

RIPKE

Memorandum

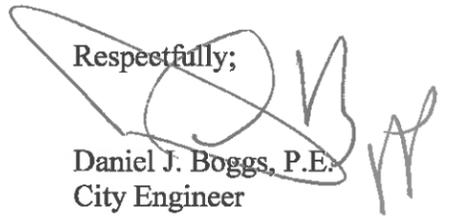
To: Chad Lohrer, IDOT
CC: Jeff Morrow, P.E., Tom Storey, P.E., Joel Keim
From: Daniel Boggs, P.E.
Date: June 13, 2014
Re: Plan of Action, Traffic Signal Replacement, IA Hwy 1 & First Street,
Mount Vernon, IA

Thank you for taking the time to meet with us this morning regarding the progress and plan of action concerning the Signal replacement at the intersection of IA Highway 1 and First Street in Mount Vernon. As a follow-up to our meeting this morning (6/13/2014), I wanted to summarize the plan of action that I feel we have all agreed to:

1. The City will place 8 portable signals at the intersection located as shown on the attached drawing. The agreed to cycle times are also attached. These signals will remain in place until such time that permanent signals can be installed.
2. The City, or a contractor employed by the City will proceed with the following work:
 - a. Remove the existing sidewalk pavement in all 4 intersection quadrants.
 - b. Complete the underground installation of electrical conduit, handholes, and signal bases. It is understood that this work will be at the City's risk until an approved plan set and signal installation permit is received by the City from IDOT.
3. The City will supply certified plans for the installation of new signals for the intersection to the IDOT for review and approval. These plans will also include accommodations for ADA accessible pedestrian sidewalk ramps. It is understood that where these requirements cannot be met, a variance will need to be applied for by the City.

We appreciate the guidance and cooperation extended thus far, and we look forward to a successful conclusion to this traffic issue.

Respectfully;


Daniel J. Boggs, P.E.
City Engineer

Dan Boggs

From: Lohrer, Chad [DOT] [Chad.Lohrer@dot.iowa.gov]
Sent: Monday, June 02, 2014 3:43 PM
To: City Mount Vernon
Cc: 'Jim Moore - City of Mt. Vernon'; 'Mike Beimer'; 'Sgt. Doug Shannon'; 'Sue Ripke'; 'Jeff Morrow'; Yanna, Kenneth [DOT]; Schnoebelen, Jim [DOT]; Crouch, Tim [DOT]; Matulac, David [DOT]; Wilkinson, Cedric [DOT]; Brandl, Mark [DOT]; Keim, Joel [DOT]
Subject: RE: Signal Timing, IA Hwy 1 and First Street, Mount Vernon, Iowa
Attachments: 1st Ave_1st St Signal Timings.pdf, Mt.Vernon Temp signals on IA1_1st street.pdf

Dan-

I have received comments back from Ames and a few more issues need to be addressed with the layout and timings, which are listed below:

- The MUTCD requires two signal heads per approach. In the attached drawing it appears the signals being install include only one signal head per approach.
- The MUTCD requires the two signal heads to be a minimum of 40' from the stop line. In the attached drawing it appears the signals are installed at the stop line for each approach. They should be installed on the far side of the intersection.
- The proposed yellow times should be 3.0 sec for each approach.
- The proposed red time for each approach should be 2.0 sec.
- I'm assuming the temporary signals do not include traffic actuation, so I don't see a need for the minimum green times or the minimum split times included in the proposed timings. Looking at the maximum green times of 32 sec for Iowa 1 and 18 sec for First Street, that would be the timings for the signals. A quick look at the 2009 turning movement counts for the intersection - http://www.iowadot.gov/maps//msp/traffic/turning_movements/2009/57147055099.pdf

It is agreed this is a good starting point, but things should be monitored and adjusted if needed. For most hours there is twice as much traffic on Iowa 1, so more green time may be needed for Iowa 1 and less for 1st Street.

Once these comments/concerns are addressed, signatures will be applied to the TCD application approving the use of these temporary traffic signals. Please let us know when these issues are addressed and how the requested changes will be implemented. Thank you for your time on this... take care.

Best regards-



Chad Lohrer / District 6 Traffic Technician

From: Dan Boggs [mailto:dboggs@cityofmtvernon-ia.gov]
Sent: Monday, June 02, 2014 12:47 PM
To: Lohrer, Chad [DOT]
Cc: 'Jim Moore - City of Mt. Vernon'; 'Mike Beimer'; 'Sgt. Doug Shannon'; 'Sue Ripke'; 'Jeff Morrow'; Yanna, Kenneth [DOT]; Schnoebelen, Jim [DOT]; Crouch, Tim [DOT]; Matulac, David [DOT]; Wilkinson, Cedric [DOT]; Brandl, Mark

[DOT]; Keim, Joel [DOT]

Subject: RE: Signal Timing, IA Hwy 1 and First Street, Mount Vernon, Iowa

The temporary signals have been turned off.

From: Lohrer, Chad [DOT] [<mailto:Chad.Lohrer@dot.iowa.gov>]

Sent: Monday, June 02, 2014 11:15 AM

To: City Mount Vernon

Cc: 'Jim Moore - City of Mt. Vernon'; 'Mike Beimer'; 'Sgt. Doug Shannon'; 'Sue Ripke'; 'Jeff Morrow'; Yanna, Kenneth [DOT]; Schnoebelen, Jim [DOT]; Crouch, Tim [DOT]; Matulac, David [DOT]; Wilkinson, Cedric [DOT]; Brandl, Mark [DOT]; Keim, Joel [DOT]

Subject: RE: Signal Timing, IA Hwy 1 and First Street, Mount Vernon, Iowa

Good morning Dan-

Please see attached email. I have sent the timings to Ames, however, our recommendation was to set them up and wait to activate. Please see that this is remedied until final approval is received. Thanks!!



Chad Lohrer / District 6 Traffic Technician

From: Dan Boggs [<mailto:dboggs@cityofmtvernon-ia.gov>]

Sent: Monday, June 02, 2014 11:05 AM

To: Lohrer, Chad [DOT]

Cc: 'Jim Moore - City of Mt. Vernon'; 'Mike Beimer'; 'Sgt. Doug Shannon'; 'Sue Ripke'; 'Jeff Morrow'

Subject: Signal Timing, IA Hwy 1 and First Street, Mount Vernon, Iowa

Chad,

I asked Jeff Morrow of Anderson Bogert Engineers to help with signal timing, and Jeff has emailed me these results.

The temporary signals are installed now. They are flashing red for traffic on First Street and flashing yellow for traffic on IA Hwy 1. The stop signs are still in place on First Street.

As soon as you tell us that we may proceed, we will program the signals and remove the stop signs.

Your help with this is much appreciated,

Respectfully,

Daniel J. Boggs, P.E.
City Engineer

N 1ST AVENUE (IA 1) AND 1ST STREET									
TRAFFIC SIGNAL TIMINGS - (6:00 AM TO 10:00 PM)									
CYCLE LENGTH:	60								
2-PHASE PRETIMED OPERATION									
PHASE	1	2	3	4	5	6	7	8	
DESCRIPTION	-	NB Thru	-	EB Thru	-	SB Thru			WB Thru
COMMENT									
MIN GREEN	-	7.0	-	7.0	-	7.0	-	7.0	-
MIN SPLIT	-	37.0	-	23.0	-	37.0	-	23.0	-
MAX GREEN	-	32.0	-	18.0	-	32.0	-	18.0	-
YELLOW	-	2.5	-	2.5	-	2.5	-	2.5	-
RED	-	2.5	-	2.5	-	2.5	-	2.5	-
PASSAGE	-	-	-	-	-	-	-	-	-
WALK	-	-	-	-	-	-	-	-	-
COUNTDOWN	-	-	-	-	-	-	-	-	-

ALL RED FLASH - ALL DIRECTIONS FROM 10:00 PM TO 6:00 AM.

Dan Boggs

From: Sgt. Doug Shannon [dshannon@cityofmtvernon-ia.gov]
Sent: Thursday, May 22, 2014 10:31 AM
To: Lohrer, Chad [DOT]
Cc: 'Dan Boggs'; mbeimer@cityofmtvernon-ia.gov; Jim; 'Sue Ripke'; 'Mark Winder'
Subject: TCD Apps
Attachments: TCD Apps_Crosswalks_Temp Signals.pdf

Chad,

Attached are two TCD applications we discussed on the phone. One is for the implementation of temporary signals to replace the 2way stop signs. The signals will remain in place for the remainder of this project, until the permanent signals are operational. I have attached the spec sheets for the signals we are planning to use and contact information for the vendor providing the signals. Our plan is to deploy the signals beginning June 2nd to allow us to get beyond the Holiday weekend. The signals will control all four approaches to the intersections and meet the MUTCD standards.

The second application is for the installation of permanent crosswalks across Hwy 1 at 1st St. The crosswalks will consist of colored concrete, and are part of the intersection reconstruction project. The new signals will have pedestrian crossing devices installed.

If you need the applications with original signatures, please advise and I will send them to you in the mail.

Please advise if you have concerns or recommendations. Thank you for your assistance and consideration!

Sgt. Doug Shannon #868
Mount Vernon Police Department
213 First Street West
Mount Vernon, Iowa 52314
319-895-6141



Iowa Department of Transportation

AGREEMENT FOR APPROVAL OF A TRAFFIC CONTROL DEVICE

Four copies of application and sketch must be filed with the Office of Traffic Engineering and Safety
Iowa Department of Transportation
Ames, Iowa

County Linn

Applicant City Of Mount Vernon
Name of Governmental Authority

Approval is requested for authority to install and maintain a traffic control device at the following location:

Highway 1 and 1st Street, Mount Vernon, Linn County, Iowa

THE APPLICANT UNDERSTANDS THAT THE TRAFFIC CONTROL DEVICE MUST COMPLY WITH THE REQUIREMENTS OF THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, IOWA DEPARTMENT OF TRANSPORTATION. THE APPLICANT ASSUMES RESPONSIBLY FOR THE OPERATION OF THE TRAFFIC CONTROL DEVICE. THE APPLICANT ALSO ASSUMES ALL COSTS FOR ELECTRICITY, MAINTENANCE, AND REPLACEMENT FOR THE ABOVE TRAFFIC CONTROL DEVICE.

Attach (to all copies of the application) a drawing of the proposed installation. Drawing to be complete, showing location of traffic control device in relation to sidewalks, driveways, streets, etc.

Show extra indications such as pedestrian "Walk-Don't Walk", etc., in detail on proposed installation drawing.

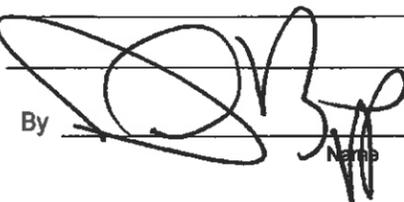
OPERATION

The traffic control shall function as follows: Temporary traffic signals for all four approaches to the intersection.

Implementation of SQ2 temporary signals at the intersection of Hwy 1 & 1st Street, Mount Vernon, Iowa. Temporary traffic signals

would be placed on all four approaches to the intersection providing signalization as previously in place. Signals would remain

in place until the completion of the construction project and installation of new permanent traffic signals.

By  _____
Name
City Engineer
Title (Mayor, Clerk, or Engineer)
5/22/2014
Date

NOTE: The signal installation must have final inspection and approval by the Iowa Department of Transportation before being placed in operation. Please notify the State Traffic Engineer, Office of Traffic Engineering and Safety, Iowa Department of Transportation, Ames, Iowa, one (1) week before signal turn on.

AUTHORIZATION

Approval is granted, subject to the conditions and restrictions set forth herein, for the installation of a traffic control device at the location described above.

CONDITION AND/OR RESTRICTIONS _____

THE IOWA DEPARTMENT OF TRANSPORTATION RESERVES THE RIGHT TO:

- (1) Require the removal of such traffic control device upon thirty days' written notice. Either lack of supervision, inadequate enforcement, unapproved operation, or intolerable congestion shall be considered sufficient reason to require removal.
- (2) Revoke and annul the issued permit if the installation is not in operation within eighteen (18) months after date of approval.

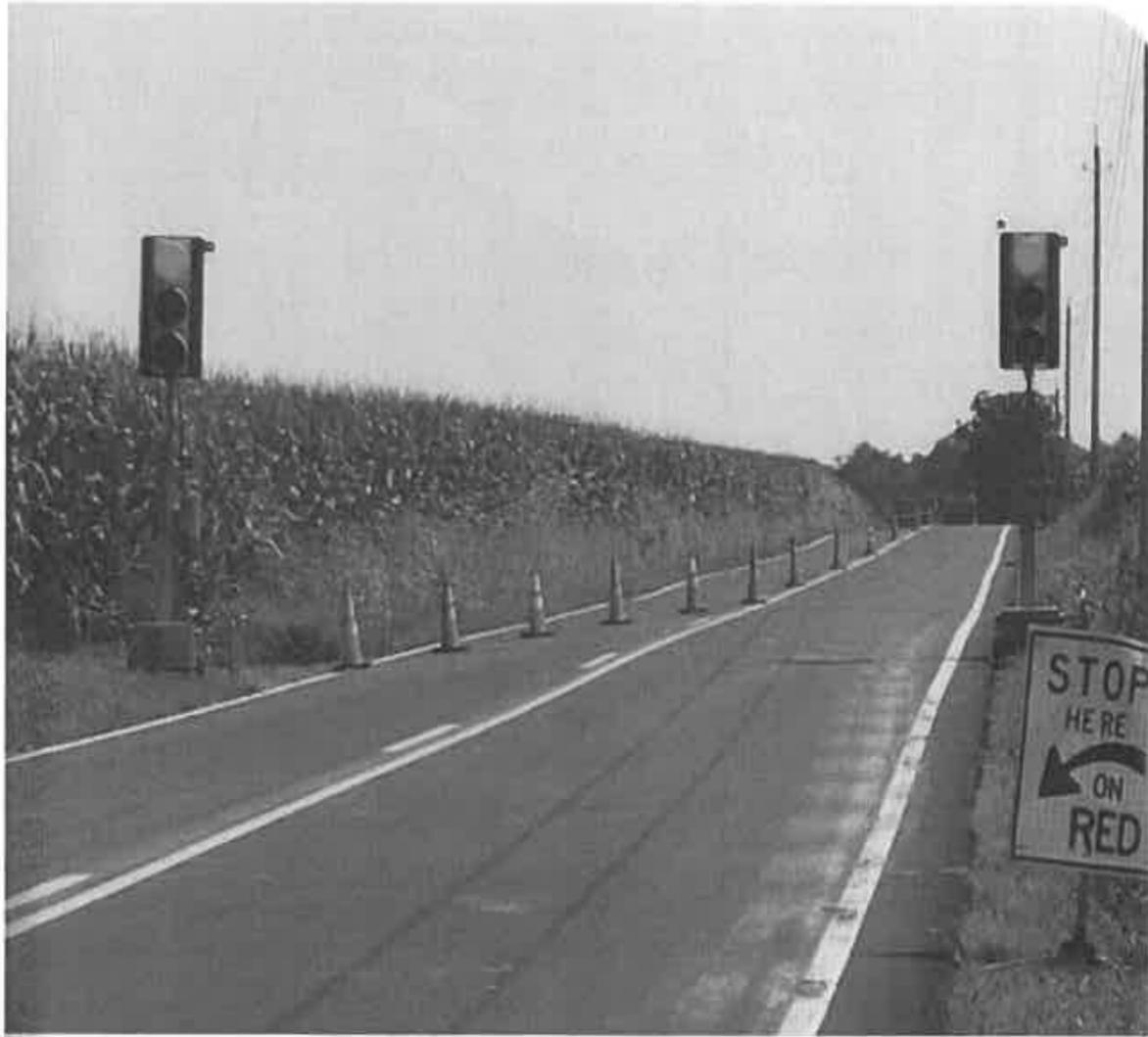
Name _____ Date _____
State Traffic Engineer,
Iowa Department of Transportation

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SIGNAL
TECHNOLOGIES

PORTABLE TRAFFIC SIGNAL SYSTEMS

SQ2[®] System



THE MOBILE TRAFFIC SIGNAL

The SQ2 Portable Traffic Signal System has been designed for fast efficient deployment without sacrificing quality or versatility. The full matrix operating system features an integrated conflict monitor, programming storage and is actuation ready. The operating system is software based and conforms to the NEMA performance standards. Failsafe programming is accomplished easily and features fixed time, actuated or manual modes. The SQ2 System is ideal for daily or short term traffic control applications. It provides increased work zone safety while maximizing traffic flow.

SQ2® System

SPECIFICATIONS

Signal Carts per System	4
Signal Heads per Cart	1
Lamp Type	12" (300 mm) diameter LED
Power Source	12V / (2) 12V batteries
Height: Operating Position	96" (244 cm)
Cart Footprint	31 x 25.5" (79 x 65 cm)
Cart Weight	420 lb. (190 kg)

SQ2 SYSTEM FEATURES

- Full matrix operating system
- Bulletproof 900 MHZ radio communication option
- True green time extensions
- Manual, fixed time, & traffic actuated operation mode options
- Wireless remote operation mode option
- Work zone indication light to provide visual cues
- Fast, efficient deployment and relocation
- Fully MUTCD and NCHRP 350 compliant
- Integrated conflict monitoring

AVAILABLE OPTIONS

Solar Charging & Outrigger Package The solar charging option extends battery life while the outrigger option provides additional stabilization.

Traffic Actuators Facilitates traffic actuation via motion sensors.

Pedestrian Crosswalk Signals System can be configured with MUTCD compliant pedestrian crosswalk signal indicators.

Advanced Remote Monitoring System Allows an authorized user to monitor location, voltage, operating hours and system status.

Back Plates Provides an additional background around the signal head to enhance visibility.

Flagger/Pilot Car Module Allows flagger or pilot car driver to control signal status with built in safeguards.

Transport Trailer An enclosed trailer to transport, store and accommodate charging of SQ2 signals.

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General specifications for the SQ2® System are subject to change without notice to reflect improvements and upgrades. Additional information is available. Contact Horizon Signal Technologies for details.

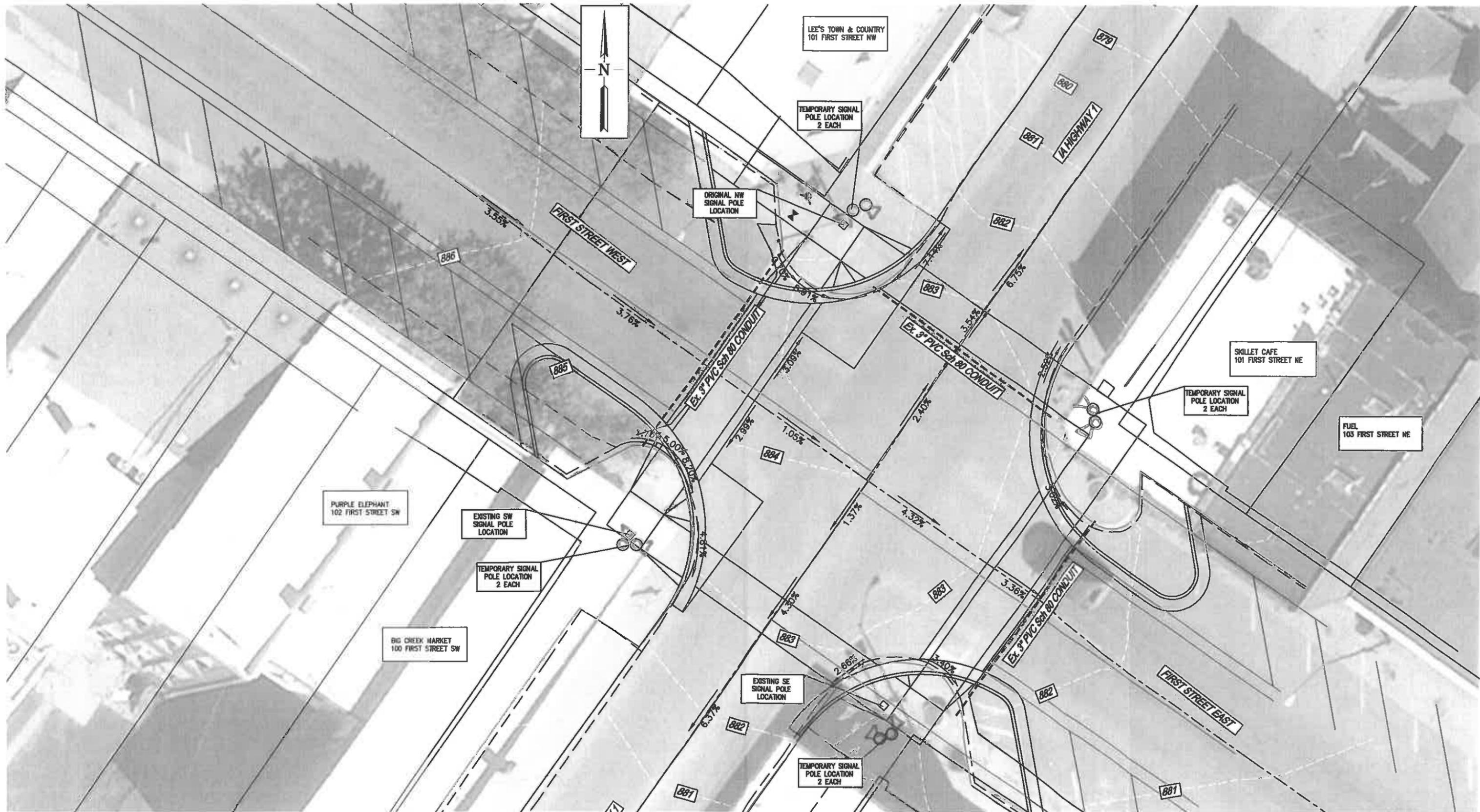
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No Scale
June 13, 2014