Smyrna ITS Phases 1 & 2

Michael Nichols, ITS Solutions Team Leader
Stansell Electric Inc



Tom Rose, PE, Director - Public Works
Town of Smyrna



Meredith K Cebelak, PhD PE Gresham Smith



Greg Judy, PE PTOE - VP / Engineer Manager
Neel-Schaffer Inc



Smyrna ITS Project Snapshot

Connected traffic signal network

Roadway intersection CCTV network

Advanced Traffic Management System

Video Wall

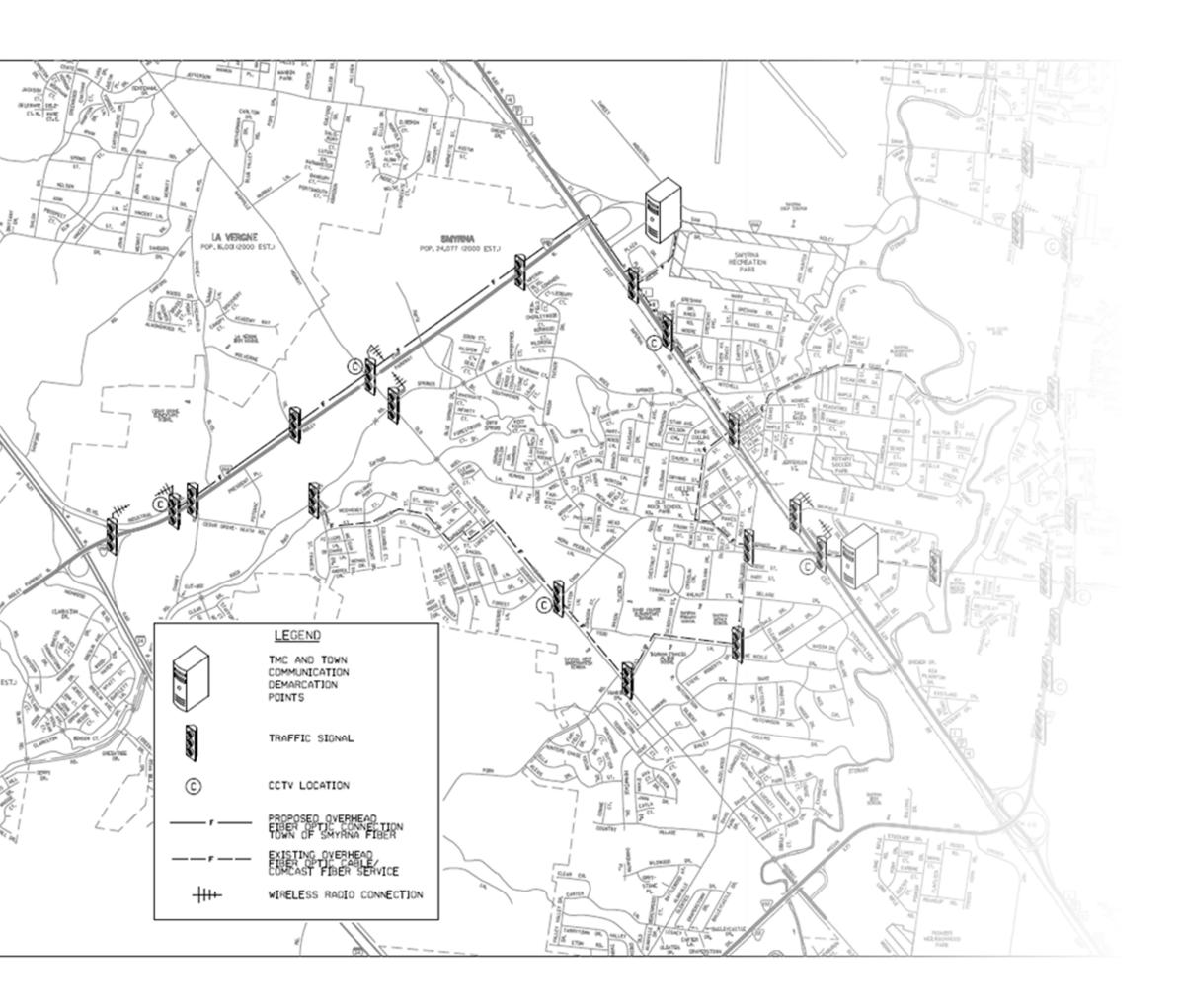
28 signalized intersections

~ 28,000' fiber interconnect

14 miles of roadway covered

Traffic Operations Center (TOC)

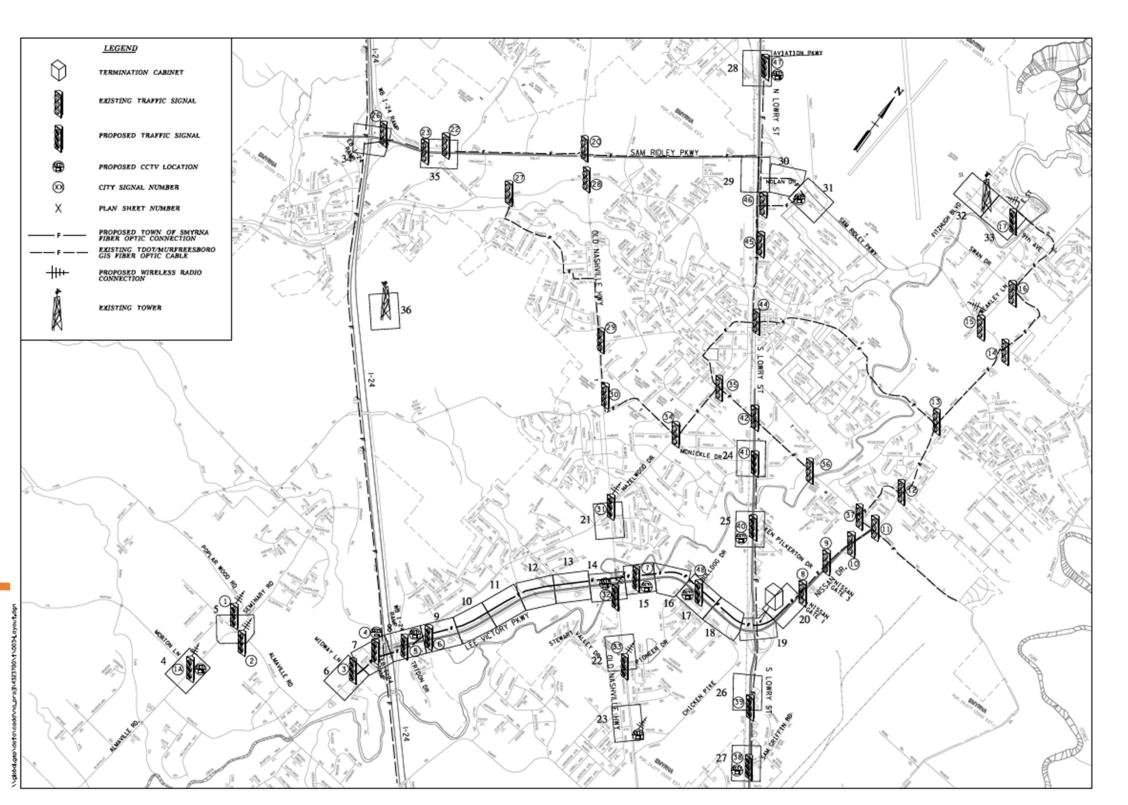




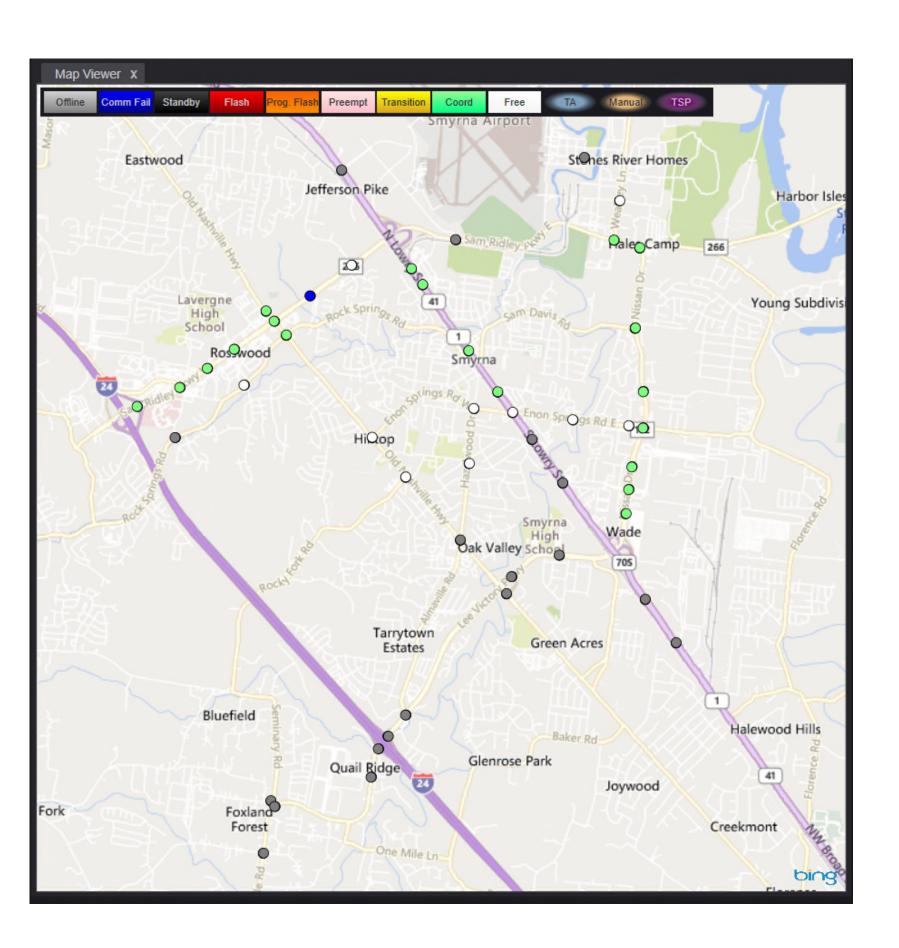


ITS Phases 1 & 2

ITS Phases 3, 4, & 5







Signal Overview



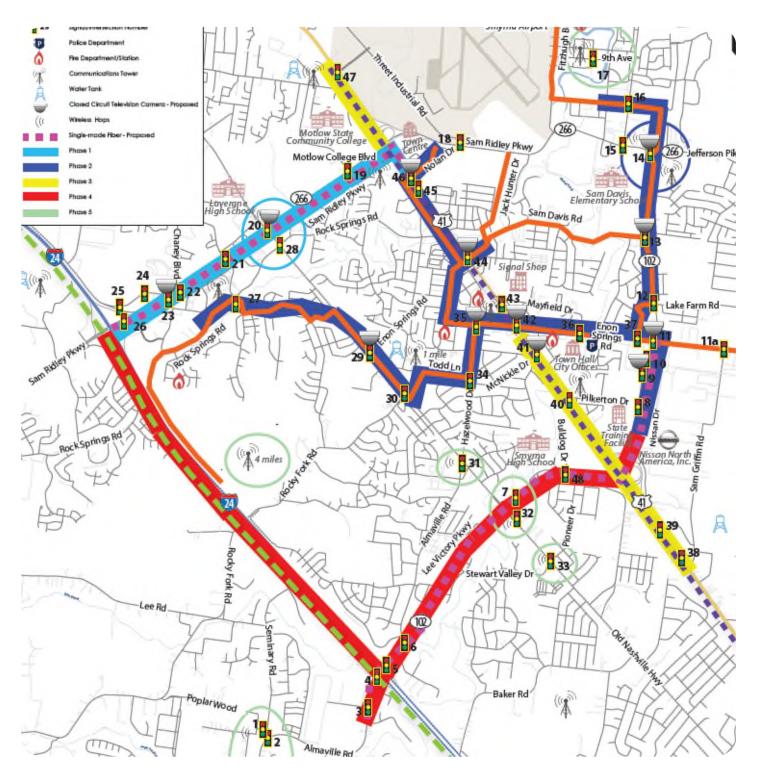


The Project Begins...

2015 – ITS & Communications Master Plan

- Main Goals / Needs/Objectives:
 - Upgrade Signals GPS Clocks, Communications, New Controllers
 - Install Communications Infrastructure Existing
 & New Fiber Opti Cables, Wireless Connections
 - Install Detection and CCTV Cameras
 - Create Traffic Management Center (TMC) & Deploy ATMS software





The Project Begins...

Implementation Plan

- Phase 1 & 2
- Phase 3, 4 & 5



- 2016
 - NEPA CE
 - ConOps Developed
 - Preliminary Plans
- 2018
 - Systems Engineering Analysis Report Developed
 - System Requirements
 - System Verification Plan
 - ROW Plans

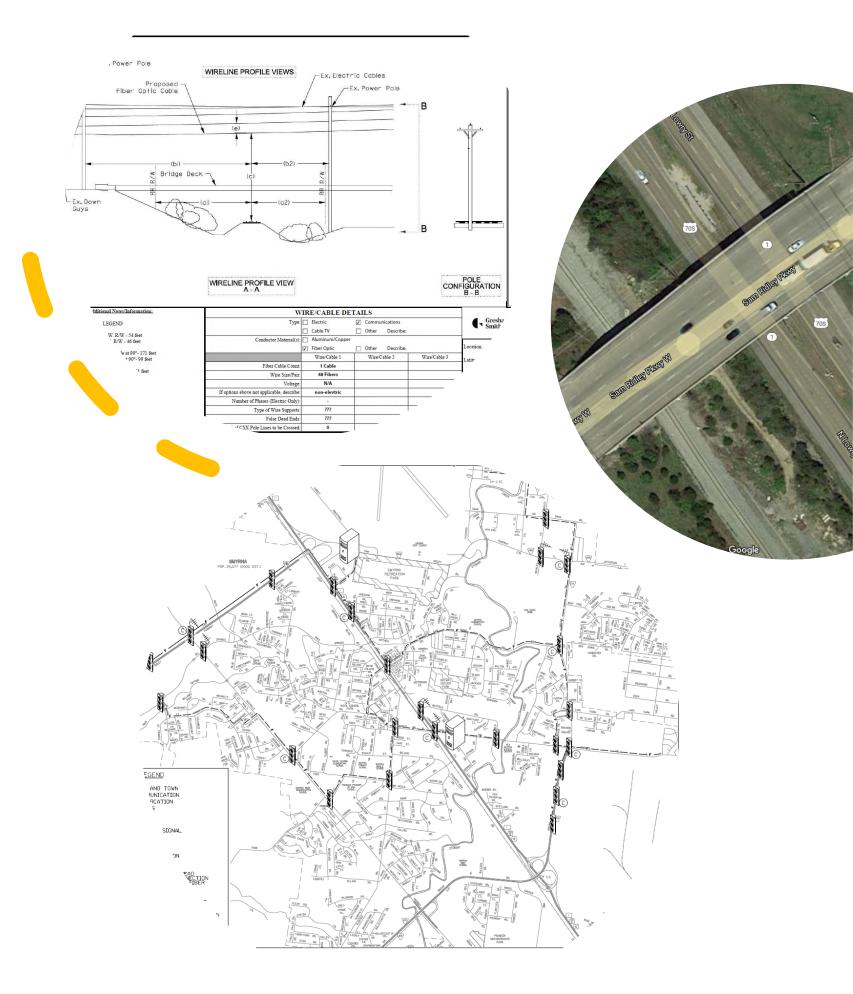
Design Continues

Coordination

- MTEMC
- CSX

Final Plans

• April 2019



I-24 SMART Corridor

Phase 1

Upgraded
Signal System &
Signal Timings
on Arterials

Design – Summer 2018

Construction – December 2021

Phase 2

Upgraded Fiber Along I-24

Upgraded
Detection
Along I-24 &
Arterials

Design – Summer 2019

Construction – Spring 2023

Phase 3

Upgraded Fiber Along Arterials

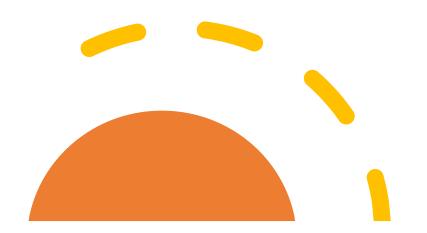
CCTVs and DMS Along Arterials

ADA Improvements Along Arterials

Design – December 2022

Construction – Summer 2024





Impact of I-24 SMART Corridor

Design Updates

- Notified June 2019 SMART Corridor Would Finish 1st
- Providing Needed Elements Along Sam Ridley Pkwy (SR 1)
 - Traffic Controllers
 - Ethernet Switches

Smyrna ITS Phase 1 & 2



Updated Final Plans – January 2020



NTP – March 2020



Bid – September 2020 TDOT Concurrence – October 2020



A Successful Team

- Customer
- Designer
- CEI
- Contractor
 - Estimating Team
 - Project Mgt Team
 - Field Delivery Team









