



Intelligent Transportation System(ITS)

ENGINEERING SERVICES CONSTRUCTION CONTRACT

CITY COUNCIL

JULY 22, 2024

Background



- At the city council meeting on 6/17, staff presented to the council regarding the implementation of the Intelligent Transportation System (ITS) Strategic Plan, prior project bid, and current procurement plan.
- Burleson ITS project includes design and installation of:
 - Advanced Traffic Management System (software and hardware)
 - Vehicle detection, new video cameras
 - Emergency response vehicle preemption
 - Traffic Management Center build-out including video wall
 - Design and implementation of a resident facing website
- System design primarily focuses on connecting 44 traffic signals (16 existing City signals, 27 TxDOT signals, and the proposed Hidden Creek / Gardens signal) then monitoring and managing them in the proposed *Traffic Management Center*.

Resources to Support ITS

- One Traffic Signal Technician / Traffic Management Center Operator - \$100k
- Inventory (signal cabinet, controller, detection, poles, etc.) and services – \$75k
- Additional bucket truck necessary to access taller signal heads on multi-lane corridors – \$200k (One-time costs plus \$20k annually recurring)
- Traffic control equipment for lane closures and safe work zones – \$50k (One-time costs and \$5k annually recurring)
- Ongoing IT costs - \$100k annually recurring

Total: \$250k one-time, \$300k annually recurring



Action Items

- Signal Maintenance Agreement with TxDOT
- Iteris Procurement - ATMS
- Paradigm Procurement – Preemption
- LJA Contract – Website Design
- IT Contracts – Firewalls, Hardware

Signal Maintenance Agreement with TxDOT



- Maintain
 - Traffic signals at 27 intersections (cabinets, poles, and other equipment)
 - Eight school flasher locations
 - Five advanced flashers locations
- Implement traffic signal timing (including coordination with TxDOT and NCTCOG on regionally significant corridors)
- Provide traffic control (including providing temporary / replacement infrastructure when damaged by accidents, storms, etc.)
- Document inspections, maintenance, and repairs for each intersection
- Troubleshoot and respond to requests and complaints

Iteris Contract



- Advanced Traffic Management System (software and hardware)
- Vehicle detection system
- Signal Performance Measure (SPM)
- Travel Time Module
- Traffic Management Center (TMC) build-out including video wall
- Hardware installation and system integration

ITERIS Primary Quote

Detection	\$	865,874.00
Hwy TRF Sig System	\$	78,720.00
ATMS	\$	75,345.00
SPMs	\$	26,520.00
Planar Video Wall	\$	304,642.80
TMC Console Furniture	\$	63,000.00
Installation/Integration	\$	330,082.00
Subtotal Primary Quote	\$	1,744,183.80
5% Contingency	\$	87,209.19
Total	\$	1,831,392.99

Paradigm Contract

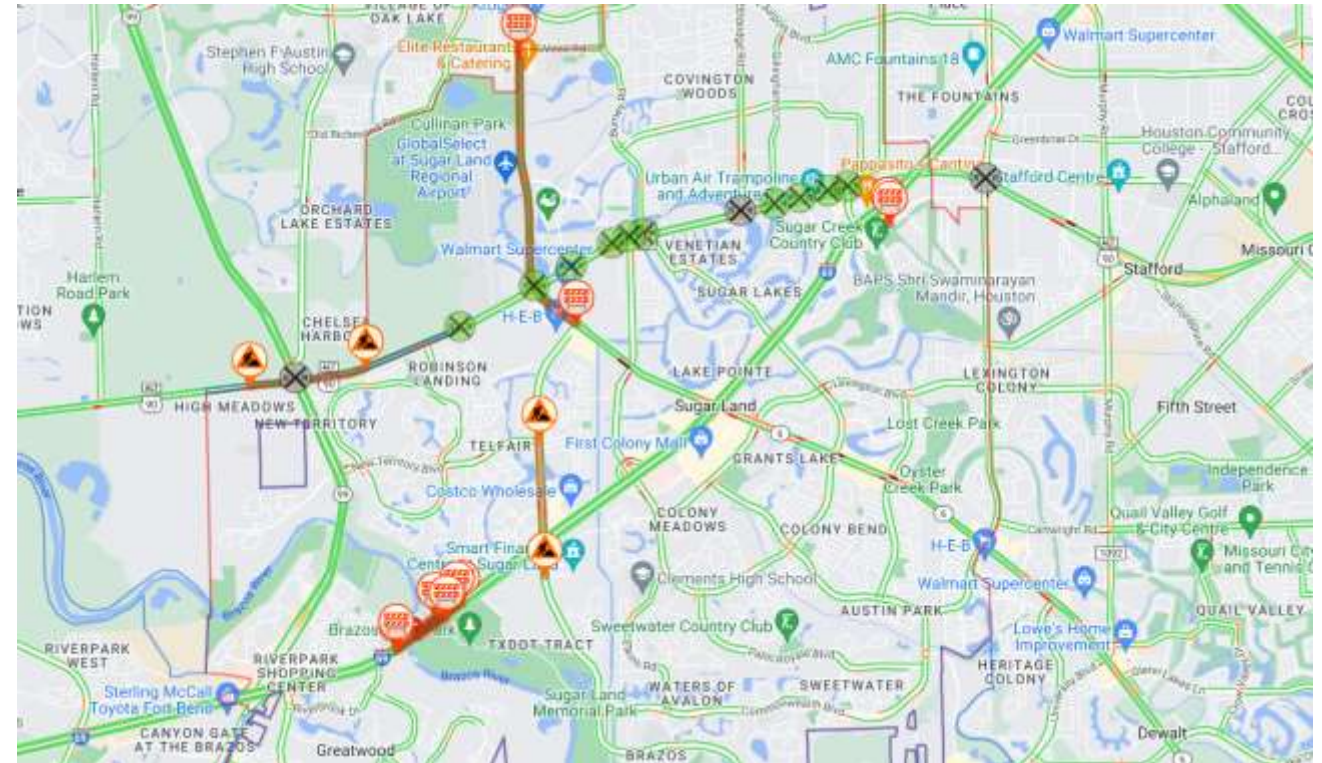
Emergency Vehicle Preemption System

Paradigm Quote	
In-vehicle units (14)	\$ 81,200.00
In-vehicle unit installation (14)	\$ 21,000.00
Preemption Units (40)	\$ 232,000.00
Subtotal Quote	\$ 334,200.00
5% Contingency	\$ 16,710.00
Total	\$ 350,910.00

Burleson Web-Based Application



- Support the implementation of the city's ITS project
- Asset group management for traffic devices
- Special event management
- Construction update status
- Railroad Preemption status
- Notification environment for citizens
- Mapping of traffic data
- Design contractor: LJA Engineering, INC.
- Cost: \$150,000



Burleson IT Procurement

- Firewall
- Communication
- Traffic Cameras
- TMC workstation computers
- TMC video management system

Burleson IT	
Firewall - Solid Border	\$ 488,670.64
Axis Camera/Mounts/Milestone/Switches - CDWG	\$ 212,091.26
Cradlepoint - GST	\$ 198,261.64
Subtotal	\$ 899,023.54

Current Procurement: Cooperative Purchasing-based

Procurement strategy revised June 2024:

- Assign experienced staff to role of integrator instead of general contractor
- Seek competitive pricing directly from software / hardware distributors through use of cooperative contracting
- Collaborate with Burleson Information Technology Department for procurement of network switches, firewall, camera mounts, and workstations at favorable pricing

Funding available: \$3,361,653.69

Project total amount: \$3,231,326.53

ITERIS	
Detection	\$ 865,874.00
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ATMS	\$ 75,345.00
SPMs	\$ 26,520.00
Planar Video Wall	\$ 304,642.80
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Subtotal	\$ 334,200.00
5% Contingency	\$ 16,710.00
Total	\$ 350,910.00
LJA	
Website Design	\$ 150,000.00
Burleson IT	
Firewall - Solid Border	\$ 488,670.64
Axis Camera/Mounts/Milestone/Switches - CDWG	\$ 212,091.26
Cradlepoint - GST	\$ 198,261.64
Subtotal	\$ 899,023.54
Project Total	
\$ 3,231,326.53	

Project Implementation Schedule

- Hardware and Software Procurement – 2 months
- TMC field installation – 1 month
- Traffic devices field installation at current city-maintained intersections (16) – 2 months
- Software system installation, configuration, integration – 1 month
- Traffic devices field installation at TxDOT taken over intersections (27) – 2 months
- Training and operation maintenance – 1 month

Primary implementation complete in 9-12 months

Next Steps

- Kick-off Contractors
- Field implementation
- Software implementation
- TMC implementation
- Estimated completion in 9-12 months
 - TMC
 - Traffic signal detection
 - Traffic video camera
 - Emergency vehicle preemption
 - Website
 - Communication

Council Action Requested

APPROVE

- Approve the traffic signal maintenance and operations provisions and authorize the city manager to execute the agreement with TxDOT.

DENY

Council Action Requested

APPROVE

DENY

- Approve a BuyBoard cooperative purchasing agreement with Iteris, Inc for procurement and construction of a portion of the Intelligent Transportation System project in the amount of \$1,744,183.80 with project contingency of \$87,209.19 for a total amount of \$1,831,392.99.

Council Action Requested

APPROVE

DENY

- Approve a BuyBoard cooperative purchasing agreement with Paradigm Traffic Systems, Inc for procurement and construction of a portion of the Intelligent Transportation System project in the amount of \$334,200 with project contingency of \$16,710 for a total amount of \$350,910.

Council Action Requested

APPROVE

DENY

- Approve a professional services contract with LJA Engineering, Inc. Services Contract in the amount of \$150,000.00.

Council Action Requested

APPROVE

DENY

- Approve a DIR cooperative purchasing agreement with Solid Border for information technology hardware and software for a portion of the Intelligent Transportation System project in the amount of \$488,670.64.

Council Action Requested

APPROVE

DENY

- Approve a DIR cooperative purchasing agreement with CDW-G for information technology hardware and software for a portion of the Intelligent Transportation System project in the amount of \$118,831.50.

Council Action Requested

APPROVE

DENY

- Approve a DIR cooperative purchasing agreement with CDW-G for information technology hardware and software for a portion of the Intelligent Transportation System project in the amount of \$93,259.76.

Council Action Requested

APPROVE

DENY

- Approve a DIR cooperative purchasing agreement with GST Technology Solutions for information technology hardware and software for a portion of the Intelligent Transportation System project in the amount of \$198,261.64.

Questions / Discussion

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