NEW APPLICATION

ORIGINAL

0000077677

BEFORE THE ARIZONA CORPORATION COMMISSION

RECEIVED

2007 OCT 19 P 1: 07

AZ CORP COMMISSION
DOCKET CONTROL

Arizona Corporation Commission
DOCKETED
OCT 19 2007
DOCKETED BY MN

COMMISIONERS
MIKE GLEASON, Chairman
WILLIAM A. MUNDELL
JEFF HATCH-MILLER
KRISTIN K. MAYES
GARY PIERCE

IN THE MATTER OF THE APPLICATION OF UNION PACIFIC RAILROAD TO ALTER TWO CROSSINGS OF THE UNION PACIFIC RAILROAD AT PARK LINK DRIVE AND MISSILE BASE ROAD	DOCKET NO. **RR-03639A-07-0606** **UNION PACIFIC RAILROAD COMPANY'S APPLICATION FOR AUTHORITY TO ALTER TWO CROSSINGS OF THE UNION PACIFIC RAILROAD AT PARK LINK DRIVE AND MISSILE BASE ROAD BY ADDING A SECOND MAINLINE TRACK**

Applicant Union Pacific Railroad Company ("Union Pacific"), whose post office address is 1255 South Campbell Avenue, Tucson, Arizona 85713, by and through its attorneys Beaugureau, Zukowski, Hancock, Stoll & Schwartz, P.C., pursuant to A.A.C. R14-3-106(F) and R14-3-107 and A.R.S. §40-337(B)(2), hereby applies for authority to alter the public at-grade crossings at Park Link Drive, DOT #741 714K, and Missile Base Road, DOT #741 716Y, by adding a second mainline track thereto. By submitting this application, Union Pacific does not waive its rights with respect to any lack of jurisdiction or authority of the Arizona Corporation Commission, including, without limitation, the right to assert federal preemption.

The reasons for this application follow, supported by the Affidavit of James H. Smith, attached hereto as Exhibit A:

1. In recent years, the public's demand for rail freight service to, from and through Arizona and in the Southwest generally has grown steadily and dramatically.

2. To meet this growing public demand for movement of freight by rail, Union Pacific needs to increase its capacity to move more freight to, from and through Arizona. The only way to increase Union Pacific's capacity substantially is to add a second mainline track into and through Arizona (the "double-track project"). Doing so is in the best interests of Union Pacific's 25,000 rail customers, the many other members of the public who use the freight shipped by those customers, Union Pacific, and rail commerce to, from and through Arizona and throughout the 23 western states served by Union Pacific.

3. The addition of a second mainline track through Arizona will allow more expeditious movement of freight by rail through the State, and will thus minimize traffic delays for users of the roadways that cross Union Pacific's railroad tracks within the State.

4. No new railroad-roadway crossings will be constructed as part of the double-track project. Instead, a second mainline track would be added only at crossings where a single mainline track already exists.

5. This application seeks authority to construct a second mainline track at two crossings in Pinal County where public roadways intersect at grade with Union Pacific's existing mainline track. Both crossings and the proposed improvements thereto, have been evaluated by a diagnostic team consisting of Union Pacific, the Arizona Corporation Commission's Railroad Safety Staff, and the controlling roadway authority, which is Pinal County.

6. Safety will be enhanced at these crossings in connection with the addition of a second mainline track by incorporating the most currently accepted standards in the industry for at-grade crossing safety.

7. Attached to the Affidavit of James H. Smith, Exhibit A filed herewith, are two groups of exhibits, one for each of the crossings affected by this application, identified by the

names of the crossings: Park Line Drive and Missile Base Road. Each set of exhibits for each crossing consists of the following:

a. cover sheet;

b. overview map;

c. aerial map of crossing locations, providing details of the crossing including the most recent traffic data available and traffic data projected for 2025, and showing the location of existing track, proposed track, existing at-grade crossings, any schools, hospitals, fire stations, and development in the area;

d. notes of the diagnostic field review and recommendations of the diagnostic team;

e. four photographs, one taken looking toward each direction at the crossing;

f. summary of crossing data, including the most recent traffic data available, traffic data projected for 2025, as well as accident history, if any;

g. work proposed for the roadway and the track, and whether a grade separation has been proposed or planned by the controlling roadway authority; and

h. detailed plan of improvements to be made.

8. Union Pacific will bear the entire cost of all improvements to be made at the crossings affected by this application. Those costs are projected to be as follows:

Crossing	Crossing Surface	Signal	Total
Park Link Drive	$ 30,880.00	$216,157.00	$247,037.00
Missile Base Road	$ 30,880.00	$216,157.00	$247,037.00

. . .

. . .

. . .

For the foregoing reasons, Union Pacific respectfully applies to the Commission for authority to alter, at Union Pacific's own cost, the foregoing public grade crossings as specified herein, so as to accommodate the addition of a second mainline track.

RESPECTFULLY SUBMITTED this 19th day of October, 2007.

BEAUGUREAU, ZUKOWSKI,
HANCOCK, STOLL & SCHWARTZ, P.C.

By: Terrance L. Sims

Anthony J. Hancock
Terrance L. Sims
302 East Coronado Road
Phoenix, Arizona 85004
Attorneys for Applicant Union Pacific Railroad Company

ORIGINAL AND THIRTEEN COPIES of the foregoing filed this 19th day of October, 2007, with:

Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

COPY of the foregoing mailed this 19th day of October, 2007, to:

Mr. David Raber
Mr. Brian Lehman
Mr. Chris Watson
Railroad Safety Section
Arizona Corporation Commission
2200 North Central Avenue, #300
Phoenix, Arizona 85007

Janice M. Alward, Esq.
Charles H. Hains, Esq.
Kenya Collins, Esq.
Legal Division
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

Mary Ann Palmer

Mary Ann Palmer

Doc 100122

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISIONERS
MIKE GLEASON, Chairman
WILLIAM A. MUNDELL
JEFF HATCH-MILLER
KRISTIN K. MAYES
GARY PIERCE

IN THE MATTER OF THE APPLICATION OF UNION PACIFIC RAILROAD TO ALTER TWO CROSSINGS OF THE UNION PACIFIC RAILROAD AT PARK LINK DRIVE AND MISSILE BASE ROAD	)	DOCKET NO. _____
	)	**AFFIDAVIT OF JAMES H. SMITH IN SUPPORT OF UNION PACIFIC RAILROAD COMPANY'S APPLICATION FOR AUTHORITY TO ALTER TWO CROSSINGS OF THE UNION PACIFIC RAILROAD AT PARK LINK DRIVE AND MISSILE BASE ROAD BY ADDING A SECOND MAINLINE TRACK**

James H. Smith, being first duly sworn upon his oath, states as follows:

1. I am over the age of eighteen, and I have personal knowledge of the facts stated herein.

2. I am employed by Union Pacific Railroad Company ("Union Pacific") as Manager of Industry and Public Projects and I have responsibility for the State of Arizona.

3. In recent years, the public's demand for rail freight service to, from and through Arizona and in the Southwest generally has grown steadily and dramatically.

4. To meet this growing public demand for movement of freight by rail, Union Pacific needs to increase its capacity to move more freight to, from and through Arizona. The only way to increase Union Pacific's capacity substantially is to add a second mainline track into and through Arizona (the "double-track project"). Doing so is in the best interests of Union Pacific's 25,000 rail customers, the many other members of the public who use the freight shipped by those

EXHIBIT A

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Missile Base Road	$ 30,880.00	$216,157.00	$247,037.00

James H. Smith

SUBSCRIBED AND SWORN TO before me this 17 day of October, 2007.

Shannon M. Rankin
Notary Public

My Commission Expires:
April 20, 2008

OFFICIAL SEAL
SHANNON M. RANKIN
NOTARY PUBLIC-ARIZONA
PINAL COUNTY
My Comm. Expires April 20, 2008

. . .

Doc 100128

ORIGINAL AND THIRTEEN COPIES of the foregoing filed this 19th day of October, 2007, with:

Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

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Mary Ann Palmer

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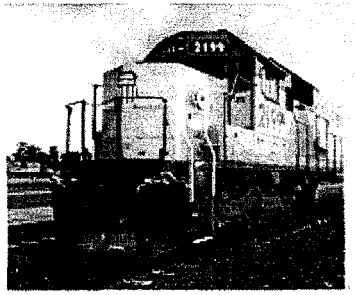
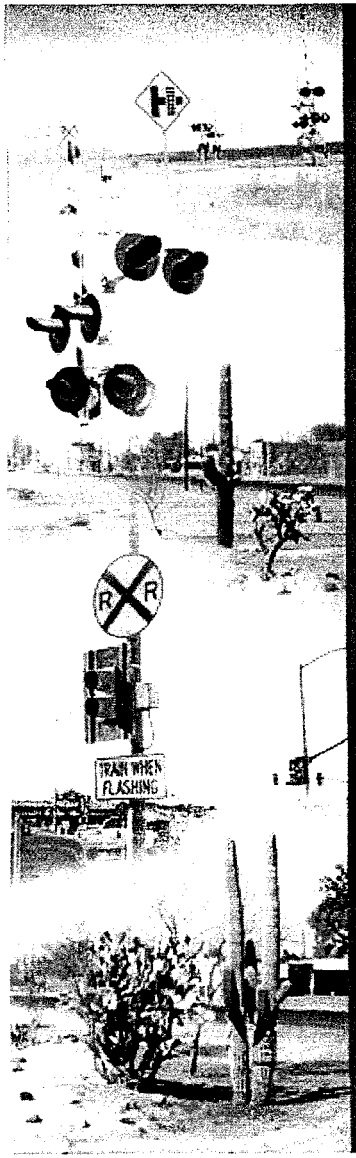
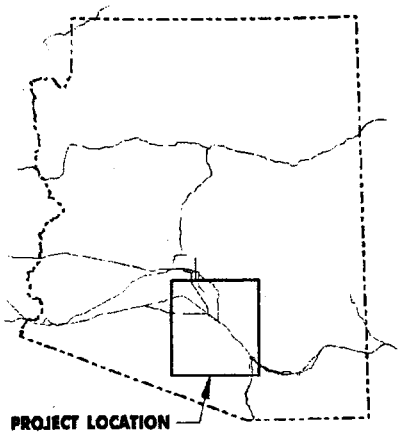
Park Link Drive



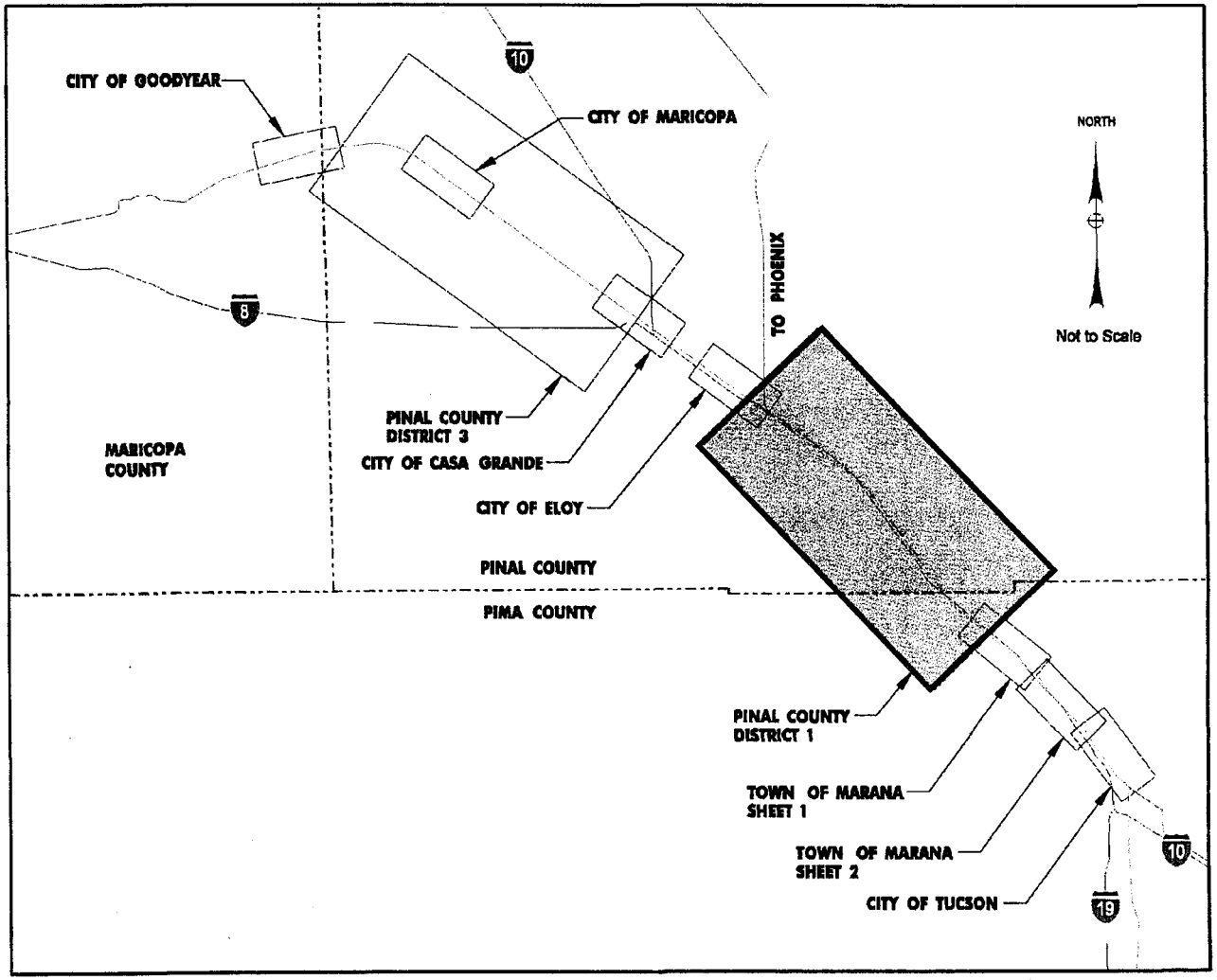
ACC Presentation



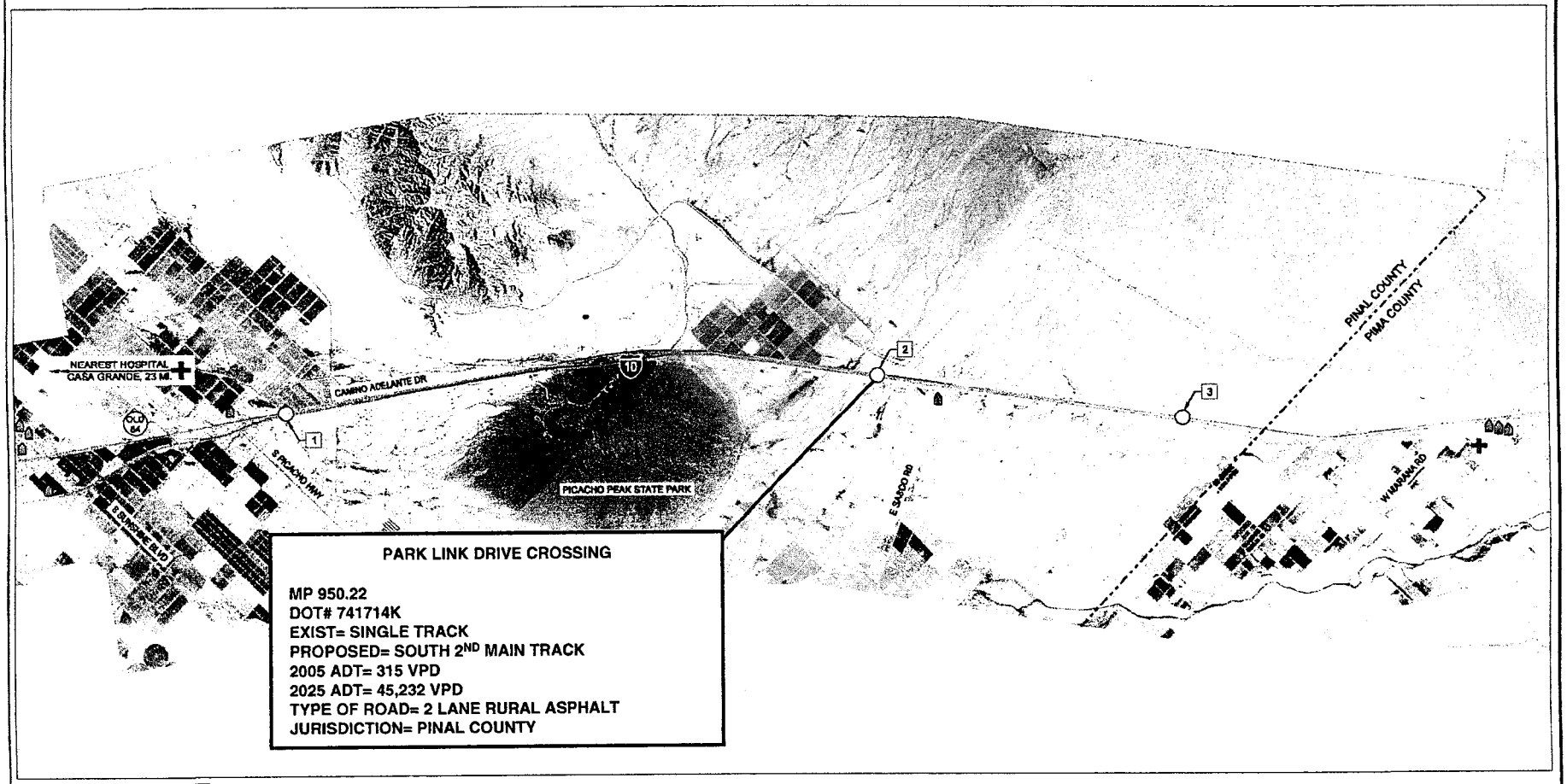
Park Link Drive
(DOT# 741714K, M.P.950.22)



State of Arizona



HDR	UNION PACIFIC	SUNSET ROUTE - SEGMENT 1 CROSSING LOCATIONS OVERVIEW MAP	DATE: 6 JUNE 2007 SHEET: 1 OF 7



PARK LINK DRIVE CROSSING

MP 950.22
DOT# 741714K
EXIST= SINGLE TRACK
PROPOSED= SOUTH 2ND MAIN TRACK
2005 ADT= 315 VPD
2025 ADT= 45,232 VPD
TYPE OF ROAD= 2 LANE RURAL ASPHALT
JURISDICTION= PINAL COUNTY

LEGEND
- EXISTING TRACK
- PROPOSED TRACK
- EXISTING AT-GRADE CROSSING
- SCHOOL
- HOSPITAL
- FIRE STATION
- COUNTY LIMITS

CROSSING LOCATIONS
1 MP. 938.52 - PICACHO BLVD
2 MP. 950.22 - PARK LINK ROAD
3 MP. 958.26 - MISSLE BASE ROAD

SCALE
0 10,000 20,000

SOURCE: AERIAL PHOTOGRAPHY PROVIDED BY GOOGLE EARTH, 2007

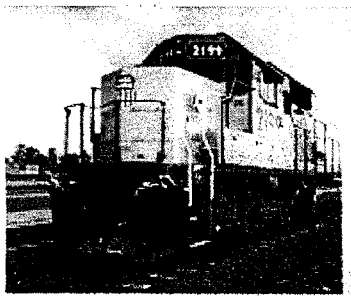
HDR

UNION PACIFIC

SUNSET ROUTE - SEGMENT 1
PINAL COUNTY, DISTRICT 1
CROSSING LOCATIONS

DATE: 8 JUNE 2007

SHEET: 7 OF 7



Park Link Drive
(DOT# 741714K, M.P.950.22)

Diagnostic Field Reviews/Recommendations

September 13, 2006

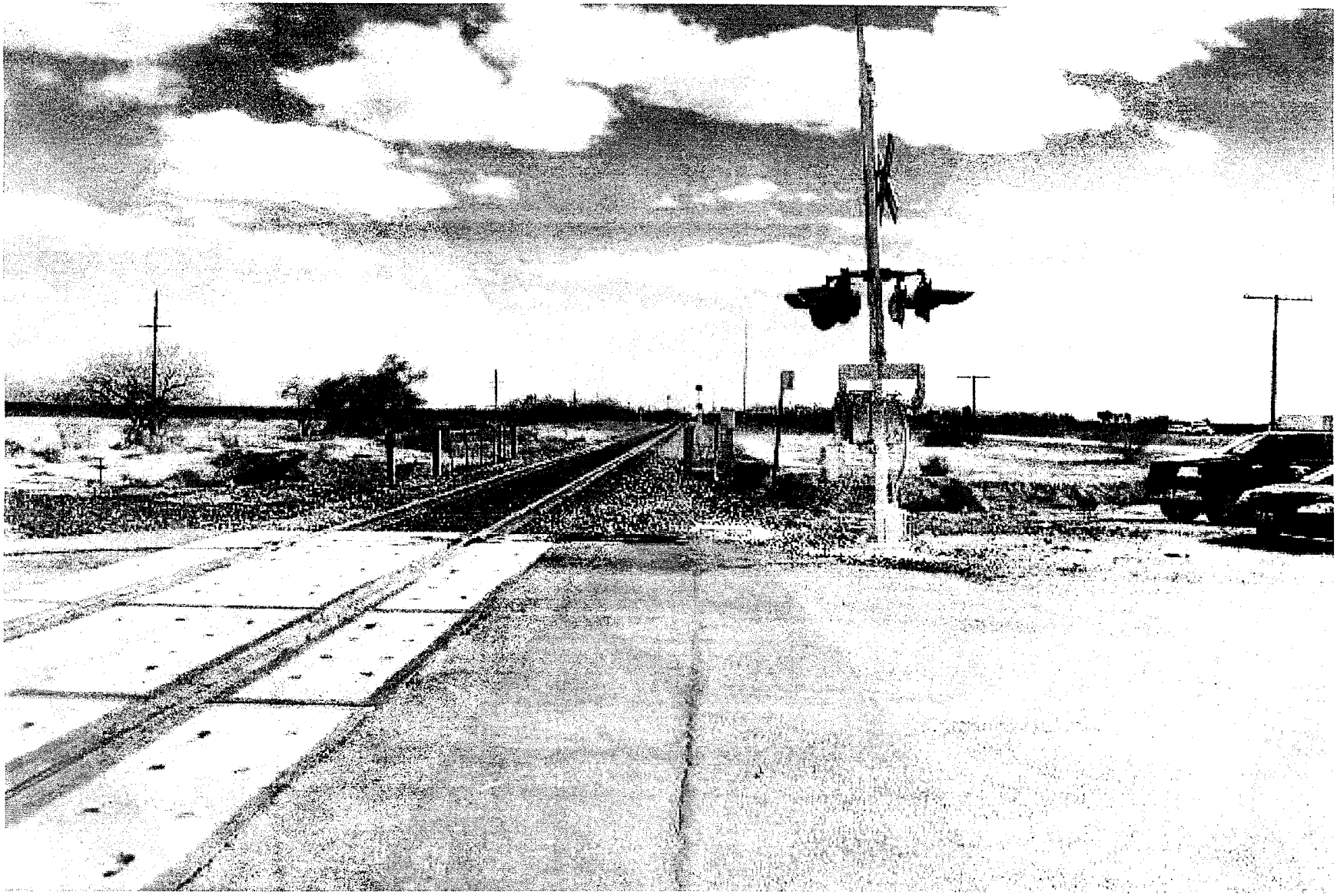
Introduced double tracking project to Pinal County

February 28, 2007

1. Met w/ Pinal County and ACC Staff
2. Existing warning devices in good working order
3. Existing pavement markings are deficient
4. Existing Bridge Culvert East of crossing
5. Sufficient room to tie-in proposed roadway profile on south side
6. No advance warning signs on Camino Adelante Drive for turning vehicles — need to provide
7. "2 Tracks" Crossing signs to be installed
8. Upgrade and relocate warning devices to accommodate new track

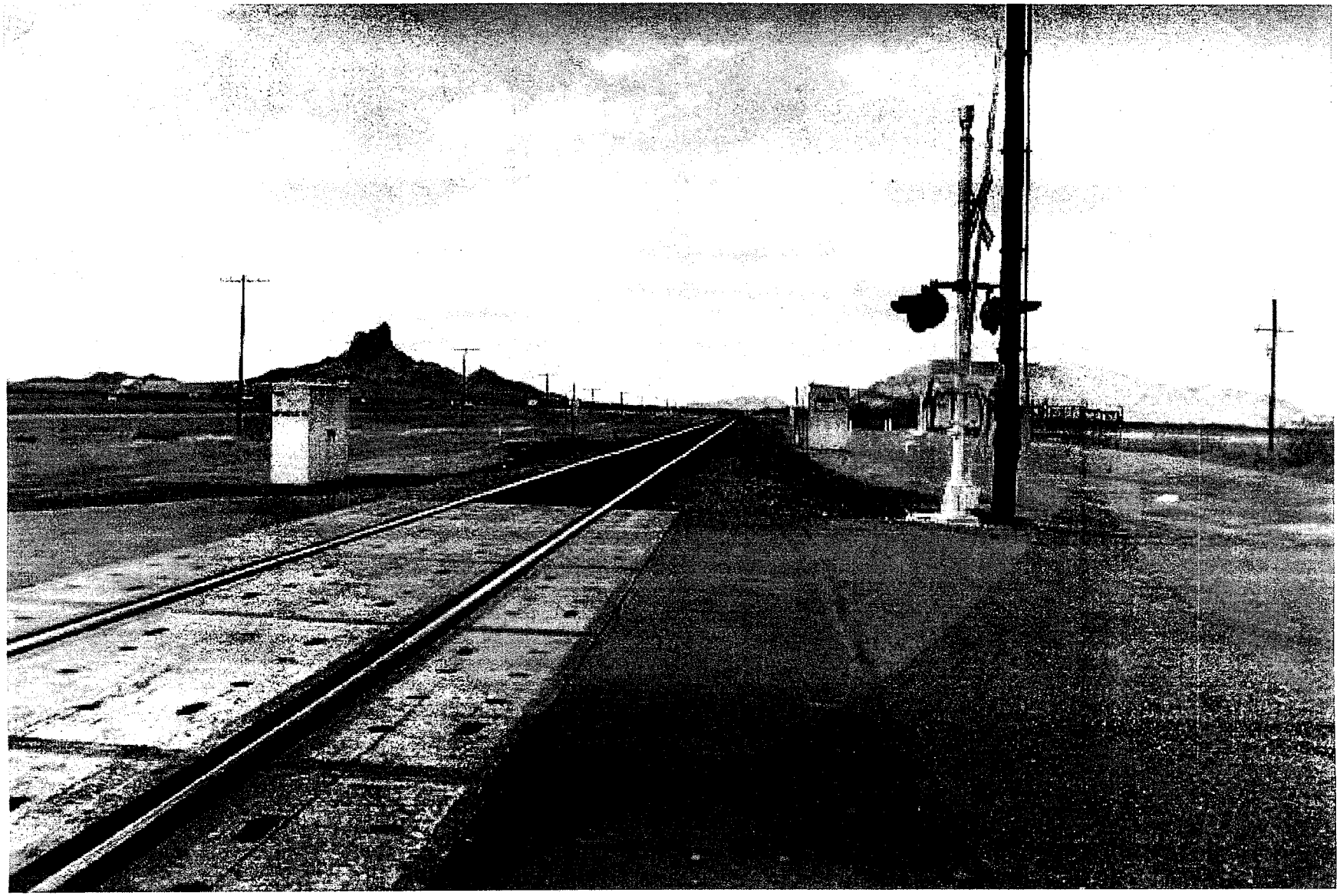
UPRR Field Photographs February 28, 2007

Crossing MP 950.22 (Park Link Dr) Looking North



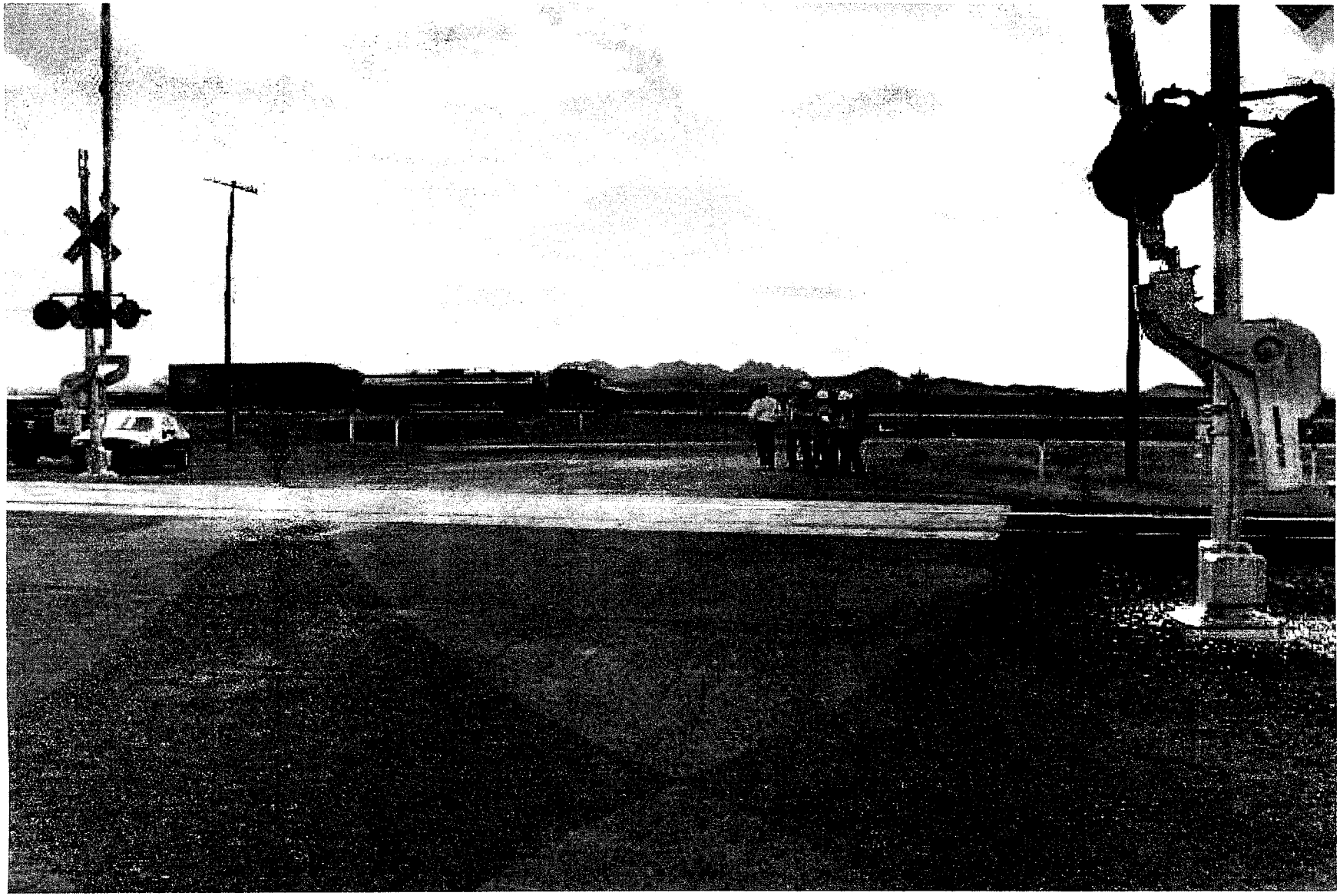
UPRR Field Photographs February 28, 2007

Crossing MP 950.22 (Park Link Dr) Looking East



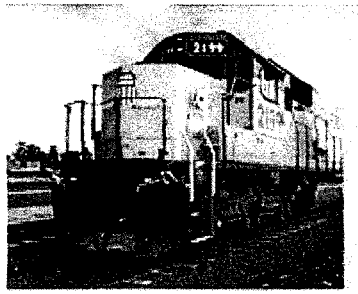
UPRR Field Photographs February 28, 2007

Crossing MP 950.22 (Park Link Dr) Looking West

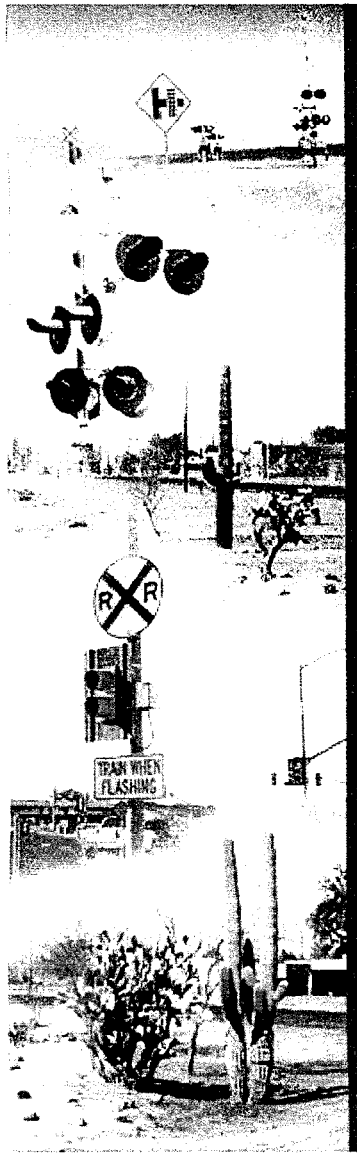


UPRR Field Photographs February 28, 2007

Crossing MP 950.22 (Park Link Dr) Looking South



Park Link Drive
(DOT# 741714K, M.P.950.22)



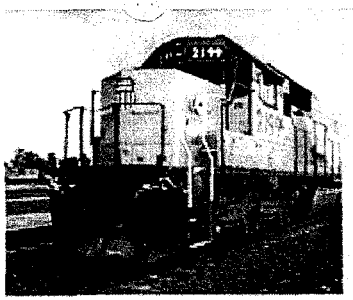
Crossing Data Summary

Roadway

1. 2-Lane Rural Asphalt at-grade crossing
2. Existing Flashers, Gates, and Bells
3. 2005 Traffic – 315 vpd
   (Source: 2005 CAAG Traffic Counts)
4. 2025 Projected Traffic – 45,232 vpd
   (Source: ADOT's SR347 Feasibility Report)
5. Speed Limit – 50 mph

Track

1. Existing Single Mainline
2. South 2nd Main Track
3. Accident History – 4 (1979, 1983, 1985, 2003); 2 deaths prior to installation of Active Warning Devices in 1988
   (Source: June 2007 FRA Database)



Park Link Drive
(DOT# 741714K, M.P.950.22)

Proposed Work

Roadway

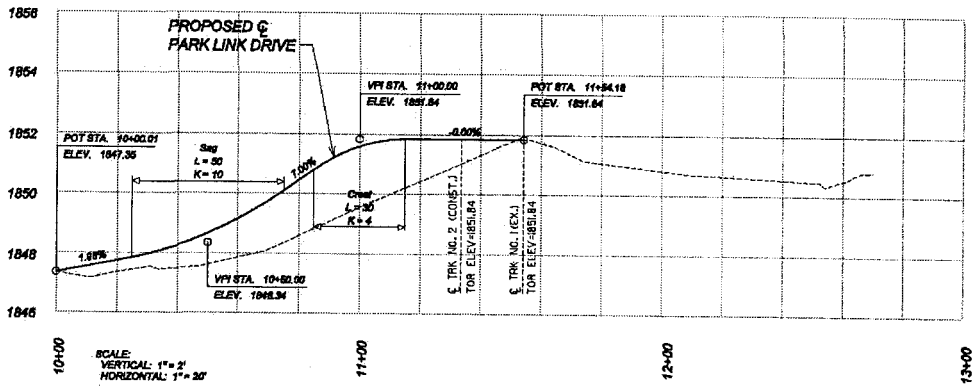
1. Re-profile portion of 2-Lane Rural Asphalt Pavement
2. Upgrade to New Flashers, Gates, and Bells
3. Replace Impacted Pavement Markings
4. Add W10-3 signs on Camino Adelante Drive
5. Add R8-8 sign "Do Not Stop on Tracks"
6. Add 10' x 40' Concrete Panel Crossing Surface
7. Detour Traffic to Missile Base Road Crossing

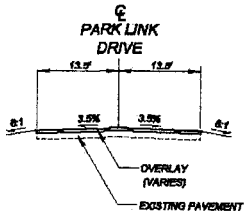
Track

1. New 2nd Main Track on South side
2. Install New Train Signal Equipment

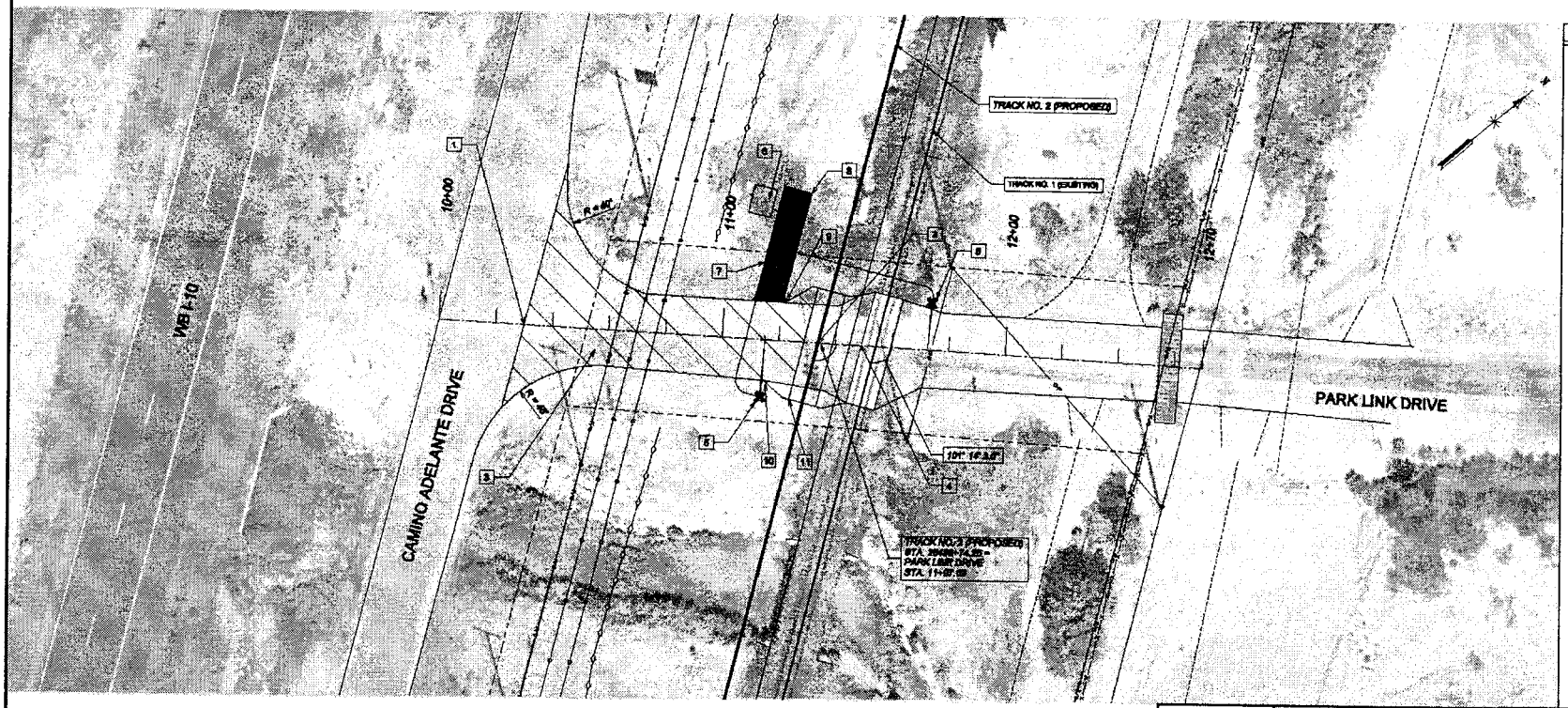
Grade Separation

Proposed by Pinal County
(Source: Shown in 2020 Traffic Projections)





TYPICAL SECTION



CONSTRUCTION NOTES

1. BEGIN CONSTRUCTION STA. 10+30.00, TIE TO EXISTING, FEATHER TO MATCH (SEE DETAIL C).
2. CONSTRUCT 10' X 40' CONCRETE CROSSING PAD (SEE DETAIL B).
3. CONSTRUCT PAVEMENT OVERLAY (SEE DETAIL A).
4. STA. 11+49.18, TIE TO EXISTING.
5. PROVIDE STAKED LOCATION FOR PROPOSED SIGNAL LOCATION FOR UPRR.
6. CONSTRUCT SUBBALLAST PAD FOR SIGNAL HOUSE AND DRIVE FROM ROADWAY (SEE DETAIL D).
7. CONSTRUCT ACCESS ROAD (SEE DETAIL D).
8. TIE TO ACCESS ROAD IN TRACK PLAN ELEV. = 1848.46.
9. STA. 11+21, 13.5' LT., ELEV.= 1851.37
10. STA. 11+18, 13.5' RT., ELEV.= 1851.38
11. ROTATE PAVEMENT TO MATCH CONCRETE PANEL.

NOTE:

1. SEE SIGNING AND PAVEMENT MARKING SHEET FOR MORE INFORMATION.
2. SEE TRAFFIC CONTROL SHEET FOR STAGING/DETOUR INFORMATION.
3. SEE VOLUME 1 - ROADWAY DETAILS FOR DETAILS.

SCALE

PRELIMINARY

NOT FOR CONSTRUCTION DATE: 04/25/07

HDR

UNION PACIFIC

DRAWN BY:	AL
CHECKED BY:	HAS
DATE:	30 MAR 2007
SHEET NUMBER	R002 of R004

UNION PACIFIC RAILROAD

Office of Assistant Vice President Engineering Design

LOCATION: SUNSET ROUTE - SEGMENT 1 - VOLUME 9

DWG TITLE: ROADWAY CROSSING PLAN & PROFILE
PARK LINK DRIVE (MP 950.22)
DOT # 741714K

UPRR.sb1
PLOT STYLE: sb1
SHL:R950.22_PP_ParkLinkDr.dgn
6/14/2007

SHL:R950.22_PP_ParkLinkDr.dgn

LIST OF PERMANENT ROADWAY SIGNING & MARKINGS			
ITEM	ADOT / MUTCD	SIZE	CONTRACTOR QTY.
NO OUTLET	W1-7	36" X 36"	-
DO NOT ENTER WHEN FLOODED	W8-33	24" X 48"	-
RAILROAD CROSSING	W10-1	36" DIA.	-
HWY-RAIL GRADE CROSSING	W10-3L	36" X 36"	-
ADVANCE WARNING - LT & RT	W10-3R	36" X 36"	-
NO PASSING ZONE	W14-3	48" X 36"	-
ROAD NAME - "PARK LINK"	W16-8AZ	VAR X 9"	-
"2 TRACKS"	W16-8AZ	VAR X 9"	-
CATTLE GUARD	W7???	36" X 36"	-
STOP	R1-1	30" X 30"	-
DO NOT STOP ON TRACKS	R9-8	24" X 30"	1
CROSSBUCKS	R15-1	48" X 8"	2
2 TRACKS	R15-2	27" X 18"	2
OBJECT MARKER	OM1-1	6" X 12"	-
6" WHITE		-	200'
24" WHITE		-	20'
6" DBL YELLOW		-	130'
RAILROAD MARKINGS		-	1

CONTRACTOR

1. CONSTRUCT 6" SOLID YELLOW
2. CONSTRUCT 6" SOLID WHITE
3. CONSTRUCT 24" SOLID WHITE
4. CONSTRUCT 6" DBL YELLOW
5. CONSTRUCT SKIP WHITE
6. CONSTRUCT RAILROAD MARKING SYMBOL PER ADOT STD. M-5
7. CONSTRUCT 6" WHITE RIGHT TURN ARROW PER ADOT STD. M-10 & M-11
8. CONSTRUCT MESSAGE "ONLY" PER ADOT STD. M-11 & M-6
9. CONSTRUCT CURB MARKING FOR RAISED MEDIAN PER ADOT STD. M-1
10. CONSTRUCT 6" WHITE LEFT MERGE ARROW PER ADOT STD. M-10

NOTE: ALL PAVEMENT MARKINGS WITHIN THE PINAL COUNTY SHALL BE THERMOPLASTIC.

UPRR

11. STA. 11+14, 20' RT, EL —.—; STA. 11+13, 17' LT, EL —.—
CONSTRUCT FLASHING-LIGHT SIGNAL, POST-MOUNTED
(R 15-1 - RELOCATED, R 15-2, BACK LIGHTS, BELLS & GATE, w/20' ARM) ON CONCRETE FOUNDATION PER MUTCD, PART 8 & UPRR STD.

12. STA. —+—, —'—, EL —.—; STA. —+—, —'—, EL —.—
CONSTRUCT FLASHING-LIGHT SIGNAL, POST-MOUNTED
(R 15-1 - RELOCATED, R 15-2, BACK LIGHTS, BELLS & GATE, w/– ARM) w/SIDE LIGHTS (2 SETS); ON CONCRETE FOUNDATION PER MUTCD, PART 8 & UPRR STD.

13. CONSTRUCT SIGNAL HOUSE (8' x 10')
14. RELOCATE EXISTING SIGNAL HOUSE FOR TRACK CONSTRUCTION; REMOVE UPON ACTIVATION OF NEW SIGNAL HOUSE.
15. REMOVE SIGNAL FLASHERS, GATE AND FOUNDATION. RELOCATE R15-1 FROM EXISTING POLE TO NEW SIGNAL POLE.
16. PRE-EMPTION TRAFFIC SIGNAL (BY OTHERS). RECONNECT TO NEW SIGNAL HOUSE.
17. CONSTRUCT FLASHING LIGHTS ON CANTILEVER w/R15-2, R15-1(RELOCATED) & GATE ON CONCRETE FOUNDATION PER MUTCD, PART 8 & UPRR STD.
18. CONSTRUCT 10' X 40' PRECAST CONCRETE PANELS ON 10' CONCRETE TIES PER UPRR STDS.

PINAL COUNTY (DISTRICT 1)

1.) ALL SIGNING AND MARKING WITH THE NOTATION '(BY PINAL)' ARE TO BE FURNISHED AND INSTALLED BY PINAL COUNTY.

2.) EXISTING STRIPING IS DEFICIENT. PINAL COUNTY TO REMEDIATE IMMEDIATELY.

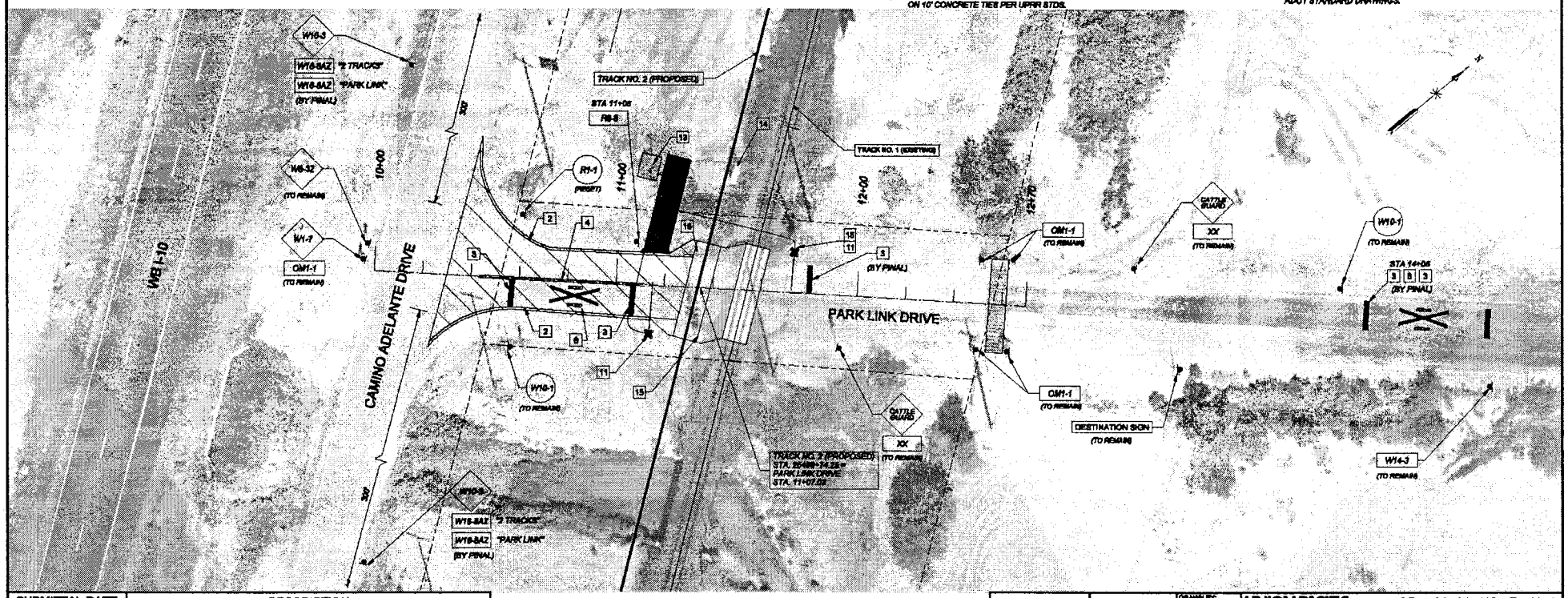
CLOSURES REQUIRED:

1.) ONE WEEK FULL CLOSURE FOR MAJOR ROADWAY WORK w/DETOUR.

2.) 8 HOUR NIGHT CLOSURE FOR SETTING RAIL (1-2 MONTHS AFTER FULL CLOSURE)

3.) POSSIBLE 8 HOUR NIGHT CLOSURE FOR SETTLEMENT SUBSEQUENT TO TRAINS RUNNING ON ACTIVE TRACK. (3 MONTHS AFTER CLOSURE FOR SETTING RAIL)

NOTE: ALL SIGNING AND PAVEMENT MARKINGS SHALL BE CONSTRUCTED/ INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND ADOT STANDARD DRAWINGS.



SUBMITTAL DATE	DESCRIPTION
3/22/ 2007	FOR ACC APPLICATION
4/26/ 2007	PINAL COUNTY, AZ. SUBMITTAL

SCALE 0 20 40 80

ADT = 315 vpd

PRELIMINARY

NOT FOR CONSTRUCTION DATE: 04/25/07

HDR

UNION PACIFIC

DRAWN BY: MJT
CHECKED BY: JDC
DATE: 30 MAR 2007
SHEET NUMBER: R004 of R004

UNION PACIFIC RAILROAD

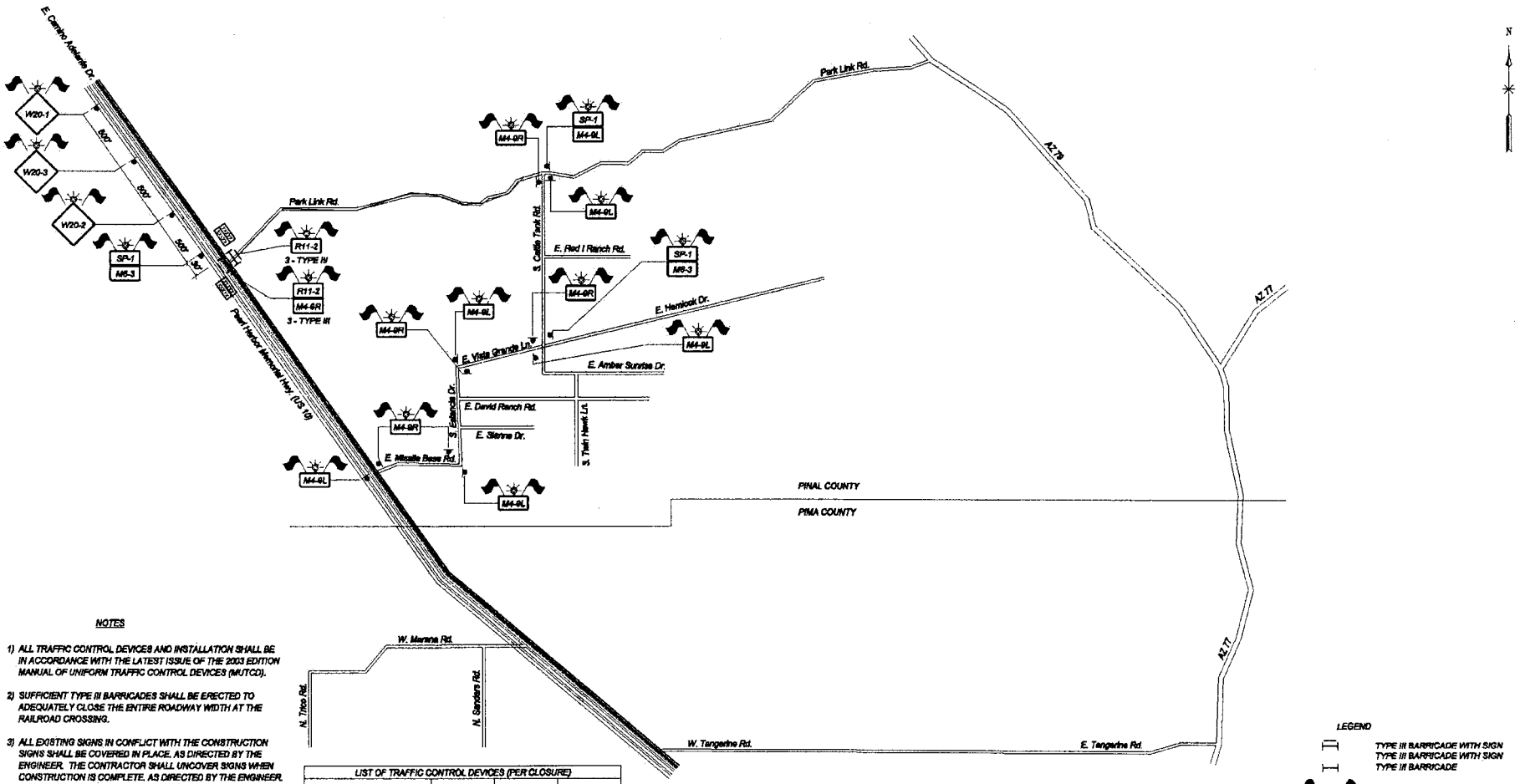
Office of Assistant Vice President Engineering Design

LOCATION: SUNSET ROUTE - SEGMENT 1 - VOLUME 9

DWG TITLE: ROADWAY SIGNING & PAVEMENT MARKING PARK LINK DRIVE (MP 950.22) DOT # 741714K

SR_R950.22_SM_ParkLinkDr.dgn

UPRR.tbl
PLOTTING.tbl
SR_R950.22_SM_ParkLinkDr.dgn
5/14/2007



NOTES

1) ALL TRAFFIC CONTROL DEVICES AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST ISSUE OF THE 2003 EDITION MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

2) SUFFICIENT TYPE III BARRICADES SHALL BE ERECTED TO ADEQUATELY CLOSE THE ENTIRE ROADWAY WIDTH AT THE RAILROAD CROSSING.

3) ALL EXISTING SIGNS IN CONFLICT WITH THE CONSTRUCTION SIGNS SHALL BE COVERED IN PLACE, AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL UNCOVER SIGNS WHEN CONSTRUCTION IS COMPLETE, AS DIRECTED BY THE ENGINEER.

4) ALL NON-REGULATORY CONSTRUCTION SIGNS SHALL HAVE BLACK LETTERS ON AN ORANGE BACKGROUND, EXCEPT AS OTHERWISE NOTED.

5) FLAGS SHALL BE INSTALLED ON ALL CONSTRUCTION SIGNS WITH TYPE A FLASHING WARNING LIGHTS.

6) ALL SIGNS MOUNTED ON SPRING STANDS SHALL HAVE A MINIMUM MOUNTING HEIGHT OF 2' OFF THE PAVEMENT.

7) PLACE VMS SIGN 14 DAYS PRIOR TO CROSSING CLOSURE THRU END OF CLOSURE.

8) CONTRACTOR TO COORDINATE CLOSURE WITH PINAL COUNTY (DISTRICT 1) 60 DAYS PRIOR TO BEGINNING WORK.

9) IT IS THE CONTRACTOR'S RESPONSIBILITY TO DESIGN THE SP-1 SIGN AND HAVE IT APPROVED BY THE ENGINEER.

LIST OF TRAFFIC CONTROL DEVICES (PER CLOSURE)

ITEM	MUTCD DEVICE NO.	SIZE	QTY
ROAD CLOSED	R11-2	48" X 30"	2
ROAD WORK AHEAD	W20-1	48" X 48"	1
DETOUR AHEAD	W20-2	48" X 48"	1
ROAD CLOSED 1000 FT	W20-3	48" X 48"	1
ROAD CLOSED AHEAD	W20-3a	48" X 48"	0
DETOUR	M4-8	24" X 12"	0
DETOUR WITH LEFT ARROW	M4-9L	30" X 24"	6
DETOUR WITH RIGHT ARROW	M4-9R	30" X 24"	5
DETOUR	M4-10L	48" X 18"	0
STRAIGHT AHEAD DIRECTIONAL ARROW	M6-3	24" X 18"	2
SPECIAL SIGN	SP-1		3
VARIABLE MESSAGE BOARD	-	DAYS	42
BARRICADES	TYPE III		6

SP-1

Park Links Rd
Closed at R/R Crossing
Use Missile Base Rd

MESSAGE:
LINE 1: PARK LINK DR
LINE 2: CLOSED AT R/R
LINE 3: USE MISSILE BASE RD

LEGEND

- TYPE III BARRICADE WITH SIGN
- TYPE III BARRICADE WITH SIGN
- TYPE III BARRICADE
- WARNING FLAGS
- WARNING LIGHT
- SIGN ON SPRING STAND
- CHANGEABLE MESSAGE BOARD

PRELIMINARY

NOT FOR CONSTRUCTION DATE: 04/25/07

HDR

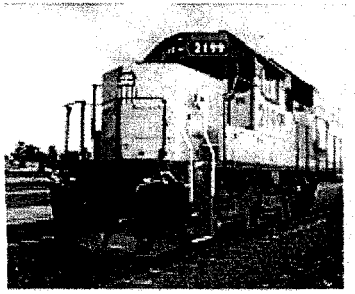
UNION PACIFIC

DRAWN BY: AYJ	UNION PACIFIC RAILROAD — Office of Assistant Vice President Engineering Design
CHECKED BY: HAS	LOCATION: SUNSET ROUTE - SEGMENT 1 - VOLUME 9
DATE: 30 MAR 2007	DWG TITLE: ROADWAY TRAFFIC CONTROL PARK LINK DRIVE (MP 950.22) DOT # 741714K
SHEET NUMBER R003 of R004	

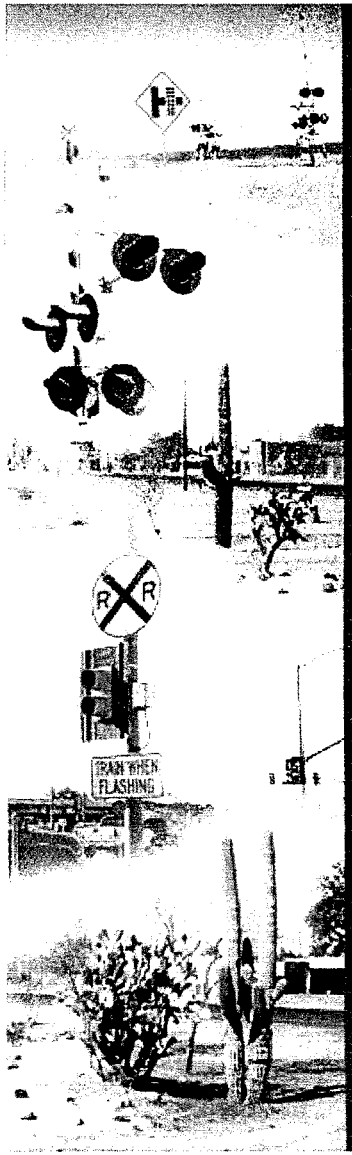
UPRR.tbl
PLOTTING.tbl
SH_R950.22_TC_ParkLinkDR.dgn
6/14/2007

SH_R950.22_TC_ParkLinkDR.dgn

Missile Base Road

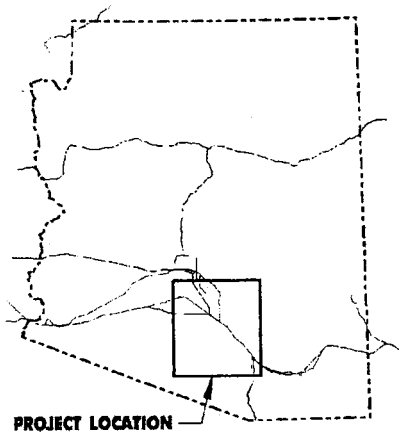


ACC Presentation

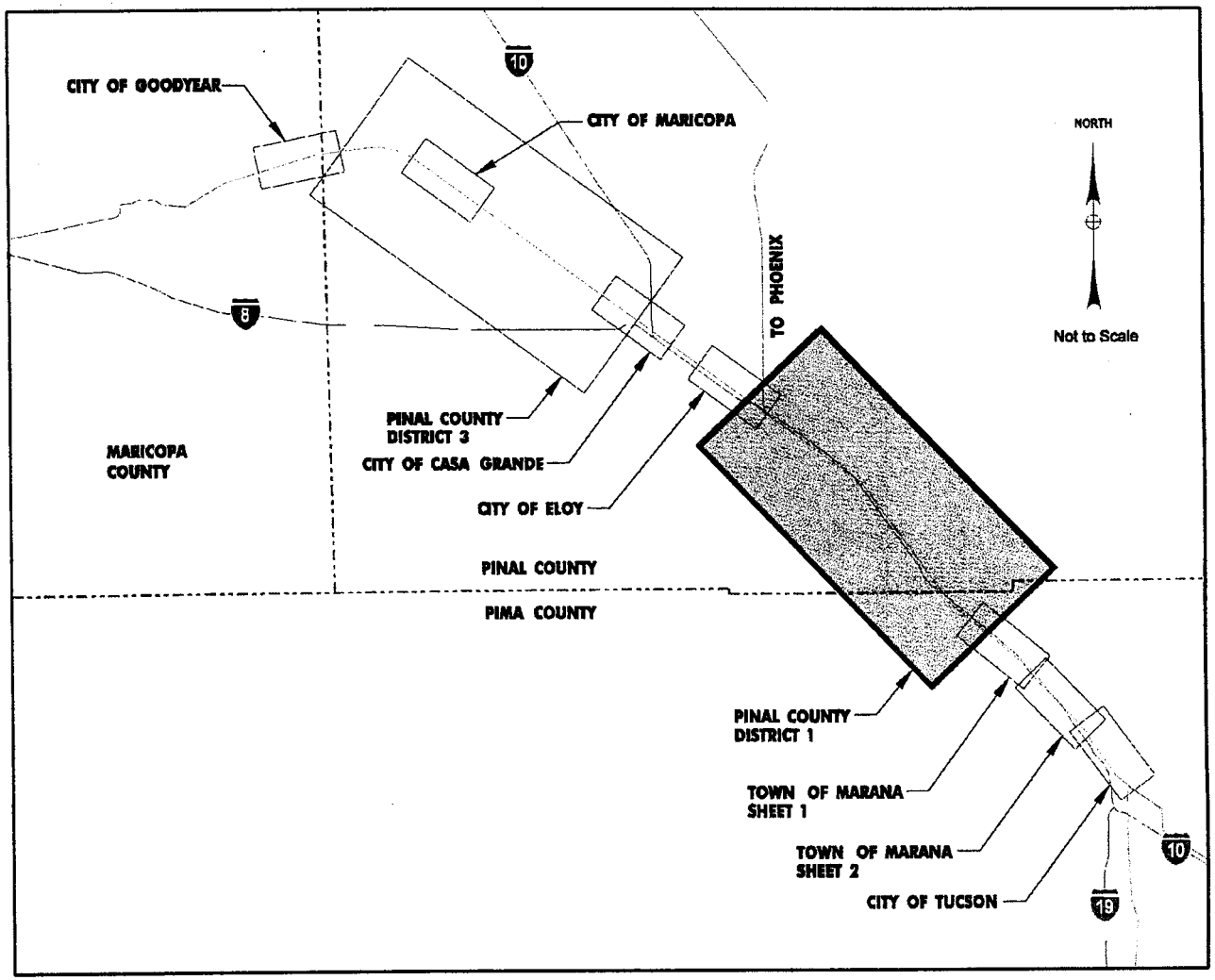


E. Missile Base Road

(DOT# 741716Y, M.P.956.26)



State of Arizona



HDR

UNION PACIFIC

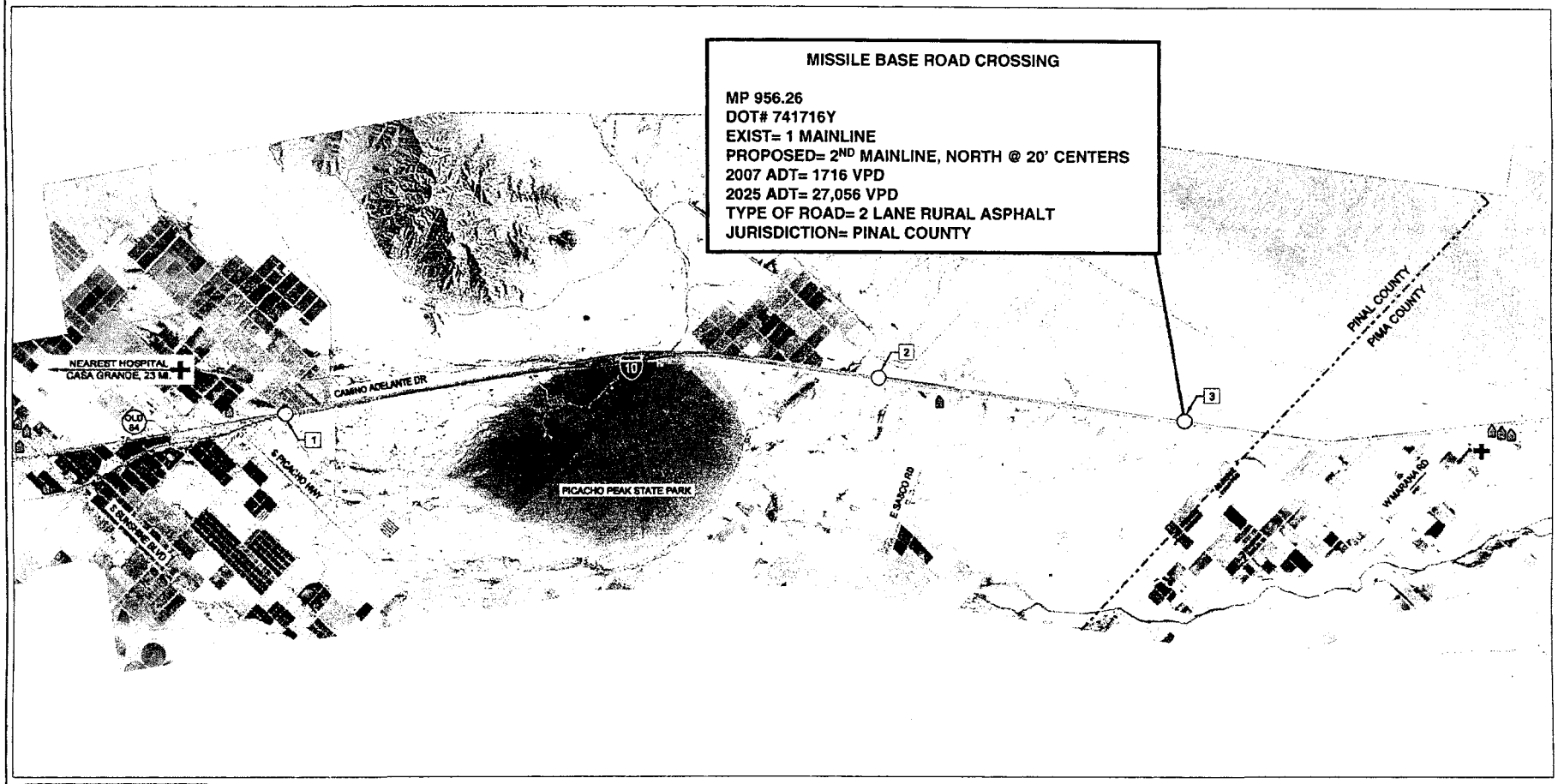
SUNSET ROUTE - SEGMENT 1
CROSSING LOCATIONS
OVERVIEW MAP

DATE: 6 JUNE 2007

SHEET: 1 OF 7

SEGMENT 1 - PHASE 2

SEGMENT 1 - PHASE 1



LEGEND
- EXISTING TRACK
- PROPOSED TRACK
- EXISTING AT-GRADE CROSSING
- SCHOOL
- HOSPITAL
- FIRE STATION
- COUNTY LIMITS

CROSSING LOCATIONS
1. MP. 938.82 - PICACHO BLVD
2. MP. 950.22 - PARK LINK ROAD
3. MP. 956.26 - MISSLE BASE ROAD

SCALE
0 10,000 20,000

SOURCE: AERIAL PHOTOGRAPHY PROVIDED BY GOOGLE EARTH, 2007

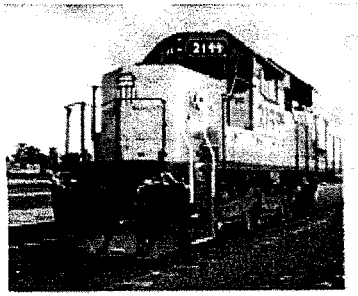
HDR

UNION PACIFIC

SUNSET ROUTE - SEGMENT 1
PINAL COUNTY, DISTRICT 1
CROSSING LOCATIONS

DATE: 6 JUNE 2007

SHEET: 7 OF 7



E. Missile Base Road (DOT# 741716Y, M.P.956.26)

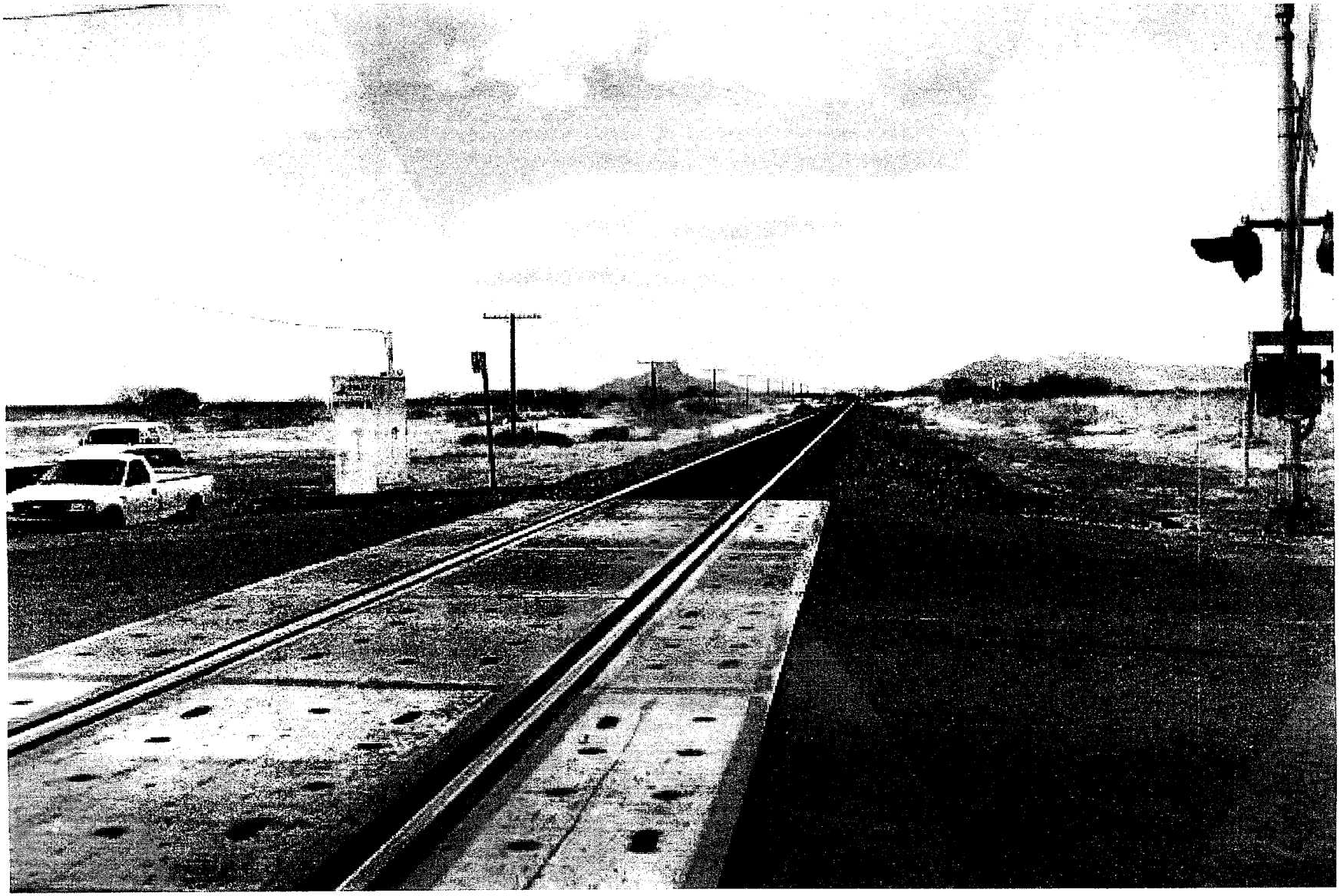
Diagnostic Field Reviews/Recommendations

September 13, 2006

Introduced double tracking project to Pinal County

February 28, 2007

1. Met w/ Pinal County, and ACC Staff
2. Existing warning devices in good working order
3. Existing pavement markings fair condition
4. Drainage bridge culvert east of crossing
5. Twin 36" pipes just north of crossing impacted
6. Sufficient room to tie-in proposed roadway profile on north side
7. No advance warning signs on Camino Adelante Drive for turning vehicles — need to provide
8. "2 Tracks" Crossing signs to be installed
9. Upgrade and relocate warning devices to accommodate new track

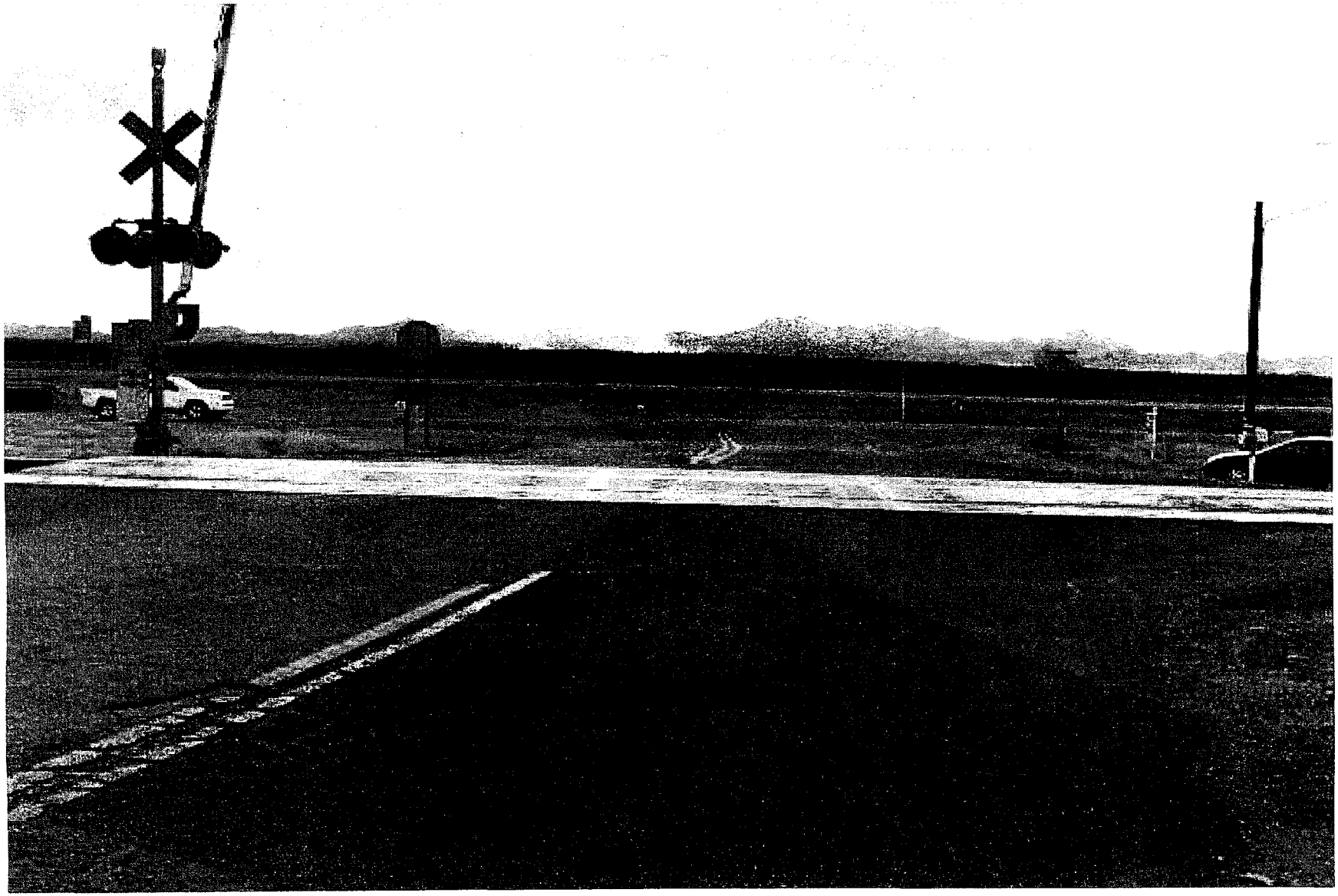


UPRR Field Photographs February 28, 2007

Crossing MP 956.26 (Missile Base Rd) Looking North

UPRR Field Photographs February 28, 2007

Crossing MP 956.26 (Missile Base Rd) Looking East

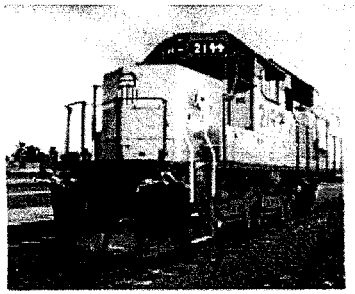


UPRR Field Photographs February 28, 2007

Crossing MP 956.26 (Missile Base Rd) Looking West

UPRR Field Photographs February 28, 2007

Crossing MP 956.26 (Missile Base Rd) Looking South



E. Missile Base Road (DOT# 741716Y, M.P.956.26)

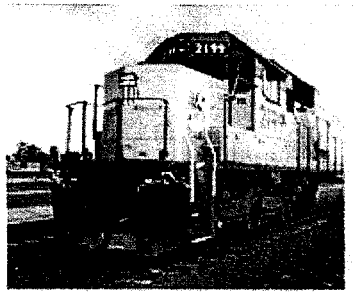
Crossing Data Summary

Roadway

1. 2-Lane Rural Asphalt at-grade crossing
2. Existing Flashers, Gates, and Bells
3. 2007 Traffic – 1,716 vpd
   (Source: 2007 Traffic Counts by HDR)
1. 2025 Projected Traffic – 27,056 vpd
   (Source: Pinal County SATS, dated 8/2006)
5. Speed Limit – 50 mph

Track

1. Existing Single Mainline
2. New Mainline on North side
3. Accident History – 1 (2005)
   (Source: June 2007 FRA Database)



E. Missile Base Road (DOT# 741716Y, M.P.956.26)

Proposed Work

Roadway

1. Re-profile portion of 2-Lane Rural Asphalt Pavement
2. Upgrade to New Flashers, Gates, and Bells
3. Replace Impacted Pavement Markings
4. Const twin 36" pipes north of crossing
5. Add W10-3 signs on Camino Adelante Drive
6. Add R8-8 sign "Do Not Stop on Tracks"
7. Add 10' x 30' Concrete Panel Crossing Surface
8. Detour Traffic to Marana Road Crossing

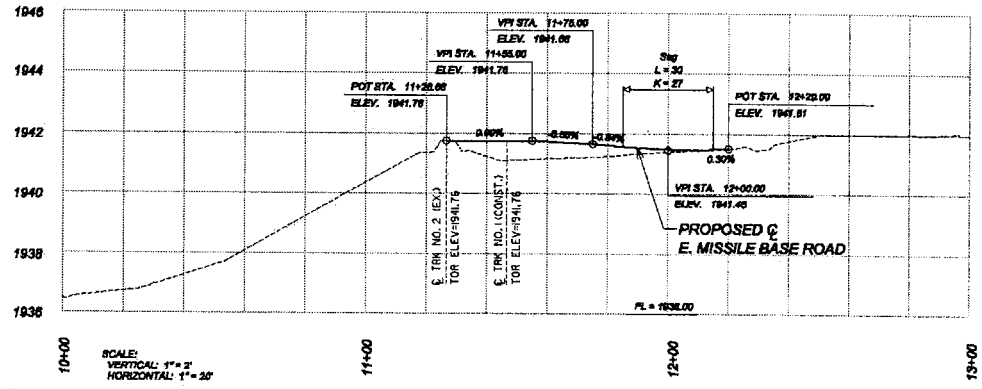
Track

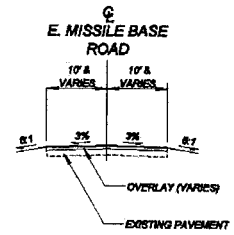
1. Construct New Mainline on North side
2. Install New Train Signal Equipment

Grade Separation

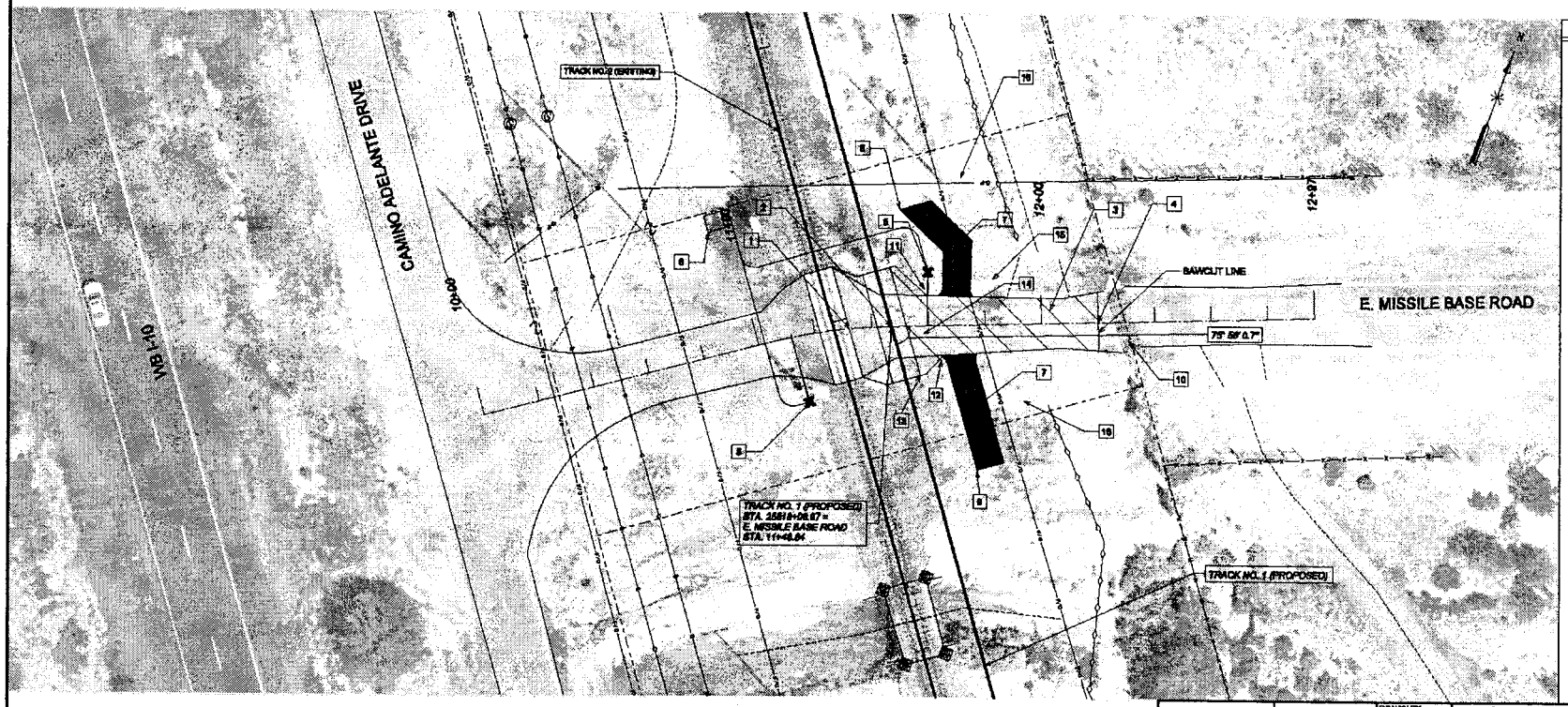
None Planned by Pinal County

(Source: Discussions w/County on 2/28/07)





TYPICAL SECTION



CONSTRUCTION NOTES

1. BEGIN CONSTRUCTION STA. 11+32.10, TIE TO EXISTING (SEE DETAIL C).
2. CONSTRUCT 10' X 40' CONCRETE CROSSING PAD (SEE DETAIL B).
3. CONSTRUCT PAVEMENT OVERLAY (SEE DETAIL A).
4. STA. 12+25.00, TIE TO EXISTING (SEE DETAIL C).
5. PROVIDE STAKED LOCATION FOR PROPOSED SIGNAL FOUNDATION FOR UP&R.
6. CONSTRUCT SUBBALLAST SIGNAL HOUSE PAD AND ACCESS DRIVE FROM ROADWAY (SEE DETAIL D).
7. CONSTRUCT ACCESS ROAD (SEE DETAIL D).
8. TIE TO ACCESS ROAD IN TRACK PLANS ELEV = 1936.42.
9. TIE TO ACCESS ROAD IN TRACK PLANS ELEV = 1936.00.
10. CATTLE GUARD (TO REMAIN).
11. STA. 11+60, 11' LT., ELEV.= 1941.40
12. STA. 11+85, 11' RT., ELEV.= 1941.38
13. ROTATE PAVEMENT TO MATCH CONCRETE PANEL.
14. REMOVE DBL - 36" CMP (INCLUDES FILL PLACEMENT AND COMPACTION TO BOTTOM OF PROPOSED SUBBALLAST.)
15. STA 11+85, FL= 1936.00 LT., FL= 1935.50 RT. CONSTRUCT 78 LF OF DBL - 36" CMP W/ END SECTIONS PER ADOT C-13.23. (INCLUDES EXCAVATION, COMPACTION, BASE, AND PAVEMENT PATCH).
16. GRADE @ 5% TO MATCH TRACK DITCH ELEVATION.

NOTE:

1. SEE SIGNING AND PAVEMENT MARKING SHEET FOR MORE INFORMATION.
2. SEE TRAFFIC CONTROL SHEET FOR STAGING/DETOUR INFORMATION.
3. SEE VOLUME 1 - ROADWAY DETAILS FOR DETAILS.

SCALE: 0 20 40 80

PRELIMINARY

NOT FOR CONSTRUCTION DATE: 04/25/07

HDR

DRAWN BY:	AL
CHECKED BY:	HAS
DATE:	30 MAR 2007
SHEET NUMBER:	R002 of R004

UNION PACIFIC RAILROAD — Office of Assistant Vice President Engineering Design

LOCATION: SUNSET ROUTE - SEGMENT 1 - VOLUME 10

DWG TITLE: ROADWAY CROSSING PLAN & PROFILE
E. MISSILE BASE ROAD (MP 956.26)
DOT # 741716Y

UPRR.sb1
PLOTTING.cb1
SIL956.26_PP_MissileBaseRd.dgn
04/25/2007

SIL956.26_PP_MissileBaseRd.dgn

LIST OF PERMANENT ROADWAY SIGNING			
ITEM	ADOT/ MUTCD	SIZE	CONTRACTOR QTY.
STOP HEAD	W3-1	36" X 36"	-
DO NOT ENTER WHEN FLOODED	W8-33	24" X 48"	-
RAILROAD CROSSING	W10-1	36" DIA.	-
HWY-RAIL GRADE CROSSING	W10-3R	36" X 36"	-
ADVANCE WARNING	W10-3L	36" X 36"	-
"2 TRACKS"	W16-8AZ	VAR X 8"	-
ROAD NAME	W16-8AZ	VAR X 8"	-
CATTLE GUARD	W77-77	36" X 36"	-
STOP	R1-1	30" X 30"	-
DO NOT STOP ON TRACKS	R8-8	24" X 30"	-
CROSS BUCKS	R15-1	48" X 8"	2
2 TRACKS	R15-2	27" X 18"	2
OBJECT MARKER	OM1-1	6" X 12"	1
OBJECT MARKER	OM3-1V	6" X 12"	1
5" WHITE		-	192'
24" WHITE		-	10'
5" DBL YELLOW		-	194'
"ONLY"		-	-
RAILROAD MARKINGS	M-5	-	-

CONTRACTOR

1. CONSTRUCT 5" SOLID YELLOW
2. CONSTRUCT 5" SOLID WHITE
3. CONSTRUCT 24" SOLID WHITE
4. CONSTRUCT 5" DBL YELLOW
5. CONSTRUCT SKIP WHITE
6. CONSTRUCT RAILROAD MARKING SYMBOL PER ADOT STD. M-5
7. CONSTRUCT 8" WHITE RIGHT TURN ARROW PER ADOT STD. M-10 & M-11
8. CONSTRUCT MESSAGE "ONLY" PER ADOT STD. M-11 & M-6
9. CONSTRUCT CURB MARKING FOR RAISED MEDIAN PER ADOT STD. M-1
10. CONSTRUCT 8" WHITE LEFT MERGE ARROW PER ADOT STD. M-10

NOTE: ALL PAVEMENT MARKINGS WITHIN THE PINAL COUNTY SHALL BE THERMOPLASTIC.

UPRR

11. STA. 11+12, 20' RT, EL —.—; STA. 11+90, 18' LT, EL —.—
CONSTRUCT FLASHING-LIGHT SIGNAL, POST-MOUNTED (R 15-1 - RELOCATED, R 15-2, BACK LIGHTS, BELLS & GATE, w/20' ARM) ON CONCRETE FOUNDATION PER MUTCD, PART 8 & UPRR STD.
12. STA. —+—, —'—, EL —.—; STA. —+—, —'—, EL —.—
CONSTRUCT FLASHING-LIGHT SIGNAL, POST-MOUNTED (R 15-1 - RELOCATED, R 15-2, BACK LIGHTS, BELLS & GATE, w/– ARM) w/SIDE LIGHTS (2 SETS); ON CONCRETE FOUNDATION PER MUTCD, PART 8 & UPRR STD.
13. CONSTRUCT SIGNAL HOUSE (6' x 6')
14. RELOCATE EXISTING SIGNAL HOUSE FOR TRACK CONSTRUCTION; REMOVE UPON ACTIVATION OF NEW SIGNAL HOUSE.
15. REMOVE SIGNAL FLASHERS, GATE AND FOUNDATION. RELOCATE R15-1 FROM EXISTING POLE TO NEW SIGNAL POLE.
16. PRE-EMPTION TRAFFIC SIGNAL (BY OTHERS). RECONNECT TO NEW SIGNAL HOUSE.
17. CONSTRUCT FLASHING LIGHTS ON CANTILEVER w/R15-2, R15-1(RELOCATED) & GATE ON CONCRETE FOUNDATION PER MUTCD, PART 8 & UPRR STD.
18. CONSTRUCT 10' X 30' PRECAST CONCRETE PANELS ON 10' CONCRETE TIES PER UPRR STDS.

PINAL COUNTY (DISTRICT 1)

1.) ALL SIGNING AND MARKING WITH THE NOTATION "(BY PINAL)" ARE TO BE FURNISHED AND INSTALLED BY PINAL COUNTY.

2.) EXISTING STRIPING TO REMAIN, NEEDS FRESH COAT.

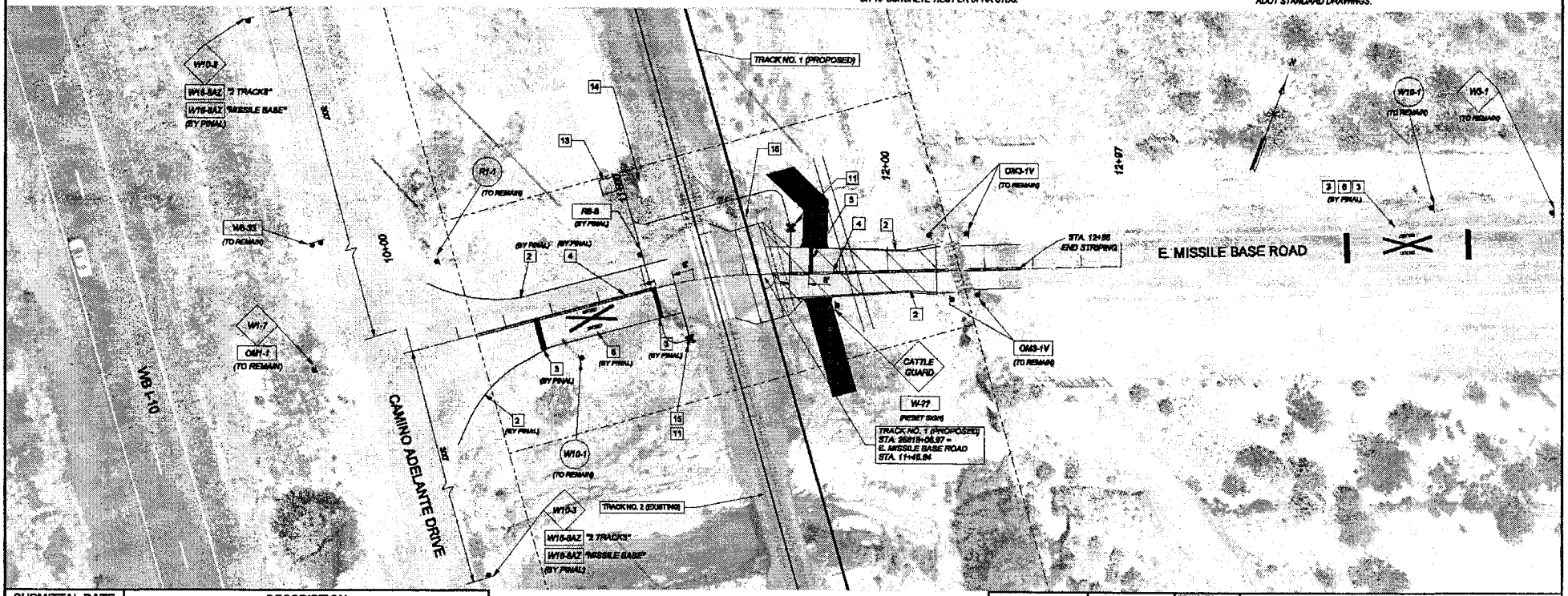
CLOSURES REQUIRED:

1.) ONE WEEK FULL CLOSURE FOR MAJOR ROADWAY WORK w/DETOUR.

2.) 8 HOUR NIGHT CLOSURE FOR SETTING RAIL. (1-2 MONTHS AFTER FULL CLOSURE)

3.) POSSIBLE 8 HOUR NIGHT CLOSURE FOR SETTLEMENT SUBSEQUENT TO TRAINS RUNNING ON ACTIVE TRACK. (3 MONTHS AFTER CLOSURE FOR SETTING RAIL)

NOTE: ALL SIGNING AND PAVEMENT MARKINGS SHALL BE CONSTRUCTED/ INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND ADOT STANDARD DRAWINGS.



SUBMITTAL DATE	DESCRIPTION
3/21/ 2007	FOR ACC APPLICATION
4/25/ 2007	PINAL COUNTY, AZ. SUBMITTAL

SCALE

PRELIMINARY

NOT FOR CONSTRUCTION DATE: 04/25/07

HDR

DRAWN BY: MJT	UNION PACIFIC RAILROAD — Office of Assistant Vice President Engineering Design
CHECKED BY: JOC	LOCATION: SUNSET ROUTE - SEGMENT 1 - VOLUME 10
DATE: 30 MAR 2007	DWG TITLE: ROADWAY SIGNING & PAVEMENT MARKING E. MISSILE BASE ROAD (MP 956.26) DOT # 741716Y
SHEET NUMBER R004 of R004	

UPRR.tbl
PLOTTING.tbl
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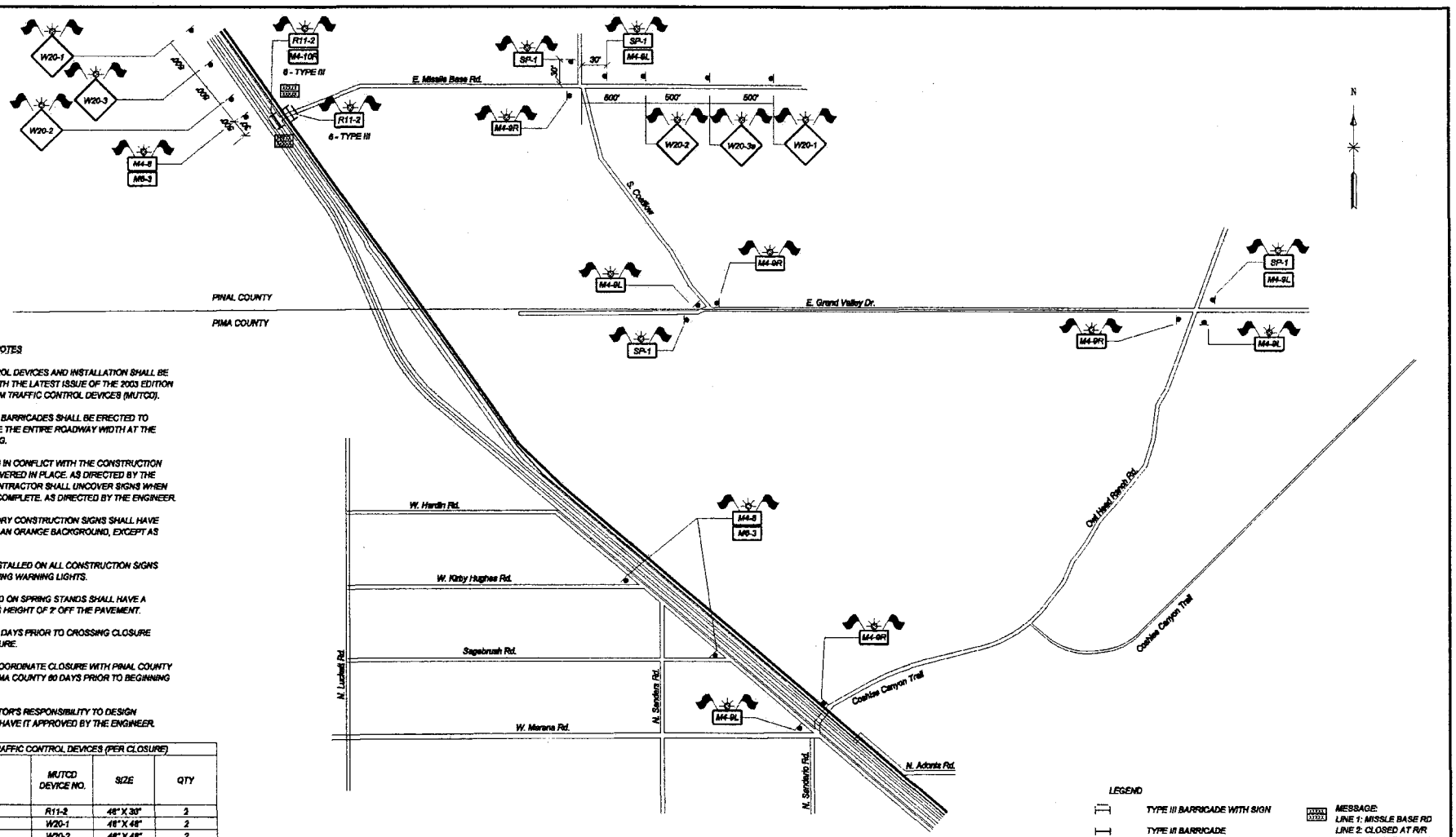
6/14/2007

SIL_R956.26_SM_EMissileBaseRd.dgn



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5) FLAGS SHALL BE INSTALLED ON ALL CONSTRUCTION SIGNS WITH TYPE A FLASHING WARNING LIGHTS.

6) ALL SIGNS MOUNTED ON SPRING STANDS SHALL HAVE A MINIMUM MOUNTING HEIGHT OF 2' OFF THE PAVEMENT.

7) PLACE VMS SIGN 14 DAYS PRIOR TO CROSSING CLOSURE THRU END OF CLOSURE.

8) CONTRACTOR TO COORDINATE CLOSURE WITH PINAL COUNTY (DISTRICT 1) AND PIMA COUNTY 60 DAYS PRIOR TO BEGINNING WORK.

9) IT IS THE CONTRACTOR'S RESPONSIBILITY TO DESIGN THE SP-1 SIGN AND HAVE IT APPROVED BY THE ENGINEER.

LIST OF TRAFFIC CONTROL DEVICES (PER CLOSURE)

ITEM	MUTCD DEVICE NO.	SIZE	QTY
ROAD CLOSED	R11-2	48" X 30"	2
ROAD WORK AHEAD	W20-1	48" X 48"	2
DETOUR AHEAD	W20-2	48" X 48"	2
ROAD CLOSED 1000 FT	W20-3	48" X 48"	1
ROAD CLOSED AHEAD	W20-3a	48" X 48"	1
DETOUR	M4-8	24" X 12"	3
DETOUR WITH LEFT ARROW	M4-9L	30" X 24"	6
DETOUR WITH RIGHT ARROW	M4-9R	30" X 24"	4
DETOUR	M4-10R	48" X 18"	1
STRAIGHT AHEAD DIRECTIONAL ARROW	M6-3	24" X 18"	3
SPECIAL SIGN	SP-1		3
VARIABLE MESSAGE BOARD	-	DAYS	42
BARRICADES	TYPE III		12

LEGEND

- TYPE III BARRICADE WITH SIGN
- TYPE III BARRICADE
- WARNING FLAGS
- WARNING LIGHT
- SIGN ON SPRING STAND
- CHANGEABLE MESSAGE BOARD

MESSAGE:
LINE 1: MISSLE BASE RD
LINE 2: CLOSED AT R/R
LINE 3: X-X-07 TO X-X-07

SP-1

Missile Base Rd
Closed at R/R Crossing
Use Cochise Canyon

PRELIMINARY
NOT FOR CONSTRUCTION DATE: 04/25/07

HDR

UNION PACIFIC

DRAWN BY:	
CHECKED BY:	
DATE:	30 MAR 2007
SHEET NUMBER	R003 of R004

UNION PACIFIC RAILROAD — Office of Assistant Vice President Engineering Design

LOCATION: SUNSET ROUTE - SEGMENT 1 - VOLUME 10

DWG TITLE: ROADWAY TRAFFIC CONTROL
E. MISSILE BASE ROAD (MP 956.26)
DOT # 741716Y

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6/14/2007

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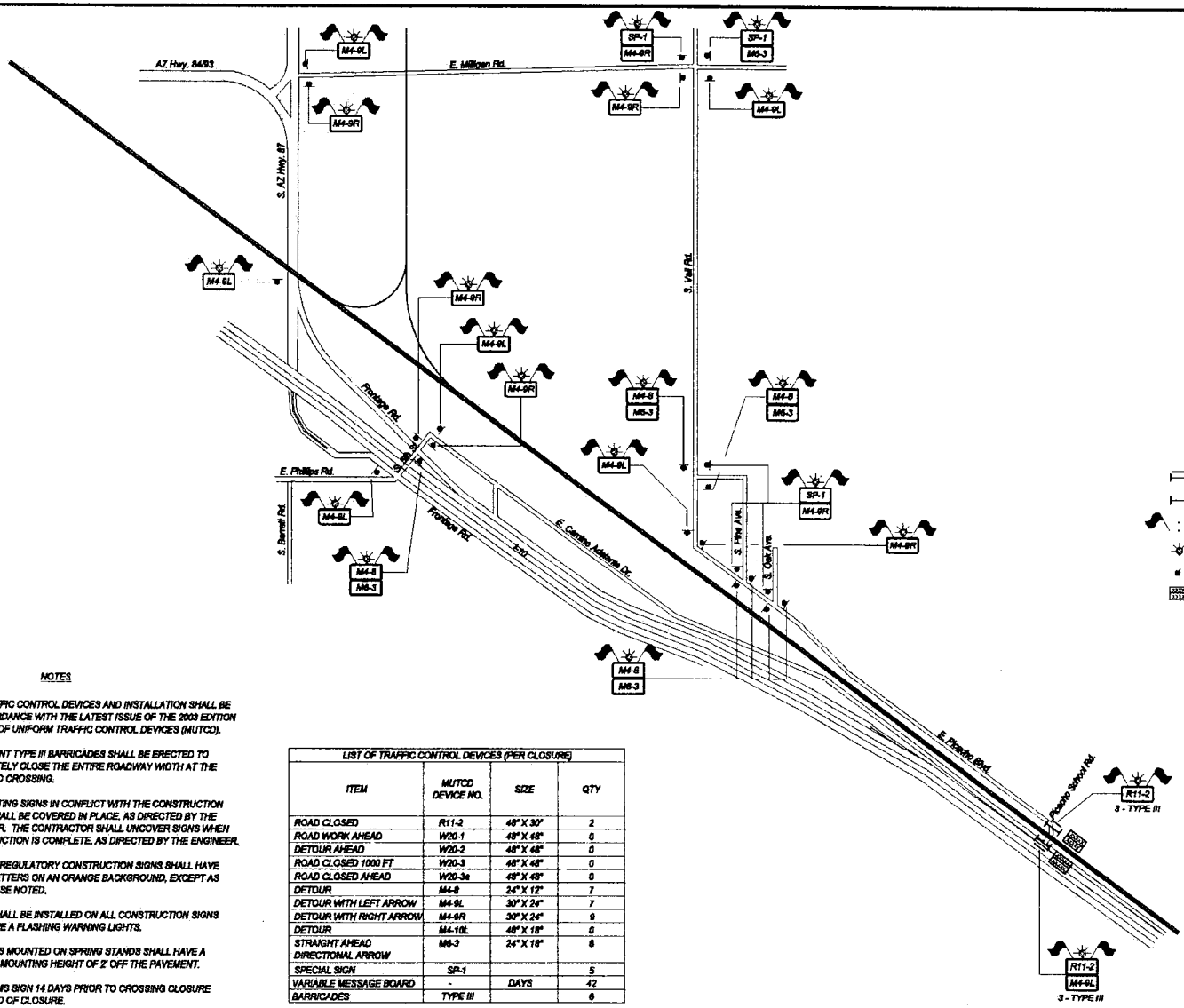

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LEGEND

- TYPE III BARRICADE WITH SIGN
- TYPE III BARRICADE WITH SIGN
- TYPE III BARRICADE
- WARNING FLAGS
- WARNING LIGHT
- SIGN ON SPRING STAND
- CHANGEABLE MESSAGE BOARD

SP-1

Picacho School Rd
Closed at RR Crossing
Use Hwy 87

MESSAGE:
LINE 1: PICACHO SCHOOL RD
LINE 2: CLOSED AT RR
LINE 3: USE HWY 87

NOTES

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DETOUR AHEAD	W20-2	48" X 48"	0
ROAD CLOSED 1000 FT	W20-3	48" X 48"	0
ROAD CLOSED AHEAD	W20-3a	48" X 48"	0
DETOUR	M4-8	24" X 12"	7
DETOUR WITH LEFT ARROW	M4-9L	30" X 24"	7
DETOUR WITH RIGHT ARROW	M4-9R	30" X 24"	9
DETOUR	M4-10L	48" X 18"	0
STRAIGHT AHEAD DIRECTIONAL ARROW	M6-3	24" X 18"	6
SPECIAL SIGN	SP-1		5
VARIABLE MESSAGE BOARD	-	DAYS	42
BARRICADES	TYPE III		6

PRELIMINARY

NOT FOR CONSTRUCTION DATE: 04/25/07

HDR

UNION PACIFIC

DRAWN BY: AYJ	UNION PACIFIC RAILROAD — Office of Assistant Vice President Engineering Design
CHECKED BY: HAS	LOCATION: SUNSET ROUTE - SEGMENT 1 - VOLUME 8
DATE: 30 MAR 2007	DWG TITLE: ROADWAY TRAFFIC CONTROL PICACHO BOULEVARD (MP 934.88) DOT # 741712W
SHEET NUMBER: R002 of R003	

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