groundwater, or surface water of the project site. The term includes hazardous substances or petroleum products even under conditions of storage and use in compliance with local and state laws and regulations. The term is not intended to include *de minimus* conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of regulatory governmental agencies. Conditions determined to be *de minimus* are not recognized environmental conditions."

HDR received authorization from the Pima County Department of Transportation (PCDOT) to conduct a Phase I ESA of the project corridor, defined as North La Cholla Boulevard from West Ruthrauff Road to West River Road, in unincorporated Pima County. This Phase I ESA has been prepared for PCDOT, and only PCDOT has the right to rely on the contents of this Phase I ESA.

2.2 Scope of Services, Significant Assumptions, and Limitations

The services provided for this project consisted of the following:

- Provide a description of the project area including current land uses
- Provide a general description of the topography, soils, geology, and groundwater flow direction
- Review reasonably ascertainable and reviewable regulatory information published by federal, state, local, tribal, health, and/or environmental agencies pertaining to the project area
- Review historical data sources for the project area, including aerial photographs, topographic maps, fire insurance maps, city directories, and other readily available development data
- Conduct an area reconnaissance and an environmental review—including a visual inspection of adjoining properties—with a focus on indications of hazardous substances, petroleum products, polychlorinated biphenyls (PCBs), wells, storage tanks, solid waste disposal pits and sumps, and utilities
- Interview current owners and occupants of businesses located near the project area that are likely to use hazardous materials in their operations and interview other persons with knowledge of the development history of the project area
- Prepare a written report of methods, findings, and conclusions

The goal of this scope of services is to assist the user in identifying conditions in the project area that may indicate risks regarding hazardous materials storage, disposal, or other impacts. The resulting report may qualify the user for relief from liabilities as one of three "defenses" identified in the 2002 Brownfields Amendments to the Comprehensive

Environmental Response, Compensation, and Liability Act (CERCLA) Section 9607 (All Appropriate Inquiry subsections). These three defenses include:

- 1. The "innocent landowner" defense to potential liabilities under 42 United States Code [U.S.C.] § 9601
- 2. The "contiguous project corridor owner" defense pursuant to 42 U.S.C. § 9607q
- 3. The "bona fide prospective purchaser" defense pursuant to 42 U.S.C. §9607r

Federal regulations at 40 Code of Federal Regulations [C.F.R.] Part 312, promulgated by the United States (U.S.) Environmental Protection Agency (EPA), require that liability release be based (in part) on completion of All Appropriate Inquiries (AAI) prior to purchase of a property. Those inquiries are documented by Phase I reports, or Environmental Site Assessments (ESAs). EPA has agreed that the recently developed ASTM guidance (ASTM Practice E 1527-05) specifies and interprets AAI requirements.

A user is defined by ASTM Practice E 1527-05 as the party seeking to use Practice E 1527 to complete an ESA of the project area and may include a potential purchaser of land in the project area, a potential tenant of the project area, an owner of land in the project area, a lender, or a project area manager. Investigative areas not included in the standard ASTM ESA scope include: asbestos, lead-based paint, lead in drinking water, radon or urea formaldehyde, wetland issues, regulatory compliance, cultural and historic resources, industrial hygiene, health and safety, ecological resources, endangered species, indoor air quality, and high voltage power lines. The scope of services for ESA projects also does not include the completion of soil borings, the installation of groundwater monitoring wells, or the collection of soil or groundwater samples. Likely sources of vapor intrusion, from potential on-site or off-site sources, are identified. State and national policies and standards relevant to vapor intrusion are in flux and subject to change.

HDR has made certain assumptions in preparing the scope of this assessment:

- Data gathered from public information sources (i.e., libraries or public regulatory agencies) are accurate and reliable.
- Site operations reflect site conditions relative to potential releases and no intentional concealment of environmental conditions or releases has occurred.
- Interview information is directly reported as gathered by the assessor and is limited by the accuracy of the interviewee's recollection and experience.
- Published geologic information and site observations made by the environmental professional are used to estimate likely contaminant migration pathways in the subsurface. These estimates by the environmental professional are limited in accuracy and are generally cross-referenced with existing information about similar sites and environmental releases in the area.
- Regulatory information is limited to sites discovered after the late 1980s because reliable records were not kept by regulatory agencies prior to that time frame.

Where a REC has resulted from historical uses or conditions, but apparently no longer persists at the site, the term "historical REC" is used.

The findings and conclusions presented in this report are based on the procedures described in ASTM Practice E 1527-05, informal discussions with various agencies, a review of the available literature cited in this report, conditions noted at the time of this Phase I ESA, and

HDR's interpretation of the information obtained as part of this Phase I ESA. The findings and conclusions are limited to the specific project and properties described in this report, and by the accuracy and completeness of the information provided by others.

An ESA cannot entirely eliminate uncertainty regarding the potential for RECs. Conducting this assessment is intended to reduce, but not eliminate, uncertainty regarding the potential for RECs in connection with a project area within reasonable limits of time and cost. In conducting its services, HDR used a degree of care and skill ordinarily exercised under similar circumstances by reputable members of its profession practicing in the same locality. No other warranty is made or intended. This Phase I ESA generally conforms to the level of documentation required in ASTM Practice E 1527-05. Deviations from the ASTM standard included deletion of certain records sources deemed to be inapplicable, or of limited value, to the specific needs of this client.

3.0 Site Description

3.1 **Project Area Location**

The study area includes North La Cholla Boulevard from West Ruthrauff Road to West River Road, in unincorporated Pima County, Arizona. The study area is located in Township 13 South – Range 13 East – Sections 15, 16, 21, and 22. A Project Location Map and a Site Detail Map is included as Appendix A. The Site Detail Map also includes a summary of sites identified in the ISA. Photographic documentation is provided in Appendix B.

3.2 Site and Vicinity Characteristics

The 1995 Jaynes, Arizona, United States Geological Survey (USGS) quadrangle map indicates that the project area is approximately 2262 feet above mean sea level (amsl). The topography near the site slopes to the north and northwest. The topography and geographic location suggest that shallow groundwater flows north and northwest.

3.3 Area Geology and Hydrogeology

The site is located within the Basin and Range Lowland Physiographic Province, which includes an area extending from the northwest corner of the state, southeasterly across the southern half of the state. Landforms present within the Basin and Range Province consist of predominantly northwest-southwest trending, block-faulted mountain ranges, separated by broad, gently sloping alluvial basins. The mountains in this province consist of tilted blocks of Precambrian, Paleozoic, Mesozoic, and Cenozoic rocks.

The corridor is located in the Tucson Basin. The Tucson Basin is an extensive basin containing alluvium varying up to approximately 12,000 feet in thickness. The alluvium is highly variable and ranges from sand, gravel, and cobble deposits to silts, clays and heavily cemented sandy clay. Characteristics of granular soils include high hydraulic transmisivity. The project area is bound to the north-northeast by the Santa Catalina Mountains, to the east by the Rincon Mountains, and to the west by the Tucson Mountains.

The Santa Cruz River is the principal drainage feature through the Tucson Basin. The Santa Cruz River is located approximately 1.5 miles west of the project area. The Rillito River is ephemeral and the principal drainage feature within the project area. The Rillito River is located approximately 0.5 mile north of Ruthrauff Road and ultimately drains northwesterly into the Santa Cruz River.

Groundwater flow in the project area is expected to be to the north-northwest. Local groundwater flow is heavily influenced by municipal wells that induce drawdown cones at the well. This local condition is further complicated by the sporadic nature of pumping from these wells, with variable pumping rates and durations. Depth to groundwater in the project area is approximately 125 feet bgs (USGS online).

4.0 User-Provided Information

The user of the report did not provide a property tax map, survey map, property zoning information, title abstract, or abstract report.

5.0 Records Review

5.1 Environmental Records Review

Environmental Data Resources, Inc. (EDR), was contracted by HDR to complete a database search of federal, state, and tribal environmental records for the project site. The federal and state databases searched consisted of the following:

Federal ASTM Standard

- NPL National Priority List
- Proposed NPL Proposed National Priority List
- Delisted NPL National Priority List Deletions
- CERCLIS Comprehensive Environmental Response, Compensation, and Liability
 Information System
- CERCLIS-NFRAP CERLCIS No Further Remedial Action Planned
- CORRACTS Corrective Action Report
- RCRA TSD Resource Conservation and Recovery Act Treatment, Storage, and Disposal Facilities
- RCRA Small Quantity Generators (SQG)
- RCRA Large Quantity Generators (LQG)
- Institutional Control/Engineering Controls Registries
- ERNS Emergency Response Notification System

Federal ASTM Supplemental

- NPL Recovery Federal Superfund Liens
- DOD Department of Defense Sites
- FUDS Formerly Used Defense Sites
- U.S. Brownfields Listing of Brownfields Sites
- CONSENT Superfund (CERLA) Consent Decrees
- ROD Records of Decision
- UMTRA Uranium Mill Tailing Sites
- ODI Open Dump Inventory
- SSTS Section 7 Tracking Systems

- ICIS Integrated Compliance Information System
- MINES Mines Master Index File
- HMIRS Hazardous Materials Incident Report System
- TRIS Toxic Chemical Release Inventory System
- TSCA Toxic Substances Control Act
- FTTS FIFRA, TSCA, and EPCRA Tracking Systems
- PADS PCB Activity Database System
- MLTS Material Licensing Tracking System
- FINDS Facility Index System
- RAATS RCRA Administration Action Tracking System

State ASTM Standard

- SPL State Superfund Program List
- WQARF Arizona Water Quality Assurance Revolving Fund Sites
- ZipAcids Arizona Hazardous Waste Sites
- SWF/LF Directory of Solid Waste/Landfill Facilities
- SWTIRE Solid Waste/Tire Facilities
- AOCONCERN Superfund GIS Program
- AST List of Aboveground Storage Tanks
- AZ Spills Hazardous Material Logbook
- AUL Deed or Environmental Use Restriction (DUER) Database
- VCP Voluntary Cleanup Program
- DRYCLEANERS Drycleaner Facility Listing
- AZ DOD U.S. Department of Defense Sites
- BROWNFIELDS Brownfields Tracking System
- CDL Clandestine Drug Labs Listing
- Aquifer Wastewater Treatment Facilities
- AZ AIRS Arizona Air Quality Database
- AZURITE Remediation and DUER/VEMUR Tracking System

Tribal ASTM Standard

- INDIAN RESERV Indian Reservations
- INDIAN LUST Leaking Underground Storage Tanks on Indian Land
- INDIAN UST Underground Storage Tanks on Indian Land

A computerized environmental information database search was performed for the project site by EDR on March 6, 2007. The databases searched included federal, state, local, tribal, and EDR proprietary databases as defined by ASTM E 1527-05. The results of the database search are summarized in the following table (Table 1) and paragraphs. A complete copy of the EDR environmental database report is included in Appendix C. Sites listed in Table 1 may or may not be of concern to the project. Only sites listed in Table 1 that are located adjacent to the corridor are discussed in the descriptive paragraphs.

Table 1 – Summary	of Environmental	Database Search
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Database	Description	Facilities listed	Sites of concern to the project
	Federal		
NPL	The National Priorities List (NPL) is the U.S. EPA's database of uncontrolled or abandoned hazardous waste facilities that have been listed for priority remedial actions under the Superfund program.	0	0
Delisted NPL	The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) established the criteria that the EPA uses to delete sites from the NPL.	0	0
CERCLIS/ NFRAP	The CERCLIS database is a compilation of facilities that the EPA has investigated or is currently investigating for a release or threatened release of hazardous substances pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980. No Further Remedial Action Planned (NFRAP) refers to facilities that have been removed and archived from its inventory of CERCLA sites.	4	2
RCRA CORRACTS/ TSD	The EPA maintains a database of Resource Conservation and Recovery Act (RCRA) facilities associated with treatment, storage, and disposal (TSD) of hazardous materials that are undergoing "corrective action." A "corrective action" order is issued when there has been a release of hazardous waste or constituents into the environment from a RCRA facility.	0	0
RCRA Non- CORRACTS/ TSD	The RCRA Non-CORRACTS/TSD Database is a compilation by the EPA of facilities that report storage, transportation, treatment, or disposal of hazardous waste. Unlike the RCRA CORRACTS/TSD database, the RCRA Non-CORRACTS/TSD database does not include RCRA facilities where corrective action is required.	0	0
RCRA INFO	The RCRA INFO database, maintained by the EPA, lists facilities that generate hazardous waste as part of their normal business practices. Generators are listed as large, small, or conditionally exempt. Large quantity generators (LQG) produce at least 1,000 kg/month of nonacutely hazardous waste or 1 kg/month of acutely hazardous waste. Small quantity generators (SQG) produce 100 to 1,000 kg/month of nonacutely hazardous waste. Conditionally exempt small quantity generators (CESQG) are those that generate less than 100 kg/month of nonacutely hazardous waste.	0	0
ERNS	Emergency Response Notification System (ERNS) records and stores information on reported releases of oil and hazardous substances.	0	0
HMIRS	Hazardous Materials Information Reporting System (HMIRS) contains hazardous material spill incidents reported to USDOT.	0	0
US ENG Controls	A listing of sites with engineering controls in place.	0	0
US INST Controls	A listing of sites with institutional controls in place.	0	0
PADS	PCB Activity Database System (PADS) identifies generators, transporters, commercial storers, and/or brokers and disposers of PCBs who are required to notify the EPA of such activities.	0	0

Database	Description	Facilities listed	Sites of concern to the project
RAATS	RCRA Administrative Action Tracking System (RAATS) contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA.	0	0
MLTS	MLTS is maintained by the Nuclear Regulatory Commission (NRC) and contains a list of approximately 8,100 sites that possess or use radioactive materials and are subject to NRC licensing requirements.	0	0
TRIS	Toxic Chemical Release Inventory System (TRIS) identifies facilities that release toxic chemicals to the air, water, and land in reportable quantities under SARA Title III, Section 313.	0	0
FINDS	Facility Index System/Facility Registry System (FINDS) contains both facility information and 'pointers' to other sources that contain further detail.	0	0
TSCA	Toxic Substances Control Act (TSCA) identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list.	0	0
FTTS	FIFRA/TSCA Tracking System, Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)/Toxic Substances Control Act (SCA). FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA, and EPCRA (Emergency Planning and Community Right-to-Know Act).	0	0
	State and Local		
SWF/LF State Landfill/ Historical Landfill	The Arizona Department of Environmental Quality (ADEQ) maintains a list of Solid Waste Facilities/Landfill Sites (SWF/LF), including active and inactive, permitted and nonpermitted solid waste disposal facilities.	2	2
SHWS State Hazardous Waste List	ADEQ's Superfund Programs List (SPL) is the state version of the federal CERCLIS list. Sites on the SPL list come from three sources: the Water Quality Assurance Revolving Fund (WQARF) list and potential sites WQARF list, the federal Superfund list (NPL), and Department of Defense sites that require Superfund oversight.	27	2
VCP Site Remediation Program	ADEQ's Voluntary Cleanup Program (VCP) list includes all sites currently enrolled in the ADEQ Voluntary Cleanup Program. These sites are listed by site, not by Remediation Applicant (RA), because the RA often is not involved in the cleanup action.	0	0
State LUST	Leaking Underground Storage Tanks (LUST) Site List – ADEQ provides a computer-generated database of the LUSTs within the specified area based on LUST incident reports and cleanup actions underway.	2	2
State UST	Underground Storage Tank (UST) Database – ADEQ provides a database of registered Underground Storage Tanks within the specified area. This database may also include registered Aboveground Storage Tanks (ASTs).	5	3
AZ Spills	ADEQ lists chemical spills and incidents referred to the Emergency Response Unit.	0	0
AZ AIRS	A listing of air permits and emissions information	0	0

Database	Description	Facilities listed	Sites of concern to the project
Brownfields	A brownfield site is an industrial or commercial project corridor that is abandoned, inactive, or underutilized, on which expansion or redevelopment is complicated because of the actual or perceived environmental contamination.	0	0

5.2 Summary of Listed Records of Concern to the Project

State and Local Records

LUST Sites

A review of the LUST list, as provided by EDR and dated March 6, 2007, has revealed that two LUST sites are located within the project corridor. The Family Food Store, located at 2100 West Ruthrauff Road, was listed as a former Mustang / Whiting or Giant Station # 922 (Site C). This facility is listed as having two closed LUST cases. The Circle K Store # 2700592 (Site B), located at 2080 West Ruthrauff Road, is listed as reporting a release resulting in an undefined or unknown soil contamination (open LUST).

UST Sites

A review of the UST list, as provided by EDR and dated March 6, 2007, has revealed that three UST sites are located within the project corridor. The UST sites are located at the southeast corner of West Ruthrauff Road and North La Cholla Boulevard (Site A, Chevron Food Market), the northeast corner of West Ruthrauff Road and North La Cholla Boulevard (Site B, Circle K), and at the southwest corner of West River Road and North La Cholla Boulevard (Site F, Circle K). Site F is a new facility and is located hydrologically down-gradient and approximately 300 feet west of La Cholla Boulevard. This site is not listed as a LUST case and is not expected to be impacted by the La Cholla widening project.

Solid Waste Facilities/ Landfill Sites

A review of the SWF/LF sites list, as provided by EDR and dated March 6, 2007, has revealed that two closed landfills are located within the project corridor. La Cholla #1 (Site D) is located on the west side of North La Cholla Boulevard south of the Rillito River. Site D was in operation from 1968 to 1972. La Cholla #2 (Site E) is located on the east side of North La Cholla Boulevard south of the Rillito River. Site E was in operation from 1968 to 1969. The boundaries of La Cholla #1 and La Cholla #2 are not well defined. Therefore the distance for the river and ROW are unknown. Pima county records do not indicate an estimate of aerial coverage, however they state the landfill were intermittent through the area.

State Hazardous Waste Sites

A review of SHWS sites list, as provided by EDR and dated March 6, 2007 has revealed that two SHWS are located within the project corridor (Sites A and C). This database repeats the sites listed in the UST and LUST databases.

5.3 Local Government Information

One interview was performed with a representative of ADEQ, Leonor Najera of ADEQ's Tank Programs Division. The results of this interview are included in Section 6.2.

5.4 Historical Use Information

The objective of reviewing historical use information is to develop a history of previous land uses in the vicinity of the project area and to assess these uses for potential hazardous materials impacts that may affect the project. HDR reviewed those historical sources that were readily available and reviewable and likely to provide useful information, given the time and cost constraints inherent in ESA projects.

Fire Insurance Maps

Fire insurance maps are produced by private fire insurance companies to indicate uses of the project area on specified dates. HDR requested fire insurance maps from EDR, the copyright holder for the Sanborn map collection; however, no Sanborn fire insurance map coverage exists for the project corridor.

City Directory Information

HDR obtained city telephone directory information for addresses located along the project corridor (4800 to 5400 North La Cholla Boulevard and 2000 to 2200 West Ruthrauff Road). City directories were researched by HDR at the Phoenix Public Library, Arizona Room, Special Collections. Thirteen directories were reviewed for the years between 1962 and 2006 (intervals of approximately five years). The following information was gathered for the three listed risk sites.

- Site A La Cholla Chevron Food Market, 2075 West Ruthrauff Road This site was first listed in 1992 and has been consistently listed from that date until the present.
- Site B The Circle K Store # 2700592, 2080 North Ruthrauff Road This site was first listed in 1972 and has been consistently listed from that date until the present.
- Site C The Family Food Store, 2100 West Ruthruaff Road This site is first listed as a Pasco Petro in 1982. Then the site is listed as a Whitting service station from 1987 to 2001. Next the site was listed as a Giant Express service station from 2002 to 2004. The Family Food Store is listed from 2005 to the present.
- Site D Closed West La Cholla #1– This site was not listed in the directory search. It is possible that the site did not have a phone number listed.
- Site E– Closed East La Cholla #2– This site was not listed in the directory search. It is possible that the site did not have a phone number listed.

Historical Aerial Photographs

Historical aerial photographs are valuable for the environmental assessor to review features of properties along the project corridor over a long period of time. HDR reviewed historical aerial photographs at Landiscor in Phoenix, Arizona (a private collection of aerial images for sites throughout Arizona). Historical aerial photographs were reviewed from 1963 through 2006. Coverage was available for 29 years of that 43-year span, with the longest gap in

coverage being 8 years (between 1963 and 1975). Information relating to observed features or the five listed risk sites is presented below.

1963 – Residential development was minimal, present only north of West Ruthrauff Road on the east and west sides of North La Cholla Boulevard. No commercial development was present within the project corridor. None of the identified risk sites were present.

1975 – Residential development had expanded east and west of North La Cholla Boulevard. Site B was present. Ground disturbance was present in the vicinity of Sites D and E. No site operations appeared to be active. No other commercial development had taken place. None of the other listed risk sites were present.

1982 – Residential development had begun to fill in undeveloped parcels. Site C was present. Site B was active. None of the other listed risk sites were present.

1989 – Commercial development was present on the east side of North La Cholla Boulevard south of the Rillito River. Sites A, B and C were present.

1992 – Sites A, B and C were present. Multi-family structures were present along West Ruthrauff Road, east of North La Cholla Boulevard.

1998 – Site A was paved, but no building was present. Sites B and C were present. This aerial photograph is similar to the 1992 photograph.

2002 – Sites B and C were present, Site A is similar to the 1998 photograph. Residential properties have begun to be built on the west side of North La Cholla Boulevard.

2006 – Sites A, B and C were present in their current configuration.

Historical Topographic Maps

Historical topographic maps provide an overview of the area relative to potential previous land uses. HDR reviewed historical topographic maps of the project corridor and adjoining properties for the years 1974 and 1975 (photo-revised 1995 and 1997, respectively). These maps served to verify the information gathered in the historic aerial photograph review.

5.5 Environmental Liens and Additional Information

No information regarding the chain-of-title ownership history or environmental liens recorded against the project corridor was provided by the user. Environmental lien searches were not conducted as part of the scope of work for this project.

5.6 Summary of Previous Environmental Investigations

Site B- A previous report entitled *Site Characterization Report* was prepared for the site by ATC Associates Inc. (ATC) in 2005. The report was in response to a possible release of petroleum from a UST. Borings were advanced to a maximum depth of 50 feet bgs in the vicinity of the tanks. Groundwater was not encountered. Concentrations of benzene were detected at concentration greater than the ADEQ established residential soil remediation levels (rSRL) at a depth of 15, 20, 25, 30, and 35 feet bgs in soil sample SB-1/VE-1, located approximately 50' east of La Cholla Boulevard.

Site C- A previous report entitled *Site Characterization Report, Former Mustang Station No.* 6922 was prepared for the site by Allen, Stephenson and Associates (ASA) in 2003. The

report was in response to a possible release of petroleum from an UST during the tank removal. Borings were advanced to a maximum depth of 50 feet bgs in the vicinity of the tanks. Groundwater was not encountered. No concentrations of any regulated contaminant of concern above rSRL were encountered.

ADEQ has closed this case.

6.0 Site Reconnaissance and Interviews

6.1 Site Reconnaissance

On May 18, 2007, HDR conducted a reconnaissance of the project area. Land use along North La Cholla Boulevard consists of residential and light commercial uses, and includes active service stations, a historic service station, an inactive landfill, and municipal properties.

During the site reconnaissance, the assessor searched for several indicators of potential environmental impacts to the project site. Some of these indicators include the presence of distressed vegetation, illegal disposal of household or construction waste, and the presence of pits, ponds, or lagoons. HDR did not observe any of these indicators. Various areas of *de minimus* (as defined in ASTM E1527-05) staining on paved surfaces within the project area were present, primarily in vehicle parking lots and roadways.

The topography of the project area is relatively flat. No discerning features of Sites D and E were visible.

6.2 Interviews

Site Interviews

HDR personnel met with representatives of Site A, B and C on May 18, 2007. These representatives provided HDR with limited information, and the results of those interviews are summarized below.

Site A - Mr. Christopher Nolen, Store Manager, Chevron (Valero) service station indicated that the facility operates five 12,000 gallon USTs. The site has been in operation for approximately one year. Mr. Nolen was unaware of any releases.

Site B – Mr. Bill Bunch, Corporate Environmental Manager, Circle K Corporation, Tempe, Arizona reported that the Circle K store is listed in the company database as an active UST site. He reported that the site is currently listed as a LUST case (undefined extent of release). He reported that the site is located at 2080 West Ruthrauff Road and was built in 1972.

Site C- Mr. Sam Zumot, Store Owner, Family Food Store (former Mustang Service Station) indicated that the building was constructed in 2005. Mr. Zumot was aware that the site was a former service station. He was unaware of any releases from the former tanks.

Off-Site Interviews

After the site reconnaissance was completed, HDR personnel contacted a representative of ADEQ's Tank Programs Division and requested a review of pertinent files for the UST and LUST cases identified. Ms. Leonor Najera of ADEQ's Tank Programs Division provided files and an interview opportunity.

Leonor Najera, Data Specialist for ADEQ, provided files for the listed risk sites. Site A and B were listed as active UST sites, with current tank fees paid. Site B is listed as having a documented release. Site C is listed as a closed UST.

6.3 Utilities and PCBs

HDR did not observe signs indicating subsurface utilities other than typical municipal utilities such as water, sewer, electrical, telecommunications cable, and residential gas. Pole-mounted transformers were noted in a few locations, but no large power substations or step-down transformers were noted. Tucson Electric Power (the power provider for the area) maintains a test-and-replace policy for PCB-containing transformers. Given the age of the development of the area, it is unlikely that PCB-containing transformers would be present. Additionally, no spills or hazardous materials response events were noted in the EDR report.

7.0 Data Gap Analysis

The ASTM E 1527-05 standard requires a listing of "data gaps" encountered during the investigative process that may affect the validity of the conclusions drawn by the environmental professional. The ASTM E 1527-05 standard also requires that the environmental professional estimate the relative importance of the data gaps. Generally, gaps in available data are related to the availability of historical data sources for specific sites of concern. The environmental professional uses multiple historical data sources as a method to provide coverage for data gaps. Historical information is collected on a recurring basis, and the passage of time between data sets may or may not constitute a significant gap in data coverage. For this project, the following items may constitute a data gap as defined by ASTM:

- Absence of Sanborn fire insurance maps
- Absence of aerial photography prior to 1963

The inability to obtain and review the Sanborn fire insurance maps, and the lack of aerial photography prior to 1963, do not appear to present significant data gaps because of the presence of other supporting historical information and the lack of development in the area prior to 1963.

8.0 Findings and Conclusions

HDR has conducted a Phase I ESA of the project corridor, identified as North La Cholla Boulevard between West Ruthrauff Road and West River Road, in unincorporated Pima County, Arizona. The ESA was performed in general conformance with the scope and limitations of ASTM Practice E 1527-05. Any exceptions to, or deletions from, this practice are described previously in this report.

HDR personnel observed recognized environmental conditions (RECs), as defined in ASTM Practice E 1527-05, in connection with the project corridor. The Site Detail Map indicates the location of sites that HDR considers to be moderate to high risk. HDR offers the following description of these sites and issues as follows:

 Site A – La Cholla Chevron Food Market, 2075 West Ruthrauff Road. This facility is an operating service station/convenience store with USTs. Although this facility is not currently listed as a LUST site, this type of facility is often the source of unreported/undiscovered subsurface impacts. Given the location of the UST system near the North La Cholla Boulevard right-of-way, and the relative location of the site (adjacent to North La Cholla Boulevard), HDR has ranked this site as a Moderate to High Risk site.

- Site B The Circle K Store # 2700592, 2080 West Ruthrauff Road. This facility is an operating service station/convenience store with USTs. The site is currently listed as a LUST site with an undefined release. This facility is located adjacent to North La Cholla Boulevard. It is possible that the site may be acquired. HDR has ranked this site as a High Risk site.
- Site C The Family Food Store (former Mustang / Whiting and Giant service station) 2100 West Ruthrauff Road. This facility is a historic service station with a known release of petroleum fuels to the subsurface from USTs. This site has been redeveloped as a grocery store. Although this facility is a closed LUST site, this type of facility is often the source of unreported/undiscovered subsurface impacts. This facility is located adjacent to North La Cholla Boulevard. HDR has ranked this site as a **High Risk site**.
- Site D Closed West La Cholla #1 landfill, located west of North La Cholla Boulevard, south of the Rillito River. This site was in operation from 1968 to 1972. It is possible the eastern boundary of the closed landfill may encroach on current rightof-way, HDR has ranked this site as a **Moderate to High Risk site**.
- Site E Closed East La Cholla #2 landfill, located east of North La Cholla Boulevard, south of the Rillito River. This site was in operation from 1968 to 1969. It is possible the western boundary of the closed landfill may encroach on current right-of-way, HDR has ranked this site as a Moderate to High Risk site.

9.0 Recommendations

Recommendations included in this report have been developed through the investigative procedures described in the *Scope of Services, Significant Assumptions, and Limitations* section of this report. These findings should be reviewed within the context of the limitations provided in the *Limitations* section. Based on the location and specific details of the identified risk sites, HDR has "recognized environmental conditions" (RECs) on the project corridor. This conclusion has led to the inclusion of the following statement as required by ASTM E 1527-05:

HDR has performed this Phase I ESA in general conformance with the scope and limitations of ASTM E 1527-05 for the project corridor, defined as North La Cholla Boulevard between West Ruthrauff Road and West River Road, in unincorporated Pima County, Arizona. Any exceptions to or deletions from these ASTM practices are described later in this report. This report has revealed evidence of RECs in connection with the project corridor.

HDR has concluded that the risk of contamination within the corridor exists due to the presence of operating service stations, former service stations, and inactive landfill facilities. Implementation of *Recommendations* will depend on proposed construction and property use, and property acquisitions. Because of this conclusion, HDR makes the following recommendations:

Recommendation 1

HDR recommends further investigation in the form of a Preliminary Site Investigation (PSI). In order to determine whether residual impacts exist at sites A, B, and C. A drilling and sampling program should be implemented to verify or refute the existence of actionable concentrations of released hazardous materials. A specific and targeted analytical program should be implemented to determine the concentration of residual impacts, if present. The

analytical program should focus on hazardous compounds that are specifically regulated by ADEQ.

Recommendation 2

HDR recommends further investigation in the form of a sub-surface characterization of potential landfill material. Test pits will be advanced and excavated materials will be categorized into waste types. Any potentially hazardous materials will be collected for laboratory analysis for contaminants of concern. The analytical program should focus on hazardous compounds that are specifically regulated by ADEQ.

10.0 Qualifications of Environmental Professionals

10.1 Signatures and Qualifications

We declare that, to the best of our professional knowledge and belief, we meet the definition of environmental professional as defined in Section 312.10 of 42 Code of Federal Regulations [C.F.R.] Part 312. This Phase I ESA was conducted under the supervision of a gualified environmental professional.

We have the specific qualifications based on education, training, and experience to assess a *property* of the nature, history, and setting of the subject *property*. We have developed and preformed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

The preceding report has been prepared in general conformance with standard industry practice for performance of Environmental Site Assessments and includes the applicable portions of the investigation procedures codified in ASTM E 1527-05, *Standard Practice for Environmental Site Assessments: Environmental Site Assessment Process.* The end user of this report may rely on the contents, findings, and conclusions to be accurate within the limitations stated in this report and in the ASTM standard. The report also complies with specific requirements supplied by the client.

Joel P. Hennings Hazardous Materials Specialist HDR Engineering, Inc.

Kelly W Rading CPG CHMM Environmental Project Manager HDR Engineering, Inc.

Qualifications of Environmental Professionals

This Phase I ESA was performed by the following HDR personnel.

Mr. Joel P. Hennings, HDR's qualified environmental professional, as defined by ASTM Practice E 1527-05, has more than six years of experience in assessment and remediation of impacted properties and compliance with environmental regulations. He has a B.S. in Environmental Sciences from the University of Nebraska. He specializes in forensic investigation of hazardous materials impacted properties for federal, state, and municipal agencies, as well as commercial clients. His experience covers assessment of more than 150 properties ranging from agricultural land to federal nuclear testing sites. He is knowledgeable of federal, state, and local environmental regulations and standards.

Qualifications of QA/QC Review Professionals

Reviews for quality assurance and quality control were performed by the following HDR personnel: Scott Stapp, René Tanner and Kelly Kading. Kelly Kading provided technical peer review for the report.

Mr. Kelly W. Kading, CPG CHMM, HDR's qualified environmental professional, as defined by ASTM Practice E 1527-05, has more than 19 years of experience in the assessment and remediation of impacted properties and compliance with environmental regulations. He has a B.S. in Geology from Colorado State University and is a Certified Professional Geologist (#9173), and a Certified Hazardous Materials Manager (#1995). Mr. Kading specializes in the forensic investigation of hazardous materials-impacted properties for municipal and state agencies, as well as for commercial clients. His experience covers the assessment of more than 2,500 properties, ranging from agricultural land to multigenerational industrial properties in 32 states and 2 foreign countries. He is highly knowledgeable of federal, state, and local environmental regulations and standards and has served on the National Board of Directors of the Academy of Certified Hazardous Materials Managers.

11.0 References

- Arizona Department of Environmental Quality, 2007. Tank Programs Division, Department Web site, http://www.azdeq.gov/environ/ust/index.html.
- ASTM Practice E 1527-05, 2005. Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.
- Environmental Data Resources, Inc., Report, 2007. North La Cholla Blvd, River Rd. to Ruthrauff ISA, Tucson, AZ 85705. The EDR DataMap Corridor Study, Inquiry Number 1871325.1s. March 6, 2007.

Interview, May 2007. Bill Bunch, Circle K Corporate Environmental Manager.

Interview, May 2007. Leonor Najera, ADEQ Tank Programs Division.

- Site Characterization Report, August 2003. Allen, Stephenson and Associates. Former Mustang Station No. 6922, 2100 West Ruthrauff Road.
- Site Characterization Report, June 2005. ATC and Associates. *Circle K Store No. 00592, 2080 West Ruthrauff Road.*

Appendix A

Figures

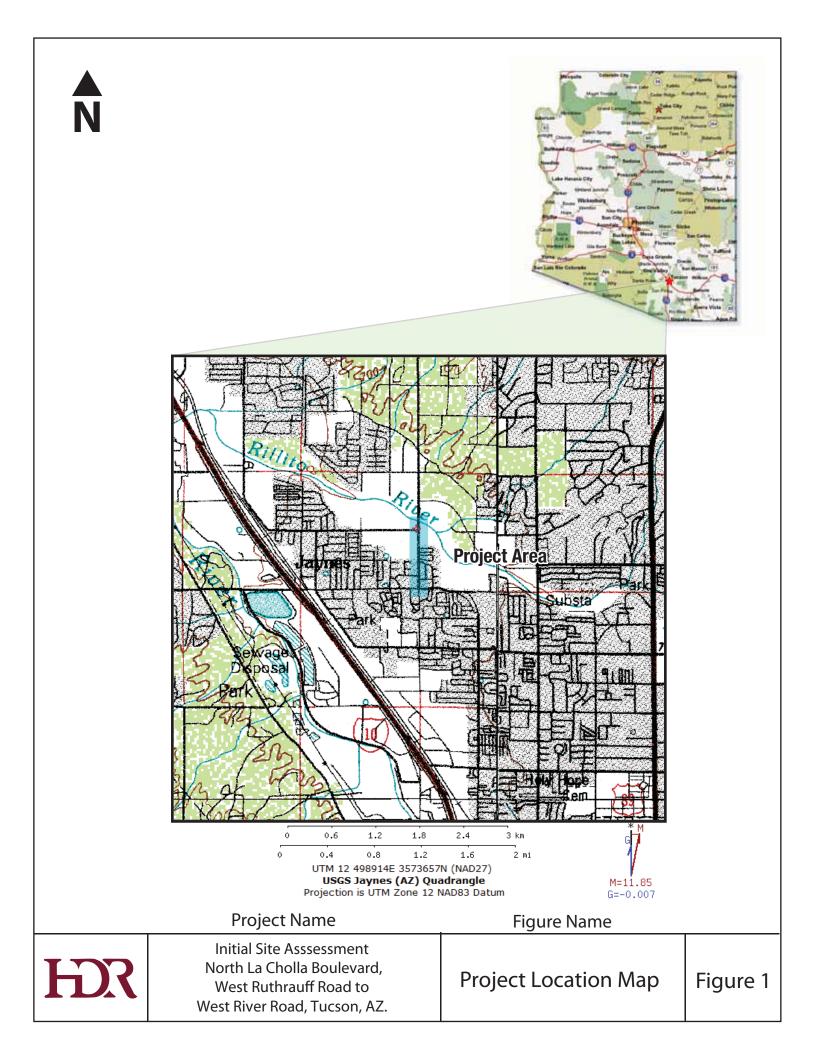


	Table 2	- ISA DATA SUM	MARY				
	Map Code (1)	Site Name/Former Name ⁽²⁾	Address (3)	Site Operations Key site use relative to hazmat issues ⁽⁴⁾	Data Source (5)	Impact On Site L/M/H ⁽⁶⁾	Impact Off Site
	A	La Cholla Chevron Food Market	2075 West Ruthrauff Road	CSS, no violation listed	R,I,D, H	Н	М
N	В	Circle K Store # 2700592	2080 West Ruthrauff Road	CSS, LUST (reported undefined release)	R,I,D, H	н	Н
	С	Family Food Store	2180 West Ruthrauff Road	HSS, LUST case closed	R,I,D, H	н	н
	D	Closed West La Cholla #1	West side of North La Cholla and south of the Rillito River	Closed landfill, eastern edge of landfill may impact right-of-way	R,D, H	н	м
	E	Closed East La Cholla #2	East side of North La Cholla and south of the Rillito River	Closed landfill, eastern edge of landfill may impact right-of-way	R,D, H	н	м
	F	Circle K Store #2706470	5365 North La Cholla	CSS, no violation listed	R, I, D	н	L
W River Rd	 (3) Sit (4) De Ur (5) Inc an (6) Ris 	nderground Storage dicates primary info id H = Historical Do sk of potential impact	ed site operations / Tank) prmation sources ocumentation for an actionable rele	/ key site use relative to hazmat is for listing: R = Reconnaissance, ease on-site, Low / Medium / High ease that have migrated off-site, Low	D = Datab	ase, I=Int	-
W Curtis Rd				Arr eleno n	WR	toller Coast	ter Rd
D E B							
N Casas Serenas Dr N Casas Serenas Dr Sullinger Ave Mathews Ave osciared Brud M.La	N Alicia Ave	er Valley Loop	Pinter of the second se			omona Ave	· · · · · · · · · · · · · · · · · · ·
W Ruthrauff Rd	een St	W Ruthra	Form	W Dairy P			
N Kai Budo		W Katie Ln W Brittain D	Luna trey Dr	N Romero Rd of FC	a Maria		Ruth St

Project Name



Initial Site Asssessment North La Cholla Boulevard, West Ruthrauff Road to West River Road, Tucson, AZ. Figure Name

Site Detail Map

Figure 2

Appendix B

Site Photographs



Photo 1 –La Cholla Chevron Food Market (Site A), view to the south.



Photo 2 – Circle K Store # 2700592 (Site B), view to the north.



Photo 3 – The Family Food Store (Site C), view to the west.



Photo 4 – Closed West La Cholla #1 (Site D), view to the west.

October 2007

Initial Site Assessment La Cholla Boulevard



Photo 5 – Vicinity of the Closed East La Cholla #2 (Site E), view to the south.



Photo 6 – Overview of topography, view to the southeast.



Photo 7 – Circle K Store at the southwest corner of West River Road and North La Cholla Boulevard, view to the northwest.



Photo 8 – Southeast corner of West River Road and La Cholla Boulevard, view to the northeast.



Photo 9 – La Cholla Boulevard, bridge over the Rillito River, view to the southwest.



Photo 10 – Rillito River at La Cholla Boulevard, view to the east.



Photo 11 – La Cholla Boulevard and Curtis Road intersection, view to the east.



Photo 12 – La Cholla Boulevard and Curtis Road intersection, view to the southeast.



Photo 13 – La Cholla Boulevard, view to the north.



Photo 14 – La Cholla Boulevard, view to the south.



Photo 15 – Southeast corner of the La Cholla Boulevard and Ruthrauff Road intersection, view to the north.



Photo 16 – Northeast corner of the La Cholla Boulevard and Ruthrauff Road intersection, view to the south.

Appendix C

EDR Information

The EDR Radius MapTM **Report**

N. La Cholla Blvd. River Road/N. La Cholla Blvd. Tucson, AZ 85705

Inquiry Number: 1871325.1s

March 06, 2007

The Standard in Environmental Risk Management Information

EDR[®] Environmental

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GEOCHECK ADDENDUM

GeoCheck - Not Requested

Thank you for your business. Please contact EDR at 1-800-352-0050 with any questions or comments.

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A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

RIVER ROAD/N. LA CHOLLA BLVD. TUCSON, AZ 85705

COORDINATES

Latitude (North):	32.299800 - 32° 17' 59.3''
Longitude (West):	111.012000 - 111° 0' 43.2"
Universal Tranverse Mercator:	Zone 12
UTM X (Meters):	498870.2
UTM Y (Meters):	3573478.5
Elevation:	2262 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	32111-C1 JAYNES, AZ
Most Recent Revision:	1995
East Map:	32110-C8 TUCSON NORTH, AZ
Most Recent Revision:	1995

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

FEDERAL RECORDS

NPL	National Priority List
Proposed NPL	Proposed National Priority List Sites
Delisted NPL	National Priority List Deletions
NPL RECOVERY	Federal Superfund Liens
CORRACTS	Corrective Action Report
RCRA-TSDF	Resource Conservation and Recovery Act Information
	Resource Conservation and Recovery Act Information

Resource Conservation and Recovery Act Information
Emergency Response Notification System
- Hazardous Materials Information Reporting System
. Engineering Controls Sites List
_ Sites with Institutional Controls
Department of Defense Sites
Formerly Used Defense Sites
_ A Listing of Brownfields Sites
Superfund (CERCLA) Consent Decrees
Records Of Decision
Uranium Mill Tailings Sites
Open Dump Inventory
Toxic Chemical Release Inventory System
Toxic Substances Control Act
FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, &
Rodenticide Act)/TSCA (Toxic Substances Control Act)
Section 7 Tracking Systems
Integrated Compliance Information System
Radiation Information Database
Clandestine Drug Labs
Land Use Control Information System
PCB Activity Database System
Material Licensing Tracking System
Mines Master Index File
. Facility Index System/Facility Registry System
. RCRA Administrative Action Tracking System

STATE AND LOCAL RECORDS

SPL AZ WQARF SWTIRE	Water Quality Assurance Revolving Fund Sites
AOCONCERN	
	Underground Storage Tank Listing
	List of Aboveground Storage Tanks
AZ MANIFEST	
AZ Spills	Hazardous Material Logbook
AUL	
VCP	Voluntary Remediation Program Sites
DRYCLEANERS	Drycleaner Facility Listing
AZ DOD	Department of Defense Sites
BROWNFIELDS	Brownfields Tracking System
CDL	Clandestine Drug Labs
Aquifer	Waste Water Treatment Facilities
WWFAC	Waste Water Treatment Facilities
Dry Wells	Drywell Registration
AZ AIRS	
AZURITE	. Remediation and DEUR/VEMUR Tracking System

TRIBAL RECORDS

INDIAN RESERV	Indian Reservations
INDIAN LUST	_ Leaking Underground Storage Tanks on Indian Land
INDIAN UST	. Underground Storage Tanks on Indian Land

EDR PROPRIETARY RECORDS

Manufactured Gas Plants ... EDR Proprietary Manufactured Gas Plants

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property. Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in **bold italics** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

FEDERAL RECORDS

CERCLIS: The Comprehensive Environmental Response, Compensation and Liability Information System contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

A review of the CERCLIS list, as provided by EDR, and dated 11/28/2006 has revealed that there is 1 CERCLIS site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Dist / Dir Map ID	Page
AERO RENTAL, INC.	2425 W. CURTIS RD.	1/4 - 1/2 WNW 5	8

CERCLIS-NFRAP: Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

A review of the CERC-NFRAP list, as provided by EDR, and dated 12/20/2006 has revealed that there are 3 CERC-NFRAP sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
PIMA PAVING, INC.	5180 N. LA CHOLLA BLVD.	0 - 1/8 N	A1	6
WHITING STATION	2100 W. RUTHRAUFF RD.	1/4 - 1/2S	B9	11
LA CHOLLA CHEVRON FOOD MARKET	2075 W. RUTHRAUFF RD.	1/4 - 1/2S	B10	12

STATE AND LOCAL RECORDS

SHWS: The State Hazardous Waste Sites records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. The data come from the Department of Environmental Quality's ZipAcids database.

A review of the SHWS list, as provided by EDR, and dated 01/03/2000 has revealed that there are 27 SHWS sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID Page	_
PIMA PAVING, INC.	5180 N. LA CHOLLA BLVD	0 - 1/8 N	A2 6	
WHITING STATION #138	2100 W. RUTHRAUFF		B7 10	
LA CHOLLA CHEVRON FOOD MART	2075 W. RUTHRAUFF RD.		B11 12	
AGM	4620 SULLINGER RD.		12 13	
VALPAR INTERNATIONAL CORP.	2450 W. RUTHRAUFF #180	1/2 - 1 SW	13 13	
RYDER TRUCK RENTAL CO.	1717 W. RILLITO ST.	1/2 - 1 SE ⁻	16 15	
ANDERSON METAL FABRICATING	2107 WEST WETMORE ROAD	1/2 - 1 S 2	23 18	
THERMAL ENGINEERING	2250 W. WETMORE	1/2 - 1 SSW 2	25 18	
PREMDOR WEST	2300 W. WETMORE #200	1/2 - 1 SSW 2	27 19	
BOB'S MATERIAL SUPPLY	2341 W. WETMORE	1/2 - 1 SSW 2	28 20	
AZ PIPELINE	2402 W. WETMORE	1/2 - 1 SSW 3	30 20	
Lower Elevation	Address	Dist / Dir	Map ID Page	_
AERO RENTAL, INC.	2425 W. CURTIS RD.	1/4 - 1/2 WNW :	5 8	
RAY KIDD TOWING SVC.	2530 W. CURTIS RD.	1/2 - 1 W [·]	14 13	
PRECISION PLATING INC.	2557 W. VIOLET AVE.	1/2 - 1 SW	15 14	
BUMPER-TO-BUMPER	2545 W. ZINNIA ST.	-	C17 15	
BOB'S CUSTOM ROOFING	2560 W ZINNIA AVE		C18 15	
AZ DRY MIXED MATERIALS	2565 W. ZINNIA ST.		C19 16	
QUALITY PAVING & UTILITY CO.	2450 W. POPPY RD.		D20 17	
RACE CAR CO.	2450 W. POPPY AVE.		D21 17	
VROMAN'S AUTO BODY	2729 W. RUTHRAUFF	1/2 - 1 WSW 2		
FOAM EXPERT ROOFING	2534 W. POPPY		E24 18	
RALPH HAYS ROOFING CO INC	2550 W POPPY AVE		E26 19	
PARSONS STEEL CO.	4580 N. HIGHWAY DR.		29 20	
BONITA STEEL	2439 W. WETMORE	1/2 - 1 SSW 3		
A.A. MCDANIEL WELL & MACHINE C	2838 W. RUTHRAUFF RD.	1/2 - 1 WSW I		
AMERICAN BODY & PAINT	4419 N. HIGHWAY DR.		33 21	
GILBERT PUMP OF TUCSON	2840 W RUTHRAUFF RD	1/2 - 1 WSW	F34 22	

SWF/LF: The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the Department of Environmental Quality's Municipal Solid Waste Landfills.../Closed Solid Waste Landfills...database.

A review of the SWF/LF list, as provided by EDR, and dated 08/26/2004 has revealed that there are 2 SWF/LF sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Dist / Dir Map ID	Page
PIMA COUNTY - LA CHOLLA #2	WEST SIDE OF LA CHOLLA	1/8 - 1/4NNE 3	7
LA CHOLLA #1	EAST SIDE OF LA CHOLLA	1/8 - 1/4WNW 4	7

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Department of Environmental Quality's LUST File Listing by Zip Code.

A review of the LUST list, as provided by EDR, and dated 05/01/2005 has revealed that there are 2 LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
CIRCLE K STORE #2700592 Date Closed: / /	2080 N RUTHRAUFF	1/4 - 1/2 S	B 6	9
GIANT #922 Date Closed: 09/14/98 Date Closed: 11/07/03	2100 W RUTHRAUFF RD	1/4 - 1/2 S	B 8	10

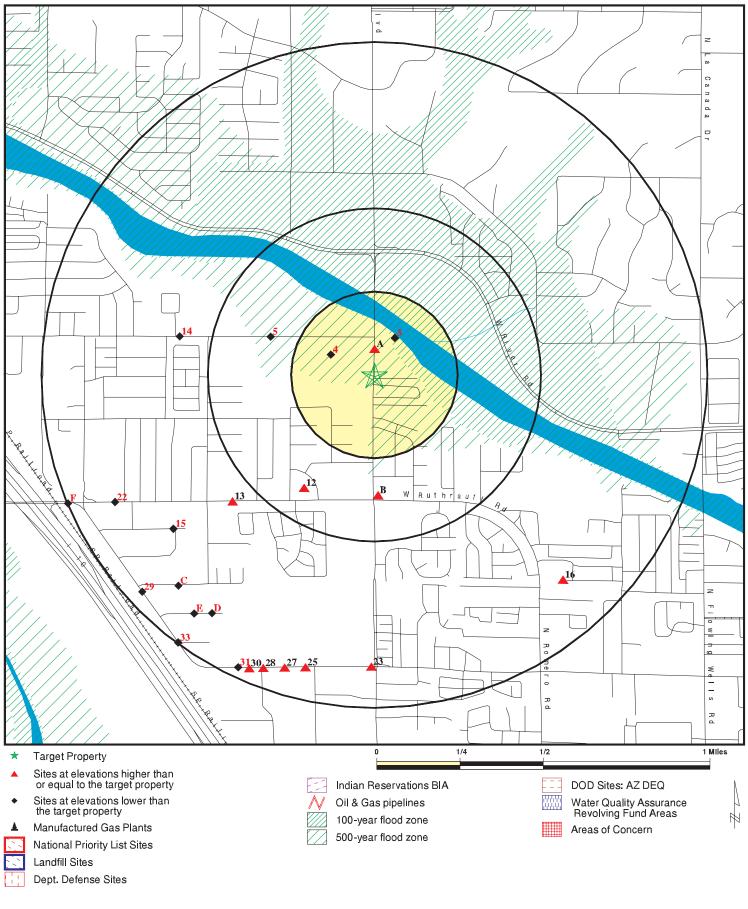
Due to poor or inadequate address information, the following sites were not mapped:

Site Name

SOUTHERN PACIFIC RAILROAD
WQ-FAGAN LAKE JAIL ANNEX LANDFILL ARTFUL DUSTERS PIMA COUNTY - ROGER RD. WWTP INA RD LANDFILL EL CAMINO DEL CERRO LDFL D & D ENTERPRISES RYLAND SAHUARO MONUMENT LINDA LANDFILL SASABE CIRCLE K STORE #2706470 CABALLO LOCO RANCH ADEQ EL CAMINO DEL CERRO WQARF IN A WASH 1/4 MI SE OF THE 2600 BLK N SILVERBELL EXXON STATION, 501 N PARK EXXON STATION, 501 N PARK 2123 N EDISON TERRANCE 4842 N SHANNON APT 7

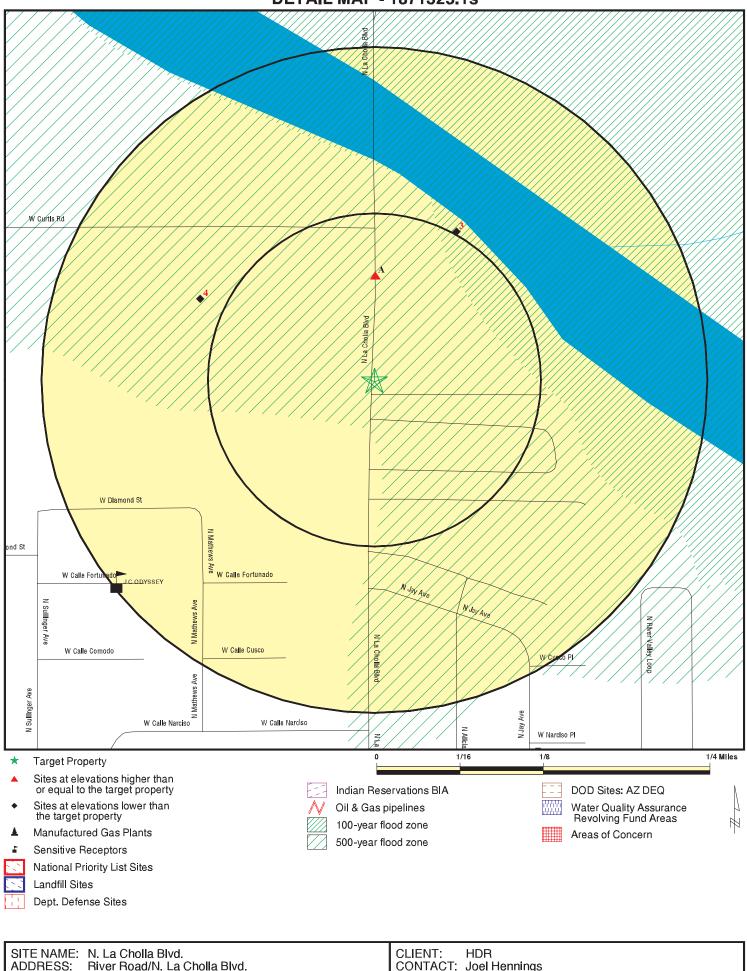
Database(s) AZ Spills, BROWNFIELDS, VCP SHWS SHWS SHWS SHWS SHWS CERCLIS, FINDS CERC-NFRAP SWF/LF SWF/LF SWF/LF SWF/LF UST AST FINDS, RCRA-LQG ERNS ERNS ERNS US CDL US CDL

OVERVIEW MAP - 1871325.1s



ADDRESS: River Road/N. La Cholla Blvd. Tucson AZ 85705 LAT/LONG: 32.2998 / 111.0120 CONTACT: Joel Hennings INQUIRY #: 1871325.1s DATE: March 06, 2007 2:19 pm	AD	DRESS:	Tucson AZ 85705	INQUIRY #:	1871325.1s
--	----	--------	-----------------	------------	------------

DETAIL MAP - 1871325.1s



Tucson AZ 85705

32.2998 / 111.0120

LAT/LONG:

	1871325.1s March 06, 2007 2:19 pm
Copyriah	t © 2007 EDR. Inc. © 2007 Tele Atlas Rel. 07/2006.

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FEDERAL RECORDS								
NPL Proposed NPL Delisted NPL NPL RECOVERY CERCLIS CERC-NFRAP CORRACTS RCRA TSD RCRA Lg. Quan. Gen. RCRA Sm. Quan. Gen. ERNS HMIRS US ENG CONTROLS US INST CONTROL DOD FUDS US BROWNFIELDS CONSENT ROD UMTRA ODI TRIS TSCA FTTS SSTS ICIS RADINFO CDL LUCIS PADS MLTS MINES		1.000 1.000 1.000 TP 0.500 0.500 0.250 0.250 0.250 TP TP 0.500 0.500 1.000 1.000 1.000 1.000 1.000 0.500 1.000 0.500 TP TP TP TP TP TP TP TP TP TP TP TP TP	0 0 0 NR 0 1 0 0 0 0 NR 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 R 0 0 0 0 0 R R 0 0 0 0 0 0 0 0 0	0 0 0 R N 1 2 0 0 R N N N N 0 0 0 0 0 0 0 0 0 N N N N N N N	0 0 0 R R R O R R R R R R R R R O 0 0 N N R R O N N N N N N N N N N N N N N N	NR R R R R R R R R R R R R R R R R R R	$ \begin{array}{c} 0\\ 0\\ 0\\ 0\\ 1\\ 3\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\$
FINDS RAATS		TP TP	NR NR	NR NR	NR NR	NR NR	NR NR	0 0
STATE AND LOCAL RECOP	RDS							
SPL AZ WQARF State Haz. Waste State Landfill SWTIRE LUST AOCONCERN UST AST MANIFEST AZ Spills		1.000 1.000 0.500 0.500 0.500 1.000 0.250 0.250 0.250 TP	0 0 1 0 0 0 0 0 0 0 0 NR	0 0 2 0 0 0 0 0 0 0 0 0 0 0	0 0 4 0 2 0 NR NR NR NR	0 22 NR NR NR 0 NR NR NR NR	NR NR NR NR NR NR NR NR NR NR	0 0 27 2 0 2 0 0 0 0 0 0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
AUL		0.500	0	0	0	NR	NR	0
VCP		0.500	0	0	0	NR	NR	0
DRYCLEANERS		0.250	0	0	NR	NR	NR	0
AZ DOD		0.500	0	0	0	NR	NR	0
BROWNFIELDS		0.500	0	0	0	NR	NR	0
CDL		TP	NR	NR	NR	NR	NR	0
Aquifer		TP	NR	NR	NR	NR	NR	0
WWFAC		0.500	0	0	0	NR	NR	0
Dry Wells		TP	NR	NR	NR	NR	NR	0
AZ AIRS		TP	NR	NR	NR	NR	NR	0
AZURITE		0.500	0	0	0	NR	NR	0
TRIBAL RECORDS								
INDIAN RESERV		1.000	0	0	0	0	NR	0
INDIAN LUST		0.500	0	0	0	NR	NR	0
INDIAN UST		0.250	0	0	NR	NR	NR	0
EDR PROPRIETARY RECOR	RDS							
Manufactured Gas Plants		1.000	0	0	0	0	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Database(s)

EDR ID Number EPA ID Number

rth /8 5 ft.	PIMA PAVING, INC. 5180 N. LA CHOLLA BLVD. TUCSON, AZ 85705		CERC-NFRAP	1003879805 AZD983480534
п.	Site 1 of 2 in cluster A			
ative: Jal	CERC-NFRAP: Site ID:	0904725		
ual:	Federal Facility:	Not a Federal Facility		
2 ft.	NPL Status:	Not on the NPL		
	Non NPL Status:	NFRAP		
	CERCLIS-NFRAP Site Contac	ct Name(s):		
	Contact Name:	Matt Mitguard		
	Contact Tel:	(415) 972-3096		
	Contact Title:	Site Assessment Manager (SAM)		
	Contact Name:	Dawn Richmond		
	Contact Tel:	(415) 972-3097		
	Contact Title:	Site Assessment Manager (SAM)		
	Site Description: Not repo	rted		
	CERCLIS-NFRAP Assessmer	nt History:		
	Action:	DISCOVERY		
	Date Started:	Not reported		
	Date Completed:	12/07/1992		
	Priority Level:	Not reported		
	Action:	PRELIMINARY ASSESSMENT		
	Date Started:	Not reported		
	Date Completed:	09/28/1995		
	Priority Level:	NFRAP (No Futher Remedial Action Planned		
	Action:	SITE INSPECTION		
	Date Started:	09/01/1993		
	Date Completed:	09/28/1995		
	Priority Level:	NFRAP (No Futher Remedial Action Planned		
	Action:	ARCHIVE SITE		
	Date Started:	Not reported		
	Date Completed:	01/23/1996		
	Priority Level:	Not reported		
	PIMA PAVING, INC.		SHWS	1000709242
h	5180 N. LA CHOLLA BLVD			N/A
3 ft.	TUCSON, AZ 85705			
	Site 0 of 0 in cluster A			

Site 2 of 2 in cluster A Relative:

SHWS: Equal EPA ID: AZD983480534 Program: Site Code: Actual: PA/SI 2262 ft. 100135 Facility Id: 1188 Discovery Date: 19921210 Source: Not reported Operable Unit: 0 QWARF Area: Not reported Lat: Not reported

Map ID Direction Distance Distance (ft.) Elevation Site

Database(s)

SWF/LF

EDR ID Number **EPA ID Number**

1000709242

S103895167

N/A

Long: Not reported Lat/Long Method: 80 Comments: Not reported

Closed

CSWLF

Operator City, St, Zip: Tucson, Az 85701

Pima County

Not reported

Not reported

Not reported

Not reported Not reported

Not reported

Not reported Not reported

Not reported

Not reported

Not reported

Not reported

Not reported

Not reported

131 W. Congress Rd.

West side of La Cholla Rd. south Rillito River

PIMA COUNTY - LA CHOLLA #2 3 NNE WEST SIDE OF LA CHOLLA RD. SOUTH RILLITO RIVER

Facility Status:

Operator:

Directions:

Mail Address:

Mail City,St,Zip:

Contact:

Mail City:

Mail State: Mail Zip:

Area Code:

FACILITY TYPE:

Operator Address:

Operator Phone:

1/8-1/4 PIMA (County), AZ

SWF/LF:

672 ft.

Relative: Lower Actual: 2257 ft.

Telephone: Facility Addr 2: Owner: Owner Address: Owner City,St,Zip: Owner Phone:

LA CHOLLA #1 4 WNW EAST SIDE OF LA CHOLLA RD. SOUTH OF RILLITO RIVER 1/8-1/4 PIMA (County), AZ 761 ft.

SWF/LF: **Relative:** Facility Status: Closed Lower FACILITY TYPE: CSWLF Actual: Operator: Pima County 2253 ft. 131 W. Congress Rd. **Operator Address:** Operator City, St, Zip: Tucson, Az 85701 Operator Phone: Not reported Directions: East side of La Cholla Rd. south of Rillito River Contact: Not reported Mail Address: Not reported Mail City: Not reported Not reported Mail State: Mail Zip: Not reported Mail City,St,Zip: Not reported Area Code: Not reported Telephone: Not reported Facility Addr 2: Not reported Owner: Not reported Owner Address: Not reported Owner City, St, Zip: Not reported

SWF/LF S103895161 N/A

Database(s)

EDR ID Number EPA ID Number

IOLLA #1 (Cont Dwner Phone:	inued) Not reported		S103895161
			2.00000101
RENTAL, INC. W. CURTIS RD. ON, AZ 85705		CERCLIS SHWS FINDS	1000709203 AZD983480120
RCLIS: Site ID:	0904681		
Federal Facility:	Not a Federal Facility		
NPL Status:	Not on the NPL		
Non NPL Status:	NFRAP		
RCLIS Site Conta	act Name(s):		
Contact Name:	Matt Mitguard		
Contact Tel:	(415) 972-3096 Site Accessed Manager (CAM)		
Contact Title:	Site Assessment Manager (SAM)		
Contact Name:	Dawn Richmond		
Contact Tel:	(415) 972-3097		
Contact Title:	Site Assessment Manager (SAM)		
Site Description:	Not reported		
RCLIS Assessme Action: Date Started: Date Completed:	DISCOVERY Not reported 12/07/1992		
Priority Level:	Not reported		
Action:	PRELIMINARY ASSESSMENT		
Date Started:	Not reported		
Date Completed:	10/01/1993		
Priority Level:	High		
Action:	SITE REASSESSMENT		
Date Started:	Not reported 06/21/2000		
Date Completed: Priority Level:	NFRAP (No Futher Remedial Action Planned		
NS:	4700000000		
EPA ID: Program:	AZD983480120 PA/SI		
Site Code:	100025		
acility Id:	1146		
Discovery Date:	19921210		
Source: Operable Linit:	•		
QWARF Area:	Not reported		
_at:	Not reported		
ong:	Not reported		
Jornments:	νοι τεροπεά		
Dis Soi Dp QW Lat Lor Lat Coi	covery Date: urce: erable Unit: /ARF Area: : ng: /Long Method: mments:	covery Date:19921210urce:Not reportederable Unit:0/ARF Area:Not reported:Not reported:Not reported/Long Method:80mments:Not reported	covery Date: 19921210 urce: Not reported erable Unit: 0 /ARF Area: Not reported : Not reported ng: Not reported /Long Method: 80 mments: Not reported

Other Pertinent Environmental Activity Identified at Site

Database(s)

EDR ID Number EPA ID Number

1000709203

AERO RENTAL, INC. (Continued)

Removed:

11

CERCLIS (Comprehensive Environmental Response, Compensation, and Liability Information System) is the Superfund database that is used to support management in all phases of the Superfund program. The system contains information on all aspects of hazardous waste sites, including an inventory of sites, planned and actual site activities, and financial information.

B6 South 1/4-1/2 1907 ft.	CIRCLE K STORE #270 2080 N RUTHRAUFF TUCSON, AZ 85705	0592	LUST UST	U003153624 N/A
	Site 1 of 6 in cluster B			
Relative: Higher	LUST: Facility ID: (0-001264		
Actual:		UNDEFINED OR UNKNOWN SOIL CONTAMINATION		
2268 ft.	,	07/02/04		
		5406.01		
	UST:			
	Facility ID:	0-001264		
	Owner:	CIRCLE K STORES INC		
	Tank ID:	1		
	In Use:	YES		
	Closed In Ground:			
	Date Closed:			
	Removed:			
	Facility ID:	0-001264		
	Owner:	CIRCLE K STORES INC		
	Tank ID:	2		
	In Use:	YES		
	Closed In Ground:	//		
	Date Closed:	//		
	Removed:	//		
		0.004004		
	Facility ID:	0-001264		
	Owner:	CIRCLE K STORES INC		
	Tank ID:	3		
	In Use:	YES		
	Closed In Ground:			
	Date Closed:			

EDR ID Number Database(s) EPA ID Number

Elevation	Site		Database(s)	EPA ID Number
B7 South 1/4-1/2 1985 ft.	WHITING STATION #13 2100 W. RUTHRAUFF TUCSON, AZ 85705	8	SHWS	S101570970 N/A
Deletive	Site 2 of 6 in cluster B			
Relative: Higher Actual: 2268 ft.	Program: Site Code: Facility Id: Discovery Date: Source: Operable Unit: QWARF Area: Lat: Long: Lat/Long Method: 3	AZD983480641 PA/SI 100009 1205 19921210 Not reported Not reported Not reported Not reported Not reported Not reported Not reported		
B8 South 1/4-1/2 1985 ft.	GIANT #922 2100 W RUTHRAUFF R TUCSON, AZ 85705	D	LUST UST	U001626133 N/A
Deletive	Site 3 of 6 in cluster B			
Relative: Higher	LUST:			
	,			
Actual: 2268 ft.		CLOSED SOIL LVL MEETS TIER1)5/15/97		
		09/14/98		
	Lust Number:	4697.01		
	Leak Priority: (Notification: (Date Closed:	0-002780 CLOSED SOIL LVL MEETS TIER1 06/13/03 11/07/03 4697.02		
	UST:			
	Facility ID: Owner: Tank ID: In Use: Closed In Ground: Date Closed: Removed:	0-002780 GIANT INDUSTRIES ARIZONA INC 1 NO / / / / 06/05/03		
	Facility ID: Owner: Tank ID: In Use: Closed In Ground: Date Closed: Removed:	0-002780 GIANT INDUSTRIES ARIZONA INC 2 NO / / / / 06/05/03		
	Facility ID: Owner: Tank ID:	0-002780 GIANT INDUSTRIES ARIZONA INC 3		

MAP FINDINGS

Database(s)

EDR ID Number **EPA ID Number**

GIANT #922 (Continued)

In Use: NO Closed In Ground: / / Date Closed: / / Removed: 06/05/03

Facility ID: 0-002780 Owner: GIANT INDUSTRIES ARIZONA INC Tank ID: 4 In Use: NO Closed In Ground: / / Date Closed: 11 Removed: 06/05/03

B9 South 1/4-1/2 1985 ft.	WHITING STATION 2100 W. RUTHRAUFF RD. TUCSON, AZ 85705		CERC-NFRAP	1003879815 AZD983480641
	Site 4 of 6 in cluster B			
Relative: Higher	CERC-NFRAP: Site ID:	0904740		
Actual:	Federal Facility:	Not a Federal Facility		
2268 ft.	NPL Status: Non NPL Status:	Not on the NPL NFRAP		
	CERCLIS-NFRAP Site Contact	Name(s):		
	Contact Name:	Matt Mitguard		
	Contact Tel:	(415) 972-3096		
	Contact Title:	Site Assessment Manager (SAM)		
	Contact Name:	Dawn Richmond		
	Contact Tel:	(415) 972-3097		
	Contact Title:	Site Assessment Manager (SAM)		
	CERCLIS-NFRAP Site Alias Na	ame(s).		
	Alias Name:	WHITING BROS. STATION		
	Alias Address:	Not reported AZ		
	Site Description: Not report	red		
	CERCLIS-NFRAP Assessment	History:		
	Action:	DISCOVERY		
	Date Started:	Not reported		
	Date Completed:	12/07/1992		
	Priority Level:	Not reported		
	Action:	PRELIMINARY ASSESSMENT		
	Date Started:	Not reported		
	Date Completed:	09/22/1993		
	Priority Level:	NFRAP (No Futher Remedial Action Planned		
	Action:	ARCHIVE SITE		
	Date Started:	Not reported		
	Date Completed:	09/22/1993		
	Priority Level:	Not reported		

Direction		4	
Distance			
Distance (ft)		
Elevation	Site		
B10	LA CHOLLA CHEVRON FOO	DD MARKET	
South	2075 W. RUTHRAUFF RD.		
1/4-1/2	TUCSON, AZ 85705		
1995 ft.			
1000 11.	Site 5 of 6 in cluster B		
Relative:	Sile 5 01 6 in cluster B		
Higher	CERC-NFRAP:		
Ingliei	Site ID:	0904684	
Actual:			L Equility
	Federal Facility:	Not a Federa	,
2269 ft.	NPL Status:	Not on the N	PL
	Non NPL Status:	NFRAP	

CERCLIS-NFRAP Site Contact Name(s):				
Contact Name:	Matt Mitguard			
Contact Tel:	(415) 972-3096			
Contact Title:	Site Assessment Manager (SAM)			

Contact Name:	Dawn Richmond
Contact Tel:	(415) 972-3097
Contact Title:	Site Assessment Manager (SAM)

CERCLIS-NFRAP Site Alias Name(s): Alias Name: APSI CHEVRON

Allas Name.	AF31 CHEVRON
Alias Address:	Not reported
	AZ

Site Description: Not reported CERCLIS-NFRAP Assessment History:

Action:	DISCOVERY
Date Started:	Not reported
Date Completed:	12/07/1992
Priority Level:	Not reported

PRELIMINARY ASSESSMENT
Not reported
09/15/1994
NFRAP (No Futher Remedial Action Planned

ARCHIVE SITE Action: Date Started: Not reported 09/15/1994 Date Completed: Priority Level: Not reported

B11 LA CHOLLA CHEVRON FOOD MART South 2075 W. RUTHRAUFF RD. 1/4-1/2 **TUCSON, AZ 85705** 1995 ft. Site 6 of 6 in cluster B

Relative:

Map ID

Relative:		
Higher	SHWS:	
•	EPA ID:	AZD983480153
Actual:	Program:	PA/SI
2269 ft.	Site Code:	100128
	Facility Id:	1181
	Discovery Date:	19921210
	Source:	Not reported
	Operable Unit:	0
	QWARF Area:	Not reported
	Lat:	Not reported

SHWS S101570935 N/A

Database(s)

CERC-NFRAP

EDR ID Number **EPA ID Number**

1003879771 AZD983480153

		· · · · · · · · · · · · · · · · · · ·		
Map ID Direction		MAP FINDINGS		
Distance Distance (ft Elevation	.) Site		Database(s)	EDR ID Number EPA ID Number
	LA CHOLLA CHEVRO	N FOOD MART (Continued)		S101570935
	Long: Lat/Long Method: Comments:	Not reported 80 Not reported		
12 SSW 1/4-1/2 2107 ft.	AGM 4620 SULLINGER RD. TUCSON, AZ 85705		SHWS	S101570898 N/A
Relative: Higher Actual: 2268 ft.	SHWS: EPA ID: Program: Site Code: Facility Id: Discovery Date: Source: Operable Unit: QWARF Area: Lat: Long: Lat/Long Method: Comments:	AZD980881429 PA/SI Not reported 460 19000101 Not reported 0 MM Not reported Not reported 80 Not reported		
13 SW 1/2-1 3010 ft.	VALPAR INTERNATIC 2450 W. RUTHRAUFF TUCSON, AZ 85705		SHWS	S101570966 N/A
Relative: Higher Actual: 2263 ft.	SHWS: EPA ID: Program: Site Code: Facility Id: Discovery Date: Source: Operable Unit: QWARF Area: Lat: Long: Lat/Long Method: Comments:	AZD982039000 PA/SI 100143 1201 19921210 Not reported 0 Not reported Not reported Not reported 80 Not reported		
14 West 1/2-1 3146 ft.	RAY KIDD TOWING S 2530 W. CURTIS RD. TUCSON, AZ 85705	VC.	SHWS	S101570953 N/A
Relative: Lower Actual: 2253 ft.	SHWS: EPA ID: Program: Site Code: Facility Id: Discovery Date:	AZD983480575 PA/SI 110032 1193 19921210		

Discovery Date: 19921210 Source: Not reporte Operable Unit: 0

Not reported

Map ID Direction Distance Distance (ft.) Elevation Site

Database(s)

EDR ID Number EPA ID Number

RAY KIDD TOWING SVC. (Continued)

QWARF Area:Not reportedLat:Not reportedLong:Not reportedLat/Long Method:80Comments:Not reported

15 PRECISION PLATING INC. SW 2557 W. VIOLET AVE. TUCSON, AZ 85705 1/2-1 4013 ft. SHWS: **Relative:** AZD982489668 EPA ID: Lower Program: PA/SI Not reported Actual: Site Code: 2251 ft. Facility Id: 1059 Discovery Date: 19000101 Source: Not reported Operable Unit: 0 QWARF Area: Not reported Lat: Not reported Long: Not reported Lat/Long Method: 80 Comments: Not reported AZ Spills: 06/05/1989 Incident Date: 100584214 Facility ID: Property Mngmt: Private Chemicals: Sulfuric Acid (16%) Response Date: N/A Report / Assist: 06/13/1989 Type: Release

Referred to: HWIU Fund Amount: Pvt/Unk Quantity: 60 gallons Incident Number: 89-167 Referral Date: 06/13/1989 Strucure: Piping Incident Date: 06/26/1992 100584214 Facility ID: Property Mngmt: Private ALDET Chemicals: Response Date: N/A 06/29/1992 Report / Assist: Type: Fire Referred to: N/A Pvt/Unk Fund Amount:

Incident Number: 92-087-C

300 gals.

11

Tank

Quantity:

Strucure:

Referral Date:

SHWS S101570945 AZ Spills N/A

S101570953

Relative: SHWS: Higher EPA ID: AZD982485039 Program: PA/SI Actual: Site Code: 110031 2282 ft. Facility Id: 1194 Discovery Date: 19921210 Source: Not reported Operable Unit: 0 QWARF Area: Not reported Lat: Not reported Lat: Not reported Lat: Not reported Lat/Long Method: 99 Comments: Not reported Lower SHWS: Eower SHWS: Eower SHWS: Eower SHWS: Eower Site Code:	16 SE 1/2-1 4414 ft.	RYDER TRUCK RENT 1717 W. RILLITO ST. TUCSON, AZ 85705	AL CO.	SHWS	S101570954 N/A
SW 2545 W. ZINNIA ST. TUCSON, AZ 85705 N/A 1/2-1 TUCSON, AZ 85705 N/A 4500 ft. Site 1 of 3 in cluster C Image: Classical Content of the second content of the secon	Higher Actual:	EPA ID: Program: Site Code: Facility Id: Discovery Date: Source: Operable Unit: QWARF Area: Lat: Long: Lat/Long Method:	PA/SI 110031 1194 19921210 Not reported 0 Not reported Not reported Not reported 99		
Relative: Lower SHWS: EPA ID: AZD983480278 Actual: Program: PA/SI 2255 ft. Site Code: 100116 Facility Id: 1159	SW 1/2-1	2545 W. ZINNIA ST. TUCSON, AZ 85705		SHWS	
2255 ft. Site Code: 100116 Facility Id: 1159		SHWS:			
		Program: Site Code: Facility Id:	PA/SI 100116 1159		

Lat/Long Metho	d: 80
Comments:	Not reported
	·

Not reported

Not reported Not reported

Not reported

0

C18 BOB'S CUSTOM ROOFING SW 2560 W ZINNIA AVE 1/2-1 TUCSON, AZ 85705

Source:

Lat:

Long:

Operable Unit:

QWARF Area:

1/2-1 TUC 4523 ft.

Site 2 of 3 in cluster C

Sile 2 OF S IN Cluster C	,
SHWS:	
EPA ID:	AZD983480237
Program:	PA/SI
Site Code:	100035
Facility Id:	1155
Discovery Date:	19921210
Source:	Not reported
Operable Unit:	0
QWARF Area:	Not reported
Lat:	Not reported
Long:	Not reported
Lat/Long Method:	: 80
Comments:	Not reported
	SHWS: EPA ID: Program: Site Code: Facility Id: Discovery Date: Source: Operable Unit: QWARF Area: Lat: Long: Lat/Long Method:

SHWS 1000709213 LUST N/A UST

EDR ID Number **EPA ID Number**

1000709213

LUST:

Facility ID:	0-000734
Leak Priority:	LUST CASE COMBINED - CLOSED OUT
Notification:	12/16/93
Date Closed:	04/20/98
Lust Number:	3111.033111.02

Facility ID:	0-000734
Leak Priority:	CLOSED SOIL LVL MEETS TIER1
Notification:	09/17/93
Date Closed:	04/30/96
Lust Number:	3111.01

0-000734
CLOSED SOIL LVL MEETS TIER1
12/16/93
04/30/96
3111.02

UST:

Facility ID:	0-000734
Owner:	BOB'S CUSTOM ROOFING
Tank ID:	1
In Use:	NO
Closed In Ground:	//
Date Closed:	//
Removed:	12/15/93

Not reported

Not reported

FULL PA

C19 **AZ DRY MIXED MATERIALS** SW 2565 W. ZINNIA ST.

TUCSON, AZ 85705 1/2-1

4563 ft.

Site 3 of 3 in cluster C

Relative: SHWS: Lower EPA ID: AZD983480161 Program: Actual: PA/SI 2255 ft. Site Code: 110054 Facility Id: 1149 19921210 Discovery Date: Source: Not reported Operable Unit: 0 QWARF Area: Not reported

Lat:

Long:

Comments:

Lat/Long Method: 80

SHWS S101570903 N/A

Database	(s)

EDR ID Number EPA ID Number

QUALITY PAVING &	UTILITY CO.	SHWS	S1015709
2450 W. POPPY RD.			N/A
TUCSON, AZ 85705			
Site 1 of 2 in cluster	D		
SHWS:			
EPA ID:	AZD983480559		
Program:	PA/SI		
Site Code:	100137		
Facility Id:	1190		
Discovery Date:	19921210		
Source:	Not reported		
Operable Unit:	0		
QWARF Area:	Not reported		
Lat:	Not reported		
Long:	Not reported		
Lat/Long Metho			
Comments:	Not reported		
TUCSON, AZ 85705			
Site 2 of 2 in cluster	D		
SHWS:			
EPA ID:	AZD983480567		
Program:	PA/SI		
Site Code:	100138		
Facility Id:	1191		
Discovery Date:	19921210		
Source:	Not reported		
Operable Unit:	0		
QWARF Area:	Not reported		
Lat:	Not reported		
Long:	Not reported		
Lat/Long Metho			
Comments:	Not reported		
VROMAN'S AUTO B	YOC	SHWS	S100412

22 VROMAN'S AUTO BODY WSW 2729 W. RUTHRAUFF 1/2-1 TUCSON, AZ 85705

4579 ft.

Relative: Lower

Actual: 2247 ft.

SHWS S100412197 N/A

Map ID Direction		MAP FINDINGS		
Distance Distance (ft Elevation	.) Site		Database(s)	EDR ID Number EPA ID Number
23 South 1/2-1 4624 ft.	ANDERSON METAL F 2107 WEST WETMOR TUCSON, AZ 85749		SHWS	1000486428 N/A
Relative: Higher Actual: 2284 ft.	SHWS: EPA ID: Program: Site Code: Facility Id: Discovery Date: Source: Operable Unit: QWARF Area: Lat: Long: Lat/Long Method: Comments:	AZD983474792 PA/SI Not reported 962 19000101 Not reported 0 Not reported Not reported 80 Not reported		
E24 SW 1/2-1 4739 ft.	FOAM EXPERT ROOF 2534 W. POPPY TUCSON, AZ 85705	ING	SHWS	1000709229 N/A
Relative:	Site 1 of 2 in cluster E			
Lower Actual: 2257 ft.	SHWS: EPA ID: Program: Site Code: Facility Id: Discovery Date: Source: Operable Unit: QWARF Area: Lat: Long: Lat/Long Method: Comments:	AZD983480393 PA/SI 110044 1172 19921210 Not reported 0 Not reported Not reported Not reported Not reported 80 WILL BE SITE INSPECTION		
25 SSW 1/2-1 4763 ft.	THERMAL ENGINEER 2250 W. WETMORE TUCSON, AZ 85705	ING	SHWS	1000709250 N/A
Relative: Higher Actual: 2272 ft.	SHWS: EPA ID: Program: Site Code: Facility Id:	AZD983480617 PA/SI 110028 1198		

Actual: 2272 ft.

Facility Id:

Discovery Date: Source:

Operable Unit:

QWARF Area:

Lat/Long Method: 80 Comments: Not

Lat:

Long:

1198

0

19921210 Not reported

Not reported

Not reported

Not reported

Not reported

EDR ID Number

SW 25 1/2-1 TL 4773 ft. Sir Relative: Lower Actual: 2257 ft.	ALPH HAYS ROOFIN			
Sir Relative: Lower Actual: 2257 ft.	2550 W POPPY AVE TUCSON, AZ 85705		SHWS LUST UST	U003050837 N/A
Lower Actual: 2257 ft.	Site 2 of 2 in cluster E			
2257 ft.	SHWS: EPA ID:	AZD982505877		
	Program: Program: Site Code: Facility Id: Discovery Date: Source: Operable Unit: QWARF Area: Lat: Long: Lat/Long Method: Comments:	PA/SI 100139 1192 19921210 Not reported 0 Not reported Not reported Not reported		
	LUST: Facility ID: Leak Priority: Notification: Date Closed: Lust Number: UST: Facility ID: Owner: Tank ID: In Use:	0-008073 CLOSED SOIL LVL MEETS TIER1 01/25/93 05/25/00 2657.01 0-008073 RALPH HAYS 1 NO		
	Closed In Ground Date Closed: Removed:		_	

27 PREMDOR WEST SSW 2300 W. WETMORE #200 TUCSON, AZ 85705 1/2-1

4853 ft. SHWS: **Relative:** EPA ID: AZD983480542 Higher PA/SI Program: Actual: Site Code: 100136 2267 ft. Facility Id: 1189 Discovery Date: 19921210 Not reported Source: Operable Unit: 0 QWARF Area: Not reported Lat: Not reported Not reported Long: Lat/Long Method: 80 Comments: Not reported

SHWS S101570946 N/A

Map ID			MAP FINDINGS		
Direction Distance Distance (ft Elevation	.) Site	ч		Database(s)	EDR ID Number EPA ID Number
28 SSW 1/2-1 4967 ft.	BOB'S MATERIAL SU 2341 W. WETMORE TUCSON, AZ 85705	PPLY		SHWS	1000709214 N/A
Relative: Higher Actual: 2263 ft.	SHWS: EPA ID: Program: Site Code: Facility Id: Discovery Date: Source: Operable Unit: QWARF Area: Lat: Long: Lat/Long Method: Comments:	AZD983480245 PA/SI 110051 1156 19921210 Not reported 0 MM Not reported Not reported 80 Not reported			
29 SW 1/2-1 5037 ft.	PARSONS STEEL CO. 4580 N. HIGHWAY DR TUCSON, AZ 85705			SHWS	1000709241 N/A
Relative: Lower Actual: 2254 ft.	SHWS: EPA ID: Program: Site Code: Facility Id: Discovery Date: Source: Operable Unit: QWARF Area: Lat: Long: Lat/Long Method: Comments:	AZD983480518 PA/SI 100134 1186 19921210 Not reported 0 Not reported Not reported Not reported 80 Not reported			
30 SSW 1/2-1 5056 ft.	AZ PIPELINE 2402 W. WETMORE TUCSON, AZ 85705			SHWS	S103932019 N/A
Relative: Equal Actual: 2262 ft.	SHWS: EPA ID: Program: Site Code: Facility Id: Discovery Date: Source: Operable Unit: QWARF Area: Lat:	AZD983480187 PA/SI 110056 1150 19921210 Not reported 0 Not reported Not reported Not reported			

Not reported Not reported Not reported

Not reported

Lat:

Long: Not Lat/Long Method: 80

Comments:

Map ID Direction			MAP FINDINGS		
Distance Distance (ft Elevation	.) Site			Database(s)	EDR ID Number EPA ID Number
31 SSW 1/2-1 5115 ft.	BONITA STEEL 2439 W. WETMORE TUCSON, AZ 85705			SHWS	1000709215 N/A
Relative: Lower	SHWS: EPA ID:	AZD983480252			
Actual: 2261 ft.	Program: Site Code: Facility Id: Discovery Date: Source: Operable Unit: QWARF Area: Lat: Long: Lat/Long Method: Comments:	PA/SI 100113 1157 19921210 Not reported 0 MM Not reported Not reported 80 Not reported			
F32 WSW 1/2-1 5190 ft.	A.A. MCDANIEL WEL 2838 W. RUTHRAUFF TUCSON, AZ 85705			SHWS	1000709202 N/A
	Site 1 of 2 in cluster F				
Relative: Lower	SHWS: EPA ID:	AZD983480112			
Actual: 2242 ft.	Program: Site Code: Facility Id: Discovery Date: Source: Operable Unit: QWARF Area: Lat: Long:	PA/SI 110040 1145 19921210 Not reported 0 Not reported Not reported Not reported			

33	AMERICAN BODY & PAINT
SW	4419 N. HIGHWAY DR.
1/2-1	TUCSON, AZ 85705

5260 ft.

SHWS: Relative: EPA ID: AZD983480146 Lower Program: PA/SI Site Code: 110058 Actual: 2258 ft. Facility Id: 1148 Discovery Date: 19921210 Source: Not reported Operable Unit: 0 QWARF Area: Not reported Lat: Not reported Long: Not reported Lat/Long Method: 80 Comments: Not reported

Lat/Long Method: 80 Comments: No

Not reported

SHWS 1000709205 N/A

Database(s)

EDR ID Number EPA ID Number

F34 WSW 1/2-1 5266 ft.	GILBERT PUMP OF TU 2840 W RUTHRAUFF R TUCSON, AZ 85703		SHWS LUST UST WWFAC	U001625882 N/A
	Site 2 of 2 in cluster F			
Relative: Lower	SHWS: EPA ID:	AZD983480401		
Actual: 2241 ft.	Program: Site Code: Facility Id: Discovery Date: Source: Operable Unit: QWARF Area: Lat: Long: Lat/Long Method:	PA/SI 100096 1175 19921210 Not reported 0 Not reported Not reported Not reported		
	Leak Priority: Notification: Date Closed:	0-002297 SOIL CONTAMINATION DEFINED BUT > SSCLS IN GROUND 12/14/89 / / 1573.01		
	Leak Priority: Notification: Date Closed:	0-002297 SOIL CONTAMINATION DEFINED BUT > SSCLS IN GROUND 09/26/91 / / 1573.02		
	Leak Priority: Notification: Date Closed:	0-002297 SOIL CONTAMINATION DEFINED BUT > SSCLS IN GROUND 01/06/93 / / 1573.03		
	UST: Facility ID: Owner: Tank ID: In Use: Closed In Ground: Date Closed: Removed: Facility ID: Owner: Tank ID: In Use: Closed In Ground: Date Closed: Removed: Facility ID: Owner:	/ / 03/19/93 0-002297 GILBERT PUMP & EQUIPMENT CO 2 NO		

Database(s)

EDR ID Number EPA ID Number

Tank ID:3In Use:NOClosed In Ground:/ /Date Closed:/ /Removed:09/26/91

Facility ID:0-002297Owner:GILBERT PUMP & EQUIPMENT COTank ID:4In Use:NOClosed In Ground:/ /Date Closed:/ /Removed:09/26/91

WWFAC:

Place ID:	1405
Inventory ID:	101382
Facility Code:	COMM
Facility Type:	COMMERCIAL PROPERTY

U001625882

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
PIMA COUNTY	S103895169	RYLAND	WEST END OF 40TH ST. AND SANTA CRUZ RIVER		SWF/LF
PIMA COUNTY	S103895170	SAHUARO MONUMENT	1 MILE SOUTHEAST OF VISTORS CENTER		SWF/LF
PIMA COUNTY	S103895162	LINDA LANDFILL	NORTH OF ALAMEDA AND EAST OF SANTA CRUZ		SWF/LF
PIMA COUNTY	S102286938	SASABE	PRESUMIDO PEAK QUADRANT .5 MILES NORTH OF US-MEXIC		SWF/LF
PIMA COUNTY	S101570019	WQ-FAGAN LAKE	T17S R16E SEC 34 SE 1/4		SHWS
TUCSON	94369129	IN A WASH 1/4 MI SE OF THE 2600 BLK N	IN A WASH 1/4 MI SE OF THE 2600 BLK N SILVERBELL		ERNS
		SILVERBELL			
TUCSON	A100170444	CABALLO LOCO RANCH	17500 W. BANNER RANCH RT.8		AST
TUCSON	S106197422	SOUTHERN PACIFIC RAILROAD	1255 S. CAMPBELL AVE TRACK 470		AZ Spills, BROWNFIELDS, VCP
TUCSON	1004675127	ADEQ EL CAMINO DEL CERRO WQARF	CASA GRANDE HWY AND CURTIS RD	85741	FINDS, RCRA-LQG
TUCSON	1009618703	2123 N EDISON TERRANCE	2123 N EDISON TERRANCE		US CDL
TUCSON	93354262	EXXON STATION, 501 N PARK	EXXON STATION, 501 N PARK		ERNS
TUCSON	93353452	EXXON STATION, 501 N PARK	EXXON STATION, 501 N PARK		ERNS
TUCSON	1003879788	D & D ENTERPRISES	5266 N. HWY DR.	85705	CERC-NFRAP
TUCSON	U003936074	CIRCLE K STORE #2706470	5365 N LA CHOLLA	85705	UST
TUCSON	1009618709	4842 N SHANNON APT 7	4842 N SHANNON APT 7		US CDL
TUCSON	S101570892	JAIL ANNEX LANDFILL	SILVER BELL RD/POLICE ACADEMY	85704	SHWS
TUCSON	1000486421	ARTFUL DUSTERS	3450 N STONE AVE/205	85705	SHWS
TUCSON	1000588273	PIMA COUNTY - ROGER RD. WWTP	SWEETWATER RD.	85705	SHWS
TUCSON	1003878112	EL CAMINO DEL CERRO LDFL	1/4 MI W OF I10/EL CAMINO BLVD	85704	CERCLIS, FINDS
TUCSON	S103932017	INA RD LANDFILL	1/2 MI W OF I10 E OF INA RD	85704	SHWS

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

FEDERAL RECORDS

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 09/27/2006 Date Data Arrived at EDR: 11/01/2006 Date Made Active in Reports: 11/22/2006 Number of Days to Update: 21 Source: EPA Telephone: N/A Last EDR Contact: 01/31/2007 Next Scheduled EDR Contact: 04/30/2007 Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC) Telephone: 202-564-7333

EPA Region 1 Telephone 617-918-1143

EPA Region 3 Telephone 215-814-5418

EPA Region 4 Telephone 404-562-8033

EPA Region 5 Telephone 312-886-6686

EPA Region 10 Telephone 206-553-8665

Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

EPA Region 6

EPA Region 7

EPA Region 8

EPA Region 9

Telephone: 214-655-6659

Telephone: 913-551-7247

Telephone: 303-312-6774

Telephone: 415-947-4246

Date of Government Version: 09/27/2006 Date Data Arrived at EDR: 11/01/2006 Date Made Active in Reports: 11/22/2006 Number of Days to Update: 21 Source: EPA Telephone: N/A Last EDR Contact: 02/23/2007 Next Scheduled EDR Contact: 04/30/2007 Data Release Frequency: Quarterly

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 09/27/2006 Date Data Arrived at EDR: 11/01/2006 Date Made Active in Reports: 11/22/2006 Number of Days to Update: 21 Source: EPA Telephone: N/A Last EDR Contact: 01/31/2007 Next Scheduled EDR Contact: 04/30/2007 Data Release Frequency: Quarterly

NPL RECOVERY: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991	Source: EPA
Date Data Arrived at EDR: 02/02/1994	Telephone: 202-564-4267
Date Made Active in Reports: 03/30/1994	Last EDR Contact: 02/19/2007
Number of Days to Update: 56	Next Scheduled EDR Contact: 05/21/2007
	Data Release Frequency: No Update Planned

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 11/28/2006 Date Data Arrived at EDR: 12/19/2006 Date Made Active in Reports: 01/29/2007 Number of Days to Update: 41 Source: EPA Telephone: 703-603-8960 Last EDR Contact: 12/19/2006 Next Scheduled EDR Contact: 03/19/2007 Data Release Frequency: Quarterly

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 12/20/2006 Date Data Arrived at EDR: 01/29/2007 Date Made Active in Reports: 02/27/2007 Number of Days to Update: 29 Source: EPA Telephone: 703-603-8960 Last EDR Contact: 12/18/2006 Next Scheduled EDR Contact: 03/19/2007 Data Release Frequency: Quarterly

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 01/04/2007 Date Data Arrived at EDR: 01/18/2007 Date Made Active in Reports: 02/27/2007 Number of Days to Update: 40 Source: EPA Telephone: 800-424-9346 Last EDR Contact: 03/05/2007 Next Scheduled EDR Contact: 06/04/2007 Data Release Frequency: Quarterly

RCRA: Resource Conservation and Recovery Act Information

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS). The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month. Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Transporters are individuals or entities that move hazardous waste from the generator off-site to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 06/13/2006 Date Data Arrived at EDR: 06/28/2006 Date Made Active in Reports: 08/23/2006 Number of Days to Update: 56 Source: EPA Telephone: 800-424-9346 Last EDR Contact: 02/27/2007 Next Scheduled EDR Contact: 04/16/2007 Data Release Frequency: Quarterly

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/2005	Source: National Response Center, United States Coast Guard
Date Data Arrived at EDR: 01/12/2006	Telephone: 202-260-2342
Date Made Active in Reports: 02/21/2006	Last EDR Contact: 01/24/2007
Number of Days to Update: 40	Next Scheduled EDR Contact: 04/23/2007
	Data Release Frequency: Annually

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 11/28/2006 Date Data Arrived at EDR: 01/17/2007 Date Made Active in Reports: 02/27/2007 Number of Days to Update: 41 Source: U.S. Department of Transportation Telephone: 202-366-4555 Last EDR Contact: 01/17/2007 Next Scheduled EDR Contact: 04/16/2007 Data Release Frequency: Annually

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 10/18/2006 Date Data Arrived at EDR: 12/14/2006 Date Made Active in Reports: 01/11/2007 Number of Days to Update: 28 Source: Environmental Protection Agency Telephone: 703-603-8905 Last EDR Contact: 01/02/2007 Next Scheduled EDR Contact: 04/02/2007 Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 01/24/2007 Date Data Arrived at EDR: 01/31/2007 Date Made Active in Reports: 02/27/2007 Number of Days to Update: 27 Source: Environmental Protection Agency Telephone: 703-603-8905 Last EDR Contact: 01/02/2007 Next Scheduled EDR Contact: 04/02/2007 Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005	Source: USGS
Date Data Arrived at EDR: 11/10/2006	Telephone: 703-692-8801
Date Made Active in Reports: 01/11/2007	Last EDR Contact: 02/08/2007
Number of Days to Update: 62	Next Scheduled EDR Contact: 05/07/2007
	Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/31/2005	Source: U.S. Army Corps of Engineers
Date Data Arrived at EDR: 09/20/2006	Telephone: 202-528-4285
Date Made Active in Reports: 11/22/2006	Last EDR Contact: 01/02/2007
Number of Days to Update: 63	Next Scheduled EDR Contact: 04/02/2007
	Data Release Frequency: Varies

US BROWNFIELDS: A Listing of Brownfields Sites

Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become Brownfields Cleanup Revolving Loan Fund (BCRLF) cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 10/17/2006 Date Data Arrived at EDR: 10/20/2006 Date Made Active in Reports: 12/13/2006 Number of Days to Update: 54 Source: Environmental Protection Agency Telephone: 202-566-2777 Last EDR Contact: 12/11/2006 Next Scheduled EDR Contact: 03/12/2007 Data Release Frequency: Semi-Annually

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/14/2004 Date Data Arrived at EDR: 02/15/2005 Date Made Active in Reports: 04/25/2005 Number of Days to Update: 69 Source: Department of Justice, Consent Decree Library Telephone: Varies Last EDR Contact: 02/06/2007 Next Scheduled EDR Contact: 04/23/2007 Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 01/10/2007
Date Data Arrived at EDR: 01/24/2007
Date Made Active in Reports: 02/27/2007
Number of Days to Update: 34

Source: EPA Telephone: 703-416-0223 Last EDR Contact: 01/22/2007 Next Scheduled EDR Contact: 04/02/2007 Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 12/31/2005 Date Data Arrived at EDR: 11/08/2006 Date Made Active in Reports: 01/29/2007 Number of Days to Update: 82	Source: Department of Energy Telephone: 505-845-0011 Last EDR Contact: 12/18/2006 Next Scheduled EDR Contact: 03/19/2007 Data Release Frequency: Varies
ODI: Open Dump Inventory An open dump is defined as a disposal facilit Subtitle D Criteria.	ty that does not comply with one or more of the Part 257 or Part 258
Date of Government Version: 06/30/1985 Date Data Arrived at EDR: 08/09/2004 Date Made Active in Reports: 09/17/2004 Number of Days to Update: 39	Source: Environmental Protection Agency Telephone: 800-424-9346 Last EDR Contact: 06/09/2004 Next Scheduled EDR Contact: N/A Data Release Frequency: No Update Planned
TRIS: Toxic Chemical Release Inventory System Toxic Release Inventory System. TRIS ident land in reportable quantities under SARA Tit	ifies facilities which release toxic chemicals to the air, water and le III Section 313.
Date of Government Version: 12/31/2004 Date Data Arrived at EDR: 06/22/2006 Date Made Active in Reports: 08/23/2006 Number of Days to Update: 62	Source: EPA Telephone: 202-566-0250 Last EDR Contact: 12/19/2006 Next Scheduled EDR Contact: 03/19/2007 Data Release Frequency: Annually
	es manufacturers and importers of chemical substances included on the includes data on the production volume of these substances by plant
Date of Government Version: 12/31/2002 Date Data Arrived at EDR: 04/14/2006 Date Made Active in Reports: 05/30/2006 Number of Days to Update: 46	Source: EPA Telephone: 202-260-5521 Last EDR Contact: 01/15/2007 Next Scheduled EDR Contact: 04/16/2007 Data Release Frequency: Every 4 Years
FTTS tracks administrative cases and pestic	ederal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act) ide enforcement actions and compliance activities related to FIFRA, d Community Right-to-Know Act). To maintain currency, EDR contacts the
Date of Government Version: 10/19/2006 Date Data Arrived at EDR: 10/27/2006 Date Made Active in Reports: 11/22/2006 Number of Days to Update: 26	Source: EPA/Office of Prevention, Pesticides and Toxic Substances Telephone: 202-566-1667 Last EDR Contact: 12/18/2006 Next Scheduled EDR Contact: 03/19/2007 Data Release Frequency: Quarterly
FTTS INSP: FIFRA/ TSCA Tracking System - FIF A listing of FIFRA/TSCA Tracking System (F	RA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act) (TTS) inspections and enforcements.
Date of Government Version: 10/19/2006 Date Data Arrived at EDR: 10/27/2006 Date Made Active in Reports: 11/22/2006 Number of Days to Update: 26	Source: EPA Telephone: 202-566-1667 Last EDR Contact: 12/18/2006 Next Scheduled EDR Contact: 03/19/2007

Data Release Frequency: Quarterly

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

	Date of Government Version: 12/31/2004	Source: EPA
	Date Data Arrived at EDR: 05/11/2006	Telephone: 202-564-4203
	Date Made Active in Reports: 05/22/2006	Last EDR Contact: 01/29/2007
	Number of Days to Update: 11	Next Scheduled EDR Contact: 04/16/2007
		Data Release Frequency: Annually
ICIS	: Integrated Compliance Information System The Integrated Compliance Information Syste	m (ICIS) supports the information needs of the national enforcement
		e needs of the National Pollutant Discharge Elimination System (NPDES)
	and compliance program as well as the uniqu	
	and compliance program as well as the uniqu program.	e needs of the National Pollutant Discharge Elimination System (NPDES)
	and compliance program as well as the uniqu program. Date of Government Version: 02/13/2006	e needs of the National Pollutant Discharge Elimination System (NPDES) Source: Environmental Protection Agency
	and compliance program as well as the uniqu program. Date of Government Version: 02/13/2006 Date Data Arrived at EDR: 04/21/2006	e needs of the National Pollutant Discharge Elimination System (NPDES) Source: Environmental Protection Agency Telephone: 202-564-5088

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 12/09/2005 Date Data Arrived at EDR: 12/11/2006 Date Made Active in Reports: 01/11/2007 Number of Days to Update: 31 Source: Department of the Navy Telephone: 843-820-7326 Last EDR Contact: 12/11/2006 Next Scheduled EDR Contact: 03/12/2007 Data Release Frequency: Varies

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 01/30/2007 Date Data Arrived at EDR: 01/31/2007 Date Made Active in Reports: 02/27/2007 Number of Days to Update: 27 Source: Environmental Protection Agency Telephone: 202-343-9775 Last EDR Contact: 01/31/2007 Next Scheduled EDR Contact: 04/30/2007 Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 12/01/2006 Date Data Arrived at EDR: 01/08/2007 Date Made Active in Reports: 01/11/2007 Number of Days to Update: 3 Source: Drug Enforcement Administration Telephone: 202-307-1000 Last EDR Contact: 01/08/2007 Next Scheduled EDR Contact: 03/26/2007 Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 10/17/2006
Date Data Arrived at EDR: 11/29/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 43

Source: EPA Telephone: 202-566-0500 Last EDR Contact: 03/02/2007 Next Scheduled EDR Contact: 05/07/2007 Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 01/11/2007 Date Data Arrived at EDR: 01/26/2007 Date Made Active in Reports: 02/27/2007 Number of Days to Update: 32 Source: Nuclear Regulatory Commission Telephone: 301-415-7169 Last EDR Contact: 01/02/2007 Next Scheduled EDR Contact: 04/02/2007 Data Release Frequency: Quarterly

MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 11/15/2006	Source: Department of Labor, Mine Safety and Health Administration
Date Data Arrived at EDR: 12/28/2006	Telephone: 303-231-5959
Date Made Active in Reports: 01/29/2007	Last EDR Contact: 12/28/2006
Number of Days to Update: 32	Next Scheduled EDR Contact: 03/26/2007
	Data Release Frequency: Semi-Annually

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 01/18/2007 Date Data Arrived at EDR: 01/23/2007 Date Made Active in Reports: 02/27/2007 Number of Days to Update: 35 Source: EPA Telephone: N/A Last EDR Contact: 01/02/2007 Next Scheduled EDR Contact: 04/02/2007 Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995 Date Data Arrived at EDR: 07/03/1995 Date Made Active in Reports: 08/07/1995 Number of Days to Update: 35 Source: EPA Telephone: 202-564-4104 Last EDR Contact: 03/05/2007 Next Scheduled EDR Contact: 06/04/2007 Data Release Frequency: No Update Planned

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Source: EPA/NTIS Telephone: 800-424-9346

Last EDR Contact: 03/06/2007

Next Scheduled EDR Contact: 06/11/2007 Data Release Frequency: Biennially

Date of Government Version: 12/31/2003 Date Data Arrived at EDR: 06/17/2005 Date Made Active in Reports: 08/04/2005 Number of Days to Update: 48

STATE AND LOCAL RECORDS

SPL: Superfund Program List

The list is representative of the sites and potential sites within the jurisdiction of the Superfund Program Section. It is comprised of the following elements: 1) Water Quality Assurance Revolving Fund Registry Sites; 2) Potential WQARF Registry sites; 3) NPL sites; and 4) Department of Defense sites requiring SPS oversight.

Date of Government Version: 08/25/2004 Date Data Arrived at EDR: 12/03/2004 Date Made Active in Reports: 01/25/2005 Number of Days to Update: 53

Source: Department of Environmental Quality Telephone: 602-771-4360 Last EDR Contact: 03/02/2007 Next Scheduled EDR Contact: 05/28/2007 Data Release Frequency: Semi-Annually

WQARF: Water Quality Assurance Revolving Fund Sites

Sites which may have an actual or potential impact upon the waters of the state, cause by hazardous substances. The WQARF program provides matching funds to political subdivisions and other state agencies for clean-up activities.

Date of Government Version: 07/17/2006 Date Data Arrived at EDR: 10/11/2006 Date Made Active in Reports: 10/31/2006 Number of Days to Update: 20

Source: Department of Environmental Quality Telephone: 602-771-4360 Last EDR Contact: 12/20/2006 Next Scheduled EDR Contact: 03/19/2007 Data Release Frequency: Annually

SHWS: ZipAcids List

The ACIDS list consists of more than 750 locations subject to investigation under the State Water Quality Assurance Revolving Fund (WQARF) and Federal CERCLA programs. The list is no longer updated by the state.

Date of Government Version: 01/03/2000 Date Data Arrived at EDR: 04/11/2000 Date Made Active in Reports: 05/16/2000 Number of Days to Update: 35

Source: Department of Environmental Quality Telephone: 602-771-4360 Last EDR Contact: 01/15/2007 Next Scheduled EDR Contact: 04/16/2007 Data Release Frequency: No Update Planned

SWF/LF: Directory of Solid Waste Facilities

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 08/26/2004 Date Data Arrived at EDR: 12/29/2006 Date Made Active in Reports: 02/01/2007 Number of Days to Update: 34

Source: Department of Environmental Quality Telephone: 602-771-2300 Last EDR Contact: 12/29/2006 Next Scheduled EDR Contact: 03/26/2007 Data Release Frequency: Annually

SWTIRE: Solid Waste Tire Facilities

A waste tire "facility" means a solid waste facility at which waste tires are stored outdoors on any day.

Date of Government Version: 11/01/2005 Date Data Arrived at EDR: 01/12/2006	Source: Department of Environmental Quality Telephone: 602-771-4132
Date Made Active in Reports: 02/15/2006	Last EDR Contact: 12/29/2006
Number of Days to Update: 34	Next Scheduled EDR Contact: 03/26/2007
	Data Release Frequency: Varies

LUST: Leaking Underground Storage Tank Listing

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

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	Date of Government Version: 05/01/2005 Date Data Arrived at EDR: 05/19/2005 Date Made Active in Reports: 06/09/2005 Number of Days to Update: 21	Source: Department of Environmental Quality Telephone: 602-771-4345 Last EDR Contact: 02/08/2007 Next Scheduled EDR Contact: 05/07/2007 Data Release Frequency: Semi-Annually
AO	CONCERN: Superfund GIS Information A gis coverage for Department of Environment	tal Quality superfund sites, included WAQRF, DOD and NPL.
	Date of Government Version: 02/10/2006 Date Data Arrived at EDR: 06/10/2006 Date Made Active in Reports: 06/30/2006 Number of Days to Update: 20	Source: Department of Environmental Quality Telephone: 602-771-6517 Last EDR Contact: 12/18/2006 Next Scheduled EDR Contact: 03/19/2007 Data Release Frequency: Varies
US [.]	5 5	's are regulated under Subtitle I of the Resource Conservation and Recovery ate department responsible for administering the UST program. Available
	Date of Government Version: 05/01/2005 Date Data Arrived at EDR: 05/19/2005 Date Made Active in Reports: 06/09/2005 Number of Days to Update: 21	Source: Department of Environmental Quality Telephone: 602-771-4345 Last EDR Contact: 02/08/2007 Next Scheduled EDR Contact: 05/07/2007 Data Release Frequency: Annually
AS	I: List of Aboveground Storage Tanks Aboveground storage tanks that the Dept. of B	Building & Fire Safety have permitted.
	Date of Government Version: 12/31/2000 Date Data Arrived at EDR: 01/22/2001 Date Made Active in Reports: 02/16/2001 Number of Days to Update: 25	Source: Department of Building & Fire Safety Telephone: 602-364-1003 Last EDR Contact: 01/08/2007 Next Scheduled EDR Contact: 04/09/2007 Data Release Frequency: No Update Planned
MA	NIFEST: Manifest Information Hazardous waste manifest information	
	Date of Government Version: 12/31/2005 Date Data Arrived at EDR: 03/17/2006 Date Made Active in Reports: 04/20/2006 Number of Days to Update: 34	Source: Department of Environmental Quality Telephone: N/A Last EDR Contact: 02/05/2007 Next Scheduled EDR Contact: 04/16/2007 Data Release Frequency: Annually
SPI	LLS: Hazardous Material Logbook Chemical spills and incidents referred to the E	mergency Response Unit.
	Date of Government Version: 06/30/2001 Date Data Arrived at EDR: 03/29/2004 Date Made Active in Reports: 04/16/2004 Number of Days to Update: 18	Source: Department of Environmental Quality Telephone: 602-771-4153 Last EDR Contact: 12/29/2006 Next Scheduled EDR Contact: 03/26/2007 Data Release Frequency: Varies
AU	L: DEUR Database	

AUL: DEUR Database

Activity and use limitations include both engineering controls and institutional controls. DEUR and VEMUR sites. DEUR: Declaration of Environmental Use Restriction. A restrictive land use covenant that is required when a property owner elects to use an institutional (i.e., administrative) control or engineering (i.e., physical) control as a means to meet remediation goals. The DEUR runs with and burdens the land, and requires maintenance of any institutional or engineering controls. VEMUR: Voluntary Environmental Mitigation Use Restriction. A restrictive land use covenant that, prior to July 18, 2000, was required when a property owner elected to remediate the property to non-residential uses. Effective July 18, 2000, the DEUR replaced the VEMUR as a restrictive use covenant.

Date of Government Version: 01/16/2007 Date Data Arrived at EDR: 01/16/2007 Date Made Active in Reports: 02/01/2007 Number of Days to Update: 16	Source: Department of Environmental Quality Telephone: 602-771-4398 Last EDR Contact: 01/15/2007 Next Scheduled EDR Contact: 04/16/2007 Data Release Frequency: Varies
VCP: Voluntary Remediation Program Sites Sites involved in the Voluntary Remediation P	Program.
Date of Government Version: 07/11/2006 Date Data Arrived at EDR: 07/13/2006 Date Made Active in Reports: 08/02/2006 Number of Days to Update: 20	Source: Department of Environmental Quality Telephone: 602-771-4411 Last EDR Contact: 01/15/2007 Next Scheduled EDR Contact: 04/16/2007 Data Release Frequency: Varies
DRYCLEANERS: Drycleaner Facility Listing A listing of drycleaner facilities in Arizona.	
Date of Government Version: 01/20/2006 Date Data Arrived at EDR: 01/25/2006 Date Made Active in Reports: 02/15/2006 Number of Days to Update: 21	Source: Department of Environmental Quality Telephone: 602-771-4335 Last EDR Contact: 01/29/2007 Next Scheduled EDR Contact: 04/16/2007 Data Release Frequency: Varies
DOD: Department of Defense Sites These sites are federal facilities that are eithe remediation taking place on them.	r being assessed for potential contamination, or have active
Date of Government Version: 07/17/2006 Date Data Arrived at EDR: 10/11/2006 Date Made Active in Reports: 10/31/2006 Number of Days to Update: 20	Source: Department of Environmental Quality Telephone: 602-771-4360 Last EDR Contact: 12/20/2006 Next Scheduled EDR Contact: 03/19/2007 Data Release Frequency: Annually
BROWNFIELDS: Brownfields Tracking System Information relating to Brownfields sites in Aria	zona.
Date of Government Version: 07/11/2006 Date Data Arrived at EDR: 07/13/2006 Date Made Active in Reports: 08/02/2006 Number of Days to Update: 20	Source: Department of Environmental Quality Telephone: 602-771-4401 Last EDR Contact: 01/15/2007 Next Scheduled EDR Contact: 04/16/2007 Data Release Frequency: Varies
CDL: Clandestine Drug Labs A listing of drug lab seizures in Arizona.	
Date of Government Version: 01/24/2007 Date Data Arrived at EDR: 01/24/2007 Date Made Active in Reports: 02/01/2007 Number of Days to Update: 8	Source: Board of Technical Registration Telephone: 602-364-4931 Last EDR Contact: 01/22/2007 Next Scheduled EDR Contact: 04/23/2007 Data Release Frequency: Varies
AQUIFER: Waste Water Treatment Facilities Waste Water Treatment Facilities with APP (A	Aquifer Protection Permits.)
Date of Government Version: 12/13/2006 Date Data Arrived at EDR: 12/19/2006 Date Made Active in Reports: 02/01/2007 Number of Days to Update: 44	Source: Department of Environmental Quality Telephone: 602-771-4623 Last EDR Contact: 02/19/2007 Next Scheduled EDR Contact: 05/21/2007 Data Release Frequency: Semi-Annually

DRY WELLS: Drywell Registration

A drywell is a bored, drilled, or driven shaft or hole whose depth is greater than its width and is designed and constructed specifically for the disposal of storm water.

construc	ted specifically for the disposal of store	m water.	
Date Da Date Ma	Government Version: 12/18/2006 ta Arrived at EDR: 12/18/2006 de Active in Reports: 02/01/2007 of Days to Update: 45	Source: Department of Environmental Quality Telephone: 602-771-4686 Last EDR Contact: 12/18/2006 Next Scheduled EDR Contact: 03/19/2007 Data Release Frequency: Semi-Annually	
	ste Water Treatment Facilities le list of waste water treatment facilities	S.	
Date Dat Date Ma	Government Version: 08/09/2006 ta Arrived at EDR: 01/02/2007 de Active in Reports: 02/01/2007 of Days to Update: 30	Source: Department of Environmental Quality Telephone: 602-771-4623 Last EDR Contact: 02/19/2007 Next Scheduled EDR Contact: 05/21/2007 Data Release Frequency: Varies	
-	zona Airs Database major (has the potential to emit over 10	00 tons of criteria pollutant) and minor (below 100 tons) sources.	
Date Dat Date Ma	Government Version: 08/01/2006 ta Arrived at EDR: 08/17/2006 de Active in Reports: 09/26/2006 of Days to Update: 40	Source: Department of Environmental Quality Telephone: 602-771-2344 Last EDR Contact: 01/29/2007 Next Scheduled EDR Contact: 04/30/2007 Data Release Frequency: Semi-Annually	
	AZURITE: Remediation and DEUR/VEMUR Tracking System ADEQ maintains a repository listing sites remediated under programs administered by the department.		
Date Dat Date Ma	Government Version: 01/16/2007 ta Arrived at EDR: 01/16/2007 de Active in Reports: 02/01/2007 of Days to Update: 16	Source: Department of Environmental Quality Telephone: 601-771-4396 Last EDR Contact: 01/15/2007 Next Scheduled EDR Contact: 04/16/2007 Data Release Frequency: Quarterly	
RADON: Stat	e Radon Data		
Date Dat Date Ma	Government Version: N/A ta Arrived at EDR: 11/15/2002 de Active in Reports: N/A of Days to Update: 0 ORDS	Source: N/A Telephone: N/A Last EDR Contact: 04/02/2004 Next Scheduled EDR Contact: N/A Data Release Frequency: N/A	
	ERV: Indian Reservations		
-	o layer portrays Indian administered la	nds of the United States that have any area equal to or greater	
Date Date Ma	Government Version: 12/31/2005 ta Arrived at EDR: 02/06/2006 de Active in Reports: 01/11/2007 of Days to Update: 339	Source: USGS Telephone: 202-208-3710 Last EDR Contact: 02/08/2007 Next Scheduled EDR Contact: 05/07/2007 Data Release Frequency: Semi-Annually	
	R1: Leaking Underground Storage T of leaking underground storage tank to		
Date Da Date Ma	Government Version: 12/01/2006 ta Arrived at EDR: 12/01/2006 de Active in Reports: 01/29/2007 of Days to Update: 59	Source: EPA Region 1 Telephone: 617-918-1313 Last EDR Contact: 02/19/2007 Next Scheduled EDR Contact: 05/21/2007 Data Release Frequency: Varies	

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in Arizona, California, New Mexico and Nevada			
Date of Government Version: 12/19/2006 Date Data Arrived at EDR: 12/19/2006 Date Made Active in Reports: 01/29/2007 Number of Days to Update: 41	Source: Environmental Protection Agency Telephone: 415-972-3372 Last EDR Contact: 02/19/2007 Next Scheduled EDR Contact: 05/21/2007 Data Release Frequency: Quarterly		
	INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.		
Date of Government Version: 11/21/2006 Date Data Arrived at EDR: 12/08/2006 Date Made Active in Reports: 01/29/2007 Number of Days to Update: 52	Source: EPA Region 10 Telephone: 206-553-2857 Last EDR Contact: 02/19/2007 Next Scheduled EDR Contact: 02/21/2007 Data Release Frequency: Quarterly		
INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.			
Date of Government Version: 11/30/2006 Date Data Arrived at EDR: 12/08/2006 Date Made Active in Reports: 01/29/2007 Number of Days to Update: 52	Source: EPA Region 8 Telephone: 303-312-6271 Last EDR Contact: 02/19/2007 Next Scheduled EDR Contact: 05/21/2007 Data Release Frequency: Quarterly		
INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in Florida, Minnesota, Mississippi and North Carolina.			
Date of Government Version: 08/24/2006 Date Data Arrived at EDR: 09/11/2006 Date Made Active in Reports: 11/08/2006 Number of Days to Update: 58	Source: EPA Region 4 Telephone: 404-562-8677 Last EDR Contact: 02/19/2007 Next Scheduled EDR Contact: 05/21/2007 Data Release Frequency: Semi-Annually		
INDIAN LUST R7: Leaking Underground Storage T LUSTs on Indian land in Iowa, Kansas, and Ne			
Date of Government Version: 09/06/2006 Date Data Arrived at EDR: 10/04/2006 Date Made Active in Reports: 11/08/2006 Number of Days to Update: 35	Source: EPA Region 7 Telephone: 913-551-7003 Last EDR Contact: 02/19/2007 Next Scheduled EDR Contact: 05/21/2007 Data Release Frequency: Varies		
INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in New Mexico and Oklahoma.			
Date of Government Version: 01/04/2005 Date Data Arrived at EDR: 01/21/2005 Date Made Active in Reports: 02/28/2005 Number of Days to Update: 38	Source: EPA Region 6 Telephone: 214-665-6597 Last EDR Contact: 02/19/2007 Next Scheduled EDR Contact: 05/21/2007 Data Release Frequency: Varies		

INDIAN UST R4: Underground Storage Tanks on Indian Land

Date of Government Version: 08/24/2006	Source: EPA Region 4
Date Data Arrived at EDR: 09/11/2006	Telephone: 404-562-9424
Date Made Active in Reports: 11/08/2006	Last EDR Contact: 02/19/2007
Number of Days to Update: 58	Next Scheduled EDR Contact: 05/21/2007
	Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land

Date of Government Version: 12/02/2004	Source: EPA Region 5
Date Data Arrived at EDR: 12/29/2004	Telephone: 312-886-6136
Date Made Active in Reports: 02/04/2005	Last EDR Contact: 02/19/2007
Number of Days to Update: 37	Next Scheduled EDR Contact: 05/21/2007
· ·	Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

Date of Government Version: 11/30/2006	Source: EPA Region 8
Date Data Arrived at EDR: 12/08/2006	Telephone: 303-312-6137
Date Made Active in Reports: 01/29/2007	Last EDR Contact: 02/19/2007
Number of Days to Update: 52	Next Scheduled EDR Contact: 05/21/2007
	Data Release Frequency: Quarterly

INDIAN UST R10: Underground Storage Tanks on Indian Land

Date of Government Version: 11/21/2006	Source: EPA Region 10
Date Data Arrived at EDR: 12/08/2006	Telephone: 206-553-2857
Date Made Active in Reports: 01/29/2007	Last EDR Contact: 02/19/2007
Number of Days to Update: 52	Next Scheduled EDR Contact: 05/21/2007
	Data Release Frequency: Quarterly

INDIAN UST R1: Underground Storage Tanks on Indian Land A listing of underground storage tank locations on Indian Land.

Date of Government Version: 12/01/2006	Source: EPA, Region 1
Date Data Arrived at EDR: 12/01/2006	Telephone: 617-918-1313
Date Made Active in Reports: 01/29/2007	Last EDR Contact: 02/19/2007
Number of Days to Update: 59	Next Scheduled EDR Contact: 05/21/2007 Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

Date of Government Version: 12/19/2006	Source: EPA Region 9	
Date Data Arrived at EDR: 12/19/2006	Telephone: 415-972-3368	
Date Made Active in Reports: 01/29/2007	Last EDR Contact: 02/19/2007	
Number of Days to Update: 41	Next Scheduled EDR Contact: 05/21/2007	
	Data Release Frequency: Quarterly	

INDIAN UST R6: Underground Storage Tanks on Indian Land

Date of Government Version: 01/11/2007	Source: EPA Region 6	
Date Data Arrived at EDR: 01/12/2007	Telephone: 214-665-7591	
Date Made Active in Reports: 01/29/2007	Last EDR Contact: 02/19/2007	
Number of Days to Update: 17	Next Scheduled EDR Contact: 05/21/2007	
	Data Release Frequency: Semi-Annually	

INDIAN UST R7: Underground Storage Tanks on Indian Land

Date of Government Version: 09/06/2006	Source: EPA Regio
Date Data Arrived at EDR: 10/04/2006	Telephone: 913-55
Date Made Active in Reports: 11/08/2006	Last EDR Contact: (
Number of Days to Update: 35	Next Scheduled ED
	Data Release From

on 7 51-7003 02/19/2007 DR Contact: 05/21/2007 Data Release Frequency: Varies

EDR PROPRIETARY RECORDS

Manufactured Gas Plants: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A Date Data Arrived at EDR: N/A Date Made Active in Reports: N/A Number of Days to Update: N/A

COUNTY RECORDS

APACHE COUNTY:

Apache County Special Tax Assessments

Date of Government Version: N/A Date Data Arrived at EDR: N/A Date Made Active in Reports: N/A Number of Days to Update: 0 Source: EDR, Inc. Telephone: N/A Last EDR Contact: N/A Next Scheduled EDR Contact: N/A Data Release Frequency: No Update Planned

Source: N/A Telephone: N/A Last EDR Contact: N/A Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

COCHISE COUNTY:

Cochise County Special Tax Assessments

Date of Government Version: N/A Date Data Arrived at EDR: N/A Date Made Active in Reports: N/A Number of Days to Update: 0 Source: N/A Telephone: N/A Last EDR Contact: N/A Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

COCONINO COUNTY:

Coconino County Special Tax Assessments

Date of Government Version: N/A Date Data Arrived at EDR: N/A Date Made Active in Reports: N/A Number of Days to Update: 0 Source: N/A Telephone: N/A Last EDR Contact: N/A Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

GILA COUNTY:

Gila County Special Tax Assessments

Date of Government Version: 11/01/2006 Date Data Arrived at EDR: 11/20/2006 Date Made Active in Reports: 11/29/2006 Number of Days to Update: 9 Source: N/A Telephone: N/A Last EDR Contact: 10/27/2006 Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

GRAHAM COUNTY:

Graham County Special Tax Assessments

Date of Government Version: N/A Date Data Arrived at EDR: N/A Date Made Active in Reports: N/A Number of Days to Update: 0 Source: N/A Telephone: N/A Last EDR Contact: N/A Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

GREENLEE COUNTY:

Greenlee County Special Tax Assessments

Date of Government Version: N/A Date Data Arrived at EDR: N/A Date Made Active in Reports: N/A Number of Days to Update: 0

Telephone: N/A Last EDR Contact: N/A Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

Source: N/A

LA PAZ COUNTY:

La Paz County Special Tax Assessments

Date of Government Version: N/A Date Data Arrived at EDR: N/A Date Made Active in Reports: N/A Number of Days to Update: 0 Source: N/A Telephone: N/A Last EDR Contact: N/A Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

MARICOPA COUNTY:

Maricopa County Noise Contour Areas

Date of Government Version: 10/28/2003 Date Data Arrived at EDR: 08/31/2006 Date Made Active in Reports: 09/19/2006 Number of Days to Update: 19

Maricopa County Special Tax Assessments

Date of Government Version: N/A Date Data Arrived at EDR: N/A Date Made Active in Reports: N/A Number of Days to Update: 0 Source: N/A Telephone: N/A Last EDR Contact: 07/26/2006 Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

Source: N/A Telephone: N/A Last EDR Contact: N/A Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

MOHAVE COUNTY:

Mohave County Special Tax Assessments

Date of Government Version: 11/01/2006 Date Data Arrived at EDR: 11/06/2006 Date Made Active in Reports: 11/29/2006 Number of Days to Update: 23 Source: N/A Telephone: N/A Last EDR Contact: 10/13/2006 Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

NAVAJO COUNTY:

Navajo County Special Tax Assessments

Date of Government Version: 10/17/2006 Date Data Arrived at EDR: 10/17/2006 Date Made Active in Reports: 11/29/2006 Number of Days to Update: 43 Source: N/A Telephone: N/A Last EDR Contact: 10/12/2006 Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

PIMA COUNTY:

Pima County Noise Contour Areas

Date of Government Version: 08/17/2006 Date Data Arrived at EDR: 08/31/2006 Date Made Active in Reports: 09/19/2006 Number of Days to Update: 19

Pima County Special Tax Assessments

Date of Government Version: N/A Date Data Arrived at EDR: N/A Date Made Active in Reports: N/A Number of Days to Update: 0 Source: N/A Telephone: N/A Last EDR Contact: 08/17/2006 Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

Source: N/A Telephone: N/A Last EDR Contact: N/A Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

PINAL COUNTY:

Pinal County Special Tax Assessments

Date of Government Version: 10/01/2006 Date Data Arrived at EDR: 10/11/2006 Date Made Active in Reports: 11/30/2006 Number of Days to Update: 50 Source: N/A Telephone: N/A Last EDR Contact: 09/22/2006 Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

SANTA CRUZ COUNTY:

Santa Cruz County Special Tax Assessments

Date of Government Version: N/A Date Data Arrived at EDR: N/A Date Made Active in Reports: N/A Number of Days to Update: 0 Source: N/A Telephone: N/A Last EDR Contact: N/A Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

YAVAPAI COUNTY:

Yavapai County Special Tax Assessments

Date of Government Version: N/A Date Data Arrived at EDR: N/A Date Made Active in Reports: N/A Number of Days to Update: 0 Source: N/A Telephone: N/A Last EDR Contact: N/A Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

YUMA COUNTY:

Yuma County Noise Contour Areas

Date of Government Version: 08/01/2006 Date Data Arrived at EDR: 08/31/2006 Date Made Active in Reports: 09/19/2006 Number of Days to Update: 19 Source: N/A Telephone: N/A Last EDR Contact: 08/02/2006 Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Yuma County Special Tax Assessments

Date of Government Version: N/A Date Data Arrived at EDR: N/A Date Made Active in Reports: N/A Number of Days to Update: 0 Source: N/A Telephone: N/A Last EDR Contact: N/A Next Scheduled EDR Contact: N/A Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 12/31/2004	Source: Department of Environmental Protection
Date Data Arrived at EDR: 02/17/2006	Telephone: 860-424-3375
Date Made Active in Reports: 04/07/2006	Last EDR Contact: 12/11/2006
Number of Days to Update: 49	Next Scheduled EDR Contact: 03/12/2007
	Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 10/26/2006 Date Data Arrived at EDR: 11/29/2006 Date Made Active in Reports: 01/05/2007 Number of Days to Update: 37 Source: Department of Environmental Conservation Telephone: 518-402-8651 Last EDR Contact: 03/02/2007 Next Scheduled EDR Contact: 05/28/2007 Data Release Frequency: Annually

RI MANIFEST: Manifest information Hazardous waste manifest information

Date of Government Version: 04/11/2006 Date Data Arrived at EDR: 10/31/2006 Date Made Active in Reports: 12/18/2006 Number of Days to Update: 48 Source: Department of Environmental Management Telephone: 401-222-2797 Last EDR Contact: 12/18/2006 Next Scheduled EDR Contact: 03/19/2007 Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2005 Date Data Arrived at EDR: 03/17/2006 Date Made Active in Reports: 05/02/2006 Number of Days to Update: 46 Source: Department of Natural Resources Telephone: N/A Last EDR Contact: 02/06/2007 Next Scheduled EDR Contact: 04/09/2007 Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data

Source: PennWell Corporation

Telephone: (800) 823-6277

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fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:

Source: American Hospital Association, Inc.

Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services

Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services,

a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes

Source: National Institutes of Health

Telephone: 301-594-6248

Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on elementary

and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools

Source: National Center for Education Statistics Telephone: 202-502-7300

The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Child Care Facilities & Group Homes

Source: Department of Health Services Telephone: 602-674-4220

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Riparian Vegetation Associated with Perennial Waters

Source: State Land Department Telephone: 602-542-4094

STREET AND ADDRESS INFORMATION

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Appendix D

Excerpts from Reviewed Regulatory Files



ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Russell F. Rhoades, Director

CERTIFIED MAIL Governor Jane Dee Hull Return Receipt Request UST Ref. #98-0015711 September 14, 1998

Mr. Randall Morris Kaibab Industries P.O. Box 52111 Phoenix, Arizona 85072

RE: CASE CLOSURE FOR LUST FILE #4697.01 Facility ID #0-002780 Pima County

Whiting Station #158 2100 West Ruthrauff Road Tucson, Arizona 85705

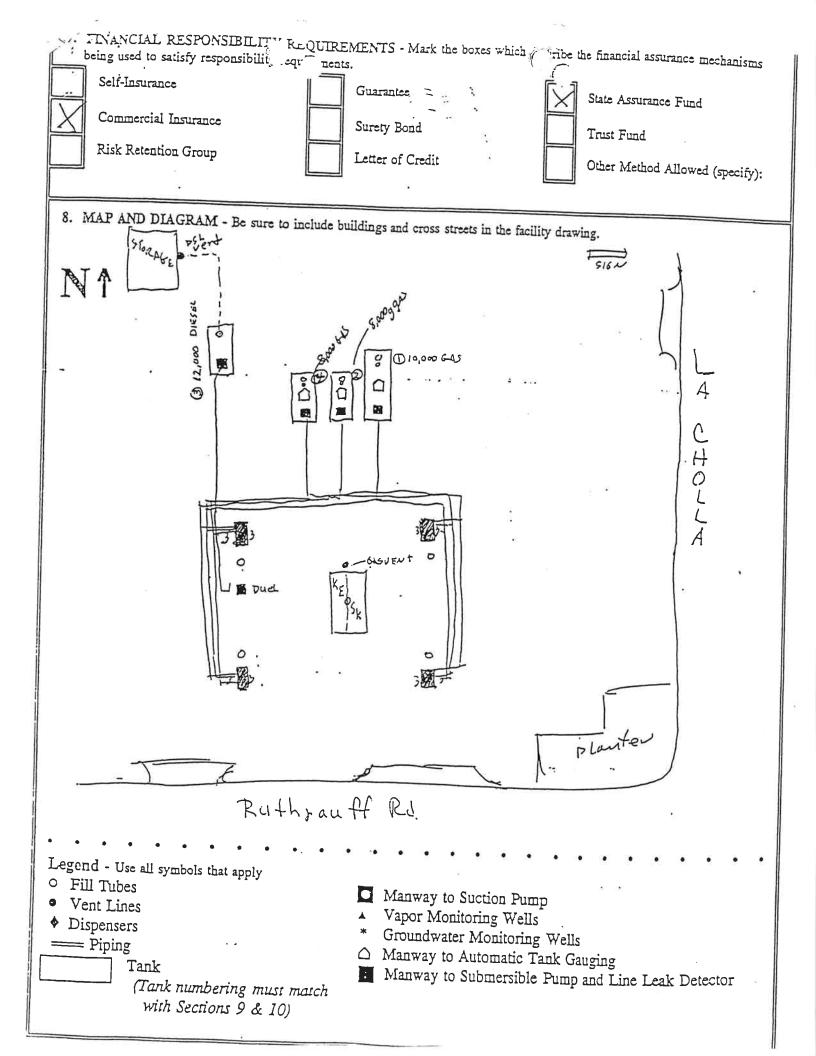
Dear Mr. Morris:

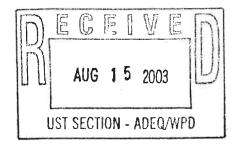
The Arizona Department of Environmental Quality (ADEQ), Underground Storage Tank (UST) Corrective Action Section (UST Section) staff have reviewed the referenced case file. Based on this review, it has been determined that Section investigative and remedial requirements have been satisfied. The UST release discovered on or about May 14, 1997 at this facility does not appear to be a significant threat to groundwater quality. This letter concerns the gasoline release reported to the ADEQ on May 15, 1997. Further response concerning this release is, therefore, not required at this time.

This LUST case file has been closed for the following reasons:

- 1. The referenced UST system release area was investigated.
- 2. The vertical extent of laboratory detectable soil contamination was defined to approximately 35 feet below the ground surface (bgs) beneath the release location(s).
- 3. The lateral extent of laboratory detectable soil contamination was defined to a radius of approximately 10 feet around the release location(s).
- 4. Depth to groundwater beneath this facility has been estimated or measured to be approximately 120 feet bgs. The source of this information is the Department of Water Resources, 1995.
- 5. The ADEQ has determined that the extent of contamination appears to have been adequately defined as of May 19, 1997.
- 6. The documented results, to date, for the referenced UST releases indicate that contaminant concentration remaining in the vadose zone is at or below the remediation standard(s) specified in R18-7-205.

The ADEQ is not requiring additional work for the referenced UST release at this facility at this time. However, if, in the future, evidence of previously undocumented contamination is discovered at, or emanating from, this facility, the ADEQ will require additional investigation including any necessary additional remediation.





50 2 ŝ Vilen Stephenson Associates

SITE CHARACTERIZATION REPORT Former Mustang Station No. 6922 2100 West Ruthrauff Road Tucson, Arizona LUST No. 4697.02 (North End of UST #3) Facility No. 0-002780

Prepared for

Giant Industries Attn: Mr. Tim Littlewood 7324 Fourth Street NW Albuquerque, New Mexico 87107

Prepared by

Allen, Stephenson & Associates 1130 E. Missouri Avenue., Suite 110 Phoenix, Arizona 85014

August 15, 2003

Job No. 425.01

5 - 26 2 95 -1- - - 12 5 1 195

Tracking 032 Facility DOC Lust #4697.62 Lust # Lust # Date & 102 Initial_

Allen, Stephenson & Associates

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Appendix A – Exploratory Boring Log

Appendix B – Soil Analytical Laboratory Report and Chain-of-Custody Documentation Appendix C – Owner/Operator/Volunteer Certification for LUST Case Closure Request Allen, Stephenson & Associates

1.0 INTRODUCTION

Allen, Stephenson & Associates, (ASA) was retained by Giant Industries (Giant) to assess and report the extent of petroleum hydrocarbon impact associated with the reported leaking underground storage tank (LUST) release which occurred within the former underground storage tank (UST) pit at the former location of Mustang Station #6922. Assessment of the UST pit was completed in response to the Arizona Department of Environmental Quality (ADEQ) correspondence (UST Ref. #03-0004979) dated June 20, 2003. Subsequent to Giant receiving the ADEQ correspondence, LUST release case number 4697.02 was assigned to the site by ADEQ.

1.1 Facility Identification, Location and Adjoining Property Uses

The former Mustang Station #6922 (site) is situated within Pima County and located at 2100 West Ruthrauff Road in Tucson, Arizona (Figure 1). The cadastral coordinates for the site are the southeast quarter of the southeast quarter of the southeast quarter of Section 16, Township 13 North, Range 13 East of the Gila and Salt River Base and Meridian. The site was the location of a fuel station that reportedly operated until just recently, when the USTs formerly located at the site were removed. Since the removal of the USTs in June 2003, the property has remained vacant.

Properties adjoining the site consist of a vacant lot to the north and to the south of the site (across Ruthrauff Road) and operating commercial properties to the east and west. The nearest permitted UST facility is the Circle K #592 Station located across La Cholla Boulevard at 2080 West Ruthrauff Road, approximately fifty feet east of the site. According to the ADEQ LUST database, which records LUST file numbers that have been placed on facilities where releases have occurred, this Circle K Station has not had any open or closed LUSTs reported.

2.0 BACKGROUND

Fuel dispensing operations at the site ceased prior to May 30, 2003, when all remaining product and accumulated sludge were removed from the USTs in preparation for UST removal activities at the sSite. The dispensers were also removed from the site at or before this date; however the dispenser islands and associated canopy and convenience store still exist at the site. According to a UST removal report prepared by Tank Solutions, the UST excavation was located approximately five feet due north of the canopy at the site, and adjacent to the north edge of the convenience store, as shown on Figure 2. Reportedly, three 10,000-gallon gasoline USTs were removed from the primary UST pit at the site on June 12, 2003. One 12,000-gallon diesel fuel UST was also removed from an adjacent separate UST pit on that date. Each of the USTs appeared to be in good condition and did not contain corrosion holes along the tank exterior. The report also states that no visual or olfactory evidence was discovered that would indicate a release had occurred. Based upon this information, samples were collected in the required locations and the excavation was backfilled with the fill material surrounding the former USTs and topped off with imported fill material. The collected soil samples were then submitted to an analytical laboratory for the analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX).

Following removal of the USTs, soil samples were collected from beneath the north and south ends of each of the UST locations, at approximately 14 feet below ground surface (bgs). Soil samples were also collected from beneath the product lines that connect the USTs to the dispenser islands. The soil analytical laboratory results indicated the presence of a low concentration of benzene in the soil sample collected from beneath the north end of the central gasoline UST (referenced as UST #3 in the UST removal report), at 0.43 milligrams per kilogram (mg/kg). No other BTEX constituents were reported above their respective laboratory reporting limits in that sample or in any of the other samples submitted for analysis. Given that the tanks appeared in good condition, and that the benzene concentration was low, the source of the benzene is likely attributable to overfilling of the USTs and/or Allen, Stephenson & Associates

piping leaks in the vicinity of the former USTs. The age and volume of the release is unknown. This reportable benzene concentration is the release location for which ADEQ assigned LUST case file #4697.02, and the subsequent characterization and assessment of this UST pit release is the subject of this site characterization report.

ENVIRONMENTAL SETTING

3.0

The site is located within the Basin and Range Lowlands Physiographic Province, which includes an area extending from the northwest corner of the state, southeasterly across the southern half of the state. The Basin and Range Province is bounded to the north by the Central Highlands Province, which includes the Colorado Plateau and associated Mogollon Rim. Landforms present within the Basin and Range Province consist of predominantly northwest-southeast trending, block-faulted mountain ranges, separated by broad, gently sloping alluvial basins. The site is situated within one of these alluvial basins, and is bounded to the north-northeast by the Santa Catalina Mountains, to the east by the Rincon Mountains, and to the west by the Tucson Mountains.

The Rillito Creek, an ephemeral principal drainage for the site vicinity and the nearest surface water feature to the site, lies approximately one-half mile north of the site and drains northwest. Based upon a search of the Arizona Department of Water Resources database, a well owned by the City of Tucson was reviewed, which was installed in July 2000 and is located approximately one-half mile west of the site. The groundwater level in the well was shown to be 128 feet bgs. Based upon the distance and the similar topography between the well location and the site, it is reasonable to expect that the groundwater levels at the site would be a similar depth.

Exploratory drilling at the site encountered principally alluvial sediments, consisting of moderately cemented, variably interbedded silty sands and silty clays, from the surface to approximately 41 feet bgs. From 41 feet to the termination of the boring at 50 feet bgs, an increase in coarse sand and gravel was observed, concomitant with a decrease in fines. From 48 feet bgs to 50 feet bgs, the boring was completed in sandy gravel, most likely originating from previous historic meandering of the Rillito Creek.

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4.0 SITE CHARACTERIZATION METHODS – ADEQ LUST CASE FILE #4697.02

The assessment of the release in the UST pit consisted of one exploratory soil boring in the location of the impacted area, with the collection of soil samples at five-foot intervals. This approach was based upon the fact that the previously reported benzene concentration was below the ADEQ residential and non-residential soil remediation levels (SRLs), and that the sample collected at the greatest depth, beneath the north end of UST #3 exhibited a target analyte above the laboratory reporting limit.

On July 18, 2003, one exploratory boring (SB-01) was drilled at the location of impact to assess the vertical extent of petroleum hydrocarbon impact discovered during the UST removal activities at the site (Figure 2).

4.1 Drilling Method

Exploratory boring SB-01 was drilled using a CME-55 hollow-stem auger-drilling rig. Mr. Steven Sutherland, a registered geologist with ASA, logged the lithology encountered during on-site drilling activities in general accordance with ASTM Method D2488-93. Soil samples were collected at approximate five-foot intervals, beginning in the native material, from 15 feet bgs to 50 feet bgs. The original scope of work called to terminate the boring at 30 feet bgs; however, due to olfactory observations and preliminary screening results with a photo-ionization detector (PID), the boring was extended until no indicators of possible negative impact were encountered.

Soil samples were collected with an 18-inch split-spoon sampler equipped with three 6-inch brass sleeves. At the desired depth, the sampler was driven approximately 12 inches into the subsurface soils with an approximate 140-pound slide hammer, or to sample refusal (greater than 50 blows per 6-inch interval).

Following retrieval of the split-spoon sampler, it was opened and the brass sleeve nearest the shoe or bottom of the sampler was retrieved and sealed for submittal to an analytical laboratory for analysis. The side of that brass sleeve that coincided with the greatest sampling depth was marked, so that the analytical laboratory would use that portion of the sample. Additional soil collected from the sampler was screened for the presence of volatile organic compounds (VOCs) with a PID, calibrated to100 parts per million (ppm) volume of isobutylene. The results of PID screening are reported on the boring log, located in Appendix A.

Each sample sleeve collected for analysis was covered at each end with a Teflon® sheet, then a sheet of aluminum foil and capped with a tight fitting plastic end cap. The sample number, date, time, ASA job number, and the sampler's initials were then recorded on the sample and the laboratory chain-of-custody, and then placed into a sealable plastic bag and into an insulated cooler on ice until submittal to the laboratory for analysis.

4.2 PID Screening

Field screening for the presence of VOC vapors was accomplished by utilizing a Rae Systems model MiniRae 2000 PID. The PID provides a relative indication of the presence of VOCs, including gasoline and/or BTEX. The presence of VOC vapors was accomplished by placing the soil collected from the sampler shoe into a sealable plastic bag, allowing the sample and bag to volatilize for approximately 10-15 minutes, and then carefully inserting the PID tube into the bag to collect a reading. PID readings were then recorded onto the exploratory soil boring field log (Appendix A).

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4.3 Soil Sample Analytical Laboratory Methods

Soil samples collected from exploratory boring SB-01 were analyzed for various compounds, in accordance with ADEQ requirements for vertical characterization of impacted soil where a LUST file number has been assigned. Based upon ADEQ requirements, soil samples SB-01-25, SB-01-30, SB-01-35, SB-01-40 and SB-01-45 (collected at 25, 30, 35, 40 and 45 feet bgs, respectively) were analyzed for BTEX via U. S. Environmental Protection Agency (EPA) Method 8260B. Soil samples SB-01-15, SB-01-20, and SB-01-50 (collected at 15, 20 and 50 feet bgs, respectively) were analyzed for VOC constituents via EPA Method 8260B. The full VOC analysis also includes BTEX constituents. Soil sample SB-01-15 was also analyzed for polynuclear aromatic hydrocarbons (PAHs) via EPA Method 8310. Sample analyses were performed by Precision Analytical Laboratories, Inc., a State-certified analytical laboratory (Arizona Department of Health & Safety License #AZ0610). The analytical laboratory report and chain-of-custody documentation are presented in Appendix B. The analytical report identifies the analytical method, sample media and collection date, extraction date, analyses date, and reporting limits of the laboratory analyses.

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5.0 SITE CHARACTERIZATION RESULTS - ADEQ LUST CASE FILE #4697.02

ASA's site characterization activities were initiated at the site on July 18, 2003, and consisted of drilling a single exploratory boring (SB-01) to a maximum depth of 50 feet bgs. The exploratory boring was positioned in the center the reported release area. This location coincided with the north end of the central UST (UST #3). Soil samples were collected at a depth commencing at 15 feet bgs (native soil began at 14 feet bgs) and extending to a depth of 50 feet bgs. The results and findings of ASA's site characterization activities are described in further detail below.

5.1 Soil Sample Analytical Results

ASA's site characterization activities were successful in determining the vertical extent of petroleum hydrocarbon impacted soil beneath the former location of the north end of the central UST (UST #3) in the former UST pit. Results of the analyses of the samples indicated the presence of methyl tert-butyl ether (MTBE, a gasoline additive) in the two most shallow soil samples collected (SB-01-15 and SB-01-20). The results were respectively 0.40 mg/kg and 0.55 mg/kg. Neither of these reportable concentrations exceed the ADEQ residential or non-residential SRLs for MTBE, established at 320 mg/kg and 3,300 mg/kg. No other VOC constituents were detected above their respective laboratory reporting limits in any of the samples submitted for VOC analysis. In addition, no benzene or other BTEX constituents were detected in any of the samples submitted for analysis. PAH analysis of sample SB-01-15 did not indicate the presence of any PAH constituents.

\$;

6.0 EXPOSURE CONCERNS

Soil analytical laboratory results obtained during the site characterization indicate that the soil directly beneath the north end of the former centrally located UST (UST #3) was only impacted with remnants of a gasoline release, where only MTBE was discovered in samples collected at 15 and 20 feet bgs, respectively. Neither of these results exceed the ADEQ SRLs for MTBE and, as such, exposure concerns to contaminated soil are minimal. Published groundwater information in the near vicinity of the site indicates groundwater levThe previously reported release has been vertically characterized to a maximum depth of approximately 20 feet bgs. Based upon this information, impact to the groundwater is unlikely.

7.0 CONCLUSIONS AND RECOMMENDATIONS

Based on a review of the data compiled from the UST removal documentation and ASA's site characterization activities, the following conclusions and recommendations are made:

7.1 Conclusions

- A release of petroleum hydrocarbons (benzene specifically) was confirmed based upon analytical data from the UST removal activities in June 2003. According to the laboratory documentation, a low benzene result of 0.43 mg/kg was detected in the soil sample collected from approximately 14 feet bgs.
- On July 18, 2003, the UST release (LUST #4697.02) was vertically assessed with the installation of an exploratory soil boring SB-01 at the location of the reportable benzene concentration. Low levels of MTBE were detected in the two shallowest samples. No other ADEQ contaminants of concern were detected above their respective laboratory reporting limits in any of the samples submitted for analysis. ASA concludes that the vertical extent of the release has been fully defined.

7.2 Recommendations

• The petroleum hydrocarbon impact related to the UST pit release does not appear to exceed applicable SRLs, nor does it appear that the release has migrated to or impacted groundwater beneath the site. Based on the available documentation presented in this report, closure of ADEQ's LUST #4697.02 is requested. The UST "Owner/Operator/Volunteer Certification for LUST Case Closure Request" form has been signed by the responsible party and is presented in Appendix C.



Geotechnical and Environmental Consultants, Inc.

2447 West 12th Street, Suite 4 · Tempe, Arizona 85281 ·

(602) 966-8631

Roger A. Brewer, P.E. Christopher L. Jacquemin, P.E. Donald J. Spadola, P.E.

Chet L. Pearson, P.E. Charles E. O'Bannon, Ph.D., P.E.

Kaibab Petroleum Company P.O. Box 52111 Phoenix, Arizona 85072

July 16, 1997

Attention: Mr. Randy Morris

Subject: Site Characterization Sampling and Testing UST Reference No. 97-0007463 ADEQ LUST File No. 4697.01 ADEQ Facility ID No. 0-002780 Whiting Station #158 2100 West Ruthrauff Road Tucson, Arizona

Dear Mr. Morris:

This report presents the results of sampling and testing performed by Geotechnical and Environmental Consultants, Inc. (GEC) at the referenced site. The purpose of our sampling and testing was to obtain preliminary data to aid in evaluating the site for the presence of significant quantities of petroleum hydrocarbons caused by a suspected dispenser release. These services have been provided in accordance with our proposal contract dated May 19, 1997.

We drilled two test borings to depths of approximately 35 to 40 feet in the vicinity of the northwest dispenser area. Sixteen soil samples were collected during the test drilling and selected samples were submitted for laboratory testing.

Based on the results of our sampling and testing, no petroleum hydrocarbons were detected in any samples obtained at the site at levels exceeding the current residential soil remediation standards (SRSs). A completed site characterization report form is presented in Appendix A. Based on the results, we feel the site has been suitably characterized in accordance with typical Arizona Department of Environmental Quality (ADEQ) requirements, and no further investigation or remediation is warranted. We recommend Kaibab submit a copy of this report to ADEQ along with a request for closure of the LUST File.

Project Background

The site is located at the northwest corner of Ruthrauff Road and La Cholla Boulevard in Tucson, Arizona as shown on Figure 1. The street address is 2100 West Ruthrauff Road. The site is located in the southeast quarter of the southeast quarter of the southeast quarter of Section 16 in



Township 13 South, Range 13 East of the Gila and Salt River Base Line and Meridian, in Pima County, Arizona. An aerial photograph of the site vicinity is presented in Figure 2.

At the time of our services, the site was developed with a Whiting/Unocal 76 station that was closed for renovation. The site improvements included a canopy, cashier's booth, restrooms, air/water stations, and landscaping. The site contained four underground storage tanks (USTs) for the storage of unleaded, premium, and unleaded plus gasoline, and diesel fuel. The dispensers, product piping, dispenser islands, and pavement had been removed and the tops of the USTs had been exposed as part of the renovation.

We understand a suspected release source was discovered during renovation work at the site on May 14, 1997. A faulty valve was found in the northwest dispenser when it was removed. The product released was unleaded gasoline, and the amount released is unknown. GEC reported the release by telephone to ADEQ on May 15, 1997. GEC submitted a Release Confirmation and 14-day Report Form to ADEQ on May 29, 1997.

Since ADEQ's State Assurance Fund rules allow for the drilling of a single test boring near the point of the release to determine the vertical extent of petroleum hydrocarbons without preapproval, a test boring was drilled adjacent to the release source. At the request of Kaibab, this boring was completed as a vapor extraction well in an effort to reduce costs if remediation of the release were required in the future. Kaibab also requested that we drill a second boring approximately 15 feet west of the release point to evaluate the horizontal extent. Soil samples were collected from each test boring and selected samples were analyzed for total petroleum hydrocarbons (TPH), and benzene, toluene, ethylbenze and, and xylenes (BTEX).

Geologic/Hydrologic Setting

The site lies on relatively flat land in the central portion of the Tucson Basin. The Tucson Basin is located in the Basin and Range Province which includes the southwestern portion of Arizona as well as parts of southern Nevada, California, New Mexico, and northern Mexico. The Basin and Range Province is characterized by elongated mountain ranges trending northwest-southwest and separated by broad alluvial valleys. The mountains in this province consist of tilted blocks of Precambrian, Paleozoic, Mesozoic, and Cenozoic rocks. The mountain blocks are bounded by faults and are usually severely eroded.

The Tucson Basin is an extensive basin containing alluvium varying up to approximately 12,000 feet in thickness. The alluvium, often called "Valley Fill," is highly variable and ranges from dense sand, gravel, and cobble deposits to silts and clays. In many areas, deposits of heavily cemented sandy clay and clayey sand ("caliche") are encountered. Caliche often has the characteristics of soft rock.

The alluvium and rock of the Tucson Basin include three major units that in general form a single, unconfined aquifer. They are the Fort Lowell Formation, the Tinaja Beds, and the Pantano Formation. The Fort Lowell Formation, which generally comprises the upper 300 to 400 feet, provides most of the groundwater that is withdrawn from the basin. It is comprised of interbedded



silts, sands, and gravel. The Tinaja Beds underlie the Fort Lowell Formation and, in many areas, are separated from the Fort Lowell Formation by an aquitard which inhibits flow between the two. The Tinaja Beds are comprised of upper beds, which are sand and gravel, and lower beds, which are gypsiferous clayey silt and mudstones. Beneath the Tinaja Beds, at depths of several thousand feet in the central portion of the basin, is the Pantano Formation. The Pantano Formation is generally a reddish-brown silty sandstone that overlies bedrock.

The Santa Cruz River is the principal drainage feature through the Tucson Basin. It drains northerly and is located approximately 1.5 miles west of the site. It is highly variable in flow, ranging from traces during dry seasons to torrential flows during flood events. The nearest significant drainage feature to the site was Rillito Creek. Rillito Creek, a principal tributary to the Santa Cruz River, is located approximately one-half mile north of the site.

Groundwater data (Ref.1) provided by the City of Tucson Water, Planning, and Technical Services Division indicated that the groundwater elevation in 1992 in the site vicinity was approximately 2,142 feet above mean sea level, as shown on Figure 3. The direction of groundwater flow beneath the site was westerly in 1992 based on the groundwater contours and individual well data shown on Figure 3. A topographic map of the site vicinity is shown on Figure 4. The elevation of the ground surface at the site is approximately 2,266 feet as shown on Figure 4. Therefore, the depth to groundwater at the site was approximately 124 feet in 1992. GEC also contacted the Arizona Department of Water Resources (ADWR) for depth to groundwater data in the site vicinity. ADWR indicated the depth to groundwater in a well near the site was approximately 125 feet in January 1995.

Sampling and Testing

The field exploration and soil sampling was conducted on May 16, 1997. Mr. David E. Foreman, P.E. and Mr. John J. Nolan of GEC supervised the test drilling, logged the soil borings, performed sampling equipment decontamination, and kept the samples in their custody until delivery to the laboratory.

Two test borings were drilled in the vicinity of the suspected dispenser release at the locations shown on Figure 5. The test borings were designated at TB-1 and TB-2. Boring TB-1 was drilled at the approximate location of the release point to evaluate the vertical extent of the release. Boring TB-2 was drilled approximately 15 feet west of TB-1 to evaluate the horizontal extent of the release.

TB-1 was drilled to a depth of approximately 36.5 feet and TB-2 was drilled to a depth of approximately 41.5 feet. TB-1 was located in an area that had been excavated to a depth of about 5 feet as part of the renovation work. Therefore, the ground surface at the location of TB-1 was about 5 feet below the ground surface level of the rest of the site. The top of TB-1 was approximately five feet below the natural grade at the location of TB-2.



All test borings were drilled with a CME-75 drill rig and OSHA-trained crew supplied by Enviro International, Inc. of Tucson, Arizona. The borings were advanced using 7-inch OD hollow-stem augers. Soil samples were obtained using clean brass-sleeve-lined samplers (2.0-inch ID California split-spoon) driven through the end of the augers. Enviro International steam-cleaned the hollow-stem augers and other downhole equipment at its yard prior to arriving on site. Samplers were decontaminated prior to obtaining each sample by washing with Alconox detergent and water, double rinsing with deionized water, rinsing with methanol, and allowing to air dry.

All drilling and sampling operations were monitored using a portable photoionization detector (PID-Thermo Environmental Instruments, Inc. Model 580B, 10.0 eV lamp) to aid in determining which samples to test, and to aid in determining if higher levels of personnel protection (beyond OSHA Level D) were required for the project. The PID detects volatile organic compounds (VOCs) in air, including those associated with gasoline and diesel fuel, with detection limits on the order of 0.2 units (approximately 0.2 parts per million). Background PID readings at the site ranged up to 15 units due to the ongoing renovation work. Relatively low PID readings were obtained at both boring locations as shown on the boring logs. Higher levels of personnel protection were not required during the test drilling.

Soil samples were obtained every five feet throughout each test boring starting at a depth of five feet. An additional soil sample was obtained at a depth of three feet in test boring TB-1. The samples were obtained by driving a split-spoon sampler 18 inches through the end of the hollow stem augers. The split-spoon sampler was fitted with two 2-inch-diameter by 3-inch-long brass sleeves and two 6-inch-long brass sleeves.

The bottom 3-inch sleeve was removed from the sampler, and each end of the sleeve was sealed with a sheet of TeflonTM and a sheet of aluminum foil followed by a plastic end cap. The plastic end caps were secured by wrapping the cap and sleeve with TeflonTM tape. Each sleeve was labeled with the sample identification number, the initials of the person who obtained the sample, the date, the time, and the sample locations. Each sleeve was sealed in a manner which will indicate tampering by placing a gummed seal around the wrap of TeflonTM tape. All of the samples were stored in a cooler with ice, and kept in the possession of GEC personnel at all times until they were delivered to the laboratory under-chain-of-custody documentation. A portion of soil from the second 3-inch sleeve from each sample was monitored with the PID.

TB-1 was completed as a vapor extraction well for possible use if remediation was required in the future. The well was constructed of 2-inch diameter PVC and extended to a depth of 35 feet below the natural site grade. Thirty feet of 0.020-inch slot well screen was placed between depths of 5 and 35 feet. A sand pack using #8-16 size silica sand was placed around the well screen. A 1-foot seal of 1/4-inch bentonite pellets was placed on top of the sand pack. The remainder of the annulus between the well and the wall of the test boring was backfilled with drill cuttings. TB-2 was abandoned by backfilling the drill cuttings back into the test boring.



Soil Conditions

The subsurface soil encountered at each of the test boring locations was generally a stratified dark brown clayey sand to sandy clay deposit. This deposit was medium dense to dense, exhibited low plasticity, and contained coarse gravel and cobbles from approximately 3 to 7 feet in TB-1 and approximately 6 to 15.5 feet in TB-2.

A light reddish brown silty sand deposit was encountered at approximately 35 feet in TB-1 and between 20 and 25 feet in TB-2. This deposit was medium dense to very dense, nonplastic, and predominately fine to medium grained. Soil moisture contents were described as damp. Groundwater was not encountered in any of the test borings during test drilling. Boring logs are presented in Appendix B.

Description of the Laboratory Testing

Six samples from the test borings were analyzed for TPH using ADHS Test Method 418.1AZ. Ten samples were analyzed for BTEX according to EPA Test Method 8020. Turner Laboratories, Inc.(Turner-Tucson, Arizona, ADHS license #AZ0066) conducted the laboratory analyses.

Laboratory Test Results

The laboratory report and chain-of-custody documentation are presented in Appendix C. The laboratory report indicates the analytical methods, sample collection dates, extraction dates, analyses dates, and detection limits of the laboratory test. A summary of the analytical laboratory results is presented below:

Sample ID/Depth	PID Reading (units)	Method 418.1AZ	EPA Method 8020 (mg/kg)			
(ft)	TPH (mg/kg)	TPH (mg/kg)	В	Т	E	x
TB-1-3	15	<20	< 0.05	<0.1	<0.1	< 0.1
TB-1-5	40		< 0.05	<0.1	< 0.1	< 0.1
TB-1-10	65	<20	0.22	<0.1	< 0.1	0.2
TB-1-15	14		< 0.05	<0.1	< 0.1	< 0.1
TB-1-20	13		< 0.05	<0.1	< 0.1	< 0.1
TB-1-25	15		< 0.05	<0.1	< 0.1	0.13
TB-1-30	16	<20	< 0.05	<0.1	< 0.1	< 0.1



Sample ID/Depth	PID Reading (units)	Method 418.1AZ	EPA Method 8020 (mg/kg)			
(ft)		TPH (mg/kg)	В	т	Е	x
TB-1-35	15	.<20	< 0.05	<0.1	< 0.1	0.1
TB-2-20	2	<20	< 0.05	<0.1	<0.1	< 0.1
TB-2-40	1	<20	< 0.05	< 0.1	< 0.1	< 0.1
Current Residenti	al SRSs (mg/kg)	7,000	47	23,000	12,000	230,000

Notes: 1. -- = The sample was not analyzed by this method.

2. The numbers presented in **bold** represent analytical laboratory results equal to or above laboratory detection limits.

Discussion

ADEQ recently promulgated interim soil remediation rules. These rules present predetermined soil remediation standards (SRSs) based on residential and non-residential health based guidance levels (HBGLs). These SRSs are typically used for evaluating soil contamination, unless the contamination is at or near the groundwater level. We also understand that ADEQ typically requires that the vertical extent of a release be defined to a level at/or below the minimum required detection limits of the particular analysis.

The results of the drilling, sampling, and testing indicate the extent of petroleum hydrocarbons beneath the northwest dispenser was limited to a depth of about 35 feet. No TPH were detected in any of the soil samples analyzed and only three samples from TB-1 contained relatively low concentrations of benzene and/or xylenes. The deepest sample from TB-1 was obtained at a depth of 35 feet and it contained only xylenes at a concentration of 0.1 mg/kg, which was equal to the detection limit of the test. All concentrations detected were well below the respective residential SRSs. Relatively low PID readings were observed in the soil samples; however, background PID readings ranging up to 15 units were recorded due to the ongoing renovation work which included the removal of product piping and exposing the top of the USTs. The laboratory analysis did not indicate the presence of significant concentrations of VOCs in the soil samples which supports our belief that the PID readings were background readings due to the renovation work.

Groundwater was not encountered at either boring location and is reportedly at a depth of about 125 feet in the site vicinity. Based on this data, the vertical extent of the release is separated from groundwater by a distance of approximately 90 feet.

Based on the data presented in this report, we believe the vertical extent of petroleum hydrocarbons, has been defined in accordance with ADEQ requirements and no further investigation or remediation is warranted. We recommend Kaibab submit a copy of the report to ADEQ along with a request for closure of the LUST File.

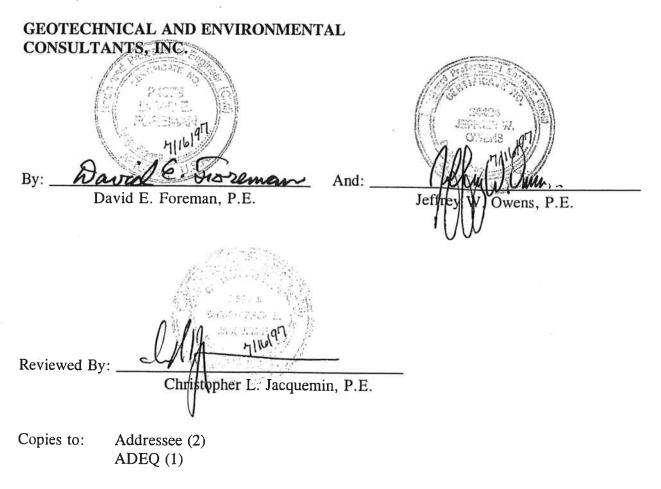


Limitations

This report was prepared for the sole use of Kaibab Petroleum Company, exclusively, and is subject to the terms presented in our contract. No other person may rely on this report without the express written permission of Geotechnical and Environmental Consultants, Inc. Geotechnical and Environmental Consultants, Inc. is not a law firm, and therefore makes no representations regarding any potential liability of any person for site conditions. Results of sampling and testing presented in this report represent site conditions only at the designated locations and times specified. Additional information which was not readily available to Geotechnical and Environmental Consultants, Inc. at the time of this report may result in modification of this report.

We appreciate the opportunity to perform this work. If there are any questions or we can be of further assistance, please do not hesitate to call.

Sincerely,

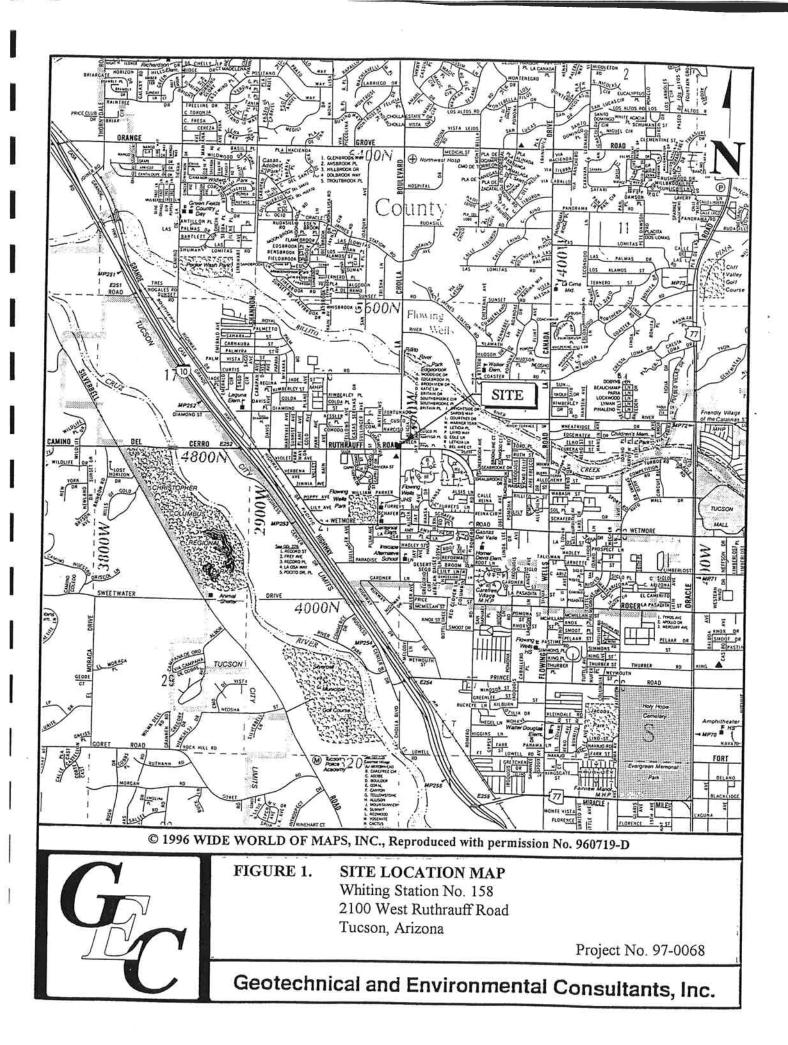


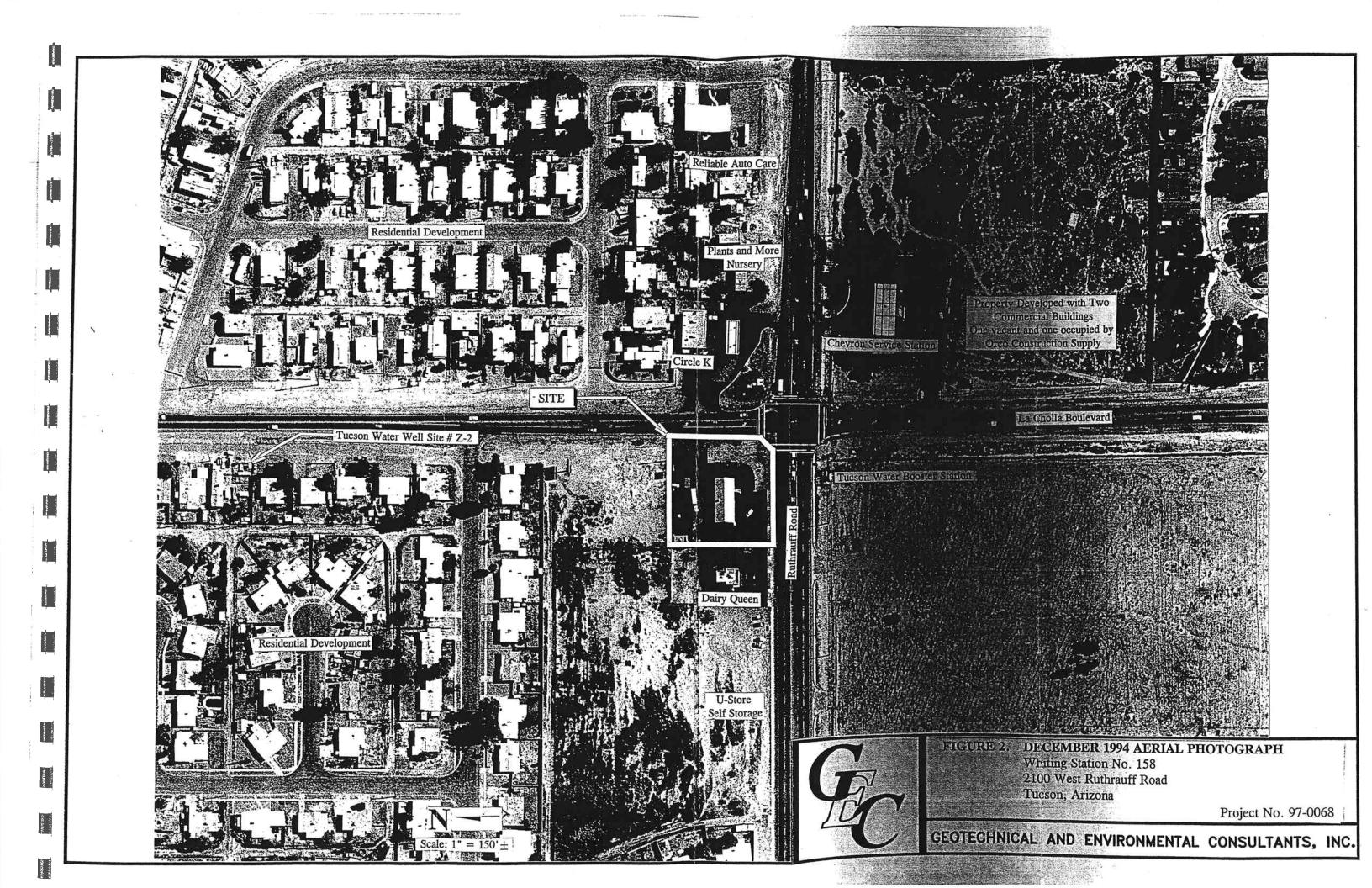


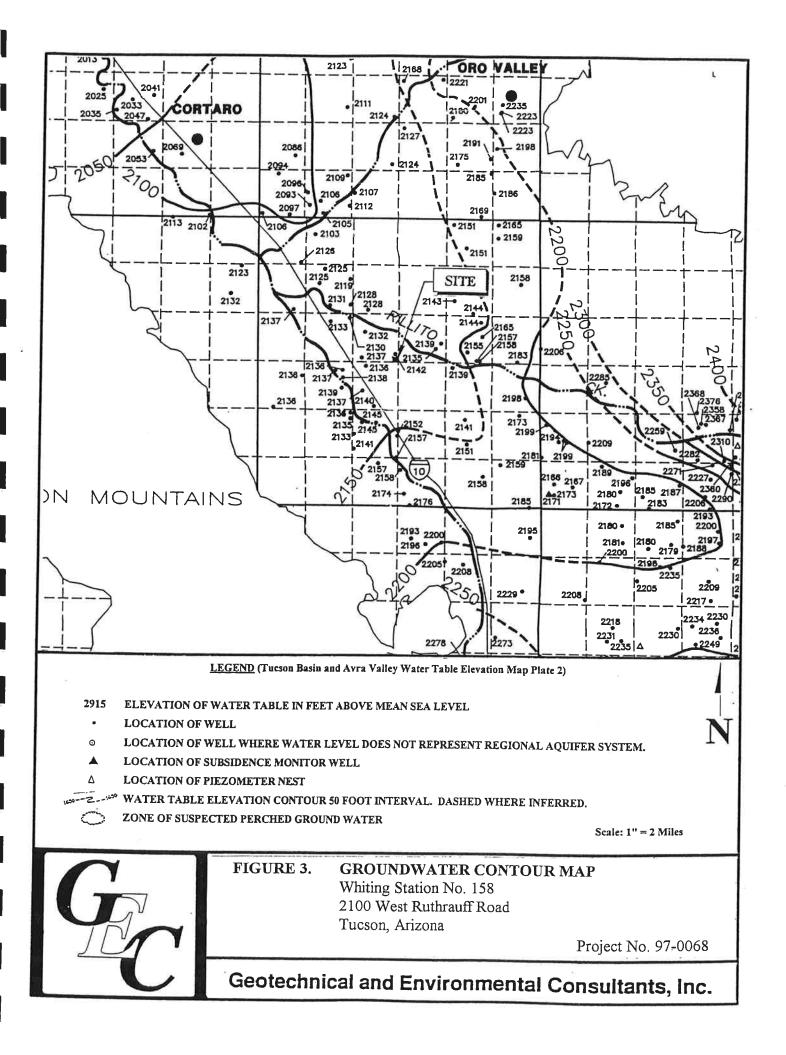
References

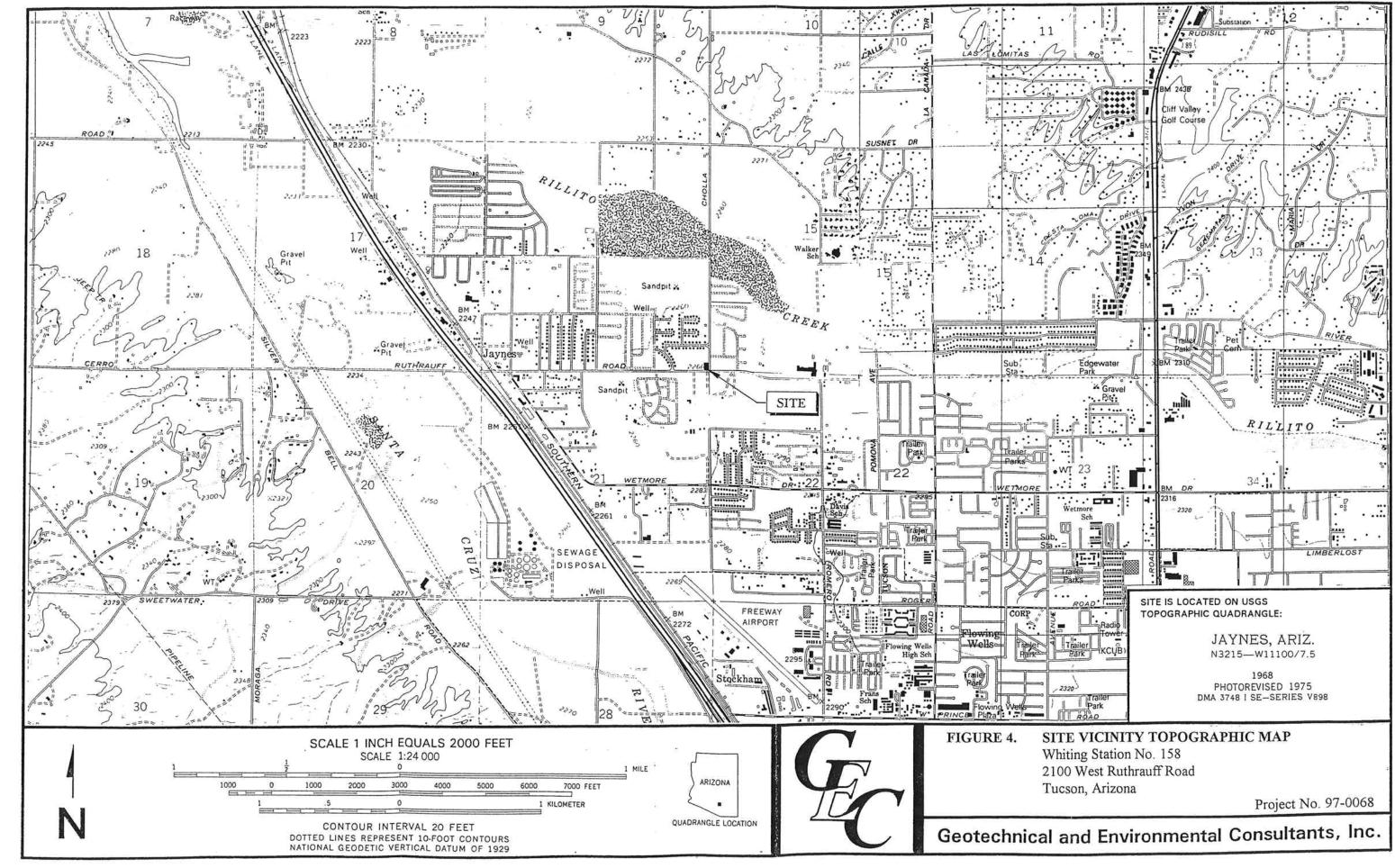
1. Annual Static Water Level Basic Data Report, Tucson Basin and Avra Valley, Pima County, Arizona--1992; City of Tucson, Tucson Water, Planning and Technical Services Division, Plate 2, Prepared Under The Direction Of R. Bruce Johnson, Chief Hydrologist, Hydrology Section, August 1994.

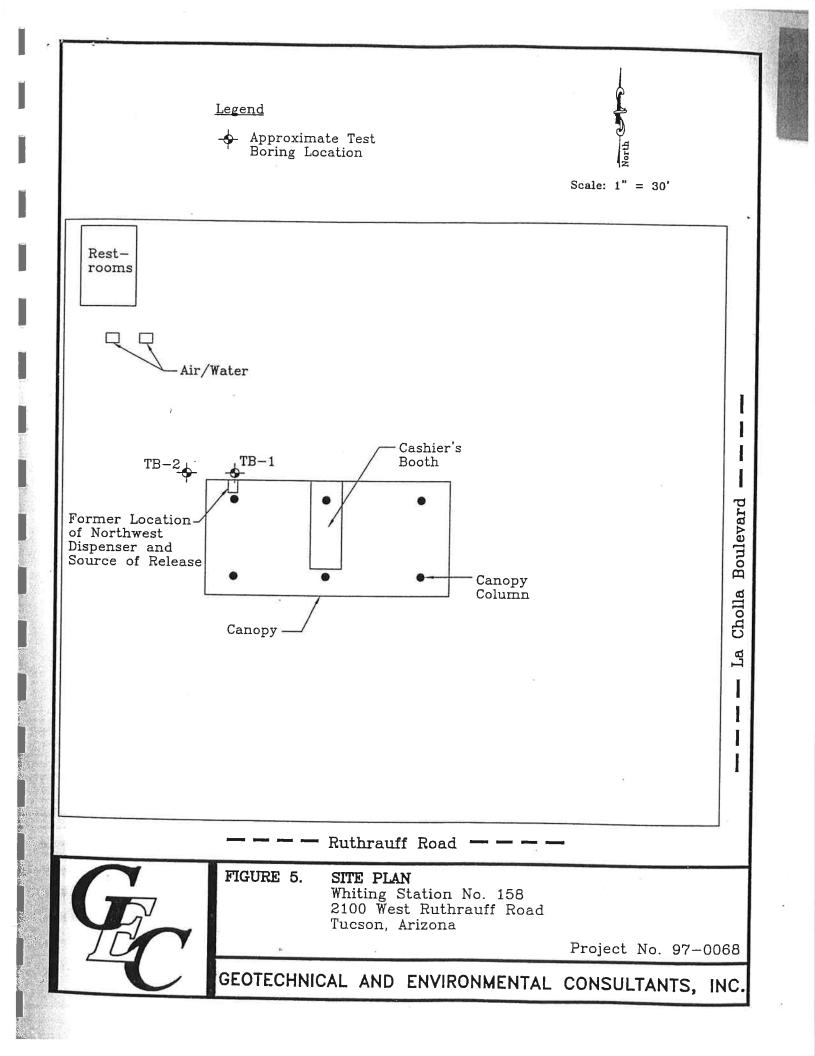












SITE CHARACTERIZATION REPORT Circle K Store No. 00592 2080 West Ruthrauff Road Tucson, Arizona 85705 c) Property Owner: Cadence Corporation 6855 North Los Leones Drive Tucson, Arizona 85718 Phone: NA Fax: NA d) Facility Contact: Nathan Russell, Project Manager, Shaw E & I, Approved service provider of ConocoPhillips-Risk Management & Remediation **ConocoPhillips** Company 1230 West Washington Street, Suite 212 Tempe, Arizona 85281 Phone: (602) 452-2511 Fax: (602) 452-2509

3.0 CONSULTANT INFORMATION

Company Name:	ATC Associates Inc. (ATC)		
Contact:	Robert Taylor		
Title:	Project Manager		
Address:	9185 South Farmer Avenue, Suite 105		
	Tempe, Arizona 85284		
	Phone: (480) 894-2056	Fax: (480) 894-2497	

4.0 SITE HISTORY, LITHOLOGY AND AREA HYDROGEOLOGY

4.1 Site Background

Circle K Store No. 00592 (the site) is located on the northeast corner of the intersection of West Ruthrauff Road and North La Cholla Boulevard in Tucson, Arizona. The general site location and layout are illustrated on Figure 1, Site Vicinity Map and Figure 2, Site Map, respectively. The site is currently operated by Circle K Stores, Inc. (Circle K) as a convenience store with retail gasoline sales.

According to ConocoPhillips Company (ConocoPhillips) files associated with Circle K Store No. 00592, three fiberglass reinforced plastic 10,000-gallon underground storage tanks (USTs) containing regular unleaded, unleaded plus and premium unleaded gasoline, four product dispensers and associated lateral product piping were installed on the property in 1987.

The UST system was removed from the site in July 1995. Subsequent to the UST system removal, three 10,000-gallon, single-walled, fiberglass-reinforced plastic USTs, two product dispenser islands and associated double-walled fiberglass lateral product piping were installed on the property. Spill and overfill protection devices as well as a vapor recovery system were also installed at the site in July 1995.

According to the ADEQ LUST Database and information obtained through a review of ConocoPhillips files for the site, Circle K Store No. 00592 has not had any prior LUST file numbers assigned to the site (Section 1.0[b]).

On June 8, 2003, ConocoPhillips Company was informed of a possible release from the 10,000gallon premium unleaded UST system at the referenced site. ADEQ was notified of a possible release from the premium unleaded tank on June 9, 2003. Repairs to the UST system were conducted by Xerxes, the manufacturer of the tank, during the week of June 25, 2003. Following repairs to the UST, tank testing activities were conducted by Westest Inc. of Phoenix, Arizona, on June 27 and 30, 2003. Both tests indicated that the tank tested tight.

On July 11, 2003, a representative from ATC met with personnel from Yellow Jacket Drilling (YJD) of Phoenix, Arizona, to conduct a subsurface investigation near the premium unleaded UST. Two, soil borings (UST-N-17' and UST-S-17') were drilled, one at each end of the premium unleaded UST to a total depth of approximately 17 feet below ground surface (bgs). The borings were placed as close to each end of the tank as possible. One soil sample was collected from each boring at approximately 17 feet bgs, the estimated bottom of the UST. Following drilling, the borings were backfilled with soil cuttings and capped with concrete to match the existing grade.

The collected soil samples were sent under chain of custody documentation to Arizona Department of Health Services (ADHS) certified Del Mar Analytical Laboratories (Del Mar) in Phoenix, Arizona for analysis. Both samples were analyzed for C_{10} to C_{32} range extractable fuel hydrocarbons (HC) and volatile fuel hydrocarbons using ADHS Method 8015AZR1 and for benzene, toluene, ethylbenzene and total xylenes (BTEX) utilizing Environmental Protection Agency (EPA) Method 8021B. Laboratory analytical results indicated that soil sample UST-S-17' did not contain constituent concentrations above their respective method reporting limit (MRL) with the exception of benzene (0.17 milligrams per kilogram [mg/kg]). Laboratory analytical results indicate that soil sample UST-N-17' did not contain concentrations of constituents above their respective MRL. The residential soil remediation level (rSRL) established by ADEQ for benzene is 0.62 mg/kg.

On February 19 and 20, 2004, a due diligence drilling and soil sampling investigation was conducted by Blaes Environmental Management, Inc. (Blaes; 2004) as part of the ConocoPhillips transfer in ownership of Circle K to Alimentation Couche-Tard Inc. (ACTI). This investigation included four hollow-stem auger drilled borings (T1 through T4) advanced at various locations adjacent to the UST basin and two angled hand auger borings (D1 and D2) advanced adjacent to the dispensers (Figure 2). Groundwater was not encountered in any of the borings, which were advanced to a reported maximum depth of 36.5 bgs. Soil samples were collected from each boring at approximate five-foot vertical intervals. Four selected soil samples were analyzed for volatile

Of the soil samples selected for analysis, one soil sample (2700592-T3-30) was collected at approximately 30 feet bgs from boring T3 (Figure 2). Laboratory analytical data indicated detectable concentrations of benzene (0.17 mg/kg) and toluene (0.34 mg/kg), in soil sample 2700592-T3-30. Select soil analytical data from the Blaes due diligence assessment are included in Table 1, Summary of Soil Sample Analytical Data. Based on the laboratory analytical results reported by Blaes (2004), ADEQ assigned a Suspect Release to the area in the vicinity of soil boring T3 (ADEQ, 2004a).

In response to the Suspect Release assigned by ADEQ, ATC (2004) advanced one soil boring on May 26, 2004, in the area of boring T3 (Figure 2). Soil samples collected at 15 and 25 feet bgs were analyzed for VOCs by EPA Method 8260B and HC by ADHS Method 8015AZR1. Laboratory analysis indicated concentrations of benzene (21 mg/kg) at 15 feet bgs exceeded its ADEQ established rSRL. Soil analytical data from the Suspect Release investigation is included in Table 1.

As a result of the Suspect Release investigation, ADEQ (2004b) assigned LUST File No. 5406.01 to the gasoline UST(s). The release point identified by LUST File No. 5406.01 (Figure 2) is the focus of this site characterization report (SCR).

4.2 **Previous Groundwater Investigations**

According to historical ConocoPhillips files and available ADEQ data associated with Circle K Store No. 00592, there is no record of any groundwater investigations having been performed at the site.

4.3 Previous Remedial Activities

According to historical ConocoPhillips files and available ADEQ data associated with Circle K Store No. 00592, there is no record of any remedial activities having been performed at the site.

4.4 Site and Area Lithology

Soil types encountered during ATC's characterization activities generally consisted of sand, silty sand and gravel and gravelly sand from the surface to approximately 50 feet bgs, the maximum depth of exploration. A horizon of silty clay was encountered in soil boring SB-1/VE-1 at a depth of approximately 30 to 35 feet bgs. Detailed information regarding subsurface lithology is provided in the boring logs included in Appendix A.

4.5 LUST Facilities

According to the ADEQ LUST Database, there is one LUST facility with two LUST file numbers located within a one-quarter mile radius of the subject site. According to the database, petroleum hydrocarbon impacts were limited to the soil media and each LUST file number has been closed.

Information regarding the identified LUST site is summarized in Table 2, ADEQ LUST Facilities within a One-Quarter Mile Radius.

4.6 Area Hydrology and Hydrogeology

The site is situated at an elevation of approximately 2,266 feet above mean sea level according to the Jaynes, Arizona, United States Geological Survey (USGS) 1:24,000 topographic map dated 1992. Rillito Creek is located approximately 2,000 feet to the northeast of the site.

Review of an April 5, 2005, search of the Arizona Department of Water Resources (ADWR) Wells-55 Registry, indicates seven registered wells are possibly located within a one-half mile radius of the subject site (Figure 1). The depth to groundwater is reported in six of these wells. The reported water levels (no dates specified) range from 96 to 325 feet bgs. Select information pertaining to the wells is presented in Table 3, ADWR Registered Wells within a One-Half Mile Radius.

4.7 Sensitive Receptors

ATC conducted a site walk survey in order to identify potentially sensitive receptors located within approximately 500 feet of the subject site. During this site walk, no potentially sensitive receptors were identified. Single-family residential homes are located north adjacent to the site, and residences northwest and south of the site. Although located in close proximity to the site, based on the findings of this investigation (Section 6.0), ATC does not consider these residences potential receptors for LUST File No. 5406.01.

No hospitals or nursing homes were observed within a one-half mile radius of the site.

5.0 SCOPE OF WORK

In response to the aforementioned LUST file assignment by ADEQ, ATC, on behalf of ConocoPhillips, initiated site characterization activities in March 2005. The objective of the assessment was to define the on-site extent of petroleum hydrocarbon impact to soil associated with ADEQ LUST File No. 5406.01 (Figure 2). This assessment was performed in general accordance with the ADEQ (2002) Release Reporting and Corrective Action Guidance and in accordance with the ADEQ (2004b) request for a SCR. The scope of work included: preparation of a Health and Safety Plan (HASP), permitting, utility clearance, drilling, soil sampling, soil vapor monitor well installation, organic vapor monitoring, data evaluation and report preparation. Each activity is described below.

5.1 Health and Safety Plan

ATC's primary mechanism to ensure employee, environmental and public safety at the project site is the HASP. Prior to conducting field activities ATC personnel prepared, approved and implemented a site- and task-specific HASP for this project. All individuals working under the purview of ATC were required to read and sign the HASP to acknowledge their understanding of the information contained in it. A copy of the HASP is included in Appendix B.

5.2 Underground Utility Clearance

Prior to conducting intrusive drilling activities, ATC contacted Arizona Blue Stake and contracted Affordable Locating, a private utility locator, to locate utilities in the vicinity of the proposed boring locations. The boreholes were excavated using an air knife to a depth of approximately five to eight feet bgs and inspected prior to drilling to avoid contact with underground utilities that had not been previously identified.

5.3 Drilling and Vapor Well Installation

On March 15 and 16, 2005, characterization activities were initiated with the advancement of soil boring/vapor extraction well SB-1/VE-1 situated in the vicinity of previous soil boring SB-1 drilled by ATC during the May 2004 Suspect Release investigation. Soil borings SB-2, SB-3 and SB-4 were advanced in the vicinity of the UST basin (Figure 2). Drilling activities were conducted by YJD using a truck-mounted hollow-stem auger drill rig.

Soil samples were collected from boring SB-1 at five-foot vertical intervals beginning at 15 feet bgs and continuing to the terminus of the boring. Soil samples were collected from boring SB-2 beginning at five feet bgs. and then collected at 10-foot vertical intervals beginning at 10 feet bgs. Soil samples were collected from borings SB-3 and SB-4 at 10-foot vertical intervals beginning at 10 feet bgs and continuing to the terminus of the borings. All four borings were drilled and sampled in general accordance with ATC's Arizona Standard Operating Procedure – Hollow-Stem Auger Drilling and Soil Sampling (Appendix C). The soil samples were delivered utilizing chain of custody documentation to an ADHS-certified on-site mobile laboratory for extraction and analysis and/or for delivery to the fixed-base laboratory for analysis.

The collected soil samples were submitted to an on-site mobile laboratory for BTEX and MTBE (screening) analyses utilizing EPA Method 8021B and HC analysis using ADHS Method 8015AZ. The soil samples collected at five, 25 and 40 feet bgs from boring B-1 were also submitted to a fixed-base laboratory for analysis of VOC and PAH utilizing EPA Methods 8260B and 8310, respectively.

Vapor extraction well VE-1, constructed of two-inch diameter Schedule 40 PVC casing, with 0.020-inch machine slots extending from approximately 15 to 30 feet bgs, was installed in boring SB-1. Vapor well VE-1 construction details are included on the edited boring log in Appendix A. The vapor well was constructed in general accordance with ATC's Arizona Standard Operating Procedure – Vapor Monitoring Well Installation (Appendix C).

5.4 Organic Vapor Monitoring

To obtain data regarding petroleum hydrocarbon impacted soil and for health and safety air monitoring, representative samples were collected from all borings and field screened for volatile organic vapors utilizing a photoionization detector (PID) in general accordance with ATC's Arizona Standard Operating Procedure - Field Soil Vapor Monitoring (Appendix C).

5.5 Laboratory Analysis and Results

Analytical services for the March 2005 site assessment conducted by ATC included mobile and fixed-base laboratory support provided by Transwest Geochem, Inc. (TGI), an ADHS-certified laboratory. Mobile laboratory analyses included BTEX and MTBE (screening) utilizing EPA Method 8021B and HC utilizing ADHS Method 8015AZ. Fixed-base laboratory analyses included VOC utilizing EPA Method 8260B and PAH utilizing EPA Method 8310.

Soil, laboratory analytical data was compared to the Tier I Corrective Action Standards established by ADEQ (2002). Based on the fact that groundwater was not encountered, (maximum boring depth of 50 bgs), ATC determined that the applicable Tier I Corrective Action Standards for soil are the rSRLs.

Benzene was detected at concentrations greater than its ADEQ established rSRL in the soil samples collected at 15 feet bgs (23 mg/kg), 20 feet bgs (23 mg/kg), 25 feet bgs (110 mg/kg), 30 feet bgs (4.2 mg/kg) and 35 feet bgs (3.7 mg/kg) from boring SB-1/VE-1. No other VOC or PAH constituents were detected at concentrations in excess of their respective rSRL. HC was not detected in excess of its established rSRL.

Soil laboratory analytical results are presented in Table 1. Laboratory analytical reports and chain of custody documents are included in Appendix D.

5.6 Data Evaluation

Holding times were met for all soil and groundwater samples submitted for analysis. Various data flags were noted in the laboratory analytical reports associated with this investigation and can be found in the Case Narrative section of each report (Appendix D).

It is ATC's opinion that the laboratory data is valid for the purposes of this investigation.

5.7 Investigation Derived Waste

Cuttings generated during characterization activities were contained in 11 labeled Department of Transportation (DOT) approved, 17H 55-gallon drum and stored temporarily at the site. Once profiling was complete, a waste profile number was issued by Allied Waste (Profile No. 755Y57574). On June 13, 2005, Red J Environmental Corporation transported the drums from the

ConocoPhillips Company Project No. 34.75000.0210

SITE CHARACTERIZATION REPORT

Circle K Store No. 00592 2080 West Ruthrauff Road Tucson, Arizona 85705

site to the Southwest Regional Landfill in Buckeye, Arizona for disposal (Ticket No. 088919). Disposal documentation is presented in Appendix E.

6.0 FINDINGS

Based on field observations and laboratory analysis of soil samples collected by ATC, the findings of the assessment at Circle K Store No. 00592 are as follows:

- Laboratory analyses of soil samples collected from boring SB-1 indicated that benzene was present at concentrations in excess of its ADEQ established rSRL from 15 to less than approximately 40 feet bgs in the vicinity of boring SB-1/VE-1 (Table 1).
- Laboratory analysis of all remaining soil samples from SB-1 (40 to 50 feet bgs), and SB-2 through SB-4 did not indicate any exceedances of the applicable Tier I Correction Action Standards (Table 1)

7.0 CONCLUSIONS

Based on the findings presented in the preceding section, ATC offers the following:

- The vertical extent of petroleum hydrocarbon constituent impacted soil related to LUST File No. 5406.01 has been adequately characterized.
- The lateral extent of petroleum hydrocarbon constituent impacted soil related to LUST File No. 5406.01 has been characterized by borings SB-2, SB-3 and SB-4.

8.0 **REFERENCES**

- Arizona Department of Environmental Quality (ADEQ), 2004a, Request for Submission of the Release Status Report (14-Day Report) and Release Confirmation Report (90-day report). March 26.
- ADEQ, 2004b, Notification of Case File Number Information and Request for Submission of the Release Status Report (14-day Report) and Site Characterization Report. July 6.
- ADEQ, 2002. Release Reporting and Corrective Action Guidance. August 20.
- Blaes Environmental Management, Inc., 2004. Environmental Due Diligence Site Assessment Report, Circle K Store #2700592, 2080 West Ruthrauff Road, Tucson, Arizona. March 18.
- ATC Associates Inc., 2004. 90-Day Release Confirmation Report, Circle K Store #2700592, 2080 West Ruthrauff Road, Tucson, Arizona. July 2.

9.0 LIMITATIONS AND CERTIFICATION

The interpretation of data and the findings and conclusions presented in this SCR are based on professional opinions and experience with regard to the subject matter. These findings and conclusions have been developed in accordance with currently accepted geological and engineering standards and practices applicable to this location. No warranty or guarantee, whether expressed or implied, is made with respect to the data or reported findings or conclusions, which are based solely upon the reported site conditions in existence at the time of the referenced field investigations.

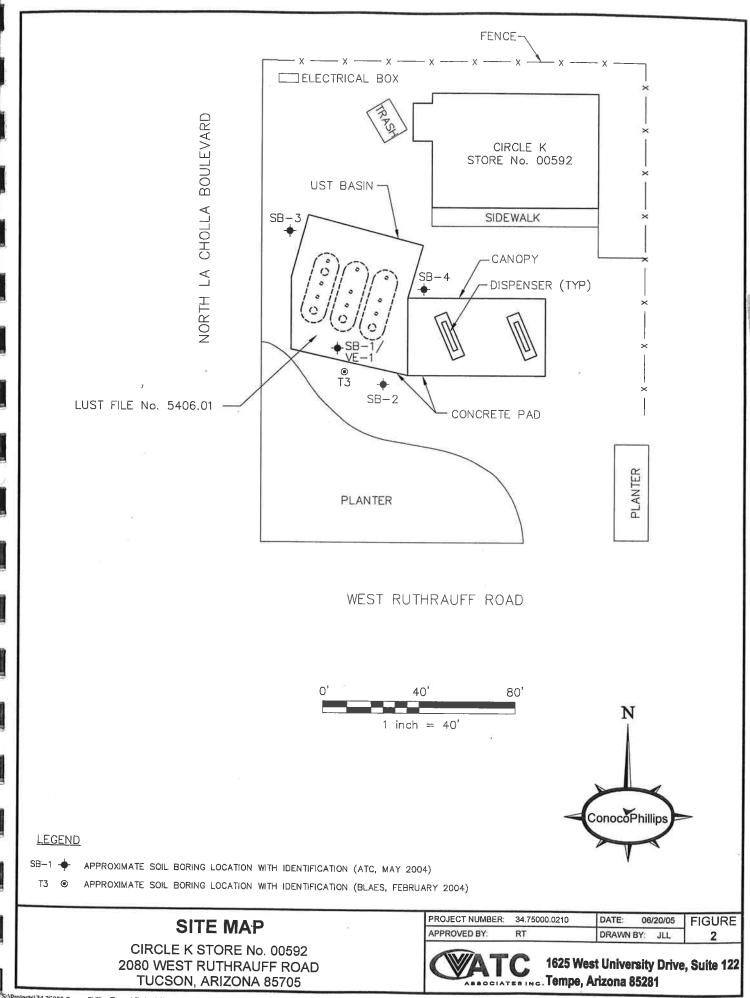
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information.



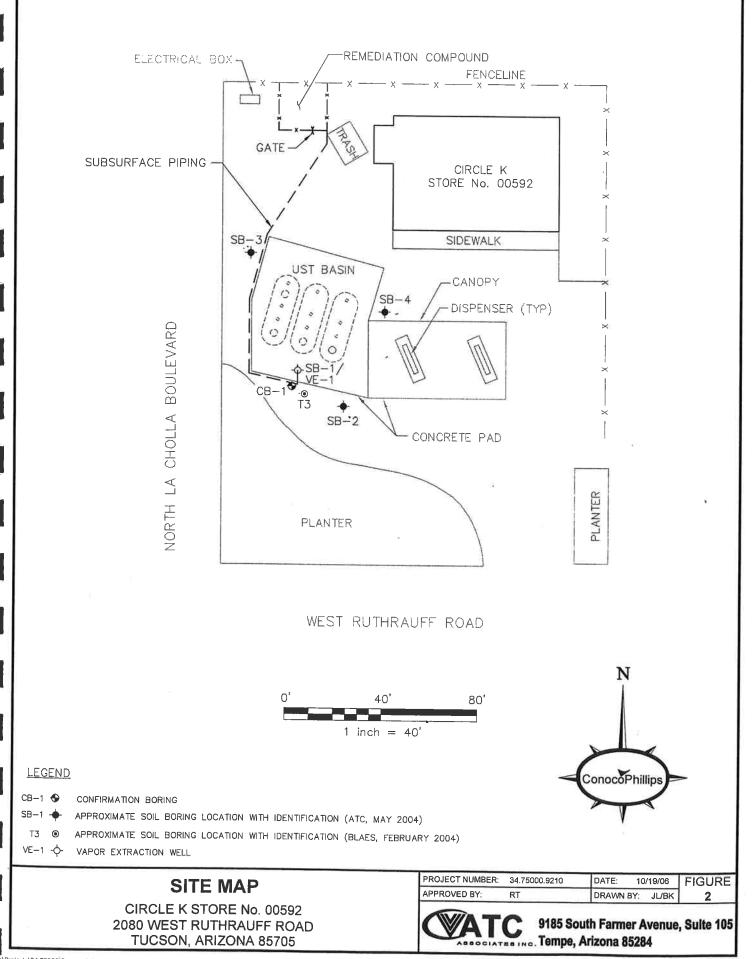
Girard E. Morgan Arizona Registered Geologist No. 32827 Principal Geologist ATC Associates Inc.

ConocoPhillips Company Project No. 34.75000.0210

ATC Associates Inc. June 30, 2005



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Appendix E

Resumes of HDR Personnel

Joel P. Hennings Hazardous Materials Planner

Mr. Hennings has over seven years of experience in the evaluation and management of hazardous materials. This experience includes oversight of hazardous waste removal and management, well installations, Brownfield redevelopment, preparing Phase I/II Assessments, research and technical writing for U.S. Department of Energy's Environmental Restoration Program, geophysical surveys, monitoring potable water line disinfections and discharges, applying Green Zia methodology to a Pollution Prevention and Environmental Management System program, toxicity sampling and coliform analysis of drinking water, and sampling and analysis of biological treatment at a wastewater facility. His experience also includes and performance of Extraction and Wet chemistry for an environmental analytical analysis laboratory. The following projects represent Mr. Hennings' experience:

Arizona Department of Transportation, ADOT Environmental On-Call 06-03. Hazardous materials support for a variety of environmental investigations for highway construction and maintenance projects statewide on an on-call basis.

Arizona Department of Transportation, I-10 (Papago) Median Widening DCR/CE (ADOT MC). Hazardous materials support for project providing engineering and environmental design services for three segments along ADOT's RTP Freeway Program.

Arizona Department of Transportation, South Mountain Corridor Environmental Impact Statement and Location/Design Concept Report, Phoenix, Arizona. Technical author for geotechnical mitigation measures portion of project that included a Location/Design Concept Report, Environmental Impact Statement, and Geographic Information Systems. The project is a 27-mile corridor transportation improvement.

Arizona Department of Transportation, SR 801, SR 303L to SR 202L - LDCR/EA. Hazardous materials support for preliminary environmental, engineering and related studies for the proposed SR 801 from SR 85 to SR 303L and SR 303 to SR 202L.

Arizona Department of Transportation, Statewide Environmental On-Call #02-104. Environmental planner for statewide environmental On-Call services including archaeological studies and surveying, site assessments, bridge widening, cultural resource studies, surveying, environmental clearance and documentation, and noise studies for various roadways throughout the state of Arizona.

Wilson & Co. Engineers & Architects, U.S. 64, Farmington to Bloomfield, ISA/PSI 2003-2006. Field supervision during drilling activities, review of analytical data, QA report writing, and coordination of subconsultants and vendors for PSI on 10-mile section of US 64 in an area with a high concentration of oilfield support yards, service stations, and a known Superfund site. Hazardous materials analysis was identified by NMDOT as a critical pathway issue.

Education

Bachelor of Science, Biology, University of Nebraska Lincoln, 2000

Kelly W. Kading, CPG, CHMM

NEPA Project Manager

Mr. Kading has 24 years of experience in hazardous materials assessment and remediation, transportation corridor assessment, NEPA coordination, and project and program management. He performs hazardous materials assessments of transportation corridor projects as well as Phase I and Phase II Assessments, up to and including recommendations for mitigation or remediation measures. Mr. Kading is also well versed in the preparation of NEPA documentation on sensitive transportation projects. He is familiar with federal and state regulatory requirements, and has worked on projects located in 32 states. The following projects represent Mr. Kading's recent project experience:

Arizona Department of Transportation, ADOT Environmental On-Call 06-03. Hazardous materials assessment for a variety of environmental investigations for highway construction and maintenance projects statewide on an on-call basis.

Arizona Department of Transportation, South Mountain Corridor Environmental Impact Statement and Location/Design Concept Report, Phoenix, Arizona. Hazardous materials assessment a Location/Design Concept Report, Environmental Impact Statement, and Geographic Information Systems for this 27-mile corridor transportation improvement.

Arizona Department of Transportation, SR 801, SR 303L to SR 202L - LDCR/EA. Hazardous materials assessment for environmental, engineering and related studies for the proposed SR 801 from SR 85 to SR 303L and SR 303 to SR 202L.

Arizona Department of Transportation, Statewide Environmental On-Call #02-104. Hazardous materials assessment for statewide environmental On-Call services including a wide variety of technical studies in support of NEPA documentation. Mr. Kading manages the hazardous materials analysis task for all task orders under ADOT Statewide Environmental On-call contracts.

Arizona Department of Transportation, Statewide Transportation Enhancement On-Call, Arizona. Hazardous materials assessment for the On-call contract for the Arizona Department of Transportation throughout the state. This project includes pedestrian improvements, scenic byway visual assessments, bike lane design, bridge fencing improvements, and constructability reviews.

Statewide Hazardous Materials Investigation Contracts, New Mexico Department of Transportation, New Mexico. Managed more than 170 hazardous materials investigations for the New Mexico Department of Transportation (NMDOT) since 1993, including Initial Site Assessments (ISA), Preliminary Site Investigations (PSI), and Detailed Site Investigations (DSI). Mr. Kading has also assisted in drafting the NMDOT's protocols for performance of ISA, PSI, and DSI projects. Other work included NEPA documentation, specifically the initial corridor analysis for the I-25 to NM47 connection (Valencia County) and the Environmental Assessment for NM44 (US 550) Bernalillo to San Ysidro.

Education

Bachelor of Science, Geological & Related Sciences (Geology), Colorado State University, 1983

Professional Registrations Certified Hazardous Materials Manager, No. 01995

Certified Professional Geologist, No. 9173

Professional Affiliations

Academy of Certified Hazardous Material Managers, National Board of Directors

American Institute of Professional Geologists, Member

PRELIMINARY SITE INVESTIGATION NORTH LA CHOLLA BOULEVARD WEST RUTHRAUFF ROAD TO WEST RIVER ROAD PIMA COUNTY, ARIZONA PROJECT NO. 4LCITR

PREPARED FOR:

Pima County Department of Transportation Environmental Compliance Division 201 North Stone Avenue, 3rd Floor Tucson, Arizona 85701

PREPARED BY:

HDR Engineering, Inc. 5210 East Williams Circle, Suite 530 Tucson, Arizona 85711 HDR project number 047-059914

November 5, 2008

ONE COMPANY | Many Solutions ®

November 5, 2008

Ms. Gloria Browne Pima County Department of Transportation Environmental Compliance Division 201 North Stone Avenue, 3rd Floor Tucson, Arizona 85701

Re: Preliminary Site Investigation (PSI) Report Submittal North La Cholla Boulevard West Ruthrauff Road to West River Road Pima County, Arizona Project No. 4LCITR

Dear Ms. Browne:

HDR Engineering, Inc. (HDR), is pleased to provide the Pima County Department of Transportation (PCDOT) with the above-referenced PSI Report. This project has been performed under the Contract # 16-04-H-139619-0607. Five copies of the PSI Report have been submitted for your use, along with an electronic file (PDF format) of the full report.

HDR appreciates the opportunity to serve PCDOT on this important project. If you have any questions or comments, please feel free to contact us at (602) 522-7700.

Sincerely,

HDR ENGINEERING, INC.

Joel P Hennings Hazardous Materials Specialist

Killy NICh

Kelly W. Kading CPG CHMM Environmental Project Manager Senior Professional Associate

JH/KWK/ Distribution:

5 Originals – Addressee 1 copy - Christine Jacobs-Donoghue, HDR Tucson 1 copy - Ted Buell, HDR Tucson 1 copy - File

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EXECUTIVE SUMMARY

HDR Engineering, Inc. (HDR), was contracted by the Pima County Department of Transportation (PCDOT) to perform a Preliminary Site Investigation (PSI) of a proposed roadway widening project. The project area includes approximately 1 mile of North La Cholla Boulevard between West Ruthrauff Road and West River Road, in unincorporated Pima County, Arizona. The purpose of the PSI is to investigate potential subsurface conditions related to potential and known releases from three sites: the current Chevron Food Market (Site A) service station; the current Circle K (Site B) service station; and the Family Food Store (Site C, a former Mustang / Whiting service station). The sites are located near the intersection of West Ruthrauff Road and North La Cholla Boulevard (located within the right-of-way). A secondary purpose of the PSI is to assess the right-of-way for the presence of landfill materials from a series of historical landfills located adjacent to the corridor, south of West Curtis Road. The PSI was performed in order to provide PCDOT with information regarding the current extent and concentration of contaminants in shallow soils (if present), at depths most likely to be disturbed by roadway improvement activities.

The PSI field effort (drilling and sampling) was performed on April 24, 2008. The PSI scope included the advancement of seven soil borings, at depths of 20 feet below ground surface (bgs) in the right-of-way. The borings were advanced using a hollow-stem auger drill rig operated by a subcontracted drilling firm (Yellow Jacket Drilling). Soil samples were collected at 5-foot intervals, with samples collected by driven, decontaminated stainless steel split spoon samplers. Soil samples were collected to assess the geological conditions and to evaluate the vertical distribution of contaminants, using field instrumentation verified by a laboratory analytical program.

To achieve the secondary objective of the PSI (location of potential landfill materials within the right-of-way), test pits were excavated on April 24, 2008. HDR excavated four shallow test pits on PCDOT right-of-way on the east and west sides of La Cholla Boulevard, south of West Curtis Road. The test pits were excavated to an approximate depth of 4 feet below grade, with a decreasing opening from approximately 6 feet at the top to about 4 feet at the bottom of each pit. Waste percentages were estimated using a series of predetermined waste type categories. Excavation was accomplished by advancing test pits using a backhoe with a 0.5-cubic yard bucket. Excavations were advanced in lifts of approximately 1 foot at a time, and the waste was characterized at each 1-foot horizon using a 3-foot by 3foot wooden "windowframe" to assist with assignment of percentages. After each lift was excavated, the windowframe was lowered by rope into the pit and two HDR geoscientists estimated percentages of the observed wastes types in the frame. By using two assessors, a means of cross-referencing estimated percentages was maintained throughout the process. Following completion of the test pit excavations, the pits were backfilled with the excavated material. The excavator backfilled the test pits in the order that each lift was removed, and compacted the fill with the excavator bucket. An HDR field technician performed density tests at every 1-foot lift to verify adequate compaction. No waste was removed from the site as part of this investigation.

A third aspect of the investigation was to assess asbestos in concrete features along the project area, and lead in paint on the Rillito Bridge and railings. Results and methodology are included in Appendix F.

FINDINGS AND OBSERVATIONS

The corridor is located in the Tucson Basin. The Tucson Basin is an extensive basin containing alluvium varying up to approximately 12,000 feet in thickness. The alluvium is highly variable and ranges from dense sand, gravel, and cobble deposits to silts, clays, and heavily cemented sandy clay. The project area is bound to the north-northeast by the Santa Catalina Mountains, to the east by the Rincon Mountains, and to the west by the Tucson Mountains.

Soils encountered generally included reddish brown, fine-to medium-grained sand with minor gravel and cobble constituents.

Soil sampling results found no actionable concentrations (as defined by Arizona Department of Environmental Quality's Residential soil Screening Levels) of petroleum constituents and no soil vapor impacts near the identified sites of concern.

The test pit contents consisted of sandy soil with gravel and rocks in small percentages. Minor debris was noted in test pit 4-E at a depth of approximately 1.5 feet. Native soil, displaying sedimentary features that indicate that it had not been disturbed either in a landfill or as part of a road-building process, was encountered at approximately 2 to 4 feet at the base of each pit. The interval from 0 to 2 feet appeared to be compacted fill, likely from the construction of the roadway.

As indicated by the report included as Appendix F, no asbestos was detected in any of the samples collected. The paint results indicated that the gray and brown paint is lead containing. The levels measured in the gray and brown paint are below the HUD action level for lead in paint.

CONCLUSIONS

HDR has completed the scope of work described in Section 1.1 and has developed the following conclusions regarding the presence of residual impacts at the project site. The summary of findings presented in this section is a synopsis, and the reader should not infer that the information presented is complete or as detailed as provided in other sections.

Within the scope of this PSI, soil sampling results found no actionable (above regulatory action levels) concentrations of petroleum constituents and no soil vapor impacts near the identified sites of concern (former and active gas stations). No petroleum or soil vapor impacts were identified in the right-of-way near the gas stations. The test pits indicated that no landfill debris was present within the North La Cholla Boulevard right-of-way. The minor debris noted in test pit 4-E appeared to have been deposited during roadway construction, and was not part of a larger debris array (indicating landfill operations).

None of the concrete materials sampled contains asbestos. Paint from the bridge and walkway railing is lead containing and will require disposal in accordance with hazardous waste regulations.

1.0 INTRODUCTION

1.1 Purpose and Scope

The purpose of the Preliminary Site Investigation (PSI) is to investigate potential subsurface conditions related to gasoline releases from three sites: the current Chevron Food Market (Site A) service station, Circle K (Site B) service station, and the Family Food Store (Site C, a former Mustang/Whiting service station). The sites are located near the intersection of West Ruthrauff Road and North La Cholla Boulevard. A secondary objective of the PSI was to determine the location and extent of debris from reported historical landfills located adjacent to the North La Cholla Boulevard right-of-way in the central portion of the project area (south of West Curtis Road). A third objective was to sample concrete from the bridge to assess the presence or absence of asbestos, and to sample paint from the bridge and railings to assess if the paint is lead containing. The PSI was performed in order to provide the Pima County Department of Transportation (PCDOT) with information regarding the current extent and concentration of contaminants in shallow soils at depths most likely to be disturbed by roadway improvement activities.

The scope of this PSI included the advancement of seven borings within the current right-ofway (R/W), to depths of 20 feet below ground surface (bgs). Soil samples were collected at 5-foot intervals to assess vertical distribution of contamination, using field instrumentation and confirmatory analysis by an analytical laboratory. To achieve the secondary objective, four shallow test pits were excavated on the east and west sides of North La Cholla Boulevard, south of West Curtis Road. Pits were excavated to an approximate depth of 4 feet below grade, with a decreasing opening from approximately 6 feet at the top to about 4 feet at the bottom of each pit. The test pits were evaluated by HDR geoscientists to determine whether landfill materials were present.

1.2 Limitations

This report has been prepared by HDR Engineering, Inc. (HDR), for use by PCDOT. The information presented in this report includes analysis of geologic conditions through data collection, review of published information, direct observation of geologic features in the project area, advancement of soil borings, excavation, and collection of soil samples for field and laboratory evaluation of the presence of gasoline constituents and landfill debris. As well as the presence or absence of asbestos in concrete, and lead containing paint associated with the bridge. HDR makes no warranties or guarantees regarding the accuracy or completeness of the information provided or compiled by others.

As with any investigation that uses sampling points to characterize an impacted area, it is possible that the sampling locations did not intersect all potentially impacted areas. HDR determined that the selected sampling locations would be sufficient to characterize the distribution of impacts if present near the proposed roadway improvement activities.

In addition, some substances may be present at the site or in the vicinity in quantities below those categorized as actionable by current environmental regulations. HDR cannot be held responsible if regulatory standards are changed in the future to a regulatory level that renders the current site conditions actionable.

2.0 PROJECT DESCRIPTION

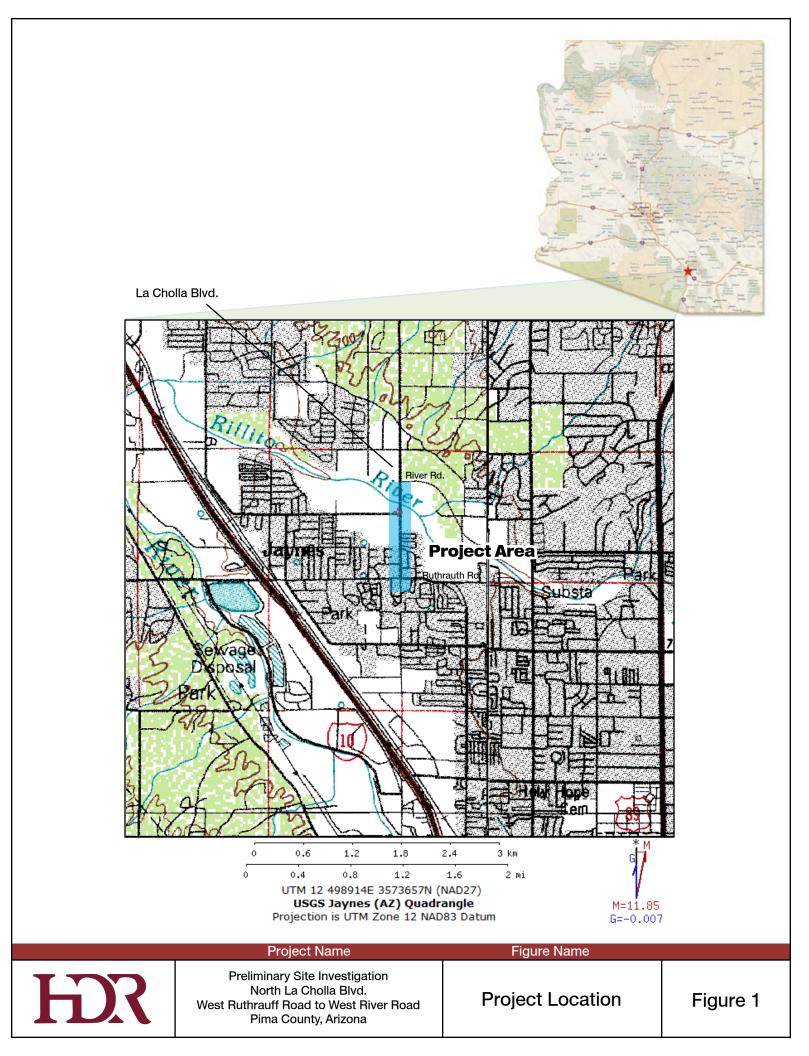
2.1 Description of Study Area

The project area consists of North La Cholla Boulevard and its associated R/W from West Ruthrauff Road to West River Road in unincorporated Pima County, Arizona. The project is approximately 1 mile in length. A project location map is included as Figure 1 and a map of soil boring and test pit locations is included as Figure 2. Photographic documentation is provided in Appendix A.

2.2 Geology

The site is located within the Basin and Range Lowland Physiographic Province, which includes an area extending from the northwest corner of the state, southeasterly across the southern half of the state. Landforms present within the Basin and Range Province consist of predominantly northwest-southwest trending, block-faulted mountain ranges, separated by broad, gently sloping alluvial basins. The mountains in this province consist of tilted blocks of Precambrian, Paleozoic, Mesozoic, and Cenozoic rocks.

The Santa Cruz River is the principal drainage feature through the Tucson Basin. The Santa Cruz River is located approximately 1.5 miles west of the project area. The Rillito River is the principal drainage feature within the project area. The Rillito River ultimately drains into the Santa Cruz River.



2.3 Investigation Methodology

An Initial Site Assessment (ISA) prepared by HDR in 2008 determined that several potential risk sites exist along the project corridor. Based upon the results of the ISA, HDR developed the following investigation methodology for the PSI that was subsequently approved by PCDOT. The PSI scope of work included the advancement of seven soil borings, excavation of four shallow test pits, interpretation of geologic and field instrument data, collection of soil samples for laboratory analysis, interpretation of results, and preparation of a final report.

Drilling and Sampling Near Current or Former Gas Station Sites

Seven soil borings were completed at the locations identified on Figure 2. Soil boring locations were selected in an attempt to delineate the extent of potential impacts from the identified sites of concern near the planned roadway improvements, within the right-of-way. Constraints to the placement of the soil borings included physical barriers to rig location, such as overhead power lines.

Drilling was performed by Yellow Jacket Drilling Company (at the direction of HDR) using a Boart Longyear BK-66 Hollow Stem Auger drill rig. The borings were advanced using an 8 and 3/8-inch outside diameter hollow stem auger. Borings were sampled at selected depth intervals using a decontaminated split-spoon sampler. All boring were advanced to a depth of 20-feet bgs. Downhole drilling and sampling tools were decontaminated prior to use with a non-phosphate detergent wash and deionized water rinse by onsite HDR field personnel.

Soil samples were collected from undisturbed soils by advancing a decontaminated stainless steel split-spoon type sampler ahead of the lowest point of the auger at the selected sampling interval. Samples were selected for laboratory analysis based on the highest photoionization detector (PID) reading. If no elevated PID readings in a boring were detected, the 5-foot sample from a boring was submitted. The specific laboratory sample collection procedure included collection of soil from the lowest section of the brass sleeve in the sampler, capping the ends of the sleeve with Teflon and plastic caps, labeling the sample, and immediately placing it on ice for transport. Samples were collected, preserved, and transported to the laboratory under chain-of-custody protocols and within quality control (QC) standards established by HDR in compliance with Arizona Department of Environmental Quality (ADEQ) data quality objectives.

Each sample interval was field screened using a soil sample from the middle section of the sampler (directly above the laboratory-submitted sample) for field headspace analysis using a Perkin-Elmer Photovac 20/20 PID. The PID was calibrated with 100 parts per million (ppm) isobutylene reference gas at the beginning of each field day. Records of PID calibrations were recorded in the site field book. The field headspace analysis was performed by placing a sample of the soil from the split-spoon sampler immediately into 1-pint dedicated zipper-seal plastic bags and allowing volatile organic vapors to equilibrate for several minutes and stabilize near 70 degrees Fahrenheit. The bags were agitated for up to 1 minute to facilitate liberation of soil vapor into the bag headspace. The inlet probe of the PID was then placed through the bag's zipper seal, the highest vapor concentration reading was recorded as the PID reading for that sample, and the result was recorded on the soil boring log. The action level for petroleum constituents using this method is 100 ppm, as specified by ADEQ's Tank Programs Division. The remaining soil from each sampling interval was used for geologic analysis of the depth interval. Soil boring logs were completed for each boring, and are included in Appendix B. All borings were backfilled with clean cuttings.

Test Pits Near Historic Landfill Locations

Test pits were excavated on April 24, 2008, according to the approved scope of work. Test pit locations were based upon a review of historic aerial photographs and information provided by Pima County, HDR excavated four shallow test pits on PCDOT right-of-way on the east and west sides of La Cholla Boulevard. Three test pits were located on the west side of La Cholla Boulevard and 1 test pit on the east side. The test pits were excavated to an approximate depth of 4 feet below grade, with a decreasing opening from approximately 6 feet at the top to about 4 feet at the bottom of each pit. Waste percentages were estimated using a series of predetermined waste type categories. Excavation was accomplished by advancing test pits using a backhoe with a 0.5-cubic yard bucket. Excavations were advanced in lifts of approximately 1-foot at a time, and the waste was characterized at each 1-foot horizon using a 3-foot by 3-foot wooden "windowframe" to assist with assignment of percentages. After each lift was excavated, the windowframe was lowered by rope into the pit and two HDR geoscientists estimated percentages of the observed wastes types in the frame. By using two assessors, a means of cross-referencing estimated percentages was maintained throughout the process. Following completion of the test pit excavations, the pits were backfilled with the excavated material. The excavator backfilled the test pits in the order that each lift was removed, and compacted the fill with the excavator bucket. An HDR field technician performed density tests at every 1-foot lift to verify adequate compaction. No waste was removed from the site as part of this investigation.

Asbestos and Lead sampling methodology is discussed in Appendix F.





Preliminary Site Investigation North La Cholla Blvd. West Ruthrauff Road to West River Road Pima County, Arizona

Figure Name

Soil Boring and **Test Pit Locations**

Figure 2

2.4 Soil Analytical Program

One soil sample from each boring was selected for laboratory analysis for volatile organic compounds by United States Environmental Protection Agency (USEPA) test method 8260B and for semi-volatiles by USEPA test method 8270C. Orange Coast Analytical, Inc. (OCA), of Tustin, California, was the ADEQ-approved analytical laboratory for this project. The soil sample exhibiting the highest PID reading was submitted to the laboratory. If no vapors were detected in any of the samples, then the sample located at the 5-foot sample collection depth was selected for submittal.

3.0 INVESTIGATION RESULTS

3.1 Analytical Results

HDR received the soil analytical results from OCA on April 30, 2008. The results are presented in the summary tables, along with the ADEQ Residential Soil Remediation Levels (ADEQ's most restrictive levels). The summary tables are included as Appendix D. The full report from the analytical laboratory is included as Appendix E.

As indicated by the report included as Appendix F, no asbestos was detected in any of the samples collected. The paint results indicated that the gray and brown paint is lead containing. The lead levels measured in the gray and brown paint are below the HUD action level for lead in paint.

3.2 Geologic Analysis Results

The following geologic findings are noted:

The corridor is located in the Tucson Basin. The Tucson Basin is an extensive basin containing alluvium varying up to approximately 12,000 feet in thickness. The alluvium is highly variable and ranges from dense sand, gravel, and cobble deposits to silts, clays, and heavily cemented sandy clay. The project area is bound to the north-northeast by the Santa Catalina Mountains, to the east by the Rincon Mountains, and to the west by the Tucson Mountains.

Soils encountered generally included reddish brown, fine-to medium-grained sand. Soil boring logs are included as Appendix B.

4.0 FINDINGS AND CONCLUSIONS

4.1 Findings

The site investigation resulted in the following findings:

The corridor is located in the Tucson Basin. The Tucson Basin is an extensive basin containing alluvium varying up to approximately 12,000 feet in thickness. The alluvium is highly variable and ranges from dense sand, gravel, and cobble deposits to silts, clays, and heavily cemented sandy clay. The project area is bound to the north-northeast by the Santa Catalina Mountains, to the east by the Rincon Mountains, and to the west by the Tucson Mountains.

Soils generally encountered included reddish brown, fine-to medium-grained sand with minor gravel and cobble constituents.

Soil sampling results found no actionable concentrations of petroleum constituents and no soil vapor impacts near the identified sites of concern.

The test pit contents consisted of sandy soil with gravel and rocks in small percentages. Minor debris was noted in test pit 4-E at a depth of approximately 1.5 feet. Native soil, displaying sedimentary features that indicate that it had not been disturbed either in a landfill or as part of a road-building process, was encountered at approximately 2 to 4 feet at the base of each pit. The interval from 0 to 2 feet appeared to be compacted fill, likely from the construction of the roadway.

4.2 Conclusions

HDR has completed the scope of work described in Section 1.1 and has developed the following conclusions regarding the presence of residual impacts at the project site. The summary of findings presented in this section is a synopsis, and the reader should not infer that the information presented is complete or as detailed as provided in other sections.

Gas Station Sites

Within the limits of this PSI, laboratory results indicated no actionable concentrations of petroleum constituents and no soil vapor impacts near the identified sites of concern within PCDOT R/W.

Former Landfill Sites

None of the four test pits indicated the presence of landfill debris or ground disturbance indicative of landfill-type deposition of waste. One pit (4E) contained a minor amount of trash, but the location, distribution, and type of debris indicated that it was probably deposited at the time of roadway construction. HDR concludes that no landfill debris was present on PCDOT R/W, within the limitations of this PSI.

Asbestos and Lead Paint

No asbestos was detected in any of the concrete samples collected from the bridge, as indicated by the report included as Appendix F. The paint samples collected from the bridge and railings indicated that the gray and brown paint is lead containing. The lead levels measured in the gray and brown paint are below the HUD action level for lead in paint, with respect to paint in place concentrations¹. However, aggregated disposal concentrations may be higher, and therefore, disposal of lead containing paint will require compliance with hazardous waste regulations.

¹ While not strictly applicable for a roadway project, HUD levels are referenced because they are available regulatory references that apply to screening level paint concentrations.

5.0 SIGNATURES AND QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

The preceding report has been prepared in general conformance with standard industry practice for performance of environmental investigations. The end user of this report may rely on the contents, findings, and conclusions to be accurate within the limitations stated herein and in PCDOT guidance.

Joel P Hennings Hazardous Materials Specialist

Kelly W. Kading CPG CHMM Quality Assurance Senior Professional Associate

Qualifications

Mr. Kelly W. Kading, CPG CHMM, HDR's Environmental Professional as defined by Arizona Department of Transportation (ADOT), has more than 20 years of experience in assessment and remediation of impacted properties and compliance with environmental regulations. He has a BS in Geology from Colorado State University and is a Certified Professional Geologist (#9173) and a Certified Hazardous Materials Manager (#1995). He is also a Senior Professional Associate as defined by HDR's rigorous qualifications process for senior technical practitioners. He specializes in forensic investigation of hazardous materials-impacted properties for municipal and state agencies, as well as commercial clients. His experience covers assessment of more than 1,000 properties ranging from agricultural land to multigenerational industrial properties in 32 states and 2 foreign countries. He is highly knowledgeable of federal, state, and local environmental regulations and standards and has served on the National Board of Directors of the Academy of Certified Hazardous Materials Managers.

Qualifications

Mr. Joel P. Hennings, HDR's Environmental Professional as defined by ADOT, has more than 8 years of experience in assessment and remediation of impacted properties and compliance with environmental regulations. He has a BS in Environmental Sciences from the University of Nebraska. He specializes in forensic investigation of hazardous materialsimpacted properties for federal, state, and municipal agencies, as well as commercial clients. His experience covers assessment of more than 150 properties ranging from agricultural land to federal nuclear testing sites. He is knowledgeable of federal, state, and local environmental regulations and standards.

APPENDIX A

Photographic Documentation

Preliminary Site Investigation North La Cholla Boulevard



Photo 1 – Location of SB-1, view to the north.



Photo 2 – Overview of traffic control at SB-2 and SB-3, view to the southeast.

Preliminary Site Investigation North La Cholla Boulevard



Photo 3 – Location of SB-5, view to the south.



Photo 4 – Location of SB-7, view to the south.

Preliminary Site Investigation North La Cholla Boulevard



Photo 5 – Location of Test pit #4E, view to the southwest.



Photo 6 – Location of Test pit #3, view to the south.

APPENDIX B

Soil Boring Logs

	ig No.	Name SB-	: North L 1 of	a Cholla Project 047-599		SOIL BOR	ING	ONE	HDR ONE COMPANY Many Solutions					
DIA LOC _tc	DIAMETER: 8.38 inches Hollow Stem Auger LOCATION: La Cholla Blvd Ruthrauff Road DRILLING DATE: 04-24-2008													
DEF	DEPTH TO WATER: No Groundwater Encountered TOP OF CASING ELEVATION: N/A													
Depth (Ft.)	h	covery Samp Lab	/ (%) ble Subm Blow C 140#/30'		V	isual Classification	USCS	STRATUM	Boring Detail					
0 Aspha	lt				Asphal	t								
Fill 5	100	*	5 30 32	0.0	Fill SAND, brown,	clay, coarse grained, reddish dry	SC							
10	100		10 18 13	0.0		clay, some gravel, coarse d, reddish brown, dry,	SC							
15	100		32 50 6"	0.0	SAND brown	<u>, clay, fine grained, reddish</u> , dry	SC	-						
20	25		50	0.0	SAND	, clay, fine grained, reddish , dry	SC							
								<u>Soil I</u>	Boring Location M	ap				
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	-	Name · SB-2	2 North	La Chol Project 047-599			SOIL BORING LOG					HDR				
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DEI	РТН Т	O WA	TER: No	Ground	lwater Ei	ncountered		TOP	OF CASI	NG EL	EVATION: N/A					
Depth (Ft.)	n	Samp Lab	/ (%) ble Subm Blow C 140#/30'		Visual Classification			USCS	STRATUM	Boring Detail						
J					Gra	vel, Fill			12 I							
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	g No.	Name · SB-; 1	North La 3 Of	a Cholla Project 047-599			SOIL BORING LOG							
DIA LOC _to	DIAMETER: 8.38 inches Hollow Stem Auger LOCATION: La Cholla Blvd Ruthrauff Road LOGGED BY: J. Hennings													
DEF Depth (Ft.)	Rec	overy	-	nitted to		visual Classification			-	LEVATION: N/A	Boring Detail			
					Asphalt									
					Fill				\sim					
5	100	*	12 15 17	0.0		clay, medium to coarse I, reddish brown, dry	SC							
10	100		15 22 20	0.0	Gravel		GP	-						
15	100		10 11 11	0.0		sand, fine to medium coars d, brown, moist	e CL	-						
20	100		15 15 15	0.0		sand, fine to medium coars d, brown, moist	e CL	-						
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	ig No.	Name · SB-/ 1	:North L 4 of	a Choll Project 047-599			SOIL BORING LOG					HDR ONE COMPANY Many Solutions				
LO0 to	CATIO Riv	ЭN: <u>L</u>	<u>a Choll</u> bad, Tu	la Blvc Icson,	I Rutł Arizon	<u>nrauff Road</u> a	LOGGEI DRILLIN DRILLEF DRILL C	G DATE R:	: <u>04</u> Sean	-24-2 Gon	2008 zalez					
DEF	этн т	O WA	TER: No	Ground	lwater Er	ncountered		TOP	OF CAS	SING E	LEVATION: N/A					
Depth (Ft.)	h	overy Samp Lab	/ (%) ble Subm Blow C 140#/30'		Visual Classification			USCS Remarks			STRATUM		Boring Detail			
					Gravel											
					Fill				•							
5	100	*	3 4 4	0.0		clay, fine to medium co , brown, moist	barse	SC								
	/		14 8 8			clay, fine to medium co l, reddish brown, moist		SC								
10	100			0.0												
15	100		12 16 20	0.0		clay, fine to medium c d, reddish brown, moist		SC								
20	25		50	0.0		clay, fine to medium c d, reddish brown, moist		SC								
										 <u>So</u> il Bo	oring Location M	ар				
	1	GRC		L ATER		SAMPLE TY	PE				WN	Z C				
	EPTH None		HOUR		ATE						N a chola Bra	E				
<u>NO</u>	TES:		otal Dept ackfilled		4-2008						W.Ruthrauff F					

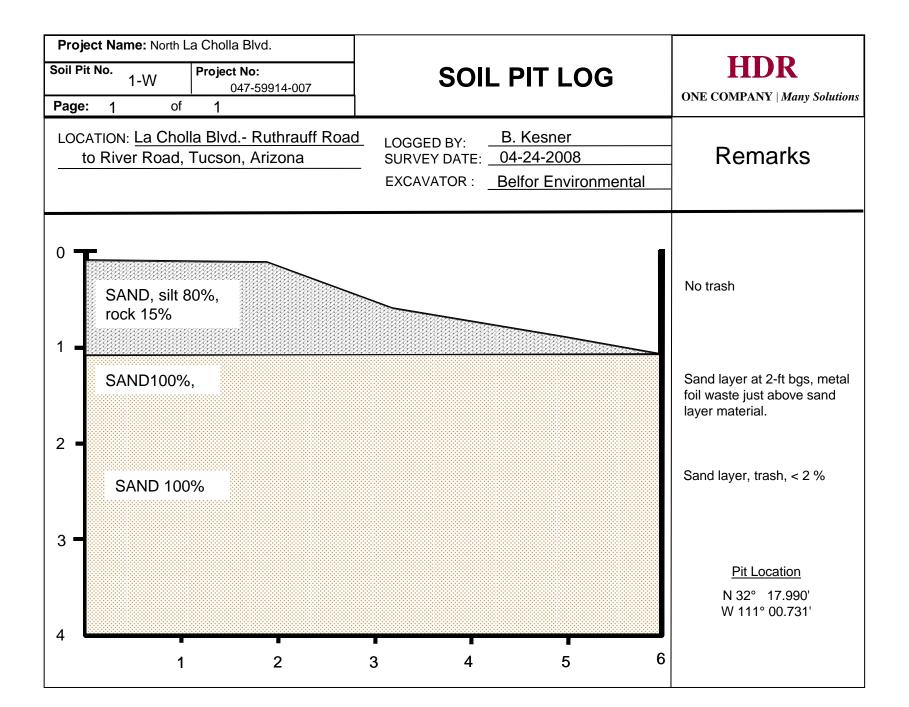
	ig No.	Name · SB-{ 1	North L 5 of	a Cholla Project 047-599			SOIL BORING LOG					HDR ONE COMPANY Many Solutions				
LOC to	DIAMETER: 8.38 inches Hollow Stem Auger LOCATION: La Cholla Blvd Ruthrauff Road LOGGED BY: J. Hennings															
DEF Depth (Ft.)	Rec	overy	-	nitted to	Viewel Cleaseifiestion			USCS Remarks			LEVATION: N/A		ring tail			
5	100	*	5 16 18	0.0	Gravel Fill SAND, brown,	clay, fine to coarse grair dry	ned,	SC								
10	0		NA	0.0	Cobble	S		GP								
15	100		28 32 32	0.0		sand, fine to medium co d, light brown, dry	oarse	CL								
20			15 15 15	0.0		sand, fine to medium co d, light brown, dry	oarse	CL								
										Soil Bo	pring Location M	ap	3			
N	EPTH None		OUNDW/ HOUR		ATE	E SAMPLE TYPE Drill cuttings Split Spoon Sample – Driven Hand Auger					N M COURT BAR	ad				
<u>NO</u>	<u>TES</u> :		otal Dept ackfilled		1-2008											

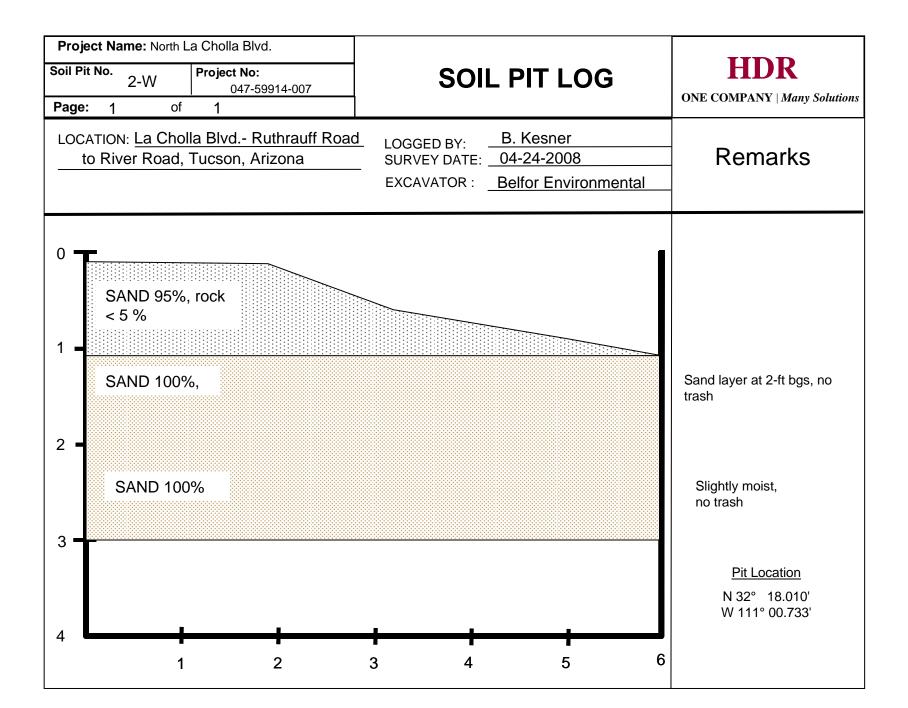
		Name: SB-6	: North L	a Cholla Project 047-599		SOIL BOR	ING		HDR				
Page	e:	1	of	1		LOG			ONE	COMPANY Many	Solutions		
LOC to	CATIO Riv	ON: <u>La</u> er Ro	<u>a Choll</u> bad, Tu	<u>a Blvd</u> icson,	<u> Rutł</u> Arizon	nrauff Road DRILL	ED BY: ING DATE ER: COMPAN	: <u>0</u> 4 Sear	<u>l-24-2</u> 1 Gon	2008 Izalez			
DEF	DEPTH TO WATER: No Groundwater Encountered TOP OF CASING ELEVATION: N/A												
Depth (Ft.)		overy Samp Lab	(%) le Subm Blow C 140#/30'		v	uscs	Rem	arks	STRATUM	Boring Detail			
					Gravel				E				
					Fill			- ^ ^					
5	100	*	5 5 5	0.0	SAND, moist	clay, fine grained, light brown	SC	-					
10	100		20 20 20	0.0	SAND, brown,	clay, fine grained, reddish moist	SC	-					
15	100		15 37 30	0.0	Cobble	25	GP	-					
20	-		30 30 28	0.0	Cobbl	es	GP	-					
								-					
									Soil B	oring Location M	ap		
			UNDW			SAMPLE TYPE	Ń			WN	oreen St		
	EPTH None		HOUR	R	ATE	Drill cuttings <u>Split Spoon Sample – Driven</u> Hand Auger	$\mathbf{+}$	Ð		W Ruthrauff F	C C		
<u>NO</u>	<u>TES</u> :		otal Dept ackfilled		-2008								

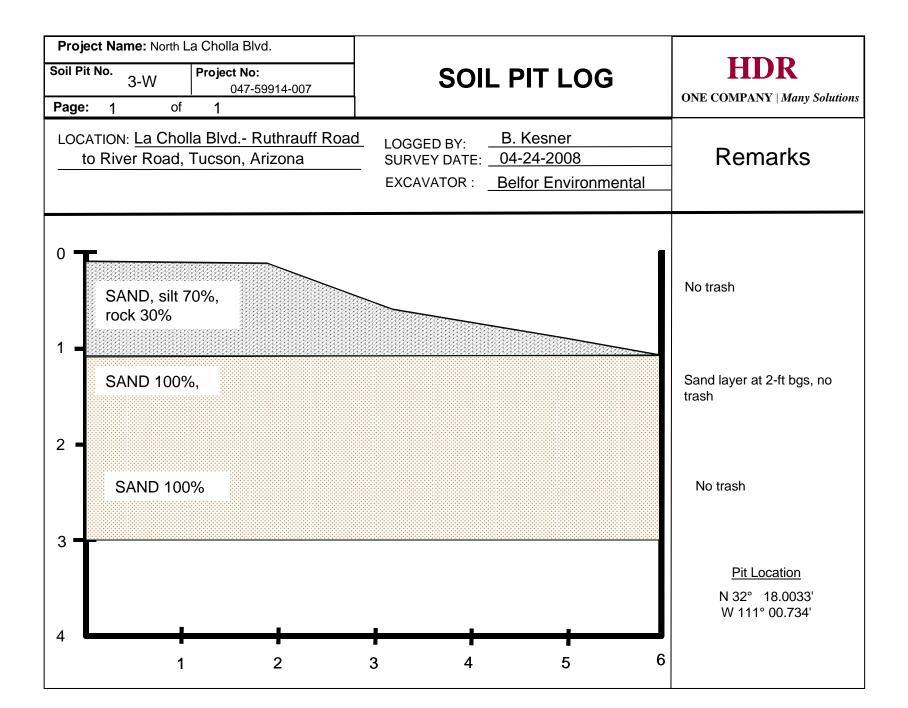
			: North L			SOIL B	SOIL BORING					HDR				
Page		· SB-7 1	7 of	Project 047-599 1	NO: 914-007	LC	DG			ONE C	COMPANY Many	Solu	tions			
LO(DIAMETER: 8.38 inches Hollow Stem Auger LOCATION: La Cholla Blvd Ruthrauff Road DRILLING DATE: 04-24-2008 to River Road, Tucson, Arizona DRILL RIG TYPE: Boart Longyear BK-66 DRILL COMPANY: DEPTH TO WATER: No Groundwater Encountered TOP OF CASING ELEVATION: N/A															
DEI	PTH T	O WA	TER: No	Ground	water Er	ncountered		TOP	OF CAS	SING EI	LEVATION: N/A					
Depth (Ft.)	n	overy Samp Lab	/ (%) ble Subm Blow C 140#/30'		Visual Classification			USCS Remarks			STRATUM		ring tail			
J					Gravel											
					Fill					- /						
5	100	*	4 4 4	0.0		clay, fine to medium co , reddish brown, dry	oarse	SC								
10	100		9 11 8	0.0		clay, fine to medium c I, reddish brown, dry	oarse	SC								
15	100		15 22 27	0.0		clay, fine to medium c d, reddish brown, dry	oarse	SC								
						· · · · · · · · · · · · · · · · · · ·										
20			25 30 33			, clay, fine to medium c d, reddish brown, dry	coarse	SC								
										Soil Bo	ring Location M	ap z				
	EPTH None		OUNDW/ HOUR		ATE	SAMPLE TYPE Drill cuttings Split Spoon Sample – Driven Hand Auger					MA Choise Blad	preen St				
<u>NO</u>	TES:		otal Dept ackfilled		1-2008						W.Ruthauff F					

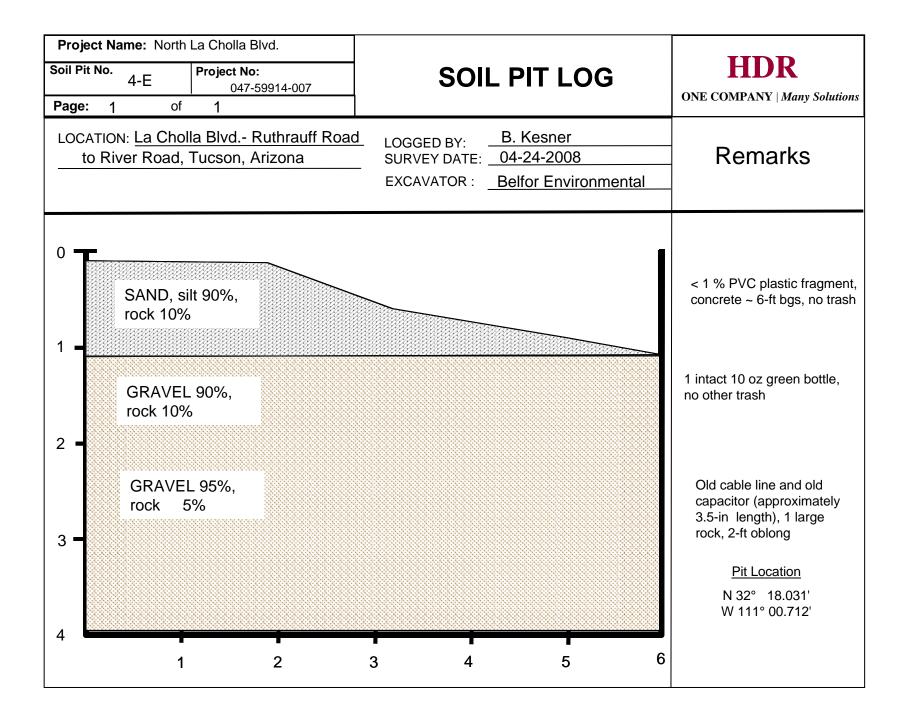
APPENDIX C

Test Pit Logs









APPENDIX D

Summary Tables

Table 1

North La Cholla Boulevard Soil Sample

Analytical Results Analyzed By EPA Method 8260B Volatiles:

Units in mg/kg (ppm)

Sample ID	Benzene	Toluene	Ethylbenzene	Methyl tert- butyl ether (MTBE)	Naphthalene	2-Butanone	Cis-1,2 DCE	Tetrachloroethene (PCE)	Trichloroethene (TCE)	Vinyl Chloride	Total Xylenes
Residential	0.65	650	400	32	56	NE	43	0.51	3.0	0.085	270
Non Residential	1.4	650	400	710	190	NE	150	13	65	0.75	420
SB-1-5'	<pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""></pql<></td></pql<>	<pql< td=""></pql<>
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ADEQ Title 18 Preliminary Remediation Goals Residential Soil 2007 ADEQ Title 18 Preliminary Remediation Goals Non Residential Soil 2007

NE – No standard established

<PQL – Analyte below the analytical method's Practical Quantitation Limit (minimum detection limit) SB- Soil Boring

Table 2

North La Cholla Boulevard Soil Sample Analytical Results

Analyzed By EPA Method 8270C Semi Volatiles:

Units in mg/kg (ppm)

Sample ID	Aniline	Benzoic Acid	Carbazole	Dibenzofuran	Hexachlorobenzene	Hexachloroethane	Di-n-butyl phthalate	Phenol	Naphthalene	Flourene
Residential	96	240,000	27	1,200	0.34	39	6,100	18,000	56	2,700
Non Residential	3,000	1,000,000	860	12,000	11	620	62,000	180,000	190	26,000
SB-1-5'	<pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""></pql<></td></pql<>	<pql< td=""></pql<>
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SB-3-5'	<pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<></td></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""><td><pql< td=""></pql<></td></pql<></td></pql<>	<pql< td=""><td><pql< td=""></pql<></td></pql<>	<pql< td=""></pql<>
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ADEQ Title 18 Preliminary Remediation Goals Residential Soil 2007 ADEQ Title 18 Preliminary Remediation Goals Non Residential Soil 2007

NE – No standard established

<PQL - Analyte below the analytical method's Practical Quantitation Limit (minimum detection limit)

SB- Soil Boring

APPENDIX E

Laboratory Report



LABORATORY REPORT FORM

ORANGE COAST ANALYTICAL, INC.

4620 East Elwood Street, Suite 4 Phoenix, AZ 85040

(480) 736-0960

Laboratory Certification (ADHS) No.: AZ0558, AZ0646, AZM499 Expiration Date: 2008

> Laboratory Director's Name: <u>Mark Noorani</u>

> > Client: HDR Engineering, Inc.

Laboratory Reference: HDR AZ5144

Project Name: La Cholla Blvd

Project Number.: 047-059914-07

Sample Matrix: Soil

Date Sampled: 04/24/08 Date Received: 04/25/08 Date Reported: 05/06/08

Chain of Custody Received: Yes

Analytical Method: 8270C, 8260B

Mark Noorani, Laboratory Director

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HDR Engineering, Inc. ATTN: Mr. Joel P. Hennings 3200 E. Camelback Rd., Suite 350 Phoenix, AZ 85018

Laboratory Reference #: HDR AZ5144 Client Project ID: La Cholla Blvd Client Project #: 047-059914-07

· · · · · · · · · · · · ·	vo	LATILE ORGANIC	S BY GC/MS	(EPA 8260B)	- -		
Sample Description: Soil							
Sampled:		·	04/24/08	04/24/08	04/24/08	04/24/08	04/24/08
Received:			04/25/08	04/25/08	04/25/08	04/25/08	04/25/08
Extracted:		04/25/08	04/25/08	04/25/08	04/25/08	04/25/08	04/25/08
Analyzed:		05/02/08	05/02/08	05/02/08	05/02/08	05/02/08	05/02/08
Reported:		05/06/08	05/06/08	05/06/08	05/06/08	05/06/08	05/06/08
Lab Sample #:		MBRP0425081	AZ5144-001	AZ5144-002	AZ5144-003	AZ5144-004	AZ5144-005
Client Sample #:		·	SB-1-5'	SB-2-5'	SB-3-5'	SB-4-5'	SB-5-5'
Dilution Factor:		1	1	1	1	1	1
Data Qualifier:		,					
ANALYTE	CAS #	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
Acetone	67-64-1	<250	<250	<250	<250	<250	<250
Benzene	71-43-2	<50	<50	<50	<50	<50	<50
Bromobenzene	108-86-1	<50	<50	<50	<50	<50	<50
Bromochloromethane	74-97-5	<50	<50	<50	<50	<50	<50
Bromodichloromethane	75-27-4	<50	<50	<50	<50	<50	<50
Bromoform	75-25-2	<50	<50	<50	<50	<50	<50
Bromomethane	74-83-9	<250	<250	<250	<250	<250	<250
n-Butylbenzene	104-51-8	<50	<50	<50	<50	<50	<50
sec-Butylbenzene	135-98-8	<50	<50	<50	<50	<50	<50
tert-Butylbenzene	98-06-6	<50	<50	<50	<50	<50	<50
Carbon tetrachloride	56-23-5	<50	<50	<50	<50	<50	<50
Chlorobenzene	108-90-7	<50	<50	<50	<50	<50	<50
Chlorodibromomethane	124-48-1	<50	<50	<50	<50	<50	<50
Chloroethane	75-00-3	<250	<250	<250	<250	<250	<250
Chloroform	67-66-3	<50	<50	<50	<50	<50	<50
Chloromethane	74-87-3	<250	<250	<250	<250	<250	<250
2-Chlorotoluene	95-49-8	<50	<50	<50	<50	<50	<50
4-Chlorotoluene	106-43-4	<50	<50	<50	<50	<50	<50
1,2-Dibromoethane	106-93-4	<50	<50	<50	<50	<50	<50
1,2-Dichlorobenzene	95-50-1	<50	<50	<50	<50	<50	<50
1,3-Dichlorobenzene	541-73-1	<50	<50	<50	<50	<50	<50
1,4-Dichlorobenzene	106-46-7	<50	<50	<50	<50	<50	<50
1,1-Dichloroethane	75-34-3	<50	<50	<50	<50	<50	<50
1,2-Dichloroethane	107-06-2	<50	<50	<50	<50	<50	<50
1,1-Dichloroethene	75-35-4	<50	<50	<50	<50	<50	<50
cis-1,2-Dichloroethene	156-59-2	<50	<50	<50	<50	<50	<50
trans-1,2-Dichloroethene	156-60-5	<50	<50	<50	<50	<50	<50
cis-1,3-Dichloropropene	10061-01-5	<50	<50	<50	<50	<50	<50
trans-1,3-Dichloropropene	10061-02-6	<50	<50	<50	<50	<50	<50
Dichlorodifluoromethane	75-71-8	<250	<250	<250	<250	<250	<250
1,2-Dichloropropane	78-87-5	<50	<50	<50	<50	<50	<50

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VOLATILE ORGANICS BY GC/	MS (EPA 8260B)	(continued)		Clie		HDR AZ5144 La Cholla Blvd 047-059914-0	
Sampled:			04/24/08	.04/24/08	04/24/08	04/24/08	04/24/08
Received:			04/25/08	04/25/08	04/25/08	04/25/08	04/25/08
Extracted:		04/25/08	04/25/08	04/25/08	04/25/08	04/25/08	04/25/08
Analyzed:		05/02/08	05/02/08	05/02/08	05/02/08	05/02/08	05/02/08
Reported:		05/06/08	05/06/08	05/06/08	05/06/08	05/06/08	05/06/08
Lab Sample #:		MBR/0425081	AZ5144-001	AZ5144-002	AZ5144-003	AZ5144-004	AZ5144-005
Client Sample #:			SB-1-5'	.SB-2-5'	SB-3-5'	SB-4-5'	SB-5-5'
Dilution Factor:		1	1	1	1	1	1
ANALYTE (con't)	CAS #	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
1,3-Dichloropropane	142-28-9	<50	<50	<50	<50	<50	<50
2,2-Dichloropropane	594-20-7	<50	<50	<50	<50	<50	<50
1,1-Dichloropropene	563-58-6	<50	<50	<50 ·	<50	<50	<50
Ethylbenzene	100-41-4	<50	<50	<50	<50	<50	<50
Isopropylbenzene	98-82-8	<50	<50	<50	<50	<50	<50
4-Isopropyltoluene	99-87-6	<50	<50	<50	<50	<50	<50
Methyl t-butyl ether (MTBE)	1634-04-4	<50	<50	<50	<50	<50	<50
Methylene chloride	75-09-2	<250	<250	<250	<250	<250	<250
Naphthalene	91-20-3	. <150	<150	<150	<150	<150	<150
n-Propylbenzene	103-65-1	<50	<50	<50	<50	<50	<50
Styrene	100-42-5	<50	<50	<50	<50	<50	<50
1,1,2,2-Tetrachloroethane	79-34-5	<50	<50	<50	<50	<50	<50
Tetrachloroethene	127-18-4	<50	<50	<50	<50	<50	<50
Toluene	108-88-3	<50	<50	<50	<50	<50	<50
1,2,3-Trichlorobenzene	87-61-6	<50	<50	<50	<50	<50	<50
1,1,1-Trichloroethane	71-55-6	<50	<50	<50	<50	<50	<50
1,1,2-Trichloroethane	79-00-5	<50	<50	<50	<50	<50	<50
Trichloroethene	79-01-6	<50	<50	<50	<50	<50	<50
Trichlorofluoromethane	75-69-4	<250	<250	<250	<250	<250	<250
1,2,3-Trichloropropane	96-18-4	<50	<50	<50	<50	<50	<50
1,2,4-Trimethylbenzene	95-63-6	<50	<50	<50	<50	<50	<50
1,3,5-Trimethylbenzene	108-67-8	<50	<50	<50	<50	<50	<50
Vinyl chloride	75-01-4	<250	<250	<250	<250	<250	<250
Total Xylenes	1330-20-7	<150	<150	<150	<150	<150	<150
Acceptable Surrogate %RC		%RC	%RC	%RC	%RC	%RC	%RC
Dibromofluoromethane	38-205%	92	92	90	88	90	90
Toluene-d8	67-128%	91	91	92	91	92	91
4-Bromofluorobenzene	40-132%	85	86	85	85	86	86

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HDR Engineering, Inc. ATTN: Mr. Joel P. Hennings 3200 E. Camelback Rd., Suite 350 Phoenix, AZ 85018

Laboratory Reference #: HDR AZ5144 Client Project ID: La Cholla Blvd Client Project #: 047-059914-07

	VO	LATILE ORGANIC	CS BY GC/MS (EP	PA 8260B)		
Sample Description: Soil					• .	
Sampled:		04/24/08	04/24/08			
Received:		04/25/08	04/25/08			,
Extracted:		· 04/25/08	04/25/08			
Analyzed:		05/02/08	05/02/08			
Reported:		05/06/08	05/06/08			
Lab Sample #:		AZ5144-006	AZ5144-007			
Client Sample #:		SB-6-5*	SB-7-5'			
Dilution Factor:		1	1			
Data Qualifier:						
ANALYTE	CAS#	µg/kg	µg/kg			
Acetone	67-64-1	<250	<250			
Benzene	71-43-2	<50	<50			
Bromobenzene	108-86-1	<50	<50			
Bromochloromethane	74-97-5	<50	<50			
Bromodichloromethane	75-27-4	<50	<50			
Bromoform	75-25-2	<50	<50			
Bromomethane	74-83-9	<250	<250			
n-Butylbenzene	104-51-8	<50	<50			
sec-Butylbenzene	135-98-8	<50	<50			
tert-Butylbenzene	98-06-6	<50	<50			
Carbon tetrachloride	56-23-5	<50	<50			
Chlorobenzene	108-90-7	<50	<50			
Chlorodibromomethane	124-48-1	<50	<50			
Chloroethane	75-00-3	<250	<250			
Chloroform	67-66-3	<50	<50			
Chloromethane	74-87-3	<250	<250			
2-Chlorotoluene	95-49-8	<50	<50			
4-Chlorotoluene	106-43-4	<50	<50			
1.2-Dibromoethane	106-93-4	<50	<50			
1,2-Dichlorobenzene	95-50-1	<50	<50			
1,3-Dichlorobenzene	541-73-1	<50	<50			
1,4-Dichlorobenzene	106-46-7	<50	<50			
1,1-Dichloroethane	75-34-3	<50	<50			
1,2-Dichloroethane	107-06-2	<50	<50			
1,1-Dichloroethene	75-35-4	<50	<50			
cis-1,2-Dichloroethene	156-59-2	<50	<50			
trans-1,2-Dichloroethene	156-60-5	<50	<50			
cis-1,3-Dichloropropene	10061-01-5	<50	<50			
trans-1,3-Dichloropropene	10061-02-6	<50	<50			
Dichlorodifluoromethane	75-71-8	<250	<250			

1,2-Dichloropropane

4 of 11

<50

<50

78-87-5

VOLATILE ORGANICS BY GC/MS (EPA 8260B)

(continued)

Laboratory Reference #: HDR AZ5144 Client Project ID: La Cholla Blvd Client Project #: 047-059914-07

Sampled: Received: Extracted: Analyzed: Reported:		04/24/08 04/25/08 04/25/08 05/02/08 05/06/08	04/24/08 04/25/08 05/02/08 05/06/08
Reported.		05/00/00	03/00/00
Lab Sample #:		AZ5144-006	AZ5144-007
Client Sample #:		SB-6-5'	SB-7-5'
Dilution Factor:		1	1,
ANALYTE (con't)	CAS #	µg/kg	µg/kg
1,3-Dichloropropane	142-28-9	<50	<50
2,2-Dichloropropane	594-20-7	<50	<50
1,1-Dichloropropene	563-58-6	<50	<50
Ethylbenzene	100-41-4	<50	<50
Isopropylbenzene	98-82-8	<50	<50
4-Isopropyltoluene	99-87-6	<50	<50
Methyl t-butyl ether (MTBE)	1634-04-4	<50	<50
Methylene chloride	75-09-2	<250	<250
Naphthalene	91-20-3	<150	<150
n-Propylbenzene	103-65-1	<50	<50
Styrene	100-42-5	<50	<50
1,1,2,2-Tetrachloroethane	79-34-5	<50	<50
Tetrachloroethene	127-18-4	<50	<50
Toluene	108-88-3	<50	<50
1,2,3-Trichlorobenzene	87-61-6	<50	<50
1,1,1-Trichloroethane	71-55-6	<50	<50
1,1,2-Trichloroethane	79-00-5	<50	<50
Trichloroethene	79-01-6	<50	<50
Trichlorofluoromethane	75-69-4	<250	<250
1,2,3-Trichloropropane	96-18-4	<50	<50
1,2,4-Trimethylbenzene	95-63-6	<50	<50
1,3,5-Trimethylbenzene	108-67-8	<50	<50
Vinyl chloride	75-01-4	<250	<250
Total Xylenes	1330-20-7	<150	<150
Acceptable Surrogate %RC		%RC	%RC
Dibromofluoromethane	38-205%	90	90
Toluene-d8	67-128%	92	92
4-Bromofluorobenzene	40-132%	86	86

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Laboratory Reference #: HDR AZ5144 Client Project ID: La Cholla Blvd Client Project #: 047-059914-07

· ·	SEMI VO	DLATILE ORGANIC	S BY GC/MS (EPA 8270C)			
Sample Description: Soil	·						
Sampled:			04/24/08	04/24/08	04/24/08	04/24/08	04/24/08
Received:	•		04/25/08	04/25/08	04/25/08	04/25/08	04/25/08
Extracted:		04/28/08	04/28/08	04/28/08	04/28/08	04/28/08	04/28/08
Analyzed:		04/30/08	04/30/08	04/30/08	04/30/08	04/30/08	04/30/08
Reported:		05/06/08	05/06/08	05/06/08	05/06/08	05/06/08	05/06/08
Lab Sample #:		MBIN0428081	AZ5144-001	AZ5144-002	AZ5144-003	AZ5144-004	AZ5144-005
Client Sample #:			SB-1-5'	SB-2-5'	SB-3-5'	SB-4-5'	SB-5-5'
Dilution Factor:		1	1	1	1	1	1
Data Qualifier:		S5	S5	S5	S5	S5	
ANALYTE	CAS #	µg∕kg	µg/kg	µg∕kg	µg/kg	µg/kg	µg/kg
Acenaphthene	83-32-9	<100	<100	<100	<100	<100	<100
Acenaphthylene	208-96-8	<100	<100	<100	<100	<100	<100
Aniline	62-53-3	<100	<100	<100	<100	<100	<100
Anthracene	120-12-7	<100	<100	<100	<100	<100	<100
Benzoic acid	65-85-0	<1000	<1000	<1000	<1000	<1000	<1000
Benz(a)anthracene	56-55-3	<100	<100	<100	<100	<100	<100
Benzo(b)fluoranthene	205-99-2	<250	<250	<250	<250	<250	<250
Benzo(k)fluoranthene	207-08-9	<250	<250	<250	<250	<250	<250
Benzo(g,h,i)perylene	191-24-2	<250	<250	<250	<250	<250	<250
Benzo(a)pyrene	50-32-8	<250	<250	<250	<250	<250	<250
Benzyl alcohol	100-51-6	<100	<100	<100	<100	<100	<100
bis-(2-chloroethoxy) methane	111-91-1	<100	<100	<100	<100	<100	<100
bis-(2-chloroethyl) ether	111-44-4	<100	<100	<100	<100	<100	<100
bis-(2-chloroisopropyl) ether	39638-32-9	<100	<100	<100	<100	<100	<100
bis-(2-ethylhexyl) phthalate	117-81-7	<100	<100	<100	<100	<100	<100
4-Bromophenyl phenyl ether	101-55-3	<100	<100	<100	<100	<100	<100
Butyl benzyl phthalate	85-68-7	<100	<100	<100	<100	<100	<100
4-Chloroaniline	106-47-8	<100	<100	<100	<100	<100	<100
2-Chloronaphthalene	91-58-7	<100	<100	<100	<100	<100	<100
4-Chloro-3-methylphenol	59-50-7	<100	<100	<100	<100	<100	<100
2-Chlorophenol	95-57-8	<100	<100	<100	<100	<100	<100
4-Chlorophenyl phenyl ether	7005-72-3	<100	<100	<100	<100	<100	<100
Chrysene	218-01-9	<100	<100	<100	<100	<100	<100
Dibenz(a,h)anthracene	53-70-3	<100	<100	<100	<100	<100	<100
Dibenzofuran	132-64-9	<100	<100	<100	<100	<100	<100
Di-n-butyl phthalate	84-74-2	<250	<250	<250	<250	<250	<250
2,4-Dichlorophenol	120-83-2	<100	<100	<100	<100	<100	<100
Diethyl phthalate	84-66-2	<100	<100	<100	<100	<100	<100
2,4-Dimethylphenol	105-67-9	<100	<100	<100	<100	<100	<100
Dimethyl phthalate	131-11-3	<100	<100	<100	<100	<100	<100
4,6-Dinitro-2-methylphenol	534-52-1	<1000	<1000	<1000	<1000	<1000	<1000

SEMI-VOLATILE ORGANICS BY GC/MS (EPA 8270C) (continued)

Laboratory Reference #: HDR AZ5144 Client Project ID: La Cholla Blvd Client Project #: 047-059914-07

Sampled: Received: Extracted: Analyzed: Reported:		04/28/08 04/30/08 05/06/08	04/24/08 04/25/08 04/28/08 04/30/08 05/06/08	04/24/08 04/25/08 04/28/08 04/30/08 05/06/08	04/24/08 04/25/08 04/28/08 04/30/08 05/06/08	04/24/08 04/25/08 04/28/08 04/30/08 05/06/08	04/24/08 04/25/08 04/28/08 04/30/08 05/06/08
Lab Sample #:		MBIN0428081	AZ5144-001	AZ5144-002	AZ5144-003	AZ5144-004	AZ5144-005
Client Sample #:			SB-1-5'	SB-2-5'	SB-3-5'	SB-4-5'	SB-5-5'
Dilution Factor:		1	1	1	1	1	1
ANALYTE (con't)	CAS #	µg/kg	µg∕kg	µg/kg	µg∕kg	µg/kg	µg/kg
2,4-Dinitrophenol	51-28-5	<1000	<1000	<1000	<1000	<1000	<1000
2,4-Dinitrotoluene	121-14-2	<250	<250	<250	<250	<250	<250
2,6-Dinitrotoluene	606-20-2	<250	<250	<250	<250	<250	<250
Di-n-octyl phthalate	117-84-0	<250	<250	<250	<250	<250	<250
Fluoranthene	206-44-0	<100	<100	<100	<100	<100	<100
Fluorene	86-73-7	<100	<100	<100	<100	<100	<100
Hexachlorobenzene	118-74-1	<100	<100	<100	<100	<100	<100
Hexachlorobutadiene	87-68-3	<100	<100	<100	<100	<100	<100
Hexachlorocyclopentadiene	77-47-4	<500	<500	<500	<500	<500	<500
Hexachloroethane	67-72-1	<100	<100	<100	<100	<100	<100
Indeno(1,2,3-cd)pyrene	193-39-5	<250	<250	<250	<250	<250	<250
Isophorone	78-59-1	<100	<100	<100	<100	<100	<100
2-Methylnaphthalene	91-57-6	<100	<100	<100	<100	<100	<100
2-Methylphenol	95-48-7	<100	<100	<100	<100	<100	<100
3 & 4-Methylphenol	108-39-4,106-44-5	<100	<100	<100	<100	<100	<100
Naphthalene	91-20-3	<100	<100	<100	<100	<100	<100
2-Nitroaniline	88-74-4	<250	<250	<250	<250	<250	<250
3-Nitroaniline	99-09-2	<250	<250	<250	<250	<250	<250
4-Nitroaniline	100-01-6	<250	<250	<250	<250	<250	<250
Nitrobenzene	98-95-3	<100	<100	<100	<100	<100	<100
2-Nitrophenol	88-75-5	<100	<100	<100	<100	<100	<100
4-Nitrophenol	100-02-7	<1000	<1000	<1000	<10D0	<1000	<1000
N-Nitrosodiphenylamine	86-30-6	<100	<100	<100	<100	<100	<100
N-Nitrosodi-n-propylamine	621-64-7	<100	<100	<100	<100	<100	<100
N-Nitrosodimethylamine	62-75-9	<100	<100	<100	<100	<100	<100
Pentachlorophenol	87-86-5	<1000	<1000	<1000	<1000	<1000	<1000
Phenanthrene	85-01-8	<100	<100	<100	<100	<100	<100 <100
Phenol	108-95-2	<100	<100	<100	<100	<100 <100	<100
Pyrene	129-00-0	<100	<100	<100 <100	<100 <100	<100	<100
1,2,4-Trichlorobenzene	120-82-1 95-95-4	<100 <100	<100 <100	<100	<100	<100	<100
2,4,5-Trichlorophenol	88-06-2	<100	<100	<100	<100	<100	<100
2,4,6-Trichlorophenol	00-00-2	~100	~100	100	. 100	-100	4100
Acceptable Surrogate %RC		%RC	%RC	%RC	%RC	%RC	%RC
2-Fluorophenol	50-159%	71	70	77	76	71	74
Phenol-d6	39-173%	72	70	77 .	77	72	75
Nitrobenzene-d5	46-195%	76	76	79	78	75	80
2-Fluorobiphenyl	85-165%	83	84	84	83	81	86
2,4,6-Tribromophenol	30-160%	75	75	86	88	83	83
Terphenyl-d14	66-173%	78	76	75	70	74	72

S5= Surrogate recovery was below laboratory acceptance limits.

HDR Engineering, Inc. ATTN: Mr. Joel P. Hennings 3200 E. Camelback Rd., Suite 350 Phoenix, AZ 85018

Laboratory Reference #: HDR AZ5144 Client Project ID: La Cholla Blvd Client Project #: 047-059914-07

SEMI VOLATILE ORGANICS BY GC/MS (EPA 8270C)

Sample Description: Soil

Sampled:		04/24/08	04/24/08
Received:		04/25/08	04/25/08
Extracted:		04/28/08	04/28/08
Analyzed:		04/30/08	04/30/08
Reported:		05/06/08	05/06/08
1-1-0		AZ5144-006	AZ5144-007
Lab Sample #:		SB-6-5'	SB-7-5'
Client Sample #:		30-0-0	30-1-0
Dilution Factor:		. 1	1
Data Qualifier:		S5	S5
ANALYTE	CAS #	µg/kg	µg/kg
Acenaphthene	83-32-9	<100	<100
Acenaphthylene	208-96-8	<100	<100
Aniline	62-53-3	<100	<100
Anthracene	120-12-7	<100	<100
Benzoic acid	65-85-0	<1000	<1000
Benz(a)anthracene	56-55-3	<100	<100
Benzo(b)fluoranthene	205-99-2	<250	<250
Benzo(k)fluoranthene	207-08-9	<250	<250
Benzo(g,h,i)perylene	191-24-2	<250	<250
Benzo(a)pyrene	50-32-8	<250	<250
Benzyl alcohol	100-51-6	<100	<100
bis-(2-chloroethoxy) methane	111-91-1	<100	<100
bis-(2-chloroethyl) ether	111-44-4	<100	<100
bis-(2-chloroisopropyl) ether	39638-32-9	<100	<100
bis-(2-ethylhexyl) phthalate	117-81-7	<100	<100
4-Bromophenyl phenyl ether	101-55-3	<100	<100
Butyl benzyl phthalate	85-68-7	<100	<100
4-Chloroaniline	106-47-8	<100	<100
2-Chloronaphthalene	91-58-7	<100	<100
4-Chloro-3-methylphenol	59-50-7	<100	<100
2-Chlorophenol	95-57-8	<100	<100
4-Chlorophenyl phenyl ether	7005-72-3	<100	<100
Chrysene	218-01-9	<100	<100
Dibenz(a,h)anthracene	53-70-3	<100	<100
Dibenzofuran	132-64-9	<100	<100
Di-n-butyl phthalate	84-74-2	<250	<250
2,4-Dichlorophenol	120-83-2	<100	<100
Diethyl phthalate	84-66-2	<100	<100
2,4-Dimethylphenol	105-67-9	<100	<100
Dimethyl phthalate	131-11-3	<100	<100
4,6-Dinitro-2-methylphenol	534-52-1	<1000	<1000

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SEMI-VOLATILE ORGANICS BY GC/MS (EPA 8270C) (continued)

Laboratory Reference #: HDR AZ5144 Client Project ID: La Cholla Blvd Client Project #: 047-059914-07

Sampled:		04/24/08	04/24/08
Received:		04/25/08	04/25/08
Extracted:		04/28/08	04/28/08
Analyzed:		04/30/08	04/30/08
Reported:		05/06/08	05/06/08
Lab Sample #:	,	AZ5144-006	AZ5144-007
Client Sample #:		SB-6-5'	\$B-7-5'
Dilution Factor:		1	1
ANALYTE (con't)	CAS#	µg/kg	µg∕kg
2,4-Dinitrophenol	51-28-5	<1000	<1000
2,4-Dinitrotoluene	121-14-2	<250	<250
2,6-Dinitrotoluene	606-20-2	<250	<250
Di-n-octyl phthalate	117-84-0	<250	<250
Fluoranthene	206-44-0	<100	<100
Fluorene	86-73-7	<100	<100
Hexachlorobenzene	118-74-1	<100	<100
Hexachlorobutadiene	87-68-3	<100	<100
Hexachlorocyclopentadiene	77-47-4	<500	<500
Hexachloroethane	67-72-1	<100	<100
Indeno(1,2,3-cd)pyrene	193-39-5	<250	<250
• • • • • • •	78-59-1	<100	<100
Isophorone		<100	<100
2-Methylnaphthalene	91-57-6		
2-Methylphenol	95-48-7	<100	<100
3 & 4-Methylphenol	108-39-4,106-44-5	<100	<100
Naphthalene	91-20-3	<100	<100
2-Nitroaniline	88-74-4	<250	<250
3-Nitroaniline	99-09-2	<250 <250	<250 <250
4-Nitroaniline	100-01-6 98-95-3	<100	<250 <100
Nitrobenzene			<100
2-Nitrophenol	88-75-5	<100 <1000	<100
4-Nitrophenol	100-02-7 86-30-6	<1000	<1000
N-Nitrosodiphenylamine		<100	<100
N-Nitrosodi-n-propylamine	621-64-7 62-75-9	<100	<100
N-Nitrosodimethylamine	87-86-5	<1000	<1000
Pentachlorophenol Phenanthrene	85-01-8	<1000	<1000
Phenol	108-95-2	<100	<100
Pyrene	129-00-0	<100	<100
1,2,4-Trichlorobenzene	120-82-1	<100	<100
2,4,5-Trichlorophenol	95-95-4	<100	<100
2,4,6-Trichlorophenol	88-06-2	<100	<100
2,4,0* Попогораеноя	00.002	100	100
Acceptable Surrogate %RC	1.	%RC	%RC
2-Fluorophenol	50-159%	67	72
Phenol-d6	39-173%	66	73
Nitrobenzene-d5	46-195%	74	76
2-Fluorobiphenyl	85-165%	78	83
2,4,6-Tribromophenol	30-160%	75	79
Terphenyl-d14	66-173%	69	73
· ·			

S5= Surrogate recovery was below laboratory acceptance limits.

QA/QC Report for Volatile Organic Compounds (EPA 8260B) Reporting Units: ppb

1. Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Date of Analysis : 05/02/08 Laboratory Sample No : AZ5143-001 Laboratory Reference No : HDR AZ5144

ANALYTE	R1	SP CONC	MS	MSD	% MS	% MSD	RPD	ACP%	ACP RPD
1,1-Dichloroethene	0.0	50	42	41	84	82	2	65-162	22
Benzene	0,0	50	52	52	104	104	0	80-138	21
Trichloroethene	0.0	.50	54	54	108	108	0.	76-123	21
Toluene	0.0	50	56	56	112	112	0	77-144	19
Chlorobenzene	0.0	50	. 55	55	110	110	0	78-134	18

Definition of Terms : R1 SP CONC

MS MSD % MS % MSD RPD ACP% ACP RPD

Result of Laboratory Sample Number
Spike Concentration Added to Sample
Matrix Spike Results
Matrix Spike Duplicate Results
Percent Recovery of MS: {(MS-R1) / SP} x 100
Percent Recovery of MSD: {(MSD-R1) / SP} x 100
Relative Percent Difference: {(MS-MSD) / (MS+MSD)} x 100 x 2
Acceptable Range of Percent for MS/MSD
Acceptable Relative Percent Difference

2. Laboratory Control Sample

Date of Analysis : 05/02/08 Laboratory Sample No : BV0502081

ANALYTE	SP CONC	RESULTS	% RECOVERY	ACCEPTABLE %
1,1-Dichloroethene	50	42	84	59-163
Benzene	50	51	102	78-136
Trichloroethene	50	53	106	72-122
Toluene	50 -	54	108	79-138
Chlorobenzene	50	53	106	78-133

INIT _____

QA/QC REPORT for Semi-Volatile Organic Compounds (EPA 8270C) Reporting Units: ppb

1. Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Date of Analysis : 04/30/08 Laboratory Sample No : AZ5144-003 Laboratory Reference No : HDR AZ5144

ANALYTE	R1	SP CONC	MS ^{ss}	MSD	% MS	% MSD	RPD	ACP%	ACP RPD
Phenol	0.0	5000	3700	3600	74	72	3	34-98	32
2-Chlorophenol	0.0	5000	3300	3200	66	64	3	32-94	33
N-Nitrosodi-n-propylamine	0.0	2500	. 1900	1900	76	76	0	9-160	31
1.2.4-Trichlorobenzene	0.0	2500	2100	2200	84	88	5	26-121	24
4-Chloro-3-methylphenol	0.0	5000	3200	3100	64	62	3	34-88	38
Acenaphthene	0.0	2500	1900	2000	76	80	5	18-138	31
4-Nitrophenol	· 0.0	5000	3400	3200	68	64	6	26-106	40
2.4-Dinitrotoluene	0.0	2500	2100	2100	84	84	0	13-166	34
Pentachlorophenol	0.0	5000	3400	3300	68	66	3	15-115	37
Pyrene	0.0	2500	1800	1900	72	76	5	35-109	33

Definition of Terms :

R1	Result of Laboratory Sample Number
SP CONC	Spike Concentration Added to Sample
MS	Matrix Spike Results
MSD	Matrix Spike Duplicate Results
% MS	Percent Recovery of MS: {(MS-R1) / SP} x 100
% MSD	Percent Recovery of MSD: {(MSD-R1) / SP} x 100
RPD	Relative Percent Difference: {(MS-MSD) / (MS+MSD)} x 100 x 2
ACP%	Acceptable Range of Percent for MS/MSD
ACP RPD	Acceptable Relative Percent Difference
S5	Surrogate recovery was below laboratory acceptance limits.

2. Laboratory Control Sample

Date of Analysis : 04/30/08 Laboratory Sample No : IN0428081

ANALYTE	SP CONC	RESULTS	% RECOVERY	ACCEPTABLE %
Phenol .	5000	3700	74	33-95
2-Chlorophenol	5000	3300	66	35-86
N-Nitrosodi-n-propylamine	2500	1900	76	2-168
1,2,4-Trichlorobenzene	2500	2100	84	19-125
4-Chloro-3-methylphenol	5000	3200	64	34-83
Acenaphthene	2500	2000	80	12-139
4-Nitrophenol	5000	3300	66	33-99
2,4-Dinitrotoluene	2500	2100	84	4-172
Pentachlorophenol	5000	3300	. 66	20-110
Pvrene	2500	1800	72	36-103

Anal	Analysis Request and Chain of Custody Record	dy Record	b No:
ORANGE COAST ANAL YTICAL, INC. 3002 Dow, Suite 532, 4620 Tustin, CA 92780 ([7]4) 832-0064 Fax (7]4) 832-0067 (480)	www.ocalab.com E. Elwood, Suite 4 snix, AZ 85040 736-0960 Fax (480) 736-0970	ANAYSIS//CONTAINER//PRESERVATIVE	Page of of
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Total No. of Samples:		Preservative; 4^{-1} = Ice 2_{3} = HCl $3 = HNO_{3}^{-1}$	4 = H ₂ SO ₄ 5 = NaOH 6 = Other
Relinquished By: Date/Time:	`	Sample	
ime:	Received By/ Date/Time:	CM - GM - Gundwater	ater SS - Soil/Solid
2. 	to a second s		OT- Other
Relinquished By: Date/Time:	Received For Lab By: Date/Time:	Sample Integrity:	On Ice
	All samples remain the property of the client who is responsible for disposal. A disposal fee may be imposed if client fails to pickup samples.	fee may be imposed if client fails to pickup	samples.

USE CAPITAL LETTERS		MATL		PUR- POSE	TEST LAB	SIZE	SIZE %
TEST NO.	SAMPLED BY		MO D/	AY YEAR	-	TIME	MILITARY
SAMPLE	D FROM		LIFT NO.	RDWY	-	STATION	
						+	
ORIGINAL SOURC		T ENGINEER / RVISOR	PRC	DJECT NUMBER		OST, INPUT C	
L		REMARKS	/ L				
Test pit #	61						

A. TOTAL WET WEIGHT OF MATERIAL FROM THE HOLE		6	.6	4	LB.					
B. WET WEIGHT OF MATERIAL RETAINED ON THE #4 SIEVE		1	3	4	LB.					
C. WET WEIGHT OF MATERIAL PASSING THE #4 SIEVE (A-B)		[LB.					
D. MOISTURE OF THE MATERIAL PASSING THE #4 SIEVE			4	8	%					
E. MOIST. CORRECTED FOR MATERIAL RETAINED ON THE #4 SIE	/E		4	.0	%					
F. WEIGHT OF SAND & APPARATUS BEFORE FILLING HOLE	1	4	6	3	LB.					
G. WEIGHT OF SAND & APPARATUS AFTER FILLING HOLE		6	./	2	LB.					
H. WEIGHT OF SAND TO FILL HOLE AND CONE (F-G)		8	.5	1	LB.					
I. WEIGHT OF SAND TO FILL CONE AND BASE PLATE		3	.3	6	LB.					
J. WEIGHT OF SAND TO FILLHOLE (H-I)		5	1	5	LB.					
K. DENSITY OF SAND		8	6	.4	PCF					
L. VOLUME OF HOLE $\left(-\frac{J}{K}\right)$	0	5	9	6	CF					
M. WET DENSITY = $\left(\frac{A}{I}\right)$	1	1	1	4	PCF					
N. DRY DENSITY = $\left(\frac{M}{100 + E}\right) \times 100$	1	0	7	,	PCF					
$COMPACTION = \left(\frac{N}{R}\right) \times 100 OR \left(\frac{N}{T}\right) \times 100$		9	1	r /	%					
COMPACTION SPECIFICATION			9	0	%					
PROCTOR DENSITY										
PROCTOR NUMBER										
PROCTOR METHOD (A, C, D, OR 1)										
O. SPECIFIC GRAVITY OF RETAINED #4										
P. ABSORPTION OF RETAINED #4			3		%					
Q. OPTIMUM MOISTURE		/	6	9	%					
R. MAXIMUM DRY DENSITY	/	0	G.	6	PCF					
CORRECTION FOR RETAINED #4 (METHOD A OR ONE	CORRECTION FOR RETAINED #4 (METHOD A OR ONE-POINT ONLY)									
S. CORRECTED OPTIMUM MOISTURE		/	3.	5	%					
T. CORRECTED MAXIMUM DRY DENSITY	1	/	7	ນ້	PCF					

a. RETAINED ON #4 = $\left(\frac{B}{A}\right) \times 100$

%

IF RET. ON #4 IS MORE THAN 50% (60% IF AB), GO NO FURTHER.

FOR METHOD A OR ONE POINT ONLY

 $\mathsf{E} = \frac{[D \ (100 \ -a)] + a}{100}$

ONE POINT PROCTOR (ARIZ 232)

b. WEIGHT OF MOLD & SOIL	/	2	5	7	LB.
c. WEIGHT OF MOLD		G	5	6	LB.
d. WEIGHT OF COMPACTED SOIL (b-c)		4	0	7	LB.
e. VOLUME OF MOLD	, C	3	3	3	CF
f. WET DENSITY (d / e)	/	2	2	•	PCF
g. MOISTURE CONTENT		/	2	9	%
FAMILY OF CURVES IDENTIFICATION		•	&	Ň	
Q. OPTIMUM MOISTURE		1	6	. T	%
R. MAXIMUM DRY DENSITY	1	Ù	6	9	PCF

-| z -R.It TEST OPERATOR AND DATE

RESIDENT ENGINEER, PROJECT SUPERVISOR, OR LABMAN AND DATE

FOR METHOD A OR ONE POINT ONLY

$$S = \frac{[Q (100 - a)] + a}{100}$$
$$T = \frac{[R (100 - a)] + [(56.2) (a)(O)]}{100}$$

	DJEC SUPE				MO DAY YEAR TIME		
						:	
	1	5	て	LB.			
B. WET WEIGHT OF MATERIAL RETAINED ON THE #4 SIEVE C. WET WEIGHT OF MATERIAL PASSING THE #4 SIEVE (A-B)	1	2	0	LB.	a. RETAINED ON #4 = $\left(\frac{B}{A}\right) \times 100$, %
D. MOISTURE OF THE MATERIAL PASSING THE #4 SIEVE (4-6)		1	4	LB. %	IF RET. ON #4 IS MORE THAN 50% (60% IF AB), GO NO FU FOR METHOD A OR ONE POINT ONLY	יח וחבה.	
E. MOIST, CORRECTED FOR MATERIAL RETAINED ON THE #4 SIEVE		$\frac{6}{5}$	12	70 1 %	$E = \frac{[D \ (100 \ -a)] + a}{100}$		
F. WEIGHT OF SAND & APPARATUS BEFORE FILLING HOLE	4	0	1		ONE POINT PROCTOR (ARIZ 232)	19 	
G. WEIGHT OF SAND & APPARATUS AFTER FILLING HOLE	3 million	Ĭ	9	LB.	b. WEIGHT OF MOLD & SOIL		LB.
H. WEIGHT OF SAND TO FILL HOLE AND CONE (F-G)	8	4	24	LB.	c. WEIGHT OF MOLD		LB.
I. WEIGHT OF SAND TO FILL CONE AND BASE PLATE	Ì	3	b		d, WEIGHT OF COMPACTED SOIL (b-c)	Ţ	LB.
J. WEIGHT OF SAND TO FILLHOLE (H-I)	×.	H	8	LB.	e. VOLUME OF MOLD		CF
K. DENSITY OF SAND	8	6	11	PCF	f. WET DENSITY (d / e)		PCF
L. VOLUME OF HOLE $\left(\frac{J}{K}\right)$	6	3	4	CF	g MOISTURE CONTENT		%
M. WET DENSITY = $\left(\frac{A}{L}\right)$ 1	in the second se	y.	6	PCF	FAMILY OF CURVES IDENTIFICATION	&	
N. DRY DENSITY = $\left(\frac{M}{100 + E}\right) \times 100$	0	9	,U	PCF	Q. OPTIMUM MOISTURE		%
$COMPACTION = \left(\frac{N}{R}\right) \times 100 OR \left(\frac{N}{T}\right) \times 100$	9	4	θ	%	R. MAXIMUM DRY DENSITY		PCF
COMPACTION SPECIFICATION		9	U	%	A la set	/	
PROCTOR DENSITY				1		24	<u></u>
PROCTOR NUMBER					TEST OPERATOR AND DATE		
PROCTOR METHOD (A, C, D, OR 1)	T						
O. SPECIFIC GRAVITY OF RETAINED #4	•			 	RESIDENT ENGINEER, PROJECT SUPERVISOR, OR LABM	AN AND I	DAIE
P. ABSORPTION OF RETAINED #4			9	%		,	
	/	6	1	%	FOR METHOD A OR ONE POINT ONLY		
		1	<u> </u>	PCF	$S = \frac{[Q(100 - a)] + a}{[Q(100 - a)] + a}$		
CORRECTION FOR RETAINED #4 (METHOD A OR ONE-POIN S. CORRECTED OPTIMUM MOISTURE	<u>чг 0</u> ;	. /	11		100		
T. CORRECTED MAXIMUM DRY DENSITY	1	7	7 Ø	%	$T = \frac{[R(100 - a)] + [(56.2)(a)(O)]}{[(56.2)(a)(O)]}$		
	*	0	/	PCF	foo		
44-9347 R03/07							

Image: Lot or Suffix SAMPLED BY MO DAY YEAR TIME Image: Lot or Suffix SAMPLED BY MO DAY YEAR TIME Image: Sampled FROM	SE CAPITAL LETTERS		PUR- TYPE POSE	TEST LAB SIZE SIZE %
TEST NO. SUFFIX SAMPLED BY MO DAY YEAR TIME Image: Sampled FROM Image: Sampled FROM <t< td=""><td></td><td></td><td>TYPE POSE</td><td>LAB SIZE SIZE %</td></t<>			TYPE POSE	LAB SIZE SIZE %
ORIGINAL SOURCE PROJECT ENGINEER / PROJECT NUMBER TRACS N		SAMPLED BY	MO DAY YEAR	
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REMARKS Test P;t # 3	ORIGINAL SOURCE			IF MILEPOST, INPUT DECIMAL
Test P;t # 3		BEMARKS		[
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%

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PCF

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6

G

A. TOTAL WET WEIGHT OF MATERIAL FROM THE HOLE		0	4	4	LB.
B. WET WEIGHT OF MATERIAL RETAINED ON THE #4 SIEVE		1	4	9'	LB.
C. WET WEIGHT OF MATERIAL PASSING THE #4 SIEVE (A-B)			9		LB.
D. MOISTURE OF THE MATERIAL PASSING THE #4 SIEVE			ų	- 8	%
E. MOIST. CORRECTED FOR MATERIAL RETAINED ON THE #4 SIE	٧E		3	9	%
F. WEIGHT OF SAND & APPARATUS BEFORE FILLING HOLE	1	hel.	1	1	LB.
G. WEIGHT OF SAND & APPARATUS AFTER FILLING HOLE		5	8	7	LB.
H. WEIGHT OF SAND TO FILL HOLE AND CONE (F-G)		8	2	4.	LB.
1. WEIGHT OF SAND TO FILL CONE AND BASE PLATE		3	3	6	LB.
J. WEIGHT OF SAND TO FILLHOLE (H-I)		4	4	8	LB.
K. DENSITY OF SAND		8	Č	4	PCF
L. VOLUME OF HOLE $\left(\frac{J}{K}\right)$	0	5	6	5	CF
M. WET DENSITY = $\left(\frac{A}{L}\right)$	1	1	4	.0	PCF
N. DRY DENSITY = $\left(\frac{M}{100 + E}\right) \times 100$	1	0	9	7	PCF
$COMPACTION = \left(\frac{N}{R}\right) \times 100 OR \left(\frac{N}{T}\right) \times 100$		9	Ζ	5	%
COMPACTION SPECIFICATION			9	0	%
PROCTOR DENSITY					_
PROCTOR NUMBER				N	

÷

CORRECTION FOR RETAINED #4 (METHOD A OR ONE-POINT ONLY)

a. RETAINED ON #4 = $\left(\frac{B}{A}\right) X 100$ 7 ? %

IF RET. ON #4 IS MORE THAN 50% (60% IF AB), GO NO FURTHER. FOR METHOD A OR ONE POINT ONLY

 $\mathsf{E} = \frac{[D \ (100 \ - \ a \)] + a}{100}$

ONE POINT PROCTOR (ARIZ 232)

b. WEIGHT OF MOLD & SOIL			Γ	LB.
c. WEIGHT OF MOLD			<u> </u>	
	 			LB.
d. WEIGHT OF COMPACTED SOIL (b-c)		•		LB.
e. VOLUME OF MOLD				CF
f. WET DENSITY (d / e)			8	PCF
g. MOISTURE CONTENT				%
FAMILY OF CURVES IDENTIFICATION		&		
Q. OPTIMUM MOISTURE		1		%
R. MAXIMUM DRY DENSITY				PCF

R. St. 4/24

RESIDENT ENGINEER, PROJECT SUPERVISOR, OR LABMAN AND DATE

FOR METHOD A OR ONE POINT ONLY

$$S = \frac{[Q(100 - a)] + a}{100}$$
$$T = \frac{[R(100 - a)] + [(56.2)(a)(O)]}{100}$$

PROCTOR METHOD (A, C, D, OR 1)

O. SPECIFIC GRAVITY OF RETAINED #4 P. ABSORPTION OF RETAINED #4

S. CORRECTED OPTIMUM MOISTURE T. CORRECTED MAXIMUM DRY DENSITY

Q. OPTIMUM MOISTURE R. MAXIMUM DRY DENSITY

USE CAPITAL LETTERS			E PUR- POSE	LAB SIZE	SIZE %
TEST NO.	SAMPLED BY	MO	DAY YEAR		MILITARY
	PROJECT EN	GINEER /		IF MILEPOST, INPUT D	
	REM	ARKS			
Test pit #					

A. TOTAL WET WEIGHT OF MATERIAL FROM THE HOLE		6	19	4	LB.
B. WET WEIGHT OF MATERIAL RETAINED ON THE #4 SIEVE		1	./	9	LB.
C. WET WEIGHT OF MATERIAL PASSING THE #4 SIEVE (A-B)			P		LB.
D. MOISTURE OF THE MATERIAL PASSING THE #4 SIEVE			4	4	%
E. MOIST, CORRECTED FOR MATERIAL RETAINED ON THE #4 SIE	VE		3	8	%
F. WEIGHT OF SAND & APPARATUS BEFORE FILLING HOLE	1	3	8	9	LB.
G. WEIGHT OF SAND & APPARATUS AFTER FILLING HOLE	17	5	1	2	LB.
H. WEIGHT OF SAND TO FILL HOLE AND CONE (F-G)	1	8	7	7	LB.
I. WEIGHT OF SAND TO FILL CONE AND BASE PLATE		3	3	6	LB.
J. WEIGHT OF SAND TO FILLHOLE (H-I)		5	4	1	LB.
K. DENSITY OF SAND		8	6	.4	PCF
L. VOLUME OF HOLE $\left(\frac{J}{K}\right)$	0	6	2	6	CF
M. WET DENSITY = $\left(\frac{A}{L}\right)$	/	1	0	9	PCF
N. DRY DENSITY = $\left(\frac{M}{100 + E}\right) \times 100$	1/	0	6	. 8	PCF
$COMPACTION = \left(\frac{N}{R}\right) \times 100 OR \left(\frac{N}{T}\right) \times 100$		9	1	. 8	%
COMPACTION SPECIFICATION			9	0	%
PROCTOR DENSITY					
PROCTOR NUMBER	T				
PROCTOR METHOD (A, C, D, OR 1)			~~~~~		
O. SPECIFIC GRAVITY OF RETAINED #4		•			
P. ABSORPTION OF RETAINED #4	1		ļ .		%
Q. OPTIMUM MOISTURE		7	6	9	%
R. MAXIMUM DRY DENSITY	1	0	9	6	PCF
CORRECTION FOR RETAINED #4 (METHOD A OR ONE	-POI	NT C	NLY	n 1	•
S. CORRECTED OPTIMUM MOISTURE		1	4	2	%
T. CORRECTED MAXIMUM DRY DENSITY	ĺ	1	6	. 7	PCF

a. RETAINED ON #4 = $\left(\frac{B}{A}\right) \times 100$

IF RET. ON #4 IS MORE THAN 50% (60% IF AB), GO NO FURTHER.

FOR METHOD A OR ONE POINT ONLY

%

 $\mathsf{E} = \frac{[D \ (100 \ - \ a \)] + a}{100}$

ONE POINT PROCTOR (ARIZ 232)

b. WEIGHT OF MOLD & SOIL		LB.
c. WEIGHT OF MOLD		LB.
d. WEIGHT OF COMPACTED SOIL (b-c)		LB.
e. VOLUME OF MOLD		CF
f. WET DENSITY (d / e)		PCF
g. MOISTURE CONTENT		%
FAMILY OF CURVES IDENTIFICATION	&	
Q. OPTIMUM MOISTURE		%
R. MAXIMUM DRY DENSITY		PCF

4/24 -1 TEST OPERATOR AND DATE

RESIDENT ENGINEER, PROJECT SUPERVISOR, OR LABMAN AND DATE

FOR METHOD A OR ONE POINT ONLY

S = [Q(100 - a)] + a100 $T = \frac{[R(100 - a)] + [(56.2)(a)(O)]}{[(56.2)(a)(O)]}$ 100

APPENDIX F

Asbestos and Lead Paint Assessment Reports

HR

November 5, 2008

Mr. Ted Buell, PE HDR Engineering, Inc. 5210 E. Williams Circle, Suite 530 Tucson, AZ 85711

Re: Asbestos Sampling Assessment Report North La Cholla Boulevard, Between River Road and West Ruthrauff Road Pima County, AZ

Dear Mr. Buell:

HDR Engineering, Inc. (HDR) is pleased to provide you with this report of findings for the asbestos sampling effort for concrete culverts, drainage and bridge along North La Cholla Boulevard located between River Road and West Ruthrauff Road, in unincorporated Pima County, Arizona. The proposed project involves roadway widening. The intent of this sampling effort was to determine whether asbestos exists in the concrete material or other construction elements. The following sections present the project background, methodology, findings, and conclusions regarding asbestos content of the subject features.

BACKGROUND INFORMATION

Asbestos is a naturally-occurring mineral that has been used in thousands of construction applications for centuries. Asbestos possesses certain physical properties that make it an advantageous construction material. These properties include resistance to heat, fire, and chemical reaction, and plaster. Although rarely used in concrete mixtures, asbestos has been used as a binder in concrete, and will become friable (potential for airborne dispersion) when the concrete is disturbed or broken. Asbestos, for all its usefulness as a construction material, is also a human carcinogen and is heavily regulated to protect human health. For this reason, the Pima County Department of Transportation (PCDOT) collects and analyzes samples of concrete that are slated for disturbance during demolition or reconstruction of roadway sections. The results of the sample analysis are used to help PCDOT make decisions about how to handle and dispose of asbestos-containing disturbed concrete materials if they contain asbestos.

HDR Engineering, Inc.

3200 East Camelback Road Suite 350 Phoenix, AZ 85018-2311 Phone: (602) 522-7700 Fax: (602) 522-7707 www.hdrinc.com

METHODOLOGY

On June 23, 2008, HDR mobilized to the area, to collect samples of concrete. One sample from each of the concrete features was collected (total of 15 samples). Concrete samples were collected by striking the concrete with a precleaned steel hammer and collecting at least 0.5 ounce of the concrete material into a dedicated plastic bag for submittal to the laboratory. All samples were collected in accordance with HDR's approved chain-of-custody procedures, and the procedures required by the analytical laboratory for correct collection and preservation of these types of samples.

The samples were analyzed using Polarized Light Microscopy by a qualified analyst at EMC Analytical Services (EMC) in Phoenix. Samples were analyzed by Polarized Light Microscopy. Specific procedures used for sample analysis are included with the analytical report provided by EMC. Laboratory results are included in Appendix A.

FINDINGS

As indicated by the laboratory report included as Appendix A, no asbestos was detected in any of the samples collected.

CONCLUSIONS

Based upon the analytical results from the collected samples, none of the concrete materials sampled contains asbestos.

HDR appreciates the opportunity to serve PCDOT and the design team on this important project. If you have any questions or comments, please feel free to contact us at (602) 522-7700.

Sincerely,

HDR ENGINEERING, INC.

Joel P/Hennings Hazardous Materials Specialist

Kelly W. Kading CPG CHMM Sr. Professional Associate, **Project Manager**

JH/KWK

Appendix:

(A) Analytical Report (EMC Analytical Services) Distribution: (1) Christine Donaghue-Jacobs, Environmental Planner, HDR Tucson

(3) Addressee

HDR Engineering, Inc.

APPENDIX A ANALYTICAL REPORTS

EMC LABS, INC.

Laboratory Report 0065905

9830 S. 51st Street, Suite B109, Phoenix, AZ 85044 Phone: 800-362-3373 or 480-940-5294 - Fax: (480) 893-1726

Bulk Asbestos Analysis by Polarized Light Microscopy

NVLAP#101926-0

Client:			Job# / P.			-59914-07	
Address:		MELBACK RD, STE 350	Date Rec		06/26/20		
	PHOENIX A	AZ 85018	Date Analyzed: 06/26/2		06/26/20		
Collected:	06/23/2008		Date Rep		06/26/20		
Project Name/	LA CHOLL	A BLVD	EPA Me	thod:		/M4-82-020	
Address:			Submitte	ed By:	JOEL HE	ENNINGS	
			Collected	d By:	Custome	r	
Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos (%)		Non-Asbestos Constituents	
0065905-001		Concrete, Beige/ Gray/ Tan	No			Cellulose Fiber	<1%
LAC-1-SWC- RILLITORUR						Gypsum Carbonates Mica Quartz Binder/Filler	99%
0065905-002		Concrete, Beige/ Gray/ Tan	No				
LAC-1-NWC- RILLITORUR						Gypsum Carbonates Mica Quartz Binder/Filler	100%
0065905-003		Concrete, Beige/ Gray/ Tan	No			Cellulose Fiber	<1%
LAC-2-NWC- CURTIS						Gypsum Carbonates Mica Quartz Binder/Filler	99%
0065905-004		Concrete, Beige/ Gray/ Tan	No				
LAC-3-SWC- CURTIS						Gypsum Carbonates Mica Quartz Binder/Filler	100%
0065905-005		Concrete, Beige/ Gray/ Tan	No				
LAC-4-GRATE- W						Gypsum Perlite Mica Quartz Binder/Filler	100%
0065905-006		Concrete, Beige/ Gray/ Tan	No				
LAC-5-GRATE- E						Gypsum Carbonates Mica Quartz Dia der(Tiller	100%
LAC-5-GRATE-		Concrete, Beige/ Gray/ Tan	No			Carbonates Mica	

EMC LABS, INC.

Laboratory Report 0065905

9830 S. 51st Street, Suite B109, Phoenix, AZ 85044 Phone: 800-362-3373 or 480-940-5294 - Fax: (480) 893-1726

Bulk Asbestos Analysis by Polarized Light Microscopy

NVLAP#101926-0

Client: Address:	HDR, INC. 3200 E. CAMELBACK RD, STE 350		Job# / P. Date Rec		047-599 06/26/20	59914-07 5/2008		
	PHOENIX A		Date Ana		06/26/20			
Collected:	06/23/2008		Date Rep	-	06/26/20			
Project Name/		A BLVD	EPA Me			/M4-82-020		
Address:			Submitte			ENNINGS		
			Collected	•	Custome			
Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos (%)	Гуре	Non-Asbestos Constituents		
0065905-007		Concrete, Beige/ Gray/ Tan	No			Cellulose Fiber	<1%	
LAC-6-GRATE- SEC						Gypsum Carbonates Mica Quartz Binder/Filler	99%	
0065905-008 LAC-7-SEC- JAYAVE		Concrete, Beige/ Gray/ Tan	No			Gypsum Carbonates Mica Quartz Binder/Filler	100%	
0065905-009 LAC-8-SEC-		Concrete, Beige/ Gray/ Tan	No					
NOREEN						Gypsum Carbonates Mica Quartz Binder/Filler	100%	
0065905-010		Concrete, Beige/ Gray/ Tan	No					
LAC-9-NEC- RUTH						Gypsum Carbonates Mica Quartz Binder/Filler	100%	
0065905-011 LAC-10-SEC- RUTH		Concrete, Beige/ Gray/ Tan	No			Gypsum Carbonates Mice		
						Mica Quartz Binder/Filler	100%	
0065905-012		Concrete, Beige/ Gray/ Tan	No			Cellulose Fiber	<1%	
LAC-11-SEC- RUTH						Gypsum Carbonates Mica Quartz		
						Binder/Filler	99%	

EMC LABS, INC.

Laboratory Report 0065905

9830 S. 51st Street, Suite B109, Phoenix, AZ 85044 Phone: 800-362-3373 or 480-940-5294 - Fax: (480) 893-1726

Bulk Asbestos Analysis by Polarized Light Microscopy

NVLAP#101926-0

Client:	HDR, INC.		Job# / P.	.O. #:	047-59914-07	
Address:	3200 E. CAN	MELBACK RD, STE 350	Date Received: 06/2		06/26/2008	
	PHOENIX A	AZ 85018	Date Ana	alyzed:	06/26/2008	
Collected:	06/23/2008		Date Reported: 06/26/2		06/26/2008	
Project Name/	LA CHOLL	A BLVD	EPA Me	ethod:	EPA 600/M4-82-020	
Address:			Submitte	ed By:	JOEL HENNINGS	
			Collected	d By:	Customer	
Lab ID Client ID	Sample Location	Layer Name / Sample Description	Asbestos Detected	Asbestos Ty (%)	pe Non-Asbestos Constituents	
0065905-013		Concrete, Beige/ Gray/ Tan	No			
LAC-BRIDGE- RAIL					Gypsum Perlite Mica	
					Quartz Binder/Filler	100%
0065905-014		Concrete, Beige/ Gray/ Tan	No		Cellulose Fiber	<1%
LAC-BRIDGE- BEAM					Gypsum Carbonates Mica	
					Quartz Binder/Filler	99%
0065905-015		Concrete, Beige/ Gray/ Tan	No		Cellulose Fiber	<1%
LAC-BRIDGE- SUPPORT					Gypsum Carbonates Mica	
					Quartz Binder/Filler	99%
				0	^	

Abut

Analyst - Paul Hofer

Signatory - Lab Director - Kurt Kettler

Distinctly stratified, easily separable layers of samples are analyzed as subsamples of the whole and are reported separately for each discernable layer. All analyses are derived from calibrated visual estimate and measured in weight percent unless otherwise noted. The report applies to the standards or procedures identified and to the sample(s) tested. The test results are not necessarily indicated or representative of the qualities of the lot from which the sample was taken or of apparently identical or similar products, nor do they represent an ongoing quality assurance program unless so noted. These reports are for the exclusive use of the addressed client and that they will not be reproduced wholly or in part for adversing or other purposes over our signature or in connection with our name without special written permission. The report shall not be reproduced except in full, without written approval by our laboratory. The samples not destroyed in testing are retained a maximum of thirty days. The laboratory measurement of uncertainty for the test method is approximately <1% by weight. Accredited by the National Institute of Standards and Technology, Voluntary Laboratory Accreditation Program for selected test method for asbestos. The accreditation approval, or endorsement by the National Institute of Standards or endorsement by the National Institute of Standards or endorsement by the National Institute of Standards and Technology. Voluntary Laboratory Accreditation Program for selected test method for asbestos. The accreditation approval, or endorsement by NVLAP or any agency of the U.S. Government. Polarized Light Microscopy may not be consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials.

HDR

November 5, 2008

Mr. Ted Buell, PE HDR Engineering, Inc. 5210 E. Williams Circle, Suite 530 Tucson, AZ 85711

Re: Investigation Results – Rillito Bridge Paint Sampling Investigation North La Cholla Boulevard Unincorporated Pima County, AZ

Dear Mr. Buell:

HDR Engineering, Inc. (HDR) is pleased to present the results of this Paint Sampling Investigation (PSSI) for the above-referenced project. The project included collection of paint chip samples from undisturbed bridge paint on the beams of the Rillito river bridge (gray paint), as well as paint on walkway railings (brown paint) below the bridge. The paint chip samples were then analyzed by a fixed-base laboratory. This letter presents the results of that analysis.

BACKGROUND

HDR mobilized to the project site on June 23, 2008 to collect paint chip samples. The project includes widening of North La Cholla Boulevard between River Road and Ruthrauff Road.

SAMPLING METHODOLOGY

HDR collected paint chip samples of two types of paint. The paint types were both single layers, and included gray paint from the bridge members and brown paint from the walkway railing.

A section of paint adequate for laboratory analytical needs (minimum 2 grams) was collected, using a decontaminated steel chisel driven by a hammer. In all cases, the paint was removed in large flakes (1/4 inch to 2 inches long, of irregular shape). The paint chips were immediately placed into dedicated containers using a clean, latex-gloved hand with new gloves applied between each sampling point to avoid cross-contamination. The samples were transported under chain-of-custody procedures to a fixed-base laboratory for analysis. No holding time limitations or sample preservation protocols were required for the selected analytical method.

Phone: (602) 522-7700 Fax: (602) 522-7707 www.hdrinc.com

LABORATORY ANALYTICAL PROGRAM

HDR submitted the samples to a fixed-base laboratory (EMC Labs, Inc.) for analysis. The analytical program included analysis of samples by EPA Test Method SW-846 7420, Lead by Flame Atomic Absorption. EMC has provided HDR with a QA / QC program manual for their process, and this document is available for review at either HDR or EMC.

RESULTS

The laboratory results are reported in the following paragraphs, and are summarized in Table 1. The regulatory references cited include the following: for paint in place, United States Housing and Urban Development (HUD) *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing*, 1997; for waste disposal of removed paint materials, *Management and Disposal of Lead-Based Paint Debris*, *Proposed Rule*, 40 CFR Part 745 and 40 CFR Part 260. HUD levels are applied, because they are the only regulatory references that apply to screening level paint concentrations.

Regulatory Reference	Action Level	Table 1					
Disposal	5	Analytical Results Analyzed By EPA Method 7420 Lead:					
HUD	5000		Units in mg/kg (ppm)				
Sample ID	Results	Color of Paint	Location of Sample				
LAC-Bridge-E	514	Gray	East side of bridge				
LAC-Bridge-W	272	Gray	West side of bridge				
LAC-Rail-E	632	Brown	East rail				
LAC-Rail-W	1060	Brown	West rail				

RCRA Toxicity Characteristic Leachate Procedure (TCLP) Disposal Limits 40 CFR Part 745 and 40 CFR Part 260, 1999

EPA HUD Standard, Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing, 1997 BRL – Below Reporting Limits as defined in the laboratory report

CONCLUSION

The paint chip results indicated that both the gray and brown paint is lead containing. The levels measured in the gray and brown paint are below the HUD action level for paint. However, the results of the analysis are specific to paint in place, and when aggregated for disposal, lead concentrations may be higher. In order to determine whether the paint waste stream would require special handling, the waste stream would need to be sampled following paint removal and laboratory analyzed for TCLP parameters.

Page 3

HDR appreciates the opportunity to serve PCDOT on this important project. If you have any questions regarding the content of this report, please do not hesitate to call us at HDR's Phoenix office (602-522-7700).

Cordially,

HDR ENGINEERING, INC.

Joel Hennings

Hazardous Materials Specialist

Enclosures:

Kelly W. Kading CPG CHMM Sr. Professional Associate, **Project Manager**

Appendix A - Laboratory Report

APPENDIX A

LABORATORY REPORT



9830 South 51st Street, Suite B-109 / PHOENIX, ARIZONA 85044 / 480-940-5294 or 800-362-3373 / FAX 480-893-1726 emclab@emclabs.com

LEAD (Pb) IN PAINT CHIP SAMPLES

EMC SOP METHOD #L01/1 EPA SW-846 METHOD 7420

EMC LAB	#: L:	33983		DATE RECEIVED:		06/26/08	
CLIENT:	Н	HDR Inc.		REPORT DATE:		06/26/08	
				DATE OF ANALYSIS:		06/26/08	
CLIENT A		S: 3200 E. Camelback Road Ste. 350 P.O. NO.:					
	Pl	hoenix, AZ 85018					
PROJECT	PROJECT NAME: La Cholla Blvd.			PROJECT NO.:	JECT NO.: 047-59914-07		
EMC # L33983-	SAMPLE DATE /08	CLIENT SAMPLE #	DESCRIPT	TON	REPORTING LIMIT IN PPM	Pb IN PPM	
1	06/23	LAC-Bridge-E	Lead Paint		100	514	
2	06/23	LAC-Bridge-W	Lead Paint		100	272	
3	06/23	LAC-Rail-E	Lead Paint		100	632#	
4	06/23	LAC-Rail-W	Lead Paint		100	1060#	

^ = Dilution Factor Changed

Ins. = Insufficient Sample for Analysis * = Excessive Substrate May Bias Sample Results # = Very Small Amount Of Sample Submitted, May Affect Result BRL = Below Reportable Limits

This report applies to the standards or procedures identified and to the samples tested only. The test results are not necessarily indicative or representative of the qualities of the lot from which the sample was taken or of apparently identical or similar products, nor do they represent an ongoing quality assurance program unless so noted.

Where it is noted that a sample with excessive substrate was submitted for laboratory analysis, such analysis may be biased. The lead content of such sample may, in actuality, be greater than reported. EMC makes no warranty, express or implied, as to the accuracy of the analysis of samples noted to have been submitted with excessive substrate. Resampling is recommended in such situations to verify original laboratory results.

These reports are for the exclusive use of the addressed client and are rendered upon the condition that they will not be reproduced wholly or in part for advertising or other purposes over our signature or in connection with our name without special written permission. Samples not destroyed in testing are retained a maximum of sixty (60) days.

ANALYST:

Jason Thompson

QA COORDINATOR:

Leat

Kurt Kettler

Page 1 of 1





Appendix H

New Right-of-Way and Temporary Construction Easements



Table H-1. New Right-of-Way

Parcel	Location	Ownership	Acreage
101-13-015K	5340 N. La Cholla Blvd.	Unisource Energy Corp	0.19
101-13-015M	West side of La Cholla, north of Curtis Road	Pima County Regional Flood Control District	0.02
101-13-016C	2110 W. Curtis Road	Pima County	0.22
101-16-117A	5195 N. La Cholla Blvd.	La Cholla/Curtis Limited Partnership	0.01
		Total	0.44

Parcel	Location	Acreage	Ownership	
101-16-0280	4901 N. La Cholla Blvd.	0.02	Metz Wayne & Norma E JT/RS	
101-16-0290	4911 N. La Cholla Blvd.	0.02	Franzen Norma D Jr & Charlene L CP/RS	
101-16-0300	4921 N. La Cholla Blvd.	0.02	Goona Roberto V & Eva D JT/RS	
101-16-0310	4931 N. La Cholla Blvd.	0.02	Nunez Alfonso G & Rosa E JT/RS	
101-16-0320	4941 N. La Cholla Blvd.	0.02	Jones Marsha June	
101-16-033A	4961 N. La Cholla Blvd.	0.02	Horn Marvin D & Arlene I JT/RS	
101-16-034A	4973 N. La Cholla Blvd.	0.02	Garcia Evardo	
101-16-034C	4967 N. La Cholla Blvd.	0.02	Erickson William J	
101-16-035A	4891 N. La Cholla Blvd.	0.02	Coury Edward M	
101-16-104E	2140 W Ruthrauff Rd.	0.02	Sandlian Colby B TR	
101-16-104F	West side of La Cholla Blvd., north of Ruthrauff Rd.	0.04	Lewis Eugene R & Mary M JT/RS	
101-16-116E	5030 N. La Cholla Blvd.	0.01	La Cholla/Curtis Limited Partnership	
101-16-122C	4955 N. La Cholla Blvd.	0.02	Stewart Title & Trust 3465	
101-16-122D	4951 N. La Cholla Blvd.	0.01	City of Tucson Well Site	
103-05-012G	East side of La Cholla Blvd., south of Ruthrauff Rd.	0.01	Flowing Wells School District No. 8	
103-05-012H	4701 N. La Cholla Blvd.	0.03	Flowing Wells Fire District	
103-05-012J	2175 W. Ruthrauff Rd.	0.05	Wal-mart Stores Inc.	
104-01-099K	5150 N. La Cholla Blvd.	0.01	Sixteenth Street LLC	
104-01-099P	5140 N. La Cholla Blvd.	0.02	Nita Ruth's LLC	
104-01-099Q	5100 N. La Cholla Blvd.	0.01	Smith Anne R	
104-01-099R 104-01-099E	5180 N. La Cholla Blvd. 5184 N. La Cholla Blvd.	0.02	Bowman J Sean	
104-01-099S	5170 N. La Cholla Blvd.	0.02	Bowman Lisa	
104-01-100A	5050 N. La Cholla Blvd.	0.02	Hallquist Wayne & Margaret TR	
104-01-379C	5310 N. La Cholla Blvd.	0.05	River Crossing Medical LLC	
104-01-379E	5330 N. La Cholla Blvd.	0.18	M & O Agencies Inc.	
104-01-379L	5260 N. La Cholla Blvd.	0.22	Stuart Title & Trust TR	
104-04-005E	2075 W. Ruthrauff Rd.	0.10	La Cholla/Ruthrauff LLC	
104-04-005G	4750 N. La Cholla Blvd.	0.03	GG LLC	
104-04-005J	4740 N. La Cholla Blvd.	0.01	Delcor LLC	
104-04-005K	2015 W. Ruthrauff Rd.	0.03	Ochoa John & Gretchen CP/RS	
104-04-005L	2025 W. Ruthrauff Rd.	0.05	Northwest Plaza-RP LLC	

 Table H-2.
 Temporary Construction Easements

Parcel	Location	Acreage	Ownership	
104-12-0010	2080 W. Ruthrauff Rd.	0.13	Circle K Stores Inc.	
104-12-002A	2091 W. Noreen St.	0.02	Schweska Stephen	
104-12-003A	2060 W. Ruthrauff Rd.	0.02	Clark Elbert H	
104-12-004B	2040 W. Ruthrauff Rd.	0.02	LIB Enterprises LLC	
104-12-005B	2020 W. Ruthrauff Rd.	0.01	Fulton Charles V & Myrtle I JT/RS	
104-12-0460	4950 N. La Cholla Blvd.	0.03	Price Robert W & Mehnick Elaine L JT/RS	
104-12-0470	4940 N. La Cholla Blvd.	0.02	Recer James A	
104-12-0480	4932 N. La Cholla Blvd.	0.02	Calhoon Dorrine Roy	
104-12-0490	4924 N. La Cholla Blvd.	0.02	Taia David L	
104-12-0500	4916 N. La Cholla Blvd.	0.02	Rodriguez Caldina C & Rodriguez F Anne JT/RS	
104-12-0510	4908 N. La Cholla Blvd.	0.02	Harvey O J & Lois W T/RS	
104-12-0520	4900 N. La Cholla Blvd.	0.02	Neely Robert I Bruce	
104-12-0530	4854 N. La Cholla Blvd.	0.02	Schweska Sieve	
104-12-0540	4846 N. La Cholla Blvd.	0.02	Schweska Stephen	
104-12-0550	4838 N. La Cholla Blvd.	0.02	Star Gary D. Trust	
104-12-0560	4830 N. La Cholla Blvd.	0.02	Jade Properties	
104-16-104B	2100 W. Ruthrauff Rd.	0.07	Ruthrauff Holdings LLC	
	Total	1.64		

 Table H-2.
 Temporary Construction Easements (continued)





Appendix I

Public Art Enhancement Design Concept



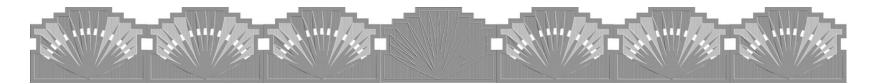
LA CHOLLA BOULEVARD, RIVER ROAD TO RUTHRAUFF ROAD PUBLIC ART ENHANCEMENT

for PIMA COUNTY DEPARTMENT OF TRANSPORTATION June 9, 2008



© Vicki Scuri SiteWorks

EXECUTIVE SUMMARY



•This proposal provides an artist's conception for enhancement of the Rillito River Wash Bridge on La Cholla Boulevard, at River Road. This art transforms the bridge into a community landmark and identifies the bridge with the Rillito River Wash.

•The artistic concept is derived from local architectural features, plant forms, and geography from the immediate area. The stair-stepping shapes found on local buildings, paired with the agave form, create a wave motion. This augments the current wave theme found on related projects along the corridor, providing continuity. The agave is viewed as a symbol of the natural environment and human intervention in the environment.

•Balconies are located to provide viewing platforms over the river wash. From these balconies, the public enjoys views of the river, framed by the infrastructure. Concrete panels are windowed to provide frame, light and drama, making restricted views special, and open views all the more dramatic and appreciated.

•For the driver, the concrete panels signal the landmark, by providing opacity and verticality, opening to the view. Between balconies, the panels are transparent mesh, and the driver is able to enjoy the spectacle in full.

•The bridge will be celebrated as a symbol of community connectivity. It highlights the importance of community and the precious resource below, the Rillito River Wash.

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THE SITE / SYMBOLISM

The Rillito River Wash is a destination, providing open space for recreation and relaxation. It is an important community resource and symbol of the community. The new bridge crossing the wash provides an opportunity for a landmark structure celebrating this community and the river.







THE SITE / EXISTING CONDTIONS

The current crossing is functional only. It does not celebrate the river or its community. Unobtrusive, the bridge is barely differentiated from the roadway. For the passerby who knows the area, the river is a local landmark. For the passerby who does not know the area, the river crossing is barely noticeable along La Cholla Boulevard.









INFRASTRUCTURE AS PUBLIC ART

An excellent example of infrastructure as public art (by Barbara Grygutis) is the Alvernon Bridge. Sensitivity to form, color, transparency and lighting are expressed in the railing with episodic geometric ornaments that make the experience of traveling this bridge special. Attention to detail and form are expressed in the clean lines of piers, pier caps, railings and walkways.









INFRASTRUCTURE AS PUBLIC ART

Other examples of infrastructure as public art (by artist Vicki Scuri) are the D Street Bridge (left) in Tacoma, WA and the Interurban Trail Bridges in Shoreline, WA (right). These bridges each reflect their local communities and their sites. The D Street Bridge carries a sails-to-rails theme, as it is located over the Union Pacific Tracks on the Foss Waterway. The Interurban Trail Bridge expresses Shoreline's proximity to the Puget Sound and the Interurban Rail Trolley Line that once occupied this site.









VERNACULAR ARCHITECTURE: INFLUENCES

Mountain tops and Southwestern architectural facades contribute to the overall character and ambiance of Tucson. These vernacular architectural facades with their geometric shapes and bold colors provide contrast to the sky and mountains providing inspiration for our project.









FUNCTIONAL ART INFLUENCES

The abundance of functional, decorative arts reflect the rich cultural heritage of Tucson residents. Bright colors, bold forms and intricate pattern work are noticeable in everyday objects and environments. These grace notes transform "the everyday" into artful expressions of spirit.









PLANT FORM INFLUENCES

The varied sculptural forms of local cacti provide an extensive palette of shapes and textures that can be manipulated to create landscape patterning. The manipulation of natural forms into geometric configurations expresses human nature's intrinsic need to shape and control nature, not unlike the building of roads and bridges. The integration of natural forms and structures creates counterpoint and it is complementary.







LANDSCAPE INTEGRATION

The integration of landscape and infrastructure is extremely important. The examples illustrated below demonstrate environments that are appealing and naturalistic while being highly designed roadway projects. This too is the deliberate control of nature in order to benefit human nature. The balance achieved between design expression and the manipulation of natural forms is key to creating livable, attractive, and sustainable environments.





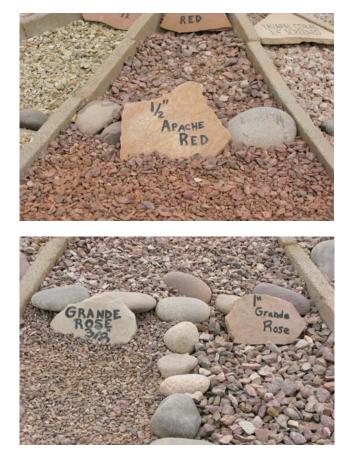




LOCAL ROCK RESOURCES: COLOR

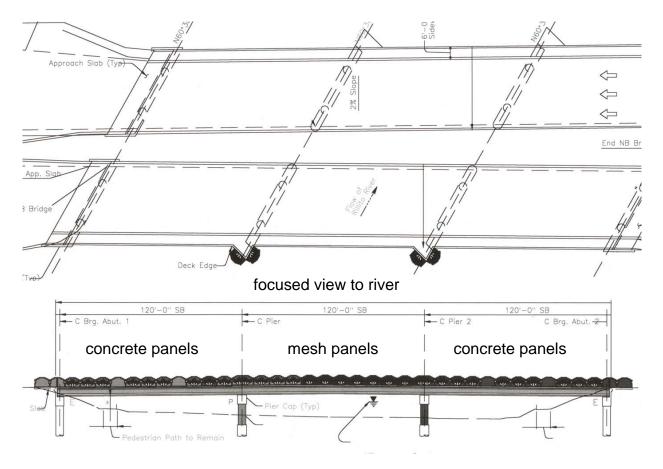
The variety of colors and sizes provides a material palette that can be used to create impervious surfaces that are striking and beautiful, particularly adaptable to highway medians. Also, these colors may be appropriate for the bridge infrastructure. These stones are on display at Pioneer Landscaping Materials, Inc. in Tucson, AZ.





OVERALL VIEW: PLAN & ELEVATION

The primary focus of this report is on the bridge. The overall plan view illustrates the addition of four balconies, to provide overlooks to the river wash. A primary visual statement is the perimeter pedestrian railing. The perimeter railing is divided into three parts, corresponding with the piers. Between Abutment 1 and Pier 1, Abutment 2 and Pier 2, the perimeter railing is comprised of concrete panels. Between Pier 1 and Pier 2, the perimeter railing is comprised of mesh panels, providing a focused view to the river.



PATTERN PAGE / CONSIDERATIONS

Illustrated below are a sampling of pattern ideas that were developed for this project. The forms and shapes are inspired by Tucson vernacular architecture and local plant forms, in particular the agave. All of the wall pattern concepts feature windowing.

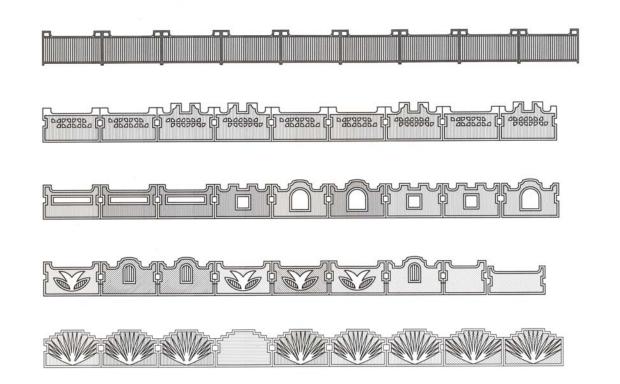
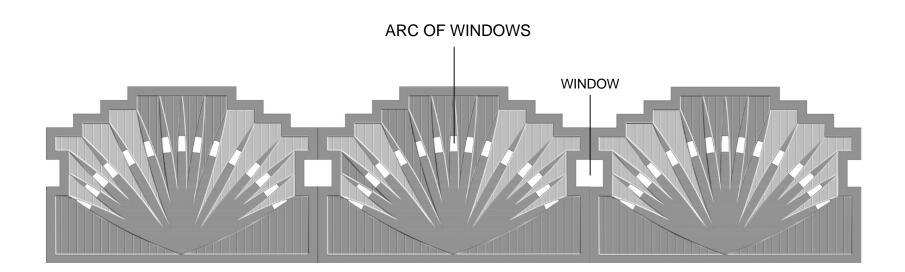


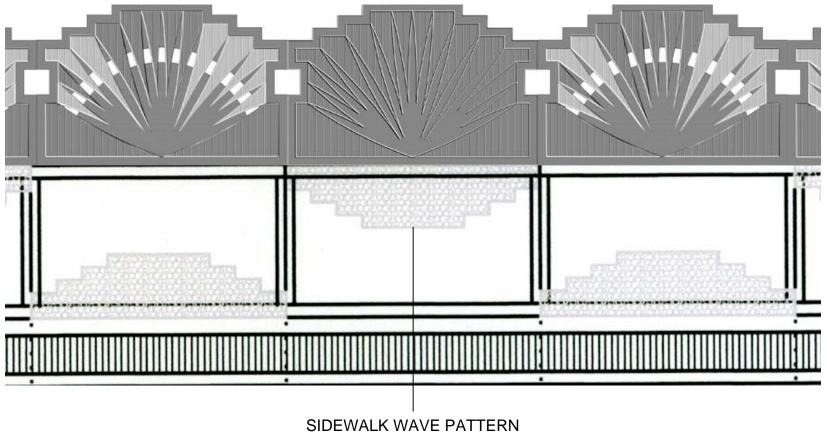
IMAGE DEVELOPMENT / WINDOWS

Capturing light and capturing the view are key elements of this work. Below, the agave wall panels feature windows that glimpse to the view, providing frame and a quality of making the view special; emphasizing its presence. The variation in value is achieved by sandblasting.



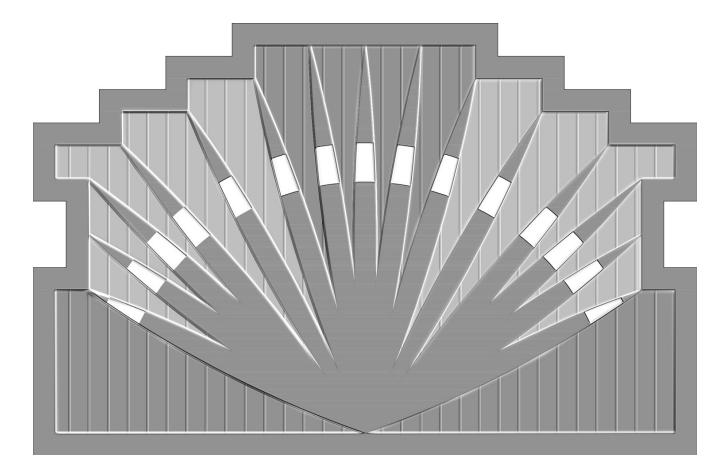
AGAVE BRIDGE PATTERN CONCEPT: concrete

The agave window-panel concept is preferred. The panels are 8.5' wide by 5.5' tall, formed in concrete with a generic 2" wave repeat form liner and an agave shaped block-out, held within a 2" relief frame. Between panels there are small, keyed, rectangular windows. An arc of "peek-a-boo" windows perforate the form and provide cadence with glimpses of the river.



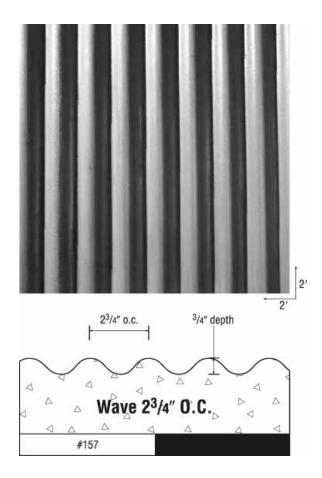
TYPICAL WINDOW PANEL

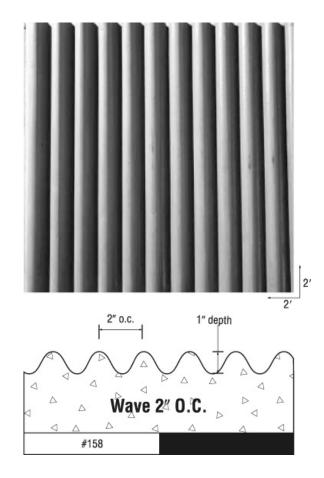
The panels are perforated to emit light and view. The variation in hue represents a heavy sandblast finish, lighter hue. Pattern relief is 2-inches maximum. Both sides of the panel are patterned.



FORM LINER / WAVE PATTERN

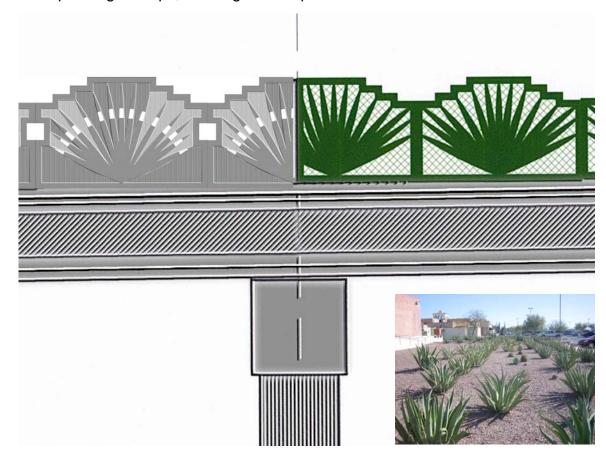
The wave pattern is a generic liner that is fabricated by many manufacturers of form liners. It is the proposed background texture for the concrete panels. Texture #158 is featured in the D Street Bridge Project for Tacoma, WA. These specific textures are manufactured by Scott System Inc.





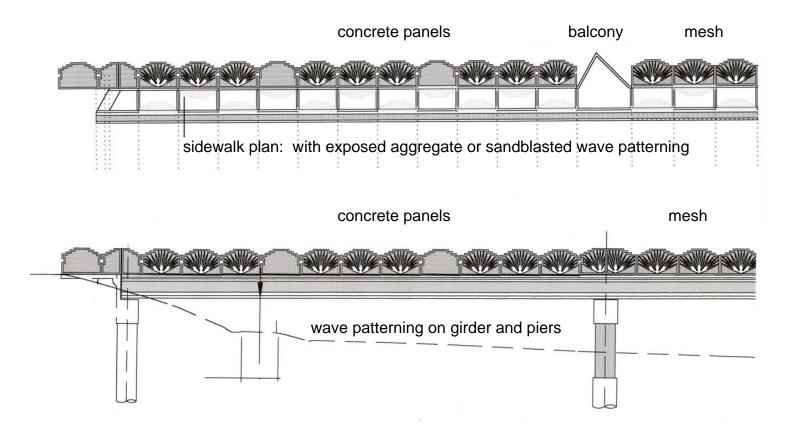
AGAVE BRIDGE PATTERN CONCEPT DEVELOPMENT

At the pier balconies the panel concept transitions from concrete to mesh. The form remains the same but the opacity of concrete (with peek-a-boo windows) is replaced with the transparency of mesh, focusing one's view to the river. This deliberate change of materials heightens one's sense of journey and vista. The agave form is repeated in stencil cut metal attached to bars or mesh for the screen panels. The form and plant choice are inspired by Tucson vernacular architecture and the marriage of form with the agave: points corresponding to steps, creating a wave pattern that reflects the Rillito River Wash.



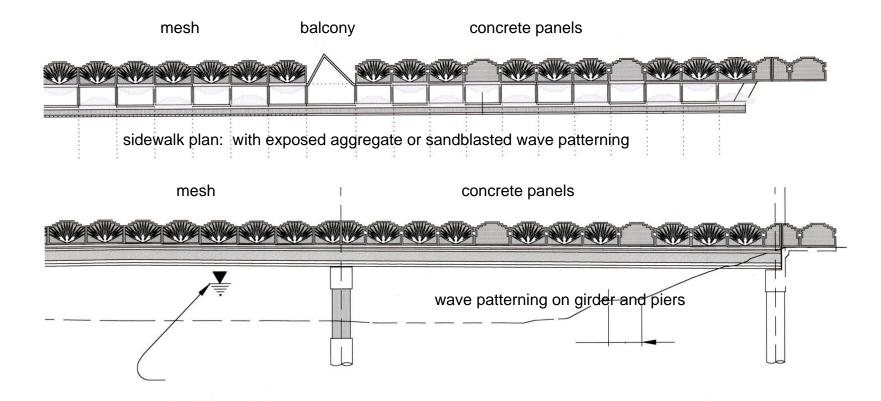
AGAVE BRIDGE PLAN & ELEVATION

This composite view (above image) illustrates the overall pattern concept. The perimeter fence and barrier wall are shown in elevation. The sidewalk is shown in plan view. Below, a partial bridge elevation is illustrated.



AGAVE BRIDGE PLAN & ELEVATION

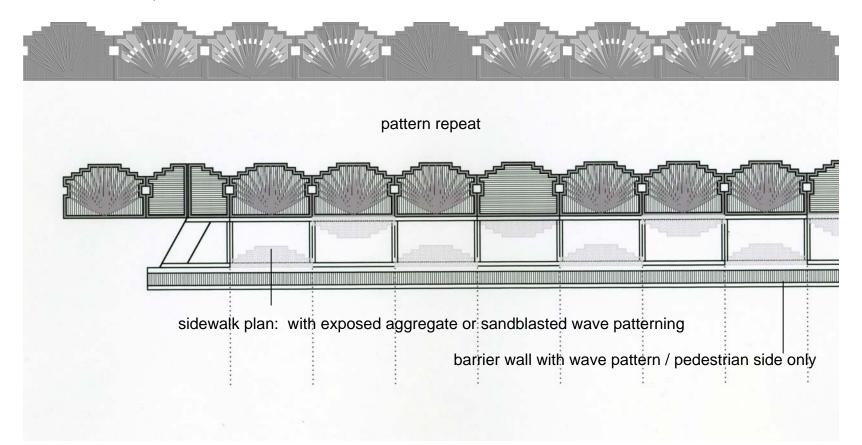
This composite view (above image) illustrates the overall pattern concept. The perimeter fence and barrier wall are shown in elevation. The sidewalk is shown in plan view. Below, a partial bridge elevation is illustrated. (continuation of plan and elevation from previous page)



PATTERN LAYOUT: FENCING, SIDEWALK, BARRIER RAIL

Developed concrete panels with windowing, above. Close-up view of pattern layout, below.

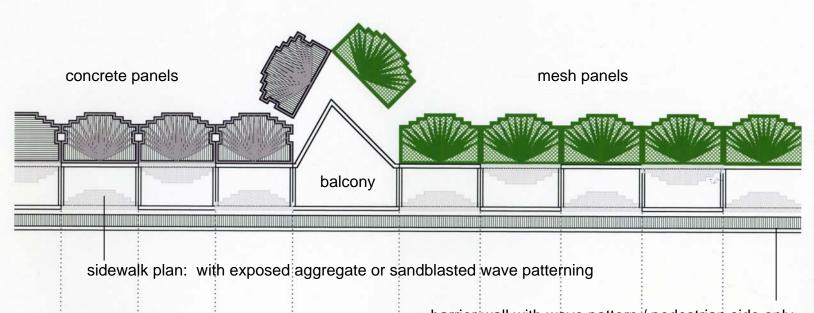
panels with arcs of windows



PATTERN LAYOUT: FENCING, SIDEWALK, BARRIER RAIL

Developed concrete panels with windowing, above. Close-up view of pattern layout, below.

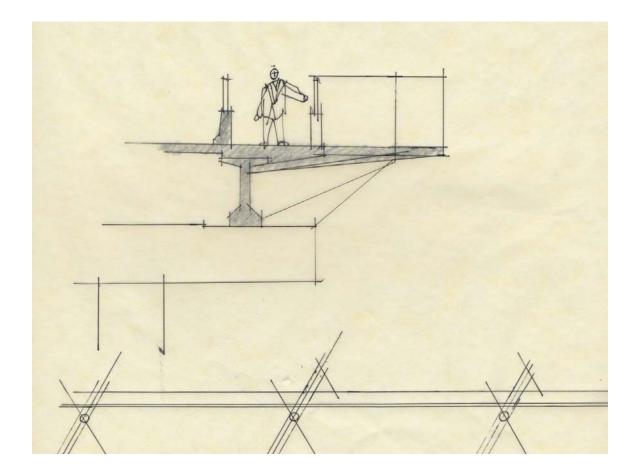


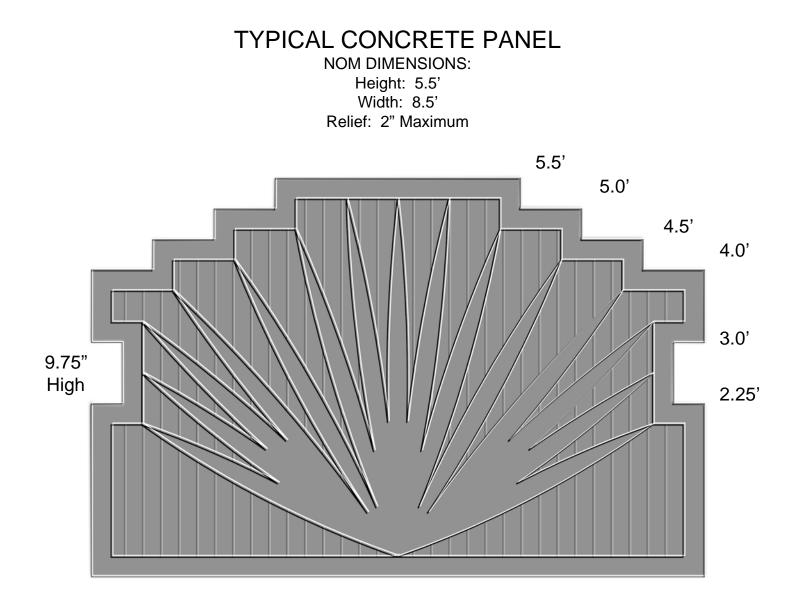


barrier wall with wave pattern / pedestrian side only

BALCONY CONCEPT SKETCH

The balcony projects out approximately 8', proving an overlook to the Rillito River.





TYPICAL WINDOWED CONCRETE PANEL NOM DIMENSIONS: Height: 5.5' Width: 8.5' Relief: 2" Maximum Widows: Screening TBD

