

UTILITY AND RAILROAD ENGINEERING (URR)

Railway-Highway Crossings Program (Section 130)

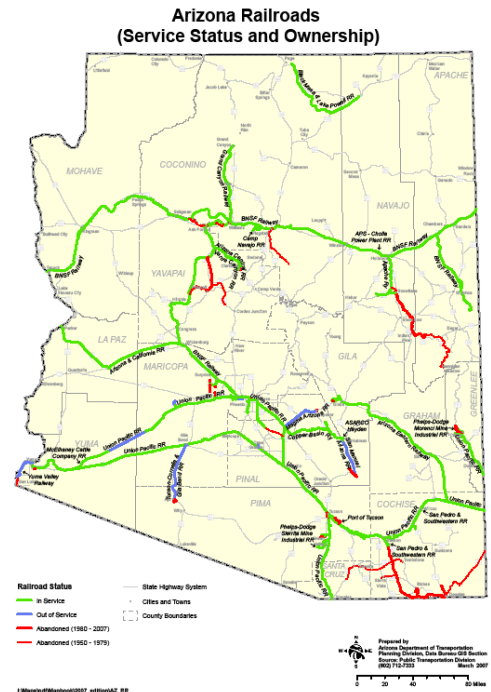
Mohamed Ali Noun, PE
Statewide Utility Engineer



Railroad

URR handles 3 primary RR functions:

1. Liaison between ADOT and the Railroads
2. Railway Highway Crossings Program (Sec 130)
3. Statewide RR Crossing Inventory



Railroad

- 2 Major Railroads and 10 short-line railroads in Arizona, including Passenger/ Tourist Railroads
- Railroad operations governed by Federal Railroad Administration (FRA) and Arizona Corporation Commission (ACC)
- Railroads have their own utilities or lease their land for 3rd party utilities. These utilities may not show up on Arizona Blue Stake
- Railroad perform all track and signal work, responsible for maintenance of this work
- Local Agency constructs roads, approach or sidewalk work

Railway Crossings Program (Section 130)



**“Look both ways
...or DIE!”**

Passive Railroad Crossings



- **Fatal accident due to limited sight distance**
- **Project needs installing flashing lights and gates**

Passive Railroad Crossings



That is Why Railroads do not like at-grade crossings

PASSIVE vs ACTIVE Crossing

Joint Efforts (LPA/URR Section 130)

AFTER



BEFORE



Active Railroad Crossing

Train Activated gates and lights improve safety



SEC 130 HIGHLIGHTS

- **Highway Safety act of 1973 first established the program to reduce the number and severity of RR-Hwy crashes.**
- **Title 23 USC; Section 130 provided a Nationwide program to improve safety at RR-Hwy crossings (aka Sec. 130 Prog.)**
- **Section 130 can be used on any public crossing in the State of Arizona**

SECTION 130 HIGHLIGHTS (cont.)

- **Section 130 is currently authorized under MAP-21**
- **Section 130 projects consist of Safety (Active railroad signal) or Hazard Elimination (crossing surface) projects.**
- **ADOT currently receives approximately \$2.3 Million per year for projects**

Section 130

Project Selection

Project selection is based on input from the ADOT Railroad crossing database:

- **Exposure index computed for each crossing based on several factors**
- **Index created for Hazard Elimination (surface work) and Protective Devices (Railroad signals)**
- **Crossings in the top 1/3 of their respective index are eligible for upgrades**
- **Selection is also based on input from Local Agencies, Az. Corporation Commission, FHWA, Railroad**

Typical Projects

- **Installation of concrete crossing surface**
- **Installation of train activated lights/gates**
- **Installation of sidewalks**
- **Signing and striping updates**
- **Updating traffic signal preemption**

Typical Projects

Typical work NOT covered unless authorized by Federal Highway Administration:

- **Installing a new crossing**
- **Relocating existing crossing**
- **Widening existing crossing**



Section 130

Project Development

- **Project selection and management done by URR**
- **Involves onsite meetings and contract preparation**
- **Kickoff to project completion is approx. 2-3 years**
- **URR is responsible for agreements with affected railroad, and obtaining FHWA, ACC authorization**

Section 130

Project Development

Local Public Agency Work (approaches, medians, sidewalks, etc.)

- **Certification Acceptance – Local agency follow their CA, URR will still request all authorizations and obtain railroad agreement**
- **Non-CA. ADOT Local Government will administer the design and construction of the improvements**

SECTION 130

Project Process Flow

- **Project Identified**
- **Onsite Diagnostic Meeting**
- **JPA executed**
- **FHWA Preliminary Engineering Authorization**
- **Project Design, Clearances and Agreements executed**
- **FHWA Construction Authorization**
- **Railroad work authorized**
- **Local Agency work authorized (as needed)**
- **ACC Opinion & Order issued (as needed)**
- **Local Agency perform final signing/stripping**
- **Project closeout**

For more RR info:

ADOT UTILITY AND RAILROAD ENGINEERING

205 S 17TH AVE, RM 357, PHOENIX, AZ 85007

www.azdot.gov

Sayeed Hani, ADOT Railroad Liaison

602-712-7555

shani@azdot.gov

Jane Gauger, ADOT Railroad Section 130 Coordinator

602-712-4052

jgauger@azdot.gov