



COTTON BELT

Cotton Belt Corridor PE/EIS

Existing Signals Assessment Report

February, 28, 2011



Prepared for Dallas Area Rapid Transit
General Planning Consultant Managed by URS Corporation



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Version 1

Prepared by Stantec Consulting, Inc



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Cotton Belt Corridor PE/EIS

1.0 Introduction

As a part of the URS project team for the Cotton Belt Corridor PE/EIS project, Stantec has been tasked with performing a cursory assessment of the condition of the signal system and at-grade crossings within the Cotton Belt Corridor. This report summarizes the findings and results of the field inspection.

2.0 Background

The limits of the assessment area include approximately 23 miles of the Cotton Belt Rail Corridor which is owned by DART. The study area begins at Milepost (MP) 589.5 which is located at L Street in the City of Plano and ends at Milepost 612.5 just east of the Texas 114L Business Loop near the City of Grapevine. DART intends to introduce passenger rail service through the corridor while maintaining the freight traffic that currently utilizes it.

Currently three different freight railways operate within the corridor.

The Kansas City Southern Railroad (KCS) operates a 3.3 mile section on the east end of the corridor from MP 589.5 to MP 592.8.

The Dallas, Garland & Northeastern Railroad (DGNO) operates a 10.7 mile central portion of the corridor from MP 592.8 to MP 603.5.

The Fort Worth Western Railroad (FWWR) operates a 9 mile portion on the western end of the corridor from MP 603.5 to MP 612.5.

3.0 Grade Crossing Report

4.0 Interlocking at I-35

5.0 Google Maps of the Rail Line

6.0 Recommendations

All crossings seemed to be between 15 and 20 years old. With the addition of the second track, it is recommended to replace all crossings. New control equipment is going to be needed for passenger service. Also, if these are going to be quiet zones the state regulations must be followed.

There are only 2 signals in this 23 mile corridor at I -35 where the BNSF crosses, a new block design will need to be done and a signal system will need to be added.

Please Note: We were not able to inventory the relay houses or cases, as we did not have anyone with us from the railroad.

Appendix A
EXISTING CONDITIONS FIELD WORKSHEET – AT GRADE CROSSINGS

EXISTING CONDITIONS FIELD WORKSHEET

DATA COLLECTED FOR AT-GRADE CROSSINGS

GENERAL INFORMATION	
Date of Inventory	1/21/11
Time of Inventory	9:20 AM
City Name (in or near)	Addison
County, Township	
Street / Highway Name	Addison Road

RAILROAD INFORMATION				
Railroad, Subdivision and Milepost	DGNO, Carrollton, MP 598.46			
Crossing Inventory No. (AARDOT)	789-766-N			
Number of Tracks	1			
Warning Device	Crossbucks, Gates, Flashers and Bell			
- Location	NW	SE	NE	SW
- Distance of primary masts to edge of roadway	4'2	4'2		
- Distance to near rail (measured along roadway)	21'	16'		
- Other signs	None			
Crossing Angle (Angular Dimension)	90			
Crossing Surface Type	Rubber			
Track Centers	N/A			
Track Orientation	E/W			
Relative Condition (Poor, Fair, Good, Excellent)	Fair			

HIGHWAY INFORMATION	
Average Daily Traffic (ADT)	High
Distance from Nearest Intersection (< or > 200')	> 200
Signalized Intersection? YES or NO or N/A	Yes
Orientation	N/S
Type of Traffic Control	Traffic Signals 180' South and 170' North of crossing
Vehicle Speed at Crossing (posted)	None
Characteristic of Flow (Car, Bus or Truck)	All
Number of Lanes	2N / 2S
Type / Width of Center Median (if applicable)	N/A
Surface Type	Asphalt
Type of Advance Warning	Signs & Pavement Markings
Relative Condition (Poor, Fair, Good, Excellent)	Good
School Bus Route & Count YES / NO / UNKNOWN	Unknown
Emergency Route YES / NO / UNKNOWN	Unknown

HIGHWAY INFORMATION

Hazardous Material Route	YES / NO / UNKNOWN	Unknown
Photographs -	Viewing Order (1 through 5)	
1 = North		
2 = Case		
3 = West		
4 = East		
5 = South		

COMMENTS:

2 Spur tracks west of crossing one goes north Hand throw switch one goes South - G&B Switch switch control on signal

2 Gates Model 95 US&S 2 Sets of flashers on each

Recommendation - With the 2nd track being added, the crossing control equipment will need to be replaced and new house and gates for the passenger service.

EXISTING CONDITIONS FIELD WORKSHEET

DATA COLLECTED FOR AT-GRADE CROSSINGS

GENERAL INFORMATION	
Date of Inventory	1/19/11
Time of Inventory	4:28 P.M.
City Name (in or near)	Plano
County, Township	Collin
Street / Highway Name	Alma Drive

RAILROAD INFORMATION				
Railroad, Subdivision and Milepost	KCS, Alliance, MP 591.2			
Crossing Inventory No. (AARDOT)	753-757-M			
Number of Tracks	1			
Warning Device	Crossbucks, Gates, Flashers and Bell			
- Location	NW	SE	NE	SW
- Distance of primary masts to edge of roadway	4'2	4'2	4'2	4'2
- Distance to near rail (measured along roadway)	18'	33'	12'	12'
- Other signs	No Train Horn – SB			
Crossing Angle (Angular Dimension)	120			
Crossing Surface Type	Rubber			
Track Centers	N/A			
Track Orientation	E/W			
Relative Condition (Poor, Fair, Good, Excellent)	Fair			

HIGHWAY INFORMATION	
Average Daily Traffic (ADT)	High
Distance from Nearest Intersection (< or > 200')	> 200
Signalized Intersection? YES or NO or N/A	Yes
Orientation	N/S
Type of Traffic Control	Traffic light 70" south of xing NB and 60' north of xing SB
Vehicle Speed at Crossing (posted)	None
Characteristic of Flow (Car, Bus or Truck)	All
Number of Lanes	3 North 3 South
Type / Width of Center Median (if applicable)	Concrete 10'
Surface Type	Concrete
Type of Advance Warning	Signs and Pavement Markings
Relative Condition (Poor, Fair, Good, Excellent)	Good
School Bus Route & Count YES / NO / UNKNOWN	Unknown

HIGHWAY INFORMATION

Emergency Route	YES / NO / UNKNOWN	Unknown
Hazardous Material Route	YES / NO / UNKNOWN	Unknown
Photographs -	Viewing Order (1 through 4)	
1 = North		
2 = East		
3 = West		
4 = South		

COMMENTS:

4 Gates 2 NB & 2 SB WCH

Recommendation - with the 2nd track being added the crossing control equipment will need to be replaced new house and gates for the passenger service.

EXISTING CONDITIONS FIELD WORKSHEET

DATA COLLECTED FOR AT-GRADE CROSSINGS

GENERAL INFORMATION	
Date of Inventory	1/20/11
Time of Inventory	3:10 PM
City Name (in or near)	Carrollton
County, Township	
Street / Highway Name	N. I-35E SB

RAILROAD INFORMATION				
Railroad, Subdivision and Milepost	FWWR, Fort Worth, MP 603.50			
Crossing Inventory No. (AARDOT)	789-755-B			
Number of Tracks	1			
Warning Device	Crossbucks, Gates, Flashers and Bell			
- Location	NW	SE	NE	SW
- Distance of primary masts to edge of roadway	4'2		4'2	
- Distance to near rail (measured along roadway)	10'		10'	
- Other signs	None			
Crossing Angle (Angular Dimension)	90			
Crossing Surface Type	Concrete			
Track Centers	N/A			
Track Orientation	N/S			
Relative Condition (Poor, Fair, Good, Excellent)	Good			

HIGHWAY INFORMATION	
Average Daily Traffic (ADT)	High
Distance from Nearest Intersection (< or > 200')	> 200
Signalized Intersection? YES or NO or N/A	Yes
Orientation	South
Type of Traffic Control	Traffic Signal 60' south of signal
Vehicle Speed at Crossing (posted)	35 MPH
Characteristic of Flow (Car, Bus or Truck)	All
Number of Lanes	2/South – one way
Type / Width of Center Median (if applicable)	N/A
Surface Type	Concrete
Type of Advance Warning	Signs and Pavement Markings
Relative Condition (Poor, Fair, Good, Excellent)	Good
School Bus Route & Count YES / NO / UNKNOWN	Unknown

HIGHWAY INFORMATION		
Emergency Route	YES / NO / UNKNOWN	Unknown
Hazardous Material Route	YES / NO / UNKNOWN	Unknown

EXISTING CONDITIONS FIELD WORKSHEET

DATA COLLECTED FOR AT-GRADE CROSSINGS

GENERAL INFORMATION	
Date of Inventory	1/21/11
Time of Inventory	12:27 P.M.
City Name (in or near)	Plano
County, Township	Collins
Street / Highway Name	Meandering Way

RAILROAD INFORMATION				
Railroad, Subdivision and Milepost	DGNO, Carrollton, MP 594.73			
Crossing Inventory No. (AARDOT)	790-106-Y			
Number of Tracks	1			
Warning Device	Crossbucks, Gates, Flashers and Bell			
- Location	NW	SE	NE	SW
- Distance of primary masts to edge of roadway	4'2	4'2		
- Distance to near rail (measured along roadway)	11'	10'		
- Other signs	None			
Crossing Angle (Angular Dimension)	90			
Crossing Surface Type	Concrete			
Track Centers	N/A			
Track Orientation	E/W			
Relative Condition (Poor, Fair, Good, Excellent)	Good			

HIGHWAY INFORMATION	
Average Daily Traffic (ADT)	Medium
Distance from Nearest Intersection (< or > 200')	< 200
Signalized Intersection? YES or NO or N/A	N/A
Orientation	N/S
Type of Traffic Control	N/A
Vehicle Speed at Crossing (posted)	None
Characteristic of Flow (Car, Bus or Truck)	All
Number of Lanes	2S / 2N
Type / Width of Center Median (if applicable)	N/A
Surface Type	Concrete / Asphalt at crossing
Type of Advance Warning	None
Relative Condition (Poor, Fair, Good, Excellent)	Good
School Bus Route & Count YES / NO / UNKNOWN	Unknown

HIGHWAY INFORMATION

Emergency Route	YES / NO / UNKNOWN	Unknown
Hazardous Material Route	YES / NO / UNKNOWN	Unknown
Photographs -	Viewing Order (1 through 5)	
1 = South		
2 = Case		
3 = West		
4 = North		
5 = East		

COMMENTS:

2 Gates Harmon – 2 sets of flashers

Recommendation - with the 2nd track being added the crossing control equipment will need to be replaced new house and gates for the passenger service.

EXISTING CONDITIONS FIELD WORKSHEET

DATA COLLECTED FOR AT-GRADE CROSSINGS

GENERAL INFORMATION	
Date of Inventory	1/19/11
Time of Inventory	1:48 P.M.
City Name (in or near)	Plano
County, Township	Collins
Street / Highway Name	K Avenue

RAILROAD INFORMATION				
Railroad, Subdivision and Milepost	KCS, Alliance, MP 589.63			
Crossing Inventory No. (AARDOT)	789-635-K			
Number of Tracks	1			
Warning Device	Crossbucks, Gates, Flashers and Bell			
- Location	NW	SE	NE	SW
- Distance of primary masts to edge of roadway		4'2		4'2
- Distance to near rail (measured along roadway)		12'		27'
- Other signs	No Train Horn			
Crossing Angle (Angular Dimension)	120			
Crossing Surface Type	Concrete			
Track Centers	N/A			
Track Orientation	E/W			
Relative Condition (Poor, Fair, Good, Excellent)	Good			

HIGHWAY INFORMATION	
Average Daily Traffic (ADT)	High
Distance from Nearest Intersection (< or > 200')	<200
Signalized Intersection? YES or NO or N/A	N/A
Orientation	N/S
Type of Traffic Control	N/A
Vehicle Speed at Crossing (posted)	35 MPH
Characteristic of Flow (Car, Bus or Truck)	All
Number of Lanes	3 – one way SB
Type / Width of Center Median (if applicable)	N/A
Surface Type	Asphalt
Type of Advance Warning	Signs & Pavement Markings
Relative Condition (Poor, Fair, Good, Excellent)	Good
School Bus Route & Count YES / NO / UNKNOWN	Unknown

HIGHWAY INFORMATION		
Emergency Route	YES / NO / UNKNOWN	Unknown
Hazardous Material Route	YES / NO / UNKNOWN	Unknown
Location Sketch		
Photographs -	Viewing Order (1 through 5)	
1 = South		
2 = West		
3 = East		
4 = North		
5 = Housing & DOT#		
COMMENTS: 2 Gates Safetran 15-20 years old		
Recommendation - with the 2 nd track being added the crossing control equipment will need to be replaced new house and gates for the passenger service.		

HIGHWAY INFORMATION

Photographs -	Viewing Order (1 through 3)
1 =	Interlocking signal West of I35
2 =	West
3 =	East
COMMENTS:	
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EXISTING CONDITIONS FIELD WORKSHEET

DATA COLLECTED FOR AT-GRADE CROSSINGS

GENERAL INFORMATION	
Date of Inventory	1/20/11
Time of Inventory	5:11 PM
City Name (in or near)	Carrollton
County, Township	
Street / Highway Name	Perry Road N

RAILROAD INFORMATION				
Railroad, Subdivision and Milepost	DGNO, Carrollton, MP 602.5			
Crossing Inventory No. (AARDOT)	789-760-X			
Number of Tracks	1			
Warning Device	Crossbucks, Gates, Flashers and Bell			
- Location	NW	SE	NE	SW
- Distance of primary masts to edge of roadway	4'2	4'2		
- Distance to near rail (measured along roadway)	18'	21'		
- Other signs	None			
Crossing Angle (Angular Dimension)	90			
Crossing Surface Type	Asphalt – Needs work			
Track Centers	N/A			
Track Orientation	E/W			
Relative Condition (Poor, Fair, Good, Excellent)	Poor			

HIGHWAY INFORMATION	
Average Daily Traffic (ADT)	High
Distance from Nearest Intersection (< or > 200')	> 200'
Signalized Intersection? YES or NO or N/A	N/A
Orientation	N/S
Type of Traffic Control	N/A
Vehicle Speed at Crossing (posted)	30 MPH
Characteristic of Flow (Car, Bus or Truck)	All
Number of Lanes	1N / 1S
Type / Width of Center Median (if applicable)	N/A
Surface Type	Asphalt
Type of Advance Warning	Signs
Relative Condition (Poor, Fair, Good, Excellent)	Good
School Bus Route & Count YES / NO / UNKNOWN	Unknown

HIGHWAY INFORMATION		
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Emergency Route	YES / NO / UNKNOWN	Unknown
Hazardous Material Route	YES / NO / UNKNOWN	Unknown
Photographs -	Viewing Order (1 through 5)	
1 = North		
2 = South		
3 = West		
4 = East		
5 = Housing		

COMMENTS:

2 Gates WCH – 2 Sets of flashers on SE gate 3 sets on NW gate one for the side Street 51’ feet North of the crossing

Both gates have bells

House has no Name or DOT # and has many bullet holes.



Alliance Transportation Group
Arredondo, Zepeda & Brunz
Bowman Engineering
Connetics Transportation Group
Cox|McLain Environmental Consulting
CP&Y
Criado & Associates
Dunbar Transportation Consulting
HMMH
KAI Texas
K Strategies Group
Legacy Resource Group
Mas-Tek Engineering & Associates
Nathan D. Maier Consulting Engineers
Pacheco Koch Consulting Engineers
Parsons
Schrader & Cline
Spartan Solutions
Stantec



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