



Alternative Analysis

County Route 4, Crine Road,
County Route 46, Dutch Lane Road And Heulitt Road
In The Township of Colts Neck

Presented by:
Monmouth County Division of Engineering
Joseph M. Ettore, County Engineer
Daria Jakimowska, Chief Engineer, Traffic Design
Vince Cardone, Principal Engineer, Traffic Design



January 14, 2009

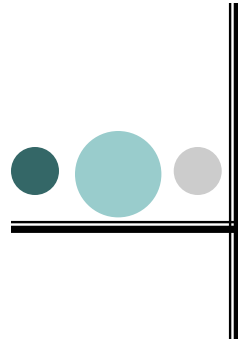
30 15 0 30 60 90 120
Feet
1 inch equals 30 feet

2006 Imagery



Area Map





Existing Conditions

CR 4 and CR 46 are classified as urban collector and rural minor collector respectively. Posted speed limit is 45 M.P.H. on all approaches

Stop signs posted on the southbound approach of CR 4 (Crine Rd) and on the northbound approach of Heulitt Rd.

Area Adjacent to the intersection is residential.

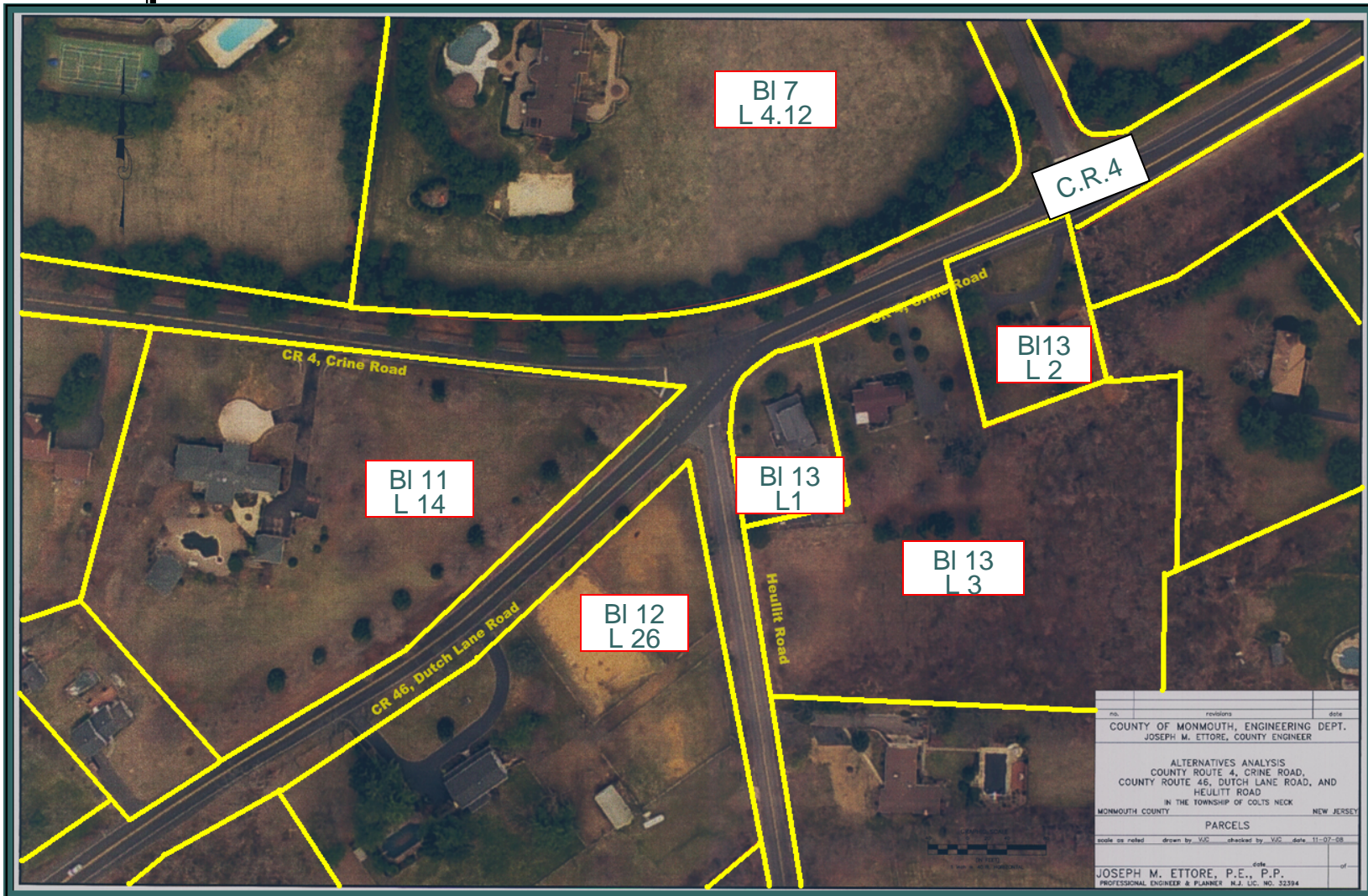


Existing Conditions Map

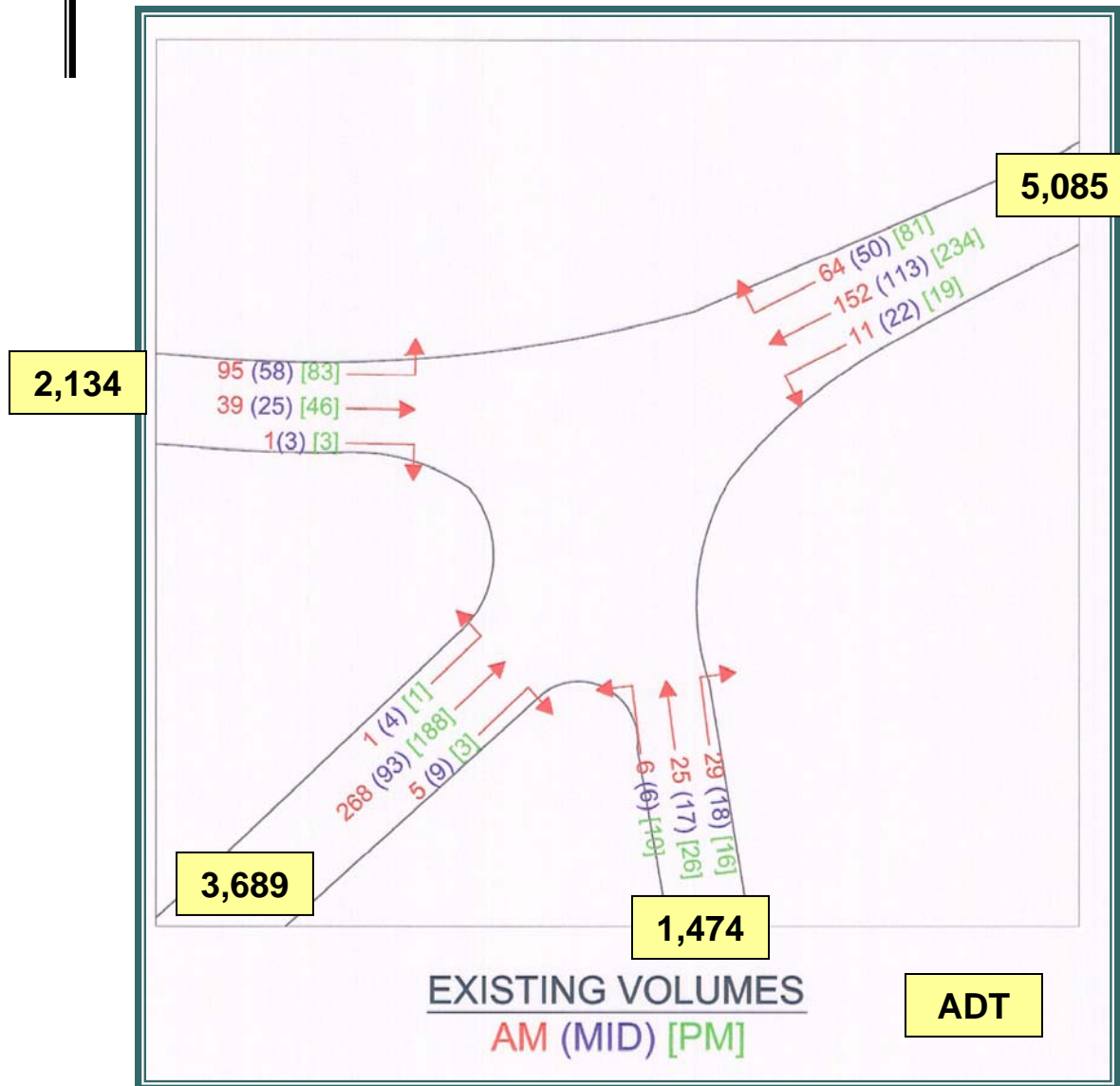




Map showing Parcels



Existing Traffic Volumes





Problem Need Statement

The existing intersection presents numerous substandard geometric features and undesirable traffic safety conditions.

- **Poor horizontal and vertical alignment approaching and through intersection**
- **Wide Intersection, long traverse time**

Sub-standard sight distance exiting Heullitt Rd (345 ft existing, 500 ft required) and Crine Rd (380 ft existing, 500 ft required)

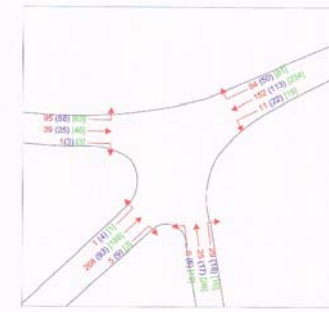


Crash History

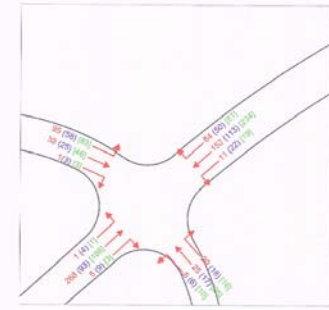
- **There were 11 crashes with 7 injuries in the three year period between November 2005 and November 2008,**
 - **2 of which involved animals (not correctable)**
 - **Of correctable crashes:**
 - **One occurred at night**
 - **4 were right angle crashes (attributable to poor sight distance)**
 - **2 involved driver losing control (attributable to poor geometry)**
- **The un-conventional geometry and restricted sight distance are so evident that the motorists exercise a lot of caution which may explain why there are not more crashes.**



Proposed Alternative 1



EXISTING VOLUMES
AM (MID) (PM)



PROPOSED VOLUMES
AM (MID) (PM)

Realignment along CR 46 and CR 4 with minor realignment of northern part of CR 4 and Heulitt Rd



Rev.	revisions	date
COUNTY OF MONMOUTH, ENGINEERING DEPT. JOSEPH M. ETTORE, COUNTY ENGINEER		
ALTERNATIVES ANALYSIS COUNTY ROUTE 4, CRINE ROAD, COUNTY ROUTE 46, DUTCH LANE ROAD, AND HEULITT ROAD IN THE TOWNSHIP OF COLTS NECK MONMOUTH COUNTY NEW JERSEY		
ALTERNATIVE 1		
drawn as noted	checked by VJC	date 11-07-08
JOSEPH M. ETTORE, P.E., P.P. PROFESSIONAL ENGINEER & PLANNER, N.J. LIC. NO. 32394		



Proposed Alternative 1

Benefits

- transformation to conventional 4-way intersection
- improved sight distance
- improved alignment of main road
- more confined intersection (shorter distance to traverse it; smaller acceptance gaps for crossing or entering main roadway)
- enhanced traffic flow & safety
- Minimizes visual impact

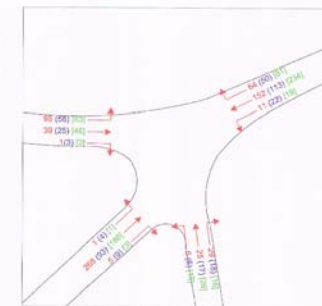
Disadvantages

- impact on properties
 - Lots 1,2,3, 13,14,26
- Does not provide any traffic calming benefits

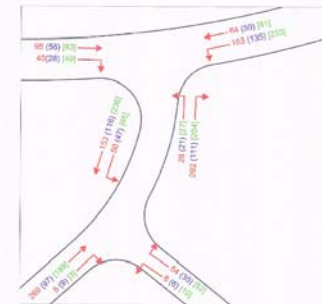
Proposed Alternative 2



Realignment along CR 4 with minor realignment of CR46 and tying Heulitt Rd to CR 46



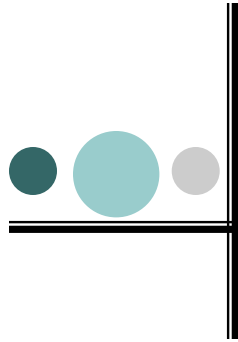
EXISTING VOLUMES
AM (MID) [PM]



EXISTING VOLUMES
AM (MID) [PM]



no.	revisions	date
COUNTY OF MONMOUTH, ENGINEERING DEPT. JOSEPH M. ETTORE, COUNTY ENGINEER		
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ALTERNATIVE 2		
scale as noted	drawn by VJC	checked by VJC date 11-07-08
JOSEPH M. ETTORE, P.E., P.P.	date	
PROFESSIONAL ENGINEER & SURVEYOR No. 11-07-08		



Proposed Alternative 2

Benefits

- transformation to conventional T-intersection
- improved sight distance
- improved alignment of CR4 - combination of major and minor road
- more confined intersection (shorter distance to traverse it; smaller acceptance gaps for crossing or entering main roadway)
- eliminates potential for northbound/southbound head-on crashes
- enhanced traffic flow & safety
- Minimizes visual impact

Disadvantages

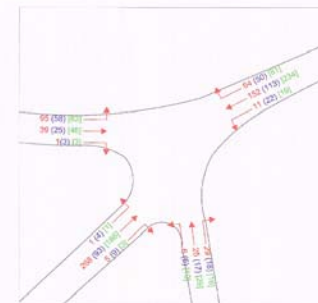
- impact on properties
 - Lots 4,12, 7,11,14,26
- not efficient (through traffic now makes either a left or right turn)
- Does not provide any traffic calming benefits



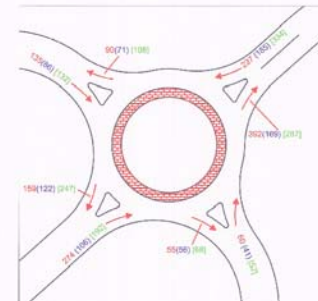
Proposed Alternative 3



Roundabout



EXISTING VOLUMES
AM (MID) [PM]



EXISTING VOLUMES
AM (MID) [PM]



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ALTERNATIVE 3		
scale as noted	drawn by VJS	checked by VJS date 11-07-08
JOSEPH M. ETTORE, P.E., P.P. PROFESSIONAL ENGINEER & PLANNER No. 13-150,000, 12/28/84		



Proposed Alternative 3

Benefits

- Traffic calming effect
- All approaches controlled by yield sign
- reduce number of vehicular conflicts
- enhanced traffic flow & safety
- Minimizes visual impact

Disadvantages

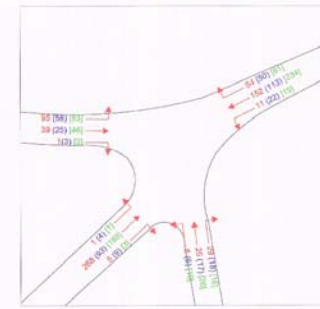
- impact on properties
 - Lots 1, 3, 4.12,7, 14
- Some delay to through traffic
- Cost



Proposed Alternative 4



Traffic Signal



EXISTING/PROPOSED VOLUMES
AM (MID) | PM



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ALTERNATIVE 4		
scale as noted	drawn by J.S.C.	checked by J.S.C. date 11-02-08
	date	of
JOSEPH M. ETTORE, P.E., P.P. PROFESSIONAL ENGINEER & PLANNER N.J. LIC. NO. 22394		



Proposed Alternative 4

Benefits

- provides the orderly movement of conflicting flows
- offer potential for reduction of right angle crashes
- enhances safety
- limited property impacts (equipment easements)

Disadvantages

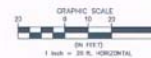
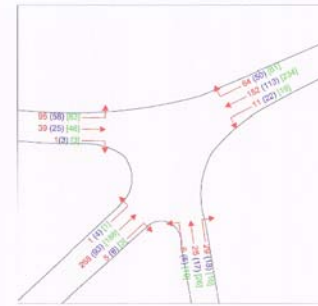
- may cause an increase of rear-end crashes
- introduces delay where there was none before
- construction and operational/maintenance costs
- additional delay causes fuel waste and higher motorist costs
- Does not meet federal warrants (MUTCD)
- negative visual effect



Proposed Alternative 5



Intersection Control Beacon



NO.	REVISIONS	DATE
COUNTY OF MONMOUTH, ENGINEERING DEPT. JOSEPH M. ETTORE, COUNTY ENGINEER		
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ALTERNATIVE 5		
SCALE AS NOTED	DRAWN BY: VAC	CHECKED BY: VAC DATE: 11-07-08
JOSEPH M. ETTORE, P.E., P.P.		
PROFESSIONAL ENGINEER & PLANNER	N.J. LIC. NO. 32294	



Proposed Alternative 5

Benefits

- additional emphasis and warning for drivers of the upcoming intersection
- may result in a reduction of vehicle speeds on the major roadway
- limited property impacts (equipment easements)

Disadvantages

- may cause an increase of rear-end crashes
- introduces delay where there was none before
- construction and operational/maintenance costs
- additional delay causes fuel waste and higher motorist costs
- negative visual effect



Next Steps

○ Solicit Public comments.

- Questions and Answer Period
- Comment forms are available
- Copy of Presentation will be posted on County's Website
www.visitmonmouth.com

○ Resolution from Township of Colts Neck Supporting an Alternative