



# Council Retreat Follow Up: Warranted Traffic Signal Installation

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April 23, 2018

# Commerce City Traffic Signals

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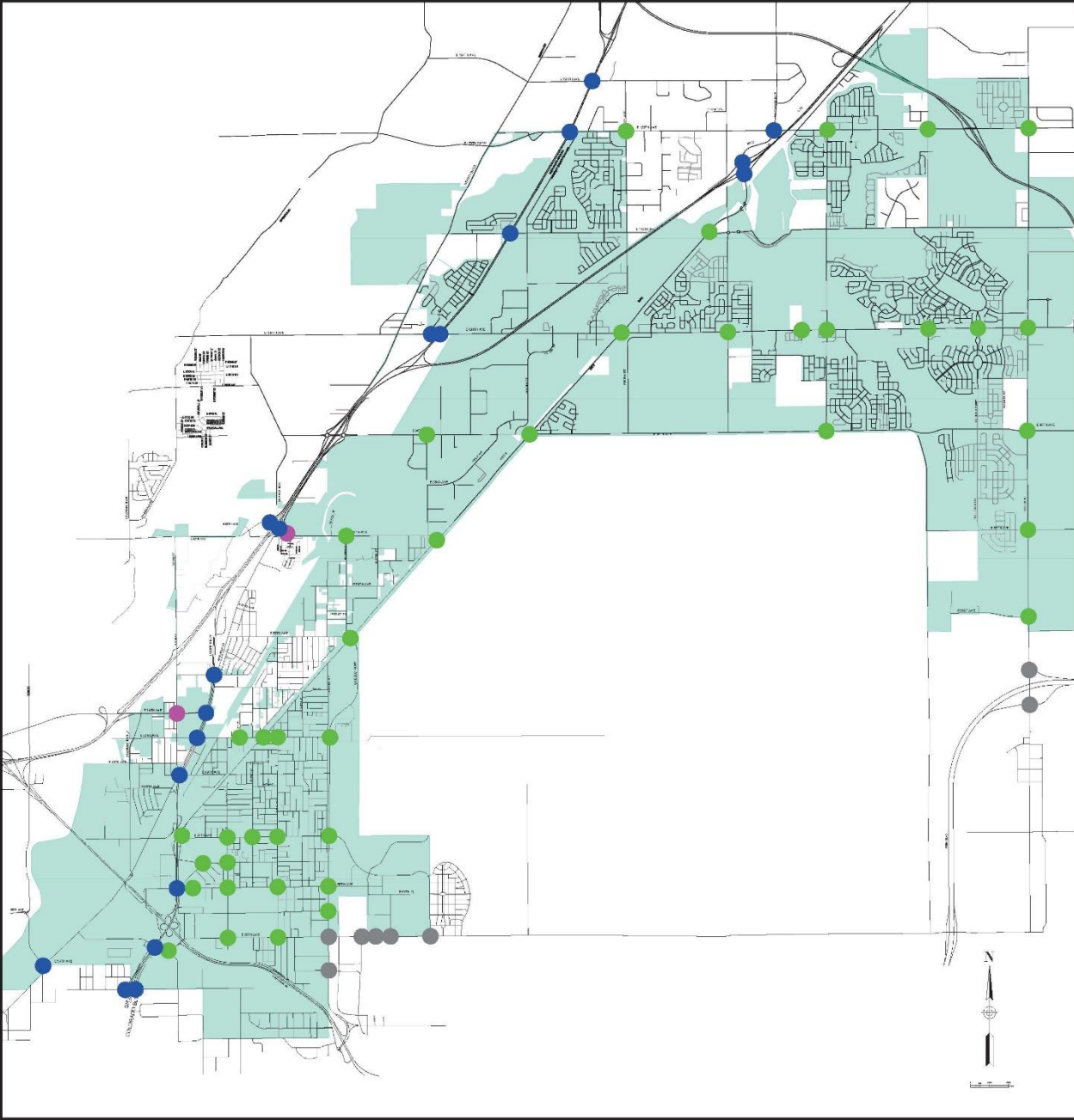
City owns & maintains:

- 40 traffic signals
  - 2 emergency signals
  - 11 flashing pedestrian beacons
  - 38 school flashing beacons
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- 17 signals are connected to the Traffic Operations Center (TOC) through fiber-optic cable or spread spectrum radio



# Existing Signals

April 16, 2018



- LEGEND**
- Existing City of Commerce City Signals
  - Existing CDOT Signals
  - Existing Adams County Signals
  - Existing City of Denver Signals



# Traffic Signal Warrant Analysis

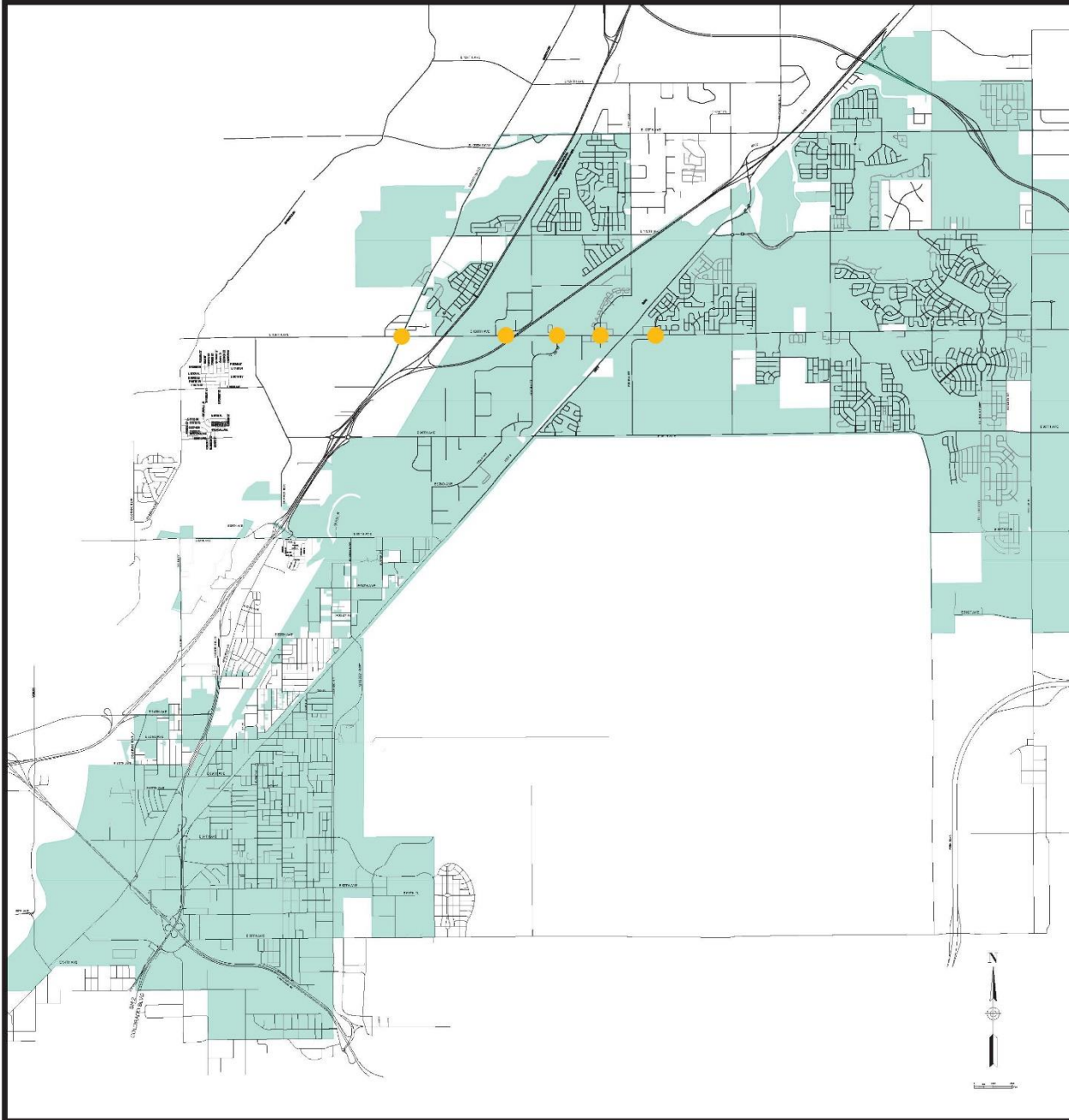
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- Warrant 1 – Eight-hour Vehicular Volume
- Warrant 2 – Four-hour Vehicular Volume
- Warrant 3 – Peak Hour
- Warrant 4 – Pedestrian Volume
- Warrant 5 – School Crossing
- Warrant 6 – Coordinated Signal System
- Warrant 7 – Crash Experience
- Warrant 8 – Roadway Network
- Warrant 9 – Intersection Near a Grade Crossing



# Warranted Signals

April 16, 2018



LEGEND  
● Currently Warranted Signals



# Warranted Signals-Current CIP Timing & Costs

Traffic Signal Installation Location	2017	2018	2019	2020	2021
104 <sup>th</sup> Ave/ Brighton Rd	\$300,000				
104 <sup>th</sup> Ave/ Joliet St			\$380,000		
104 <sup>th</sup> Ave/ Peoria Pkwy				\$380,000	
Location TBD					\$380,000
104 <sup>th</sup> Ave/ Havana St	No funding identified in CIP				
104 <sup>th</sup> Ave/ Revere St	No funding identified in CIP				

# Warranted Signals-Accelerated Timing & Updated Costs

Item	2017 Cost	2018 Cost
104 <sup>th</sup> Ave/ Brighton Rd	\$300,000	-
104 <sup>th</sup> Ave/ Joliet St		\$470,000
104 <sup>th</sup> Ave/ Peoria Pkwy		\$470,000
104 <sup>th</sup> Ave/ Havana St		\$120,000
104 <sup>th</sup> Ave/ Revere St		\$470,000
Design & Permitting (12%)		\$183,600
Construction Mgmt. (8%)		\$122,400
<b>TOTAL</b>	<b>\$300,000</b>	<b>\$1,836,000</b>

# Warranted Signals-Potential Schedule

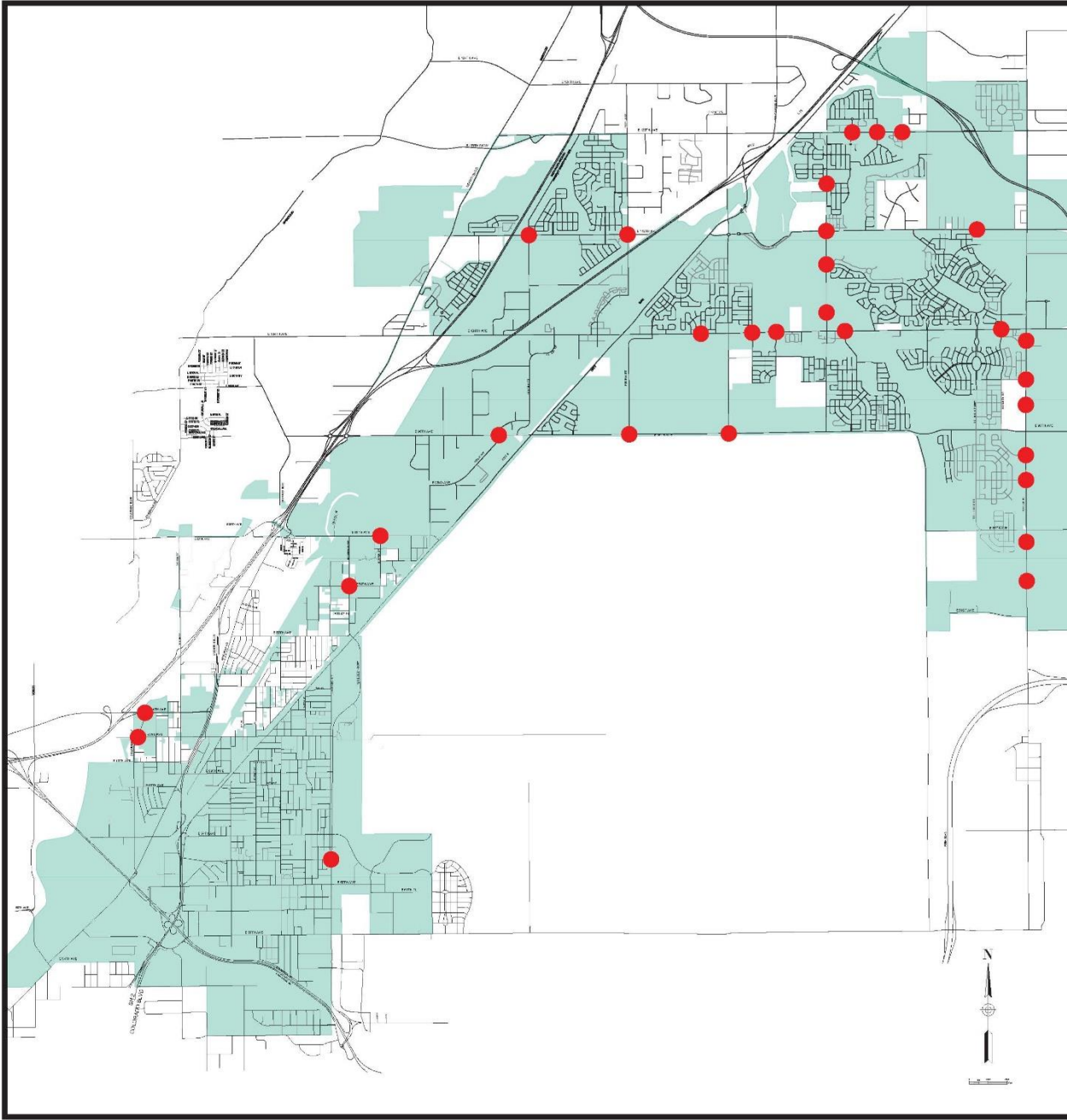
Task	Month/Year																
	05/18	06/18	07/18	08/18	09/18	10/18	11/18	12/18	01/19	02/19	03/19	04/19	05/19	06/19	07/19	08/19	09/19
Procure design services	█	█															
Submit signal installation requests to CDOT			█														
Complete plans & specifications			█	█	█	█	█	█	█								
Submit plans to CDOT for review & approval							█	█	█	█							
Issue Request for Bids (RFB)										█							
Award construction contract											█						
Procure long lead items, i.e. mast arms & poles												█	█	█	█		
Construction																█	█





# Future Signals (West of E-470 only)

April 16, 2018



LEGEND  
● Future Traffic Signals



# Existing, Warranted, and Future Signals

April 16, 2018



- LEGEND**
- Future Traffic Signals
  - Currently Warranted Signals
  - Existing City of Commerce City Signals



# Signal-Related Projects Underway

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1. TSSIP Grant through DRCOG to:
  - Replace or upgrade signal controllers at 8 locations
    - Quebec Pkwy/58<sup>th</sup> Ave & Quebec/60<sup>th</sup> Ave
    - Six signals along Highway 2 between 62<sup>nd</sup> Ave & 104<sup>th</sup> Ave
  - Install or replace uninterrupted power sources (UPS)
  - Allows for conversion of all 8 signals to FYA
2. Add Opticom to the signal at 72<sup>nd</sup> Ave & Hwy as part of the Highway 2 Widening project
3. Implement FYA on Tower Road signals & at 104<sup>th</sup> Ave/Potomac St
4. Added retro-reflective borders to signal heads at 5 locations along 104<sup>th</sup> Ave







# QUEBEC PARKWAY TRAFFIC SIGNAL CABINET REPLACEMENT





# Questions & Discussion

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