



mesaaz.gov

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PO Box 1466  
Mesa, Arizona 85211-1466

# NEW APPLICATION



0000168054

January 6, 2016

Mr. Chris Watson  
Arizona Corporation Commission  
Office of Railroad Safety  
1200 W. Washington Street  
Phoenix, AZ 85007

## ORIGINAL

Arizona Corporation Commission

### DOCKETED

JAN 11 2016

RECEIVED

2016 JAN 11 P 2:09

AZ CORP COMMISSION  
DOCKET CONTROL

DOCKETED BY	<i>WJ</i>
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**Subject: Application to install four quadrant gates at an existing public at-grade railroad crossing**

**Project: City of Mesa Quiet Zone (CP0426), at Dobson Road crossing, US DOT No 741 649 G, Rail Mile 0919.46.**

Dear Mr. Watson,

RR-03639A-16-0005

This application is being submitted to the Arizona Corporation Commission (AZCC) to allow Union Pacific Railroad (UPRR) to modify the at grade crossing at Dobson Road, US DOT No 741 649 G, Rail Mile 0919.46, on behalf of the City of Mesa. The modification was discussed in a field meeting conducted on December 10, 2014. Mesa intends to establish a railroad quiet zone, and to achieve a lower Risk Index as calculated by the Federal Railroad Administration, Mesa is requesting that UPRR install four quadrant gates at the above crossing. Currently gates are only at the approach side of the crossing and additional gates will be installed at the departure side, to help deter vehicles from driving in the opposite direction to go around lowered gates. Below is the information as required in the application instructions:

- i) Location of Crossing**  
The crossing is approximately 1330' north of the intersection of Dobson Rd and Broadway Rd, crossing the north leg of Dobson Rd. The crossing is located in the City of Mesa, Maricopa County, Arizona
- ii) Why the crossing is needed**  
The UPRR crossing at Dobson Rd is an existing crossing that will remain at the same location. The four quadrant gates are needed as a supplemental safety measure, in the City's effort to establish a railroad quiet zone.
- iii) Why the existing Crossing Cannot be Grade Separated**  
The location of the crossing will remain unchanged with the proposed work. To grade separate the crossing at Dobson Rd would have the following undesirable consequences: 1) The grade separation will requires the relocation of the existing intersection of Dobson Rd and Broadway Rd, and the intersection of Dobson Rd and First Ave, because of the needed slope from a level grade to a level overpass would exceed the distance between the crossing and the intersection;

2) access to business and properties for over 2000' will be closed along Dobson Rd, which in many cases is the only access to these businesses and properties;  
3) To construct an grade separated crossing will require additional Right of Way will be needed to establish new intersections with intersecting roadways. This Right of Way take will have detrimental effects on adjacent properties and businesses.

**iv) Type of Warning Devices to be Installed**

The crossing has existing warning devices in the north bound and south bound direction on Dobson Rd, including gates at the approach side of the crossing, cantilevered warning lights, warning signs and warning bells. This proposal is to install additional gates on the departure side of the crossing on Dobson Rd.

**v) Who Will Maintain the Crossing Warning Devices**

UPRR will own and maintain the additional gates as other the physical elements at the crossing (crossing surface, gates, flashing lights). The City of Mesa will own and maintain the approaching surface, signing and pavement markings on Dobson Rd.

**vi) Who is funding the project**

The project is funded by the City of Mesa.

Attached is a plan sheet of the crossing with the proposed changes.

For information, questions or comments concerning this application please contact Joseph Schroeder at 480-644-3285 or [joseph.schroeder@mesaaz.gov](mailto:joseph.schroeder@mesaaz.gov).

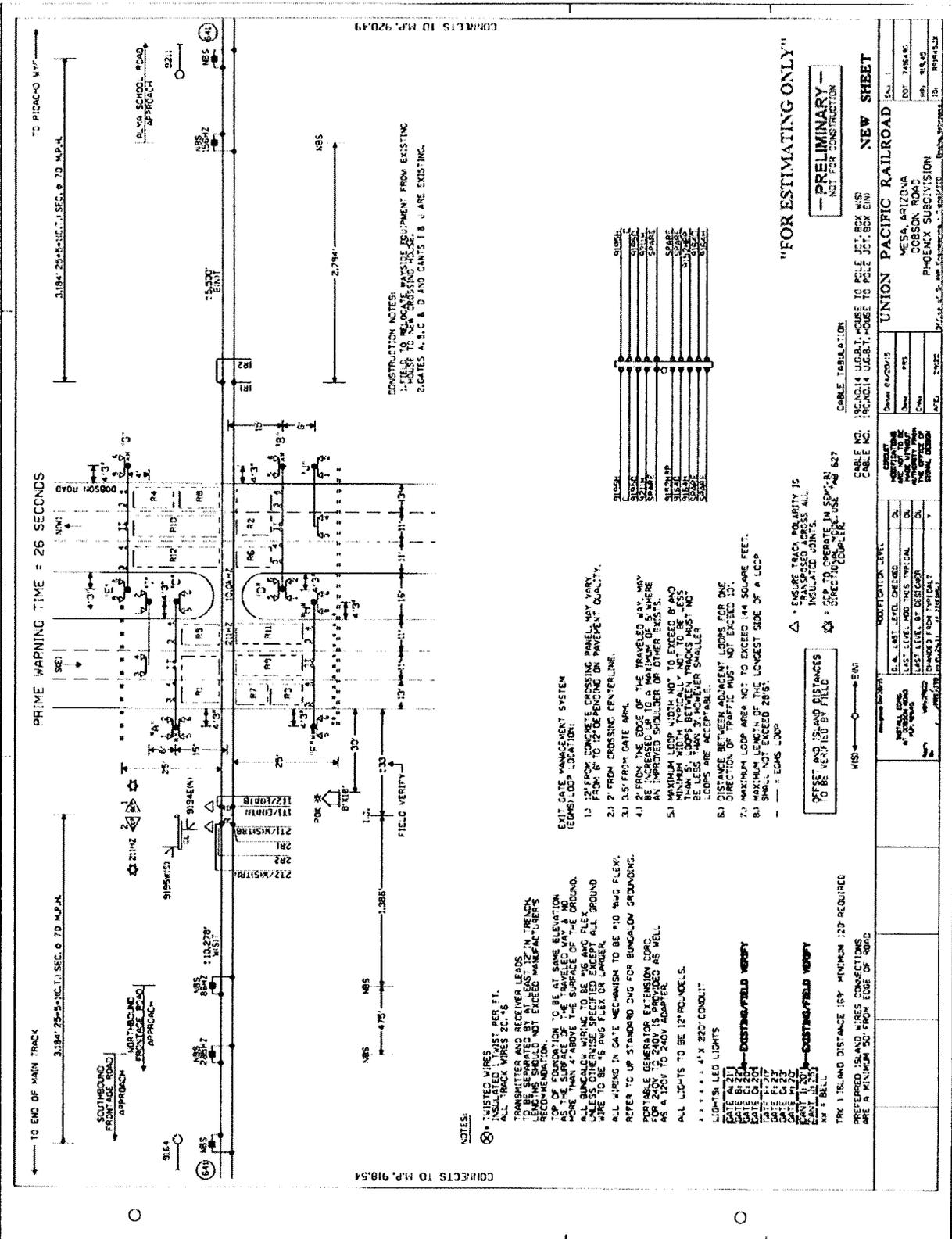
Sincerely,



Joseph Schroeder, P.E.  
Supervising Engineer  
City of Mesa

Encl.

# ATTACHMENT



PRIME WARNING TIME = 26 SECONDS

CONSTRUCTION NOTES:  
 1. ALL TO BE INSTALLED IN ACCORDANCE WITH THE EQUIPMENT FROM EXISTING.  
 2. GATES A, B, C & D AND CANTS 1 & 2 ARE EXISTING.

**NOTES:**

- 1. TWISTED WIRES INSULATED 1/8" MIN. PER FT. ALL TRACK WIRES 22-16
- 2. TRANSMITTER AND RECEIVER LEADS TO BE IDENTIFIED BY COLOR AND NUMBER. LEADS SHOULD NOT EXCEED MANUFACTURER'S RECOMMENDATION.
- 3. TOP OF FOUNDATION TO BE AT SAME ELEVATION AS EXISTING FOUNDATION UNLESS OTHERWISE SPECIFIED.
- 4. ALL BUNGALOW WIRING TO BE #16 AWG FLEX UNLESS OTHERWISE SPECIFIED EXCEPT ALL GROUND WIRE TO BE #6 AWG FLEX OR LARGER.
- 5. ALL WIRING IN GATE MECHANISM TO BE #10 AWG FLEX.
- 6. REFER TO UP STANDARD DWG FOR BUNGALOW GROUNDING.
- 7. PORTABLE GENERATOR EXTENSION CORD FOR 240V TO 240V IS PROVIDED AS WELL AS A 120V TO 240V ADAPTER.
- 8. ALL LIGHTS TO BE 12" ROUND.
- 9. LIGHTS TO BE 4" X 2" ROUND.
- 10. LIGHTS TO BE 12" ROUND.
- 11. LIGHTS TO BE 12" ROUND.
- 12. LIGHTS TO BE 12" ROUND.
- 13. LIGHTS TO BE 12" ROUND.
- 14. LIGHTS TO BE 12" ROUND.
- 15. LIGHTS TO BE 12" ROUND.
- 16. LIGHTS TO BE 12" ROUND.
- 17. LIGHTS TO BE 12" ROUND.
- 18. LIGHTS TO BE 12" ROUND.
- 19. LIGHTS TO BE 12" ROUND.
- 20. LIGHTS TO BE 12" ROUND.

EXIT GATE MANAGEMENT SYSTEM (EGMS) LOOP LOCATION:  
 1. 12' FROM CONCRETE CROSSING PANEL, MAY VARY FROM 7' TO 12' DEPENDING ON PAVEMENT QUALITY.  
 2. 2' FROM CROSSING CENTERLINE.  
 3. 3.5' FROM GATE OPN.  
 4. BE INCREASED TO 4' WHERE THERE IS AN IMPROVED SHOULDER OR OTHER EXITS.  
 5. MAXIMUM LOOP WIDTH NOT TO EXCEED 8' AND MINIMUM LOOP WIDTH NOT TO BE LESS THAN 3' HOWEVER SMALLER LOOPS ARE ACCEPTABLE.  
 6. DISTANCE BETWEEN ADJACENT LOOPS FOR ONE DIRECTION OF TRAFFIC MUST NOT EXCEED 10'.  
 7. MAXIMUM LOOP AREA NOT TO EXCEED 144 SQUARE FEET.  
 8. MAXIMUM LENGTH OF THE LONGEST SIDE OF A LOOP SHALL NOT EXCEED 28'5".  
 - : EGMS LOOP

WIRE NO.	WIRE TYPE	WIRE COLOR
1	16 AWG	RED
2	16 AWG	GREEN
3	16 AWG	BLUE
4	16 AWG	YELLOW
5	16 AWG	PINK
6	16 AWG	BLACK
7	16 AWG	WHITE
8	16 AWG	GRAY
9	16 AWG	BROWN
10	16 AWG	PURPLE
11	16 AWG	ORANGE
12	16 AWG	SILVER
13	16 AWG	GOLD
14	16 AWG	COPPER
15	16 AWG	ALUMINUM
16	16 AWG	STEEL
17	16 AWG	BRASS
18	16 AWG	NICKEL
19	16 AWG	ZINC
20	16 AWG	LEAD
21	16 AWG	TIN
22	16 AWG	SILVER
23	16 AWG	GOLD
24	16 AWG	COPPER
25	16 AWG	ALUMINUM
26	16 AWG	STEEL
27	16 AWG	BRASS
28	16 AWG	NICKEL
29	16 AWG	ZINC
30	16 AWG	LEAD
31	16 AWG	TIN
32	16 AWG	SILVER
33	16 AWG	GOLD
34	16 AWG	COPPER
35	16 AWG	ALUMINUM
36	16 AWG	STEEL
37	16 AWG	BRASS
38	16 AWG	NICKEL
39	16 AWG	ZINC
40	16 AWG	LEAD
41	16 AWG	TIN
42	16 AWG	SILVER
43	16 AWG	GOLD
44	16 AWG	COPPER
45	16 AWG	ALUMINUM
46	16 AWG	STEEL
47	16 AWG	BRASS
48	16 AWG	NICKEL
49	16 AWG	ZINC
50	16 AWG	LEAD
51	16 AWG	TIN
52	16 AWG	SILVER
53	16 AWG	GOLD
54	16 AWG	COPPER
55	16 AWG	ALUMINUM
56	16 AWG	STEEL
57	16 AWG	BRASS
58	16 AWG	NICKEL
59	16 AWG	ZINC
60	16 AWG	LEAD
61	16 AWG	TIN
62	16 AWG	SILVER
63	16 AWG	GOLD
64	16 AWG	COPPER
65	16 AWG	ALUMINUM
66	16 AWG	STEEL
67	16 AWG	BRASS
68	16 AWG	NICKEL
69	16 AWG	ZINC
70	16 AWG	LEAD
71	16 AWG	TIN
72	16 AWG	SILVER
73	16 AWG	GOLD
74	16 AWG	COPPER
75	16 AWG	ALUMINUM
76	16 AWG	STEEL
77	16 AWG	BRASS
78	16 AWG	NICKEL
79	16 AWG	ZINC
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86	16 AWG	STEEL
87	16 AWG	BRASS
88	16 AWG	NICKEL
89	16 AWG	ZINC
90	16 AWG	LEAD
91	16 AWG	TIN
92	16 AWG	SILVER
93	16 AWG	GOLD
94	16 AWG	COPPER
95	16 AWG	ALUMINUM
96	16 AWG	STEEL
97	16 AWG	BRASS
98	16 AWG	NICKEL
99	16 AWG	ZINC
100	16 AWG	LEAD

"FOR ESTIMATING ONLY"

PRELIMINARY - NOT FOR CONSTRUCTION

CABLE TABLE:  
 CABLE NO. 1824014 UCLB-T-HOUSE TO POLE JCT. BOX WSD  
 1824014 UCLB-T-HOUSE TO POLE JCT. BOX ENI  
 UNION PACIFIC RAILROAD  
 MESA, ARIZONA  
 COBSON ROAD  
 PHOENIX SUBDIVISION

NO.	DESCRIPTION	DATE	BY
1	ISSUED FOR ESTIMATING	10/1/00	J. W. COOPER
2	REVISED FOR CONSTRUCTION	10/1/00	J. W. COOPER
3	REVISED FOR CONSTRUCTION	10/1/00	J. W. COOPER
4	REVISED FOR CONSTRUCTION	10/1/00	J. W. COOPER
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100	REVISED FOR CONSTRUCTION	10/1/00	J. W. COOPER

TRK 1 ISLAND DISTANCE 189 MINIMUM 120 REQUIRED  
 REFERRED ISLAND WIRES CONNECTIONS  
 ARE A MINIMUM 30" FROM EDGE OF ROAD