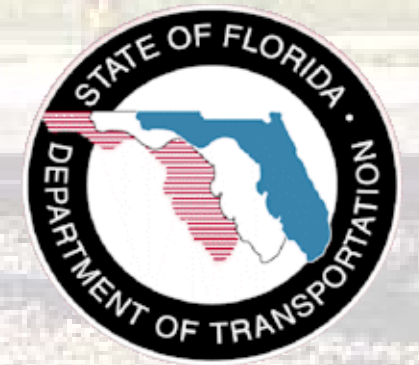


**BROWARD COUNTY  
QUIET ZONE  
PRELIMINARY ASSESSMENT**

**DRAFT**



# TRI-RAIL COASTAL LINK- QUIET ZONES AND NON QUIET ZONE AREAS BROWARD COUNTY

Template Number	Jurisdiction	From/To	Delineation	Crossings	Quiet Zone Crossing \$	Non Quiet Zone Crossing \$*
1	Deerfield Beach (Non-Quiet Zones)	NE 2 <sup>nd</sup> Street to SW 15 <sup>th</sup> Street	M.P. 326.81 - M.P. 328.48	5		900,000
2	Pompano Beach (Quiet Zone)	SR 814/W. Atlantic Blvd. to SW 3 <sup>rd</sup> St.	M.P. 333.14- M.P. 333.51	3	650,000	
2	Pompano Beach (Non Quiet Zone)	NE 48 <sup>th</sup> St. to SR 811/N. Dixie Hwy. And SW 6 <sup>th</sup> St.	M.P. 329.00–M.P. 333.00 And M.P. 333.51 -M.P. 333.79	8 1		1,400,000 200,000
3	Ft. Lauderdale (Quiet Zone)	NE 17 <sup>th</sup> Ct. to River Walk	M.P. 338.80- M.P. 341.23	11	2,000,000	
3	Ft. Lauderdale (Non Quiet Zone)	NE 62 <sup>nd</sup> St. to NE 56 <sup>th</sup> St. And SW 5 <sup>th</sup> St. to SW 24 <sup>th</sup> St.	M.P. 335.13.00–M.P. 335.63 And M.P. 341.45- M.P. 343.09	2 9		350,000 1,500,000
4	Oakland Park (Non Quiet Zone)	SR 870/E. Commercial Blvd. to Oakland Park Blvd.	M.P. 336.14- M.P. 337.67	6		1,000,000
5	Wilton Manors (Non Quiet Zone)	NE 26 <sup>th</sup> St. to NE 24 <sup>th</sup> St.	M.P. 338.16 – M.P. 338.30	2		350,000
6	Dania Beach (Non Quiet Zone)	Griffen Rd. to Sheridan St.	M. P. 345.38 – M.P. 347.13	7		1,200,000
7	Hollywood (Quiet Zone)	Garfield St. to Washington St.	M.P. 348.07 – M.P. 349.29	8	1,050,000	
7	Hollywood (Non Quiet Zone)	Taft St.	M.P. 347.75 to 348.07	1		150,000
8	Hallandale Beach (Quiet Zone)	SR 824/Pembroke Road to NE 215 <sup>th</sup> St.	M.P. 349.80 to M.P. 351.32	5	850,000	
<b>Total</b>				<b>27 Quiet Zone 41 Non Quiet Zone</b>	<b>4,550,000</b>	<b>7,050,000</b>

\*Note: The QZ\$ are a planning level estimate. Proposed QZ Crossings based on budget constraints.  
All crossing information will be updated after the diagnostic field reviews.



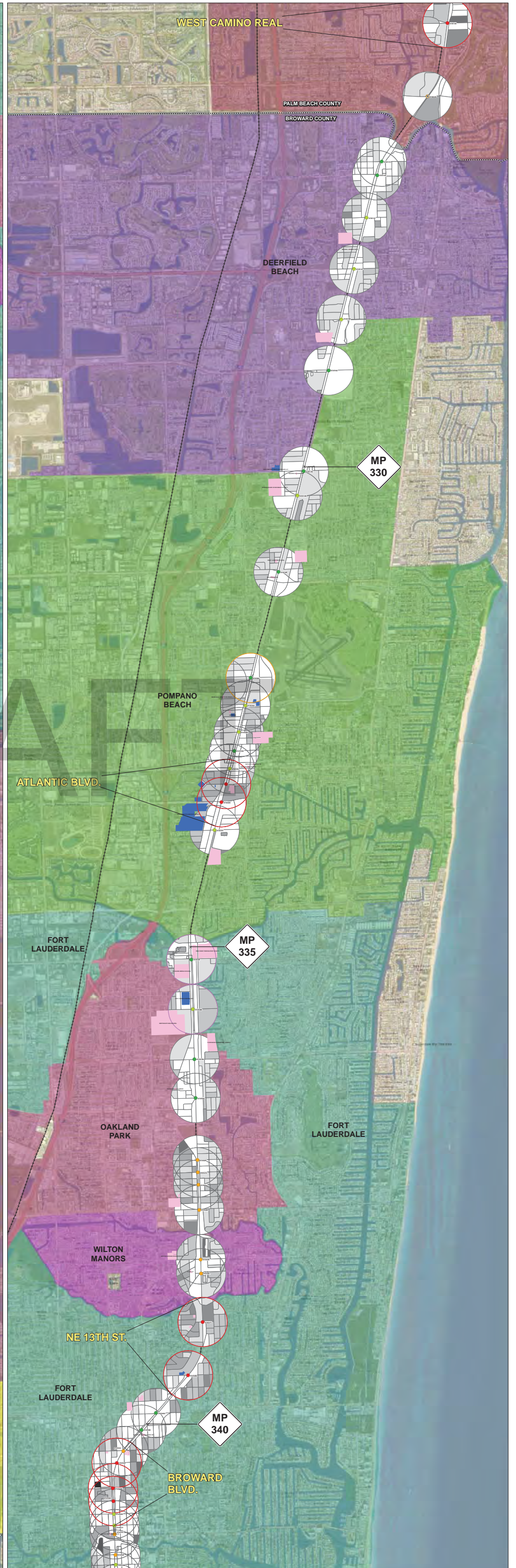
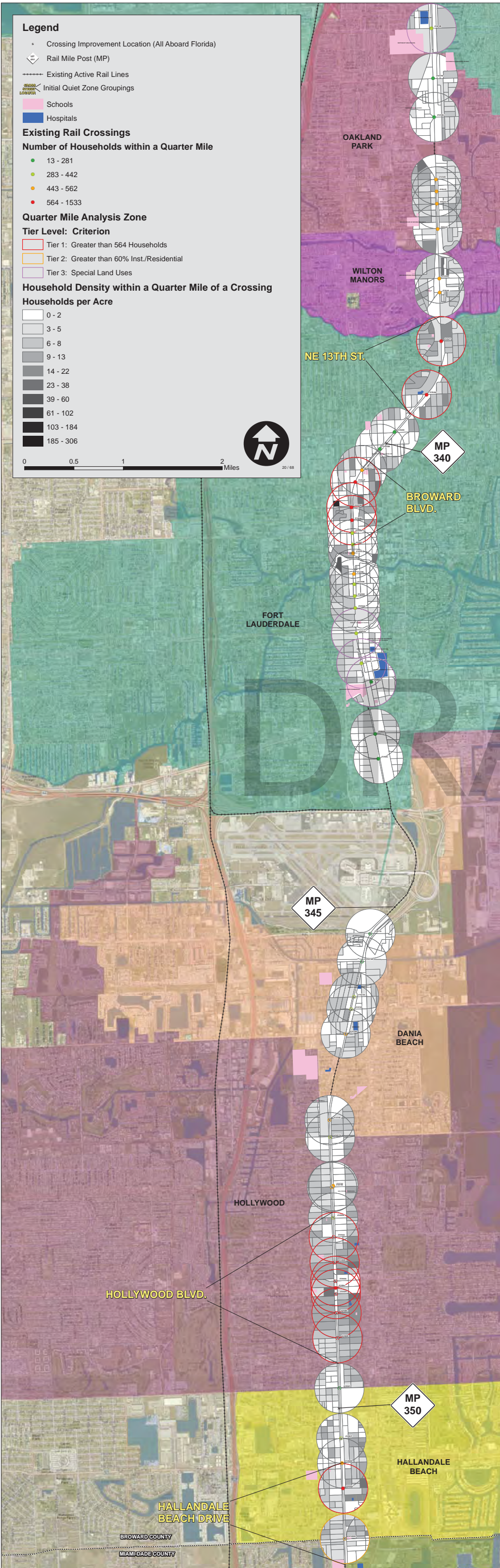
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AC	
2	Crossing #	Local Street	Quiet Zone Name	Municipality	Highway Owner	Latitude	Longitude	RR Mile Post	Track	Highway ADT	# S. Buses	# Tracks	# Hwy Lanes	Train Volume	Pro. Pass. Train	Pro. Tot. Tr. Vol.	TT Speed	AAF TTS	AWS	Accidents	Warning Device	CWT (Y/N)	P.O.I.	SSM	RIWH	QZRI	QZ\$	
74	<b>LEGEND</b>																											
75	Crossing # - Federal RR Admin - Grade Crossing Inventory Number										Hwy ADT - Average Daily Traffic Volume of Highway										AAF TTS - Proposed Maximum Time Table Speed of trains with All Aboard Florida operations							
76	Local Street - Posted Highway Crossing Name										# S. Buses - Average Number of Daily School Buses over Crossing										AWS - Advance Warning Signs - Highway Signs posted in advance of crossing to alert drivers of a "crossing ahead"							
77	Municipality - Legal Jurisdiction Name where crossing lies										# Tracks - Number of Active FEC RR tracks in crossing										Accidents - Number of Crossing Accidents at Crossing posted in crossing inventory database							
78	Highway Owner - Agency having maintenance responsibility of highway										Hwy Lanes - Number of Through highway lanes in crossing										Warning Device - CFLBG (Cantilevered Flashing Lights, Bells & Gates), FLBG (Flashing lights, bells & gates)							
79	Latitude - G.P.S. North Latitude of Crossing Location										Train Volume - Average daily number of train movements over the crossing										CWT - Constant Warning Time							
80	Longitude - G.P.S. West Longitude of Crossing Location										Pro. Pass. Train Vol. - Daily number of proposed passenger train movements (AAF & TRCI										P.O.I. - Power Out Indicator							
81	RR Mile Post - FEC Railroad Mile Post designation (increasing South - North)										Pro. Tot. Tr. Vol. - Total Proposed Daily train volume										SSM - Supplemental Safety Measures							
82	Track - FEC RR Track Classification (Main, Siding, Spur, Yard, etc.)										TT Speed - Maximum Time Table Speed of Trains permitted ( mph)										RIWH - Risk Index With Horns							
83	Highway Owner - Agency having maintenance responsibility of highway																				QZRI - Quiet Zone Risk Index							
84	Latitude - G.P.S. North Latitude of Crossing Location																				QZ\$ - Estimated Cost of Supplemental Safety Measures for Quiet Zone Designation							
85	Longitude - G.P.S. West Longitude of Crossing Location																											
86	RR Mile Post - FEC Railroad Mile Post designation (increasing South - North)																											
87	Track - FEC RR Track Classification (Main, Siding, Spur, Yard, etc.)																											
88	Highway ADT - Average Daily Traffic Volume of Highway																											
89	# School Buses - Average Number of Daily School Buses over Crossing																											
90	# Tracks - Number of Active FEC RR tracks in crossing																											
91	Highway Lanes - Number of Through highway lanes in crossing																											
92	Train Volume - Average daily number of train movements over the crossing																											
93	TT Speed - Maximum Time Table Speed of Trains permitted ( mph)																											
94	AAF TTS - Proposed Maximum Time Table Speed of trains with All Aboard Florida operations																											
95	Advance Warning Signs - Highway Signs posted in advance of crossing to alert drivers of a "crossing ahead"																											
96	Accidents - Number of Crossing Accidents at Crossing posted in crossing inventory database																											
97	Warning Device - CFLBG (Cantilevered Flashing Lights, Bells & Gates), FLBG (Flashing lights, bells & gates)																											
98	Safety Index - Index Number assigned by FDOT based on probability of accident and accident history of crossing																											
99	CWT - Constant Warning Time																											
100	P.O.I. - Power Out Indicator																											
101	SSM - Supplemental Safety Measures																											
102	RIWH - Risk Index With Horns																											
103	QZRI - Quiet Zone Risk Factor																											
104	Crossing Upgrade \$ - Estimated Cost of Crossing Signal Upgrades																											
105	QZ\$ - Estimated Cost of Supplemental Safety Measures for Quiet Zone Designation																											

Note: The QZ\$ are a planning level estimate. Proposed QZ Crossings based on budget constraints.

All crossing information will be updated after the diagnostic field reviews.

DRAFT

# BROWARD COUNTY Tiered Quiet Zone Analysis Map



# TRI-RAIL COASTAL LINK- QUIET ZONES AND NON QUIET ZONE AREAS

## BROWARD COUNTY – DEERFIELD BEACH- TEMPLATE NO. 1

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Template Number	Jurisdiction	From/To:	Delineation	Crossings	Quiet Zone Crossing \$	Non Quiet Zone Crossing \$
1.	Deerfield Beach (Non-Quiet Zones)	NE 2 <sup>nd</sup> Street to SW 15 <sup>th</sup> Street	M.P. 326.81 - M.P. 328.48	5		900,000
				5		<b>900,000</b>

Note: The QZ\$ are a planning level estimate. Proposed QZ Crossings based on budget constraints.

All crossing information will be updated after the diagnostic field reviews.

## Deerfield Beach, FL - Non -Quiet Zone Template – 1 – Broward Co.

**Purpose:** To Identify and evaluate the specific locations and descriptions of rail-highway grade crossings in the recommended corridor for consideration of the implementation of Quiet Zone

**Zone Descriptions:** Based on evaluation of dwelling and population density as well as land use categories (such as schools, hospital, as well as other sensitive receptors as defined in FRA & FHWA noise evaluation standards) analysis no Quiet Zone candidates were identified in Deerfield Beach, FL as depicted on the accompanying map.

Non Quiet Zone Crossing Inventory:

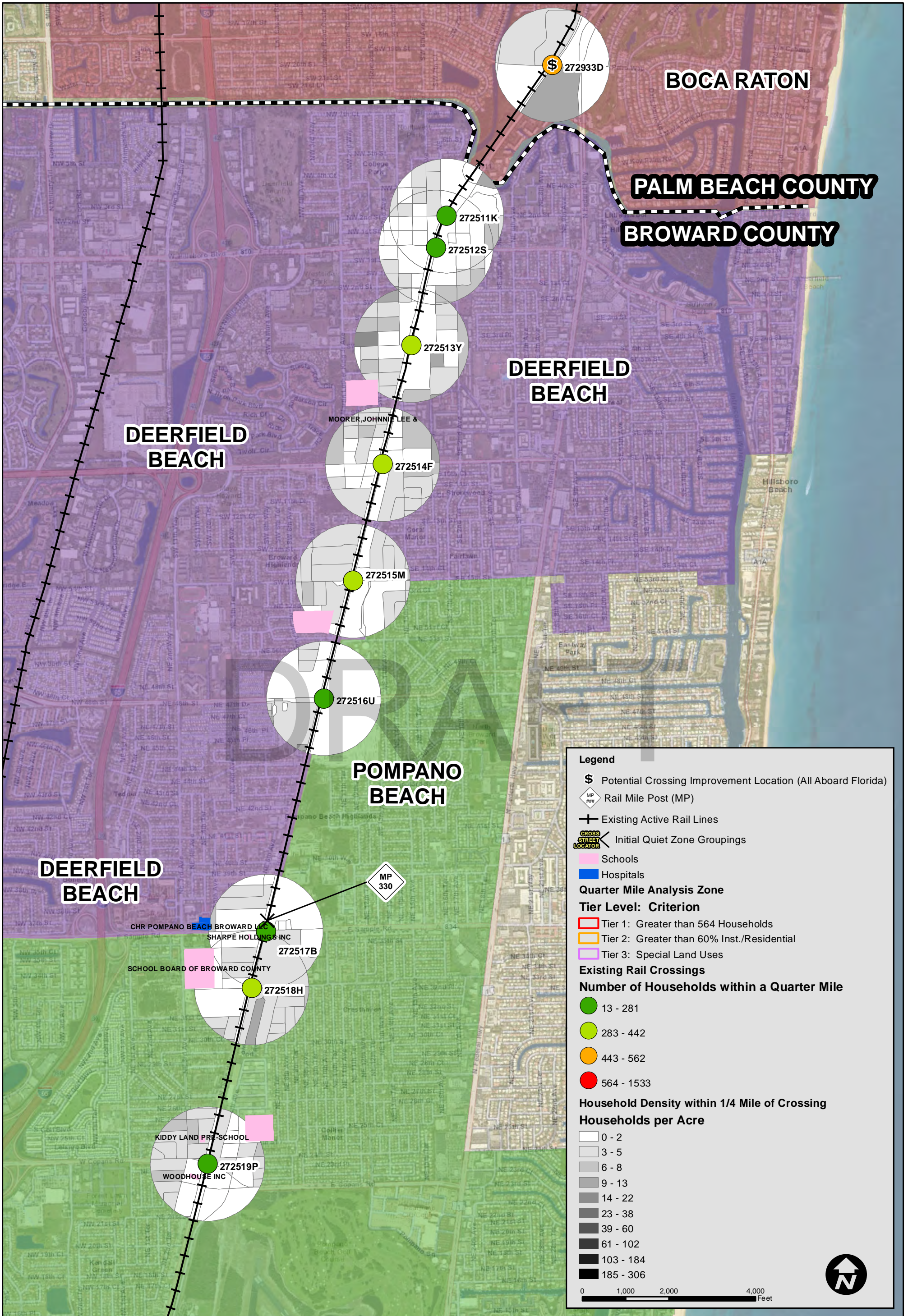
This Non Quiet Zone crossing area spans from NE 2<sup>nd</sup> St. (RR Mile Post 326.81) to SW 15th St. (RR Mile Post 328.48). The following table summarizes the physical description and operating characteristics of each of the 5 grade crossings in the corridor. This area consists of 2- 2 lane crossings, 1 – 4 lane crossing, 1 – 5 lane crossing, and 1 - 6 lane crossing.

The following table summarizes the physical description and operating characteristics of each of the 5 grade crossing in the corridor for which a quiet zone is not warranted.

Crossing #	Local Street	Quiet Zone Name	Municipality	Hwy Owner	RR Mile Post	Track	Hwy ADT	#S. Buses	# Tracks	# Hwy Lanes	Train Volume	Pro. Pass Train	Pro. Tot. Tr. Vol	TT Speed	AA F TTS	AW S	Accidents	Warning Device	C W T (Y/N)	P.O. I.	SS M	RIW H	QZ RI	QZ \$
<a href="#">272511K</a>	NE 2ND ST		Deerfield Beach	City	326.81	Main	2400	16	4	5	16	58	74	60	79	Y	0	FLBG						200,000
<a href="#">272512S</a>	SR-810 / E HILLSBORO BLVD		Deerfield Beach	State	326.97	Main	32000	30	1	6	16	58	74	60	79	Y	0	CFLBG						200,000
<a href="#">272513Y</a>	SE 4TH ST		Deerfield Beach	City	327.41	Main	2275	7	1	2	16	58	74	60	79	Y	0	FLBG						150,000
<a href="#">272514F</a>	SW 10TH ST		Deerfield Beach	City	327.95	Main	16500	59	1	4	18	58	76	60	79	Y	0	CFLBG						200,000
<a href="#">272515M</a>	SW 15TH ST		Deerfield Beach	City	328.48	Main	4300	5	1	2	16	58	74	60	79	N	2	CFLBG						150,000
Total																							900,000	

Indicates potential AAF safety improvement locations

Note: Highlighted area indicate responsibility of FDOT



**Legend**

- \$ Potential Crossing Improvement Location (All Aboard Florida)
- MP ### Rail Mile Post (MP)
- + Existing Active Rail Lines
- CROSS STREET LOCATOR Initial Quiet Zone Groupings
- Schools
- Hospitals
- Quarter Mile Analysis Zone
- Tier Level: Criterion**
- Tier 1: Greater than 564 Households
- Tier 2: Greater than 60% Inst./Residential
- Tier 3: Special Land Uses
- Existing Rail Crossings**
- Number of Households within a Quarter Mile**
- 13 - 281
- 283 - 442
- 443 - 562
- 564 - 1533
- Household Density within 1/4 Mile of Crossing**
- Households per Acre**
- 0 - 2
- 3 - 5
- 6 - 8
- 9 - 13
- 14 - 22
- 23 - 38
- 39 - 60
- 61 - 102
- 103 - 184
- 185 - 306

0 1,000 2,000 4,000 Feet



**POMPANO BEACH (CONT'D) AND DEERFIELD BEACH**  
Tiered Quiet Zone Analysis Map



**LEGEND**

- Crossing #** - Federal RR Admin. Grade Crossing Inventory Number
- Local Street** - Posted Highway Crossing Name
- Municipality** - Legal Jurisdiction Name where crossing lies
- Highway Owner** - Agency having maintenance responsibility of highway
- Latitude** - G.P.S. North Latitude of Crossing Location
- Longitude** - G.P.S. West Longitude of Crossing Location
- RR Mile Post** - FEC Railroad Mile Post designation (increasing South - North)
- Track** - FEC RR Track Classification (Main, Siding, Spur, Yard, etc.)
- Hwy ADT** - Average Daily Traffic Volume of Highway
- # S. Buses** - Average Number of Daily School Buses over Crossing
- # Tracks** - Number of Active FEC RR tracks in crossing
- Hwy Lanes** - Number of Through highway lanes in crossing
- Train Volume** - Average daily number of train movements over the crossing
- Pro. Pass. Train Vol.** - Daily number of proposed passenger train movements (AAF & TRCL)
- Pro. Tot. Tr. Vol.** - Total Proposed Daily train volume
- TT Speed** - Current Maximum Time Table Speed of Trains permitted ( mph)
- AAF TTS** - Proposed Maximum Time Table Speed of trains with All Aboard Florida operations
- AWS** - Advance Warning Signs - Highway Signs posted in advance of crossing to alert drivers of a "crossing ahead"
- Accidents** - Number of Crossing Accidents at Crossing posted in crossing inventory database
- Warning Device** - CFLBG (Cantilevered Flashing Lights, Bells & Gates), FLBG (Flashing lights, bells & gates)
- CWT** - Constant Warning Time
- P.O.I.** - Power Out Indicator
- SSM** - Supplemental Safety Measures
- RIWH** - Risk Index With Horns
- QZRI** - Quiet Zone Risk Index
- QZ\$** - Estimated Cost of Supplemental Safety Measures for Quiet Zone Designation

DRAFT

Example of 4 Quadrant Gate Installation:



Highway Width	Recommended Supplemental Safety Measures
2- Lane	2 gate mechanisms, circuitry/software, Veh. Presence Detectors, Power Out lights, Signs
4- lane	2 gate mechanisms, circuitry/software, Veh. Presence Detectors, Power Out lights. 2 Sidewalk gates, Signs
6-lane	4 gate mechanisms, circuitry/software, Veh. Presence Detectors, Power Out lights. 2 Sidewalk gates, signs
8-lane	4 gate mechanisms, circuitry/software, Veh. Presence Detectors, Power Out lights. 2 Sidewalk gates, signs

# TRI-RAIL COASTAL LINK- QUIET ZONES & NON QUIET ZONES AREAS

## BROWARD COUNTY – POMPANO BEACH- TEMPLATE NO. 2

Template Number	Jurisdiction	From/To:	Delineation	Crossings	Quiet Zone Crossing \$	Non Quiet Zone Crossing \$
2.	Pompano Beach (Quiet Zone)	SR 814/W. Atlantic Blvd. to SW 3 <sup>rd</sup> St.	M.P. 333.14- M.P. 333.51	3	650,000	
	Pompano Beach (Non-Quiet Zones)	NE 48 <sup>th</sup> St. to N. Dixie Hwy And SW 6 <sup>th</sup> St.	M.P. 329.00–M.P. 333.00 And M.P. 333.51 -M.P. 333.79	8 1		1,400,000 200,000
				12	650,000	\$1,600,00

Note: The QZ\$ are a planning level estimate. Proposed QZ Crossings based on budget constraints.

All crossing information will be updated after the diagnostic field reviews.

## Pompano Beach, FL - Quiet Zone and Non Quiet Zone Template – 2 – Broward Co.

**Purpose:** To Identify and evaluate the specific locations and descriptions of rail-highway grade crossings in the recommended corridor for consideration of the implementation of Quiet Zone


**Zone Descriptions:** Based on evaluation of dwelling and population density as well as land use categories (such as schools, hospital, as well as other sensitive receptors as defined in FRA & FHWA noise evaluation standards) analysis has identified 1 candidate zone in Pompano Beach, FL as depicted on the accompanying map.

Quiet Zone Crossing Inventory:

This zone would span from West Atlantic Blvd. (RR Mile Post 333.14) to SW 3<sup>rd</sup> St. (RR Mile Post 333.51) a distance of 0.37 miles. The following table summarizes the physical description and operating characteristics of each of the 3 grade crossings in the corridor. The Atlantic Blvd. Zone in Pompano Beach consists of 1- 2 lane crossing, 1 – 4 lane crossing and 1 - 6 lane crossing.

Crossing #	Local Street	Quiet Zone Name	Municipality	Hwy Owner	RR Mile Post	Track	Hwy ADT	#S. Buses	# Tracks	# Hwy Lanes	Train Volume	Pro. Pass Train	Pro. Tr. Vol	TT Speed	AAF TTS	AW S	Accidents	Warning Device	CW T (Y/N)	P. O. I.	SS M	RI W H	Q ZR I	QZ \$
<a href="#">272533K</a>	SR-814 / W ATLANTIC BLVD	ATLANTIC BLVD.	Pompano Beach	State	333.14	Main	45000	51	1	6	16	58	74	45	79	Y	2	CFLBG						300,000
<a href="#">272534S</a>	SW 2ND ST	ATLANTIC BLVD.	Pompano Beach	City	333.31	Main	25000	5	1	2	16	58	74	45	79	Y	0	FLBG						150,000
<a href="#">273022D</a>	SW 3RD ST	ATLANTIC BLVD.	Pompano Beach	City	333.51	Main	6300	0	1	4	16	58	74	45	79	Y	0	CFLBG						200,000
Total																							650,000	

 Indicates potential AAF safety improvement locations

 Note: Highlighted area indicate responsibility of FDOT

(Please refer to the attached “Legend” which explains to individual crossing data shown. Data for empty column fields will be included once field diagnostics have been completed. Crossings names in shaded have been identified as candidates for All Aboard Florida grade crossing signal upgrades. ) Those upgrades would consist of track circuitry improvements to provide constant warning time for crossing signal activation as well as relocation/replacement of flashing light signals, gates and cantilevers to accommodate construction of a second track. ).

**The Process:** The descriptive data shown was collected from existing FDOT as well as Federal Railroad Administration (FRA) grade crossing inventories and supplemented with documented diagnostic-team field evaluation of each of the crossings. This data was utilized as input into the FRA “Quiet Zone Calculator “. By inputting certain Supplemental Safety Measures at each crossing, this statistical tool evaluates each crossing under consideration as a Quiet Zone and simulates the relative accident risk both with and without the sounding of train horns. The results are also compared to an annually computed National Significant Risk Threshold (NSRT).


Simulating the average improved safety risk of the zones by making sufficient safety improvements, enables the zone to qualify as a Quiet Zone under the provisions of USDOT regulation 49 CFR 222.1.

**The Results:** Utilizing the above information, it was determined that by assuming the installation of 4 quadrant gates, vehicle presence detectors and “power out indicators” at each location, the crossings in both zones would have their Quiet Zone Risk Index reduced sufficiently below the existing risk index (with train horn sounding) as well as below the NSRT.

**The Costs:** It is estimated that the initial cost of these Supplemental Safety Measures would be as follows

Pompano Beach Quiet Zone:

<b>Grade Crossing</b>	<b>SSM Installation Cost</b>	<b>Annual Signal Maintenance Cost**</b>
SR 814/Atlantic	\$300,000	\$8,442
SW 2 <sup>nd</sup> St.	\$150,000	\$8,442
SW 3 <sup>rd</sup> St.	\$200,000	\$8,442
<b>Total</b>	<b>\$650,000</b>	<b>\$25,326</b>

 Note: Highlighted area indicate responsibility of FDOT

\*\* Note: Does not include life cycle cost

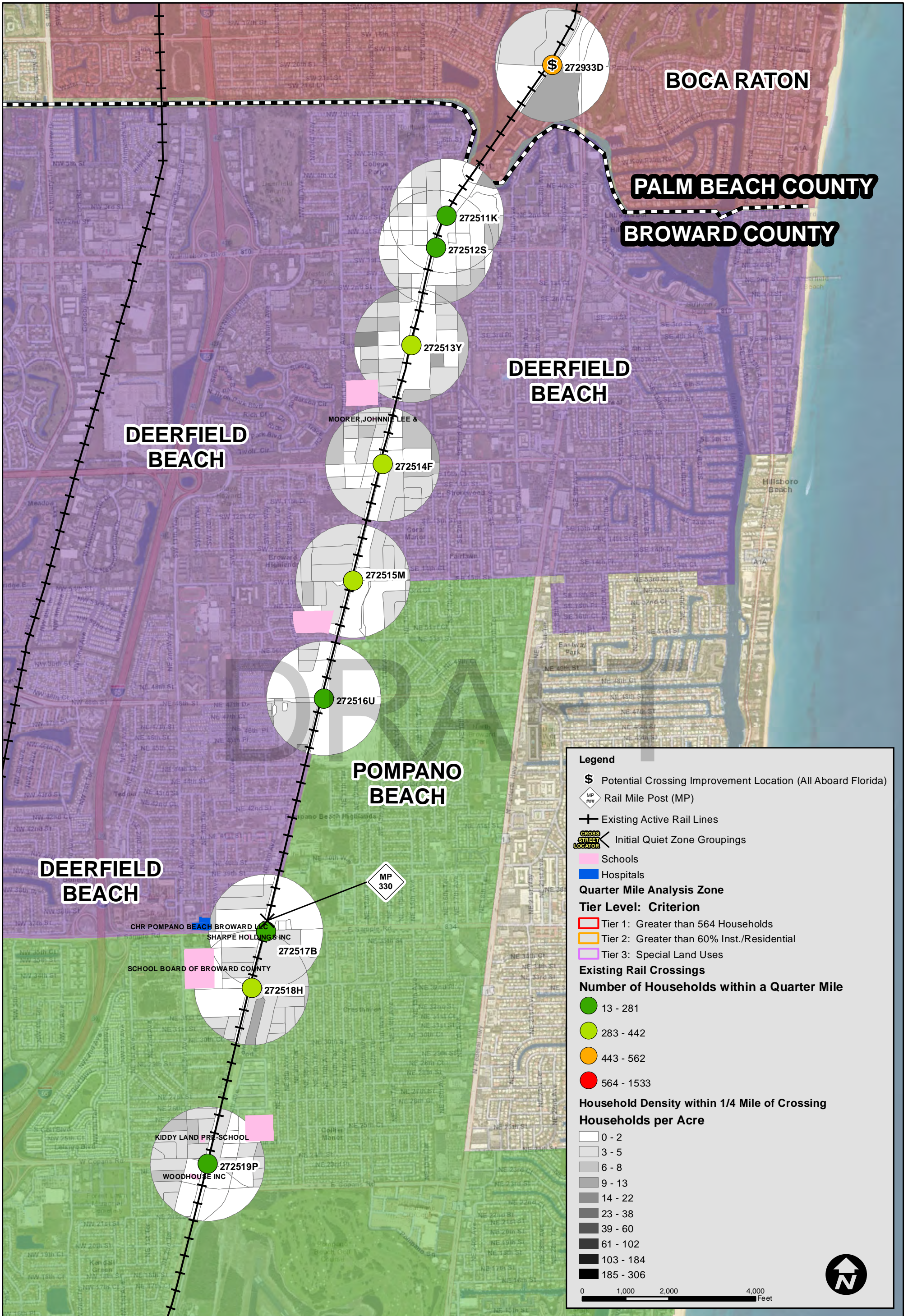
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The following table summarizes the physical description and operating characteristics of each of the 9 grade crossings in the corridor for which a quiet zone in not warranted.

<a href="#">Crossing #</a>	<a href="#">Local Street</a>	<a href="#">Quiet Zone Name</a>	<a href="#">Municipality</a>	<a href="#">Highway Owner</a>	<a href="#">RR Mile Post</a>	<a href="#">Track</a>	<a href="#">Highway ADT</a>	<a href="#"># S. Buses</a>	<a href="#"># Tracks</a>	<a href="#"># Hwy Lanes</a>	<a href="#">Train Volume</a>	<a href="#">Pro. Pass. Train Vol.</a>	<a href="#">Pro. Tot. Tr. Vol.</a>	<a href="#">TT Speed</a>	<a href="#">AAF TTS</a>	<a href="#">AWS</a>	<a href="#">Accidents</a>	<a href="#">Warning Device</a>	<a href="#">CWT (Y/N)</a>	<a href="#">P. O.I</a>	<a href="#">SS M</a>	<a href="#">RIWH</a>	<a href="#">QZ RI</a>	QZ \$
<a href="#">272516U</a>	NE 48TH ST		Pompano Beach	County	329.00	Main	10500	55	1	4	16	58	74	60	79	Y	0	CFLBG						200,000
<a href="#">272517B</a>	SR-834 / E SAMPLER RD		Pompano Beach	State	330.05	Main	40000	61	1	6	16	58	74	60	79	Y	1	CFLBG						200,000
<a href="#">272518H</a>	NE 33 ST		Pompano Beach	County	330.31	Main	15000	19	1	2	16	58	74	60	79	Y	0	CFLBG						150,000
<a href="#">272519P</a>	E COPAN S RD		Pompano Beach	County	331.10	Main	24500	82	2	6	16	58	74	60	79	Y	0	CFLBG						200,000
<a href="#">272526A</a>	NE 10TH ST		Pompano Beach	City	332.50	Main	9500	18	1	2	16	58	74	60	79	Y	0	CFLBG						150,000
<a href="#">272528N</a>	NE 6TH ST		Pompano Beach	City	332.77	Main	25000	32	1	2	16	58	74	45	79	Y	0	CFLBG						150,000
<a href="#">272531W</a>	NE 3RD ST		Pompano Beach	City	332.97	Main	24000	10	1	2	16	58	74	45	79	Y	0	CFLBG						150,000
<a href="#">272520J</a>	SR-811 / N DIXIE HWY		Pompano Beach	State	333.00	Main	24500	95	0	4	4	4	10	79	Y	0	CFLBG							200,000
<a href="#">272535Y</a>	SW 6TH ST		Pompano Beach	County	333.79	Main	7200	23	1	4	16	58	74	45	79	N	1	CFLBG						200,000
Total																						1,600,000		

 Indicates potential AAF safety improvement locations

 Note: Highlighted area indicate responsibility of FDOT



**Legend**

- \$ Potential Crossing Improvement Location (All Aboard Florida)
- MP ### Rail Mile Post (MP)
- + Existing Active Rail Lines
- CROSS STREET LOCATOR Initial Quiet Zone Groupings
- Schools
- Hospitals
- Quarter Mile Analysis Zone
- Tier Level: Criterion**
- Tier 1: Greater than 564 Households
- Tier 2: Greater than 60% Inst./Residential
- Tier 3: Special Land Uses
- Existing Rail Crossings**
- Number of Households within a Quarter Mile**
- 13 - 281
- 283 - 442
- 443 - 562
- 564 - 1533
- Household Density within 1/4 Mile of Crossing**
- Households per Acre**
- 0 - 2
- 3 - 5
- 6 - 8
- 9 - 13
- 14 - 22
- 23 - 38
- 39 - 60
- 61 - 102
- 103 - 184
- 185 - 306

0 1,000 2,000 4,000 Feet



**POMPANO BEACH (CONT'D) AND DEERFIELD BEACH**  
Tiered Quiet Zone Analysis Map

**Legend**

- \$ Potential Crossing Improvement Location (All Aboard Florida)
- MP ### Rail Mile Post (MP)
- Existing Active Rail Lines
- Initial Quiet Zone Groupings
- Schools
- Hospitals

**Quarter Mile Analysis Zone**

**Tier Level: Criterion**

- Tier 1: Greater than 564 Households
- Tier 2: Greater than 60% Inst./Residential
- Tier 3: Special Land Uses

**Existing Rail Crossings**

**Number of Households within a Quarter Mile**

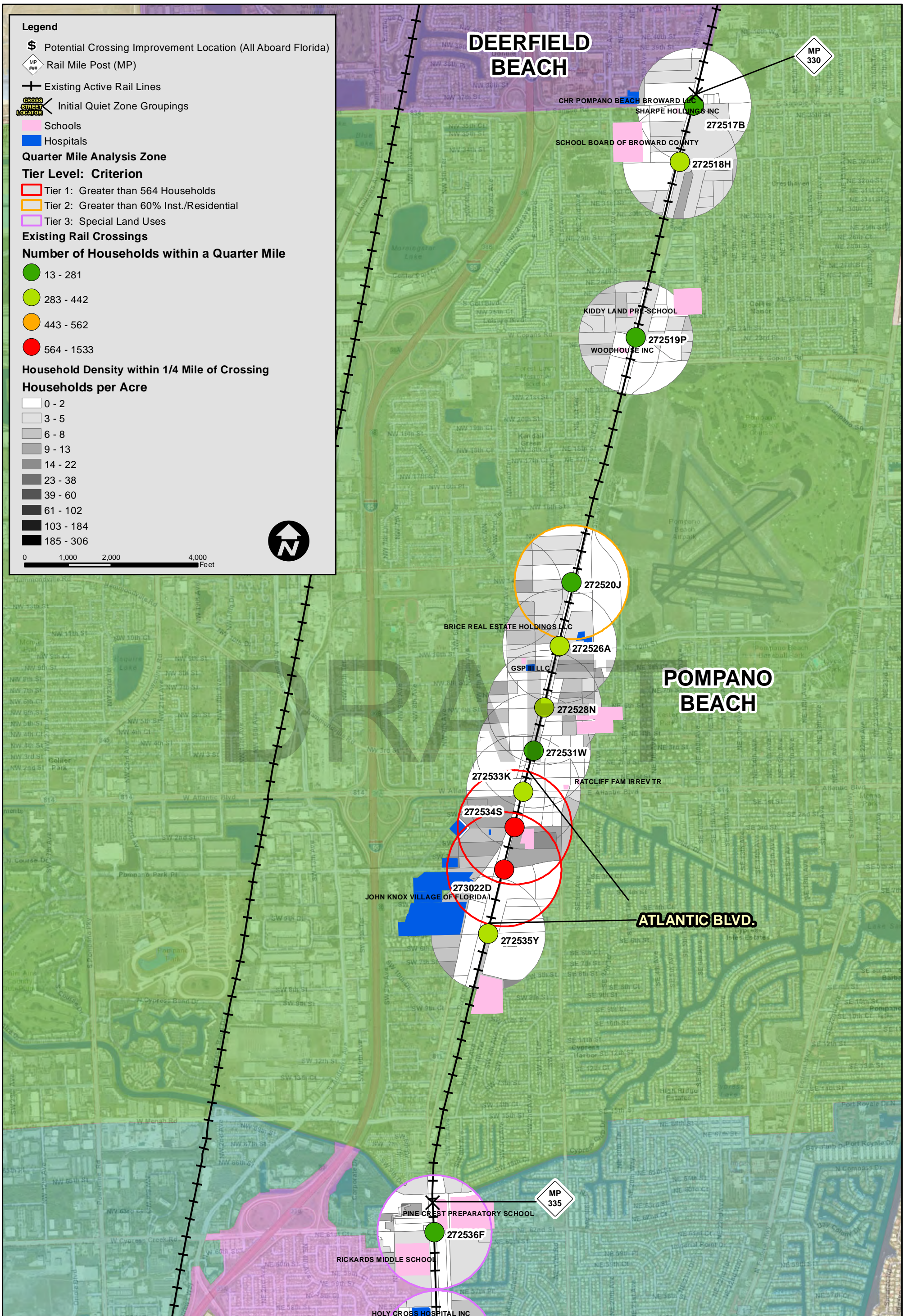
- 13 - 281
- 283 - 442
- 443 - 562
- 564 - 1533

**Household Density within 1/4 Mile of Crossing**

**Households per Acre**

- 0 - 2
- 3 - 5
- 6 - 8
- 9 - 13
- 14 - 22
- 23 - 38
- 39 - 60
- 61 - 102
- 103 - 184
- 185 - 306

0 1,000 2,000 4,000 Feet



LEGEND

- Crossing #** - Federal RR Admin. Grade Crossing Inventory Number
- Local Street** - Posted Highway Crossing Name
- Municipality** - Legal Jurisdiction Name where crossing lies
- Highway Owner** - Agency having maintenance responsibility of highway
- Latitude** - G.P.S. North Latitude of Crossing Location
- Longitude** - G.P.S. West Longitude of Crossing Location
- RR Mile Post** - FEC Railroad Mile Post designation (increasing South - North)
- Track** - FEC RR Track Classification (Main, Siding, Spur, Yard, etc.)
- Hwy ADT** - Average Daily Traffic Volume of Highway
- # S. Buses** - Average Number of Daily School Buses over Crossing
- # Tracks** - Number of Active FEC RR tracks in crossing
- Hwy Lanes** - Number of Through highway lanes in crossing
- Train Volume** - Average daily number of train movements over the crossing
- Pro. Pass. Train Vol.** - Daily number of proposed passenger train movements (AAF & TRCL)
- Pro. Tot. Tr. Vol.** - Total Proposed Daily train volume
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- AWS** - Advance Warning Signs - Highway Signs posted in advance of crossing to alert drivers of a "crossing ahead"
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- CWT** - Constant Warning Time
- P.O.I.** - Power Out Indicator
- SSM** - Supplemental Safety Measures
- RIWH** - Risk Index With Horns
- QZRI** - Quiet Zone Risk Index
- QZ\$** - Estimated Cost of Supplemental Safety Measures for Quiet Zone Designation

Example of 4 Quadrant Gate Installation:



Highway Width	Recommended Supplemental Safety Measures
2- Lane	2 gate mechanisms, circuitry/software, Veh. Presence Detectors, Power Out lights, Signs
4- lane	2 gate mechanisms, circuitry/software, Veh. Presence Detectors, Power Out lights. 2 Sidewalk gates, Signs
6-lane	4 gate mechanisms, circuitry/software, Veh. Presence Detectors, Power Out lights. 2 Sidewalk gates, signs
8-lane	4 gate mechanisms, circuitry/software, Veh. Presence Detectors, Power Out lights. 2 Sidewalk gates, signs



# TRI-RAIL COASTAL LINK- QUIET ZONES & NON QUIET ZONES AREAS

## BROWARD COUNTY – FT. LAUDERDALE – TEMPLATE NO. 3

Template Number	Jurisdiction	From/To:	Delineation	Crossings	Quiet Zone Crossing \$	Non Quiet Zone Crossing
3.	Ft. Lauderdale (Quiet Zone)	NE 17 <sup>th</sup> Ct to River Walk	M.P. 338.80- M.P. 341.23	11	2,000,000	
	Ft. Lauderdale (Non-Quiet Zone)	NE 62 <sup>nd</sup> St. to NE 56 <sup>th</sup> St.	M.P. 335.13.00–M.P. 335.63	2		350,000
		And SW 5 <sup>th</sup> St. to SW 24 <sup>th</sup> St.	And M.P. 341.45- M.P. 343.09	9		1,500,000
				<b>22</b>	<b>2,000,000</b>	<b>\$1,850,00</b>

Note: The QZ\$ are a planning level estimate. Proposed QZ Crossings based on budget constraints.

All crossing information will be updated after the diagnostic field reviews.

### Fort Lauderdale, FL - Quiet Zone and Non Quiet Zone Template – 3 – Broward Co.

**Purpose:** To Identify and evaluate the specific locations and descriptions of rail-highway grade crossings in the recommended corridor for consideration of the implementation of Quiet Zone.

**Grade Crossing Inventory:** The following table lists all the existing grade crossings within Fort Lauderdale on the Florida East Coast main line and includes data collected for evaluation of a potential Quiet Zone.

**Zone Descriptions:** Based on evaluation of dwelling and population density as well as land use categories (such as schools, hospital, as well as other sensitive receptors as defined in FRA & FHWA noise evaluation standards) analysis has identified a candidate zone in Fort Lauderdale, FL as depicted on the accompanying map.

Quiet Zone Crossing Inventory:

This zone would span from NE 17<sup>th</sup> Court (RR Mile Post 338.80) to River Walk Crossing (RR Mile Post 341.23) a distance of 2.43 miles. The following table summarizes the physical description and operating characteristics of each of the 11 grade crossings in the corridor. The Broward Blvd. Zone in Fort Lauderdale consists of 1- 1 lane crossing, 3 – 2 lane crossings, 5 – 4 lane crossings and 2 – 6 lane crossings.

Crossing #	Local Street	Quiet Zone Name	Municipality	Highway Owner	RR Mile Post	Track	Highway ADT	# S. Buses	# Tracks	# Hwy Lanes	Train Volume	Pro. Pass. Train Vol.	Pro. Tot. Tr. Vol.	TT Speed	AAFTTS	AWS	Accidents	Warning Device	CWT (Y/N)	P.O.I.	SSM	RIWH	QZRI	QZ \$
<a href="#">272547T</a>	NE 17TH CT	BROWARDBLVD.	Fort Lauderdale	City	338.80	Main	5300	5	1	2	16	58	74	45	79	Y	0	FLBG						150,000
<a href="#">272548A</a>	NE 13TH ST	BROWARDBLVD.	Fort Lauderdale	City	339.38	Main	12700	45	2	4	16	58	74	45	79	N	0	CFLBG						200,000
<a href="#">272549G</a>	SR-838 / E SUNRISE BLVD	BROWARDBLVD.	Fort Lauderdale	State	339.87	Main	37000	24	2	6	16	58	74	45	79	Y	0	CFLBG						200,000
<a href="#">272550B</a>	NE 3RD AVE	BROWARDBLVD.	Fort Lauderdale	City	340.10	Main	12300	12	2	4	16	58	74	45	79	Y	0	CFLBG						200,000
<a href="#">272551H</a>	N ANDREWS AVE	BROWARDBLVD.	Fort Lauderdale	City	340.38	Main	17500	16	2	4	16	58	74	45	79	N	2	CFLBG						200,000
<a href="#">272552P</a>	NW 6TH ST	BROWARDBLVD.	Fort Lauderdale	City	340.52	Main	12400	27	2	4	16	58	74	45	79	Y	0	CFLBG						200,000
<a href="#">272553W</a>	NW 4TH ST	BROWARDBLVD.	Fort Lauderdale	City	340.78	Main	2700	3	2	2	16	58	74	45	79	Y	1	FLBG						150,000
<a href="#">272554D</a>	NW 2ND ST	BROWARDBLVD.	Fort Lauderdale	City	340.91	Main	5700	3	2	2	16	58	74	45	79	N	0	FLBG						150,000
<a href="#">272556S</a>	SR-842 / W BROWARD BLVD	BROWARDBLVD.	Fort Lauderdale	State	341.04	Main	50500	9	2	6	16	58	74	45	79	Y	0	CFLBG						300,000
<a href="#">272557Y</a>	SW 2ND ST	BROWARDBLVD.	Fort Lauderdale	City	341.16	Main	8400	0	2	4	16	58	74	45	79	Y	0	CFLBG						200,000
<a href="#">273433J</a>	River Walk	BROWARDBLVD.	Fort Lauderdale	City	341.23	Main	0	0	2	1	16	58	74	45	79	N	1	FLBG						50,000
<b>Total</b>																							<b>2,000,000</b>	

Indicates potential AAF safety improvement locations

(Please refer to the attached “Legend” which explains to individual crossing data shown. Data for empty column fields will be included once field diagnostics have been completed. Crossings names in shaded have been identified as candidates for All Aboard Florida grade crossing signal upgrades. Those upgrades would consist of track circuitry improvements to provide constant warning time for crossing signal activation as well as relocation/replacement of flashing light signals, gates and cantilevers to accommodate construction of a second track. ).

**The Process:** The descriptive data shown was collected from existing FDOT as well as Federal Railroad Administration (FRA) grade crossing inventories and supplemented with documented diagnostic-team field evaluation of each of the crossings. This data was utilized as input into the FRA “Quiet Zone Calculator “. By inputting certain Supplemental Safety Measures at each crossing, this statistical tool evaluates each crossing under consideration as a Quiet Zone and simulates the relative accident risk both with and without the sounding of train horns. The results are also compared to an annually computed National Significant Risk Threshold (NSRT).

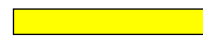
Simulating the average improved safety risk of the zones by making sufficient safety improvements, enables the zone to qualify as a Quiet Zone under the provisions of USDOT regulation 49 CFR 222.1.

**The Results:** Utilizing the above information, it was determined that by assuming the installation of 4 quadrant gates, vehicle presence detectors and “power out indicators” at each location, the crossings in both zones would have their Quiet Zone Risk Index reduced sufficiently below the existing risk index (with train horn sounding) as well as below the NSRT.

**The Costs:** It is estimated that the initial cost of these Supplemental Safety Measures would be as follows

Fort Lauderdale Quiet Zone:

Grade Crossing	SSM Installation Cost	Annual Signal Maintenance Cost**
NE 17 <sup>th</sup> Court	150,000	\$8,442
NE 13 <sup>th</sup> St.	200,000	\$8,442
Sunrise Blvd.	200,000	\$8,442
NE 3 <sup>rd</sup> . Ave.	200,000	\$8,442
N. Andrews Ave.	200,000	\$8,442
NW 6 <sup>th</sup> St.	200,000	\$8,442
NW 4 <sup>th</sup> St.	150,000	\$8,442
NW 2 <sup>nd</sup> . St.	150,000	\$8,442
W. Broward Blvd.	300,000	\$8,442
SW 2 <sup>nd</sup> St.	200,000	\$8,442
River Walk	50,000	\$8,442
<b>Total</b>	<b>\$2,000,000</b>	<b>\$92,862</b>

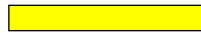
 Note: Highlighted area indicate responsibility of FDOT

\*\* Note: Does not include life cycle cost

The following table summarizes the physical description and operating characteristics of each of the 11 grade crossings in the corridor for which a quiet zone is not warranted.

<a href="#">Crossing #</a>	<a href="#">Local Street</a>	<a href="#">Quiet Zone Name</a>	<a href="#">Municipality</a>	<a href="#">Highway Owner</a>	<a href="#">RR Mile Post</a>	<a href="#">Track</a>	<a href="#">Highway ADT</a>	<a href="#"># S. Buses</a>	<a href="#"># Tracks</a>	<a href="#"># Highway Lanes</a>	<a href="#">Train Volume</a>	<a href="#">Pro. Passes - Train Vol.</a>	<a href="#">Pro. - Tot. Tr. Vol.</a>	<a href="#">TT Speed</a>	<a href="#">AA F TTS</a>	<a href="#">AWS</a>	<a href="#">Accidents</a>	<a href="#">Warning Device</a>	<a href="#">CWT (Y/N)</a>	<a href="#">P. O.I.</a>	<a href="#">SSM</a>	<a href="#">RI WH</a>	<a href="#">QZ RI</a>	QZ \$
<a href="#">272536F</a>	NE 62ND ST		Fort Lauderdale	County	335.13	Main	23000	29	1	4	16	58	74	45	79	N	0	CFLBG						200,000
<a href="#">2728</a>	NE 56TH ST		Fort Lauderdale	County	335.63	Main	8700	12	1	2	16	58	74	45	79	Y	0	CFLBG						150,000
<a href="#">272558F</a>	SW 5TH ST		Fort Lauderdale	City	341.45	Main	3440	0	2	2	16	58	74	45	79	Y	0	FLBG						150,000
<a href="#">272559M</a>	SW 6TH ST		Fort Lauderdale	City	341.56	Main	3500	8	2	2	16	58	74	45	79	Y	0	FLBG						150,000
<a href="#">272560G</a>	SW 7TH ST		Fort Lauderdale	City	341.67	Main	3600	7	2	2	16	58	74	45	79	Y	0	FLBG						150,000
<a href="#">272561N</a>	SW 9TH ST		Fort Lauderdale	City	341.80	Main	3480	2	2	2	16	58	74	45	79	Y	0	FLBG						150,000
<a href="#">272562V</a>	SR-736 / DAVIE BLVD		Fort Lauderdale	City	342.06	Main	29000	2	2	4	16	58	74	45	79	Y	0	CFLBG						200,000
<a href="#">272563C</a>	SW 15TH ST		Fort Lauderdale	City	342.36	Main	3550	1	2	2	16	58	74	45	79	Y	0	FLBG						150,000
<a href="#">272564J</a>	SW 17TH ST		Fort Lauderdale	City	342.55	Main	3400	7	2	4	16	58	74	45	79	Y	0	CFLBG						200,000
<a href="#">272566X</a>	SW 22ND ST		Fort Lauderdale	City	342.96	Main	3350	2	2	2	16	58	74	45	79	Y	0	FLBG						150,000
<a href="#">272567E</a>	SR-84 / SW 24TH ST		Fort Lauderdale	State	343.09	Main	32000	2	2	6	16	58	74	45	79	Y	0	CFLBG						200,000
Total																						1,850,000		

 Indicates potential AAF safety improvement locations

 Note: Highlighted area indicate responsibility of FDOT

**Legend**

\$ Potential Crossing Improvement Location (All Aboard Florida)

MP # Rail Mile Post (MP)

✚ Existing Active Rail Lines

Initial Quiet Zone Groupings

Schools

Hospitals

Quarter Mile Analysis Zone

Tier Level: Criterion

Tier 1: Greater than 564 Households

Tier 2: Greater than 60% Inst./Residential

Tier 3: Special Land Uses

Existing Rail Crossings

Number of Households within a Quarter Mile

13 - 281

283 - 442

443 - 562

564 - 1533

Household Density within 1/4 Mile of Crossing

Households per Acre

0 - 2

3 - 5

6 - 8

9 - 13

14 - 22

23 - 38

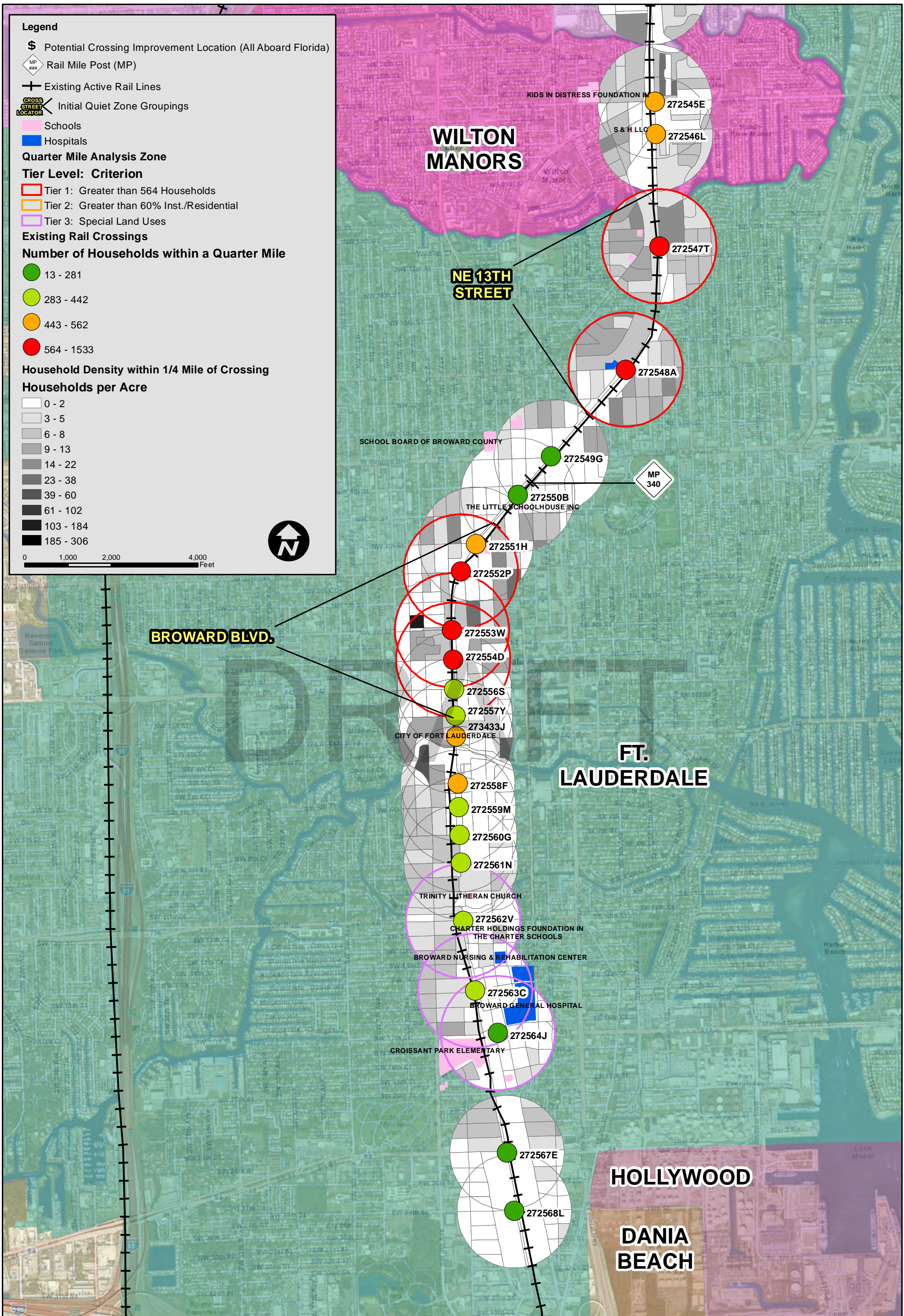
39 - 60

61 - 102

103 - 184

185 - 306

0 1,000 2,000 4,000 Feet



**WILTON MANORS**

**FT. LAUDERDALE**

**HOLLYWOOD**

**DANIA BEACH**

**BROWARD BLVD.**

**NE 13TH STREET**



**LEGEND**

- Crossing #** - Federal RR Admin. Grade Crossing Inventory Number
- Local Street** - Posted Highway Crossing Name
- Municipality** - Legal Jurisdiction Name where crossing lies
- Highway Owner** - Agency having maintenance responsibility of highway
- Latitude** - G.P.S. North Latitude of Crossing Location
- Longitude** - G.P.S. West Longitude of Crossing Location
- RR Mile Post** - FEC Railroad Mile Post designation (increasing South - North)
- Track** - FEC RR Track Classification (Main, Siding, Spur, Yard, etc.)
- Hwy ADT** - Average Daily Traffic Volume of Highway
- # S. Buses** - Average Number of Daily School Buses over Crossing
- # Tracks** - Number of Active FEC RR tracks in crossing
- Hwy Lanes** - Number of Through highway lanes in crossing
- Train Volume** - Average daily number of train movements over the crossing
- Pro. Pass. Train Vol.** - Daily number of proposed passenger train movements (AAF & TRCL)
- Pro. Tot. Tr. Vol.** - Total Proposed Daily train volume
- TT Speed** - Current Maximum Time Table Speed of Trains permitted ( mph)
- AAF TTS** - Proposed Maximum Time Table Speed of trains with All Aboard Florida operations
- AWS** - Advance Warning Signs - Highway Signs posted in advance of crossing to alert drivers of a "crossing ahead"
- Accidents** - Number of Crossing Accidents at Crossing posted in crossing inventory database
- Warning Device** - CFLBG (Cantilevered Flashing Lights, Bells & Gates), FLBG (Flashing lights, bells & gates)
- CWT** - Constant Warning Time
- P.O.I.** - Power Out Indicator
- SSM** - Supplemental Safety Measures
- RIWH** - Risk Index With Horns
- QZRI** - Quiet Zone Risk Index
- QZ\$** - Estimated Cost of Supplemental Safety Measures for Quiet Zone Designation

DRAFT

Example of 4 Quadrant Gate Installation:



Highway Width	Recommended Supplemental Safety Measures
2- Lane	2 gate mechanisms, circuitry/software, Veh. Presence Detectors, Power Out lights, Signs
4- lane	2 gate mechanisms, circuitry/software, Veh. Presence Detectors, Power Out lights. 2 Sidewalk gates, Signs
6-lane	4 gate mechanisms, circuitry/software, Veh. Presence Detectors, Power Out lights. 2 Sidewalk gates, signs
8-lane	4 gate mechanisms, circuitry/software, Veh. Presence Detectors, Power Out lights. 2 Sidewalk gates, signs

# TRI-RAIL COASTAL LINK- QUIET ZONES AND NON QUIET ZONE AREAS

## BROWARD COUNTY – OAKLAND PARK- TEMPLATE NO. 4

Template Number	Jurisdiction	From/To:	Delineation	Crossings	Quiet Zone Crossing \$	Non Quiet Zone Crossing
4.	Oakland Park (Non-Quiet Zones)	SR 870/ E. Commercial Blvd. to Oakland Park Blvd.	M.P. 336.14- M.P. 337.67	6		1,000,000
				6		1,000,000

Note: The QZ\$ are a planning level estimate. Proposed QZ Crossings based on budget constraints.

All crossing information will be updated after the diagnostic field reviews.

**Oakland Park, FL - Non -Quiet Zone Template – 4 – Broward Co.**

**Purpose:** To Identify and evaluate the specific locations and descriptions of rail-highway grade crossings in the recommended corridor for consideration of the implementation of Quiet Zone

**Zone Descriptions:** Based on evaluation of dwelling and population density as well as land use categories (such as schools, hospital, as well as other sensitive receptors as defined in FRA & FHWA noise evaluation standards) analysis no Quiet Zone candidates were identified in Oakland Park, FL as depicted on the accompanying map.


Non Quiet Zone Crossing Inventory:

This Non Quiet Zone crossing area spans from Commercial Blvd. (RR Mile Post 336.14) to Oakland Park Blvd. (RR Mile Post 337.67). The following table summarizes the physical description and operating characteristics of each of the 6 grade crossings in the corridor. This area consists of 4- 2 lane crossings, and 2 - 6 lane crossings.

The following table summarizes the physical description and operating characteristics of each of the 6 grade crossings in the corridor for which a quiet zone in not warranted.

<a href="#">Crossing #</a>	<a href="#">Local Street</a>	<a href="#">Quiet Zone Name</a>	<a href="#">Municipality</a>	<a href="#">Highway Owner</a>	<a href="#">RR Mile Post</a>	<a href="#">Track</a>	<a href="#">Highway ADT</a>	<a href="#"># S. Buses</a>	<a href="#"># Tracks</a>	<a href="#"># Highway Lanes</a>	<a href="#">Train Volume</a>	<a href="#">Pro. Pass - Train Vol.</a>	<a href="#">Pro - Tot. Tr. Vol.</a>	<a href="#">TT Speed</a>	<a href="#">AA F TTS</a>	<a href="#">AW S</a>	<a href="#">Accidents</a>	<a href="#">Warning Device</a>	<a href="#">CWT (Y/N)</a>	<a href="#">P. O.I.</a>	<a href="#">SSM</a>	<a href="#">RI WH</a>	<a href="#">QZ RI</a>	<a href="#">QZ \$</a>
<a href="#">272537M</a>	SR-870 / E COMMERCIAL BLVD		Oakland Park	State	336.14	Main	55500	41	1	6	16	58	74	45	79	Y	0	CFLBG						200,000
<a href="#">272538U</a>	NE 45TH ST		Oakland Park	City	336.53	Main	11500	22	1	2	16	58	74	45	79	Y	0	FLBG						150,000
<a href="#">272540V</a>	NE 38TH ST		Oakland Park	City	337.16	Main	5000	5	1	2	16	58	74	45	79	Y	0	CFLBG						150,000
<a href="#">272541C</a>	NE 36TH ST		Oakland Park	City	337.28	Main	4800	0	1	2	16	58	74	45	79	Y	1	FLBG						150,000
<a href="#">272542J</a>	NE 34TH CT		Oakland Park	City	337.40	Main	4700	8	1	2	16	58	74	45	79	Y	0	CFLBG						150,000
<a href="#">272544X</a>	OAKLAND PARK BLVD		Oakland Park	State	337.67	Main	36000	29	1	6	28	58	86	45	79	Y	1	CFLBG						200,000
Total																							1,000,000	

 Indicates potential AAF safety improvement locations

 Note: Highlighted area indicate responsibility of FDOT



**Legend**

- \$ Potential Crossing Improvement Location (All Aboard Florida)
- MP ### Rail Mile Post (MP)
- Existing Active Rail Lines
- Initial Quiet Zone Groupings
- Schools
- Hospitals

**Quarter Mile Analysis Zone**

**Tier Level: Criterion**

- Tier 1: Greater than 564 Households
- Tier 2: Greater than 60% Inst./Residential
- Tier 3: Special Land Uses

**Existing Rail Crossings**

**Number of Households within a Quarter Mile**

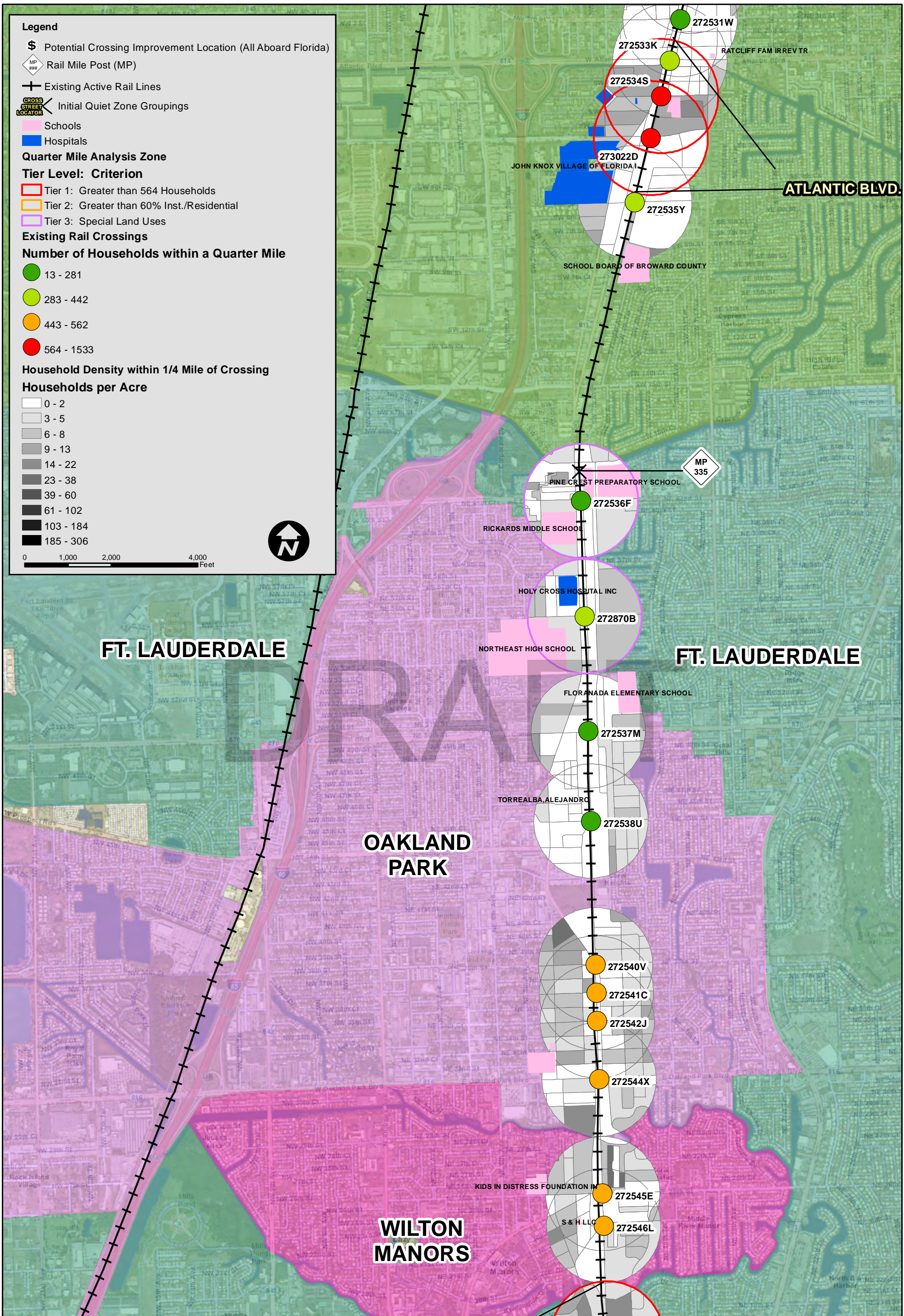
- 13 - 281
- 283 - 442
- 443 - 562
- 564 - 1533

**Household Density within 1/4 Mile of Crossing**

**Households per Acre**

- 0 - 2
- 3 - 5
- 6 - 8
- 9 - 13
- 14 - 22
- 23 - 38
- 39 - 60
- 61 - 102
- 103 - 184
- 185 - 306

0 1,000 2,000 4,000 Feet



**FT. LAUDERDALE (CONT'D) WILTON MANORS, AND OAKLAND PARK**  
**Tiered Quiet Zone Analysis Map**

**LEGEND**

- Crossing #** - Federal RR Admin. Grade Crossing Inventory Number
- Local Street** - Posted Highway Crossing Name
- Municipality** - Legal Jurisdiction Name where crossing lies
- Highway Owner** - Agency having maintenance responsibility of highway
- Latitude** - G.P.S. North Latitude of Crossing Location
- Longitude** - G.P.S. West Longitude of Crossing Location
- RR Mile Post** - FEC Railroad Mile Post designation (increasing South - North)
- Track** - FEC RR Track Classification (Main, Siding, Spur, Yard, etc.)
- Hwy ADT** - Average Daily Traffic Volume of Highway
- # S. Buses** - Average Number of Daily School Buses over Crossing
- # Tracks** - Number of Active FEC RR tracks in crossing
- Hwy Lanes** - Number of Through highway lanes in crossing
- Train Volume** - Average daily number of train movements over the crossing
- Pro. Pass. Train Vol.** - Daily number of proposed passenger train movements (AAF & TRCL)
- Pro. Tot. Tr. Vol.** - Total Proposed Daily train volume
- TT Speed** - Current Maximum Time Table Speed of Trains permitted ( mph)
- AAF TTS** - Proposed Maximum Time Table Speed of trains with All Aboard Florida operations
- AWS** - Advance Warning Signs - Highway Signs posted in advance of crossing to alert drivers of a "crossing ahead"
- Accidents** - Number of Crossing Accidents at Crossing posted in crossing inventory database
- Warning Device** - CFLBG (Cantilevered Flashing Lights, Bells & Gates), FLBG (Flashing lights, bells & gates)
- CWT** - Constant Warning Time
- P.O.I.** - Power Out Indicator
- SSM** - Supplemental Safety Measures
- RIWH** - Risk Index With Horns
- QZRI** - Quiet Zone Risk Index
- QZ\$** - Estimated Cost of Supplemental Safety Measures for Quiet Zone Designation

DRAFT

Example of 4 Quadrant Gate Installation:



Highway Width	Recommended Supplemental Safety Measures
2- Lane	2 gate mechanisms, circuitry/software, Veh. Presence Detectors, Power Out lights, Signs
4- lane	2 gate mechanisms, circuitry/software, Veh. Presence Detectors, Power Out lights. 2 Sidewalk gates, Signs
6-lane	4 gate mechanisms, circuitry/software, Veh. Presence Detectors, Power Out lights. 2 Sidewalk gates, signs
8-lane	4 gate mechanisms, circuitry/software, Veh. Presence Detectors, Power Out lights. 2 Sidewalk gates, signs

# TRI-RAIL COASTAL LINK- QUIET ZONES AND NON QUIET ZONE AREAS

## BROWARD COUNTY – WILTON MANORS- TEMPLATE NO. 5

Template Number	Jurisdiction	From/To:	Delineation	Crossings	Quiet Zone Crossing \$	Non Quiet Zone Crossing \$
5.	Wilton Manors (Non-Quiet Zones)	NE 26 <sup>th</sup> St. to NE 24 <sup>th</sup> St.	M.P. 338.16- M.P. 338.30	2		350,000
				2		350,000

Note: The QZ\$ are a planning level estimate. Proposed QZ Crossings based on budget constraints.

All crossing information will be updated after the diagnostic field reviews.

## Wilton Manors, FL - Non -Quiet Zone Template – 5 – Broward Co.

**Purpose:** To Identify and evaluate the specific locations and descriptions of rail-highway grade crossings in the recommended corridor for consideration of the implementation of Quiet Zone

**Zone Descriptions:** Based on evaluation of dwelling and population density as well as land use categories (such as schools, hospital, as well as other sensitive receptors as defined in FRA & FHWA noise evaluation standards) analysis no Quiet Zone candidates were identified in Wilton Manors, FL as depicted on the accompanying map.

Non Quiet Zone Crossing Inventory:

This Non Quiet Zone crossing area spans from NE 26<sup>th</sup> St. (RR Mile Post 338.16) to NE 24<sup>th</sup> St. (RR Mile Post 338.30). The following table summarizes the physical description and operating characteristics of each of the 2 grade crossings in the corridor. This area consists of 1- 2 lane crossing, and 1 - 4 lane crossing.

The following table summarizes the physical description and operating characteristics of each of the 2 grade crossings in the corridor for which a quiet zone in not warranted.

<u>Crossing #</u>	<u>Local Street</u>	<u>Quiet Zone Name</u>	<u>Municipality</u>	<u>Highway Owner</u>	<u>RR Mile Post</u>	<u>Track</u>	<u>Highway ADT</u>	<u># S. Buses</u>	<u># Tracks</u>	<u># Hwy Lanes</u>	<u>Train Volume</u>	<u>Pro. Pass - Train Vol.</u>	<u>Pro - Tot. Tr. Vol.</u>	<u>TT Speed</u>	<u>AA E TTS</u>	<u>AW S</u>	<u>Accidents</u>	<u>Warning Device</u>	<u>CWT (Y/N)</u>	<u>P. O.I.</u>	<u>SSM</u>	<u>RI WH</u>	<u>QZ RI</u>	<u>QZ \$</u>
<a href="#">272545E</a>	NE 26TH ST		Wilton Manors	City	338.16	Main	20100	13	1	4	16	58	74	45	79	Y	0	CFLBG						200,000
<a href="#">272546L</a>	NE 24TH ST		Wilton Manors	City	338.30	Main	5000	0	1	2	16	58	74	45	79	N	0	FLBG						150,000
Total																						350,000		

Indicates potential AAF safety improvement locations

**Legend**

- \$ Potential Crossing Improvement Location (All Aboard Florida)
- MP ### Rail Mile Post (MP)
- Existing Active Rail Lines
- Initial Quiet Zone Groupings
- Schools
- Hospitals

**Quarter Mile Analysis Zone**

**Tier Level: Criterion**

- Tier 1: Greater than 564 Households
- Tier 2: Greater than 60% Inst./Residential
- Tier 3: Special Land Uses

**Existing Rail Crossings**

**Number of Households within a Quarter Mile**

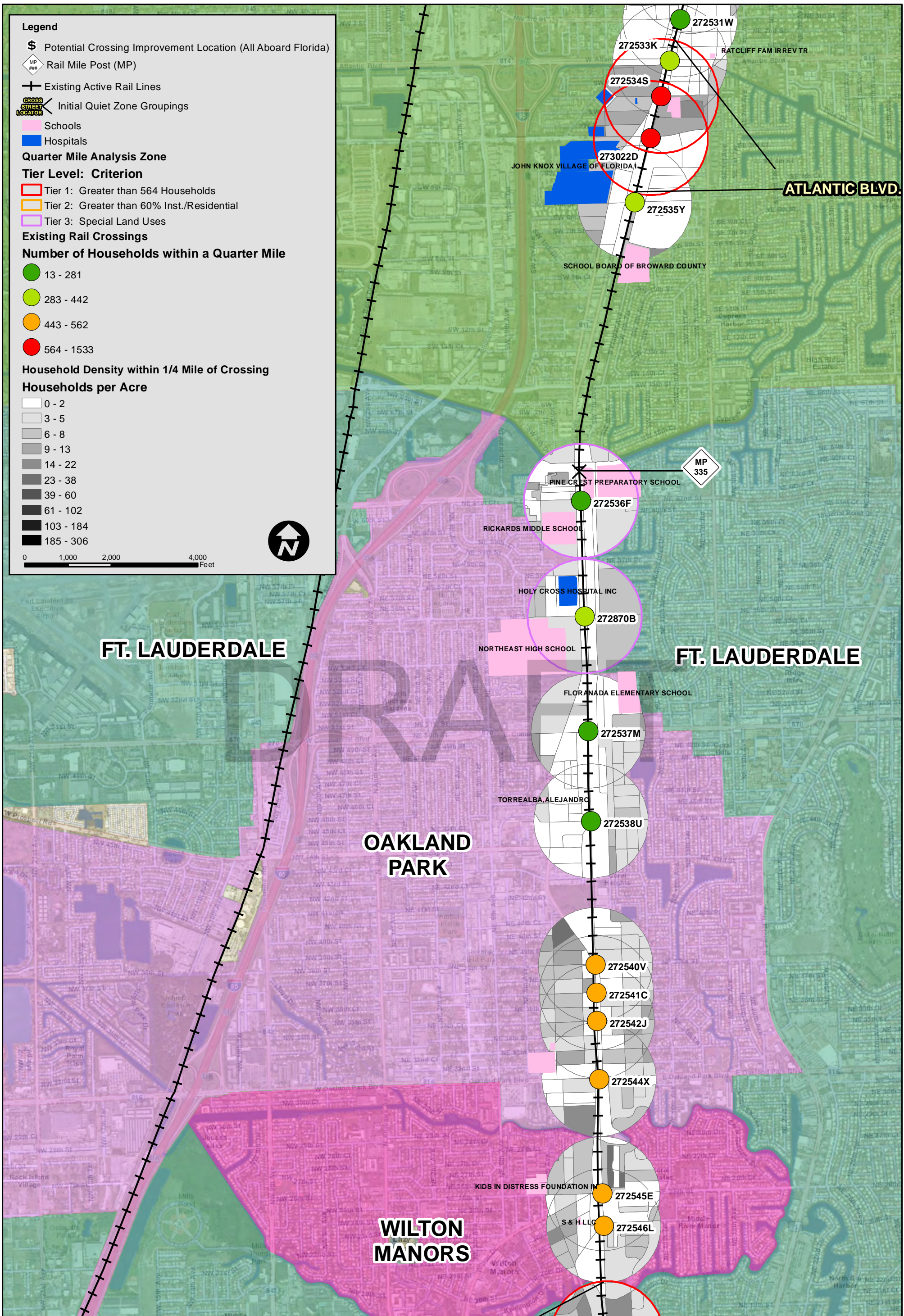
- 13 - 281
- 283 - 442
- 443 - 562
- 564 - 1533

**Household Density within 1/4 Mile of Crossing**

**Households per Acre**

- 0 - 2
- 3 - 5
- 6 - 8
- 9 - 13
- 14 - 22
- 23 - 38
- 39 - 60
- 61 - 102
- 103 - 184
- 185 - 306

0 1,000 2,000 4,000 Feet



**FT. LAUDERALE (CONT'D) WILTON MANORS, AND OAKLAND PARK**  
**Tiered Quiet Zone Analysis Map**

**LEGEND**

- Crossing #** - Federal RR Admin. Grade Crossing Inventory Number
- Local Street** - Posted Highway Crossing Name
- Municipality** - Legal Jurisdiction Name where crossing lies
- Highway Owner** - Agency having maintenance responsibility of highway
- Latitude** - G.P.S. North Latitude of Crossing Location
- Longitude** - G.P.S. West Longitude of Crossing Location
- RR Mile Post** - FEC Railroad Mile Post designation (increasing South - North)
- Track** - FEC RR Track Classification (Main, Siding, Spur, Yard, etc.)
- Hwy ADT** - Average Daily Traffic Volume of Highway
- # S. Buses** - Average Number of Daily School Buses over Crossing
- # Tracks** - Number of Active FEC RR tracks in crossing
- Hwy Lanes** - Number of Through highway lanes in crossing
- Train Volume** - Average daily number of train movements over the crossing
- Pro. Pass. Train Vol.** - Daily number of proposed passenger train movements (AAF & TRCL)
- Pro. Tot. Tr. Vol.** - Total Proposed Daily train volume
- TT Speed** - Current Maximum Time Table Speed of Trains permitted ( mph)
- AAF TTS** - Proposed Maximum Time Table Speed of trains with All Aboard Florida operations
- AWS** - Advance Warning Signs - Highway Signs posted in advance of crossing to alert drivers of a "crossing ahead"
- Accidents** - Number of Crossing Accidents at Crossing posted in crossing inventory database
- Warning Device** - CFLBG (Cantilevered Flashing Lights, Bells & Gates), FLBG (Flashing lights, bells & gates)
- CWT** - Constant Warning Time
- P.O.I.** - Power Out Indicator
- SSM** - Supplemental Safety Measures
- RIWH** - Risk Index With Horns
- QZRI** - Quiet Zone Risk Index
- QZ\$** - Estimated Cost of Supplemental Safety Measures for Quiet Zone Designation

**Example of 4 Quadrant Gate Installation:**



DRAFT

Highway Width	Recommended Supplemental Safety Measures
2- Lane	2 gate mechanisms, circuitry/software, Veh. Presence Detectors, Power Out lights, Signs
4- lane	2 gate mechanisms, circuitry/software, Veh. Presence Detectors, Power Out lights. 2 Sidewalk gates, Signs
6-lane	4 gate mechanisms, circuitry/software, Veh. Presence Detectors, Power Out lights. 2 Sidewalk gates, signs
8-lane	4 gate mechanisms, circuitry/software, Veh. Presence Detectors, Power Out lights. 2 Sidewalk gates, signs

# TRI-RAIL COASTAL LINK- QUIET ZONES AND NON QUIET ZONE AREAS

## BROWARD COUNTY – DANIA BEACH- TEMPLATE NO. 6

Template Number	Jurisdiction	From/To:	Delineation	Crossings	Quiet Zone Crossing \$	Non Quiet Zone Crossing \$
5.	Dania Beach. (Non-Quiet Zones)	Griffen Rd to Sheridan St	M.P. 345.38- M.P. 347.13	7		1,200,000
				7		1,200,000

Note: The QZ\$ are a planning level estimate. Proposed QZ Crossings based on budget constraints.

All crossing information will be updated after the diagnostic field reviews.

## Dania Beach, FL - Non -Quiet Zone Template – 6 – Broward Co.

**Purpose:** To Identify and evaluate the specific locations and descriptions of rail-highway grade crossings in the recommended corridor for consideration of the implementation of Quiet Zone

**Zone Descriptions:** Based on evaluation of dwelling and population density as well as land use categories (such as schools, hospital, as well as other sensitive receptors as defined in FRA & FHWA noise evaluation standards) analysis no Quiet Zone candidates were identified in Dania Beach, FL as depicted on the accompanying map.

Non Quiet Zone Crossing Inventory:

This Non Quiet Zone crossing area spans from Griffen Rd. (RR Mile Post 345.38) to Sheridan St. (RR Mile Post 347.13). The following table summarizes the physical description and operating characteristics of each of the 7 grade crossings in the corridor. This area consists of 4- 2 lane crossing, and 2 - 4 lane crossings, and 1 - 6 lane crossing

The following table summarizes the physical description and operating characteristics of each of the 7 grade crossings in the corridor for which a quiet zone in not warranted.

<a href="#">Crossing #</a>	<a href="#">Local Street</a>	<a href="#">Quiet Zone Name</a>	<a href="#">Municipality</a>	<a href="#">Highway Owner</a>	<a href="#">RR Mile Post</a>	<a href="#">Track</a>	<a href="#">Highway ADT</a>	<a href="#"># S. Buses</a>	<a href="#"># Tracks</a>	<a href="#"># Hway Lanes</a>	<a href="#">Train Volume</a>	<a href="#">Pro. Pass. Train Vol.</a>	<a href="#">Pro. Tot. Tr. Vol.</a>	<a href="#">TT Speed</a>	<a href="#">AAF TTS</a>	<a href="#">AWS</a>	<a href="#">Accidents</a>	<a href="#">Warning Device</a>	<a href="#">CWT (Y/N)</a>	<a href="#">P.O.I.</a>	<a href="#">SSM</a>	<a href="#">RIWH</a>	<a href="#">QZRI</a>	QZ \$
<a href="#">272571U</a>	SR-818 / GRIFFIN RD		Dania Beach	State	345.38	Main	17900	5	1	4	16	58	74	45	35	Y	0	CFLBG						200,000
<a href="#">272572B</a>	OLD GRIFFIN RD		Dania Beach	City	345.44	Main	5200	13	1	2	16	58	74	45	79	Y	0	FLBG						150,000
<a href="#">272573H</a>	NW 1ST ST		Dania Beach	City	345.81	Main	3500	11	1	2	16	58	74	45	79	Y	0	FLBG						150,000
<a href="#">272574P</a>	W DANIA BEACH BLVD		Dania Beach	City	345.94	Main	3995	2	1	2	16	58	74	55	79	Y	0	FLBG						150,000
<a href="#">272575W</a>	SR-848 / STIRLING RD		Dania Beach	State	346.19	Main	23500	26	1	6	16	58	74	55	79	Y	0	CFLBG						200,000
<a href="#">272576D</a>	DIXIE HWY		Dania Beach	County	347.08	Main	3000	52	1	2	16	58	74	55	79	Y	0	FLBG						150,000
<a href="#">272577K</a>	SR-822 / SHERIDAN ST		Dania Beach	State	347.13	Main	27000	54	1	4	16	58	74	55	79	Y	1	CFLBG						200,000
<b>Total</b>																						<b>1,200,000</b>		

Indicates potential AAF safety improvement locations

Note: Highlighted area indicate responsibility of FDOT



**Legend**

\$ Potential Crossing Improvement Location (All Aboard Florida)

MP # Rail Mile Post (MP)

— Existing Active Rail Lines

Initial Quiet Zone Groupings

Schools

Hospitals

**Quarter Mile Analysis Zone**

**Tier Level: Criterion**

Tier 1: Greater than 564 Households

Tier 2: Greater than 60% Inst./Residential

Tier 3: Special Land Uses

**Existing Rail Crossings**

**Number of Households within a Quarter Mile**

13 - 281

283 - 442

443 - 562

564 - 1533

**Household Density within 1/4 Mile of Crossing**

**Households per Acre**

0 - 2

3 - 5

6 - 8

9 - 13

14 - 22

23 - 38

39 - 60

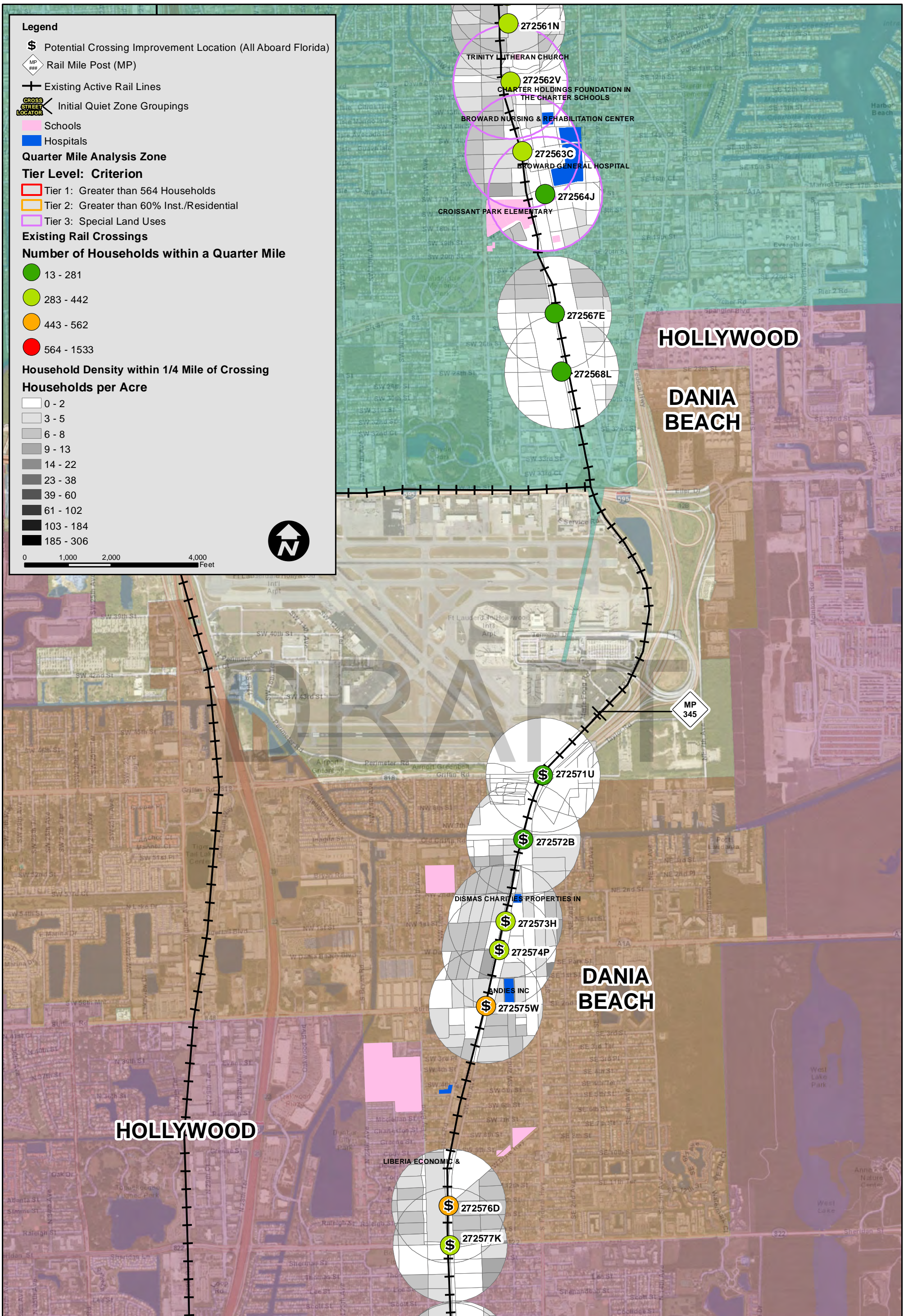
61 - 102

103 - 184

185 - 306



0 1,000 2,000 4,000 Feet



**LEGEND**

- Crossing #** - Federal RR Admin. Grade Crossing Inventory Number
- Local Street** - Posted Highway Crossing Name
- Municipality** - Legal Jurisdiction Name where crossing lies
- Highway Owner** - Agency having maintenance responsibility of highway
- Latitude** - G.P.S. North Latitude of Crossing Location
- Longitude** - G.P.S. West Longitude of Crossing Location
- RR Mile Post** - FEC Railroad Mile Post designation (increasing South - North)
- Track** - FEC RR Track Classification (Main, Siding, Spur, Yard, etc.)
- Hwy ADT** - Average Daily Traffic Volume of Highway
- # S. Buses** - Average Number of Daily School Buses over Crossing
- # Tracks** - Number of Active FEC RR tracks in crossing
- Hwy Lanes** - Number of Through highway lanes in crossing
- Train Volume** - Average daily number of train movements over the crossing
- Pro. Pass. Train Vol.** - Daily number of proposed passenger train movements (AAF & TRCL)
- Pro. Tot. Tr. Vol.** - Total Proposed Daily train volume
- TT Speed** - Current Maximum Time Table Speed of Trains permitted ( mph)
- AAF TTS** - Proposed Maximum Time Table Speed of trains with All Aboard Florida operations
- AWS** - Advance Warning Signs - Highway Signs posted in advance of crossing to alert drivers of a "crossing ahead"
- Accidents** - Number of Crossing Accidents at Crossing posted in crossing inventory database
- Warning Device** - CFLBG (Cantilevered Flashing Lights, Bells & Gates), FLBG (Flashing lights, bells & gates)
- CWT** - Constant Warning Time
- P.O.I.** - Power Out Indicator
- SSM** - Supplemental Safety Measures
- RIWH** - Risk Index With Horns
- QZRI** - Quiet Zone Risk Index
- QZ\$** - Estimated Cost of Supplemental Safety Measures for Quiet Zone Designation

DRAFT

Example of 4 Quadrant Gate Installation:



Highway Width	Recommended Supplemental Safety Measures
2- Lane	2 gate mechanisms, circuitry/software, Veh. Presence Detectors, Power Out lights, Signs
4- lane	2 gate mechanisms, circuitry/software, Veh. Presence Detectors, Power Out lights. 2 Sidewalk gates, Signs
6-lane	4 gate mechanisms, circuitry/software, Veh. Presence Detectors, Power Out lights. 2 Sidewalk gates, signs
8-lane	4 gate mechanisms, circuitry/software, Veh. Presence Detectors, Power Out lights. 2 Sidewalk gates, signs

# TRI-RAIL COASTAL LINK- QUIET ZONES AND NON QUIET ZONE AREAS

## BROWARD COUNTY – HOLLYWOOD TEMPLATE NO. 7

Template Number	Jurisdiction	From/To:	Delineation	Crossings	Quiet Zone Crossing \$	Non Quiet Zone Crossing
7	Hollywood (Quiet Zone)	Garfield St. to Washington St.	M.P. 348.07- M.P. 349.29	8	1,050,000	
	Hollywood (Non-Quiet Zone)	Taft St	M.P. 347.75–M.P. 348.07	1		150,000
				9	1,050,000	150,000

Note: The QZ\$ are a planning level estimate. Proposed QZ Crossings based on budget constraints.

All crossing information will be updated after the diagnostic field reviews.

## Hollywood, FL - Quiet Zone and Non Quiet Zone Template – 7 – Broward Co.

**Purpose:** To Identify and evaluate the specific locations and descriptions of rail-highway grade crossings in the recommended corridor for consideration of the implementation of Quiet Zone.

- **Grade Crossing Inventory:** The following table lists all the existing grade crossings within the Hollywood Blvd Quiet Zone on the Florida East Coast main line and includes data collected for evaluation of a potential Quiet Zone.

**Zone Descriptions:** Based on evaluation of dwelling and population density as well as land use categories (such as schools, hospital, as well as other sensitive receptors as defined in FRA & FHWA noise evaluation standards) analysis has identified 1 candidate zone in Hollywood, FL as depicted on the accompanying map.

### Quiet Zone Crossing Inventory:

This zone would span from Garfield St. (RR Mile Post 348.07) south to Washington St. (RR Mile Post 349.29), a total distance of 1.22 miles. The following table summarizes the physical description and operating characteristics of each of the 8 grade crossings in Quiet Zone in Hollywood. The Hollywood Blvd. Zone in Hollywood consists of 7 - 2 lane crossings and 1-3 lane crossing

Crossing #	Local Street	Quiet Zone Name	Municipality	Highway Owner	RR Mile Post	Track	Highway ADT	# S. Buses	# Tracks	# Hwy Lanes	Train Volume	Pro. Pass. Train Vol.	Pro. Tot. Tr. Vol.	TT Speed	AAF TTS	AWS	Accidents	Warning Device	CWT (Y/N)	P.O.I.	SSM	RIWH	QZRI	QZ \$
272582G	GARFIELD ST	HOLLYWOODBLVD.	Hollywood	City	348.07	Main	6100	1	1	2	16	58	74	55	79	Y	0	FLBG						Closed
272584V	JOHNSON ST	HOLLYWOODBLVD.	Hollywood	City	348.27	Main	9800	23	1	2	16	58	74	55	79	Y	0	CFLBG						150,000
272585C	FILLMORE ST	HOLLYWOODBLVD.	Hollywood	City	348.52	Main	19194	8	1	2	16	58	74	55	79	Y	0	FLBG						150,000
272868A	TYLER ST	HOLLYWOODBLVD.	Hollywood	City	348.71	Main	3400	0	1	2	16	58	74	55	79	Y	1	CFLBG						150,000
272586J	HOLLYWOOD BLVD	HOLLYWOODBLVD.	Hollywood	City	348.78	Main	19500	15	1	3	16	58	74	55	79	Y	0	FLBG						150,000
272587R	HARRISON ST	HOLLYWOODBLVD.	Hollywood	City	348.84	Main	3200	2	1	2	1	58	59	55	79	Y	0	FLBG						150,000
272588X	MONROE ST	HOLLYWOODBLVD.	Hollywood	City	349.03	Main	3011	1	1	2	16	58	74	55	79	Y	0	FLBG						150,000
272589E	WASHINGTON ST	HOLLYWOODBLVD.	Hollywood	City	349.29	Main	4500	15	1	2	16	58	74	55	79	Y	0	FLBG						150,000
<b>Total</b>																							1,050,000	

 Indicates potential AAF safety improvement locations

(Please refer to the attached “Legend” which explains to individual crossing data shown. Data for empty column fields will be included once field diagnostics have been completed. Crossings names in shaded have been identified as candidates for All Aboard Florida grade crossing signal upgrades. Those upgrades would consist of track circuitry improvements to provide constant warning time for crossing signal activation as well as relocation/replacement of flashing light signals, gates and cantilevers to accommodate construction of a second track. ).

**The Process:** The descriptive data shown was collected from existing FDOT as well as Federal Railroad Administration (FRA) grade crossing inventories and supplemented with documented diagnostic-team field evaluation of each of the crossings. This data was utilized as input into the FRA “Quiet Zone Calculator “. By inputting certain Supplemental Safety Measures at each crossing, this statistical tool evaluates each crossing under consideration as a Quiet Zone and simulates the relative accident risk both with and without the sounding of train horns. The results are also compared to an annually computed National Significant Risk Threshold (NSRT).

Simulating the average improved safety risk of the zones by making sufficient safety improvements, enables the zone to qualify as a Quiet Zone under the provisions of USDOT regulation 49 CFR 222.1.

**The Results:** Utilizing the above information, it was determined that by assuming the installation of 4 quadrant gates, vehicle presence detectors and “power out indicators” at each location, the crossings in both zones would have their Quiet Zone Risk Index reduced sufficiently below the existing risk index (with train horn sounding) as well as below the NSRT.

**The Costs:** It is estimated that the initial cost of these Supplemental Safety Measures would be as follows

Hollywood Blvd. Quiet Zone:

Grade Crossing	SSM Installation Cost	Annual Signal Maintenance Cost**
Garfield St. (Closed)		
Johnson St.	\$150,000	\$8,442
Fillmore St.	\$150,000	\$8,442
Tyler St.	\$150,000	\$8,442
Hollywood Blvd.	\$150,000	\$8,442
Harrison St.	\$150,000	\$8,442
Monroe St.	\$150,000	\$8,442
Washington St.	\$150,000	\$8,442
<b>Total</b>	<b>\$1,050,000</b>	<b>\$67,536</b>

\*\* Note: Does not include life cycle cost

The following table summarizes the physical characteristics of the grade crossing in Hollywood for which a Quiet Zone is not warranted.

Crossing #	Local Street	Quiet Zone Name	Municipality	Highway Owner	RR Mile Post	Track	Highway ADT	# S. Buses	# Tracks	# Hwy Lanes	Train Volume	Pro. Pass. Train Vol.	Pro. Tot. Tr. Vol.	TT Speed	AAF TTS	AWS	Accidents	Warning Device	CWT (Y/N)	P.O.I.	SSM	RIWH	QZRI	QZ \$
272578S	TAFT ST		Hollywood	City	347.75	Main	6100	19	1	2	16	58	74	55	79	Y	0	CFLBG						150,000
Total																							150,000	

 Indicates potential AAF safety improvement locations

**Legend**

- \$ Potential Crossing Improvement Location (All Aboard Florida)
- MP # Rail Mile Post (MP)
- ✚ Existing Active Rail Lines
- CROSS STREET LOCATOR Initial Quiet Zone Groupings
- Schools
- Hospitals

**Quarter Mile Analysis Zone**

**Tier Level: Criterion**

- Tier 1: Greater than 564 Households
- Tier 2: Greater than 60% Inst./Residential
- Tier 3: Special Land Uses

**Existing Rail Crossings**

**Number of Households within a Quarter Mile**

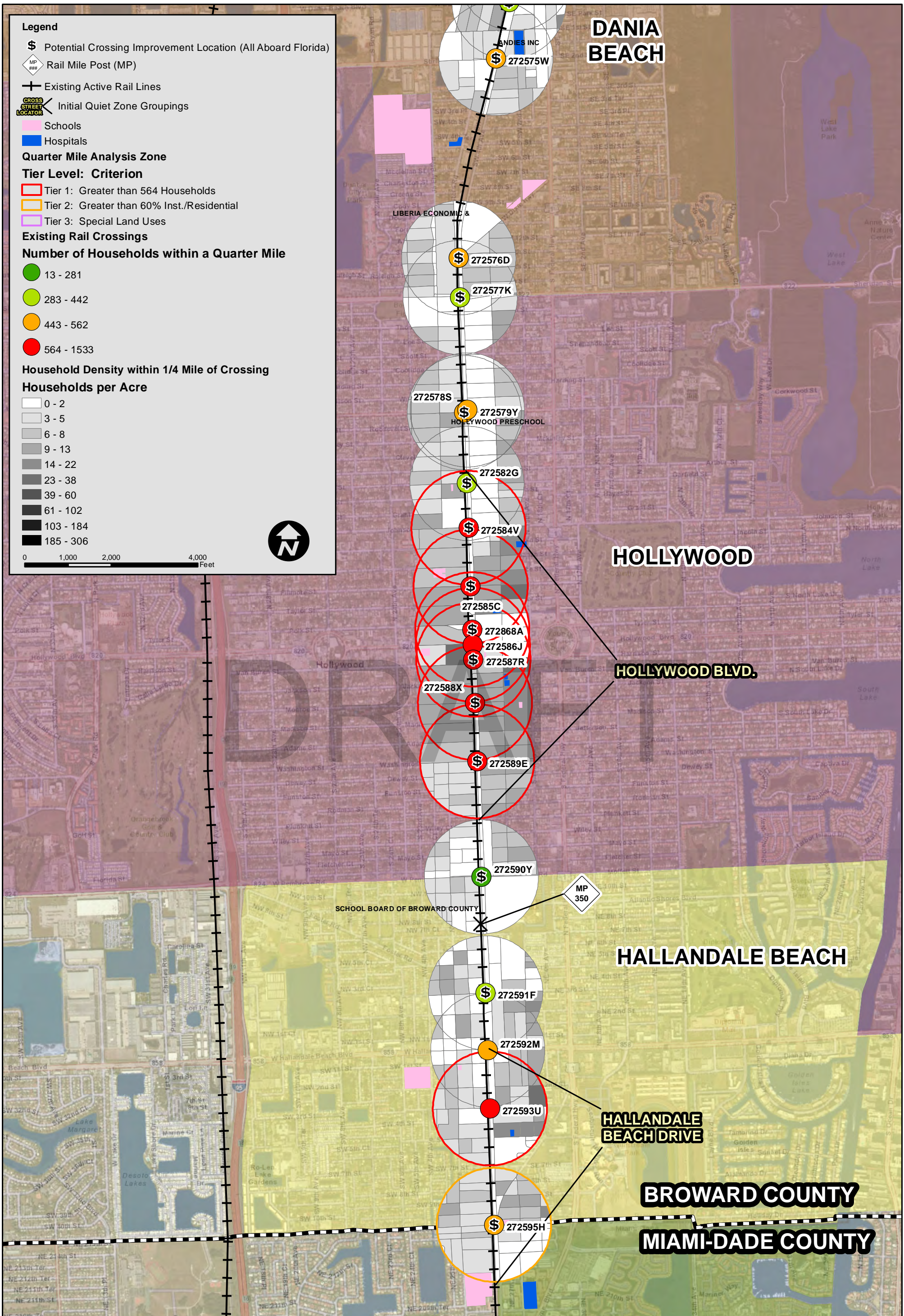
- 13 - 281
- 283 - 442
- 443 - 562
- 564 - 1533

**Household Density within 1/4 Mile of Crossing**

**Households per Acre**

- 0 - 2
- 3 - 5
- 6 - 8
- 9 - 13
- 14 - 22
- 23 - 38
- 39 - 60
- 61 - 102
- 103 - 184
- 185 - 306

0 1,000 2,000 4,000 Feet



HALLANDALE BEACH AND HOLLYWOOD  
Tiered Quiet Zone Analysis Map

**LEGEND**

- Crossing #** - Federal RR Admin. Grade Crossing Inventory Number
- Local Street** - Posted Highway Crossing Name
- Municipality** - Legal Jurisdiction Name where crossing lies
- Highway Owner** - Agency having maintenance responsibility of highway
- Latitude** - G.P.S. North Latitude of Crossing Location
- Longitude** - G.P.S. West Longitude of Crossing Location
- RR Mile Post** - FEC Railroad Mile Post designation (increasing South - North)
- Track** - FEC RR Track Classification (Main, Siding, Spur, Yard, etc.)
- Hwy ADT** - Average Daily Traffic Volume of Highway
- # S. Buses** - Average Number of Daily School Buses over Crossing
- # Tracks** - Number of Active FEC RR tracks in crossing
- Hwy Lanes** - Number of Through highway lanes in crossing
- Train Volume** - Average daily number of train movements over the crossing
- Pro. Pass. Train Vol.** - Daily number of proposed passenger train movements (AAF & TRCL)
- Pro. Tot. Tr. Vol.** - Total Proposed Daily train volume
- TT Speed** - Current Maximum Time Table Speed of Trains permitted ( mph)
- AAF TTS** - Proposed Maximum Time Table Speed of trains with All Aboard Florida operations
- AWS** - Advance Warning Signs - Highway Signs posted in advance of crossing to alert drivers of a "crossing ahead"
- Accidents** - Number of Crossing Accidents at Crossing posted in crossing inventory database
- Warning Device** - CFLBG (Cantilevered Flashing Lights, Bells & Gates), FLBG (Flashing lights, bells & gates)
- CWT** - Constant Warning Time
- P.O.I.** - Power Out Indicator
- SSM** - Supplemental Safety Measures
- RIWH** - Risk Index With Horns
- QZRI** - Quiet Zone Risk Index
- QZ\$** - Estimated Cost of Supplemental Safety Measures for Quiet Zone Designation

Example of 4 Quadrant Gate Installation:



Highway Width	Recommended Supplemental Safety Measures
2- Lane	2 gate mechanisms, circuitry/software, Veh. Presence Detectors, Power Out lights, Signs
4- lane	2 gate mechanisms, circuitry/software, Veh. Presence Detectors, Power Out lights. 2 Sidewalk gates, Signs
6-lane	4 gate mechanisms, circuitry/software, Veh. Presence Detectors, Power Out lights. 2 Sidewalk gates, signs
8-lane	4 gate mechanisms, circuitry/software, Veh. Presence Detectors, Power Out lights. 2 Sidewalk gates, signs

# TRI-RAIL COASTAL LINK- QUIET ZONES AND NON QUIET ZONE AREAS

## BROWARD COUNTY – HALLANDALE BEACH – TEMPLATE NO. 8

DRAFT

Template Number	Jurisdiction	From/To:	Delineation	Crossings	Quiet Zone Crossing \$	Non Quiet Zone Crossing
8	Hallandale Beach (Quiet Zone)	SR 824/Pembroke Road to NE 215 <sup>th</sup> St.	M.P. 349.80 - M.P. 351.32	5	850,000	
				5	850,000	

Note: The QZ\$ are a planning level estimate. Proposed QZ Crossings based on budget constraints.

All crossing information will be updated after the diagnostic field reviews.



## Hallandale Beach, FL - Quiet Zone Template – 8 – Broward Co.

**Purpose:** To Identify and evaluate the specific locations and descriptions of rail-highway grade crossings in the recommended corridor for consideration of the implementation of Quiet Zone.

**Grade Crossing Inventory:** The following table lists all the existing grade crossings within Hallandale Beach on the Florida East Coast main line and includes data collected for evaluation of a potential Quiet Zone.

**Zone Descriptions:** Based on evaluation of dwelling and population density as well as land use categories (such as schools, hospital, as well as other sensitive receptors as defined in FRA & FHWA noise evaluation standards) analysis has identified 1 candidate zone in Hallandale Beach, FL(contiguous with the identified Quiet Zone in Hollywood) and as depicted on the accompanying map.

Quiet Zone Crossing Inventory:

This zone would span from Hallendale Beach Dr. (RR Mile Post 349.80) to N 215<sup>th</sup> St.(RR Mile Post 351.32), a distance of 1.52 miles. The following table summarizes the physical description and operating characteristics of each grade crossing in the corridor. The Hallandale Beach Zone consists of 2 – 2 lane crossings, 1 – 3 lane crossing, 1 – 4 lane crossing and 1 – 5 lane crossing.

Crossing #	Local Street	Quiet Zone Name	Municipality	Highway Owner	RR Mile Post	Track	Highway ADT	# S. Buses	# Tracks	# Hwy Lanes	Train Volume	Pro. Pass. Train Vol.	Pro. Tot. Tr. Vol.	TT Speed	AAFTTS	AWS	Accidents	Warning Device	CWT (Y/N)	P.O.I.	SSM	RIWH	QZRI	QZ \$
<a href="#">272590Y</a>	SR-824 / PEMBROKE RD	Hallandale Beach Dr.	Hallandale Beach	State	349.80	Main	22500	54	1	4	16	58	74	55	79	Y	0	CFLBG						200,000
<a href="#">272591F</a>	NE 3RD ST	Hallandale Beach Dr.	Hallandale Beach	City	350.30	Main	2100	12	1	2	16	58	74	55	79	Y	0	FLBG						150,000
<a href="#">272592M</a>	Hallandale Bch Blvd	Hallandale Beach Drive	Hallandale Beach	State	350.56	Main	41500	4	1	5	16	58	74	55	79	Y	0	CFLBG						200,000
<a href="#">272593U</a>	SE 3RD ST	HALLANDALE BEACH DR.	Hallandale Beach	City	350.81	Main	3600	0	1	2	16	58	74	55	79	Y	0	FLBG						150,000
<a href="#">272595H</a>	NE 215th St. <sup>1</sup>	HALLANDALE BEACH	Hallandale Beach	County	351.32	Main	1200	0	2	3	16	58	74	55	79	Y	1	FLBG						150,000
<b>Total</b>																							850,000	

Indicates potential AAF safety improvement locations

<sup>1</sup>NE 215<sup>th</sup> St. appears for both the Municipalities of Hallandale Beach in Broward County and Ojus in Miami-Dade County due to the fact the county line bisects this crossing.

(Please refer to the attached “Legend” which explains to individual crossing data shown. Data for empty column fields will be included once field diagnostics have been completed. Crossings names in shaded have been identified as candidates for All Aboard Florida grade crossing signal upgrades. ) Those upgrades would consist of track circuitry improvements to provide constant warning time for crossing signal activation as well as relocation/replacement of flashing light signals, gates and cantilevers to accommodate construction of a second track. ).

**The Process:** The descriptive data shown was collected from existing FDOT as well as Federal Railroad Administration (FRA) grade crossing inventories and supplemented with documented diagnostic-team field evaluation of each of the crossings. This data was utilized as input into the FRA “Quiet Zone Calculator “. By inputting certain Supplemental Safety Measures at each crossing, this statistical tool evaluates each crossing under consideration as a Quiet Zone and simulates the relative accident risk both with and without the sounding of train horns. The results are also compared to an annually computed National Significant Risk Threshold (NSRT).

Simulating the average improved safety risk of the zones by making sufficient safety improvements, enables the zone to qualify as a Quiet Zone under the provisions of USDOT regulation 49 CFR 222.1.

**The Results:** Utilizing the above information, it was determined that by assuming the installation of 4 quadrant gates, vehicle presence detectors and “power out indicators” at each location , the crossings in both zones would have their Quiet Zone Risk Index reduced sufficiently below the existing risk index (with train horn sounding) as well as below the NSRT.

**The Costs:** It is estimated that the initial cost of these Supplemental Safety Measures would be as follows

Hallandale Beach Zone:

Grade Crossing	SSM Installation Cost	Annual Signal Maintenance Cost**
Pembroke Rd.	\$200,000	\$8,442
NE 3 <sup>rd</sup> St.	\$150,000	\$8,442
Hallandale Beach Blvd.	\$200,000	\$8,442
SE 3 <sup>rd</sup> St.	\$150,000	\$8,442
NE 215 <sup>th</sup> St.	\$150,000	\$8,442
<b>Total</b>	<b>\$850,000</b>	<b>\$42,210</b>



Note: Highlighted area indicate responsibility of FDOT

\*\*

Note: Does not include life cycle cost

DRAFT

**Legend**

- \$ Potential Crossing Improvement Location (All Aboard Florida)
- MP # Rail Mile Post (MP)
- ✚ Existing Active Rail Lines
- CROSS STREET LOCATOR Initial Quiet Zone Groupings
- Schools
- Hospitals

**Quarter Mile Analysis Zone**

**Tier Level: Criterion**

- Tier 1: Greater than 564 Households
- Tier 2: Greater than 60% Inst./Residential
- Tier 3: Special Land Uses

**Existing Rail Crossings**

**Number of Households within a Quarter Mile**

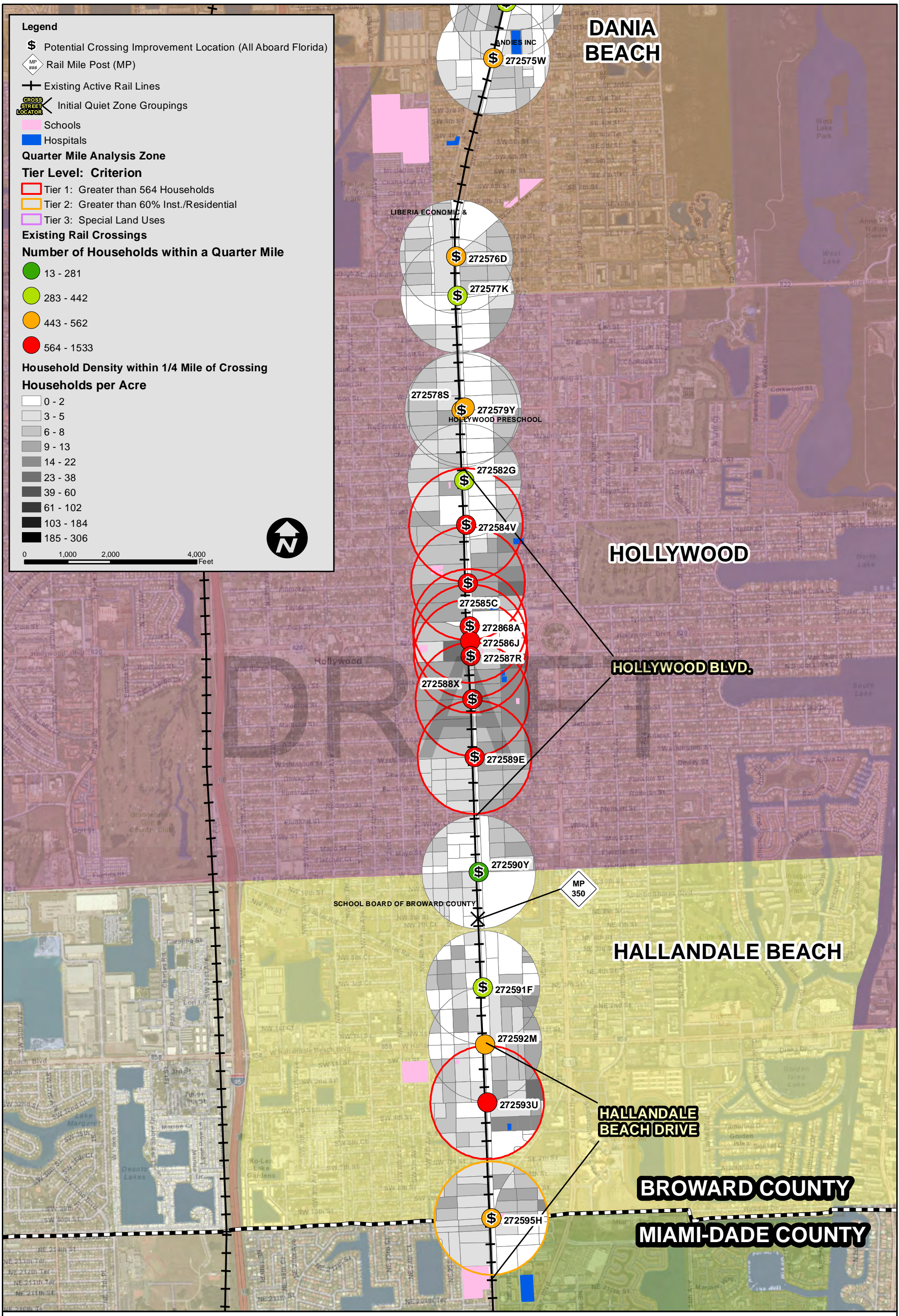
- 13 - 281
- 283 - 442
- 443 - 562
- 564 - 1533

**Household Density within 1/4 Mile of Crossing**

**Households per Acre**

- 0 - 2
- 3 - 5
- 6 - 8
- 9 - 13
- 14 - 22
- 23 - 38
- 39 - 60
- 61 - 102
- 103 - 184
- 185 - 306

0 1,000 2,000 4,000 Feet



**HALLANDALE BEACH AND HOLLYWOOD Tiered Quiet Zone Analysis Map**

**LEGEND**

- Crossing #** - Federal RR Admin. Grade Crossing Inventory Number
- Local Street** - Posted Highway Crossing Name
- Municipality** - Legal Jurisdiction Name where crossing lies
- Highway Owner** - Agency having maintenance responsibility of highway
- Latitude** - G.P.S. North Latitude of Crossing Location
- Longitude** - G.P.S. West Longitude of Crossing Location
- RR Mile Post** - FEC Railroad Mile Post designation (increasing South - North)
- Track** - FEC RR Track Classification (Main, Siding, Spur, Yard, etc.)
- Hwy ADT** - Average Daily Traffic Volume of Highway
- # S. Buses** - Average Number of Daily School Buses over Crossing
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- CWT** - Constant Warning Time
- P.O.I.** - Power Out Indicator
- SSM** - Supplemental Safety Measures
- RIWH** - Risk Index With Horns
- QZRI** - Quiet Zone Risk Index
- QZ\$** - Estimated Cost of Supplemental Safety Measures for Quiet Zone Designation

Example of 4 Quadrant Gate Installation:



DRAFT

Highway Width	Recommended Supplemental Safety Measures
2- Lane	2 gate mechanisms, circuitry/software, Veh. Presence Detectors, Power Out lights, Signs
4- lane	2 gate mechanisms, circuitry/software, Veh. Presence Detectors, Power Out lights. 2 Sidewalk gates, Signs
6-lane	4 gate mechanisms, circuitry/software, Veh. Presence Detectors, Power Out lights. 2 Sidewalk gates, signs
8-lane	4 gate mechanisms, circuitry/software, Veh. Presence Detectors, Power Out lights. 2 Sidewalk gates, signs