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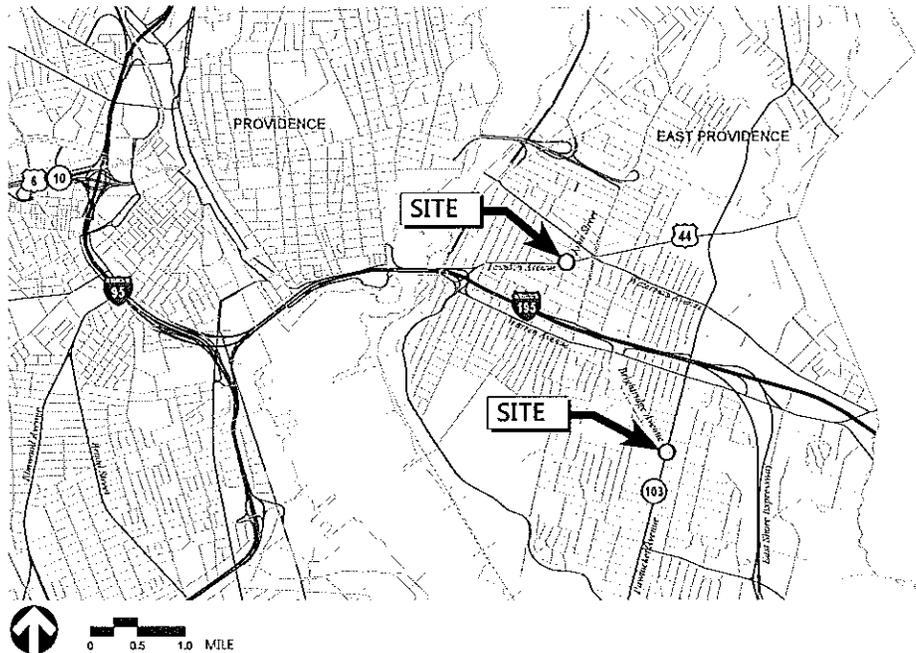
City of East Providence
 145 Taunton Avenue
 East Providence, Rhode Island 02914

SIGNAL IMPROVEMENTS

TAUNTON AVENUE AT JOHN STREET

PAWTUCKET AVENUE AT BRIGHTRIDGE AVENUE

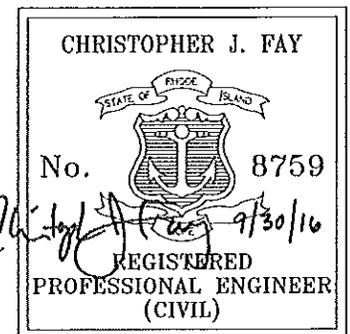
EAST PROVIDENCE, RI



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SEPTEMBER 2016

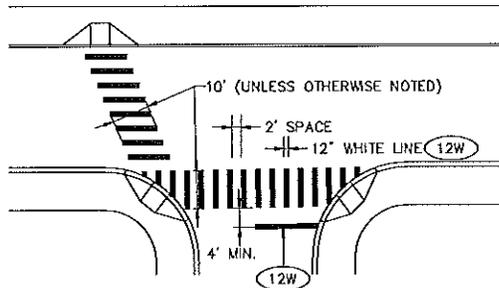


JOB SPECIFIC LEGEND:

-  CROSSWALK
-  4" EPOXY RESIN PAVEMENT MARKINGS -- DOUBLE YELLOW
-  12" EPOXY RESIN PAVEMENT MARKINGS -- WHITE

TRAFFIC SIGNAL PLANS SYMBOL LEGEND

- | | | | |
|---|---|---|--------------------------------|
|  | EXISTING UTILITY POLE |  | EXISTING CONDUIT |
|  | EXISTING CONTROLLER CABINET |  | PROPOSED CONDUIT |
|  | PROPOSED CONTROLLER CABINET WITH CONCRETE PAD |  | EXISTING SPAN OR PEDESTAL POLE |
|  | EXISTING HANDHOLE |  | PROPOSED SPAN OR PEDESTAL POLE |
|  | PROPOSED HANDHOLE |  | PROPOSED 5' PEDESTAL POLE |
|  | EXISTING TRAFFIC SIGNAL HEAD |  | EXISTING MAST ARM POLE |
|  | PROPOSED TRAFFIC SIGNAL HEAD |  | PROPOSED MAST ARM POLE |
|  | EXISTING PEDESTRIAN SIGNAL HEAD |  | EXISTING LOOP DETECTOR |
|  | PROPOSED PEDESTRIAN SIGNAL HEAD |  | PROPOSED LOOP DETECTOR |
|  | EXISTING PEDESTRIAN PUSH BUTTON | | |
|  | PROPOSED PEDESTRIAN PUSH BUTTON | | |



NOTE:
1. CROSSWALK STRIPES SHALL BE INSTALLED PARALLEL WITH THE DIRECTION OF TRAVEL OF THE CROSSING.

CROSSWALK DETAIL 
NOT TO SCALE

GENERAL NOTES:

1. CONSTRUCTION INDICATED ON THESE PLANS SHALL BE IN ACCORDANCE WITH THE LATEST REVISION OF AND MODIFICATIONS TO THE STATE OF RHODE ISLAND STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND THE SPECIFICATIONS ACCOMPANYING THESE PLANS. IN CASE OF CONFLICT, THE SPECIAL PROVISIONS OF THE SPECIFICATIONS ACCOMPANYING THESE PLANS SHALL GOVERN.
2. ALL ITEMS NOT REFERENCED FOR MODIFICATION WILL BE "EXISTING TO REMAIN" UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
3. THE TERM "PROPOSED" (PROP.) MEANS WORK TO BE CONSTRUCTED USING NEW MATERIALS OR, WHERE APPLICABLE, RE-USING EXISTING MATERIALS IDENTIFIED AS "REMOVE AND RESET" (R&R).
4. ANY EXISTING PROPERTY THAT WAS NOT PROPOSED TO BE MODIFIED THAT IS DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CITY.
5. THE CONTRACTOR SHALL PLACE ALL EQUIPMENT AND MATERIAL AS FAR AWAY AS POSSIBLE FROM THE EDGE OF THE TRAVEL LANE SO AS NOT TO CAUSE A SAFETY HAZARD, IN ACCORDANCE WITH SECTION 106.06 OF THE R.I.D.O.T. STANDARD SPECIFICATION, LATEST EDITION.
6. DIMENSIONS SHOWN ON THE PLANS ARE APPROXIMATE.
7. IF EXISTING CONCRETE BASE IS DISTURBED DURING CONSTRUCTION, IT SHALL BE REPLACED AT NO ADDITIONAL COST TO THE CITY. NEW CONCRETE SHALL BE CONNECTED TO EXISTING CONCRETE TO REMAIN BY DRILLING AND DOWELING.
8. ANY BRICK, PAVER, OR STAMPED CONCRETE/ASPHALT SIDEWALK OR ROADWAY DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST. THE COST SHALL BE CONSIDERED INCIDENTAL TO THE PRICE BID FOR THE ASSOCIATED WORK ITEM CAUSING THE DAMAGE. ANY BRICK, PAVER, OR STAMPED CONCRETE/ASPHALT SIDEWALKS OR ROADWAYS DAMAGED, OR TO BE RESTORED SHALL MATCH THE SAME MATERIALS THAT EXIST, INCLUDING CONCRETE BASE, UNLESS OTHERWISE INDICATED ON THE PLANS.
9. ANY EXISTING WHEELCHAIR RAMPS DISTURBED BY CONSTRUCTION ACTIVITY SHALL BE REPLACED WITH NEW ADA COMPLIANT WHEELCHAIR RAMPS AT NO ADDITIONAL COSTS.
10. ALL EXISTING RIDOT RIGHT-OF-WAY (ROW) LINES AND PRIVATE PROPERTY LINES, WHERE SHOWN, ARE BASED ON AERIAL PLANS AND THEIR EXACT LOCATIONS ARE NOT GUARANTEED.
11. NO BLASTING SHALL BE ALLOWED ON THIS PROJECT.
12. THE LIMITS OF CLEARING AND SURFACE DISTURBANCE MUST BE STRICTLY ADHERED TO IN ALL AREAS. IN ADDITION TO THOSE AREAS SPECIFICALLY DESIGNATED ON THE PLANS, THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING AND PLACING, AT HIS OWN EXPENSE, PLANTABLE SOIL AND SEED IN AREAS WHICH ARE OUTSIDE OF THE PROJECT'S AREAS OF DISTURBANCE AND WHICH ARE IMPACTED BY CONSTRUCTION OPERATIONS INCLUDING THOSE AREAS WHERE VEHICLES, EQUIPMENT AND MATERIALS ARE STORED WITH THE PERMISSION OF THE ENGINEER.
13. UNDER NO CIRCUMSTANCE WILL THE CONTRACTOR BE ALLOWED TO STOCKPILE REMOVED PAVEMENT MATERIALS WITHIN THE PROJECT LIMITS.
14. PRIOR TO INSTALLATION, ALL SIGNS, MOUNTINGS AND LOCATIONS SHALL BE APPROVED OR MODIFIED BY THE ENGINEER.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL ROADWAYS FREE OF DEBRIS RESULTING FROM THEIR CONSTRUCTION OPERATIONS. ALL DEBRIS SHALL BE REMOVED TO THE SATISFACTION OF THE ENGINEER AT NO ADDITIONAL COST TO THE CITY.
16. THE EXISTING GEOMETRY AND TRAFFIC SIGNAL EQUIPMENT SHOWN ON THE PLANS ARE GRAPHICAL ONLY AND ARE APPROXIMATE BASED UPON GOOGLE AND/OR RIGIS AERIAL MAPPING.
17. EXISTING TRAFFIC SIGNAL TIMINGS SHOWN ON THE PLANS ARE BASED ON INFORMATION OBTAINED DURING FIELD REVIEWS CONDUCTED BY VHB IN 2016.
18. WHERE SHOWN ON THE PLANS, THE LOCATION OF EXISTING TRAFFIC SIGNAL EQUIPMENT INCLUDING HANDHOLES AND CONDUIT RUNS ARE ESTIMATED AND APPROXIMATE BASED ON GOOGLE AND/OR RIGIS AERIAL MAPPING AND INFORMATION OBTAINED DURING FIELD REVIEWS CONDUCTED BY VHB IN 2016.



GENERAL NOTES - PAVEMENT MARKINGS:

1. THE LOCATION OF PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) 2009 EDITION, AS AMENDED.
2. WHERE EXISTING PAVEMENT MARKINGS CONFLICT WITH PROPOSED PAVEMENT MARKINGS, EXISTING MARKINGS SHALL BE REMOVED BY METHOD APPROVED BY THE CITY.

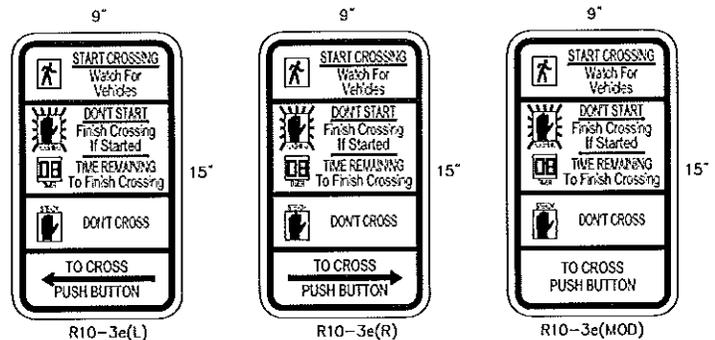
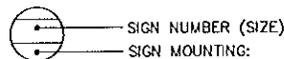
GENERAL NOTES - TRAFFIC SIGNALS:

1. ALL SALVAGED TRAFFIC SIGNAL EQUIPMENT SHALL BE DELIVERED TO THE CITY OF EAST PROVIDENCE DEPARTMENT OF PUBLIC WORKS CENTRAL GARAGE LOCATED AT 60 COMMERCIAL STREET, EAST PROVIDENCE, RHODE ISLAND.
2. ALL DELAY AND EXTENSION TIMES, AS CALLED FOR ON THE PLANS, FOR LOOP DETECTORS SHALL BE PROGRAMMED IN THE TRAFFIC SIGNAL CONTROLLER AND NOT IN THE DETECTOR UNLESS OTHERWISE NOTED.
3. FINAL PLACEMENT OF SIGNAL HEADS, DETECTORS, STOP BARS, AND CROSSWALKS TO BE DETERMINED IN THE FIELD DURING CONSTRUCTION ACCORDING TO INTERSECTION CHARACTERISTICS OBSERVED BY THE ENGINEER.
4. THE CONTRACTOR SHALL SUPPLY AND INSTALL ON THE UPPER LEFT HAND CORNER OF THE BACK OF CONTROLLER CABINET DOOR A LAMINATED INTERSECTION GRAPHIC AND TABLE DEPICTING THE TRAFFIC DETECTOR RELAY CHANNEL ASSIGNMENTS. THE DIAGRAM SHALL BE A GRAPHIC OF THE INDIVIDUAL INTERSECTION ORIENTED SIMILAR TO THE PLANS SHOWING THE LOCATIONS OF EACH LOOP DETECTOR. THE DIAGRAM SHALL, AT A MINIMUM, INCLUDE DETECTOR NUMBERS, STREET NAME LABELS, NORTH ARROW, AND CONTROLLER CABINET LOCATION. THE ASSIGNMENT INFORMATION SHALL BE INCLUDED IN A TABLE WHICH SHALL INCLUDE, AT A MINIMUM, THE APPROACH NAME, DETECTOR NUMBER, TERMINAL NUMBER, DETECTOR RACK SLOT NUMBER, RELAY NUMBER, RELAY CHANNEL NUMBER, AND PHASE ASSOCIATED WITH EACH DETECTOR.
5. TRAFFIC SIGNAL CONTROLLERS SHALL BE WIRED SO THAT ANY FIRE PRE-EMPT SHALL OVERRIDE MANUAL (PUSH BUTTON) OPERATION.
6. IF THE ASSIGNED RIGHT OF WAY FOR ANY TRAFFIC MOVEMENT IS TO REMAIN IN EFFECT DURING THE NEXT CALLED PHASE, THE SIGNAL INDICATIONS FOR THAT TRAFFIC MOVEMENT WILL NOT CHANGE DURING THE CLEARANCE INTERVAL.
7. THE RIGHT OF WAY MAY BE ASSIGNED TO ANY PHASE, OR COMBINATION OF NON-CONFLICTING PHASES.
8. UNLESS OTHERWISE DIMENSIONED ON THE PLANS, A 2-FOOT MINIMUM BUFFER SHALL BE PROVIDED BETWEEN THE CURB AND ALL LATERAL OBSTRUCTIONS (INCLUDING ALL SIGNAL POLES AND TRAFFIC/PEDESTRIAN SIGNAL HEADS) TO PROVIDE ADEQUATE CLEARANCE FOR TURNING VEHICLES.
9. ALL SIGNS INSTALLED AT RELOCATED PEDESTRIAN PUSHBUTTONS SHALL BE MUTCD 2009 CODE R10-3E (LEFT, RIGHT, OR MOD) AND SHALL BE INSTALLED SO THAT IT IS CLEARLY INDICATED WHICH CROSSING IS ASSIGNED TO EACH BUTTON (SEE BELOW FOR REQUIRED SIGN FACE GRAPHIC).
10. ALL LOOP DETECTORS SHALL BE CENTERED WITHIN EACH LANE AS DELINEATED, UNLESS OTHERWISE DIMENSIONED ON PLANS.
11. ALL LOOP DETECTORS SHALL BE CUT INTO THE FINAL PAVEMENT SURFACE COURSE.
12. THE CONTRACTOR SHALL WORK CONTINUOUSLY TO RESTORE TRAFFIC SIGNAL OPERATION TO ITS INTENDED PURPOSE WHEN REPLACING THE TRAFFIC SIGNAL EQUIPMENT. A POLICE DETAIL IS REQUIRED TO DIRECT TRAFFIC AT THE INTERSECTION AT ALL TIMES WHEN THE TRAFFIC SIGNAL IS INOPERATIVE. AT NO TIME SHALL THE CONTRACTOR LEAVE THE SITE BEFORE RESTORING FULL TRAFFIC OPERATIONS.
13. ALL CABLE DRIP LOOPS SHALL UTILIZE UV RATED CABLE TIES. THE USE OF ELECTRICAL TAPE WILL NOT BE ALLOWED.
14. AT LOCATIONS WHERE NEW CABLING IS BEING INSTALLED INTO AN EXISTING HANDHOLE THE CONTRACTOR SHALL REMOVE ACCUMULATED DEBRIS WITHIN THE HANDHOLE AND SHALL RECONSTRUCT THE HANDHOLE TO THE SATISFACTION OF THE ENGINEER AND THE CITY OF EAST PROVIDENCE. AT LOCATIONS THAT HAVE A LAYER OF CRUSHED STONE AT THE BOTTOM OF THE HANDHOLE, THE CONTRACTOR SHALL ENSURE THAT THE CRUSHED STONE REMAINS WITHIN THE BOTTOM OF THE HANDHOLE AFTER THE CLEANING PROCESS IS COMPLETED. IF REQUIRED, THE CONTRACTOR SHALL REPLACE THE CRUSHED STONE IF FOR SOME REASON IT ALSO NEEDS TO BE REMOVED AS PART OF THE DEBRIS. THE COSTS ASSOCIATED WITH HANDHOLE CLEANING AND CRUSHED STONE REPLACEMENT SHALL BE INCIDENTAL TO THE COST OF THE CABLING.

GENERAL NOTES - SIGNS:

1. PRIOR TO INSTALLATION, ALL SIGNS, MOUNTINGS AND LOCATIONS SHALL BE APPROVED OR MODIFIED BY THE CITY.
2. ALL SIGNS SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 7' OVER THE SIDEWALK.
3. ALL SIGN RADIUS AND BORDERS SHALL BE AS SPECIFIED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AS AMENDED.

TYPICAL SIGN DESIGNATION SYMBOL



SEQUENCE AND TIMING DIAGRAM															
APPROACH	DIRECTION	HOUSING	ø1			ø2			ø3			ø4		FLASHING OPERATION	
MINIMUM INTERVAL			10			--			6						
VEHICLE EXTENSION			2.7			--			2.4						
MAXIMUM 1			40			--			20						
MAXIMUM 2			40			--			20						
YELLOW CLEARANCE			4.0				3.0			3.5					
RED CLEARANCE					1.5						1.0				
PED. WALK/CHANGE						7/12									
PAWTUCKET AVENUE (RTE 103)	NB	A,B	G	Y	R	R	R	R	R	R	R	R			FY
PAWTUCKET AVENUE (RTE 103)	SB	C,D	G	Y	R	R	R	R	R	R	R	R			FY
BRIGHTBRIDGE AVENUE	EB	E,F	R	R	R	R	R	R	G	Y	R				FR
PEDESTRIAN X-ING	N-S	P1,P2	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW	DW			DARK
PEDESTRIAN X-ING	E-W	P3,P4	DW	DW	DW	W/FDW	DW	DW	DW	DW	DW	DW			DARK
DETECTOR			NON-LOCK			NON-LOCK			NON-LOCK						
RECALL			MAX			OFF			OFF						
SEQUENCE AND TIMING NOTES:			ø1		ø2		ø3		ø4						
1. FLASHING OPERATION PER M.U.T.C.D. SECTIONS 4D.28-4D.31.											NOT USED				
2. MAXIMUM 1 = NORMAL OPERATION															
3. MAXIMUM 2 = NOT USED															
4. PED. W/FDW UPON PUSHBUTTON ACTUATION ONLY															

DETECTOR DATA						
DETECTOR NO.	NO. SECTION/ SIZE	RELAY NUMBER	SLOT	DELAY (SEC)	CALL PHASE	REMARKS
1	6'x40'	1	2	5	ø3	PROPOSED

TRAFFIC SIGNAL CONSTRUCTION NOTES:

- THE ITEM "REMOVE AND SALVAGE TRAFFIC SIGNAL SYSTEM" SHALL INCLUDE THE FOLLOWING MAJOR ITEMS AND SHALL BE ACCOMPLISHED IN ACCORDANCE WITH SPECIAL PROVISION FOR ITEM CODE 201.9901:
 - LOCAL CONTROLLER, CONTROLLER CABINET AND ASSOCIATED EQUIPMENT,
 - SIGNAL HEADS, (4) PEDESTRIAN SIGNAL HEADS,
 - PEDESTRIAN INFORMATION SIGNS, (1) SPAN WIRE ASSEMBLY, MISCELLANEOUS CABLE, WIRING, ETC.
- THE EXISTING CONDUIT NETWORK SHOWN ON THE PREVIOUS PLAN IS BASED ON ASSUMED LOCATIONS AND SIZES. THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING CONDUIT LOCATIONS AND SIZES FOR ACCURACY AND ADEQUACY PRIOR TO PERFORMING THE WORK.
- SHOP DRAWINGS SHALL BE APPROVED BY THE DESIGN ENGINEER PRIOR TO ORDERING ANY PROPOSED SIGNAL EQUIPMENT.
- SEE JOB SPECIFIC PLAN SYMBOLS, LEGEND AND NOTES PLANS FOR ADDITIONAL INFORMATION.
- PRIOR TO REMOVING THE EXISTING SIGNAL HEADS, THE CONTRACTOR SHALL OBTAIN AERIAL "AS-BUILT" MEASUREMENTS OF ALL HEAD LOCATIONS ON THE SPAN. THE PROPOSED SIGNAL HEADS SHALL BE INSTALLED AT THE SAME LOCATIONS AS EXISTING USING THE AERIAL MEASUREMENTS.

SIGNAL HEAD DATA	
A,B,C,D,E,F	P1-P4
	<p>(ALL LED MODULES)</p>
ALL 12" LENS	

NOTES:

- ALL TRAFFIC SIGNAL HEADS ARE PROPOSED. ALL PROPOSED TRAFFIC SIGNAL HEADS SHALL NOT BE EQUIPPED WITH BACKPLATES. ALL PROPOSED TRAFFIC SIGNAL HEADS SHALL BE POLYCARBONATE.
- ALL PEDESTRIAN SIGNAL HEADS ARE PROPOSED. ALL PEDESTRIAN SIGNAL HEADS SHALL HAVE A POLYCARBONATE HOUSING WITH AN ALUMINUM VISOR.
- ALL RED, YELLOW, AND GREEN SIGNAL DISPLAYS SHALL BE EQUIPPED WITH LED MODULES.



LEGEND

-  TEMPORARY CONSTRUCTION SIGN. TYPE NOTED
-  FLUORESCENT TRAFFIC CONE, R.I. STD. 26.1.0
-  POLICE OFFICER
-  POLICE OFFICER WITH CRUISER & FLASHING LIGHTS
-  TRAFFIC LANE DURING CONSTRUCTION
-  WORK AREA

TRAFFIC CONTROL NOTES:

1. SEE RHODE ISLAND STANDARD 27.1.1 FOR SIGN DIMENSIONS AND PLACEMENT FOR WORK ZONE TRAFFIC FINES SIGNS.
2. ALL MAINTENANCE AND PROTECTION OF TRAFFIC SETUPS SHALL BE IN CONFORMANCE WITH THE 2009 EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.) AND RHODE ISLAND DEPARTMENT OF TRANSPORTATION GUIDELINES.
3. ALL TRAFFIC CONTROL SETUPS SHALL BE COORDINATED WITH ADJACENT CONCURRENT CONSTRUCTION CONTRACTS TO DETERMINE IF SIGNS AND SETUPS SPECIFIED ARE APPROPRIATE.
4. TEMPORARY LANE CLOSURES SHALL BE REMOVED IN THEIR ENTIRETY AT THE OF THE WORK DAY.
5. ALL TEMPORARY SIGNS SHALL HAVE BLACK COPY ON ORANGE BACKGROUND AND SHALL BE INSTALLED ACCORDING TO THE R.I. STANDARDS 24.3.0 & 29.1.0.
6. ALL TRAFFIC CONTROL DEVICES, UNLESS OTHERWISE NOTED, SHALL CONFORM TO APPLICABLE SPECIFICATIONS OF THE M.U.T.C.D. PART 6, 2009 EDITION AND STANDARD HIGHWAY SIGNS, CURRENT EDITIONS. ALL SIGNS AND CONES SHALL REFLECTORIZED.
7. ALL CONES SHALL CONFORM TO R.I. STANDARD 26.1.0. CONE SPACING SHALL BE 20' O.C., UNLESS OTHERWISE NOTED.
8. TYPICAL LANE CLOSURES DEPICT THE MINIMAL REQUIREMENTS FOR MAINTENANCE OF TRAFFIC. THE DETAILS SHALL BE USED AS A GUIDE TO PROVIDE TRAFFIC MANAGEMENT FOR DAILY OPERATIONS AND MAY BE MODIFIED AT THE DISCRETION OF THE ENGINEER.
9. WORKERS SHALL WEAR RETROREFLECTIVE PERSONAL PROTECTION EQUIPMENT (PPE) IN ACCORDANCE WITH THE M.U.T.C.D. AND FHWA REQUIREMENTS.
10. SIGNS INSTALLED ON PORTABLE STANDS REQUIRE A 12 INCH MINIMUM MOUNTING HEIGHT FROM THE ROADWAY SURFACE TO THE BOTTOM OF THE SIGN SURFACE TO THE BOTTOM OF THE SIGN.
11. SIGNS INSTALLED ON PORTABLE STANDS PLACED AMONG CHANNELIZATION DEVICES REQUIRE A 36 INCH MINIMUM MOUNTING HEIGHT FROM THE ROADWAY SURFACE TO THE BOTTOM OF THE SIGN.
12. POLICE DETAIL SHALL ASSIST WITH TRAFFIC CONTROL INCLUDING ASSISTING ANY OVERSIZED VEHICLES TO SAFELY PASS THROUGH THE WORK ZONE AND THE SAFE PASSAGE OF PEDESTRIANS THROUGH THE WORK ZONE.

EMERGENCY CONTACTS

- EAST PROVIDENCE CITY ENGINEER (401) 435-7500 x11130
- EAST PROVIDENCE DPW DIRECTOR (401) 435-7500 x40020
- RI STATE POLICE (401) 444-1000
- EAST PROVIDENCE POLICE (401) 435-7600
- EAST PROVIDENCE FIRE (401) 435-7677

GENERAL RESTRICTIONS:

LOCATION	TIME OF DAY		MINIMUM NUMBER OF LANES & SHOULDERS TO REMAIN OPEN TO TRAFFIC						
	FROM	TO	DAY OF WEEK						
			SUN	MON	TUES	WED	THURS	FRI	SAT
TAUNTON AVENUE (ROUTE 44), JOHN STREET, BRIGHTBRIDGE AVENUE	0:00	9:00	ALL	ALL	ALL	ALL	ALL	ALL	ALL
	9:00	15:00	ALL	1L ALT.	ALL				
	15:00	0:00	ALL	ALL	ALL	ALL	ALL	ALL	ALL
PAWTUCKET AVENUE (ROUTE 103)	0:00	9:00	ALL	ALL	ALL	ALL	ALL	ALL	ALL
	9:00	15:00	ALL	1L	1L	1L	1L	1L	ALL
	15:00	0:00	ALL	ALL	ALL	ALL	ALL	ALL	ALL

LEGEND:

- ALL - ALL TRAVEL LANES AND SHOULDERS SHALL REMAIN OPEN TO TRAFFIC
- 1L - A MINIMUM OF ONE TRAVEL LANE IN EACH DIRECTION SHALL REMAIN OPEN TO TRAFFIC ON ALL ROADS
- 1L ALT. - A MINIMUM OF ONE TRAVEL LANE IN ALTERNATING DIRECTIONS SHALL REMAIN OPEN TO TRAFFIC ON ALL ROADS

NOTES:

1. THE SETUP AND BREAK-DOWN OF TEMPORARY TRAFFIC CONTROL DEVICES WITHIN A TRAVELED WAY SHALL BE CONSTRUED AS A CLOSURE OF THAT TRAVELED WAY.
2. THE PROVISIONS NOTED SHALL NOT FREE THE CONTRACTOR FROM HIS RESPONSIBILITY TO CONDUCT ALL WORK IN SUCH A MANNER THAT ASSURES THE LEAST POSSIBLE OBSTRUCTION TO TRAFFIC.
3. AT LOCATIONS WITH A SIDEWALK(S), A MINIMUM OF ONE SIDEWALK ON ONE SIDE OF THE ROADWAY SHALL REMAIN OPEN TO PEDESTRIANS AT ALL TIMES.
4. ACCESS TO AND EGRESS FROM ALL SIDE STREETS, DRIVEWAYS, BUILDINGS, AND OTHER PEDESTRIAN PATHWAYS INTERSECTING THE PROJECT WORK ZONES SHALL BE MAINTAINED AT ALL TIMES UNLESS OTHERWISE NOTED OR SHOWN ON THE PLANS.
5. THERE SHALL BE NO LANE AND/OR SHOULDER CLOSURES ALLOWED AFTER 13:00 ON THE FRIDAY PRECEDING A HOLIDAY WEEKEND. THE FOLLOWING HOLIDAY RESTRICTIONS SHALL BE FOLLOWED:

EASTER SUNDAY

- NO LANE AND/OR SHOULDER CLOSURE ALLOWED ON SATURDAY.
- NO LANE AND/OR SHOULDER CLOSURE ALLOWED ON SUNDAY UNTIL 22:00 (AFTER 22:00, GENERAL RESTRICTIONS SHALL APPLY).

NEW YEAR'S DAY, INDEPENDENCE DAY, & CHRISTMAS DAY

- NO LANE AND/OR SHOULDER CLOSURE ALLOWED AFTER 13:00 ON THE DAY BEFORE THE HOLIDAY.
- NO LANE AND/OR SHOULDER CLOSURE ALLOWED ON THE HOLIDAY.

VETERAN'S DAY

- NO LANE AND/OR SHOULDER CLOSURE ALLOWED AFTER 13:00 ON THE DAY BEFORE THE HOLIDAY.
- NO LANE AND/OR SHOULDER CLOSURE ALLOWED ON SUNDAY UNTIL 22:00 (AFTER 22:00, GENERAL RESTRICTIONS SHALL APPLY).

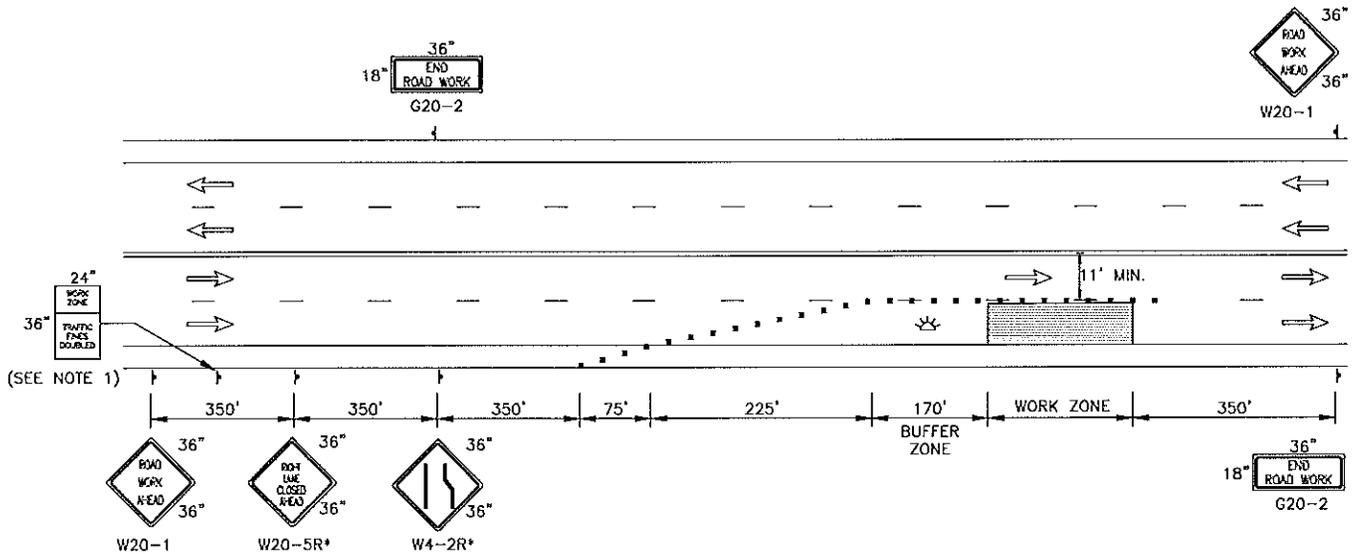
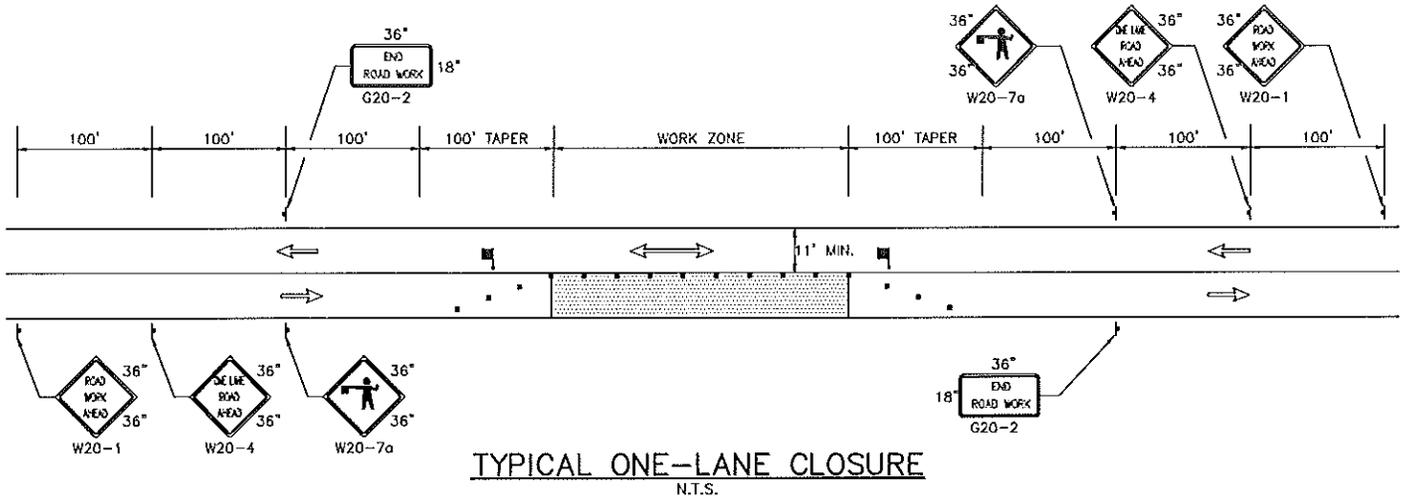
DR. MARTIN LUTHER KING, JR. DAY, VICTORY DAY, LABOR DAY, & COLUMBUS DAY

- NO LANE AND/OR SHOULDER CLOSURE ALLOWED ON SATURDAY AND/OR SUNDAY.
- NO LANE AND/OR SHOULDER CLOSURE ALLOWED ON MONDAY UNTIL 22:00 (AFTER 22:00, GENERAL RESTRICTIONS SHALL APPLY).

THANKSGIVING DAY

- NO LANE AND/OR SHOULDER CLOSURE ALLOWED AFTER 13:00 ON THE WEDNESDAY PRECEDING THANKSGIVING DAY.
- NO LANE AND/OR SHOULDER CLOSURE ALLOWED ON THANKSGIVING DAY, FRIDAY, SATURDAY, AND/OR SUNDAY.





* FOR LEFT LANE CLOSURE, W20-5R AND W4-2R SIGNS SHALL BE REPLACED WITH W20-5L AND W4-2L SIGNS, RESPECTIVELY. CONES SHALL ALSO BE PLACED ALONG THE ROADWAY CENTERLINE FOR THE ENTIRE LENGTH OF THE WORK ZONE SETUP.



CODE 201.9901

REMOVE AND SALVAGE TRAFFIC SIGNAL SYSTEM

DESCRIPTION: This item of work shall conform to the applicable sections of the Standard Specifications with the following additions.

This item of work shall consist of the removal and salvaging of traffic signal equipment at locations shown on the Traffic Signal Plans. The major equipment to be removed is listed on the traffic signal plan sheets under the construction notes. This item shall also include the removal and legal disposal of the existing wire, cable, and conduits at the signalized intersection as requested by the Engineer. The Contractor shall also remove and legally dispose any abandoned conduits as requested by the Engineer.

MATERIALS: Materials and testing for backfill shall conform to section 203 of the Standards Specifications.

CONSTRUCTION METHODS: The Contractor shall coordinate the work with the City of East Providence. The Contractor shall NOT remove any equipment without permission from the City. All equipment to be removed shall be salvaged and will remain the property of the City. All controller equipment and materials being removed that the Engineer determines to be not salvageable must be removed and legally disposed of at no additional expense to the City.

The Contractor shall tag all equipment to be salvaged. The tag shall note the intersection from which the components were salvaged, the date of the salvaging operation, and some means of identifying the other associated equipment. All salvaged traffic signal equipment shall be delivered to the East Providence Department of Public Works Central Garage located 60 Commercial Way, East Providence, Rhode Island.

Where appropriate, foundations shall be removed to a depth of 6 inches below final grade. Foundations shall be removed in accordance with the Rhode Island Standard Specifications by means approved by the Engineer. Existing foundation materials shall be legally disposed of.

All improvements, equipment, and existing surfaces disturbed, damaged or removed in performing this item of work shall be replaced to the satisfaction of the Engineer at no expense to the City. This item of work shall not commence until directed by the Engineer.

METHOD OF MEASUREMENT: "REMOVE AND SALVAGE TRAFFIC SIGNAL SYSTEM" shall be measured for payment by the unit "LUMP SUM" price for the completion of all work specified to the satisfaction of the Engineer.

BASIS OF PAYMENT: "REMOVE AND SALVAGE TRAFFIC SIGNAL SYSTEM" will be paid for at the contract bid price per "LUMP SUM" for the entire project and payment shall constitute full compensation for furnishing all labor, including the disconnection, removal and delivery of the equipment, removal of

foundations, backfilling, legal disposal of materials, and restoration of disturbed areas as called for on the plans or elsewhere in these Special Provisions, and for all tools, supplies, equipment and incidentals necessary to complete this item of work.

CODE T12.9901

MODIFY EXISTING TRAFFIC SIGNAL CONTROLLER CABINET

DESCRIPTION: This item of work shall conform to the applicable sections of the Standard Specifications with the following additions.

The work consists of the necessary rewiring/wiring terminations and reprogramming in the existing controller cabinets as indicated on the plans to accommodate any phasing or timing modifications that are called for on the plans. Also included in this item is the programming of detector relays (delays and phase assignments) as called for on the plans.

CONSTRUCTION METHODS: The Contractor shall make the required modifications in the existing controller cabinets, as called for on the plans, to accommodate the traffic signal phasing, timings and detection as shown on the plans.

Where any modifications are made at existing traffic signal controller cabinets, Contractor shall supply two (2) copies of box prints showing all of the modifications that are made. If existing box prints are not available, the Contractor shall produce and supply function based connection diagrams showing various in-cabinet interconnections and wiring changes made as part of the project. Where new loop detectors are installed, the Contractor shall install a revised cabinet door sticker table showing the detector assignment information including the approach names, detector numbers, terminal numbers, detector relay slow number, relay number, relay channel number, and phase associated with each detector.

The door sticker should be suitably durable for long term use in an outdoor environment. The cost for the required box prints and door stickers shall be considered incidental to the cost of the items of work being performed.

The new traffic signal equipment will be paid for separately under the appropriate contract pay items.

METHOD OF MEASUREMENT: "MODIFY EXISTING TRAFFIC SIGNAL CONTROLLER CABINET" shall be measured for payment by the unit "EACH" which shall consist of all labor, tools, equipment, materials, rewiring, splicing, reprogramming, and incidentals necessary to complete this item of work to the satisfaction of the Engineer.

BASIS OF PAYMENT: "MODIFY EXISTING TRAFFIC SIGNAL CONTROLLER CABINET" shall be paid for at the contract bid price "EACH", which price and payment shall constitute full compensation for furnishing all labor, tools, equipment, materials, relays, load switches, rewiring, splicing, reprogramming, and incidentals necessary to complete this item of work to the satisfaction of the Engineer.

CODE T14.9901

**1 WAY PEDESTAL MOUNTED L.E.D. PEDESTRIAN SIGNAL HEAD WITH
COUNTDOWN TIMER 12 INCH**

CODE T14.9902

**1 WAY BRACKET MOUNTED L.E.D. PEDESTRIAN SIGNAL HEAD WITH
COUNTDOWN TIMER 12 INCH**

DESCRIPTION: This item of work shall conform to the applicable sections of the Standard Specifications with the following additions.

All LED Pedestrian Signal Heads, with or without countdown timers supplied for this project shall be identical models of current production. Untried or prototype units shall not be acceptable.

MATERIALS: The materials for this work shall conform to the relevant provisions of the "Rhode Island Standard Specifications for Road and Bridge Construction" with the following additions:

Pedestrian Signal Housings

The Pedestrian signal housings shall be one section as called for on the plans, 12" polycarbonate with aluminum visors.

The single section housings or the upper section of the two-section housings shall be 12" and consist of a double message overlay combining the international symbols of a hand and walking man. The lower section of the two section housings shall be a 12" countdown timer.

General

The LED Pedestrian Signal Module and the Countdown Timer shall operate from -40 to +165°F and shall be completely sealed against dust and moisture intrusion per the requirements of NEMA Standard 250-1991 Sections 4.7.2.1 and 4.7.3.2 for type 4 enclosures.

The measured chromaticity coordinates for the "lunar white" walking man and the "Portland orange" hand shall conform to the chromaticity requirements of Section 8.04 and figure 1 of the VTCSH standard.

The driver board shall drive the LED's at a DC current not exceeding 20 ma.

The LED's shall not show any changes in color over the input line voltage range of 80 VAC to 135 VAC.

The circuitry shall ensure compatibility and proper triggering and operation of load switches and conflict monitors in use by the traffic signals.

The LED modules shall be designed to reduce the intensity of light output by 30% in response to diminished ambient light level. The dimming circuit shall have a 30-second relay to prevent interference from headlights or shadows. The LED drive current shall be regulated just as effectively when in the "dimmed" state.

LED Countdown Signal Module

The LED Countdown Signal Module shall be Model PCS 123 manufactured by Tassimco Corporation or approved equal.

The LED Countdown Signal Module shall be made of two, dual row, 7 segment digits, 8" high, made up of 160 red LED's, and shall be compatible with all makes and models of traffic signal controllers. The module shall be equipped with a test switch to turn on all 7 segments of both digits for verification.

The LED Countdown Signal Module shall have a microprocessor capable of setting its own time when connected to the traffic signal controller. The microprocessor shall be monitored by a watchdog circuit with a flashing LED for confirmation of proper operation. The LED Countdown Signal Module shall continuously monitor the traffic signal controller for any changes to the pedestrian phase time and re-program itself automatically if needed.

The LED Countdown Signal Module shall have two "user selectable" operating modes:

1. "Fixed Time": The timer shall count down the entire duration of the pedestrian walk and clearance times.
2. "Coordinated": The timer shall count down the duration of the clearance time only.

The LED Countdown Signal Module shall be initially set up under the "coordinated" mode.

The LED Countdown Signal Module shall have an internal conflict monitor to prevent any possible conflicts between the hand/man symbols and the countdown signals.

The LED Countdown Signal Module shall automatically clear to "0" if a flashing hand becomes solid for more than .750 seconds.

In the case of a power failure, the LED Countdown Signal Module shall be dark during the initial cycle for automatic reprogramming.

METHOD OF MEASUREMENT: "1 WAY PEDESTAL MOUNTED L.E.D. PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER 12 INCH" and "1 WAY BRACKET MOUNTED L.E.D. PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER 12 INCH" shall be measured for payment by the unit "EACH" for each unit installed and accepted by the Engineer.

BASIS OF PAYMENT: "1 WAY PEDESTAL MOUNTED L.E.D. PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER 12 INCH" "1 WAY BRACKET MOUNTED L.E.D. PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER 12 INCH" shall be paid for at the contract bid price "EACH" which price and payment shall constitute full compensation for furnishing all labor, materials,

mounting brackets, cabling, attachment hardware, field adjustments and settings and other incidentals complete in place and accepted by the Engineer.

CODE T14.9903

REMOVE AND RELOCATE TRAFFIC SIGNAL EQUIPMENT

DESCRIPTION: This item of work shall conform to the applicable sections of the Standard Specifications with the following additions.

It shall consist of the relocation and associated rewiring of existing traffic signal equipment at locations called for on the plans.

CONSTRUCTION METHODS: The Contractor shall relocate existing pedestrian pushbuttons onto new or existing brackets, where appropriate, as indicated on the plans. Existing holes on the signal poles that are visible after the pushbuttons are relocated shall be repaired to the satisfaction of the Engineer.

METHOD OF MEASUREMENT: "REMOVE AND RELOCATE TRAFFIC SIGNAL EQUIPMENT" shall be measured for payment by the unit "EACH" price for the completion of all work specified to the satisfaction of the Engineer.

BASIS OF PAYMENT: "REMOVE AND RELOCATE TRAFFIC SIGNAL EQUIPMENT" will be paid for at the contract bid price per "EACH" for the entire project and payment shall constitute full compensation for furnishing all labor, including the disconnection, relocation, and connection of the equipment, legal disposal of materials, and restoration of disturbed areas as called for on the plans or elsewhere in these Special Provisions, and for all tools, supplies, equipment and incidentals necessary to complete this item of work.

BID SHEET

EAST PROVIDENCE PEDESTRIAN SIGNAL IMPROVEMENTS

Item	Item Code	Description	UM	Location #1 Taunton Avenue at John Street	Location #2 Pawtucket Avenue at Brightbridge Avenue	Total Quantity	Unit Price	Location #1 TOTAL PRICE	Location #2 TOTAL PRICE
2	T12.9150	METER SOCKET W/MANUAL BY-PASS	EACH		1.00	1.00			
3	T12.0004	ACTUATED CONTROLLER TS-2, TYPE 1 W/4 PHASE ASSEMBLY POLE MOUNTED INCLUDING CABINET STD. 19.1.1	EACH		1.00	1.00			
3a	T14.9903	REMOVE AND RELOCATE TRAFFIC SIGNAL EQUIPMENT	EACH	4.00	3.00	7.00			
3g	T12.9901	MODIFY EXISTING TRAFFIC SIGNAL CONTROLLER CABINET	LS	1.00		1.00			
5b	T14.3413	1 WAY 3 SECTION SPAN MOUNTED SIGNAL HEAD 12 INCH	EACH	3.00	2.00	5.00			
5c	T14.3423	2 WAY 3 SECTION SPAN MOUNTED SIGNAL HEAD 12 INCH	EACH	2.00	2.00	4.00			
5j	T14.9901	1 WAY PEDESTAL MOUNTED L.E.D. PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER 12 INCH	EACH		2.00	2.00			
5m	T14.9902	1 WAY BRACKET MOUNTED L.E.D. PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER 12 INCH	EACH	4.00	2.00	6.00			
7	T04.5502	14 AWG 2 CONDUCTOR TWISTED SHIELDED CABLE	LF		95.00	95.00			
7a	T04.5503	14 AWG 3 CONDUCTOR CABLE	LF	730.00	375.00	1,105.00			
7b	T04.5505	14 AWG 5 CONDUCTOR CABLE	LF	1,510.00	575.00	2,085.00			
7c	T04.5509	14 AWG 9 CONDUCTOR CABLE	LF	150.00	200.00	350.00			
8b	T11.6006	SPAN AND MESSENGER WIRES 6/16	LF	235.00	105.00	340.00			
9	T13.1000	TRAFFIC DETECTORS-LOOP, STANDARD 19.6.0	LF		115.00	115.00			
9a	T13.1002	TRAFFIC DETECTOR RELAY-LOOP 2 CHANNEL	EACH		2.00	2.00			
11	201.9901	REMOVE AND SALVAGE TRAFFIC SIGNAL SYSTEM	LS	0.50	0.50	1.00			
4Y	T20.2014	4 INCH EPOXY RESING PAVEMENT MARKINGS - YELLOW	LF		100.00	100.00			
12W	T20.2012	12 INCH EPOXY RESING PAVEMENT MARKINGS - WHITE	LF	385.00	265.00	650.00			
SIGN	T15.0100	DIRECTIONAL REGULATORY AND WARNING SIGNS	SF	16.00	3.00	19.00			
							TOTAL PRICE		