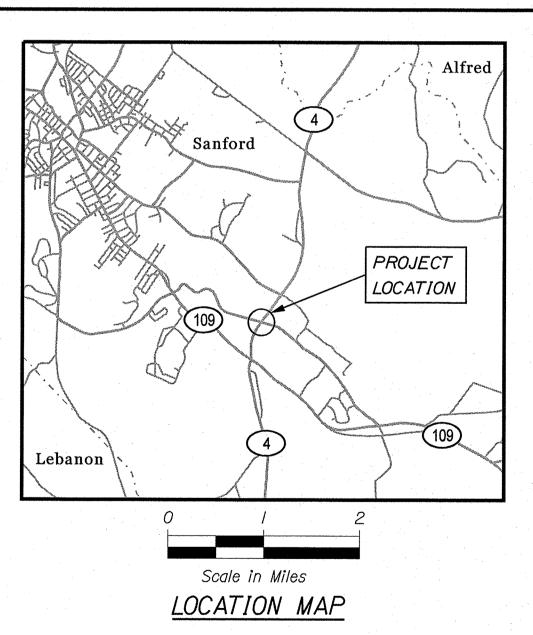
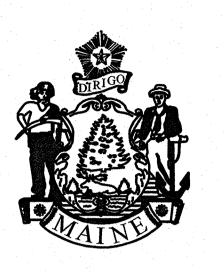
## STATE OF MAINE DEPARTMENT OF TRANSPORTATION

PLAN I	<u>LEGEND</u>
Town, County, State  Property Lines  R/W Lines-Existing  R/W Lines-Proposed  Culvert-Existing  Culvert Proposed  Curbing  Existing  Proposed  Type 1  Type 3  Type 5  Outline of Bodies of Water  Exposed Bedrock   Buildings  Trees  Conifer  Culumble Deciduous  Clearing Limit Line  Culumble Cu	Centerline-Existing Centerline-Proposed Travelway-Existing Travelway-Proposed Railroad Catch Basins Existing Proposed Manholes Proposed Underdrain Proposed Underdrain Proposed Ditch Existing Ditch Utility Poles Fire Hydrants Existing Water Line Existing San. Sewer Existing San. Sewer Manhole Guardrail-Existing Guardrail-Proposed Guardrail-Cable, Other
Signal Conduit	Existing Proposed
Signal Conduit	
Strain Pole w/ Guy Pedestal Post and Foundation	
Emergency Vehicle Preemption Reciever	
Signal Head (w/ Backplate)	
Emergency Preemption Confirmation Str	ohe -
Controller with Cabinet	obe
Video Detection Camera	
Advance Detection	
Dual Mode DSRC/C-V2X	<b>*</b>
(Dedicated Short Range Communications	· · · · · · · · · · · · · · · · · · ·
Detection Zone (& ID)	<u> </u>
Mast Arm,Post, or Span Wire Mounted Sign	



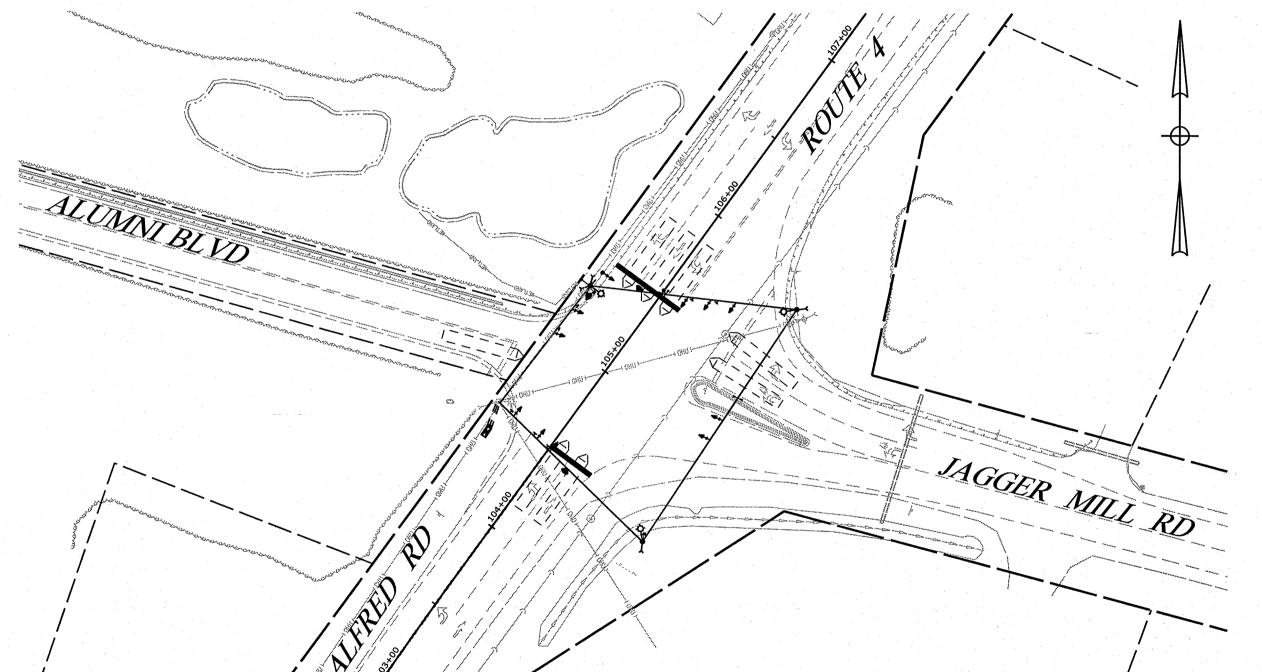


## SANFORD

YORK COUNTY

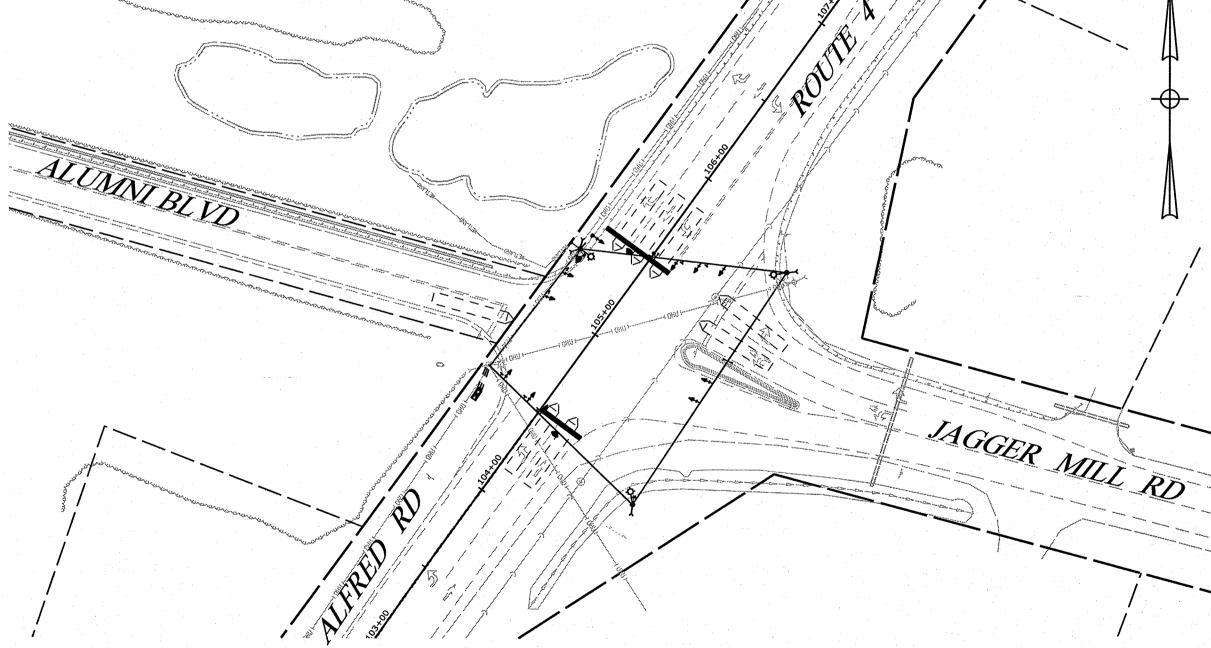
TRAFFIC SIGNALIZATION

### FEDERAL PROJECT NO. 2703000 **STATE WIN 027030.00**

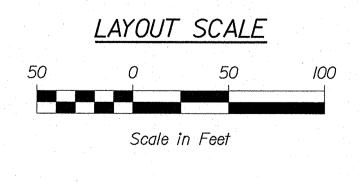


#### **INDEX OF SHEETS**

<u>Description</u>	Sheet No.
Title Sheet	1
General Notes	
Traffic Signal Plans	3-4
Interconnect Plan	5
System Network and Architecture	6



TRAFFIC DATA	SR 4 (ALFRED RD) NE/O JAGGER MILL RD		•
Current (2023) AADT	15,410	3,880	500
Future (2043) AADT			
DHV - % of AADT			
Design Hour Volume			
% Heavy Trucks (AADT)	7%	5%	0%
Directional Distribution (DHV)	64%	61%	
Design Speed (mph)		45	Unposted
Corridor Priority	<b>2</b>	4	5
Functional Class:	Minor Arterial	Major Collector	Local





PROJECT LOCATION:	In the City of Sanford at Route 4 at Jagger Mill Road and Alumni Boulevard	
PROGRAM AREA:	Multimodal	21 00
OUTLINE OF WORK:	Traffic Signal Design and Other Incidental Work	N 0 2 5 3 2

00	SANFORD ROUTE 4 (ALFRED RD) AND ALUMNI BLVD / JAGGER MILL	TITLE SHEET
21.00	SHEET N	JMBEF

M

- I. WORK FOR THIS PROJECT WILL RESULT IN THE INSTALLATION OF A NEW TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF ROUTE 4 (ALFRED ROAD) AT JAGGER MILL ROAD AND ALUMNI BOULEVARD IN SANFORD, MAINE. EQUIPMENT INCLUDES BUT IS NOT LIMITED TO, FURNISHING AND INSTALLING COMPLETE NEW ADVANCED TRANSPORTATION CONTROL CABINET (ATCC) ON A NEW GROUND MOUNT FOUNDATION WITH RACK MOUNTED ADVANCED TRANSPORTATION CONTROLLER (ATC), WOOD POLES WITH GUY WIRES AND EXTENSION OVERHEAD MAST FOR LIGHTING WHERE APPLICABLE, PEDESTAL POLE AND FOUNDATION, VEHICULAR SIGNAL HEADS WITH LIGHT-EMITTING DIODE INDICATIONS AND RETROREFLECTIVE BACKPLATES, WIRING, SIGNAL CABLE, OVERHEAD SPAN WIRE MOUNTED SIGNS, NON-INVASIVE STOP BAR AND ADVANCE VEHICLE DETECTION, EMERGENCY VEHICLE PREEMPTION, AND ALL APPURTENANCES AND INCIDENTALS REQUIRED FOR COMPLETE FUNCTIONING INSTALLATIONS. IN ADDITION, THE PROJECT WILL PROVIDE THE MEANS FOR REMOTE COMMUNICATIONS TO THE ATCC EQUIPMENT BY FIELD MONITORING UNIT (FMU) WITHIN THE MAINEDOT/CITY CLOUD HOSTED CENTRAL MANAGEMENT SYSTEM (CMS) VIA A SECURE VIRTUAL PRIVATE NETWORK (VPN) TUNNEL AND A MUNICIPAL FIBER INTRANET CONNECTION, THE PROJECT ADDITIONALLY PROVIDES FOR DUAL MODE DEDICATED SHORT RANGE COMMUNICATIONS / 4GLTE 5G ROAD SIDE UNIT (RSU) PROVIDING SELECT CONNECTED VEHICLE (CV) APPLICATIONS INTEGRATED INTO THE ATCC.
- 2. EXCEPT AS OTHERWISE NOTED IN THESE PLANS, ALL WORK SHALL BE COMPLETED IN CONFORMANCE WITH THE LATEST REVISIONS OF THE STATE OF MAINE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGES, MAINEDOT STANDARD DETAILS, SUPPLEMENTAL SPECIFICATIONS, AND SPECIAL PROVISIONS FOR THIS CONTRACT, THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE NATIONAL ELECTRICAL CODE, AND ANY REQUIREMENTS OF THE POWER COMPANY.
- 3. LOCATIONS OF ANY EXISTING UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE. THE CONTRACTOR IS RESPONSIBLE FOR FINDING EXACT LOCATIONS OF EXISTING UTILITIES PRIOR TO CONSTRUCTION, IN ACCORDANCE WITH MRSA TITLE 23 SECTION 3360-A, THE CONTRACTOR SHALL CONTACT DIG-SAFE AND APPROPRIATE AUTHORITIES PRIOR TO ANY SUBSURFACE ACTIVITIES.
- 4. THE CONTRACTOR SHALL NOTIFY UTILITY COMPANIES AT LEAST 48 HOURS BEFORE ANY OPERATIONS ARE CONDUCTED THAT COULD POTENTIALLY CONFLICT WITH AERIAL UTILITIES.
- 5. ANY RELOCATIONS OR ADJUSTMENTS OF EXISTING UTILITY FACILITIES WILL BE MADE BY THE RESPECTIVE UTILITIES IN COORDINATION WITH THE WORK OF THE CONTRACTOR.
- 6. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY NECESSARY OPENING PERMITS.
- 7. WHERE NOTED ON THE PLANS, ALL NEW VEHICULAR SIGNAL HEADS SHALL BE EQUIPPED WITH NEW LED LENSES 12 INCHES IN DIAMETER AND EQUIPPED WITH NEW 5-INCH LOUVERED BACK PLATES, INCLUDING 3-INCH RETROREFLECTIVITY.
- 8. ALL NEW SIGNAL HEADS SHALL BE TETHERED TO SPAN WIRE, AS INDICATED ON PLANS, ANY POLYCARBONATE HEADS SHALL BE STIFFENED WITH A REINFORCING
- 9. THE BOTTOM OF THE HOUSING OF NEW SIGNAL FACES SHALL BE AT LEAST IT FEET BUT NOT MORE THAN 19 FEET ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY. FOR POLE MOUNTED SIGNAL HEADS. THE BOTTOM OF THE HOUSING SHALL BE MOUNTED AT LEAST 8 FEET BUT NOT MORE THAN 19 FEET ABOVE THE PAVEMENT GRADE AT THE HIGH POINT OF THE ROAD, MINIMUM CLEARANCE OF ALL ITEMS INCLUDING TETHER WIRE SHALL BE 17 FEET.
- 10. TRAFFIC SIGNAL WORK SHALL BE COMPLETED IN A MANNER AND ORDER THAT WILL CAUSE THE MINIMUM DISRUPTION TO TRAFFIC.
- II. ALL EXISTING DRIVEWAY ACCESSES SHALL BE MAINTAINED AT ALL TIMES.
- 12. THE CONTRACTOR SHALL PROVIDE THE RESIDENT AND MAINEDOT WITH A SCHEDULE OF WORK FOR CONSTRUCTING THE TRAFFIC IMPROVEMENTS AT LEAST TWO WEEKS PRIOR TO THE COMMENCEMENT OF WORK.
- 13. ALL NON-PAVED AREAS DISTURBED DURING CONSTRUCTION SHALL BE LOAMED AND SEEDED, UNLESS OTHERWISE DIRECTED BY THE OWNER. ALL PAVED AREAS DISTURBED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR. COSTS FOR REPAIR OF DISTURBED AREAS SHALL BE INCIDENTAL TO OTHER CONTRACT ITEMS.
- 14. TWO COPIES OF AS-BUILT PLANS, WIRING DIAGRAMS, BOX PRINTS, AND EQUIPMENT MANUALS SHALL BE LEFT IN THE ATCC.
- 15. ALL MATERIAL SCHEDULES SHOWN ON THE PLANS ARE FOR GENERAL INFORMATION ONLY. THE CONTRACTOR SHALL PREPARE THEIR OWN MATERIAL SCHEDULES BASED UPON THEIR PLAN REVIEW, ALL SCHEDULES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ORDERING MATERIALS OR PERFORMING WORK.
- 16. REMOVAL OF THE EXISTING TRAFFIC CONTROL EQUIPMENT, SIGNAGE AND POLE(S) SHALL BE INCIDENTAL TO THE INSTALLATION OF THE NEW SIGNAL SYSTEM, SEE SALVAGE RIGHTS FOR ADDITIONAL INFORMATION.
- 17. THE COST OF POLE RISERS AND ALL PROJECT SIGNS EITHER OVERHEAD OR INSTALLED ON POSTS, WHICH INCLUDES PROVISION OF THE POSTS SHALL BE INCIDENTAL TO ITEM 643.80.
- 18. LED OVERHEAD LIGHTING LUMINAIRE WITH ARM IS TO BE INSTALLED ON THE TOP OF WOOD POLES AS SHOWN ON THE PLANS WITH DISTRIBUTION TYPE 3 AND CONTROLLED FROM PHOTOCELL AT ATCC ON SEPARATE BREAKER.

#### 19. TRAFFIC SIGNAL EQUIPMENT

CONTRACTOR FURNISHED EQUIPMENT: THE ATCC, ATC, AND VARIOUS OTHER EQUIPMENT ITEMS SHOWN ON THE PLANS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR, THE TRAFFIC SIGNAL CONTROLLER SUPPLIED UNDER THIS CONTRACT SHALL BE AN ETHERNET EQUIPPED ECONOLITE EOS ADVANCED TRANSPORTATION CONTROLLER.

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR PROVIDING THE PROJECT WITH WORKING AND FULLY CONFIGURED ATC, COMPLETE SET-UP OF THE EXISTING CLOUD-BASED CENTRAL MANAGEMENT SYSTEM, SIGNAL PERFORMANCE MEASURE (SPM) APPLICATIONS, CV SYSTEM, INSTALLATION OF THE CENTRAL AND LOCAL INTERSECTION COMMUNICATIONS INTERFACE, AND COORDINATION WITH MAINEDOT OFFICE OF INFORMATION TECHNOLOGY. THE CONTRACTOR IS FURTHER RESPONSIBLE FOR SYSTEM START-UP AND SYSTEM LOADING, ACCEPTANCE TESTING, AND TRAINING. IN ADDITION, THE CONTRACTOR SHALL FURNISH AND INSTALL AND/OR EXPAND THE EXISTING LIGHT-BASED EMERGENCY VEHICLE PREEMPTION SYSTEM COMPATIBLE WITH THE PREEMPTION EMITTERS OWNED BY THE MUNICIPAL FIRE DEPARTMENT, NOTING THAT SYSTEM SHALL BE CONFIGURED SUCH THAT PREEMPTION OR PRIORITY CONTROL CAN ALSO BE INITIATED THROUGH DEDICATED SHORT-RANGE COMMUNICATIONS (DSRC)/4GLTE 5G THROUGH A ROADSIDE UNIT BY WAY OF AN APPROACHING AUTHORIZED VEHICLE WITH AN ON-BOARD UNIT.

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR FURNISHING AND INSTALLING ALL OTHER EQUIPMENT DETAILED IN GENERAL NOTE I AND SHALL BE AWARE OF AND CONFORM TO ALL DETAILS FOR THE MATERIAL SPECIFICATIONS IN SPECIAL PROVISION 718.

#### 20. PAINTING

UNLESS OTHERWISE DIRECTED BY MAINEDOT OR THROUGH THE RESIDENT, ALL EXTERIOR PARTS OF THE LISTED EQUIPMENT SHALL BE DELIVERED TO THE PROJECT FINISHED AS FOLLOWS:

- CONTROL CABINET BLACK
- PEDESTAL POSTS AND BASES BLACK
- VEHICULAR SIGNAL HEADS ALL PARTS BLACK
- SIGNAL BACKPLATES BLACK AND LOUVERED W/ 3" FLUORESCENT YELLOW RETROREFLECTIVE STRIP

#### 21. COMMUNICATIONS

THE CONTRACTOR SHALL SEE SPECIAL PROVISION 626 FOR DETAILS OF FIBER OPTIC CABLE TO BE INSTALLED BY GWI AND MADE FOR USE IN THE EXISTING CMS PROCURED UNDER THE 024301.00 STATEWIDE BUILD PROJECT.

THE CMS SHALL SUPPORT COMMUNICATIONS TO ATC, ASSOCIATED EQUIPMENT, AND VEHICLE DETECTION AS SHOWN IN THE PLANS. ALL CONNECTIONS TO THE CLOUD-BASED CMS SHALL BE VIA A SECURE VPN NETWORK. COMMUNICATIONS FROM THE CMS TO THE ON-STREET ATCC SHALL BE MADE PRIMARILY THROUGH THE FIBER INTRANET AND SECONDARILY THROUGH THE FMU.

CONTRACTOR SHALL ADDITIONALLY PROCURE A HIGH GAIN ANTENNA IN LIEU OF THE STANDARD FMU PUCK TYPE ANTENNA.

#### 22. VEHICLE DETECTION

THE CONTRACTOR SHALL FURNISH AND INSTALL NON-INVASIVE STOP LINE AND ADVANCE VEHICLE DETECTION AS SHOWN IN THE PLANS. AS PAYMENT FOR THIS WORK, THE CONTRACTOR SHALL SUBMIT A LUMP SUM BID FOR NON-INVASIVE STOP LINE AND A LUMP SUM BID FOR NON-INVASIVE ADVANCE (WHERE APPLICABLE) DETECTION. THE VEHICLE DETECTORS ARE TO BE CONNECTED TO THE ATC FOR LOCAL VEHICLE DETECTION AND REMOTELY CONNECTED TO THE CLOUD-BASED CENTRAL MANAGEMENT SYSTEM TO ALLOW VISUAL CONFIRMATION (STOP LINE) AND ADJUSTMENT OF THE DETECTION ZONES AS SHOWN IN THE PLANS. WORK SHALL BE CONSTRUCTED AND PAID FOR AS OUTLINED IN SPECIAL PROVISION 643.

THE NON-INVASIVE VEHICLE DETECTION ZONES SHOWN IN THE PLANS ARE FOR ILLUSTRATIVE PURPOSES ONLY. FINAL DETECTION ZONES SHALL BE LOCATED IN THE FIELD AND APPROVED BY MAINEDOT AND THE RESIDENT.

THE LOCATION OF THE DETECTION DEVICES SHOWN IN THE PLANS ARE CONCEPTUAL FOR OPTIMAL APPROACH COVERAGE ASSUMING ONE TYPE (ADVANCE, IF APPLICABLE, AND/OR STOP LINE) DEVICE PER APPROACH. THE ACTUAL NUMBER OF DETECTION DEVICES AND MOUNTING LOCATIONS SHALL BE PER MANUFACTURES RECOMMENDATION.

THE RESIDENT RESERVES THE RIGHT TO DIRECT THE CONTRACTOR TO ADJUST THE VIDEO DETECTOR MOUNTING HEIGHT FOR LOCAL CONDITIONS IDENTIFIED DURING OR AFTER INSTALLATION, NO ADDITIONAL COST WILL BE ALLOWED FOR FIELD ADJUSTING THE PIPE EXTENSIONS OR REWIRING AS NECESSARY. THIS WORK WILL BE INCIDENTAL TO THE 643.21 AND/OR 643.22 ITEM.

#### 23. ROAD SIDE UNIT (RSU)

THE CONTRACTOR MAY MOUNT RSU IN AN ALTERNATE LOCATION THAN SHOWN ON THE PLANS PROVIDED THE ANTENNAE HAVE A CLEAR LINE OF SIGHT FOR ALL APPROACHES. THIS PROVISION IS TO BETTER ASSIST THE CONTRACTOR TO STAY WITHIN THE 100 METER LIMITATION OF THE CAT5 CABLE RUN WITHOUT HAVING TO PURCHASE REPEATERS TO MATCH THE PROPOSED PLAN LOCATION.

#### 24. FOUNDATIONS

NEW ATCC AND PEDESTAL POLE FOUNDATIONS SHALL BE CONSTRUCTED IN LOCATIONS SHOWN ON THE PLANS. THE PROPOSED FOUNDATIONS AS SHOWN ARE TO BE WITHIN EXISTING RIGHT-OF-WAY OR PROPOSED EASEMENTS TO AVOID UNDERGROUND CONFLICTS BASED ON AVAILABLE INFORMATION PROVIDED DURING DESIGN; HOWEVER, THE CONTRACTOR MAY UPON CONSULTATION AND APPROVAL FROM THE RESIDENT, RELOCATE ATCC AND TRAFFIC SIGNAL PEDESTAL POLE FOUNDATIONS AS NEEDED TO AVOID UNANTICIPATED CONFLICTS AS LONG AS THE FINAL LOCATION MEETS THE GUIDELINES IN SECTION 4E.08 OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). DOES NOT VIOLATE ADA. AND THE STRUCTURE IS INSTALLED COMPLETELY WITHIN THE EXISTING ROW OR AVAILABLE EASEMENTS.

THE ATCC FOUNDATION SHALL PROVIDE SUFFICIENT CONDUIT SWEEPS TO SERVICE THE SIGNALIZED INTERSECTION WHILE MEETING THE NATIONAL ELECTRICAL CODE CHAPTER 9, TABLE I REQUIREMENTS FOR CONDUIT FILL.

#### 25. START-UP AND SYSTEM LOADING

THE SYSTEM SUPPLIER SHALL INITIATE COMPLETE SYSTEM OPERATION INCLUDING ATC, ATCC, CMS, SPM, STOP LINE VEHICLE DETECTION SYSTEM, ADVANCED VEHICLE DETECTION SYSTEM, CV SYSTEM, HOSTED CLOUD-BASED SYSTEMS, FMU, THE COMMUNICATIONS SYSTEM, AND REMOTE MONITORING AND CONTROL OF CMS OPERATIONS AS SHOWN ON THE PLANS AND/OR DIRECTED BY MAINEDOT AND THE RESIDENT.AFTER THE SUPPLIER HAS INITIATED SYSTEM OPERATION, THE SYSTEM SHALL BE RUN FOR A CONTINUOUS 7-DAY INITIAL OPERATIONAL TESTING PERIOD. IF ANY MAJOR FUNCTIONS OF THE SYSTEM FAIL TO OPERATE DURING THIS TESTING PERIOD, AS DETERMINED BY MAINEDOT AND/OR THE RESIDENT, THE SUPPLIER SHALL CORRECT OR REPAIR THE SYSTEM AND THE CONTINUOUS 7-DAY TESTING PERIOD SHALL BE RESTARTED. AT THE COMPLETION OF A SUCCESSFUL 7-DAY TESTING PERIOD, THE SUPPLIER SHALL ADVISE MAINEDOT AND/OR THE RESIDENT THAT THE SYSTEM IS READY FOR THE START-UP PHASE.ANY MAJOR SYSTEM MALFUNCTIONS ENCOUNTERED DURING THE START-UP PHASE SHALL BE CORRECTED BY THE SUPPLIER, AND THE TEST RESTARTED, DURING THIS PERIOD, MAINEDOT AND/OR THE RESIDENT MAY MAKE MODIFICATIONS TO THE SYSTEM TIMING PARAMETERS, BUT THIS WILL NOT CAUSE RESTARTING OF THE TESTING PERIOD, AT THE COMPLETION OF THE TESTING PERIOD, THE SYSTEM WILL BE DEEMED READY FOR FINAL ACCEPTANCE TESTING AS DESCRIBED IN ACCEPTANCE TESTING.

#### 26. ACCEPTANCE TESTING

UPON COMPLETION OF THE 7-DAY TESTING PERIOD, MAINEDOT AND/OR THE RESIDENT SHALL EVALUATE SYSTEM OPERATIONS. IT IS EXPECTED THAT THE COMPLETE SYSTEM SHALL OPERATE FULLY FUNCTIONAL FOR A PERIOD OF 30 CONSECUTIVE DAYS WITHOUT MALFUNCTION. MINOR MALFUNCTIONS OF INOPERABILITY NOT THE FAULT OF THE CONTRACTOR, AS JUDGED BY MAINEDOT AND/OR THE RESIDENT, ARE NOT INCLUDED IN THE 30-DAY PERIOD, IF THE SYSTEM FAILS TO OPERATE AS INTENDED BY THIS SPECIFICATION THE MALFUNCTION SHALL BE CORRECTED BY THE CONTRACTOR AT ITS COST AND A NEW 30-DAY TESTING PERIOD SHALL BEGIN, THIS PROCESS SHALL CONTINUE UNTIL A COMPLETELY OPERABLE SYSTEM IS DEMONSTRATED FOR A CONSECUTIVE 30-DAY PERIOD.

ACCEPTANCE TESTING MUST DEMONSTRATE TO MAINEDOT AND/OR THE RESIDENT A REASONABLE SATISFACTION THAT THE HARDWARE AND LICENSED SOFTWARE FUNCTION IN ACCORDANCE WITH THE SPECIFICATIONS, REQUIREMENTS, FUNCTIONALITIES, PERFORMANCE CRITERIA OR OTHER BENEFITS STATED IN DOCUMENTATION, PROPOSALS, AND/OR DEMONSTRATIONS GIVEN TO MAINEDOT.

#### 27. SALVAGE RIGHTS

MAINEDOT SHALL HAVE FIRST RIGHTS TO ALL EQUIPMENT (SIGNAL FLASHERS AND CONTROL UNIT) REMOVED BY THE PROJECT (CONTACT BROOKE GLIDDEN AT BROOKE.GLIDDEN@MAINE.GOV). THE CITY OF SANFORD SHALL HAVE SECOND SALVAGE RIGHTS TO ALL EQUIPMENT NOT CLAIMED BY MAINEDOT. THE CONTRACTOR SHALL CAREFULLY REMOVE AND STORE ALL EQUIPMENT CLAIMED BY EITHER MAINEDOT OR THE MUNICIPALITY FOR RETRIEVAL BY MAINEDOT OR THE MUNICIPALITY. THE STORAGE AREA SHALL BE SECURE AND ALL CONTROL EQUIPMENT REMOVED THAT HAS COMPUTER CHIP TECHNOLOGY SHALL BE STORED IN AN INTERIOR CLIMATE CONTROLLED ENVIRONMENT.

ANY EQUIPMENT NOT CLAIMED BY EITHER MAINEDOT OR THE MUNICIPALITY FOR SALVAGE SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AND DISPOSED OF IN A MANNER ACCEPTABLE TO THE RESIDENT.

- 28. THE RESIDENT AND MAINEDOT SHALL HAVE THE RIGHT AND AUTHORITY TO DETERMINE THE ACCEPTABILITY OF WORK AND MATERIALS IN PROGRESS OR COMPLETED AND SHALL HAVE THE RIGHT TO REJECT ANY WORK OR MATERIALS WHICH DO NOT CONFORM, IN ITS SOLE OPINION, TO THE PLANS OR SPECIFICATIONS.
- 29. THE MAINTENANCE OF TRAFFIC SIGNALS SHALL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR UNTIL FINAL ACCEPTANCE BY MAINEDOT.
- 30. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING RED-LINE AS-BUILT DRAWINGS OF THE FINAL WORK TO THE RESIDENT.THOSE DRAWINGS SHALL BE ON A CLEAN SET OF PLANS SHOWING ALL CHANGES OR MODIFICATIONS TO THE BID PLANS.
- 31. THE CONTRACTOR SHALL REMAIN ALERT FOR ANY EVIDENCE OF CONTAMINATED SOILS. THE CONTRACTOR SHALL EMPLOY APPROPRIATE HEALTH AND SAFETY MEASURES TO PROTECT ITS WORKERS AGAINST HAZARDS ASSOCIATED WITH EXCAVATING AND WORKING NEAR CONTAMINATED SOILS, IF THE CONTRACTOR ENCOUNTERS EVIDENCE OF SOIL OR GROUNDWATER CONTAMINATION, THE CONTRACTOR SHALL SECURE THE EXCAVATION, STOP WORK IN THE CONTAMINATED AREA, AND IMMEDIATELY NOTIFY THE RESIDENT. THE RESIDENT SHALL CONTACT THE HYDROGEOLOGIST IN MAINEDOT S ENVIRONMENTAL OFFICE AT 207-624-3100 AND THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION AT 800-482-0777, WORK MAY ONLY CONTINUE WITH AUTHORIZATION FROM THE RESIDENT.
- 32. THE CONTRACTOR IS DIRECTED TO PROJECT SPECIAL PROVISION 718 FOR ADDITIONAL INFORMATION RELATED TO THE FOLLOWING:
  - 718.13 TRAFFIC SIGNAL CONTROL SYSTEM
  - 718,14 FIELD MONITORING UNIT (NOTE: DIFFERS FROM MAINEDOT REPAIR SPEC)
  - 718.15 MESSENGER WIRE
  - 718.16 EMERGENCY VEHICLE PREEMPTION SYSTEM
  - 718,17 SINGLE MODE FIBER OPTIC CABLE • 718,18 TWELVE (12) POSITION FIBER OPTIC PATCH PANEL
  - 718,19 ETHERNET SWITCH WITH FIBER OPTIC INTERFACES

SPECIAL PROVISION 718 EXPANDS UPON THE INFORMATION FOUND IN THESE GENERAL NOTES, MAINEDOT STANDARD SPECIFICATIONS DATED MARCH 2020, AND MAINEDOT STANDARD DETAILS DATED MARCH 2020. AS SUCH, THE MORE RESTRICTIVE LANGUAGE BETWEEN THESE GENERAL NOTES, MAINEDOT STANDARD SPECIFICATIONS, MAINEDOT STANDARD DETAILS, AND SPECIAL PROVISION 718 SHALL GOVERN THE WORK TO BE PERFORMED UNDER THIS PROJECT.

#### 33. RIGHT-OF-WAY

• STATEWIDE (BUILD)

RIGHT-OF-WAY AND EASEMENTS WHERE NOTED IN THE PLANS APPROXIMATE.

34. OVERLAPPING PROJECTS (BY OTHERS) TO BE COORDINATED

THE CONTRACTOR AND RESIDENT ARE TO BE AWARE OF, AND COORDINATE WITH, THE BULLETED PROJECTS THAT OVERLAP WITH THE FOLLOWING PROJECT:

- SANFORD (POWERS BRIDGE #3827 REPLACEMENT)
- WIN 025317.00 • SANFORD (ROUTE 4/SCHOOL STREET/GAVEL ROAD) WIN 019001.00
  - WIN 024301.00

SEE SPECIAL PROVISION 105 (COOPERATION BETWEEN CONTRACTORS) FOR ADDITIONAL INFORMATION.



PROJ. MANAGER	J. DOSTIE	ВҮ	DATE
DESIGN-DETAILED	M. GRAHAM	J. ROBERT	12/23
CHECKED-REVIEWED C. BOBAY	C. BOBAY	C. BOBAY	04/24
DESIGN2-DETAILED2 C. BOBAY	C. BOBAY	J. READY	10/54
DESIGN3-DETAILED3 J. ROBERT		C. BOBAY	11/24
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			

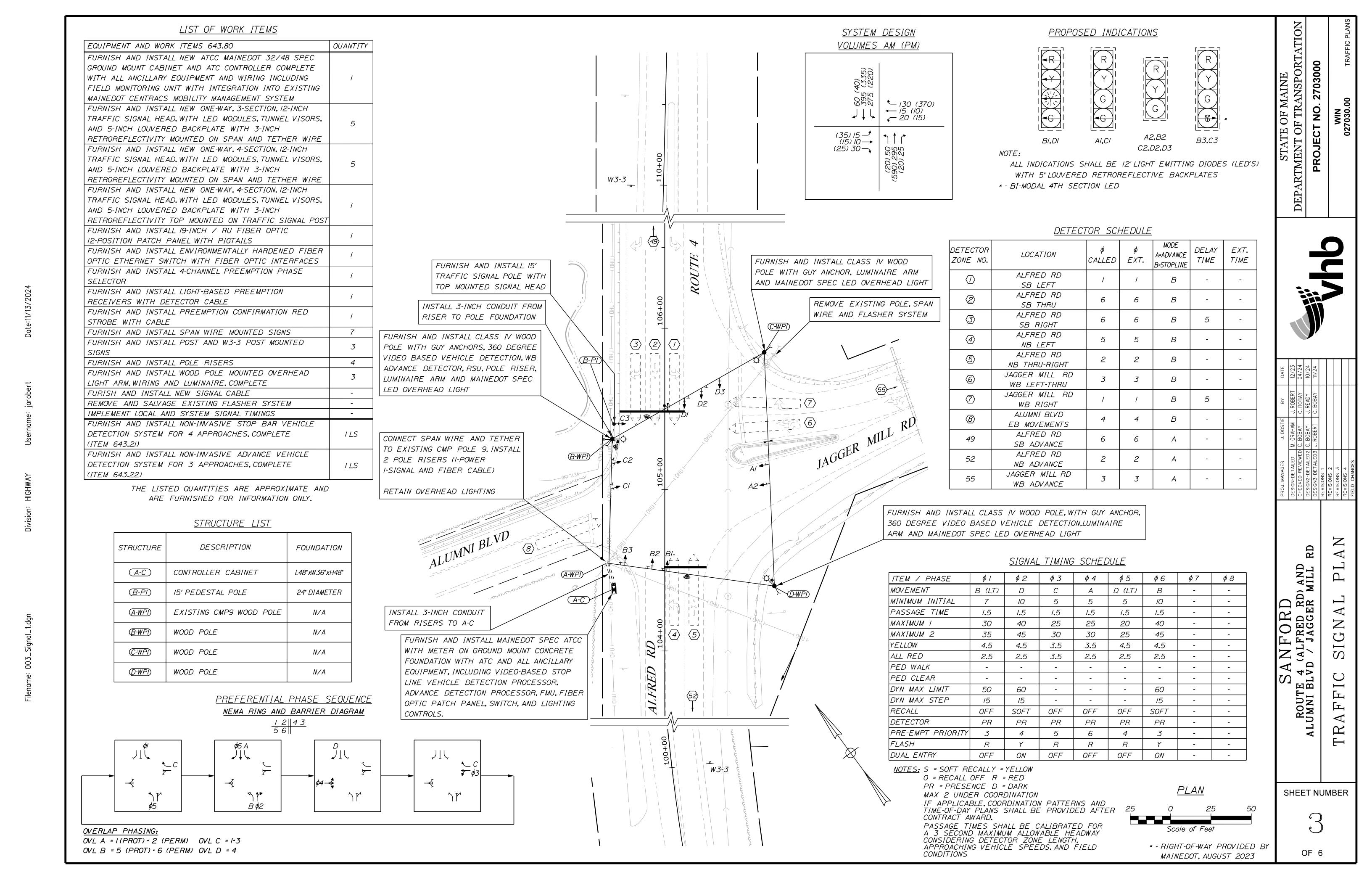
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SHEET NUMBER

RO LM



OF 6



#### LIST OF WORK ITEMS EQUIPMENT AND WORK ITEMS (ITEM XXX.YYZ) QUANTITY FURNISH AND INSTALL 14-INCH PRECAST CONCRETE JUNCTION BOX I EA (ITEM 626.11) FURNISH AND INSTALL (3-INCH) NON-METALLIC CONDUIT 50 LF (ITEM 626.22) FURNISH AND INSTAL NON-METALLIC CONDUIT, CONCRETE 25 LF ENCASED (ITEM 626.221) FURNISH AND INSTALL GROUND MOUNTED CABINET FOUNDATION I EA (ITEM 626.38) FURNISH AND INSTALL 24-IN DIAMETER FOUNDATION 7 *LF* (ITEM 626.421) FURNISH AND INSTALL 12-INCH SOLID WHITE PAVEMENT MARKING 60 LF (ITEM 627.18) ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR) 24 HR (ITEM 631.12) FURNISH AND INSTALL 15-FOOT PEDESTAL POLE I EA (ITEM 643.92) FURNISH AND INSTALL WOOD POLE WITH GUYS 3 EA (ITEM 643.97) FURNISH AND INSTALL DUAL MODE DSCR/-V2X ROADSIDE UNIT I EA (ITEM 654.351) THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

#### EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT	TSP	RECEIVER	<i>ACTIVE</i>
	ASSIGNMENT	ASSIGNMENT	PRIORITY	PHASE
	1		NOT USED/	RESERVED
	2		NOT USED/	RESERVED
RI	3	7	1	\$1&\$6 (SB)
R2	4	8	2	φ2&φ5 (NB.
R3	5	9	3	φ3 (WB)
R4	6	10	4	φ4 (EB)

#### EMERGENCY VEHICLE PRE-EMPTION NOTES:

PLACE W3-3 30"X30" SIGNAL AHEAD

SIGN 360' IN ADVANCE OF STOP BAR

FURNISH AND INSTALL HIGH

PREEMPTION SYSTEM, COMPLETE

INTENSITY LIGHT BASED

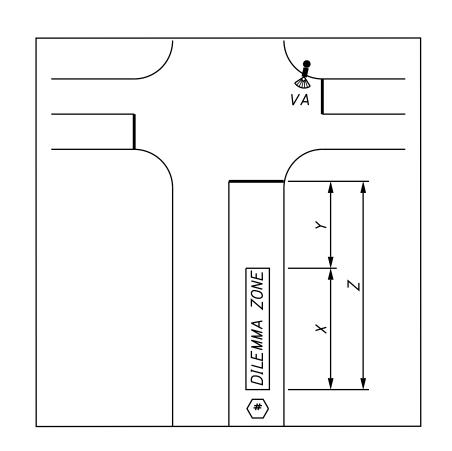
EMERGENCY VEHICLE

PLACE W3-3 30"X30" SIGNAL AHEAD

WARNING SIGN APPROXIMATELY 450' IN

ADVANCE OF STOP BAR AT 100+00 RT

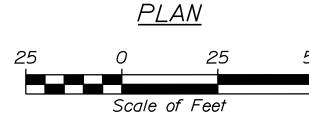
- I. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (I = HIGHEST, 10 = LOWEST)
- INTERSECTION BY AN OPTICAL DETECTOR, THE CONTROLLER SHALL HOLD OR ADVANCE TO AND HOLD THE EMERGENCY ACTIVE PHASE GREEN FOR A MINIMUM OF 10 SECONDS OR UNTIL THE PRE-EMPTION SIGNAL CEASES. THE CONTROLLER SHALL THEN TIME PRE-EMPTION PHASE CLEARANCE (4.5 SECONDS YELLOW AND 3.5 SECONDS ALL RED) AND SERVICE SUBSEQUENT EMERGENCY ACTIVE PHASES AS NECESSARY. AT THE COMPLETION OF THE PRE-EMPTION CYCLE, THE CONTROLLER SHALL TIME THE PRE-EMPTION CLEARANCE AND RESUME NORMAL SIGNAL OPERATION.
- 3. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY
- 4. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY EMERGENCY VEHICLE PREEMPTION GREEN IS ON.
- 5. THE EXISTING ATMS SYSTEM IS TO BE CONFIGURED TO EMAIL TRAINING) WHEN TRAFFIC SIGNAL PREEMPTION EXCEEDS A



X	Y	Z
(DISTANCE)	(DISTANCE)	(DISTANCE)
<i>152'</i>	102'	254′
<i>162'</i>	122'	284′
175′	<i>152'</i>	327′
<i>181′</i>	172'	<i>353′</i>
<i>152'</i>	234′	386′
	152' 162' 175' 181'	162' 122' 175' 152' 181' 172'

#### ADVANCE DILEMMA ZONE SETUP

THIRD EDITION - VOLUME I



MAINEDOT, AUGUST 2023

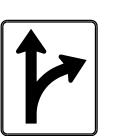




R3-5A

*30"x36*"

*I-PROPOSED* 



R3-6R

*30"x36"* 





PLACE W3-3 30"X30" SIGNAL AHEAD

WARNING SIGN APPROXIMATELY 450'IN

ADVANCE OF STOP BAR AT 110+00 LT

FURNISH AND INSTALL ADVANCE VEHICLE

DETECTION NB AND SB TETHERED ON

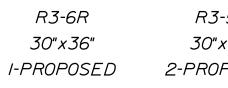
SPAN WIRE AND ON NW POLE (TYP)

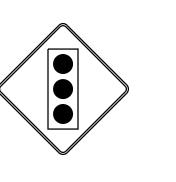
W3-3

JR3-5R

₩*3*<del>\</del>3







W3-3 *30"x30" 3-PROPOSED* 

#### EXISTING SIGNS



S4-3P

2-RETAINED



2-RETAINED

R3-6L

*30"x36"* 

I-PROPOSED









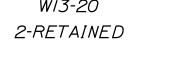






S4-6P 2-RETAINED

W13-20



# *30"x36"* 2-PROPOSED YOUR

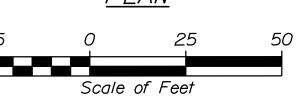
2. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN

PRE-EMPTION DEMAND.

PREEMPTION ALERTS TO TOWN STAFF (TO BE DESIGNATED DURING DURATION GREATER THAN ONE MINUTE.

SPEED	X	Y	Z
MILES PER HOUR	(DISTANCE)	(DISTANCE)	(DISTANCE)
35	<i>152'</i>	102'	254′
40	<i>162'</i>	122'	284′
45	175′	<i>152</i> ′	327′
50	181′	<i>172'</i>	<i>353′</i>
55	<i>152'</i>	234′	386′





\* - RIGHT-OF-WAY PROVIDED BY

ANFORD (ALFRED RD) AND D / JAGGER MILL ROUTE 4 (A

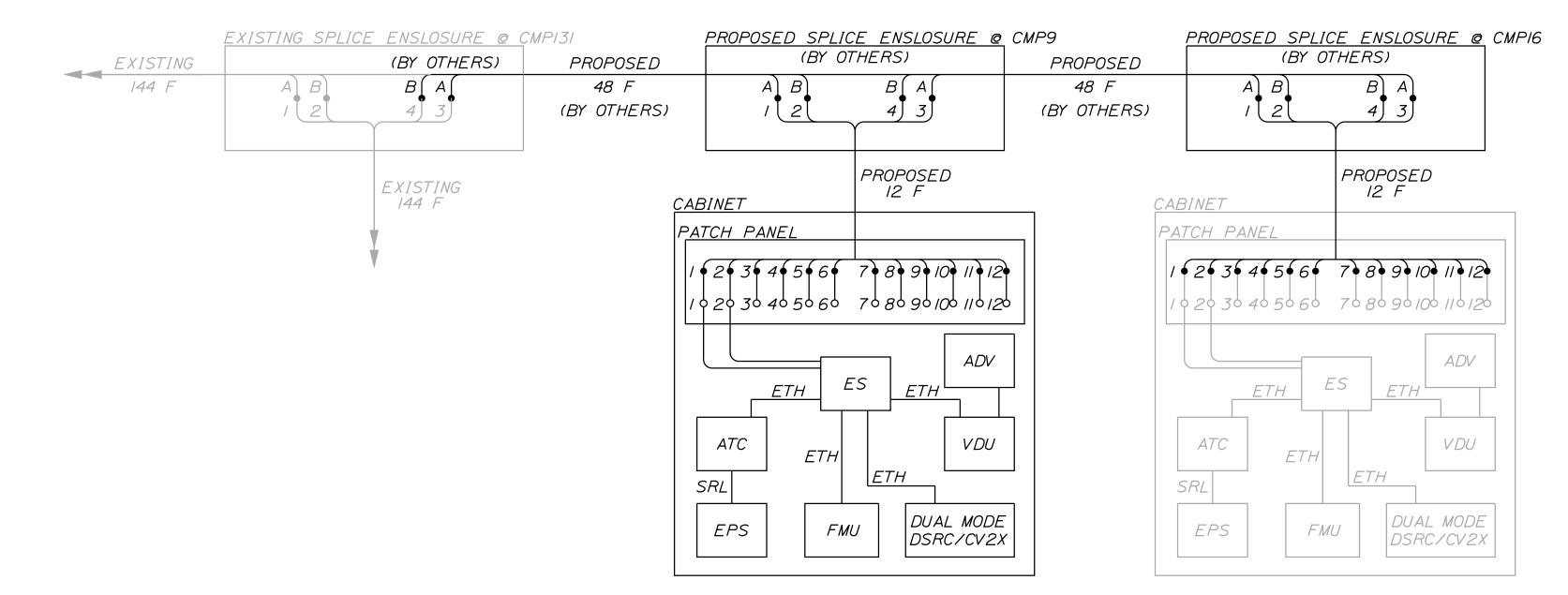
SHEET NUMBER

OF 6

ROUTE 4 (ALFRED RD) / ROUTE 109 (MAIN ST)

#### ROUTE 4 (ALFRED RD) / <u>ALUMNI BLVD / JAGER MILL RD</u>

#### ROUTE 4 (ALFRED RD) / SCHOOL ST / GAVEL RD



#### ROUTE 4 (ALFRED RD) / JAGGER MILL RD & ALUMNI BLVD

	CABLE	STRAND	CONNECTION TYPE	CABLE	STRAND	DESCRIPTION
E JRE	48F TO CMP131	/-A	UNTERMINATED	CONTINUOUS		
SPLICE ENCLOSURE CMP9	48F TO CMP131	A	SPLICE	48F TO CONTROLLER CABINET	1	SPLICE TO 12F DROP CABLE
Si ENC (	48F TO CMP131	В	SPLICE	48F TO CONTROLLER CABINET	2	SPLICE TO 12F DROP CABLE
	12F TO SE CMP9	1	SPLICE	PIGTAIL	-	ES, PP POSITION I
ABINET NLVD	12F TO SE CMP9	2	SPLICE	PIGTAIL	-	ES, PP POSITION 2
1 0 / 4 1	12F TO SE CMP9	3	SPLICE	PIGTAIL	-	SPARE, PP POSITION 3
OLLER ED RD)	12F TO SE CMP9	4	SPLICE	PIGTAIL	-	SPARE, PP POSITION 4
CONTROLL ALFRED I	12F TO SE CMP9	5	SPLICE	PIGTAIL	-	SPARE, PP POSITION 5
FRED & AL	12F TO SE CMP9	6	SPLICE	PIGTAIL	-	SPARE, PP POSITION 6
	12F TO SE CMP9	7	SPLICE	PIGTAIL	-	SPARE, PP POSITION 7
:L A]	12F TO SE CMP9	8	SPLICE	PIGTAIL	-	SPARE, PP POSITION 8
1 94 5	12F TO SE CMP9	9	SPLICE	PIGTAIL	-	SPARE, PP POSITION 9
	12F TO SE CMP9	10	SPLICE	PIGTAIL	-	SPARE, PP POSITION 10
РАТСН	12F TO SE CMP9	//	SPLICE	PIGTAIL	-	SPARE, PP POSITION II
<i>H</i>	12F TO SE CMP9	12	SPLICE	PIGTAIL	-	SPARE, PP POSITION 12

#### ROUTE 4 (ALFRED RD) / SCHOOL ST & GAVEL RD

	CABLE	STRAND	CONNECTION TYPE	CABLE	STRAND	DESCRIPTION
E IRE 5	48F TO CMPI3I	I-A	UNTERMINATED	CONTINUOUS		
SPLICE ENCLOSURE CMPIG	48F TO CMPI3I	Α	SPLICE	48F TO CONTROLLER CABINET	1	SPLICE TO 12F DROP CABLE
S ENC C	48F TO CMPI3I	В	SPLICE	48F TO CONTROLLER CABINET	2	SPLICE TO 12F DROP CABLE
ET	12F TO SE CMP16	1	SPLICE	PIGTAIL	-	ES, PP POSITION I
CABINET	12F TO SE CMP16	2	SPLICE	PIGTAIL	-	ES, PP POSITION 2
' ' ' ' ' '	12F TO SE CMP16	3	SPLICE	PIGTAIL	-	SPARE, PP POSITION 3
~ ~ ~ _	12F TO SE CMP16	4	SPLICE	PIGTAIL	-	SPARE, PP POSITION 4
WTROLLE FRED R. GAVEL	12F TO SE CMP16	5	SPLICE	PIGTAIL	-	SPARE, PP POSITION 5
ONT. LFR & G	12F TO SE CMP16	6	SPLICE	PIGTAIL	-	SPARE, PP POSITION 6
AT CO. 4 (AL) . ST &	12F TO SE CMP16	7	SPLICE	PIGTAIL	-	SPARE, PP POSITION 7
, , ,	12F TO SE CMP16	8	SPLICE	PIGTAIL	-	SPARE, PP POSITION 8
PANEL A ROUTE SCHOOL	12F TO SE CMP16	9	SPLICE	PIGTAIL	-	SPARE, PP POSITION 9
	12F TO SE CMP16	10	SPLICE	PIGTAIL	-	SPARE, PP POSITION 10
РАТСН	12F TO SE CMP16	//	SPLICE	PIGTAIL	-	SPARE, PP POSITION II
9	12F TO SE CMP16	12	SPLICE	PIGTAIL	-	SPARE, PP POSITION 12

FIBER OPTIC PIGTAIL

FIBER ETHERNET SWITCH

SERIAL CONNECTION

SYSTEM

VIDEO DETECTION CONTROL UNIT

EXISTING EQUIPMENT

LEGEND

FIBER OPTIC SPLICE

ADVANCED TRANSPORTATION CONTROLLER

ETHERNET CABLE EMERGENCY PREEMPTION

OF 6

SHEET NUMBER

NETWORK CHITECTURE

SANFORD
ROUTE 4 (ALFRED RD) AND
ALUMNI BLVD / JAGGER MILL