



Huntsville, Alabama

308 Fountain Circle
Huntsville, AL 35801

Cover Memo

Meeting Type: City Council Regular Meeting **Meeting Date:** 7/27/2023

File ID: TMP-3146

Department: Engineering

Subject:

Type of Action: Approval/Action

Resolution authorizing the Mayor to enter into an Agreement between Alabama Department of Transportation and the City of Huntsville, Alabama for the Installation, Operation and Maintenance of Traffic Control Signals for Huntsville Northern Bypass, ALDOT Project No. CRSA-PE10(917).

Resolution No.

Finance Information:

Account Number: N/A

City Cost Amount: N/A

Total Cost: N/A

Special Circumstances:

Grant Funded: N/A

Grant Title - CFDA or granting Agency: N/A

Resolution #: N/A

Location: (list below)

Address: N/A

District: District 1 ☐ District 2 ☐ District 3 ☐ District 4 ☐ District 5 ☐

Additional Comments:

Agreement between the City of Huntsville and ALDOT for the installation and maintenance of a new traffic signal at the intersection of Memorial Parkway and Huntsville Northern Bypass.

RESOLUTION NO. 23-

BE IT RESOLVED by the City Council of the City of Huntsville, Alabama, that the Mayor be, and is hereby authorized, to enter into an Agreement between Alabama Department of Transportation and the City of Huntsville, Alabama for the Installation, Operation and Maintenance of Traffic Control Signals for Huntsville Northern Bypass, ALDOT Project No. CRSA-PE10(917), on behalf of the City of Huntsville, a municipal corporation in the State of Alabama, which said Agreement is substantially in words and figures similar to that document attached hereto and identified as "Resolution authorizing the Mayor to enter into an Agreement between Alabama Department of Transportation and the City of Huntsville, Alabama for the Installation, Operation and Maintenance of Traffic Control Signals for Huntsville Northern Bypass, ALDOT Project No. CRSA-PE10(917)," consisting of a total of sixteen (16) pages, and the date of July 27, 2023, appearing on the margin of the first page, together with the signature of the President or President Pro Tem of the City Council, and an executed copy of said document being permanently kept on file in the Office of the City Clerk of the City of Huntsville, Alabama.

ADOPTED this the 27th day of July, 2023.

President of the City Council of
the City of Huntsville, Alabama

APPROVED this the 27th day of July, 2023.

Mayor of the City of Huntsville,
Alabama

For Official Use Only: ALDOT Agreement Number: _____

Region Tracking Number: _____ Project Number: CRSA-PE10(917)

Region: NR - Guntersville County: MADISON

**STATE OF ALABAMA acting by and through the
ALABAMA DEPARTMENT OF TRANSPORTATION: AGREEMENT for the
INSTALLATION and/or OPERATION and/or MAINTENANCE OF TRAFFIC CONTROL SIGNALS and/or
ROADWAY LIGHTING**

This Agreement, in accordance with resolution number _____ dated (or minutes dated) _____ attached hereto and made part of this Agreement, is made and entered into by and between the Alabama Department of Transportation (herein referred to as STATE) and the City of Huntsville (herein referred to as **MAINTAINING AGENCY**) for the accomplishment of the following work as hereinafter indicated by the alphabetic letter of "X" marked in the check-boxes below, to wit:

	(A) New Installation	(B) Equipment Upgrade	(C) Complete Removal	(D) Operation	(E) Maintenance
Traffic Control Signal:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Intersection Flashing Signal/Beacon:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Roadway Lighting:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The accomplishment of the work indicated by the alphabetic letter of "X" marked in the check-box(es) above and hereinafter signified by the use of the corresponding alphabetic letter A, B, C, D, and/or E as applicable, will be at the following location(s): {Example: AL-3/US-31 @ Main Street [A, D, & E] denotes the installation, operation, and maintenance of the equipment installed} **NOTE** – if more space is needed, please use continuation sheets.

Huntsville Northern Bypass / Memorial Parkway - Traffic Control Signal [A, D, & E]

Huntsville Northern Bypass / Bob Wade Lane/Countess Road - Traffic Control Signal [C]

- For the purposes of this Agreement, "equipment and/or associated hardware" shall refer to the equipment and/or associated hardware used to install, upgrade, maintain, and/or operate traffic control signals, intersection flashing signals/beacons, roadway lighting, and/or other as specified in the chart above.
- In the event the work to be accomplished above is identified by (A) and/or (B), the ☐ STATE ☒ MAINTAINING AGENCY will furnish and the ☐ STATE ☒ MAINTAINING AGENCY will install the equipment and/or associated

hardware utilized in the accomplishment of the work. In the event the STATE contributes funds to the work and the MAINTAINING AGENCY will be credited or debited for under-runs or overruns respectively, the "**Exhibit O**" is attached to and made part of this Agreement.

3. The equipment and/or associated hardware shall be installed in accordance with the applicable portions of the:
 - A. Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD), current ALDOT approved edition.
 - B. State of Alabama Project Details and Special and Standard Highway Drawings, current year version.
 - C. National Electrical Code, current edition.
 - D. Alabama Department of Transportation (ALDOT) Standard Specifications for Highway Construction, current edition and applicable special provisions.
 - E. Code of Alabama, 1975 (as Amended) with specific reference to:
 - (1) §23-1-113, Municipal Connecting Link Roads – Stipulations and Conditions [specifically sub-paragraphs (6) and (7)].
 - (2) §32-5A-32, Traffic – Control signal legend.
 - (3) §32-5A-33, Pedestrian – Control signals.
 - (4) §32-5A-34, Flashing signals.
 - (5) §32-5A-35, Lane – Direction – Control signals.
4. The STATE shall determine the quantity of the equipment and/or associated hardware to be utilized in the accomplishment of the work identified by (A) and/or (B) above. In the event the MAINTAINING AGENCY furnishes the equipment and/or associated hardware to be utilized in the accomplishment of the work identified by (A) and/or (B) above, the MAINTAINING AGENCY shall ascertain that the type and quality of the equipment and/or associated hardware is in accordance with the STATE's Materials, Sources, and Devices with Special Acceptance Requirements (APL) as maintained by the STATE's Bureau of Materials and Tests.
5. It is the sole responsibility of the MAINTAINING AGENCY to locate and/or relocate any and all utilities in conflict with the installation, upgrade, and/or maintenance of equipment and associated hardware prior to commencing work to install, upgrade, and/or maintain equipment and associated hardware. The MAINTAINING AGENCY will locate and/or relocate such utilities in accordance with all applicable Federal and State laws, regulations, and procedures. Associated utility costs will be at the sole expense of the MAINTAINING AGENCY. In the event utilities are damaged during the installation, upgrade, and/or maintenance of equipment and associated hardware due to failure of the MAINTAINING AGENCY to relocate and/or relocate such utilities, the MAINTAINING AGENCY shall be responsible for providing the funding to pay for any and all associated costs to repair the utilities.
6. Title to any and all equipment and/or associated hardware furnished by the STATE shall remain in the STATE and the STATE is deemed to be the sole owner of such equipment and/or hardware.
7. The equipment and/or associated hardware shall be operated and maintained at the sole expense of the MAINTAINING AGENCY. The MAINTAINING AGENCY agrees to provide electrical energy on a continuing basis as required, beginning at the time of the initial electrical service connection during the construction of the system. The MAINTAINING AGENCY agrees further to maintain the equipment and/or associated hardware in a good state of repair at all times, as required in

accordance with the applicable documents: Manual on Uniform Traffic Control Devices for Streets and Highways and the Alabama Department of Transportation Standard Specifications for Highway Construction and applicable special provisions. Any traffic control signal equipment and/or associated hardware must also be maintained in accordance with any traffic signal operating plan of the STATE which is in effect at the applicable time of the maintenance. If a malfunction of the equipment and/or associated hardware should ever occur, the MAINTAINING AGENCY shall make or cause to be made any repairs immediately. If a malfunction presents a potential hazard to the motoring public and the MAINTAINING AGENCY is unable to repair the equipment and/or associated hardware in a timely manner as determined by the STATE, the MAINTAINING AGENCY agrees that the STATE reserves the right to and may repair the equipment and/or associated hardware, and invoice the MAINTAINING AGENCY for all costs incurred. The MAINTAINING AGENCY agrees to pay the STATE all such costs incurred by the STATE promptly upon receipt of the invoice from the STATE.

- 7a. In instances where ALDOT maintains a fiber-optic trunk line that is used in conjunction with a closed-loop signal system, the MAINTAINING AGENCY shall maintain the fiber-optic cable from the splice point in the trunk line out to the traffic control equipment.
- 8a. Installation requests made by the MAINTAINING AGENCY and identified on page one as "(A) New Installation" with "Traffic Control Signal" marked must follow the Traffic Signal Warrant and Justification procedure as identified in the Alabama Department of Transportation Traffic Signal Design Guide and Timing Manual, latest edition. For any warrant study/analysis which does not satisfy a traffic signal warrant or warrants, the MAINTAINING AGENCY agrees to accept any and all responsibility for any damage or injury that may be caused by or related to the installation, location, operation, sequencing, and/or maintenance of the equipment and/or associated hardware and shall defend, indemnify, and hold harmless the State of Alabama, the Alabama Department of Transportation, and its agents, servants, employees, in their official or individual capacities and/or facilities from and against all claims, damages, losses and expenses, including but not limited to attorney's fees, arising out of or resulting from the installation, operation, and maintenance of the equipment and/or associated hardware, or any claim, damage, loss, or expense to the person or property caused. A copy of the warrant study/analysis shall be attached to and made part of this Agreement.
- 8b. Check one:

The ☒ CITY (Incorporated Municipality)

Subject to the limitations on damages applicable to municipal corporations under Alabama Code § 11-47-190(1975), the CITY shall indemnify and hold harmless the State of Alabama, the Alabama Department of Transportation, its officers, officials, agents, servants, and employees from and against (1) claims, damages, losses, and expenses, including but not limited to attorney's fees arising out of, connected with, resulting from, or related to the work performed by the CITY, or its officers, employees, contracts, agents or assigns (2) the provision of any services or expenditure of funds required, authorized, or undertaken by the CITY pursuant to the terms of this Agreement, or (3) any damage, loss, expense, bodily injury, or death, or injury or destruction or tangible property (other than the work itself), including loss of use therefrom, and including but not limited

to attorney's fees, caused by the willful, negligent, careless, or unskillful acts of the CITY, its agents, servants, representatives, or employees, or the misuse, misappropriation, misapplication, or misexpenditure of any source of funding, compensation, or reimbursement by the CITY, its agents, servants, representatives, or employees, or anyone for whose acts the CITY may be liable.

The ☐ COUNTY (County Government or Agency)

The COUNTY shall be responsible at all times for all of the work performed under this agreement and, as provided in Alabama Code § 11-93-2(1975), the COUNTY shall indemnify and hold harmless the State of Alabama, the Alabama Department of Transportation, its officers, officials, agents, servants, and employees.

For all claims not subject to Alabama Code § 11-93-2(1975), the COUNTY shall indemnify and hold harmless the State of Alabama, the Alabama Department of Transportation, its officers, officials, agents, servants, and employees from and against any and all damages, claims, loss, liabilities, attorney's fees or expense whatsoever, or any amount paid in compromise thereof arising out of, connected with, or related to (1) work performed under this Agreement, (2) the provision of any services or expenditure of funds required, authorized, or undertaken by the COUNTY pursuant to the terms of this Agreement, or (3) misuse, misappropriation, misapplication, or misexpenditure of any source of funding, compensation or reimbursement by the COUNTY, its officers, officials, agents, servants, and employees.

The term "hold harmless" includes the obligation of the MAINTAINING AGENCY to pay damages on behalf of the State of Alabama, the Alabama Department of Transportation, and its agents, servants, and/or employees.

9. Complete removal of the equipment and/or associated hardware, hereinabove identified by (C), will be at the sole expense of the ☐ STATE ☒ MAINTAINING AGENCY.
10. The STATE reserves the right to demand the removal of the equipment and/or associated hardware should the STATE determine that the signal is no longer required or deem its condition or operation hazardous. Further, the STATE shall have the right to remove the equipment and/or associated hardware should the MAINTAINING AGENCY fail to do so upon demand by the STATE. The MAINTAINING AGENCY agrees to reimburse the STATE for its costs associated with the removal. Any equipment and/or associated hardware which is deemed by the STATE to be non-uniform or obsolete will be removed and disposed of by the MAINTAINING AGENCY. None of the non-uniform or obsolete equipment and/or associated hardware which has been removed shall be reused on the STATE highway system.
11. If future traffic conditions require changes and/or adjustments to said equipment and/or associated hardware (other than ordinary timing), the MAINTAINING AGENCY shall obtain the approval of the STATE before such changes are implemented and the STATE shall make a determination on whether a new Agreement is required to be submitted for the UPGRADING, OPERATION, and MAINTENANCE of the new equipment and/or associated hardware. All such changes shall be at the sole cost and expense of the MAINTAINING AGENCY.

12. At such time as a warrant study is conducted on an existing signalized intersection and the results differ from the previous warrant study conducted at that signalized intersection, a new Agreement for Installation and/or Operation and/or Maintenance of Traffic Control Signals and/or Roadway Lighting shall be executed with the MAINTAINING AGENCY.

13. In the event Federal funds are utilized in the accomplishment of the work hereinbefore described, "**Exhibit M**" is attached to and made a part of this Agreement.

14. FUNDS SHALL NOT BE CONSTITUTED AS A DEBT

It is agreed that the terms and commitments contained herein shall not be construed as a debt of the State of Alabama in violation of Article 11, Section 213 of the Constitution of Alabama, 1901, as amended by Amendment Number 26. It is further agreed that if any provision of this Agreement shall contravene any statute or Constitutional Provision or Amendment, then the conflicting provision in this Agreement shall be deemed null and void.

For any and all disputes arising under the terms of this Agreement, the parties hereto agree, in compliance with the recommendations of the Governor and Attorney General, when considering settlement of such disputes, to utilize appropriate forms of non-binding alternative dispute resolution including, but not limited to, mediation by and through the Attorney General's Office of Administrative Hearings or where appropriate, private mediators.

15. The type and number of signal & pedestrian heads per intersection or roadway lighting hardware are as follows: {Example: 5 – 3 sec, 12", red ball, yellow/green left arrow. OPTION: If plans are available to convey information below, just enter "**SEE ATTACHED PLANS**".} **NOTE** – If more space is needed, please use continuation sheets.

SEE ATTACHED PLANS - CRSA-PE10 (917)

TYPE OF SIGNAL		CONTROLLER	
<input checked="" type="checkbox"/> Traffic Control	<input type="checkbox"/> Pedestrian Control	Make:	Model #:
<input type="checkbox"/> Flashing	<input type="checkbox"/> Lane Control	<input type="checkbox"/> Fixed Time	<input type="checkbox"/> Two Phase
<input type="checkbox"/> School Flasher	<input type="checkbox"/> Railroad Crossing	<input type="checkbox"/> Semi Actuated	<input type="checkbox"/> Four Phase
<input type="checkbox"/> Other: _____		<input type="checkbox"/> Full Actuated	<input type="checkbox"/> Eight Phase
_____		<input type="checkbox"/> Other: _____	
_____		SYSTEM <input type="checkbox"/> YES <input type="checkbox"/> NO	

16. In the event the work to be accomplished is identified by (A), (B), and/or (C) and [1] in part or wholly constitutes an interconnected, coordinated, fixed time relationship, signal control operation between two or more intersections (herein referred to as a SYSTEM and hereinabove indicated by the SYSTEM check-box for YES marked in the controller box above), [2] is located within the limits of a SYSTEM, or [3] is within close proximity as to adjoin a SYSTEM, the ☐ STATE ☐ MAINTAINING AGENCY shall substantiate the work identified by (A), (B), and/or (C) to be SYSTEM compatible.
17. By entering into this agreement, the MAINTAINING AGENCY is not an agent of the State, its officers, employees, agents or assigns. The MAINTAINING AGENCY is an independent entity from the State and nothing in this agreement creates an agency relationship between the parties.
18. By signing this contract, the contracting parties affirm, for the duration of this agreement, that they will not violate federal immigration law or knowingly employ, hire for employment, or continue to employ an unauthorized alien within the State of Alabama. Furthermore, a contracting party found to be in violation of this provision shall be deemed in breach of this agreement and shall be responsible for all damages resulting there from.

REMAINDER OF PAGE INTENTIONALLY LEFT BLANK. SIGNATURE PAGE TO FOLLOW.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by those officers, officials, and persons thereunto duly authorized, and the Agreement is deemed to be dated and to be effective on the date stated hereinafter as the date of the approval of the Region Engineer.

(Seal of MAINTAINING AGENCY)

Legal Name of MAINTAINING AGENCY

Attest: _____
(Seal or notary signature)

By: _____
Authorized Signature for MAINTAINING AGENCY

Agreement Recommended for approval:

By: _____
Area Traffic Engineer Signature

STATE OF ALABAMA acting by and through the ALABAMA DEPARTMENT OF TRANSPORTATION

The within and foregoing Agreement is hereby approved on this _____ day
of _____, 20_____.

APPROVED:

RECORDED:

By: _____
Region Engineer Signature

By: _____
State Traffic Engineer Signature

Date: _____
(Added to Archive)

Region Tracking Number: _____ Project Number: CRSA-PE10 (917)
Region: NR - Guntersville ☐ County: MADISON

7/18/90

EXHIBIT M

CERTIFICATION

This certification is applicable to the instrument to which it is attached whether attached directly or indirectly with other attachments to such instrument.

The prospective participant/recipient, by causing the signing of and the submission of this Federal contract, grant, loan, cooperative agreement, or other instrument as might be applicable under Section 1352, Title 31, U.S. Code, and the person signing same for and on behalf of the prospective participant/recipient each respectively certify that to the best of the knowledge and belief of the prospective participant or recipient and of the person signing for and on behalf of the prospective participant/recipient, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the prospective participant/recipient or the person signing on behalf of the prospective participant/recipient as mentioned above, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, or other instrument as might be applicable under Section 1352, Title 31, U.S. Code, the prospective participant/recipient shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The prospective participant/recipient also agrees by submitting this Federal contract, grant, loan, cooperative agreement or other instrument as might be applicable under Section 1352, Title 31, U.S. Code, that the prospective participant/recipient shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such sub-recipients shall certify and disclose accordingly.

Region Tracking Number: _____ Project Number: CRSA-PE10 (917)
Region: NR - Guntersville County: MADISON

3/31/2000

EXHIBIT O

CERTIFICATION

FUNDING RATIO FOR THE INSTALLATION OF TRAFFIC CONTROL SIGNALS
AND/OR ROADWAY LIGHTING

The Alabama Department of Transportation (hereinafter referred to as the STATE) and the City of Huntsville (hereinafter referred to as the MAINTAINING AGENCY) wishes to install a traffic control signal and/or roadway lighting at Huntsville Northern Bypass. This installation requires participation by the STATE and the MAINTAINING AGENCY in funding the installation cost. The total estimated cost to install the traffic control signal and/or roadway lighting is _____ with _____ percent funded by the STATE and _____ percent funded by the MAINTAINING AGENCY. In the event the final installation cost is less than the total estimated cost, the STATE and the OWNER will share in the cost under-run at the above-mentioned funding ratio and, therefore, the STATE will refund to the MAINTAINING AGENCY 0 percent of the under-run. In the event the final installation cost exceeds the total estimated cost, the STATE and the MAINTAINING AGENCY will share in the cost over-run at the above-mentioned funding ratio and, therefore, the MAINTAINING AGENCY will submit a check to the STATE for 0 percent of the cost over-run.

ALABAMA

DEPARTMENT OF TRANSPORTATION

PLANS OF PROPOSED PROJECT NUMBER

CRSA-PE10(917)

HUNTSVILLE NORTHERN BYPASS

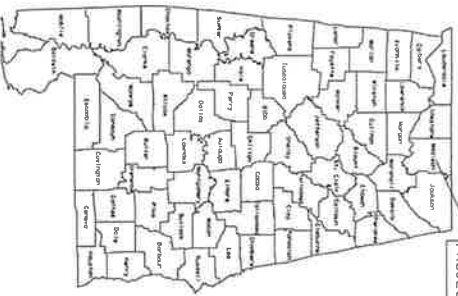
FROM 1.2 MILES EAST OF CR-86 (PULASKI PIKE)

TO 1500' EAST OF SR-1 (US HIGHWAY 431)

GRADE, DRAIN, BASE, PAVE, SIGNALS,

BRIDGE CULVERTS, AND BRIDGE CULVERT REMOVAL

MADISON COUNTY



Existing Bridges (Culvert) (Remove)

INDEX	STA TO	STA	LENGTH	BIN
1	288+22.51	288+44.98	22.47	4371

TOTAL EFFECT NONE

Required Bridge (Culvert)

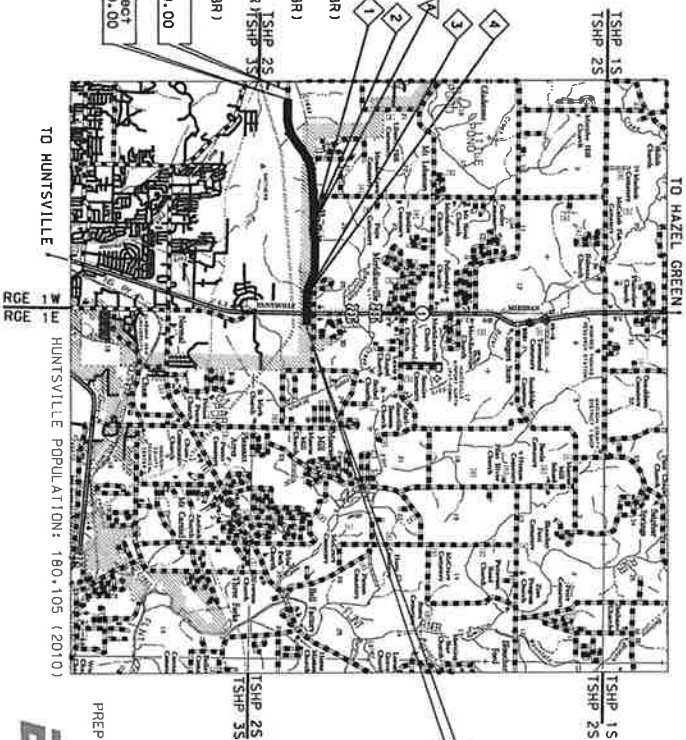
1	CD-8'x6'	287+09.09	287+29.99	20.90	21711	37°30'40" LT AH (EBR)
2	CD-8'x6'	287+09.09	287+29.99		21713	37°30'40" LT AH (WBR)
3	CT-8'x5'	355+90.11	356+22.67	32.56	21714	39°49'54" LT AH (EBR)
4	CT-8'x5'	355+90.11	356+22.67		21712	39°49'54" LT AH (WBR)

TOTAL EFFECT (EB ONLY) 53.46

Equations & Exceptions
NONE

Total Stationing of Project 18203.07
Equations & Exceptions 0.00
Net Length of Project 18203.07
Net Length of Bridges 53.46
Net Length of Roadways 18149.61

FEET MILES



Begin Project
Sta. 195+00.00

End Project/Work
Sta. 385+03.07

PREPARED BY:

BARGE
DESIGN SOLUTIONS

2000 Century Parkway, Suite 200, Huntsville, Alabama 35891
PHONE (256) 533-1661 FAX (256) 533-1564

STATE	REFERENCE PROJECT NO.	FISCAL YEAR	SHEET NO.	LAST SHEET NO.
AL	CRSA-PE10(917)	2023	1	585

Contract ID No. STPMV-PE10(917)
Code No. 4321 STRWA 100054537-2


Design Designation	ADT 12022	ADT 12042	ADT 12062	ADT 12082	ADT 12102	ADT 12122	ADT 12142	ADT 12162	ADT 12182	ADT 12202	ADT 12222	ADT 12242	ADT 12262	ADT 12282	ADT 12302	ADT 12322	ADT 12342	ADT 12362	ADT 12382	ADT 12402	ADT 12422	ADT 12442	ADT 12462	ADT 12482	ADT 12502	ADT 12522	ADT 12542	ADT 12562	ADT 12582	ADT 12602	ADT 12622	ADT 12642	ADT 12662	ADT 12682	ADT 12702	ADT 12722	ADT 12742	ADT 12762	ADT 12782	ADT 12802	ADT 12822	ADT 12842	ADT 12862	ADT 12882	ADT 12902	ADT 12922	ADT 12942	ADT 12962	ADT 12982	ADT 13002	ADT 13022	ADT 13042	ADT 13062	ADT 13082	ADT 13102	ADT 13122	ADT 13142	ADT 13162	ADT 13182	ADT 13202	ADT 13222	ADT 13242	ADT 13262	ADT 13282	ADT 13302	ADT 13322	ADT 13342	ADT 13362	ADT 13382	ADT 13402	ADT 13422	ADT 13442	ADT 13462	ADT 13482	ADT 13502	ADT 13522	ADT 13542	ADT 13562	ADT 13582	ADT 13602	ADT 13622	ADT 13642	ADT 13662	ADT 13682	ADT 13702	ADT 13722	ADT 13742	ADT 13762	ADT 13782	ADT 13802	ADT 13822	ADT 13842	ADT 13862	ADT 13882	ADT 13902	ADT 13922	ADT 13942	ADT 13962	ADT 13982	ADT 14002	ADT 14022	ADT 14042	ADT 14062	ADT 14082	ADT 14102	ADT 14122	ADT 14142	ADT 14162	ADT 14182	ADT 14202	ADT 14222	ADT 14242	ADT 14262	ADT 14282	ADT 14302	ADT 14322	ADT 14342	ADT 14362	ADT 14382	ADT 14402	ADT 14422	ADT 14442	ADT 14462	ADT 14482	ADT 14502	ADT 14522	ADT 14542	ADT 14562	ADT 14582	ADT 14602	ADT 14622	ADT 14642	ADT 14662	ADT 14682	ADT 14702	ADT 14722	ADT 14742	ADT 14762	ADT 14782	ADT 14802	ADT 14822	ADT 14842	ADT 14862	ADT 14882	ADT 14902	ADT 14922	ADT 14942	ADT 14962	ADT 14982	ADT 15002	ADT 15022	ADT 15042	ADT 15062	ADT 15082	ADT 15102	ADT 15122	ADT 15142	ADT 15162	ADT 15182	ADT 15202	ADT 15222	ADT 15242	ADT 15262	ADT 15282	ADT 15302	ADT 15322	ADT 15342	ADT 15362	ADT 15382	ADT 15402	ADT 15422	ADT 15442	ADT 15462	ADT 15482	ADT 15502	ADT 15522	ADT 15542	ADT 15562	ADT 15582	ADT 15602	ADT 15622	ADT 15642	ADT 15662	ADT 15682	ADT 15702	ADT 15722	ADT 15742	ADT 15762	ADT 15782	ADT 15802	ADT 15822	ADT 15842	ADT 15862	ADT 15882	ADT 15902	ADT 15922	ADT 15942	ADT 15962	ADT 15982	ADT 16002	ADT 16022	ADT 16042	ADT 16062	ADT 16082	ADT 16102	ADT 16122	ADT 16142	ADT 16162	ADT 16182	ADT 16202	ADT 16222	ADT 16242	ADT 16262	ADT 16282	ADT 16302	ADT 16322	ADT 16342	ADT 16362	ADT 16382	ADT 16402	ADT 16422	ADT 16442	ADT 16462	ADT 16482	ADT 16502	ADT 16522	ADT 16542	ADT 16562	ADT 16582	ADT 16602	ADT 16622	ADT 16642	ADT 16662	ADT 16682	ADT 16702	ADT 16722	ADT 16742	ADT 16762	ADT 16782	ADT 16802	ADT 16822	ADT 16842	ADT 16862	ADT 16882	ADT 16902	ADT 16922	ADT 16942	ADT 16962	ADT 16982	ADT 17002	ADT 17022	ADT 17042	ADT 17062	ADT 17082	ADT 17102	ADT 17122	ADT 17142	ADT 17162	ADT 17182	ADT 17202	ADT 17222	ADT 17242	ADT 17262	ADT 17282	ADT 17302	ADT 17322	ADT 17342	ADT 17362	ADT 17382	ADT 17402	ADT 17422	ADT 17442	ADT 17462	ADT 17482	ADT 17502	ADT 17522	ADT 17542	ADT 17562	ADT 17582	ADT 17602	ADT 17622	ADT 17642	ADT 17662	ADT 17682	ADT 17702	ADT 17722	ADT 17742	ADT 17762	ADT 17782	ADT 17802	ADT 17822	ADT 17842	ADT 17862	ADT 17882	ADT 17902	ADT 17922	ADT 17942	ADT 17962	ADT 17982	ADT 18002	ADT 18022	ADT 18042	ADT 18062	ADT 18082	ADT 18102	ADT 18122	ADT 18142	ADT 18162	ADT 18182	ADT 18202	ADT 18222	ADT 18242	ADT 18262	ADT 18282	ADT 18302	ADT 18322	ADT 18342	ADT 18362	ADT 18382	ADT 18402	ADT 18422	ADT 18442	ADT 18462	ADT 18482	ADT 18502	ADT 18522	ADT 18542	ADT 18562	ADT 18582	ADT 18602	ADT 18622	ADT 18642	ADT 18662	ADT 18682	ADT 18702	ADT 18722	ADT 18742	ADT 18762	ADT 18782	ADT 18802	ADT 18822	ADT 18842	ADT 18862	ADT 18882	ADT 18902	ADT 18922	ADT 18942	ADT 18962	ADT 18982	ADT 19002	ADT 19022	ADT 19042	ADT 19062	ADT 19082	ADT 19102	ADT 19122	ADT 19142	ADT 19162	ADT 19182	ADT 19202	ADT 19222	ADT 19242	ADT 19262	ADT 19282	ADT 19302	ADT 19322	ADT 19342	ADT 19362	ADT 19382	ADT 19402	ADT 19422	ADT 19442	ADT 19462	ADT 19482	ADT 19502	ADT 19522	ADT 19542	ADT 19562	ADT 19582	ADT 19602	ADT 19622	ADT 19642	ADT 19662	ADT 19682	ADT 19702	ADT 19722	ADT 19742	ADT 19762	ADT 19782	ADT 19802	ADT 19822	ADT 19842	ADT 19862	ADT 19882	ADT 19902	ADT 19922	ADT 19942	ADT 19962	ADT 19982	ADT 20002	ADT 20022	ADT 20042	ADT 20062	ADT 20082	ADT 20102	ADT 20122	ADT 20142	ADT 20162	ADT 20182	ADT 20202	ADT 20222	ADT 20242	ADT 20262	ADT 20282	ADT 20302	ADT 20322	ADT 20342	ADT 20362	ADT 20382	ADT 20402	ADT 20422	ADT 20442	ADT 20462	ADT 20482	ADT 20502	ADT 20522	ADT 20542	ADT 20562	ADT 20582	ADT 20602	ADT 20622	ADT 20642	ADT 20662	ADT 20682	ADT 20702	ADT 20722	ADT 20742	ADT 20762	ADT 20782	ADT 20802	ADT 20822	ADT 20842	ADT 20862	ADT 20882	ADT 20902	ADT 20922	ADT 20942	ADT 20962	ADT 20982	ADT 21002	ADT 21022	ADT 21042	ADT 21062	ADT 21082	ADT 21102	ADT 21122	ADT 21142	ADT 21162	ADT 21182	ADT 21202	ADT 21222	ADT 21242	ADT 21262	ADT 21282	ADT 21302	ADT 21322	ADT 21342	ADT 21362	ADT 21382	ADT 21402	ADT 21422	ADT 21442	ADT 21462	ADT 21482	ADT 21502	ADT 21522	ADT 21542	ADT 21562	ADT 21582	ADT 21602	ADT 21622	ADT 21642	ADT 21662	ADT 21682	ADT 21702	ADT 21722	ADT 21742	ADT 21762	ADT 21782	ADT 21802	ADT 21822	ADT 21842	ADT 21862	ADT 21882	ADT 21902	ADT 21922	ADT 21942	ADT 21962	ADT 21982	ADT 22002	ADT 22022	ADT 22042	ADT 22062	ADT 22082	ADT 22102	ADT 22122	ADT 22142	ADT 22162	ADT 22182	ADT 22202	ADT 22222	ADT 22242	ADT 22262	ADT 22282	ADT 22302	ADT 22322	ADT 22342	ADT 22362	ADT 22382	ADT 22402	ADT 22422	ADT 22442	ADT 22462	ADT 22482	ADT 22502	ADT 22522	ADT 22542	ADT 22562	ADT 22582	ADT 22602	ADT 22622	ADT 22642	ADT 22662	ADT 22682	ADT 22702	ADT 22722	ADT 22742	ADT 22762	ADT 22782	ADT 22802	ADT 22822	ADT 22842	ADT 22862	ADT 22882	ADT 22902	ADT 22922	ADT 22942	ADT 22962	ADT 22982	ADT 23002	ADT 23022	ADT 23042	ADT 23062	ADT 23082	ADT 23102	ADT 23122	ADT 23142	ADT 23162	ADT 23182	ADT 23202	ADT 23222	ADT 23242	ADT 23262	ADT 23282	ADT 23302	ADT 23322	ADT 23342	ADT 23362	ADT 23382	ADT 23402	ADT 23422	ADT 23442	ADT 23462	ADT 23482	ADT 23502	ADT 23522	ADT 23542	ADT 23562	ADT 23582	ADT 23602	ADT 23622	ADT 23642	ADT 23662	ADT 23682	ADT 23702	ADT 23722	ADT 23742	ADT 23762	ADT 23782	ADT 23802	ADT 23822	ADT 23842	ADT 23862	ADT 23882	ADT 23902	ADT 23922	ADT 23942	ADT 23962	ADT 23982	ADT 24002	ADT 24022	ADT 24042	ADT 24062	ADT 24082	ADT 24102	ADT 24122	ADT 24142	ADT 24162	ADT 24182	ADT 24202	ADT 24222	ADT 24242	ADT 24262	ADT 24282	ADT 24302	ADT 24322	ADT 24342	ADT 24362	ADT 24382	ADT 24402	ADT 24422	ADT 24442	ADT 24462	ADT 24482	ADT 24502	ADT 24522	ADT 24542	ADT 24562	ADT 24582	ADT 24602	ADT 24622	ADT 24642	ADT 24662	ADT 24682	ADT 24702	ADT 24722	ADT 24742	ADT 24762	ADT 24782	ADT 24802	ADT 24822	ADT 24842	ADT 24862	ADT 24882	ADT 24902	ADT 24922	ADT 24942	ADT 24962	ADT 24982	ADT 25002	ADT 25022	ADT 25042	ADT 25062	ADT 25082	ADT 25102	ADT 25122	ADT 25142	ADT 25162	ADT 25182	ADT 25202	ADT 25222	ADT 25242	ADT 25262	ADT 25282	ADT 25302	ADT 25322	ADT 25342	ADT 25362	ADT 25382	ADT 25402	ADT 25422	ADT 25442	ADT 25462	ADT 25482	ADT 25502	ADT 25522	ADT 25542	ADT 25562	ADT 25582	ADT 25602	ADT 25622	ADT 25642	ADT 25662	ADT 25682	ADT 25702	ADT 25722	ADT 25742	ADT 25762	ADT 25782	ADT 25802	ADT 25822	ADT 25842	ADT 25862	ADT 25882	ADT 25902	ADT 25922	ADT 25942	ADT 25962	ADT 25982	ADT 26002	ADT 26022	ADT 26042	ADT 26062	ADT 26082	ADT 26102	ADT 26122	ADT 26142	ADT 26162	ADT 26182	ADT 26202	ADT 26222	ADT 26242	ADT 26262	ADT 26282	ADT 26302	ADT 26322	ADT 26342	ADT 26362	ADT 26382	ADT 26402	ADT 26422	ADT 26442	ADT 26462	ADT 26482	ADT 26502	ADT 26522	ADT 26542	ADT 26562	ADT 26582	ADT 26602	ADT 26622	ADT 26642	ADT 26662	ADT 26682	ADT 26702	ADT 26722	ADT 26742	ADT 26762	ADT 26782	ADT 26802	ADT 26822	ADT 26842	ADT 26862	ADT 26882	ADT 26902	ADT 26922	ADT 26942	ADT 26962	ADT 26982	ADT 27002	ADT 27022	ADT 27042	ADT 27062	ADT 27082	ADT 27102	ADT 27122	ADT 27142	ADT 27162	ADT 27182	ADT 27202	ADT 27222	ADT 27242	ADT 27262	ADT 27282	ADT 27302	ADT 27322	ADT 27342	ADT 27362	ADT 27382	ADT 27402	ADT 27422	ADT 27442	ADT 27462	ADT 27482	ADT 27502	ADT 27522	ADT 27542	ADT 27562	ADT 27582	ADT 27602	ADT 27622	ADT 27642	ADT 27662	ADT 27682	ADT 27702	ADT 27722	ADT 27742	ADT 27762	ADT 27782	ADT 27802	ADT 27822	ADT 27842	ADT 27862	ADT 27882	ADT 27902	ADT 27922	ADT 27942	ADT 27962	ADT 27982	ADT 28002	ADT 28022	ADT 28042	ADT 28062	ADT 28082	ADT 28102	ADT 28122	ADT 28142	ADT 28162	ADT 28182	ADT 28202	ADT 28222	ADT 28242	ADT 28262	ADT 28282	ADT 28302	ADT 28322	ADT 28342	ADT 28362	ADT 28382	ADT 28402	ADT 28422	ADT 28442	ADT 28462	ADT 28482	ADT 28502	ADT 28522	ADT 28542	ADT 28562	ADT 28582	ADT 28602	ADT 28622	ADT 28642	ADT 28662	ADT 28682	ADT 28702	ADT 28722	ADT 28742	ADT 28762	ADT 28782	ADT 28802	ADT 28822	ADT 28842	ADT 28862	ADT 28882	ADT 28902	ADT 28922	ADT 28942	ADT 28962	ADT 28982	ADT 29002	ADT 29022	ADT 29042	ADT 29062	ADT 29082	ADT 29102	ADT 29122	ADT 29142	ADT 29162	ADT 29182	ADT 29202	ADT 29222	ADT 29242	ADT 29262	ADT 29282	ADT 29302	ADT 29322	ADT 29342	ADT 29362	ADT 29382	ADT 29402	ADT 29422	ADT 29442	ADT 29462	ADT 29482	ADT 29502	ADT 29522	ADT 29542	ADT 29562	ADT 29582	ADT 29602	ADT 29622	ADT 29642	ADT 29662	ADT 29682	ADT 29702	ADT 29722	ADT 29742	ADT 29762	ADT 29782	ADT 29802	ADT 29822	ADT 29842	ADT 29862	ADT 29882	ADT 29902	ADT 29922	ADT 29942	ADT 29962	ADT 29982	ADT 30002
	10.292	16.865	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										

TRAFFIC SIGNAL PLAN NOTES

IN THE EVENT CONFLICTS OCCUR BETWEEN THE PROJECT TRAFFIC SIGNAL NOTES AND THE MUTCD, THE MUTCD WILL GOVERN.

NOTES THAT APPLY TO THIS PROJECT.

500. WHEN THE CONTROLLER IS IN THE FLASHING MODE, THE VEHICULAR SIGNAL HEADS SHALL FLASH YELLOW ON THE MAIN STREET, RED ON ALL CROSS STREETS, AND RED OR PROTECTED LEFT TURNS.
501. ALL EXISTING TRAFFIC CONTROL EQUIPMENT WHICH IS THE PROPERTY OF THE STATE INCLUDING SIGNAL HEADS, CONTROLLERS, POLES, AND MISCELLANEOUS HARDWARE SHALL BE REMOVED UPON COMPLETION OF THE NEW TRAFFIC CONTROL UNIT (TEMPORARY OR PERMANENT) AND STORED TO COMPLY WITH SECTION 720.03 OF THE STANDARD SPECIFICATIONS. THE SAME SHALL BE DELIVERED TO THE ALABAMA DEPARTMENT OF TRANSPORTATION AS DIRECTED BY THE ENGINEER.
502. ALL EXISTING TRAFFIC CONTROL EQUIPMENT WHICH IS THE PROPERTY OF THE CITY OF HUNTSVILLE INCLUDING SIGNAL HEADS, CONTROLLERS, POLES, AND MISCELLANEOUS HARDWARE SHALL BE REMOVED UPON COMPLETION OF THE NEW TRAFFIC CONTROL UNIT (TEMPORARY OR PERMANENT) AND STORED TO COMPLY WITH SECTION 720.03 OF THE STANDARD SPECIFICATIONS. THE SAME SHALL BE DELIVERED TO THE ALABAMA DEPARTMENT OF TRANSPORTATION AS DIRECTED BY THE ENGINEER.
503. THE LOCATION OF THE POWER SOURCE AS SHOWN IN THE PLANS IS APPROXIMATE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF THE POWER SOURCE AND THE SWIFTEST ROUTE TO SERVE THE TRAFFIC SIGNAL CONTROLLER CABINET AND LUMINAIRES.
504. AS WORK BEGINS RELATED TO OR AFFECTING THE SIGNAL(S) WITHIN THE CONSTRUCTION LIMITS, THE CONTRACTOR SHALL ASSUME RESPONSIBILITY OF ALL EXISTING, TEMPORARY, AND REQUIRED SIGNAL(S). THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTINUAL OPERATION AND MAINTENANCE OF THE SIGNAL(S) UNTIL ALL SIGNAL WORK OR WORK AFFECTING THE SIGNAL(S) IS ACCEPTED BY THE ALABAMA DEPARTMENT OF TRANSPORTATION.
505. THE CONTRACTOR SHALL INSTALL TEMPORARY SIGNAL(S) AS REQUIRED BY THE TEMPORARY TRAFFIC SIGNAL PLAN LAYOUT OR THE TRAFFIC CONTROL PLANS. WHEN TEMPORARY SIGNAL(S) ARE NOT REQUIRED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MONITORING AND ADJUSTING THE EXISTING AND/OR REQUIRED SIGNAL(S) SO THAT ALL LANE STRIPS, CLOSURES, AND ANY OTHER CHANGES TO THE ROADWAY DURING CONSTRUCTION ARE CONTROLLED BY THE EXISTING AND/OR REQUIRED SIGNAL(S).
506. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES TO LOCATE ALL OVERHEAD AND UNDERGROUND UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT. DAMAGE TO UTILITIES CAUSED BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE UTILITY COMPANY AND THE OWNER. THE CONTRACTOR SHALL BEAR ALL COST TO REPAIR ANY AND ALL DAMAGES TO THE UTILITIES CAUSED BY THE CONTRACTOR.
507. THE ALABAMA DEPARTMENT OF TRANSPORTATION RESERVES THE RIGHT TO RESPOND TO TRAFFIC CONTROL SIGNALS HAZARDOUS TO PUBLIC SAFETY OR OF NATURAL DISASTERS. THE CONTRACTOR'S LIABILITY AND RESPONSIBILITY RELATED TO MAINTAINING THE TRAFFIC UNIT(S) OR SYSTEM REMAINS IN EFFECT.
508. THE CONTRACTOR SHALL HAVE THE APPROVAL OF THE ENGINEER PRIOR TO THE REMOVAL OF ANY EXISTING TRAFFIC CONTROL UNIT. THE CONTRACTOR SHALL NOT REMOVE AN EXISTING TRAFFIC CONTROL UNIT UNTIL THE REQUIRED TRAFFIC CONTROL UNIT IS INSTALLED AND COMPLETELY OPERATIONAL.
509. EACH REQUIRED TRAFFIC SIGNAL, STRAIN POLE AND MAST ARM POLE MAY VARY IN LENGTH AND SIZE. THE CONTRACTOR SHALL ASCERTAIN THAT THE POLE HEIGHTS ARE SUFFICIENT TO PROVIDE THE REQUIRED VEHICULAR TRAFFIC SIGNAL CLEARANCE. EXTENSIONS FOR MOUNTING SIGNALS SHALL BE PROVIDED WHEN NECESSARY.
510. EACH MAST ARM MAY VARY IN LENGTH. THE CONTRACTOR SHALL ASCERTAIN THAT ALL ARM LENGTHS ARE SUFFICIENT SO THAT EACH VEHICULAR SIGNAL HEAD POSITION CONFORMS TO THE AUTO.
511. THE TRAFFIC SIGNAL POLE LOCATION(S) AS SHOWN IN THE PLANS (STATE) APPROXIMATE. THE CONTRACTOR SHALL COORDINATE THE POLE LOCATION(S) WITH THE ENGINEER. THE CONTRACTOR SHALL ASCERTAIN THAT THE FINAL POLE LOCATION(S) PROVIDE FOR THE VEHICULAR TRAFFIC SIGNAL HEADS TO MEET THE DISTANCE REQUIREMENTS TO THE STOP LINE AS REQUIRED BY THE AUTO. WHEN PEDESTRIAN SIGNAL HEADS AND/OR PEDESTRIAN CROSSWALKS ARE INVOLVED, THE SAME SHALL POLE LOCATION(S) SHALL ALSO CONFORM TO THE RELATIVE SECTIONS OF THE AUTO.
512. THE CONTRACTOR SHALL LOCATE EACH REQUIRED AND RELOCATED VEHICULAR TRAFFIC SIGNAL HEAD ON THE SPAN WIRE OR MAST ARM SO THAT EACH HEAD IS LOCATED IN THE APPROXIMATE LANE FOR WHICH IT APPLIES. LOCATION OF SIGNAL HEADS SHALL CONFORM TO THE AUTO.
513. THE TRAFFIC SIGNAL STRAIN POLE LOCATION(S) AS SHOWN IN THE PLANS IS (ARE) APPROXIMATE. THE ENGINEER SHALL APPROVE ALL RELOCATION LOCATIONS PRIOR TO THE CONTRACTOR EXCAVATING FOR EACH FOUNDATION.
514. BALANCE ADJUSTERS SHALL BE INSTALLED ON TRAFFIC SIGNAL HEADS FOR PROPER AUTO AND TO THE SATISFACTION OF THE ENGINEER.
515. A 12 INCH DEEP COIL WITH 3 LOOPS SHALL BE PROVIDED TO THE RIGHTS OF EACH VEHICULAR TRAFFIC SIGNAL HEAD. A DIMP LOOP SHALL BE FORMED SO THAT WATER CANNOT ENTER THE ENTRANCE CLAMP. THE WIRE SHALL ENTER THE CLAMP FROM THE BOTTOM OF THE DIMP LOOP.
516. WHEN PVC CONDUIT IS USED FROM THE CONTROLLER TO THE STEEL STRAIN POLE OR MAST ARM POLE, THE CONTRACTOR SHALL BOND THE CONTROLLER TO THE POLE WITH A #6-1C BONDING CABLE.
517. WARNING/WARNING TAPE SHALL BE BURED OVER CONDUIT. THE TAPE SHALL BE 4 INCH POLYETHYLENE, RED IN COLOR WITH BLACK LETTERING.
518. WHEN EXISTING LOOP WIRE AND VEHICLE LOOP DETECTORS ARE TO BE RETAINED AND REUSED, OR RELOCATED IN A NEW CONTROLLER CABINET, THE CONTRACTOR SHALL ASCERTAIN THE MANUFACTURER AND MODEL NUMBER OF EACH EXISTING DETECTOR AMPLIFIER AND PROVIDE A NEW WIRING HARNESS COMPLETELY WIRED IN THE CONTROLLER CABINET FOR EACH EXISTING DETECTOR AMPLIFIER.
519. WHEN SYSTEM TUNINGS ARE NOT INCLUDED IN THE PLANS FOR THE BASE OR CLOSED LOOP SYSTEMS, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HIRE A LICENSED PROFESSIONAL ENGINEER TO CALCULATE SYSTEM TUNINGS. THE COST OF CALCULATING SYSTEM TUNINGS SHALL BE A SUBSIDIARY OBLIGATION OF 730C.
520. IF SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HIRE A LICENSED PROFESSIONAL ENGINEER TO INPUT THE TUNINGS AND FINE TUNE THE TUNINGS. THE COST OF INPUTTING AND FINE TUNING TUNINGS SHALL BE A SUBSIDIARY OBLIGATION OF 730C.
521. THE AREA TRAFFIC ENGINEER / CITY TRAFFIC ENGINEER / COUNTY TRAFFIC ENGINEER SHALL BE RESPONSIBLE FOR INPUTTING AND FINE TUNING THE TUNINGS.
522. WHEN EXISTING SPAN WIRE THAT IS TO BE RETAINED HAS SAGGED, THE CONTRACTOR SHALL ADJUST THE SPAN WIRE SO THAT SIGNAL HEADS COMPLY WITH THE CLEARANCE SHOWN ON THE STANDARD DETAIL DRAWING.
523. A NOTICE OF INTENT FOR WIPES PERMIT COVERAGE HAS BEEN FILED WITH ADEN FOR THIS PROJECT. A COPY OF THE CONSTRUCTION BEST MANAGEMENT PRACTICES PLAN (CBMP) IS AVAILABLE THROUGH OFFICE ENGINEER PRIOR TO BIDDING.
524. THE CONTRACTOR SHALL PROVIDE A SET OF AS-BUILT PLANS TO THE AREA TRAFFIC ENGINEER AND THE CITY OF HUNTSVILLE.
525. THE CONTRACTOR SHALL INSTALL BACKPLATES WITH A 2 INCH FLUORESCENT YELLOW REFLECTIVE BORDER ON ALL EXISTING AND REQUIRED SIGNAL HEADS AS SHOWN ON PLANS. BACKPLATES ON REQUIRED SIGNAL HEADS SHALL BE PAID FOR AS A SUBSIDIARY OF 730C. BACKPLATES ON EXISTING SIGNAL HEADS SHALL BE PAID FOR AS A SUBSIDIARY OF 730C.
526. WHEN LUMINAIRES PAID FOR AS A SUBSIDIARY OF 730C ARE INCLUDED, THE RELATED PHOTOELECTRICS MAY BE MOUNTED ON THE TOP OR SIDE OF THE SIGNAL CABINET WHERE NO SHADOWS ARE EXPECTED TO BE CAST ON THE CABINET THAT WOULD IMPAIR THE FUNCTION OF THE PHOTOCELL WHEN COMPARED TO MOUNTING ON THE DISCONNECT POLE IN ITS ORIGINAL LOCATION. WHERE THE EFFECT OF SHADOWS IS UNCERTAIN, THE CONTRACTOR SHALL MOUNT THE PHOTOELECTRIC IN ITS STANDARD LOCATION.
527. WHEN WEA SIGNAL CABLE 20-1 IS USED THAT IS 7C OR LARGER, THE CONTRACTOR SHALL CLEANLY TAG AND MARK IN THE CONTROLLER CABINET THE SIGNAL INDICATION EACH CONDUCTOR CONNECTS TO WHERE THE CONDUCTOR JACKET DOES NOT MATCH IN COLOR THE ASSOCIATED SIGNAL HEAD COLOR.
528. ON ALL LOOPS, THE CONTRACTOR SHALL BE REQUIRED TO PERFORM A LEAKAGE TO GROUND TEST USING A MEG-OHM METER WITH 500 VOLTS APPLIED. THE LOOPS SHALL ALSO BE TESTED AFTER THE LEADS (HOLE RUN) ARE PULLED TO THE AMPLIFIER TO BY A STATE INSPECTOR CHECKING FOR LEAKAGE. ANY LOOP FAILING TO READ 100 MEGS OR BETTER WILL NOT BE ACCEPTED AND SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE PROJECT.

RESPONSIBLE P.E. RICHARD L. CAUDE, P.E.	SUPERVISOR	DESIGNER	PLAN SUBMITTAL	 ALABAMA DEPARTMENT OF TRANSPORTATION	REGION 02/15/2022	SHEET TITLE	
DATE: APRIL 27, 2023	DATE:	DATE:	OC			TRAFFIC SIGNAL PLAN NOTES	ROUTE HUNTSVILLE NORTHERN BYPASS



SKIPPER
CONSULTING INC.
3644 YANN ROAD SUITE 100
BIRMINGHAM, ALABAMA 35235
TELEPHONE: (205)655-8955

NOTES THAT APPLY TO THIS PROJECT:

[illegible]

SKIPPER
CONSULTING INC.
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BIRMINGHAM, ALABAMA 35225
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TRAFFIC SIGNAL PAY ITEMS (EQUIPMENT)

[illegible]

TRAFFIC SIGNAL PAY ITEMS

[illegible]

REQUIRED ITS EQUIPMENT AND INFRASTRUCTURE

REQUIRED ITS EQUIPMENT AND INFRASTRUCTURE					
PROJECT SECTION	SITE NUMBER	DESCRIPTION	NETWORK DEVICE (TYPE &) (PAGES)	CUSTOMER PROVIDER (TYPE A)	STANDARD SHEET#
		LOCATION	794C-035	738D-100	
B5	1	HUNTSVILLE NORTHERN BYPASS AT MEMORIAL PARKWAY	EACH	EACH	SPECIAL DETAIL SHEET NO. B5
TOTAL			1	1	

J.	SPECIAL	DRAWING	NO.	T.S.D.	-730-1
I.	SPECIAL	DRAWING	NO.	T.S.D.	-730-2
H.	SPECIAL	DRAWING	NO.	T.S.D.	-730-28
G.	SPECIAL	DRAWING	NO.	T.S.D.	-730-4
F.	SPECIAL	DRAWING	NO.	T.S.D.	-730-10
E.	SPECIAL	DRAWING	NO.	T.S.D.	-730-13
D.	SPECIAL	DRAWING	NO.	T.S.D.	-730-14
C.	SPECIAL	DRAWING	NO.	T.S.D.	-730-15
B.	SPECIAL	DRAWING	NO.	T.S.D.	-730-17
A.	SPECIAL	DRAWING	NO.	T.S.D.	-730-27
					SHS-B

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BIRMINGHAM, ALABAMA 35235
TELEPHONE: (205)855-8855

RESPONSIBLE PE: RICHARD L. CAUDLE, P.E.
DATE: APRIL 27, 2023

SUPERVISOR:	
DATE:	

DESIGNER:	
DATE:	

PLAN SUBMITTAL	OE
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ALABAMA DEPARTMENT
OF TRANSPORTATION

NOT TO SCALE

SHEET TITLE
SUMMARY OF QUANTITIES

ROUTE
UNTSVILLE
NORTHERN
BYPASS

TRAFFIC SIGNAL AND ITS LEGEND

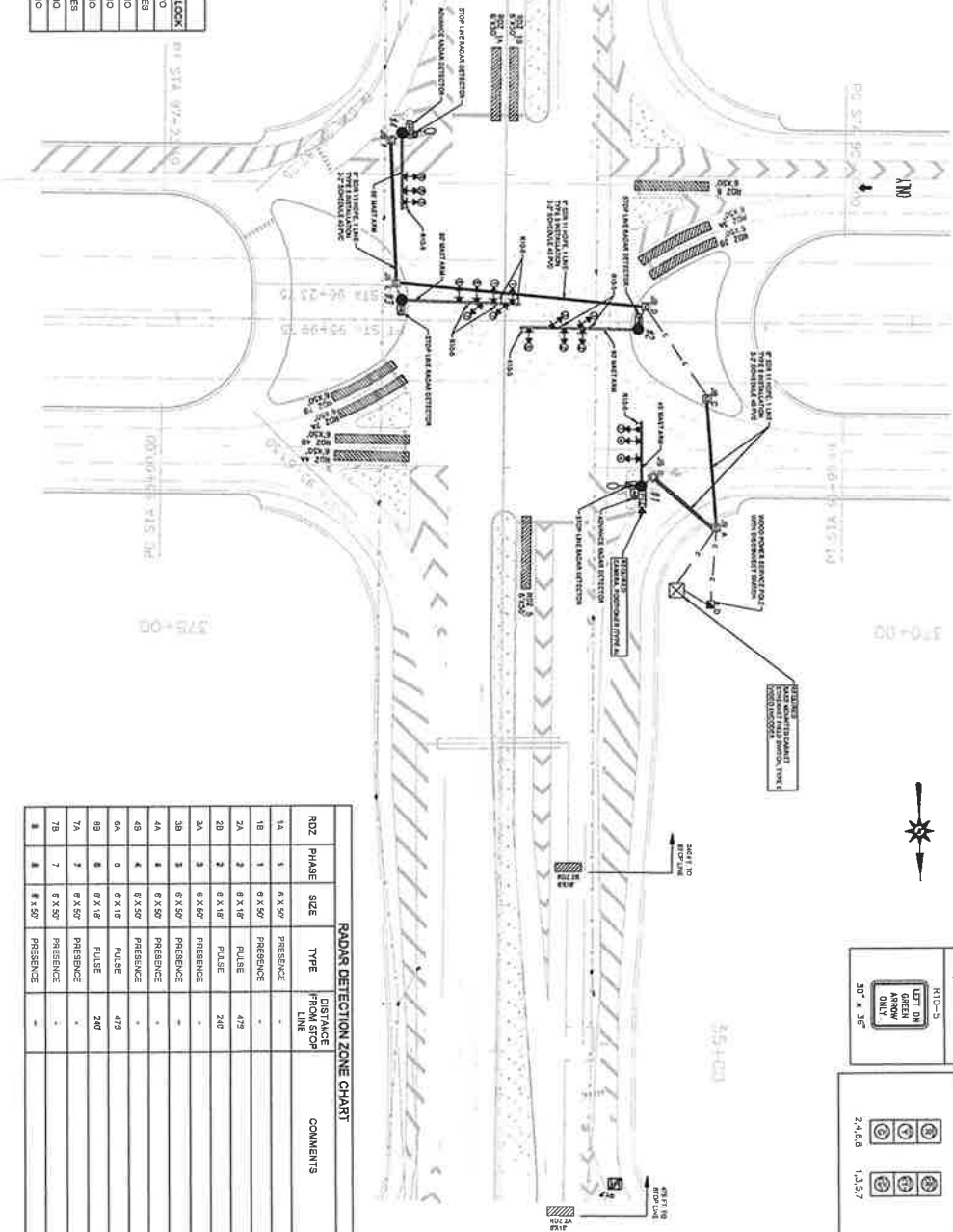
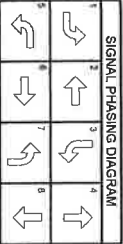
REFERENCE PROJECT NO. STPHV-UR14	FISCAL YEAR 2023	SHEET NO. 81
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ELECTRICAL BOXES		MISCELLANEOUS EQUIPMENT		ABBREVIATIONS	
EXISTING		EXISTING			
METALLIC PULL BOX	REQUIRE	TRAFFIC SIGNAL HEAD	REQUIRE	AMERICAN WIRE GUIDE	AWG
FIBER OPTIC COMBOX TYPE F1	REQUIRE	TRAFFIC SIGNAL HEAD WITH BACKPLATE	REQUIRE	CLOSED CIRCUIT TELEVISION	CCTV
FIBER OPTIC COMBOX TYPE F2	REQUIRE	PEDESTRIAN SIGNAL HEAD	REQUIRE	CONDUIT	C
TRAFFIC SIGNAL JUNCTION BOX TYPE S1	REQUIRE	8 FOOT PEDESTAL POLE AND PEDESTRIAN SIGNAL HEAD	REQUIRE	CURB AND GUTTER	C&G
TRAFFIC SIGNAL JUNCTION BOX TYPE S2	REQUIRE	PEDESTAL MOUNTED FLASHING WARNING SIGNAL WITH SIGN	REQUIRE	DYNAMIC MESSAGE SIGN	DMS
TRAFFIC SIGNAL JUNCTION BOX TYPE S3	REQUIRE	PEDESTAL MOUNTED ILLUMINATED SCHOOL ZONE SIGN	REQUIRE	EASTBOUND ROADWAY	EBR
CABLE IN CONDUIT		PUSH BUTTON ASSEMBLY	REQUIRE	EMERGENCY VEHICLE PREEMPTION	EVP
FIBER OPTIC CABLE IN CONDUIT (UNDERGROUND)	REQUIRE	SPAN/MASTARM MOUNTED SIGN	REQUIRE	END ANCHOR	E/A
FIBER OPTIC CABLE IN CONDUIT (UNDERGROUND WITH CONCRETE)	REQUIRE	DOWN DIRECTIONAL ANTENNA	REQUIRE	FLASHING BEACON	FB
FIBER OPTIC CABLE IN CONDUIT (BRIDGE ATTACHED)	REQUIRE	DIRECTIONAL ANTENNA	REQUIRE	GUARDRAIL	GR
FIBER OPTIC CABLE (AERIAL INSTALLATION)	REQUIRE	EMERGENCY VEHICLE PREEMPTION SENSOR	REQUIRE	HIGH DENSITY POLYETHYLENE	HDPE
INTERCONNECT CABLE IN CONDUIT (AERIAL INSTALLATION)	REQUIRE	BLANKOUT MESSAGE SIGN	REQUIRE	HIGHWAY ADVISORY RADIO	HAR
CONDUIT	REQUIRE	TRAFFIC CONTROL CENTER	REQUIRE	INDIVIDUAL LOWERING DEVICE	ILD
ENCASEMENT	REQUIRE	HIGHWAY ADVISORY RADIO	REQUIRE	INTELLIGENT TRANSPORTATION SYSTEMS	ITS
OVERHEAD ELECTRIC	REQUIRE	HUB BUILDING	REQUIRE	JUNCTION BOX	JB
BURIED ELECTRIC	REQUIRE	DYNAMIC MESSAGE SIGN (OVERHEAD)	REQUIRE	LEFT	L
VEHICULAR DETECTORS		DYNAMIC MESSAGE SIGN (ROADSIDE)	REQUIRE	LIGHT EMITTING DIODE	LED
EXISTING	REQUIRE	DYNAMIC MESSAGE SIGN (CANTILEVER)	REQUIRE	LIGHT POLE	LP
PRESENCE LOOP DETECTOR	REQUIRE	DIGITAL RADIO	REQUIRE	LUMINAIRE	LUM
QUADRUPOLE LOOP DETECTOR	REQUIRE	REPEATER	REQUIRE	MILEPOST	MP
6' x 6' LOOP DETECTOR	REQUIRE	(NOTE: @ INDICATES SIGNAL HEAD NUMBER)	REQUIRE	NORTHBOUND ROADWAY	NBR
VEHICLE DETECTION CAMERA	REQUIRE	POLES	REQUIRE	NON-METALLIC CONDUIT	NMC
DETECTION ZONE	REQUIRE	EXISTING	REQUIRE	PAN TILT ZOOM	PTZ
RADAR DETECTION UNIT	REQUIRE	METAL POLE OR AS SPECIFIED ON PLANS	REQUIRE	PRIMARY FIBER DISTRIBUTION UNIT	PFDU
RADAR DETECTION UNIT (ADVANCE)	REQUIRE	CONCRETE POLE	REQUIRE	PROPERTY LINE	PL
RADAR DETECTION UNIT (PRESENT)	REQUIRE	METAL MASTARM POLE	REQUIRE	PUBLIC ACCESS CAMERA	PAC
MAGNETOMETER (SENSOR)	REQUIRE	CLASS 3 WOOD SERVICE POLE WITH DISCONNECT	REQUIRE	PULL BOX	PB
MAGNETOMETER (REPEATER POLE)	REQUIRE	WOOD POLE	REQUIRE	RADIUS	R
CABINETS		DOWN GUY	REQUIRE	RAILROAD	RR
EXISTING	REQUIRE	LUMINAIRE	REQUIRE	RIGHT	RT
CABINET	REQUIRE		REQUIRE	RIGHT OF WAY	ROW
CAMERAS			REQUIRE	SECONDARY FIBER DISTRIBUTION UNIT	SFDU
EXISTING	REQUIRE		REQUIRE	SCHOOL	SCH
CCTV CAMERA, FIXED	REQUIRE		REQUIRE	SOUTHBOUND ROADWAY	SBR
CCTV CAMERA, PTZ	REQUIRE		REQUIRE	STANDARD DRAWING	STD-DWG
	REQUIRE		REQUIRE	STATION	STA
	REQUIRE		REQUIRE	TRAFFIC CONTROL CENTER	TCC
	REQUIRE		REQUIRE	TRAFFIC SIGNAL OPERATING PLAN	TSP
	REQUIRE		REQUIRE	TRANSPORTATION MANAGEMENT CENTER	TMC
	REQUIRE		REQUIRE	TURNOUT	TO
	REQUIRE		REQUIRE	VEHICLE DETECTION CAMERA	VDC
	REQUIRE		REQUIRE	WESTBOUND ROADWAY	WBR

RESPONSIBLE PER: RICHARD L. CAULDE, P.E.	SUPERVISOR	DESIGNER	PLAN SUBMITTER	DATE	DATE	DATE	DATE	DATE	DATE
DATE: APRIL 27, 2023									

<p>REQUIRED SIGNS</p> <p>R10-5</p> <p>30" x 36"</p>	<p>REQUIRED SIGNAL HEADS</p> <p>24x24x8 1,3x5,7</p>
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SUGGESTED LOCAL TIMINGS									
PHASE	MOVEMENT	MIN/GHIN	PASADENA	YELLOW	ALL RED	MAX GR 1	MAX GR 2	REGAL.	NON-LOOK
1	NBLT	4	2.0	3.2	4.0	20	20	NO	NO
2	SBTHRU	20	3.0	3.2	3.0	20	35	MIN	YES
3	EBLT	4	2.0	3.2	5.1	20	30	NO	NO
4	WBTHRU	4	2.0	3.2	1.8	25	25	NO	NO
5	SBLT	4	2.0	3.2	4.0	20	20	NO	NO
6	NBTHRU	20	3.0	3.2	3.6	35	35	MIN	YES
7	WBLT	4	2.0	3.2	5.1	20	20	NO	NO
8	EBTHRU	4	2.0	3.2	1.9	25	25	NO	NO



RADAR DETECTION ZONE CHART					
ROZ	PHASE	SIZE	TYPE	DISTANCE FROM STOP LINE	COMMENTS
1A	1	0' x 50'	PRESBENCE	-	
1B	1	0' x 50'	PRESBENCE	-	
2A	2	0' x 10'	PULSE	475	
2D	2	0' x 10'	PULSE	240	
3A	3	0' x 50'	PRESBENCE	-	
3D	3	0' x 50'	PRESBENCE	-	
4A	4	0' x 50'	PRESBENCE	-	
4D	4	0' x 50'	PRESBENCE	-	
6A	0	0' x 10'	PULSE	475	
6D	0	0' x 10'	PULSE	240	
7A	7	0' x 50'	PRESBENCE	-	
7B	7	0' x 50'	PRESBENCE	-	
8	8	0' x 50'	PRESBENCE	-	


SUPPORTING STRUCTURES							
	ROLE NUMBER	ROLE LENGTH (FT)	LAST RAY LENGTH (FT)	LUMINAIRE	STATION	OFFSET (FT)	COMMENTS
1	27	45			20+00.00	111.00	
2	22	40			22+00.00	4.00	
3	22	40			22+00.00	44.00	
4	37	65			32+00.00	105.00	

1. GENERAL TRAFFIC SIGNAL NOTES.
2. 1. STANDARD TRAFFIC SIGNAL OPERATING PLAN NO. 27 SHALL BE USED.
3. 2. STANDARD TRAFFIC SIGNAL SHALL BE FOR ILLUSTRATIVE PURPOSES ONLY.
4. 3. UNLESS OTHERWISE NOTED.
5. 4. BASE MAP INFORMATION WAS PROVIDED BY SOURCE DESIGN SOLUTIONS.
6. 5. REQUIRED TRAFFIC SIGNAL HEADS USED AT THIS INTERSECTION SHALL HAVE:
7. 6. THE CONTROLLER SHALL BE A CONDUITE CONTROL RACK UNIT TO BE COMPARABLE WITH THE CITY'S CENTRAL TRAFFIC MANAGEMENT SOFTWARE.
8. 7. THE CONDUCTOR IS TO ENSURE THAT AN ADA LEVEL II TRAFFIC SIGNAL ACINIES SHALL BE ON SITE DURING ALL SIGNAL CONSTRUCTION.
9. 8. THE RADAR DETECTION SYSTEM SHALL BE WAVELENGTH.

[illegible]

REFERENCE PROJECT NO.	FISCAL YEAR	SHEET NO.
STPHV-UR14	2023	84



Revisions:		SPHV-UR14	
		WOMEN COUNTY	
		TRAFFIC SIGNAL REMOVAL	
		SKIPPER Consulting, Inc. Transportation Engineering and Planning Consultants 5860 Highway 101, Suite 200 Portland, Oregon 97231-4602	
30	0	30	\$0
			
Date:		APRIL 27, 2023	

