STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PLAN LEGEND

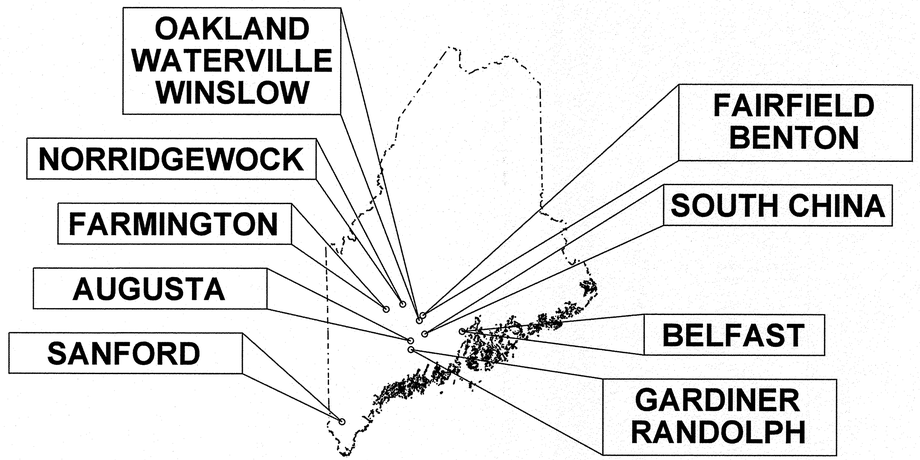
Town, County, State		Centerline-Existing	
Property Lines		Centerline-Proposed	10+00
R/W Lines-Existing		Travelway-Existing	
R/W Lines-Proposed		Travelway-Proposed	
Culvert-Existing		Railroad	
Culvert Proposed		Catch Basins	Existing ■ Proposed
Curbing	Existing / Proposed	Manholes	Existing ● Proposed
Type 1		Proposed Underdrain	
Type 3		Proposed Ditch	
Type 5		Existing Ditch	
Outline of Bodies of Water		Utility Poles	Existing ◆ Proposed
Exposed Bedrock		Fire Hydrants	Existing ◈ Proposed
Buildings		Existing Water Line	W
Trees	Conifer / Deciduous	Existing San. Sewer	
Tree Line		Existing San. Sewer Manhole	
Clearing Limit Line	CLL	Guardrail-Existing	
Boring		Guardrail-Proposed	
Existing Overhead Line		Guardrail-Cable, Other	

	Existing	Proposed
Fiber Optic Cable		
Signal Conduit		
Accessible Pedestrian Signal (APS) Button		
Pedestrian Signal Head w/ Pushbutton		
Pedestrian Signal Post w/ equipment		
Steel Strain Pole		
Mast Arm Pole		
Receiver		
Signal Head (no backplate)		
Signal Head (w/ Backplate)		
Confirmation Strobe		
Mast Arm Mounted Sign		
Controller Cabinet		
Meter Pedestal		
Pullbox		PB
Video Detection Camera		
Video Detection Camera (360*)		
Advance Detection		
Combination Stop Line and Advance Detection		
Dual Mode DSRC/C-V2X (Dedicated Short Range Communications)		
Detection Zone (& ID)		
Underground Fiber Splice Enclosure		SE ●
Aerial Fiber Splice Enclosure		SE ▼
Adaptive Signal Control Technology		ASCT

STATEWIDE

TRAFFIC SIGNAL MODERNIZATION

FEDERAL PROJECT NO. 2430100
STATE WIN 024301.00



INDEX OF SHEETS

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* Each Traffic Signal Plan contains a 643.71 major equipment list, signal design, vehicle detection, signal phasing and timing plan sheet with an Additional A sheet containing the non-643.71 major equipment list, existing fiber optic integration (where applicable), emergency preemption, and overhead sign details. These sheets are followed by B-F, and R sheets, noting that only applicable intersections have B-F, and/or R sheets.

SIGNATURE: 12632
P.E. NUMBER
DATE: 11/19/2020
STATE OF MAINE — BRADLEY R. LYON — No. 12632 — LICENSED PROFESSIONAL ENGINEER

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd. Suite #4
South Portland, ME 04106
Tel. 207-200-2100

SHEETS: 57-58, 74-104

SIGNATURE: 5077
P.E. NUMBER
DATE: 11/19/20
STATE OF MAINE — DIANE W. MORABITO — No. 5077 — LICENSED PROFESSIONAL ENGINEER

Sewall — The evolution of expertise

SHEETS: 41-44, 54-55, 59, 73

vhb

PROJECT LOCATION:	Statewide
PROGRAM AREA:	Multimodal
OUTLINE OF WORK:	Traffic Signal Design and Other Incidental Work

WIN 024301.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

	DATE
APPROVED	12-4-2020
COMMISSIONER:	
CHIEF ENGINEER: Jaye Neil Taylor	12-4-2020

PROJECT INFORMATION

PROGRAM	
PROJECT MANAGER	
DESIGNER	
CONSULTANT	
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

STATE OF MAINE — Christopher M. Bobby — 9374 — LICENSED PROFESSIONAL ENGINEER

SIGNATURE
P.E. NUMBER: 9374
DATE: 11/19/2020

STATEWIDE

TITLE SHEET

SHEET NUMBER
A
OF 358

Filename: 00A_Title.dgn Username: jarobert Division: HIGHWAY Date:11/25/2020

Date:11/24/2020
Username: jorobert
Division: HIGHWAY
Filename: 00B_Notes.dgn

GENERAL NOTES:

1. WORK FOR THIS PROJECT WILL RESULT IN THE MODERNIZATION OF TRAFFIC CONTROL SIGNALS AND PEDESTRIAN CROSSING FACILITIES IN AUGUSTA, BELFAST, BENTON, FAIRFIELD, FARMINGTON, GARDINER, NORRIDGEWOCK, OAKLAND, RANDOLPH, SANFORD, SOUTH CHINA, WATERVILLE, AND WINSLOW. EQUIPMENT INCLUDES BUT IS NOT LIMITED TO, FURNISHING AND INSTALLING COMPLETE NEW ADVANCED TRANSPORTATION CONTROL CABINETS ON NEW OR MODIFIED FOUNDATIONS WITH RACK MOUNTED ADVANCED TRANSPORTATION CONTROLLERS, NEW WOOD POLE WITH GUY ANCHORS AND SPAN WIRE, MAST ARM POLES AND FOUNDATIONS, STRAIN POLES AND FOUNDATIONS, PEDESTAL POLES AND FOUNDATIONS, VEHICULAR AND PEDESTRIAN SIGNAL HEADS WITH COUNTDOWN TIMERS, NEW LIGHT-EMITTING DIODE INDICATIONS, RETROREFLECTIVE BACKPLATES ON VEHICLE SIGNAL HEADS, WIRING, SIGNAL CABLE, OVERHEAD MAST ARM AND SPAN WIRE MOUNTED SIGNS, NON-INVASIVE STOP BAR VEHICLE DETECTION, NON-INVASIVE 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 TRAFFIC SIGNAL CONTROL CABINET EQUIPMENT BY FIELD MONITORING UNIT WITH A CLOUD-BASED CENTRAL MANAGEMENT SYSTEM VIA A SECURE VIRTUAL PRIVATE NETWORK TUNNEL AND/OR A MUNICIPAL EXISTING FIBER INTRANET CONNECTION. THE PROJECT ADDITIONALLY PROVIDES FOR ADAPTIVE SIGNAL CONTROL TECHNOLOGY AT SELECT LOCATIONS AND DUAL MODE DEDICATED SHORT RANGE COMMUNICATIONS/4GLTE 5G ON BOARD UNITS AND ROAD SIDE UNITS PROVIDING SELECTED CONNECTED VEHICLE APPLICATIONS INTEGRATED INTO THE ADVANCED TRANSPORTATION CONTROL CABINET AND MAINEDOT TRAFFIC MANAGEMENT CENTER.

2. 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. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE REMOVAL AND/OR RELOCATION OF EXISTING POWER METERS AND PEDESTALS IF REQUIRED. THIS WORK WILL BE INCIDENTAL TO ITEM 643.71 AS APPLICABLE TO THE LOCATION OF THE WORK.

7. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY NECESSARY OPENING PERMITS.

8. 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.

9. ALL NEW SIGNAL HEADS SHALL BE FIX MOUNTED TO MAST ARMS WITH ASTROBRACKETS, OR MOUNTED TO MAST ARM POLES WITH BRACKET ARMS, OR TETHERED TO SPAN WIRE, AS INDICATED ON PLANS.

10. THE BOTTOM OF THE HOUSING OF NEW SIGNAL FACES SHALL BE AT LEAST 17 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 SIDEWALK, OR IF THERE IS NO SIDEWALK, ABOVE THE PAVEMENT GRADE AT THE HIGH POINT OF THE ROAD.

11. EXISTING LUMINAIRES ON MAST ARM POLES TO BE REPLACED SHALL BE RELOCATED TO PROPOSED MAST ARM POLES WITH PAYMENT INCIDENTAL TO ITEM 643.71 AS APPLICABLE TO THE LOCATION OF THE WORK.

12. TRAFFIC SIGNAL WORK SHALL BE COMPLETED IN A MANNER AND ORDER THAT WILL CAUSE THE MINIMUM DISRUPTION TO TRAFFIC.

13. ALL EXISTING DRIVEWAY ACCESSES SHALL BE MAINTAINED AT ALL TIMES.

14. ALL SAW CUTTING OF EXISTING PAVEMENT FOR CURB RAMP INSTALLATION THAT MAY BE REQUIRED SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

15. ALL STOP LINES SHALL BE 24-INCHES WIDE.

16. THE CONTRACTOR SHALL PROVIDE THE RESIDENT ENGINEER AND MAINEDOT WITH A SCHEDULE OF WORK FOR CONSTRUCTING THE TRAFFIC IMPROVEMENTS AT LEAST TWO WEEKS PRIOR TO THE COMMENCEMENT OF WORK.

17. THE CONTRACTOR SHALL PERFORM THE WORK IN A MANNER THAT WILL REQUIRE THE LEAST AMOUNT OF DOWNTIME TO THE TRAFFIC SIGNAL OPERATIONS.

18. 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.

19. TWO COPIES OF AS-BUILT PLANS, WIRING DIAGRAMS, BOX PRINTS, AND EQUIPMENT MANUALS SHALL BE LEFT IN EACH OF THE CONTROLLER CABINETS.

20. ALL MATERIAL SCHEDULES SHOWN ON THE PLANS ARE FOR GENERAL INFORMATION ONLY. THE CONTRACTOR SHALL PREPARE HIS OWN MATERIAL SCHEDULES BASED UPON HIS PLAN REVIEW. ALL SCHEDULES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ORDERING MATERIALS OR PERFORMING WORK.

21. TRAFFIC SIGNAL EQUIPMENT

CONTRACTOR FURNISHED EQUIPMENT THE TRAFFIC SIGNAL CONTROLLERS, CABINETS, AND VARIOUS OTHER EQUIPMENT ITEMS SHOWN ON THE PLANS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. THE TRAFFIC SIGNAL CONTROLLERS SUPPLIED UNDER THIS CONTRACT SHALL BE ETHERNET EQUIPPED ADVANCED TRANSPORTATION CONTROLLERS AS DETAILED IN MAINEDOT STANDARD SPECIFICATION 718.07. ALL CONTROL CABINETS SUPPLIED UNDER THIS CONTRACT SHALL BE ADVANCED TRANSPORTATION CONTROL CABINETS AS DESCRIBED IN MAINEDOT STANDARD SPECIFICATION 718.08.

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR PROVIDING THE PROJECT WITH WORKING AND FULLY CONFIGURED TRAFFIC SIGNAL CONTROLLERS FOR EACH INTERSECTION, DELIVERY AND COMPLETE SET-UP OF THE CLOUD-BASED CENTRAL MANAGEMENT SYSTEM, SIGNAL PERFORMANCE MEASURE APPLICATIONS, CONNECTED VEHICLE SYSTEM, ADAPTIVE SIGNAL CONTROL TECHNOLOGY SYSTEM (WHERE APPLICABLE AND CALLED FOR IN THE PLANS), 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 1 AND SHALL BE AWARE OF AND CONFORM TO ALL DETAILS FOR THE MATERIAL SPECIFICATIONS IN SPECIAL PROVISION 718.

22. PAINTING

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

CITY OF AUGUSTA (CAPITOL COMPLEX HISTORIC DISTRICT, LOCATIONS 1, 19, 20, AND 34)
- VEHICULAR SIGNAL HEADS ALL PARTS BRONZE.
- PEDESTRIAN SIGNAL HEADS ALL PARTS BRONZE.
- ACCESSIBLE PEDESTRIAN SIGNALS (APS) BLACK.
- SIGNAL BACKPLATES BRONZE AND LOUVERED W/FLUORESCENT YELLOW RETROREFLECTIVE STRIP.
- CONTROLLER CABINETS BRONZE PAINTED / ALUMINUM.
- MAST ARMS, UPRIGHTS, AND BASES BRONZE PAINTED / GALVANIZED STEEL.
- PEDESTAL POSTS AND BASES BRONZE PAINTED / ALUMINUM.

CITY OF AUGUSTA (LOCATIONS, 2-11, 13-18 AND 21-37, 29-33, 35, 38-40), CITY OF BELFAST (LOCATIONS 41, 42, AND 44), CITY OF GARDINER, TOWN OF FAIRFIELD (LOCATION 47), TOWN OF FARMINGTON (LOCATIONS 49-53), TOWN OF RANDOLPH, AND TOWN OF NORRIDGEWOCK
- VEHICULAR SIGNAL HEADS ALL PARTS BLACK.
- PEDESTRIAN SIGNAL HEADS ALL PARTS BLACK.
- ACCESSIBLE PEDESTRIAN SIGNALS (APS) BLACK.
- SIGNAL BACKPLATES BLACK AND LOUVERED W/FLUORESCENT YELLOW RETROREFLECTIVE STRIP.
- CONTROLLER CABINETS BARE METAL / ALUMINUM.
- MAST ARMS, UPRIGHTS, AND BASES BARE METAL / GALVANIZED STEEL.
- PEDESTAL POSTS AND BASES BARE METAL / ALUMINUM.

CITY OF AUGUSTA (LOCATIONS 12, 28, AND 36-37), CITY OF BELFAST (DOWNTOWN LOCATION 43), TOWN OF FAIRFIELD (LOCATION 46), TOWN OF FARMINGTON (DOWNTOWN LOCATION 48), AND CITY OF SANFORD
- VEHICULAR SIGNAL HEADS ALL PARTS BLACK.
- PEDESTRIAN SIGNAL HEADS ALL PARTS BLACK.
- ACCESSIBLE PEDESTRIAN SIGNALS (APS) BLACK.
- SIGNAL BACKPLATES BLACK AND LOUVERED W/FLUORESCENT YELLOW RETROREFLECTIVE STRIP.
- CONTROLLER CABINETS BLACK / ALUMINUM.
- MAST ARMS, UPRIGHTS, AND BASES BLACK / GALVANIZED STEEL.
- PEDESTAL POSTS AND BASES BLACK / ALUMINUM.

CITY OF WATERVILLE (LOCATIONS 74-83, 85, 87-88, 90-98), TOWN OF SOUTH CHINA, TOWN OF WINSLOW, AND TOWN OF OAKLAND
- VEHICULAR SIGNAL HEADS ALL PARTS FEDERAL YELLOW.
- PEDESTRIAN SIGNAL HEADS ALL PARTS FEDERAL YELLOW.
- ACCESSIBLE PEDESTRIAN SIGNALS (APS) FEDERAL YELLOW.
- SIGNAL BACKPLATES BLACK AND LOUVERED W/FLUORESCENT YELLOW RETROREFLECTIVE STRIP.
- CONTROLLER CABINETS BARE METAL / ALUMINUM.
- MAST ARMS, UPRIGHTS, AND BASES BARE METAL / GALVANIZED STEEL.
- PEDESTAL POSTS AND BASES BARE METAL / ALUMINUM

CITY OF WATERVILLE (LOCATIONS 84, 86 AND 89)
- VEHICULAR SIGNAL HEADS ALL PARTS FEDERAL YELLOW.
- PEDESTRIAN SIGNAL HEADS ALL PARTS FEDERAL YELLOW.
- ACCESSIBLE PEDESTRIAN SIGNALS (APS) FEDERAL YELLOW.
- SIGNAL BACKPLATES BLACK AND LOUVERED W/ FLUORESCENT YELLOW RETROREFLECTIVE STRIP.
- CONTROLLER CABINETS BLACK / ALUMINUM.
- MAST ARMS, UPRIGHTS, AND BASES BLACK / GALVANIZED STEEL.
- PEDESTAL POSTS AND BASES BLACK / ALUMINUM

23. COMMUNICATIONS

THE SYSTEM SHALL SUPPORT COMMUNICATIONS TO ADVANCED TRANSPORTATION CONTROLLER, ASSOCIATED EQUIPMENT, AND VEHICLE DETECTION AS SHOWN IN THE PLANS. INTERSECTION CONTROLLERS SHALL BE CAPABLE OF COMMUNICATING WITH THE SYSTEM, AT A RATE OF ONCE-PER-SECOND, FOR PROJECT INTERSECTIONS LOCATED WITHIN AUGUSTA, SANFORD, WATERVILLE AND WINSLOW. COMMUNICATIONS FROM THE CLOUD-BASED SYSTEM TO THE ON-STREET TRAFFIC SIGNAL CONTROLLERS SHALL BE MADE THROUGH FIBER OPTIC INTERCONNECT CABLE CONNECTED BACK TO EXISTING INTRANET CONNECTIONS TO THE CLOUD-BASED CENTRAL MANAGEMENT SYSTEM WITH BACKHAUL REDUNDANCY THROUGH THE FIELD MONITORING UNIT. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS NECESSARY FOR A COMPLETE AND OPERATIONAL FIBER OPTIC INTERCONNECTION TO APPLICABLE PROJECT INTERSECTIONS SHOWN IN THE PLANS. ALL CONNECTIONS TO THE CLOUD-BASED CENTRAL MANAGEMENT SYSTEM SHALL BE VIA A SECURE VPN NETWORK. FOR ALL OTHER PROJECT INTERSECTIONS, COMMUNICATIONS FROM THE CLOUD-BASED SYSTEM TO THE ON-STREET TRAFFIC SIGNAL CONTROLLERS SHALL BE MADE THROUGH THE FIELD MONITORING UNIT.

CONTRACTOR SHALL REESTABLISH FIBER OPTIC CONNECTIONS IN AUGUSTA, WATERVILLE, AND WINSLOW AND INSTALL AND SPLICE NEW FIBER OPTIC DROP CABLES IN SANFORD AS INDICATED ON THE PLANS. THE NEW FIBER OPTIC CABLE SHALL BE SPLICED INTO THE EXISTING CITY OF SANFORD FIBER OPTIC CABLE. THE CONTRACTOR SHALL VERIFY THAT THE EXISTING FIBERS IDENTIFIED FOR SPLICING ARE NOT LIT PRIOR TO CUTTING ANY FIBERS. CONTRACTOR SHALL NOT CUT ANY FIBERS CURRENTLY IN USE BY THE CITY OF SANFORD. IF INTERRUPTIONS IN THE CITY'S NETWORK ARE REQUIRED, INTERRUPTIONS SHALL BE LIMITED TO OFF-PEAK HOURS AND SHALL BE SCHEDULED WITH THE CITY IT DEPARTMENT. ALL SPLICES SHALL BE WATERTIGHT FUSION SPLICES.

24. 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 PER INTERSECTION FOR NON-INVASIVE STOP LINE AND NON-INVASIVE ADVANCE (WHERE APPLICABLE) DETECTION. THE VEHICLE DETECTORS ARE TO BE CONNECTED TO THE INTERSECTION TRAFFIC CONTROLLER FOR LOCAL VEHICLE DETECTION AND REMOTELY CONNECTED TO THE MAINEDOT TRAFFIC MANAGEMENT CENTER TO ALLOW VISUAL CONFIRMATION 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 ENGINEER.

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 ENGINEER 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.

THE CONTRACTOR SHALL BE RESPONSIBLE TO REPLACE ANY VEHICLE DETECTION THAT IS NOT FUNCTIONING AT ANY SIGNALIZED INTERSECTION IN THE PROJECT PRIOR TO SYSTEM START-UP AND LOADING. THE CONTRACTOR SHALL ALSO RE-INSPECT EACH SIGNALIZED INTERSECTION DURING THE ACCEPTANCE TESTING PERIOD AND CERTIFY DETECTORS ARE FUNCTIONING PROPERLY BEFORE FINAL ACCEPTANCE IS GRANTED.

25. ON BOARD UNIT (OBU) VEHICLE EQUIPMENT

CONTRACTOR SHALL FURNISH AND INSTALL 5 OBUS INTO VEHICLES IDENTIFIED AND SUPPLIED BY MAINEDOT. THE OBU SYSTEM SHALL BE FULLY OPERATIONAL IN ALL IDENTIFIED VEHICLES.

26. FOUNDATIONS

NEW TRAFFIC SIGNAL CONTROL CABINET, MAST ARM POLE, STRAIN POLE, OR 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 ENGINEER, RELOCATE CABINET AND TRAFFIC SIGNALS 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.

WHEN NEW CONDUIT IS EXTENDED OR INSTALLED INTO NEW FOUNDATIONS, THE CONTRACTOR SHALL BREAK INTO THE NEAREST EXISTING PULL BOX, CONDUIT, OR FOUNDATION TO EXPOSE THE EXISTING CONDUIT. NEW CONDUIT SHALL BE ATTACHED TO EXISTING CONDUIT.

WHERE NEW CONTROL CABINET FOUNDATIONS ARE CALLED FOR IN THE PLANS, EACH FOUNDATION SHALL PROVIDE SUFFICIENT CONDUIT SWEEPS TO SERVICE THE SIGNALIZED INTERSECTION WHILE MEETING THE NATIONAL ELECTRICAL CODE CHAPTER 9, TABLE 1 REQUIREMENTS FOR CONDUIT FILL. IN ADDITION, A SPARE 1-1/2 DIAMETER CONDUIT SHALL BE INSTALLED IN EACH NEW CONTROL CABINET FOUNDATION AND RUN TO THE NEAREST SERVICE POLE AND CAPPED FOR FUTURE USE.

THERE ARE LOCATIONS SHOWN IN THE PLANS WHERE A NEW ADVANCED TRANSPORTATION CONTROLLER CABINET IS PROPOSED TO BE MOUNTED ONTO AN EXISTING FOUNDATION THAT PRESENTLY SUPPORTS AN EXISTING P-TYPE CABINET. IT IS POSSIBLE THAT THE BOLT PATTERN FOR THE PROPOSED CABINET MAY NOT ALIGN WITH THE EXISTING ANCHOR BOLTS. IN THIS INSTANCE, THE CONTRACTOR MAY CUT THE EXISTING ANCHOR BOLTS BELOW THE TOP SURFACE, CORE INTO THE EXISTING FOUNDATION, INSTALL A NEW 8-INCH ANCHOR BOLT AND SECURE BOLT WITH NEW CONCRETE OR A HEAVY EPOXY. ADDITIONALLY, AND IN LIEU OF INSTALLING NEW CONTROLLER CABINET FOUNDATIONS WITH NEW, EXTENDED OR MODIFIED CONDUIT CONNECTIONS TO THE EXISTING SIGNAL SYSTEM, THE CONTRACTOR MAY AT HIS DISCRETION AND UPON APPROVAL BY THE RESIDENT ENGINEER FORM AND POUR A NEW CONTROLLER CABINET FOUNDATION SUITABLE TO ACCOMMODATE THE PROPOSED ADVANCED TRANSPORTATION CONTROL CABINET AROUND ANY EXISTING CABINET FOUNDATION. IF THIS OPTION IS CHOSEN, THE CONTRACTOR MUST MEET THE FOLLOWING CONDITIONS:

- MINIMUM 6-INCHES ON THE VERTICAL FACES AND 4-INCHES OF NEW CONCRETE ON TOP ABOVE THE OLD CONCRETE. THIS MAY MEAN CHIPPING DOWN A FEW INCHES OF OLD CONCRETE.
- EXISTING ANCHOR BOLTS MUST BE CUT BELOW THE NEW FINISHED TOP SURFACE.
- NEW ANCHOR BOLTS SHALL BE DRILLED INTO THE NEW CONCRETE FOUNDATION.
- NEW CONCRETE JACKET WILL BE STRENGTHENED WITH ADEQUATE REINFORCEMENT, FOLLOWING STANDARD DETAILS FOR NEW CONCRETE INSTALLATION.

ALL MODIFICATIONS TO EXISTING FOUNDATIONS WILL BE INCIDENTAL TO ITEM 643.71 AS APPLICABLE TO THE LOCATION OF THE WORK. ALL CONTROLLER CABINET FOUNDATIONS AND PEDESTAL POSTS CALLED FOR IN THE PLANS TO BE REMOVED SHALL BE INCIDENTAL TO ITEM 643.71 AS APPLICABLE TO THE LOCATION OF THE WORK. REMOVAL OF MAST ARM OR STRAIN POLE FOUNDATIONS CALLED FOR IN THE PLANS SHALL BE PAID FOR UNDER ITEM 626.36.

27. TEMPORARY TRAFFIC SIGNALS

TEMPORARY TRAFFIC SIGNAL MODIFICATIONS DURING CONSTRUCTION SHALL BE INCIDENTAL TO ITEM 643.71 UNLESS OTHERWISE NOTED IN THE CONTRACT BY LOCATION UNDER ITEM 643.72 TEMPORARY TRAFFIC SIGNALS. LOCATIONS USING ITEM 643.72 HAVE BEEN SPECIFICALLY IDENTIFIED FOR THE LIKELIHOOD OF NEEDING TEMPORARY WOOD POLES AND SPAN WIRE TO COMPLETE THE INSTALLATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING ANY TEMPORARY SIGNAL LAYOUTS TO THE RESIDENT ENGINEER FOR APPROVAL.

28. START-UP AND SYSTEM LOADING

THE SYSTEM SUPPLIER SHALL INITIATE COMPLETE SYSTEM OPERATION INCLUDING ATC, ATCC, CMS, ASCT, 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/ASCT OPERATIONS AS SHOWN ON THE PLANS AND/OR DIRECTED BY MAINEDOT AND THE ENGINEER. 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 ENGINEER, 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 ENGINEER THAT THE SYSTEM IS READY FOR THE START-UP PHASE. ANY MAJOR SYSTEM MALFUNCTIONS ENCOUNTERED DURING THIS TESTING PERIOD SHALL BE CORRECTED BY THE SUPPLIER, AND THE TEST RESTARTED. DURING THIS PERIOD, MAINEDOT AND/OR THE ENGINEER 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.

29. ACCEPTANCE TESTING

UPON COMPLETION OF THE 7-DAY TESTING PERIOD, MAINEDOT AND/OR THE ENGINEER 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 ENGINEER, 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 ENGINEER'S 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.

30. SALVAGE RIGHTS

MAINEDOT SHALL HAVE FIRST RIGHTS TO ALL EQUIPMENT REMOVED OR REPLACED BY THE PROJECT (CONTACT RON COTE AT 207-446-2305). THE LOCAL MUNICIPALITIES 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 AT A CENTRAL LOCATION ON SITE 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 HEATED 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 ENGINEER.

31. THE ENGINEER 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, IT'S SOLE OPINION, TO THE PLANS OR SPECIFICATIONS.

32. THE MAINTENANCE OF TRAFFIC SIGNALS SHALL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR UNTIL FINAL ACCEPTANCE BY MAINEDOT.

33. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING RED-LINE AS-BUILT DRAWINGS OF THE FINAL WORK TO THE RESIDENT ENGINEER. THOSE DRAWINGS SHALL BE ON A CLEAN SET OF PLANS SHOWING ALL CHANGES OR MODIFICATIONS TO THE BID PLANS.

34. 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 ENGINEER. THE RESIDENT ENGINEER 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 ENGINEER.

35. 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
- 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
- 718.20 WIRELESS INTERCONNECT SYSTEM
- 718.21 PEDESTRIAN CROSSING SYSTEM

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.

36. AMERICANS WITH DISABILITIES ACT (ADA) CURB RAMPS

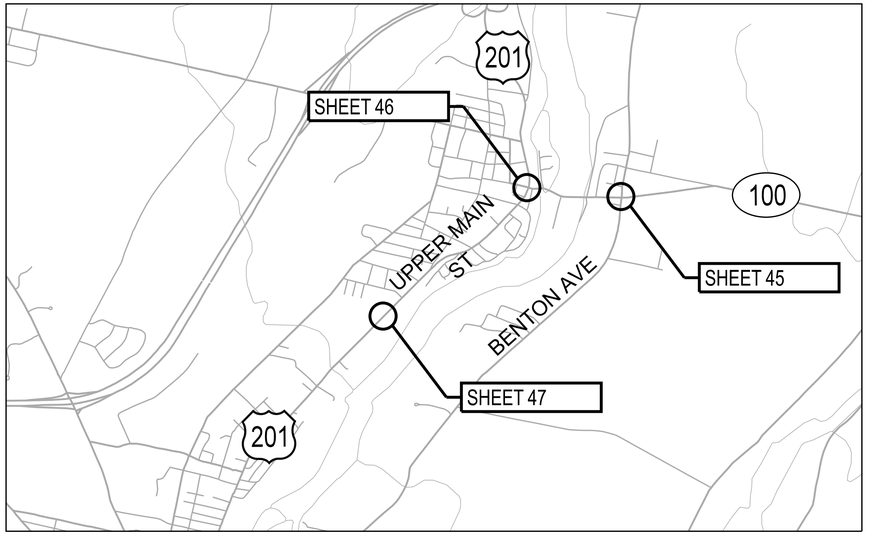
THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTING THE CURB RAMPS IN COMPLIANCE WITH CURRENT ADA STANDARDS. IF THE CONTRACTOR CANNOT ACHIEVE ADA COMPLIANCE AS INDICATED ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER TO DETERMINE THE APPROPRIATE APPLICATION OF FEASIBLE DESIGN PRIOR TO THE CURB RAMP CONSTRUCTION.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTING THE CURB RAMPS TO ALLOW PROPER DRAINAGE AT THE GUTTER. STANDING SURFACE WATER WILL NOT BE ACCEPTED.

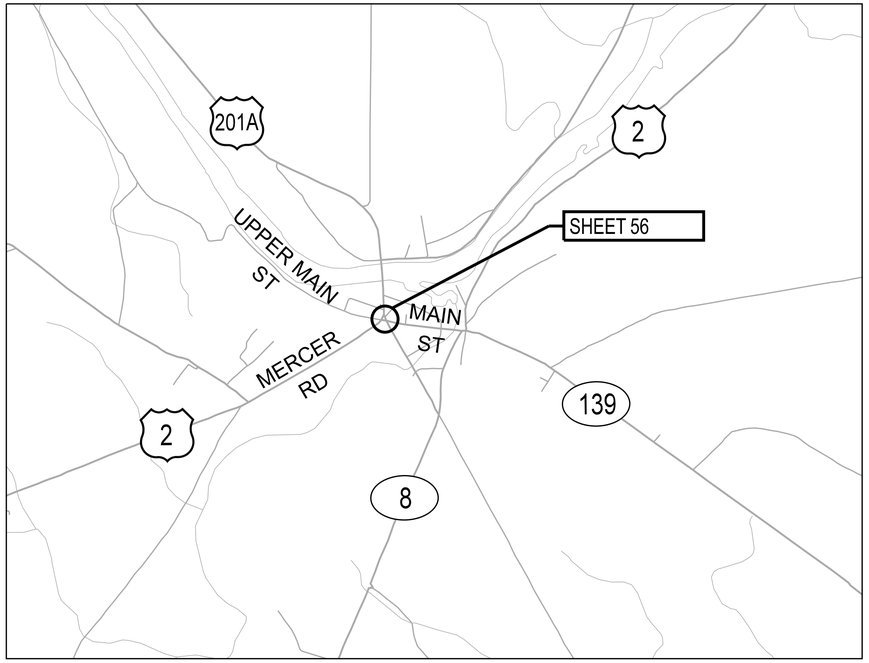
ALL CURB RAMPS SURFACES SHALL BE CONCRETE UNLESS NOTED ON THE PLANS.

ALL DETECTABLE WARNING PLATES SHALL BE

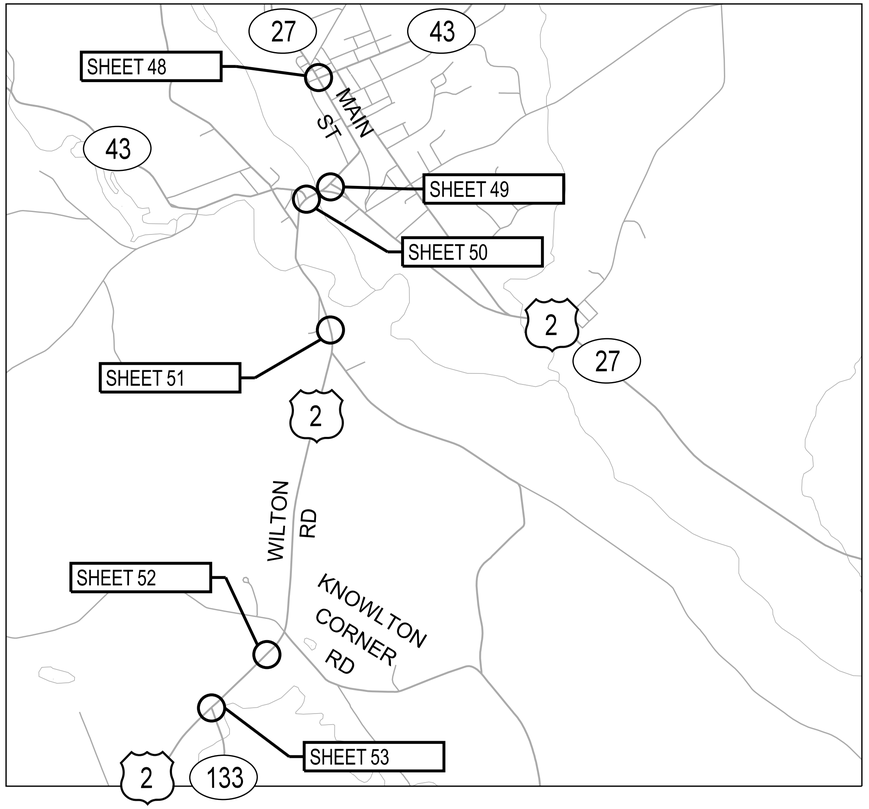
FAIRFIELD AND BENTON

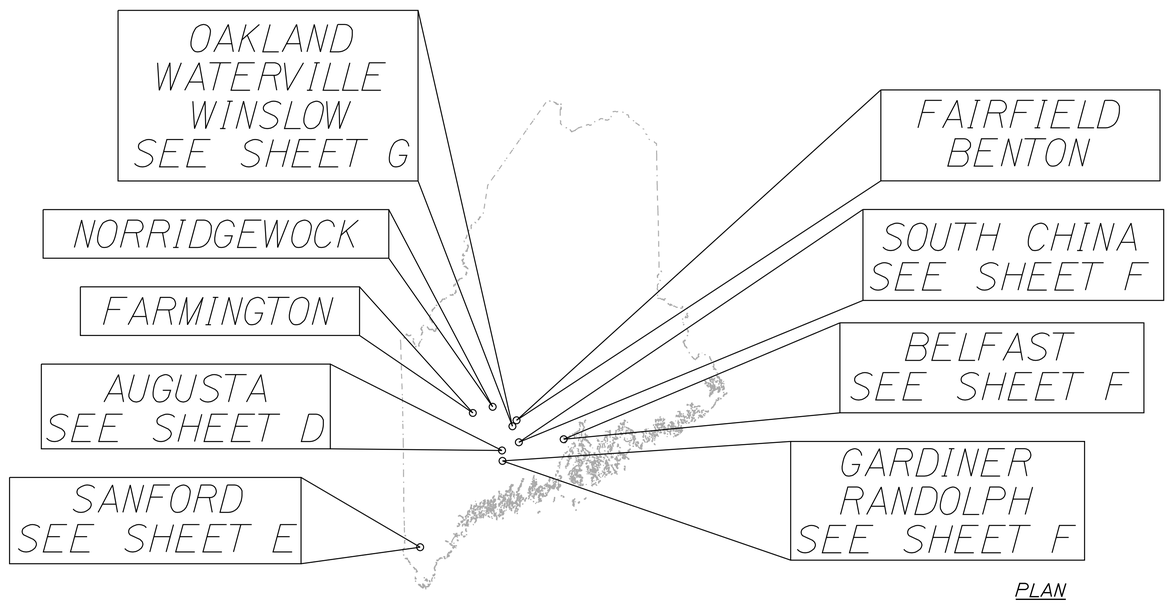


NORRIDGEWOCK



FARMINGTON





PLAN

2000 0 2000 4000

Scale of Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

		BY	DATE
PROJ. MANAGER	B. KEEZER		
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

STATEWIDE

LOCATION MAPS
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Filename: 00C_Map_01.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

Filename: 000_Map_02.dgn Username: jorobert Division: HIGHWAY Date:11/24/2020

AUGUSTA

SHEET 33
SHEET 2
SHEET 6
SHEET 3
SHEET 5
SHEET 4
SHEET 7
SHEET 8
SHEET 26
SHEET 24
SHEET 25
SHEET 27
SHEET 29
WESTERN AVE
SHEET 31
SHEET 40
SHEET 17
SHEET 23
SHEET 22
SHEET 37
SHEET 36
SHEET 35
SHEET 34
SHEET 28
SHEET 30
SHEET 1
SHEET 19
SHEET 20
SHEET 32
SHEET 16
SHEET 15
SHEET 14
SHEET 13
SHEET 39
SHEET 38
SHEET 21
SHEET 18
SHEET 9
SHEET 10
SHEET 12
SHEET 11

27 CIVIC CENTER DR
104
201
3
202
3
105
CONY RD
CAPITOL ST
STATE ST
EASTERN AVE
SPRING RD
9
17
201

PLAN
2000 0 2000 4000
Scale of Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

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WIN 024301.00

TRAFFIC PLANS

vhb

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DESIGN3-DETAILED3		
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STATEWIDE

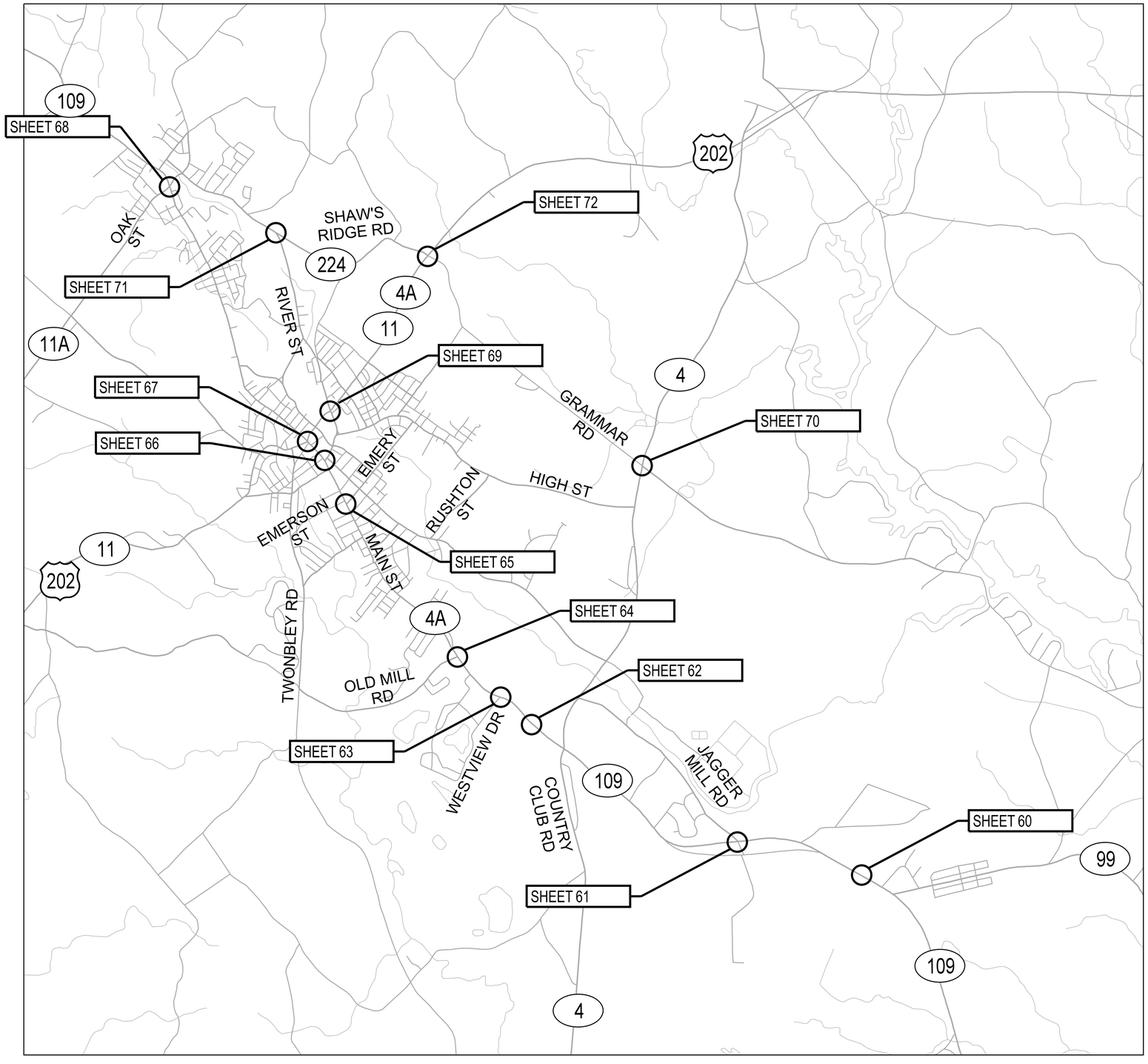
LOCATION MAPS
(2 OF 5)

SHEET NUMBER

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SANFORD



PLAN

2000 0 2000 4000

Scale of Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN
024301.00

TRAFFIC PLANS

vhb

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REVISIONS 2			
REVISIONS 3			
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FIELD CHANGES			

STATEWIDE

LOCATION MAPS
(3 OF 5)

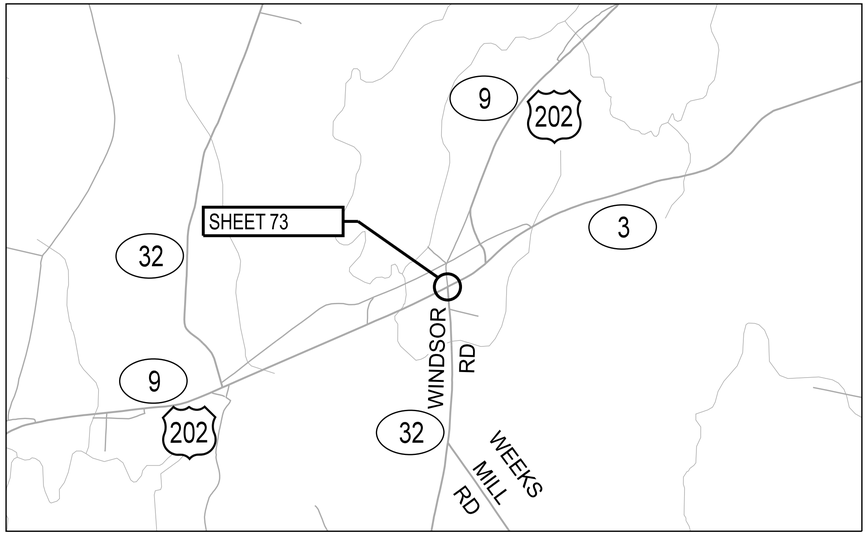
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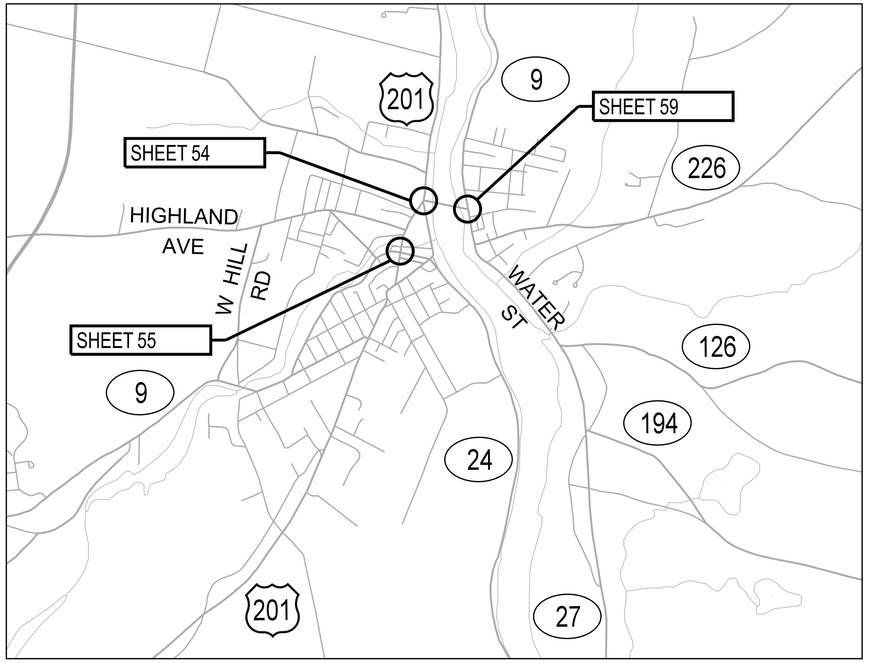
OF 358

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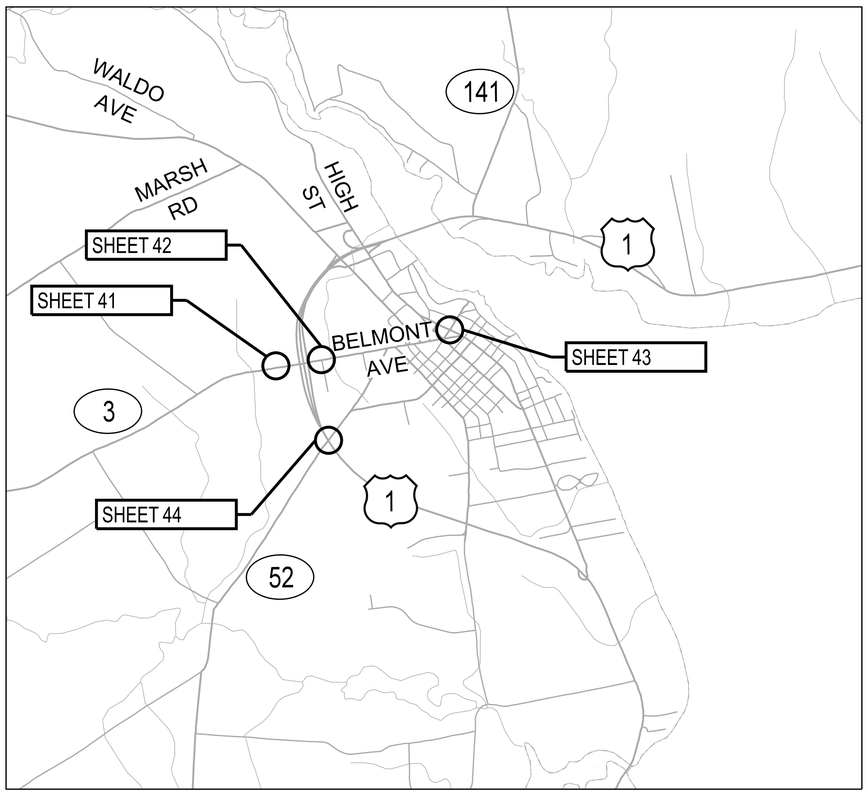
SOUTH CHINA



GARDINER / RANDOLPH



BELFAST



PLAN

2000 0 2000 4000

Scale of Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	BY	DATE
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REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

STATEWIDE

LOCATION MAPS
(4 OF 5)

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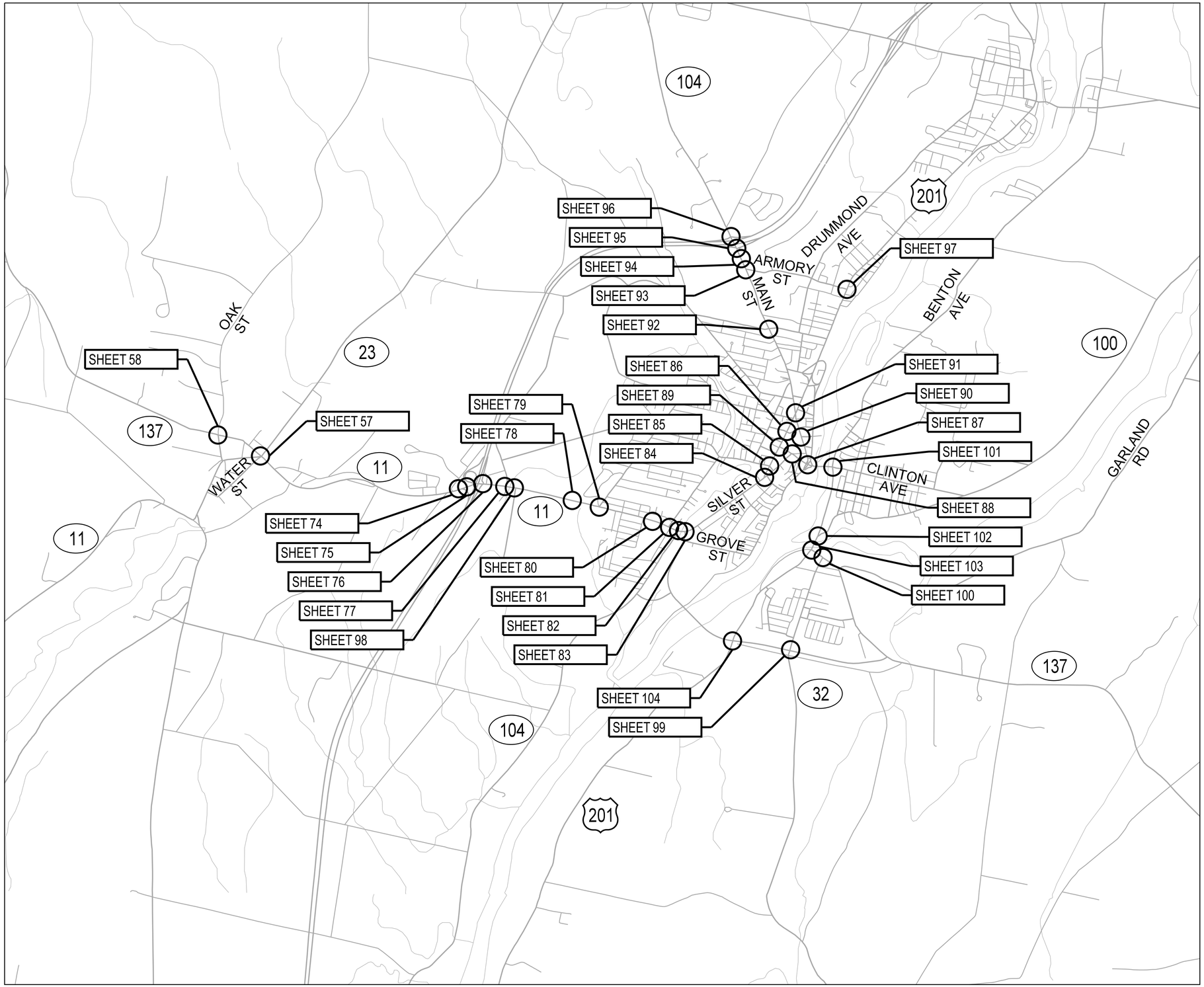
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Filename: 00F_Map_04.dgn Division: HIGHWAY Username: jarobert Date:11/24/2020

Filename: 00G_Map_05.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

OAKLAND / WATERVILLE / WINSLOW



PLAN

2000 0 2000 4000

Scale of Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

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WIN
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TRAFFIC PLANS

vhb

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DESIGN3-DETAILED3			
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FIELD CHANGES			

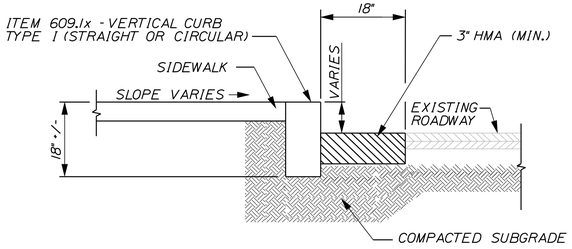
STATEWIDE

LOCATION MAPS
(5 OF 5)

SHEET NUMBER

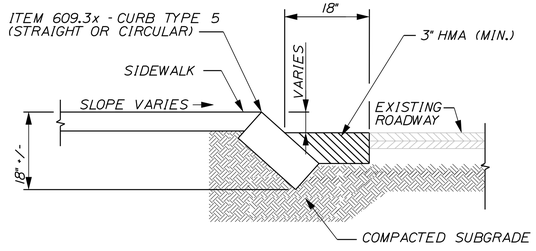
G

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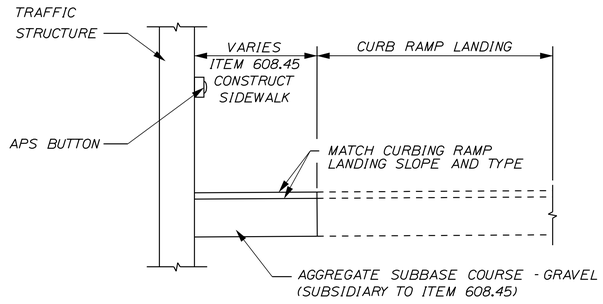
VERTICAL CURB TYPE 1 GRANITE CURB SET IN EXISTING PAVEMENT DETAIL

SEE MAINEDOT STANDARD DETAILS 609 & 801



CURB TYPE 5 GRANITE CURB SET IN EXISTING PAVEMENT DETAIL

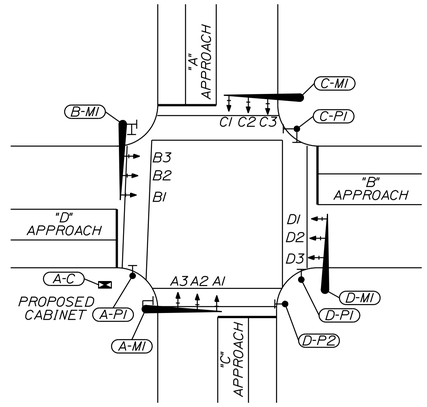
SEE MAINEDOT STANDARD DETAILS 609 & 801



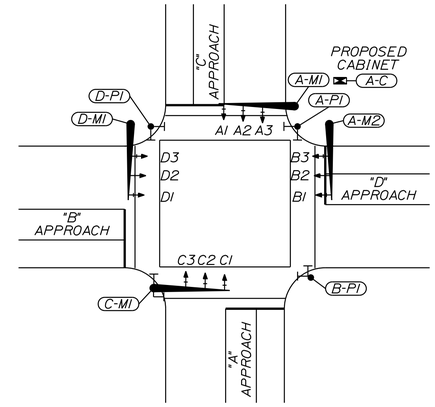
ACCESS TO ACCESSIBLE PEDESTRIAN SIGNAL (APS) BUTTON DETAIL

STRUCTURE LIST (FOR APPROACH DETAIL 1)

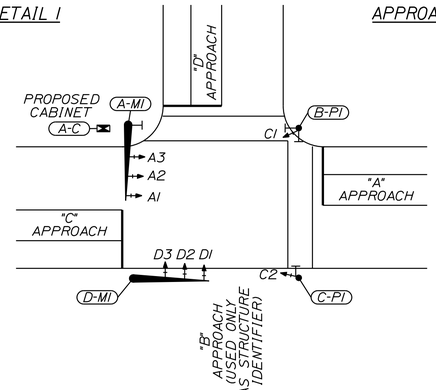
STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	L48"xW36"xH48"
A-MI	XX' MAST ARM	TBD
A-PI	X' PEDESTAL POLE	24" DIAMETER
B-MI	XX' MAST ARM	TBD
C-MI	XX' MAST ARM	TBD
C-PI	X' PEDESTAL POLE	24" DIAMETER
D-MI	X' MAST ARM	TBD
D-PI	X' PEDESTAL POLE	24" DIAMETER
D-P2	X' PEDESTAL POLE	24" DIAMETER



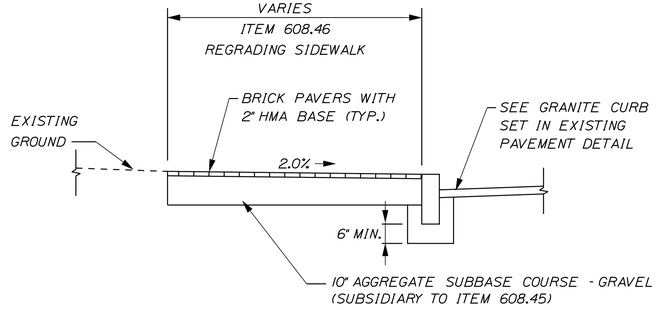
APPROACH DETAIL 1



APPROACH DETAIL 2



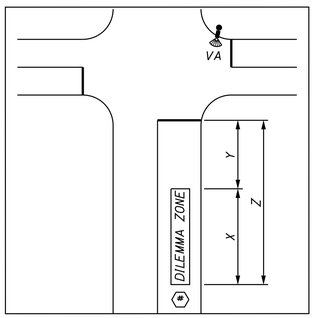
APPROACH DETAIL 3



BRICK SIDEWALK CONSTRUCTION DETAIL

BRICK SIDEWALK NOTE:

1. BRICK SIDEWALK SHALL BE INSTALLED TO MATCH THE EXISTING BRICK LAY PATTERN.

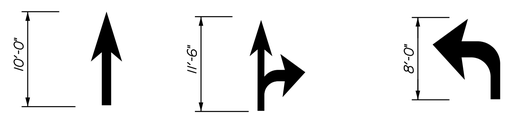


SPEED MILES PER HOUR	X (DISTANCE)	Y (DISTANCE)	Z (DISTANCE)
35	152'	102'	254'
40	162'	122'	284'
45	175'	152'	327'
50	181'	172'	353'
55	152'	234'	386'

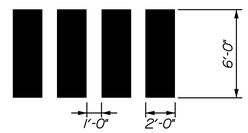
ADVANCE DILEMMA ZONE SETUP

SOURCE: TRAFFIC DETECTOR HANDBOOK: THIRD EDITION - VOLUME 1

LANE MARKING DETAILS



CROSSWALK MARKING DETAIL



PAVEMENT MARKING NOTES:

1. ALL PAVEMENT MARKINGS SHALL BE IN CONFORMANCE WITH THE MANUAL ON TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, U.S. DOT, FHWA, 2009 EDITION, WITH THE LATEST REVISIONS.
2. ALL PAVEMENT MARKING LINES, ARROWS, AND WORD SYMBOLS SHALL BE PAINT AND SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH MAINEDOT STANDARD SPECIFICATION 627.

STATE OF MAINE
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FIELD CHANGES			

STATEWIDE

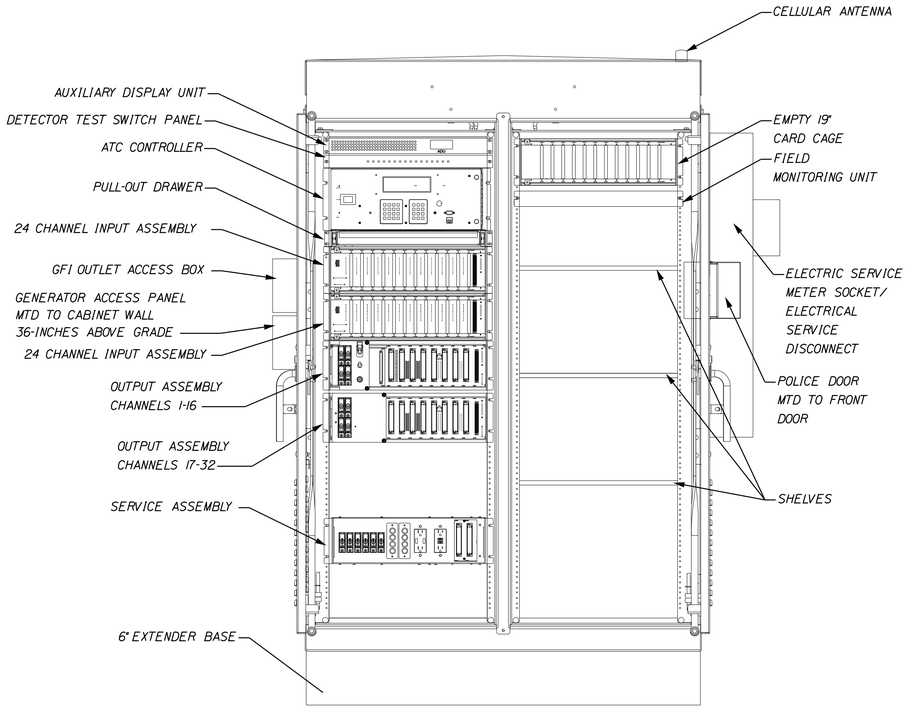
DETAILS (1 OF 4)

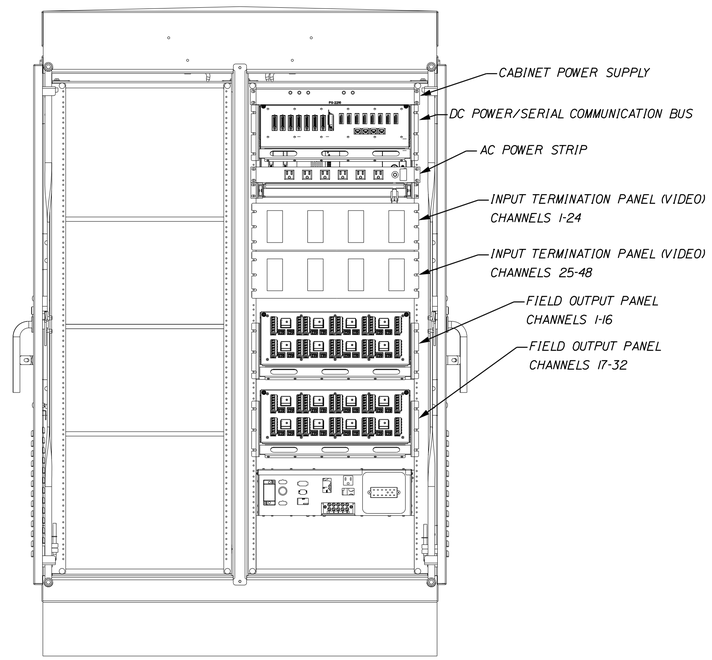
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Filename: 00H_Details_01.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020





MaineDOT 32/48 ATC CABINET

NOT TO SCALE

NOTES:

1. DRAWING SHOWN IS A SCHEMATIC REPRESENTATION OF THE ATC CABINET DEPICTING THE RELATIVE LOCATION OF VARIOUS IN-CABINET DEVICES AND SUBASSEMBLIES. THE EXACT SIZE OF VARIOUS ELEMENTS MAY VARY PER MANUFACTURER.
2. INPUT TERMINATION PANEL SHOWN IS FOR VIDEO BASED INPUTS.
3. DRAWING DEPICTS TWO INPUT PANELS AND TWO OUTPUT PANELS. THIS QUANTITY MAY BE REDUCED DEPENDING ON APPLICATION; SEE SPECIAL PROVISIONS FOR NUMBER OF PANELS TO BE SUPPLIED.
4. FAN AND THERMOSTAT SHALL BE INSTALLED ON CABINET FRAME ABOVE THE DOOR.
5. LED LIGHT STRIPS SHALL BE INSTALLED ON CABINET FRAME ABOVE THE DOOR AND ON THE UNDERSIDE OF THE LOWER SHELF.
6. THE SIZE OF THE METER SOCKET WILL VARY BASED ON THE LOCAL ELECTRIC UTILITY COMPANY REQUIREMENT.
7. THE METER SHALL BE INSTALLED SUCH THAT THE BOTTOM OF THE METER IS AT LEAST 48 INCHES ABOVE FINAL GRADE.
8. THE LOAD SIDE CABLE SHALL BE ROUTED THROUGH THE INTERIOR OF THE CABINET SUCH THAT IT DOES NOT BLOCK OR ENTER INTO AVAILABLE RACK SPACE. THE CABLE SHALL BE ROUTED BETWEEN THE EDGE OF THE RACK SYSTEM AND THE CABINET SIDE WALL, ALONG THE BOTTOM OF THE CABINET AND BELOW THE BOTTOM OPENING OF THE DOORS.

NOMINAL TERMINAL PANEL SIZE
PER 24 INPUT RACK:
LOOP = 6U HIGH (10.5")
VIDEO = 3U HIGH (5.25")

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STATEWIDE

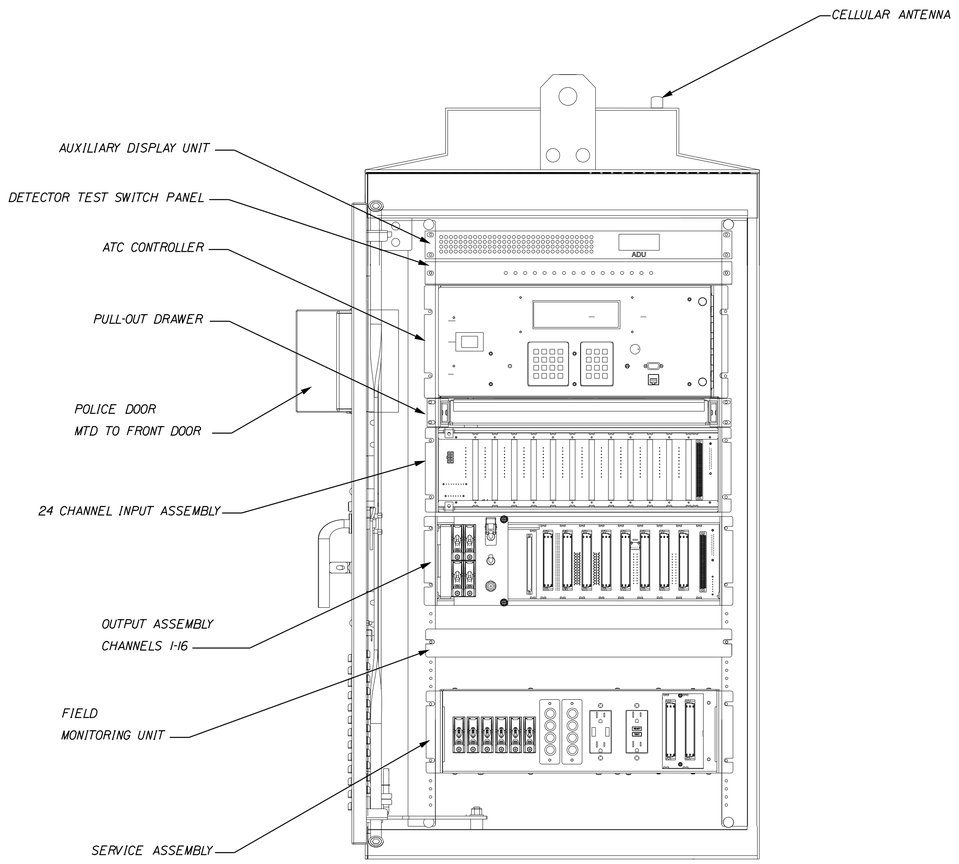
DETAILS
(2 OF 4)

SHEET NUMBER

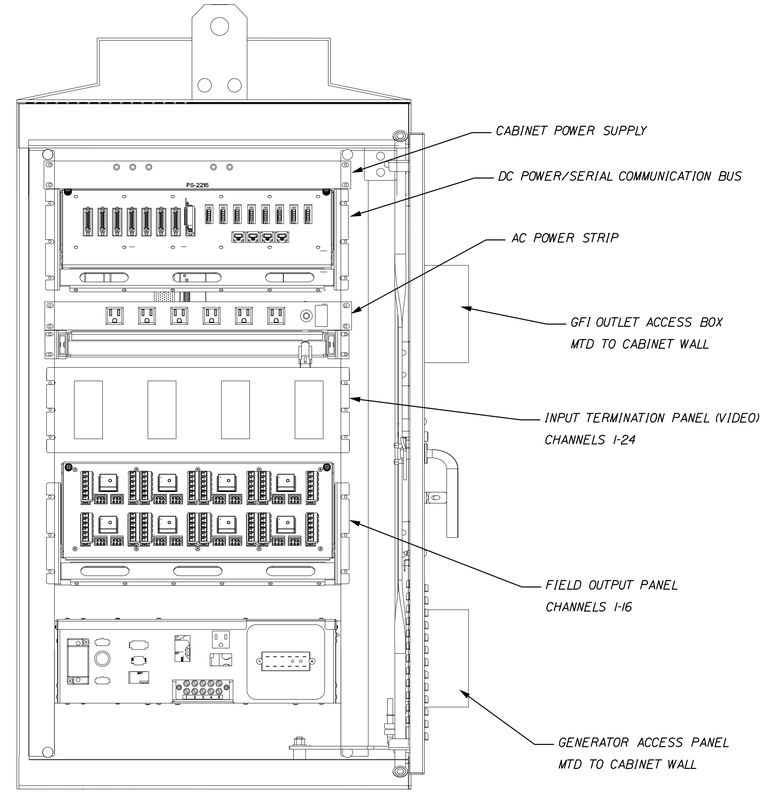
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OF 358

Division: HIGHWAY
Username: jorobert
Date:11/24/2020
Filename: 001_Details_02.dgn



FRONT VIEW



BACK VIEW

MaineDOT 16/24 SIDE-OF-POLE

MOUNT ATC CABINET

NOT TO SCALE

NOTES:

1. DRAWING SHOWN IS A SCHEMATIC REPRESENTATION OF THE ATC CABINET DEPICTING THE RELATIVE LOCATION OF VARIOUS IN-CABINET DEVICES AND SUBASSEMBLIES. THE EXACT SIZE OF VARIOUS ELEMENTS MAY VARY PER MANUFACTURER.
2. INPUT TERMINATION PANEL SHOWN IS FOR VIDEO BASED INPUTS.
3. FAN AND THERMOSTAT SHALL BE INSTALLED ON CABINET FRAME ABOVE THE DOOR.
4. LED LIGHT STRIPS SHALL BE INSTALLED ON CABINET FRAME ABOVE THE DOOR AND ON THE UNDERSIDE OF THE LOWER SHELF.

NOMINAL TERMINAL PANEL SIZE
PER 24 INPUT RACK:
LOOP = 6U HIGH (10.5")
VIDEO = 3U HIGH (5.25")

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER		
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

STATEWIDE

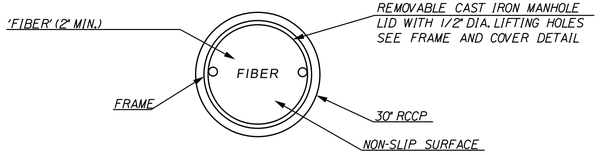
DETAILS
(3 OF 4)

SHEET NUMBER

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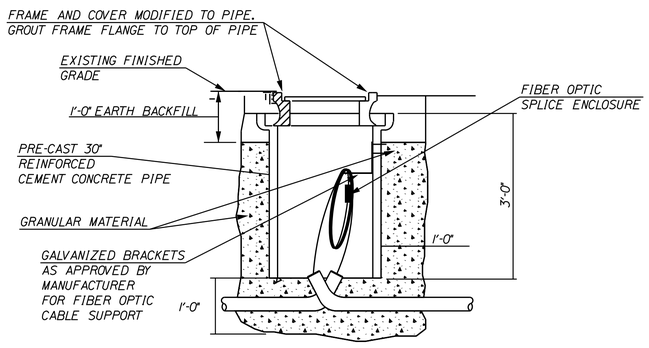
OF 358

Filename: 00J_Details_03.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020



MANHOLE COVER

NOT TO SCALE



ITEM 654.3335

30-INCH CONCRETE FIBER OPTIC MANHOLE

NOT TO SCALE

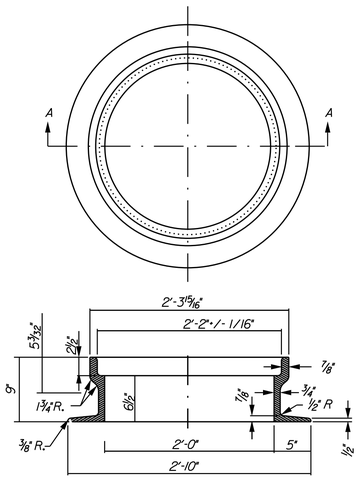
FIBER OPTIC MANHOLE NOTES:

1. CONDUIT BENDS THAT ARE GREATER THAN THE MINIMUM BENDING RADIUS OF THE CABLE SHALL BE USED TO ENTER THE MANHOLE.

2. CONDUIT SHALL EXTEND INTO THE MANHOLE A MAXIMUM OF 12".

3. SLACK CABLE SHOULD BE SUSPENDED FROM GALVANIZED BRACKETS AS APPROVED BY THE CABLE MANUFACTURER SO AS NOT TO EXCEED THE MINIMUM BENDING RADIUS OF THE CABLE.

4. THE COVER SHALL BE CAST IRON WITH A NON-SLIP SURFACE. THE SURFACE SHALL HAVE A MINIMUM COEFFICIENT OF FRICTION OF 0.50.



SECTION A-A

FRAME AND COVER DETAIL

FIBER OPTIC MANHOLE

NOT TO SCALE

FIBER OPTIC CABLE NOTES:

1. MANUFACTURED CONDUIT BEND RADIUS SHALL EXCEED THE MINIMUM BENDING RADIUS FOR FIBER OPTIC CABLE. FIELD BENDING CONDUIT SHALL NOT BE PERMITTED.

2. FIBER OPTIC CABLE SHALL EXCEED THE MINIMUM BENDING RADIUS FOR THE CABLE AT ALL TIMES DURING INSTALLATION, MODIFICATION, REPAIR, SPLICING, OR IN PERMANENT CONDITION. MINIMUM BENDING RADIUS SHALL BE THE GREATER OF THE MANUFACTURER'S RECOMMENDED RADIUS OR 15X THE OUTSIDE DIAMETER OF THE CABLE.

3. CONTRACTOR SHALL USE ONLY MANUFACTURER-RECOMMENDED GRIPPING AND PULLING DEVICES FOR PULLING CABLES THROUGH THE CONDUIT SYSTEM.

4. FOR UNDERGROUND INSTALLATIONS, FIBER OPTIC SPLICE ENCLOSURES SHALL BE INSTALLED IN FIBER OPTIC MANHOLES. FOR AERIAL ATTACHMENTS, FIBER OPTIC SPLICE ENCLOSURES SHALL BE ATTACHED TO THE MESSENGER WIRE.

5. A MINIMUM OF 50 FEET OF SPARE CABLE SHALL BE PROVIDED ON EACH SIDE OF ANY SPLICE ENCLOSURE IN EACH FIBER OPTIC MANHOLE. A MINIMUM OF 75 FEET OF SPARE CABLE SHALL BE PROVIDED ON EACH SIDE OF ANY AERIAL SPLICE ENCLOSURE. AN ADDITIONAL 10 FEET ON EACH SIDE OF THE SPLICE ENCLOSURE SHALL BE PROVIDED FOR EVERY 10 LATERAL FEET FROM THE SPLICE ENCLOSURE LOCATION TO A VEHICLE-ACCESSIBLE LOCATION.

6. UNDERGROUND FIBER OPTIC CABLE SHALL BE INSTALLED IN RACEWAYS IN ACCORDANCE WITH NEC. DIRECT BURIAL OF FIBER OPTIC CABLE SHALL NOT BE PERMITTED.

7. AT AERIAL FIBER OPTIC CABLE INSTALLATIONS, THE FIBER OPTIC CABLE SHALL BE TAGGED AT THE ATTACHMENT LOCATION ON EACH POLE TO WHICH THE CABLE IS ATTACHED. THE TAG SHALL INDICATE THE CABLE OWNER (MAINEDOT), CONTACT TELEPHONE NUMBER, AND NUMBER OF FIBERS IN THE CABLE.

8. IN THE EVENT THE MATERIAL MANUFACTURER'S INSTALLATION REQUIREMENTS RECOMMEND MORE STRINGENT INSTALLATION PROCEDURES, THE MORE STRINGENT RECOMMENDATIONS AND PROCEDURES SHALL APPLY UNLESS OTHERWISE APPROVED BY THE ENGINEER.

GENERAL NOTES:

1. FIBERS INDICATED AS THROUGH FIBERS SHALL NOT BE CUT.

2. SPLICE ENCLOSURES SHALL HAVE 12-SPLICE CAPACITY MINIMUM. AT LOCATIONS REQUIRING MORE THAN 12 SPLICES, THE SPLICE ENCLOSURE SHALL HAVE A CAPACITY SUFFICIENT TO HOLD ALL OF THE REQUIRED SPLICES, IN A MULTIPLE OF 12.

3. CONTRACTOR SHALL MAKE ALL REQUIRED CONNECTIONS FOR ALL ANCILLARY TRAFFIC SIGNAL EQUIPMENT INTERFACING WITH THE TRAFFIC SIGNAL CONTROLLER.

4. MANUFACTURED PIGTAILS SHALL BE TERMINATED ON PATCH PANELS. PATCH CORDS SHALL BE USED TO CONNECT TO ETHERNET FIBER SWITCHES.

5. CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF EXISTING FIBERS NOT INDICATED FOR USE AT A PROJECT SITE. CONTRACTOR SHALL AVOID INTERRUPTING EXISTING FIBER OPTIC COMMUNICATIONS WHEN SPLICING FIBER OPTIC CABLE FOR NEW CONNECTIONS. IF INTERRUPTION OF EXISTING COMMUNICATIONS IS NECESSARY, CONTRACTOR SHALL CONTACT THE RESIDENT ENGINEER AT LEAST 3 DAYS PRIOR TO INTERRUPTION.

FIBER OPTIC MANHOLES:

1. FIBER OPTIC MANHOLES SHALL BE EXCAVATED TO A DEPTH OF 12 INCHES BELOW THE STRUCTURE'S BOTTOM. THE CONTRACTOR SHALL INSTALL 12 INCHES OF GRANULAR FILL MATERIAL AT THE BASE OF THE EXCAVATION BEFORE NSTALLING THE MANHOLE.

2. FIBER OPTIC MANHOLES SHALL NOT BE INSTALLED IN EXISTING OR PROPOSED ROADWAY PAVEMENT.

3. FIBER OPTIC MANHOLES SHALL BE MOUNTED FLUSH TO GRADE.

4. FIBER OPTIC MANHOLES SHALL NOT BE INSTALLED ON STEEP SLOPES WHERE THE COVER CANNOT BE LEVELED WITHIN A TOLERANCE OF 1 INCH PER 1 FOOT OF GRADE.

5. THE MAXIMUM OPENING SIZE FOR FIBER OPTIC MANHOLES SHALL EXCEED 1.5 TIMES THE MINIMUM BENDING RADIUS OF THE FIBER OPTIC CABLE TO BE INSTALLED.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN
024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER
DESIGN-DETAILED	MLG
CHECKED-REVIEWED	CMB
DESIGN2-DETAILED2	CMB
DESIGN3-DETAILED3	
REVISIONS 1	
REVISIONS 2	
REVISIONS 3	
REVISIONS 4	
FIELD CHANGES	

BY	DATE
JAR	07/20
CMB	07/20

STATEWIDE

DETAILS
(4 OF 4)

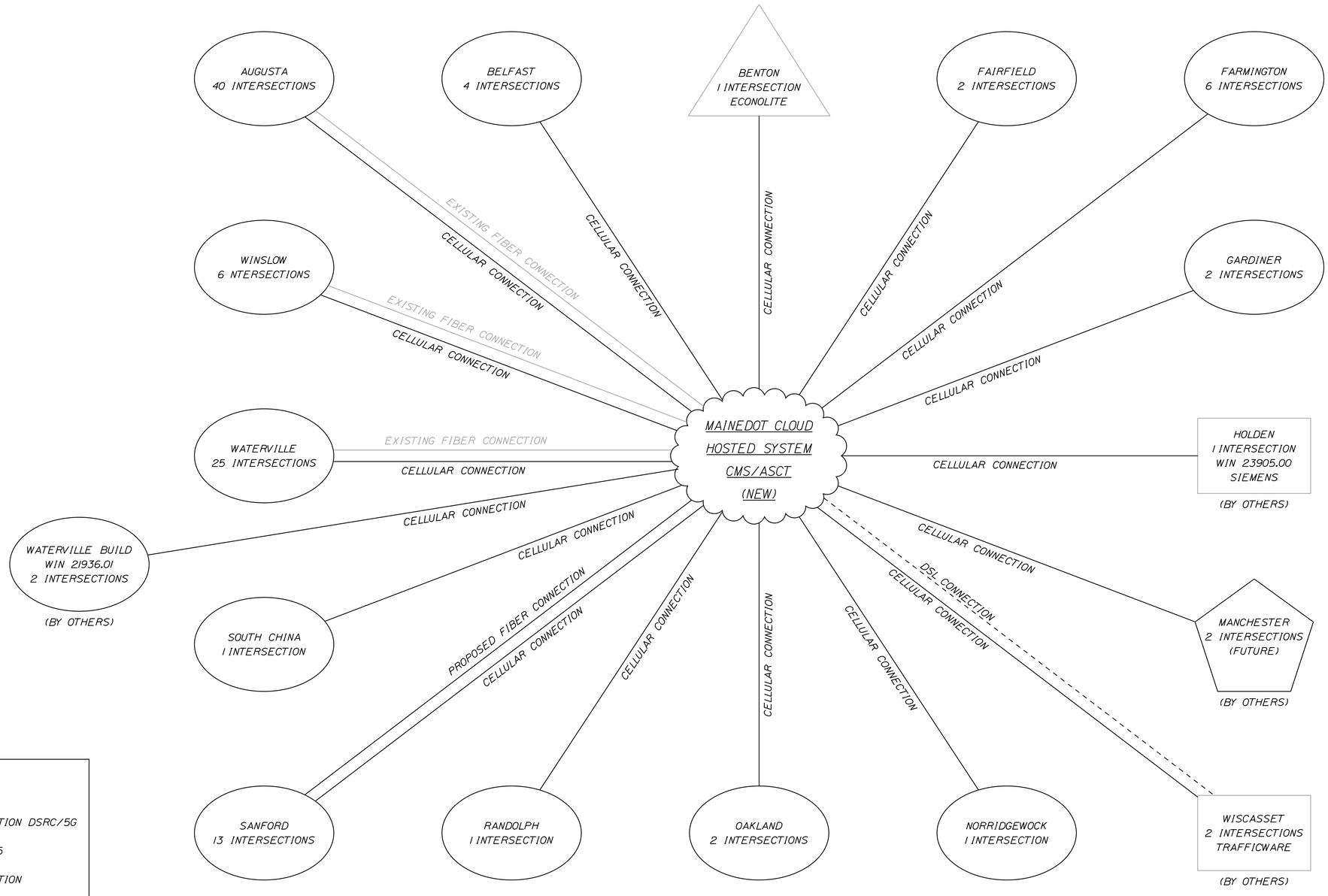
SHEET NUMBER

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OF 358

Filename: 00K_Details_04.dgn Username: jorobert Date:11/24/2020 Division: HIGHWAY

STATE WIDE SYSTEM



LEGEND

- BUILD PROJECT
- EXISTING INTERSECTION DSRC/5G
- FUTURE BUILD 2025
- EXISTING INTERSECTION
- WIRELESS RADIO CONNECTION
- CELLULAR CONNECTION
- DSL CONNECTION
- PROPOSED FIBER CONNECTION
- EXISTING FIBER CONNECTION
- FUTURE FIBER CONNECTION

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	BY	DATE
PROJ. MANAGER			
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
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REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

STATEWIDE

MAINEDOT CLOUD HOSTED NETWORK (1 OF 25)

SHEET NUMBER

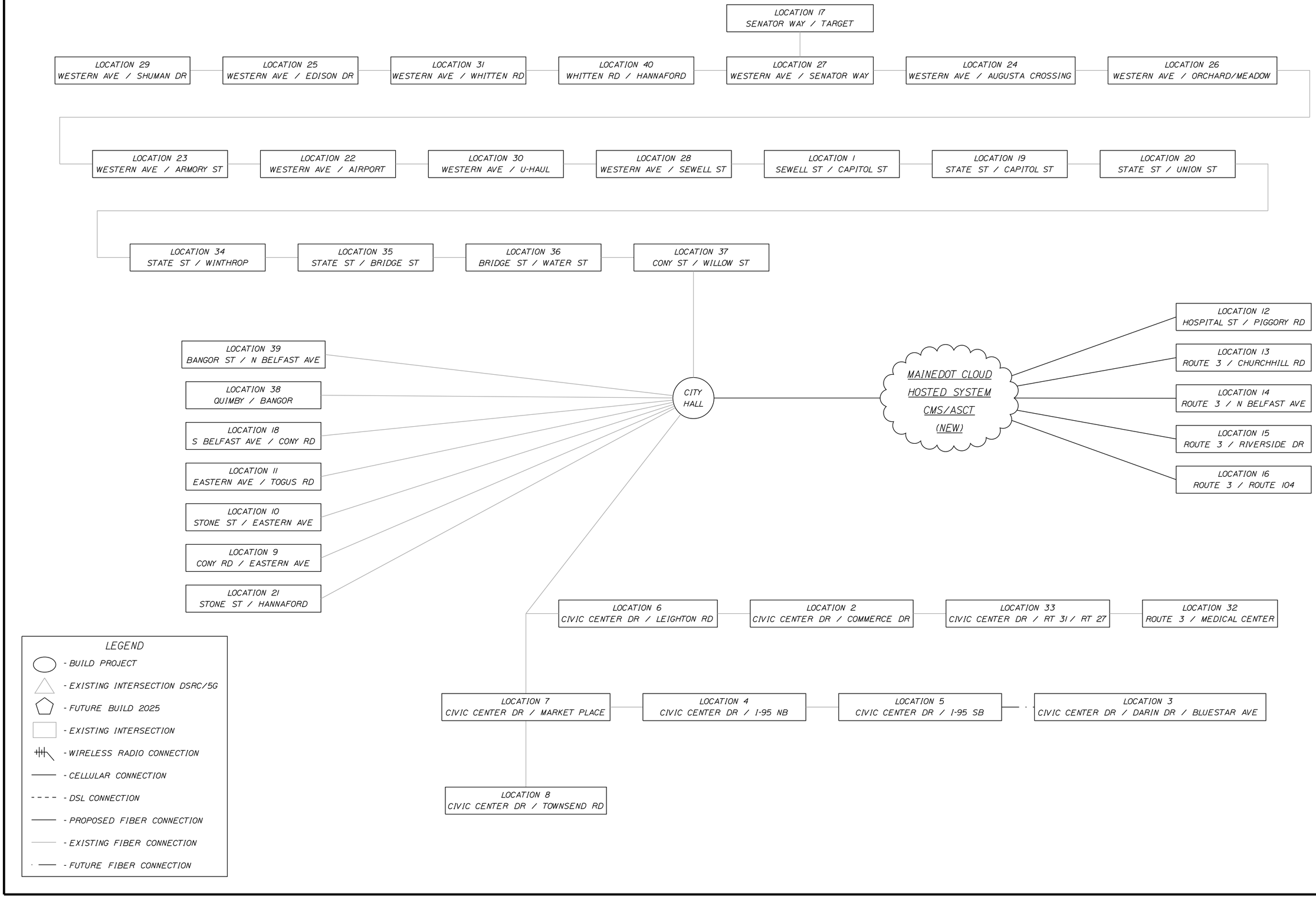
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OF 358

Filename: 00L_Comm_01.dgn Username: jorobert Date:11/24/2020

Division: HIGHWAY

AUGUSTA



LEGEND

- BUILD PROJECT
- EXISTING INTERSECTION DSRC/5G
- FUTURE BUILD 2025
- EXISTING INTERSECTION
- WIRELESS RADIO CONNECTION
- CELLULAR CONNECTION
- DSL CONNECTION
- PROPOSED FIBER CONNECTION
- EXISTING FIBER CONNECTION
- FUTURE FIBER CONNECTION

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER		
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
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REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

STATEWIDE

MAINEDOT CLOUD HOSTED NETWORK (2 OF 25)

SHEET NUMBER

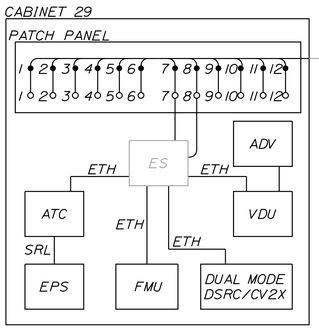
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OF 358

Filename: 00M_Comm_02.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

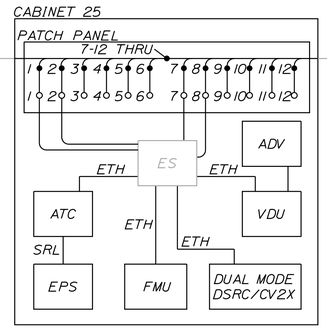
AUGUSTA

LOCATION 29
ROUTE 11/100/202 (WESTERN AVE) / SHUMAN AVE



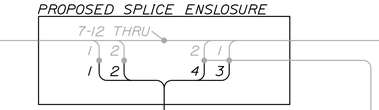
EXISTING 12 F

LOCATION 25
ROUTE 11/100/202 (WESTERN AVE) / EDISON DR

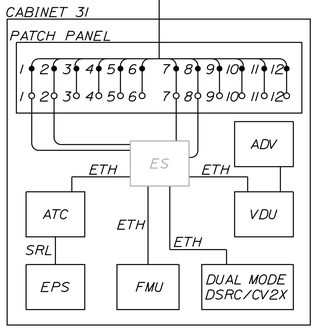


EXISTING 12 F

LOCATION 31
ROUTE 11/100/202 (WESTERN AVE) / WHITTEN RD

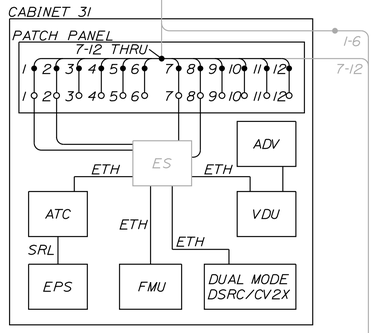


PROPOSED 12 F



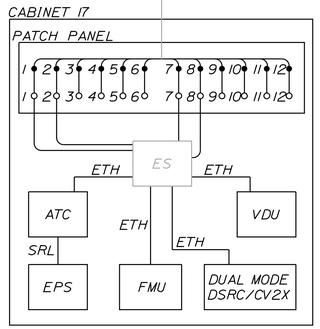
EXISTING 12 F

LOCATION 27
ROUTE 11/100/202 (WESTERN AVE) / SENATOR WAY

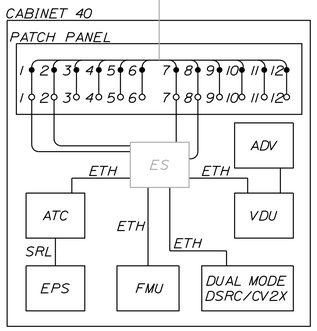


EXISTING 12 F
TO LOCATION 24

LOCATION 17
SENATOR WAY / CROSSING WAY



LOCATION 40
WHITTEN RD / HANNAFORD DR



FIBER OPTIC CABLE CONSTRUCTION NOTES:

1. MANUFACTURED PIGTAILS SHALL BE TERMINATED ON PATCH PANELS.
2. FIBER OPTIC CABLE BENDS SHALL NOT EXCEED THE MINIMUM BENDING RADIUS FOR THE CABLE AT ALL TIMES DURING INSTALLATION, MODIFICATION, REPAIR, SPLICING, OR IN THE PERMANENT CONDITION.
3. FIBER OPTIC CABLE SHALL NOT BE SPLICED EXCEPT AS SHOWN ON THE PLANS. FIBERS NOT TERMINATED IN A SPLICE ENCLOSURE OR SHOWN AS THROUGH FIBERS SHALL NOT BE CUT.

LEGEND

●—○	FIBER OPTIC PIGTAIL
●—●	FIBER OPTIC SPLICE
ADV -	ADVANCE VEHICLE DETECTION
ATC -	ADVANCED TRANSPORTATION CONTROLLER
DSRC -	DEDICATED SHORT RANGE COMMUNICATIONS
ES -	FIBER ETHERNET SWITCH
ETH -	ETHERNET CABLE
SRL-	SERIAL TWISTED PAIR CONNECTION
EPS -	EMERGENCY PREEMPTION SYSTEM
FMU -	FIELD MONITORING UNIT
RU -	RADIO UNIT
VDU -	NON-INVASIVE VIDEO DETECTION UNIT
▭	EXISTING EQUIPMENT

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER	BY	DATE
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
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REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

STATEWIDE

MAINEDOT CLOUD HOSTED NETWORK (3 OF 25)

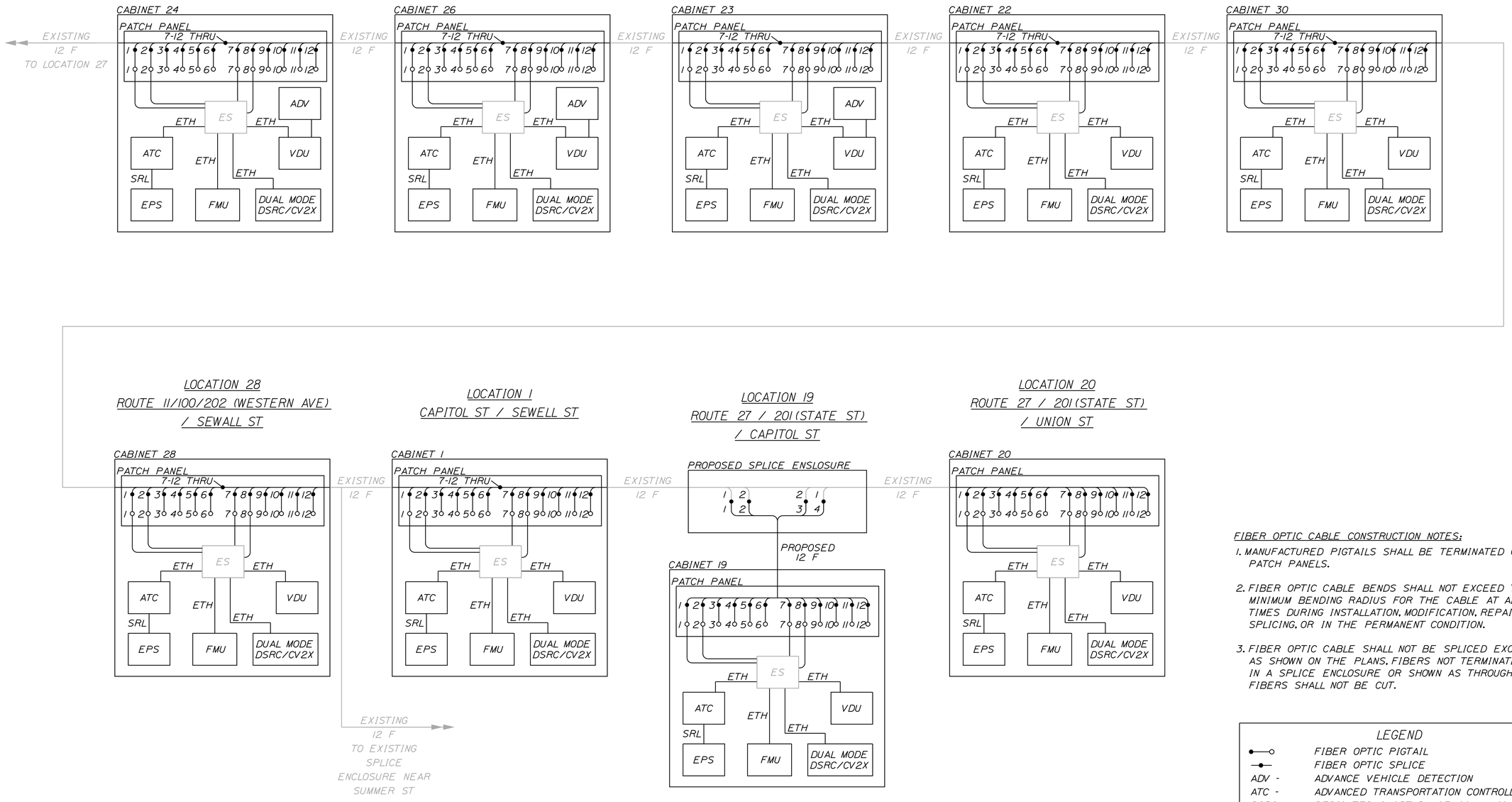
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OF 358

Username: jorobert
Date:11/24/2020
Division: HIGHWAY
Filename: 00N_Comm_03.dgn

AUGUSTA



FIBER OPTIC CABLE CONSTRUCTION NOTES:

1. MANUFACTURED PIGTAILS SHALL BE TERMINATED ON PATCH PANELS.
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●—●	FIBER OPTIC Ssplice
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ATC -	ADVANCED TRANSPORTATION CONTROLLER
DSRC -	DEDICATED SHORT RANGE COMMUNICATIONS
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STATE OF MAINE
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vhb

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PROJ. MANAGER		
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DESIGN2-DETAILED2		
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REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

STATEWIDE

MAINEDOT CLOUD HOSTED NETWORK (4 OF 25)

SHEET NUMBER

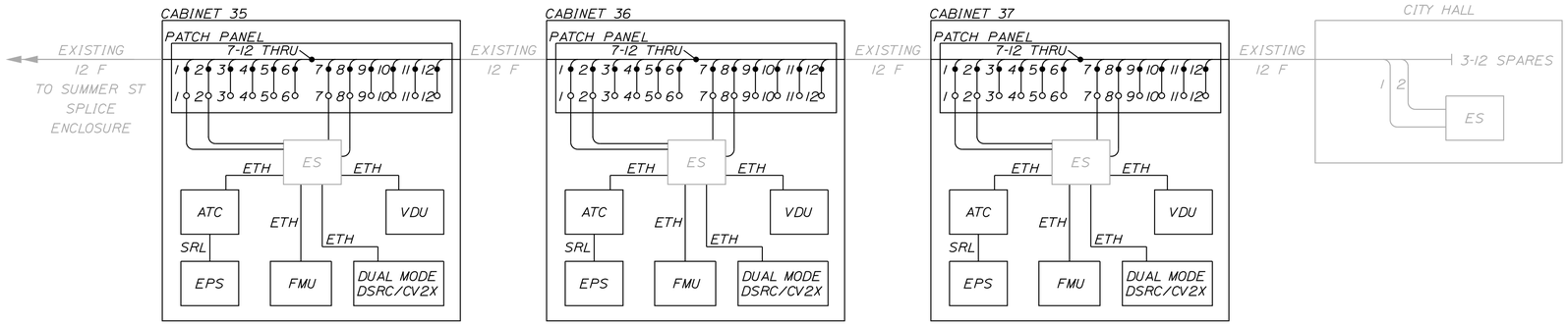
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Filename: 000_Comm_04.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

AUGUSTA

LOCATION 35
ROUTE 8/11/104 (STATE ST) / BRIDGE ST

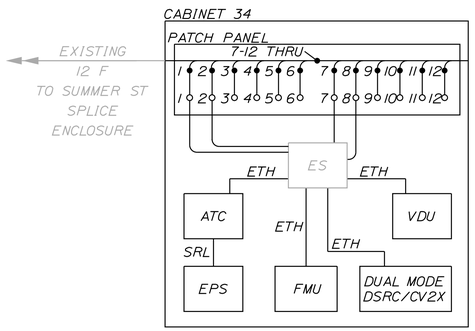


LOCATION 36
WATER ST / BRIDGE ST

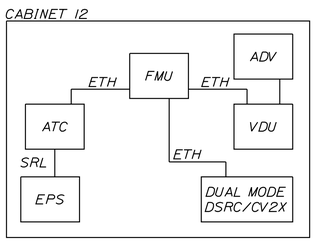
LOCATION 37
CONY ST / WILLOW ST

CITY CENTER

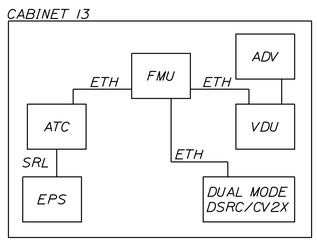
LOCATION 34
ROUTE 8/11/104 (STATE ST) / WINTHROP ST



LOCATION 12
ROUTE 9 (HOSPITAL ST) / PIGGERY RD / TYSON DR



LOCATION 13
ROUTE 3/9/202 (N BELFAST AVE) / CHURCH HILL RD



FIBER OPTIC CABLE CONSTRUCTION NOTES:

1. MANUFACTURED PIGTAILS SHALL BE TERMINATED ON PATCH PANELS.
2. FIBER OPTIC CABLE BENDS SHALL NOT EXCEED THE MINIMUM BENDING RADIUS FOR THE CABLE AT ALL TIMES DURING INSTALLATION, MODIFICATION, REPAIR, SPLICING, OR IN THE PERMANENT CONDITION.
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LEGEND

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●—	FIBER OPTIC SPLICE
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ATC -	ADVANCED TRANSPORTATION CONTROLLER
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VDU -	NON-INVASIVE VIDEO DETECTION UNIT
▭	EXISTING EQUIPMENT

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

			DATE
PROJ. MANAGER	B. KEEZER	BY	
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

STATEWIDE

MAINEDOT CLOUD HOSTED NETWORK (5 OF 25)

SHEET NUMBER

P

OF 358

Username: jorobert
Division: HIGHWAY
Date:11/24/2020
Filename: 00P_Comm_05.dgn

AUGUSTA

LOCATION 6
ROUTE 27 (CIVIC CENTER DR / LEIGHTON RD)

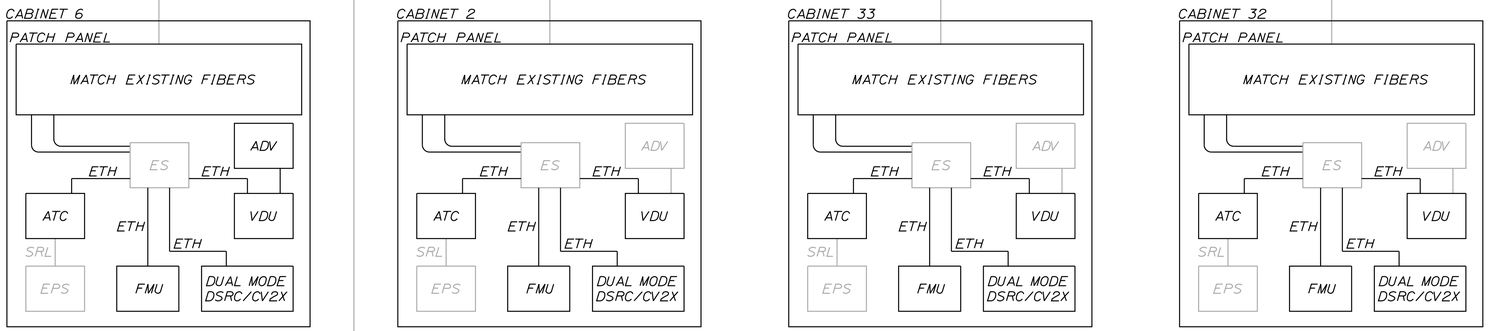
LOCATION 2
ROUTE 24 (CIVIC CENTER DR / COMMERCE DR)

LOCATION 33
ROUTE 11/27 (CIVIC CENTER DR / ROUTE 3 (OLD BELGRADE RD) / WILSON ST

LOCATION 32
ROUTE 3 (OLD BELGRADE RD) / HENRYS WAY / MEDICAL CENTER PKWY

EXISTING FIBER

EXISTING FIBER



LOCATION 8
ROUTE 27 (CIVIC CENTER DR / COMMUNITY DR / TOWNSEND RD

LOCATION 7
ROUTE 27 (CIVIC CENTER DR / UNIVERSITY DR

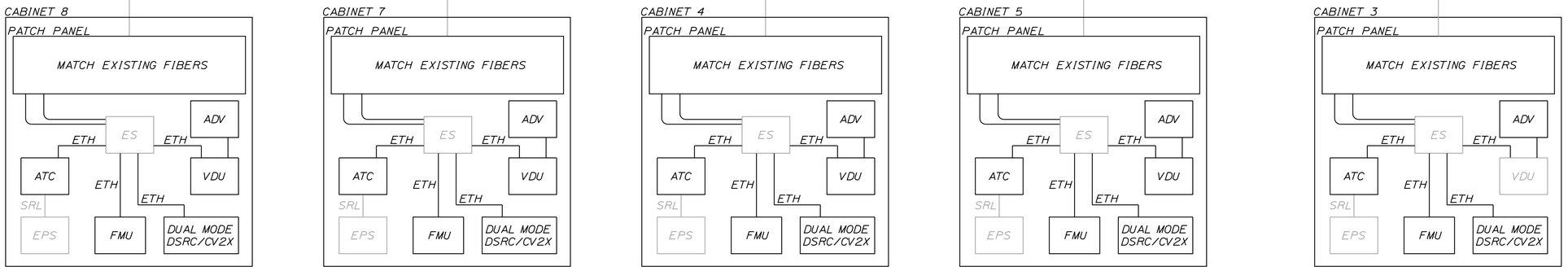
LOCATION 4
ROUTE 27 (CIVIC CENTER DR / I-95 NB RAMPS

LOCATION 5
ROUTE 27 (CIVIC CENTER DR / I-95 SB RAMPS

LOCATION 3
ROUTE 27 (CIVIC CENTER DR / DARIN DR / BLUE STAR AVE

EXISTING FIBER

EXISTING FIBER



FIBER OPTIC CABLE CONSTRUCTION NOTES:

1. MANUFACTURED PIGTAILS SHALL BE TERMINATED ON PATCH PANELS.
2. FIBER OPTIC CABLE BENDS SHALL NOT EXCEED THE MINIMUM BENDING RADIUS FOR THE CABLE AT ALL TIMES DURING INSTALLATION, MODIFICATION, REPAIR, SPLICING, OR IN THE PERMANENT CONDITION.
3. FIBER OPTIC CABLE SHALL NOT BE SPLICED EXCEPT AS SHOWN ON THE PLANS. FIBERS NOT TERMINATED IN A SPLICE ENCLOSURE OR SHOWN AS THROUGH FIBERS SHALL NOT BE CUT.

LEGEND

●—○	FIBER OPTIC PIGTAIL
—●—	FIBER OPTIC Ssplice
ADV -	ADVANCE VEHICLE DETECTION
ATC -	ADVANCED TRANSPORTATION CONTROLLER
DSRC -	DEDICATED SHORT RANGE COMMUNICATIONS
ES -	FIBER ETHERNET SWITCH
ETH -	ETHERNET CABLE
SRL-	SERIAL TWISTED PAIR CONNECTION
EPS -	EMERGENCY PREEMPTION SYSTEM
FMU -	FIELD MONITORING UNIT
RU -	RADIO UNIT
VDU -	NON-INVASIVE VIDEO DETECTION UNIT
▭	EXISTING EQUIPMENT

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	DATE
DESIGN-DETAILED	MLG	
CHECKED-REVIEWED	CMB	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1	JAR	07/20
REVISIONS 2	CMB	07/20
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

STATEWIDE

MAINEDOT CLOUD HOSTED NETWORK (6 OF 25)

SHEET NUMBER

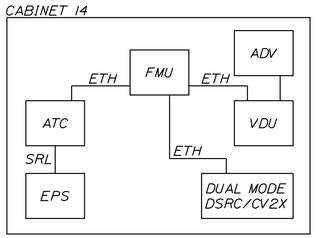
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OF 358

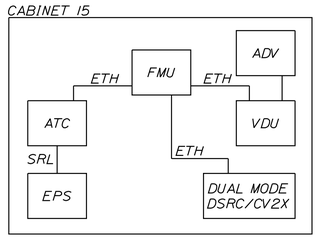
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AUGUSTA

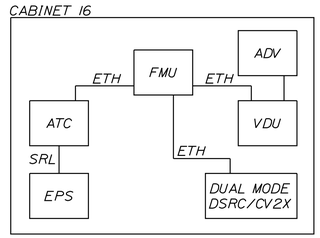
LOCATION 14
ROUTE 3/9/202 / N BELFAST AVE



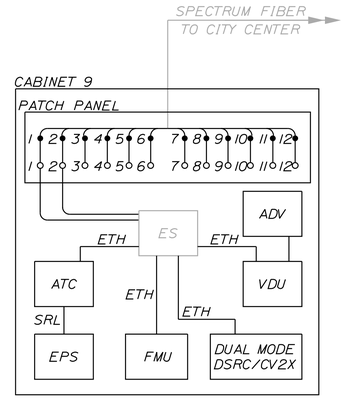
LOCATION 15
ROUTE 3/9/202/ ROUTE 201 (RIVERSIDE DR)



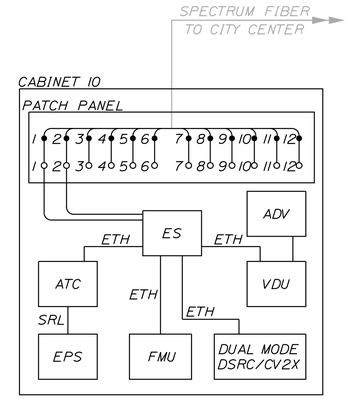
LOCATION 16
ROUTE 3/9/202/ ROUTE 104 (W RIVER RD)



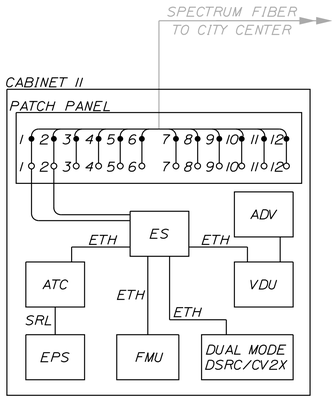
LOCATION 9
ROUTE 17 (EASTERN AVE) / CONY RD



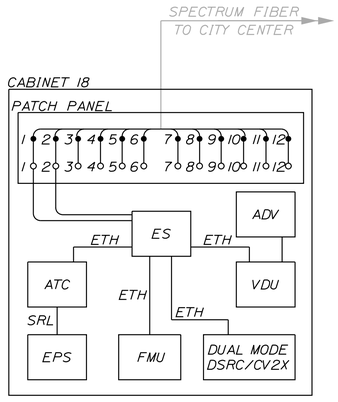
LOCATION 10
ROUTE 17 (EASTERN AVE) / STORE ST



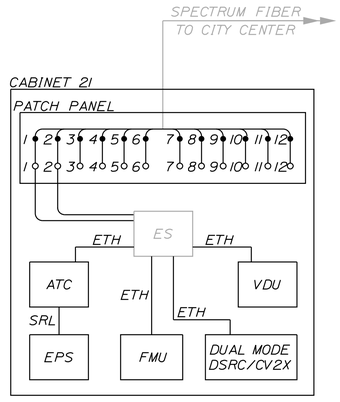
LOCATION 11
ROUTE 17 (EASTERN AVE) / SPRING ST / TOGUS RD



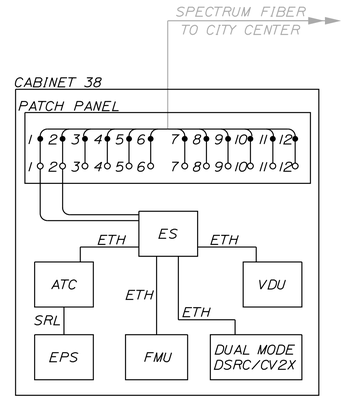
LOCATION 18
ROUTE 105 (S BELFAST AVE) / CONY RD / CHURCH HILL RD



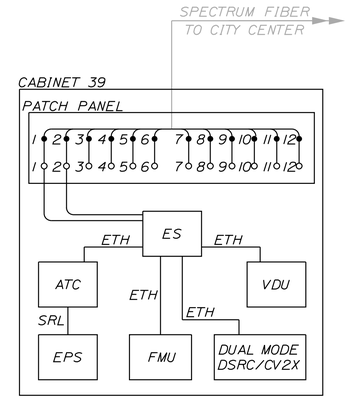
LOCATION 21
ROUTE 17 (STONE ST / HANNAFORD DR



LOCATION 38
ROUTE 9/202 (BANGOR ST) / LINDEN ST / QUIMBY ST



LOCATION 39
ROUTE 9/202 (BANGOR ST) / ROUTE 9/202 (N BELFAST ST) / LOCKE ST



FIBER OPTIC CABLE CONSTRUCTION NOTES:

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LEGEND

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●—●	FIBER OPTIC SPLICE
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FMU -	FIELD MONITORING UNIT
RU -	RADIO UNIT
VDU -	NON-INVASIVE VIDEO DETECTION UNIT
▭	EXISTING EQUIPMENT

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	DATE
DESIGN-DETAILED	MLG	
CHECKED-REVIEWED	CMB	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1	JAR	07/20
REVISIONS 2	CMB	07/20
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

STATEWIDE

MAINEDOT CLOUD HOSTED NETWORK (7 OF 25)

SHEET NUMBER

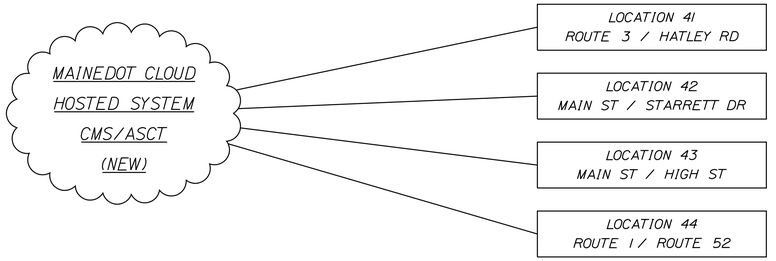
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OF 358

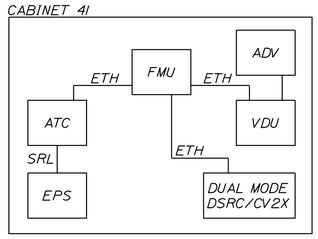
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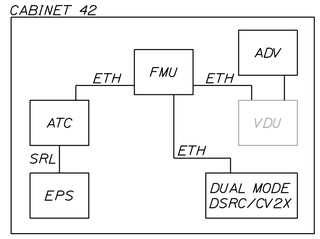
BELFAST



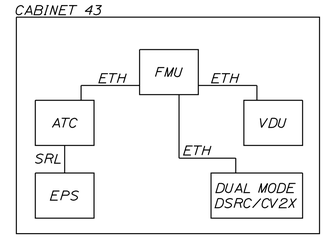
LOCATION 41
ROUTE 3 / HATLEY RD



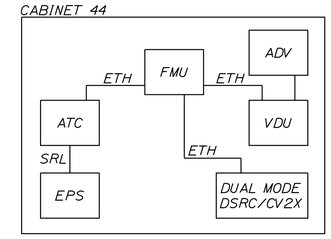
LOCATION 42
MAIN ST / STARRETT DR



LOCATION 43
MAIN ST / HIGH ST



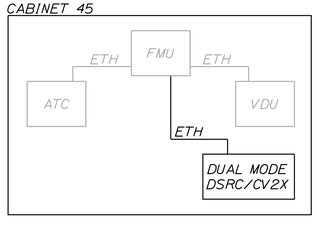
LOCATION 44
ROUTE 1 / ROUTE 52



BENTON



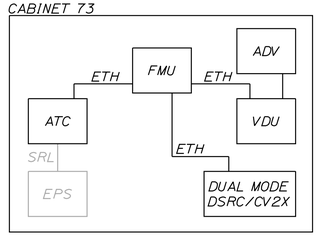
LOCATION 45
ROUTE 11 / 109 / 139 (BRIDGE ST)
BENTON AVE / RIVER RD



SOUTH CHINA



LOCATION 73
ROUTE 202 / ROUTE 32



LEGEND

- BUILD PROJECT
- EXISTING INTERSECTION DSRC/5G
- FUTURE BUILD 2025
- EXISTING INTERSECTION
- WIRELESS RADIO CONNECTION
- CELLULAR CONNECTION
- DSL CONNECTION
- PROPOSED FIBER CONNECTION
- EXISTING FIBER CONNECTION
- FUTURE FIBER CONNECTION

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LEGEND

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	FIBER OPTIC Ssplice
ADV -	ADVANCE VEHICLE DETECTION
ATC -	ADVANCED TRANSPORTATION CONTROLLER
DSRC -	DEDICATED SHORT RANGE COMMUNICATIONS
ES -	FIBER ETHERNET SWITCH
ETH -	ETHERNET CABLE
SRL-	SERIAL TWISTED PAIR CONNECTION
EPS -	EMERGENCY PREEMPTION SYSTEM
FMU -	FIELD MONITORING UNIT
RU -	RADIO UNIT
VDU -	NON-INVASIVE VIDEO DETECTION UNIT
	EXISTING EQUIPMENT

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	DATE
PROJ. MANAGER		
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DESIGN2-DETAILED2		
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REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

STATEWIDE

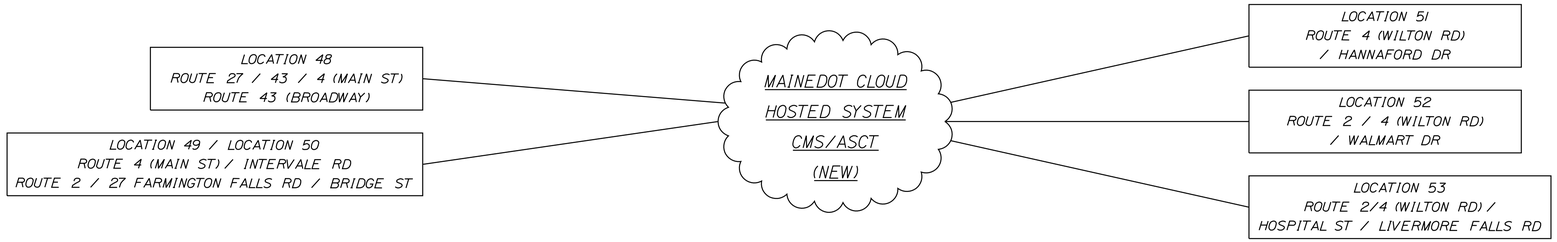
MAINEDOT CLOUD HOSTED NETWORK (8 OF 25)

SHEET NUMBER

S

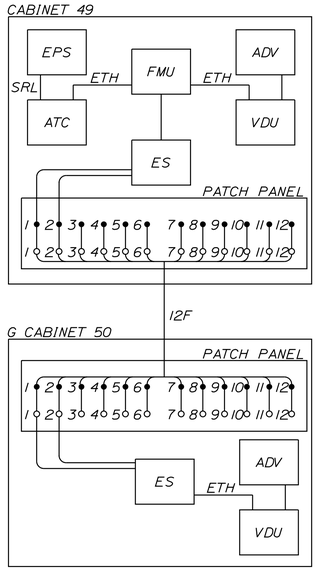
OF 358

FARMINGTON

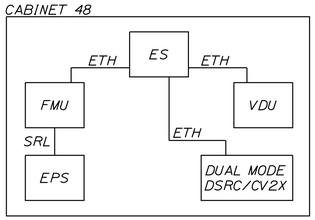


LOCATION 49
ROUTE 4 (MAIN ST) / INTERVALE RD
LOCATION 50
ROUTE 2 / 27 FARMINGTON FALLS RD / BRIDGE ST *

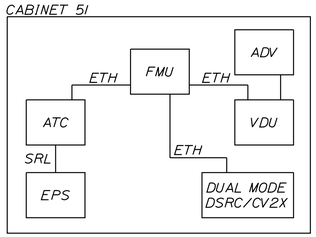
* TWO INTERSECTIONS RUN BY ONE CONTROLLER



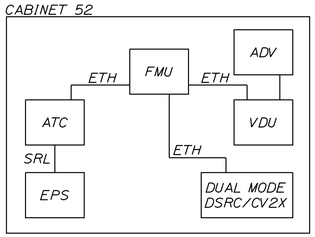
LOCATION 48
ROUTE 27 / 43 / 4 (MAIN ST)
ROUTE 43 (BROADWAY)



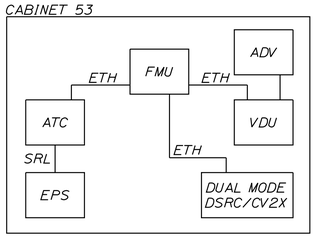
LOCATION 51
ROUTE 4 (WILTON RD) / HANNAFORD DR



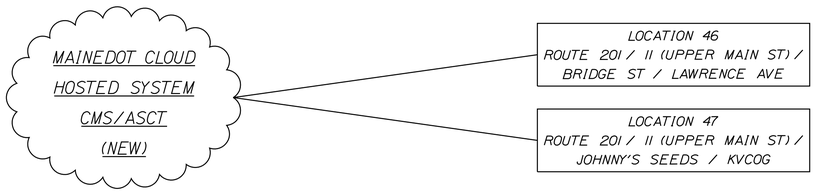
LOCATION 52
ROUTE 2 / 4 (WILTON RD) / WALMART DR



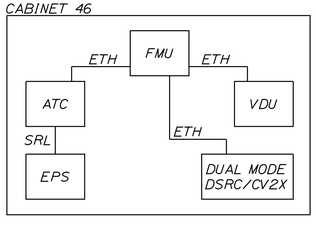
LOCATION 53
ROUTE 2/4 (WILTON RD) / HOSPITAL ST / LIVERMORE FALLS RD



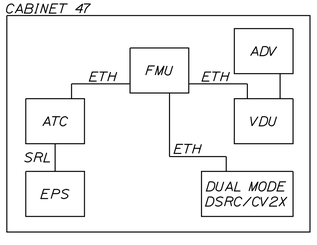
FAIRFIELD



LOCATION 46
ROUTE 201 / 11 (UPPER MAIN ST) / BRIDGE ST / LAWRENCE AVE



LOCATION 47
ROUTE 201 / 11 (UPPER MAIN ST) / JOHNNY'S SEEDS / KVCOG



LEGEND

- BUILD PROJECT
- EXISTING INTERSECTION DSRC/5G
- FUTURE BUILD 2025
- EXISTING INTERSECTION
- WIRELESS RADIO CONNECTION
- CELLULAR CONNECTION
- DSL CONNECTION
- PROPOSED FIBER CONNECTION
- EXISTING FIBER CONNECTION
- FUTURE FIBER CONNECTION

FIBER OPTIC CABLE CONSTRUCTION NOTES:

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LEGEND

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	FIBER OPTIC SPLICE
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ATC -	ADVANCED TRANSPORTATION CONTROLLER
DSRC -	DEDICATED SHORT RANGE COMMUNICATIONS
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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER	BY	DATE
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

STATEWIDE

MAINEDOT CLOUD HOSTED NETWORK (9 OF 25)

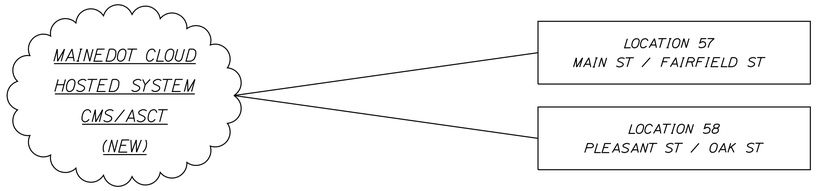
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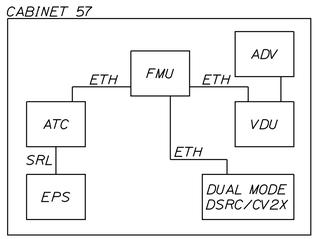
OF 358

Username: jorobert
Date:11/24/2020
Division: HIGHWAY
Filename: 00T_Comm_09.dgn

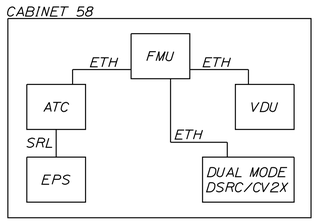
OAKLAND



LOCATION 57
MAIN ST / FAIRFIELD ST



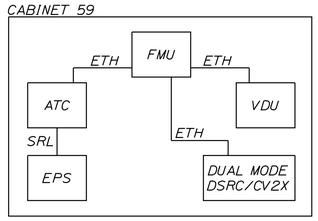
LOCATION 58
PLEASANT ST / OAK ST



RANDOLPH



LOCATION 59
ROUTE 9 / ROUTE 27



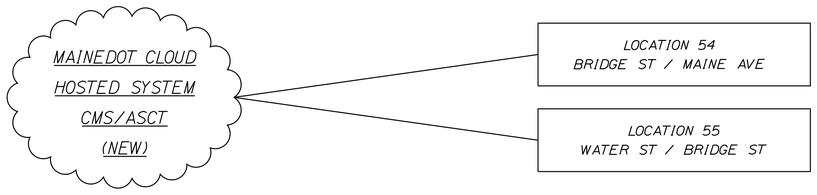
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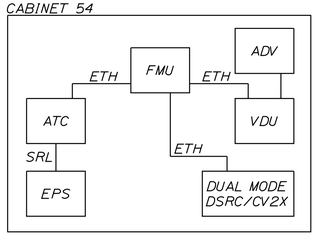
LEGEND

●—○	FIBER OPTIC PIGTAIL
●—●	FIBER OPTIC SPLICE
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ATC -	ADVANCED TRANSPORTATION CONTROLLER
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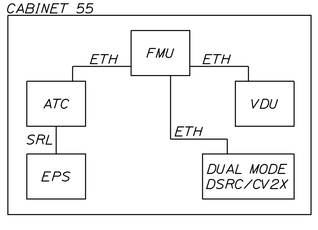
GARDINER



LOCATION 54
BRIDGE ST / MAINE AVE



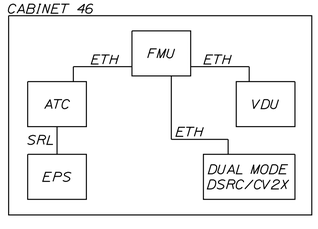
LOCATION 55
WATER ST / BRIDGE ST



NORRIDGEWOCK



LOCATION 56
ROUTE 2 (MAIN ST) / ROUTE 201A
(BRIDGE ST) / PERKINS ST



LEGEND

- BUILD PROJECT
- EXISTING INTERSECTION DSRC/5G
- FUTURE BUILD 2025
- EXISTING INTERSECTION
- WIRELESS RADIO CONNECTION
- CELLULAR CONNECTION
- DSL CONNECTION
- PROPOSED FIBER CONNECTION
- EXISTING FIBER CONNECTION
- FUTURE FIBER CONNECTION

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN
024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER		
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

STATEWIDE

MAINEDOT CLOUD HOSTED NETWORK (10 OF 25)

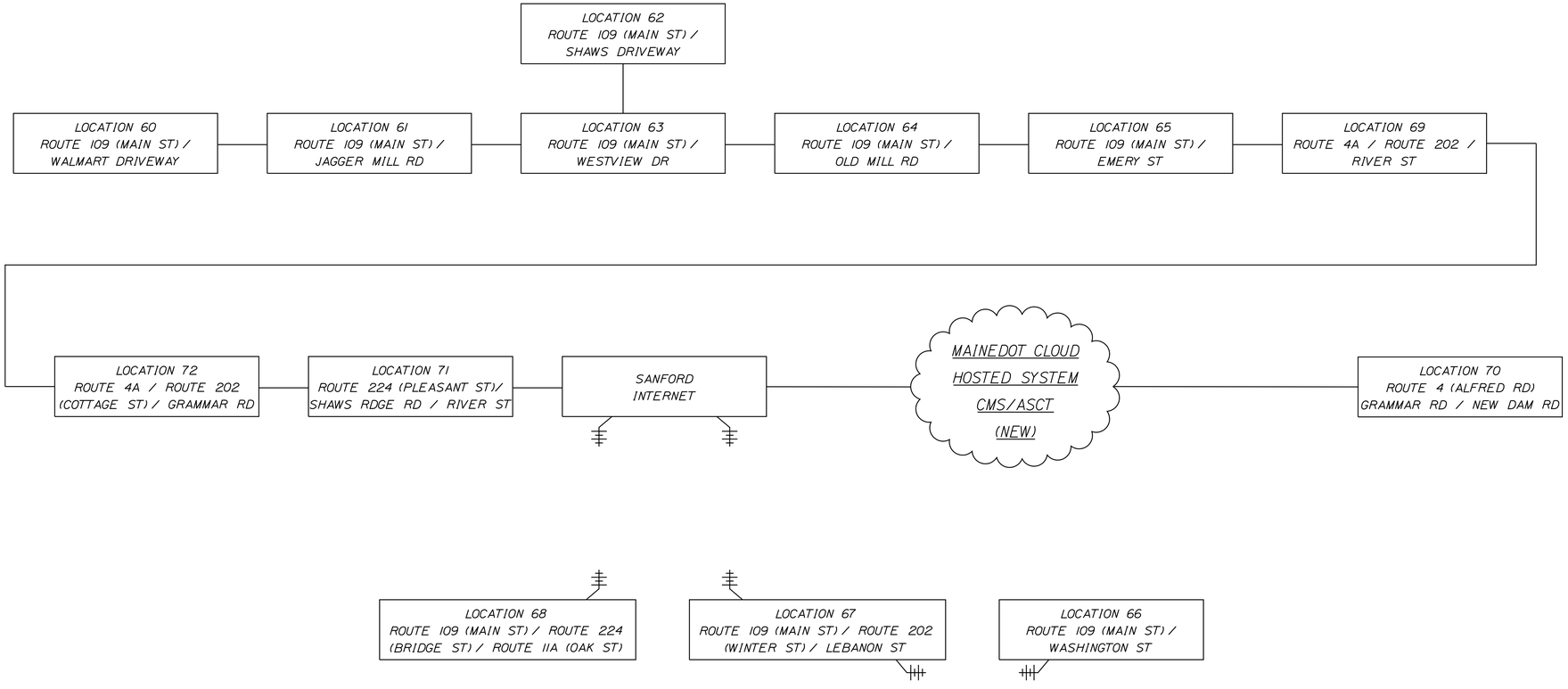
SHEET NUMBER

U

OF 358

Filename: 00U_Comm_10.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

SANFORD



LEGEND

- BUILD PROJECT
- EXISTING INTERSECTION DSRC/5G
- FUTURE BUILD 2025
- EXISTING INTERSECTION
- WIRELESS RADIO CONNECTION
- CELLULAR CONNECTION
- DSL CONNECTION
- PROPOSED FIBER CONNECTION
- EXISTING FIBER CONNECTION
- FUTURE FIBER CONNECTION

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	BY	DATE
PROJ. MANAGER			
DESIGN-DETAILED	M.G	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

STATEWIDE

MAINEDOT CLOUD HOSTED NETWORK (11 OF 25)

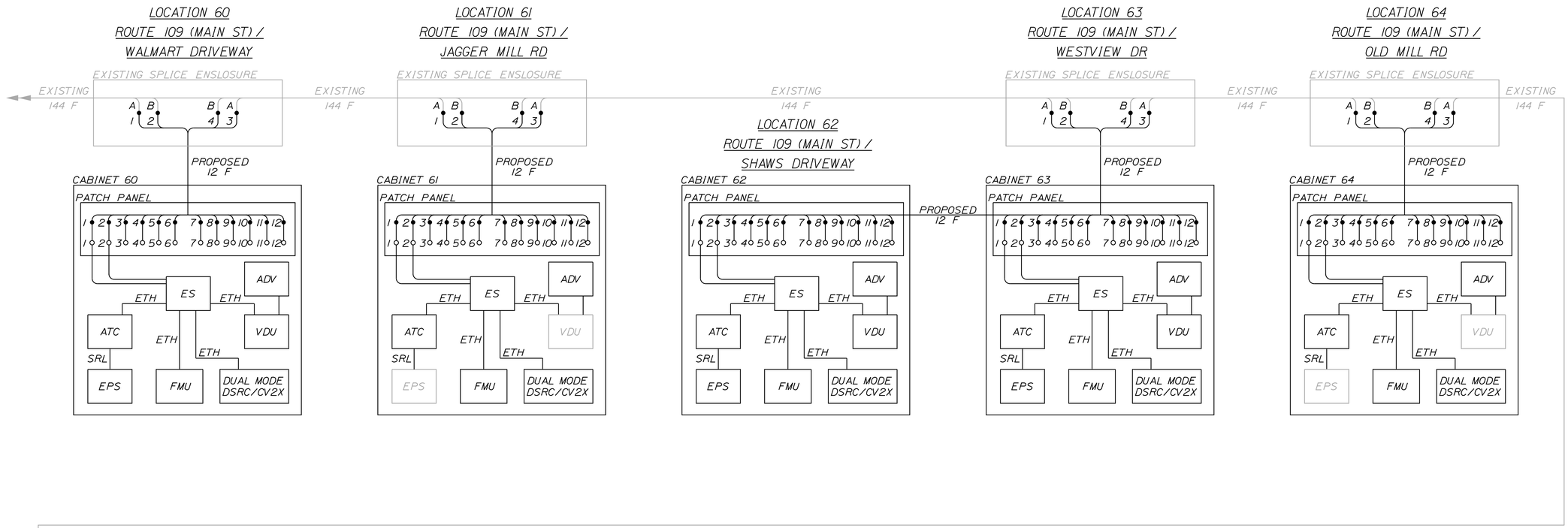
SHEET NUMBER

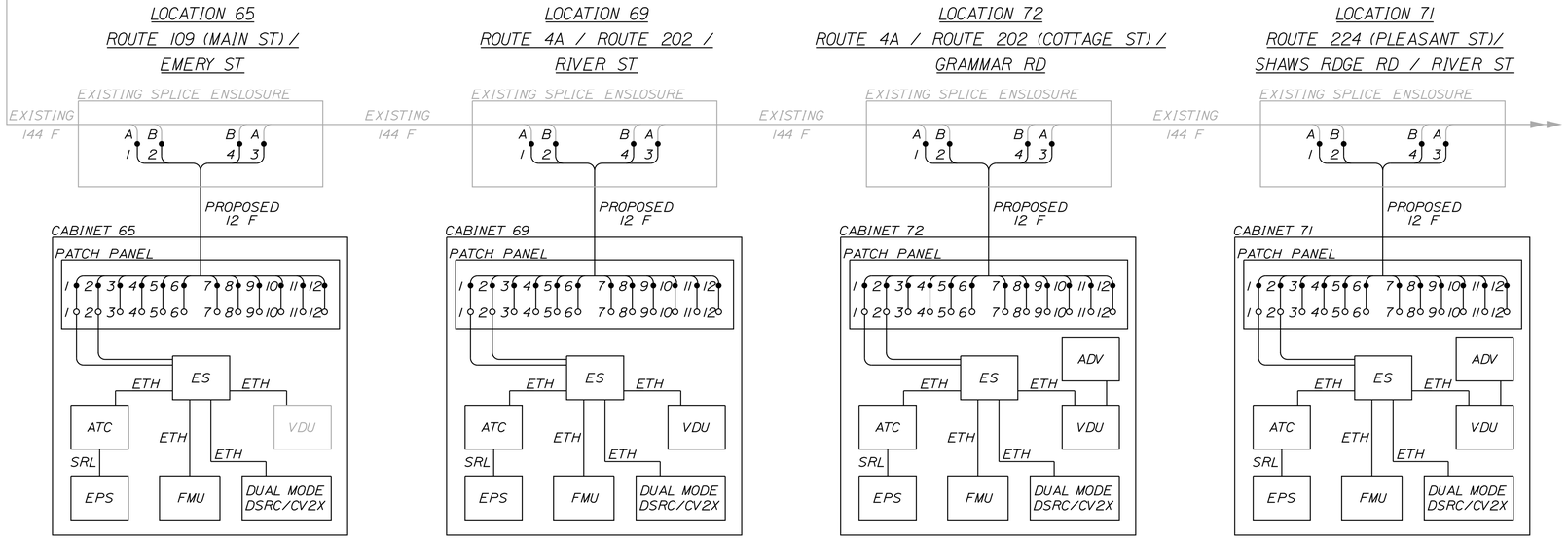
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OF 358

Filename: 00V_Comm_11.dgn Username: jarobert Division: HIGHWAY Date:11/24/2020

SANFORD





FIBER OPTIC CABLE CONSTRUCTION NOTES:

1. MANUFACTURED PIGTAILS SHALL BE TERMINATED ON PATCH PANELS.
2. FIBER OPTIC CABLE BENDS SHALL NOT EXCEED THE MINIMUM BENDING RADIUS FOR THE CABLE AT ALL TIMES DURING INSTALLATION, MODIFICATION, REPAIR, SPLICING, OR IN THE PERMANENT CONDITION.
3. FIBER OPTIC CABLE SHALL NOT BE SPLICED EXCEPT AS SHOWN ON THE PLANS. FIBERS NOT TERMINATED IN A SPLICE ENCLOSURE OR SHOWN AS THROUGH FIBERS SHALL NOT BE CUT.
4. DETAILS ON FIBER NUMBERS TO TIE INTO SANFORD'S EXISTING BACKBONE WILL BE PROVIDED TO THE CONTRACTOR PRIOR TO INITIATING WORK.

LEGEND

●—○	FIBER OPTIC PIGTAIL
●—●	FIBER OPTIC SPLICE
ADV -	ADVANCE VEHICLE DETECTION
ATC -	ADVANCED TRANSPORTATION CONTROLLER
DSRC -	DEDICATED SHORT RANGE COMMUNICATIONS
ES -	FIBER ETHERNET SWITCH
ETH -	ETHERNET CABLE
SRL-	SERIAL TWISTED PAIR CONNECTION
EPS -	EMERGENCY PREEMPTION SYSTEM
FMU -	FIELD MONITORING UNIT
RU -	RADIO UNIT
VDU -	NON-INVASIVE VIDEO DETECTION UNIT
▭	EXISTING EQUIPMENT

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

		DATE
B. KEEZER	BY	
PROJ. MANAGER		
DESIGN-DETAILED	M.C	07/20
CHECKED-REVIEWED	CMB	07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

STATEWIDE

MAINEDOT CLOUD HOSTED NETWORK (12 OF 25)

SHEET NUMBER

W

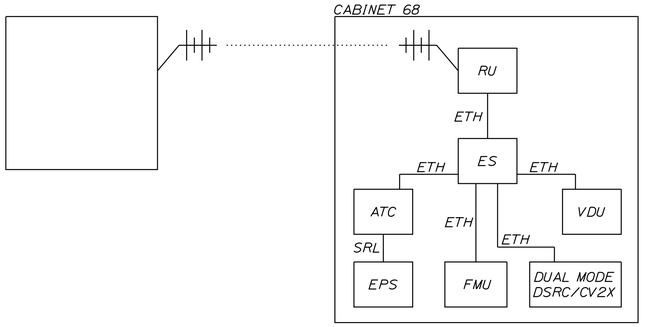
OF 358

Filename: 00W_Comm_12.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

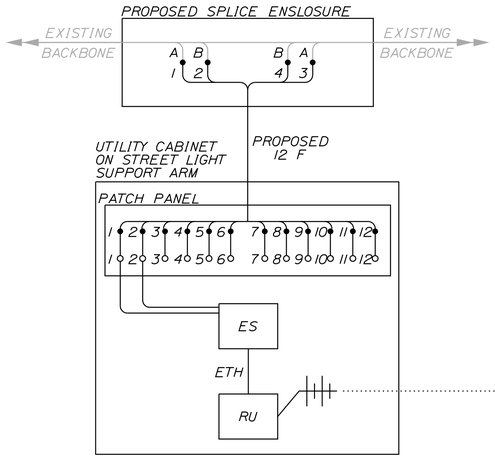
SANFORD

SANFORD FIRE DEPT.
SPRINGVALE STATION

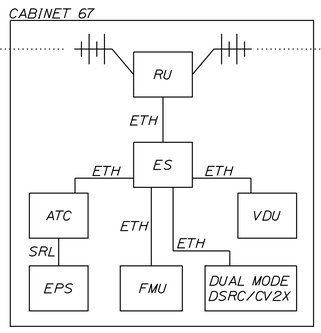
LOCATION 68
ROUTE 109 (MAIN ST)/
ROUTE 224 (BRIDGE ST)/
ROUTE 11A (OAK ST)



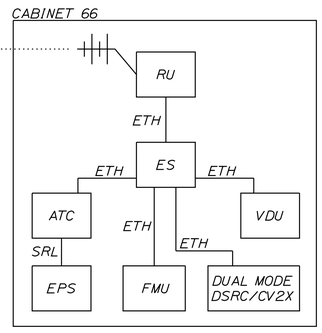
MAPLE ST/NASON ST
PEDESTRIAN CROSSING



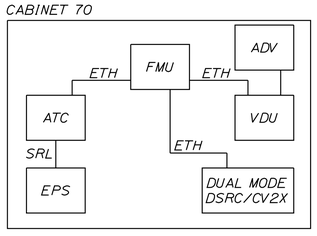
LOCATION 67
ROUTE 109 (MAIN ST) /
ROUTE 202 (WINTER ST)/
LEBANON ST



LOCATION 66
ROUTE 109 (MAIN ST) /
WASHINGTON ST



LOCATION 70
ROUTE 4 (ALFRED RD)
GRAMMAR RD / NEW DAM RD



FIBER OPTIC CABLE CONSTRUCTION NOTES:

1. MANUFACTURED PIGTAILS SHALL BE TERMINATED ON PATCH PANELS.
2. FIBER OPTIC CABLE BENDS SHALL NOT EXCEED THE MINIMUM BENDING RADIUS FOR THE CABLE AT ALL TIMES DURING INSTALLATION, MODIFICATION, REPAIR, SPLICING, OR IN THE PERMANENT CONDITION.
3. FIBER OPTIC CABLE SHALL NOT BE SPLICED EXCEPT AS SHOWN ON THE PLANS. FIBERS NOT TERMINATED IN A SPLICE ENCLOSURE OR SHOWN AS THROUGH FIBERS SHALL NOT BE CUT.
4. DETAILS ON FIBER NUMBERS TO TIE INTO SANFORDS' EXISTING BACKBONE WILL BE PROVIDED TO THE CONTRACTOR PRIOR TO INITIATING WORK.

LEGEND

●—○	FIBER OPTIC PIGTAIL
—●—	FIBER OPTIC SPLICE
ADV -	ADVANCE VEHICLE DETECTION
ATC -	ADVANCED TRANSPORTATION CONTROLLER
DSRC -	DEDICATED SHORT RANGE COMMUNICATIONS
ES -	FIBER ETHERNET SWITCH
ETH -	ETHERNET CABLE
SRL-	SERIAL TWISTED PAIR CONNECTION
EPS -	EMERGENCY PREEMPTION SYSTEM
FMU -	FIELD MONITORING UNIT
RU -	RADIO UNIT
VDU -	NON-INVASIVE VIDEO DETECTION UNIT
▭	EXISTING EQUIPMENT

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN
024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	DATE
PROJ. MANAGER		
DESIGN-DETAILED	MLG	07/20
CHECKED-REVIEWED	CMB	07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

STATEWIDE

MAINEDOT CLOUD HOSTED
NETWORK (13 OF 25)

SHEET NUMBER

X

OF 358

Filename: 00X_Comm_13.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

Division: HIGHWAY
Username: jorobert
Date:11/24/2020
Filename: 00Y_Comm_14.dgn

SANFORD

THE CONTRACTOR SHALL INSTALL AN AERIAL SPLICE ENCLOSURE TO CONNECT NEW 12F FIBER OPTIC DROP CABLES TO THE PROPOSED SIGNAL CABINET

THE CONTRACTOR SHALL INSTALL WIRELESS INTERCONNECT WITH ANTENNAE MOUNTED ON MAST ARM POLE

THE CONTRACTOR SHALL INSTALL RECIPROCAL WIRELESS DEVICE AT SANFORD FIRE DEPARTMENT SPRINGVALE STATION TO BE CONNECTED TO THE SANFORD COMMUNICATION SYSTEM INSIDE THE STATION

THE CONTRACTOR SHALL INSTALL A PROPOSED AERIAL SPLICE ENCLOSURE AT THE NASON STREET PEDESTRIAN CROSSING

THE CONTRACTOR SHALL CONNECT TO AN EXISTING AERIAL SPLICE ENCLOSURE TO CONNECT NEW 12F FIBER OPTIC DROP CABLES TO THE PROPOSED SIGNAL CABINET

THE CONTRACTOR SHALL INSTALL WIRELESS INTERCONNECT WITH ANTENNAE MOUNTED ON MAST ARM POLE

THE CONTRACTOR SHALL CONNECT TO AN EXISTING AERIAL SPLICE ENCLOSURE TO CONNECT NEW 12F FIBER OPTIC DROP CABLES TO THE PROPOSED SIGNAL CABINET

THE CONTRACTOR SHALL CONNECT TO AN EXISTING AERIAL SPLICE ENCLOSURE TO CONNECT NEW 12F FIBER OPTIC DROP CABLES TO THE PROPOSED SIGNAL CABINET

THE CONTRACTOR SHALL CONNECT TO AN EXISTING AERIAL SPLICE ENCLOSURE TO CONNECT NEW 12F FIBER OPTIC DROP CABLES TO THE PROPOSED SIGNAL CABINET

ELM STREET
OAK STREET
SHAW'S RIDGE ROAD
RIVER STREET
GRAMMAR ROAD
EMERY STREET
HIGH STREET
NEW DAM ROAD
ALFRED ROAD
EMERSON STREET
MAIN STREET
RUSHTON STREET
TWONBLEY ROAD
OLD MILL ROAD
WESTVIEW DRIVE
COUNTRY CLUB ROAD
JAGGER MILL ROAD

109 202 68 71 224 72 4A 11 4 11A 69 67 66 65 70 64 63 62 61 60 99

LEGEND

- EXISTING FIBER OPTIC CABLE (INSTALLED BY OTHERS)
- PROPOSED FIBER OPTIC CABLE
- PROPOSED CONTROLLER CABINET
- EXISTING CONTROLLER CABINET
- SE ▽ EXISTING AERIAL SPLICE ENCLOSURE
- SE ▼ PROPOSED AERIAL SPLICE ENCLOSURE
- PROPOSED WIRELESS INTERCONNECT DEVICE

LAYOUT SCALE

2000 0 2000 4000

Scale in Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER	BY	DATE
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

STATEWIDE

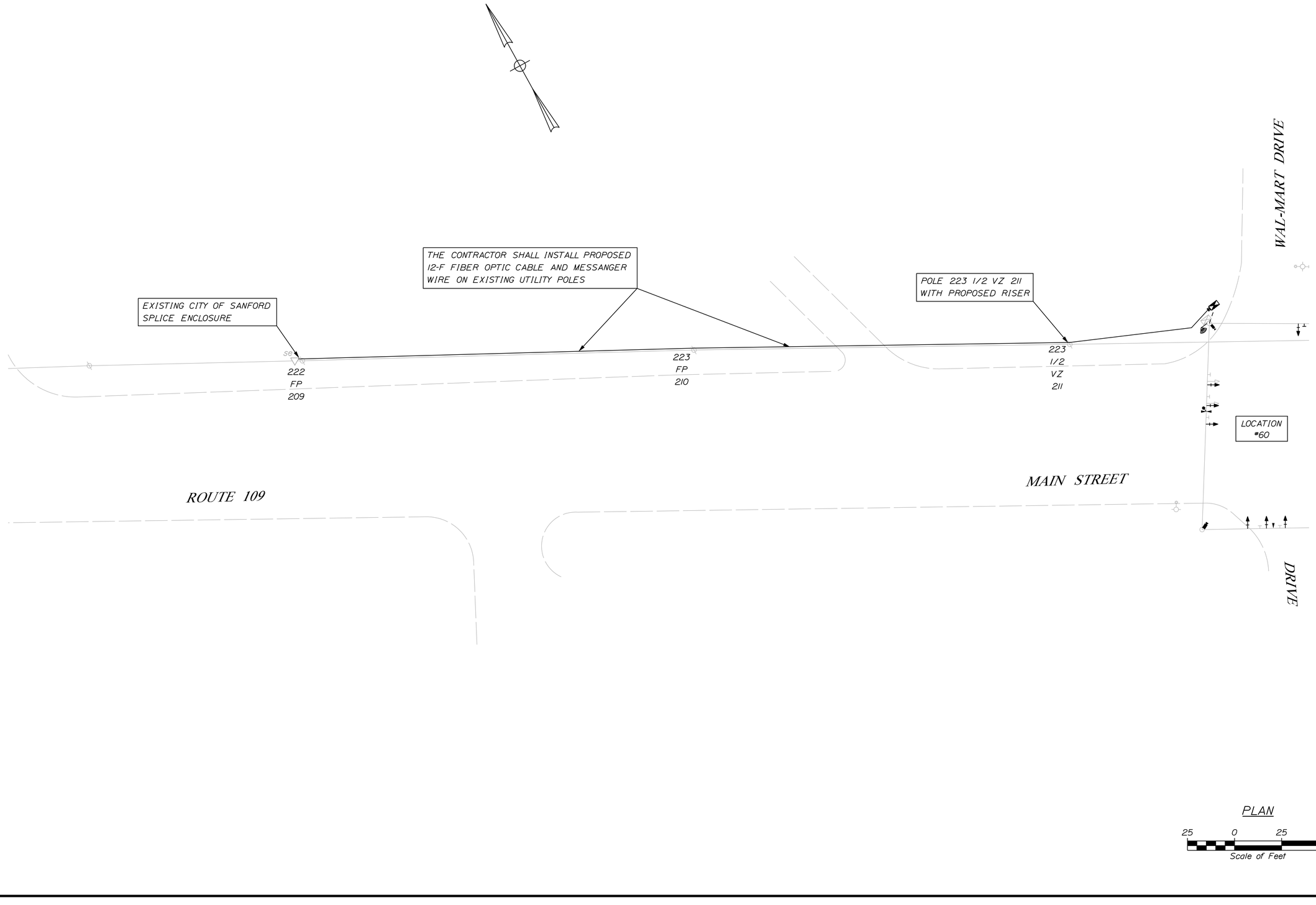
MAINEDOT CLOUD HOSTED NETWORK (14 OF 25)

SHEET NUMBER

Y

OF 358

SANFORD



PLAN

25 0 25 50

Scale of Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER	BY	DATE
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

STATEWIDE

MAINEDOT CLOUD HOSTED NETWORK (15 OF 25)

SHEET NUMBER

Z

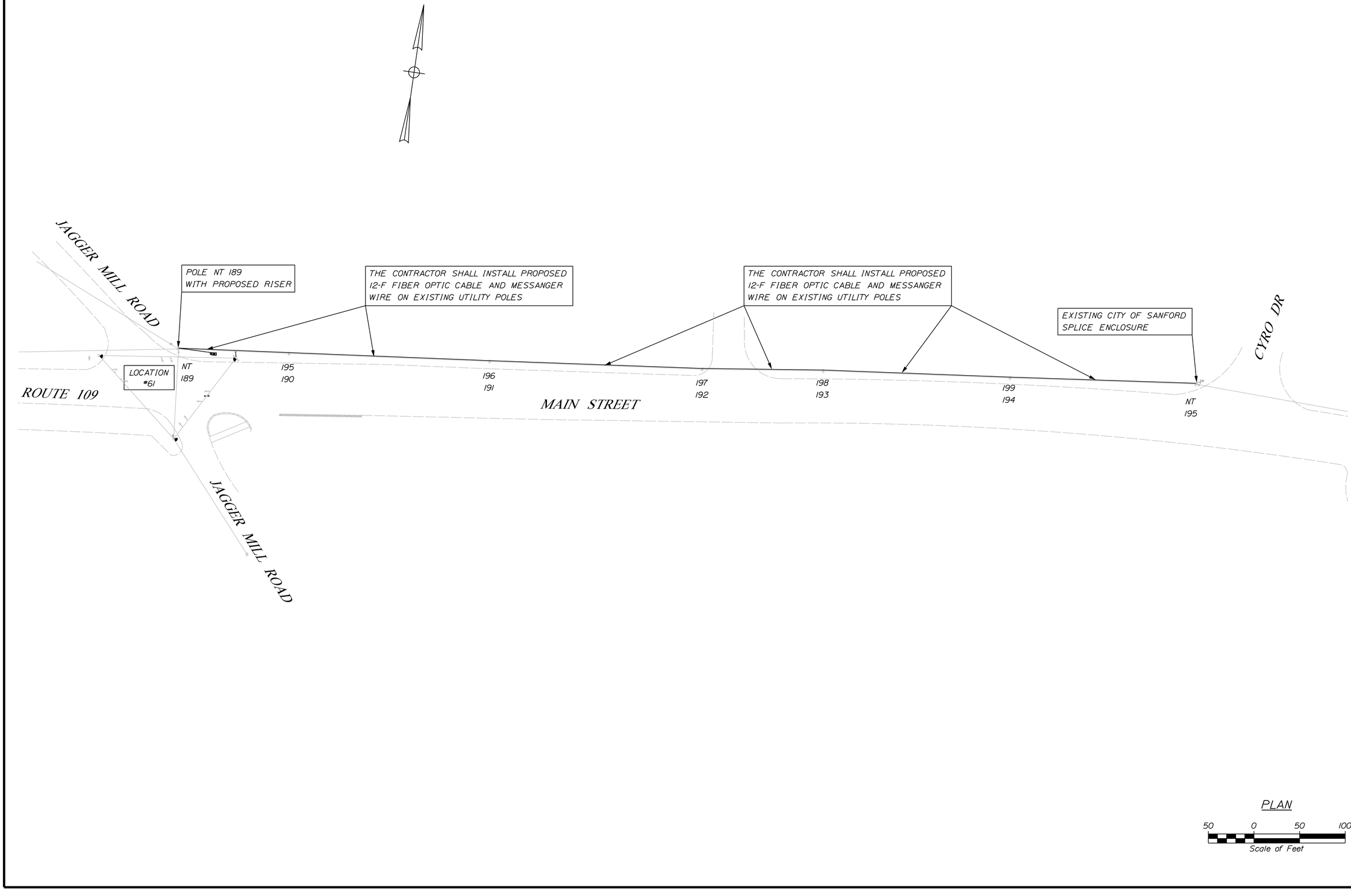
OF 358

Username: jorobert Date:11/24/2020

Division: HIGHWAY

Filename: 00Z_Comm_15.dgn

SANFORD



PLAN

50 0 50 100

Scale of Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN
024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER	BY	DATE
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

STATEWIDE

MAINEDOT CLOUD HOSTED
NETWORK (16 OF 25)

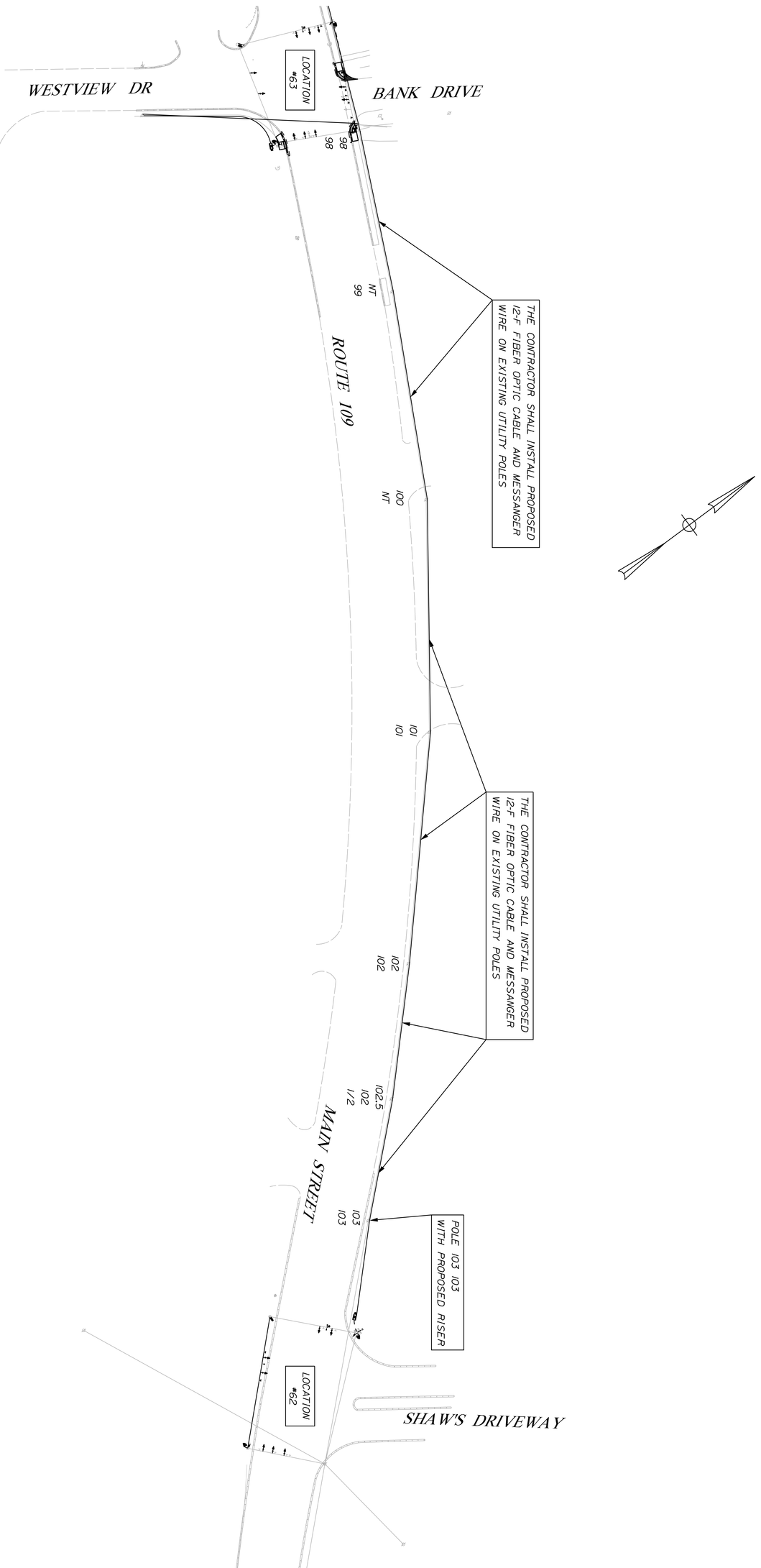
SHEET NUMBER

AA

OF 358

Filename: 0AA_Comm_16.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

SANFORD



PLAN

Scale of Feet: 50 0 50 100

PROJ. MANAGER	B. KEEZER	BY	DATE
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SHEET NUMBER AB OF 358

STATEWIDE

MAINEDOT CLOUD HOSTED NETWORK (17 OF 25)

vhb

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00 TRAFFIC PLANS

SANFORD

THE CONTRACTOR SHALL INSTALL PROPOSED 12-F FIBER OPTIC CABLE AND MESSANGER WIRE ON EXISTING UTILITY POLES

ROUTE 109

BANK DRIVEWAY

97
97

98
98

NT
99

96
NT

LOCATION
#63

MAIN STREET

EXISTING CITY OF SANFORD SPLICE ENCLOSURE

WESTVIEW DRIVE

THE CONTRACTOR SHALL INSTALL PROPOSED 12-F FIBER OPTIC CABLE AND MESSANGER WIRE ON EXISTING UTILITY POLES

POLE WITH PROPOSED RISER

T.B.D.

PLAN

25 0 25 50
Scale of Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN
024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER		
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

STATEWIDE

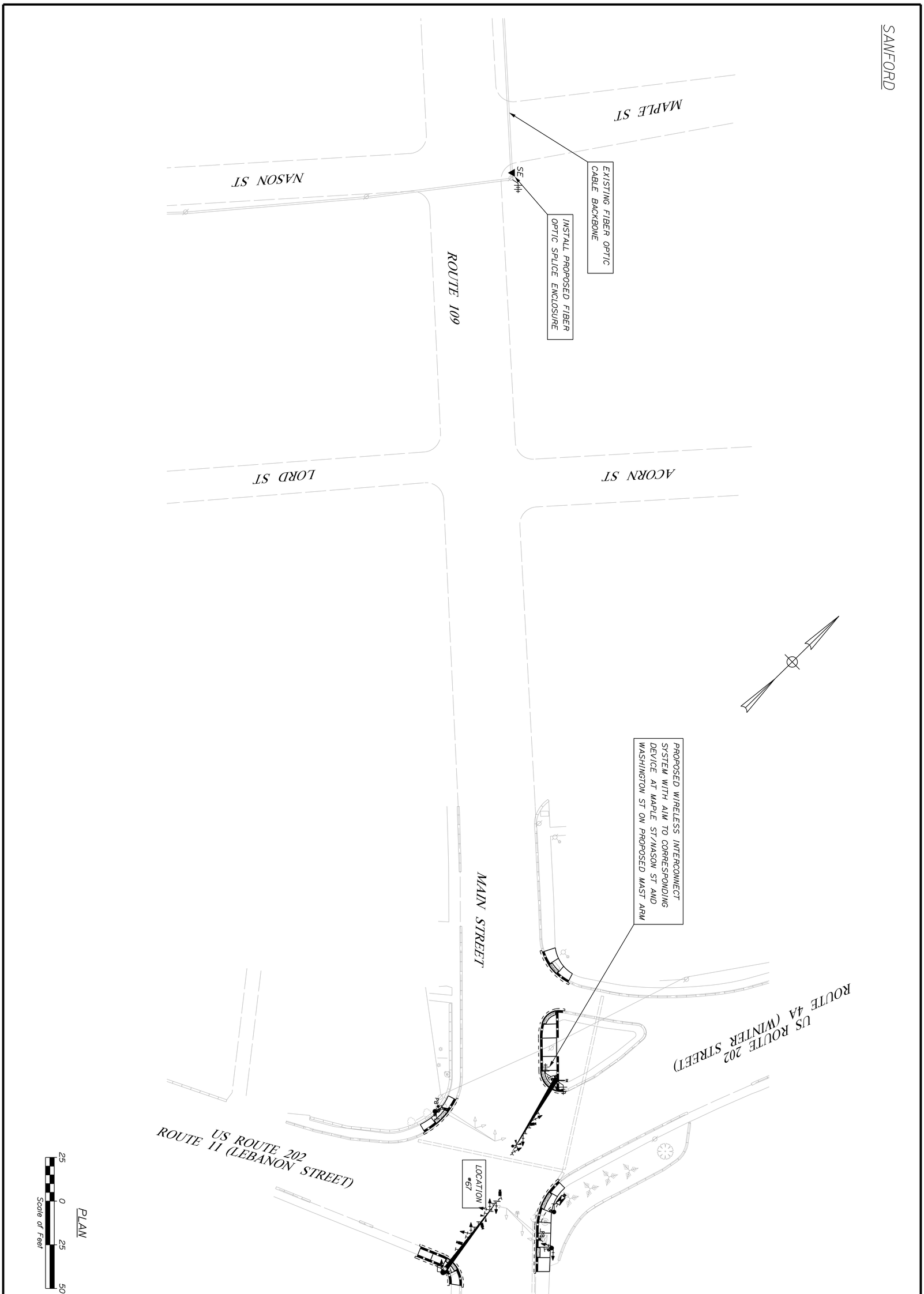
MAINEDOT CLOUD HOSTED NETWORK (18 OF 25)

SHEET NUMBER

AC

OF 358

Filename: 0AC_Comm_18.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020



SHEET NUMBER AD OF 358	STATEWIDE	PROJ. MANAGER	B. KEEZER	BY	DATE
		DESIGN-DETAILED	MLG	JAR	07/20
		CHECKED-REVIEWED	CMB	CMB	07/20
		DESIGN2-DETAILED2			
		DESIGN3-DETAILED3			
	MAINEDOT CLOUD HOSTED NETWORK (19 OF 25)	REVISIONS 1			
		REVISIONS 2			
		REVISIONS 3			
		REVISIONS 4			
		FIELD CHANGES			

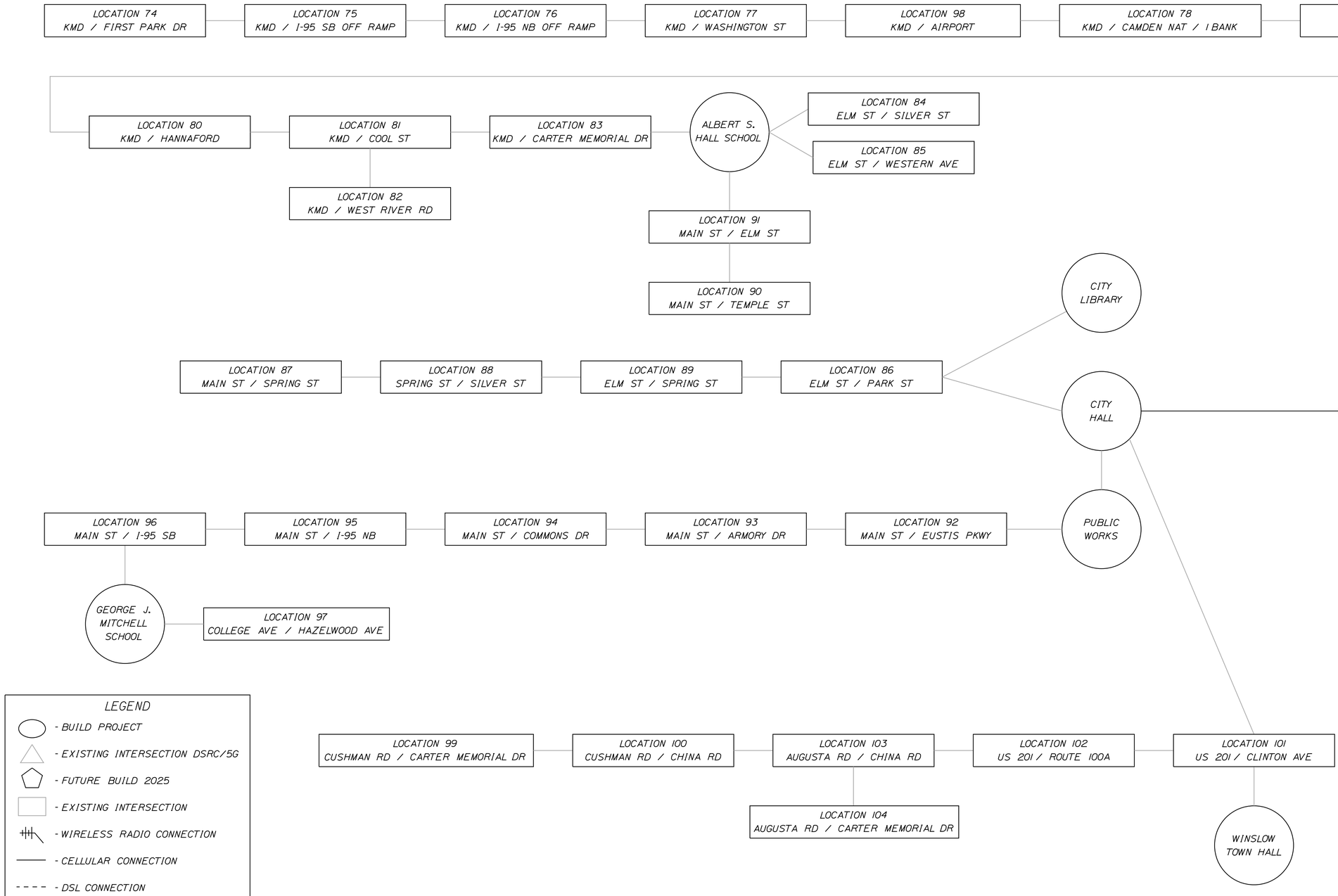
vhb

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00 TRAFFIC PLANS

WATERVILLE/WINSLOW



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER	DATE
DESIGN-DETAILED	MLG	07/20
CHECKED-REVIEWED	CMB	07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

STATEWIDE

MAINEDOT CLOUD HOSTED NETWORK (20 OF 25)

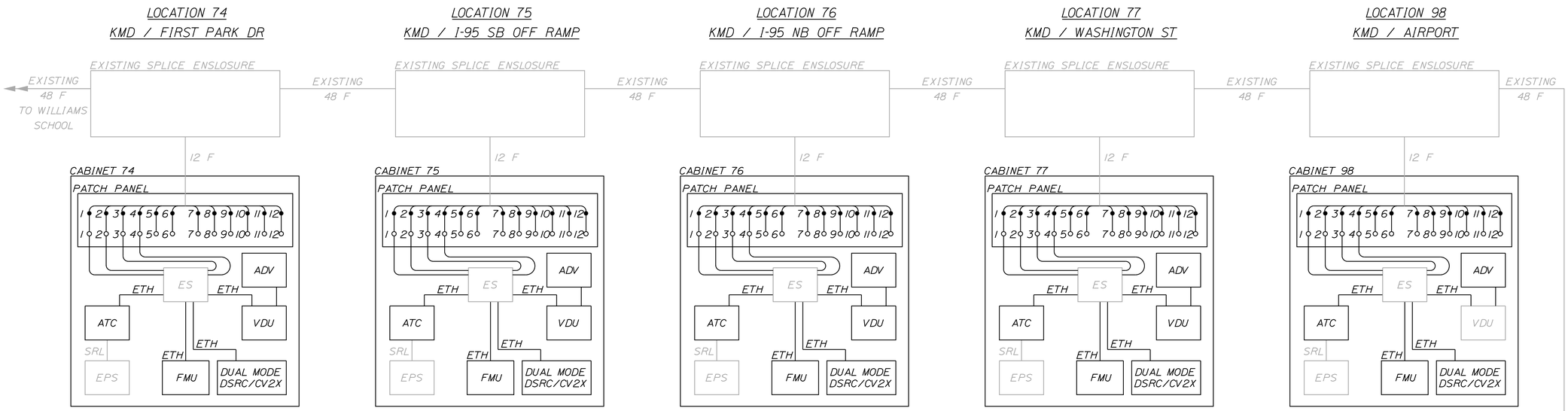
SHEET NUMBER

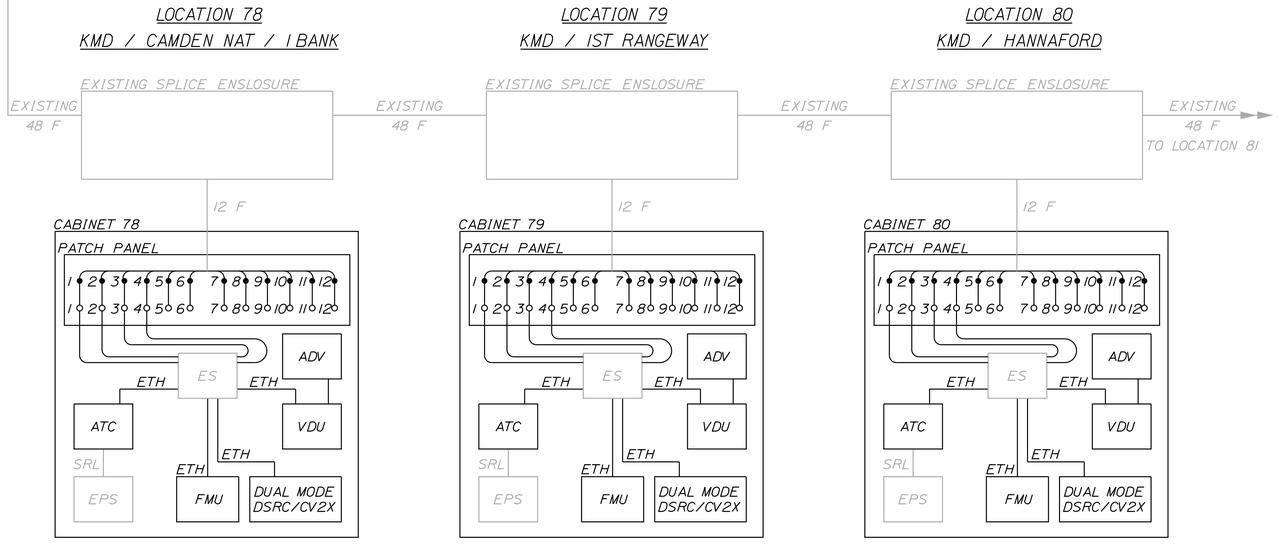
AE

OF 358

Username: jorobert
Date:11/24/2020
Division: HIGHWAY
Filename: 0AE_Comm_20.dgn

WATERVILLE





FIBER OPTIC CABLE CONSTRUCTION NOTES:

1. MANUFACTURED PIGTAILS SHALL BE TERMINATED ON PATCH PANELS.
2. FIBER OPTIC CABLE BENDS SHALL NOT EXCEED THE MINIMUM BENDING RADIUS FOR THE CABLE AT ALL TIMES DURING INSTALLATION, MODIFICATION, REPAIR, SPLICING, OR IN THE PERMANENT CONDITION.
3. FIBER OPTIC CABLE SHALL NOT BE SPLICED EXCEPT AS SHOWN ON THE PLANS. FIBERS NOT TERMINATED IN A SPLICE ENCLOSURE OR SHOWN AS THROUGH FIBERS SHALL NOT BE CUT.

LEGEND

●—○	FIBER OPTIC PIGTAIL
●—●	FIBER OPTIC Ssplice
ADV -	ADVANCE VEHICLE DETECTION
ATC -	ADVANCED TRANSPORTATION CONTROLLER
DSRC -	DEDICATED SHORT RANGE COMMUNICATIONS
ES -	FIBER ETHERNET SWITCH
ETH -	ETHERNET CABLE
SRL-	SERIAL TWISTED PAIR CONNECTION
EPS -	EMERGENCY PREEMPTION SYSTEM
FMU -	FIELD MONITORING UNIT
RU -	RADIO UNIT
VDU -	NON-INVASIVE VIDEO DETECTION UNIT
▭	EXISTING EQUIPMENT

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER		
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

STATEWIDE

MAINEDOT CLOUD HOSTED NETWORK (21 OF 25)

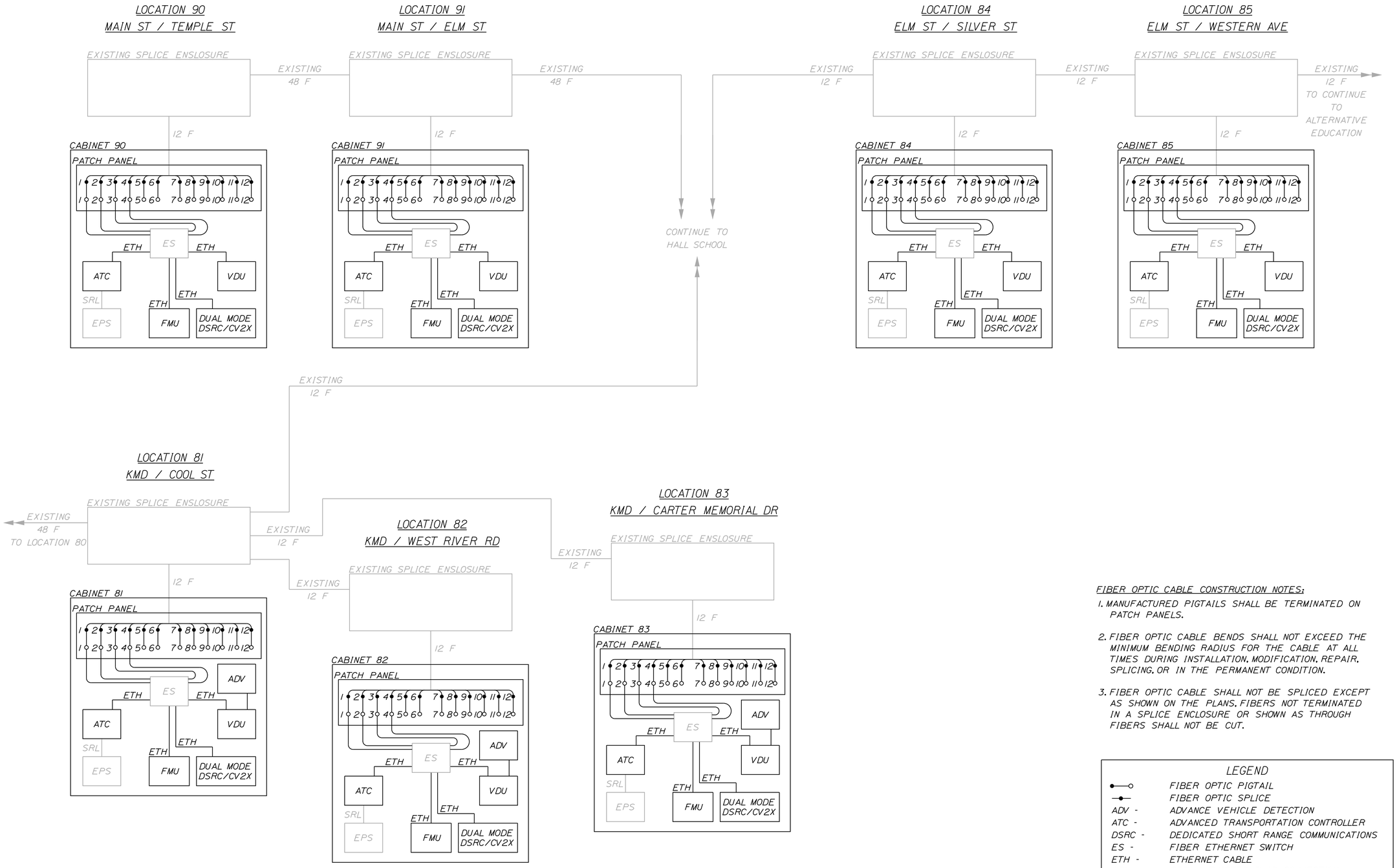
SHEET NUMBER

AF

OF 358

Username: jorobert
Division: HIGHWAY
Date:11/24/2020
Filename: 0AF_Comm_21.dgn

WATERVILLE



FIBER OPTIC CABLE CONSTRUCTION NOTES:

1. MANUFACTURED PIGTAILS SHALL BE TERMINATED ON PATCH PANELS.
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3. FIBER OPTIC CABLE SHALL NOT BE SPLICED EXCEPT AS SHOWN ON THE PLANS. FIBERS NOT TERMINATED IN A SPLICE ENCLOSURE OR SHOWN AS THROUGH FIBERS SHALL NOT BE CUT.

LEGEND

●—○	FIBER OPTIC PIGTAIL
●—●	FIBER OPTIC Ssplice
ADV -	ADVANCE VEHICLE DETECTION
ATC -	ADVANCED TRANSPORTATION CONTROLLER
DSRC -	DEDICATED SHORT RANGE COMMUNICATIONS
ES -	FIBER ETHERNET SWITCH
ETH -	ETHERNET CABLE
SRL-	SERIAL TWISTED PAIR CONNECTION
EPS -	EMERGENCY PREEMPTION SYSTEM
FMU -	FIELD MONITORING UNIT
RU -	RADIO UNIT
VDU -	NON-INVASIVE VIDEO DETECTION UNIT
▭	EXISTING EQUIPMENT

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	DATE
PROJ. MANAGER		
DESIGN-DETAILED	MLG	07/20
CHECKED-REVIEWED	CMB	07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

STATEWIDE

MAINEDOT CLOUD HOSTED NETWORK (22 OF 25)

SHEET NUMBER

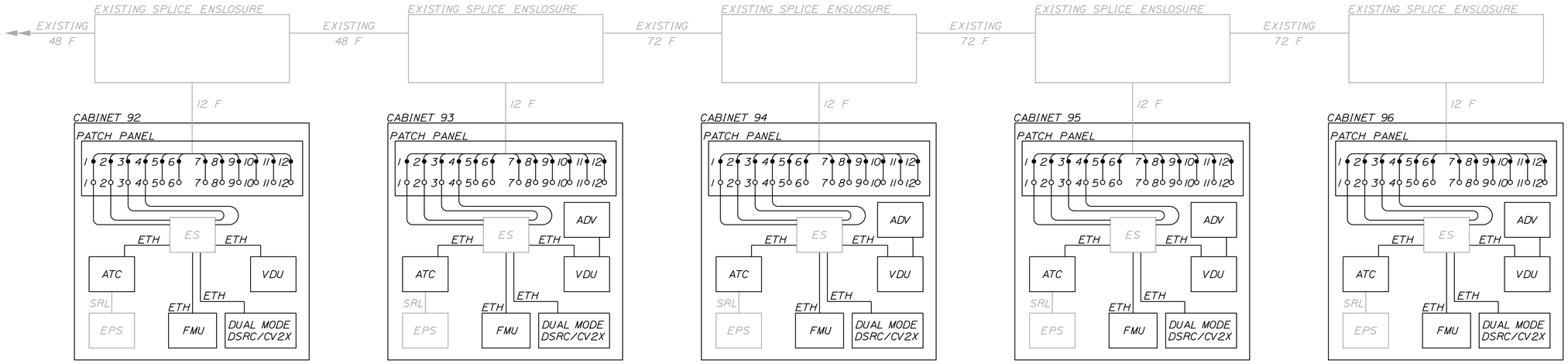
AG

OF 358

Filename: OAG_Comm_22.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

WATERVILLE

LOCATION 92
MAIN ST / EUSTIS PKWY



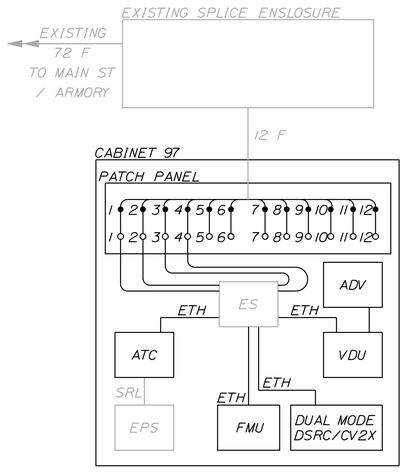
LOCATION 93
MAIN ST / ARMORY DR

LOCATION 94
MAIN ST / COMMONS DR

LOCATION 95
MAIN ST / I-95 NB

LOCATION 96
MAIN ST / I-95 SB

LOCATION 97
COLLEGE AVE / HAZELWOOD AVE



FIBER OPTIC CABLE CONSTRUCTION NOTES:

1. MANUFACTURED PIGTAILS SHALL BE TERMINATED ON PATCH PANELS.
2. FIBER OPTIC CABLE BENDS SHALL NOT EXCEED THE MINIMUM BENDING RADIUS FOR THE CABLE AT ALL TIMES DURING INSTALLATION, MODIFICATION, REPAIR, SPLICING, OR IN THE PERMANENT CONDITION.
3. FIBER OPTIC CABLE SHALL NOT BE SPLICED EXCEPT AS SHOWN ON THE PLANS. FIBERS NOT TERMINATED IN A SPLICE ENCLOSURE OR SHOWN AS THROUGH FIBERS SHALL NOT BE CUT.

LEGEND

●—○	FIBER OPTIC PIGTAIL
●—●	FIBER OPTIC SPLICE
ADV -	ADVANCE VEHICLE DETECTION
ATC -	ADVANCED TRANSPORTATION CONTROLLER
DSRC -	DEDICATED SHORT RANGE COMMUNICATIONS
ES -	FIBER ETHERNET SWITCH
ETH -	ETHERNET CABLE
SRL-	SERIAL TWISTED PAIR CONNECTION
EPS -	EMERGENCY PREEMPTION SYSTEM
FMU -	FIELD MONITORING UNIT
RU -	RADIO UNIT
VDU -	NON-INVASIVE VIDEO DETECTION UNIT
▭	EXISTING EQUIPMENT

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER	
DESIGN-DETAILED	MLG	JAR 07/20
CHECKED-REVIEWED	CMB	CMB 07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

STATEWIDE

MAINEDOT CLOUD HOSTED NETWORK (23 OF 25)

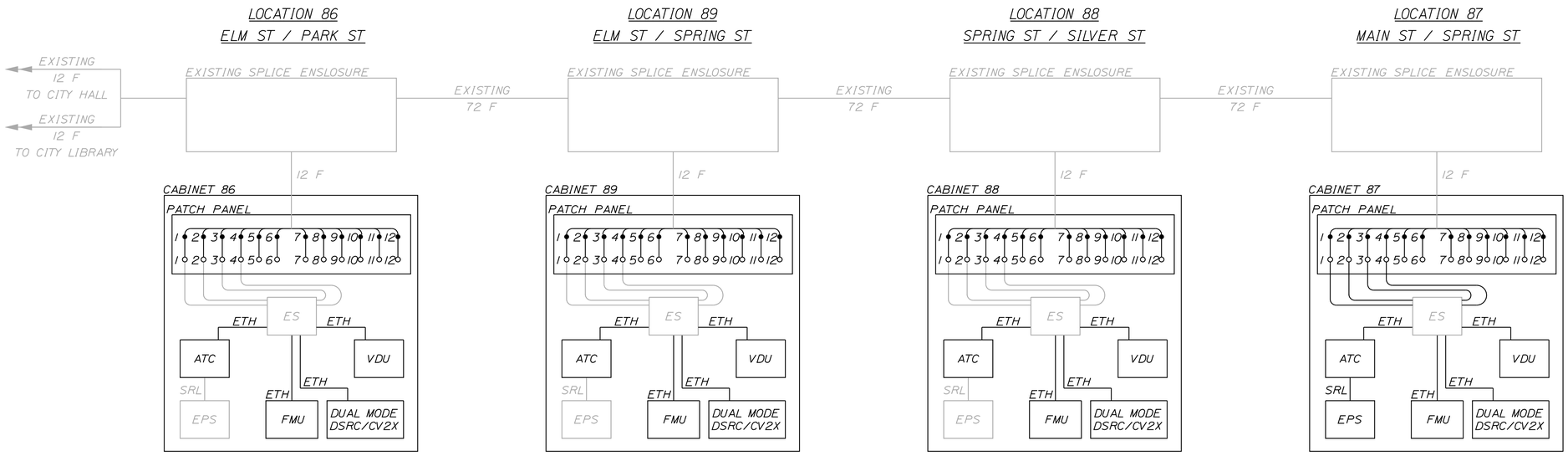
SHEET NUMBER

AH

OF 358

Filename: 0AH_Comm_23.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

WATERVILLE



FIBER OPTIC CABLE CONSTRUCTION NOTES:

1. MANUFACTURED PIGTAILS SHALL BE TERMINATED ON PATCH PANELS.
2. FIBER OPTIC CABLE BENDS SHALL NOT EXCEED THE MINIMUM BENDING RADIUS FOR THE CABLE AT ALL TIMES DURING INSTALLATION, MODIFICATION, REPAIR, SPLICING, OR IN THE PERMANENT CONDITION.
3. FIBER OPTIC CABLE SHALL NOT BE SPLICED EXCEPT AS SHOWN ON THE PLANS. FIBERS NOT TERMINATED IN A SPLICE ENCLOSURE OR SHOWN AS THROUGH FIBERS SHALL NOT BE CUT.

LEGEND

●—○	FIBER OPTIC PIGTAIL
●—	FIBER OPTIC Ssplice
ADV -	ADVANCE VEHICLE DETECTION
ATC -	ADVANCED TRANSPORTATION CONTROLLER
DSRC -	DEDICATED SHORT RANGE COMMUNICATIONS
ES -	FIBER ETHERNET SWITCH
ETH -	ETHERNET CABLE
SRL-	SERIAL TWISTED PAIR CONNECTION
EPS -	EMERGENCY PREEMPTION SYSTEM
FMU -	FIELD MONITORING UNIT
RU -	RADIO UNIT
VDU -	NON-INVASIVE VIDEO DETECTION UNIT
▭	EXISTING EQUIPMENT

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER		
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

STATEWIDE

MAINEDOT CLOUD HOSTED NETWORK (24 OF 25)

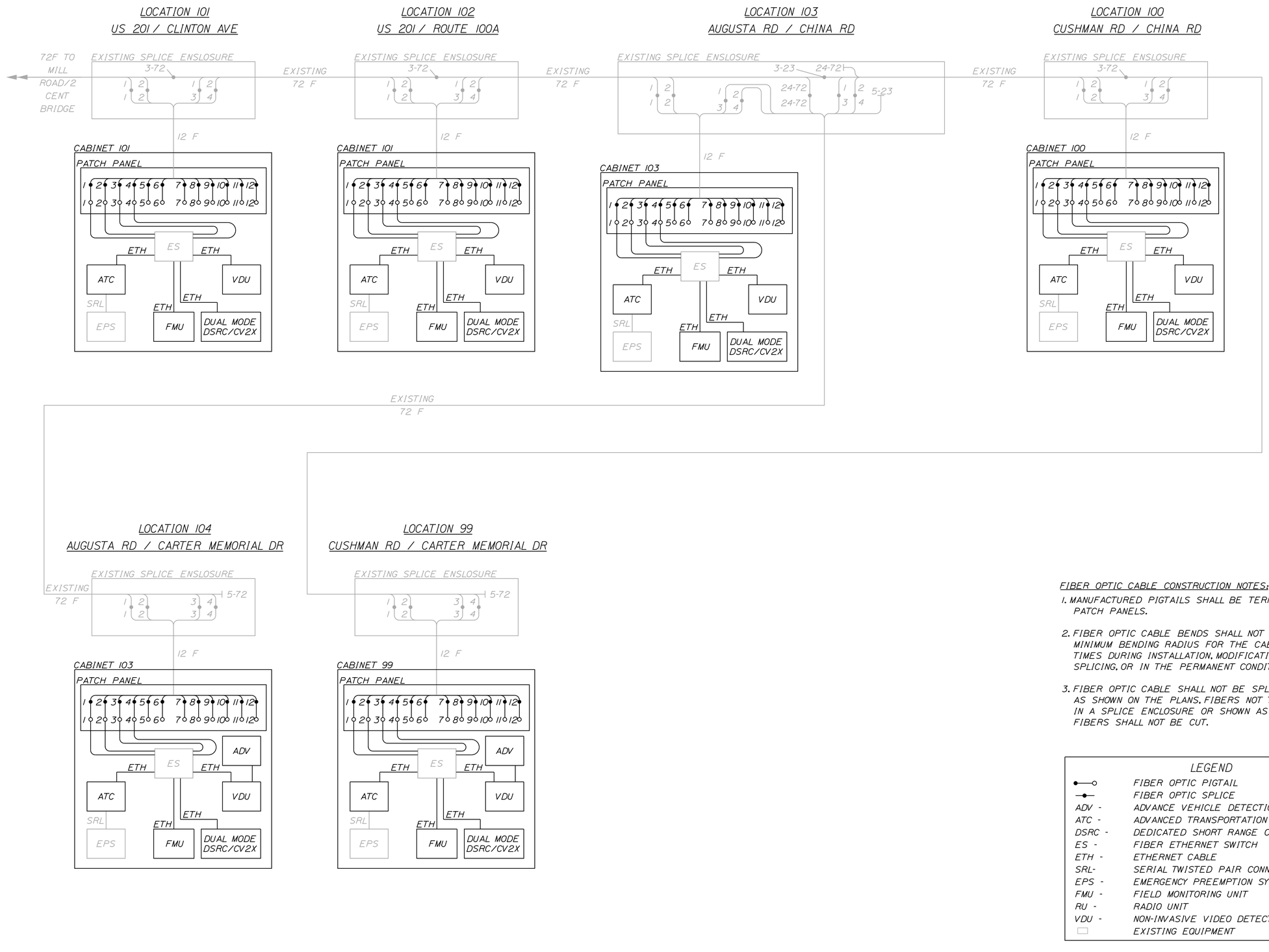
SHEET NUMBER

AI

OF 358

Division: HIGHWAY
Username: jorobert
Date:11/24/2020
Filename: 0AL_Comm_24.dgn

WINSLOW



FIBER OPTIC CABLE CONSTRUCTION NOTES:

1. MANUFACTURED PIGTAILS SHALL BE TERMINATED ON PATCH PANELS.
2. FIBER OPTIC CABLE BENDS SHALL NOT EXCEED THE MINIMUM BENDING RADIUS FOR THE CABLE AT ALL TIMES DURING INSTALLATION, MODIFICATION, REPAIR, SPLICING, OR IN THE PERMANENT CONDITION.
3. FIBER OPTIC CABLE SHALL NOT BE SPLICED EXCEPT AS SHOWN ON THE PLANS. FIBERS NOT TERMINATED IN A SPLICE ENCLOSURE OR SHOWN AS THROUGH FIBERS SHALL NOT BE CUT.

LEGEND

●—○	FIBER OPTIC PIGTAIL
●—●	FIBER OPTIC Ssplice
ADV -	ADVANCE VEHICLE DETECTION
ATC -	ADVANCED TRANSPORTATION CONTROLLER
DSRC -	DEDICATED SHORT RANGE COMMUNICATIONS
ES -	FIBER ETHERNET SWITCH
ETH -	ETHERNET CABLE
SRL-	SERIAL TWISTED PAIR CONNECTION
EPS -	EMERGENCY PREEMPTION SYSTEM
FMU -	FIELD MONITORING UNIT
RU -	RADIO UNIT
VDU -	NON-INVASIVE VIDEO DETECTION UNIT
▭	EXISTING EQUIPMENT

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER		
DESIGN-DETAILED	MLG	BY	DATE
CHECKED-REVIEWED	CMB	JAR	07/20
DESIGN2-DETAILED2		CMB	07/20
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

STATEWIDE

MAINEDOT CLOUD HOSTED NETWORK (25 OF 25)

SHEET NUMBER

AJ

OF 358

Filename: OAJ_Comm_25.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

SANFORD

SR 109 (MAIN ST) / WALMART DRIVEWAY - FIBER OPTIC SPLICE TABLE

	CABLE	STRAND	CONNECTION TYPE	CABLE	STRAND	DESCRIPTION
SPLICE ENCLOSURE 60	144F TO SOUTH	1-A	UNTERMINATED	CONTINUOUS		
	144F TO SOUTH	A	SPLICE	12F TO CONTROLLER CABINET 60	1	SPLICE TO 12F DROP CABLE
	144F TO SOUTH	B	SPLICE	12F TO CONTROLLER CABINET 60	2	SPLICE TO 12F DROP CABLE
	144F TO SOUTH	B-144	UNTERMINATED	CONTINUOUS		
PATCH PANEL AT CONTROLLER CABINET 60 (MAIN ST / WALMART)	12F TO SE 60	1	SPLICE	PIGTAIL	-	ES, PP POSITION 1
	12F TO SE 60	2	SPLICE	PIGTAIL	-	ES, PP POSITION 2
	12F TO SE 60	3	SPLICE	PIGTAIL	-	SPARE, PP POSITION 3
	12F TO SE 60	4	SPLICE	PIGTAIL	-	SPARE, PP POSITION 4
	12F TO SE 60	5	SPLICE	PIGTAIL	-	SPARE, PP POSITION 5
	12F TO SE 60	6	SPLICE	PIGTAIL	-	SPARE, PP POSITION 6
	12F TO SE 60	7	SPLICE	PIGTAIL	-	SPARE, PP POSITION 7
	12F TO SE 60	8	SPLICE	PIGTAIL	-	SPARE, PP POSITION 8
	12F TO SE 60	9	SPLICE	PIGTAIL	-	SPARE, PP POSITION 9
	12F TO SE 60	10	SPLICE	PIGTAIL	-	SPARE, PP POSITION 10
	12F TO SE 60	11	SPLICE	PIGTAIL	-	SPARE, PP POSITION 11
	12F TO SE 60	12	SPLICE	PIGTAIL	-	SPARE, PP POSITION 12

SR 109 (MAIN ST) / WESTVIEW DR - FIBER OPTIC SPLICE TABLE

	CABLE	STRAND	CONNECTION TYPE	CABLE	STRAND	DESCRIPTION
SPLICE ENCLOSURE 63	144F TO SHAWS	1-A	UNTERMINATED	CONTINUOUS		
	144F TO SHAWS	A	SPLICE	12F TO CONTROLLER CABINET 63	1	SPLICE TO 12F DROP CABLE
	144F TO SHAWS	B	SPLICE	12F TO CONTROLLER CABINET 63	2	SPLICE TO 12F DROP CABLE
	144F TO SHAWS	B-144	UNTERMINATED	CONTINUOUS		
PATCH PANEL AT CONTROLLER CABINET 63 (MAIN ST / WESTVIEW DR)	12F TO SE 63	1	SPLICE	PIGTAIL	-	ES, PP POSITION 1
	12F TO SE 63	2	SPLICE	PIGTAIL	-	ES, PP POSITION 2
	12F TO SE 63	3	SPLICE	PIGTAIL	-	SPARE, PP POSITION 3
	12F TO SE 63	4	SPLICE	PIGTAIL	-	SPARE, PP POSITION 4
	12F TO SE 63	5	SPLICE	PIGTAIL	-	SPARE, PP POSITION 5
	12F TO SE 63	6	SPLICE	PIGTAIL	-	SPARE, PP POSITION 6
	12F TO SE 63	7	SPLICE	PIGTAIL	-	SPARE, PP POSITION 7
	12F TO SE 63	8	SPLICE	PIGTAIL	-	SPARE, PP POSITION 8
	12F TO SE 63	9	SPLICE	PIGTAIL	-	SPARE, PP POSITION 9
	12F TO SE 63	10	SPLICE	PIGTAIL	-	SPARE, PP POSITION 10
	12F TO SE 63	11	SPLICE	PIGTAIL	-	SPARE, PP POSITION 11
	12F TO SE 63	12	SPLICE	PIGTAIL	-	SPARE, PP POSITION 12

SR 109 (MAIN ST) / JAGGER MILL RD - FIBER OPTIC SPLICE TABLE

	CABLE	STRAND	CONNECTION TYPE	CABLE	STRAND	DESCRIPTION
SPLICE ENCLOSURE 61	144F TO WALMART	1-A	UNTERMINATED	CONTINUOUS		
	144F TO WALMART	A	SPLICE	12F TO CONTROLLER CABINET 61	1	SPLICE TO 12F DROP CABLE
	144F TO WALMART	B	SPLICE	12F TO CONTROLLER CABINET 61	2	SPLICE TO 12F DROP CABLE
	144F TO WALMART	B-144	UNTERMINATED	CONTINUOUS		
PATCH PANEL AT CONTROLLER CABINET 61 (MAIN ST / JAGGER MILL RD)	12F TO SE 61	1	SPLICE	PIGTAIL	-	ES, PP POSITION 1
	12F TO SE 61	2	SPLICE	PIGTAIL	-	ES, PP POSITION 2
	12F TO SE 61	3	SPLICE	PIGTAIL	-	SPARE, PP POSITION 3
	12F TO SE 61	4	SPLICE	PIGTAIL	-	SPARE, PP POSITION 4
	12F TO SE 61	5	SPLICE	PIGTAIL	-	SPARE, PP POSITION 5
	12F TO SE 61	6	SPLICE	PIGTAIL	-	SPARE, PP POSITION 6
	12F TO SE 61	7	SPLICE	PIGTAIL	-	SPARE, PP POSITION 7
	12F TO SE 61	8	SPLICE	PIGTAIL	-	SPARE, PP POSITION 8
	12F TO SE 61	9	SPLICE	PIGTAIL	-	SPARE, PP POSITION 9
	12F TO SE 61	10	SPLICE	PIGTAIL	-	SPARE, PP POSITION 10
	12F TO SE 61	11	SPLICE	PIGTAIL	-	SPARE, PP POSITION 11
	12F TO SE 61	12	SPLICE	PIGTAIL	-	SPARE, PP POSITION 12

SR 109 (MAIN ST) / OLD MILL RD - FIBER OPTIC SPLICE TABLE

	CABLE	STRAND	CONNECTION TYPE	CABLE	STRAND	DESCRIPTION
SPLICE ENCLOSURE 64	144F TO WESTVIEW	1-A	UNTERMINATED	CONTINUOUS		
	144F TO WESTVIEW	A	SPLICE	12F TO CONTROLLER CABINET 64	1	SPLICE TO 12F DROP CABLE
	144F TO WESTVIEW	B	SPLICE	12F TO CONTROLLER CABINET 64	2	SPLICE TO 12F DROP CABLE
	144F TO WESTVIEW	B-144	UNTERMINATED	CONTINUOUS		
PATCH PANEL AT CONTROLLER CABINET 64 (MAIN ST / OLD MILL RD)	12F TO SE 64	1	SPLICE	PIGTAIL	-	ES, PP POSITION 1
	12F TO SE 64	2	SPLICE	PIGTAIL	-	ES, PP POSITION 2
	12F TO SE 64	3	SPLICE	PIGTAIL	-	SPARE, PP POSITION 3
	12F TO SE 64	4	SPLICE	PIGTAIL	-	SPARE, PP POSITION 4
	12F TO SE 64	5	SPLICE	PIGTAIL	-	SPARE, PP POSITION 5
	12F TO SE 64	6	SPLICE	PIGTAIL	-	SPARE, PP POSITION 6
	12F TO SE 64	7	SPLICE	PIGTAIL	-	SPARE, PP POSITION 7
	12F TO SE 64	8	SPLICE	PIGTAIL	-	SPARE, PP POSITION 8
	12F TO SE 64	9	SPLICE	PIGTAIL	-	SPARE, PP POSITION 9
	12F TO SE 64	10	SPLICE	PIGTAIL	-	SPARE, PP POSITION 10
	12F TO SE 64	11	SPLICE	PIGTAIL	-	SPARE, PP POSITION 11
	12F TO SE 64	12	SPLICE	PIGTAIL	-	SPARE, PP POSITION 12

SR 109 (MAIN ST) / SHAW'S DRIVEWAY - FIBER OPTIC SPLICE TABLE

	CABLE	STRAND	CONNECTION TYPE	CABLE	STRAND	DESCRIPTION
PATCH PANEL AT CONTROLLER CABINET 62 (MAIN ST / SHAWS)	12F TO SE 62	1	SPLICE	PIGTAIL	-	ES, PP POSITION 1
	12F TO SE 62	2	SPLICE	PIGTAIL	-	ES, PP POSITION 2
	12F TO SE 62	3	SPLICE	PIGTAIL	-	SPARE, PP POSITION 3
	12F TO SE 62	4	SPLICE	PIGTAIL	-	SPARE, PP POSITION 4
	12F TO SE 62	5	SPLICE	PIGTAIL	-	SPARE, PP POSITION 5
	12F TO SE 62	6	SPLICE	PIGTAIL	-	SPARE, PP POSITION 6
	12F TO SE 62	7	SPLICE	PIGTAIL	-	SPARE, PP POSITION 7
	12F TO SE 62	8	SPLICE	PIGTAIL	-	SPARE, PP POSITION 8
	12F TO SE 62	9	SPLICE	PIGTAIL	-	SPARE, PP POSITION 9
	12F TO SE 62	10	SPLICE	PIGTAIL	-	SPARE, PP POSITION 10
	12F TO SE 62	11	SPLICE	PIGTAIL	-	SPARE, PP POSITION 11
	12F TO SE 62	12	SPLICE	PIGTAIL	-	SPARE, PP POSITION 12

SR 109 (MAIN ST) / EMERY ST - FIBER OPTIC SPLICE TABLE

	CABLE	STRAND	CONNECTION TYPE	CABLE	STRAND	DESCRIPTION
SPLICE ENCLOSURE 65	144F TO OLD MILL RD	1-A	UNTERMINATED	CONTINUOUS		
	144F TO OLD MILL RD	A	SPLICE	12F TO CONTROLLER CABINET 65	1	SPLICE TO 12F DROP CABLE
	144F TO OLD MILL RD	B	SPLICE	12F TO CONTROLLER CABINET 65	2	SPLICE TO 12F DROP CABLE
	144F TO OLD MILL RD	B-144	UNTERMINATED	CONTINUOUS		
PATCH PANEL AT CONTROLLER CABINET 65 (MAIN ST / EMERY ST)	12F TO SE 65	1	SPLICE	PIGTAIL	-	ES, PP POSITION 1
	12F TO SE 65	2	SPLICE	PIGTAIL	-	ES, PP POSITION 2
	12F TO SE 65	3	SPLICE	PIGTAIL	-	SPARE, PP POSITION 3
	12F TO SE 65	4	SPLICE	PIGTAIL	-	SPARE, PP POSITION 4
	12F TO SE 65	5	SPLICE	PIGTAIL	-	SPARE, PP POSITION 5
	12F TO SE 65	6	SPLICE	PIGTAIL	-	SPARE, PP POSITION 6
	12F TO SE 65	7	SPLICE	PIGTAIL	-	SPARE, PP POSITION 7
	12F TO SE 65	8	SPLICE	PIGTAIL	-	SPARE, PP POSITION 8
	12F TO SE 65	9	SPLICE	PIGTAIL	-	SPARE, PP POSITION 9
	12F TO SE 65	10	SPLICE	PIGTAIL	-	SPARE, PP POSITION 10
	12F TO SE 65	11	SPLICE	PIGTAIL	-	SPARE, PP POSITION 11
	12F TO SE 65	12	SPLICE	PIGTAIL	-	SPARE, PP POSITION 12

FIBER OPTIC SPLICE TABLE NOTES:

1. ALL FIBER OPTIC PIGTAILS SHALL BE TERMINATED ON PATCH PANELS (PP).

2. DETAILS ON FIBER NUMBERS TO TIE INTO SANFORDS' EXISTING BACKBONE WILL BE PROVIDED TO THE CONTRACTOR PRIOR TO INITIATING WORK.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER	BY	DATE
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SANFORD

FIBER OPTIC SPLICE TABLES (1 OF 2)

SHEET NUMBER

AK

OF 358

Filename: OAK_Splice_S_01.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

SANFORD

SR 4A/ RT 202 / RIVER ST - FIBER OPTIC SPLICE TABLE

	CABLE	STRAND	CONNECTION TYPE	CABLE	STRAND	DESCRIPTION
SPLICE ENCLOSURE 69	144F TO EMERY ST	1-A	UNTERMINATED	CONTINUOUS		
	144F TO EMERY ST	A	SPLICE	12F TO CONTROLLER CABINET 69	1	SPLICE TO 12F DROP CABLE
	144F TO EMERY ST	B	SPLICE	12F TO CONTROLLER CABINET 69	2	SPLICE TO 12F DROP CABLE
	144F TO EMERY ST	B-144	UNTERMINATED	CONTINUOUS		
PATCH PANEL AT CONTROLLER CABINET 69 (RT 4A/202 / RIVER ST)	12F TO SE 69	1	SPLICE	PIGTAIL	-	ES, PP POSITION 1
	12F TO SE 69	2	SPLICE	PIGTAIL	-	ES, PP POSITION 2
	12F TO SE 69	3	SPLICE	PIGTAIL	-	SPARE, PP POSITION 3
	12F TO SE 69	4	SPLICE	PIGTAIL	-	SPARE, PP POSITION 4
	12F TO SE 69	5	SPLICE	PIGTAIL	-	SPARE, PP POSITION 5
	12F TO SE 69	6	SPLICE	PIGTAIL	-	SPARE, PP POSITION 6
	12F TO SE 69	7	SPLICE	PIGTAIL	-	SPARE, PP POSITION 7
	12F TO SE 69	8	SPLICE	PIGTAIL	-	SPARE, PP POSITION 8
	12F TO SE 69	9	SPLICE	PIGTAIL	-	SPARE, PP POSITION 9
	12F TO SE 69	10	SPLICE	PIGTAIL	-	SPARE, PP POSITION 10
	12F TO SE 69	11	SPLICE	PIGTAIL	-	SPARE, PP POSITION 11
	12F TO SE 69	12	SPLICE	PIGTAIL	-	SPARE, PP POSITION 12

SR 109 (MAIN ST) / RT 224 (BRIDGE ST) / RT 11A (OAK ST) - FIBER OPTIC SPLICE TABLE

	CABLE	STRAND	CONNECTION TYPE	CABLE	STRAND	DESCRIPTION
SPLICE ENCLOSURE 68	144F TO RIVER ST	1-A	UNTERMINATED	CONTINUOUS		
	144F TO RIVER ST	A	SPLICE	12F TO CONTROLLER CABINET 68	1	SPLICE TO 12F DROP CABLE
	144F TO RIVER ST	B	SPLICE	12F TO CONTROLLER CABINET 68	2	SPLICE TO 12F DROP CABLE
	144F TO RIVER ST	B-144	UNTERMINATED	CONTINUOUS		
PATCH PANEL AT CONTROLLER CABINET 68 (MAIN ST/ BRIDGE ST /OAK ST)	12F TO SE 68	1	SPLICE	PIGTAIL	-	ES, PP POSITION 1
	12F TO SE 68	2	SPLICE	PIGTAIL	-	ES, PP POSITION 2
	12F TO SE 68	3	SPLICE	PIGTAIL	-	SPARE, PP POSITION 3
	12F TO SE 68	4	SPLICE	PIGTAIL	-	SPARE, PP POSITION 4
	12F TO SE 68	5	SPLICE	PIGTAIL	-	SPARE, PP POSITION 5
	12F TO SE 68	6	SPLICE	PIGTAIL	-	SPARE, PP POSITION 6
	12F TO SE 68	7	SPLICE	PIGTAIL	-	SPARE, PP POSITION 7
	12F TO SE 68	8	SPLICE	PIGTAIL	-	SPARE, PP POSITION 8
	12F TO SE 68	9	SPLICE	PIGTAIL	-	SPARE, PP POSITION 9
	12F TO SE 68	10	SPLICE	PIGTAIL	-	SPARE, PP POSITION 10
	12F TO SE 68	11	SPLICE	PIGTAIL	-	SPARE, PP POSITION 11
	12F TO SE 68	12	SPLICE	PIGTAIL	-	SPARE, PP POSITION 12

SR 4A/ RT 202 (COTTAGE ST) / GRAMMAR RD - FIBER OPTIC SPLICE TABLE

	CABLE	STRAND	CONNECTION TYPE	CABLE	STRAND	DESCRIPTION
SPLICE ENCLOSURE 72	144F TO RIVER ST	1-A	UNTERMINATED	CONTINUOUS		
	144F TO RIVER ST	A	SPLICE	12F TO CONTROLLER CABINET 72	1	SPLICE TO 12F DROP CABLE
	144F TO RIVER ST	B	SPLICE	12F TO CONTROLLER CABINET 72	2	SPLICE TO 12F DROP CABLE
	144F TO RIVER ST	B-144	UNTERMINATED	CONTINUOUS		
PATCH PANEL AT CONTROLLER CABINET 72 (RT 4A/202 / GRAMMAR RD)	12F TO SE 72	1	SPLICE	PIGTAIL	-	ES, PP POSITION 1
	12F TO SE 72	2	SPLICE	PIGTAIL	-	ES, PP POSITION 2
	12F TO SE 72	3	SPLICE	PIGTAIL	-	SPARE, PP POSITION 3
	12F TO SE 72	4	SPLICE	PIGTAIL	-	SPARE, PP POSITION 4
	12F TO SE 72	5	SPLICE	PIGTAIL	-	SPARE, PP POSITION 5
	12F TO SE 72	6	SPLICE	PIGTAIL	-	SPARE, PP POSITION 6
	12F TO SE 72	7	SPLICE	PIGTAIL	-	SPARE, PP POSITION 7
	12F TO SE 72	8	SPLICE	PIGTAIL	-	SPARE, PP POSITION 8
	12F TO SE 72	9	SPLICE	PIGTAIL	-	SPARE, PP POSITION 9
	12F TO SE 72	10	SPLICE	PIGTAIL	-	SPARE, PP POSITION 10
	12F TO SE 72	11	SPLICE	PIGTAIL	-	SPARE, PP POSITION 11
	12F TO SE 72	12	SPLICE	PIGTAIL	-	SPARE, PP POSITION 12

MAPLE ST/NASON ST PEDESTRIAN CROSSING STREET LIGHT - FIBER OPTIC SPLICE TABLE

	CABLE	STRAND	CONNECTION TYPE	CABLE	STRAND	DESCRIPTION
SPLICE ENCLOSURE 67	144F TO RIVER ST	1-A	UNTERMINATED	CONTINUOUS		
	144F TO RIVER ST	A	SPLICE	12F TO CONTROLLER CABINET 67	1	SPLICE TO 12F DROP CABLE
	144F TO RIVER ST	B	SPLICE	12F TO CONTROLLER CABINET 67	2	SPLICE TO 12F DROP CABLE
	144F TO RIVER ST	B-144	UNTERMINATED	CONTINUOUS		
PATCH PANEL AT CONTROLLER CABINET 67 (MAIN ST/ WINTER ST /LEBANON ST)	12F TO SE 67	1	SPLICE	PIGTAIL	-	ES, PP POSITION 1
	12F TO SE 67	2	SPLICE	PIGTAIL	-	ES, PP POSITION 2
	12F TO SE 67	3	SPLICE	PIGTAIL	-	SPARE, PP POSITION 3
	12F TO SE 67	4	SPLICE	PIGTAIL	-	SPARE, PP POSITION 4
	12F TO SE 67	5	SPLICE	PIGTAIL	-	SPARE, PP POSITION 5
	12F TO SE 67	6	SPLICE	PIGTAIL	-	SPARE, PP POSITION 6
	12F TO SE 67	7	SPLICE	PIGTAIL	-	SPARE, PP POSITION 7
	12F TO SE 67	8	SPLICE	PIGTAIL	-	SPARE, PP POSITION 8
	12F TO SE 67	9	SPLICE	PIGTAIL	-	SPARE, PP POSITION 9
	12F TO SE 67	10	SPLICE	PIGTAIL	-	SPARE, PP POSITION 10
	12F TO SE 67	11	SPLICE	PIGTAIL	-	SPARE, PP POSITION 11
	12F TO SE 67	12	SPLICE	PIGTAIL	-	SPARE, PP POSITION 12

SR 224 (PLEASANT ST/ SHAWS RIDGE RD) / RIVER ST - FIBER OPTIC SPLICE TABLE

	CABLE	STRAND	CONNECTION TYPE	CABLE	STRAND	DESCRIPTION
SPLICE ENCLOSURE 71	144F TO GRAMMAR RD	1-A	UNTERMINATED	CONTINUOUS		
	144F TO GRAMMAR RD	A	SPLICE	12F TO CONTROLLER CABINET 71	1	SPLICE TO 12F DROP CABLE
	144F TO GRAMMAR RD	B	SPLICE	12F TO CONTROLLER CABINET 71	2	SPLICE TO 12F DROP CABLE
	144F TO GRAMMAR RD	B-144	UNTERMINATED	CONTINUOUS		
PATCH PANEL AT CONTROLLER CABINET 71 (RT 224/ RIVER ST)	12F TO SE 71	1	SPLICE	PIGTAIL	-	ES, PP POSITION 1
	12F TO SE 71	2	SPLICE	PIGTAIL	-	ES, PP POSITION 2
	12F TO SE 71	3	SPLICE	PIGTAIL	-	SPARE, PP POSITION 3
	12F TO SE 71	4	SPLICE	PIGTAIL	-	SPARE, PP POSITION 4
	12F TO SE 71	5	SPLICE	PIGTAIL	-	SPARE, PP POSITION 5
	12F TO SE 71	6	SPLICE	PIGTAIL	-	SPARE, PP POSITION 6
	12F TO SE 71	7	SPLICE	PIGTAIL	-	SPARE, PP POSITION 7
	12F TO SE 71	8	SPLICE	PIGTAIL	-	SPARE, PP POSITION 8
	12F TO SE 71	9	SPLICE	PIGTAIL	-	SPARE, PP POSITION 9
	12F TO SE 71	10	SPLICE	PIGTAIL	-	SPARE, PP POSITION 10
	12F TO SE 71	11	SPLICE	PIGTAIL	-	SPARE, PP POSITION 11
	12F TO SE 71	12	SPLICE	PIGTAIL	-	SPARE, PP POSITION 12

FIBER OPTIC SPLICE TABLE NOTES:

1. ALL FIBER OPTIC PIGTAILS SHALL BE TERMINATED ON PATCH PANELS (PP).

2. DETAILS ON FIBER NUMBERS TO TIE INTO SANFORDS' EXISTING BACKBONE WILL BE PROVIDED TO THE CONTRACTOR PRIOR TO INITIATING WORK.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	BY	DATE
PROJ. MANAGER	B. KEEZER	
DESIGN-DETAILED	JAR	07/20
CHECKED-REVIEWED	CMB	07/20
DESIGN2-DETAILED2	MLG	
DESIGN3-DETAILED3	CMB	
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SANFORD

FIBER OPTIC SPLICE TABLES (2 OF 2)

SHEET NUMBER

AL

OF 358

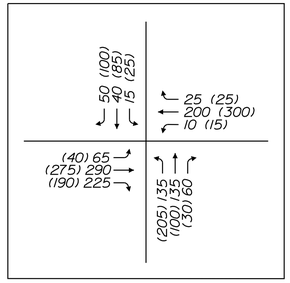
Filename: 0AL_Splice_S_02.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

LIST OF WORK ITEMS

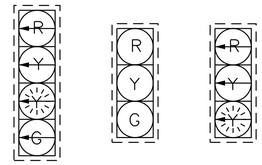
EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	8
FURNISH AND INSTALL ONE-WAY 4-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARM UPRIGHTS WITH BRACKET	3
FURNISH AND INSTALL 16-INCH L.E.D. COUNTDOWN PEDESTRIAN LENS IN EXISTING HOUSING	8
FURNISH AND INSTALL 19-INCH 1RU FIBER OPTIC 12-POSITION PATCH PANEL WITH PIGTAILS	1
RESET FIBER OPTIC ETHERNET SWITCH WITH FIBER OPTIC INTERFACES	1
FURNISH AND INSTALL MAST ARM MOUNTED SIGNS	8
FURNISH AND INSTALL ADA COMPLIANT ACCESSIBLE PEDESTRIAN SIGNAL (APS) BUTTON WITH 9"X15" R10-3e INFORMATIONAL SIGN	8
REMOVE MAST ARM MOUNTED SIGNS	7
RESET COUNTDOWN PEDESTRIAN SIGNAL HEADS	2
RESET PREEMPTION PHASE SELECTOR	1
RESET EXISTING 12-F FIBER IN PROPOSED CABINET	-
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 4 APPROACHES, COMPLETE (ITEM 643.21)	1 LS

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

SYSTEM DESIGN VOLUMES AM (PM)



PROPOSED INDICATIONS

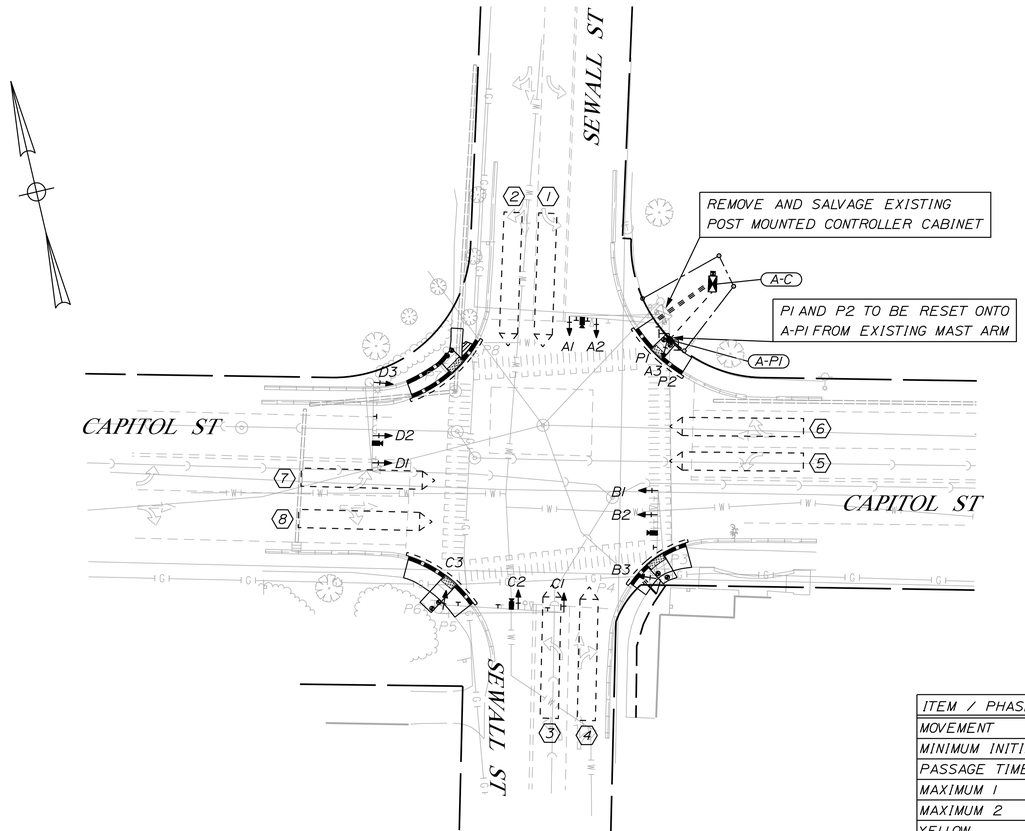


EXISTING INDICATIONS
TO REMAIN OR RELOCATE



P1-P8

NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES
EXISTING COUNTDOWN PEDESTRIAN SIGNAL HEADS SHALL HAVE NEW L.E.D. LENSES INSTALLED



DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	φ CALLED	φ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
1	SEWALL ST SB LEFT	6	6	B	-	-
2	SEWALL ST SB THRU-RIGHT	6	6	B	-	-
3	SEWALL ST NB LEFT	5	5	B	-	-
4	SEWALL ST NB THRU-RIGHT	2	2	B	-	-
5	CAPITOL ST WB LEFT	8	8	B	-	-
6	CAPITOL ST WB THRU-RIGHT	8	8	B	-	-
7	CAPITOL ST EB LEFT	4	4	B	-	-
8	CAPITOL ST EB THRU-RIGHT	4	4	B	-	-

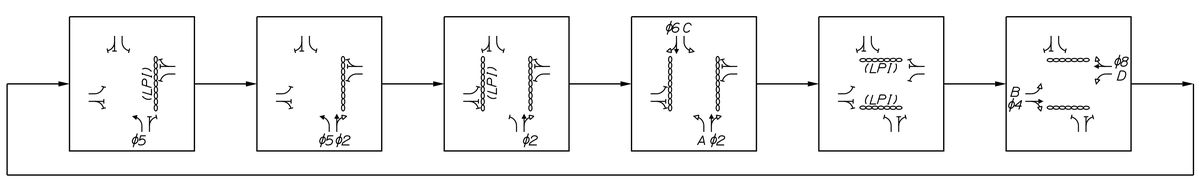
STRUCTURE LIST

STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	L48"xW36"xH48"
A-P1	10' PEDESTAL POLE	24" DIAMETER

PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM

2 | 4
5 6 | 8



OVERLAP PHASING:
OVL A = 5 (PROT) + 6 (PERM)
OVL B = 4
OVL C = 6
OVL D = 8

PHASING NOTES:
1. EACH PEDESTRIAN PHASE SHALL HAVE A MINIMUM OF A 4 SECOND LEADING PEDESTRIAN INTERVAL (LPI).
2. PEDESTRIAN PHASE UPON PUSH BUTTON ACTIVATION ONLY
3. OVERLAP A,B,C, AND D SHALL BE PROGRAMMED FOR FLASHING YELLOW ARROWS

SIGNAL TIMING SCHEDULE

ITEM / PHASE	φ 1	φ 2	φ 3	φ 4	φ 5	φ 6	φ 7	φ 8
MOVEMENT	-	A	-	B	A (LT)	C	-	D
MINIMUM INITIAL	-	10	-	10	5	10	-	10
PASSAGE TIME	-	3.0	-	3.5	3.0	3.0	-	3.5
MAXIMUM 1	-	30	-	25	10	30	-	25
MAXIMUM 2	-	35	-	35	15	35	-	35
YELLOW	-	3.5	-	4.0	3.5	3.5	-	4.0
ALL RED	-	2.5	-	2.0	2.5	2.5	-	2.0
PED WALK	-	5	-	5	-	5	-	5
PED CLEAR	-	18	-	17	-	18	-	17
DYN MAX LIMIT	-	-	-	-	-	-	-	-
DYN MAX STEP	-	-	-	-	-	-	-	-
RECALL	-	OFF	-	SOFT	OFF	OFF	-	SOFT
DETECTOR	-	PR	-	PR	PR	PR	-	PR
PRE-EMPT PRIORITY	-	6	-	3	6	5	-	4
FLASH	-	R	-	Y	R	R	-	Y
DUAL ENTRY	-	ON	-	ON	OFF	ON	-	ON

NOTES: S = SOFT RECALLY = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK
MAX 2 UNDER COORDINATION
IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	BY	DATE
B. KEEZER		
PROJ. MANAGER		
DESIGN-DETAILED	MLG	JAR 07/20
CHECKED-REVIEWED	CMB	CMB 07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
CAPITOL ST AND SEWELL ST

TRAFFIC SIGNAL PLAN

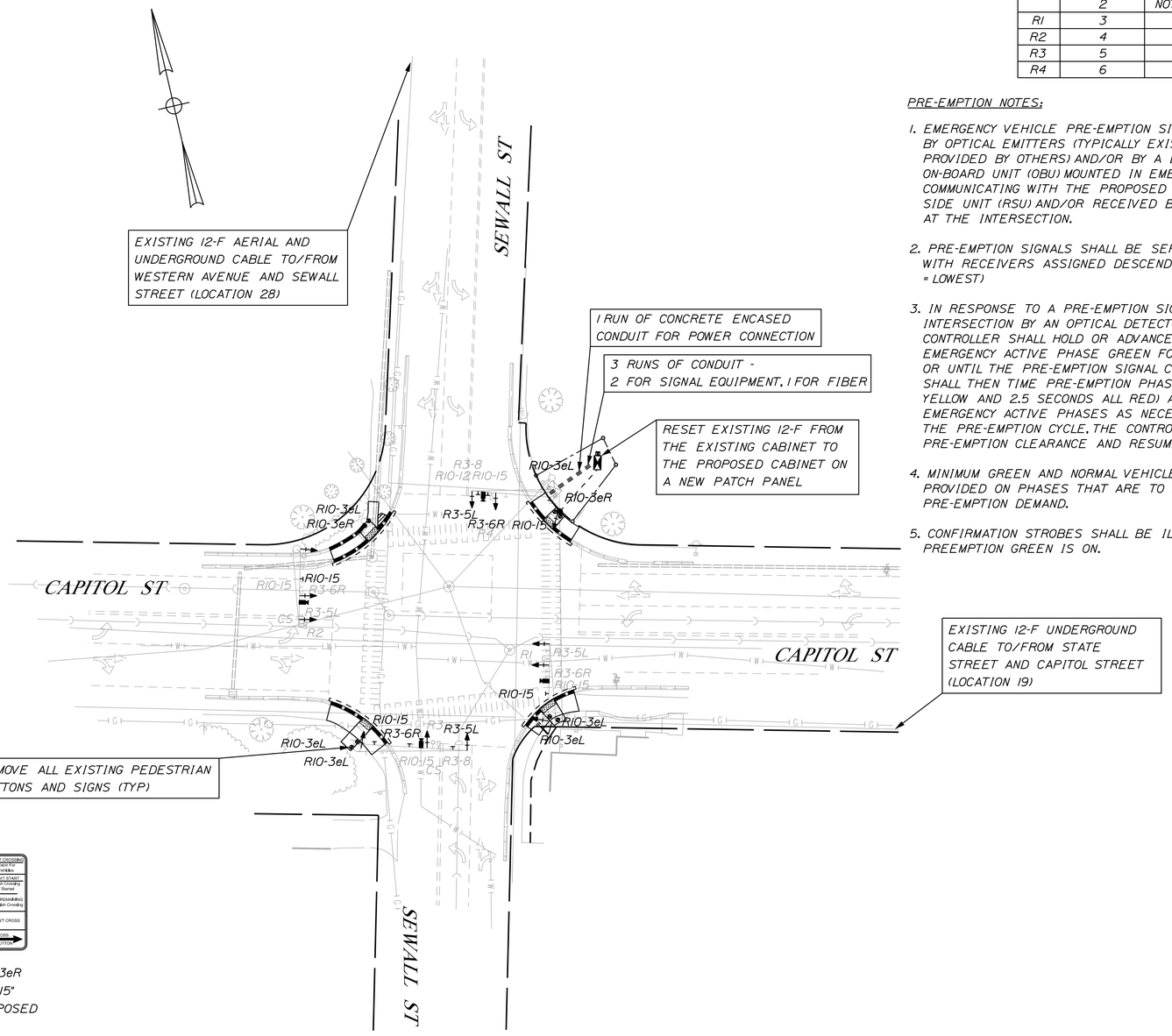
SHEET NUMBER
1
OF 358

Filename: 001_Signal_01.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
FURNISH AND INSTALL (3-INCH) NON-METALLIC CONDUIT (ITEM 626.22)	100 LF
FURNISH AND INSTALL NON-METALLIC CONDUIT, CONCRETE ENCASED (ITEM 626.221)	25 LF
FURNISH AND INSTALL CONTROLLER CABINET FOUNDATION (ITEM 626.35)	1 EA
FURNISH AND INSTALL 24-INCH DIAMETER FOUNDATION (ITEM 626.421)	7 LF
FURNISH AND INSTALL 10-FOOT PEDESTAL POLE (ITEM 643.92)	1 EA
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.



PROPOSED SIGNS



R3-5L	R3-6R	R10-15	R10-3eL	R10-3eR
30"x36"	30"x36"	30"x30"	9"x15"	9"x15"
2-PROPOSED	2-PROPOSED	4-PROPOSED	6-PROPOSED	2-PROPOSED

EXISTING SIGNS



R3-6R	R3-5L	R10-15	R10-12	R3-8
2-RETAINED	2-RETAINED	4-REMOVED	1-REMOVED	2-REMOVED

EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USE/RESERVED	
	2	NOT USE/RESERVED	
R1	3	1	ϕ4
R2	4	2	ϕ8
R3	5	3	ϕ6
R4	6	4	ϕ2&ϕ5

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.
2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 4 = LOWEST)
3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR AND/OR RSU , 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 (4.0 SECONDS YELLOW AND 2.5 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.
4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.

PLAN

25 0 25 50

Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER		
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

AUGUSTA
CAPITOL ST AND SEWELL ST

TRAFFIC SIGNAL PLAN

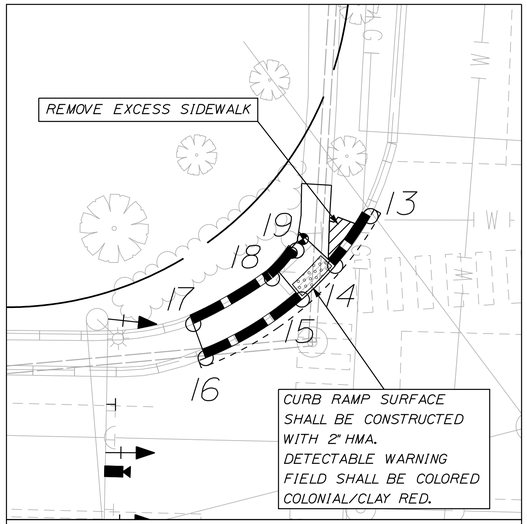
SHEET NUMBER

1A

OF 358

Filename: 001_Signal_01a.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

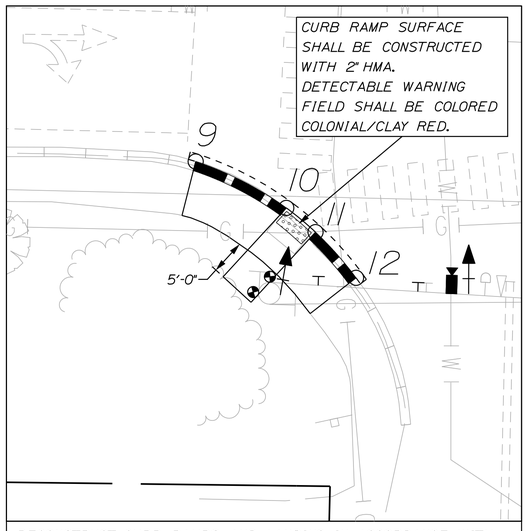
D CORNER - NW DETAIL



RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).
TRANSITION LENGTH REQUIRED FOR THE WESTERN CURB RAMP SHALL BE 13.5'. SEE MAINEDOT STANDARD DETAIL 801(13).

10 0 10 20
Scale of Feet

C CORNER - SW DETAIL

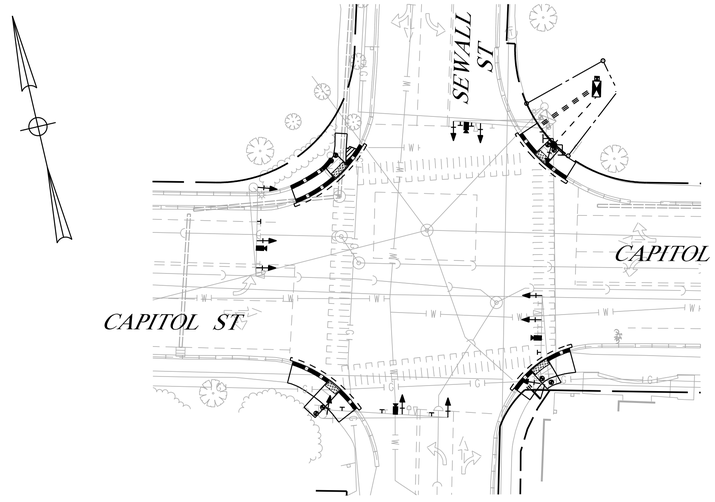


RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).
TRANSITION LENGTH REQUIRED FOR THE WESTERN CURB RAMP SHALL BE 13.5'. SEE MAINEDOT STANDARD DETAIL 801(13).
EXTEND LANDING TO ACCESS THE PEDESTRIAN BUTTONS.
SEE DETAIL ON SHEET H.

10 0 10 20
Scale of Feet

PT. TO PT.	RADIUS (FT)	ITEM 608.26 - CURB RAMP DETECTABLE WARNING FIELD		ITEM 609.12 - VERTICAL CURB TYPE I - CIRCULAR (LF)	ITEM 609.222 - TERMINAL CURB TYPE I - CIRCULAR (LF)	COMMENT
		LENGTH (FT)	QTY (SF)			
1 TO 2	50.0				8.0	
* 2 TO 3	50.0	5.2	8.8			2.9% CROSS SLOPE
3 TO 4	50.0				8.0	
5 TO 6	34.0				8.0	
* 6 TO 7	34.0	6.9	12.2			3.9% CROSS SLOPE
7 TO 8	34.0				8.0	
9 TO 10	43.8				13.5	
* 10 TO 11	42.5	5.0	8.7			3.2% CROSS SLOPE
11 TO 12	43.8				8.0	
13 TO 14	43.5				8.0	
* 14 TO 15	43.5	6.3	10.9			3.2% CROSS SLOPE
15 TO 16	43.5				15.0	
17 TO 18	60.0			11.7		
18 TO 19	15.9			4.5		

* NON-COMPLIANT CURB RAMP ELEMENT - THE EXISTING GUTTER LINE PROFILE IS GREATER THAN 2%. THEREFORE THE LEVEL LANDING CROSS SLOPE AND/OR RUNNING SLOPE WILL BE GREATER THAN THE 2% AND 8.33% MAXIMUM ALLOWABLE, RESPECTIVELY. THE COMMENT IS THE MAXIMUM VALUE FOR PROPOSED LEVEL OF COMPLIANCE.



ALL CURB RAMPS SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND MAINEDOT STANDARD DETAILS 801(11) to 801(26) AS NOTED. AS WELL AS DETAILS PROVIDED ON SHEET H.

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
COMMON EXCAVATION (ITEM 203.20)	2.2 CY
HOT MIX ASPHALT, 9.5 MM NOMINAL MAXIMUM SIZE (ITEM 403.210)	8.4 TONS
PLAIN CONCRETE SIDEWALK (ITEM 608.07)	16.9 SY
BRICK SIDEWALK WITH BITUMINOUS BASE (ITEM 608.15)	14.8 SY
CURB RAMP DETECTABLE WARNING FIELD (ITEM 608.26)	40.6 SF

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
CONSTRUCT SIDEWALK (ITEM 608.45)	4.2 SY
REGRADING SIDEWALK (ITEM 608.46)	67.2 SY
VERTICAL CURB TYPE I - CIRCULAR (ITEM 609.12)	16.2 LF
TERMINAL CURB TYPE I - CIRCULAR (ITEM 609.222)	76.5 LF

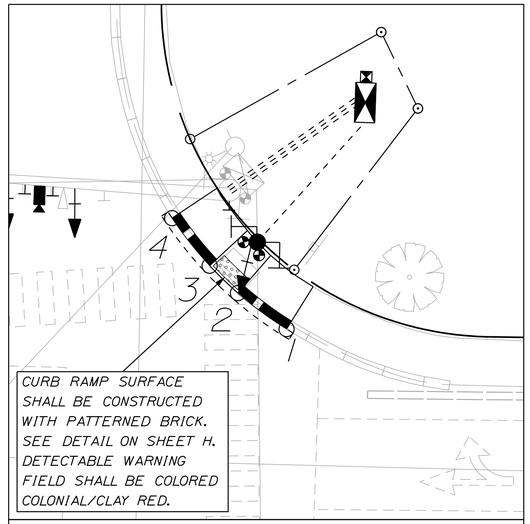
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PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

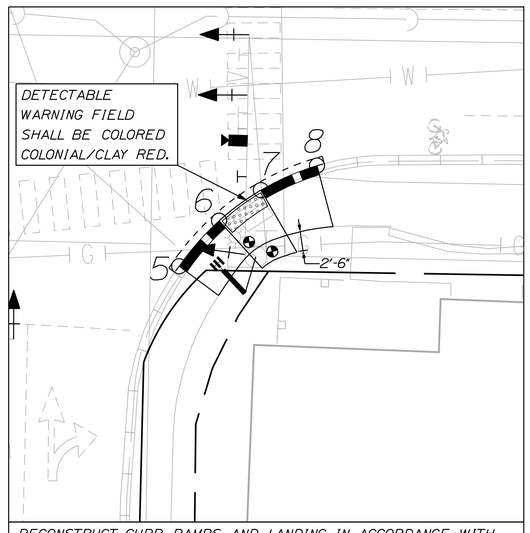
A CORNER - NE DETAIL



RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).

10 0 10 20
Scale of Feet

B CORNER - SE DETAIL



RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).
EXTEND LANDING TO ACCESS THE PEDESTRIAN BUTTONS.
SEE DETAIL ON SHEET H.

10 0 10 20
Scale of Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER		
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

AUGUSTA
CAPITOL ST AND SEWELL ST

CURB RAMP LAYOUT AND DETAIL PLAN

SHEET NUMBER
1C
OF 358

Filename: 001_Signal_01c.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

PLAN LEGEND

Town, County, State	New R/W Along Existing R/W		Existing	Proposed		Existing	Proposed
Approx. Property Lines P.L.	Building	Clearing Limit Line	Sanitary Sewer		Traveled Way		
Existing Right of Way	Trees Conifer	Deciduous	Telephone Line		Ditch		
Limits of Wrought Portion L.O.W.P.	Tree Line	Bush Line	Electric Line		Catch Basin		
Control Of Access C.O.A.	Water Edge		Water Line		Manhole		
New Right of Way	Ledge	Rock/Boulder Flag Pole	Underdrain Line		Sewer Manhole		
New Easement	Fence CHAIN LINK	BARB WIRE STOCKADE	Gas Line		Utility Pole		
New Temporary Rights	Sign	Well WELL Mailbox	Guardrail		Fire Hydrant		
New R/W Within Existing R/W			Culvert		Curbing		

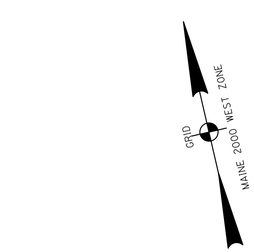
Cut Line C—C—C Fill Line F—F—F
Stonewall Retaining Wall
Baseline 10+00 11+00 12+00
Monument Traverse Point
Iron Rod Found IRF Pipe Found IPF
Replacement Pin Set

THIS PLAN WAS PREPARED IN CONNECTION WITH THE DEPARTMENT'S ACQUISITION OF REAL PROPERTY FOR TRANSPORTATION PURPOSES. IT CANNOT BE USED TO ESTABLISH LEGAL BOUNDARIES BETWEEN ABUTTING PROPERTY OWNERS.

25 0 25 50 75 100
Scale of Feet

STATE OF MAINE REGISTRY OF DEEDS

COUNTY _____
RECEIVED _____, _____
at _____h_____m_____M and
recorded in Plan Bk _____, Pg._____
Attest: _____
REGISTER



NOTE:
THE NORTH ARROW AND BASELINE COORDINATES SHOWN ARE BASED ON GRID NORTH, MAINE 2000 WEST ZONE. HOWEVER, THE BASELINE BEARING IS TAKEN FROM THE D.O.T. FILE NO. REFERENCED, AND MAY BE BASED ON MAGNETIC NORTH.

FDS STATE OF MAINE LLC

S.H.C. FILE NO. 6-314

CAPITOL STREET
STATE AID HIGHWAY NO. 14

NOTE:
BASE LINE ESTABLISHED UNDER S.H.C. FILE NO. 6-275

TO WESTERN AVE.

SEWALL STREET
STATE AID HIGHWAY NO. 13

STATE OF MAINE,
DEPARTMENT OF ADMINISTRATIVE AND FINANCIAL SERVICES
ITEM NO. (1)
SIGNAL SYSTEM EASE. = 469± S.F. (1)
TOTAL AREA = 3.80± AC. (CITY)

STATE EMPLOYEE PARKING GARAGE

SIGNAL SYSTEM EASE. 469± S.F.

LIMITS

S.H.C. FILE NO. 6-275

70' 60'

100.00'
N58°38'09.0"W

34 +75 +61 +50 +45 33

END B.L.
N:538180.272
E:1138930.337

S.H.C. FILE NO. 6-275
SHEET NO. 4

BEGIN B.L.
N:538157.700
E:1139027.757

CAPITOL STREET
STATE AID HIGHWAY NO. 14

TO STATE STREET

1PF
N:538181.471
E:1138715.156

EXISTING R/W REF.:
S.H.C. FILE NO. 6-275, SHEET NO. 4
S.H.C. FILE NO. 6-314, SHEET NO. 1

NOTE: PRESCRIPTIVE EASEMENT FOR HIGHWAY PURPOSES WITHIN LIMITS OF WROUGHT PORTION (L.O.W.P.)

N:538116.161
E:1138882.262
1PF

S.H.C. FILE NO. 6-314

PAGE STREET

COMMERCIAL BUILDING (OFFICES)

MITCHELL TARDY LLC

N:538063.562
E:1138869.571
1PF

SEWALL STREET
STATE AID HIGHWAY NO. 13

1PF
N:538013.148
E:1138856.355

BUILDING "NASH SCHOOL"

L.O.W.P.

STATE OF MAINE

"JACKSON STREET" (PARKING LOT ENTRANCE)

INTERSECTION NO. 1 WIN 024301.00

ITEM	TECH	CHECKED
EXISTING CONDITION PLAN	B.S.	G.L.L.
FINAL RIGHT OF WAY	B.S.	G.L.L.
AREAS	B.S.	G.L.L.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION - AUGUSTA, ME 04333-0016 - 207-624-3460
AUGUSTA
RIGHT OF WAY MAP

REVISIONS

NO.	DATE	DESCRIPTION	BY

PLAN FILED IN PLAN BOOK	PAGE	COUNTY RECORD				
NO.	GRANTOR	INSTRUMENT	DATE	BOOK	PAGE	

BRUCE A. VAN NOTE
COMMISSIONER
JOYCE NOEL TAYLOR
CHIEF ENGINEER
DATE

STATE AID HIGHWAY NOS. 13 & 14
SEWALL STREET & CAPITOL STREET
AUGUSTA KENNEBEC COUNTY
FEDERAL AID PROJECT NO. 2430100

NOVEMBER 2020 | RIGHT-OF-WAY MAP | D.O.T. FILE NO. 6-487
SCALE 1" = 25' | SHEET 1 OF 12

SHEET NUMBER
1R
OF 358

Username: Benjamin.Singer Date:11/19/2020
Division: ROW
Filename: ...\ROW\MSTA\001_RWPLAN1.dgn

LIST OF WORK ITEMS

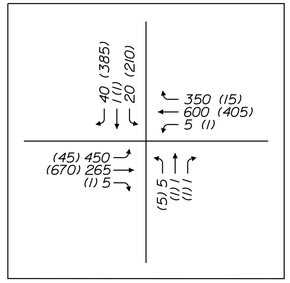
EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	11
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON TOP OF POST	1
FURNISH AND INSTALL 19-INCH 1 RU FIBER OPTIC 12-POSITION PATCH PANEL WITH PIGTAILS	1
RESET FIBER OPTIC ETHERNET SWITCH WITH FIBER OPTIC INTERFACES	1
FURNISH AND INSTALL MAST ARM MOUNTED SIGNS	1
FURNISH AND INSTALL SIGNAL POST MOUNTED SIGNS	1
REMOVE MAST ARM MOUNTED SIGNS	1
RESET PREEMPTION PHASE SELECTOR	1
RESET EXISTING 12-F FIBER IN PROPOSED CABINET	-
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 4 APPROACHES, COMPLETE (ITEM 643.21)	1 LS
RESET EXISTING ADVANCE VEHICLE DETECTION SYSTEM (SUBSIDIARY TO ITEM 643.21)	-

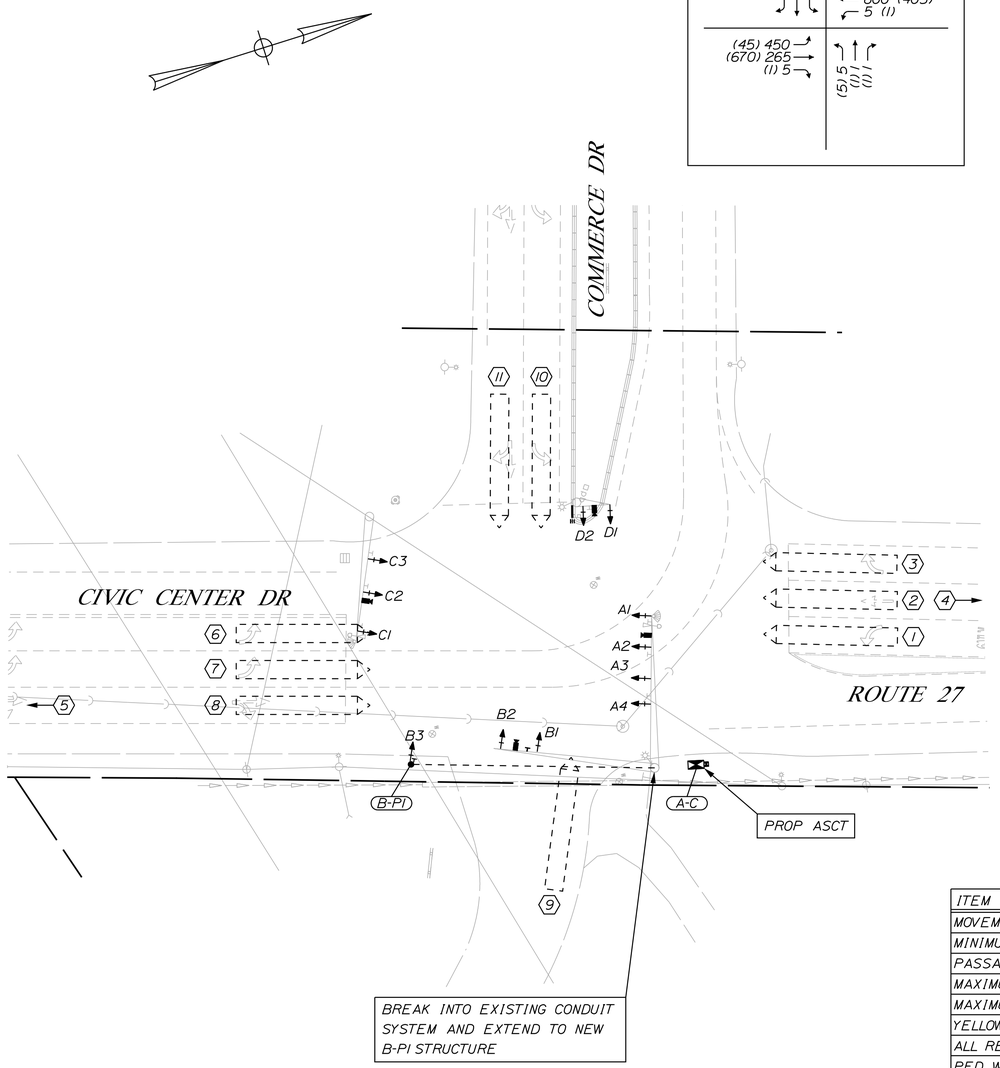
THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

STRUCTURE LIST

STRUCTURE	DESCRIPTION	FOUNDATION
(A-C)	CONTROLLER CABINET	EXISTING
(B-P1)	10' PEDESTAL POLE	24" DIAMETER

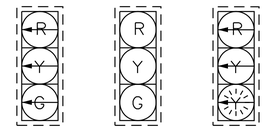
SYSTEM DESIGN VOLUMES AM (PM)





BREAK INTO EXISTING CONDUIT SYSTEM AND EXTEND TO NEW B-P1 STRUCTURE

PROPOSED INDICATIONS



A1,A2,C1 | A3,A4,B2 B3,C2,C3 D1,D2 | B1

NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES

DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	φ CALLED	φ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
1	CIVIC CENTER DR SB LEFT	1	1	B	-	-
2	CIVIC CENTER DR SB THROUGH	6	6	B	-	-
3	CIVIC CENTER DR SB RIGHT	6	6	B	5	-
4*	CIVIC CENTER DR SB ADVANCE	6	6	A	-	-
5*	CIVIC CENTER DR NB ADVANCE	2	2	A	-	-
6	CIVIC CENTER DR NB LEFT	5	5	B	-	-
7	CIVIC CENTER DR NB LEFT	5	5	B	-	-
8	CIVIC CENTER DR NB THRU-RIGHT	2	2	B	-	-
9	DRIVEWAY WB MOVEMENTS	8	8	B	-	-
10	COMMERCE DR EB LEFT	4	4	B	-	-
11	COMMERCE DR EB THRU-RIGHT	4	4	B	-	-

* SEE ADVANCED DILEMMA ZONE DETAIL (50 MPH)
NOTE: LOCATION AND QUANTITY OF ADDITIONAL VEHICLE DETECTION ZONES TO BE DETERMINED BASED ON THE SPECIFIC ASCT SYSTEM REQUIREMENTS

SIGNAL TIMING SCHEDULE

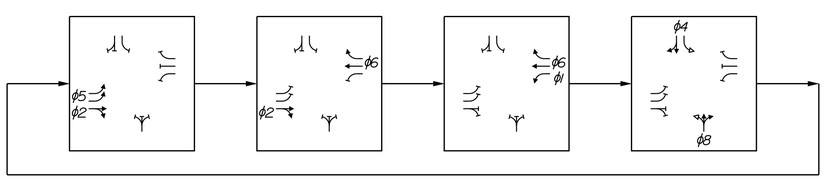
ITEM / PHASE	φ 1	φ 2	φ 3	φ 4	φ 5	φ 6	φ 7	φ 8
MOVEMENT	C (LT)	A	-	B	A (LT)	C	-	D
MINIMUM INITIAL	5	10	-	5	5	10	-	5
PASSAGE TIME	3.0	3.5	-	3.0	3.0	3.5	-	3.0
MAXIMUM 1	5	45	-	20	30	35	-	20
MAXIMUM 2	5	48	-	17	30	36	-	17
YELLOW	4.0	5.0	-	3.5	4.0	5.0	-	3.5
ALL RED	3.0	2.0	-	2.5	3.0	2.0	-	2.5
PED WALK	-	-	-	-	-	-	-	-
PED CLEAR	-	-	-	-	-	-	-	-
DYN MAX LIMIT	-	-	-	-	-	-	-	-
DYN MAX STEP	-	-	-	-	-	-	-	-
RECALL	OFF	SOFT	-	OFF	OFF	SOFT	-	OFF
DETECTOR	PR	PR	-	PR	PR	PR	-	PR
PRE-EMPT PRIORITY	3	4	-	-	4	3	-	-
FLASH	R	Y	-	R	R	Y	-	R
DUAL ENTRY	OFF	ON	-	ON	OFF	ON	-	ON

NOTES: S = SOFT RECALLY = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK
IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD. INTERSECTION SHALL BE PART OF AN ASCT (ADAPTIVE) SYSTEM.

PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM

2 1 || 4
5 6 || 8



PLAN

25 0 25 50
Scale of Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	DATE
PROJ. MANAGER		
DESIGN-DETAILED	MLG	JAR 07/20
CHECKED-REVIEWED	CMB	CMB 07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 27 (CIVIC CENTER DR) AND COMMERCE DR

TRAFFIC SIGNAL PLAN

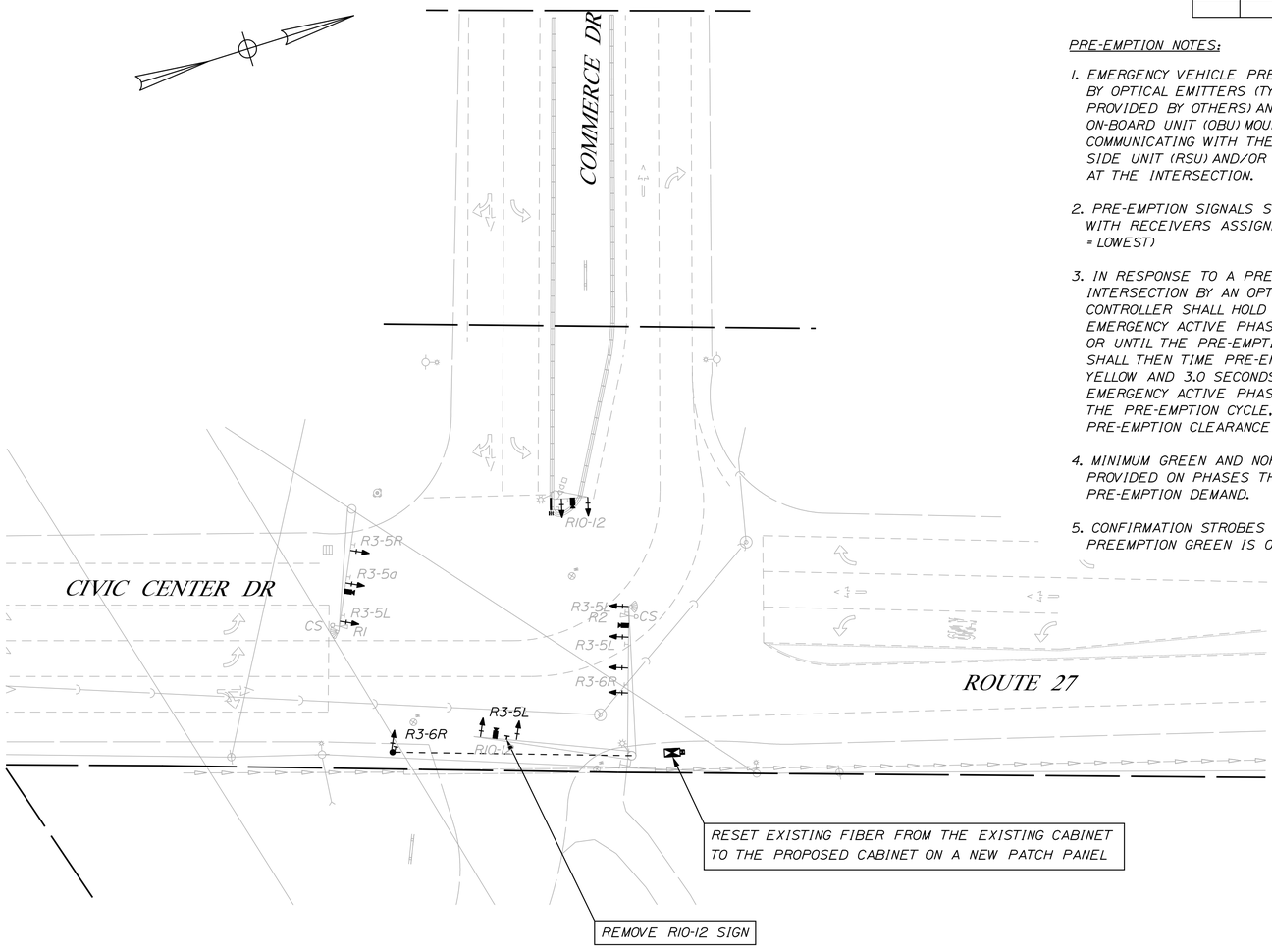
SHEET NUMBER
2
OF 358

Usernam: jorobert Date:11/24/2020
Division: HIGHWAY
Filename: 002_Signal_02.dgn

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
FURNISH AND INSTALL (3-INCH) NON-METALLIC UNDER PAVEMENT CONDUIT (ITEM 626.251)	80 LF
FURNISH AND INSTALL 24-INCH DIAMETER FOUNDATION (ITEM 626.421)	7 LF
FURNISH AND INSTALL 10-FOOT PEDESTAL POLE (ITEM 643.92)	1 EA
FURNISH AND INSTALL CIVIC CENTER DRIVE BALANCED/CRITICAL PATHS BASED ASCT SYSTEM (ITEM 654.05)	1 LS
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.



EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USE/RESERVED	
	2	NOT USE/RESERVED	
R1	3	1	ϕ6
R2	4	2	ϕ2&ϕ5
	5	NOT USED	
	6	NOT USED	

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.

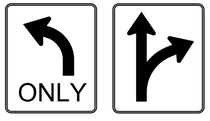
2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 2 = LOWEST)

3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR AND/OR RSU, 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 (5.0 SECONDS YELLOW AND 3.0 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.

4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.

5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.

PROPOSED SIGNS



R3-5L 30"x36" 1-PROPOSED

R3-6R 30"x36" 1-PROPOSED

EXISTING SIGNS



R3-5L 3-RETAINED



R3-6R 1-RETAINED



R3-5a 1-RETAINED



R3-5R 1-RETAINED



R10-12 1-RETAINED 1-REMOVED

PLAN

25 0 25 50

Scale of Feet

* - RIGHT-OF-WAY REFERENCE PIN F-032-1(13) DOT FILE 6-195, SHEET 2 OF 3, 12/1979

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	BY	DATE
PROJ. MANAGER			
DESIGN-DETAILED	M.G	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

AUGUSTA
ROUTE 27 (CIVIC CENTER DR) AND COMMERCE DR

TRAFFIC SIGNAL PLAN

SHEET NUMBER

2A

OF 358

Filename: 002_Signal_02a.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

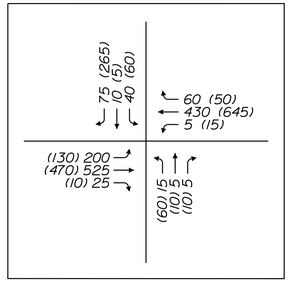
Usermame: jorobert Date:11/24/2020
Division: HIGHWAY
Filename: 003_Signal_03.dgn

LIST OF WORK ITEMS

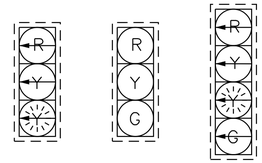
EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	2
FURNISH AND INSTALL ONE-WAY 4-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARM UPRIGHTS WITH BRACKET	2
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON TOP OF POST	1
FURNISH AND INSTALL 19-INCH 1 RU FIBER OPTIC 12-POSITION PATCH PANEL WITH PIGTAILS	1
RESET FIBER OPTIC ETHERNET SWITCH WITH FIBER OPTIC INTERFACES	1
FURNISH AND INSTALL MAST ARM MOUNTED SIGNS	4
REMOVE MAST ARM MOUNTED SIGNS	1
RESET COUNTDOWN PEDESTRIAN SIGNAL HEAD	1
RESET (APS) PUSH BUTTON WITH R10-3e SIGN	1
RESET PREEMPTION PHASE SELECTOR	1
RESET VIDEO DETECTION CARD (INCIDENTAL TO 643.71)	1
RESET EXISTING 12-F FIBER IN PROPOSED CABINET	-
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-
FURNISH AND INSTALL NON-INVASIVE ADVANCE VEHICLE DETECTION SYSTEM FOR 2 APPROACHES, COMPLETE (ITEM 643.22)	1 LS

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

SYSTEM DESIGN VOLUMES AM (PM)

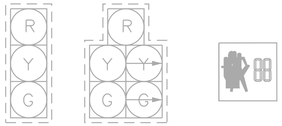


PROPOSED INDICATIONS

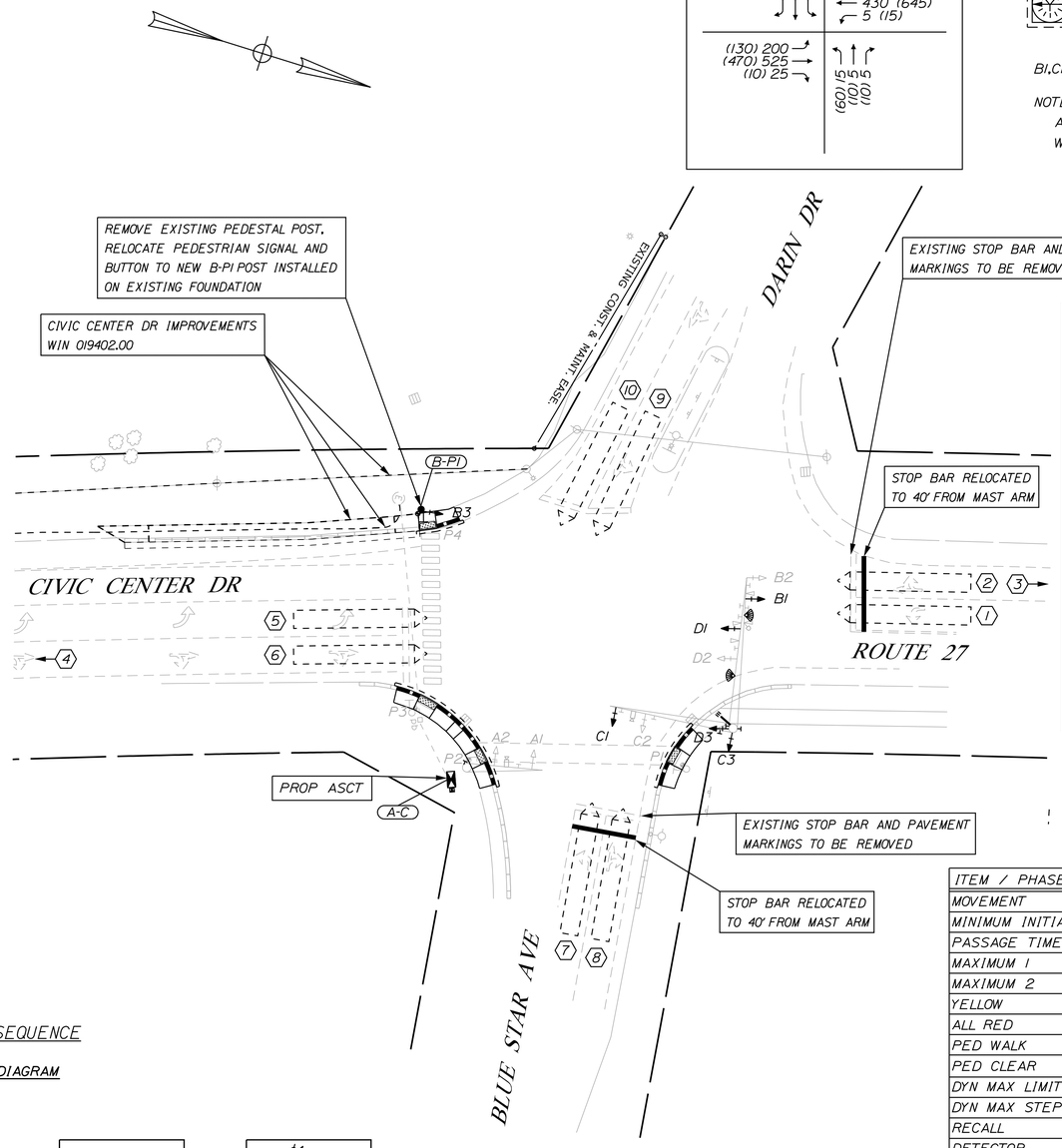


B1,C1 B3,C3,D3 D1 A1,B2 C2,D2 A2 P1-P4

EXISTING INDICATIONS TO REMAIN OR RELOCATE



NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES



DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	φ CALLED	φ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
1	CIVIC CENTER DR SB LEFT	6	6	B	-	-
2	CIVIC CENTER DR SB THRU-RIGHT	6	6	B	-	-
3*	CIVIC CENTER DR SB ADVANCE	6	6	A	-	-
4**	CIVIC CENTER DR NB ADVANCE	2	2	A	-	-
5	CIVIC CENTER DR NB LEFT	5	5	B	-	-
6	CIVIC CENTER DR NB THRU-RIGHT	2	2	B	-	-
7	BLUE STAR AVE WB LEFT	8	8	B	-	-
8	BLUE STAR AVE WB THRU-RIGHT	8	8	B	-	-
9	DARIN DR EB LEFT-THRU	4	4	B	-	-
10	DARIN DR EB RIGHT	4	4	B	5	-

* SEE ADVANCED DILEMMA ZONE DETAIL (35 MPH)
** SEE ADVANCED DILEMMA ZONE DETAIL (45 MPH)
NOTE: LOCATION AND QUANTITY OF ADDITIONAL VEHICLE DETECTION ZONES TO BE DETERMINED BASED ON THE SPECIFIC ASCT SYSTEM REQUIREMENTS

STRUCTURE LIST

STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	EXISTING
B-P1	10' PEDESTAL POLE	EXISTING

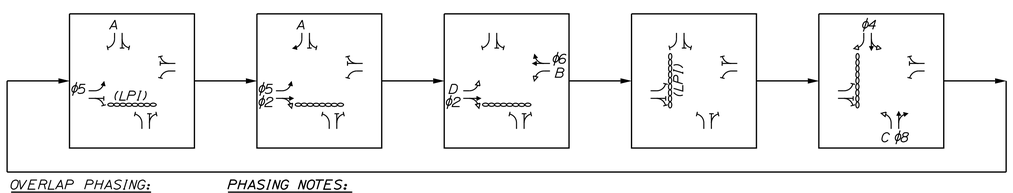
SIGNAL TIMING SCHEDULE

ITEM / PHASE	φ1	φ2	φ3	φ4	φ5	φ6	φ7	φ8
MOVEMENT	-	D	-	A	D (LT)	B	-	C
MINIMUM INITIAL	-	10	-	5	5	10	-	5
PASSAGE TIME	-	3.5	-	3.0	3.0	3.5	-	3.0
MAXIMUM 1	-	35	-	15	10	35	-	15
MAXIMUM 2	-	34	-	12	6	34	-	12
YELLOW	-	5.0	-	4.0	4.0	5.0	-	4.0
ALL RED	-	2.0	-	3.0	3.0	2.0	-	3.0
PED WALK	-	5	-	5	-	-	-	-
PED CLEAR	-	15	-	15	-	-	-	-
DYN MAX LIMIT	-	-	-	-	-	-	-	-
DYN MAX STEP	-	-	-	-	-	-	-	-
RECALL	-	SOFT	-	OFF	OFF	SOFT	-	OFF
DETECTOR	-	PR	-	PR	PR	PR	-	PR
PRE-EMPT PRIORITY	-	4	-	6	4	3	-	5
FLASH	-	Y	-	R	R	Y	-	R
DUAL ENTRY	-	ON	-	ON	OFF	ON	-	ON

NOTES: S = SOFT RECALLY = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK
IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD.
INTERSECTION SHALL BE PART OF AN ASCT (ADAPTIVE) SYSTEM.

PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM



OVERLAP PHASING:
OVL A = 4 + 5
OVL B = 6
OVL C = 8
OVL D = 5 (PROT) + 6 (PERM)

PHASING NOTES:
1. EACH PEDESTRIAN PHASE SHALL HAVE A MINIMUM OF A 4 SECOND LEADING PEDESTRIAN INTERVAL (LPI).
2. PEDESTRIAN PHASE UPON PUSH BUTTON ACTIVATION ONLY.
3. GREEN ARROW INDICATION FOR OVERLAP A IS DISABLED WHEN THE PHASE 4 PEDESTRIAN PHASE OR PHASE 8 IS ACTIVE.
4. OVERLAP B,C, AND D SHALL BE PROGRAMMED FOR FLASHING YELLOW ARROWS.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY INFORMATION FROM MAINEDOT - AUGUSTA STP-1940(200)X DOT FILE NO 6-482, MAY 2019

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	BY	DATE
B. KEEZER		
PROJ. MANAGER		
DESIGN-DETAILED	MLC	07/20
CHECKED-REVIEWED	JAR	07/20
DESIGN2-DETAILED2	CMB	
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 27 (CIVIC CENTER DR) AND DARIN DR / BLUE STAR AVE

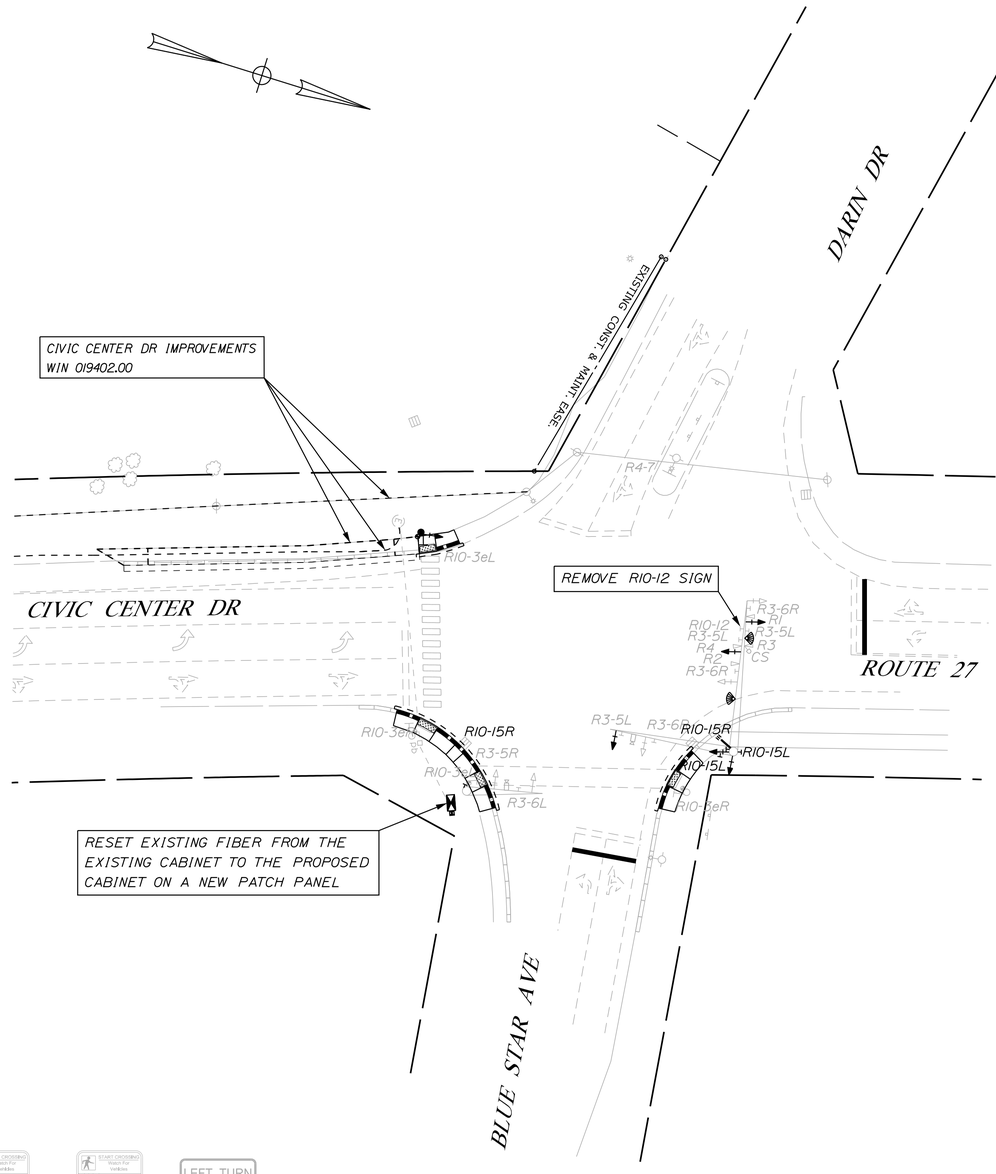
TRAFFIC SIGNAL PLAN

SHEET NUMBER
3
OF 358

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
FURNISH AND INSTALL WHITE PAVEMENT AND CURB MARKING (ITEM 627.75)	94 LF
REMOVE EXISTING PAVEMENT MARKING (ITEM 627.77)	101 SF
FURNISH AND INSTALL 10-FOOT PEDESTAL POLE (ITEM 643.92)	1 EA
FURNISH AND INSTALL CIVIC CENTER DRIVE BALANCED/CRITICAL PATHS BASED ASCT SYSTEM (ITEM 654.05)	1 LS
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.



PROPOSED SIGNS



R10-15L
30"x30"
2-PROPOSED

R10-15R
30"x30"
2-PROPOSED

EXISTING SIGNS



R3-5L
3-RETAINED

R3-6R
3-RETAINED

R3-6L
1-RETAINED

R4-7
1-RETAINED

R10-3eL
1-RETAINED
1-RELOCATED

R10-3eR
2-RETAINED

R10-12
1-REMOVED

EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USE/RESERVED	
	2	NOT USE/RESERVED	
R1	3	1	ϕ6
R2	4	2	ϕ2&ϕ5
R3	5	3	ϕ8
R4	6	4	ϕ4

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.

2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 4 = LOWEST)

3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR AND/OR RSU, 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 (5.0 SECONDS YELLOW AND 3.0 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.

4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.

5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY INFORMATION FROM MAINEDOT - AUGUSTA STP-1940(200)X DOT FILE NO 6-482, MAY 2019

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER		
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

AUGUSTA
ROUTE 27 (CIVIC CENTER DR) AND
DARIN DR / BLUE STAR AVE

TRAFFIC SIGNAL PLAN

SHEET NUMBER

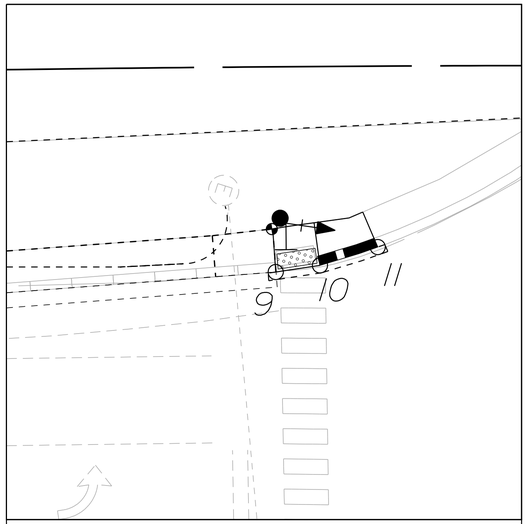
3A

OF 358

Filename: 003_Signal_03a.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

Usermame: jorobert
Date:11/24/2020
Division: HIGHWAY
Filename: 003_Signal_03c.dgn

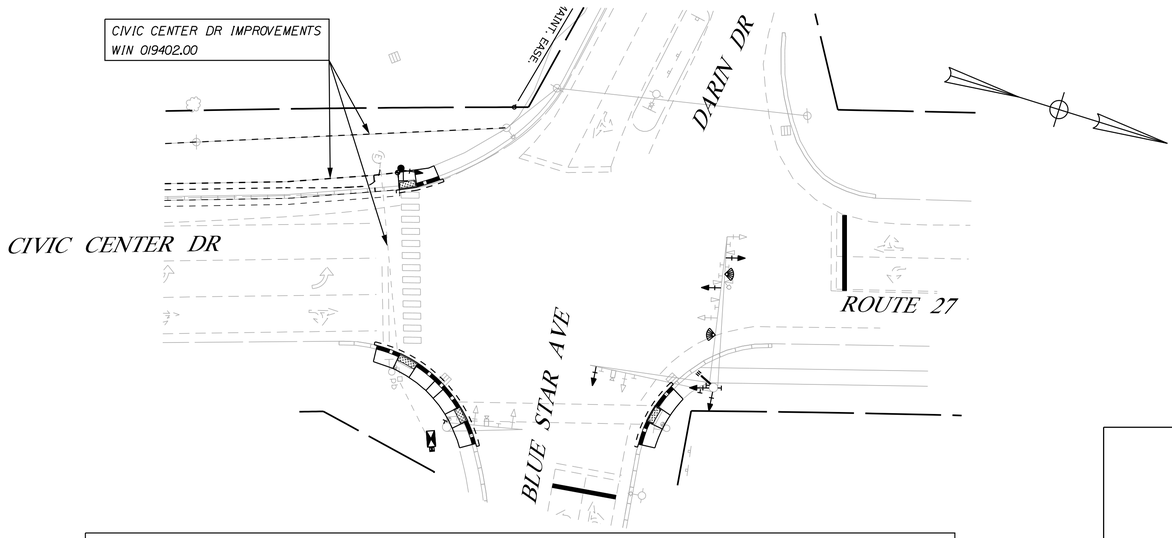
B CORNER - SW DETAIL



RECONSTRUCT CURB RAMP AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).

10 0 10 20
Scale of Feet

PT. TO PT.	RADIUS (FT)	ITEM 608.26 - CURB RAMP DETECTABLE WARNING FIELD		ITEM 609.12 - VERTICAL CURB TYPE I - CIRCULAR (LF)	ITEM 609.221 - TERMINAL CURB TYPE I (LF)	ITEM 609.222 - TERMINAL CURB TYPE I - CIRCULAR (LF)	COMMENT
		LENGTH (FT)	QTY (SF)				
1 TO 2	45.0					8.0	
2 TO 3	45.0	6.9	12.6				
3 TO 4	45.0					8.0	
4 TO 5	45.0			4.0			
5 TO 6	45.0					8.0	
6 TO 7	45.0	5.3	10.0				
7 TO 8	45.0					8.0	
9 TO 10	-	5.9	10.3				
10 TO 11	-				8.0		
12 TO 13	41.3					8.0	
13 TO 14	40.0	6.2	10.6				
14 TO 15	41.3					8.0	



ALL CURB RAMPS SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND MAINEDOT STANDARD DETAILS 801(11) to 801(26) AS NOTED. AS WELL AS DETAILS PROVIDED ON SHEET H.

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
HOT MIX ASPHALT, 9.5 MM NOMINAL MAXIMUM SIZE (ITEM 403.210)	3.3 TONS
PLAIN CONCRETE SIDEWALK (ITEM 608.07)	48.9 SY
CURB RAMP DETECTABLE WARNING FIELD (ITEM 608.26)	43.5 SF
CONSTRUCT SIDEWALK (ITEM 608.45)	0.1 SY
REGRADING SIDEWALK (ITEM 608.46)	48.8 SY

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
VERTICAL CURB TYPE I - CIRCULAR (ITEM 609.12)	4.0 LF
TERMINAL CURB TYPE I (ITEM 609.221)	8.0 LF
TERMINAL CURB TYPE I - CIRCULAR (ITEM 609.222)	48.0 LF

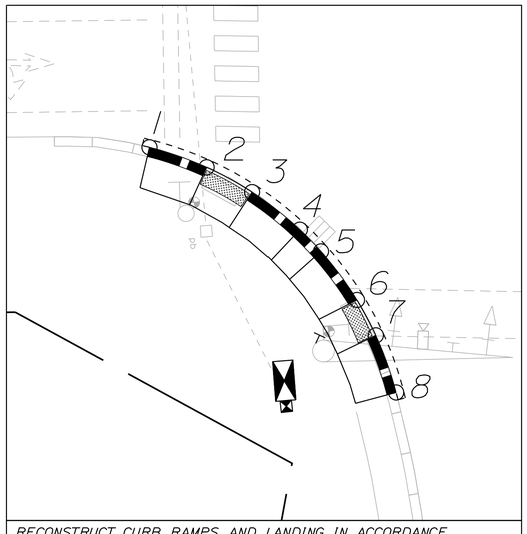
THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY INFORMATION FROM MAINEDOT - AUGUSTA STP-1940(200)X DOT FILE NO 6-482, MAY 2019

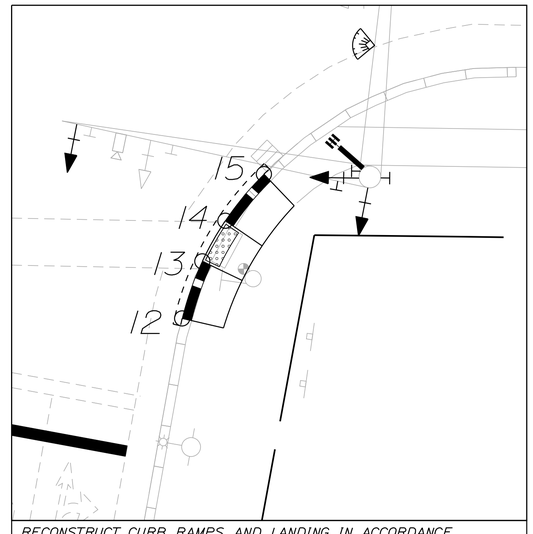
A CORNER - SE DETAIL



RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).

10 0 10 20
Scale of Feet

D CORNER - NE DETAIL



RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).

10 0 10 20
Scale of Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER	
DESIGN-DETAILED	MLG	JAR 07/20
CHECKED-REVIEWED	CMB	CMB 07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 27 (CIVIC CENTER DR) AND DARIN DR / BLUE STAR AVE
CURB RAMP LAYOUT AND DETAIL PLAN

SHEET NUMBER

3C

OF 358

Filename: 004_Signal_04.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

LIST OF WORK ITEMS

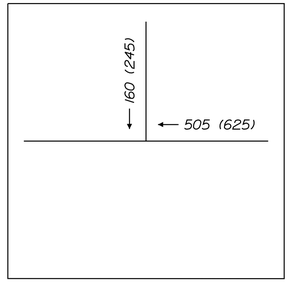
EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	4
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON TOP OF POST	2
FURNISH AND INSTALL 19-INCH 1RU FIBER OPTIC 12-POSITION PATCH PANEL WITH PIGTAILS	1
RESET FIBER OPTIC ETHERNET SWITCH WITH FIBER OPTIC INTERFACES	1
RESET PREEMPTION PHASE SELECTOR	1
RESET EXISTING 12-F FIBER IN PROPOSED CABINET	-
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 2 APPROACHES, COMPLETE (ITEM 643.21)	1 LS
FURNISH AND INSTALL NON-INVASIVE ADVANCE VEHICLE DETECTION SYSTEM FOR 2 APPROACHES, COMPLETE (ITEM 643.22)	1 LS

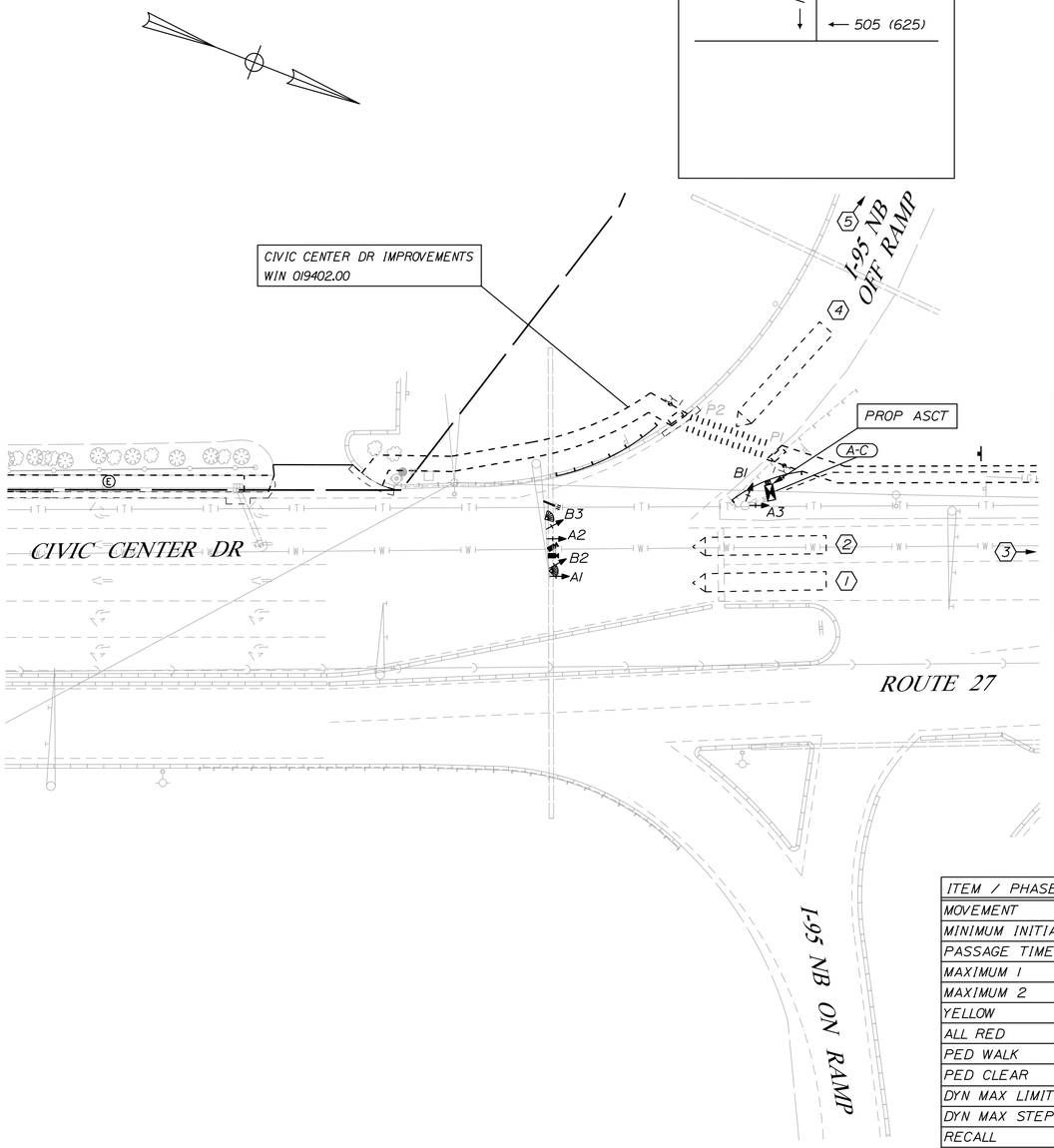
THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

STRUCTURE LIST

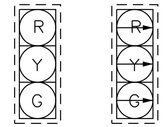
STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	EXISTING

SYSTEM DESIGN VOLUMES AM (PM)





PROPOSED INDICATIONS



A1,A2,A3 B1,B2,B3

EXISTING INDICATIONS
TO REMAIN



P1-P2*

NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES
* INSTALLED UNDER 019402.00 IMPROVEMENTS

DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	ϕ CALLED	ϕ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
1	CIVIC CENTER DR SB THROUGH	6	6	B	-	-
2	CIVIC CENTER DR SB THROUGH	6	6	B	-	-
3*	CIVIC CENTER DR SB ADVANCE	6	6	A	-	-
4	I-95 NB OFF RAMP EB RIGHT	4	4	B	5	-
5*	I-95 NB OFF RAMP EB ADVANCE	4	4	A	-	-

* SEE ADVANCED DILEMMA ZONE DETAIL (35 MPH)
NOTE: LOCATION AND QUANTITY OF ADDITIONAL VEHICLE DETECTION ZONES TO BE DETERMINED BASED ON THE SPECIFIC ASCT SYSTEM REQUIREMENTS

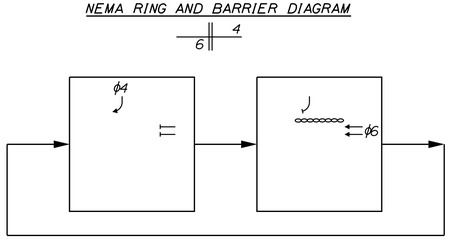
SIGNAL TIMING SCHEDULE

ITEM / PHASE	ϕ1	ϕ2	ϕ3	ϕ4	ϕ5	ϕ6	ϕ7	ϕ8
MOVEMENT	-	-	-	B	-	A	-	-
MINIMUM INITIAL	-	-	-	7	-	10	-	-
PASSAGE TIME	-	-	-	3.0	-	3.0	-	-
MAXIMUM 1	-	-	-	20	-	45	-	-
MAXIMUM 2	-	-	-	35	-	75	-	-
YELLOW	-	-	-	4.0	-	4.0	-	-
ALL RED	-	-	-	2.0	-	2.0	-	-
PED WALK	-	-	-	-	-	5	-	-
PED CLEAR	-	-	-	-	-	8	-	-
DYN MAX LIMIT	-	-	-	-	-	-	-	-
DYN MAX STEP	-	-	-	-	-	-	-	-
RECALL	-	-	-	OFF	-	SOFT	-	-
DETECTOR	-	-	-	PR	-	PR	-	-
PRE-EMPT PRIORITY	-	-	-	4	-	3	-	-
FLASH	-	-	-	R	-	Y	-	-
DUAL ENTRY	-	-	-	OFF	-	OFF	-	-

NOTES: S = SOFT RECALL Y = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK
IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD. INTERSECTION SHALL BE PART OF AN ASCT (ADAPTIVE) SYSTEM.

PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM



PHASING NOTES:
1. PEDESTRIAN PHASE UPON PUSH BUTTON ACTIVATION ONLY.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	BY	DATE
PROJ. MANAGER	B. KEEZER	
DESIGN-DETAILED	MLG	JAR 07/20
CHECKED-REVIEWED	CMB	CMB 07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 27 (CIVIC CENTER DR) AND I-95 NB RAMPS

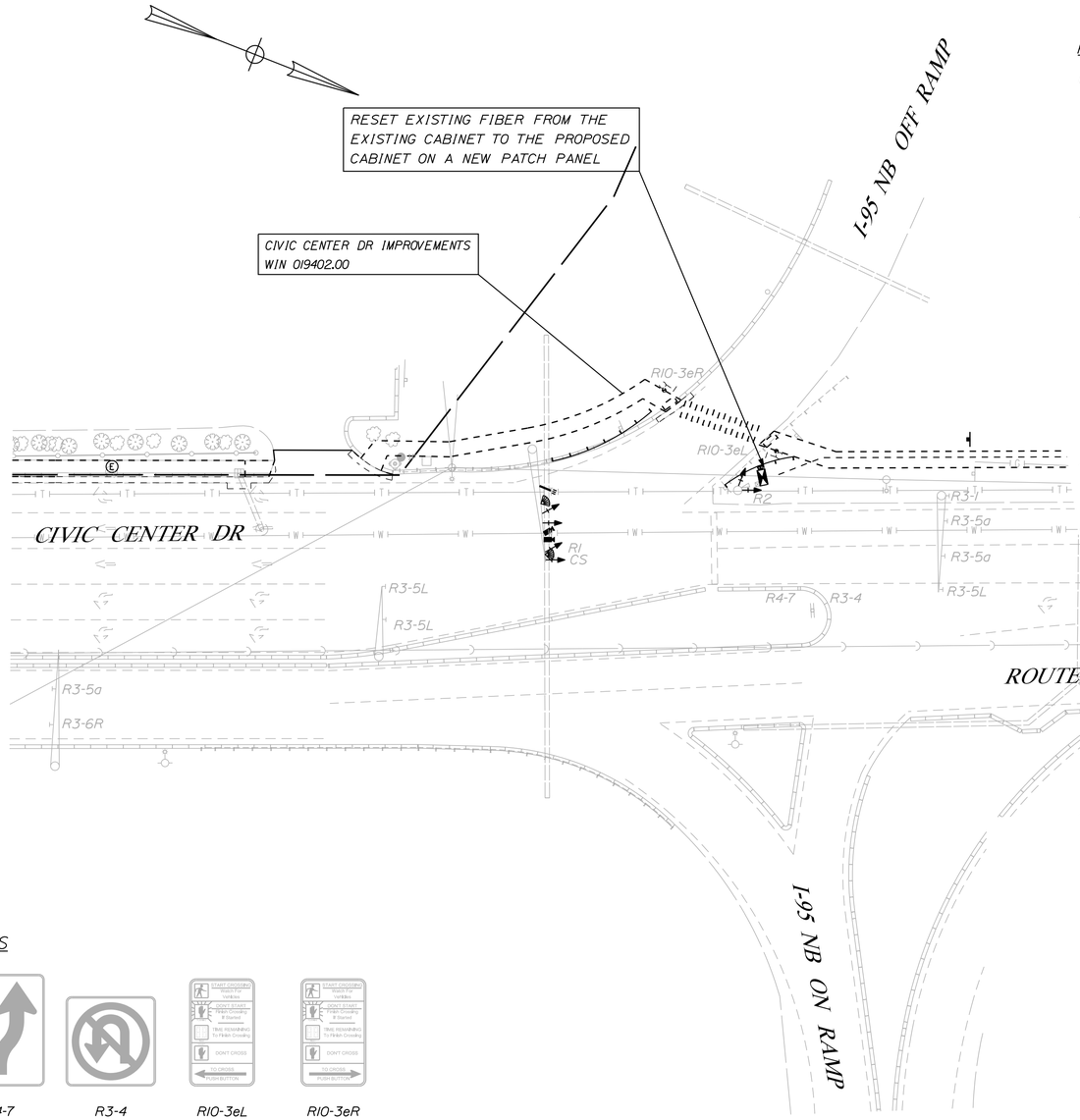
TRAFFIC SIGNAL PLAN

SHEET NUMBER
4
OF 358

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
FURNISH AND INSTALL CIVIC CENTER DRIVE BALANCED/CRITICAL PATHS BASED ASCT SYSTEM (ITEM 654.05)	1 LS
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.



EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USE/RESERVED	
	2	NOT USE/RESERVED	
R1	3	1	Ø6
R2	4	2	Ø4
	5	NOT USED	
	6	NOT USED	

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.
2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 2 = LOWEST)
3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR AND/OR RSU, 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 (4.0 SECONDS YELLOW AND 2.0 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.
4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.

EXISTING SIGNS



R3-5L 3-RETAINED | R3-5a 3-RETAINED | R3-6R 1-RETAINED | R3-1 1-RETAINED | R4-7 1-RETAINED | R3-4 1-RETAINED | R10-3eL 1-RETAINED | R10-3eR 1-RETAINED

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

		DATE
B. KEEZER		
PROJ. MANAGER	MLG	07/20
DESIGN-DETAILED	JAR	07/20
CHECKED-REVIEWED	CMB	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 27 (CIVIC CENTER DR) AND I-95 NB RAMPS

TRAFFIC SIGNAL PLAN

SHEET NUMBER
4A
OF 358

Filename: 004_SignalL_04a.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

Filename: 005_Signal_05.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

LIST OF WORK ITEMS

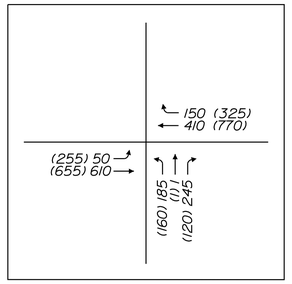
EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	6
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARM UPRIGHTS WITH BRACKET	2
FURNISH AND INSTALL ONE-WAY 4-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARM UPRIGHTS WITH BRACKETS	1
FURNISH AND INSTALL 19-INCH 1 RU FIBER OPTIC 12-POSITION PATCH PANEL WITH PIGTAILS	1
RESET FIBER OPTIC ETHERNET SWITCH WITH FIBER OPTIC INTERFACES	1
REMOVE MAST ARM MOUNTED SIGN	1
RESET PREEMPTION PHASE SELECTOR	1
RESET EXISTING 12-F FIBER IN PROPOSED CABINET	-
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 4 APPROACHES, COMPLETE (ITEM 643.21)	1 LS
FURNISH AND INSTALL NON-INVASIVE ADVANCE VEHICLE DETECTION SYSTEM FOR 2 APPROACHES, COMPLETE (ITEM 643.22)	1 LS

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

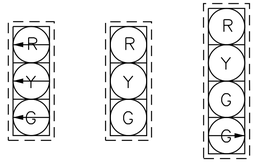
STRUCTURE LIST

STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	EXISTING

SYSTEM DESIGN VOLUMES AM (PM)

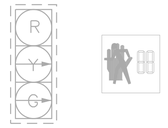


PROPOSED INDICATIONS



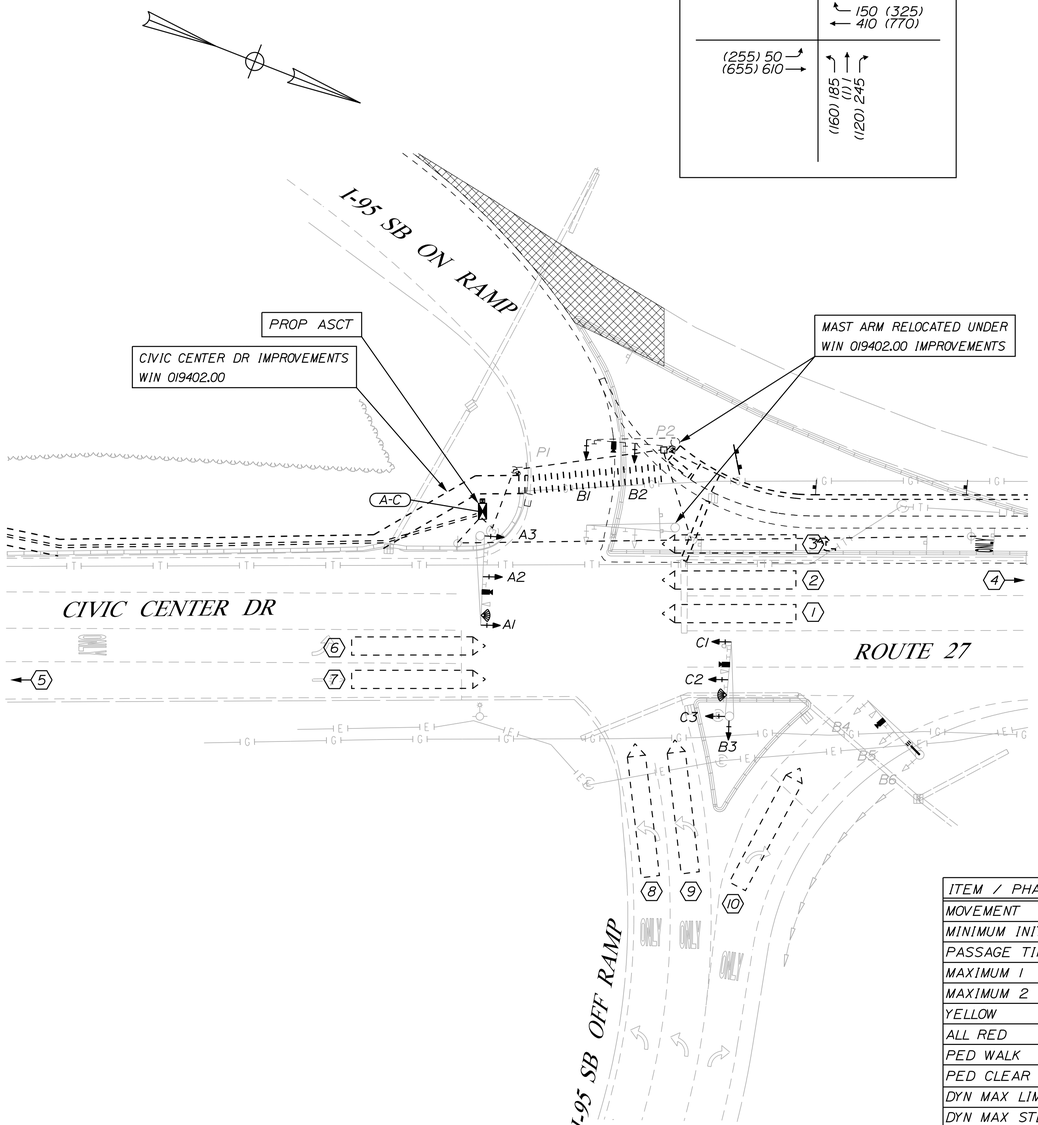
B1,B2,C1 | A1,A2 B3,C2,C3 | A3

EXISTING INDICATIONS TO REMAIN



B4,B5,B6 | P1-P2*

NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES
* INSTALLED UNDER 019402.00 IMPROVEMENTS



DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	φ CALLED	φ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
1	CIVIC CENTER DR SB THROUGH	6	6	B	-	-
2	CIVIC CENTER DR SB THROUGH	6	6	B	-	-
3	CIVIC CENTER DR SB RIGHT	6	6	B	5	-
4*	CIVIC CENTER DR SB ADVANCE	6	6	A	-	-
5*	CIVIC CENTER DR NB ADVANCE	2	2	A	-	-
6	CIVIC CENTER DR NB LEFT	5	5	B	-	-
7	CIVIC CENTER DR NB THROUGH	2	2	B	-	-
8	I-95 SB OFF RAMP WB LEFT	3	3	B	-	-
9	I-95 SB OFF RAMP WB LEFT	3	3	B	-	-
10	I-95 SB OFF RAMP WB RIGHT	3	3	B	5	-

* SEE ADVANCED DILEMMA ZONE DETAIL (35 MPH)
NOTE: LOCATION AND QUANTITY OF ADDITIONAL VEHICLE DETECTION ZONES TO BE DETERMINED BASED ON THE SPECIFIC ASCT SYSTEM REQUIREMENTS

SIGNAL TIMING SCHEDULE

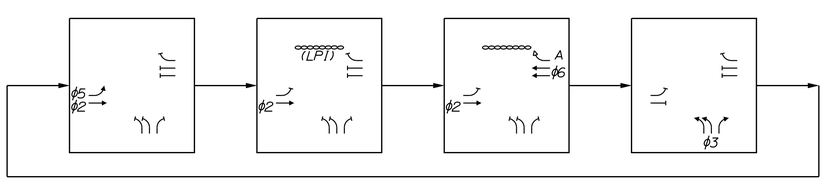
ITEM / PHASE	φ1	φ2	φ3	φ4	φ5	φ6	φ7	φ8
MOVEMENT	-	C	B	-	C (LT)	A	-	-
MINIMUM INITIAL	-	10	7	-	5	10	-	-
PASSAGE TIME	-	3.0	3.0	-	3.0	3.0	-	-
MAXIMUM 1	-	45	25	-	20	45	-	-
MAXIMUM 2	-	45	25	-	20	45	-	-
YELLOW	-	4.0	4.0	-	3.5	4.0	-	-
ALL RED	-	2.0	2.0	-	2.5	2.0	-	-
PED WALK	-	-	-	-	-	5	-	-
PED CLEAR	-	-	-	-	-	12	-	-
DYN MAX LIMIT	-	-	-	-	-	-	-	-
DYN MAX STEP	-	-	-	-	-	-	-	-
RECALL	-	SOFT	OFF	-	OFF	SOFT	-	-
DETECTOR	-	PR	PR	-	PR	PR	-	-
PRE-EMPT PRIORITY	-	4	5	-	4	3	-	-
FLASH	-	Y	R	-	R	Y	-	-
DUAL ENTRY	-	ON	OFF	-	OFF	ON	-	-

NOTES: S = SOFT RECALL Y = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK
IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD. INTERSECTION SHALL BE PART OF AN ASCT (ADAPTIVE) SYSTEM.

PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM

2 | 3
5 6



OVERLAP PHASING:
OVL A = 6

PHASING NOTES:
1. EACH PEDESTRIAN PHASE SHALL HAVE A MINIMUM OF A 4 SECOND LEADING PEDESTRIAN INTERVAL (LPI).
2. PEDESTRIAN PHASE UPON PUSH BUTTON ACTIVATION ONLY.
3. GREEN ARROW INDICATION FOR OVERLAP A IS DISABLED WHEN THE PHASE 6 PEDESTRIAN PHASE IS ACTIVE.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	DATE
PROJ. MANAGER		
DESIGN-DETAILED	MLG	07/20
CHECKED-REVIEWED	CMB	07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 27 (CIVIC CENTER DR) AND I-95 SB RAMPS

TRAFFIC SIGNAL PLAN

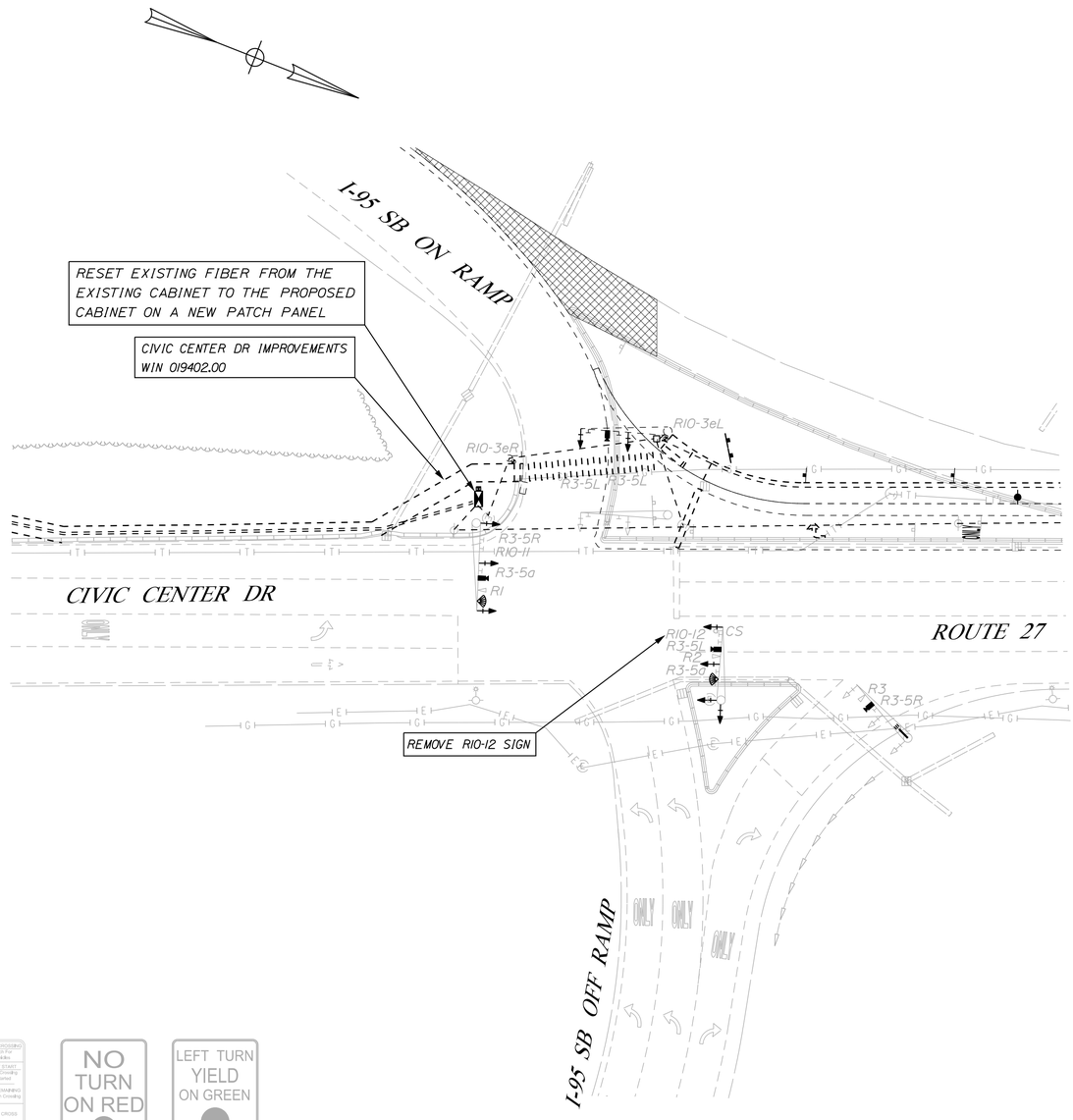
SHEET NUMBER
5
OF 358

Filename: 005_Signal_05a.dgn Username: jarobert Division: HIGHWAY Date:11/24/2020

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
FURNISH AND INSTALL CIVIC CENTER DRIVE BALANCED/CRITICAL PATHS BASED ASCT SYSTEM (ITEM 654.05)	1 LS
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.



EXISTING SIGNS



R3-5L	R3-5a	R3-5R	R10-3eL	R10-3eR	R10-11	R10-12
3-RETAINED	2-RETAINED	2-RETAINED	1-RETAINED	1-RETAINED	1-RETAINED BLANK-OUT SIGN INSTALLED UNDER 019401.00 IMPROVEMENTS	1-REMOVED

EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USE/RESERVED	
	2	NOT USE/RESERVED	
R1	3	1	ϕ6
R2	4	2	ϕ2&ϕ5
R3	5	3	ϕ3
	6	NOT USED	

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.
2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 3 = LOWEST)
3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR AND/OR RSU, 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 (4.0 SECONDS YELLOW AND 2.5 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.
4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.

PLAN

25 0 25 50

Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER
DESIGN-DETAILED	M.G
CHECKED-REVIEWED	CMB
DESIGN2-DETAILED2	
DESIGN3-DETAILED3	

BY	DATE
JAR	07/20
CMB	07/20
REVISIONS 1	
REVISIONS 2	
REVISIONS 3	
REVISIONS 4	
FIELD CHANGES	

AUGUSTA
ROUTE 27 (CIVIC CENTER DR) AND I-95 SB RAMPS

TRAFFIC SIGNAL PLAN

SHEET NUMBER

5A

OF 358

LIST OF WORK ITEMS

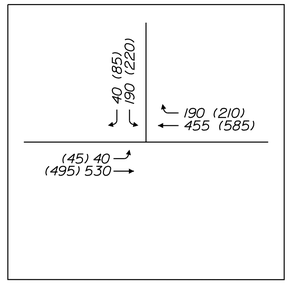
EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	8
FURNISH AND INSTALL ONE-WAY 4-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	1
FURNISH AND INSTALL ONE-WAY 5-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	1
FURNISH AND INSTALL 19-INCH 1 RU FIBER OPTIC 12-POSITION PATCH PANEL WITH PIGTAILS	1
RESET FIBER OPTIC ETHERNET SWITCH WITH FIBER OPTIC INTERFACES	1
FURNISH AND INSTALL MAST ARM MOUNTED SIGNS	3
REMOVE MAST ARM MOUNTED SIGNS	1
RESET PREEMPTION PHASE SELECTOR	1
RESET EXISTING 12-F FIBER IN PROPOSED CABINET	-
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 4 APPROACHES, COMPLETE (ITEM 643.21)	1 LS
FURNISH AND INSTALL NON-INVASIVE ADVANCE VEHICLE DETECTION SYSTEM FOR 3 APPROACHES, COMPLETE (ITEM 643.22)	1 LS

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

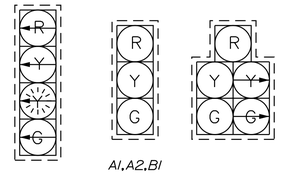
STRUCTURE LIST

STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	EXISTING

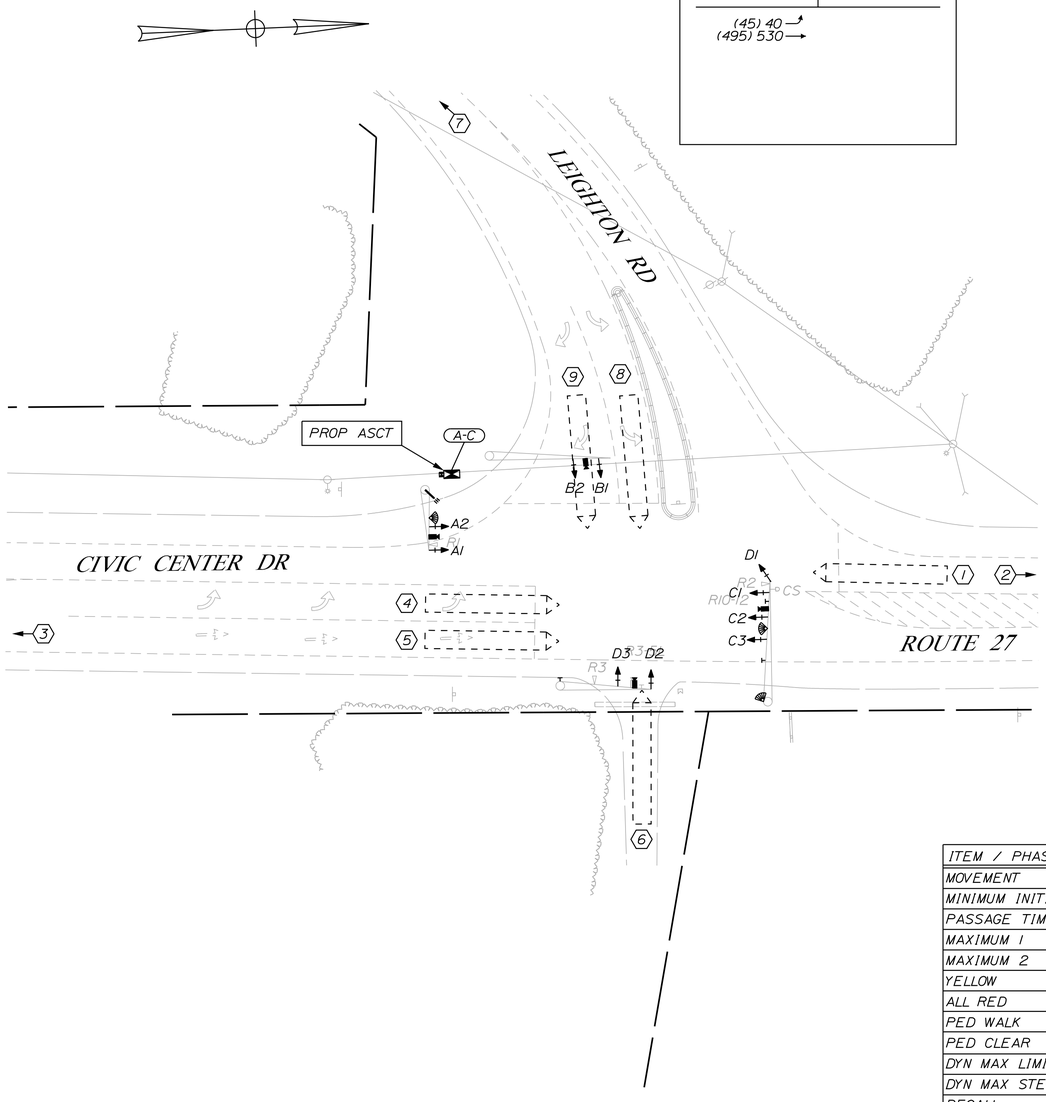
SYSTEM DESIGN VOLUMES AM (PM)



PROPOSED INDICATIONS



NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES



DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	φ CALLED	φ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
1	CIVIC CENTER DR SB MOVEMENTS	6	6	B	-	-
2*	CIVIC CENTER DR SB ADVANCE	6	6	A	-	-
3**	CIVIC CENTER DR NB ADVANCE	2	2	A	-	-
4	CIVIC CENTER DR NB LEFT	5	5	B	-	-
5	CIVIC CENTER DR NB THRU-RIGHT	2	2	B	-	-
6	DRIVEWAY WB MOVEMENTS	8	8	B	-	-
7***	LEIGHTON RD EB ADVANCE	4	4	A	-	-
8	LEIGHTON RD EB LEFT-THRU	4	4	B	-	-
9	LEIGHTON RD EB RIGHT	4	4	B	-	-

* SEE ADVANCED DILEMMA ZONE DETAIL (45 MPH)
** SEE ADVANCED DILEMMA ZONE DETAIL (50 MPH)
*** SEE ADVANCED DILEMMA ZONE DETAIL (40 MPH)
NOTE: LOCATION AND QUANTITY OF ADDITIONAL VEHICLE DETECTION ZONES TO BE DETERMINED BASED ON THE SPECIFIC ASCT SYSTEM REQUIREMENTS

SIGNAL TIMING SCHEDULE

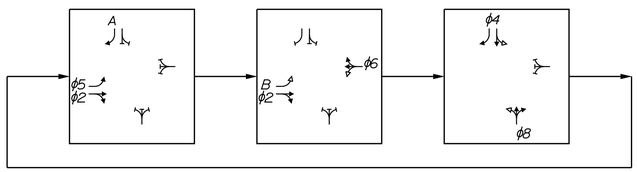
ITEM / PHASE	φ 1	φ 2	φ 3	φ 4	φ 5	φ 6	φ 7	φ 8
MOVEMENT	-	C	-	D	C (LT)	A	-	B
MINIMUM INITIAL	-	10	-	5	5	10	-	5
PASSAGE TIME	-	3.5	-	3.0	3.0	3.5	-	3.0
MAXIMUM 1	-	40	-	20	15	40	-	7
MAXIMUM 2	-	42	-	18	15	42	-	7
YELLOW	-	5.0	-	4.0	4.0	5.0	-	4.0
ALL RED	-	2.0	-	2.0	3.0	2.0	-	2.0
PED WALK	-	-	-	-	-	-	-	-
PED CLEAR	-	-	-	-	-	-	-	-
DYN MAX LIMIT	-	-	-	-	-	-	-	-
DYN MAX STEP	-	-	-	-	-	-	-	-
RECALL	-	SOFT	-	OFF	OFF	SOFT	-	OFF
DETECTOR	-	PR	-	PR	PR	PR	-	PR
PRE-EMPT PRIORITY	-	4	-	5	4	3	-	-
FLASH	-	Y	-	R	R	Y	-	R
DUAL ENTRY	-	ON	-	OFF	OFF	ON	-	OFF

NOTES: S = SOFT RECALLY = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK
IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD. INTERSECTION SHALL BE PART OF AN ASCT (ADAPTIVE) SYSTEM.

PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM

2 | 4
5 6 | 8



OVERLAP PHASING:
OVL A = 5
OVL B = 5 (PROT) + 6 (PERM)

PHASING NOTES:
1. GREEN ARROW INDICATION FOR OVERLAP A IS DISABLED WHEN PHASE 8 IS ACTIVE.
2. OVERLAP B SHALL BE PROGRAMMED FOR FLASHING YELLOW ARROW.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY REFERENCE F 02-09(501)
DOT FILE S-6-264, SHEET 1 OF 3, 09/1977

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER		
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2	CMB		
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

AUGUSTA
ROUTE 27 (CIVIC CENTER DR) AND LEIGHTON RD

TRAFFIC SIGNAL PLAN

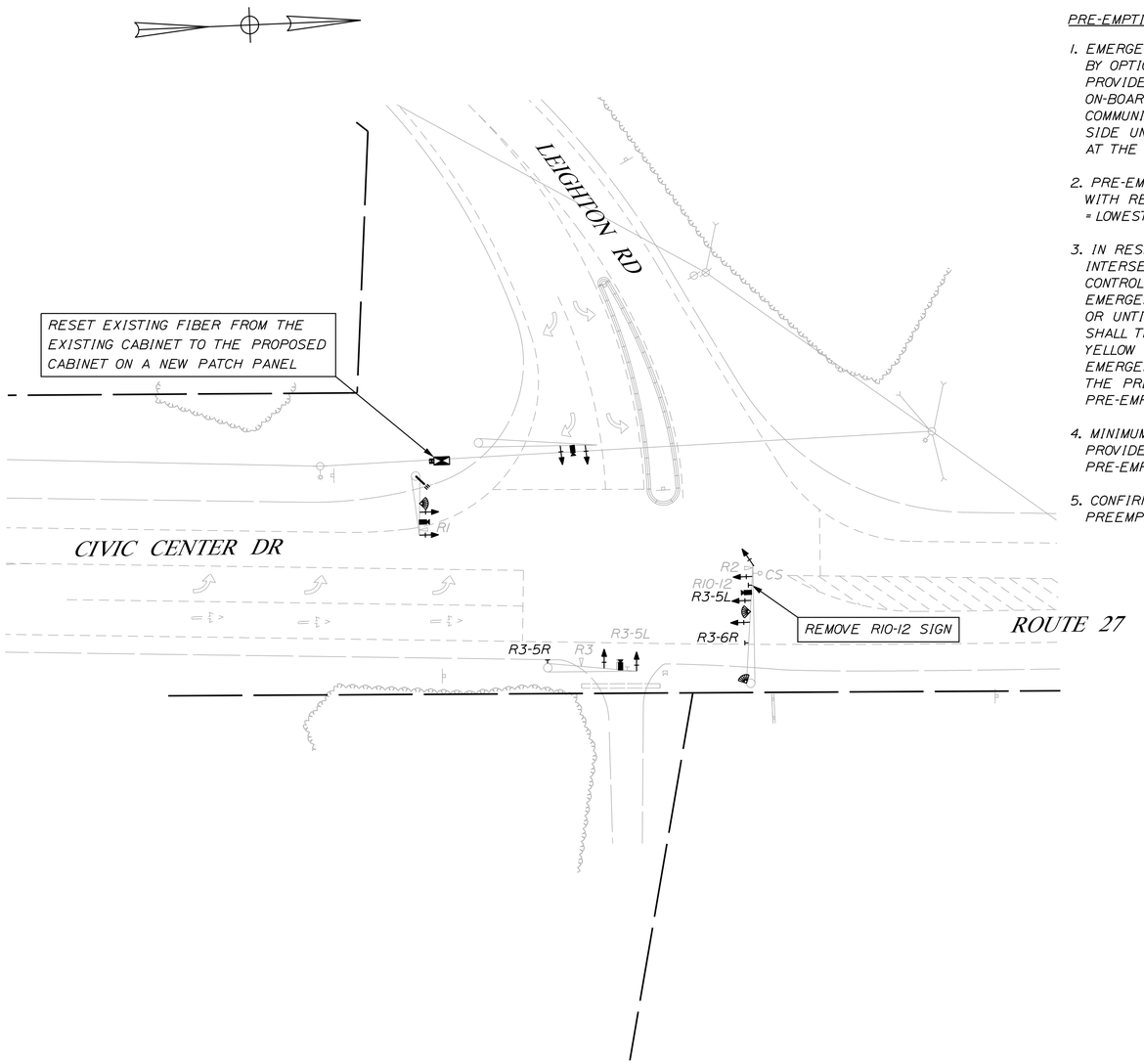
SHEET NUMBER
6
OF 358

Filename: 006_Signal_06.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
FURNISH AND INSTALL CIVIC CENTER DRIVE BALANCED/CRITICAL PATHS BASED ASCT SYSTEM (ITEM 654.05)	1 LS
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.



EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USE/RESERVED	
	2	NOT USE/RESERVED	
R1	3	1	ϕ6
R2	4	2	ϕ2&ϕ5
R3	5	3	ϕ4
	6	NOT USED	

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.

2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 3 = LOWEST)

3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR AND/OR RSU, 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 (5.0 SECONDS YELLOW AND 3.0 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.

4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.

5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.

PROPOSED SIGNS



R3-5L 30"x36" 1-PROPOSED

R3-5R 30"x36" 1-PROPOSED

R3-6R 30"x36" 1-PROPOSED

EXISTING SIGNS



R3-5L 1-RETAINED

R10-12 1-REMOVED

PLAN

25 0 25 50

Scale of Feet

* - RIGHT-OF-WAY REFERENCE F 02-09(501) DOT FILE S-6-264, SHEET 1 OF 3, 09/1977

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER	BY	DATE
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

AUGUSTA
ROUTE 27 (CIVIC CENTER DR) AND LEIGHTON RD

TRAFFIC SIGNAL PLAN

SHEET NUMBER

6A

OF 358

Filename: 006_Signal_06a.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

LIST OF WORK ITEMS

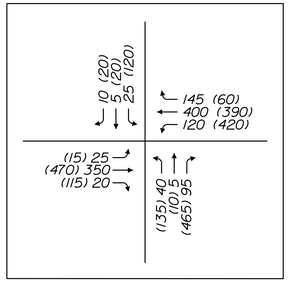
EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	10
FURNISH AND INSTALL ONE-WAY 4-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	1
FURNISH AND INSTALL ONE-WAY 5-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	2
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARM UPRIGHTS WITH BRACKET	2
FURNISH AND INSTALL ONE-WAY 5-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARM UPRIGHTS WITH BRACKETS	1
FURNISH AND INSTALL ONE-WAY, 16 X 18-INCH LED SIDE OF POLE MOUNTED COUNTDOWN PEDESTRIAN SIGNAL HEAD	3
FURNISH AND INSTALL ONE-WAY, 16 X 18-INCH LED TOP OF POST MOUNTED COUNTDOWN PEDESTRIAN SIGNAL HEAD	1
FURNISH AND INSTALL 9"X15" R10-3e INFORMATIONAL SIGN	4
FURNISH AND INSTALL 19-INCH 1RU FIBER OPTIC 12-POSITION PATCH PANEL WITH PIGTAILS	1
RESET FIBER OPTIC ETHERNET SWITCH WITH FIBER OPTIC INTERFACES	1
FURNISH AND INSTALL MAST ARM MOUNTED SIGNS	1
RESET PREEMPTION PHASE SELECTOR	1
REMOVE MAST ARM MOUNTED SIGNS	1
RESET LIGHT-BASED PREEMPTION RECEIVER	2
RESET EXISTING 12-F FIBER IN PROPOSED CABINET	-
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 4 APPROACHES, COMPLETE (ITEM 643.21)	1 LS
FURNISH AND INSTALL NON-INVASIVE ADVANCE VEHICLE DETECTION SYSTEM FOR 2 APPROACHES, COMPLETE (ITEM 643.22)	1 LS

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

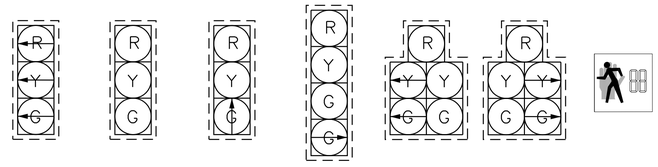
STRUCTURE LIST

STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	L48"xW36"xH48"
A-PI	8' PEDESTAL POLE	24" DIAMETER

SYSTEM DESIGN VOLUMES AM (PM)



PROPOSED INDICATIONS



A1,B1,C1 C2,D1,D4 | B2,B3 | A2,A3 C3,C4 | D3 | D2 | A4,C5 | P1-P4

NOTE: ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES

EXISTING INDICATIONS



P5-P6*

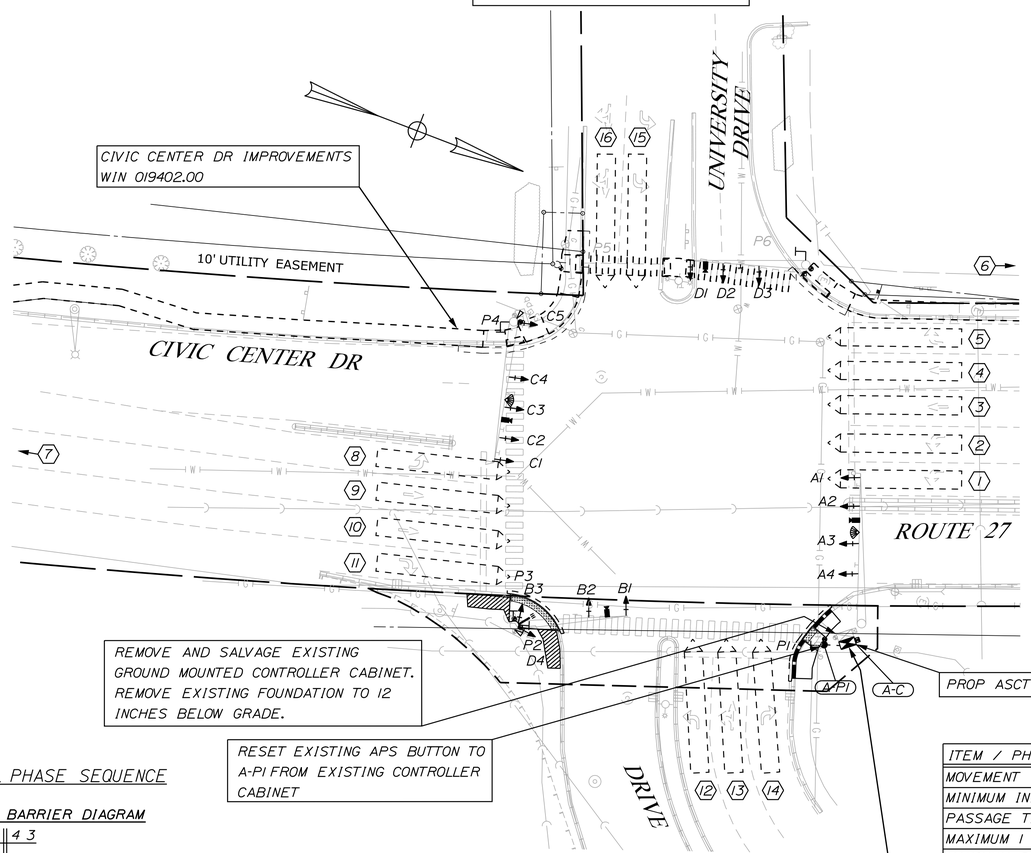
* INSTALLED UNDER 019401.00 IMPROVEMENTS

DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	φ CALLED	φ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
1	CIVIC CENTER DR SB LEFT	1	1	B	-	-
2	CIVIC CENTER DR SB LEFT	1	1	B	-	-
3	CIVIC CENTER DR SB THROUGH	6	6	B	-	-
4	CIVIC CENTER DR SB THROUGH	6	6	B	-	-
5	CIVIC CENTER DR SB RIGHT	6	6	B	5	-
6*	CIVIC CENTER DR SB ADVANCE	6	6	A	-	-
7*	CIVIC CENTER DR NB ADVANCE	2	2	A	-	-
8	CIVIC CENTER DR NB LEFT	5	5	B	-	-
9	CIVIC CENTER DR NB THROUGH	2	2	B	-	-
10	CIVIC CENTER DR NB THROUGH	2	2	B	-	-
11	CIVIC CENTER DR NB RIGHT	2	2	B	5	-
12	MARKET PLACE WB LEFT	3	3	B	-	-
13	MARKET PLACE WB LEFT-THRU	3	3	B	-	-
14	MARKET PLACE WB RIGHT	3	3	B	5	-
15	UNIVERSITY DR EB LEFT	4	4	B	-	-
16	UNIVERSITY DR EB THRU-RIGHT	4	4	B	-	-

* SEE ADVANCED DILEMMA ZONE DETAIL (35 MPH)

NOTE: LOCATION AND QUANTITY OF ADDITIONAL VEHICLE DETECTION ZONES TO BE DETERMINED BASED ON THE SPECIFIC ASCT SYSTEM REQUIREMENTS



SIGNAL TIMING SCHEDULE

ITEM / PHASE	φ1	φ2	φ3	φ4	φ5	φ6	φ7	φ8
MOVEMENT	C (LT)	A	D	B	A (LT)	C	-	-
MINIMUM INITIAL	7	10	7	7	7	10	-	-
PASSAGE TIME	3.5	3.5	3.0	3.0	3.0	3.5	-	-
MAXIMUM 1	35	45	30	15	15	35	-	-
MAXIMUM 2	35	45	30	15	15	35	-	-
YELLOW	3.5	4.0	4.0	4.0	3.5	4.0	-	-
ALL RED	2.5	2.0	3.0	3.0	2.5	2.0	-	-
PED WALK	-	5	-	5	-	5	-	-
PED CLEAR	-	24	-	22	-	24	-	-
DYN MAX LIMIT	-	55	-	60	-	55	-	-
DYN MAX STEP	-	10	-	15	-	10	-	-
RECALL	OFF	SOFT	OFF	OFF	OFF	SOFT	-	-
DETECTOR	PR	PR	PR	PR	PR	PR	-	-
PRE-EMPT PRIORITY	3	4	5	6	4	3	-	-
FLASH	R	Y	R	R	R	Y	-	-
DUAL ENTRY	OFF	ON	OFF	OFF	OFF	ON	-	-

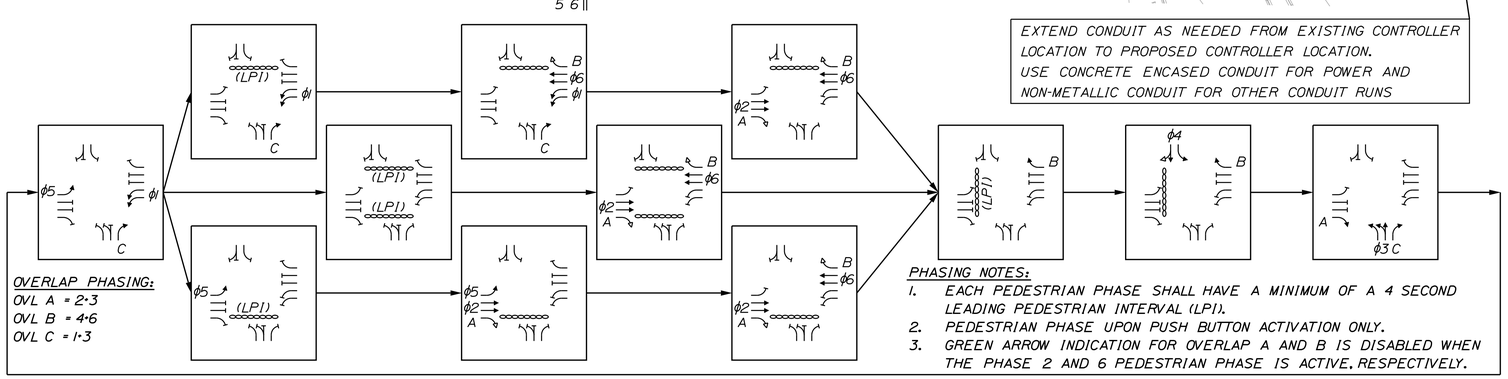
NOTES: S = SOFT RECALL = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK

IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD. INTERSECTION SHALL BE PART OF AN ASCT (ADAPTIVE) SYSTEM.

PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM

1 2 | 4 3
5 6 | 8 7



PHASING NOTES:

1. EACH PEDESTRIAN PHASE SHALL HAVE A MINIMUM OF A 4 SECOND LEADING PEDESTRIAN INTERVAL (LPI).
2. PEDESTRIAN PHASE UPON PUSH BUTTON ACTIVATION ONLY.
3. GREEN ARROW INDICATION FOR OVERLAP A AND B IS DISABLED WHEN THE PHASE 2 AND 6 PEDESTRIAN PHASE IS ACTIVE, RESPECTIVELY.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

		BY	DATE
PROJ. MANAGER	B. KEEZER		
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

AUGUSTA
ROUTE 27 (CIVIC CENTER DR) AND UNIVERSITY DRIVE

TRAFFIC SIGNAL PLAN

SHEET NUMBER 7

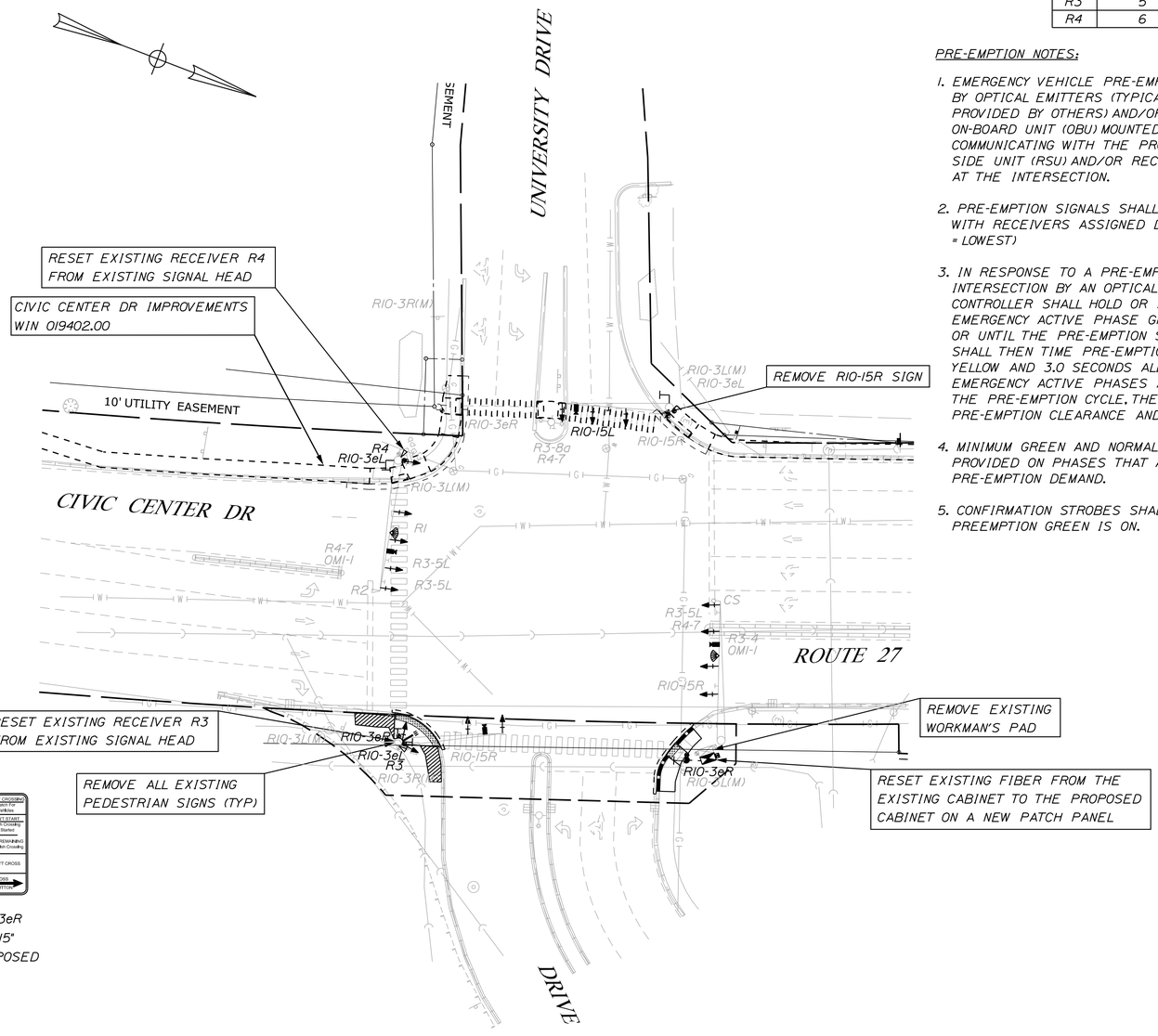
OF 358

Filename: 007_Signal_07.dgn Username: jorobert Division: HIGHWAY Date:11/24/2020

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
FURNISH AND INSTALL (3-INCH) NON-METALLIC CONDUIT (ITEM 626.22)	25 LF
FURNISH AND INSTALL NON-METALLIC CONDUIT, CONCRETE ENCASED (ITEM 626.221)	10 LF
FURNISH AND INSTALL CONTROLLER CABINET FOUNDATION (ITEM 626.35)	1 EA
FURNISH AND INSTALL 24-INCH DIAMETER FOUNDATION (ITEM 626.421)	7 LF
FURNISH AND INSTALL 8-FOOT PEDESTAL POLE (ITEM 643.92)	1 EA
FURNISH AND INSTALL CIVIC CENTER DRIVE BALANCED/CRITICAL PATHS BASED ASCT SYSTEM (ITEM 654.05)	1 LS
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.



PROPOSED SIGNS



RIO-15L 30"x30" 1-PROPOSED

RIO-3eL 9"x15" 2-PROPOSED

RIO-3eR 9"x15" 2-PROPOSED

EXISTING SIGNS



R3-5L 3-RETAINED

R3-8a 1-RETAINED

R4-7 2-RETAINED

RIO-15R 2-RETAINED 1-REMOVED

RIO-3L(M) 2-REMOVED

RIO-3R(M) 2-REMOVED

R3-4 1-RETAINED

OMI-1 2-RETAINED

EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USE/RESERVED	
	2	NOT USE/RESERVED	
R1	3	1	ϕ1&ϕ6
R2	4	2	ϕ2&ϕ5
R3	5	3	ϕ3
R4	6	4	ϕ4

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.

2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 4 = LOWEST)

3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR AND/OR RSU, 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 (4.0 SECONDS YELLOW AND 3.0 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.

4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.

5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.

PLAN

25 0 25 50

Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER	
DESIGN-DETAILED	MLG	JAR 07/20
CHECKED-REVIEWED	CMB	CMB 07/20
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REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 27 (CIVIC CENTER DR) AND UNIVERSITY DRIVE

TRAFFIC SIGNAL PLAN

SHEET NUMBER

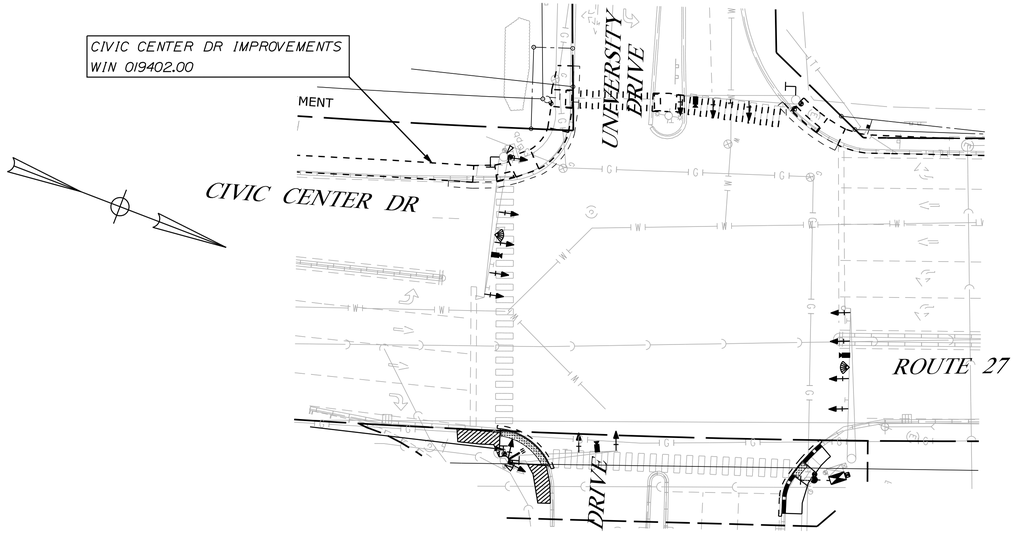
7A

OF 358

Filename: 007_Signal_07a.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

PT. TO PT.	RADIUS (FT)	ITEM 608.26 - CURB RAMP DETECTABLE WARNING FIELD		ITEM 609.221 - TERMINAL CURB TYPE I (LF)	ITEM 609.222 - TERMINAL CURB TYPE I - CIRCULAR (LF)	COMMENT
		LENGTH (FT)	QTY (SF)			
1 TO 2	-			5.5		
2 TO 3	13.3				8.0	
3 TO 4	55.0	5.6	9.7			
4 TO 5	56.3				8.0	
* 6 TO 7	20.5	21.5	37.1			3.2% CROSS SLOPE

* NON-COMPLIANT CURB RAMP ELEMENT - THE EXISTING ROADWAY PROFILE GRADE IS GREATER THAN 2%. THEREFORE THE LEVEL LANDING CROSS SLOPE AND/OR RUNNING SLOPE WILL BE GREATER THAN THE 2% AND 8.33% MAXIMUM ALLOWABLE. RESPECTIVELY. THE COMMENT IS THE MAXIMUM VALUE FOR PROPOSED LEVEL OF COMPLIANCE.



ALL CURB RAMPS SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND MAINEDOT STANDARD DETAILS 801(11) to 801(26) AS NOTED. AS WELL AS DETAILS PROVIDED ON SHEET H.

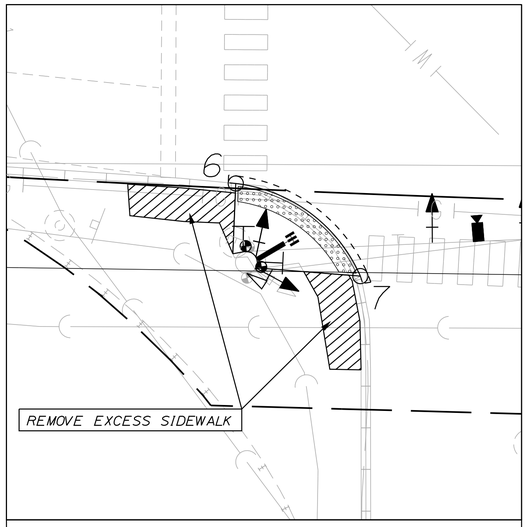
LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
COMMON EXCAVATION (ITEM 203.20)	27.9 CY
HOT MIX ASPHALT, 9.5 MM NOMINAL MAXIMUM SIZE (ITEM 403.210)	2.0 TONS
PLAIN CONCRETE SIDEWALK (ITEM 608.07)	30.9 SY
CURB RAMP DETECTABLE WARNING FIELD (ITEM 608.26)	46.8 SF
CONSTRUCT SIDEWALK (ITEM 608.45)	2.9 SY

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
REGRADING SIDEWALK (ITEM 608.46)	28.0 SY
TERMINAL CURB TYPE I (ITEM 609.221)	5.5 LF
TERMINAL CURB TYPE I - CIRCULAR (ITEM 609.222)	16.0 LF

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

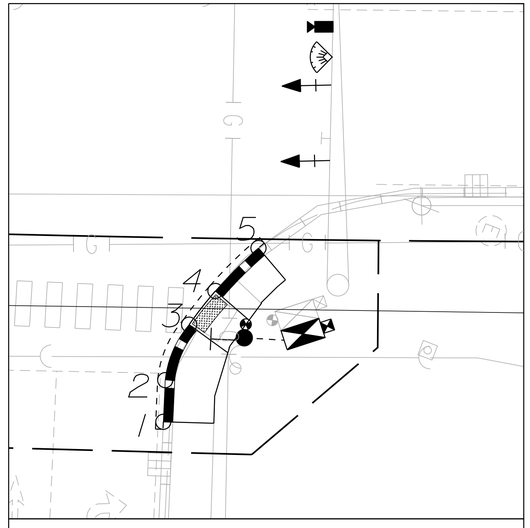
B CORNER - SE DETAIL



RECONSTRUCT LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(26).
EXTEND LANDING TO MAST ARM TO ACCESS THE PEDESTRIAN BUTTONS. SEE DETAIL ON SHEET H.

10 0 10 20
Scale of Feet

A CORNER - NE DETAIL



RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).
TRANSITION LENGTH REQUIRED FOR THE EASTERN CURB RAMP SHALL BE 13.5'. SEE MAINEDOT STANDARD DETAIL 801(13).

10 0 10 20
Scale of Feet

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN
024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	DATE
PROJ. MANAGER		
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DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 27 (CIVIC CENTER DR) AND UNIVERSITY DRIVE
CURB RAMP LAYOUT AND DETAIL PLAN

SHEET NUMBER
7C
OF 358

Filename: 007_SignoL_07c.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

LIST OF WORK ITEMS

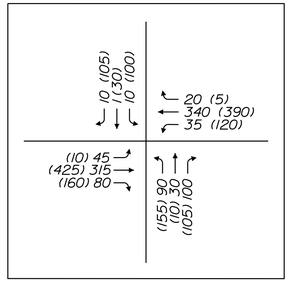
EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	7
FURNISH AND INSTALL ONE-WAY 4-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	2
FURNISH AND INSTALL ONE-WAY 5-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	1
FURNISH AND INSTALL ONE-WAY, 16 X 18-INCH LED SIDE OF POLE MOUNTED COUNTDOWN PEDESTRIAN SIGNAL HEAD	1
FURNISH AND INSTALL ONE-WAY, 16 X 18-INCH LED TOP OF POST MOUNTED COUNTDOWN PEDESTRIAN SIGNAL HEAD	1
FURNISH AND INSTALL ADA COMPLIANT ACCESSIBLE PEDESTRIAN SIGNAL (APS) BUTTON WITH 9"X15" R10-3e INFORMATIONAL SIGN	2
FURNISH AND INSTALL 19-INCH 1 RU FIBER OPTIC 12-POSITION PATCH PANEL WITH PIGTAILS	1
RESET FIBER OPTIC ETHERNET SWITCH WITH FIBER OPTIC INTERFACES	1
FURNISH AND INSTALL MAST ARM MOUNTED SIGNS	4
FURNISH AND INSTALL POST MOUNTED SIGNS	4
REMOVE EXISTING POST MOUNTED SIGNS	1
RESET PREEMPTION PHASE SELECTOR	1
RESET EXISTING 12-F FIBER IN PROPOSED CABINET	-
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 4 APPROACHES, COMPLETE (ITEM 643.21)	1 LS
FURNISH AND INSTALL NON-INVASIVE ADVANCE VEHICLE DETECTION SYSTEM FOR 2 APPROACHES, COMPLETE (ITEM 643.22)	1 LS

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

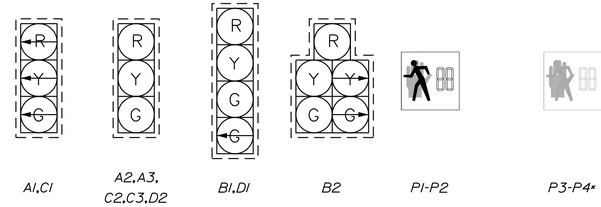
STRUCTURE LIST

STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	EXISTING
C-P1	8' PEDESTAL POLE	24" DIAMETER

SYSTEM DESIGN VOLUMES AM (PM)

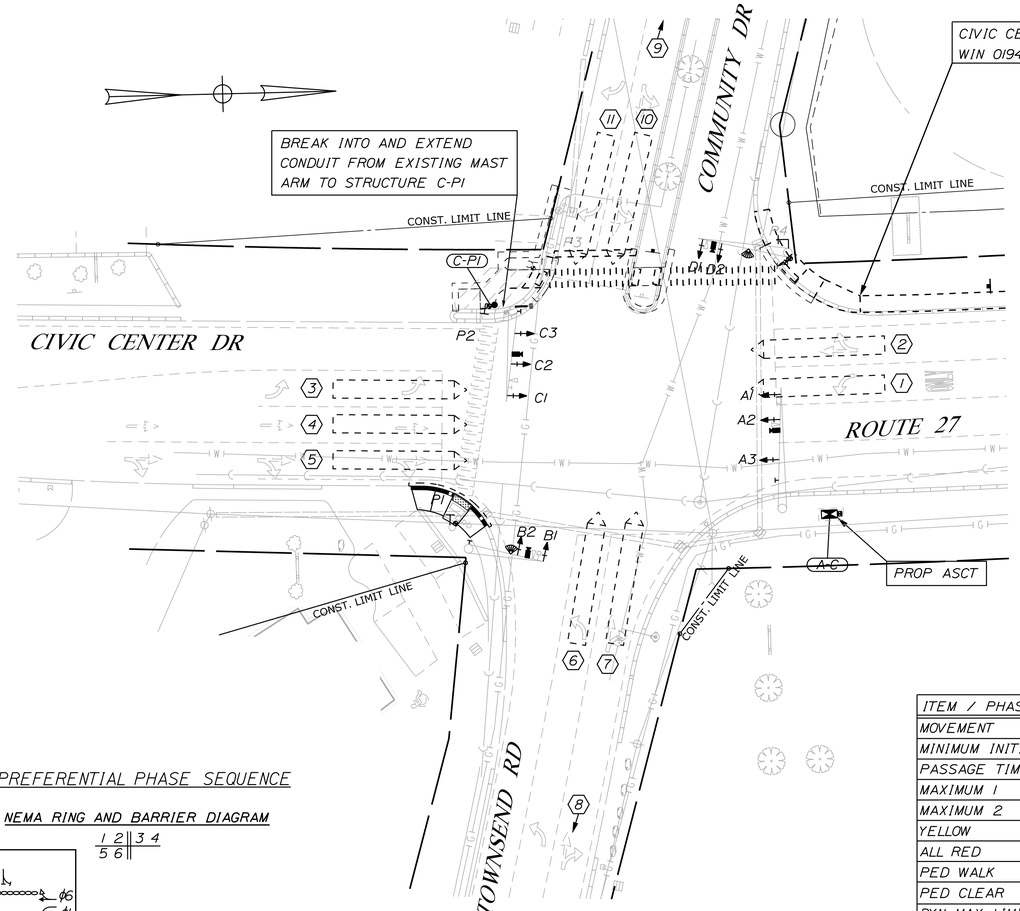


PROPOSED INDICATIONS



NOTE: ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES
* INSTALLED UNDER 019402.00 IMPROVEMENTS

EXISTING INDICATIONS
TO REMAIN OR RELOCATE



DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	φ CALLED	φ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
1	CIVIC CENTER DR SB LEFT	1	1	B	-	-
2	CIVIC CENTER DR SB THRU-RIGHT	6	6	B	-	-
3	CIVIC CENTER DR NB LEFT	5	5	B	-	-
4	CIVIC CENTER DR NB THROUGH	2	2	B	-	-
5	CIVIC CENTER DR NB THRU-RIGHT	2	2	B	-	-
6	TOWNSEND RD WB LEFT	3	3	B	-	-
7	TOWNSEND RD WB THRU-RIGHT	3	3	B	-	-
8*	TOWNSEND RD WB ADVANCE	3	3	A	-	-
9*	COMMUNITY DR EB ADVANCE	4	4	A	-	-
10	COMMUNITY DR EB LEFT-THRU	4	4	B	-	-
11	COMMUNITY DR EB RIGHT	4	4	B	5	-

* SEE ADVANCED DILEMMA ZONE DETAIL (35 MPH)
NOTE: LOCATION AND QUANTITY OF ADDITIONAL VEHICLE DETECTION ZONES TO BE DETERMINED BASED ON THE SPECIFIC ASCT SYSTEM REQUIREMENTS

SIGNAL TIMING SCHEDULE

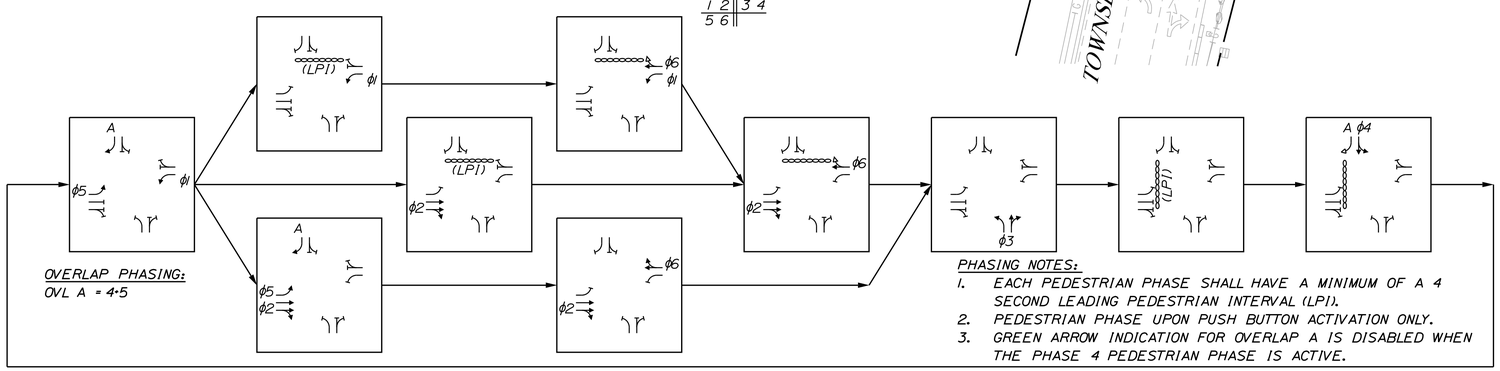
ITEM / PHASE	φ 1	φ 2	φ 3	φ 4	φ 5	φ 6	φ 7	φ 8
MOVEMENT	C (LT)	A	D	B	A (LT)	C	-	-
MINIMUM INITIAL	7	10	7	7	7	10	-	-
PASSAGE TIME	3.0	3.0	3.0	3.0	3.0	3.0	-	-
MAXIMUM 1	30	15	30	10	25	45	-	-
MAXIMUM 2	25	40	30	30	35	40	-	-
YELLOW	3.5	4.0	4.0	4.0	3.5	4.0	-	-
ALL RED	2.5	2.0	2.0	2.0	2.5	2.0	-	-
PED WALK	-	-	-	5	-	5	-	-
PED CLEAR	-	-	-	16	-	20	-	-
DYN MAX LIMIT	-	-	-	30	-	-	-	-
DYN MAX STEP	-	-	-	10	-	-	-	-
RECALL	OFF	SOFT	OFF	OFF	OFF	SOFT	-	-
DETECTOR	PR	PR	PR	PR	PR	PR	-	-
PRE-EMPT PRIORITY	3	4	5	6	4	3	-	-
FLASH	R	Y	R	R	R	Y	-	-
DUAL ENTRY	OFF	ON	OFF	OFF	OFF	ON	-	-

NOTES: S = SOFT RECALLY = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK
IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD. INTERSECTION SHALL BE PART OF AN ASCT (ADAPTIVE) SYSTEM.

PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM

1 2 | 3 4
5 6 |



OVERLAP PHASING:
OVL A = 4-5

PHASING NOTES:
1. EACH PEDESTRIAN PHASE SHALL HAVE A MINIMUM OF A 4 SECOND LEADING PEDESTRIAN INTERVAL (LPI).
2. PEDESTRIAN PHASE UPON PUSH BUTTON ACTIVATION ONLY.
3. GREEN ARROW INDICATION FOR OVERLAP A IS DISABLED WHEN THE PHASE 4 PEDESTRIAN PHASE IS ACTIVE.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY INFORMATION FROM MAINEDOT - AUGUSTA STP-1940(200)X DOT FILE NO 6-482, MAY 2019 AND MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

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AUGUSTA
ROUTE 27 (CIVIC CENTER DR) AND
COMMUNITY DR / TOWNSEND RD

TRAFFIC SIGNAL PLAN

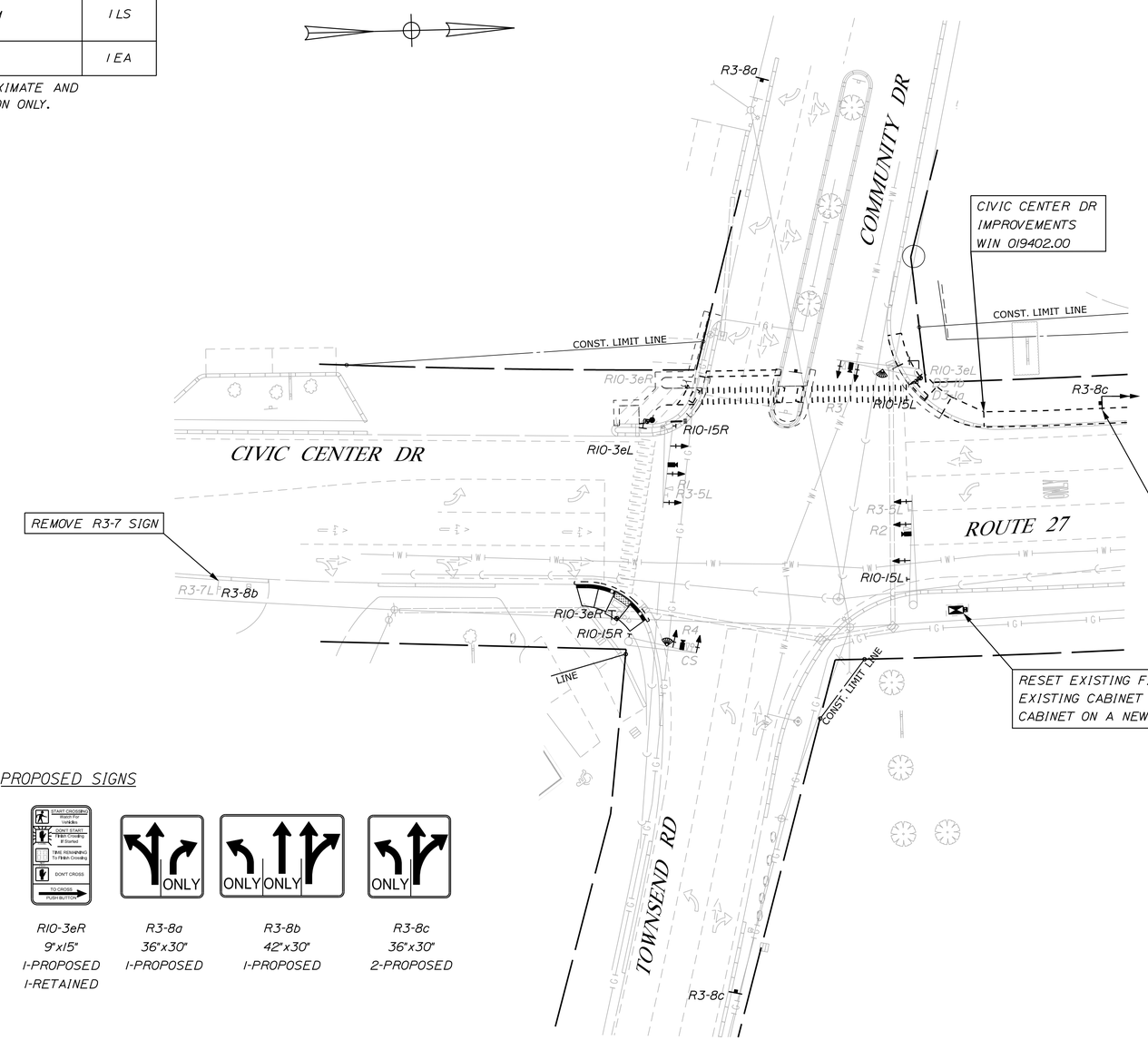
SHEET NUMBER
8
OF 358

Filename: 008_Signal_08.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
FURNISH AND INSTALL (3-INCH) NON-METALLIC CONDUIT (ITEM 626.22)	10 LF
FURNISH AND INSTALL 24-INCH DIAMETER FOUNDATION (ITEM 626.421)	7 LF
FURNISH AND INSTALL 8-FOOT PEDESTAL POLE (ITEM 643.92)	1 EA
FURNISH AND INSTALL CIVIC CENTER DRIVE BALANCED/CRITICAL PATHS BASED ASCT SYSTEM (ITEM 654.05)	1 LS
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

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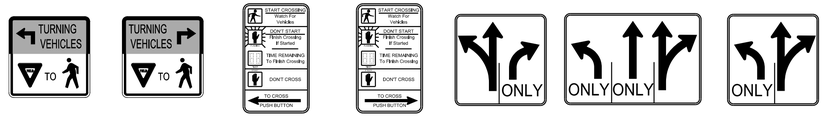
EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USE/RESERVED	
	2	NOT USE/RESERVED	
R1	3	1	ϕ1&ϕ6
R2	4	2	ϕ2&ϕ5
R3	5	3	ϕ3
R4	6	4	ϕ4

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.
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3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR AND/OR RSU, 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 (4.0 SECONDS YELLOW AND 2.5 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.
4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.

PROPOSED SIGNS



R10-15L	R10-15R	R10-3eL	R10-3eR	R3-8a	R3-8b	R3-8c
30"x30"	30"x30"	9"x15"	9"x15"	36"x30"	42"x30"	36"x30"
2-PROPOSED	2-PROPOSED	1-PROPOSED 1-RETAINED	1-PROPOSED 1-RETAINED	1-PROPOSED	1-PROPOSED	2-PROPOSED

EXISTING SIGNS



R3-5L	R3-7L	D3-1a	D3-1b
2-RETAINED	1-REMOVED	1-RETAINED	1-RETAINED

PLAN

25 0 25 50

Scale of Feet

* - RIGHT-OF-WAY INFORMATION FROM MAINEDOT - AUGUSTA STP-1940(200)X DOT FILE NO 6-482, MAY 2019 AND MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

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PROJ. MANAGER	B. KEEZER	
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DESIGN2-DETAILED2		
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AUGUSTA
ROUTE 27 (CIVIC CENTER DR) AND
COMMUNITY DR / TOWNSEND RD

TRAFFIC SIGNAL PLAN

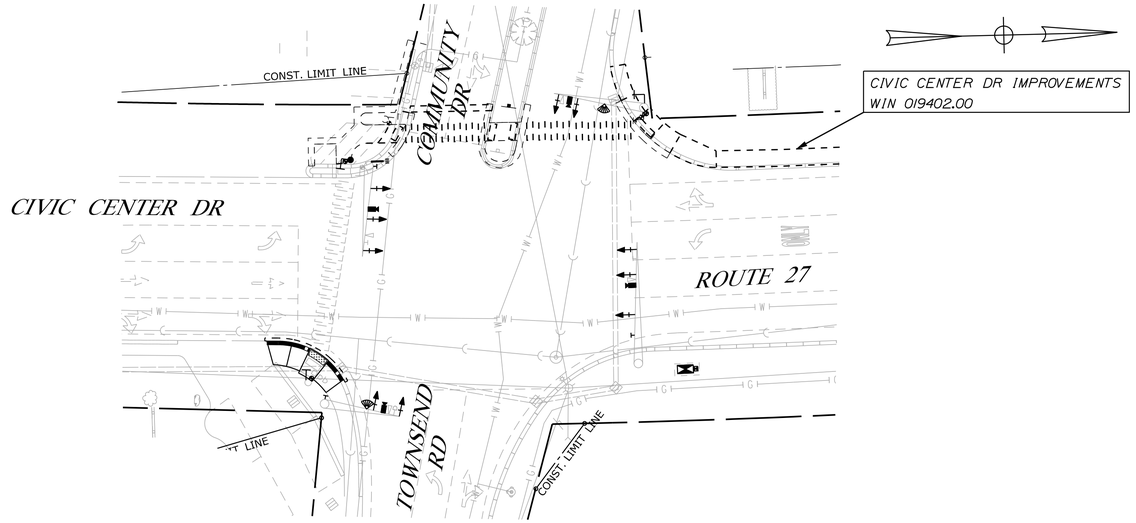
SHEET NUMBER

8A

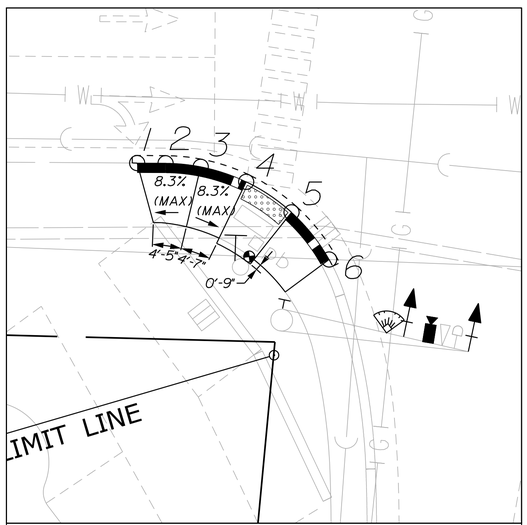
OF 358

Filename: 008_Signal_08a.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

PT. TO PT.	RADIUS (FT)	ITEM 608.26 - CURB RAMP DETECTABLE WARNING FIELD		ITEM 609.221 - TERMINAL CURB TYPE I (LF)	ITEM 609.222 - TERMINAL CURB TYPE I - CIRCULAR (LF)	COMMENT
		LENGTH (FT)	QTY (SF)			
1 TO 2	-			3.8		
2 TO 3	25.0				4.7	
3 TO 4	25.0				6.3	
4 TO 5	25.0	7.2	12.6			
5 TO 6	25.0				8.0	



B CORNER - SE DETAIL



RECONSTRUCT EASTERN CURB RAMP AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).
RECONSTRUCT SOUTHERN CURB RAMPS IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).
EXTEND LANDING TO ACCESS THE PEDESTRIAN BUTTON. SEE DETAIL ON SHEET H.

10 0 10 20
Scale of Feet

ALL CURB RAMPS SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND MAINEDOT STANDARD DETAILS 801(11) to 801(26) AS NOTED. AS WELL AS DETAILS PROVIDED ON SHEET H.

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
HOT MIX ASPHALT, 9.5 MM NOMINAL MAXIMUM SIZE (ITEM 403.210)	1.2 TONS
PLAIN CONCRETE SIDEWALK (ITEM 608.07)	22.7 SY
CURB RAMP DETECTABLE WARNING FIELD (ITEM 608.26)	12.6 SF
CONSTRUCT SIDEWALK (ITEM 608.45)	0.5 SY
REGRADING SIDEWALK (ITEM 608.46)	22.3 SY

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
TERMINAL CURB TYPE I (ITEM 609.221)	3.8 LF
TERMINAL CURB TYPE I - CIRCULAR (ITEM 609.222)	19.0 LF

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY INFORMATION FROM MAINEDOT - AUGUSTA STP-1940(200)X DOT FILE NO 6-482, MAY 2019 AND MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	DATE
PROJ. MANAGER		
DESIGN-DETAILED	M.G	07/20
CHECKED-REVIEWED	CMB	07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 27 (CIVIC CENTER DR) AND
COMMUNITY DR / TOWNSEND RD

CURB RAMP LAYOUT
AND DETAIL PLAN

SHEET NUMBER

8C

OF 358

Filename: 008_Signal_08c.dgn Division: HIGHWAY Username: jarobert Date:11/24/2020

Date:11/24/2020
Username: jorobert
Division: HIGHWAY
Filename: 009_Signal_09.dgn

LIST OF WORK ITEMS

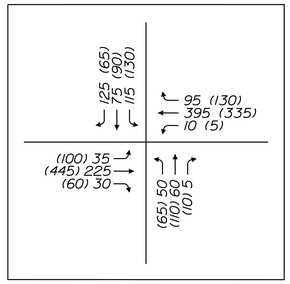
EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON SPAN AND TETHER WIRE	8
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY BRACKET MOUNTED ON POLE UPRIGHT	2
FURNISH AND INSTALL ADA COMPLIANT ACCESSIBLE PEDESTRIAN SIGNAL (APS) BUTTON WITH 9"X15" R10-3e INFORMATIONAL SIGN	2
FURNISH AND INSTALL 16-INCH L.E.D. COUNTDOWN PEDESTRIAN LENS IN EXISTING HOUSING	2
FURNISH AND INSTALL 4-CHANNEL PREEMPTION PHASE SELECTOR	1
FURNISH AND INSTALL LIGHT-BASED PREEMPTION RECEIVERS WITH DETECTOR CABLE	4
FURNISH AND INSTALL PREEMPTION CONFIRMATION RED STROBE WITH CABLE	1
FURNISH AND INSTALL 19-INCH 1RU FIBER OPTIC 12-POSITION PATCH PANEL WITH PIGTAILS	1
RESET FIBER OPTIC ETHERNET SWITCH WITH FIBER OPTIC INTERFACES	1
FURNISH AND INSTALL SPAN WIRE MOUNTED SIGNS	2
RESET COUNTDOWN PEDESTRIAN SIGNAL HEADS	1
RESET EXISTING 12-F FIBER IN PROPOSED CABINET	-
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 4 APPROACHES, COMPLETE (ITEM 643.21)	1 LS
FURNISH AND INSTALL NON-INVASIVE ADVANCE VEHICLE DETECTION SYSTEM FOR 3 APPROACHES, COMPLETE (ITEM 643.22)	1 LS

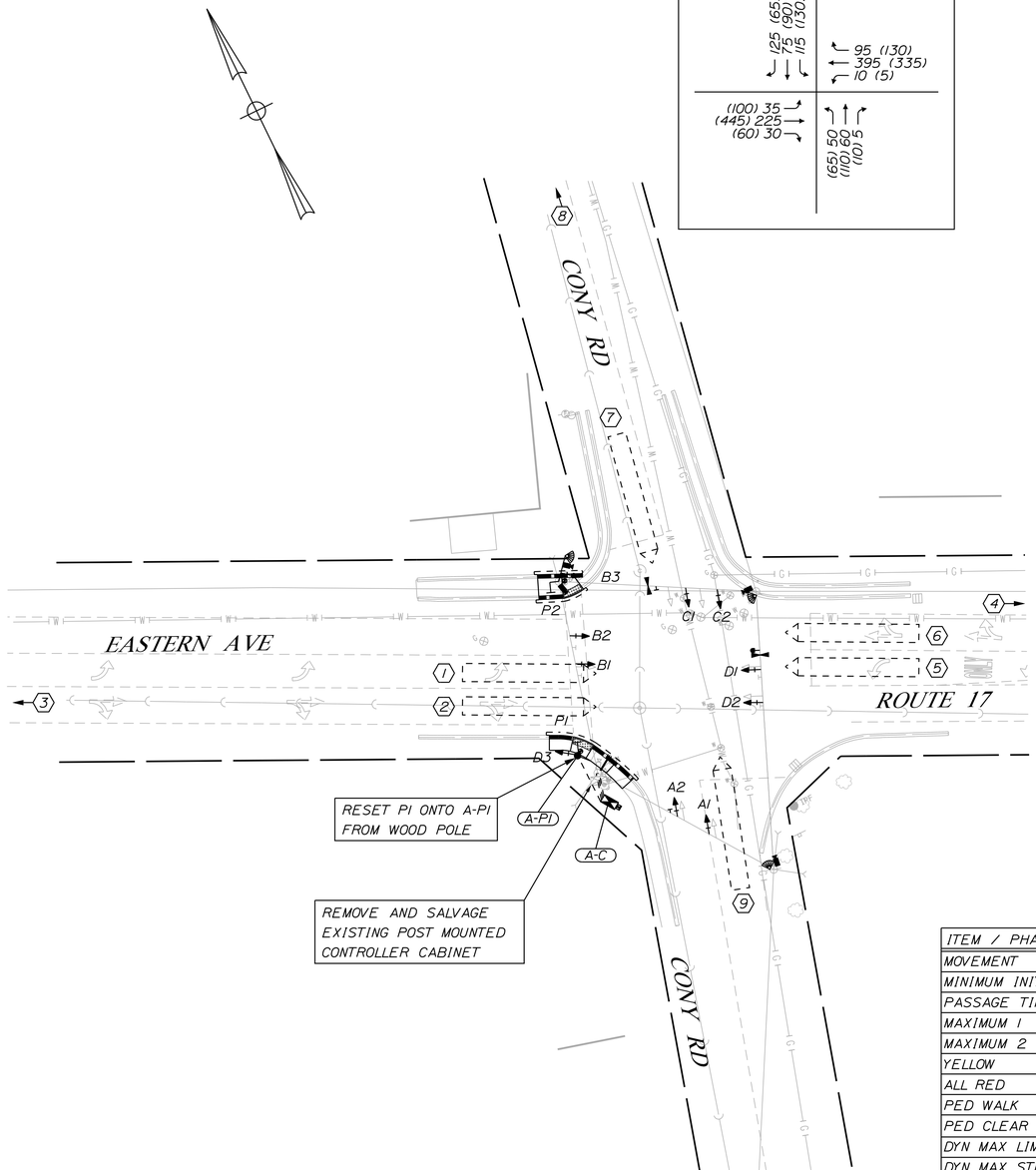
THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

STRUCTURE LIST

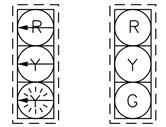
STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	L48"xW36"xH48"
A-PI	10' PEDESTAL POLE	24" DIAMETER

SYSTEM DESIGN VOLUMES AM (PM)





PROPOSED INDICATIONS



B1.D1 — A1.A2.B2 B3.C1.C2 D2.D3

EXISTING INDICATIONS
TO REMAIN OR RELOCATE



P1-P2

NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES

EXISTING COUNTDOWN PEDESTRIAN SIGNAL HEADS SHALL HAVE NEW L.E.D. LENSES INSTALLED

DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	φ CALLED	φ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
1	EASTERN AVE EB LEFT	6	6	B	-	-
2	EASTERN AVE EB THRU-RIGHT	6	6	B	-	-
3*	EASTERN AVE EB ADVANCE	6	6	A	-	-
4*	EASTERN AVE WB ADVANCE	2	2	A	-	-
5	EASTERN AVE WB LEFT	2	2	B	-	-
6	EASTERN AVE WB THRU-RIGHT	2	2	B	-	-
7	CONY RD SB MOVEMENTS	8	8	B	-	-
8*	CONY RD SB ADVANCE	8	8	A	-	-
9	CONY RD NB MOVEMENTS	4	4	B	-	-

* SEE ADVANCED DILEMMA ZONE DETAIL (35 MPH)

SIGNAL TIMING SCHEDULE

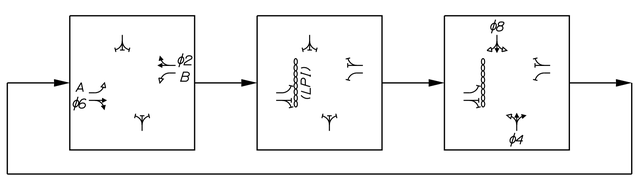
ITEM / PHASE	φ 1	φ 2	φ 3	φ 4	φ 5	φ 6	φ 7	φ 8
MOVEMENT	-	B	-	C	-	D	-	A
MINIMUM INITIAL	-	5	-	5	-	5	-	5
PASSAGE TIME	-	3.0	-	3.0	-	3.0	-	3.0
MAXIMUM 1	-	35	-	25	-	35	-	25
MAXIMUM 2	-	37	-	23	-	37	-	23
YELLOW	-	4.0	-	4.0	-	4.0	-	4.0
ALL RED	-	2.0	-	2.0	-	2.0	-	2.0
PED WALK	-	-	-	-	-	-	-	5
PED CLEAR	-	-	-	-	-	-	-	12
DYN MAX LIMIT	-	-	-	-	-	-	-	-
DYN MAX STEP	-	-	-	-	-	-	-	-
RECALL	-	SOFT	-	OFF	-	SOFT	-	OFF
DETECTOR	-	PR	-	PR	-	PR	-	PR
PRE-EMPT PRIORITY	-	4	-	6	-	3	-	5
FLASH	-	Y	-	R	-	Y	-	R
DUAL ENTRY	-	ON	-	ON	-	ON	-	ON

NOTES: S = SOFT RECALLY = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK
IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD.

PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM

2 | 4
6 | 8



OVERLAP PHASING:
OVL A = 6
OVL B = 2

PHASING NOTES:
1. EACH PEDESTRIAN PHASE SHALL HAVE A MINIMUM OF A 4 SECOND LEADING PEDESTRIAN INTERVAL (LPI).
2. PEDESTRIAN PHASE UPON PUSH BUTTON ACTIVATION ONLY.
3. OVERLAP A AND B SHALL BE PROGRAMMED FOR FLASHING YELLOW ARROWS.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	DATE
PROJ. MANAGER		
DESIGN-DETAILED	MLG	JAR 07/20
CHECKED-REVIEWED	CMB	CMB 07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 17 (EASTERN AVE) AND CONY RD

TRAFFIC SIGNAL PLAN

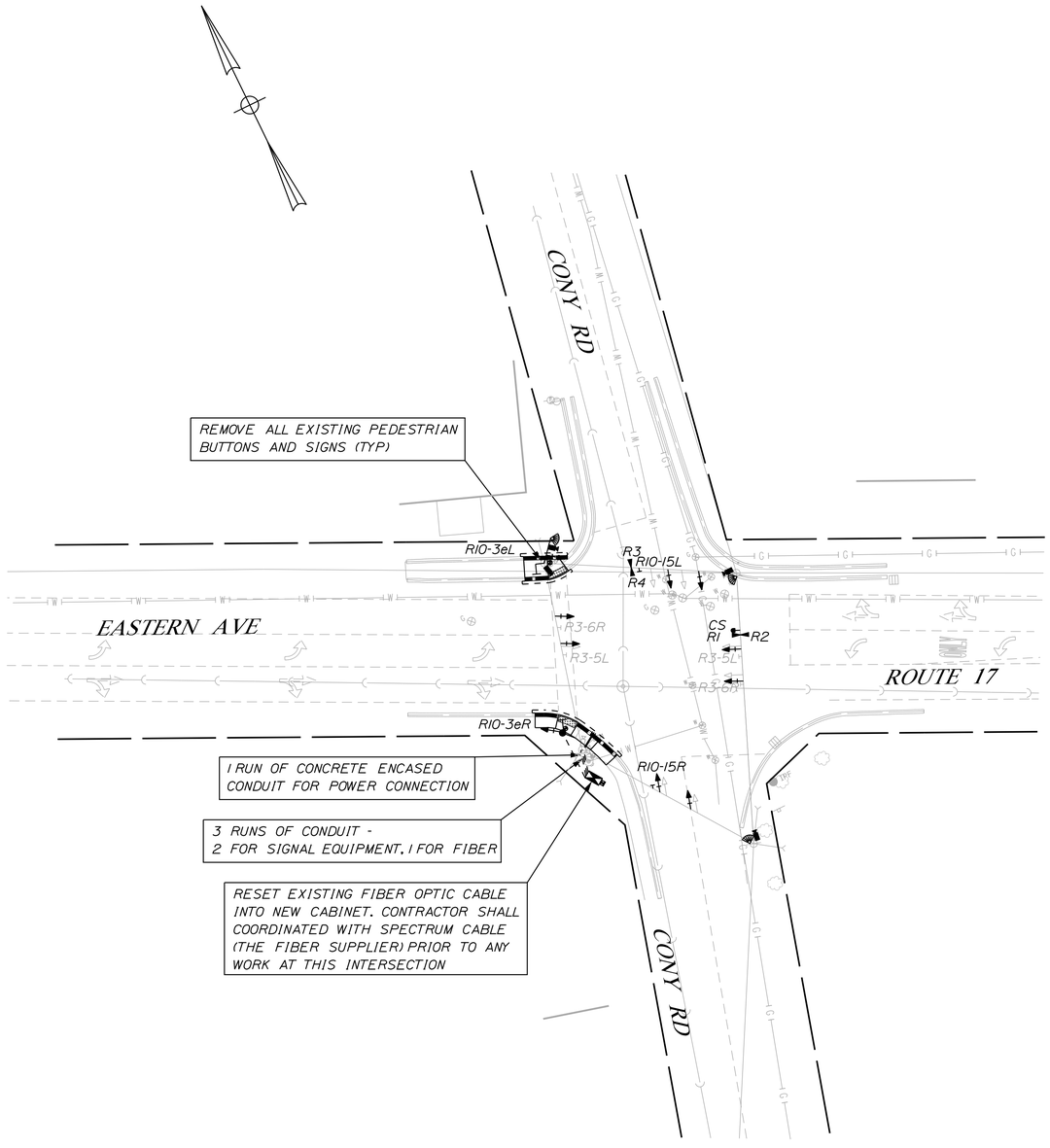
SHEET NUMBER
9
OF 358

Filename: 009_Signal_09a.dgn Username: jarobert Division: HIGHWAY Date:11/24/2020

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
FURNISH AND INSTALL (3-INCH) NON-METALLIC CONDUIT (ITEM 626.22)	50 LF
FURNISH AND INSTALL NON-METALLIC CONDUIT, CONCRETE ENCASED (ITEM 626.221)	10 LF
FURNISH AND INSTALL CONTROLLER CABINET FOUNDATION (ITEM 626.35)	1 EA
FURNISH AND INSTALL 24-INCH DIAMETER FOUNDATION (ITEM 626.421)	7 LF
FURNISH AND INSTALL 10-FOOT PEDESTAL POLE (ITEM 643.92)	1 EA
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.



PROPOSED SIGNS



R10-15L
30"x30"
1-PROPOSED



R10-15R
30"x30"
1-PROPOSED



R10-3eL
9"x15"
1-PROPOSED



R10-3eR
9"x15"
1-PROPOSED

EXISTING SIGNS



R3-5L
2-RETAINED



R3-6R
2-RETAINED

EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USE/RESERVED	
	2	NOT USE/RESERVED	
R1	3	1	ϕ6
R2	4	2	ϕ2
R3	5	3	ϕ8
R4	6	4	ϕ4

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.

2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 4 = LOWEST)

3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR AND/OR RSU, 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 (4.0 SECONDS YELLOW AND 2.0 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.

4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.

5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	BY	DATE
PROJ. MANAGER			
DESIGN-DETAILED	M.G	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

AUGUSTA
ROUTE 17 (EASTERN AVE) AND CONY RD

TRAFFIC SIGNAL PLAN

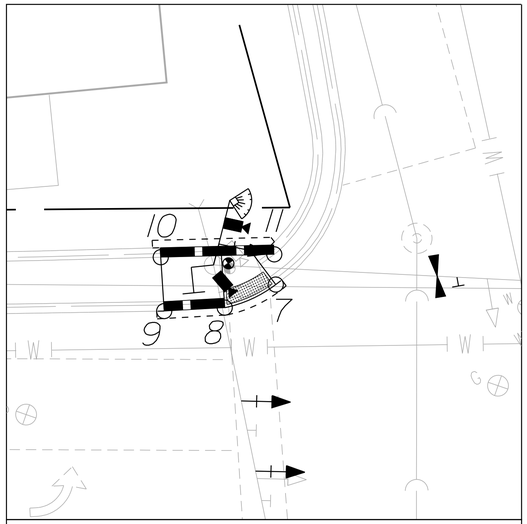
SHEET NUMBER

9A

OF 358

Filename: 009_Signal_09c.dgn Division: HIGHWAY Username: jarobert Date:11/24/2020

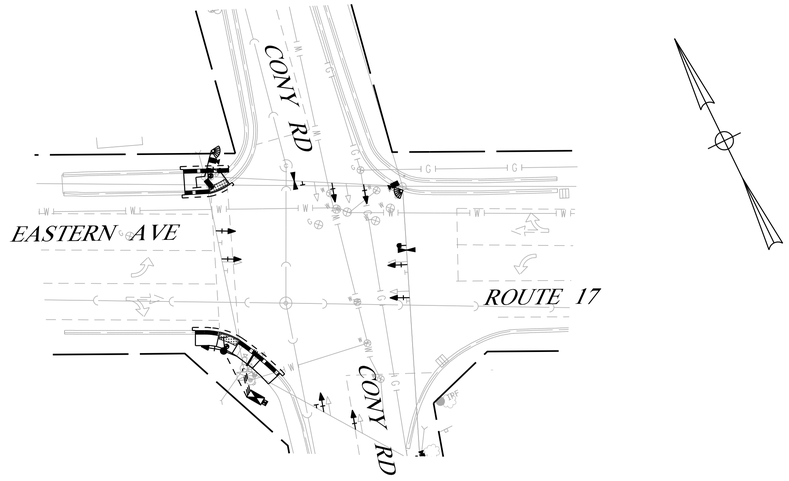
B CORNER - NW DETAIL



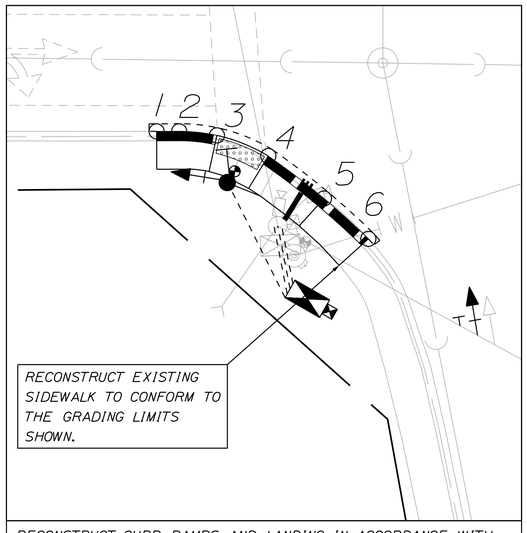
RECONSTRUCT CURB RAMP AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(14).
INSTALL BACK CURB ALONG CURB RAMP AND LANDING AND EXTEND TO MATCH INTO EXISTING CURBED ISLAND.

10 0 10 20
Scale of Feet

PT. TO PT.	RADIUS (FT)	ITEM 608.26 - CURB RAMP DETECTABLE WARNING FIELD		ITEM 609.11 - VERTICAL CURB TYPE I (LF)	ITEM 609.221 - TERMINAL CURB TYPE I (LF)	ITEM 609.222 - TERMINAL CURB TYPE I - CIRCULAR (LF)	COMMENT
		LENGTH (FT)	QTY (SF)				
1 TO 2	-				3.0		
2 TO 3	23.8					5.0	
3 TO 4	22.5	7.3	12.3				
4 TO 5	100.0				9.2		
5 TO 6	100.0			8.0			
7 TO 8	16.5	7.5	12.0				
8 TO 9	-				8.0		
10 TO 11	-			15.0			



A CORNER - SW DETAIL



RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).
TRANSITION LENGTH REQUIRED FOR THE WESTERN CURB RAMP SHALL BE 9.2'. SEE MAINEDOT STANDARD DETAIL 801(13).

10 0 10 20
Scale of Feet

ALL CURB RAMPS SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND MAINEDOT STANDARD DETAILS 801(11) to 801(26) AS NOTED. AS WELL AS DETAILS PROVIDED ON SHEET H.

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
HOT MIX ASPHALT, 9.5 MM NOMINAL MAXIMUM SIZE (ITEM 403.210)	3.0 TONS
PLAIN CONCRETE SIDEWALK (ITEM 608.07)	24.2 SY
CURB RAMP DETECTABLE WARNING FIELD (ITEM 608.26)	24.3 SF
CONSTRUCT SIDEWALK (ITEM 608.45)	19.4 SY
REGRADING SIDEWALK (ITEM 608.46)	9.1 LF

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
VERTICAL CURB TYPE I (ITEM 609.11)	23.0 LF
TERMINAL CURB TYPE I (ITEM 609.221)	20.2 LF
TERMINAL CURB TYPE I - CIRCULAR (ITEM 609.222)	5.0 LF

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER		
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

AUGUSTA
ROUTE 17 (EASTERN AVE) AND CONY RD

CURB RAMP LAYOUT AND DETAIL PLAN

SHEET NUMBER

9C

OF 358

LIST OF WORK ITEMS

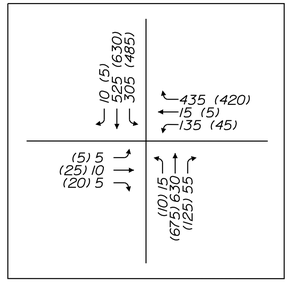
EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON SPAN AND TETHER WIRE	8
FURNISH AND INSTALL ONE-WAY 5-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON SPAN AND TETHER WIRE	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON TOP OF POST	1
FURNISH AND INSTALL 16-INCH L.E.D. COUNTDOWN PEDESTRIAN LENS IN EXISTING HOUSING	8
FURNISH AND INSTALL ADA COMPLIANT ACCESSIBLE PEDESTRIAN SIGNAL (APS) BUTTON WITH 9"X15" RIO-3E INFORMATIONAL SIGN	8
FURNISH AND INSTALL 4-CHANNEL PREEMPTION PHASE SELECTOR	1
FURNISH AND INSTALL LIGHT-BASED PREEMPTION RECEIVERS WITH DETECTOR CABLE	4
FURNISH AND INSTALL PREEMPTION CONFIRMATION RED STROBE WITH CABLE	1
FURNISH AND INSTALL 12-POSITION PATCH PANEL	1
FURNISH AND INSTALL TETHER WIRE	325 LF
FURNISH AND INSTALL ENVIRONMENTALLY HARDENED FIBER OPTIC ETHERNET SWITCH	1
FURNISH AND INSTALL SPAN WIRE MOUNTED SIGNS	6
RESET COUNTDOWN PEDESTRIAN SIGNAL HEADS	5
RESET EXISTING SPAN WIRE MOUNTED SIGNS	5
RESET EXISTING 12-F FIBER IN PROPOSED CABINET	-
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 4 APPROACHES, COMPLETE (ITEM 643.21)	1 LS
FURNISH AND INSTALL NON-INVASIVE ADVANCE VEHICLE DETECTION SYSTEM FOR 2 APPROACHES, COMPLETE (ITEM 643.22)	1 LS

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

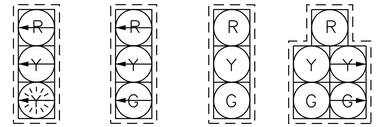
STRUCTURE LIST

STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	L48"xW36"xH48"
B-PI	8' PEDESTAL POLE	24" DIAMETER
C-PI	8' PEDESTAL POLE	24" DIAMETER
D-PI	10' PEDESTAL POLE	24" DIAMETER

SYSTEM DESIGN VOLUMES AM (PM)



PROPOSED INDICATIONS



BI DI A1,B2,B3 C1,C2,D2 D3 A2

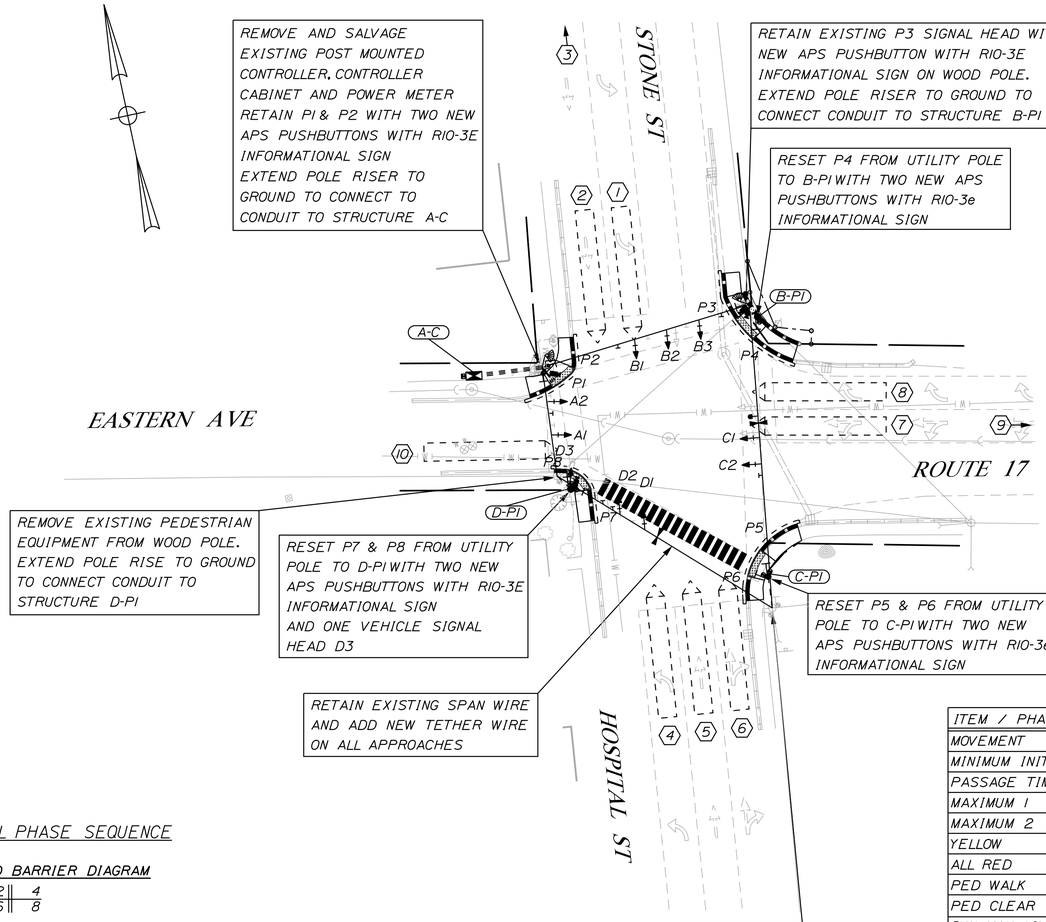
EXISTING INDICATIONS TO REMAIN



P1-P8

NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES

EXISTING COUNTDOWN PEDESTRIAN SIGNAL HEADS SHALL HAVE NEW L.E.D. LENSES INSTALLED



DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	φ CALLED	φ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
1	STONE ST SB LEFT	1	1	B	-	-
2	STONE ST SB THRU-RIGHT	6	6	B	-	-
3*	STONE ST SB ADVANCE	6	6	A	-	-
4	HOSPITAL ST NB LEFT	2	2	B	-	-
5	HOSPITAL ST NB THROUGH	2	2	B	-	-
6	HOSPITAL ST NB THRU-RIGHT	2	2	B	-	-
7	EASTERN AVE WB LEFT-THRU	8	8	B	-	-
8	EASTERN AVE WB RIGHT	8	8	B	5	-
9*	EASTERN AVE WB ADVANCE	8	8	A	-	-
10	EASTERN AVE EB MOVEMENTS	4	4	B	-	-

* SEE ADVANCED DILEMMA ZONE DETAIL (35 MPH)

SIGNAL TIMING SCHEDULE

ITEM / PHASE	φ 1	φ 2	φ 3	φ 4	φ 5	φ 6	φ 7	φ 8
MOVEMENT	D (LT)	B	-	C	-	D	-	A
MINIMUM INITIAL	5	10	-	5	-	10	-	5
PASSAGE TIME	3.0	3.5	-	3.0	-	3.5	-	3.0
MAXIMUM 1	30	45	-	20	-	45	-	35
MAXIMUM 2	50	60	-	20	-	60	-	35
YELLOW	3.5	4.0	-	3.5	-	4.0	-	3.5
ALL RED	2.5	2.0	-	2.5	-	2.0	-	2.5
PED WALK	-	5	-	5	-	5	-	5
PED CLEAR	-	17	-	17	-	8	-	17
DYN MAX LIMIT	-	-	-	-	-	-	-	-
DYN MAX STEP	-	-	-	-	-	-	-	-
RECALL	OFF	SOFT	-	OFF	-	SOFT	-	OFF
DETECTOR	PR	PR	-	PR	-	PR	-	PR
PRE-EMPT PRIORITY	3	4	-	6	-	3	-	5
FLASH	R	Y	-	R	-	Y	-	R
DUAL ENTRY	OFF	ON	-	OFF	-	ON	-	OFF

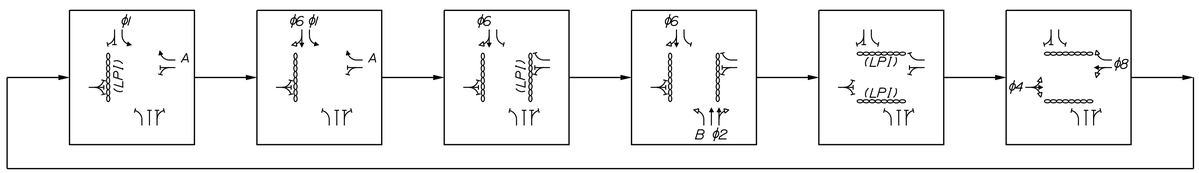
NOTES: S = SOFT RECALLY = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK

IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD.

PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM

1 2 | 4
6 | 8



OVERLAP PHASING:
OVL A = 1
OVL B = 2

PHASING NOTES:
1. EACH PEDESTRIAN PHASE SHALL HAVE A MINIMUM OF A 4 SECOND LEADING PEDESTRIAN INTERVAL (LPI).
2. PEDESTRIAN PHASE UPON PUSH BUTTON ACTIVATION ONLY
3. GREEN ARROW INDICATION FOR OVERLAP A IS DISABLED WHEN THE PHASE 8 PEDESTRIAN PHASE OR PHASE 4 IS ACTIVE.
4. OVERLAP B SHALL BE PROGRAMMED FOR FLASHING YELLOW ARROW.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY REFERENCE HES-030-1(22) DOT FILE 6-257 SHEET 1 OF 1, 12/1984

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	DATE
PROJ. MANAGER		
DESIGN-DETAILED	MLG	07/20
CHECKED-REVIEWED	CMB	07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1	JAR	
REVISIONS 2	CMB	
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 17 (EASTERN AVE) AND
HOSPITAL ST / STONE ST

TRAFFIC SIGNAL PLAN

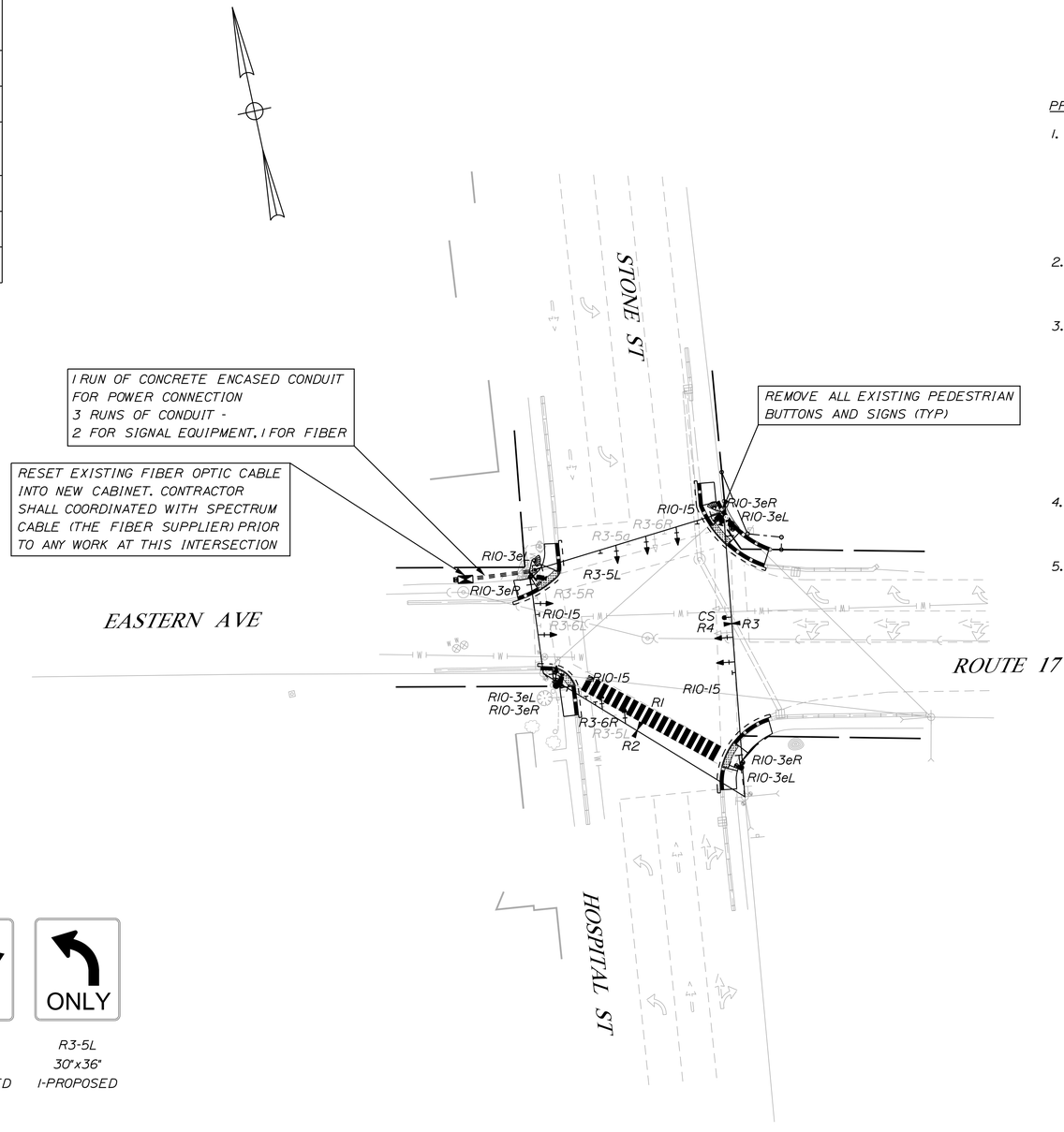
SHEET NUMBER
10
OF 358

Filename: 010_Signal_10.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
FURNISH AND INSTALL (3-INCH) NON-METALLIC CONDUIT (ITEM 626.22)	85 LF
FURNISH AND INSTALL NON-METALLIC CONDUIT, CONCRETE ENCASED (ITEM 626.221)	20 LF
FURNISH AND INSTALL CONTROLLER CABINET FOUNDATION (ITEM 626.35)	1 EA
FURNISH AND INSTALL 24-INCH DIAMETER FOUNDATION (ITEM 626.421)	21 LF
FURNISH AND INSTALL WHITE PAVEMENT AND CURB MARKINGS ITEM 627.75)	288 LF
FURNISH AND INSTALL 8-FOOT PEDESTAL POLE (ITEM 643.92)	2 EA
FURNISH AND INSTALL 10-FOOT PEDESTAL POLE (ITEM 643.92)	1 EA
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.



EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USE/RESERVED	
	2	NOT USE/RESERVED	
R1	3	1	ϕ1&ϕ6
R2	4	2	ϕ2
R3	5	3	ϕ8
R4	6	4	ϕ4

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.
2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 4 = LOWEST)
3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR AND/OR RSU, 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 (4.0 SECONDS YELLOW AND 2.5 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.
4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.

PROPOSED SIGNS



R10-15	R10-3eL	R10-3eR	R3-6R	R3-5L
30"x30"	9"x15"	9"x15"	30"x36"	30"x36"
4-PROPOSED	4-PROPOSED	4-PROPOSED	1-PROPOSED	1-PROPOSED

EXISTING SIGNS



R3-5L	R3-6L	R3-6R	R3-5a	R3-5R
1-RETAINED	1-RETAINED	1-RETAINED	1-RETAINED	1-RETAINED

NOTE: EXISTING SIGNS TO BE RETAINED SHALL BE RESET AS REQUIRED TO PROVIDED BOTH SPAN AND TETHER WIRE CONNECTIONS.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY REFERENCE HES-030-1(22)
DOT FILE 6-257 SHEET 1 OF 1, 12/1984

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER		
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

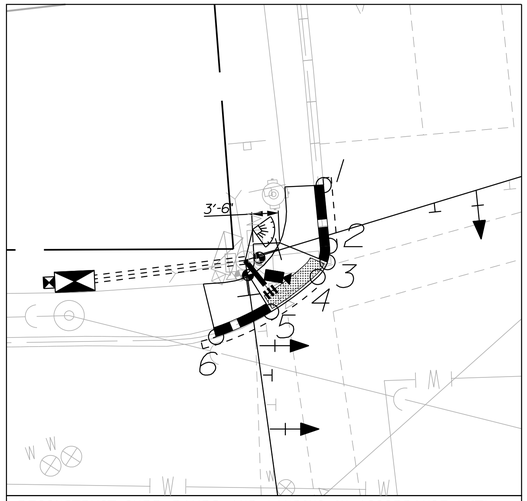
AUGUSTA
ROUTE 17 (EASTERN AVE) AND
HOSPITAL ST / STONE ST

TRAFFIC SIGNAL PLAN

SHEET NUMBER
10A
OF 358

Filename: 010_Signal_10a.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

A CORNER - NW DETAIL



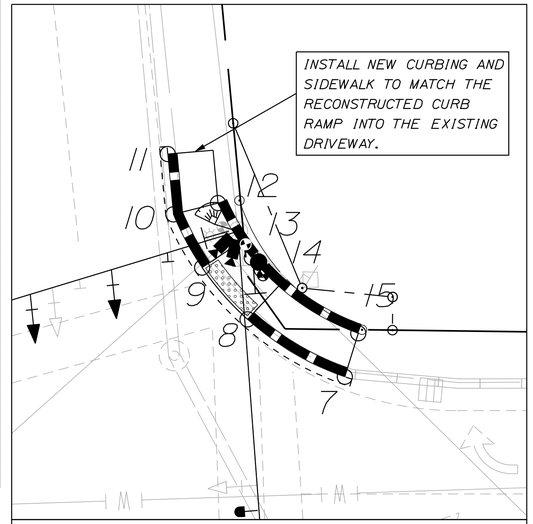
RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).
EXTEND LANDING TO ACCESS THE PEDESTRIAN BUTTONS.
SEE DETAIL ON SHEET H.

10 0 10 20
Scale of Feet

	PT. TO PT.	RADIUS (FT)	ITEM 608.26 - CURB RAMP DETECTABLE WARNING FIELD		ITEM 609.11 - VERTICAL CURB TYPE I (LF)	ITEM 609.12 - VERTICAL CURB TYPE I - CIRCULAR (LF)	ITEM 609.221 - TERMINAL CURB TYPE I (LF)	ITEM 609.222 - TERMINAL CURB TYPE I - CIRCULAR (LF)	COMMENT
			LENGTH (FT)	QTY (SF)					
	1 TO 2	-					8.0		
	2 TO 3	5.0						2.2	
*	3 TO 4	5.0	2.4	17.1					8.1% CROSS SLOPE
	4 TO 5	37.0	7.7						
	5 TO 6	37.4						8.0	
	7 TO 8	38.0						15.0	
*	8 TO 9	38.0	9.1	16.3					6.1% CROSS SLOPE
	9 TO 10	38.0						8.0	
	10 TO 11	-			8.0				
	12 TO 13	32.0				8.4			
	14 TO 15	32.0				15.4			
	16 TO 17	-					2.4		
	17 TO 18	25.3						5.6	
*	18 TO 19	24.0	9.9	17.3					4.1% CROSS SLOPE
*	19 TO 20	25.3						15.0	10.1% RUNNING SLOPE
	21 TO 22	46.2						4.0	
*	22 TO 23	10.0	11.2	16.8					6.1% CROSS SLOPE
	23 TO 24	-					10.2		

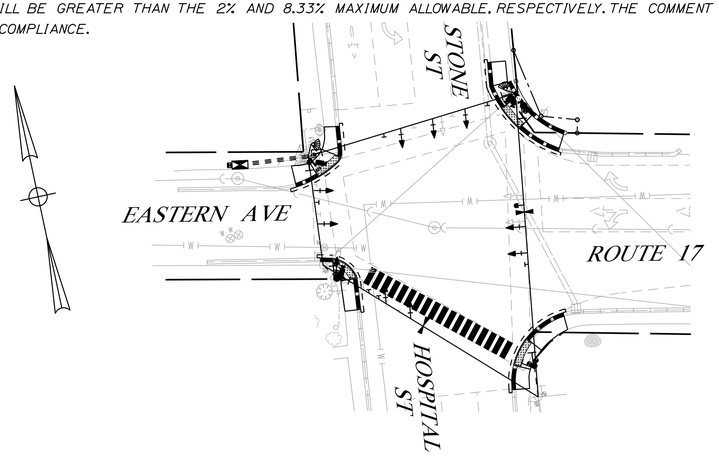
* NON-COMPLIANT CURB RAMP ELEMENT - THE EXISTING ROADWAY PROFILE GRADE IS GREATER THAN 2%. THEREFORE THE LEVEL LANDING CROSS SLOPE AND/OR RUNNING SLOPE WILL BE GREATER THAN THE 2% AND 8.33% MAXIMUM ALLOWABLE. RESPECTIVELY. THE COMMENT IS THE MAXIMUM VALUE FOR PROPOSED LEVEL OF COMPLIANCE.

B CORNER - NE DETAIL



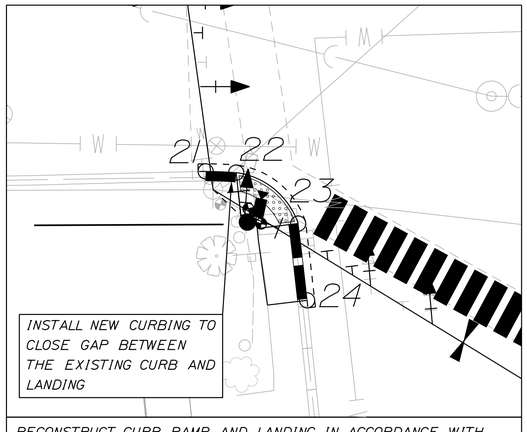
RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).
INSTALL BACK CURB ALONG CURB RAMPS AND LANDING.
TRANSITION LENGTH REQUIRED FOR THE EASTERN CURB RAMP SHALL BE 15.0'. SEE MAINEDOT STANDARD DETAIL 801(13).

10 0 10 20
Scale of Feet



ALL CURB RAMPS SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND MAINEDOT STANDARD DETAILS 801(11) to 801(26) AS NOTED. AS WELL AS DETAILS PROVIDED ON SHEET H.

D CORNER - SW DETAIL



RECONSTRUCT CURB RAMP AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(22).
TRANSITION LENGTH REQUIRED FOR THE SOUTHERN CURB RAMP SHALL BE 10.2'. SEE MAINEDOT STANDARD DETAIL 801(13).
EXTEND LANDING TO ACCESS THE PEDESTRIAN BUTTONS.
SEE DETAIL ON SHEET H.

10 0 10 20
Scale of Feet

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
HOT MIX ASPHALT, 9.5 MM NOMINAL MAXIMUM SIZE (ITEM 403.210)	5.7 TONS
PLAIN CONCRETE SIDEWALK (ITEM 608.07)	65.4 SY
CURB RAMP DETECTABLE WARNING FIELD (ITEM 608.26)	67.5 SF
CONSTRUCT SIDEWALK (ITEM 608.45)	0.9 SY
REGRADING SIDEWALK (ITEM 608.46)	69.4 SY

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
VERTICAL CURB TYPE I (ITEM 609.11)	8.0 LF
VERTICAL CURB TYPE I - CIRCULAR (ITEM 609.12)	23.0 LF
TERMINAL CURB TYPE I (ITEM 609.221)	20.6 LF
TERMINAL CURB TYPE I - CIRCULAR (ITEM 609.222)	57.8 LF

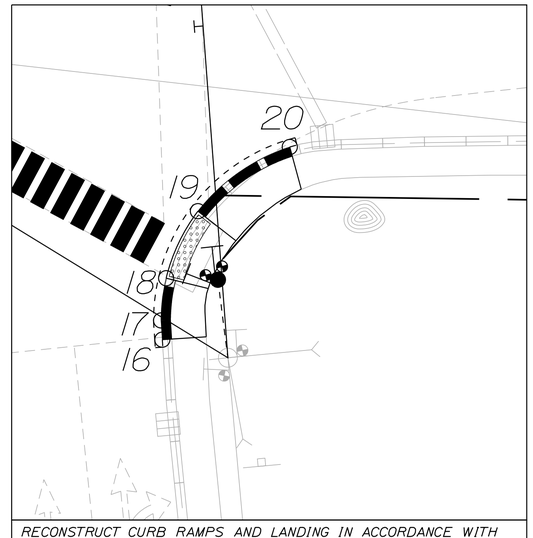
THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY REFERENCE HES-030-1(22) DOT FILE 6-257 SHEET 1 OF 1, 12/1984

C CORNER - SE DETAIL



RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).
TRANSITION LENGTH REQUIRED FOR THE EASTERN CURB RAMP SHALL BE 15.0'. SEE MAINEDOT STANDARD DETAIL 801(13).

10 0 10 20
Scale of Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	DATE
PROJ. MANAGER		
DESIGN-DETAILED	M.G	07/20
CHECKED-REVIEWED	CMB	07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 17 (EASTERN AVE) AND HOSPITAL ST / STONE ST
CURB RAMP LAYOUT AND DETAIL PLAN

SHEET NUMBER
10C
OF 358

Filename: 010_Signal_10c.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

Username: Benjamin.Singer Date:11/19/2020
Division: ROW
Filename: ...\ROW\MSTA\010_RWPLAN2.dgn

PLAN LEGEND

Town, County, State	New R/W Along Existing R/W		Existing	Proposed		Existing	Proposed
Approx. Property Lines P.L.	Building	Clearing Limit Line	Sanitary Sewer		Traveled Way		
Existing Right of Way	Trees Conifer	Deciduous	Telephone Line		Ditch		
Limits of Wrought Portion L.O.W.P.	Tree Line	Bush Line	Electric Line		Catch Basin		
Control Of Access C.O.A.	Water Edge		Water Line		Manhole		
New Right of Way	Ledge	Rock/Boulder Flag Pole	Underdrain Line		Sewer Manhole		
New Easement	Fence CHAIN LINK	BARB WIRE STOCKADE	Gas Line		Utility Pole		
New Temporary Rights	Sign	Well Mailbox	Guardrail		Fire Hydrant		
New R/W Within Existing R/W			Culvert		Curbing		

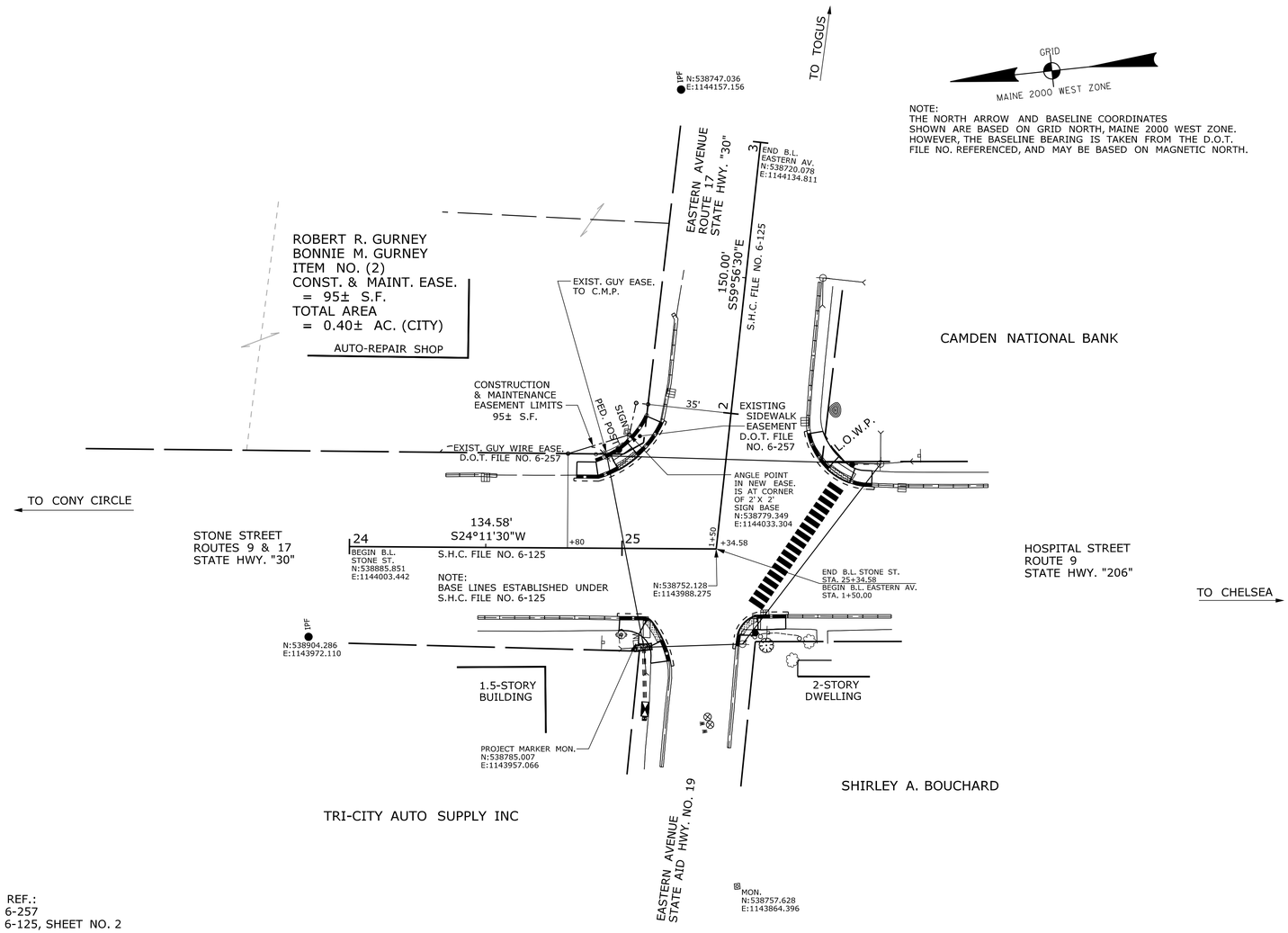
Cut Line C—C—C	Fill Line F—F—F	Monument
Stonewall	Retaining Wall	Iron Rod Found ● IRF
Baseline 10+00 11+00 12+00	Traverse Point	Replacement Pin Set
	Pipe Found ● IPF	

THIS PLAN WAS PREPARED IN CONNECTION WITH THE DEPARTMENT'S ACQUISITION OF REAL PROPERTY FOR TRANSPORTATION PURPOSES. IT CANNOT BE USED TO ESTABLISH LEGAL BOUNDARIES BETWEEN ABUTTING PROPERTY OWNERS.

25 0 25 50 75 100
Scale of Feet

STATE OF MAINE REGISTRY OF DEEDS

COUNTY _____
RECEIVED _____, _____
at _____h_____m_____M and
recorded in Plan Bk _____, Pg._____
Attest: _____
REGISTER



EXISTING R/W REF.:
D.O.T. FILE NO. 6-257
S.H.C. FILE NO. 6-125, SHEET NO. 2

NOTE: PRESCRIPTIVE EASEMENT FOR HIGHWAY PURPOSES WITHIN LIMITS OF WROUGHT PORTION (L.O.W.P.)

ITEM	TECH	CHECKED
EXISTING CONDITION PLAN	B.S.	G.L.L.
FINAL RIGHT OF WAY	B.S.	G.L.L.
AREAS	B.S.	G.L.L.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION - AUGUSTA, ME 04333-0016 - 207-624-3460
AUGUSTA
RIGHT OF WAY MAP

INTERSECTION NO. 10 WIN 024301.00

REVISIONS NO.	DATE	DESCRIPTION	BY

PLAN FILED IN PLAN BOOK PAGE	COUNTY RECORD NO.	GRANTOR	INSTRUMENT	DATE	BOOK	PAGE

BRUCE A. VAN NOTE
COMMISSIONER
JOYCE NOEL TAYLOR
CHIEF ENGINEER
DATE

STATE HIGHWAY "30"
ROUTE 17 (STONE STREET & EASTERN AVE.)
AUGUSTA KENNEBEC COUNTY
FEDERAL AID PROJECT NO. 2430100

NOVEMBER 2020	RIGHT-OF-WAY MAP	D.O.T. FILE NO. 6-487
SCALE 1" = 25'	SHEET 2 OF 12	

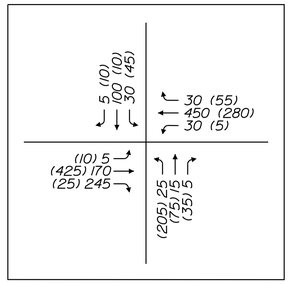
SHEET NUMBER
10R
OF 358

LIST OF WORK ITEMS

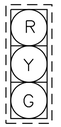
EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON SPAN AND TETHER WIRE	8
FURNISH AND INSTALL 4-CHANNEL PREEMPTION PHASE SELECTOR	1
FURNISH AND INSTALL LIGHT-BASED PREEMPTION RECEIVERS WITH DETECTOR CABLE	4
FURNISH AND INSTALL PREEMPTION CONFIRMATION RED STROBE WITH CABLE	1
FURNISH AND INSTALL 19-INCH 1RU FIBER OPTIC 12-POSITION PATCH PANEL WITH PIGTAILS	1
FURNISH AND INSTALL ENVIRONMENTALLY HARDENED FIBER OPTIC ETHERNET SWITCH	1
FURNISH AND INSTALL SPAN WIRE MOUNTED SIGNS	2
RESET EXISTING 12-F FIBER IN PROPOSED CABINET	-
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 4 APPROACHES, COMPLETE (ITEM 643.21)	1 LS
FURNISH AND INSTALL NON-INVASIVE ADVANCE VEHICLE DETECTION SYSTEM FOR 2 APPROACHES, COMPLETE (ITEM 643.22)	1 LS

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

SYSTEM DESIGN VOLUMES AM (PM)

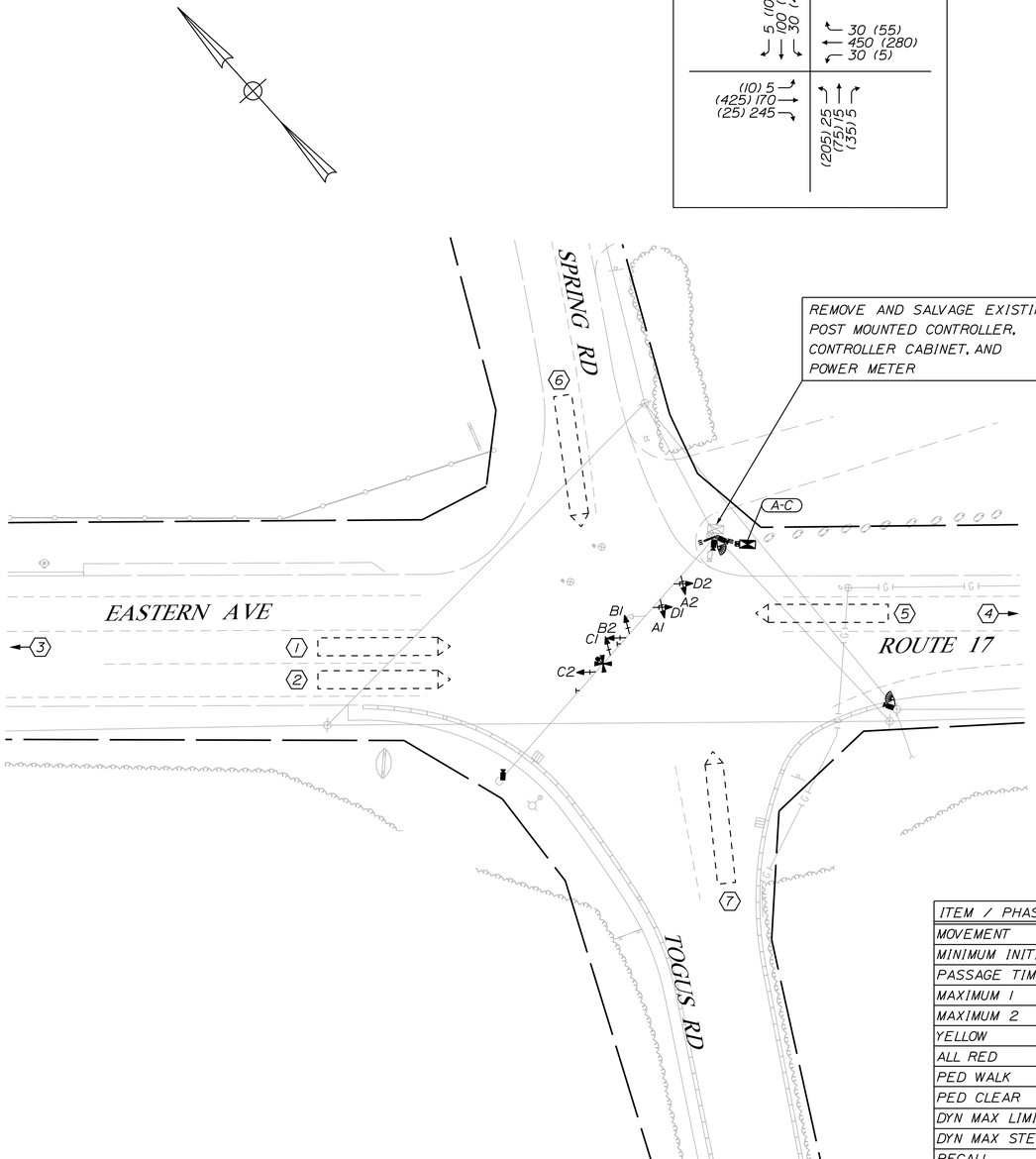


PROPOSED INDICATIONS



A1, A2, B1, B2
C1, C2, D1, D2

NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES



DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	φ CALLED	φ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
1	EASTERN AVE EB LEFT-THRU	6	6	B	-	-
2	EASTERN AVE EB RIGHT	6	6	B	5	-
3*	EASTERN AVE EB ADVANCE	6	6	A	-	-
4*	EASTERN AVE WB ADVANCE	2	2	A	-	-
5	EASTERN AVE WB MOVEMENTS	2	2	B	-	-
6	SPRING RD SB MOVEMENTS	8	8	B	-	-
7	TOGUS RD NB MOVEMENTS	4	4	B	-	-

* SEE ADVANCED DILEMMA ZONE DETAIL (45 MPH)

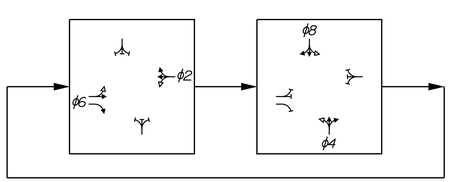
STRUCTURE LIST

STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	L48"xW36"xH48"

PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM

2 | 4
6 | 8



SIGNAL TIMING SCHEDULE

ITEM / PHASE	φ1	φ2	φ3	φ4	φ5	φ6	φ7	φ8
MOVEMENT	-	D	-	A	-	C	-	B
MINIMUM INITIAL	-	10	-	5	-	10	-	5
PASSAGE TIME	-	3.5	-	3.0	-	3.5	-	3.0
MAXIMUM 1	-	40	-	20	-	40	-	20
MAXIMUM 2	-	40	-	20	-	40	-	20
YELLOW	-	5.0	-	3.0	-	5.0	-	3.0
ALL RED	-	2.0	-	3.0	-	2.0	-	3.0
PED WALK	-	-	-	-	-	-	-	-
PED CLEAR	-	-	-	-	-	-	-	-
DYN MAX LIMIT	-	60	-	30	-	60	-	30
DYN MAX STEP	-	10	-	5	-	10	-	5
RECALL	-	SOFT	-	OFF	-	SOFT	-	OFF
DETECTOR	-	PR	-	PR	-	PR	-	PR
PRE-EMPT PRIORITY	-	4	-	6	-	3	-	5
FLASH	-	Y	-	R	-	Y	-	R
DUAL ENTRY	-	ON	-	ON	-	ON	-	ON

NOTES: S = SOFT RECALL Y = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK
IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY INFORMATION FROM MAINE OFFICE OF GEOGRAPHIC INFORMATION SYSTEMS - AUGUST 7, 2018

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	DATE
PROJ. MANAGER		
DESIGN-DETAILED	MLG	JAR 07/20
CHECKED-REVIEWED	CMB	CMB 07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 17 (EASTERN AVE) AND
SPRING RD / TOGUS RD

TRAFFIC SIGNAL PLAN

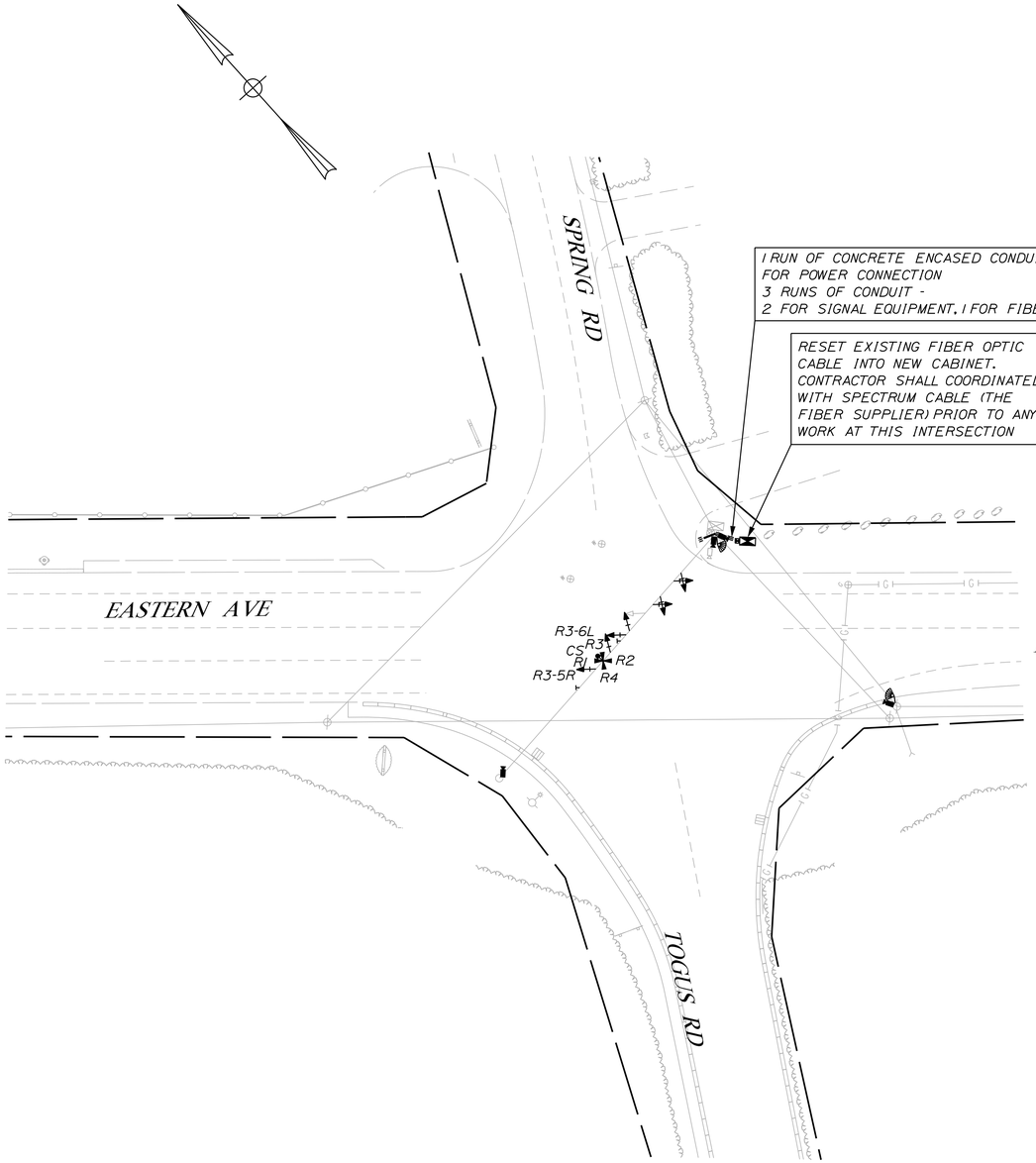
SHEET NUMBER
11
OF 358

Filename: 011_SignoI_11.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
FURNISH AND INSTALL (3-INCH) NON-METALLIC CONDUIT (ITEM 626.22)	30 LF
FURNISH AND INSTALL NON-METALLIC CONDUIT, CONCRETE ENCASED (ITEM 626.221)	10 LF
FURNISH AND INSTALL CONTROLLER CABINET FOUNDATION (ITEM 626.35)	1 EA
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.



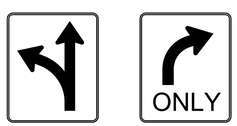
EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USE/RESERVED	
	2	NOT USE/RESERVED	
R1	3	1	Ø6
R2	4	2	Ø2
R3	5	3	Ø8
R4	6	4	Ø4

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.
2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 4 = LOWEST)
3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR AND/OR RSU, 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 (5.0 SECONDS YELLOW AND 3.0 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.
4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.

PROPOSED SIGNS



R3-6L
30"x36"
1-PROPOSED

R3-5R
30"x36"
1-PROPOSED

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY INFORMATION FROM MAINE OFFICE OF GEOGRAPHIC INFORMATION SYSTEMS - AUGUST 7, 2018

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER	BY	DATE
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CHECKED-REVIEWED	CMB	CMB	07/20
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DESIGN3-DETAILED3			
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REVISIONS 4			
FIELD CHANGES			

AUGUSTA
ROUTE 17 (EASTERN AVE) AND
SPRING RD / TOGUS RD

TRAFFIC SIGNAL PLAN

SHEET NUMBER

11A

OF 358

Filename: 011_SignoL_11a.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

Filename: 012_Signal_12.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

LIST OF WORK ITEMS

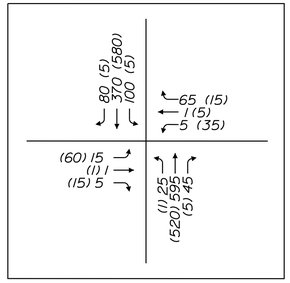
EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	3
FURNISH AND INSTALL ONE-WAY 4-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	4
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARM UPRIGHTS WITH BRACKET	2
FURNISH AND INSTALL ONE-WAY 4-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARM UPRIGHTS WITH BRACKETS	1
FURNISH AND INSTALL ONE-WAY 4-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON TOP OF POST	1
FURNISH AND INSTALL 16-INCH L.E.D. COUNTDOWN PEDESTRIAN LENS IN EXISTING HOUSING	6
FURNISH AND INSTALL ADA COMPLIANT ACCESSIBLE PEDESTRIAN SIGNAL (APS) BUTTON WITH 9"X15" R10-3e INFORMATIONAL SIGN	6
FURNISH AND INSTALL 4-CHANNEL PREEMPTION PHASE SELECTOR	1
FURNISH AND INSTALL LIGHT-BASED PREEMPTION RECEIVERS WITH DETECTOR CABLE	4
FURNISH AND INSTALL PREEMPTION CONFIRMATION RED STROBE WITH CABLE	1
FURNISH AND INSTALL MAST ARM MOUNTED SIGNS	2
FURNISH AND INSTALL SIGNAL POST MOUNTED SIGNS	2
FURNISH AND INSTALL POST MOUNTED SIGNS	1
REMOVE MAST ARM MOUNTED SIGNS	3
RESET COUNTDOWN PEDESTRIAN SIGNAL HEAD	1
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 4 APPROACHES, COMPLETE (ITEM 643.21)	1 LS
FURNISH AND INSTALL NON-INVASIVE ADVANCE VEHICLE DETECTION SYSTEM FOR 2 APPROACHES, COMPLETE (ITEM 643.22)	1 LS

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

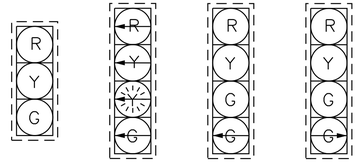
STRUCTURE LIST

STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	L48"xW36"xH48"
A-P1	10' PEDESTAL POLE	24" DIAMETER

SYSTEM DESIGN VOLUMES AM (PM)



PROPOSED INDICATIONS



A2,B2,B3, D2,D3 | B1,D1 | A1,C1 | A3,C2

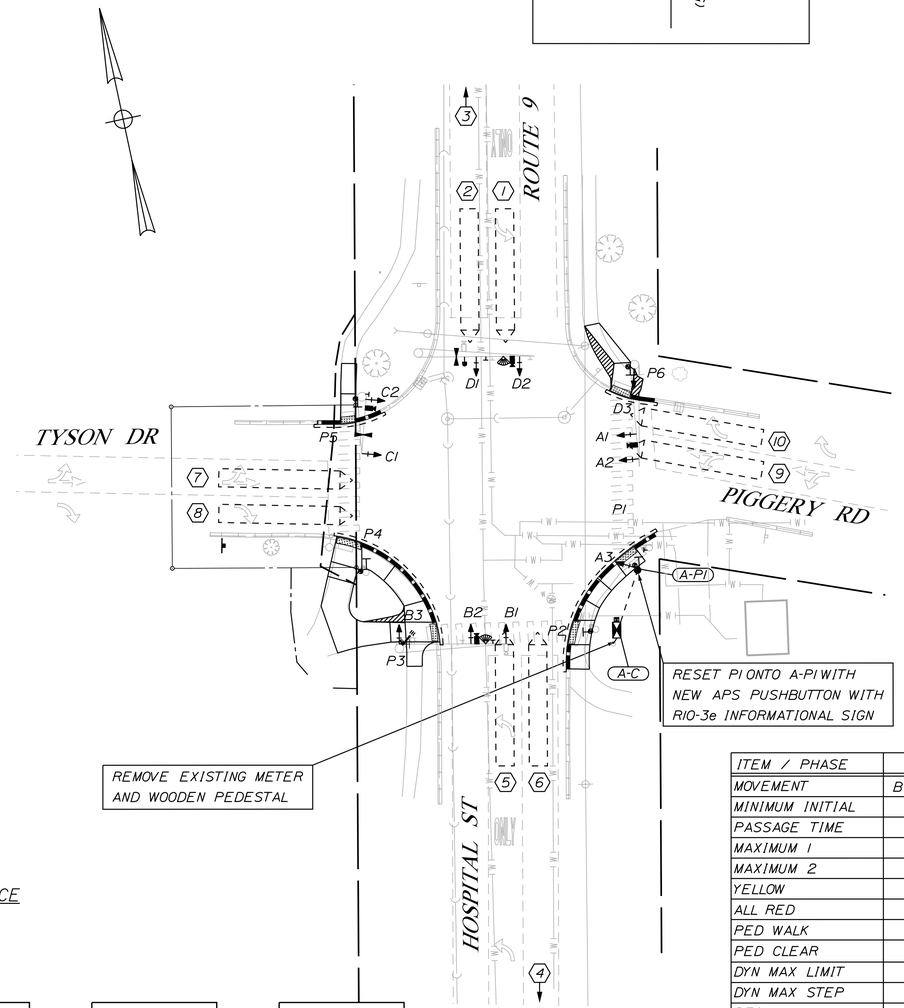
EXISTING INDICATIONS TO REMAIN



P1-P6

NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES

EXISTING COUNTDOWN PEDESTRIAN SIGNAL HEADS SHALL HAVE NEW L.E.D. LENSES INSTALLED



DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	φ CALLED	φ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
1	HOSPITAL ST SB LEFT	1	1	B	-	-
2	HOSPITAL ST SB THRU-RIGHT	6	6	B	-	-
3*	HOSPITAL ST SB ADVANCE	6	6	A	-	-
4*	HOSPITAL ST NB ADVANCE	2	2	A	-	-
5	HOSPITAL ST NB LEFT	5	5	B	-	-
6	HOSPITAL ST NB THRU-RIGHT	2	2	B	-	-
7	TYSON DR EB LEFT-THRU	3	3	B	-	-
8	TYSON DR EB RIGHT	3	3	B	5	-
9	PIGGERY RD WB LEFT-THRU	4	4	B	-	-
10	PIGGERY RD WB RIGHT	4	4	B	-	-

* SEE ADVANCED DILEMMA ZONE DETAIL (35 MPH)

SIGNAL TIMING SCHEDULE

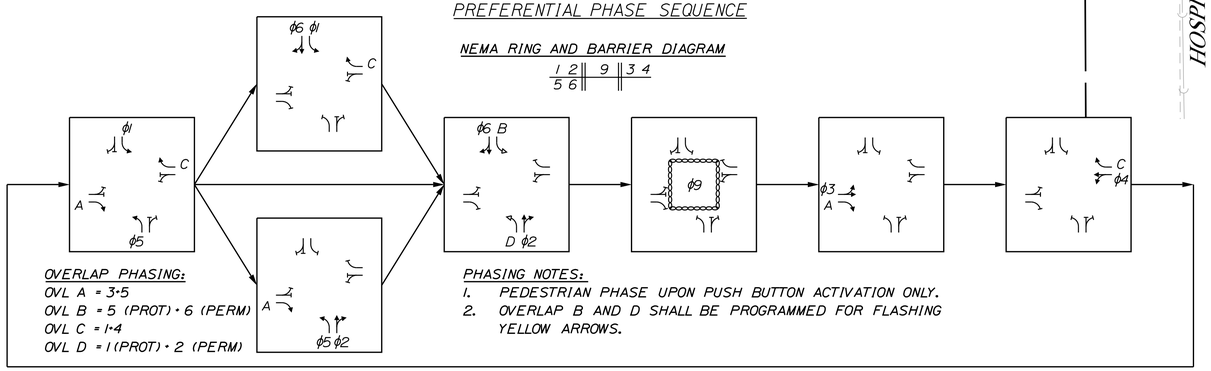
ITEM / PHASE	φ1	φ2	φ3	φ4	φ5	φ6	φ7	φ8	φ9
MOVEMENT	B (LT)	D	A	C	D (LT)	B	-	-	EX. PED.
MINIMUM INITIAL	5	10	5	5	5	10	-	-	-
PASSAGE TIME	3.0	3.5	3.0	3.0	3.0	3.5	-	-	-
MAXIMUM 1	20	40	20	20	20	40	-	-	-
MAXIMUM 2	20	40	20	20	20	40	-	-	-
YELLOW	3.5	4.0	3.5	3.5	3.5	4.0	-	-	3.0
ALL RED	2.5	2.0	2.5	2.5	2.5	2.0	-	-	0.0
PED WALK	-	-	-	-	-	-	-	-	5
PED CLEAR	-	-	-	-	-	-	-	-	14
DYN MAX LIMIT	-	-	-	-	-	-	-	-	-
DYN MAX STEP	-	-	-	-	-	-	-	-	-
RECALL	OFF	SOFT	OFF	OFF	OFF	SOFT	-	-	-
DETECTOR	PR	PR	PR	PR	PR	PR	-	-	-
PRE-EMPT PRIORITY	3	4	5	6	4	3	-	-	-
FLASH	R	Y	R	R	R	Y	-	-	DARK
DUAL ENTRY	OFF	ON	OFF	OFF	OFF	ON	-	-	OFF

NOTES: S = SOFT RECALL Y = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK
IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD.

PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM

1 2 | 9 | 3 4
5 6 | | |



OVERLAP PHASING:
OVL A = 3-5
OVL B = 5 (PROT) - 6 (PERM)
OVL C = 1-4
OVL D = 1 (PROT) - 2 (PERM)

PHASING NOTES:
1. PEDESTRIAN PHASE UPON PUSH BUTTON ACTIVATION ONLY.
2. OVERLAP B AND D SHALL BE PROGRAMMED FOR FLASHING YELLOW ARROWS.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY REFERENCE STP -A053(000)X
DOT FILE 6-397 SHEET 2 OF 3, 12/2004

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

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WIN 024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	DATE
PROJ. MANAGER		
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FIELD CHANGES		

AUGUSTA
ROUTE 9 (HOSPITAL ST) AND
PIGGERY RD / TYSON DR

TRAFFIC SIGNAL PLAN

SHEET NUMBER
12
OF 358

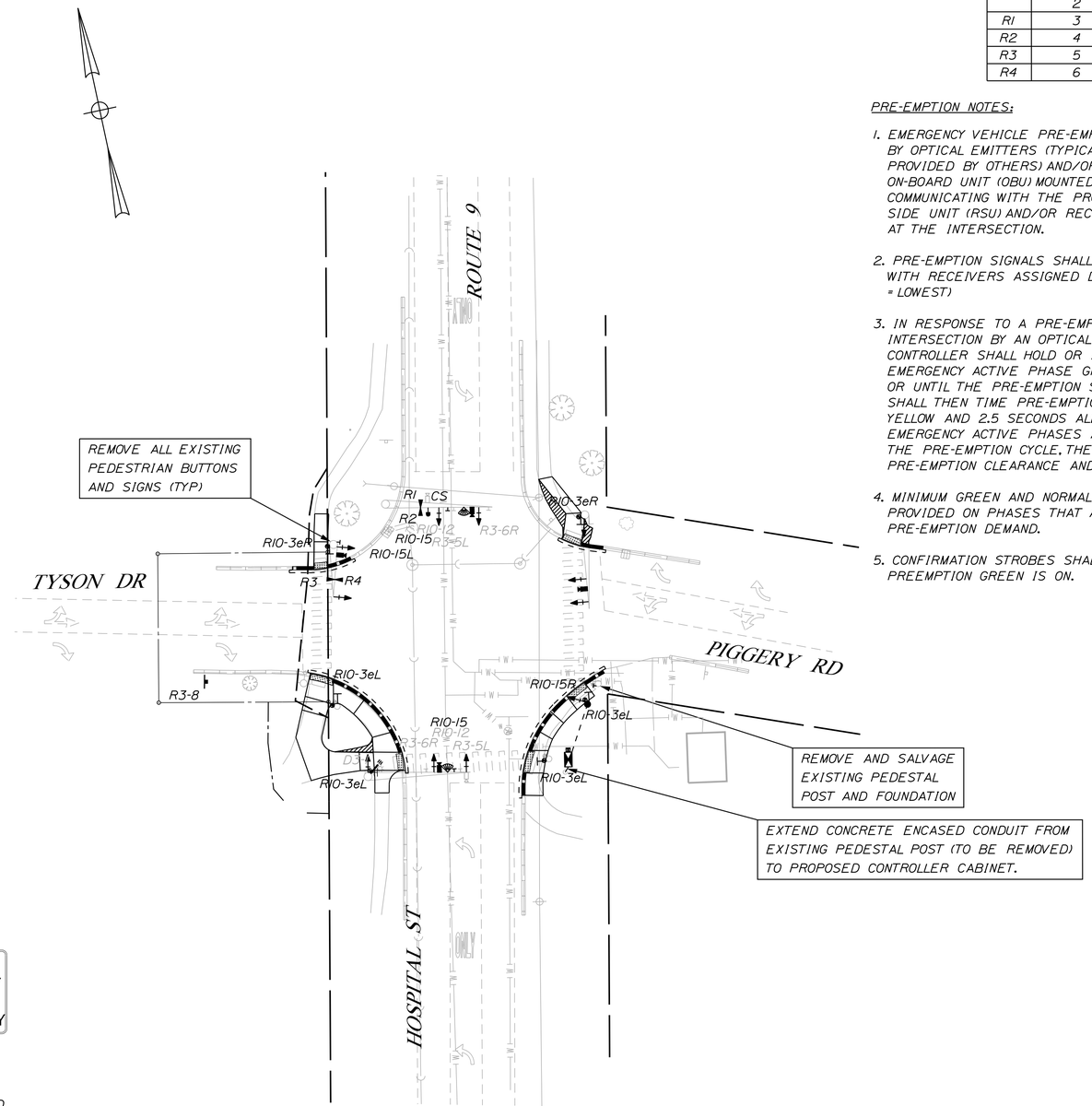
Filename: 012_Signal_12a.dgn Division: HIGHWAY Username: jarobert Date:11/24/2020

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
FURNISH AND INSTALL (3-INCH) NON-METALLIC CONDUIT (ITEM 626.22)	20 LF
FURNISH AND INSTALL NON-METALLIC CONDUIT, CONCRETE ENCASED (ITEM 626.221)	10 LF
FURNISH AND INSTALL CONTROLLER CABINET FOUNDATION (ITEM 626.35)	1 EA
FURNISH AND INSTALL 24-INCH DIAMETER FOUNDATION (ITEM 626.421) *	7 LF
FURNISH AND INSTALL 10-FOOT PEDESTAL POLE (ITEM 643.92)	1 EA
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

* REMOVAL OF EXISTING PEDESTAL POLE FOUNDATION SHALL BE SUBSIDIARY TO ITEM 626.421

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.



EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USE/RESERVED	
	2	NOT USE/RESERVED	
R1	3	1	ϕ1&ϕ6
R2	4	2	ϕ2&ϕ5
R3	5	3	ϕ3
R4	6	4	ϕ4

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.
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3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR AND/OR RSU, 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 (4.0 SECONDS YELLOW AND 2.5 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.
4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.

PROPOSED SIGNS



R10-1	R10-1R	R10-1L	R10-3eL	R10-3eR	R3-8
30"x30"	30"x30"	30"x30"	9"x15"	9"x15"	36"x 30"
2-PROPOSED	1-PROPOSED	1-PROPOSED	4-PROPOSED	2-PROPOSED	1-PROPOSED

EXISTING SIGNS



R3-5L	R3-6R	R10-12	R10-1R
2-RETAINED	2-RETAINED	2-REMOVED	1-REMOVED

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY REFERENCE STP -A053(000)X DOT FILE 6-397 SHEET 2 OF 3, 12/2004

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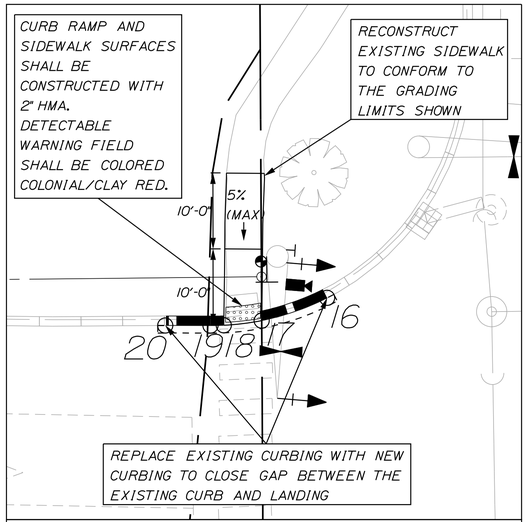
AUGUSTA
ROUTE 9 (HOSPITAL ST) AND
PIGGERY RD / TYSON DR

TRAFFIC SIGNAL PLAN

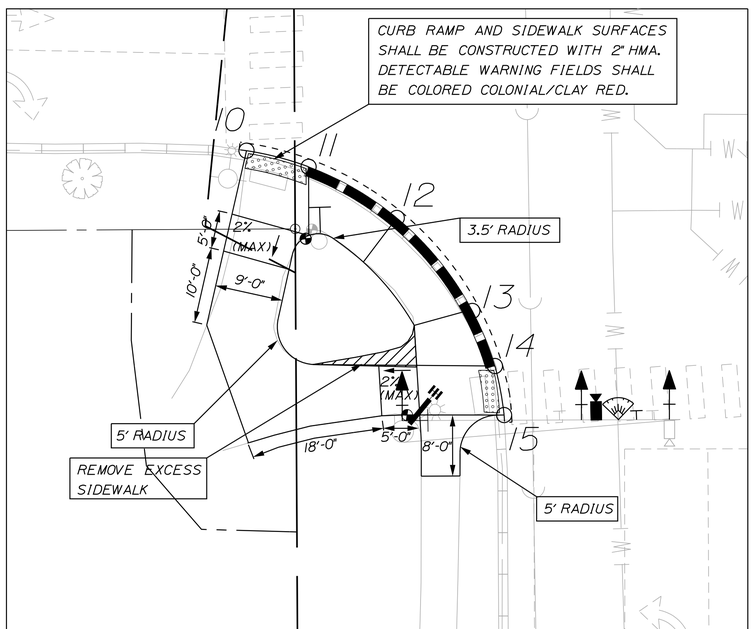
SHEET NUMBER
12A
OF 358

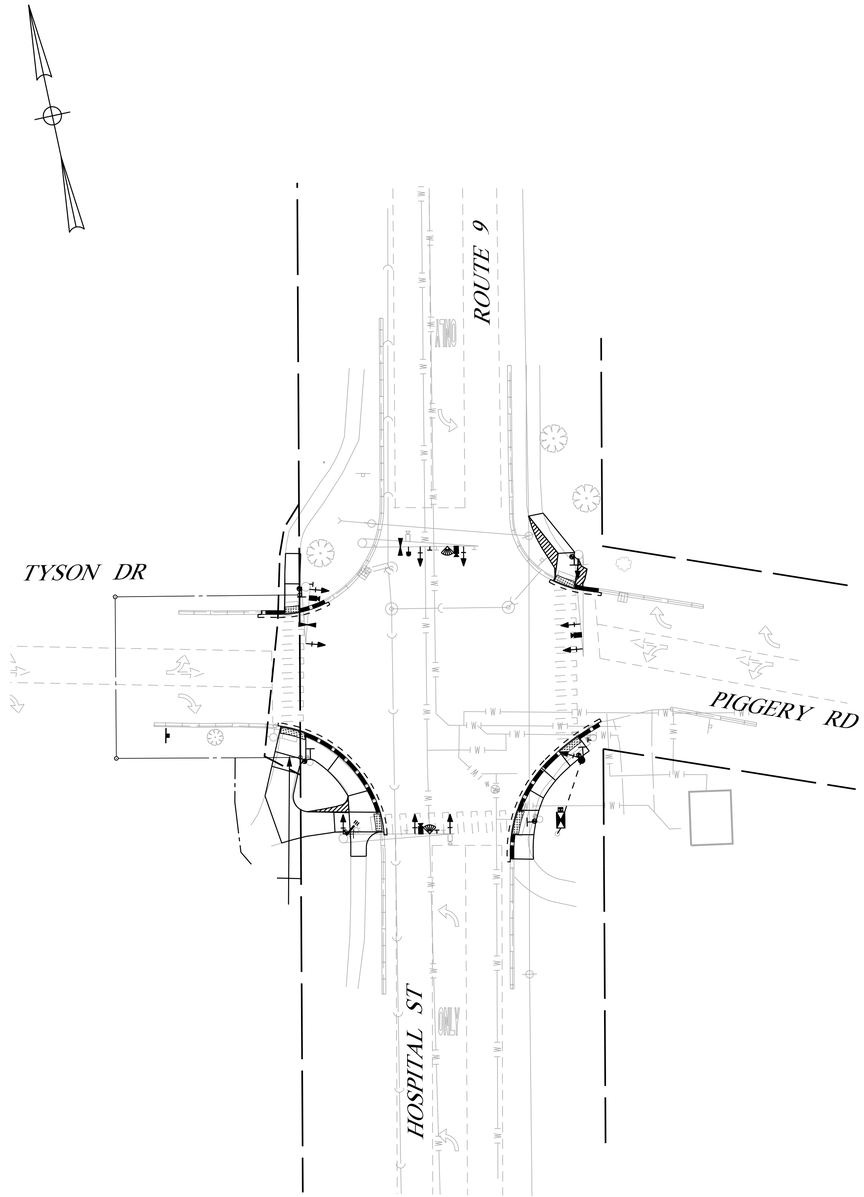
Filename: 012_Signal_12c.dgn Division: HIGHWAY Username: jarobert Date:11/24/2020

C CORNER - NW DETAIL



B CORNER - SW DETAIL

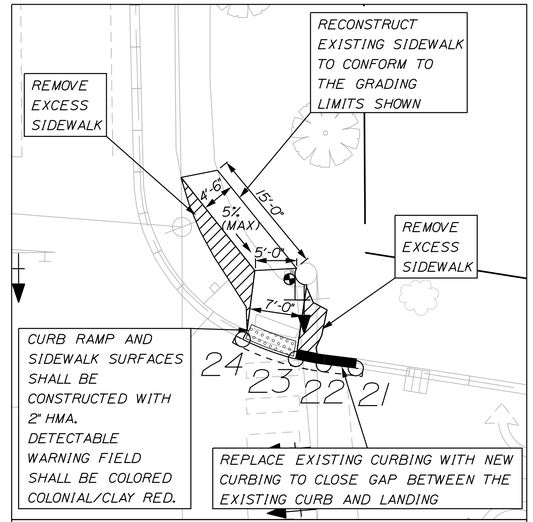




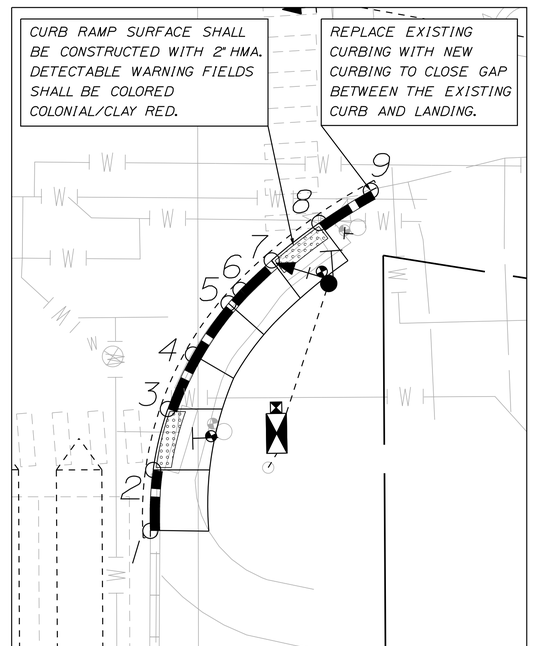
PLAN

25 0 25 50
Scale of Feet

D CORNER - NE DETAIL



A CORNER - SE DETAIL



* - RIGHT-OF-WAY REFERENCE STP -A053(000)X DOT FILE 6-397 SHEET 2 OF 3, 12/2004

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BY	DATE
JAR	07/20
CMB	07/20

AUGUSTA
ROUTE 9 (HOSPITAL ST) AND PIGGERY RD / TYSON DR
CURB RAMP LAYOUT AND DETAIL PLAN

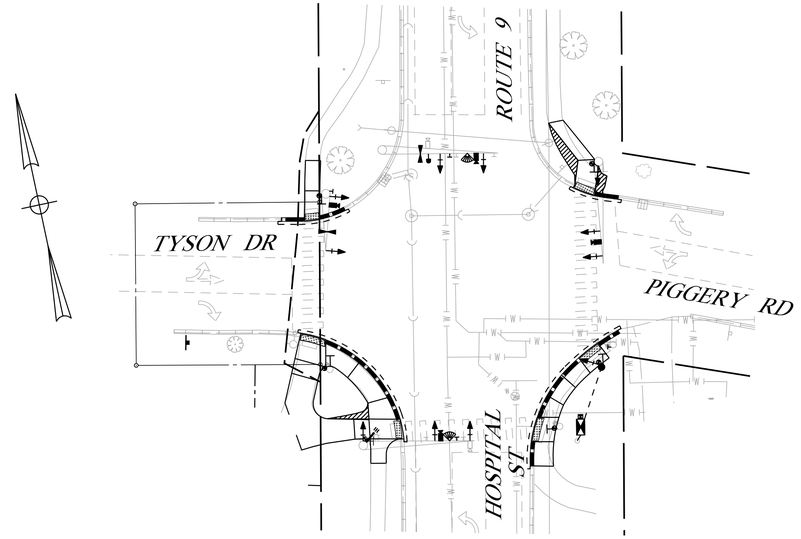
SHEET NUMBER

12C

OF 358

PT. TO PT.	RADIUS (FT)	ITEM 608.26 - CURB RAMP DETECTABLE WARNING FIELD		ITEM 609.12 - VERTICAL CURB TYPE I - CIRCULAR (LF)	ITEM 609.221 - TERMINAL CURB TYPE I (LF)	ITEM 609.222 - TERMINAL CURB TYPE I - CIRCULAR (LF)	COMMENT
		LENGTH (FT)	QTY (SF)				
1 TO 2	43.3					8.0	
2 TO 3	43.0	8.3	15.2				
3 TO 4	45.3					8.0	
4 TO 5	45.3			8.2			
5 TO 6	45.3					2.4	
6 TO 7	77.8				5.6		
7 TO 8	75.0	8.0	14.7				
8 TO 9	76.7				8.0		
* 10 TO 11	41.5	8.5	16.2				2.4% CROSS SLOPE
11 TO 12	40.5					13.5	
12 TO 13	40.5			15.7			
13 TO 14	40.5					8.0	
14 TO 15	41.5	6.6	11.3				
16 TO 17	35.8					9.2	
* 17 TO 18	34.5	5.1	9.2				4.4% CROSS SLOPE
18 TO 19	35.7					1.8	
19 TO 20	-				5.9		
21 TO 22	-				4.3		
22 TO 23	35.0					3.9	
23 TO 24	33.7	7.4	13.0				

* NON-COMPLIANT CURB RAMP ELEMENT - THE EXISTING GUTTER LINE PROFILE IS GREATER THAN 2%. THEREFORE THE LEVEL LANDING CROSS SLOPE AND/OR RUNNING SLOPE WILL BE GREATER THAN THE 2% AND 8.33% MAXIMUM ALLOWABLE, RESPECTIVELY. THE COMMENT IS THE MAXIMUM VALUE FOR PROPOSED LEVEL OF COMPLIANCE.



ALL CURB RAMPS SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND MAINEDOT STANDARD DETAILS 801(11) to 801(26) AS NOTED, AS WELL AS DETAILS PROVIDED ON SHEET H.

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
COMMON EXCAVATION (ITEM 203.20)	18.6 CY
HOT MIX ASPHALT, 9.5 MM NOMINAL MAXIMUM SIZE (ITEM 403.210)	22.3 TONS
CURB RAMP DETECTABLE WARNING FIELD (ITEM 608.26)	79.6 SF
CONSTRUCT SIDEWALK (ITEM 608.45)	15.3 SY
REGRADING SIDEWALK (ITEM 608.46)	135.4 SY

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
VERTICAL CURB TYPE I - CIRCULAR (ITEM 609.12)	23.9 LF
TERMINAL CURB TYPE I (ITEM 609.221)	23.8 LF
TERMINAL CURB TYPE I - CIRCULAR (ITEM 609.222)	54.8 LF

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PLAN

25 0 25 50
Scale of Feet

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PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER		
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

AUGUSTA
ROUTE 9 (HOSPITAL ST) AND
PIGGERY RD / TYSON DR

CURB RAMP LAYOUT
AND DETAIL PLAN

SHEET NUMBER

12D

OF 358

Filename: 012_Signal_12d.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

Filename: ...\ROW\MSTA\012_RWPLAN3.dgn Division: ROW Username: Benjamin.Singer Date:11/19/2020

PLAN LEGEND

Town, County, State	New R/W Along Existing R/W	Sanitary Sewer	Existing / Proposed	Traveled Way	Existing / Proposed	Cut Line	Fill Line	THIS PLAN WAS PREPARED IN CONNECTION WITH THE DEPARTMENT'S ACQUISITION OF REAL PROPERTY FOR TRANSPORTATION PURPOSES. IT CANNOT BE USED TO ESTABLISH LEGAL BOUNDARIES BETWEEN ABUTTING PROPERTY OWNERS.	STATE OF MAINE REGISTRY OF DEEDS
Approx. Property Lines P.L.	Building / Clearing Limit Line	Telephone Line		Ditch		Stonewall	Retaining Wall		COUNTY
Existing Right of Way	Trees Conifer / Deciduous	Electric Line		Catch Basin		Baseline 10+00 11+00 12+00			RECEIVED ,
Limits of Wrought Portion L.O.W.P.	Tree Line / Bush Line	Water Line		Manhole		Monument	Traverse Point		at h m M and
Control Of Access C.O.A.	Water Edge	Underdrain Line		Sewer Manhole		Iron Rod Found IRF	Pipe Found IPF		recorded in Plan Bk , Pg.
New Right of Way	Ledge / Rock/Boulder / Flag Pole	Gas Line		Utility Pole		Replacement Pin Set			Attest: REGISTER
New Easement	Fence CHAIN LINK / BARB WIRE / STOCKADE	Guardrail		Fire Hydrant					
New Temporary Rights	Sign / Well / Mailbox	Culvert		Curbing					
New R/W Within Existing R/W									

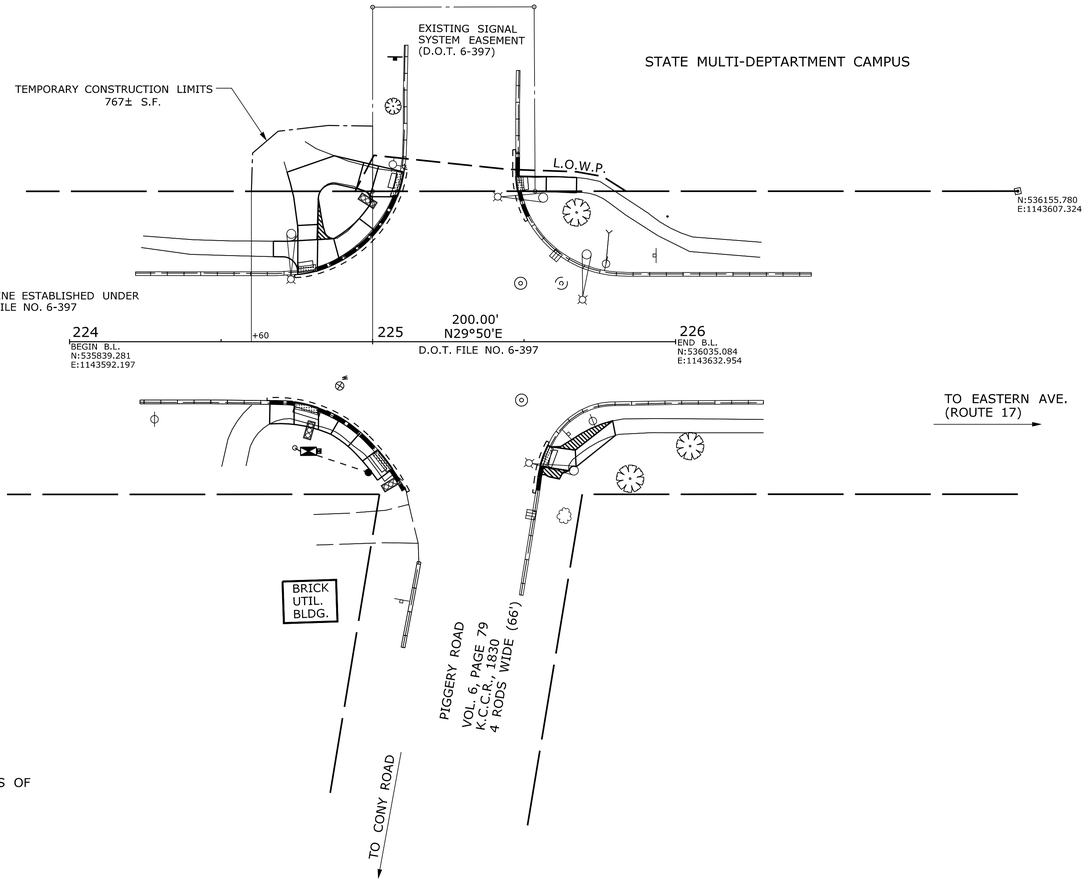
25 0 25 50 75 100
Scale of Feet

STATE OF MAINE,
DEPARTMENT OF ADMINISTRATIVE
AND FINANCIAL SERVICES
ITEM NO. (3)
TEMP. CONST. RIGHTS = 767± S.F. (1)
TOTAL AREA = 147.60± AC. (CITY)

"TYSON DRIVE"

GRID
MAINE 2000 WEST ZONE

NOTE:
THE NORTH ARROW AND BASELINE COORDINATES
SHOWN ARE BASED ON GRID NORTH, MAINE 2000 WEST ZONE.
HOWEVER, THE BASELINE BEARING IS TAKEN FROM THE D.O.T.
FILE NO. REFERENCED, AND MAY BE BASED ON MAGNETIC NORTH.



EXISTING R/W REF.:
D.O.T. FILE NO. 6-397, SHEET NO. 2

NOTE: PRESCRIPTIVE RIGHTS FOR HIGHWAY PURPOSES WITHIN LIMITS OF WROUGHT PORTION (L.O.W.P.)

INTERSECTION NO. 12 WIN 024301.00

ITEM	TECH	CHECKED
EXISTING CONDITION PLAN	B.S.	G.L.L.
FINAL RIGHT OF WAY	B.S.	G.L.L.
AREAS	B.S.	G.L.L.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION - AUGUSTA, ME 04333-0016 - 207-624-3460
AUGUSTA
RIGHT OF WAY MAP

REVISIONS

NO.	DATE	DESCRIPTION	BY

PLAN FILED IN PLAN BOOK PAGE COUNTY RECORD

NO.	GRANTOR	INSTRUMENT	DATE	BOOK	PAGE

BRUCE A. VAN NOTE
COMMISSIONER
JOYCE NOEL TAYLOR
CHIEF ENGINEER
DATE

STATE HIGHWAY "206"
HOSPITAL STREET / ROUTE 9
AUGUSTA KENNEBEC COUNTY
FEDERAL AID PROJECT NO. 2430100

NOVEMBER 2020 | RIGHT-OF-WAY MAP | D.O.T. FILE NO. 6-487
SCALE 1" = 25' | SHEET 3 OF 12

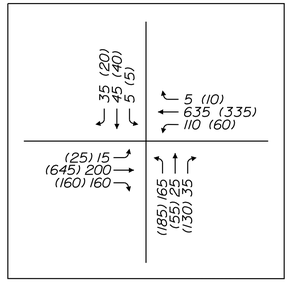
SHEET NUMBER
12R
OF 358

LIST OF WORK ITEMS

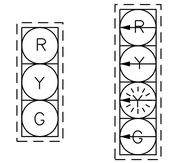
EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON SPAN AND TETHER WIRE	8
FURNISH AND INSTALL ONE-WAY 4-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON SPAN AND TETHER WIRE	2
FURNISH AND INSTALL 4-CHANNEL PREEMPTION PHASE SELECTOR	1
FURNISH AND INSTALL LIGHT-BASED PREEMPTION RECEIVERS WITH DETECTOR CABLE	4
FURNISH AND INSTALL PREEMPTION CONFIRMATION RED STROBE WITH CABLE	1
RESET SPAN WIRE MOUNTED SIGN	2
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 4 APPROACHES, COMPLETE (ITEM 643.21)	1 LS
FURNISH AND INSTALL NON-INVASIVE ADVANCE VEHICLE DETECTION SYSTEM FOR 4 APPROACHES, COMPLETE (ITEM 643.22)	1 LS

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

SYSTEM DESIGN VOLUMES AM (PM)



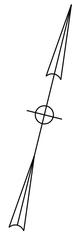
PROPOSED INDICATIONS

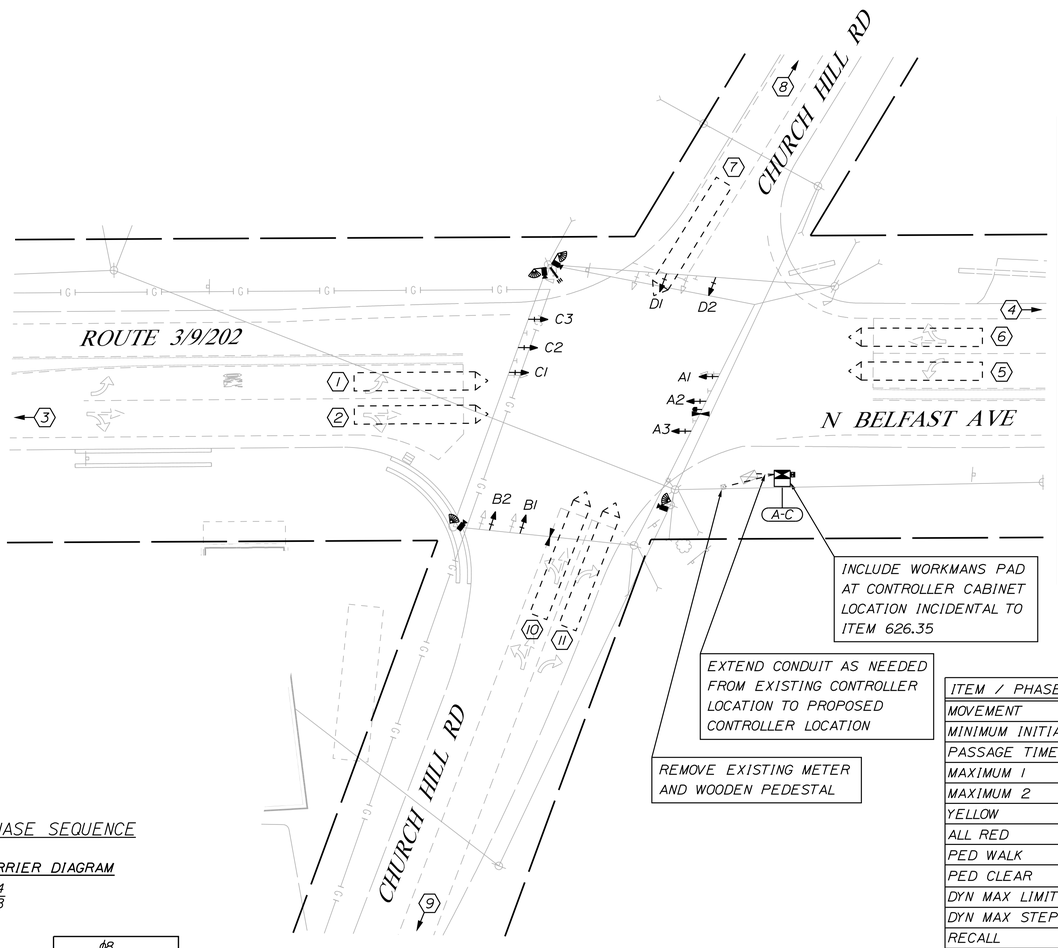


A2,A3,B1,B2
C2,C3,D1,D2

A1,C1

NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES





INCLUDE WORKMANS PAD AT CONTROLLER CABINET LOCATION INCIDENTAL TO ITEM 626.35

EXTEND CONDUIT AS NEEDED FROM EXISTING CONTROLLER LOCATION TO PROPOSED CONTROLLER LOCATION

REMOVE EXISTING METER AND WOODEN PEDESTAL

DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	φ CALLED	φ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
1	N BELFAST AVE EB LEFT	1	1	B	-	-
2	N BELFAST AVE EB THRU-RIGHT	6	6	B	-	-
3*	N BELFAST AVE EB ADVANCE	6	6	A	-	-
4*	N BELFAST AVE WB ADVANCE	2	2	A	-	-
5	N BELFAST AVE WB LEFT	5	5	B	-	-
6	N BELFAST AVE WB THRU-RIGHT	2	2	B	-	-
7	CHURCH HILL RD SB MOVEMENTS	8	8	B	-	-
8*	CHURCH HILL RD SB ADVANCE	8	8	A	-	-
9**	CHURCH HILL RD NB ADVANCE	4	4	A	-	-
10	CHURCH HILL RD NB LEFT-THRU	4	4	B	-	-
11	CHURCH HILL RD NB RIGHT	4	4	B	5	-

* SEE ADVANCED DILEMMA ZONE DETAIL (45 MPH)
** SEE ADVANCED DILEMMA ZONE DETAIL (40 MPH)

STRUCTURE LIST

STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	L48"xW36"xH48"

SIGNAL TIMING SCHEDULE

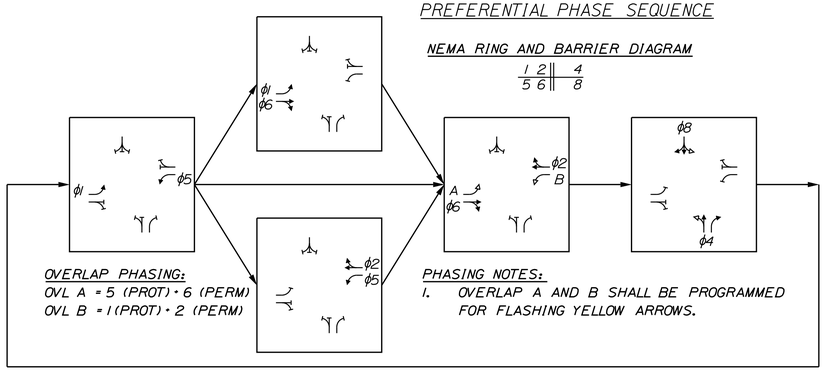
ITEM / PHASE	φ 1	φ 2	φ 3	φ 4	φ 5	φ 6	φ 7	φ 8
MOVEMENT	A (LT)	C	-	D	C (LT)	A	-	B
MINIMUM INITIAL	7	10	-	7	7	10	-	7
PASSAGE TIME	3.0	3.5	-	3.0	3.0	3.5	-	3.0
MAXIMUM 1	15	45	-	45	15	45	-	45
MAXIMUM 2	15	45	-	45	15	45	-	45
YELLOW	4.0	5.0	-	5.0	4.0	5.0	-	5.0
ALL RED	3.0	2.0	-	2.0	3.0	2.0	-	2.0
PED WALK	-	-	-	-	-	-	-	-
PED CLEAR	-	-	-	-	-	-	-	-
DYN MAX LIMIT	-	-	-	-	-	-	-	-
DYN MAX STEP	-	-	-	-	-	-	-	-
RECALL	OFF	SOFT	-	OFF	OFF	SOFT	-	OFF
DETECTOR	PR	PR	-	PR	PR	PR	-	PR
PRE-EMPT PRIORITY	3	4	-	6	4	3	-	5
FLASH	R	Y	-	R	R	Y	-	R
DUAL ENTRY	OFF	ON	-	ON	OFF	ON	-	ON

NOTES: S = SOFT RECALLY = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK
IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD.

PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM

1 2 4
5 6 8



OVERLAP PHASING:
OVL A = 5 (PROT) + 6 (PERM)
OVL B = 1 (PROT) + 2 (PERM)

PHASING NOTES:
1. OVERLAP A AND B SHALL BE PROGRAMMED FOR FLASHING YELLOW ARROWS.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY REFERENCE STP -6720(00)E DOT FILE 6-356 SHEET 2 OF 3, 06/1997

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER			
DESIGN-DETAILED	MLG		
CHECKED-REVIEWED	CMB		
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
B. KEEZER		BY	DATE
		JAR	07/20
		CMB	07/20
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

AUGUSTA
ROUTE 3/9/202 (N BELFAST AVE)
AND CHURCH HILL RD

TRAFFIC SIGNAL PLAN

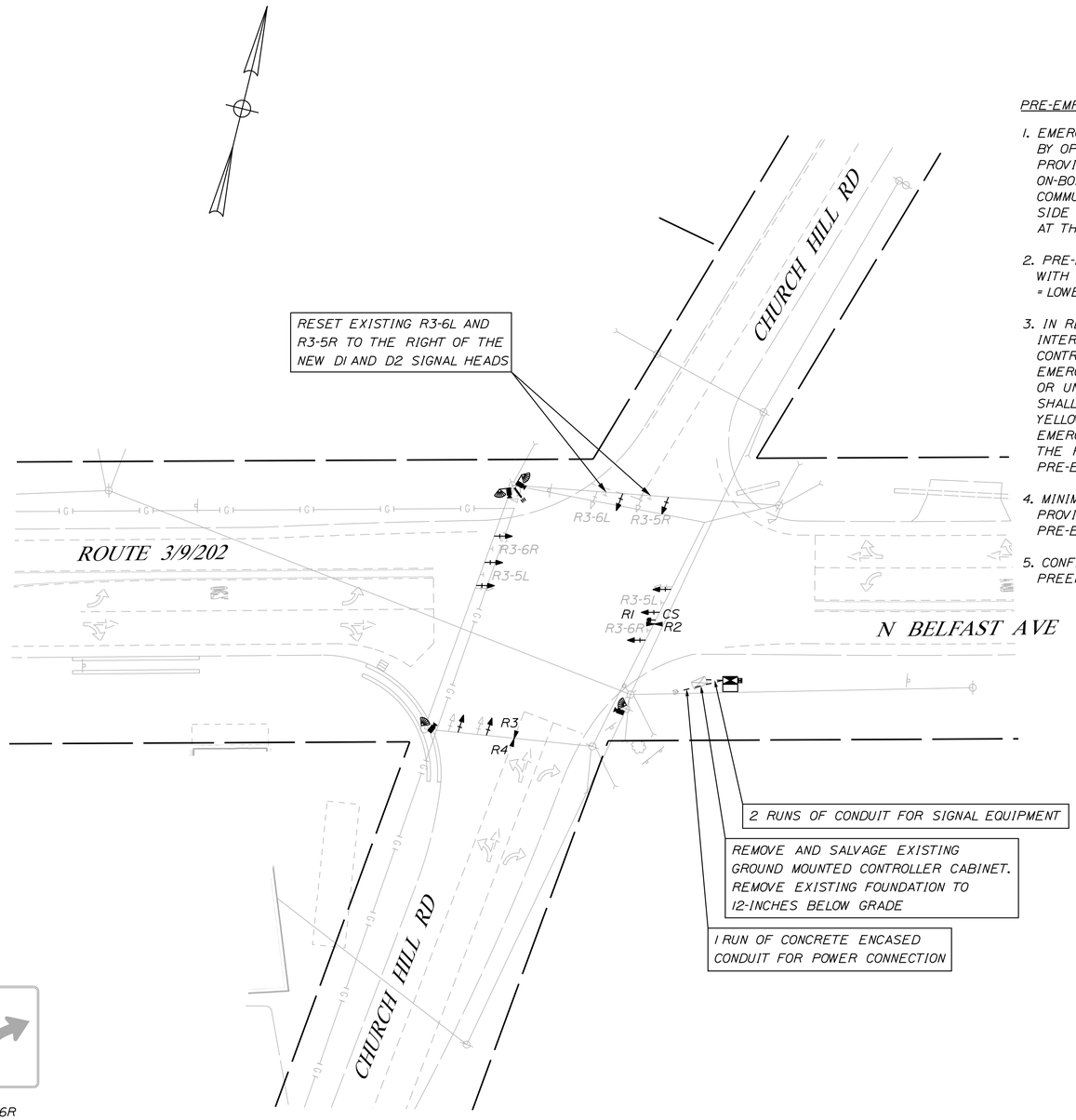
SHEET NUMBER
13
OF 358

Filename: 013_Signal_13.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

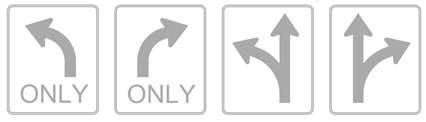
LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
FURNISH AND INSTALL (3-INCH) NON-METALLIC CONDUIT (ITEM 626.22)	20 LF
FURNISH AND INSTALL NON-METALLIC CONDUIT, CONCRETE ENCASED (ITEM 626.221)	20 LF
FURNISH AND INSTALL CONTROLLER CABINET FOUNDATION (ITEM 626.35)	1 EA
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.



EXISTING SIGNS



R3-5L	R3-5R	R3-6L	R3-6R
2-RETAINED	1-RELOCATED	1-RELOCATED	2-RETAINED

EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USE/RESERVED	
	2	NOT USE/RESERVED	
R1	3	1	ϕ1&ϕ6
R2	4	2	ϕ2&ϕ5
R3	5	3	ϕ8
R4	6	4	ϕ4

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.
2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 4 = LOWEST)
3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR AND/OR RSU, 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 (5.0 SECONDS YELLOW AND 3.0 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.
4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY REFERENCE STP -6720(00)E
DOT FILE 6-356 SHEET 2 OF 3, 06/1997

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN
024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER		
DESIGN-DETAILED	MLG	BY	DATE
CHECKED-REVIEWED	CMB	JAR	07/20
DESIGN2-DETAILED2		CMB	07/20
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

AUGUSTA
ROUTE 3/9/202 (N BELFAST AVE)
AND CHURCH HILL RD

TRAFFIC SIGNAL PLAN

SHEET NUMBER
13A
OF 358

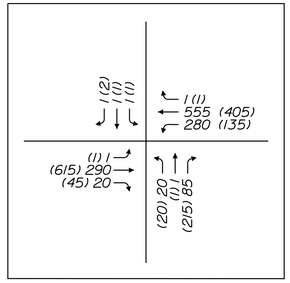
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LIST OF WORK ITEMS

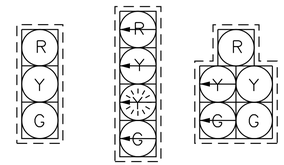
EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON SPAN AND TETHER WIRE	6
FURNISH AND INSTALL ONE-WAY 4-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON SPAN AND TETHER WIRE	2
FURNISH AND INSTALL ONE-WAY 5-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON SPAN AND TETHER WIRE	2
FURNISH AND INSTALL 4-CHANNEL PREEMPTION PHASE SELECTOR	1
FURNISH AND INSTALL LIGHT-BASED PREEMPTION RECEIVERS WITH DETECTOR CABLE	4
FURNISH AND INSTALL PREEMPTION CONFIRMATION RED STROBE WITH CABLE	1
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 4 APPROACHES, COMPLETE (ITEM 643.21)	1 LS
FURNISH AND INSTALL NON-INVASIVE ADVANCE VEHICLE DETECTION SYSTEM FOR 3 APPROACHES, COMPLETE (ITEM 643.22	1 LS

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

SYSTEM DESIGN VOLUMES AM (PM)



PROPOSED INDICATIONS



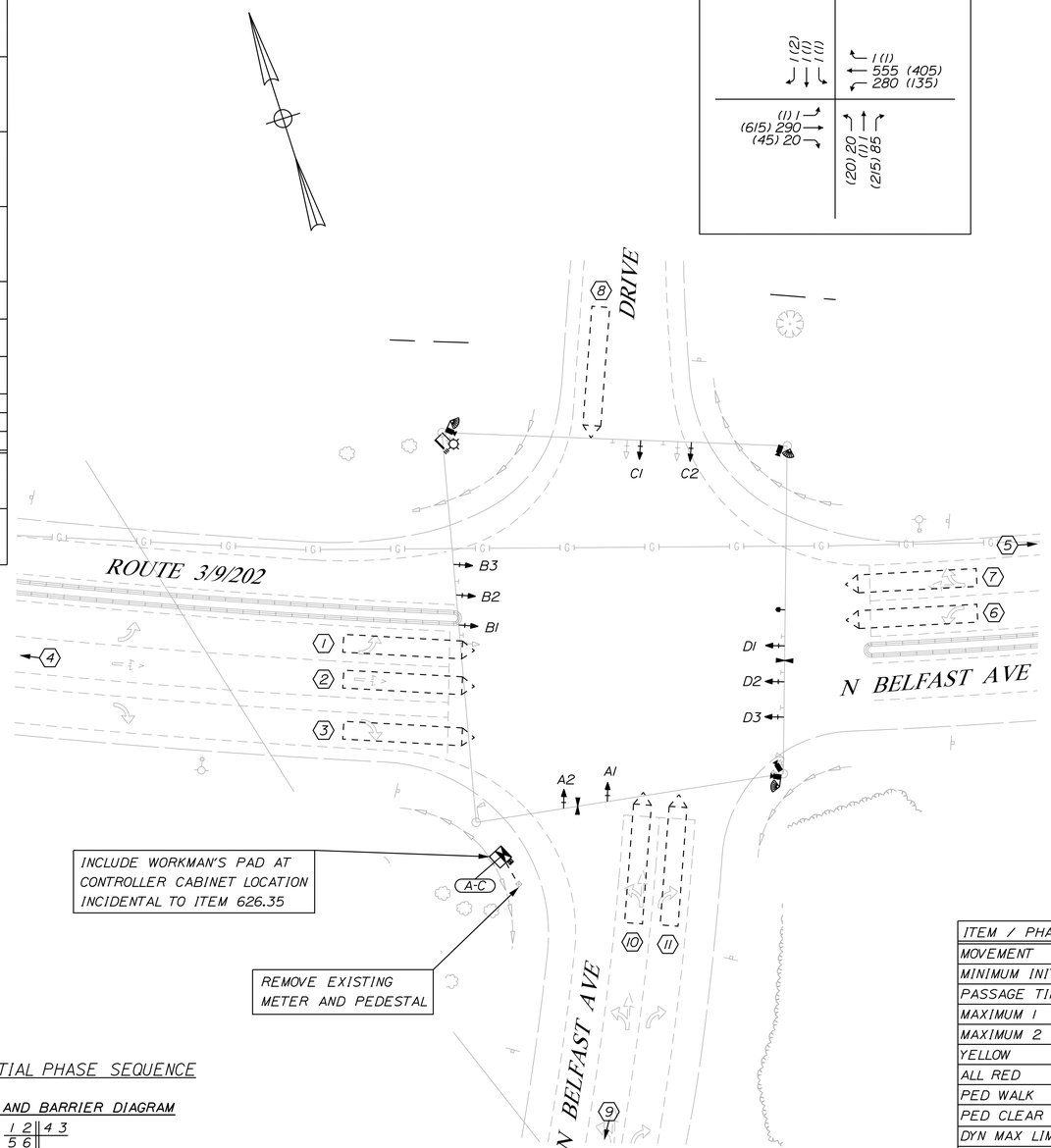
A2,B2,B3 C2,D2,D3 — B1,D1 — A1,C1

NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES

DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	φ CALLED	φ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
①	ROUTE 3 EB LEFT	1	1	B	-	-
②	ROUTE 3 EB THROUGH	6	6	B	-	-
③	ROUTE 3 EB RIGHT	6	6	B	5	-
④*	ROUTE 3 EB ADVANCE	6	6	A	-	-
⑤*	N BELFAST AVE WB ADVANCE	2	2	A	-	-
⑥	N BELFAST AVE WB LEFT	5	5	B	-	-
⑦	N BELFAST AVE WB THRU-RIGHT	2	2	B	-	-
⑧	DRIVE SB MOVEMENTS	3	3	B	-	-
⑨*	N BELFAST AVE NB ADVANCE	4	4	A	-	-
⑩	N BELFAST AVE NB LEFT-THRU	4	4	B	-	-
⑪	N BELFAST AVE NB RIGHT	4	4	B	5	-

* SEE ADVANCED DILEMMA ZONE DETAIL (35 MPH)



STRUCTURE LIST

STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	L48"xW36"xH48"

SIGNAL TIMING SCHEDULE

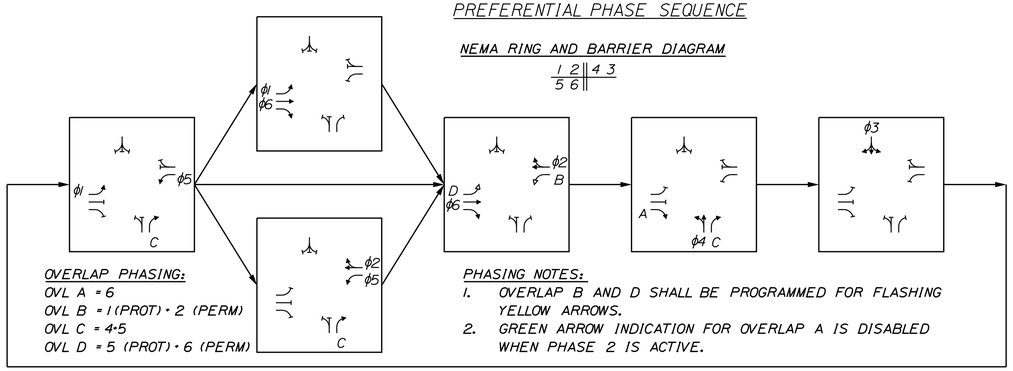
ITEM / PHASE	φ 1	φ 2	φ 3	φ 4	φ 5	φ 6	φ 7	φ 8
MOVEMENT	D (LT)	B	A	C	B (LT)	D	-	-
MINIMUM INITIAL	5	10	5	7	7	10	-	-
PASSAGE TIME	3.0	3.5	3.0	3.0	3.0	3.5	-	-
MAXIMUM 1	10	45	12	20	25	45	-	-
MAXIMUM 2	10	45	15	20	25	45	-	-
YELLOW	4.0	5.0	3.5	5.0	4.0	5.0	-	-
ALL RED	3.0	2.0	2.5	2.0	3.0	2.0	-	-
PED WALK	-	-	-	-	-	-	-	-
PED CLEAR	-	-	-	-	-	-	-	-
DYN MAX LIMIT	-	-	-	-	-	-	-	-
DYN MAX STEP	-	-	-	-	-	-	-	-
RECALL	OFF	SOFT	OFF	OFF	OFF	SOFT	-	-
DETECTOR	PR	PR	PR	PR	PR	PR	-	-
PRE-EMPT PRIORITY	3	4	5	6	4	3	-	-
FLASH	R	Y	R	R	R	Y	-	-
DUAL ENTRY	OFF	ON	OFF	OFF	OFF	ON	-	-

NOTES: S = SOFT RECALLY = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK
IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD.

PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM

1 2 ‖ 4 3
5 6 ‖



OVERLAP PHASING:
OVL A = 6
OVL B = 1 (PROT) + 2 (PERM)
OVL C = 4+5
OVL D = 5 (PROT) + 6 (PERM)

PHASING NOTES:
1. OVERLAP B AND D SHALL BE PROGRAMMED FOR FLASHING YELLOW ARROWS.
2. GREEN ARROW INDICATION FOR OVERLAP A IS DISABLED WHEN PHASE 2 IS ACTIVE.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY REFERENCE STP - 0556 (20)
DOT FILE 6 - 382 SHEET 26 OF 28, 09/2001

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	BY	DATE
PROJ. MANAGER	B. KEEZER	
DESIGN-DETAILED	MLG	JAR 07/20
CHECKED-REVIEWED	CMB	CMB 07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		1
REVISIONS 2		2
REVISIONS 3		3
REVISIONS 4		4
FIELD CHANGES		

AUGUSTA
ROUTE 3/9/202 AND
N BELFAST AVE

TRAFFIC SIGNAL PLAN

SHEET NUMBER
14
OF 358

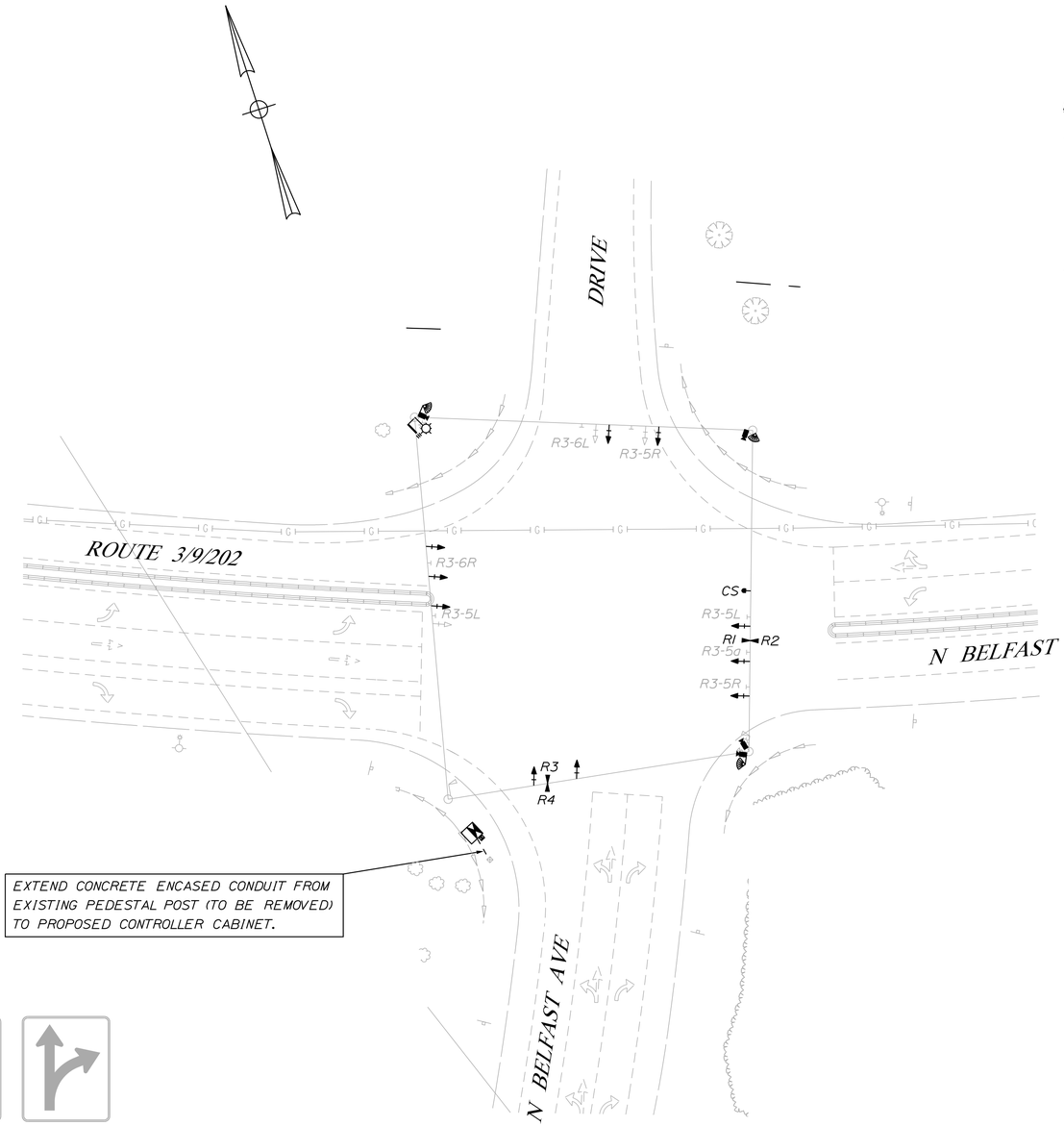
Filename: 014_Signal_14.dgn Division: HIGHWAY Username: jarobert Date:11/24/2020

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
FURNISH AND INSTALL NON-METALLIC CONDUIT, CONCRETE ENCASED (ITEM 626.221)	10 LF
FURNISH AND INSTALL CONTROLLER CABINET FOUNDATION (ITEM 626.35) *	1 EA
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

* WORKMAN'S PAD SHALL BE INCIDENTAL TO ITEM 626.35

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.



EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USE/RESERVED	
	2	NOT USE/RESERVED	
RI	3	1	ϕ1&ϕ6
R2	4	2	ϕ2&ϕ5
R3	5	3	ϕ3
R4	6	4	ϕ4

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.
2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 4 = LOWEST)
3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR AND/OR RSU, 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 (5.0 SECONDS YELLOW AND 3.0 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.
4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.

EXISTING SIGNS



R3-5L	R3-5a	R3-5R	R3-6L	R3-6R
2-RETAINED	1-RETAINED	2-RETAINED	1-RETAINED	1-RETAINED

PLAN

25 0 25 50

Scale of Feet

* - RIGHT-OF-WAY REFERENCE STP - 0556 (20) DOT FILE 6 - 382 SHEET 26 OF 28, 09/2001

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	DATE
PROJ. MANAGER		
DESIGN-DETAILED	MLG	JAR 07/20
CHECKED-REVIEWED	CMB	CMB 07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 3/9/202 AND
N BELFAST AVE

TRAFFIC SIGNAL PLAN

SHEET NUMBER

14A

OF 358

Filename: 014_Signal_14a.dgn Division: HIGHWAY Username: jarobert Date:11/24/2020

LIST OF WORK ITEMS

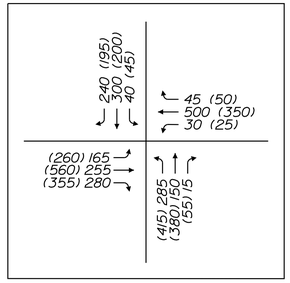
EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	10
FURNISH AND INSTALL ONE-WAY 4-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	2
RESET PREEMPTION PHASE SELECTOR	1
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 4 APPROACHES, COMPLETE (ITEM 643.21)	1 LS
FURNISH AND INSTALL NON-INVASIVE ADVANCE VEHICLE DETECTION SYSTEM FOR 4 APPROACHES, COMPLETE (ITEM 643.22)	1 LS

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

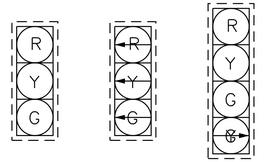
STRUCTURE LIST

STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	L48"xW36"xH48"

SYSTEM DESIGN VOLUMES AM (PM)

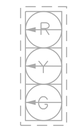


PROPOSED INDICATIONS

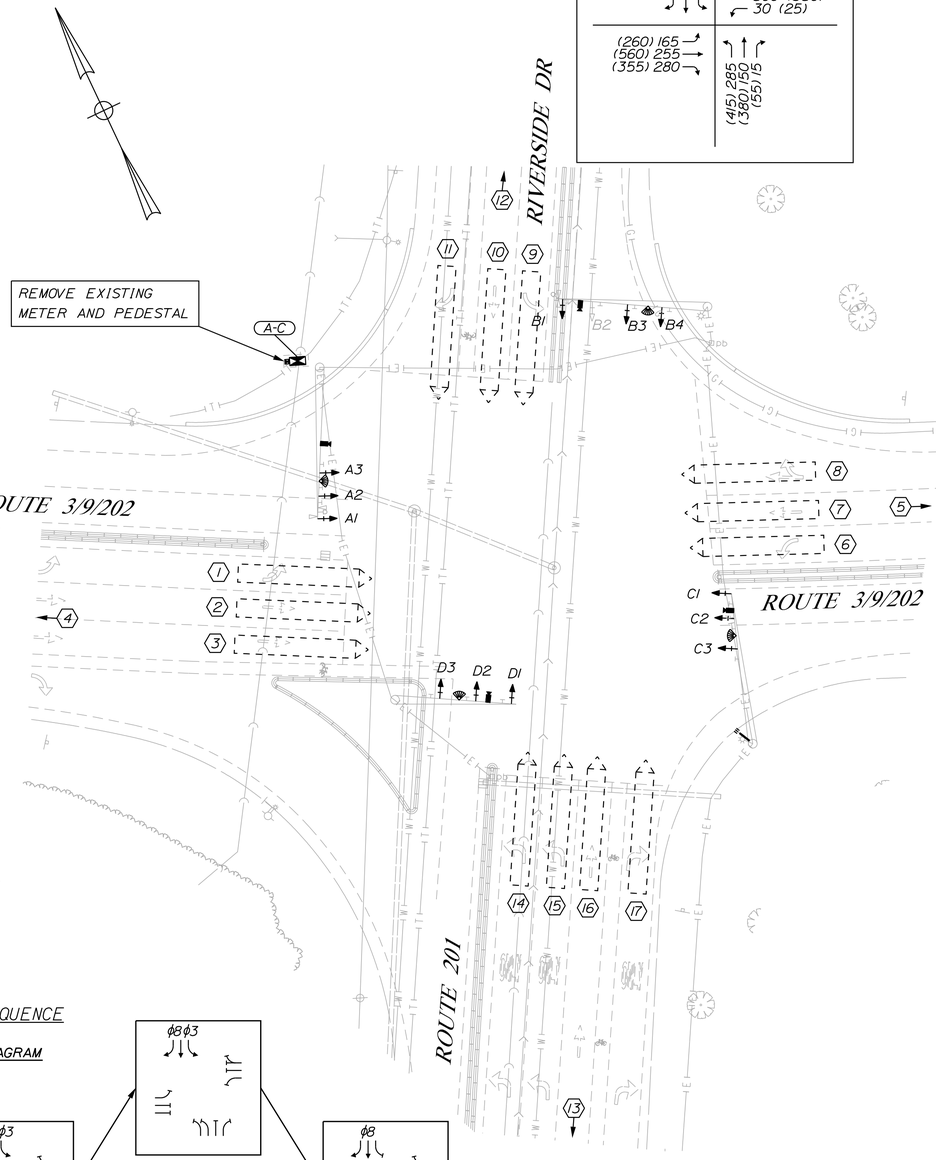


EXISTING INDICATIONS

TO REMAIN



NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES



DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	φ CALLED	φ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
1	ROUTE 3 EB LEFT	1	1	B	-	-
2	ROUTE 3 EB THROUGH	6	6	B	-	-
3	ROUTE 3 EB THROUGH	6	6	B	-	-
4**	ROUTE 3 EB ADVANCE	6	6	A	-	-
5**	ROUTE 3 WB ADVANCE	2	2	A	-	-
6	ROUTE 3 WB LEFT	5	5	B	-	-
7	ROUTE 3 WB THROUGH	2	2	B	-	-
8	ROUTE 3 WB THRU-RIGHT	2	2	B	-	-
9	RIVERSIDE DR SB LEFT	3	3	B	-	-
10	RIVERSIDE DR SB THROUGH	8	8	B	-	-
11	RIVERSIDE DR SB RIGHT	8	8	B	5	-
12*	RIVERSIDE DR SB ADVANCE	8	8	A	-	-
13*	RIVERSIDE DR NB ADVANCE	4	4	A	-	-
14	RIVERSIDE DR NB LEFT	7	7	B	-	-
15	RIVERSIDE DR NB LEFT	7	7	B	-	-
16	RIVERSIDE DR NB THROUGH	4	4	B	-	-
17	RIVERSIDE DR NB RIGHT	4	4	B	5	-

* SEE ADVANCED DILEMMA ZONE DETAIL (35 MPH)
** SEE ADVANCED DILEMMA ZONE DETAIL (50 MPH)

SIGNAL TIMING SCHEDULE

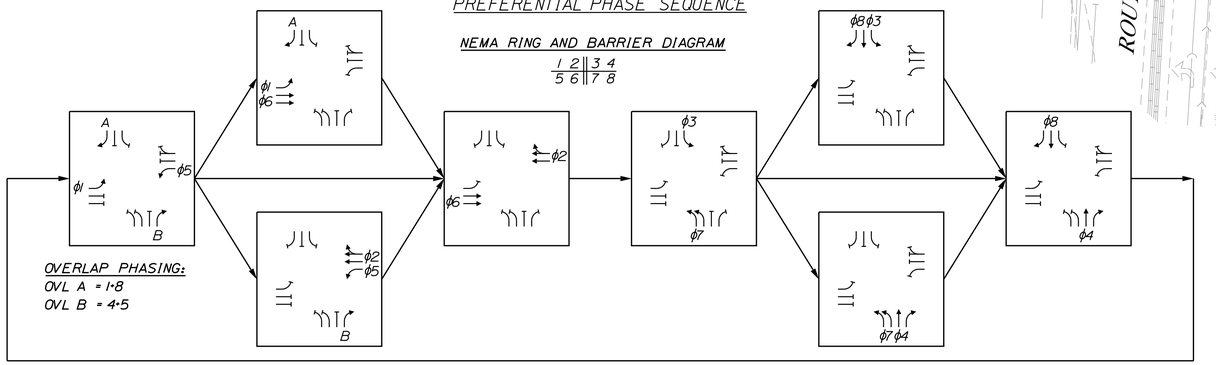
ITEM / PHASE	φ1	φ2	φ3	φ4	φ5	φ6	φ7	φ8
MOVEMENT	C (LT)	A	D (LT)	B	A (LT)	C	B (LT)	D
MINIMUM INITIAL	5	10	5	7	5	10	5	7
PASSAGE TIME	2.5	3.5	2.5	3.0	2.5	3.5	3.0	3.0
MAXIMUM 1	30	40	20	35	20	40	35	35
MAXIMUM 2	30	50	20	40	20	40	40	40
YELLOW	4.0	5.0	3.5	4.0	4.0	5.0	3.5	4.0
ALL RED	3.0	2.0	2.5	2.0	3.0	2.0	2.5	2.0
PED WALK	-	-	-	-	-	-	-	-
PED CLEAR	-	-	-	-	-	-	-	-
DYN MAX LIMIT	-	-	-	-	-	-	-	-
DYN MAX STEP	-	-	-	-	-	-	-	-
RECALL	OFF	SOFT	OFF	OFF	OFF	SOFT	OFF	OFF
DETECTOR	PR	PR	PR	PR	PR	PR	PR	PR
PRE-EMPT PRIORITY	3	4	5	6	4	3	6	5
FLASH	R	Y	R	R	R	Y	R	R
DUAL ENTRY	OFF	ON	OFF	ON	OFF	ON	OFF	ON

NOTES: S = SOFT RECALL Y = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK
IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD.

PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM

1 2 | 3 4
5 6 | 7 8



OVERLAP PHASING:
OVL A = 1+8
OVL B = 4+5

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY REFERENCE FROM MAINE DOT, WIN 022938.00, SHEET 7 OF 18, OCTOBER 4,2018

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	BY	DATE
B. KEEZER		
PROJ. MANAGER		
DESIGN-DETAILED	MLG	07/20
CHECKED-REVIEWED	JAR	07/20
DESIGN2-DETAILED2	CMB	
DESIGN3-DETAILED3	CMB	
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 3/9/202 AND
ROUTE 201 (RIVERSIDE DR)

TRAFFIC SIGNAL PLAN

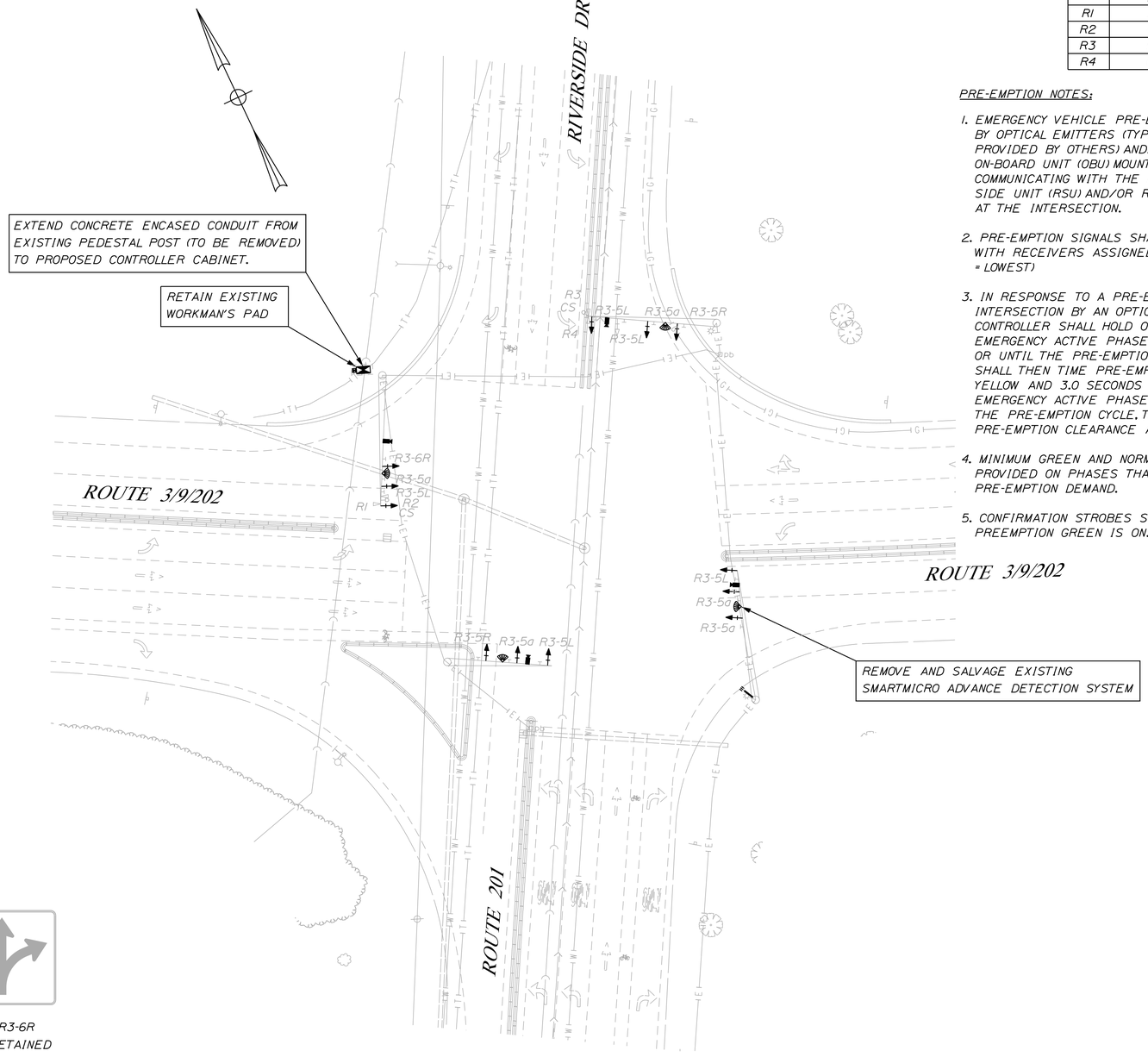
SHEET NUMBER
15
OF 358

Filename: 015_Signal_15.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
FURNISH AND INSTALL NON-METALLIC CONDUIT, CONCRETE ENCASED (ITEM 626.221)	5 LF
FURNISH AND INSTALL CONTROLLER CABINET FOUNDATION (ITEM 626.35)	1 EA
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.



EXISTING SIGNS



R3-5L	R3-5a	R3-5R	R3-6R
5-RETAINED	5-RETAINED	2-RETAINED	1-RETAINED

EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USE/RESERVED	
	2	NOT USE/RESERVED	
R1	3	1	ϕ1&ϕ6
R2	4	2	ϕ2&ϕ5
R3	5	3	ϕ3&ϕ8
R4	6	4	ϕ4&ϕ7

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.
2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 4 = LOWEST)
3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR AND/OR RSU, 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 (5.0 SECONDS YELLOW AND 3.0 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.
4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY REFERENCE FROM MAINE DOT, WIN 022938.00, SHEET 7 OF 18, OCTOBER 4,2018

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER		
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

AUGUSTA
ROUTE 3/9/202 AND
ROUTE 201 (RIVERSIDE DR)

TRAFFIC SIGNAL PLAN

SHEET NUMBER

15A

OF 358

Filename: 015_Signal_15a.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON SPAN AND TETHER WIRE	9
FURNISH AND INSTALL ONE-WAY 4-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON SPAN AND TETHER WIRE	1
RESET PREEMPTION PHASE SELECTOR	1
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 4 APPROACHES, COMPLETE (ITEM 643.21)	1 LS
FURNISH AND INSTALL NON-INVASIVE ADVANCE VEHICLE DETECTION SYSTEM FOR 4 APPROACHES, COMPLETE (ITEM 643.22)	1 LS

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

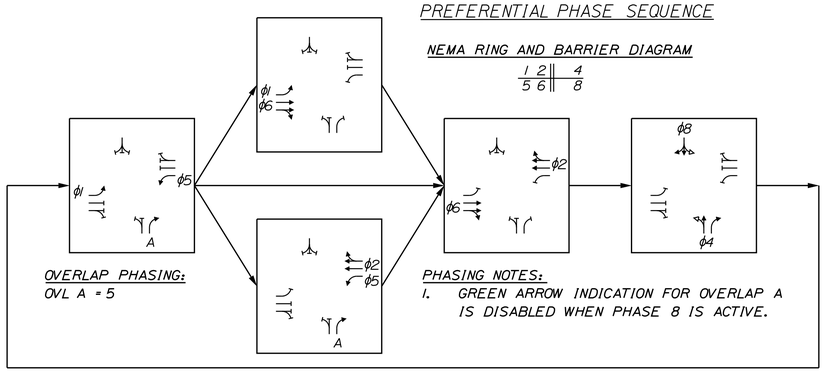
STRUCTURE LIST

STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	L48"xW36"xH48"

PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM

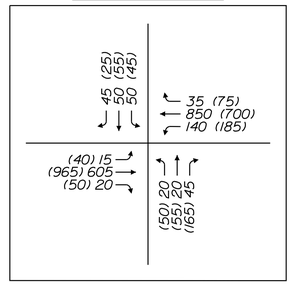
1 2 | 4
5 6 | 8

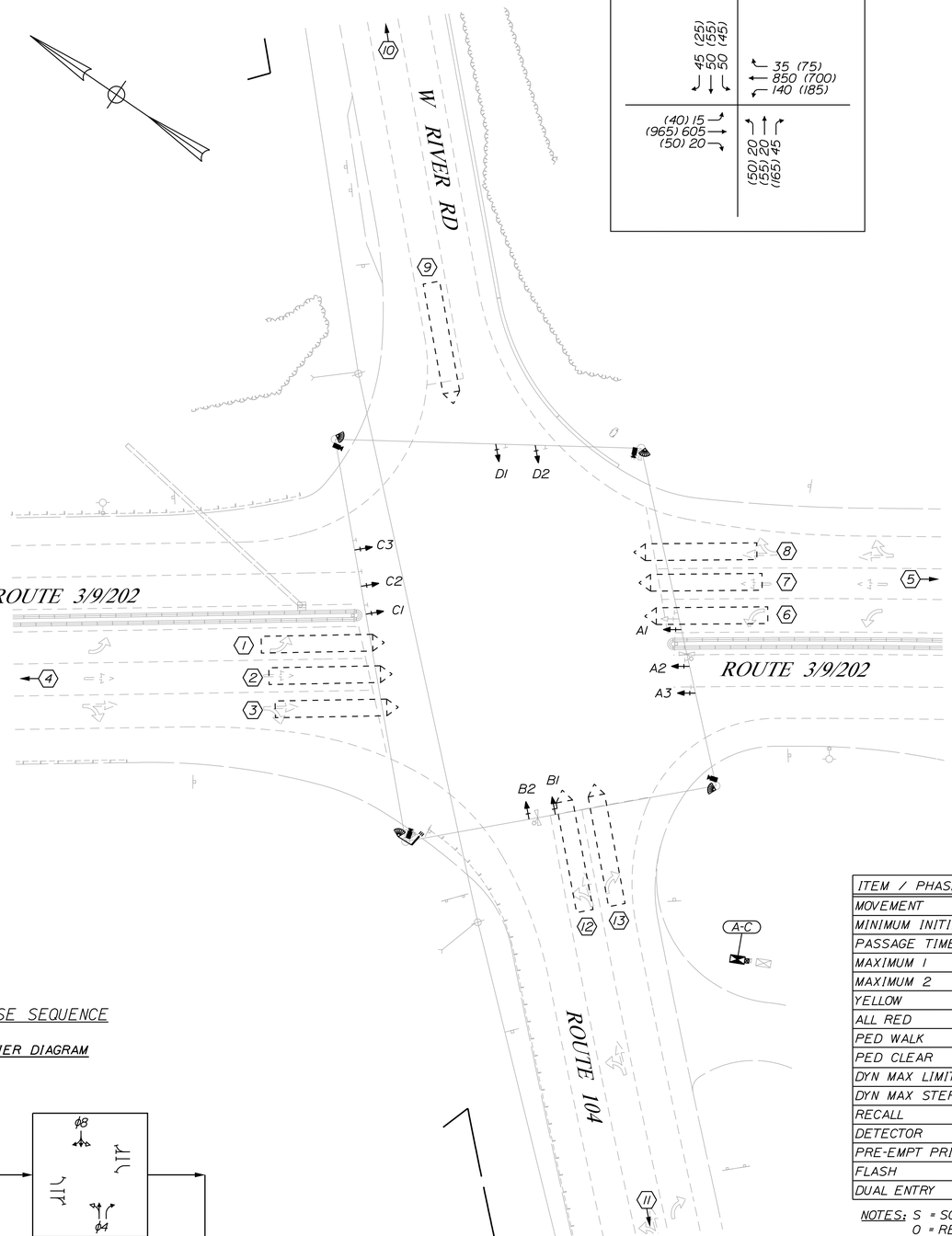


OVERLAP PHASING:
OVL A = 5

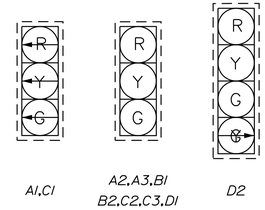
PHASING NOTES:
1. GREEN ARROW INDICATION FOR OVERLAP A IS DISABLED WHEN PHASE 8 IS ACTIVE.

SYSTEM DESIGN VOLUMES AM (PM)





PROPOSED INDICATIONS



NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES

DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	φ CALLED	φ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
1	ROUTE 3 EB LEFT	1	1	B	-	-
2	ROUTE 3 EB THROUGH	6	6	B	-	-
3	ROUTE 3 EB THRU-RIGHT	6	6	B	-	-
4**	ROUTE 3 EB ADVANCE	6	6	A	-	-
5**	ROUTE 3 WB ADVANCE	2	2	A	-	-
6	ROUTE 3 WB LEFT	5	5	B	-	-
7	ROUTE 3 WB THROUGH	2	2	B	-	-
8	ROUTE 3 WB THRU-RIGHT	2	2	B	-	-
9	W RIVER RD SB MOVEMENTS	8	8	B	-	-
10*	W RIVER RD SB ADVANCE	8	8	A	-	-
11*	ROUTE 104 NB ADVANCE	4	4	A	-	-
12	ROUTE 104 NB LEFT-THRU	4	4	B	-	-
13	ROUTE 104 NB RIGHT	4	4	B	5	-

* SEE ADVANCED DILEMMA ZONE DETAIL (45 MPH)
** SEE ADVANCED DILEMMA ZONE DETAIL (50 MPH)

SIGNAL TIMING SCHEDULE

ITEM / PHASE	φ 1	φ 2	φ 3	φ 4	φ 5	φ 6	φ 7	φ 8
MOVEMENT	A (LT)	C	-	D	C (LT)	A	-	B
MINIMUM INITIAL	5	10	-	7	5	10	-	7
PASSAGE TIME	2.5	3.5	-	3.0	2.5	3.5	-	3.0
MAXIMUM 1	15	40	-	20	15	40	-	20
MAXIMUM 2	12	40	-	20	15	40	-	20
YELLOW	4.5	5.0	-	4.5	4.5	5.0	-	4.5
ALL RED	2.5	2.0	-	2.5	2.5	2.0	-	2.5
PED WALK	-	-	-	-	-	-	-	-
PED CLEAR	-	-	-	-	-	-	-	-
DYN MAX LIMIT	-	-	-	-	-	-	-	-
DYN MAX STEP	-	-	-	-	-	-	-	-
RECALL	OFF	SOFT	-	OFF	OFF	SOFT	-	OFF
DETECTOR	PR	PR	-	PR	PR	PR	-	PR
PRE-EMPT PRIORITY	3	4	-	6	4	3	-	5
FLASH	R	Y	-	R	R	Y	-	R
DUAL ENTRY	OFF	ON	-	ON	OFF	ON	-	ON

NOTES: S = SOFT RECALLY = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK
IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY REFERENCE STP - 0556 (20)
DOT FILE 6 - 382 SHEET 12 OF 28, 09/2001

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	DATE
PROJ. MANAGER		
DESIGN-DETAILED	MLG	JAR 07/20
CHECKED-REVIEWED	CMB	CMB 07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 3/9/202 AND
ROUTE 104 (W RIVER RD)

TRAFFIC SIGNAL PLAN

SHEET NUMBER
16
OF 358

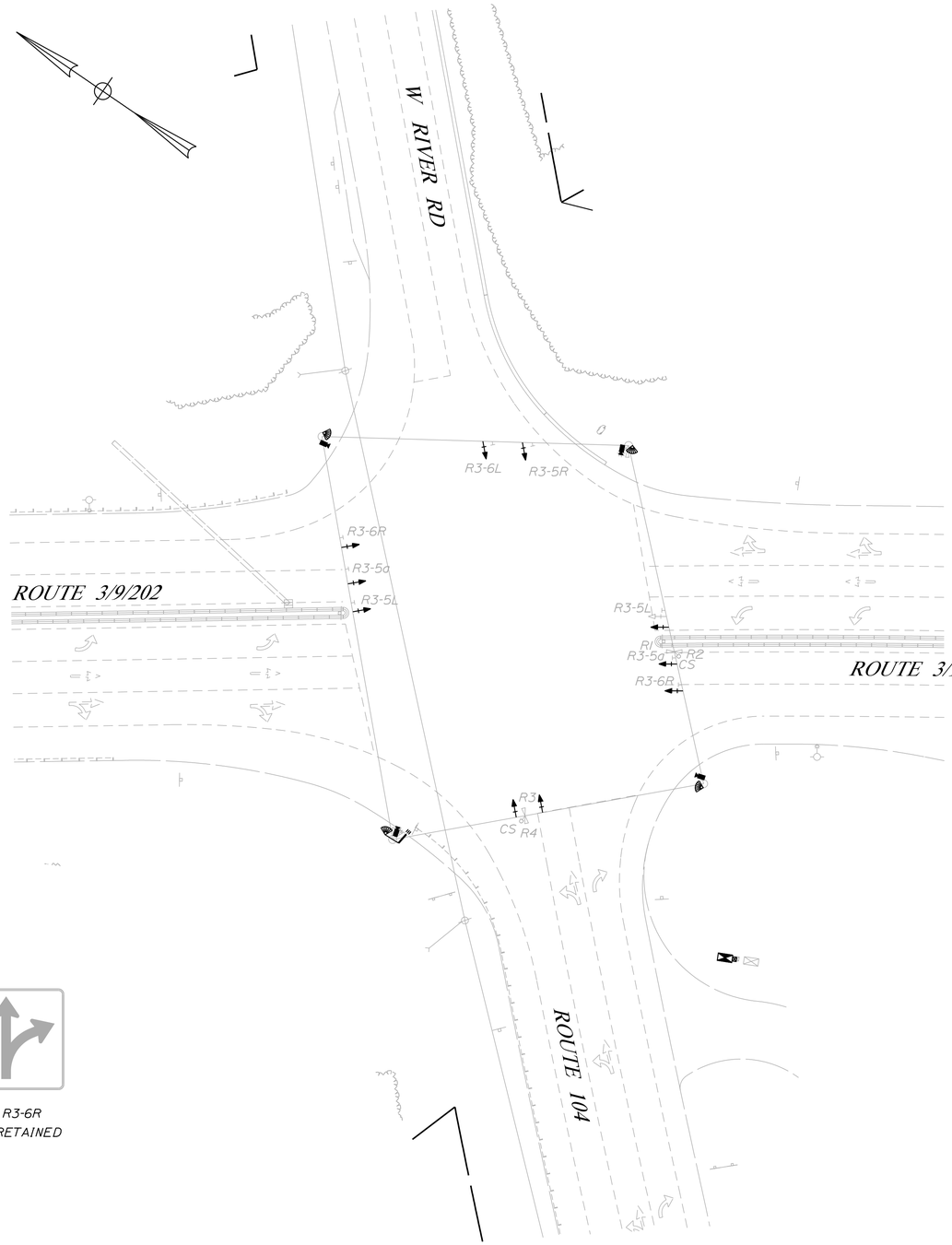
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Filename: 016_Signal_16a.dgn Division: HIGHWAY Username: jarobert Date:11/24/2020

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
FURNISH AND INSTALL CONTROLLER CABINET FOUNDATION (ITEM 626.35)	1 EA
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.3511)	1 EA

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.



EXISTING SIGNS



R3-5L	R3-5a	R3-5R	R3-6L	R3-6R
2-RETAINED	2-RETAINED	1-RETAINED	1-RETAINED	2-RETAINED

EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USE/RESERVED	
	2	NOT USE/RESERVED	
R1	3	1	ϕ1&ϕ6
R2	4	2	ϕ2&ϕ5
R3	5	3	ϕ8
R4	6	4	ϕ4

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.

2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 4 = LOWEST)

3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR AND/OR RSU, 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 (5.0 SECONDS YELLOW AND 2.5 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.

4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.

5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY REFERENCE STP - 0556 (20)
DOT FILE 6 - 382 SHEET 12 OF 28, 09/2001

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	DATE
PROJ. MANAGER		
DESIGN-DETAILED	MLG	07/20
CHECKED-REVIEWED	CMB	07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 3/9/202 AND
ROUTE 104 (W RIVER RD)

TRAFFIC SIGNAL PLAN

SHEET NUMBER

16A

OF 358

LIST OF WORK ITEMS

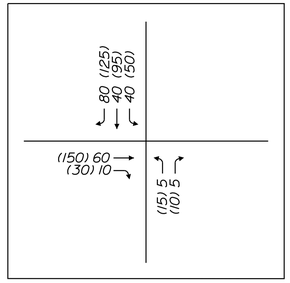
EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	4
FURNISH AND INSTALL ONE-WAY 5-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	2
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON TOP OF POST	3
FURNISH AND INSTALL ONE-WAY 5-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON TOP OF POST	1
FURNISH AND INSTALL 16-INCH L.E.D. COUNTDOWN PEDESTRIAN LENS IN EXISTING HOUSING	6
FURNISH AND INSTALL ADA COMPLIANT ACCESSIBLE PEDESTRIAN SIGNAL (APS) BUTTON WITH 9"X15" R10-3e INFORMATIONAL SIGN	6
FURNISH AND INSTALL 4-CHANNEL PREEMPTION PHASE SELECTOR	1
FURNISH AND INSTALL LIGHT-BASED PREEMPTION RECEIVERS WITH DETECTOR CABLE	3
FURNISH AND INSTALL PREEMPTION CONFIRMATION RED STROBE WITH CABLE	1
FURNISH AND INSTALL 19-INCH 1RU FIBER OPTIC 12-POSITION PATCH PANEL WITH PIGTAILS	1
RESET FIBER OPTIC ETHERNET SWITCH WITH FIBER OPTIC INTERFACES	1
FURNISH AND INSTALL MAST ARM MOUNTED SIGNS	3
FURNISH AND INSTALL SIGNAL POST MOUNTED SIGNS	1
RESET EXISTING 12-F FIBER IN PROPOSED CABINET	-
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 3 APPROACHES, COMPLETE (ITEM 643.21)	1 LS

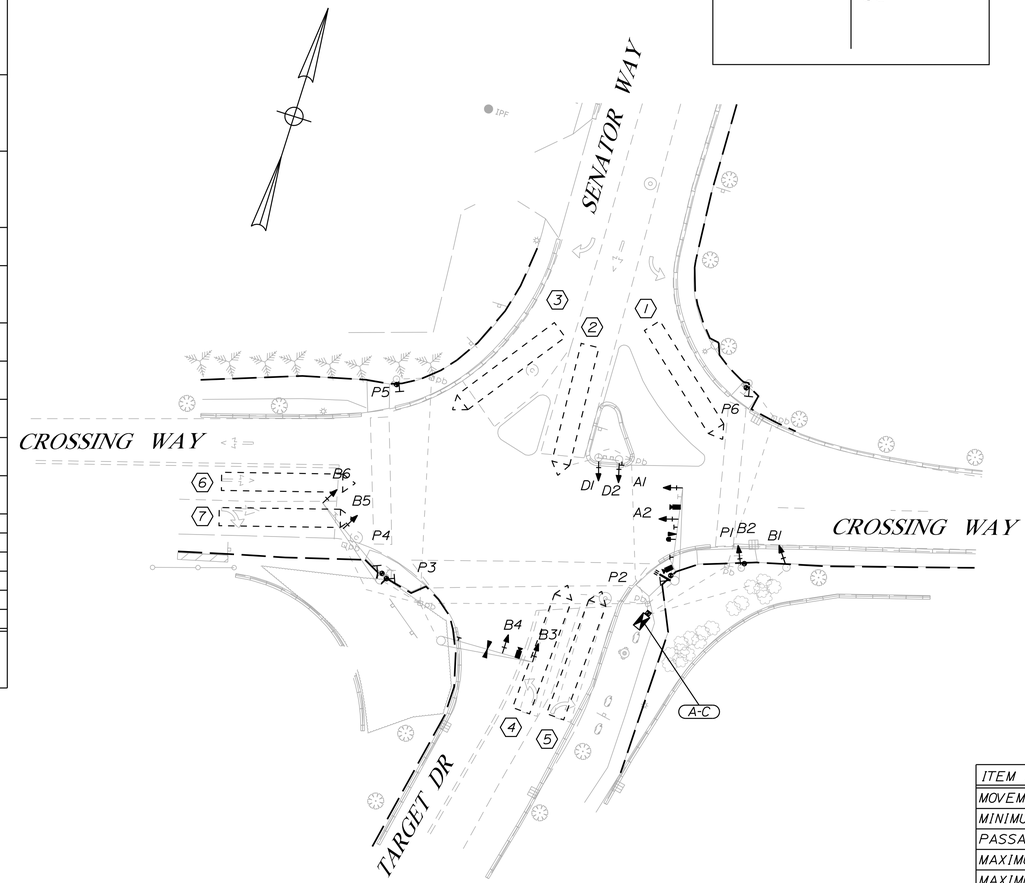
THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

STRUCTURE LIST

STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	EXISTING

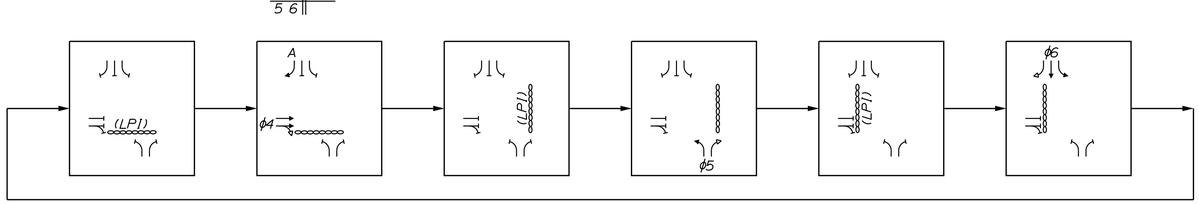
SYSTEM DESIGN VOLUMES AM (PM)





PREFERENTIAL PHASE SEQUENCE

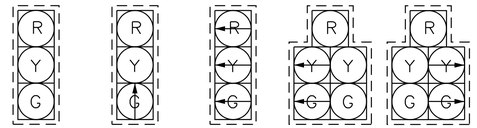
NEMA RING AND BARRIER DIAGRAM



OVERLAP PHASING:
OVL A = 4-6

PHASING NOTES:
1. EACH PEDESTRIAN PHASE SHALL HAVE A MINIMUM OF A 4 SECOND LEADING PEDESTRIAN INTERVAL (LPI).
2. PEDESTRIAN PHASE UPON PUSH BUTTON ACTIVATION ONLY
3. GREEN ARROW INDICATION FOR OVERLAP A IS DISABLED WHEN THE PHASE 6 PEDESTRIAN PHASE IS ACTIVE.

PROPOSED INDICATIONS



A2,D2 A1,B3,B4 B1,B2 D1 B5,B6

EXISTING INDICATIONS
TO REMAIN



P1-P6

NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES

EXISTING COUNTDOWN PEDESTRIAN SIGNAL HEADS SHALL HAVE NEW L.E.D. LENSES INSTALLED

DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	ϕ CALLED	ϕ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
1	SENATOR WAY SB LEFT	6	6	B	-	-
2	SENATOR WAY SB THROUGH	6	6	B	-	-
3	SENATOR WAY SB RIGHT	6	6	B	5	-
4	TARGET DR NB LEFT	5	5	B	-	-
5	TARGET DR NB RIGHT	5	5	B	5	-
6	CROSSING WAY EB THROUGH	4	4	B	-	-
7	CROSSING WAY EB THRU-RIGHT	4	4	B	-	-

SIGNAL TIMING SCHEDULE

ITEM / PHASE	ϕ1	ϕ2	ϕ3	ϕ4	ϕ5	ϕ6	ϕ7	ϕ8
MOVEMENT	-	-	-	A	D	B	-	-
MINIMUM INITIAL	-	-	-	5	5	5	-	-
PASSAGE TIME	-	-	-	3.0	3.0	3.0	-	-
MAXIMUM 1	-	-	-	32	17	25	-	-
MAXIMUM 2	-	-	-	20	25	40	-	-
YELLOW	-	-	-	3.5	3.0	4.0	-	-
ALL RED	-	-	-	3.5	3.0	2.0	-	-
PED WALK	-	-	-	4	4	4	-	-
PED CLEAR	-	-	-	19	12	11	-	-
DYN MAX LIMIT	-	-	-	-	-	-	-	-
DYN MAX STEP	-	-	-	-	-	-	-	-
RECALL	-	-	-	OFF	OFF	SOFT	-	-
DETECTOR	-	-	-	PR	PR	PR	-	-
PRE-EMPT PRIORITY	-	-	-	5	4	3	-	-
FLASH	-	-	-	R	R	R	-	-
DUAL ENTRY	-	-	-	OFF	OFF	OFF	-	-

NOTES: S = SOFT RECALL = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK
IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	BY	DATE
PROJ. MANAGER	B. KEEZER	
DESIGN-DETAILED	MLG	07/20
CHECKED-REVIEWED	CMB	07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
SENATOR WAY AND CROSSING WAY

TRAFFIC SIGNAL PLAN

SHEET NUMBER
17
OF 358

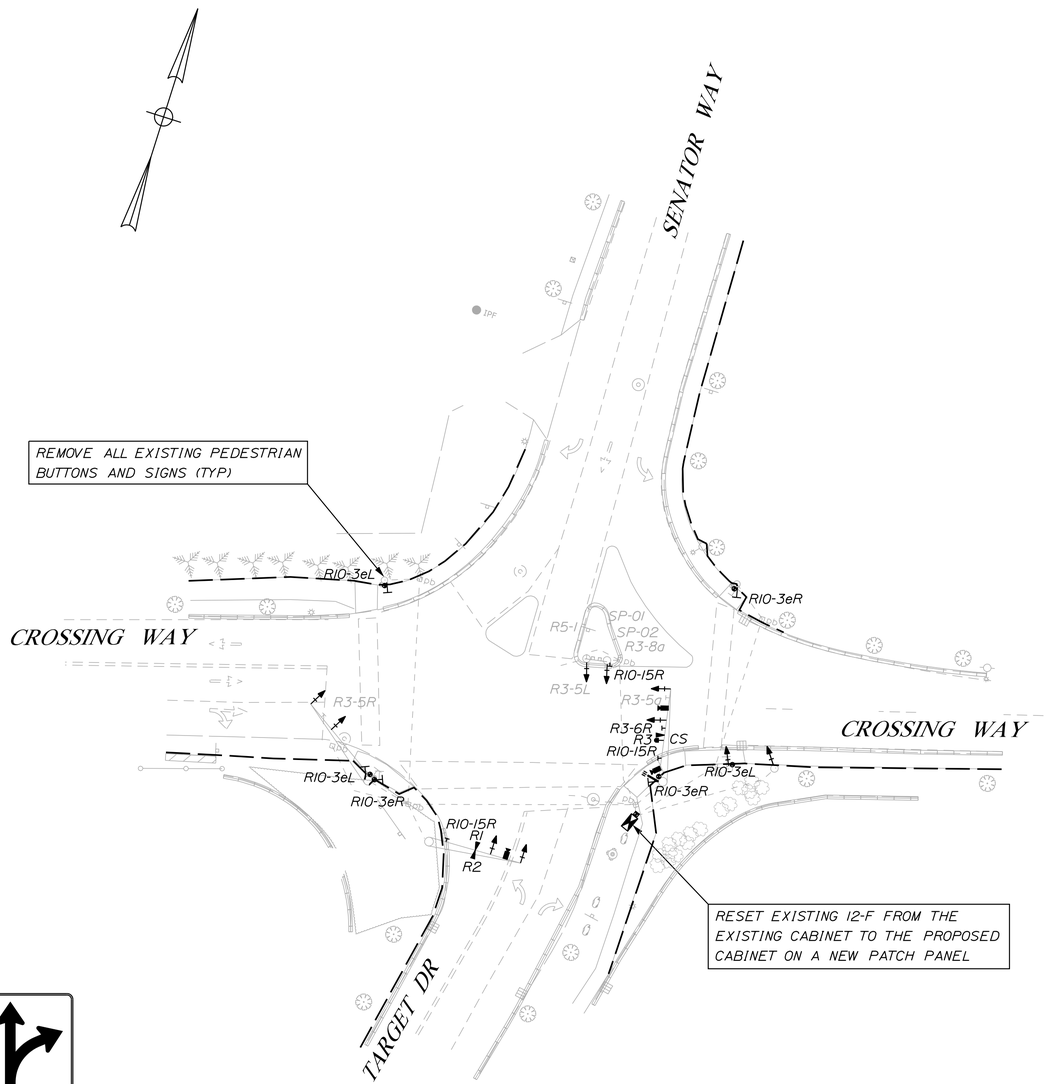
Usernome: jorobert Date:11/24/2020
Division: HIGHWAY
Filename: 017_Signal_17.dgn

Filename: 017_Signal_17a.dgn Division: HIGHWAY Username: jarobert Date:11/24/2020

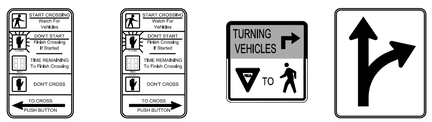
LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.



PROPOSED SIGNS



RIO-3eL	RIO-3eR	RIO-15R	R3-6R
9"x15"	9"x15"	30"x30"	30"x36"
3-PROPOSED	3-PROPOSED	3-PROPOSED	1-PROPOSED

EXISTING SIGNS



R3-5L	R3-5a	R3-5R	SP-01	SP-02	R5-1	R3-8a
1-RETAINED	1-RETAINED	2-RETAINED	1-RETAINED	1-RETAINED	1-RETAINED	1-RETAINED

EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USE/RESERVED	
	2	NOT USE/RESERVED	
R1	3	1	ϕ6
R2	4	2	ϕ5
R3	5	3	ϕ4
	6	NOT USED	

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.

2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 3 = LOWEST)

3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR AND/OR RSU, 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 (4.0 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.

4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.

5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.

PLAN

25 0 25 50

Scale of Feet

× - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	DATE
PROJ. MANAGER		
DESIGN-DETAILED	M.G	07/20
CHECKED-REVIEWED	CMB	07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
SENATOR WAY AND
CROSSING WAY

TRAFFIC SIGNAL PLAN

SHEET NUMBER

17A

OF 358

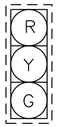
LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON SPAN AND TETHER WIRE	8
FURNISH AND INSTALL 4-CHANNEL PREEMPTION PHASE SELECTOR	1
FURNISH AND INSTALL LIGHT-BASED PREEMPTION RECEIVERS WITH DETECTOR CABLE	4
FURNISH AND INSTALL PREEMPTION CONFIRMATION RED STROBE WITH CABLE	1
FURNISH AND INSTALL 19-INCH 1RU FIBER OPTIC 12-POSITION PATCH PANEL WITH PIGTAILS	1
FURNISH AND INSTALL ENVIRONMENTALLY HARDENED FIBER OPTIC ETHERNET SWITCH	1
RESET EXISTING 12-F FIBER IN PROPOSED CABINET	-
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 4 APPROACHES, COMPLETE (ITEM 643.21)	1 LS
FURNISH AND INSTALL NON-INVASIVE ADVANCE VEHICLE DETECTION SYSTEM FOR 4 APPROACHES, COMPLETE (ITEM 643.22)	1 LS

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

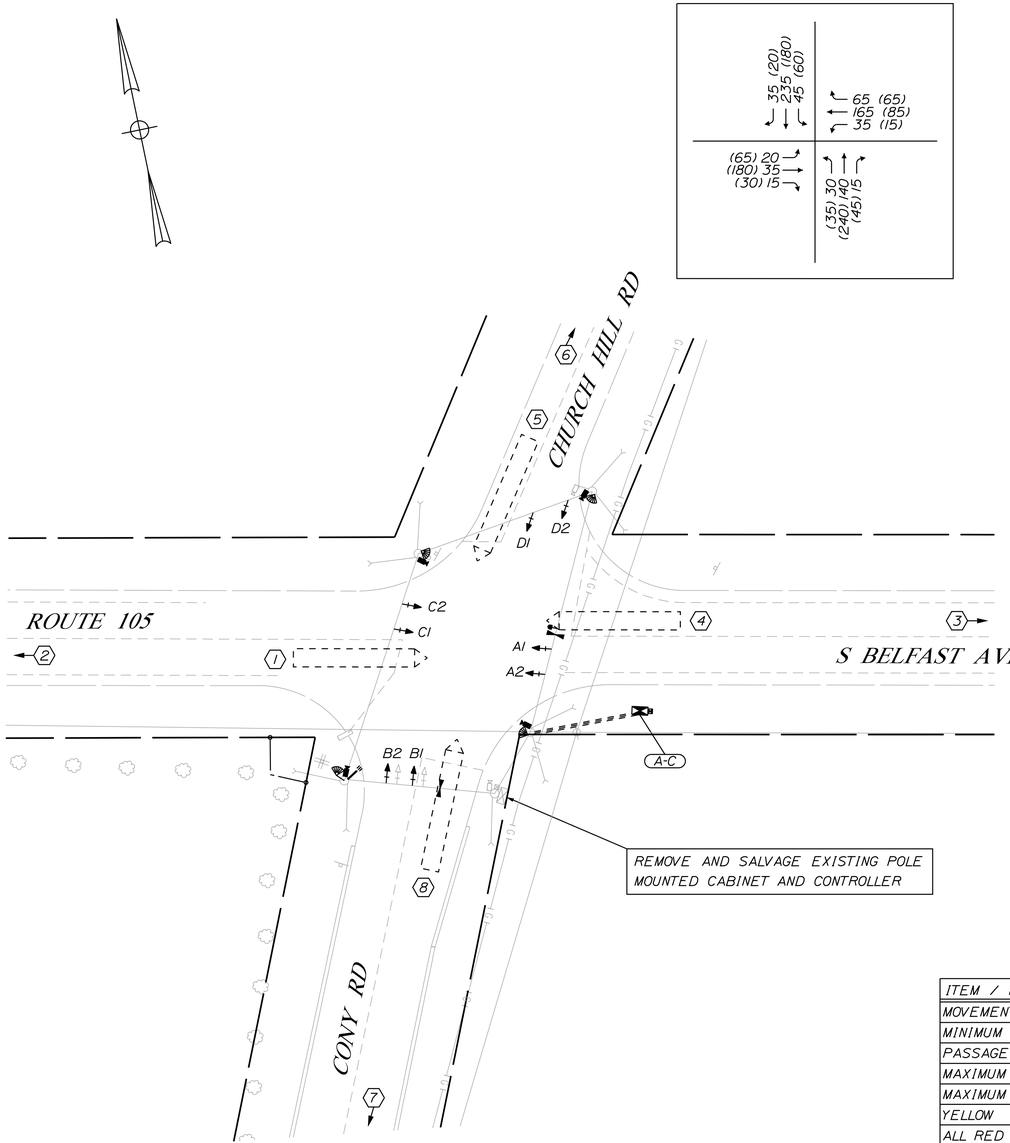
SYSTEM DESIGN VOLUMES AM (PM)

PROPOSED INDICATIONS



A1, A2, B1, B2
C1, C2, D1, D2

NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES



DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	φ CALLED	φ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
1	S BELFAST AVE EB MOVEMENTS	6	6	B	-	-
2*	S BELFAST AVE EB ADVANCE	6	6	A	-	-
3**	S BELFAST AVE WB ADVANCE	2	2	A	-	-
4	S BELFAST AVE WB MOVEMENTS	2	2	B	-	-
5	CHURCH HILL RD SB MOVEMENTS	8	8	B	-	-
6**	CHURCH HILL RD SB ADVANCE	8	8	A	-	-
7*	CONY RD NB ADVANCE	4	4	A	-	-
8	CONY RD NB MOVEMENTS	4	4	B	-	-

* SEE ADVANCED DILEMMA ZONE DETAIL (35 MPH)
** SEE ADVANCED DILEMMA ZONE DETAIL (45 MPH)

STRUCTURE LIST

STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	L48"xW36"xH48"

SIGNAL TIMING SCHEDULE

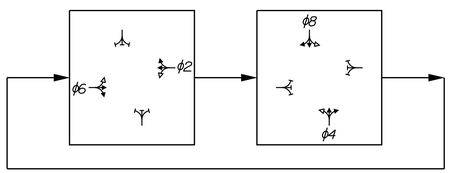
ITEM / PHASE	φ1	φ2	φ3	φ4	φ5	φ6	φ7	φ8
MOVEMENT	-	C	-	D	-	A	-	B
MINIMUM INITIAL	-	5	-	5	-	5	-	5
PASSAGE TIME	-	3.0	-	3.0	-	3.0	-	3.0
MAXIMUM 1	-	30	-	35	-	30	-	35
MAXIMUM 2	-	28	-	38	-	28	-	38
YELLOW	-	4.0	-	4.0	-	4.0	-	4.0
ALL RED	-	2.0	-	2.0	-	2.0	-	2.0
PED WALK	-	-	-	-	-	-	-	-
PED CLEAR	-	-	-	-	-	-	-	-
DYN MAX LIMIT	-	-	-	-	-	-	-	-
DYN MAX STEP	-	-	-	-	-	-	-	-
RECALL	-	SOFT	-	OFF	-	SOFT	-	OFF
DETECTOR	-	PR	-	PR	-	PR	-	PR
PRE-EMPT PRIORITY	-	4	-	6	-	3	-	5
FLASH	-	Y	-	R	-	Y	-	R
DUAL ENTRY	-	ON	-	ON	-	ON	-	ON

NOTES: S = SOFT RECALL Y = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK
IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD.

PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM

2 | 4
6 | 8



PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY REFERENCE STP-6724(00)X
DOT FILE 6-352 SHEET 1 OF 1, 11/1996

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	BY	DATE
PROJ. MANAGER	B. KEEZER	
DESIGN-DETAILED	MLG	JAR 07/20
CHECKED-REVIEWED	CMB	CMB 07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 105 (S BELFAST AVE) AND
CONY RD / CHURCH HILL RD

TRAFFIC SIGNAL PLAN

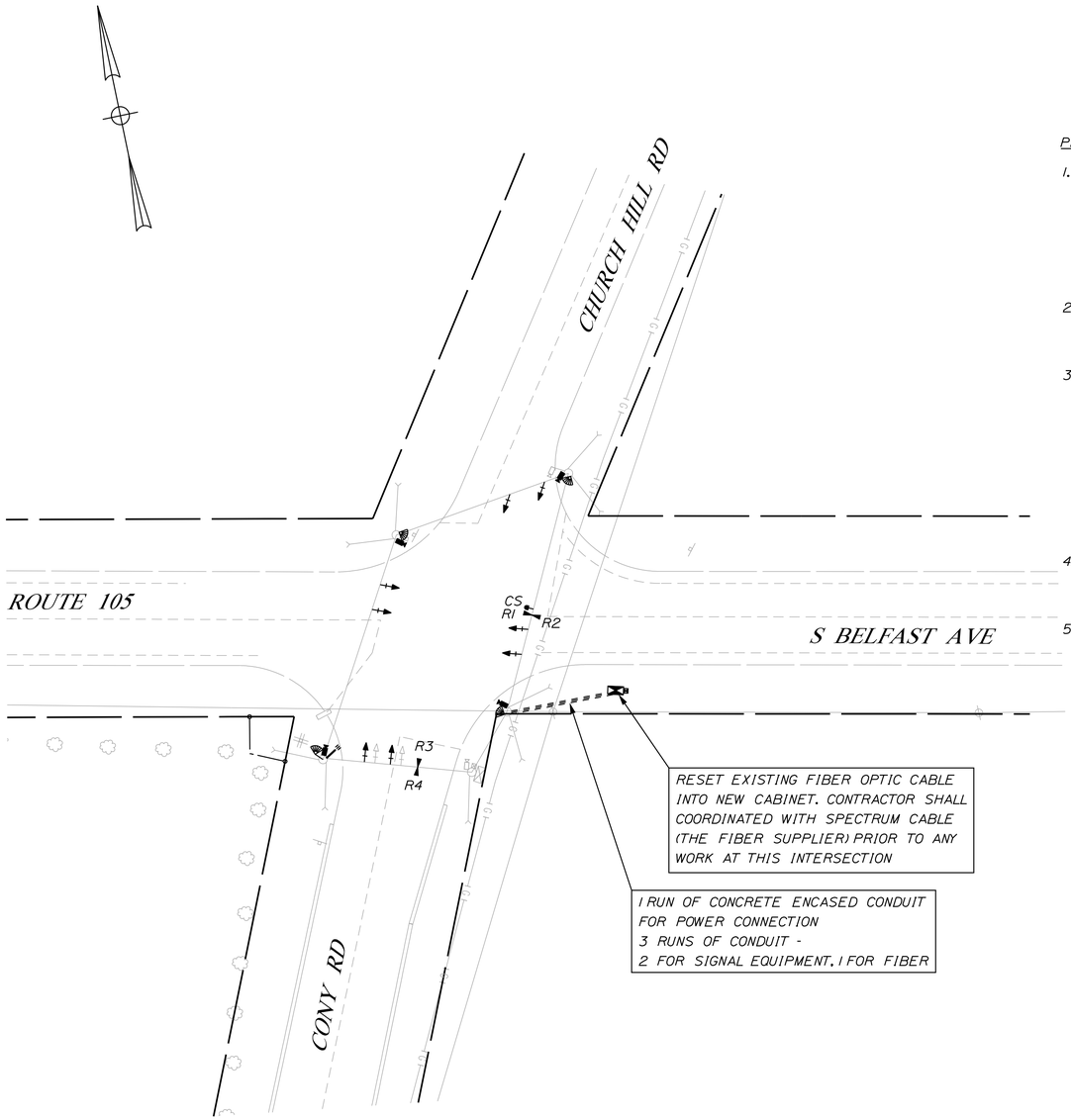
SHEET NUMBER
18
OF 358

Filename: 018_Signal_18.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
FURNISH AND INSTALL (3-INCH) NON-METALLIC CONDUIT (ITEM 626.22)	120 LF
FURNISH AND INSTALL NON-METALLIC CONDUIT, CONCRETE ENCASED (ITEM 626.221)	40 LF
FURNISH AND INSTALL CONTROLLER CABINET FOUNDATION (ITEM 626.35)	1 EA
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.



EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USE/RESERVED	
	2	NOT USE/RESERVED	
R1	3	1	Ø6
R2	4	2	Ø2
R3	5	3	Ø8
R4	6	4	Ø4

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.
2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 4 = LOWEST)
3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR AND/OR RSU, 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 (4.0 SECONDS YELLOW AND 2.0 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.
4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY REFERENCE STP-6724(00)X
DOT FILE 6-352 SHEET 1 OF 1, 11/1996

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN
024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	DATE
PROJ. MANAGER		
DESIGN-DETAILED	MLG	07/20
CHECKED-REVIEWED	CMB	07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 105 (S BELFAST AVE) AND
CONY RD / CHURCH HILL RD

TRAFFIC SIGNAL PLAN

SHEET NUMBER
18A
OF 358

Filename: 018_Signal_18a.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

LIST OF WORK ITEMS

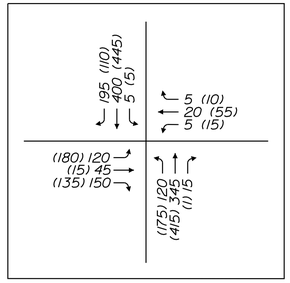
EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	6
FURNISH AND INSTALL ONE-WAY 4-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	2
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON TOP OF POST	1
FURNISH AND INSTALL 16-INCH L.E.D. COUNTDOWN PEDESTRIAN LENS IN EXISTING HOUSING	8
FURNISH AND INSTALL ADA COMPLIANT ACCESSIBLE PEDESTRIAN SIGNAL (APS) BUTTON WITH 9"X15" R10-3e INFORMATIONAL SIGN	8
FURNISH AND INSTALL 19-INCH 1RU FIBER OPTIC 12-POSITION PATCH PANEL WITH PIGTAILS	1
RESET FIBER OPTIC ETHERNET SWITCH WITH FIBER OPTIC INTERFACES	1
FURNISH AND INSTALL MAST ARM MOUNTED SIGNS	4
REMOVE MAST ARM MOUNTED SIGNS	2
RESET COUNTDOWN PEDESTRIAN SIGNAL HEADS	6
RESET PREEMPTION PHASE SELECTOR	1
RESET EXISTING 12-F FIBER IN PROPOSED CABINET	-
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 4 APPROACHES, COMPLETE (ITEM 643.21)	1 LS

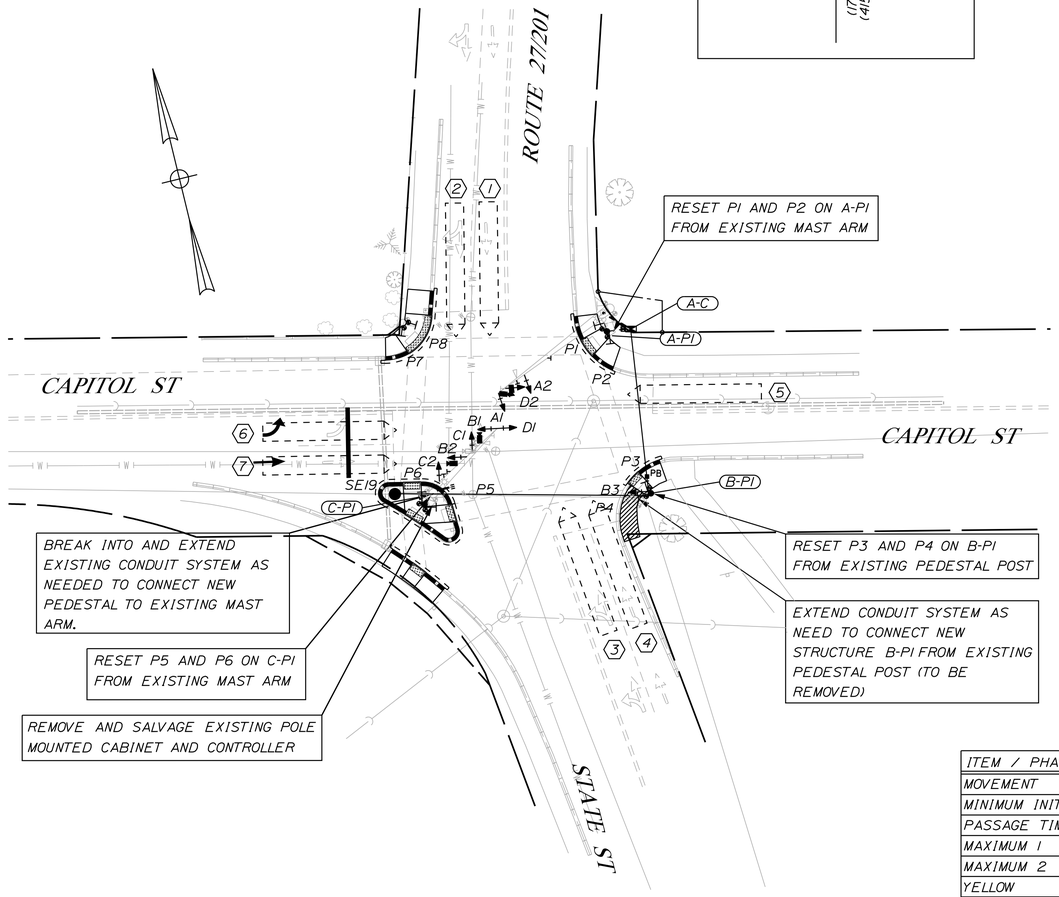
THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

STRUCTURE LIST

STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	L48"xW36"xH48"
A-PI	8' PEDESTAL POLE	24" DIAMETER
B-PI	10' PEDESTAL POLE	24" DIAMETER
C-PI	8' PEDESTAL POLE	24" DIAMETER

SYSTEM DESIGN VOLUMES AM (PM)

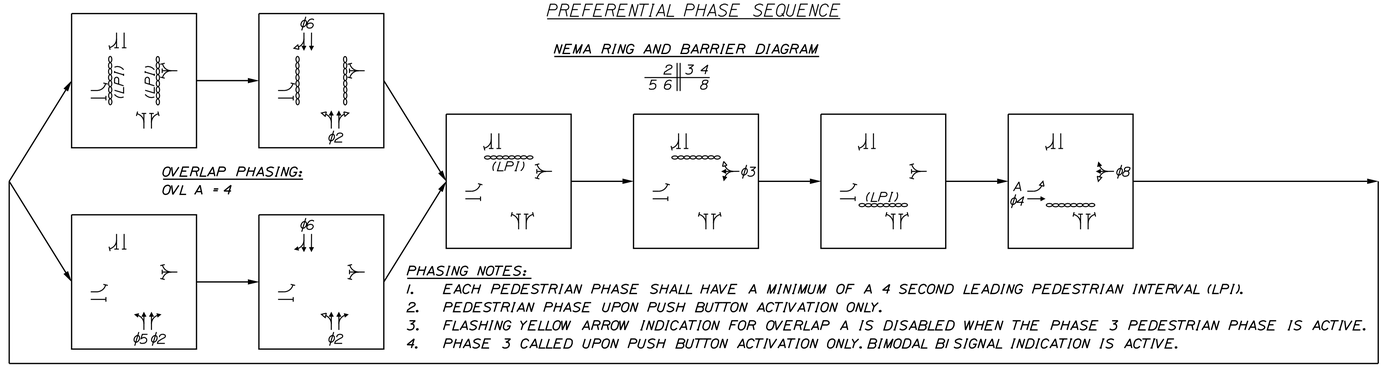




PREFERENTIAL PHASE SEQUENCE

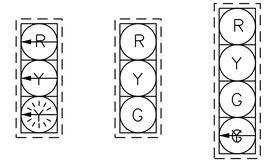
NEMA RING AND BARRIER DIAGRAM

2 3 4
5 6 8



PHASING NOTES:
1. EACH PEDESTRIAN PHASE SHALL HAVE A MINIMUM OF A 4 SECOND LEADING PEDESTRIAN INTERVAL (LPI).
2. PEDESTRIAN PHASE UPON PUSH BUTTON ACTIVATION ONLY.
3. FLASHING YELLOW ARROW INDICATION FOR OVERLAP A IS DISABLED WHEN THE PHASE 3 PEDESTRIAN PHASE IS ACTIVE.
4. PHASE 3 CALLED UPON PUSH BUTTON ACTIVATION ONLY. BIMODAL BI SIGNAL INDICATION IS ACTIVE.

PROPOSED INDICATIONS



B1 | A2,B2,B3 C1,C2,D2 | A1,D1

EXISTING INDICATIONS
TO REMAIN OR RELOCATE



P1-P8

NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES

EXISTING COUNTDOWN PEDESTRIAN SIGNAL HEADS SHALL HAVE NEW L.E.D. LENSES INSTALLED

DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	ϕ CALLED	ϕ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
1	STATE ST SB THROUGH	6	6	B	-	-
2	STATE ST SB THRU-RIGHT	6	6	B	-	-
3	STATE ST NB LEFT-THRU	2	2	B	-	-
4	STATE ST NB THRU-RIGHT	2	2	B	-	-
5	CAPITOL ST WB MOVEMENTS	8	8	B	-	-
6	CAPITOL ST EB LEFT	4	4	B	-	-
7	CAPITOL ST EB THROUGH	4	4	B	-	-

SIGNAL TIMING SCHEDULE

ITEM / PHASE	ϕ1	ϕ2	ϕ3	ϕ4	ϕ5	ϕ6	ϕ7	ϕ8
MOVEMENT	-	A	D (LT)	B	A (LT)	C	-	D
MINIMUM INITIAL	-	10	5	5	4	10	-	5
PASSAGE TIME	-	3.0	3.0	3.0	3.0	3.0	-	3.0
MAXIMUM 1	-	25	10	25	10	25	-	25
MAXIMUM 2	-	35	10	30	12	35	-	30
YELLOW	-	4.0	4.0	4.0	4.0	4.0	-	4.0
ALL RED	-	2.0	2.0	2.0	2.0	2.0	-	2.0
PED WALK	-	4	4	4	-	4	-	-
PED CLEAR	-	10	11	11	-	10	-	-
DYN MAX LIMIT	-	-	-	-	-	-	-	-
DYN MAX STEP	-	-	-	-	-	-	-	-
RECALL	-	SOFT	OFF	OFF	OFF	SOFT	-	OFF
DETECTOR	-	PR	PR	PR	PR	PR	-	PR
PRE-EMPT PRIORITY	-	4	5	6	4	3	-	5
FLASH	-	Y	R	R	R	Y	-	R
DUAL ENTRY	-	ON	OFF	ON	OFF	ON	-	ON

NOTES: S = SOFT RECALLY = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK
MAX 2 UNDER COORDINATION
IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	BY	DATE
PROJ. MANAGER	B. KEEZER	
DESIGN-DETAILED	MLG	07/20
CHECKED-REVIEWED	CMB	07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 27/201 (STATE ST)
AND CAPITOL ST

TRAFFIC SIGNAL PLAN

SHEET NUMBER
19
OF 358

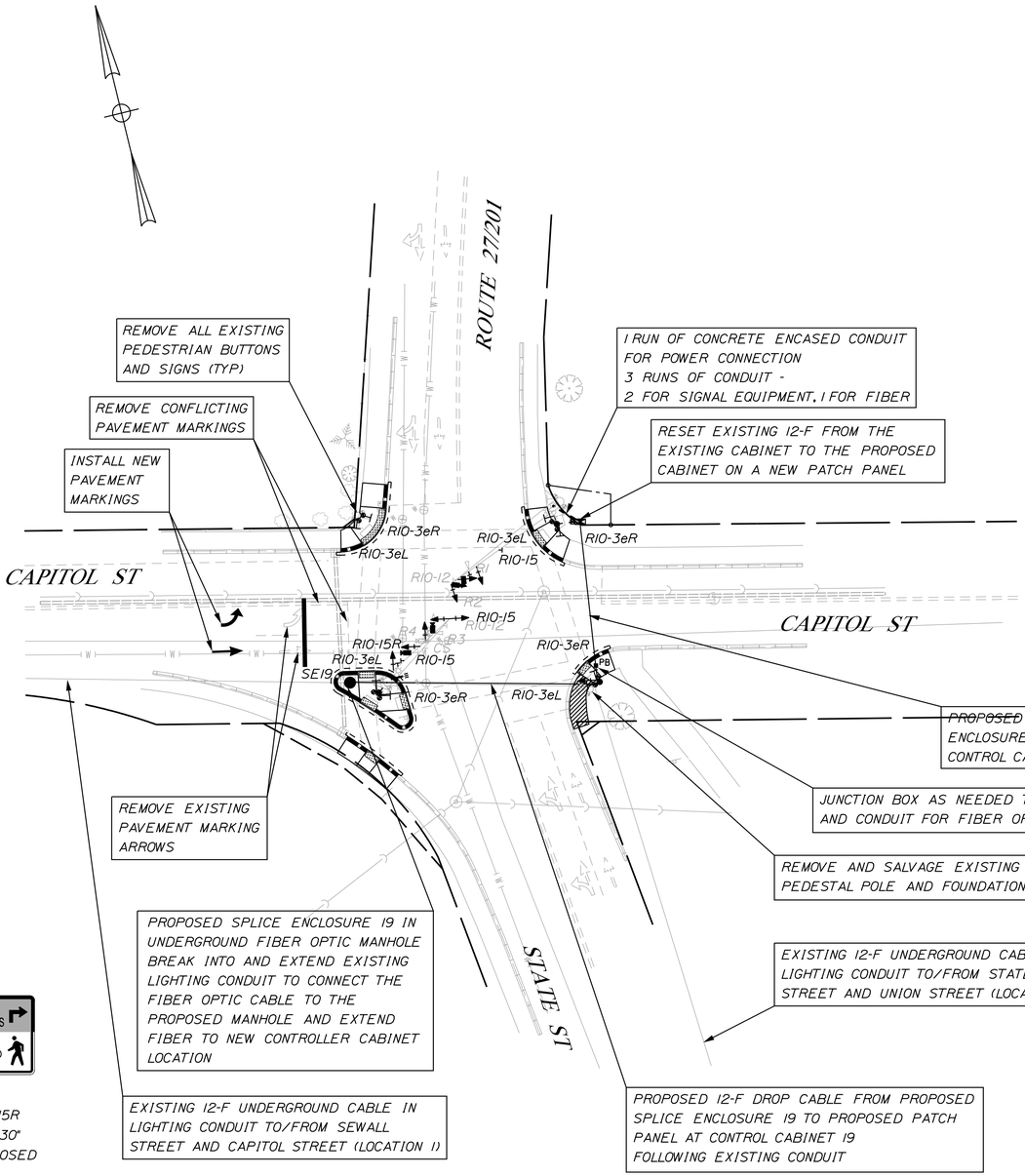
Filename: 019_Signal_19.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

LIST OF WORK ITEMS

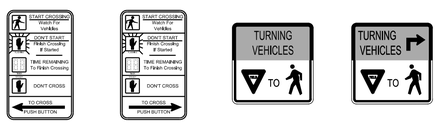
EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
FURNISH AND INSTALL PRECAST CONCRETE JUNCTION BOX (ITEM 626.11)	1 EA
FURNISH AND INSTALL (3-INCH) NON-METALLIC CONDUIT (ITEM 626.22)	50 LF
FURNISH AND INSTALL NON-METALLIC CONDUIT, CONCRETE ENCASED (ITEM 626.221)	10 LF
FURNISH AND INSTALL (3-INCH) NON-METALLIC UNDER PAVEMENT CONDUIT (ITEM 626.251)	65 LF
FURNISH AND INSTALL CONTROLLER CABINET FOUNDATION (ITEM 626.35)	1 EA
FURNISH AND INSTALL 24-INCH DIAMETER FOUNDATION (ITEM 626.421)*	21 LF
FURNISH AND INSTALL WHITE PAVEMENT AND CURB MARKING (ITEM 627.75)	77 LF
REMOVE EXISTING PAVEMENT MARKING (ITEM 627.77)	73 SF
FURNISH AND INSTALL APPROXIMATELY 200 LINEAR FEET OF 12-STRAND FIBER OPTIC INTERCONNECT CABLE FROM UNDERGROUND SPLICE ENCLOSURE 19 TO CONTROLLER CABINET AT INTERSECTION 19. (ITEM 643.90)	1 LS
FURNISH AND INSTALL FIBER OPTIC SPLICE ENCLOSURE (ITEM 643.90)	1 EA
FURNISH AND INSTALL 8-FOOT PEDESTAL POLE (ITEM 643.92)	2 EA
FURNISH AND INSTALL 10-FOOT PEDESTAL POLE (ITEM 643.92)	1 EA
FUNISH AND INSTALL FIBER OPTIC MANHOLE (ITEM 654.3335)	1 EA
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

*REMOVAL OF EXISTING PEDESTAL POLE FOUNDATION SHALL BE SUBSIDIARY TO ITEM 626.421.

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.



PROPOSED SIGNS



RIO-3eL 9"x15" 4-PROPOSED

RIO-3eR 9"x15" 4-PROPOSED

RIO-15 30"x30" 3-PROPOSED

RIO-15R 30"x30" 1-PROPOSED

EXISTING SIGNS



RIO-12 2-REMOVED

EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USE/RESERVED	
	2	NOT USE/RESERVED	
R1	3	1	ϕ6
R2	4	2	ϕ2&ϕ5
R3	5	3	ϕ3&ϕ8
R4	6	4	ϕ4

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.
2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 4 = LOWEST)
3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR AND/OR RSU, 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 (4.0 SECONDS YELLOW AND 2.0 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.
4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.

PLAN

25 0 25 50

Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	DATE
PROJ. MANAGER		
DESIGN-DETAILED	MLG	07/20
CHECKED-REVIEWED	CMB	07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 27/201 (STATE ST) AND CAPITOL ST

TRAFFIC SIGNAL PLAN

SHEET NUMBER

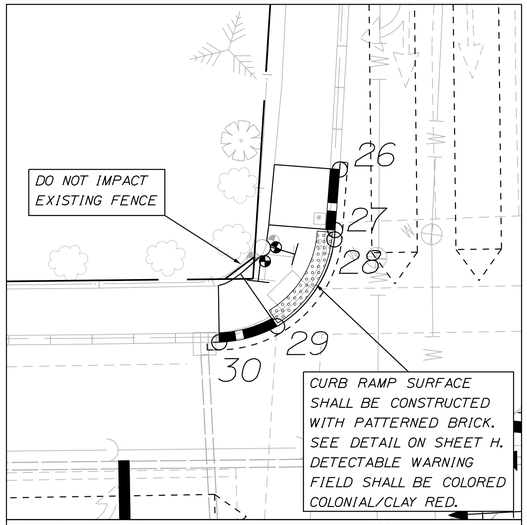
19A

OF 358

Filename: 019_Signal_19a.dgn Username: jorobert Division: HIGHWAY Date:11/24/2020

Filename: 019_Signal_19c.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

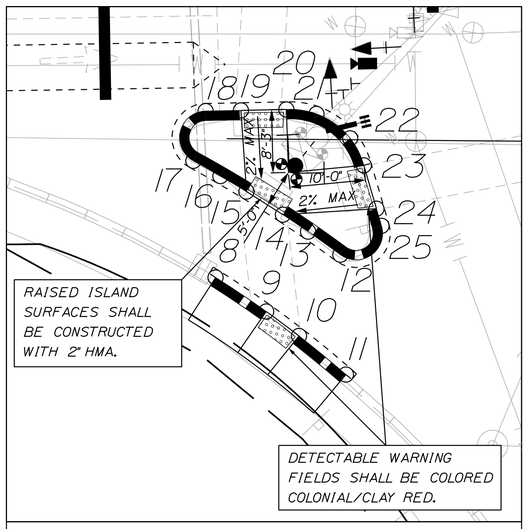
D CORNER - NW DETAIL



RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).
WIDEN EXISTING LANDING TO PROVIDE 2' WIDTH BETWEEN EDGE OF LANDING AND PEDESTRIAN BUTTONS.

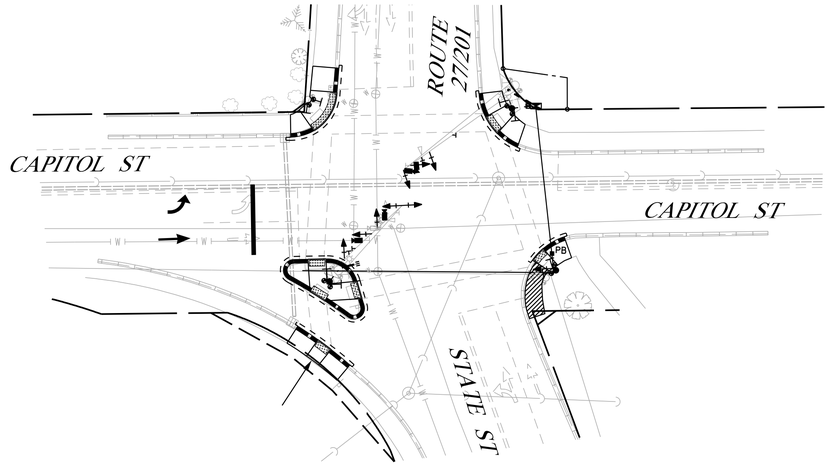
10 0 10 20
Scale of Feet

C CORNER - SW DETAIL



RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20)
RECONSTRUCT RAISED ISLAND AND PROVIDE 2% GRADE BETWEEN LANDINGS. CONSTRUCT DETECTABLE WARNING AREAS IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 608(02).

10 0 10 20
Scale of Feet

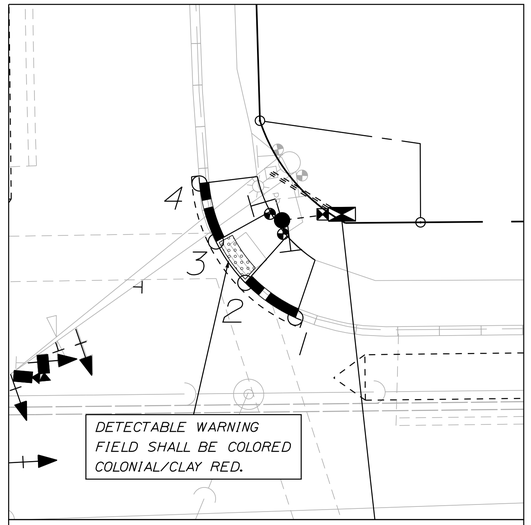


PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

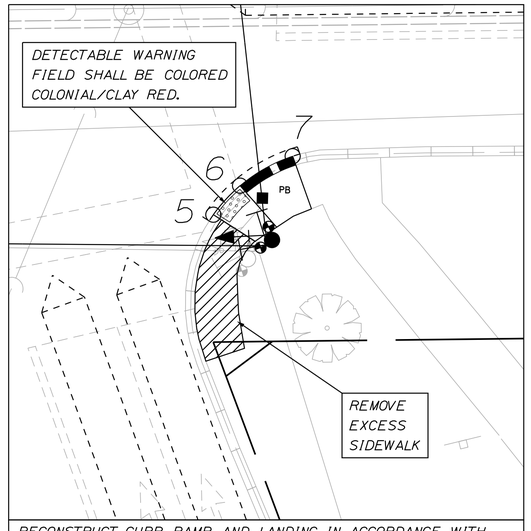
A CORNER - NE DETAIL



RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).

10 0 10 20
Scale of Feet

B CORNER - SE DETAIL



RECONSTRUCT CURB RAMP AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).

10 0 10 20
Scale of Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER		
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

AUGUSTA
ROUTE 27/201 (STATE ST) AND CAPITOL ST

CURB RAMP LAYOUT AND DETAIL PLAN

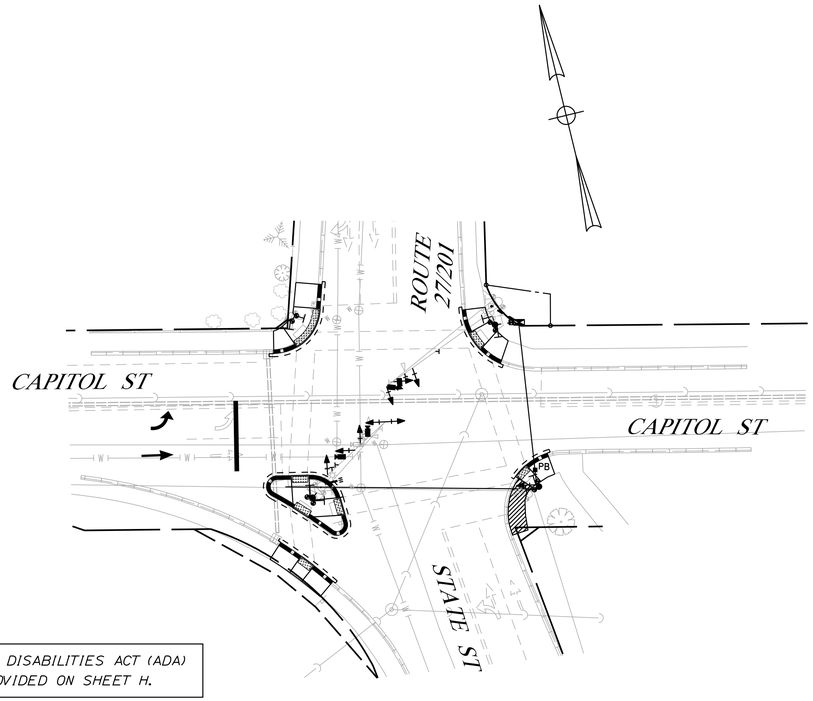
SHEET NUMBER

19C

OF 358

PT. TO PT.	RADIUS (FT)	ITEM 608.26 - CURB RAMP DETECTABLE WARNING FIELD		ITEM 609.221 - TERMINAL CURB TYPE 1 (LF)	ITEM 609.222 - TERMINAL CURB TYPE 1 - CIRCULAR (LF)	ITEM 609.34 - CURB TYPE 5 (LF)	ITEM 609.35 - CURB TYPE 5 - CIRCULAR (LF)	COMMENT
		LENGTH (FT)	QTY (SF)					
1 TO 2	21.5				8.0			
* 2 TO 3	21.5	6.7	11.2					2.4% CROSS SLOPE
3 TO 4	21.5				8.0			
* 5 TO 6	21.0	5.2	8.4					7.1% CROSS SLOPE
6 TO 7	21.0				8.0			
8 TO 9	138.0			8.0				
9 TO 10	138.0	5.4	9.3					
10 TO 11	138.0			8.0				
12 TO 13	172.6					5.2		
13 TO 14	172.6					4.0		
14 TO 15	-	5.7	11.4					
15 TO 16	172.5					4.0		
16 TO 17	172.5					4.1		
17 TO 18	3.5						9.2	
18 TO 19	-					4.7		
19 TO 20	-	6.0	10.3					
20 TO 21	10.0					4.0		
21 TO 22	10.0						5.6	
22 TO 23	10.0					4.0		
23 TO 24	-	6.0	10.3					
24 TO 25	-					2.4		
25 TO 12	3.5						8.7	
26 TO 27	-			8.0				
27 TO 28	-	1.2	27.7					
28 TO 29	15.5	14.2						
29 TO 30	17.0				8.0			

* NON-COMPLIANT CURB RAMP ELEMENT - THE EXISTING GUTTER LINE PROFILE IS GREATER THAN 2%. THEREFORE THE LEVEL LANDING CROSS SLOPE AND/OR RUNNING SLOPE WILL BE GREATER THAN THE 2% AND 8.33% MAXIMUM ALLOWABLE. RESPECTIVELY. THE COMMENT IS THE MAXIMUM VALUE FOR PROPOSED LEVEL OF COMPLIANCE.



ALL CURB RAMPS SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND MAINEDOT STANDARD DETAILS 801(11) to 801(26) AS NOTED. AS WELL AS DETAILS PROVIDED ON SHEET H.

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
COMMON EXCAVATION (ITEM 203.20)	20.6 CY
HOT MIX ASPHALT, 9.5 MM NOMINAL MAXIMUM SIZE (ITEM 403.210)	10.3 TONS
PLAIN CONCRETE SIDEWALK (ITEM 608.07)	40.6 SY
BRICK SIDEWALK WITH BITUMINOUS BASE (ITEM 608.15)	23.8 SY
CURB RAMP DETECTABLE WARNING FIELD (ITEM 608.26)	88.6 SF

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
REGRADING SIDEWALK (ITEM 608.46)	79.2 SY
TERMINAL CURB TYPE 1 (ITEM 609.221)	24.0 LF
TERMINAL CURB TYPE 1 - CIRCULAR (ITEM 609.222)	32.0 LF
CURB TYPE 5 (ITEM 609.34)	32.4 LF
CURB TYPE 5 - CIRCULAR (ITEM 609.35)	23.5 LF

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	DATE
PROJ. MANAGER		
DESIGN-DETAILED	MLG	JAR 07/20
CHECKED-REVIEWED	CMB	CMB 07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 27/201 (STATE ST)
AND CAPITOL ST

CURB RAMP LAYOUT
AND DETAIL PLAN

SHEET NUMBER

19D

OF 358

Filename: 019_Signal_19d.dgn Date:11/24/2020
Division: HIGHWAY Username: jorobert

Filename: ...\ROW\MSTA\019_RWPLAN4.dgn Division: ROW Username: Benjamin.Singer Date:11/19/2020

PLAN LEGEND

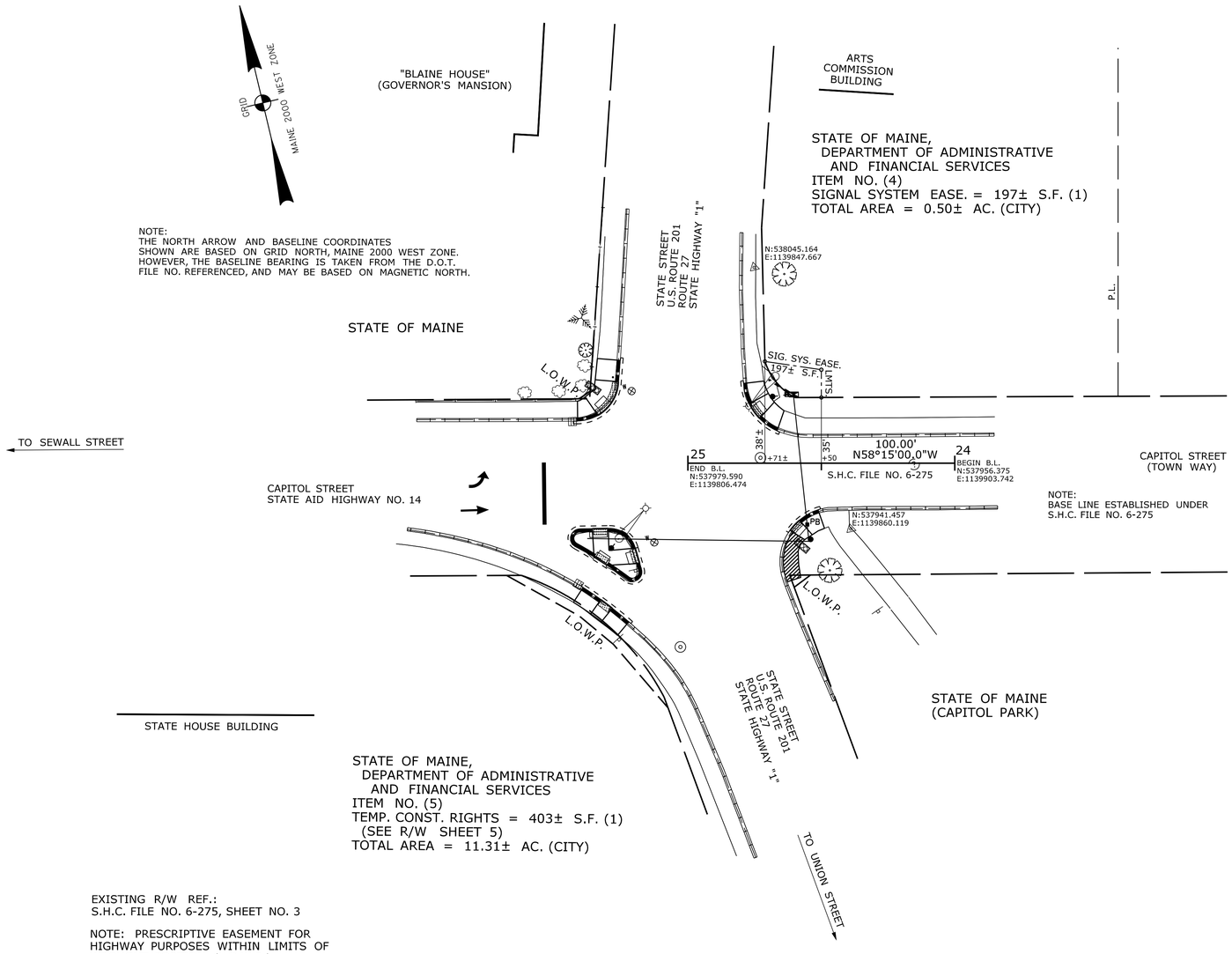
Town, County, State	New R/W Along Existing R/W	Sanitary Sewer	Existing / Proposed	Traveled Way	Existing / Proposed	Cut Line C C C	Fill Line F F F
Approx. Property Lines P.L.	Building / Clearing Limit Line	Telephone Line		Ditch		Stonewall	Retaining Wall
Existing Right of Way	Trees Conifer / Deciduous	Electric Line		Catch Basin		Baseline 10+00 11+00 12+00	
Limits of Wrought Portion L.O.W.P.	Tree Line / Bush Line	Water Line		Manhole		Monument	Traverse Point
Control Of Access C.O.A.	Water Edge	Underdrain Line		Sewer Manhole		Iron Rod Found ● IRF	Pipe Found ● IPF
New Right of Way	Ledge / Rock/Boulder / Flag Pole	Gas Line		Utility Pole		Replacement Pin Set	
New Easement	Fence CHAIN LINK / BARB WIRE / STOCKADE	Guardrail		Fire Hydrant			
New Temporary Rights	Sign / Well / Mailbox	Culvert		Curbing			
New R/W Within Existing R/W							

THIS PLAN WAS PREPARED IN CONNECTION WITH THE DEPARTMENT'S ACQUISITION OF REAL PROPERTY FOR TRANSPORTATION PURPOSES. IT CANNOT BE USED TO ESTABLISH LEGAL BOUNDARIES BETWEEN ABUTTING PROPERTY OWNERS.

25 0 25 50 75 100
Scale of Feet

STATE OF MAINE REGISTRY OF DEEDS

COUNTY _____
RECEIVED _____, _____
at _____h _____m _____M and
recorded in Plan Bk _____, Pg. _____
Attest: _____
REGISTER



EXISTING R/W REF.:
S.H.C. FILE NO. 6-275, SHEET NO. 3

NOTE: PRESCRIPTIVE EASEMENT FOR HIGHWAY PURPOSES WITHIN LIMITS OF WROUGHT PORTION (L.O.W.P.)

ITEM	TECH	CHECKED
EXISTING CONDITION PLAN	B.S.	G.L.L.
FINAL RIGHT OF WAY	B.S.	G.L.L.
AREAS	B.S.	G.L.L.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION - AUGUSTA, ME 04333-0016 - 207-624-3460
AUGUSTA
RIGHT OF WAY MAP

INTERSECTION NO. 19 WIN 024301.00

REVISIONS

NO.	DATE	DESCRIPTION	BY

PLAN FILED IN PLAN BOOK PAGE COUNTY RECORD

NO.	GRANTOR	INSTRUMENT	DATE	BOOK	PAGE

BRUCE A. VAN NOTE
COMMISSIONER
JOYCE NOEL TAYLOR
CHIEF ENGINEER
DATE

STATE HWY. "1" & STATE AID HWY. NO. 14
STATE STREET & CAPITOL STREET
AUGUSTA KENNEBEC COUNTY
FEDERAL AID PROJECT NO. 2430100

NOVEMBER 2020 | RIGHT-OF-WAY MAP | D.O.T. FILE NO. 6-487
SCALE 1" = 25' | SHEET 4 OF 12

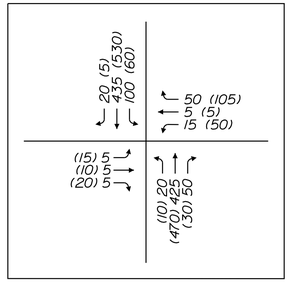
SHEET NUMBER
19R
OF 358

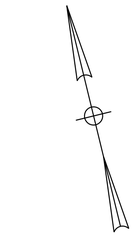
LIST OF WORK ITEMS

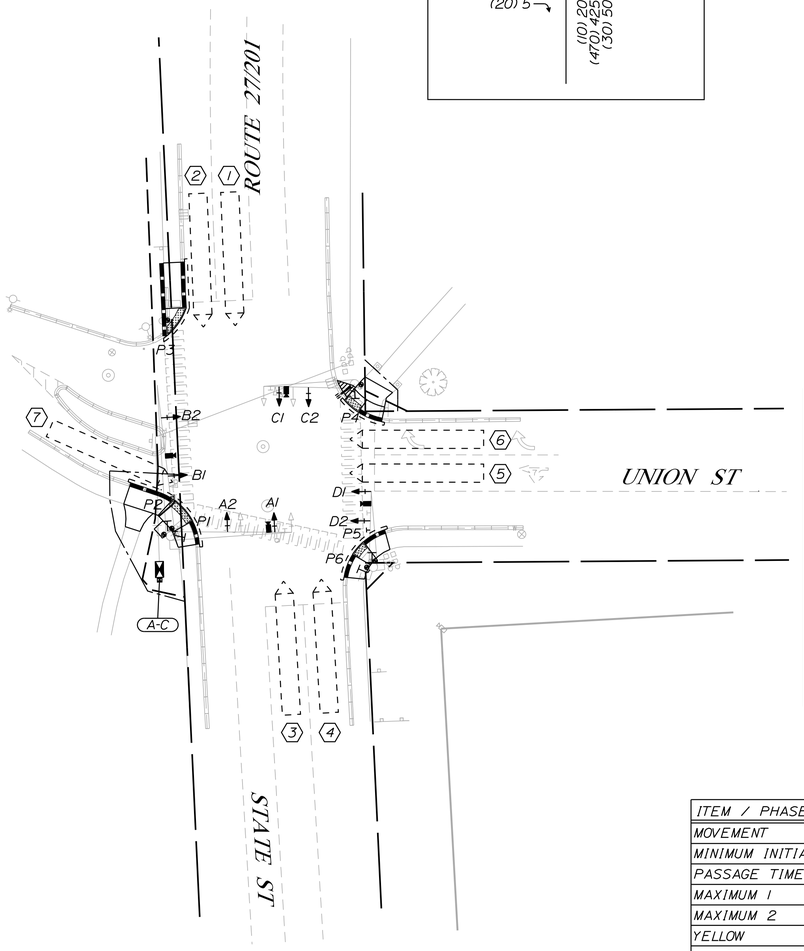
EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	8
FURNISH AND INSTALL 16-INCH L.E.D. COUNTDOWN PEDESTRIAN LENS IN EXISTING HOUSING	6
FURNISH AND INSTALL ADA COMPLIANT ACCESSIBLE PEDESTRIAN SIGNAL (APS) BUTTON WITH 9"X15" R10-3e INFORMATIONAL SIGN	6
FURNISH AND INSTALL 19-INCH 1RU FIBER OPTIC 12-POSITION PATCH PANEL WITH PIGTAILS	1
RESET FIBER OPTIC ETHERNET SWITCH WITH FIBER OPTIC INTERFACES	1
FURNISH AND INSTALL MAST ARM MOUNTED SIGNS	4
RESET PREEMPTION PHASE SELECTOR	1
REMOVE MAST ARM MOUNTED SIGNS	2
RESET EXISTING 12-F FIBER IN PROPOSED CABINET	-
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 4 APPROACHES, COMPLETE (ITEM 643.21)	1 LS

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

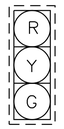
SYSTEM DESIGN VOLUMES AM (PM)







PROPOSED INDICATIONS



A1, A2, B1, B2
C1, C2, D1, D2

EXISTING INDICATIONS TO REMAIN



P1-P6

NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES

EXISTING COUNTDOWN PEDESTRIAN SIGNAL HEADS SHALL HAVE NEW L.E.D. LENSES INSTALLED

DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	φ CALLED	φ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
1	STATE ST SB LEFT-THRU	6	6	B	-	-
2	STATE ST SB THRU-RIGHT	6	6	B	-	-
3	STATE ST NB LEFT-THRU	2	2	B	-	-
4	STATE ST NB THRU-RIGHT	2	2	B	-	-
5	UNION ST WB LEFT-THRU	8	8	B	-	-
6	UNION ST WB RIGHT	8	8	B	5	-
7	DRIVEWAY EB MOVEMENTS	4	4	B	-	-

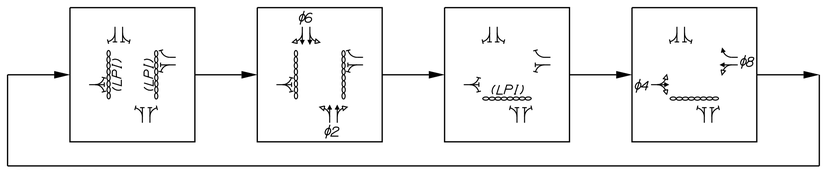
STRUCTURE LIST

STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	EXISTING

PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM

2 | 4
6 | 8



PHASING NOTES:
1. EACH PEDESTRIAN PHASE SHALL HAVE A MINIMUM OF A 4 SECOND LEADING PEDESTRIAN INTERVAL (LPI).
2. PEDESTRIAN PHASE UPON PUSH BUTTON ACTIVATION ONLY.

SIGNAL TIMING SCHEDULE

ITEM / PHASE	φ1	φ2	φ3	φ4	φ5	φ6	φ7	φ8
MOVEMENT	-	C	-	D	-	A	-	B
MINIMUM INITIAL	-	10	-	5	-	10	-	5
PASSAGE TIME	-	3.5	-	3.0	-	3.5	-	3.0
MAXIMUM 1	-	30	-	20	-	30	-	20
MAXIMUM 2	-	75	-	25	-	75	-	25
YELLOW	-	3.5	-	3.5	-	3.5	-	3.5
ALL RED	-	2.5	-	2.5	-	2.5	-	2.5
PED WALK	-	7	-	5	-	5	-	-
PED CLEAR	-	13	-	15	-	15	-	-
DYN MAX LIMIT	-	-	-	-	-	-	-	-
DYN MAX STEP	-	-	-	-	-	-	-	-
RECALL	-	SOFT	-	OFF	-	SOFT	-	OFF
DETECTOR	-	PR	-	PR	-	PR	-	PR
PRE-EMPT PRIORITY	-	4	-	-	-	3	-	5
FLASH	-	Y	-	R	-	Y	-	R
DUAL ENTRY	-	ON	-	ON	-	ON	-	ON

NOTES: S = SOFT RECALLY = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK
MAX 2 UNDER COORDINATION
IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	BY	DATE
PROJ. MANAGER	B. KEEZER	
DESIGN-DETAILED	MLG	JAR 07/20
CHECKED-REVIEWED	CMB	CMB 07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 27/201 (STATE ST)
AND UNION ST

TRAFFIC SIGNAL PLAN

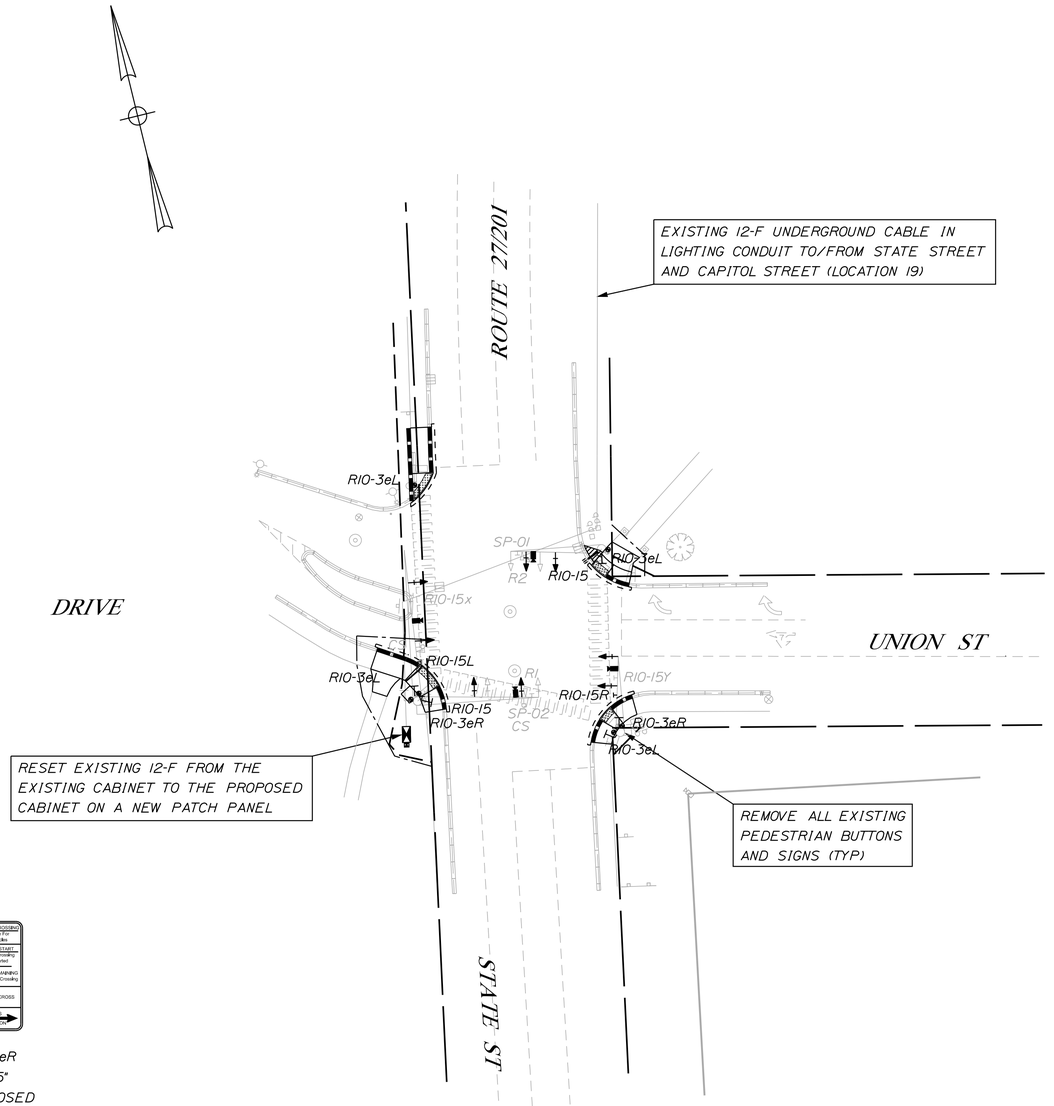
SHEET NUMBER
20
OF 358

Filename: 020_Signal_20.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.



EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USE/RESERVED	
	2	NOT USE/RESERVED	
R1	3	1	ϕ6
R2	4	2	ϕ2
R3	5	3	ϕ8
	6	NOT USED	

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.
2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 3 = LOWEST)
3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR AND/OR RSU, 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 (3.5 SECONDS YELLOW AND 2.5 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.
4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.

PROPOSED SIGNS



R10-15	R10-15L	R10-15R	R10-3eL	R10-3eR
30"x30"	30"x30"	30"x30"	9"x15"	9"x15"
2-PROPOSED	1-PROPOSED	1-PROPOSED	4-PROPOSED	2-PROPOSED

EXISTING SIGNS



SP-01	SP-02	R10-15x	R10-15Y
1-RETAINED	1-RETAINED	1-REMOVE	1-REMOVE

PLAN

25 0 25 50

Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	BY	DATE
PROJ. MANAGER	B. KEEZER	
DESIGN-DETAILED	MLG	JAR 07/20
CHECKED-REVIEWED	CMB	CMB 07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 27/201 (STATE ST)
AND UNION ST

TRAFFIC SIGNAL PLAN

SHEET NUMBER

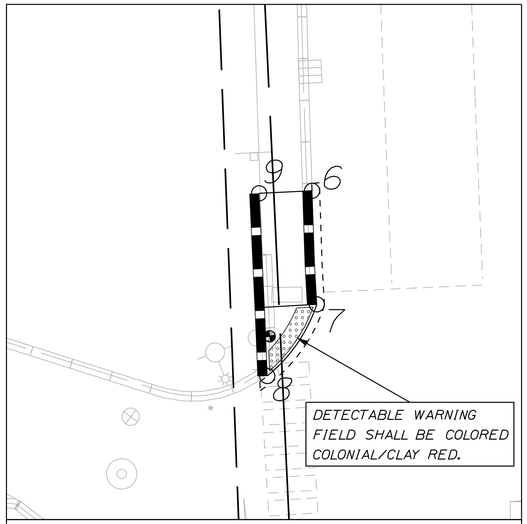
20A

OF 358

Filename: 020_Signal_20a.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

Filename: 020_Signal_20c.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

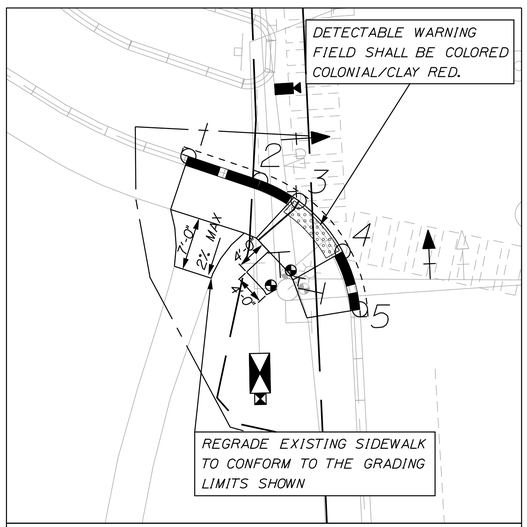
B CORNER - NW DETAIL



RECONSTRUCT CURB RAMP AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(22).
INSTALL BACK CURB ALONG THE CURB RAMP AND LANDING.
TRANSITION LENGTH REQUIRED FOR THE CURB RAMP SHALL BE 15.0'. SEE MAINEDOT STANDARD DETAIL 801(13).

10 0 10 20
Scale of Feet

A CORNER - SW DETAIL

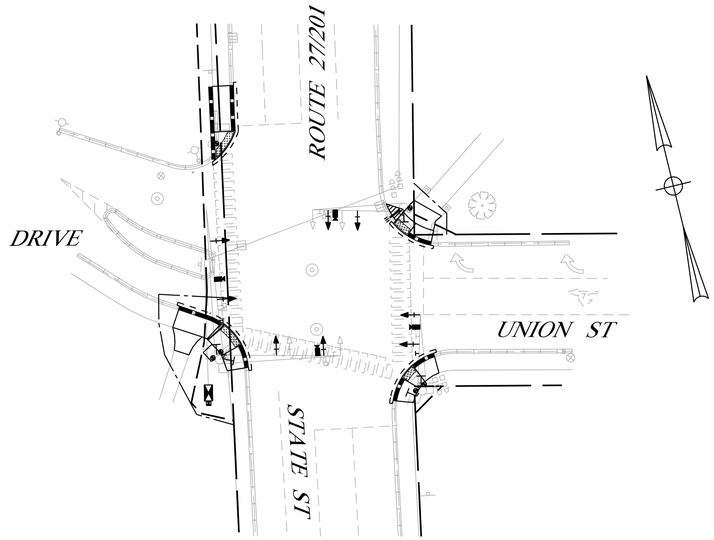


RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).
TRANSITION LENGTH REQUIRED FOR THE WESTERN CURB RAMP SHALL BE 15.0'. SEE MAINEDOT STANDARD DETAIL 801(13).
EXTEND LANDING TO CONSTRUCT AN ADDITIONAL 4' X 4' SPACE TO ACCESS THE PEDESTRIAN BUTTONS. SEE DETAIL ON SHEET H.

10 0 10 20
Scale of Feet

PT. TO PT.	RADIUS (FT)	ITEM 608.26 - CURB RAMP DETECTABLE WARNING FIELD		ITEM 609.11 - VERTICAL CURB TYPE I (LF)	ITEM 609.221 - TERMINAL CURB TYPE I (LF)	ITEM 609.222 - TERMINAL CURB TYPE I - CIRCULAR (LF)	COMMENT
		LENGTH (FT)	QTY (SF)				
* 1 TO 2	-				10.0		12.6% RUNNING SLOPE
2 TO 3	20.0					5.0	
* 3 TO 4	20.0	9.7	17.3				3.7% CROSS SLOPE
4 TO 5	20.0					8.0	
6 TO 7	-				15.0		
7 TO 8	20.5	11.7	17.1				
8 TO 9	-			24.2			
10 TO 11	21.7					8.3	
* 11 TO 12	21.7	6.1	10.6				7.7% CROSS SLOPE
13 TO 14	19.5					8.0	
* 14 TO 15	19.5	5.6	8.7				2.9% CROSS SLOPE
15 TO 16	19.5					8.0	

* NON-COMPLIANT CURB RAMP ELEMENT - THE EXISTING GUTTER LINE PROFILE IS GREATER THAN 2%. THEREFORE THE LEVEL LANDING CROSS SLOPE AND/OR RUNNING SLOPE WILL BE GREATER THAN THE 2% AND 8.33% MAXIMUM ALLOWABLE, RESPECTIVELY. THE COMMENT IS THE MAXIMUM VALUE FOR PROPOSED LEVEL OF COMPLIANCE.



ALL CURB RAMPS SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND MAINEDOT STANDARD DETAILS 801(11) to 801(26) AS NOTED. AS WELL AS DETAILS PROVIDED ON SHEET H.

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
COMMON EXCAVATION (ITEM 203.20)	3.3 CY
HOT MIX ASPHALT, 9.5 MM NOMINAL MAXIMUM SIZE (ITEM 403.210)	3.9 TONS
PLAIN CONCRETE SIDEWALK (ITEM 608.07)	67.5 SY
BRICK SIDEWALK WITH BITUMINOUS BASE (ITEM 608.15)	7.1 SY
CURB RAMP DETECTABLE WARNING FIELD (ITEM 608.26)	53.7 SF

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
CONSTRUCT SIDEWALK (ITEM 608.45)	2.5 SY
REGRADING SIDEWALK (ITEM 608.46)	72.1 SY
VERTICAL CURB TYPE I (ITEM 609.11)	24.2 LF
TERMINAL CURB TYPE I (ITEM 609.221)	25.0 LF
TERMINAL CURB TYPE I - CIRCULAR (ITEM 609.222)	37.3 LF

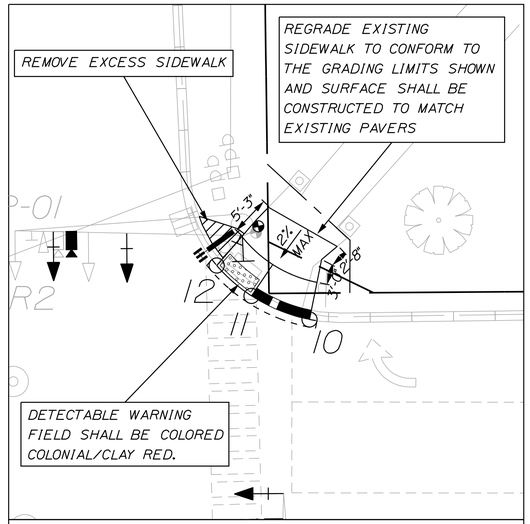
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PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

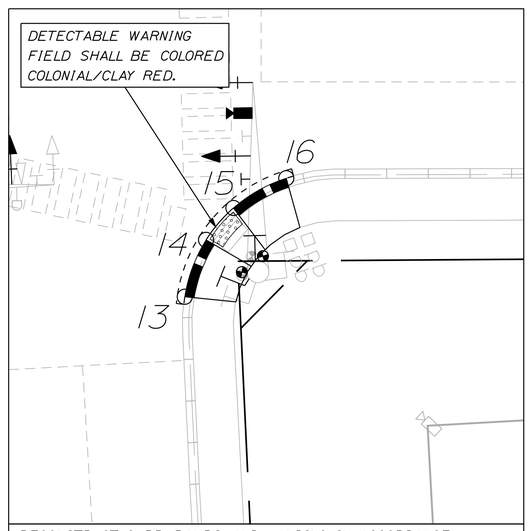
C CORNER - NE DETAIL



RECONSTRUCT CURB RAMP AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).

10 0 10 20
Scale of Feet

D CORNER - SE DETAIL



RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).

10 0 10 20
Scale of Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	DATE
PROJ. MANAGER		
DESIGN-DETAILED	M.C	07/20
CHECKED-REVIEWED	CMB	07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 27/201 (STATE ST) AND UNION ST

CURB RAMP LAYOUT AND DETAIL PLAN

SHEET NUMBER

20C

OF 358

PLAN LEGEND

Town, County, State	New R/W Along Existing R/W		Existing	Proposed		Existing	Proposed
Approx. Property Lines P.L.	Building	Clearing Limit Line	Sanitary Sewer		Traveled Way		
Existing Right of Way	Trees Conifer	Deciduous	Telephone Line		Ditch		
Limits of Wrought Portion L.O.W.P.	Tree Line	Bush Line	Electric Line		Catch Basin		
Control Of Access C.O.A.	Water Edge		Water Line		Manhole		
New Right of Way	Ledge	Rock/Boulder Flag Pole	Underdrain Line		Sewer Manhole		
New Easement	Fence CHAIN LINK	BARB WIRE STOCKADE	Gas Line		Utility Pole		
New Temporary Rights	Sign	Well WELL Mailbox	Guardrail		Fire Hydrant		
New R/W Within Existing R/W			Culvert		Curbing		

Cut Line C C C	Fill Line F F F
Stonewall	Retaining Wall
Baseline 10+00 11+00 12+00	
Monument	Traverse Point
Iron Rod Found IRF	Pipe Found IPF
Replacement Pin Set	

THIS PLAN WAS PREPARED IN CONNECTION WITH THE DEPARTMENT'S ACQUISITION OF REAL PROPERTY FOR TRANSPORTATION PURPOSES. IT CANNOT BE USED TO ESTABLISH LEGAL BOUNDARIES BETWEEN ABUTTING PROPERTY OWNERS.

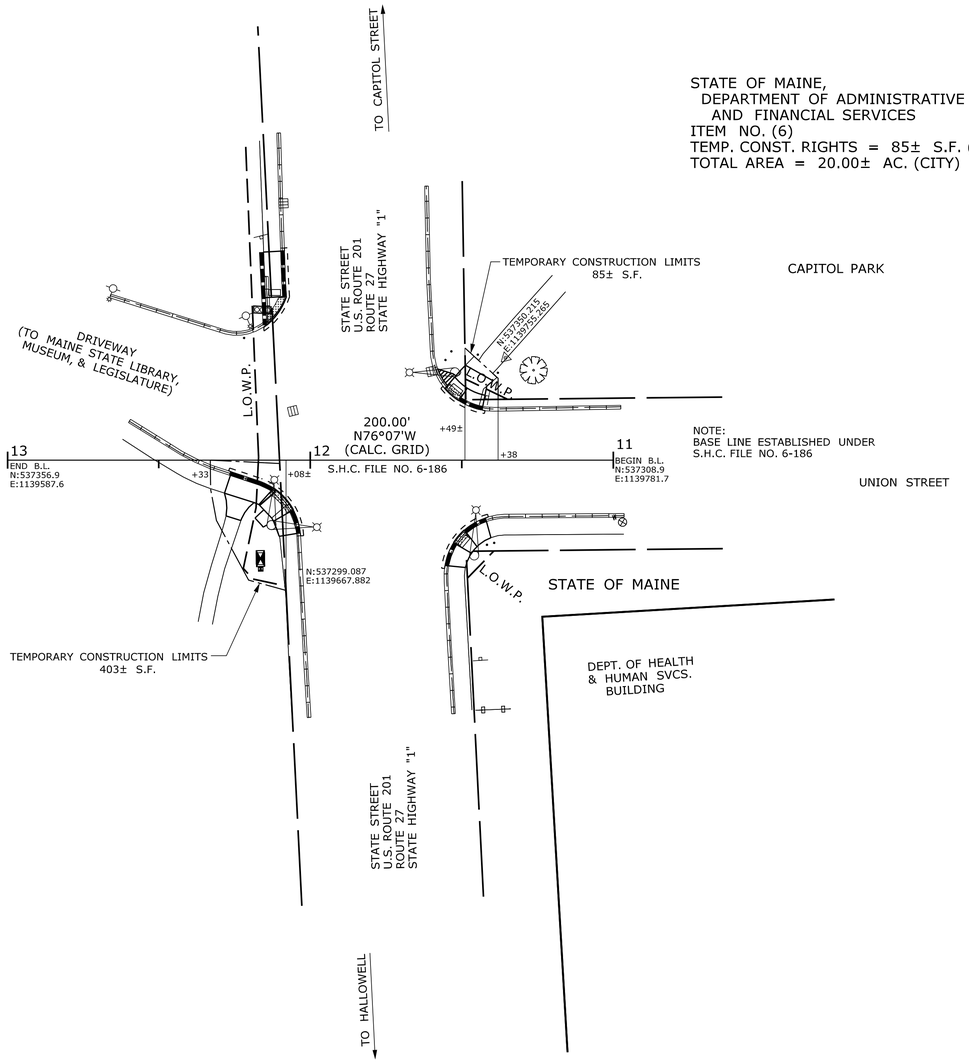
25 0 25 50 75 100
Scale of Feet

STATE OF MAINE
REGISTRY OF DEEDS

COUNTY _____
RECEIVED _____, _____
at _____h_____m_____M and
recorded in Plan Bk _____, Pg._____
Attest: _____
REGISTER

GRID
MAINE 2000 WEST ZONE

NOTE:
THE NORTH ARROW AND BASELINE COORDINATES SHOWN ARE BASED ON GRID NORTH, MAINE 2000 WEST ZONE. HOWEVER, THE BASELINE BEARING IS TAKEN FROM THE D.O.T. FILE NO. REFERENCED, AND MAY BE BASED ON MAGNETIC NORTH.



STATE OF MAINE,
DEPARTMENT OF ADMINISTRATIVE
AND FINANCIAL SERVICES
ITEM NO. (6)
TEMP. CONST. RIGHTS = 85± S.F. (1)
TOTAL AREA = 20.00± AC. (CITY)

STATE OF MAINE,
DEPARTMENT OF ADMINISTRATIVE
AND FINANCIAL SERVICES
ITEM NO. (5)
TEMP. CONST. RIGHTS = 403± S.F. (1)
TOTAL AREA = 11.31± AC. (CITY)

EXISTING R/W REF.:
S.H.C. FILE NO. 6-186, SHEET NO. 1

NOTE: PRESCRIPTIVE RIGHTS FOR HIGHWAY PURPOSES WITHIN LIMITS OF WROUGHT PORTION (L.O.W.P.)

ITEM	CHECKED	TECH
EXISTING CONDITION PLAN	G.L.L.	B.S.
FINAL RIGHT OF WAY	G.L.L.	B.S.
AREAS	G.L.L.	B.S.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION - AUGUSTA, ME 04333-0016 - 207-624-3460
AUGUSTA
RIGHT OF WAY MAP

INTERSECTION NO. 20 WIN 024301.00

REVISIONS			
NO.	DATE	DESCRIPTION	BY

PLAN FILED IN PLAN BOOK PAGE COUNTY RECORD					
NO.	GRANTOR	INSTRUMENT	DATE	BOOK	PAGE

BRUCE A. VAN NOTE
COMMISSIONER
JOYCE NOEL TAYLOR
CHIEF ENGINEER
DATE

STATE HIGHWAY "1"
STATE STREET / U.S. ROUTE 201 / ROUTE 27
AUGUSTA KENNEBEC COUNTY
FEDERAL AID PROJECT NO. 2430100

NOVEMBER 2020	RIGHT-OF-WAY MAP	D.O.T. FILE NO. 6-487
SCALE 1" = 25'	SHEET 5 OF 12	

SHEET NUMBER
20R
OF 358

Username: Benjamin.Singer Date:11/19/2020
Division: ROW
Filename: ...\ROW\MSTA\020_RWPLAN5.dgn

Filename: 021_Signal_21.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

LIST OF WORK ITEMS

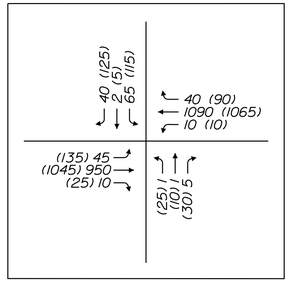
EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
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FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARM UPRIGHTS WITH BRACKET	1
FURNISH AND INSTALL 16-INCH L.E.D. COUNTDOWN PEDESTRIAN LENS IN EXISTING HOUSING	6
FURNISH AND INSTALL ADA COMPLIANT ACCESSIBLE PEDESTRIAN SIGNAL (APS) BUTTON WITH 9"X15" R10-3e INFORMATIONAL SIGN	6
FURNISH AND INSTALL 19-INCH 1RU FIBER OPTIC 12-POSITION PATCH PANEL WITH PIGTAILS	1
RESET FIBER OPTIC ETHERNET SWITCH WITH FIBER OPTIC INTERFACES	1
FURNISH AND INSTALL MAST ARM MOUNTED SIGNS	4
REMOVE MAST ARM MOUNTED SIGNS	4
RESET COUNTDOWN PEDESTRIAN SIGNAL HEADS	1
RESET PREEMPTION PHASE SELECTOR	1
RESET EXISTING 12-F FIBER IN PROPOSED CABINET	-
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 4 APPROACHES, COMPLETE (ITEM 643.21)	1 LS

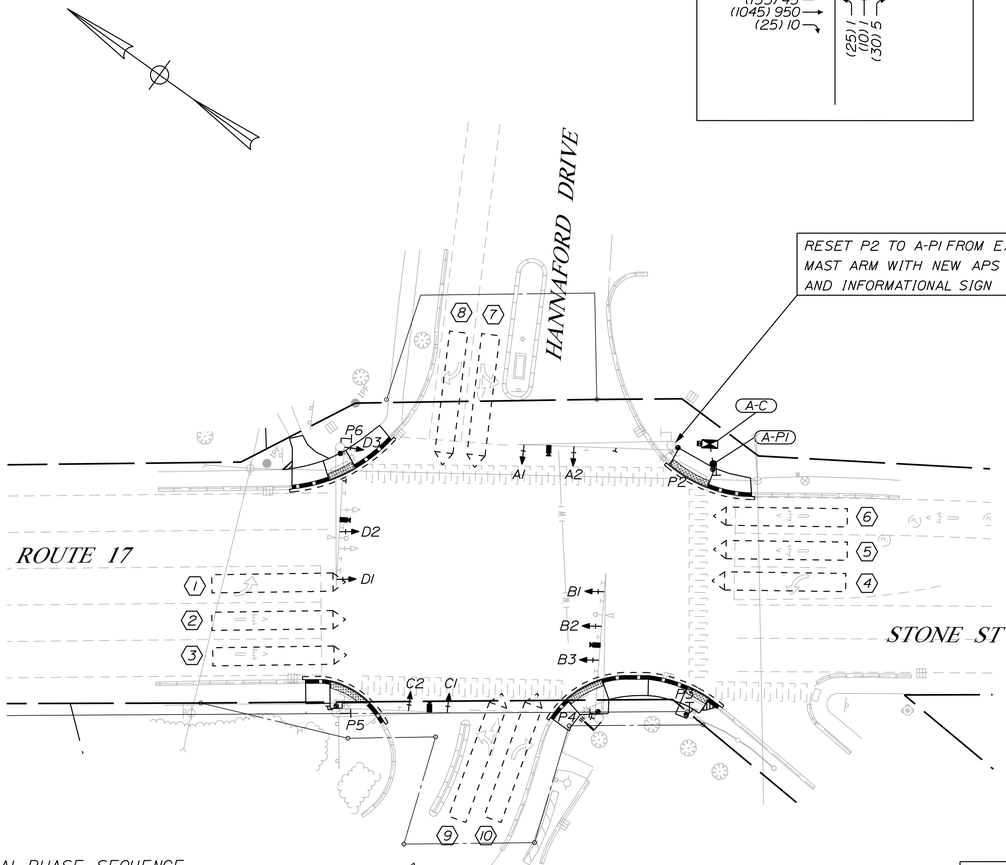
THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

STRUCTURE LIST

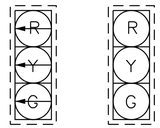
STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	EXISTING
A-P1	8' PEDESTAL POLE	24" DIAMETER

SYSTEM DESIGN VOLUMES AM (PM)





PROPOSED INDICATIONS



B1.D1

A1.A2.B2.B3
C1.C2.D2.D3

EXISTING INDICATIONS
TO REMAIN OR RELOCATE



P1-P6

NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES

EXISTING COUNTDOWN PEDESTRIAN SIGNAL HEADS SHALL HAVE NEW L.E.D. LENSES INSTALLED

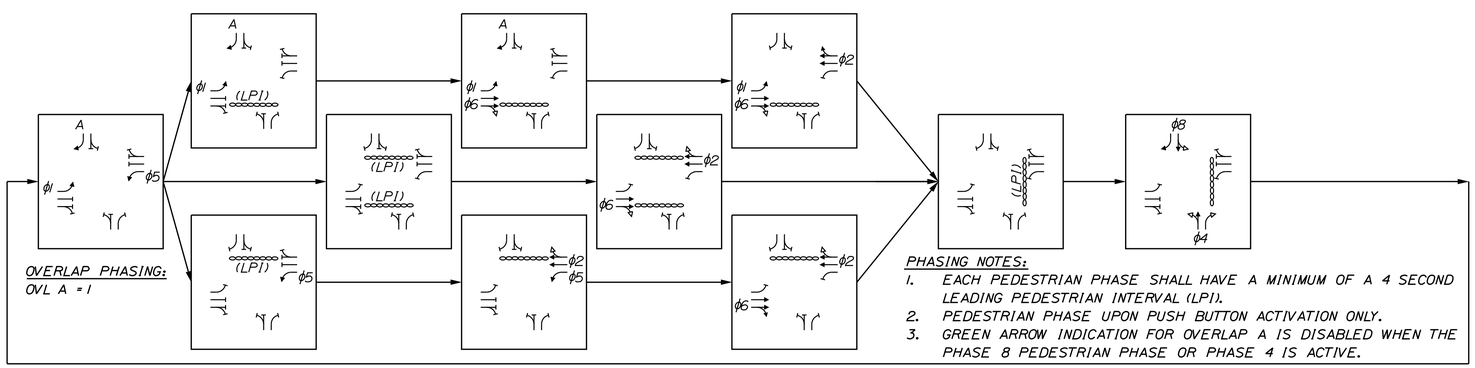
DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	φ CALLED	φ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
1	STONE ST EB LEFT	1	1	B	-	-
2	STONE ST EB THROUGH	6	6	B	-	-
3	STONE ST EB THRU-RIGHT	6	6	B	-	-
4	STONE ST WB LEFT	5	5	B	-	-
5	STONE ST WB THROUGH	2	2	B	-	-
6	STONE ST WB THRU-RIGHT	2	2	B	-	-
7	HANNAFORD DR SB LEFT-THRU	8	8	B	-	-
8	HANNAFORD DR SB RIGHT	8	8	B	5	-
9	DRIVEWAY NB LEFT-THRU	4	4	B	-	-
10	DRIVEWAY NB RIGHT	4	4	B	5	-

PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM

1 2 | 4
5 6 | 8



OVERLAP PHASING:
OVL A = 1

PHASING NOTES:
1. EACH PEDESTRIAN PHASE SHALL HAVE A MINIMUM OF A 4 SECOND LEADING PEDESTRIAN INTERVAL (LPI).
2. PEDESTRIAN PHASE UPON PUSH BUTTON ACTIVATION ONLY.
3. GREEN ARROW INDICATION FOR OVERLAP A IS DISABLED WHEN THE PHASE 8 PEDESTRIAN PHASE OR PHASE 4 IS ACTIVE.

SIGNAL TIMING SCHEDULE

ITEM / PHASE	φ 1	φ 2	φ 3	φ 4	φ 5	φ 6	φ 7	φ 8
MOVEMENT	B (LT)	D	-	A	D (LT)	B	-	C
MINIMUM INITIAL	5	10	-	5	5	10	-	5
PASSAGE TIME	2.5	3.0	-	3.0	2.5	3.0	-	3.0
MAXIMUM 1	20	35	-	17	8	48	-	17
MAXIMUM 2	20	35	-	17	8	48	-	17
YELLOW	3.0	4.0	-	4.0	3.0	4.0	-	4.0
ALL RED	3.0	2.0	-	2.0	3.0	2.0	-	2.0
PED WALK	-	5	-	5	-	5	-	-
PED CLEAR	-	28	-	18	-	18	-	-
DYN MAX LIMIT	-	-	-	-	-	-	-	-
DYN MAX STEP	-	-	-	-	-	-	-	-
RECALL	OFF	SOFT	-	OFF	OFF	SOFT	-	OFF
DETECTOR	PR	PR	-	PR	PR	PR	-	PR
PRE-EMPT PRIORITY	3	4	-	-	4	3	-	-
FLASH	R	Y	-	R	R	Y	-	R
DUAL ENTRY	OFF	ON	-	ON	OFF	ON	-	ON

NOTES: S = SOFT RECALLY = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK
IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	BY	DATE
PROJ. MANAGER	B. KEEZER	
DESIGN-DETAILED	MLG	JAR 07/20
CHECKED-REVIEWED	CMB	CMB 07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 17 (STONE ST) AND HANNAFORD DRIVE

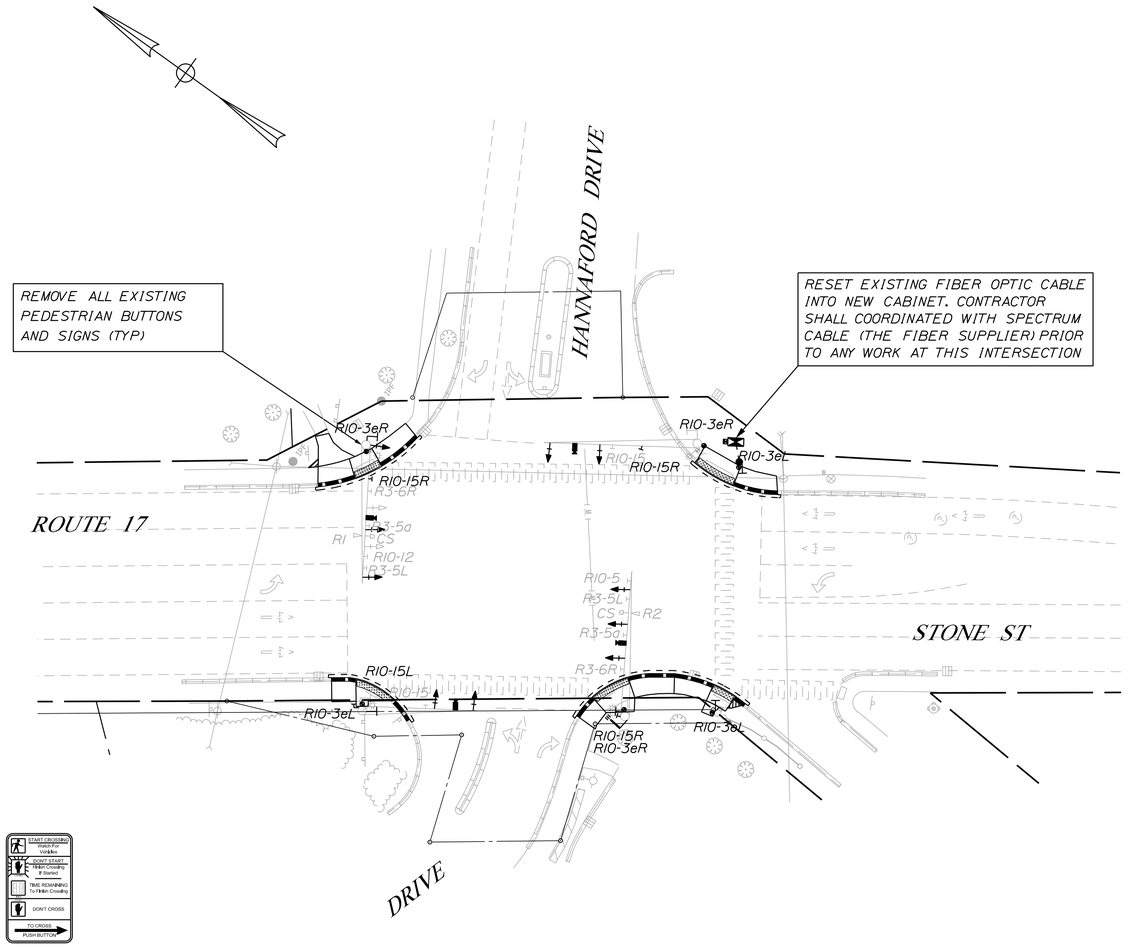
TRAFFIC SIGNAL PLAN

SHEET NUMBER
21
OF 358

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
FURNISH AND INSTALL (3-INCH) NON-METALLIC CONDUIT (ITEM 626.22)	10 LF
FURNISH AND INSTALL 24-INCH DIAMETER FOUNDATION (ITEM 626.421)	7 LF
FURNISH AND INSTALL 8-FOOT PEDESTAL POLE (ITEM 643.92)	1 EA
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.



PROPOSED SIGNS



R10-15L	R10-15R	R10-3eL	R10-3eR
30"x30"	30"x30"	9"x15"	9"x15"
1-PROPOSED	3-PROPOSED	3-PROPOSED	3-PROPOSED

EXISTING SIGNS



R3-5L	R3-5a	R3-6R	R10-5	R10-15	R10-12
2-RETAINED	2-RETAINED	2-RETAINED	1-REMOVED	2-REMOVED	1-REMOVED

EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USED/RESERVED	
	2	NOT USED/RESERVED	
R1	3	1	ϕ1&ϕ6
R2	4	2	ϕ2&ϕ5
	5	NOT USED	
	6	NOT USED	

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.
2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 2 = LOWEST)
3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR AND/OR RSU, 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 (4.0 SECONDS YELLOW AND 3.0 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.
4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.

PLAN

25 0 25 50

Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER		
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

AUGUSTA
ROUTE 17 (STONE ST) AND
HANNAFORD DRIVE

TRAFFIC SIGNAL PLAN

SHEET NUMBER

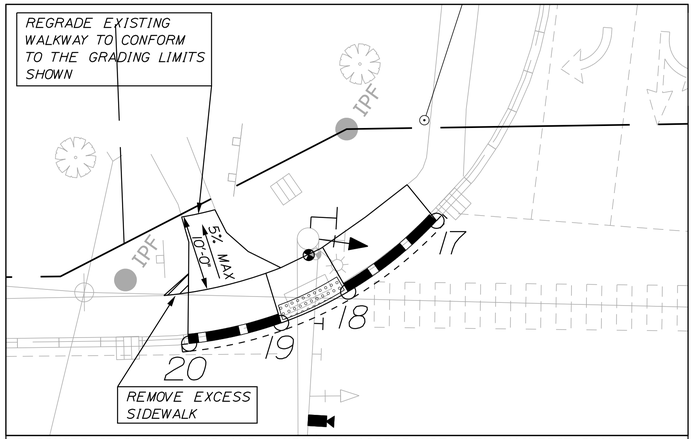
21A

OF 358

Filename: 021_Signal_21a.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

Filename: 021_Signal_21c.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

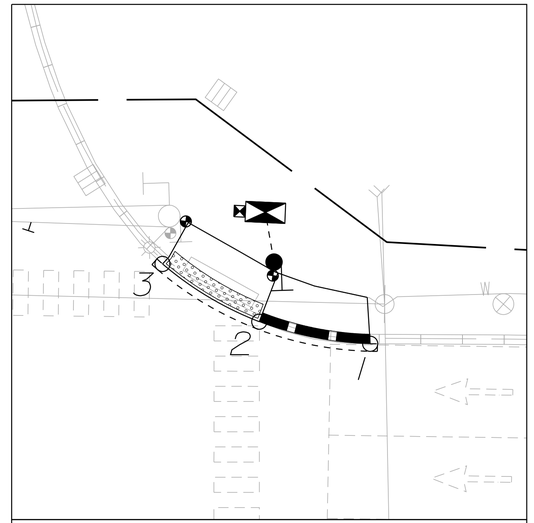
D CORNER - NE DETAIL



RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).
TRANSITION LENGTH REQUIRED FOR THE EASTERN CURB RAMP SHALL BE 15.0'.
SEE MAINEDOT STANDARD DETAIL 801(13).
WESTERN CURB RAMP WILL EXTEND TO THE LIMIT OF THE WALKWAY.

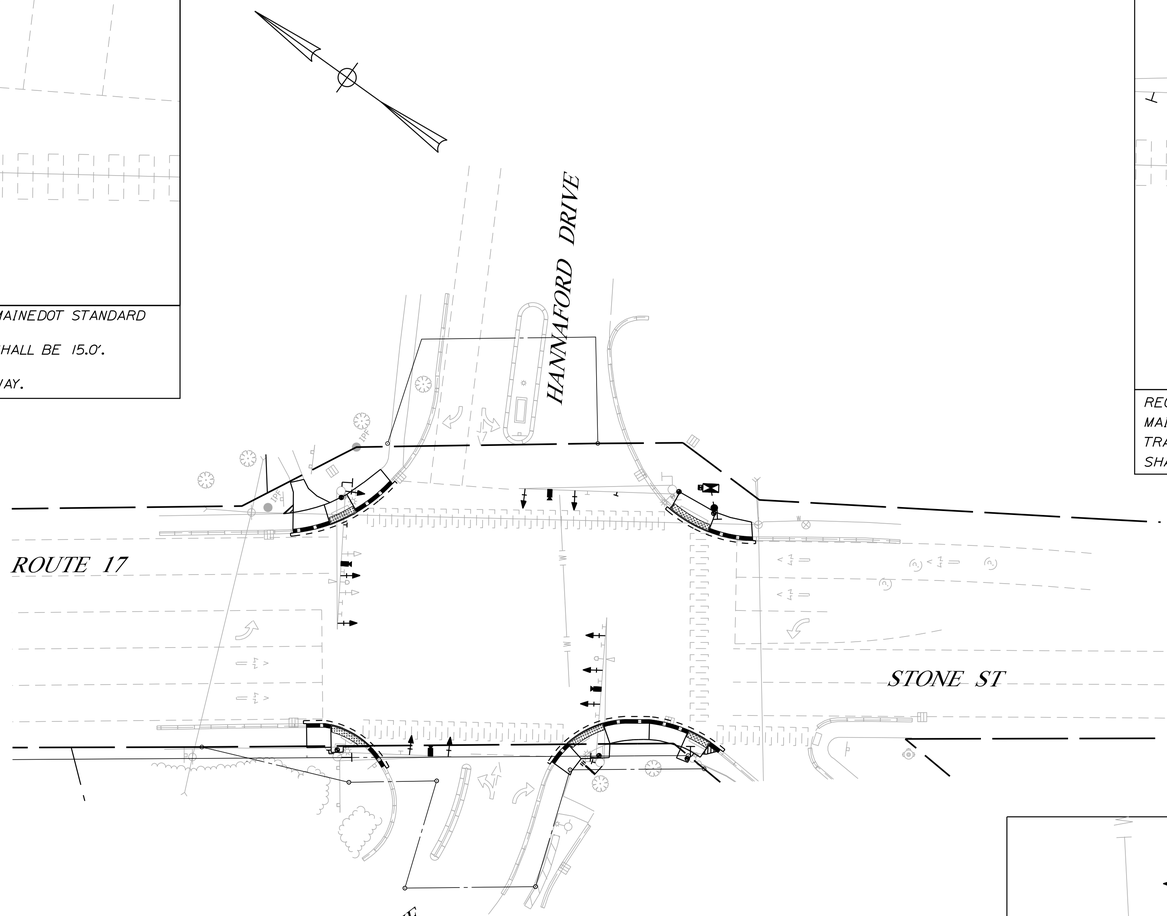
10 0 10 20
Scale of Feet

A CORNER - SE DETAIL

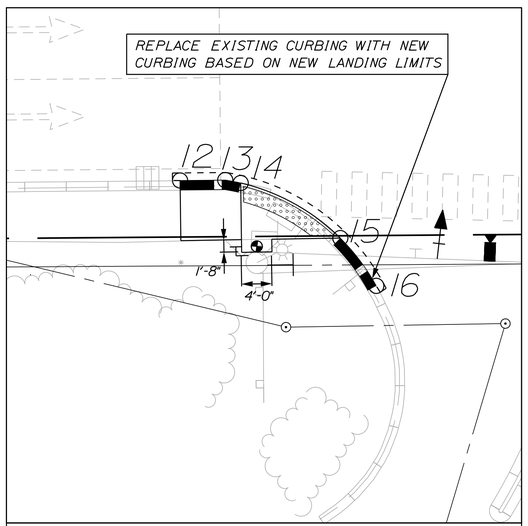


RECONSTRUCT CURB RAMP AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).
TRANSITION LENGTH REQUIRED FOR THE EASTERN CURB RAMP SHALL BE 15.0'. SEE MAINEDOT STANDARD DETAIL 801(13).

10 0 10 20
Scale of Feet



C CORNER - NW DETAIL



RECONSTRUCT CURB RAMP AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(22).
EXTEND LANDING TO ACCESS THE PEDESTRIAN BUTTON. THE ADDITIONAL AREA SHALL BE 4' WIDE. SEE DETAIL ON SHEET H.

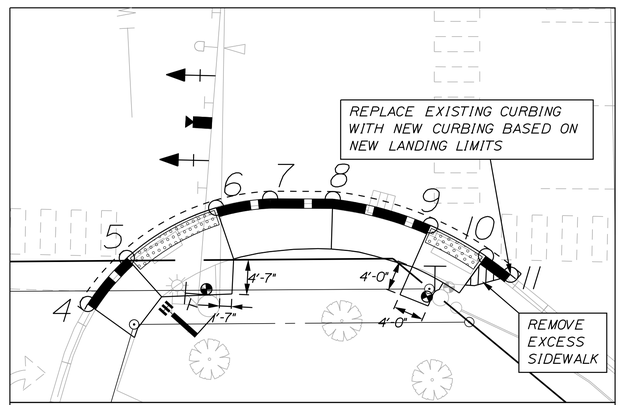
10 0 10 20
Scale of Feet

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

B CORNER - SW DETAIL



RECONSTRUCT CURB RAMPS AND LANDINGS IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).
TRANSITION LENGTH REQUIRED FOR THE EASTERN CURB RAMP SHALL BE 15.0'. SEE MAINEDOT STANDARD DETAIL 801(13). WESTERN CURB RAMP WILL ENCOMPASS THE REMAINING LENGTH.
EXTEND LANDINGS TO ACCESS THE PEDESTRIAN BUTTONS.
SEE DETAIL ON SHEET H.

10 0 10 20
Scale of Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER	BY	DATE
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

AUGUSTA
ROUTE 17 (STONE ST) AND HANNAFORD DRIVE

CURB RAMP LAYOUT AND DETAIL PLAN

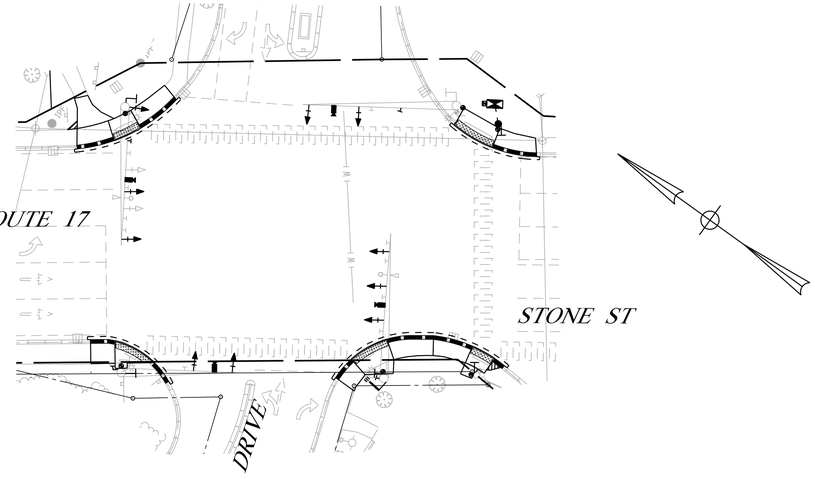
SHEET NUMBER

21C

OF 358

	PT. TO PT.	RADIUS (FT)	ITEM 608.26 - CURB RAMP DETECTABLE WARNING FIELD		ITEM 609.221 - TERMINAL CURB TYPE I (LF)	ITEM 609.222 - TERMINAL CURB TYPE I - CIRCULAR (LF)	COMMENT
			LENGTH (FT)	QTY (SF)			
	1 TO 2	43.8				15.0	
*	2 TO 3	43.8	14.9	27.7			6.1% CROSS SLOPE
	4 TO 5	30.3				8.0	
*	5 TO 6	30.3	13.6	24.9			2.9% CROSS SLOPE
	6 TO 7	30.5				7.2	
	7 TO 8	-			8.3		
	8 TO 9	45.0				13.4	
	9 TO 10	45.0	8.4	15.0			
	10 TO 11	45.0				4.1	
	12 TO 13	-			6.0		
	13 TO 14	27.5				2.0	
*	14 TO 15	27.5	15.2	24.0			4.4% CROSS SLOPE
	15 TO 16	27.5				8.0	
	17 TO 18	51.7				15.0	
*	18 TO 19	51.7	9.8	17.7			3.7% CROSS SLOPE
	19 TO 20	51.5				12.5	

* NON-COMPLIANT CURB RAMP ELEMENT - THE EXISTING GUTTER LINE PROFILE IS GREATER THAN 2%. THEREFORE THE LEVEL LANDING CROSS SLOPE AND/OR RUNNING SLOPE WILL BE GREATER THAN THE 2% AND 8.33% MAXIMUM ALLOWABLE, RESPECTIVELY. THE COMMENT IS THE MAXIMUM VALUE FOR PROPOSED LEVEL OF COMPLIANCE.



ALL CURB RAMPS SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND MAINEDOT STANDARD DETAILS 801(11) to 801(26) AS NOTED, AS WELL AS DETAILS PROVIDED ON SHEET H.

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
HOT MIX ASPHALT, 12.5 MM NOMINAL MAXIMUM SIZE (ITEM 403.208)	2.3 TONS
HOT MIX ASPHALT, 9.5 MM NOMINAL MAXIMUM SIZE (ITEM 403.210)	7.2 TONS
PLAIN CONCRETE SIDEWALK (ITEM 608.07)	106.3 SF
CURB RAMP DETECTABLE WARNING FIELD (ITEM 608.26)	109.3 SF

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
CONSTRUCT SIDEWALK (ITEM 608.45)	5.4 SY
REGRADING SIDEWALK (ITEM 608.46)	109.1 SY
TERMINAL CURB TYPE I (ITEM 609.221)	14.3 LF
TERMINAL CURB TYPE I - CIRCULAR (ITEM 609.222)	85.2 LF

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

PLAN

25 0 25 50

Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER	DATE
DESIGN-DETAILED	MLG	JAR 07/20
CHECKED-REVIEWED	CMB	CMB 07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 17 (STONE ST) AND HANNAFORD DRIVE

CURB RAMP LAYOUT AND DETAIL PLAN

SHEET NUMBER

21D

OF 358

Filename: 021_Signal_21d.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

PROPOSED INDICATIONS

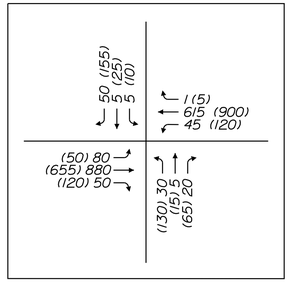
EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON SPAN AND TETHER WIRE	8
FURNISH AND INSTALL ONE-WAY 4-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON SPAN AND TETHER WIRE	2
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON TOP OF POST	1
FURNISH AND INSTALL ONE-WAY 4-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON TOP OF POST	1
FURNISH AND INSTALL 16-INCH L.E.D. COUNTDOWN PEDESTRIAN LENS IN EXISITNG HOUSING	6
FURNISH AND INSTALL ADA COMPLIANT ACCESSIBLE PEDESTRIAN SIGNAL (APS) BUTTON WITH 9"X15" R10-3e INFORMATIONAL SIGN	6
FURNISH AND INSTALL 19-INCH 1RU FIBER OPTIC 12-POSITION PATCH PANEL WITH PIGTAILS	1
RESET FIBER OPTIC ETHERNET SWITCH WITH FIBER OPTIC INTERFACES	1
FURNISH AND INSTALL SPAN WIRE MOUNTED SIGNS	10
REMOVE SPAN WIRE MOUNTED SIGNS	3
RESET COUNTDOWN PEDESTRIAN SIGNAL HEADS	3
RESET PREEMPTION PHASE SELECTOR	1
RESET EXISTING 12-F FIBER IN PROPOSED CABINET	-
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 4 APPROACHES. COMPLETE (ITEM 643.21)	1 LS

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

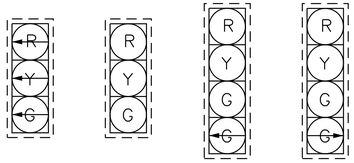
STRUCTURE LIST

STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	EXISTING
A-P1	8' PEDESTAL POLE	24" DIAMETER
A-P2	8' PEDESTAL POLE	24" DIAMETER
D-P1	8' PEDESTAL POLE	24" DIAMETER

SYSTEM DESIGN VOLUMES AM (PM)



PROPOSED INDICATIONS



A1,B1,C1 | A2,A3,C2 C3,D2,D3 | B2,D1 | B3

EXISTING INDICATIONS TO REMAIN



P1-P6

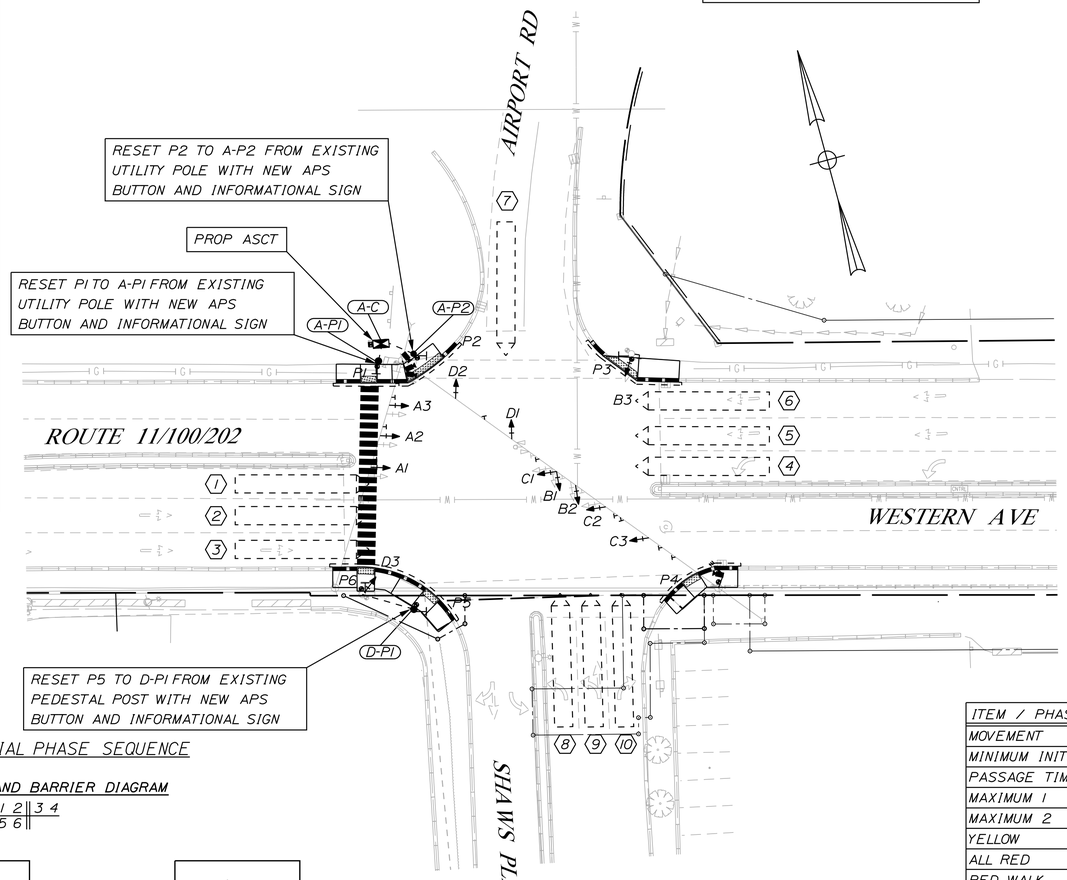
NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES

EXISTING COUNTDOWN PEDESTRIAN SINGLA HEADS SHALL HAVE NEW L.E.D. LENSES INSTALLED

DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	φ CALLED	φ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
1	WESTERN AVE EB LEFT	1	1	B	-	-
2	WESTERN AVE EB THROUGH	6	6	B	-	-
3	WESTERN AVE EB THRU-RIGHT	6	6	B	-	-
4	WESTERN AVE WB LEFT	5	5	B	-	-
5	WESTERN AVE WB THROUGH	2	2	B	-	-
6	WESTERN AVE WB THRU-RIGHT	2	2	B	-	-
7	AIRPORT RD SB MOVEMENTS	3	3	B	-	-
8	SHAWS PLAZA NB LEFT	4	4	B	-	-
9	SHAWS PLAZA NB LEFT-THRU	4	4	B	-	-
10	SHAWS PLAZA NB RIGHT	4	4	B	5	-

NOTE: LOCATION AND QUANTITY OF ADDITIONAL VEHICLE DETECTION ZONES TO BE DETERMINED BASED ON THE SPECIFIC ASCT SYSTEM REQUIREMENTS



SIGNAL TIMING SCHEDULE

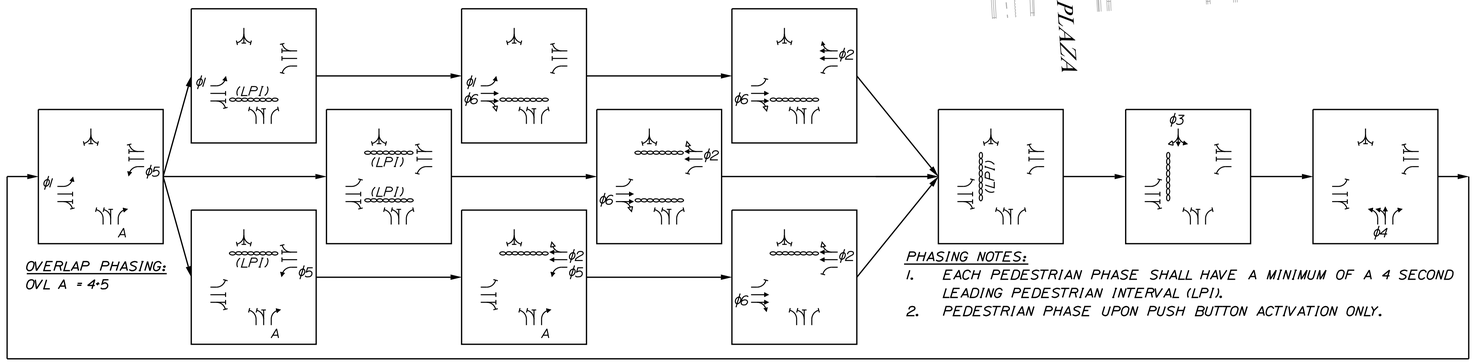
ITEM / PHASE	φ 1	φ 2	φ 3	φ 4	φ 5	φ 6	φ 7	φ 8
MOVEMENT	C (LT)	A	D	B	A (LT)	C	-	-
MINIMUM INITIAL	5	10	5	5	5	10	-	-
PASSAGE TIME	3.0	3.5	3.0	3.0	3.0	3.5	-	-
MAXIMUM 1	15	45	20	20	15	45	-	-
MAXIMUM 2	25	55	12	23	25	55	-	-
YELLOW	3.5	3.5	3.5	3.5	3.5	3.5	-	-
ALL RED	2.5	2.5	2.5	2.5	2.5	2.5	-	-
PED WALK	-	5	5	-	-	5	-	-
PED CLEAR	-	16	16	-	-	21	-	-
DYN MAX LIMIT	-	-	-	-	-	-	-	-
DYN MAX STEP	-	-	-	-	-	-	-	-
RECALL	OFF	SOFT	OFF	OFF	OFF	SOFT	-	-
DETECTOR	PR	PR	PR	PR	PR	PR	-	-
PRE-EMPT PRIORITY	3	4	-	-	4	3	-	-
FLASH	R	Y	R	R	R	Y	-	-
DUAL ENTRY	OFF	ON	OFF	OFF	OFF	ON	-	-

NOTES: S = SOFT RECALLY = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK
IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD.
INTERSECTION SHALL BE PART OF AN ASCT (ADAPTIVE) SYSTEM.

PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM

1	2	3	4
5	6		



OVERLAP PHASING:
OVL A = 4-5

PHASING NOTES:
1. EACH PEDESTRIAN PHASE SHALL HAVE A MINIMUM OF A 4 SECOND LEADING PEDESTRIAN INTERVAL (LPI).
2. PEDESTRIAN PHASE UPON PUSH BUTTON ACTIVATION ONLY.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	BY	DATE
B. KEEZER	JAR	07/20
PROJ. MANAGER	CMB	07/20
DESIGN-DETAILED		
CHECKED-REVIEWED		
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 11/100/202 (WESTERN AVE) AND AIRPORT RD

TRAFFIC SIGNAL PLAN

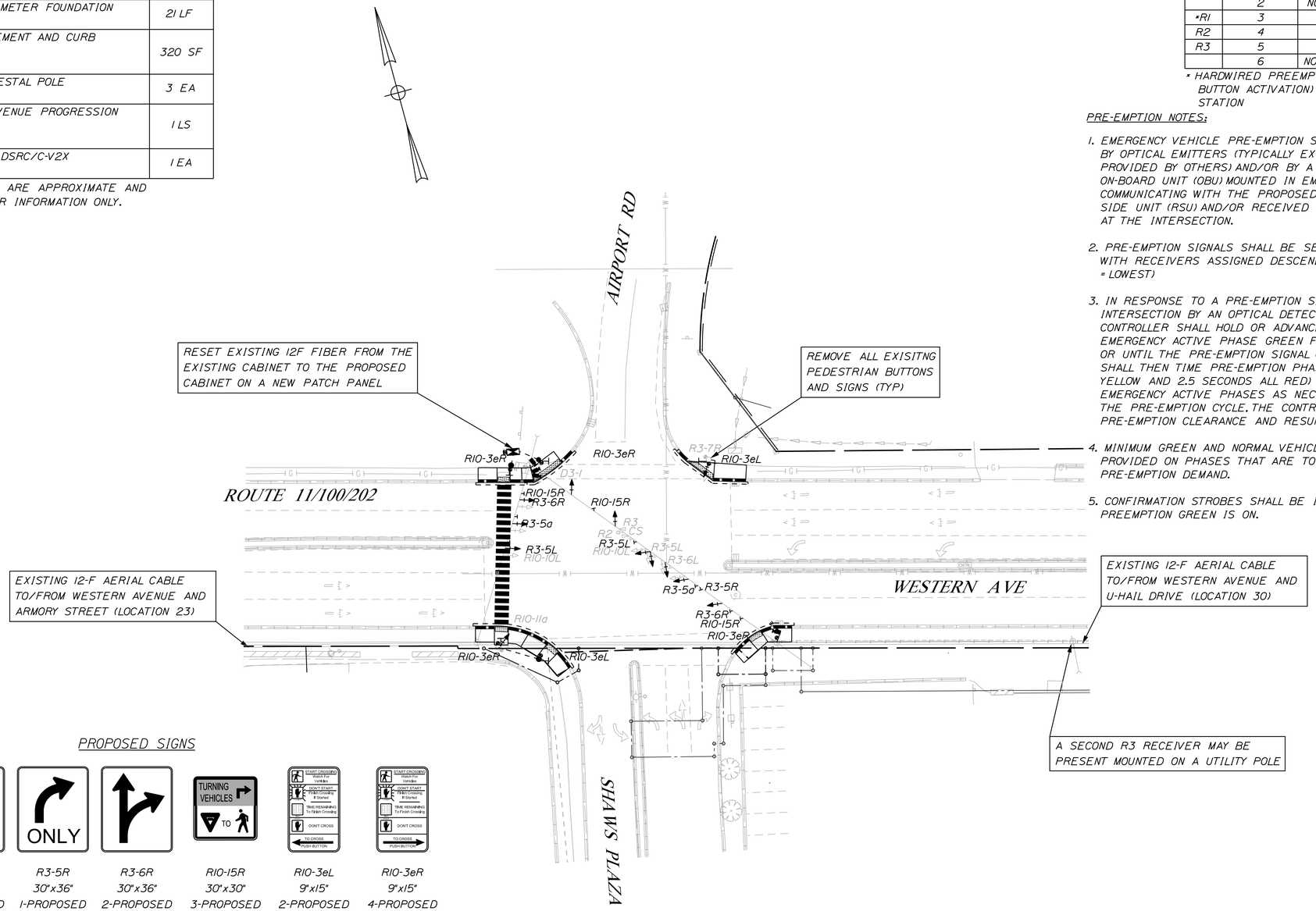
SHEET NUMBER
22
OF 358

Filename: 022_Signal_22.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
FURNISH AND INSTALL (3-INCH) NON-METALLIC CONDUIT (ITEM 626.22)	20 LF
FURNISH AND INSTALL 24-INCH DIAMETER FOUNDATION (ITEM 626.421)	21 LF
FURNISH AND INSTALL WHITE PAVEMENT AND CURB MARKING (ITEM 627.75)	320 SF
FURNISH AND INSTALL 8-FOOT PEDESTAL POLE (ITEM 643.92)	3 EA
FURNISH AND INSTALL WESTERN AVENUE PROGRESSION BASED ASCT SYSTEM (ITEM 654.05)	1 LS
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.



PROPOSED SIGNS



R3-5L	R3-5a	R3-5R	R3-6R	R10-15R	R10-3eL	R10-3eR
30"x36"	30"x36"	30"x36"	30"x36"	30"x30"	9"x15"	9"x15"
2-PROPOSED	2-PROPOSED	1-PROPOSED	2-PROPOSED	3-PROPOSED	2-PROPOSED	4-PROPOSED

EXISTING SIGNS



R3-5L	R3-6L	R10-10L	R3-7R	R10-11a	D3-1
1-RETAINED	1-RETAINED	2-REMOVED	1-REMOVED	1-RETAINED	1-RETAINED

EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USE/RESERVED	
	2	NOT USE/RESERVED	
*R1	3	1	ϕ1&ϕ6
R2	4	2	ϕ1&ϕ6
R3	5	3	ϕ2&ϕ5
	6	NOT USED	

* HARDWIRED PREEMPTION (CALLED WITH PUSH BUTTON ACTIVATION) FROM WESTERN AVENUE FIRE STATION

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.
2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 2 = LOWEST)
3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR AND/OR RSU, 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 (3.5 SECONDS YELLOW AND 2.5 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.
4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	DATE
PROJ. MANAGER		
DESIGN-DETAILED	MLG	07/20
CHECKED-REVIEWED	CMB	07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

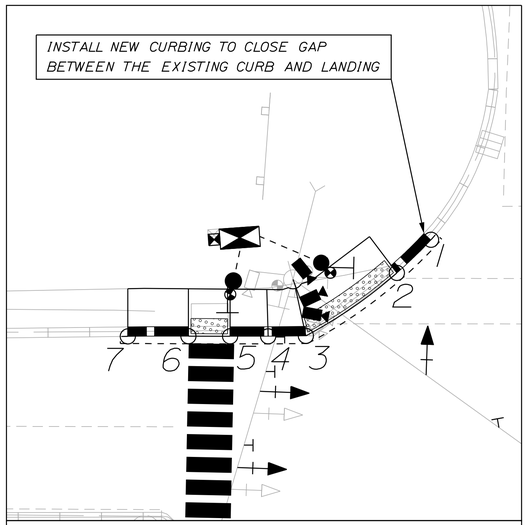
AUGUSTA
ROUTE 11/100/202 (WESTERN AVE) AND AIRPORT RD

TRAFFIC SIGNAL PLAN

SHEET NUMBER
22A
OF 358

Filename: 022_Signal_22a.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

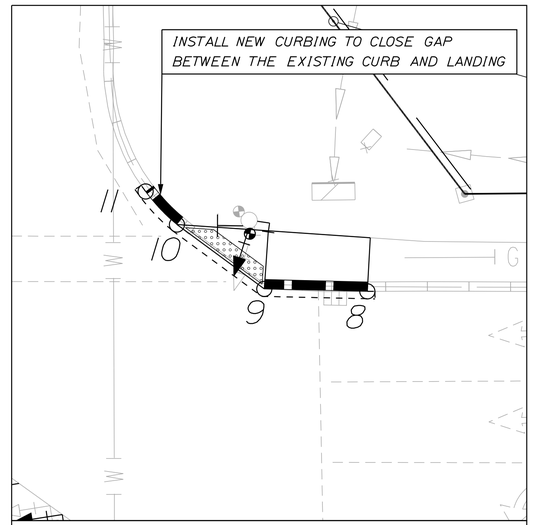
A CORNER - NW DETAIL



RECONSTRUCT CURB RAMPS AND LANDINGS IN ACCORDANCE WITH MAINEDOT STANDARD DETAILS 801(14) AND 801(18).

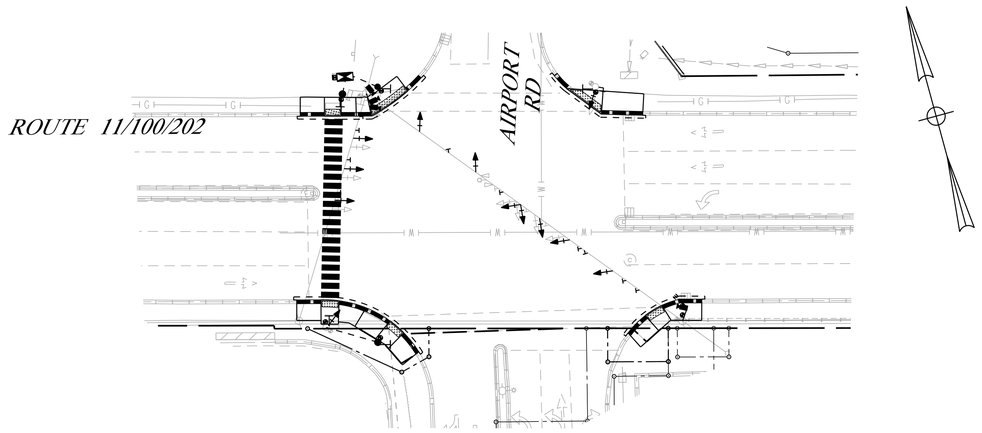
10 0 10 20
Scale of Feet

B CORNER - NE DETAIL



RECONSTRUCT CURB RAMP AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(22).
TRANSITION LENGTH REQUIRED FOR THE CURB RAMP SHALL BE 13.5'. SEE MAINEDOT STANDARD DETAIL 801(13).

10 0 10 20
Scale of Feet



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN
024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	DATE
PROJ. MANAGER		
DESIGN-DETAILED	MLG	07/20
CHECKED-REVIEWED	CMB	07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 11/100/202 (WESTERN AVE)
AND AIRPORT RD

CURB RAMP LAYOUT
AND DETAIL PLAN

SHEET NUMBER

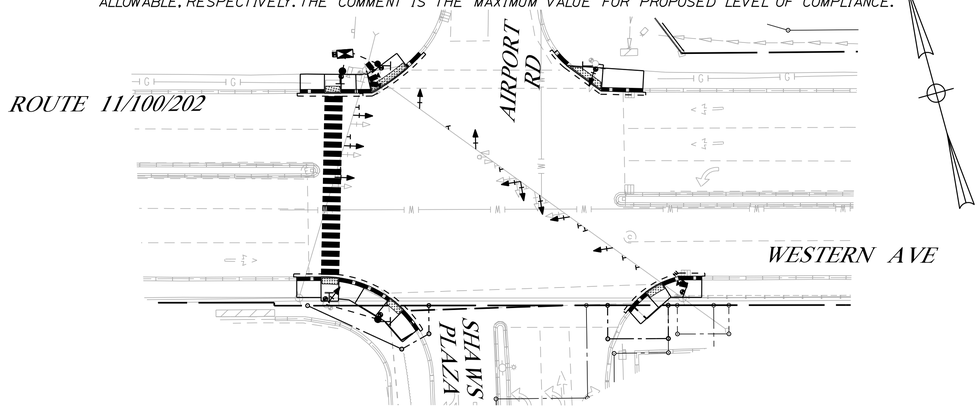
22C

OF 358

Filename: 022_Signal_22c.dgn Division: HIGHWAY Username: jorobert Date:11/25/2020

	PT. TO PT.	RADIUS (FT)	ITEM 608.26 - CURB RAMP DETECTABLE WARNING FIELD		ITEM 609.221 - TERMINAL CURB TYPE I (LF)	ITEM 609.222 - TERMINAL CURB TYPE I - CIRCULAR (LF)	COMMENT
			LENGTH (FT)	QTY (SF)			
	1 TO 2	63.0			6.3		
*	2 TO 3	63.0	14.6	26.8			3.6% CROSS SLOPE
	3 TO 4	-			5.0		
	4 TO 5	-			5.0		
*	5 TO 6	-	5.5	9.7			3.4% CROSS SLOPE
	6 TO 7				8.0		
	8 TO 9	-			13.5		
*	9 TO 10	-	14.3	20.8			4.6% CROSS SLOPE
	10 TO 11	25.0				6.0	
	12 TO 13	30.0				8.0	
*	13 TO 14	30.0	6.5	11.1			3.7% CROSS SLOPE
	14 TO 15	30.0				6.2	
	15 TO 16	-			7.3		
	17 TO 18	-			8.0		
*	18 TO 19	-	1.3	11.0			3.7% CROSS SLOPE
	19 TO 20	36.5	4.7				
	20 TO 21	36.5				9.2	
	21 TO 22	36.5				9.0	
	22 TO 23	36.5	6.0	10.4			
	23 TO 24	36.5				8.0	

* NON-COMPLIANT CURB RAMP ELEMENT - THE EXISTING GUTTER LINE PROFILE IS GREATER THAN 2%. THEREFORE THE LEVEL LANDING CROSS SLOPE AND/OR RUNNING SLOPE WILL BE GREATER THAN THE 2% AND 8.33% MAXIMUM ALLOWABLE, RESPECTIVELY. THE COMMENT IS THE MAXIMUM VALUE FOR PROPOSED LEVEL OF COMPLIANCE.



ALL CURB RAMPS SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND MAINEDOT STANDARD DETAILS 801(11) to 801(26) AS NOTED. AS WELL AS DETAILS PROVIDED ON SHEET H.

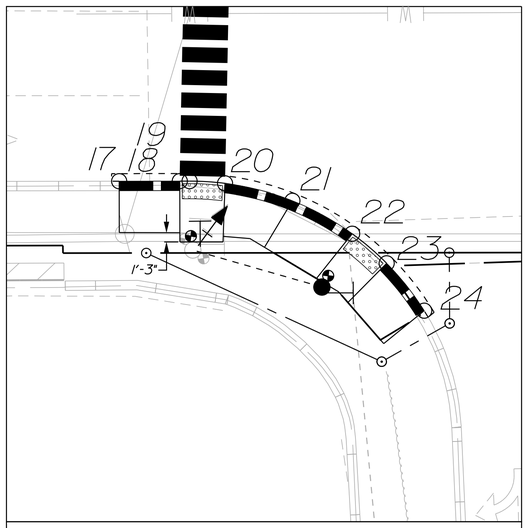
LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
HOT MIX ASPHALT, 9.5 MM NOMINAL MAXIMUM SIZE (ITEM 403.210)	6.0 TONS
PLAIN CONCRETE SIDEWALK (ITEM 608.07)	94.6 SY
CURB RAMP DETECTABLE WARNING FIELD (ITEM 608.26)	89.8 SF
CONSTRUCT SIDEWALK (ITEM 608.45)	1.6 SY

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
REGRADING SIDEWALK (ITEM 608.46)	93.0 SY
TERMINAL CURB TYPE I (ITEM 609.221)	53.1 LF
TERMINAL CURB TYPE I - CIRCULAR (ITEM 609.222)	46.4 LF

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

D CORNER - SW DETAIL



RECONSTRUCT CURB RAMPS AND LANDINGS IN ACCORDANCE WITH MAINEDOT STANDARD DETAILS 801(14) AND 801(18).
EXTEND LANDING TO ACCESS THE PEDESTRIAN BUTTON.
SEE DEATAIL ON SHEET H.

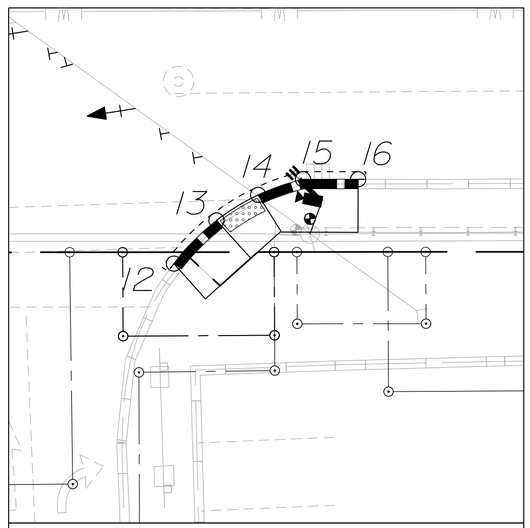
10 0 10 20
Scale of Feet

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

C CORNER - SE DETAIL



RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAILS 801(20).
TRANSITION LENGTH REQUIRED FOR THE CURB RAMP SHALL BE 13.5'. SEE MAINEDOT STANDARD DETAIL 801(13).

10 0 10 20
Scale of Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER		
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

AUGUSTA
ROUTE 11/100/202 (WESTERN AVE)
AND AIRPORT RD

CURB RAMP LAYOUT
AND DETAIL PLAN

SHEET NUMBER
22D
OF 358

Filename: 022_Signal_22d.dgn Division: HIGHWAY Username: jorobert Date:11/25/2020

Filename: ...\ROW\MSTA\022_RWPLAN6.dgn Username: Benjamin.Singer Date:11/19/2020
Division: ROW

PLAN LEGEND

Town, County, State	New R/W Along Existing R/W	Sanitary Sewer	Traveled Way
Approx. Property Lines P.L.	Building / Clearing Limit Line	Telephone Line	Ditch
Existing Right of Way	Trees Conifer / Deciduous	Electric Line	Catch Basin
Limits of Wrought Portion L.O.W.P.	Tree Line / Bush Line	Water Line	Manhole
Control Of Access C.O.A.	Water Edge	Underdrain Line	Sewer Manhole
New Right of Way	Ledge / Rock/Boulder / Flag Pole	Gas Line	Utility Pole
New Easement	Fence CHAIN LINK / BARB WIRE / STOCKADE	Guardrail	Fire Hydrant
New Temporary Rights	Sign / Well / Mailbox	Culvert	Curbing
New R/W Within Existing R/W			

Existing / Proposed

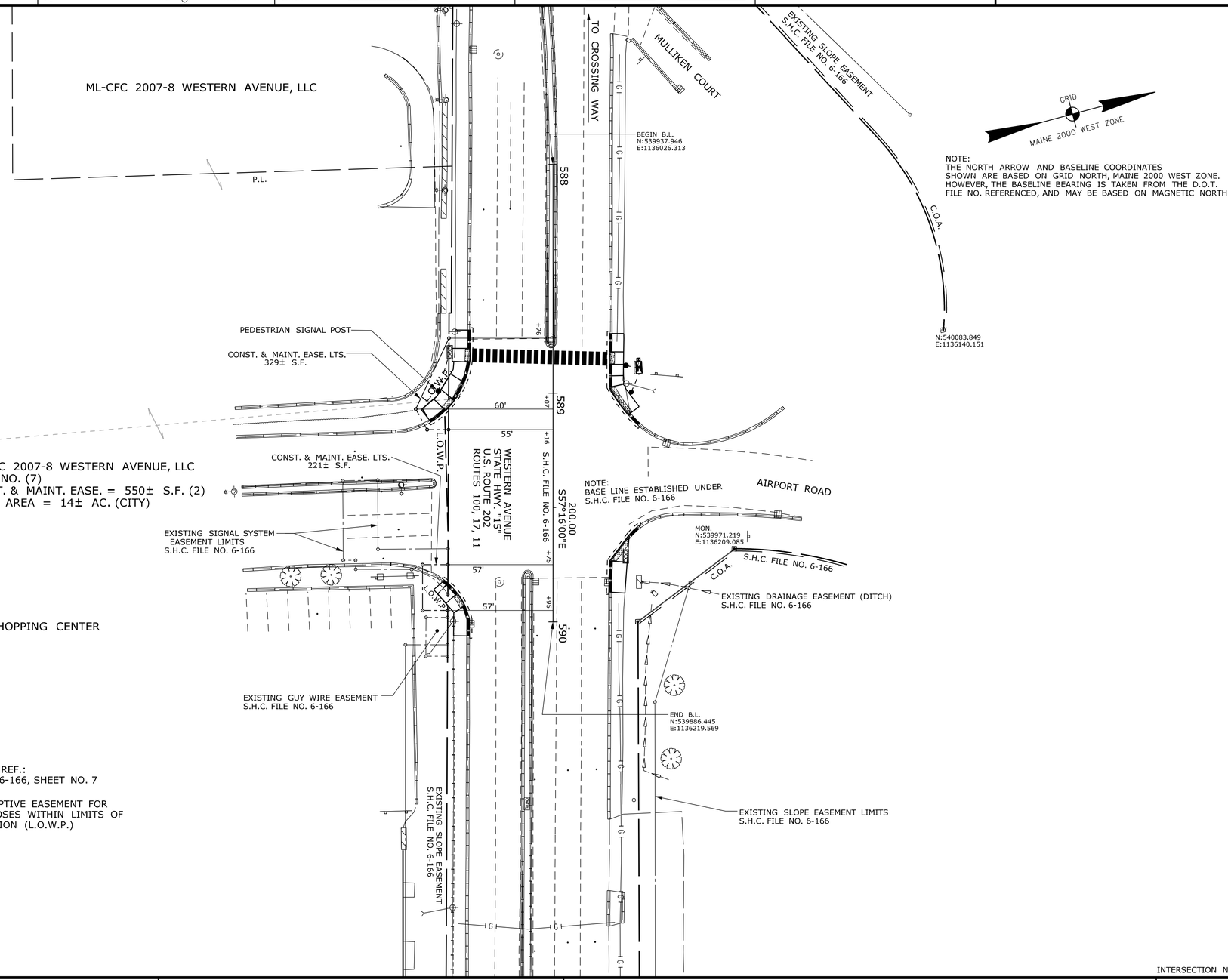
Cut Line C C C	Fill Line F F F
Stonewall	Retaining Wall
Baseline 10+00 11+00 12+00	
Monument	Traverse Point
Iron Rod Found IRF	Pipe Found IPF
Replacement Pin Set	

THIS PLAN WAS PREPARED IN CONNECTION WITH THE DEPARTMENT'S ACQUISITION OF REAL PROPERTY FOR TRANSPORTATION PURPOSES. IT CANNOT BE USED TO ESTABLISH LEGAL BOUNDARIES BETWEEN ABUTTING PROPERTY OWNERS.

25 0 25 50 75 100
Scale of Feet

STATE OF MAINE REGISTRY OF DEEDS

COUNTY _____
RECEIVED _____, _____
at _____h _____m _____M and
recorded in Plan Bk _____, Pg. _____
Attest: _____
REGISTER



EXISTING R/W REF.:
S.H.C. FILE NO. 6-166, SHEET NO. 7

NOTE: PRESCRIPTIVE EASEMENT FOR HIGHWAY PURPOSES WITHIN LIMITS OF WROUGHT PORTION (L.O.W.P.)

INTERSECTION NO. 22 WIN 024301.00

ITEM	TECH	CHECKED
EXISTING CONDITION PLAN	B.S.	G.L.L.
FINAL RIGHT OF WAY	B.S.	G.L.L.
AREAS	B.S.	G.L.L.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION - AUGUSTA, ME 04333-0016 - 207-624-3460
AUGUSTA
RIGHT OF WAY MAP

REVISIONS

NO.	DATE	DESCRIPTION	BY

PLAN FILED IN PLAN BOOK PAGE COUNTY RECORD

NO.	GRANTOR	INSTRUMENT	DATE	BOOK	PAGE

BRUCE A. VAN NOTE
COMMISSIONER
JOYCE NOEL TAYLOR
CHIEF ENGINEER
DATE

STATE HIGHWAY "15"
WESTERN AVE. / U.S. ROUTE 202
AUGUSTA KENNEBEC COUNTY
FEDERAL AID PROJECT NO. 2430100

NOVEMBER 2020	RIGHT-OF-WAY MAP	D.O.T. FILE NO. 6-487
SCALE 1" = 25'	SHEET 6 OF 12	

SHEET NUMBER
22R
OF 358

Filename: 023_Signal_23.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

LIST OF WORK ITEMS

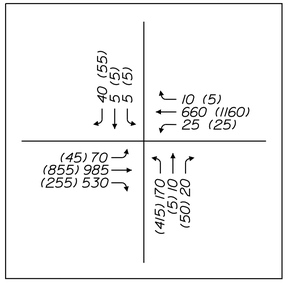
EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON SPAN AND TETHER WIRE	8
FURNISH AND INSTALL ONE-WAY 4-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON SPAN AND TETHER WIRE	2
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON SIDE OF POLE	1
FURNISH AND INSTALL ONE-WAY 4-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON TOP OF POST	1
FURNISH AND INSTALL ONE-WAY, 16 X 18-INCH LED TOP OF POST MOUNTED COUNTDOWN PEDESTRIAN SIGNAL HEAD	2
FURNISH AND INSTALL 16-INCH L.E.D. COUNTDOWN PEDESTRIAN LENS IN EXISTING HOUSING	4
FURNISH AND INSTALL ADA COMPLIANT ACCESSIBLE PEDESTRIAN SIGNAL (APS) BUTTON WITH 9"X15" R10-3e INFORMATIONAL SIGN	6
FURNISH AND INSTALL 19-INCH 1 RU FIBER OPTIC 12-POSITION PATCH PANEL WITH PIGTAILS	1
RESET FIBER OPTIC ETHERNET SWITCH WITH FIBER OPTIC INTERFACES	1
FURNISH AND INSTALL SPAN WIRE AND POST MOUNTED SIGNS	13
REMOVE SPAN WIRE AND POST MOUNTED SIGNS	3
RESET COUNTDOWN PEDESTRIAN SIGNAL HEADS	1
RESET PREEMPTION CONFIRMATION STROBE	1
RESET LIGHT-BASED PREEMPTION RECEIVER	1
RESET PREEMPTION PHASE SELECTOR	1
RESET EXISTING 12-F FIBER IN PROPOSED CABINET	-
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 4 APPROACHES, COMPLETE (ITEM 643.21)	1 LS
FURNISH AND INSTALL NON-INVASIVE ADVANCE VEHICLE DETECTION SYSTEM FOR 1 APPROACH, COMPLETE (ITEM 643.22)	1 LS

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

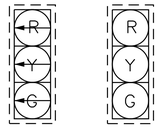
STRUCTURE LIST

STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	EXISTING
A-P1	8' PEDESTAL POLE	24" DIAMETER
B-P1	8' PEDESTAL POLE	24" DIAMETER
C-P1	8' PEDESTAL POLE	24" DIAMETER

SYSTEM DESIGN VOLUMES AM (PM)



PROPOSED INDICATIONS



B1,C1,D1 | A2,B2,B3 C3,D2,D3 | A1,C2 | D4 | P2, P3

EXISTING INDICATIONS
TO REMAIN OR RELOCATE



P1, P4-P6

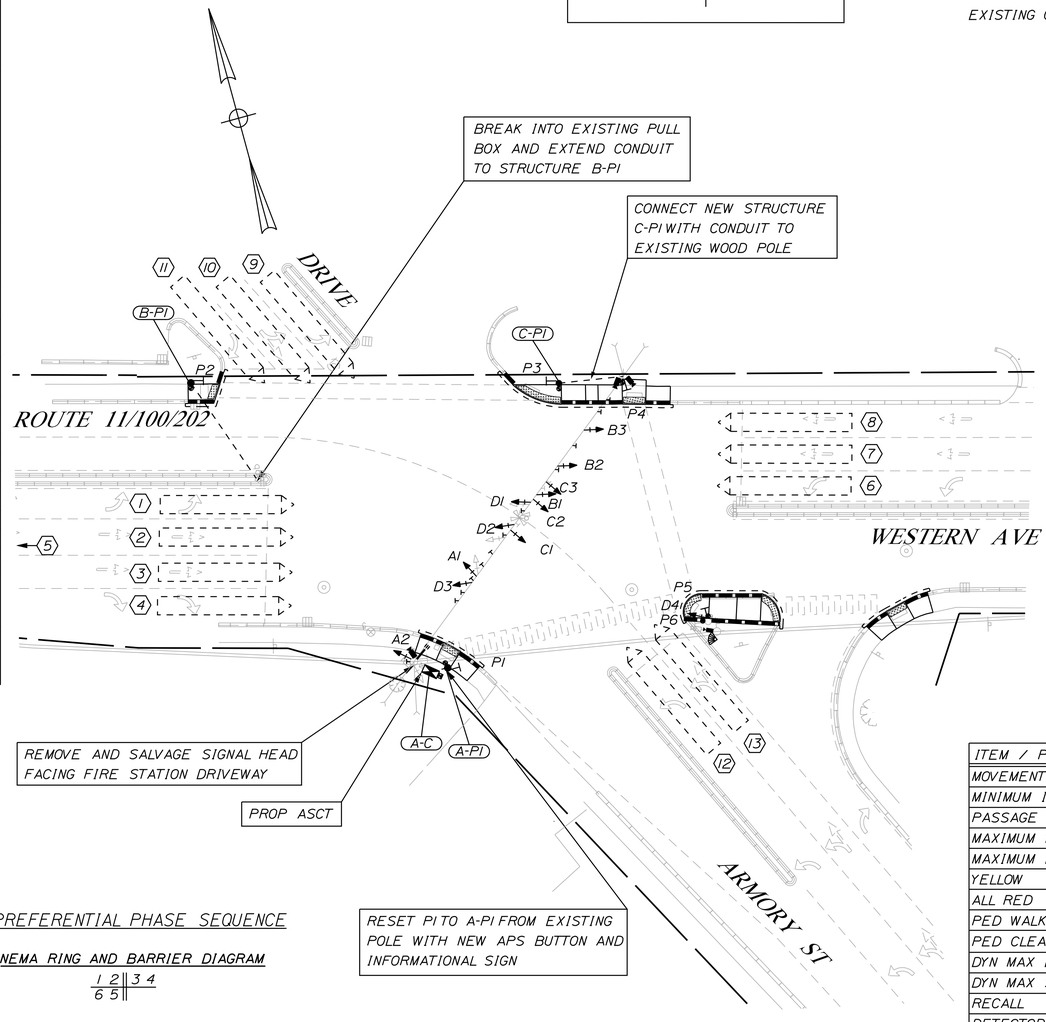
NOTE: ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES

EXISTING COUNTDOWN PEDESTRIAN SIGNAL HEADS SHALL HAVE NEW L.E.D. LENSES INSTALLED

DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	φ CALLED	φ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
1	WESTERN AVE EB LEFT	1	1	B	-	-
2	WESTERN AVE EB THROUGH	6	6	B	-	-
3	WESTERN AVE EB THROUGH	6	6	B	-	-
4	WESTERN AVE EB RIGHT	6	6	B	5	-
5*	WESTERN AVE EB ADVANCE	6	6	A	-	-
6	WESTERN AVE WB LEFT	5	5	B	-	-
7	WESTERN AVE WB THROUGH	2	2	B	-	-
8	WESTERN AVE WB THRU-RIGHT	2	2	B	-	-
9	DRIVEWAY SB LEFT	3	3	B	-	-
10	DRIVEWAY SB LEFT-THRU	3	3	B	-	-
11	DRIVEWAY SB RIGHT	3	3	B	5	-
12	ARMORY ST NB LEFT	4	4	B	-	-
13	ARMORY ST NB LEFT-THRU	4	4	B	-	-

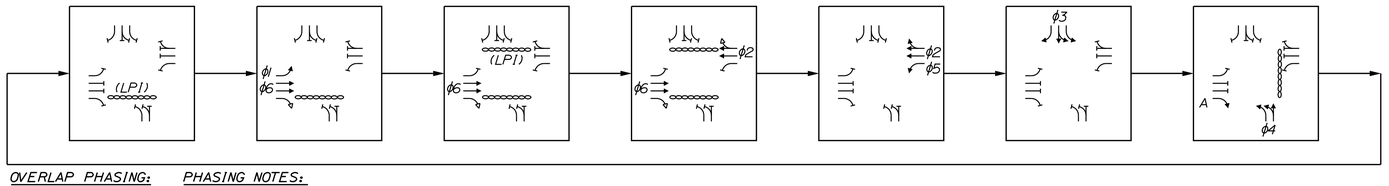
* SEE ADVANCED DILEMMA ZONE DETAIL (35 MPH)
NOTE: LOCATION AND QUANTITY OF ADDITIONAL VEHICLE DETECTION ZONES TO BE DETERMINED BASED ON THE SPECIFIC ASCT SYSTEM REQUIREMENTS



PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM

1 2 | 3 4
6 5 | 5 6



OVERLAP PHASING:
OVL A = 4-6

PHASING NOTES:
1. THE EASTBOUND AND WESTBOUND PEDESTRIAN PHASES SHALL HAVE A MINIMUM OF A 4 SECOND LEADING PEDESTRIAN INTERVAL (LPI).
2. PEDESTRIAN PHASE UPON PUSH BUTTON ACTIVATION ONLY.
3. GREEN ARROW INDICATION FOR OVERLAP A IS DISABLED WHEN THE PHASE 6 PEDESTRIAN PHASE IS ACTIVE.

SIGNAL TIMING SCHEDULE

ITEM / PHASE	φ1	φ2	φ3	φ4	φ5	φ6	φ7	φ8
MOVEMENT	D (LT)	B	A	C	B (LT)	D	-	-
MINIMUM INITIAL	5	10	5	7	5	10	-	-
PASSAGE TIME	3.0	3.5	3.0	3.0	3.0	3.5	-	-
MAXIMUM 1	25	45	25	30	15	55	-	-
MAXIMUM 2	20	50	15	35	10	60	-	-
YELLOW	4.0	4.0	3.5	3.5	4.0	4.0	-	-
ALL RED	3.0	3.0	2.5	2.5	3.0	3.0	-	-
PED WALK	-	5	-	5	-	5	-	-
PED CLEAR	-	27	-	18	-	21	-	-
DYN MAX LIMIT	-	-	-	-	-	-	-	-
DYN MAX STEP	-	-	-	-	-	-	-	-
RECALL	OFF	SOFT	OFF	OFF	OFF	SOFT	-	-
DETECTOR	PR	PR	PR	PR	PR	PR	-	-
PRE-EMPT PRIORITY	3	4	5	6	4	3	-	-
FLASH	R	Y	R	R	R	Y	-	-
DUAL ENTRY	OFF	ON	OFF	OFF	OFF	ON	-	-

NOTES: S = SOFT RECALLY = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK
IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD. INTERSECTION SHALL BE PART OF AN ASCT (ADAPTIVE) SYSTEM.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER	DATE
DESIGN-DETAILED	M.G	07/20
CHECKED-REVIEWED	CMB	07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 11/100/202 (WESTERN AVE) AND ARMORY ST

TRAFFIC SIGNAL PLAN

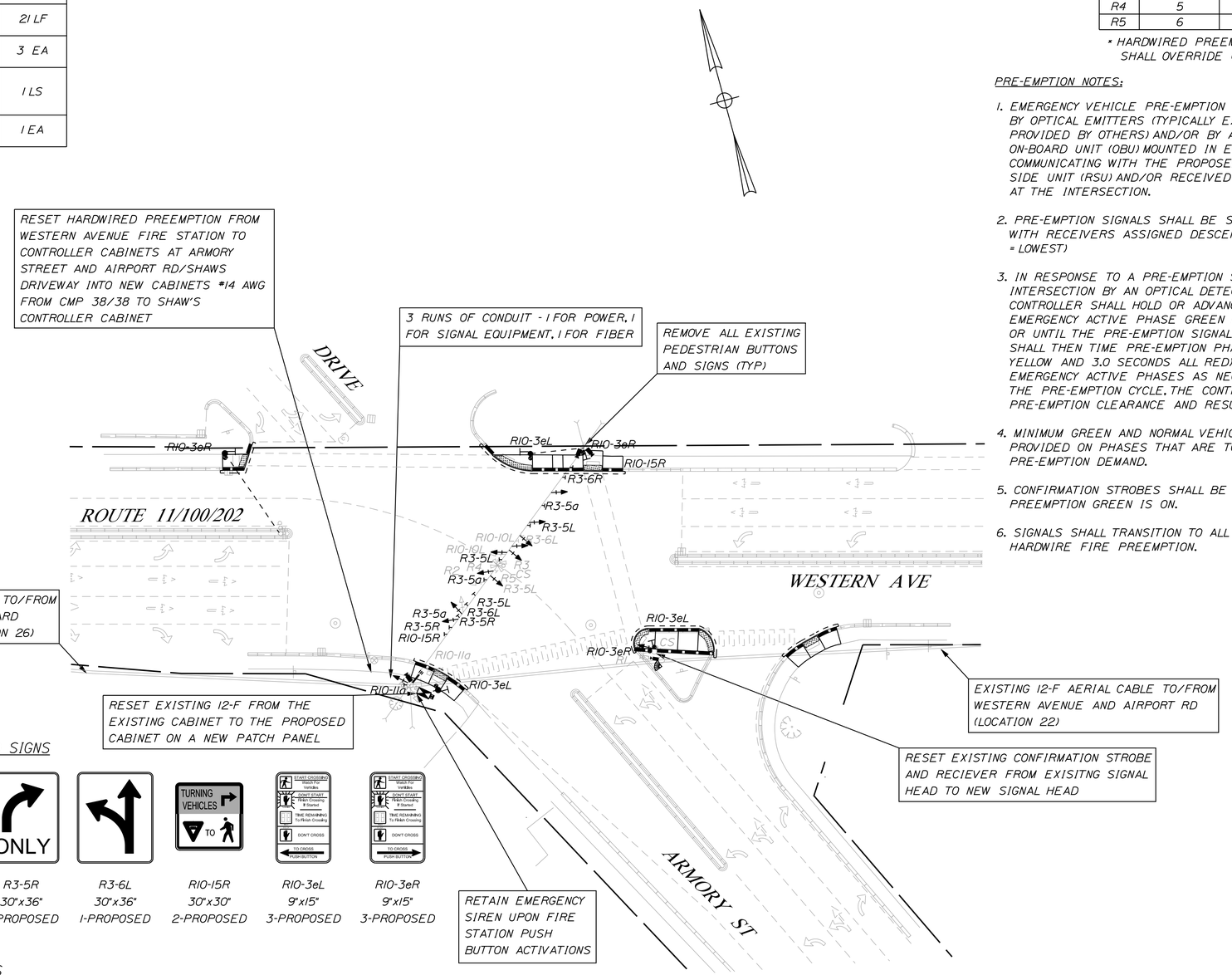
SHEET NUMBER
23
OF 358

Filename: 023_SignoI_23a.dgn Username: jorobert Division: HIGHWAY Date:11/24/2020

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
FURNISH AND INSTALL (3-INCH) NON-METALLIC CONDUIT (ITEM 626.22)	30 LF
FURNISH AND INSTALL (3-INCH) NON-METALLIC UNDER PAVEMENT CONDUIT (ITEM 626.251)	45 LF
FURNISH AND INSTALL 24-INCH DIAMETER FOUNDATION (ITEM 626.421)	21 LF
FURNISH AND INSTALL 8-FOOT PEDESTAL POLE (ITEM 643.92)	3 EA
FURNISH AND INSTALL WESTERN AVENUE PROGRESSION BASED ASCT SYSTEM (ITEM 654.05)	1 LS
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.



PROPOSED SIGNS



R10-11a	R3-6R	R3-5L	R3-5a	R3-5R	R3-6L	R10-15R	R10-3eL	R10-3eR
30"x36"	30"x36"	30"x36"	30"x36"	30"x36"	30"x36"	30"x30"	9"x15"	9"x15"
1-PROPOSED	1-PROPOSED	3-PROPOSED	3-PROPOSED	2-PROPOSED	1-PROPOSED	2-PROPOSED	3-PROPOSED	3-PROPOSED

EXISTING SIGNS



R3-5L	R3-6L	R10-10L	R10-11a
1-RETAINED	1-RETAINED	2-REMOVED	1-REMOVED

EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
R1	1	1	FIRE ST*
	2	NOT USE	RESERVED
R2	3	2	ϕ1&ϕ6
R3	4	3	ϕ2&ϕ5
R4	5	4	ϕ3
R5	6	5	ϕ4

* HARDWIRED PREEMPTION (FROM FIRE STATION) SHALL OVERRIDE OPTICAL PREEMPTION

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.
2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 5 = LOWEST)
3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR AND/OR RSU, 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 (4.0 SECONDS YELLOW AND 3.0 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.
4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.
6. SIGNALS SHALL TRANSITION TO ALL RED ALL APPROACHES DURING HARDWIRE FIRE PREEMPTION.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	DATE
PROJ. MANAGER		
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CHECKED-REVIEWED	CMB	07/20
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DESIGN3-DETAILED3		
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REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

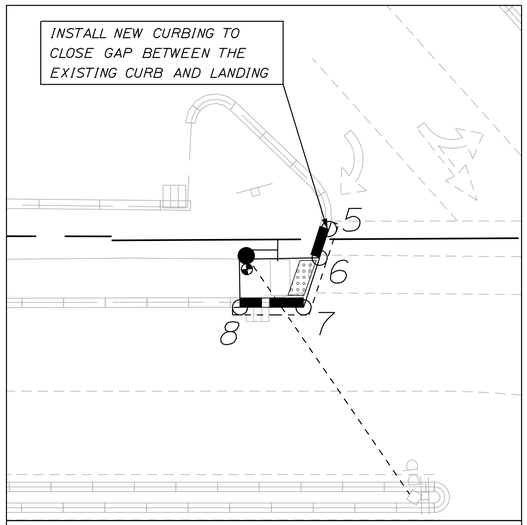
AUGUSTA
ROUTE 11/100/202 (WESTERN AVE) AND ARMORY ST

TRAFFIC SIGNAL PLAN

SHEET NUMBER
23A
OF 358

Filename: 023_Signal_23c.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

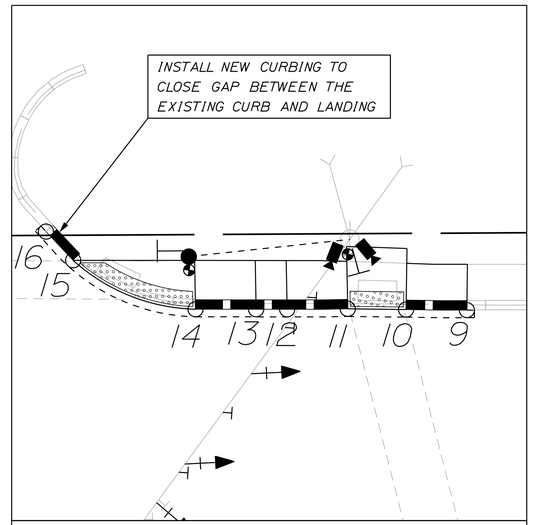
B CORNER - NW DETAIL



RECONSTRUCT LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAILS 801(22).

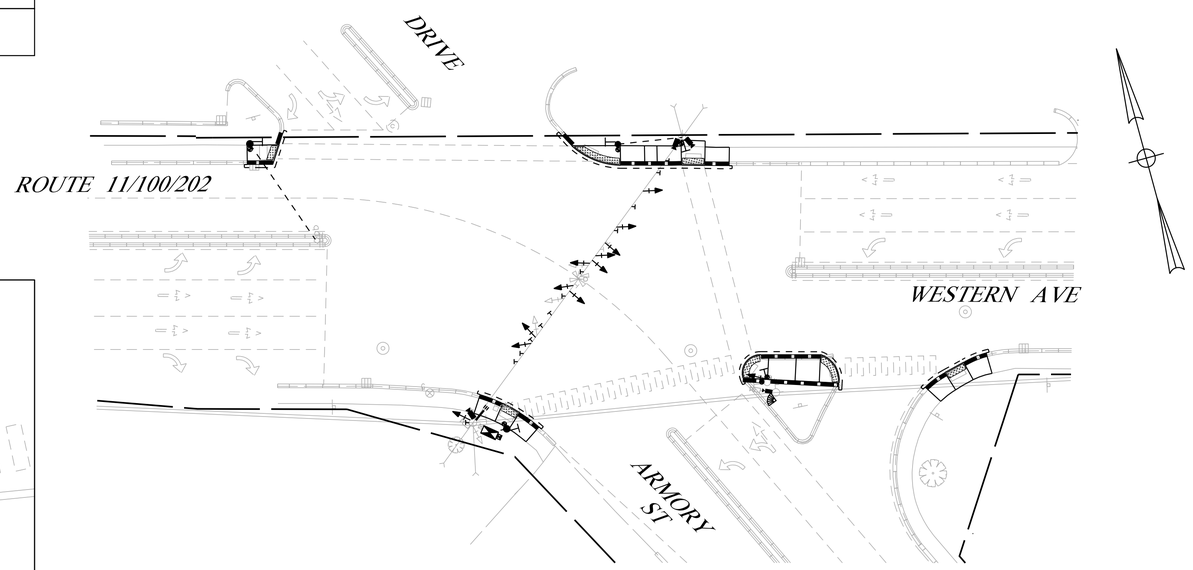
10 0 10 20
Scale of Feet

C CORNER - NE DETAIL

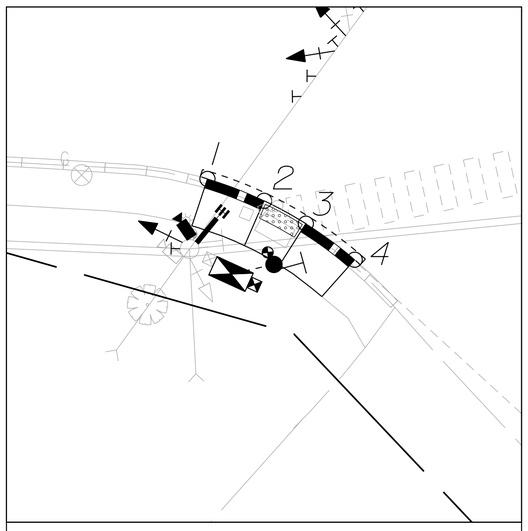


RECONSTRUCT CURB RAMPS AND LANDINGS IN ACCORDANCE WITH MAINEDOT STANDARD DETAILS 801(14) AND 801(22).
EXTEND LANDING TO ACCESS THE PEDESTRIAN BUTTON.
SEE DETAIL ON SHEET H.

10 0 10 20
Scale of Feet



A CORNER - SW DETAIL



RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAILS 801(20).

10 0 10 20
Scale of Feet

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	DATE
PROJ. MANAGER		
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CHECKED-REVIEWED	CMB	07/20
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DESIGN3-DETAILED3		
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REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 11/100/202 (WESTERN AVE)
AND ARMORY ST

CURB RAMP LAYOUT AND DETAIL PLAN

SHEET NUMBER

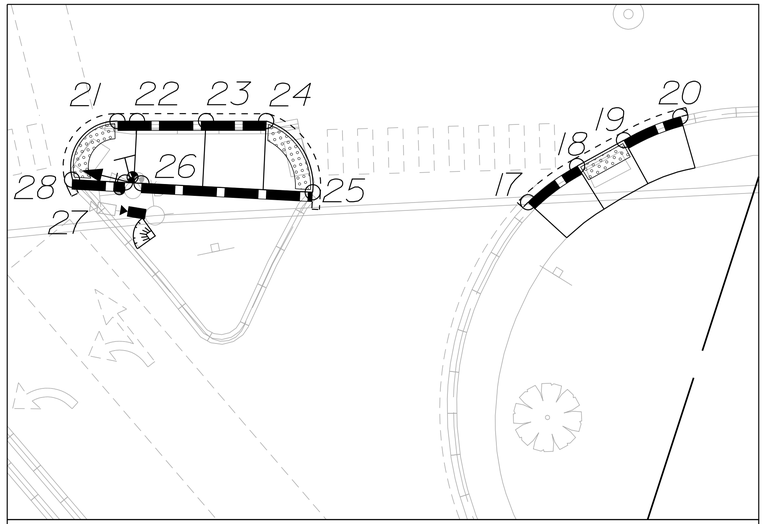
23C

OF 358

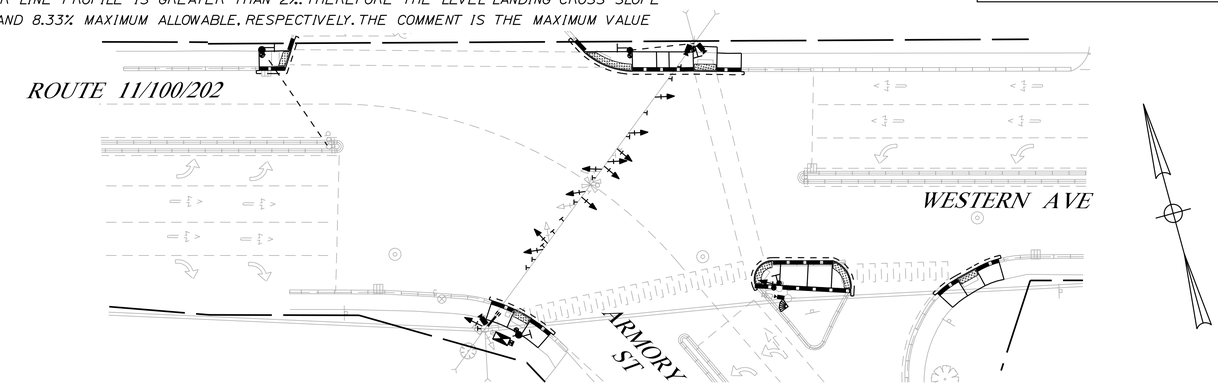
	PT. TO PT.	RADIUS (FT)	ITEM 608.26 - CURB RAMP DETECTABLE WARNING FIELD		ITEM 609.11 - VERTICAL CURB TYPE I (LF)	ITEM 609.221 - TERMINAL CURB TYPE I (LF)	ITEM 609.222 - TERMINAL CURB TYPE I - CIRCULAR (LF)	ITEM 609.34 - CURB TYPE 5 (LF)	COMMENT
			LENGTH (FT)	QTY (SF)					
	1 TO 2	53.5					8.0		
*	2 TO 3	53.5	6.3	10.9					2.6% CROSS SLOPE
	3 TO 4	53.5					8.0		
	5 TO 6	-				4.0			
	6 TO 7	-	6.9	9.7					
	7 TO 8	-				8.4			
	9 TO 10	-				8.0			
	10 TO 11	-	7.7	14.2					
	11 TO 12	-				8.0			
	12 TO 13	-			4.0				
	13 TO 14	-				8.0			
	14 TO 15	25.0	17.8	28.7					
	15 TO 16	-				5.2			
							8.0		
*	17 TO 18	30.0							
	18 TO 19	-	7.1	12.7			8.0		4.1% CROSS SLOPE
	19 TO 20	30.0						2.6	
	21 TO 22	-						9.1	
	22 TO 23	-						8.0	
	23 TO 24	-							
	24 TO 25	8.9	12.1	18.7					
	25 TO 26	-			22.6				
	27 TO 28	-			7.0				
	28 TO 21	6.0	11.4	17.4					

* NON-COMPLIANT CURB RAMP ELEMENT - THE EXISTING GUTTER LINE PROFILE IS GREATER THAN 2%. THEREFORE THE LEVEL LANDING CROSS SLOPE AND/OR RUNNING SLOPE WILL BE GREATER THAN THE 2% AND 8.33% MAXIMUM ALLOWABLE, RESPECTIVELY. THE COMMENT IS THE MAXIMUM VALUE FOR PROPOSED LEVEL OF COMPLIANCE.

D CORNER - SE DETAIL



RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAILS 801(20).
RECONSTRUCT ISLAND CURB RAMPS AND LANDINGS IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(14) AND INSTALL BACK CURB ALONG CURB RAMPS AND LANDINGS.



10 0 10 20
Scale of Feet

ALL CURB RAMPS SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND MAINEDOT STANDARD DETAILS 801(11) to 801(26) AS NOTED, AS WELL AS DETAILS PROVIDED ON SHEET H.

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
HOT MIX ASPHALT, 9.5 MM NOMINAL MAXIMUM SIZE (ITEM 403.210)	6.7 TONS
PLAIN CONCRETE SIDEWALK (ITEM 608.07)	100.6 SY
CURB RAMP DETECTABLE WARNING FIELD (ITEM 608.26)	112.3 SF
CONSTRUCT SIDEWALK (ITEM 608.45)	1.7 SY
REGRADING SIDEWALK (ITEM 608.46)	98.9 SY

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
VERTICAL CURB TYPE I (ITEM 609.11)	33.6 LF
TERMINAL CURB TYPE I (ITEM 609.221)	41.6 LF
TERMINAL CURB TYPE I - CIRCULAR (ITEM 609.222)	32.0 LF
CURB TYPE 5 (ITEM 609.34)	19.7 LF

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

PLAN

25 0 25 50
Scale of Feet

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	BY	DATE
PROJ. MANAGER	B. KEEZER	
DESIGN-DETAILED	MLG	07/20
CHECKED-REVIEWED	CMB	07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 11/100/202 (WESTERN AVE)
AND ARMORY ST

CURB RAMP LAYOUT
AND DETAIL PLAN

SHEET NUMBER
23D
OF 358

Filename: 023_SignoI_23d.dgn Username: jorobert Division: HIGHWAY Date:11/24/2020

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTROBRACKETS	8
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARM UPRIGHTS WITH BRACKET	2
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON TOP OF POLE	1
FURNISH AND INSTALL 16-INCH L.E.D. OCUNTDOWN PEDESTRIAN LENS IN EXISTING HOUSING	4
FURNISH AND INSTALL ADA COMPLIANT ACCESSIBLE PEDESTRIAN SIGNAL (APS) BUTTON WITH 9"X15" R10-3e INFORMATIONAL SIGN	4
FURNISH AND INSTALL 19-INCH 1RU FIBER OPTIC 12-POSITION PATCH PANEL WITH PIGTAILS	1
RESET FIBER OPTIC ETHERNET SWITCH WITH FIBER OPTIC INTERFACES	1
FURNISH AND INSTALL MAST ARM MOUNTED SIGNS	3
REMOVE MAST ARM MOUNTED SIGNS	2
RESET COUNTDOWN PEDESTRIAN SIGNAL HEADS	1
RESET PREEMPTION PHASE SELECTOR	1
RESET EXISTING 12-F FIBER IN PROPOSED CABINET	-
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 3 APPROACHES, COMPLETE (ITEM 643.21)	1 LS
FURNISH AND INSTALL NON-INVASIVE ADVANCE VEHICLE DETECTION SYSTEM FOR 2 APPROACHES, COMPLETE (ITEM 643.22)	1 LS

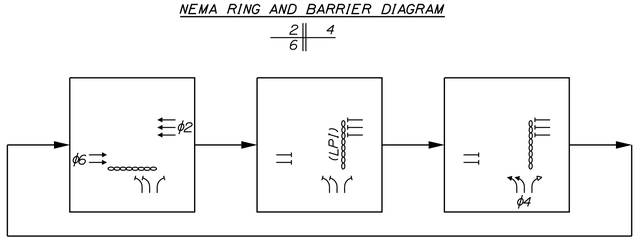
THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

STRUCTURE LIST

STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	EXISTING
C-P1	10' PEDESTAL POLE	24" DIAMETER

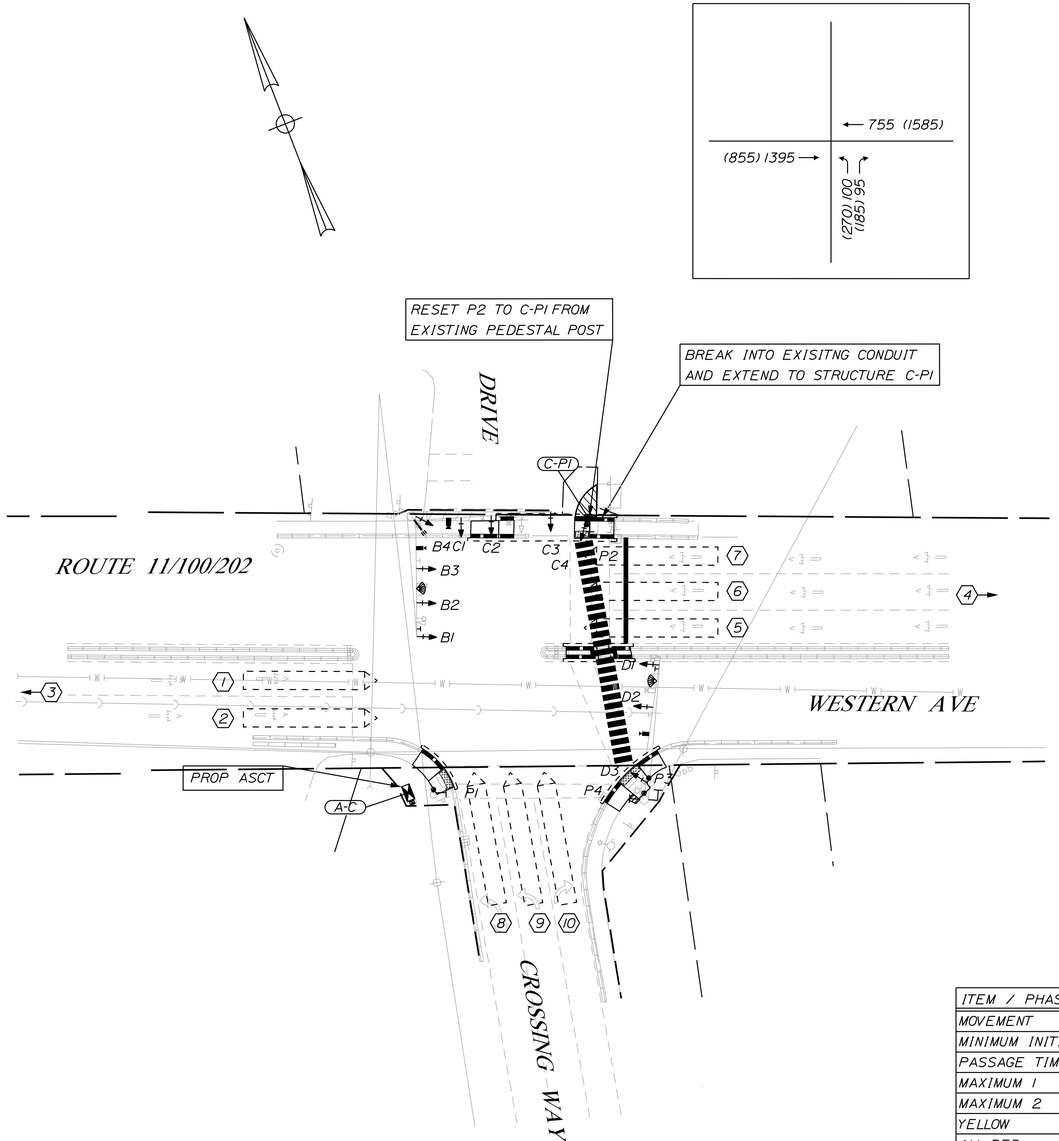
PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM

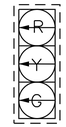


PHASING NOTES:
1. NORTHBOUND PEDESTRIAN PHASE SHALL HAVE A MINIMUM OF A 4 SECOND LEADING PEDESTRIAN INTERVAL (LPI).
2. PEDESTRIAN PHASE UPON PUSH BUTTON ACTIVATION ONLY.

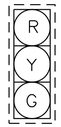
SYSTEM DESIGN VOLUMES AM (PM)



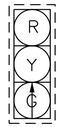
PROPOSED INDICATIONS



C1.C2



C3.C4



B1.B2.B3.B4
D1.D2.D3

EXISTING INDICATIONS

TO REMAIN OR RELOCATE



P1-P4

NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES

EXISTING COUNTDOWN PEDESTRIAN SIGNAL HEADS SHALL HAVE NEW L.E.D. LENSES INSTALLED

DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	ϕ CALLED	ϕ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
1	WESTERN AVE EB THROUGH	6	6	B	-	-
2	WESTERN AVE EB THROUGH	6	6	B	-	-
3*	WESTERN AVE EB ADVANCE	6	6	A	-	-
4*	WESTERN AVE WB ADVANCE	2	2	A	-	-
5	WESTERN AVE WB THROUGH	2	2	B	-	-
6	WESTERN AVE WB THROUGH	2	2	B	-	-
7	WESTERN AVE WB THROUGH	2	2	B	-	-
8	CROSSING WAY NB LEFT	4	4	B	-	-
9	CROSSING WAY NB LEFT	4	4	B	-	-
10	CROSSING WAY NB RIGHT	4	4	B	5	-

* SEE ADVANCED DILEMMA ZONE DETAIL (35 MPH)
NOTE: LOCATION AND QUANTITY OF ADDITIONAL VEHICLE DETECTION ZONES TO BE DETERMINED BASED ON THE SPECIFIC ASCT SYSTEM REQUIREMENTS

SIGNAL TIMING SCHEDULE

ITEM / PHASE	ϕ 1	ϕ 2	ϕ 3	ϕ 4	ϕ 5	ϕ 6	ϕ 7	ϕ 8
MOVEMENT	-	B	-	C	-	D	-	-
MINIMUM INITIAL	-	10	-	7	-	10	-	-
PASSAGE TIME	-	3.5	-	3.0	-	3.5	-	-
MAXIMUM 1	-	45	-	25	-	45	-	-
MAXIMUM 2	-	95	-	40	-	95	-	-
YELLOW	-	4.0	-	4.0	-	4.0	-	-
ALL RED	-	2.0	-	2.0	-	2.0	-	-
PED WALK	-	-	-	5	-	5	-	-
PED CLEAR	-	-	-	22	-	14	-	-
DYN MAX LIMIT	-	-	-	-	-	-	-	-
DYN MAX STEP	-	-	-	-	-	-	-	-
RECALL	-	SOFT	-	OFF	-	SOFT	-	-
DETECTOR	-	NON-LOCK	-	NON-LOCK	-	NON-LOCK	-	-
PRE-EMPT PRIORITY	-	4	-	-	-	3	-	-
FLASH	-	Y	-	R	-	Y	-	-
DUAL ENTRY	-	ON	-	OFF	-	ON	-	-

NOTES: S = SOFT RECALLY = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK
IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD.
INTERSECTION SHALL BE PART OF AN ASCT (ADAPTIVE) SYSTEM.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

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FIELD CHANGES		

AUGUSTA
ROUTE 11/100/202 (WESTERN AVE) AND CROSSING WAY

TRAFFIC SIGNAL PLAN

SHEET NUMBER
24
OF 358

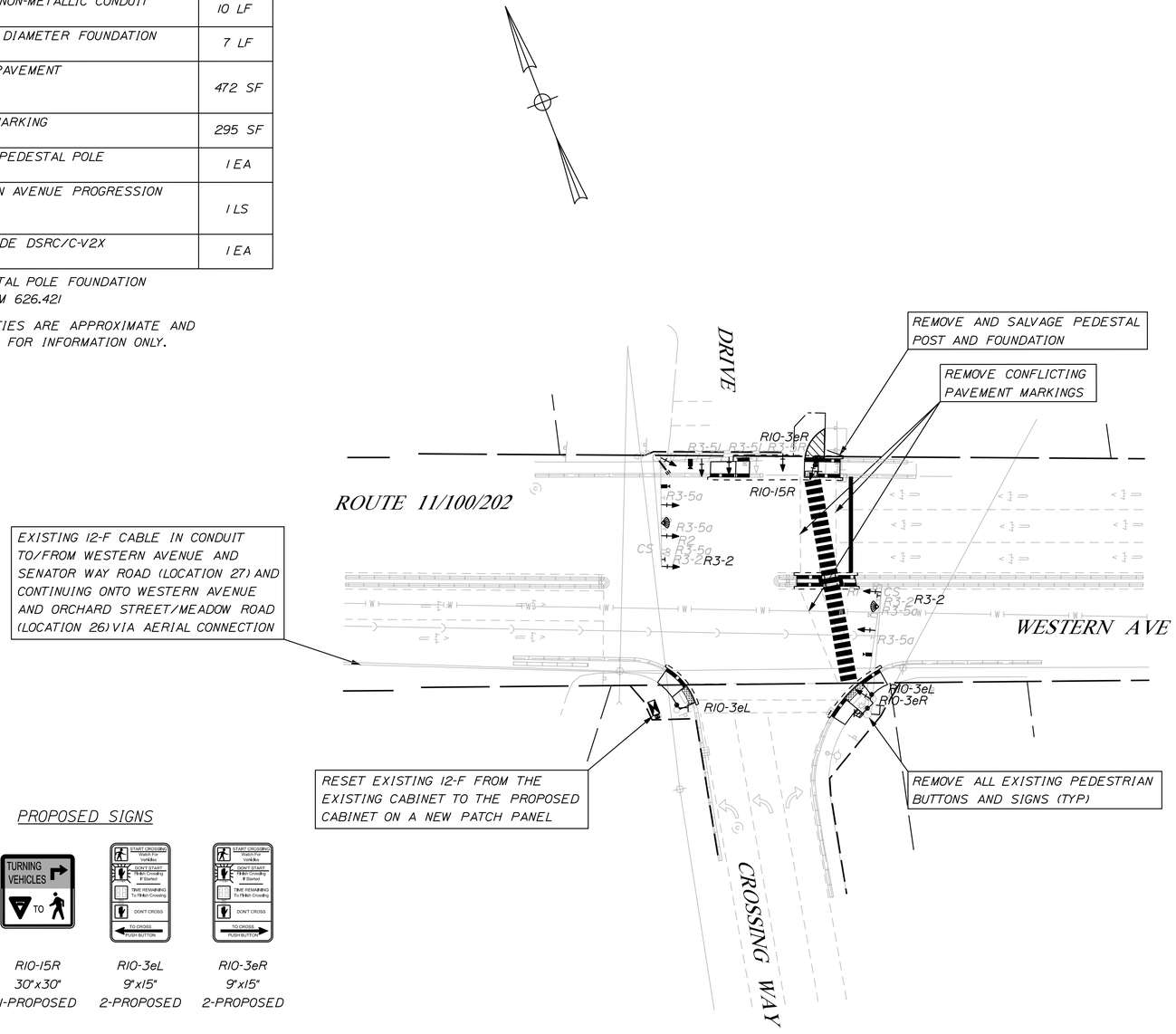
Filename: 024_Signal_24.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
FURNISH AND INSTALL (3-INCH) NON-METALLIC CONDUIT (ITEM 626.22)	10 LF
FURNISH AND INSTALL 24-INCH DIAMETER FOUNDATION (ITEM 626.421) *	7 LF
FURNISH AND INSTALL WHITE PAVEMENT AND CURB MARKING (ITEM 627.75)	472 SF
REMOVE EXISTING PAVEMENT MARKING (ITEM 627.77)	295 SF
FURNISH AND INSTALL 10-FOOT PEDESTAL POLE (ITEM 643.92)	1 EA
FURNISH AND INSTALL WESTERN AVENUE PROGRESSION BASED ASCT SYSTEM (ITEM 654.05)	1 LS
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

* REMOVAL OF EXISTING PEDESTAL POLE FOUNDATION SHALL BE SUBSIDIARY TO ITEM 626.421

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.



PROPOSED SIGNS



R3-2	R10-15R	R10-3eL	R10-3eR
24"x24"	30"x30"	9"x15"	9"x15"
2-PROPOSED	1-PROPOSED	2-PROPOSED	2-PROPOSED

EXISTING SIGNS



R3-2	R3-5L	R3-5a	R3-5R
2-REMOVED	2-RETAINED	5-RETAINED	1-RETAINED

EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USE/RESERVED	
	2	NOT USE/RESERVED	
R1	3	1	ϕ6 (EB)
R2	4	2	ϕ2 (WB)
	5	NOT USED	
	6	NOT USED	

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.
2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 2 = LOWEST)
3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR AND/OR RSU, 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 (4.0 SECONDS YELLOW AND 2.0 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.
4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER		
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

AUGUSTA
ROUTE 11/100/202 (WESTERN AVE)
AND CROSSING WAY

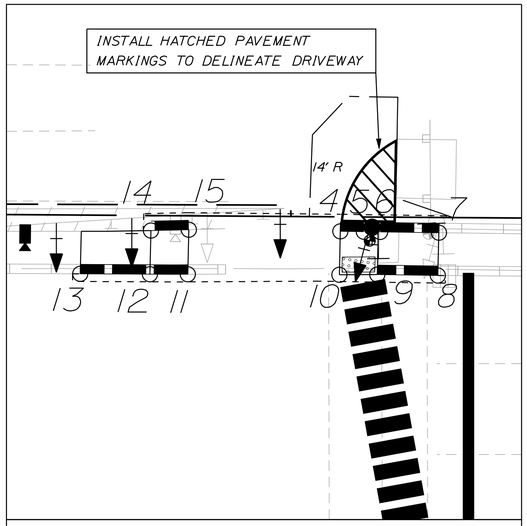
TRAFFIC SIGNAL PLAN

SHEET NUMBER
24A
OF 358

Username: jorobert Date:11/24/2020 Division: HIGHWAY Filename: 024_Signal_24a.dgn

Filename: 024_Signol_24c.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

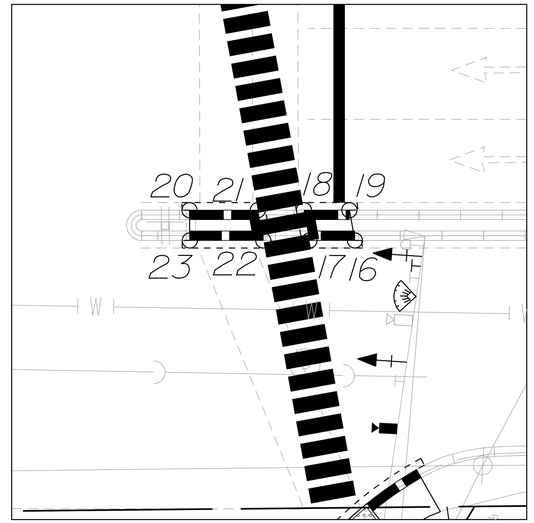
B & C CORNER - N DETAIL



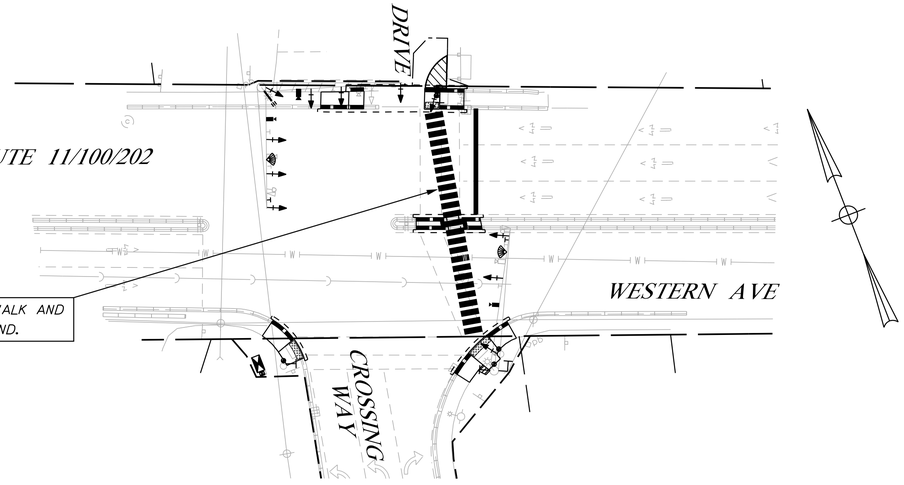
RECONSTRUCT EASTERN CURB RAMP AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(14).
MAINTAIN EXISTING DRIVEWAY OPENING WIDTH. RELOCATE WESTERN LANDING AND RECONSTRUCT 9.2' LONG TRANSITION LENGTH. SEE MAINEDOT STANDARD DETAIL 801(13).
INSTALL BACK CURB ALONG THE CURB RAMP AND LANDINGS.

10 0 10 20
Scale of Feet

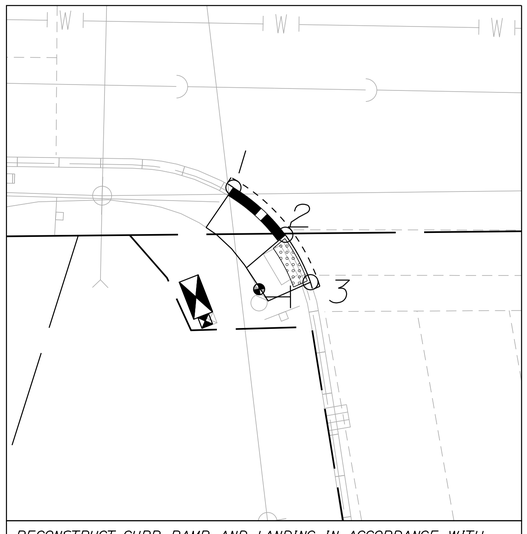
RAISED ISLAND DETAIL



10 0 10 20
Scale of Feet



A CORNER - SW DETAIL



RECONSTRUCT CURB RAMP AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).
TRANSITION LENGTH REQUIRED FOR THE CURB RAMP SHALL BE 9.2'. SEE MAINEDOT STANDARD DETAIL 801(13).

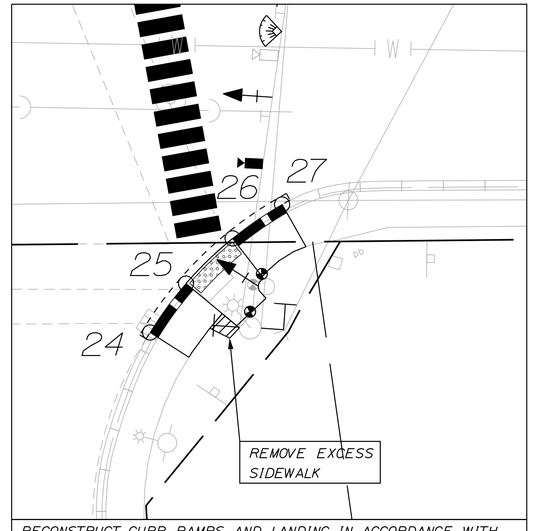
10 0 10 20
Scale of Feet

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

D CORNER - SE DETAIL



RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).
EXTEND EASTERN LIMIT OF LANDING TO OUTSIDE OF EXISTING PEDESTRIAN POLE.
EXTEND LANDING AN ADDITIONAL 3' TO ACCESS THE PEDESTRIAN BUTTONS. SEE DETAIL ON SHEET H.

10 0 10 20
Scale of Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

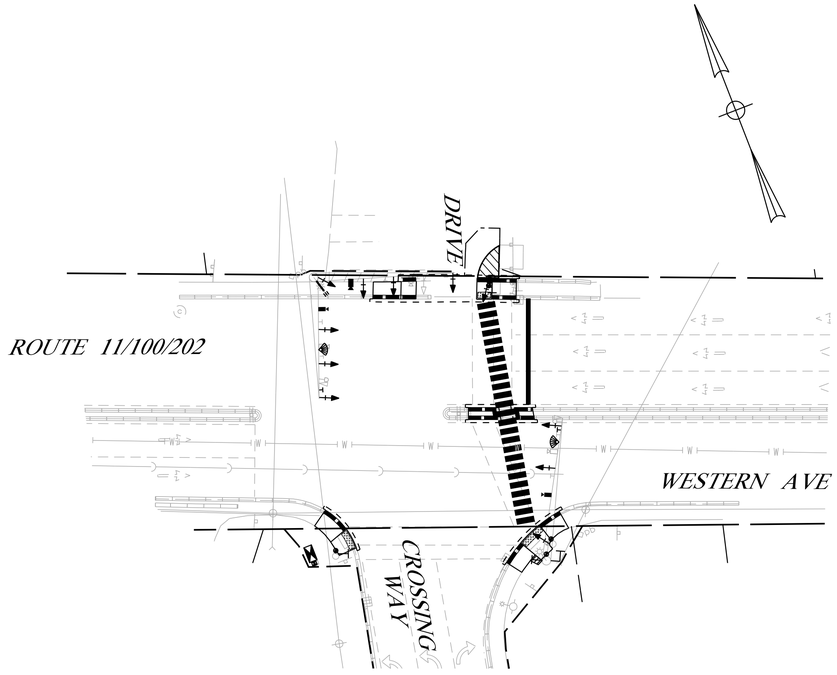
PROJ. MANAGER	B. KEEZER	DATE
DESIGN-DETAILED	MLG	07/20
CHECKED-REVIEWED	CMB	07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 11/100/202 (WESTERN AVE) AND CROSSING WAY
CURB RAMP LAYOUT AND DETAIL PLAN

SHEET NUMBER
24C
OF 358

PT. TO PT.	RADIUS (FT)	ITEM 608.26 - CURB RAMP DETECTABLE WARNING FIELD		ITEM 609.11 - VERTICAL CURB TYPE I (LF)	ITEM 609.221 - TERMINAL CURB TYPE I (LF)	ITEM 609.222 - TERMINAL CURB TYPE I - CIRCULAR (LF)	ITEM 609.34 - CURB TYPE 5 (LF)	COMMENT
		LENGTH (FT)	QTY (SF)					
1 TO 2	24.0					9.2		
2 TO 3	24.0	7.1	12.1					
4 TO 5	-			3.1				
6 TO 7	-			7.8				
8 TO 9	-				8.0			
9 TO 10	-	5.0	8.7					
11 TO 12	-				5.0			
12 TO 13	-			9.2				
14 TO 15	-				5.0			
16 TO 17	-						6.0	
17 TO 18	-						3.8	
18 TO 19	-						6.0	
20 TO 21	-						9.0	
21 TO 22	-						3.8	
22 TO 23	-						9.7	
24 TO 25	49.0					8.0		
* 25 TO 26	49.0	8.6	15.2					4.6% CROSS SLOPE
26 TO 27	49.0					8.0		

* NON-COMPLIANT CURB RAMP ELEMENT - THE EXISTING GUTTER LINE PROFILE IS GREATER THAN 2%. THEREFORE THE LEVEL LANDING CROSS SLOPE AND/OR RUNNING SLOPE WILL BE GREATER THAN THE 2% AND 8.33% MAXIMUM ALLOWABLE, RESPECTIVELY. THE COMMENT IS THE MAXIMUM VALUE FOR PROPOSED LEVEL OF COMPLIANCE.



ALL CURB RAMPS SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND MAINEDOT STANDARD DETAILS 801(11) to 801(26) AS NOTED, AS WELL AS DETAILS PROVIDED ON SHEET H.

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
COMMON EXCAVATION (ITEM 203.20)	1.4 CY
HOT MIX ASPHALT, 9.5 MM NOMINAL MAXIMUM SIZE (ITEM 403.210)	6.8 TONS
PLAIN CONCRETE SIDEWALK (ITEM 608.07)	38.2 SY
CURB RAMP DETECTABLE WARNING FIELD (ITEM 608.26)	36.0 SF
CONSTRUCT SIDEWALK (ITEM 608.45)	0.3 SY
REGRADING SIDEWALK (ITEM 608.46)	46.8 LF

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
VERTICAL CURB TYPE I (ITEM 609.11)	20.1 LF
TERMINAL CURB TYPE I (ITEM 609.221)	18.0 LF
TERMINAL CURB TYPE I - CIRCULAR (ITEM 609.222)	25.2 LF
CURB TYPE 5 (ITEM 609.34)	38.3 LF

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	BY	DATE
PROJ. MANAGER	B. KEEZER	
DESIGN-DETAILED	MLG	07/20
CHECKED-REVIEWED	CMB	07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 11/100/202 (WESTERN AVE) AND CROSSING WAY

CURB RAMP LAYOUT AND DETAIL PLAN

SHEET NUMBER
24D
OF 358

Filename: 024_Signal_24d.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

Filename: ...\ROW\MSTA\024_RWPLAN7.dgn Division: ROW Username: Benjamin.Singer Date:11/19/2020

PLAN LEGEND

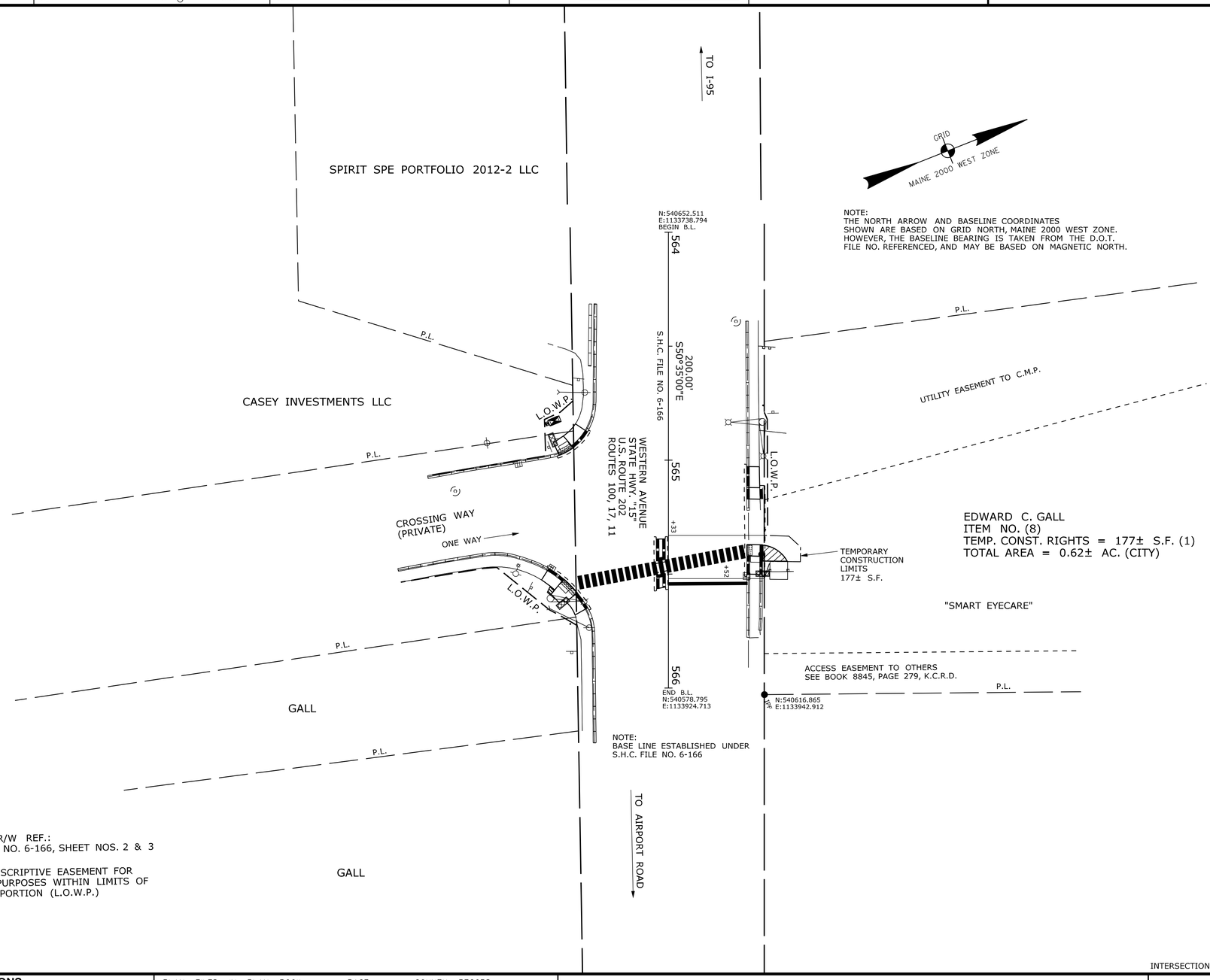
Town, County, State	New R/W Along Existing R/W	Existing / Proposed	Existing / Proposed	Cut Line / Fill Line	
Approx. Property Lines P.L.	Building / Clearing Limit Line	Sanitary Sewer	Traveled Way	Stonewall / Retaining Wall	
Existing Right of Way	Trees Conifer / Deciduous	Telephone Line	Ditch	Baseline 10+00 11+00 12+00	
Limits of Wrought Portion L.O.W.P.	Tree Line / Bush Line	Electric Line	Catch Basin	Monument / Traverse Point	
Control Of Access C.O.A.	Water Edge	Water Line	Manhole	Iron Rod Found IRF / Pipe Found IPF	
New Right of Way	Ledge / Rock/Boulder / Flag Pole	Underdrain Line	Sewer Manhole	Replacement Pin Set	
New Easement	Fence CHAIN LINK / BARB WIRE / STOCKADE	Gas Line	Utility Pole		
New Temporary Rights	Sign / Well WELL / Mailbox	Guardrail	Fire Hydrant		
New R/W Within Existing R/W		Culvert	Curbing		

THIS PLAN WAS PREPARED IN CONNECTION WITH THE DEPARTMENT'S ACQUISITION OF REAL PROPERTY FOR TRANSPORTATION PURPOSES. IT CANNOT BE USED TO ESTABLISH LEGAL BOUNDARIES BETWEEN ABUTTING PROPERTY OWNERS.

25 0 25 50 75 100
Scale of Feet

STATE OF MAINE
REGISTRY OF DEEDS

COUNTY _____
RECEIVED _____, _____
at _____h_____m_____M and
recorded in Plan Bk _____, Pg._____
Attest: _____
REGISTER



TECH	CHECKED
B.S.	G.L.L.
B.S.	G.L.L.
B.S.	G.L.L.

ITEM
EXISTING CONDITION PLAN
FINAL RIGHT OF WAY
AREAS

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION - AUGUSTA, ME 04333-0016 - 207-624-3460
AUGUSTA
RIGHT OF WAY MAP

INTERSECTION NO. 24 WIN 024301.00

REVISIONS NO.	DATE	DESCRIPTION	BY

PLAN FILED IN PLAN BOOK PAGE COUNTY RECORD NO.	GRANTOR	INSTRUMENT	DATE	BOOK	PAGE

BRUCE A. VAN NOTE
COMMISSIONER
JOYCE NOEL TAYLOR
CHIEF ENGINEER
DATE

STATE HIGHWAY "15"
WESTERN AVE. / U.S. ROUTE 202
AUGUSTA KENNEBEC COUNTY
FEDERAL AID PROJECT NO. 2430100

NOVEMBER 2020	RIGHT-OF-WAY MAP	D.O.T. FILE NO. 6-487
SCALE 1" = 25'	SHEET 7 OF 12	

SHEET NUMBER
24R
OF 358

LIST OF WORK ITEMS

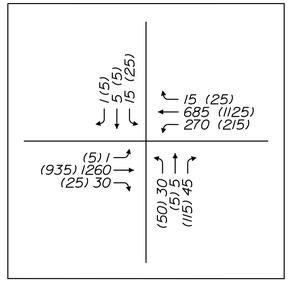
EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON SPAN AND TETHER WIRE	9
FURNISH AND INSTALL ONE-WAY 4-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON SPAN AND TETHER WIRE	1
FURNISH AND INSTALL ONE-WAY, 16 X 18-INCH LED SIDE OF POLE MOUNTED COUNTDOWN PEDESTRIAN SIGNAL HEAD	2
FURNISH AND INSTALL ONE-WAY, 16 X 18-INCH LED TOP OF POST MOUNTED COUNTDOWN PEDESTRIAN SIGNAL HEAD	2
FURNISH AND INSTALL 16-INCH L.E.D. COUNTDOWN PEDESTRIAN LENS IN EXISTING HOUSING	2
FURNISH AND INSTALL ADA COMPLIANT ACCESSIBLE PEDESTRIAN SIGNAL (APS) BUTTON WITH 9"X15" R10-3e INFORMATIONAL SIGN	6
FURNISH AND INSTALL 19-INCH 1RU FIBER OPTIC 12-POSITION PATCH PANEL WITH PIGTAILS	1
RESET FIBER OPTIC ETHERNET SWITCH WITH FIBER OPTIC INTERFACES	1
FURNISH AND INSTALL SPAN WIRE MOUNTED SIGNS	10
RESET COUNTDOWN PEDESTRIAN SIGNAL HEADS	1
RESET PREEMPTION PHASE SELECTOR	1
RESET EXISTING PULL BOX	1
RESET EXISTING 12-F FIBER IN PROPOSED CABINET	-
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 4 APPROACHES, COMPLETE (ITEM 643.21)	1 LS
FURNISH AND INSTALL NON-INVASIVE ADVANCE VEHICLE DETECTION SYSTEM FOR 2 APPROACHES, COMPLETE (ITEM 643.22)	1 LS

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

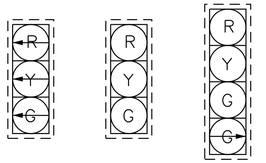
STRUCTURE LIST

STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	EXISTING
A-PI	8' PEDESTAL POLE	24" DIAMETER
B-PI	8' PEDESTAL POLE	24" DIAMETER
D-PI	8' PEDESTAL POLE	24" DIAMETER

SYSTEM DESIGN VOLUMES AM (PM)



PROPOSED INDICATIONS



A1,C1 — A2,A3,B1 B2,C2,C3,D1 — D2 — P1-P2 P5-P6 — P3-P4

NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES

EXISTING COUNTDOWN PEDESTRIAN SIGNAL HEADS SHALL HAVE NEW L.E.D. LENSES INSTALLED

EXISTING INDICATIONS

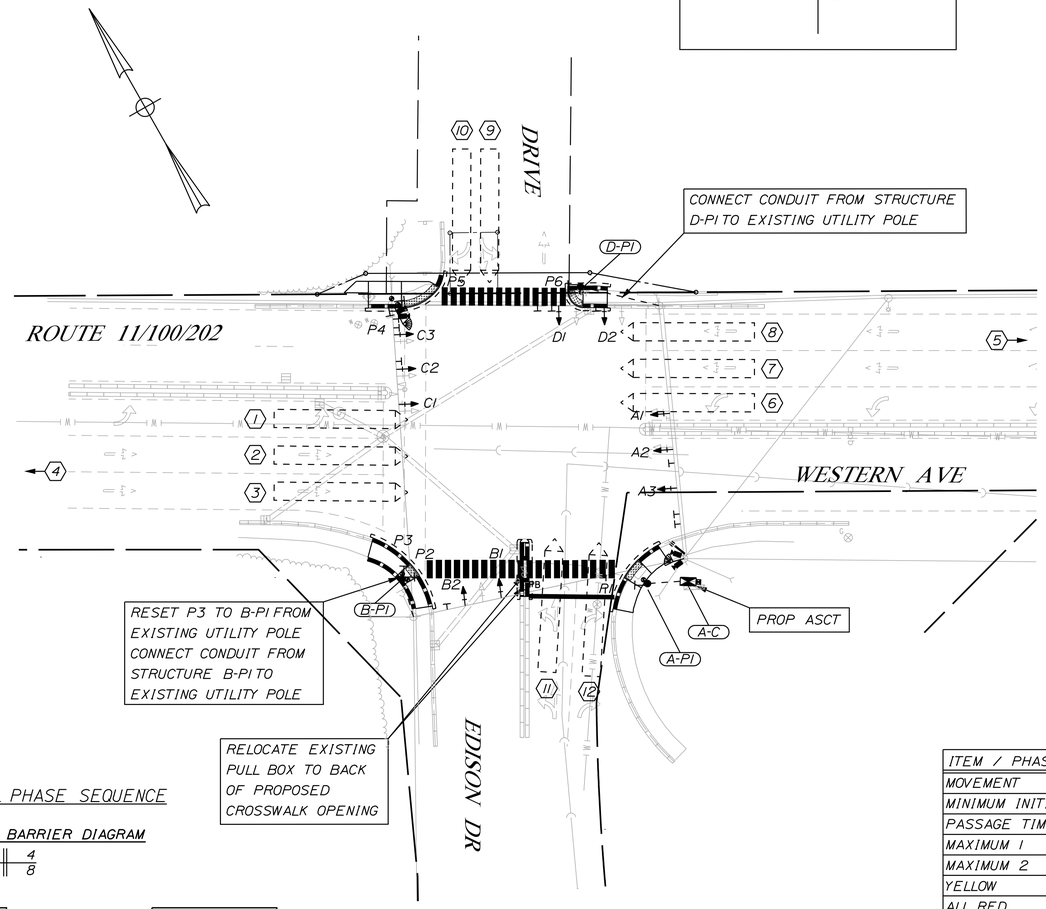
TO REMAIN OR RELOCATE



DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	φ CALLED	φ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
1	WESTERN AVE EB LEFT	1	1	B	-	-
2	WESTERN AVE EB THROUGH	6	6	B	-	-
3	WESTERN AVE EB THRU-RIGHT	6	6	B	-	-
4*	WESTERN AVE EB ADVANCE	6	6	A	-	-
5*	WESTERN AVE WB ADVANCE	2	2	A	-	-
6	WESTERN AVE WB LEFT	5	5	B	-	-
7	WESTERN AVE WB THROUGH	2	2	B	-	-
8	WESTERN AVE WB THRU-RIGHT	2	2	B	-	-
9	DRIVEWAY SB LEFT-THRU	8	8	B	-	-
10	DRIVEWAY SB RIGHT	8	8	B	5	-
11	EDISON DR NB LEFT-THRU	4	4	B	-	-
12	EDISON DR NB RIGHT	4	4	B	5	-

* SEE ADVANCED DILEMMA ZONE DETAIL (35 MPH)
NOTE: LOCATION AND QUANTITY OF ADDITIONAL VEHICLE DETECTION ZONES TO BE DETERMINED BASED ON THE SPECIFIC ASCT SYSTEM REQUIREMENTS



SIGNAL TIMING SCHEDULE

ITEM / PHASE	φ1	φ2	φ3	φ4	φ5	φ6	φ7	φ8
MOVEMENT	A (LT)	C	-	D	C (LT)	A	-	B
MINIMUM INITIAL	5	10	-	5	7	10	-	5
PASSAGE TIME	2.5	3.5	-	2.5	3.5	3.5	-	2.5
MAXIMUM 1	10	60	-	20	35	45	-	20
MAXIMUM 2	10	65	-	25	50	65	-	25
YELLOW	3.5	4.0	-	3.5	3.5	4.0	-	3.5
ALL RED	2.5	2.0	-	2.5	2.5	2.0	-	2.5
PED WALK	-	5	-	-	-	5	-	5
PED CLEAR	-	14	-	-	-	19	-	24
DYN MAX LIMIT	-	-	-	-	-	-	-	-
DYN MAX STEP	-	-	-	-	-	-	-	-
RECALL	OFF	SOFT	-	OFF	OFF	SOFT	-	OFF
DETECTOR	PR	PR	-	PR	PR	PR	-	PR
PRE-EMPT PRIORITY	3	4	-	6	4	3	-	5
FLASH	R	Y	-	R	R	Y	-	R
DUAL ENTRY	OFF	ON	-	ON	OFF	ON	-	ON

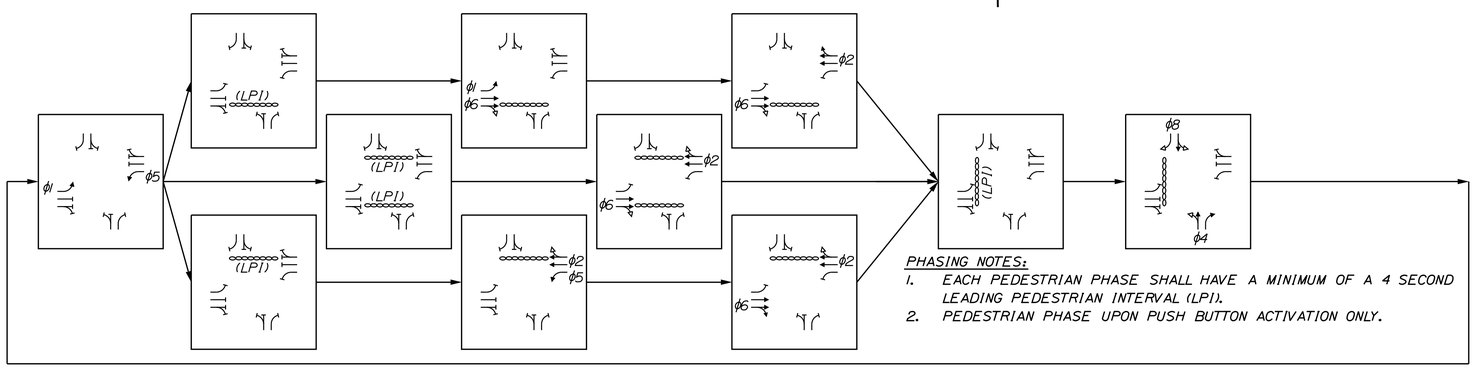
NOTES: S = SOFT RECALLY = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK

IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD. INTERSECTION SHALL BE PART OF AN ASCT (ADAPTIVE) SYSTEM.

PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM

1 2 | 4
5 6 | 8



PHASING NOTES:
1. EACH PEDESTRIAN PHASE SHALL HAVE A MINIMUM OF A 4 SECOND LEADING PEDESTRIAN INTERVAL (LPI).
2. PEDESTRIAN PHASE UPON PUSH BUTTON ACTIVATION ONLY.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

			DATE
PROJ. MANAGER	B. KEEZER	BY	
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

AUGUSTA
ROUTE 11/100/202 (WESTERN AVE)
AND EDISON DR

TRAFFIC SIGNAL PLAN

SHEET NUMBER
25
OF 358

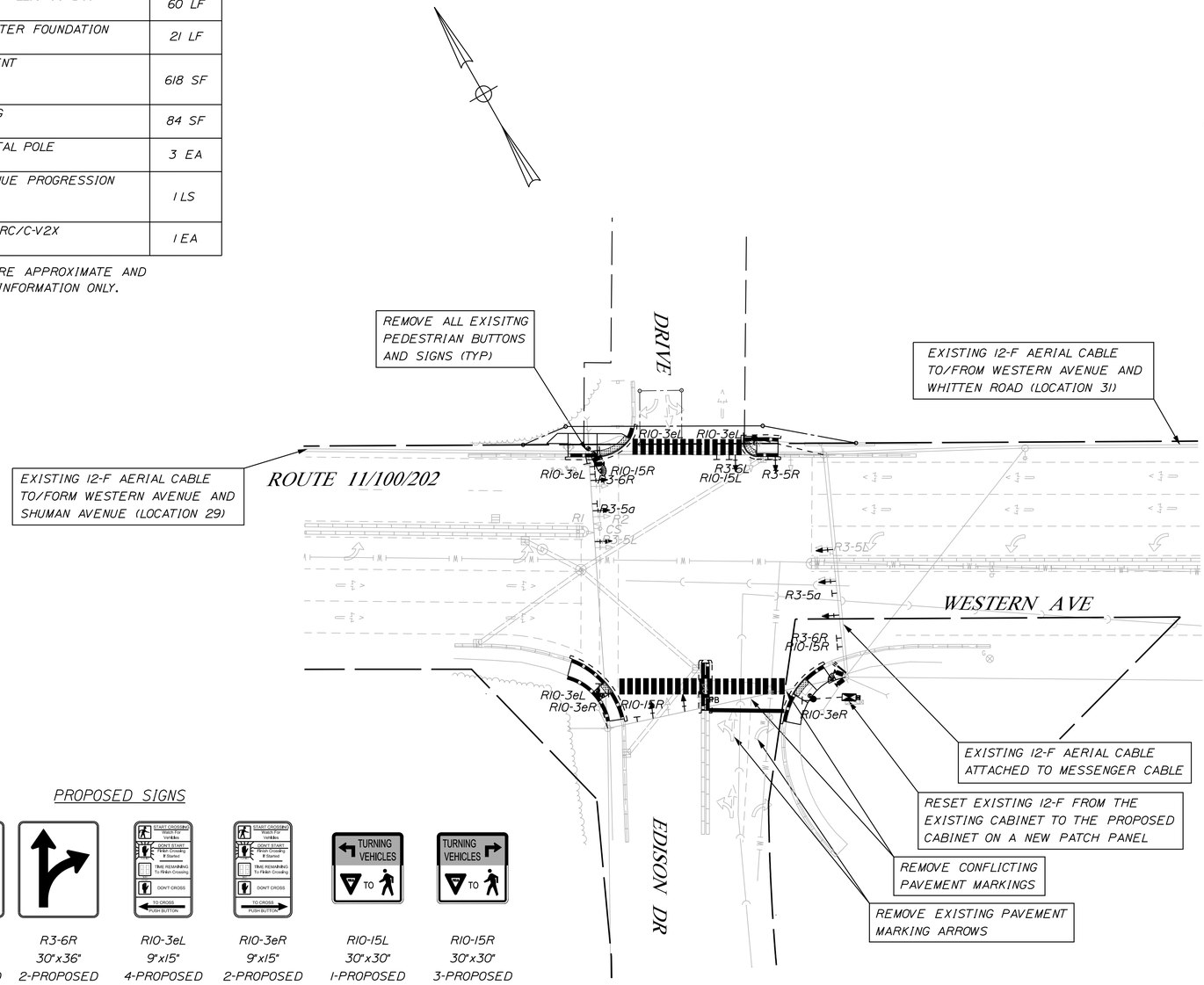
Usernam: jorobert Date:11/24/2020
Division: HIGHWAY
Filename: 025_Signal_25.dgn

Filename: 025_Signal_25a.dgn Username: jorobert Division: HIGHWAY Date:11/24/2020

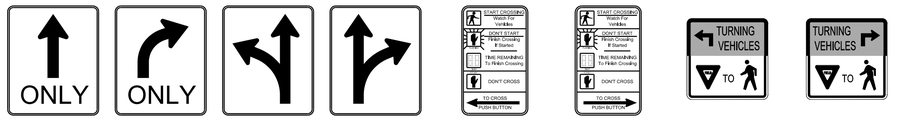
LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
FURNISH AND INSTALL (3-INCH) NON-METALLIC CONDUIT (ITEM 626.22)	60 LF
FURNISH AND INSTALL 24-INCH DIAMETER FOUNDATION (ITEM 626.421)	21 LF
FURNISH AND INSTALL WHITE PAVEMENT AND CURB MARKING (ITEM 627.75)	618 SF
REMOVE EXISTING PAVEMENT MARKING (ITEM 627.77)	84 SF
FURNISH AND INSTALL 8-FOOT PEDESTAL POLE (ITEM 643.92)	3 EA
FURNISH AND INSTALL WESTERN AVENUE PROGRESSION BASED ASCT SYSTEM (ITEM 654.05)	1 LS
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.



PROPOSED SIGNS



R3-5a 30"x36" 2-PROPOSED
R3-5R 30"x36" 1-PROPOSED
R3-6L 30"x36" 1-PROPOSED
R3-6R 30"x36" 2-PROPOSED
R10-3eL 9"x15" 4-PROPOSED
R10-3eR 9"x15" 2-PROPOSED
R10-15L 30"x30" 1-PROPOSED
R10-15R 30"x30" 3-PROPOSED

EXISTING SIGNS



R3-5L
2-RETAINED

EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USE/RESERVED	
	2	NOT USE/RESERVED	
R1	3	1	ϕ1&ϕ6
R2	4	2	ϕ2&ϕ5
	5	NOT USED	
	6	NOT USED	

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.
2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 2 = LOWEST)
3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR AND/OR RSU, 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 (4.0 SECONDS YELLOW AND 2.5 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.
4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	DATE
PROJ. MANAGER		
DESIGN-DETAILED	MLG	07/20
CHECKED-REVIEWED	CMB	07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

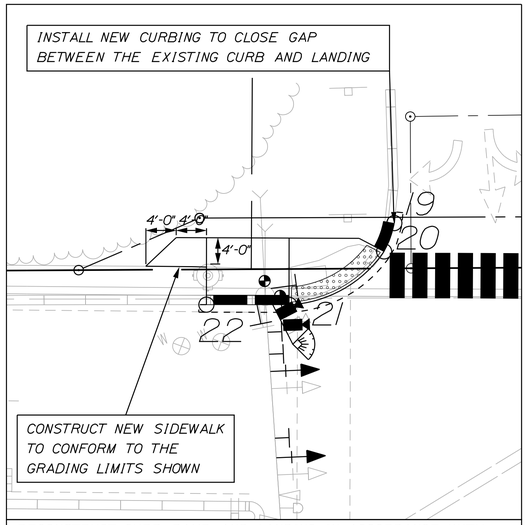
AUGUSTA
ROUTE 11/100/202 (WESTERN AVE)
AND EDISON DR

TRAFFIC SIGNAL PLAN

SHEET NUMBER
25A
OF 358

Filename: 025_Signal_25c.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

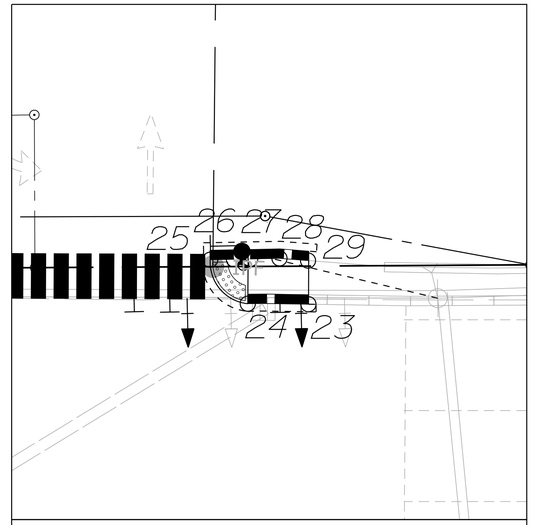
C CORNER - NW DETAIL



RECONSTRUCT CURB RAMP AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).
TRANSITION LENGTH REQUIRED FOR THE WESTERN CURB RAMP SHALL BE 10.9'. SEE MAINEDOT STANDARD DETAIL 801(13).

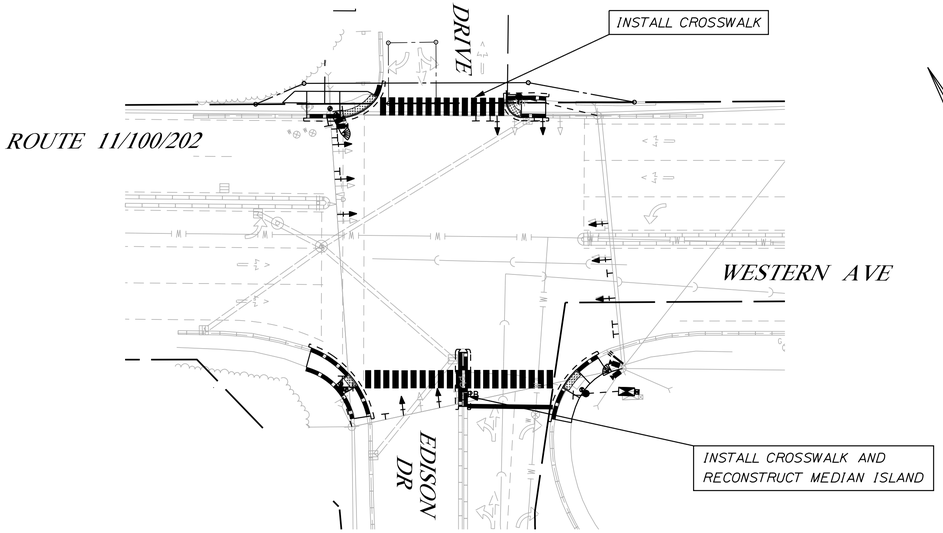
10 0 10 20
Scale of Feet

D CORNER - NE DETAIL

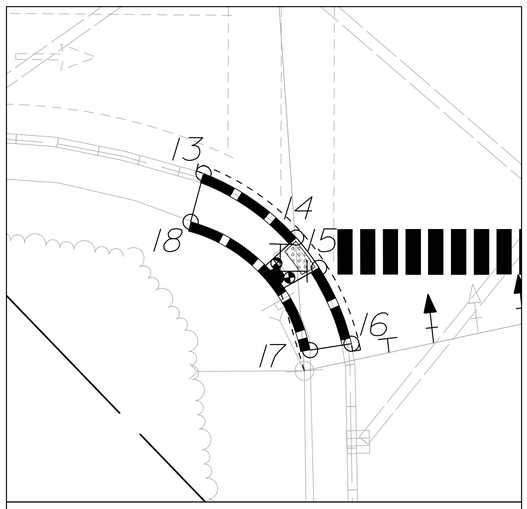


RECONSTRUCT CURB RAMP AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(22).
INSTALL BACK CURB ALONG THE CURB RAMP AND LANDING.

10 0 10 20
Scale of Feet



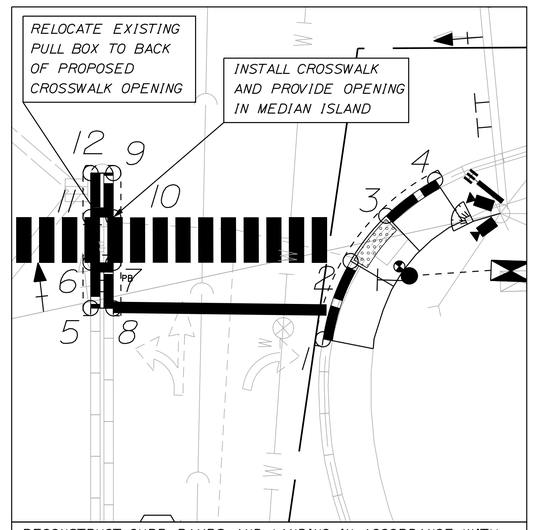
B CORNER - SW DETAIL



RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).
TRANSITION LENGTH REQUIRED FOR WESTERN AND EASTERN CURB RAMPS SHALL BE 13.5' AND 10.9', RESPECTIVELY.
SEE MAINEDOT STANDARD DETAIL 801(13).
INSTALL BACK CURB ALONG THE CURB RAMPS AND LANDING.

10 0 10 20
Scale of Feet

A CORNER - SE DETAIL



RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).
TRANSITION LENGTH REQUIRED FOR THE SOUTHERN CURB RAMP SHALL BE 10.9'. SEE MAINEDOT STANDARD DETAIL 801(13).

10 0 10 20
Scale of Feet

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER	
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DESIGN3-DETAILED3		
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REVISIONS 2		
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REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 11/100/202 (WESTERN AVE)
AND EDISON DR

CURB RAMP LAYOUT
AND DETAIL PLAN

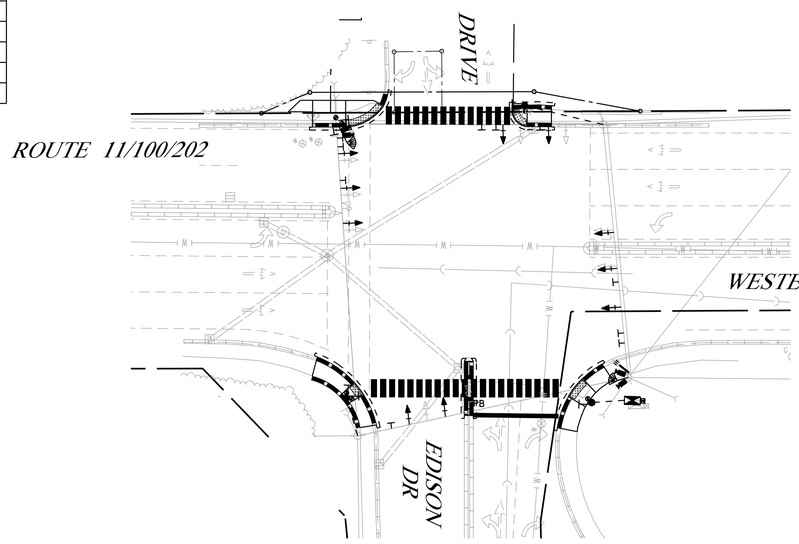
SHEET NUMBER

25C

OF 358

PT. TO PT.	RADIUS (FT)	ITEM 608.26 - CURB RAMP DETECTABLE WARNING FIELD		ITEM 609.11 - VERTICAL CURB TYPE 1 (LF)	ITEM 609.12 - VERTICAL CURB TYPE 1 - CIRCULAR (LF)	ITEM 609.221 - TERMINAL CURB TYPE 1 (LF)	ITEM 609.222 - TERMINAL CURB TYPE 1 - CIRCULAR (LF)	ITEM 609.34 - CURB TYPE 5 (LF)	COMMENT
		LENGTH (FT)	QTY (SF)						
1 TO 2	28.5						10.9		
* 2 TO 3	28.5	7.6	13.2						4.5% CROSS SLOPE
3 TO 4	28.5						8.0		
5 TO 6	-							6.0	
6 TO 7	-							3.0	
7 TO 8	-							6.0	
9 TO 10	-							5.8	
10 TO 11	-							3.0	
11 TO 12	-							5.8	
13 TO 14	32.0						15.0		
* 14 TO 15	32.0	5.0	8.1						3.0% CROSS SLOPE
15 TO 16	32.0						10.9		
17 TO 18	21.8				24.4				
19 TO 20	12.0						4.0		
20 TO 21	16.0	14.9	25.6						
21 TO 22	-					10.9			
23 TO 24	-					8.0			
* 24 TO 25	5.5	8.4	11.4						7.7% CROSS SLOPE
25 TO 26	-			3.1					
27 TO 28	-			3.9					
28 TO 29	-			3.9					

* NON-COMPLIANT CURB RAMP ELEMENT - THE EXISTING GUTTER LINE PROFILE IS GREATER THAN 2%. THEREFORE THE LEVEL LANDING CROSS SLOPE AND/OR RUNNING SLOPE WILL BE GREATER THAN THE 2% AND 8.33% MAXIMUM ALLOWABLE, RESPECTIVELY. THE COMMENT IS THE MAXIMUM VALUE FOR PROPOSED LEVEL OF COMPLIANCE.



ALL CURB RAMPS SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND MAINEDOT STANDARD DETAILS 801(11) to 801(26) AS NOTED, AS WELL AS DETAILS PROVIDED ON SHEET H.

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
HOT MIX ASPHALT, 9.5 MM NOMINAL MAXIMUM SIZE (ITEM 403.210)	6.9 TONS
PLAIN CONCRETE SIDEWALK (ITEM 608.07)	64.0 SY
CURB RAMP DETECTABLE WARNING FIELD (ITEM 608.26)	58.3 SF
CONSTRUCT SIDEWALK (ITEM 608.45)	9.9 SY
REGRADING SIDEWALK (ITEM 608.46)	56.6 SY

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
VERTICAL CURB TYPE 1 (ITEM 609.11)	10.9 LF
VERTICAL CURB TYPE 1 - CIRCULAR (ITEM 609.12)	24.4 LF
TERMINAL CURB TYPE 1 (ITEM 609.221)	18.9 LF
TERMINAL CURB TYPE 1 - CIRCULAR (ITEM 609.222)	48.8 LF
CURB TYPE 5 (ITEM 609.34)	29.6 LF

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

PLAN

25 0 25 50

Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER		
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FIELD CHANGES			

AUGUSTA
ROUTE 11/100/202 (WESTERN AVE)
AND EDISON DR

CURB RAMP LAYOUT AND DETAIL PLAN

SHEET NUMBER

25D

OF 358

Filename: 025_Signal_25d.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

Filename: ...\ROW\MSTA\025_RWPLAN8.dgn Division: ROW Username: Benjamin.Singer Date:11/19/2020

PLAN LEGEND

Town, County, State	New R/W Along Existing R/W	Sanitary Sewer	Existing / Proposed	Traveled Way	Existing / Proposed
Approx. Property Lines P.L.	Building / Clearing Limit Line	Telephone Line		Ditch	
Existing Right of Way	Trees Conifer / Deciduous	Electric Line		Catch Basin	
Limits of Wrought Portion L.O.W.P.	Tree Line / Bush Line	Water Line		Manhole	
Control Of Access C.O.A.	Water Edge	Underdrain Line		Sewer Manhole	
New Right of Way	Ledge / Rock/Boulder / Flag Pole	Gas Line		Utility Pole	
New Easement	Fence CHAIN LINK / BARB WIRE / STOCKADE	Guardrail		Fire Hydrant	
New Temporary Rights	Sign / Well / Mailbox	Culvert		Curbing	
New R/W Within Existing R/W					

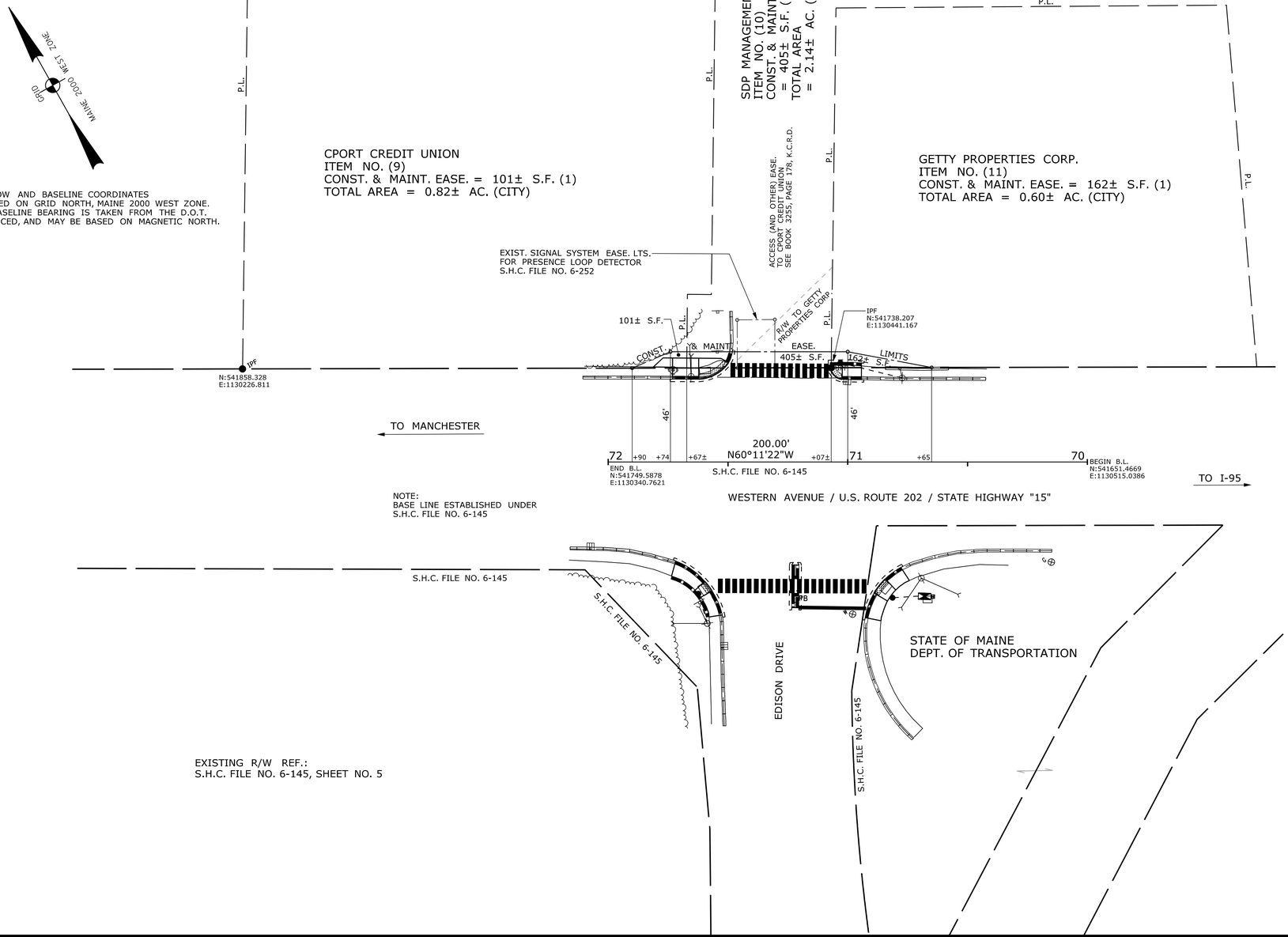
Cut Line C—C—C	Fill Line F—F—F	
Stonewall	Retaining Wall	
Baseline 10+00 11+00 12+00		
Monument	Traverse Point	
Iron Rod Found ● IRF	Pipe Found ● IPF	
Replacement Pin Set		

THIS PLAN WAS PREPARED IN CONNECTION WITH THE DEPARTMENT'S ACQUISITION OF REAL PROPERTY FOR TRANSPORTATION PURPOSES. IT CANNOT BE USED TO ESTABLISH LEGAL BOUNDARIES BETWEEN ABUTTING PROPERTY OWNERS.

25 0 25 50 75 100
Scale of Feet

STATE OF MAINE
REGISTRY OF DEEDS

COUNTY _____
RECEIVED _____, _____
at _____h_____m_____M and
recorded in Plan Bk _____, Pg._____
Attest: _____
REGISTER



ITEM	TECH	CHECKED
EXISTING CONDITION PLAN	B.S.	G.L.L.
FINAL RIGHT OF WAY	B.S.	G.L.L.
AREAS	B.S.	G.L.L.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION - AUGUSTA, ME 04333-0016 - 207-624-3460
AUGUSTA
RIGHT OF WAY MAP

INTERSECTION NO. 25 WIN 024301.00

REVISIONS NO.	DATE	DESCRIPTION	BY

PLAN FILED IN PLAN BOOK PAGE COUNTY RECORD

NO.	GRANTOR	INSTRUMENT	DATE	BOOK	PAGE

BRUCE A. VAN NOTE
COMMISSIONER
JOYCE NOEL TAYLOR
CHIEF ENGINEER
DATE

STATE HIGHWAY "15"
WESTERN AVE. / U.S. ROUTE 202
AUGUSTA KENNEBEC COUNTY
FEDERAL AID PROJECT NO. 2430100

NOVEMBER 2020	RIGHT-OF-WAY MAP	D.O.T. FILE NO. 6-487
SCALE 1" = 25'	SHEET 8 OF 12	

SHEET NUMBER
25R
OF 358

LIST OF WORK ITEMS

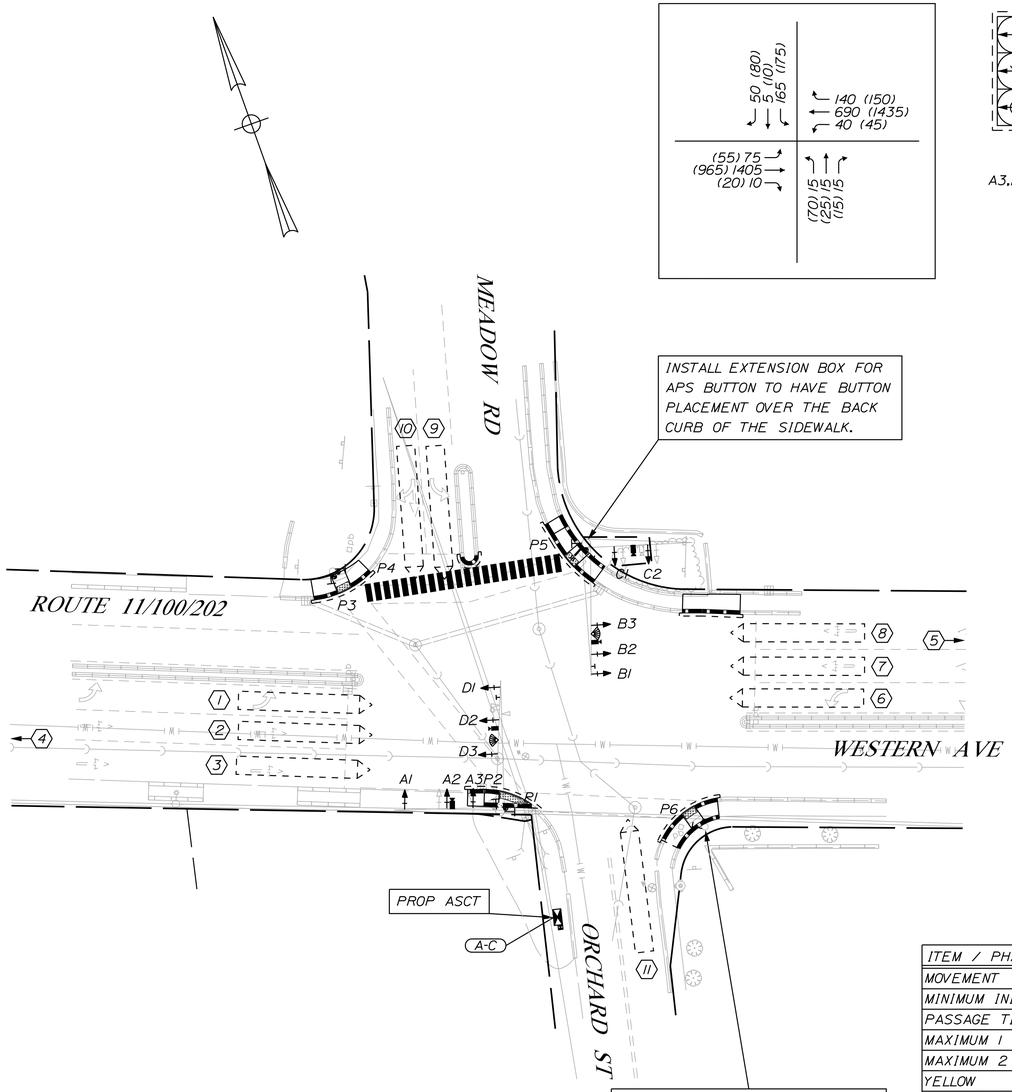
EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	9
FURNISH AND INSTALL ONE-WAY 4-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	2
FURNISH AND INSTALL 6-INCH L.E.D. COUNTOWN PEDESTRIAN LENS IN EXISTING HOUSING	6
FURNISH AND INSTALL ADA COMPLIANT ACCESSIBLE PEDESTRIAN SIGNAL (APS) BUTTON WITH 9"X15" R10-3E INFORMATIONAL SIGN	6
FURNISH AND INSTALL 19-INCH 1 RU FIBER OPTIC 12-POSITION PATCH PANEL WITH PIGTAILS	1
RESET FIBER OPTIC ETHERNET SWITCH WITH FIBER OPTIC INTERFACES	1
FURNISH AND INSTALL MAST ARM MOUNTED SIGNS	4
FURNISH AND INSTALL APS BUTTON EXTENSION BOX	1
REMOVE MAST ARM MOUNTED SIGNS	2
RESET PREEMPTION PHASE SELECTOR	1
RESET EXISTING PEDESTAL POLE AND FOUNDATION	1
RESET EXISTING 12-F FIBER IN PROPOSED CABINET	-
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 4 APPROACHES, COMPLETE (ITEM 643.21)	1 LS
FURNISH AND INSTALL NON-INVASIVE ADVANCE VEHICLE DETECTION SYSTEM FOR 2 APPROACHES, COMPLETE (ITEM 643.22)	1 LS

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

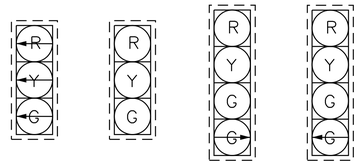
STRUCTURE LIST

STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	EXISTING

SYSTEM DESIGN VOLUMES AM (PM)



PROPOSED INDICATIONS



EXISTING INDICATIONS

TO REMAIN



NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES

EXISTING COUNTDOWN PEDESTRIAN SIGNAL HEADS SHALL HAVE NEW L.E.D. LENSES INSTALLED

DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	φ CALLED	φ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
①	WESTERN AVE EB LEFT	1	1	B	-	-
②	WESTERN AVE EB THROUGH	6	6	B	-	-
③	WESTERN AVE EB THRU-RIGHT	6	6	B	-	-
④*	WESTERN AVE EB ADVANCE	6	6	A	-	-
⑤*	WESTERN AVE WB ADVANCE	2	2	A	-	-
⑥	WESTERN AVE WB LEFT	5	5	B	-	-
⑦	WESTERN AVE WB THROUGH	5	5	B	-	-
⑧	WESTERN AVE WB THRU-RIGHT	2	2	B	-	-
⑨	MEADOW RD SB LEFT	8	8	B	-	-
⑩	MEADOW RD SB THRU-RIGHT	4	4	B	-	-
⑪	ORCHARD ST NB MOVEMENTS	4	4	B	-	-

* SEE ADVANCED DILEMMA ZONE DETAIL (35 MPH)
NOTE: LOCATION AND QUANTITY OF ADDITIONAL VEHICLE DETECTION ZONES TO BE DETERMINED BASED ON THE SPECIFIC ASCT SYSTEM REQUIREMENTS

SIGNAL TIMING SCHEDULE

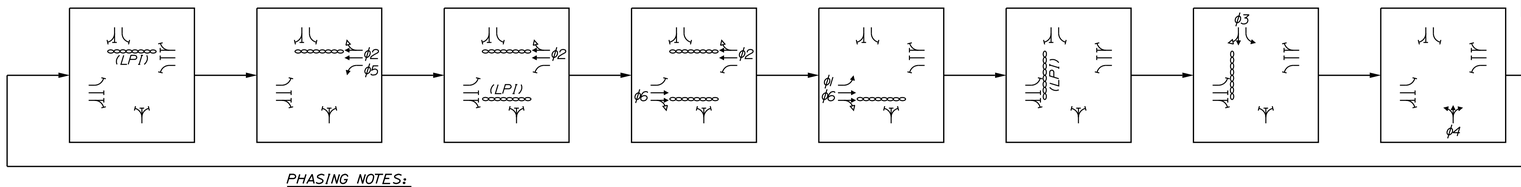
ITEM / PHASE	φ1	φ2	φ3	φ4	φ5	φ6	φ7	φ8
MOVEMENT	D (LT)	B	A	C	B (LT)	D	-	-
MINIMUM INITIAL	5	10	5	5	5	10	-	-
PASSAGE TIME	2.5	3.5	2.0	2.5	2.5	3.5	-	-
MAXIMUM 1	15	40	15	15	20	40	-	-
MAXIMUM 2	10	80	18	12	20	80	-	-
YELLOW	3.5	3.5	3.5	3.5	3.5	3.5	-	-
ALL RED	2.5	2.5	2.5	2.5	2.5	2.5	-	-
PED WALK	-	4	4	-	-	5	-	-
PED CLEAR	-	20	20	-	-	15	-	-
DYN MAX LIMIT	-	-	-	-	-	-	-	-
DYN MAX STEP	-	-	-	-	-	-	-	-
RECALL	OFF	SOFT	OFF	OFF	OFF	SOFT	-	-
DETECTOR	PR	PR	PR	PR	PR	PR	-	-
PRE-EMPT PRIORITY	3	4	-	-	4	3	-	-
FLASH	R	Y	R	R	R	Y	-	-
DUAL ENTRY	OFF	ON	OFF	OFF	OFF	ON	-	-

NOTES: S = SOFT RECALLY = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK
IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD. INTERSECTION SHALL BE PART OF AN ASCT (ADAPTIVE) SYSTEM.

PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM

2 1 ‖ 3 4
5 6



PHASING NOTES:
1. EACH PEDESTRIAN PHASE SHALL HAVE A MINIMUM OF A 4 SECOND LEADING PEDESTRIAN INTERVAL (LPI).
2. PEDESTRIAN PHASE UPON PUSH BUTTON ACTIVATION ONLY.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	BY	DATE
PROJ. MANAGER	B. KEEZER	
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AUGUSTA
ROUTE 11/100/202 (WESTERN AVE)
AND ORCHARD ST / MEADOW RD

TRAFFIC SIGNAL PLAN

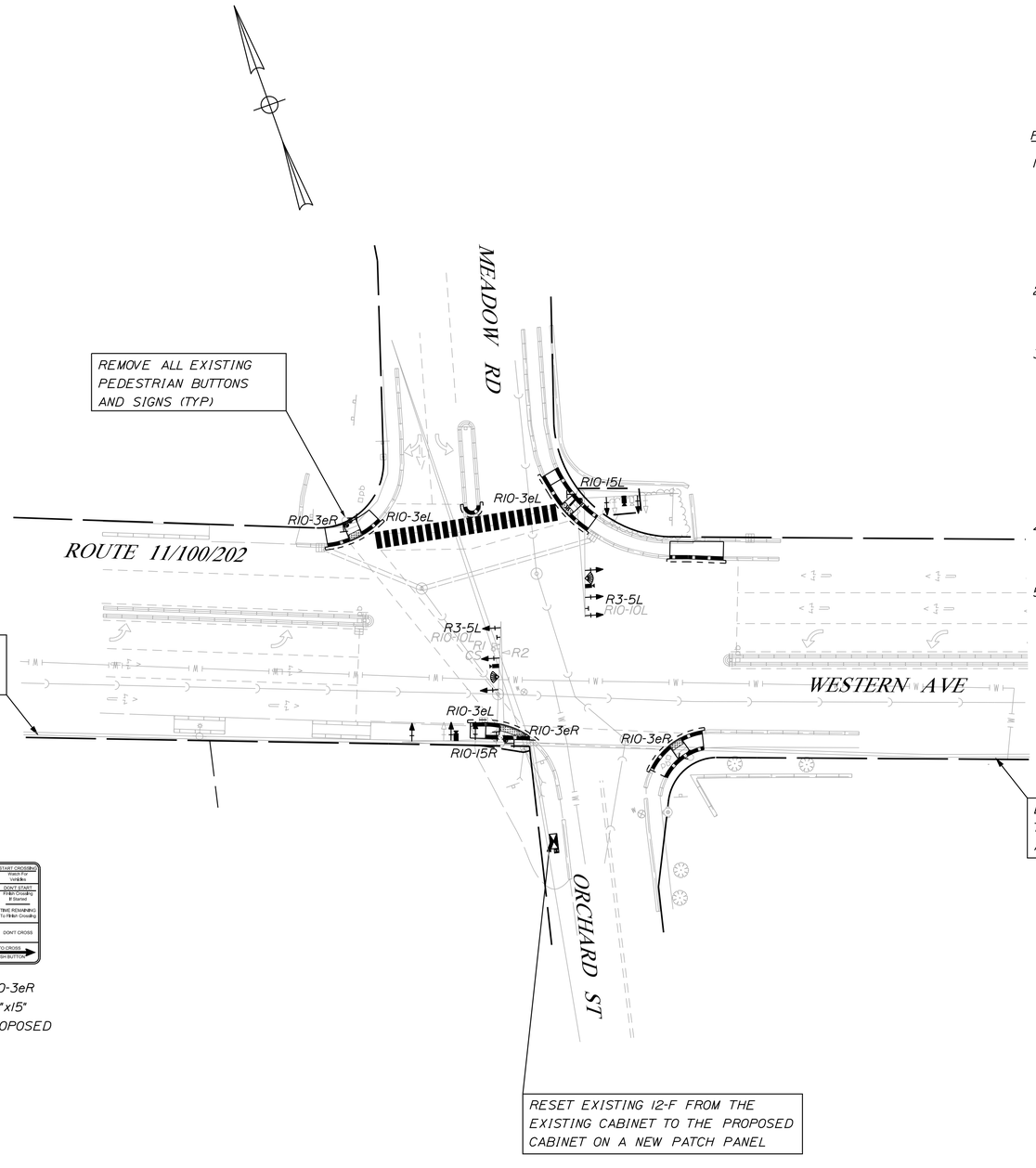
SHEET NUMBER
26
OF 358

Filename: 026_Signal_26.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
FURNISH AND INSTALL WHITE PAVEMENT AND CURB MARKING (ITEM 627.75)	352 SF
FURNISH AND INSTALL WESTERN AVENUE PROGRESSION BASED ASCT SYSTEM (ITEM 654.05)	1 LS
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.



PROPOSED SIGNS



R3-5L
30"x36"
2-PROPOSED

R10-15L
30"x30"
1-PROPOSED

R10-15R
30"x30"
1-PROPOSED

R10-3eL
9"x15"
3-PROPOSED

R10-3eR
9"x15"
3-PROPOSED

EXISTING SIGNS



R10-10L
2-REMOVED

EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USE/RESERVED	
	2	NOT USE/RESERVED	
R1	3	1	ϕ6
R2	4	2	ϕ2&ϕ5
	5	NOT USED	
	6	NOT USED	

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.
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TRAFFIC PLANS

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AUGUSTA
ROUTE 11/100/202 (WESTERN AVE)
AND ORCHARD ST / MEADOW RD

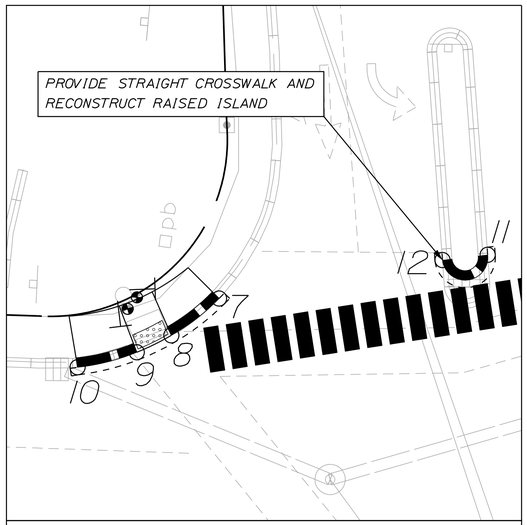
TRAFFIC SIGNAL PLAN

SHEET NUMBER
26A
OF 358

Filename: 026_Signal_26a.dgn Division: HIGHWAY Username: jarobert Date:11/24/2020

Filename: 026_Signal_26c.dgn Division: HIGHWAY Username: jarobert Date:11/24/2020

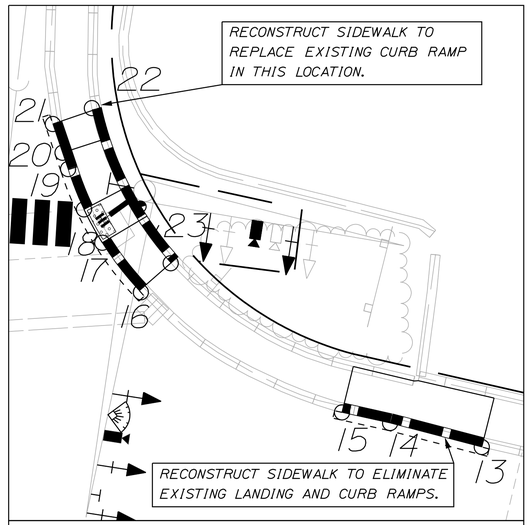
B CORNER - NW DETAIL



RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).

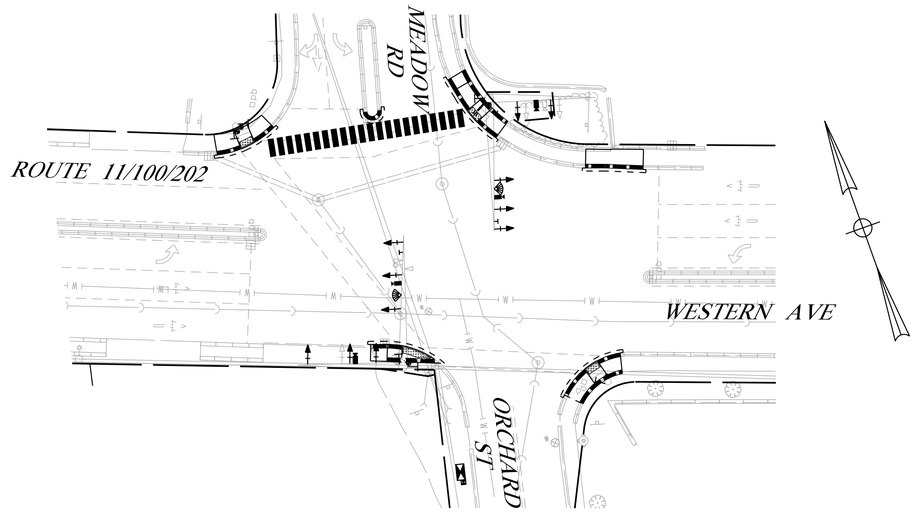
10 0 10 20
Scale of Feet

C CORNER - NE DETAIL

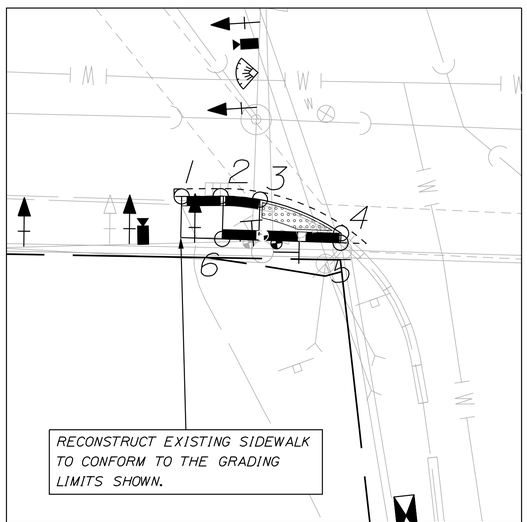


RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).
RECONSTRUCT BACK CURB ALONG THE CURB RAMPS AND LANDING.

10 0 10 20
Scale of Feet



A CORNER - SW DETAIL



RECONSTRUCT CURB RAMP AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(22).
RECONSTRUCT BACK CURB ALONG THE CURB RAMP AND LANDING.

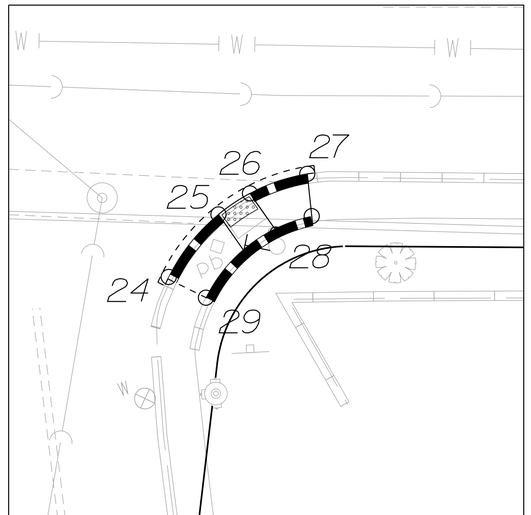
10 0 10 20
Scale of Feet

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

D CORNER - SE DETAIL



RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).
TRANSITION LENGTH REQUIRED FOR THE SOUTHERN CURB RAMP SHALL BE 10.9'. SEE MAINEDOT STANARD DETAIL 801(13).
RECONSTRUCT BACK CURB ALONG THE CURB RAMPS AND LANDING.

10 0 10 20
Scale of Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER	
DESIGN-DETAILED	MLG	JAR 07/20
CHECKED-REVIEWED	CMB	CMB 07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 11/100/202 (WESTERN AVE) AND ORCHARD ST / MEADOW RD
CURB RAMP LAYOUT AND DETAIL PLAN

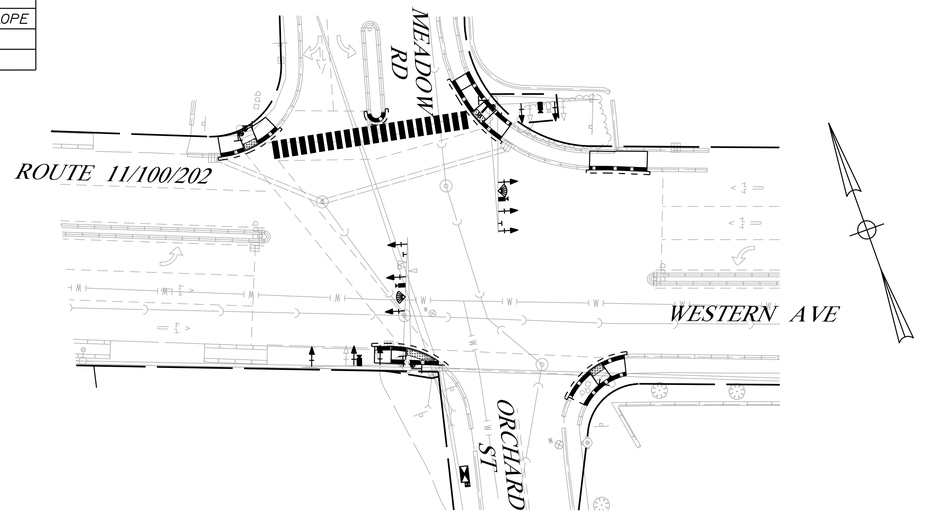
SHEET NUMBER

26C

OF 358

PT. TO PT.	RADIUS (FT)	ITEM 608.26 - CURB RAMP DETECTABLE WARNING FIELD		ITEM 609.11 - VERTICAL CURB TYPE I (LF)	ITEM 609.12 - VERTICAL CURB TYPE I - CIRCULAR (LF)	ITEM 609.221 - TERMINAL CURB TYPE I (LF)	ITEM 609.222 - TERMINAL CURB TYPE I - CIRCULAR (LF)	ITEM 609.35 - CURB TYPE 5 - CIRCULAR (LF)	COMMENT
		LENGTH (FT)	QTY (SF)						
1 TO 2	-					5.2			
2 TO 3	27.5						5.2		
3 TO 4	27.5	11.7	15.2						
5 TO 6	-			15.6					
7 TO 8	28.2						8.0		
8 TO 9	32.0	5.1	8.7						
9 TO 10	28.2						8.0		
11 TO 12	3.0							9.4	
13 TO 14	-			12.5					
14 TO 15	-			6.5					
16 TO 17	42.2						8.0		
17 TO 18	42.0	5.0	8.6						
18 TO 19	42.0						5.7		
19 TO 20	-					2.3			
20 TO 21	-			4.0					
22 TO 23	43.9				22.4				
24 TO 25	25.0						10.9		
* 25 TO 26	25.0	5.0	8.7						3.0% CROSS SLOPE
26 TO 27	25.0						8.0		
28 TO 29	18.8				17.0				

* NON-COMPLIANT CURB RAMP ELEMENT - THE EXISTING GUTTER LINE PROFILE IS GREATER THAN 2%. THEREFORE THE LEVEL LANDING CROSS SLOPE AND/OR RUNNING SLOPE WILL BE GREATER THAN THE 2% AND 8.33% MAXIMUM ALLOWABLE. RESPECTIVELY. THE COMMENT IS THE MAXIMUM VALUE FOR PROPOSED LEVEL OF COMPLIANCE.



ALL CURB RAMPS SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND MAINEDOT STANDARD DETAILS 801(11) to 801(26) AS NOTED. AS WELL AS DETAILS PROVIDED ON SHEET H.

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
HOT MIX ASPHALT, 9.5 MM NOMINAL MAXIMUM SIZE (ITEM 403.210)	7.3 TONS
PLAIN CONCRETE SIDEWALK (ITEM 608.07)	51.6 SY
CURB RAMP DETECTABLE WARNING FIELD (ITEM 608.26)	41.2 SF
CONSTRUCT SIDEWALK (ITEM 608.45)	1.6 SY
REGRADING SIDEWALK (ITEM 608.46)	69.8 SY

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
VERTICAL CURB TYPE I (ITEM 609.11)	38.6 LF
VERTICAL CURB TYPE I - CIRCULAR (ITEM 609.12)	39.4 LF
TERMINAL CURB TYPE I (ITEM 609.221)	7.5 LF
TERMINAL CURB TYPE I - CIRCULAR (ITEM 609.222)	53.8 LF
CURB TYPE 5 - CIRCULAR (ITEM 609.35)	9.4 LF

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER	BY	DATE
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

AUGUSTA
ROUTE 11/100/202 (WESTERN AVE)
AND ORCHARD ST / MEADOW RD

CURB RAMP LAYOUT
AND DETAIL PLAN

SHEET NUMBER

26D

OF 358

Filename: 026_Signal_26d.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

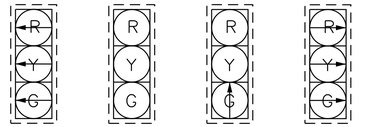
LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	8
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARM UPRIGHTS WITH BRACKET	2
FURNISH AND INSTALL 16-INCH L.E.D. COUNTDOWN PEDESTRIAN LENS IN EXISTING HOUSING	4
FURNISH AND INSTALL ADA COMPLIANT ACCESSIBLE PEDESTRIAN SIGNAL (APS) BUTTON WITH 9"X15" R10-3e INFORMATIONAL SIGN	4
FURNISH AND INSTALL 19-INCH 1 RU FIBER OPTIC 12-POSITION PATCH PANEL WITH PIGTAILS	1
RESET FIBER OPTIC ETHERNET SWITCH WITH FIBER OPTIC INTERFACES	1
FURNISH AND INSTALL MAST ARM AND POLE MOUNTED SIGNS	2
RESET COUNTDOWN PEDESTRIAN SIGNAL HEADS	1
RESET PREEMPTION PHASE SELECTOR	1
RESET EXISTING 12-F FIBER IN PROPOSED CABINET	-
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 3 APPROACHES, COMPLETE (ITEM 643.21)	1
FURNISH AND INSTALL NON-INVASIVE ADVANCE VEHICLE DETECTION SYSTEM FOR 2 APPROACHES, COMPLETE (ITEM 643.22)	1

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

SYSTEM DESIGN VOLUMES AM (PM)

PROPOSED INDICATIONS



A1 | A3,A4,C2 C3,D1,D2 | A2,C1 | C4

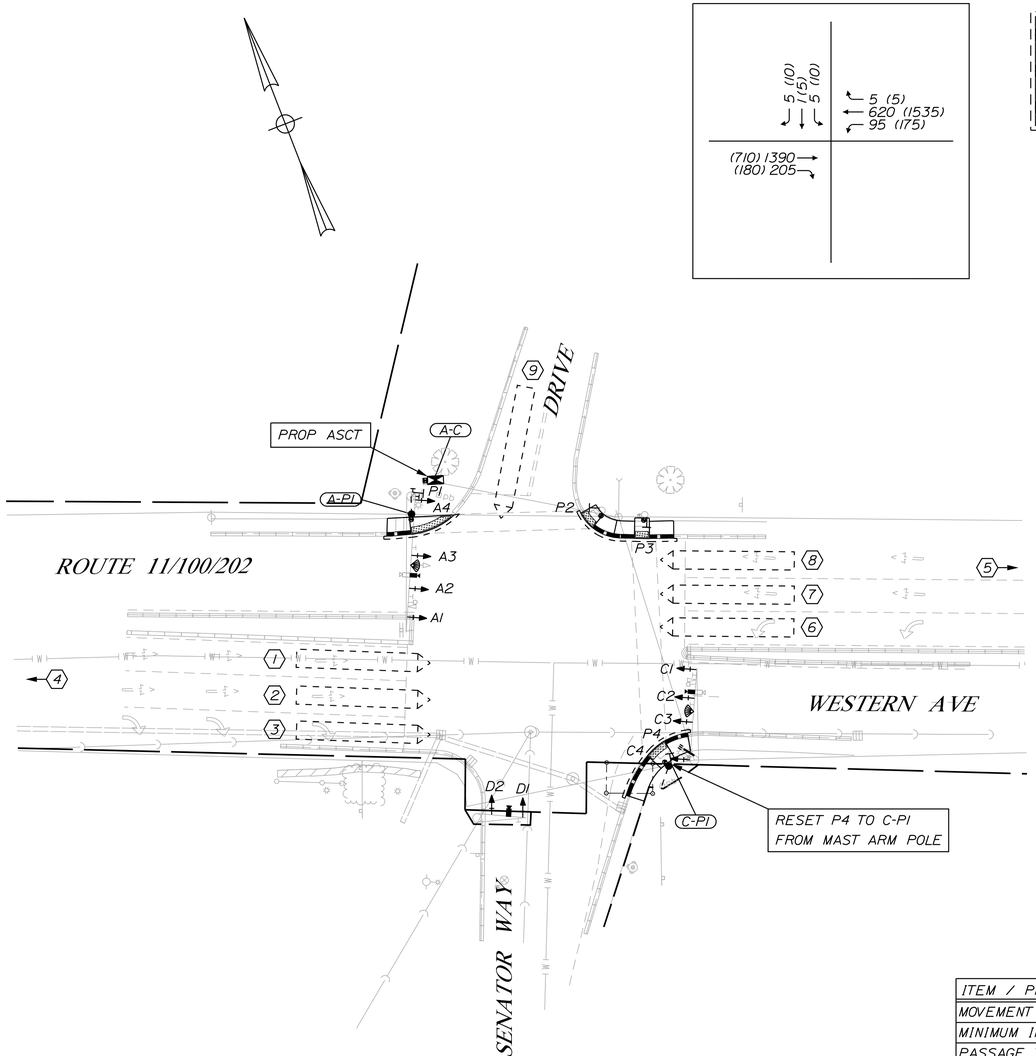
EXISTING INDICATIONS
TO REMAIN OR RELOCATE



P1-P4

NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES

EXISITNG COUNTDOWN PEDESTRIAN SIGNAL HEADS SHALL HAVE NEW L.E.D. LENSES INSTALLED



DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	φ CALLED	φ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
1	WESTERN AVE EB THROUGH	6	6	B	-	-
2	WESTERN AVE EB THROUGH	6	6	B	-	-
3	WESTERN AVE EB RIGHT	6	6	B	5	-
4*	WESTERN AVE EB ADVANCE	6	6	A	-	-
5*	WESTERN AVE WB ADVANCE	2	2	A	-	-
6	WESTERN AVE WB LEFT	5	5	B	-	-
7	WESTERN AVE WB THROUGH	2	2	B	-	-
8	WESTERN AVE WB THRU-RIGHT	2	2	B	-	-
9	DRIVEWAY SB MOVEMENTS	3	3	B	-	-

* SEE ADVANCED DILEMMA ZONE DETAIL (35 MPH)
NOTE: LOCATION AND QUANTITY OF ADDITIONAL VEHICLE DETECTION ZONES TO BE DETERMINED BASED ON THE SPECIFIC ASCT SYSTEM REQUIREMENTS

STRUCTURE LIST

STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	EXISTING
A-P1	4' PEDESTAL POLE	24" DIAMETER
C-P1	8' PEDESTAL POLE	24" DIAMETER

SIGNAL TIMING SCHEDULE

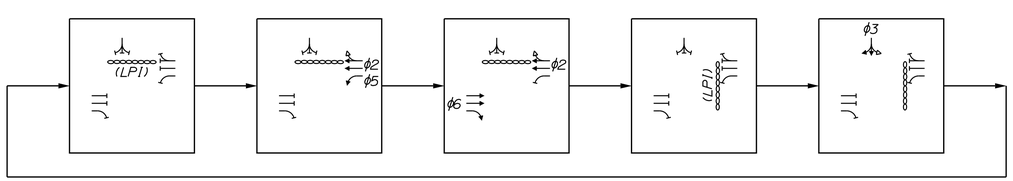
ITEM / PHASE	φ1	φ2	φ3	φ4	φ5	φ6	φ7	φ8
MOVEMENT	-	A	D	-	A (LT)	C	-	-
MINIMUM INITIAL	-	10	5	-	5	10	-	-
PASSAGE TIME	-	3.5	2.5	-	3.0	3.5	-	-
MAXIMUM 1	-	45	15	-	25	45	-	-
MAXIMUM 2	-	85	15	-	30	85	-	-
YELLOW	-	4.0	3.5	-	3.5	4.0	-	-
ALL RED	-	2.0	2.5	-	2.5	2.0	-	-
PED WALK	-	4	4	-	-	-	-	-
PED CLEAR	-	16	19	-	-	-	-	-
DYN MAX LIMIT	-	-	-	-	-	-	-	-
DYN MAX STEP	-	-	-	-	-	-	-	-
RECALL	-	SOFT	OFF	-	OFF	SOFT	-	-
DETECTOR	-	NON-LOCK	NON-LOCK	-	NON-LOCK	NON-LOCK	-	-
PRE-EMPT PRIORITY	-	4	-	-	4	3	-	-
FLASH	-	Y	R	-	R	Y	-	-
DUAL ENTRY	-	ON	OFF	-	OFF	ON	-	-

NOTES: S = SOFT RECALL Y = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK
IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD.
INTERSECTION SHALL BE PART OF AN ASCT (ADAPTIVE) SYSTEM.

PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM

2 | 3
5 6



PHASING NOTES:
1. EACH PEDESTRIAN PHASE SHALL HAVE A MINIMUM OF A 4 SECOND LEADING PEDESTRIAN INTERVAL (LPI).
2. PEDESTRIAN PHASE UPON PUSH BUTTON ACTIVATION ONLY.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	BY	DATE
PROJ. MANAGER	B. KEEZER	
DESIGN-DETAILED	MLG	07/20
CHECKED-REVIEWED	JAR	07/20
DESIGN2-DETAILED2	CMB	
DESIGN3-DETAILED3	CMB	
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 11/100/202 (WESTERN AVE) AND SENATOR WAY

TRAFFIC SIGNAL PLAN

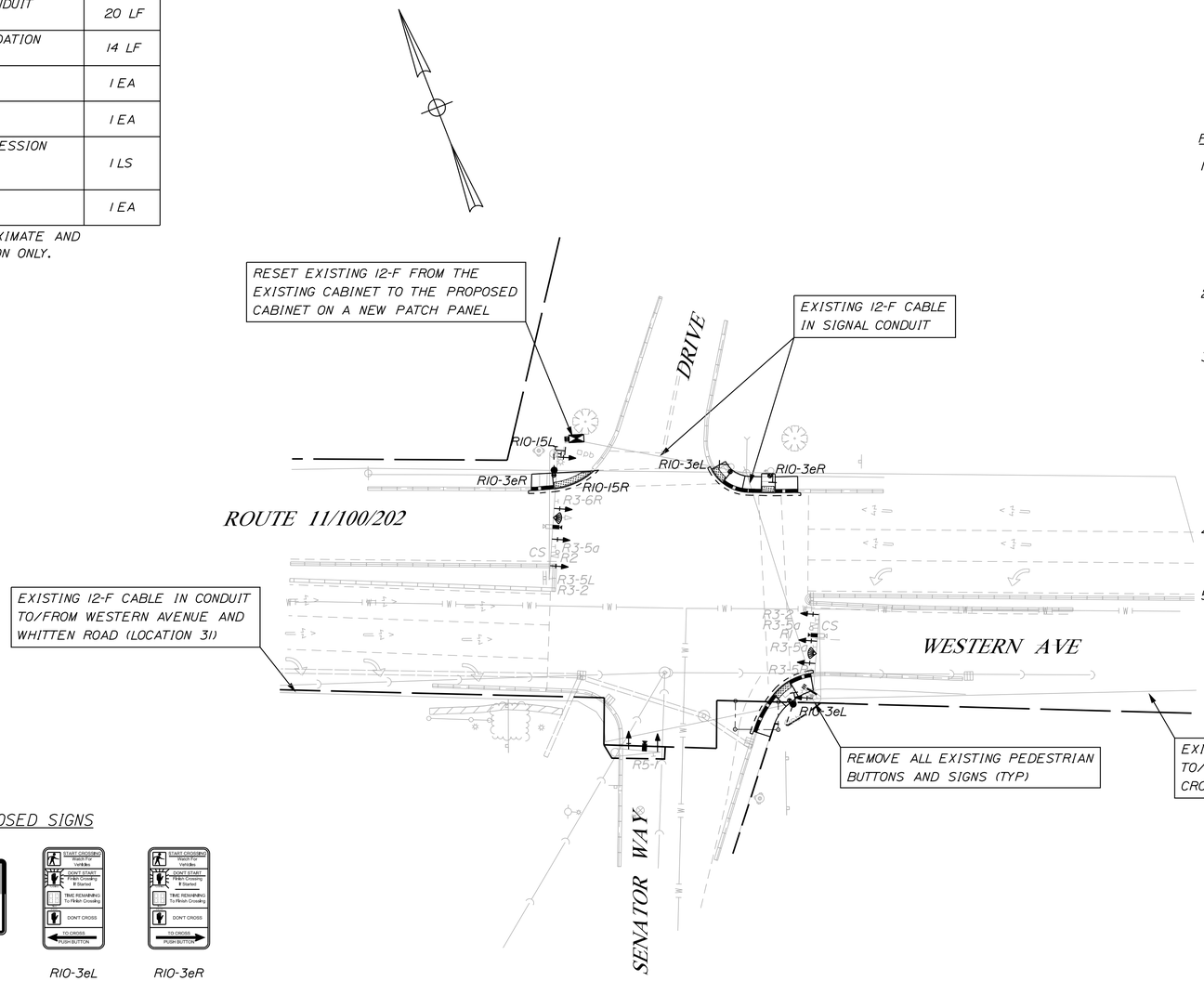
SHEET NUMBER
27
OF 358

Usernome: jorobert
Division: HIGHWAY
Date:11/24/2020
Filename: 027_Signal_27.dgn

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
FURNISH AND INSTALL (3-INCH) NON-METALLIC CONDUIT (ITEM 626.22)	20 LF
FURNISH AND INSTALL 24-INCH DIAMETER FOUNDATION (ITEM 626.421)	14 LF
FURNISH AND INSTALL 4-FOOT PEDESTAL POLE (ITEM 643.92)	1 EA
FURNISH AND INSTALL 8-FOOT PEDESTAL POLE (ITEM 643.92)	1 EA
FURNISH AND INSTALL WESTERN AVENUE PROGRESSION BASED ASCT SYSTEM (ITEM 654.05)	1 LS
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

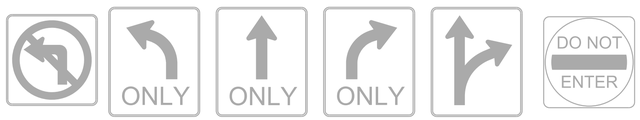


PROPOSED SIGNS



R10-15L	R10-15R	R10-3eL	R10-3eR
30"x30"	30"x30"	9"x15"	9"x15"
1-PROPOSED	1-PROPOSED	2-PROPOSED	2-PROPOSED

EXISTING SIGNS



R3-2	R3-5L	R3-5a	R3-5R	R3-6R	R5-1
2-RETAINED	1-RETAINED	3-RETAINED	1-RETAINED	1-RETAINED	1-RETAINED

EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USED/RESERVED	
	2	NOT USED/RESERVED	
R1	3	1	ϕ6
R2	4	2	ϕ2 & ϕ5
	5	NOT USED	
	6	NOT USED	

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.
2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 2 = LOWEST)
3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR AND/OR RSU, 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 (4.0 SECONDS YELLOW AND 2.5 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.
4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	DATE
PROJ. MANAGER		
DESIGN-DETAILED	M.G	07/20
CHECKED-REVIEWED	CMB	07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
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REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 11/100/202 (WESTERN AVE)
AND SENATOR WAY

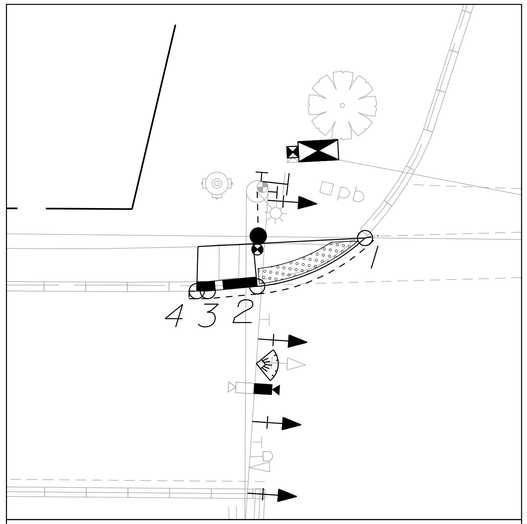
TRAFFIC SIGNAL PLAN

SHEET NUMBER
27A
OF 358

Filename: 027_Signal_27a.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

Filename: 027_Signal_27c.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

A CORNER - NW DETAIL

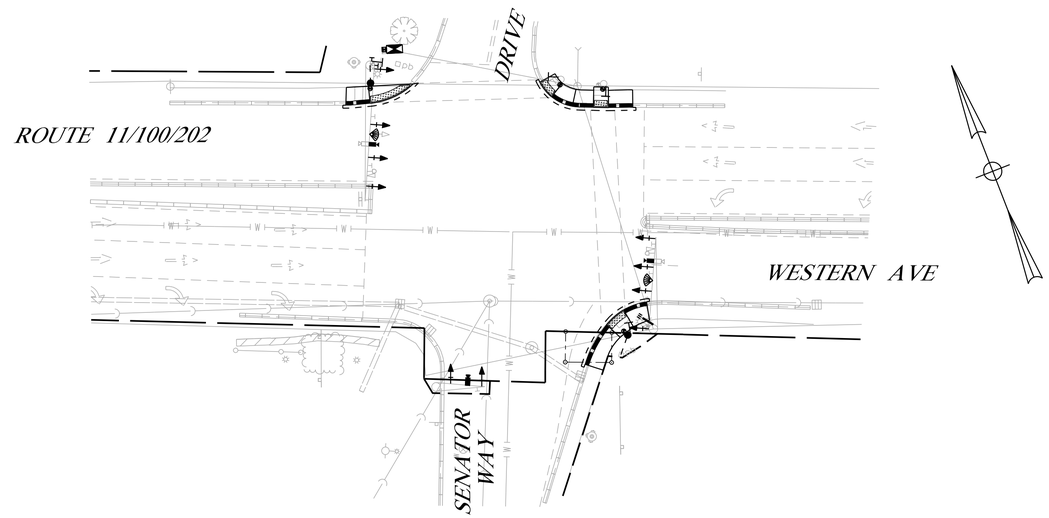


RECONSTRUCT CURB RAMP AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(22).

10 0 10 20
Scale of Feet

PT. TO PT.	RADIUS (FT)	ITEM 608.26 - CURB RAMP DETECTABLE WARNING FIELD		ITEM 609.11 - VERTICAL CURB TYPE 1 (LF)	ITEM 609.221 - TERMINAL CURB TYPE 1 (LF)	ITEM 609.222 - TERMINAL CURB TYPE 1 - CIRCULAR (LF)	COMMENT
		LENGTH (FT)	QTY (SF)				
* 1 TO 2	24.1	15.9	24.9				3.2% CROSS SLOPE
2 TO 3	-				6.5		
3 TO 4	-			1.5			
5 TO 6	-				8.0		
6 TO 7	-	5.0	8.7				
7 TO 8	-				4.8		
8 TO 9	15.0					2.2	
9 TO 10	15.0					7.6	
* 10 TO 11	15.0	6.3	10.1				3.3% CROSS SLOPE
12 TO 13	39.3					15.0	
13 TO 14	20.5	7.5	12.9				
14 TO 15	20.5					8.0	

* NON-COMPLIANT CURB RAMP ELEMENT - THE EXISTING GUTTER LINE PROFILE IS GREATER THAN 2%. THEREFORE THE LEVEL LANDING CROSS SLOPE AND/OR RUNNING SLOPE WILL BE GREATER THAN THE 2% AND 8.33% MAXIMUM ALLOWABLE, RESPECTIVELY. THE COMMENT IS THE MAXIMUM VALUE FOR PROPOSED LEVEL OF COMPLIANCE.



ALL CURB RAMPS SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND MAINEDOT STANDARD DETAILS 801(11) to 801(26) AS NOTED. AS WELL AS DETAILS PROVIDED ON SHEET H.

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
HOT MIX ASPHALT, 9.5 MM NOMINAL MAXIMUM SIZE (ITEM 403.210)	3.5 TONS
PLAIN CONCRETE SIDEWALK (ITEM 608.07)	50.0 SY
CURB RAMP DETECTABLE WARNING FIELD (ITEM 608.26)	56.6 SF
CONSTRUCT SIDEWALK (ITEM 608.45)	0.6 SY
REGRADING SIDEWALK (ITEM 608.46)	49.4 SY

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
VERTICAL CURB TYPE 1 (ITEM 609.11)	1.5 LF
TERMINAL CURB TYPE 1 (ITEM 609.221)	19.3 LF
TERMINAL CURB TYPE 1 - CIRCULAR (ITEM 609.222)	32.8 LF

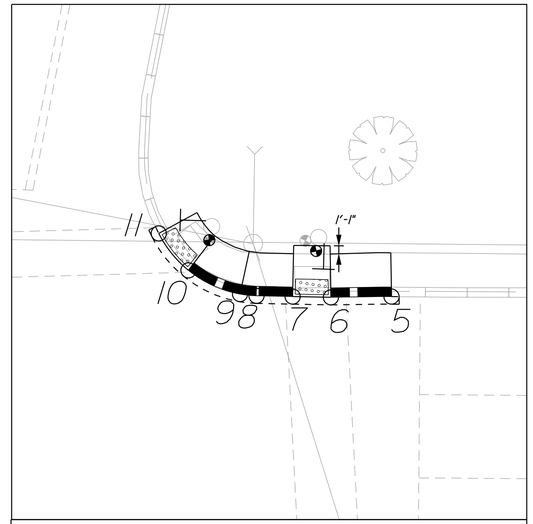
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PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

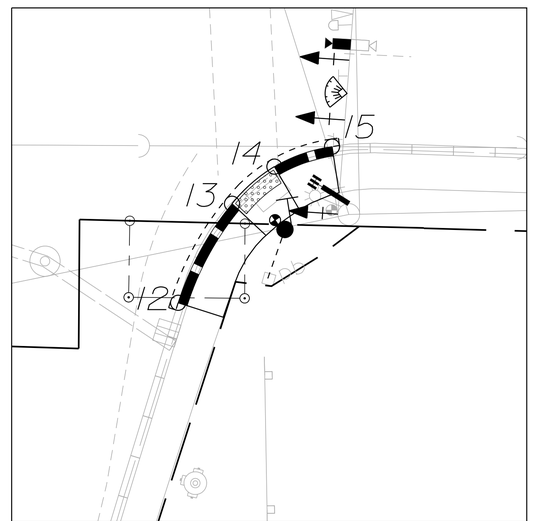
B CORNER - NE DETAIL



RECONSTRUCT CURB RAMPS AND LANDINGS IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(16).
EXTEND LANDING TO ACCESS THE PEDESTRIAN BUTTON.
SEE DETAIL ON SHEET H.

10 0 10 20
Scale of Feet

C CORNER - SE DETAIL



RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).
TRANSITION LENGTH REQUIRED FOR THE WESTERN CURB RAMP SHALL BE 15.0'. SEE MAINEDOT STANDARD DETAIL 801(13).

10 0 10 20
Scale of Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	DATE
PROJ. MANAGER		
DESIGN-DETAILED	M.C	07/20
CHECKED-REVIEWED	CMB	07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 11/100/202 (WESTERN AVE) AND SENATOR WAY

CURB RAMP LAYOUT AND DETAIL PLAN

SHEET NUMBER
27C
OF 358

LIST OF WORK ITEMS

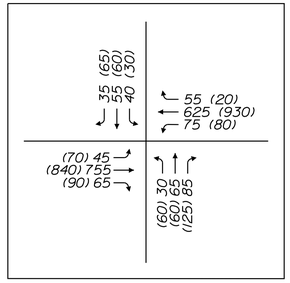
EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON SPAN AND TETHER WIRE	11
FURNISH AND INSTALL 16-INCH L.E.D. COUNTDOWN PEDESTRIAN LENS IN EXISTING HOUSING	8
FURNISH AND INSTALL ADA COMPLIANT ACCESSIBLE PEDESTRIAN SIGNAL (APS) BUTTON WITH 9"X15" R10-3e INFORMATIONAL SIGN	8
FURNISH AND INSTALL 19-INCH 1RU FIBER OPTIC 12-POSITION PATCH PANEL WITH PIGTAILS	1
RESET FIBER OPTIC ETHERNET SWITCH WITH FIBER OPTIC INTERFACES	1
FURNISH AND INSTALL SPAN WIRE MOUNTED SIGNS	14
REMOVE SPAN WIRE MOUNTED SIGNS	4
RESET COUNTDOWN PEDESTRIAN SIGNAL HEADS	5
RESET PREEMPTION PHASE SELECTOR	1
RESET EXISTING 12-F FIBER IN PROPOSED CABINET	-
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 4 APPROACHES, COMPLETE (ITEM 643.21)	1 LS

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

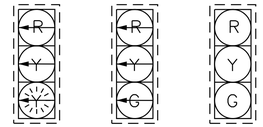
STRUCTURE LIST

STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	EXISTING
A-PI	8' PEDESTAL POLE	24" DIAMETER
B-PI	8' PEDESTAL POLE	24" DIAMETER
D-PI	8' PEDESTAL POLE	24" DIAMETER

SYSTEM DESIGN VOLUMES AM (PM)



PROPOSED INDICATIONS



C1 B1,D1 A1,A2,B2,B3 C2,C3,D2,D3

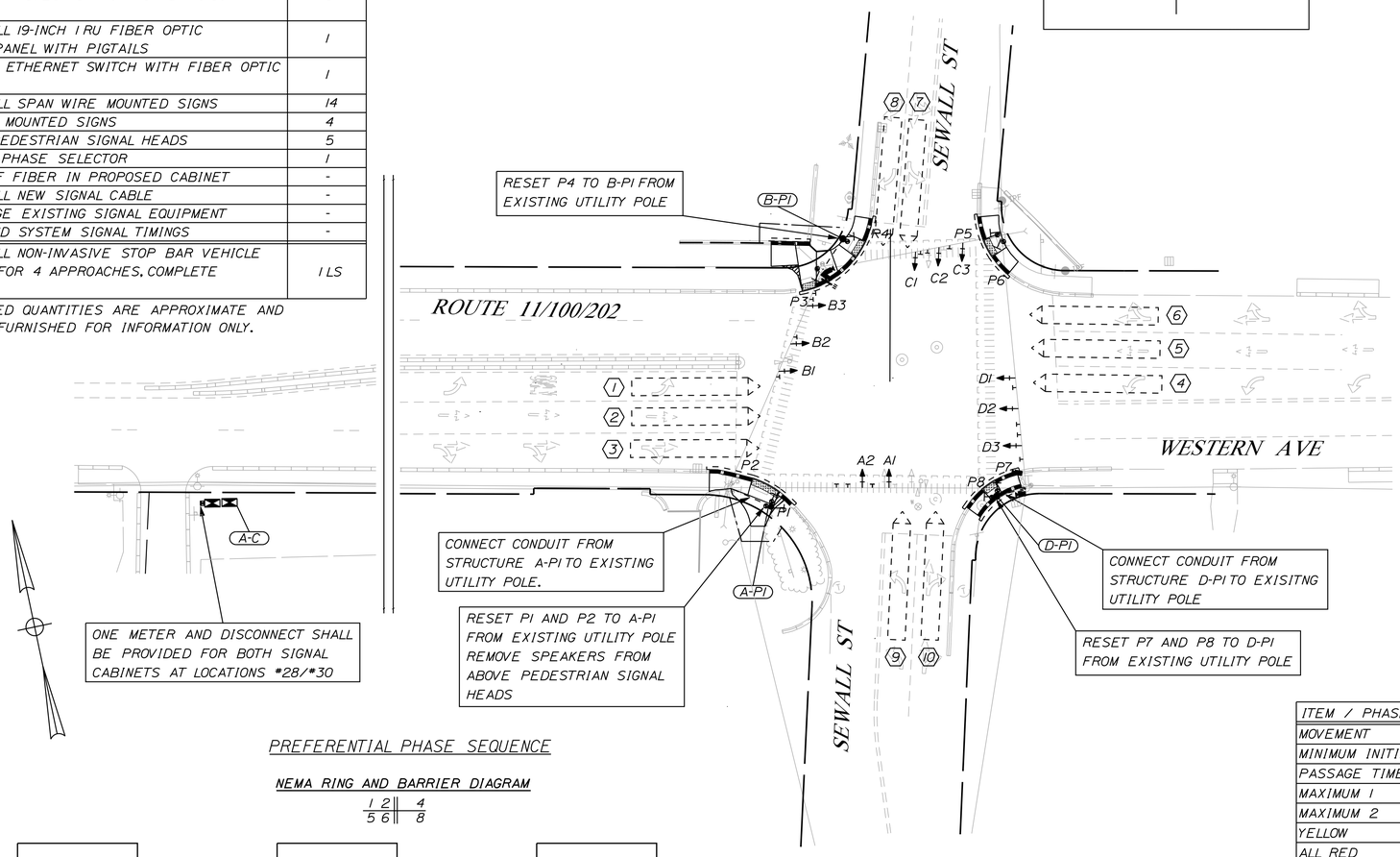
EXISTING INDICATIONS TO REMAIN OR RELOCATE



P1-P8

NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES

EXISTING COUNTDOWN PEDESTRIAN SIGNAL HEADS SHALL HAVE NEW L.E.D. LENSES INSTALLED



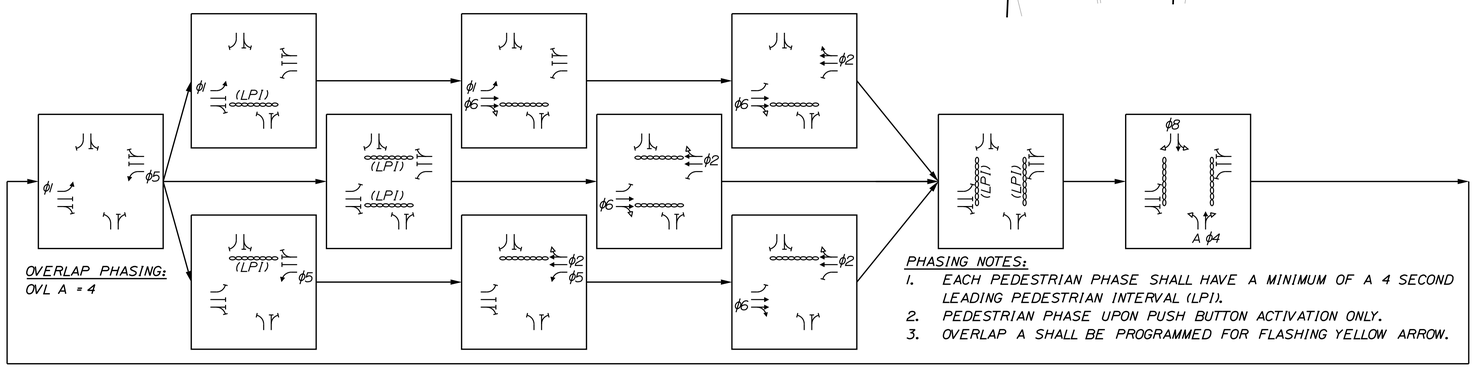
DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	φ CALLED	φ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
1	WESTERN AVE EB LEFT	1	1	B	-	-
2	WESTERN AVE EB THROUGH	6	6	B	-	-
3	WESTERN AVE EB THRU-RIGHT	6	6	B	-	-
4	WESTERN AVE WB LEFT	5	5	B	-	-
5	WESTERN AVE WB THROUGH	2	2	B	-	-
6	WESTERN AVE WB THRU-RIGHT	2	2	B	-	-
7	SEWALL ST SB LEFT-THRU	8	8	B	-	-
8	SEWALL ST SB RIGHT	8	8	B	5	-
9	SEWALL ST NB LEFT	4	4	B	-	-
10	SEWALL ST NB THRU-RIGHT	4	4	B	-	-

PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM

1 2 | 4
5 6 | 8



OVERLAP PHASING:
OVL A = 4

PHASING NOTES:
1. EACH PEDESTRIAN PHASE SHALL HAVE A MINIMUM OF A 4 SECOND LEADING PEDESTRIAN INTERVAL (LPI).
2. PEDESTRIAN PHASE UPON PUSH BUTTON ACTIVATION ONLY.
3. OVERLAP A SHALL BE PROGRAMMED FOR FLASHING YELLOW ARROW.

SIGNAL TIMING SCHEDULE

ITEM / PHASE	φ 1	φ 2	φ 3	φ 4	φ 5	φ 6	φ 7	φ 8
MOVEMENT	D (LT)	B	-	C	B (LT)	D	-	A
MINIMUM INITIAL	5	10	-	7	5	10	-	7
PASSAGE TIME	3.0	4.0	-	3.0	3.0	4.0	-	3.0
MAXIMUM 1	20	40	-	23	20	40	-	23
MAXIMUM 2	20	60	-	23	20	60	-	23
YELLOW	3.5	4.0	-	3.5	3.5	4.0	-	3.5
ALL RED	2.5	2.0	-	2.5	2.5	2.0	-	2.5
PED WALK	-	5	-	4	-	5	-	4
PED CLEAR	-	11	-	20	-	20	-	20
DYN MAX LIMIT	-	-	-		-	-	-	-
DYN MAX STEP	-	-	-		-	-	-	-
RECALL	OFF	SOFT	-	OFF	OFF	SOFT	-	OFF
DETECTOR	PR	PR	-	PR	PR	PR	-	PR
PRE-EMPT PRIORITY	3	4	-	6	4	3	-	5
FLASH	R	Y	-	R	R	Y	-	R
DUAL ENTRY	OFF	ON	-	ON	OFF	ON	-	ON

NOTES: S = SOFT RECALLY = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK
MAX 2 UNDER COORDINATION
IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER
DESIGN-DETAILED	MLG
CHECKED-REVIEWED	CMB
DESIGN2-DETAILED2	
DESIGN3-DETAILED3	

REVISIONS	BY	DATE
REVISIONS 1	JAR	07/20
REVISIONS 2	CMB	07/20
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 11/100/202 (WESTERN AVE) AND SEWALL ST

TRAFFIC SIGNAL PLAN

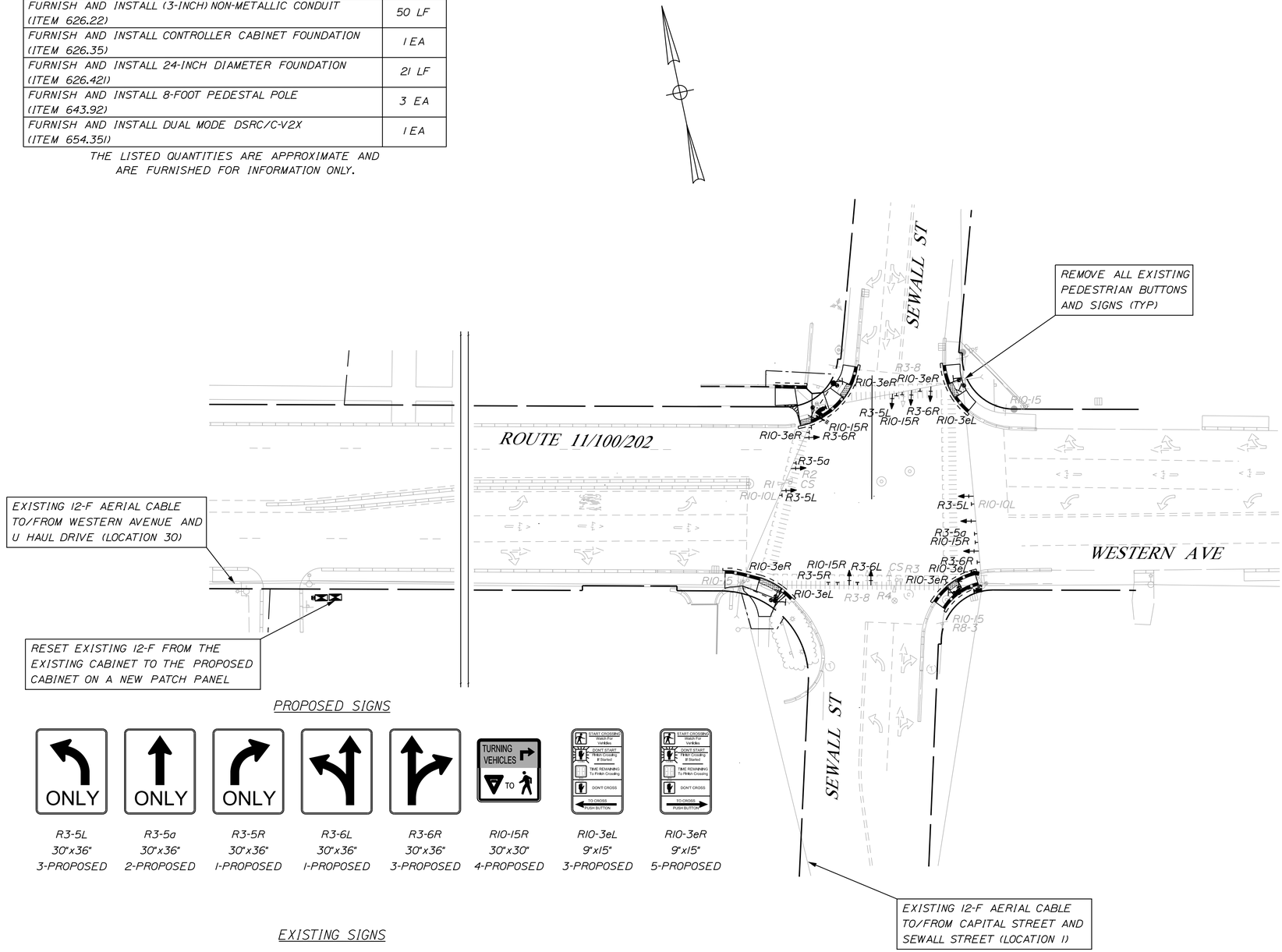
SHEET NUMBER
28
OF 358

Filename: 028_Signal_28.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
FURNISH AND INSTALL (3-INCH) NON-METALLIC CONDUIT (ITEM 626.22)	50 LF
FURNISH AND INSTALL CONTROLLER CABINET FOUNDATION (ITEM 626.35)	1 EA
FURNISH AND INSTALL 24-INCH DIAMETER FOUNDATION (ITEM 626.421)	21 LF
FURNISH AND INSTALL 8-FOOT PEDESTAL POLE (ITEM 643.92)	3 EA
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.



PROPOSED SIGNS

R3-5L	R3-5a	R3-5R	R3-6L	R3-6R	R10-15R	R10-3eL	R10-3eR
30"x36"	30"x36"	30"x36"	30"x36"	30"x36"	30"x30"	9"x15"	9"x15"
3-PROPOSED	2-PROPOSED	1-PROPOSED	1-PROPOSED	3-PROPOSED	4-PROPOSED	3-PROPOSED	5-PROPOSED

EXISTING SIGNS



R10-10L	R3-8
2-REMOVED	2-REMOVED

EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USE/RESERVED	
	2	NOT USE/RESERVED	
R1	3	1	ϕ1&ϕ6
R2	4	2	ϕ2&ϕ5
R3	5	3	ϕ8
R4	6	4	ϕ4

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.
2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 4= LOWEST)
3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR AND/OR RSU, 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 (4.0 SECONDS YELLOW AND 2.5 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.
4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.

PLAN

25 0 25 50

Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER		
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

AUGUSTA
ROUTE 11/100/202 (WESTERN AVE) AND SEWALL ST

TRAFFIC SIGNAL PLAN

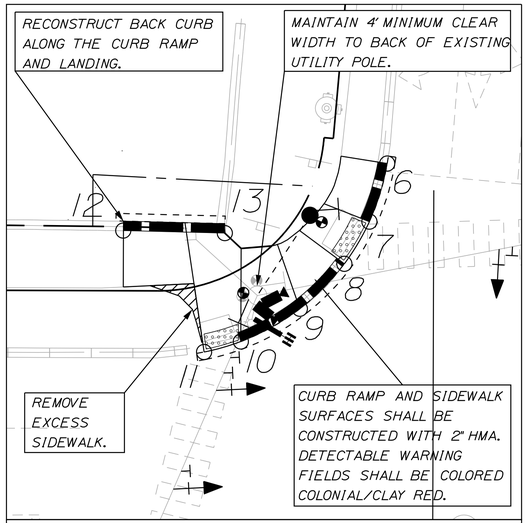
SHEET NUMBER

28A

OF 358

Filename: 028_Signal_28a.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

B CORNER - NW DETAIL



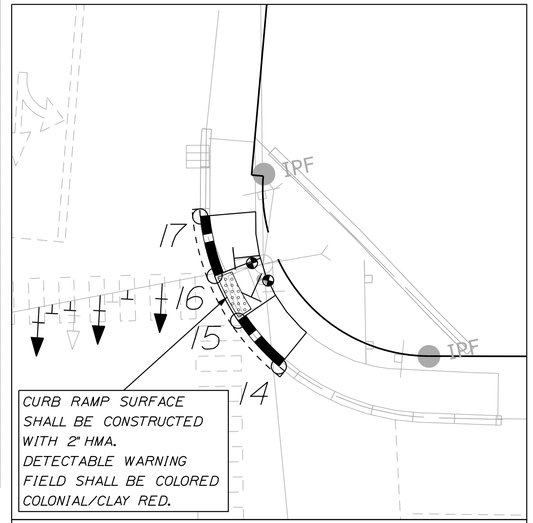
RECONSTRUCT CURB RAMPS AND LANDINGS IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(18).

10 0 10 20
Scale of Feet

	PT. TO PT.	RADIUS (FT)	ITEM 608.26 - CURB RAMP DETECTABLE WARNING FIELD		ITEM 609.11 - VERTICAL CURB TYPE I (LF)	ITEM 609.12 - VERTICAL CURB TYPE I - CIRCULAR (LF)	ITEM 609.221 - TERMINAL CURB TYPE I (LF)	ITEM 609.222 - TERMINAL CURB TYPE I - CIRCULAR (LF)	COMMENT
			LENGTH (FT)	QTY (SF)					
*	1 TO 2	-					3.0		9.3% RUNNING SLOPE
	2 TO 3	-					12.0		
*	3 TO 4	32.0	10.3	19.0					6.8% CROSS SLOPE
	4 TO 5	30.5						6.1	
	6 TO 7	30.5						8.0	
*	7 TO 8	30.5	6.5	10.9					4.8% CROSS SLOPE
	8 TO 9	30.5						8.4	
	9 TO 10	30.5						9.0	
*	10 TO 11	30.5	5.1	9.2					3.2% CROSS SLOPE
	12 TO 13	-			13.4				
	14 TO 15	30.0						8.0	
*	15 TO 16	30.0	6.7	11.5					3.7% CROSS SLOPE
	16 TO 17	30.0						8.0	
	18 TO 19	28.5						8.0	
*	19 TO 20	28.5	5.6	9.0					3.6% CROSS SLOPE
	20 TO 21	28.5						8.0	
	22 TO 23	22.6				7.8			
	24 TO 25	22.6				8.0			

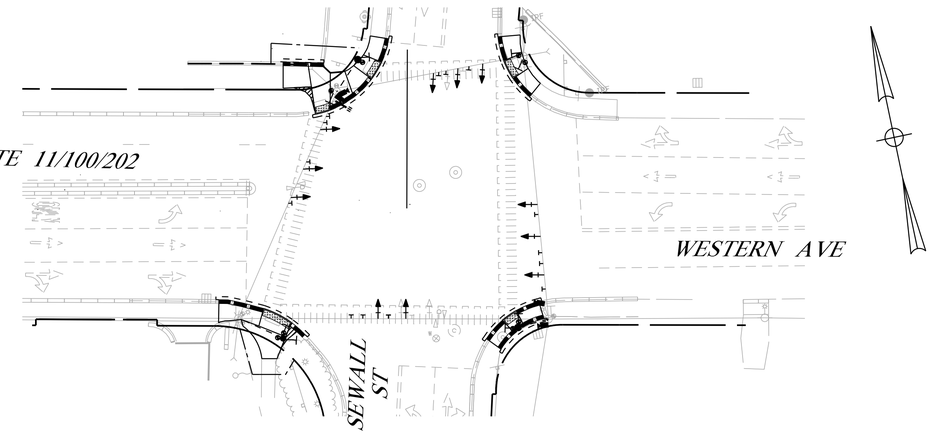
* NON-COMPLIANT CURB RAMP ELEMENT - THE EXISTING GUTTER LINE PROFILE IS GREATER THAN 2%. THEREFORE THE LEVEL LANDING CROSS SLOPE AND/OR RUNNING SLOPE WILL BE GREATER THAN THE 2% AND 8.33% MAXIMUM ALLOWABLE. RESPECTIVELY. THE COMMENT IS THE MAXIMUM VALUE FOR PROPOSED LEVEL OF COMPLIANCE.

C CORNER - NE DETAIL



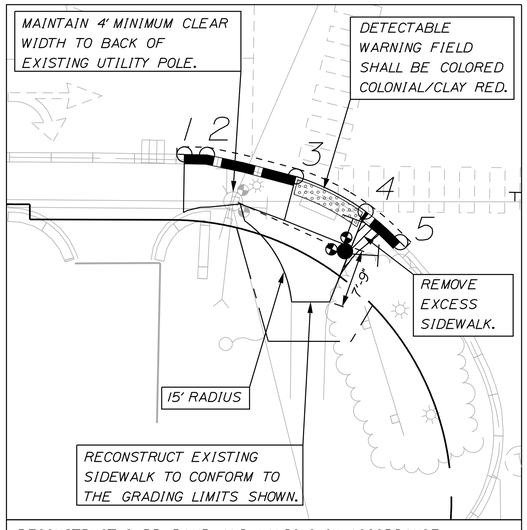
RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).

10 0 10 20
Scale of Feet



ALL CURB RAMPS SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND MAINEDOT STANDARD DETAILS 801(11) to 801(26) AS NOTED. AS WELL AS DETAILS PROVIDED ON SHEET H.

A CORNER - SW DETAIL



RECONSTRUCT CURB RAMP AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20). TRANSITION LENGTH REQUIRED FOR THE WESTERN CURB RAMP SHALL BE 15.0'. SEE MAINEDOT STANDARD DETAIL 801(13).

10 0 10 20
Scale of Feet

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
COMMON EXCAVATION (ITEM 203.20)	4.7 CY
HOT MIX ASPHALT, 9.5 MM NOMINAL MAXIMUM SIZE (ITEM 403.210)	13.2 TONS
PLAIN CONCRETE SIDEWALK (ITEM 608.07)	25.8 SY
CURB RAMP DETECTABLE WARNING FIELD (ITEM 608.26)	59.6 SF
REGRADING SIDEWALK (ITEM 608.46)	94.3 SY

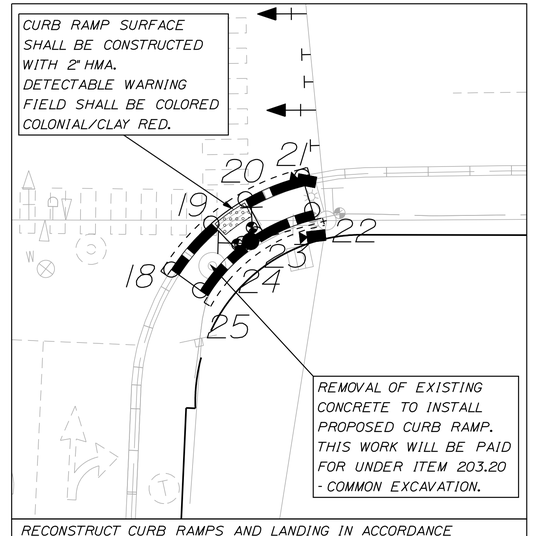
EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
VERTICAL CURB TYPE I (ITEM 609.11)	13.4 LF
VERTICAL CURB TYPE I - CIRCULAR (ITEM 609.12)	15.8 LF
TERMINAL CURB TYPE I (ITEM 609.221)	15.0 LF
TERMINAL CURB TYPE I - CIRCULAR (ITEM 609.222)	63.5 LF

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

PLAN

25 0 25 50
Scale of Feet

D CORNER - SE DETAIL



RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20). RECONSTRUCT BACK CURB ALONG THE CURB RAMP AND LANDING.

10 0 10 20
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER	DATE
DESIGN-DETAILED	MLG	JAR 07/20
CHECKED-REVIEWED	CMB	CMB 07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 11/100/202 (WESTERN AVE)
AND SEWALL ST

CURB RAMP LAYOUT
AND DETAIL PLAN

SHEET NUMBER
28C
OF 358

Filename: 028_Signal_28c.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

Filename: ...\ROW\MSTA\028_RWPLAN9.dgn Division: ROW Username: Benjamin.Singer Date:11/19/2020

PLAN LEGEND

Town, County, State	New R/W Along Existing R/W	Existing / Proposed	Existing / Proposed
Approx. Property Lines P.L.	Building / Clearing Limit Line	Sanitary Sewer	Traveled Way
Existing Right of Way	Trees Conifer / Deciduous	Telephone Line	Ditch
Limits of Wrought Portion L.O.W.P.	Tree Line / Bush Line	Electric Line	Catch Basin
Control Of Access C.O.A.	Water Edge	Water Line	Manhole
New Right of Way	Ledge / Rock/Boulder / Flag Pole	Underdrain Line	Sewer Manhole
New Easement	Fence CHAIN LINK / BARB WIRE / STOCKADE	Gas Line	Utility Pole
New Temporary Rights	Sign / Well / Mailbox	Guardrail	Fire Hydrant
New R/W Within Existing R/W		Culvert	Curbing

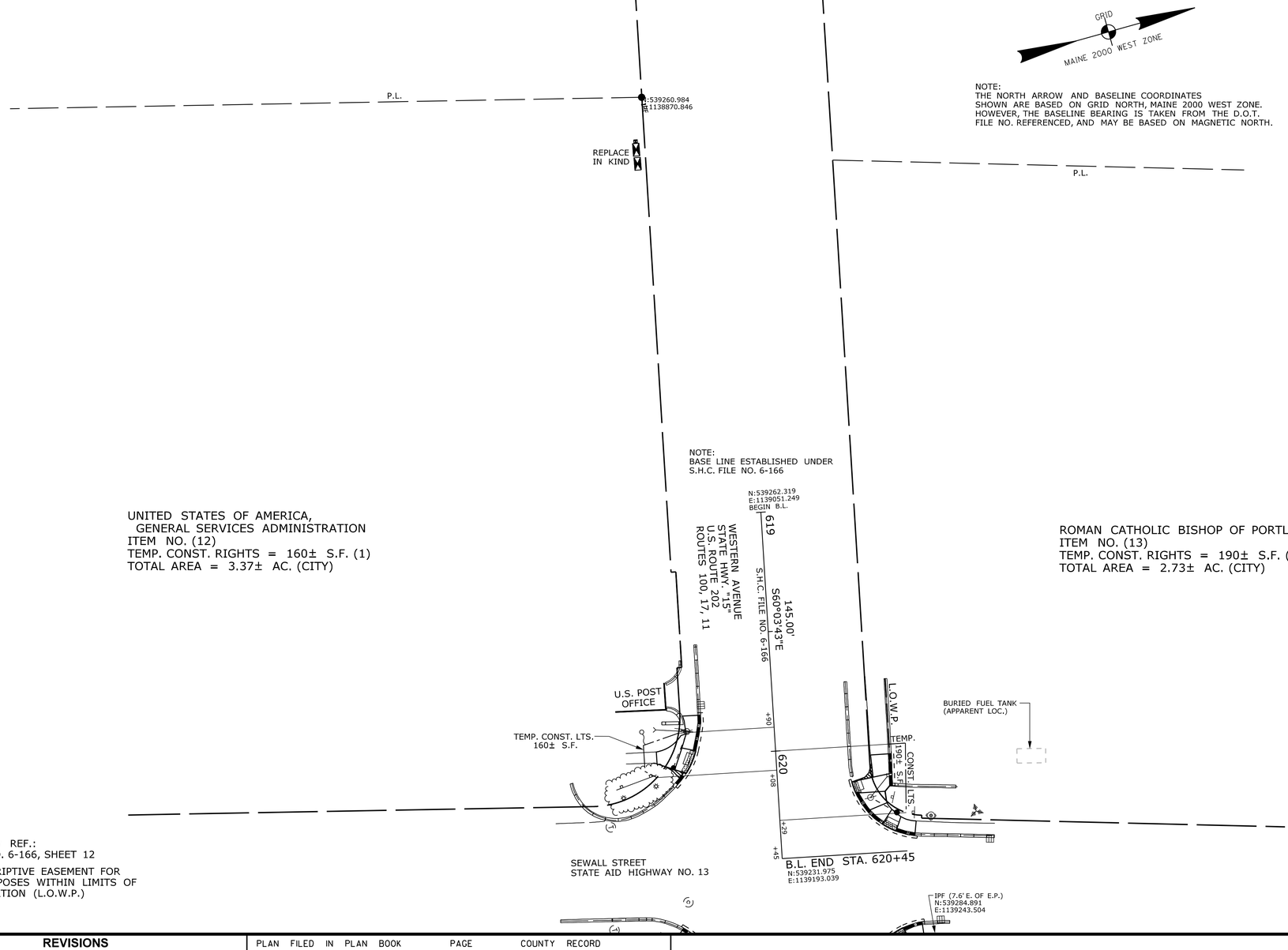
Cut Line / Fill Line
Stonewall / Retaining Wall
Baseline 10+00 11+00 12+00
Monument / Traverse Point
Iron Rod Found ● IRF / Pipe Found ● IPF
Replacement Pin Set

THIS PLAN WAS PREPARED IN CONNECTION WITH THE DEPARTMENT'S ACQUISITION OF REAL PROPERTY FOR TRANSPORTATION PURPOSES. IT CANNOT BE USED TO ESTABLISH LEGAL BOUNDARIES BETWEEN ABUTTING PROPERTY OWNERS.

25 0 25 50 75 100
Scale of Feet

STATE OF MAINE REGISTRY OF DEEDS

COUNTY _____
RECEIVED _____, _____
at _____h_____m_____M and
recorded in Plan Bk _____, Pg._____
Attest: _____
REGISTER



INTERSECTION NO. 28 WIN 024301.00

TECH	CHECKED
B.S.	G.L.L.
B.S.	G.L.L.
B.S.	G.L.L.

ITEM
EXISTING CONDITION PLAN
FINAL RIGHT OF WAY
AREAS

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION - AUGUSTA, ME 04333-0016 - 207-624-3460
AUGUSTA
RIGHT OF WAY MAP

REVISIONS

NO.	DATE	DESCRIPTION	BY

PLAN FILED IN PLAN BOOK PAGE COUNTY RECORD

NO.	GRANTOR	INSTRUMENT	DATE	BOOK	PAGE

BRUCE A. VAN NOTE
COMMISSIONER
JOYCE NOEL TAYLOR
CHIEF ENGINEER
DATE

STATE HWY. "15" & STATE AID HWY. 13
WESTERN AVE. & SEWALL STREET
AUGUSTA KENNEBEC COUNTY
FEDERAL AID PROJECT NO. 2430100

NOVEMBER 2020 | RIGHT-OF-WAY MAP | D.O.T. FILE NO. 6-487
SCALE 1" = 25' | SHEET 9 OF 12

SHEET NUMBER
28R
OF 358

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	9
FURNISH AND INSTALL ONE-WAY 5-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	1
FURNISH AND INSTALL 16-INCH L.E.D. COUNTDOWN PEDESTRIAN LENS IN EXISTING HOUSING	2
FURNISH AND INSTALL ADA COMPLIANT ACCESSIBLE PEDESTRIAN SIGNAL (APS) BUTTON WITH 9"X15" R10-3e INFORMATIONAL SIGN	2
FURNISH AND INSTALL 19-INCH 1 RU FIBER OPTIC 12-POSITION PATCH PANEL WITH PIGTAILS	1
RESET FIBER OPTIC ETHERNET SWITCH WITH FIBER OPTIC INTERFACES	1
FURNISH AND INSTALL SIGNAL POST MOUNTED SIGNS	2
RESET PREEMPTION PHASE SELECTOR	1
RESET EXISTING 12-F FIBER IN PROPOSED CABINET	-
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 4 APPROACHES, COMPLETE (ITEM 643.21)	1 LS
FURNISH AND INSTALL NON-INVASIVE ADVANCE VEHICLE DETECTION SYSTEM FOR 2 APPROACHES, COMPLETE (ITEM 643.22)	1 LS

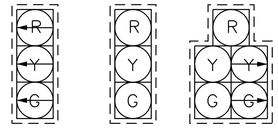
THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

STRUCTURE LIST

STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	EXISTING

SYSTEM DESIGN VOLUMES AM (PM)

PROPOSED INDICATIONS



A1,C1 | A2,A3,B1 C2,C3,D1,D2 | B2

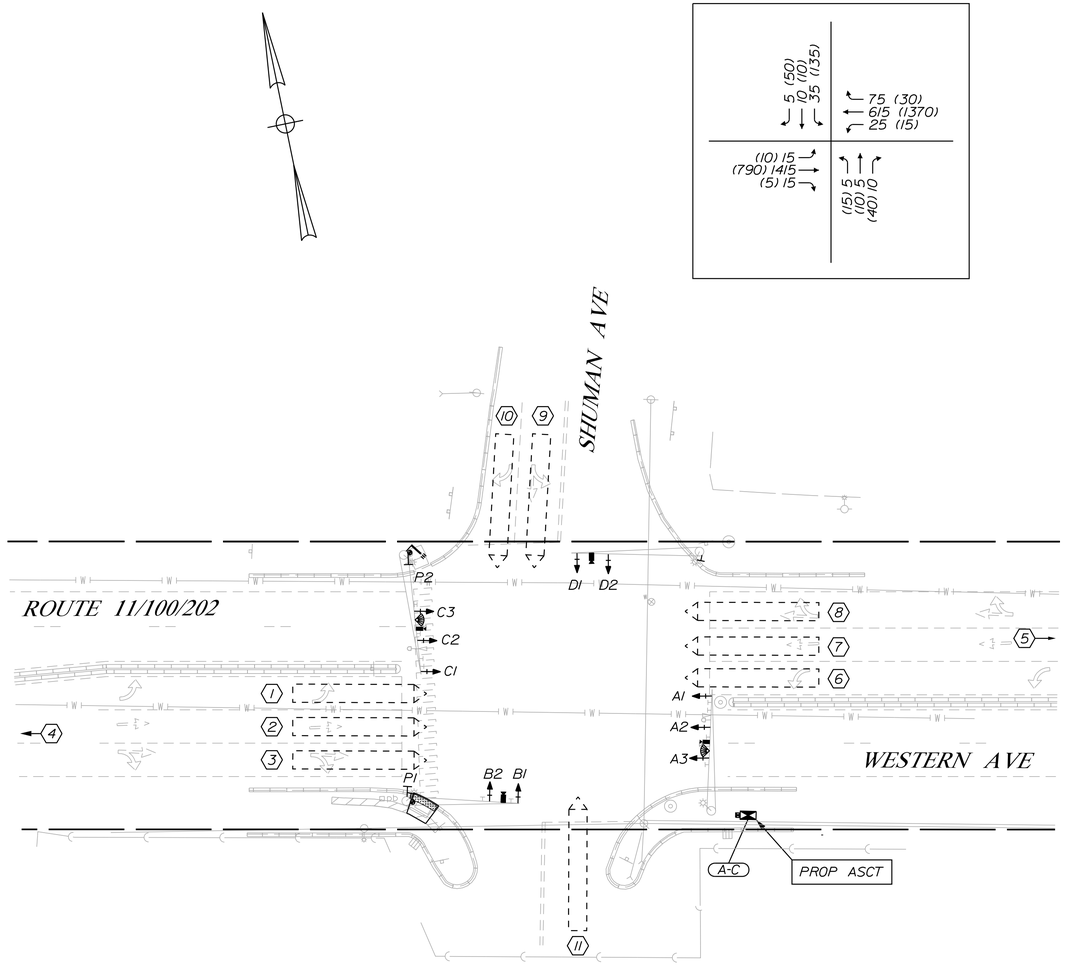
EXISTING INDICATIONS TO REMAIN



P1-P2

NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES

EXISTING COUNTDOWN PEDESTRIAN SIGNAL HEADS SHALL HAVE NEW L.E.D. LENSES INSTALLED



DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	ϕ CALLED	ϕ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
1	WESTERN AVE EB LEFT	1	1	B	-	-
2	WESTERN AVE EB THROUGH	6	6	B	-	-
3	WESTERN AVE EB THRU-RIGHT	6	6	B	-	-
4*	WESTERN AVE EB ADVANCE	6	6	A	-	-
5*	WESTERN AVE WB ADVANCE	2	2	A	-	-
6	WESTERN AVE WB LEFT	5	5	B	-	-
7	WESTERN AVE WB THROUGH	2	2	B	-	-
8	WESTERN AVE WB THRU-RIGHT	2	2	B	-	-
9	SHUMAN AVE SB LEFT-THRU	8	8	B	-	-
10	SHUMAN AVE SB RIGHT	8	8	B	5	-
11	DRIVEWAY NB MOVEMENTS	4	4	B	-	-

* SEE ADVANCED DILEMMA ZONE DETAIL (35 MPH)
NOTE: LOCATION AND QUANTITY OF ADDITIONAL VEHICLE DETECTION ZONES TO BE DETERMINED BASED ON THE SPECIFIC ASCT SYSTEM REQUIREMENTS

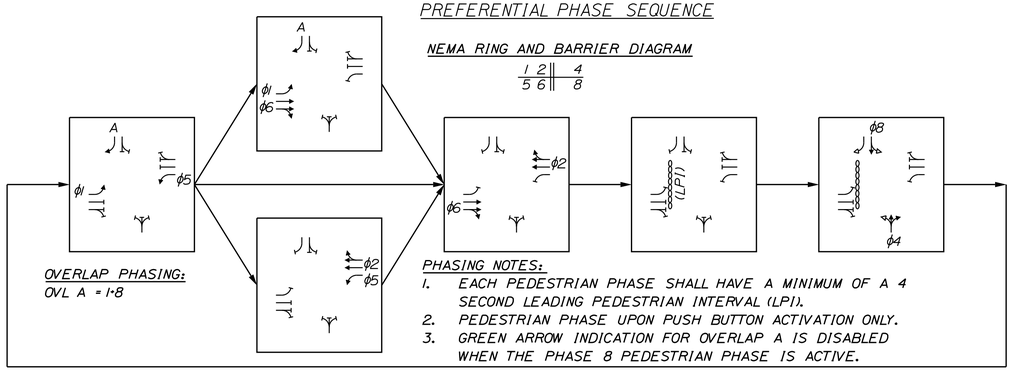
SIGNAL TIMING SCHEDULE

ITEM / PHASE	ϕ 1	ϕ 2	ϕ 3	ϕ 4	ϕ 5	ϕ 6	ϕ 7	ϕ 8
MOVEMENT	A (LT)	C	-	D	C (LT)	A	-	B
MINIMUM INITIAL	5	10	-	5	5	10	-	5
PASSAGE TIME	2.0	3.5	-	2.0	2.0	3.5	-	2.0
MAXIMUM 1	10	55	-	15	10	55	-	15
MAXIMUM 2	12	80	-	25	12	80	-	25
YELLOW	3.5	4.0	-	3.5	3.5	4.0	-	3.5
ALL RED	2.5	2.0	-	2.5	2.5	2.0	-	2.5
PED WALK	-	-	-	-	-	-	-	5
PED CLEAR	-	-	-	-	-	-	-	21
DYN MAX LIMIT	-	-	-	-	-	-	-	-
DYN MAX STEP	-	-	-	-	-	-	-	-
RECALL	OFF	SOFT	-	OFF	OFF	SOFT	-	OFF
DETECTOR	PR	PR	-	PR	PR	PR	-	PR
PRE-EMPT PRIORITY	3	4	-	-	4	3	-	-
FLASH	R	Y	-	R	R	Y	-	R
DUAL ENTRY	OFF	ON	-	ON	OFF	ON	-	ON

NOTES: S = SOFT RECALLY = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK
IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD. INTERSECTION SHALL BE PART OF AN ASCT (ADAPTIVE) SYSTEM.

PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM



PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

			DATE
PROJ. MANAGER	B. KEEZER		BY
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

AUGUSTA
ROUTE 11/100/202 (WESTERN AVE)
AND SHUMAN AVE

TRAFFIC SIGNAL PLAN

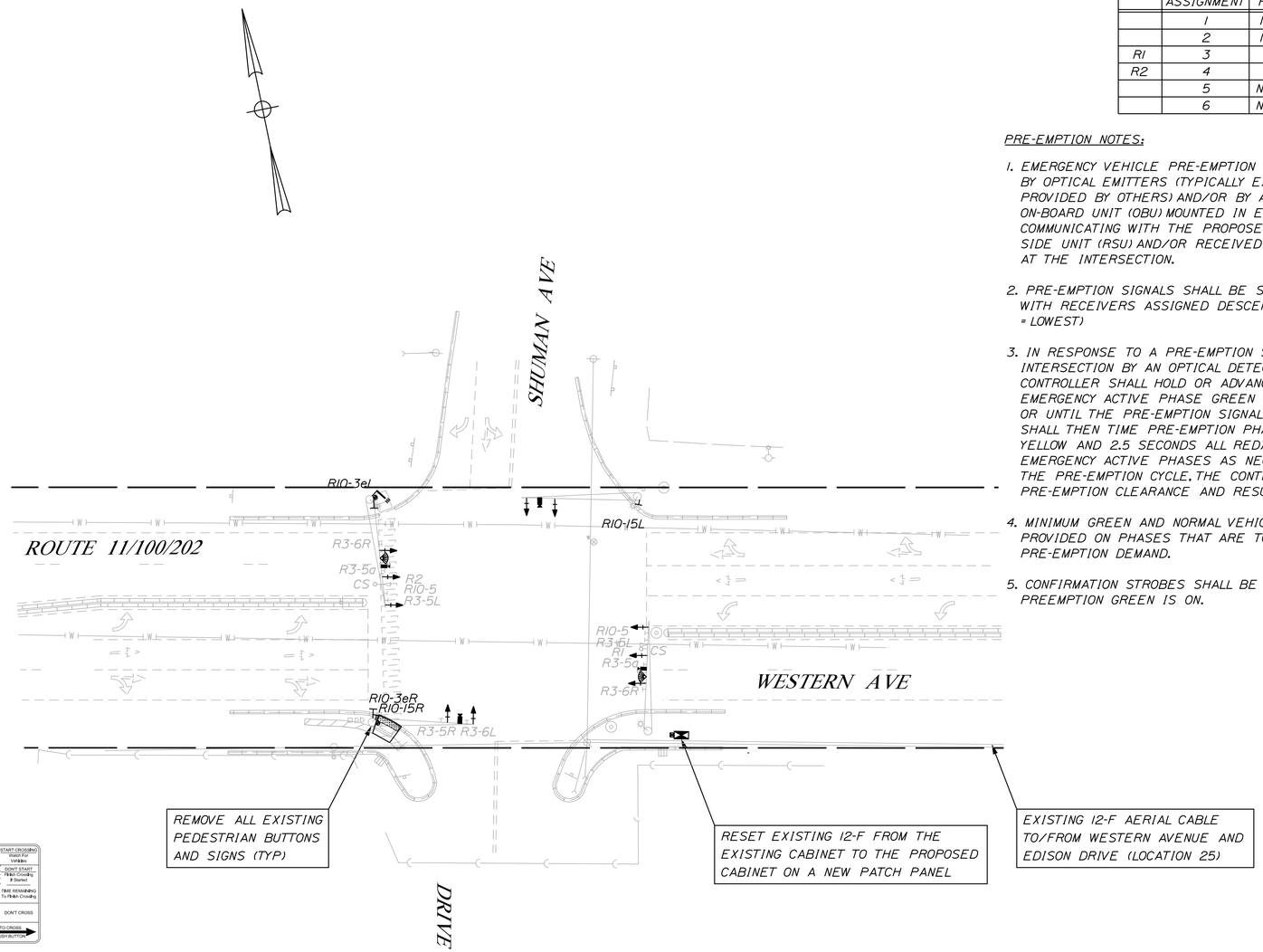
SHEET NUMBER
29
OF 358

Username: jorobert
Date:11/24/2020
Division: HIGHWAY
Filename: 029_Signal_29.dgn

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
FURNISH AND INSTALL WESTERN AVENUE PROGRESSION BASED ASCT SYSTEM (ITEM 654.05)	1 LS
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

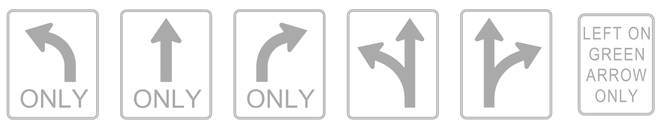


PROPOSED SIGNS



R10-15L	R10-15R	R10-3eL	R10-3eR
30"x30"	30"x30"	9"x15"	9"x15"
1-PROPOSED	1-PROPOSED	1-PROPOSED	1-PROPOSED

EXISTING SIGNS



R3-5L	R3-5a	R3-5R	R3-6L	R3-6R	R10-5
2-RETAINED	2-RETAINED	1-RETAINED	1-RETAINED	2-RETAINED	2-RETAINED

EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USE/RESERVED	
	2	NOT USE/RESERVED	
R1	3	1	ϕ1&ϕ6
R2	4	2	ϕ2&ϕ5
	5	NOT USED	
	6	NOT USED	

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.
2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 2 = LOWEST)
3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR AND/OR RSU, 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 (4.0 SECONDS YELLOW AND 2.5 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.
4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	DATE
PROJ. MANAGER		
DESIGN-DETAILED	MLG	07/20
CHECKED-REVIEWED	CMB	07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

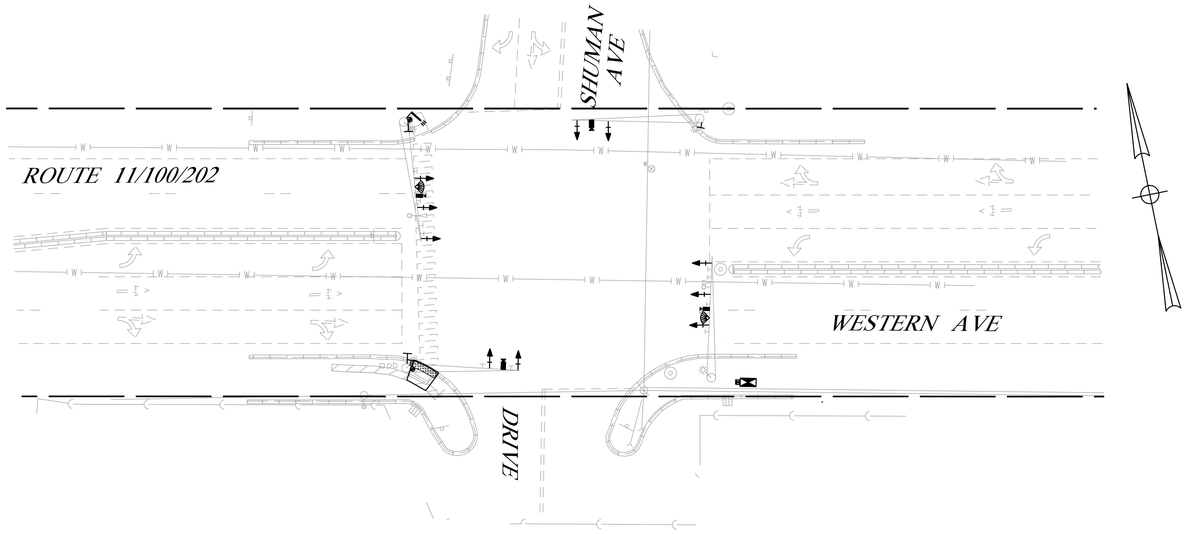
AUGUSTA
ROUTE 11/100/202 (WESTERN AVE)
AND SHUMAN AVE

TRAFFIC SIGNAL PLAN

SHEET NUMBER
29A
OF 358

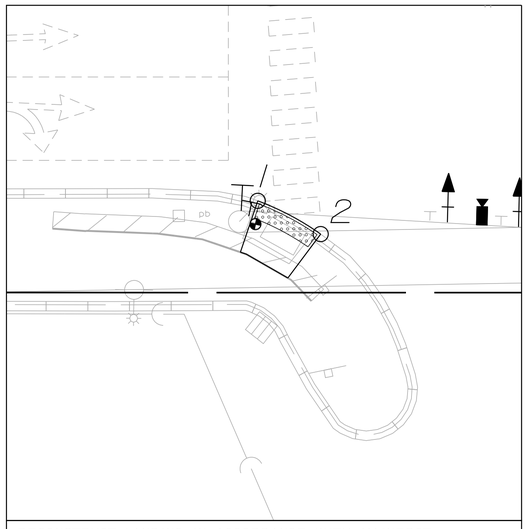
Filename: 029_Signal_29a.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

PT. TO PT.	RADIUS (FT)	ITEM 608.26 - CURB RAMP DETECTABLE WARNING FIELD		COMMENT
		LENGTH (FT)	QTY (SF)	
1 TO 2	36.8	9.4	16.7	



ALL CURB RAMPS SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND MAINEDOT STANDARD DETAILS 801(11) to 801(26) AS NOTED. AS WELL AS DETAILS PROVIDED ON SHEET H.

B CORNER - SW DETAIL



RECONSTRUCT LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).
DO NOT IMPACT EXISTING WALL.

10 0 10 20
Scale of Feet

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
PLAIN CONCRETE SIDEWALK (ITEM 608.07)	6.7 SY
CURB RAMP DETECTABLE WARNING FIELD (ITEM 608.26)	16.7 SF
REGRADING SIDEWALK (ITEM 608.46)	6.7 SY

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER	BY	DATE
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

AUGUSTA
ROUTE 11/100/202 (WESTERN AVE)
AND SHUMAN AVE

CURB RAMP LAYOUT
AND DETAIL PLAN

SHEET NUMBER

29C

OF 358

Filename: 029_Signal_29c.dgn Division: HIGHWAY Username: jarobert Date:11/24/2020

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON SPAN AND TETHER WIRE	10
FURNISH AND INSTALL 16-INCH L.E.D. COUNTDOWN PEDESTRIAN LENS IN EXISITNG HOUSING	8
FURNISH AND INSTALL ADA COMPLIANT ACCESSIBLE PEDESTRIAN SIGNAL (APS) BUTTON WITH 9"X15" R10-3e INFORMATIONAL SIGN	8
FURNISH AND INSTALL 19-INCH 1RU FIBER OPTIC 12-POSITION PATCH PANEL WITH PIGTAILS	1
RESET FIBER OPTIC ETHERNET SWITCH WITH FIBER OPTIC INTERFACES	1
FURNISH AND INSTALL SPAN WIRE MOUNTED SIGNS	14
FURNISH AND INSTALL SPAN AND TETHER WIRE	400
REMOVE SPAN WIRE MOUNTED SIGNS	2
RESET COUNTDOWN PEDESTRIAN SIGNAL HEADS	2
RESET PREEMPTION PHASE SELECTOR	1
RESET EXISTING 12-F FIBER IN PROPOSED CABINET	-
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 4 APPROACHES, COMPLETE (ITEM 643.21)	1 LS

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

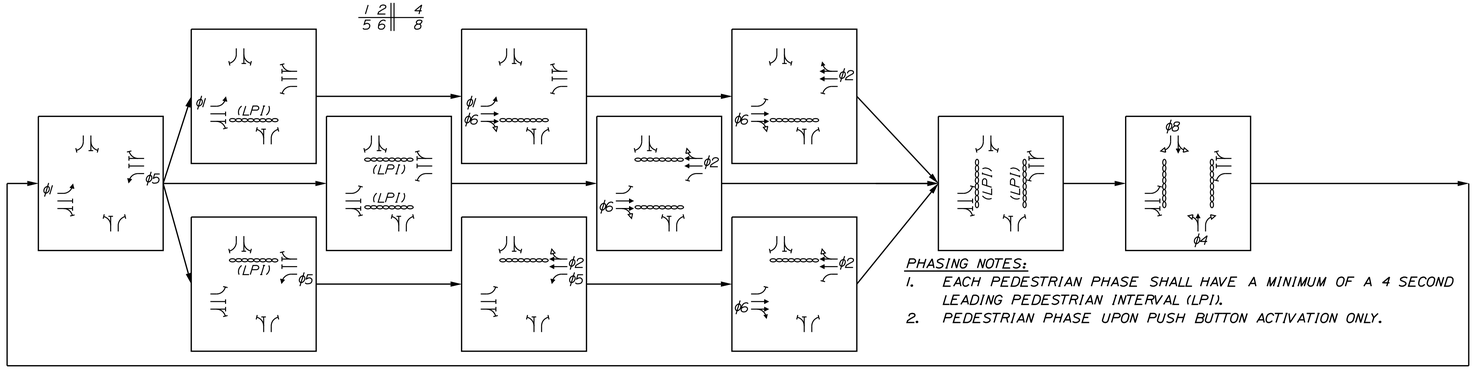
DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	φ CALLED	φ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
⑴	WESTERN AVE EB LEFT	1	1	B	-	-
⑵	WESTERN AVE EB THROUGH	6	6	B	-	-
⑶	WESTERN AVE EB THRU-RIGHT	6	6	B	-	-
⑷	WESTERN AVE WB LEFT	2	2	B	-	-
⑸	WESTERN AVE WB THROUGH	2	2	B	-	-
⑹	WESTERN AVE WB THRU-RIGHT	5	5	B	-	-
⑺	U-HAUL DR SB LEFT-THRU	8	8	B	-	-
⑻	U-HAUL DR SB RIGHT	8	8	B	5	-
⑼	DRIVEWAY NB LEFT-THRU	4	4	B	-	-
⑽	DRIVEWAY NB RIGHT	4	4	B	5	-

PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM

1 2 | 4
5 6 | 8

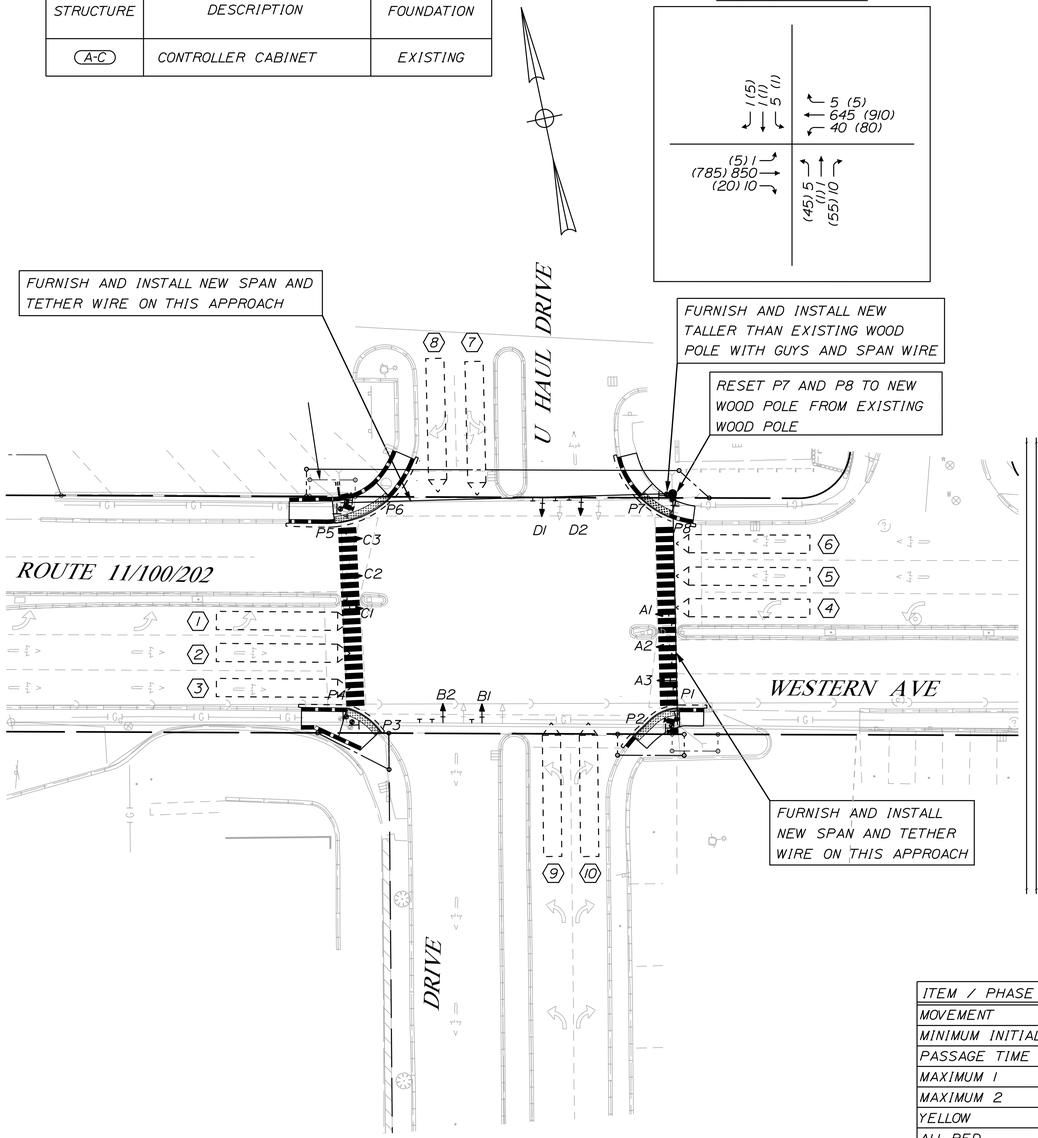


PHASING NOTES:
1. EACH PEDESTRIAN PHASE SHALL HAVE A MINIMUM OF A 4 SECOND LEADING PEDESTRIAN INTERVAL (LPI).
2. PEDESTRIAN PHASE UPON PUSH BUTTON ACTIVATION ONLY.

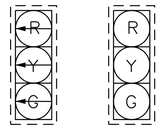
STRUCTURE LIST

STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	EXISTING

SYSTEM DESIGN VOLUMES AM (PM)



PROPOSED INDICATIONS



A1,C1 — A2,A3,B1,B2 C2,C3,D1,D2

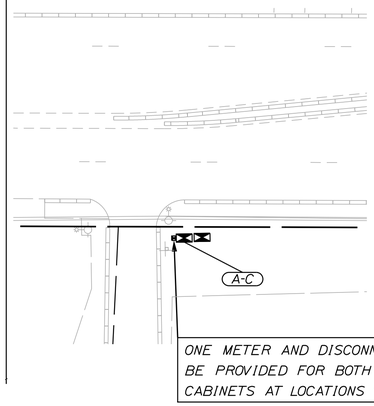
EXISTING INDICATIONS
TO REMAIN OR RELOCATE



P1-P8

NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES

EXISTING COUNTDOWN PEDESTRIAN SIGNAL HEADS SHALL HAVE NEW L.E.D. LENSES INSTALLED



ONE METER AND DISCONNECT SHALL BE PROVIDED FOR BOTH SIGNAL CABINETS AT LOCATIONS *28/*30

SIGNAL TIMING SCHEDULE

ITEM / PHASE	φ 1	φ 2	φ 3	φ 4	φ 5	φ 6	φ 7	φ 8
MOVEMENT	A (LT)	C	-	D	C (LT)	A	-	B
MINIMUM INITIAL	5	10	-	5	5	10	-	5
PASSAGE TIME	2.0	4.0	-	2.0	3.0	4.0	-	2.0
MAXIMUM 1	10	30	-	10	15	30	-	10
MAXIMUM 2	10	70	-	25	20	60	-	25
YELLOW	3.5	4.0	-	3.5	3.5	4.0	-	3.5
ALL RED	2.5	2.0	-	2.5	2.5	2.0	-	2.5
PED WALK	-	5	-	5	-	5	-	5
PED CLEAR	-	24	-	18	-	24	-	18
DYN MAX LIMIT	-	-	-	-	-	-	-	-
DYN MAX STEP	-	-	-	-	-	-	-	-
RECALL	OFF	SOFT	-	OFF	OFF	SOFT	-	OFF
DETECTOR	PR	PR	-	PR	PR	PR	-	PR
PRE-EMPT PRIORITY	3	4	-	-	4	3	-	-
FLASH	R	Y	-	R	R	Y	-	R
DUAL ENTRY	OFF	ON	-	ON	OFF	ON	-	ON

NOTES: S = SOFT RECALLY = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK
MAX 2 UNDER COORDINATION

IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	DATE
PROJ. MANAGER		
DESIGN-DETAILED	MLG	JAR 07/20
CHECKED-REVIEWED	CMB	CMB 07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 11/100/202 (WESTERN AVE)
AND U HAUL DRIVE

TRAFFIC SIGNAL PLAN

SHEET NUMBER
30
OF 358

Filename: 030_Signal_30.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

Filename: 030_Signal_30a.dgn Division: HIGHWAY Username: jarobert Date:11/24/2020

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
FURNISH AND INSTALL WHITE PAVEMENT AND CURB MARKING (ITEM 627.75)	640 SF
FURNISH AND INSTALL WOOD POLE WITH GUYS (ITEM 643.97)	1 EA
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

PROPOSED SIGNS



R3-5L 30"x36" 2-PROPOSED | R3-5a 30"x36" 2-PROPOSED | R3-5R 30"x36" 2-PROPOSED | R3-6L 30"x36" 2-PROPOSED | R3-6R 30"x36" 2-PROPOSED

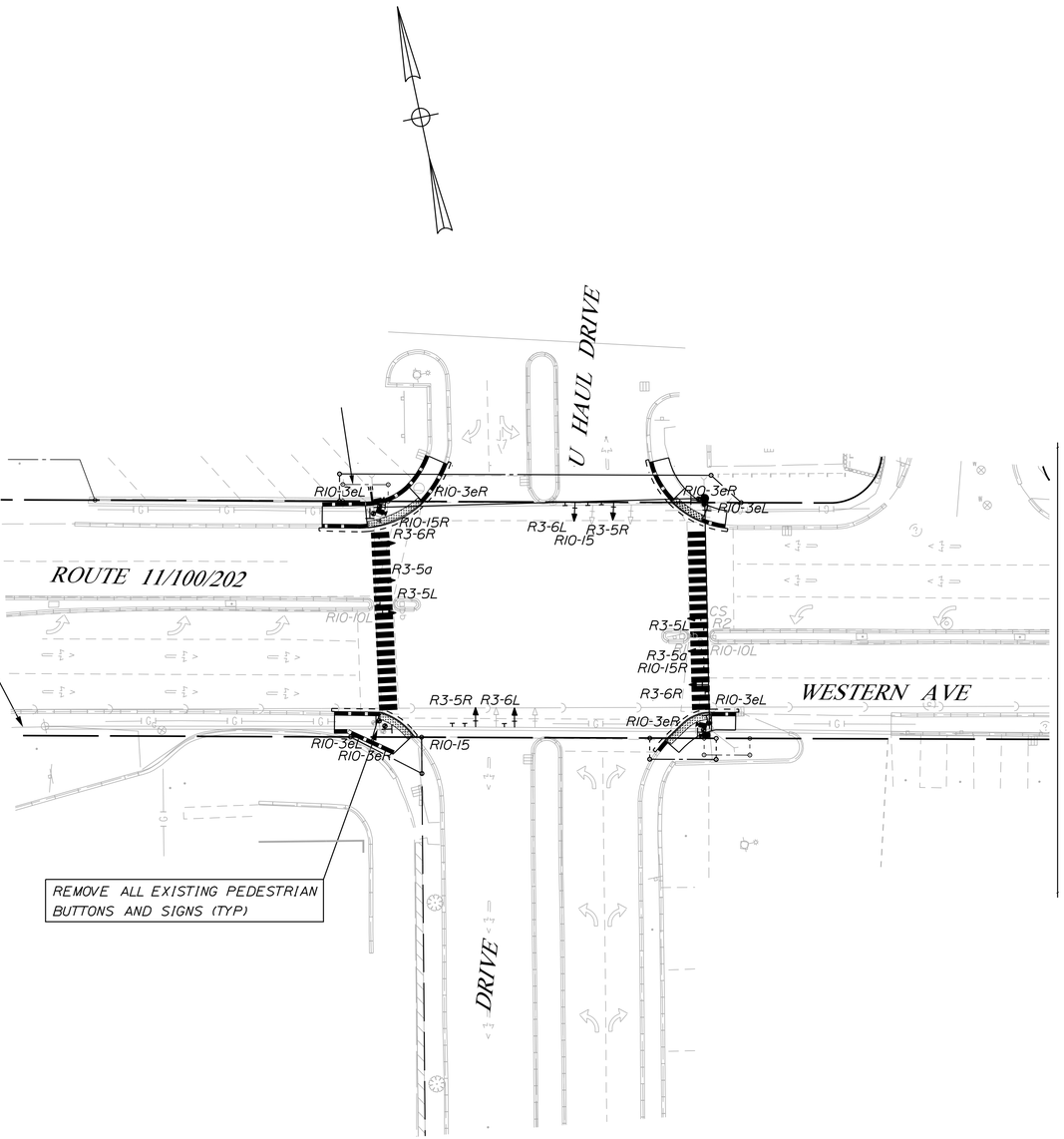


R10-15R 30"x30" 2-PROPOSED | R10-15 30"x30" 2-PROPOSED | R10-3eL 9"x15" 4-PROPOSED | R10-3eR 9"x15" 4-PROPOSED

EXISTING SIGNS



R10-10L 2-REMOVED



EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USE/RESERVED	
	2	NOT USE/RESERVED	
R1	3	1	ϕ1&ϕ6
R2	4	2	ϕ2&ϕ5
	5	NOT USED	
	6	NOT USED	

PRE-EMPTION NOTES:

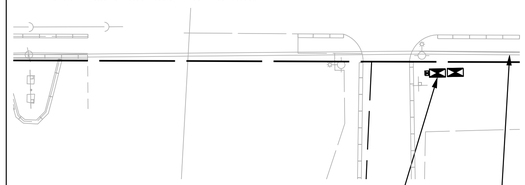
1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.

2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 2 = LOWEST)

3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR AND/OR RSU, 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 (4.0 SECONDS YELLOW AND 2.5 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.

4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.

5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.



RESET EXISTING 12-F FROM THE EXISTING CABINET TO THE PROPOSED CABINET ON A NEW PATCH PANEL

EXISTING 12-F AERIAL CABLE TO/FROM WESTERN AVENUE AND SEWALL STREET (LOCATION 28)

PLAN

25 0 25 50

Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER
DESIGN-DETAILED	MLC
CHECKED-REVIEWED	CMB
DESIGN2-DETAILED2	
DESIGN3-DETAILED3	

BY	DATE
JAR	07/20
CMB	07/20
REVISIONS 1	
REVISIONS 2	
REVISIONS 3	
REVISIONS 4	
FIELD CHANGES	

AUGUSTA
ROUTE 11/100/202 (WESTERN AVE)
AND U HAUL DRIVE

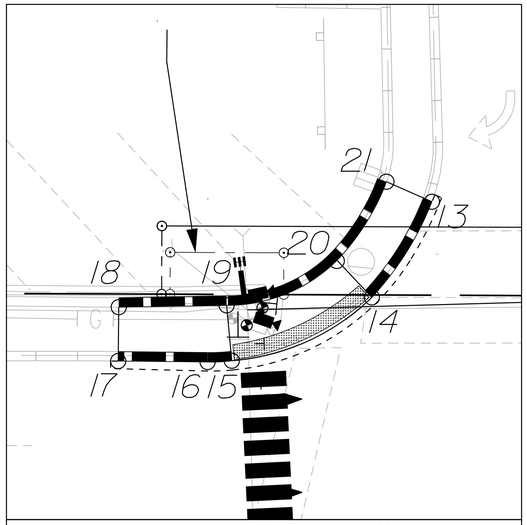
TRAFFIC SIGNAL PLAN

SHEET NUMBER

30A

Usermame: jorobert Date:11/24/2020
Division: HIGHWAY
Filename: 030_Signal_30c.dgn

C CORNER - NW DETAIL



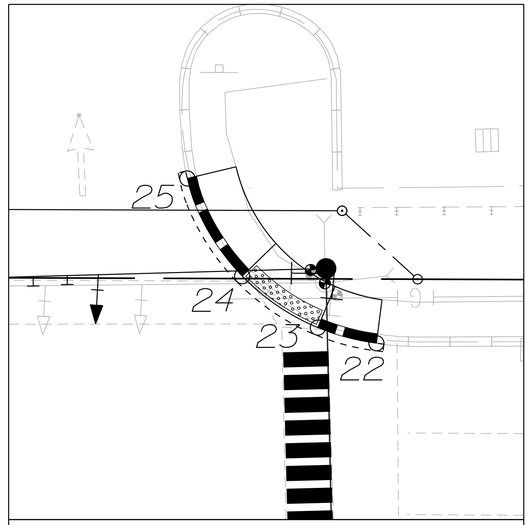
RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).
TRANSITION LENGTH REQUIRED FOR BOTH CURB RAMPS SHALL BE 15.0'. SEE MAINEDOT STANDARD DETAIL 801(13).
RECONSTRUCT BACK CURB ALONG THE CURB RAMPS AND LANDING.

10 0 10 20
Scale of Feet

	PT. TO PT.	RADIUS (FT)	ITEM 608.26 - CURB RAMP DETECTABLE WARNING FIELD		ITEM 609.11 - VERTICAL CURB TYPE 1 (LF)	ITEM 609.12 - VERTICAL CURB TYPE 1 - CIRCULAR (LF)	ITEM 609.221 - TERMINAL CURB TYPE 1 (LF)	ITEM 609.222 - TERMINAL CURB TYPE 1 - CIRCULAR (LF)	COMMENT
			LENGTH (FT)	QTY (SF)					
	1 TO 2	32.0						4.0	
*	2 TO 3	-	8.0	33.6					10.0% CROSS SLOPE
	3 TO 4	13.5	10.6						
	4 TO 5	-					8.0		
*	6 TO 7	-					15.0		11.6% RUNNING SLOPE
*	7 TO 8	20.0	11.7	25.1					4.3% CROSS SLOPE
	8 TO 9	-	1.9						
	10 TO 11	-			16.6				
	11 TO 12	-			4.3				
*	13 TO 14	40.0						15.0	13.2% RUNNING SLOPE
*	14 TO 15	29.9	20.7	39.0					4.1% CROSS SLOPE
	15 TO 16	19.5						3.2	
	16 TO 17	-					11.8		
	18 TO 19	-			14.2				
	19 TO 20	20.5				16.2			
	20 TO 21	30.0				12.3			
	22 TO 23	30.0						8.0	
*	23 TO 24	30.0	12.2	21.9					7.9% CROSS SLOPE
*	24 TO 25	30.0						15.0	11.1% RUNNING SLOPE

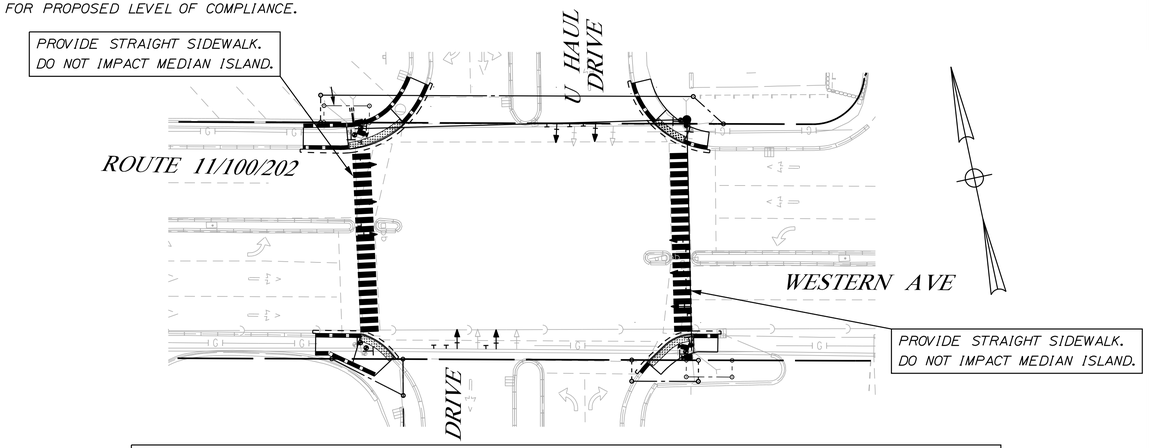
* NON-COMPLIANT CURB RAMP ELEMENT - THE EXISTING GUTTER LINE PROFILE IS GREATER THAN 2%. THEREFORE THE LEVEL LANDING CROSS SLOPE AND/OR RUNNING SLOPE WILL BE GREATER THAN THE 2% AND 8.33% MAXIMUM ALLOWABLE. RESPECTIVELY. THE COMMENT IS THE MAXIMUM VALUE FOR PROPOSED LEVEL OF COMPLIANCE.

D CORNER - NE DETAIL



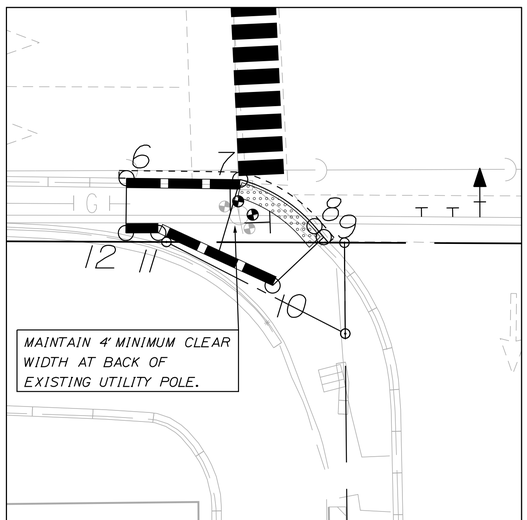
RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).
TRANSITION LENGTH REQUIRED FOR THE WESTERN CURB RAMP SHALL BE 15.0'. SEE MAINEDOT STANDARD DETAIL 801(13).

10 0 10 20
Scale of Feet



ALL CURB RAMPS SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND MAINEDOT STANDARD DETAILS 801(11) to 801(26) AS NOTED. AS WELL AS DETAILS PROVIDED ON SHEET H.

B CORNER - SW DETAIL



RECONSTRUCT CURB RAMP AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).
TRANSITION LENGTH REQUIRED FOR THE WESTERN CURB RAMP SHALL BE 15.0'. SEE MAINEDOT STANDARD DETAIL 801(13).
INSTALL BACK CURB ALONG THE BACK OF THE CURB RAMP AND LANDING TO MATCH INTO EXISTING PAVEMENT.

10 0 10 20
Scale of Feet

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
HOT MIX ASPHALT, 9.5 MM NOMINAL MAXIMUM SIZE (ITEM 403.210)	5.8 TONS
PLAIN CONCRETE SIDEWALK (ITEM 608.07)	99.5 SY
CURB RAMP DETECTABLE WARNING FIELD (ITEM 608.26)	119.6 SF
REGRADING SIDEWALK (ITEM 608.46)	99.5 SY
VERTICAL CURB TYPE 1 (ITEM 609.11)	35.1 LF

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
VERTICAL CURB TYPE 1 - CIRCULAR (ITEM 609.12)	28.5 LF
TERMINAL CURB TYPE 1 (ITEM 609.221)	34.8 LF
TERMINAL CURB TYPE 1 - CIRCULAR (ITEM 609.222)	45.2 LF

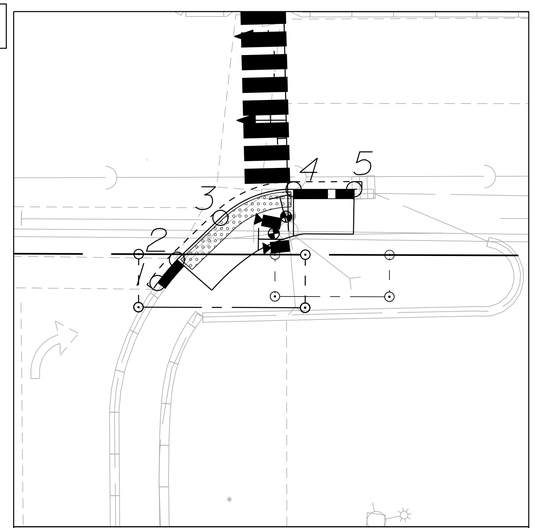
THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

A CORNER - SE DETAIL



RECONSTRUCT CURB RAMP AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).

10 0 10 20
Scale of Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	DATE
PROJ. MANAGER		
DESIGN-DETAILED	MLG	07/20
CHECKED-REVIEWED	CMB	07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 11/100/202 (WESTERN AVE)
AND U HAUL DRIVE

CURB RAMP LAYOUT
AND DETAIL PLAN

SHEET NUMBER
30C
OF 358

Filename: ...\ROW\MSTA\030_RWPLAN10.dgn Username: Benjamin.Singer Date:11/19/2020 Division: ROW

PLAN LEGEND

Town, County, State	New R/W Along Existing R/W	Sanitary Sewer	Traveled Way	Cut Line	Fill Line
Approx. Property Lines P.L.	Building / Clearing Limit Line	Telephone Line	Ditch	Stonewall	Retaining Wall
Existing Right of Way	Trees Conifer / Deciduous	Electric Line	Catch Basin	Baseline 10+00 11+00 12+00	
Limits of Wrought Portion L.O.W.P.	Tree Line / Bush Line	Water Line	Manhole	Monument	Traverse Point
Control Of Access C.O.A.	Water Edge	Underdrain Line	Sewer Manhole	Iron Rod Found IRF	Pipe Found IPF
New Right of Way	Ledge / Rock/Boulder / Flag Pole	Gas Line	Utility Pole	Replacement Pin Set	
New Easement	Fence CHAIN LINK / BARB WIRE / STOCKADE	Guardrail	Fire Hydrant		
New Temporary Rights	Sign / Well / Mailbox	Culvert	Curbing		
New R/W Within Existing R/W					

Existing / Proposed

THIS PLAN WAS PREPARED IN CONNECTION WITH THE DEPARTMENT'S ACQUISITION OF REAL PROPERTY FOR TRANSPORTATION PURPOSES. IT CANNOT BE USED TO ESTABLISH LEGAL BOUNDARIES BETWEEN ABUTTING PROPERTY OWNERS.

25 0 25 50 75 100
Scale of Feet

STATE OF MAINE
REGISTRY OF DEEDS

COUNTY _____
RECEIVED _____, _____
at _____h_____m_____M and
recorded in Plan Bk _____, Pg._____
Attest: _____
REGISTER

GRID
MAINE 2000 WEST ZONE

NOTE:
THE NORTH ARROW AND BASELINE COORDINATES SHOWN ARE BASED ON GRID NORTH, MAINE 2000 WEST ZONE. HOWEVER, THE BASELINE BEARING IS TAKEN FROM THE D.O.T. FILE NO. REFERENCED, AND MAY BE BASED ON MAGNETIC NORTH.

MON.
N:539370.790
E:1138358.832

N:539445.006
E:1138384.540
IPF

P.L.

G.D.G.
ITEM NO. (16)
CONST. & MAINT. EASE. = 25± S.F. (1)
TOTAL AREA = 0.66± AC. (CITY)

EXISTING SLOPE EASEMENT LIMITS S.H.C. FILE NO. 6-166

BEGIN B.L.
N:539387.947
E:1138464.680

613
S60°01'15"E
132.65'
S.H.C. FILE NO. 6-166

WENDY'S RESTAURANT

EXISTING GUY WIRE EASEMENT LIMITS S.H.C. FILE NO. 6-166

CONST. & MAINT. EASE. LTS. 25± S.F.

EXISTING CONST. & MAINT. EASE. LIMITS (CURBING) S.H.C. FILE NO. 6-166

ACCESS (AND OTHER) EASE. TO G.D.G.

NOTE:
BASE LINE ESTABLISHED UNDER S.H.C. FILE NO. 6-166

P.I. STA. 614+32.65

614
WESTERN AVENUE
STATE HWY. "15"
U.S. ROUTE 202
ROUTES 100, 17, 11

S60°02'43"E
67.35'
S.H.C. FILE NO. 6-166

1,153± S.F. SIGNAL SYSTEM EASEMENT LIMITS

EXISTING CONST. & MAINT. EASE. LIMITS S.H.C. FILE NO. 6-166

"U-HAUL MOVING AND STORAGE"

AREC 9, LLC
ITEM NO. (14)
SIGNAL SYSTEM EASE. = 1,153± S.F. (1)
TOTAL AREA = 1.92± AC. (CITY)

AUGUSTA PLAZA ASSOCIATES, LLC
ITEM NO. (15)
OMITTED

EXISTING R/W REF.:
S.H.C. FILE NO. 6-166, SHEET 11

GUY WIRE EASEMENT S.H.C. FILE NO. 6-166

615

END B.L.
N:539346.000
E:1138660.232

INTERSECTION NO. 30 WIN 024301.00

ITEM	TECH	CHECKED
EXISTING CONDITION PLAN	B.S.	G.L.L.
FINAL RIGHT OF WAY	B.S.	G.L.L.
AREAS	B.S.	G.L.L.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION - AUGUSTA, ME 04333-0016 - 207-624-3460
AUGUSTA
RIGHT OF WAY MAP

REVISIONS

NO.	DATE	DESCRIPTION	BY

PLAN FILED IN PLAN BOOK PAGE COUNTY RECORD					
NO.	GRANTOR	INSTRUMENT	DATE	BOOK	PAGE

BRUCE A. VAN NOTE
COMMISSIONER
JOYCE NOEL TAYLOR
CHIEF ENGINEER
DATE

STATE HIGHWAY "15"
WESTERN AVE. / U.S. ROUTE 202
AUGUSTA KENNEBEC COUNTY
FEDERAL AID PROJECT NO. 2430100

NOVEMBER 2020	RIGHT-OF-WAY MAP	D.O.T. FILE NO. 6-487
SCALE 1" = 25'	SHEET 10 OF 12	

SHEET NUMBER
30R
OF 358

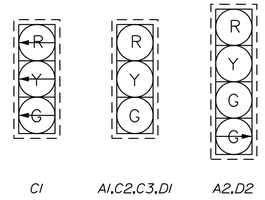
LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	5
FURNISH AND INSTALL ONE-WAY 4-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	2
FURNISH AND INSTALL 19-INCH 1 RU FIBER OPTIC 12-POSITION PATCH PANEL WITH PIGTAILS	1
RESET FIBER OPTIC ETHERNET SWITCH WITH FIBER OPTIC INTERFACES	1
FURNISH AND INSTALL MAST ARM MOUNTED SIGNS	1
FURNISH AND INSTALL POST MOUNTED SIGNS	1
FURNISH AND INSTALL POLE RISERS	1
REMOVE MAST ARM MOUNTED SIGNS	1
RESET PREEMPTION PHASE SELECTOR	1
RESET EXISTING 12-F FIBER IN PROPOSED CABINET	-
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 3 APPROACHES, COMPLETE (ITEM 643.21)	1 LS
FURNISH AND INSTALL NON-INVASIVE ADVANCE VEHICLE DETECTION SYSTEM FOR 3 APPROACHES, COMPLETE (ITEM 643.22)	1 LS

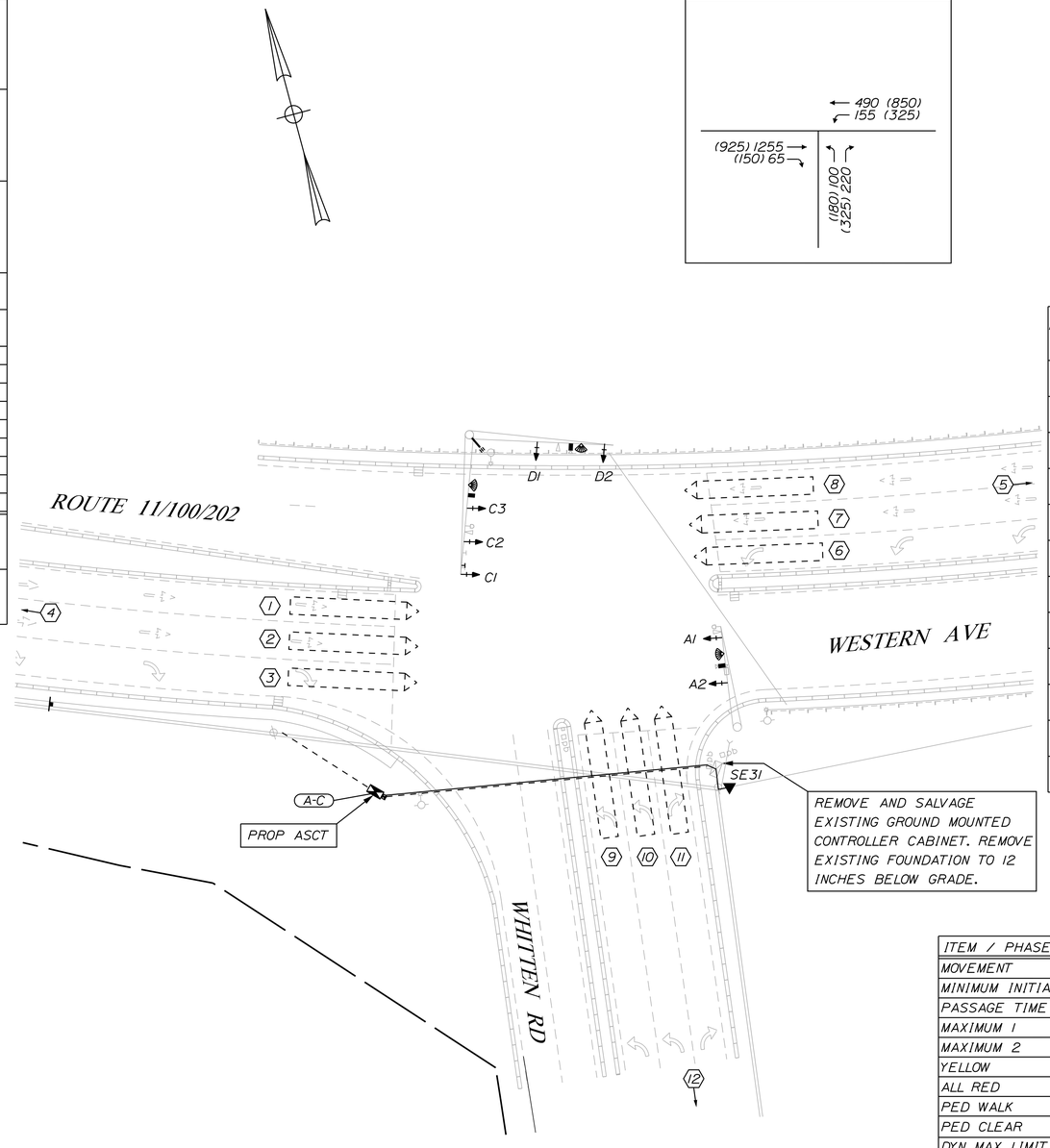
THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

SYSTEM DESIGN VOLUMES AM (PM)

PROPOSED INDICATIONS



NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES



DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	φ CALLED	φ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
①	WESTERN AVE EB THROUGH	6	6	B	-	-
②	WESTERN AVE EB THROUGH	6	6	B	-	-
③	WESTERN AVE EB RIGHT	6	6	B	5	-
④*	WESTERN AVE EB ADVANCE	6	6	A	-	-
⑤*	WESTERN AVE WB ADVANCE	2	2	A	-	-
⑥	WESTERN AVE WB LEFT	5	5	B	-	-
⑦	WESTERN AVE WB THROUGH	2	2	B	-	-
⑧	WESTERN AVE WB THROUGH	2	2	B	-	-
⑨	WHITTEN RD NB LEFT	4	4	B	-	-
⑩	WHITTEN RD NB LEFT	4	4	B	-	-
⑪	WHITTEN RD NB RIGHT	4	4	B	5	-
⑫*	WHITTEN RD NB ADVANCE	4	4	A	-	-

* SEE ADVANCED DILEMMA ZONE DETAIL (35 MPH)
NOTE: LOCATION AND QUANTITY OF ADDITIONAL VEHICLE DETECTION ZONES TO BE DETERMINED BASED ON THE SPECIFIC ASCT SYSTEM REQUIREMENTS

STRUCTURE LIST

STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	L48"xW36"xH48"

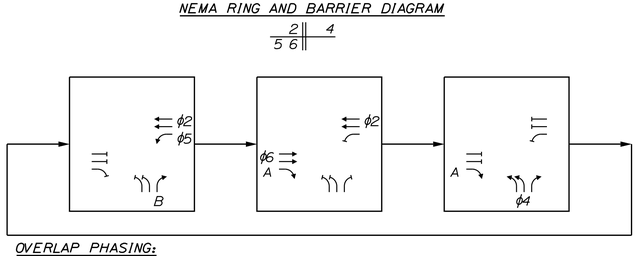
SIGNAL TIMING SCHEDULE

ITEM / PHASE	φ1	φ2	φ3	φ4	φ5	φ6	φ7	φ8
MOVEMENT	-	C	-	D	C (LT)	A	-	-
MINIMUM INITIAL	-	10	-	5	10	10	-	-
PASSAGE TIME	-	3.5	-	2.5	3.5	3.5	-	-
MAXIMUM 1	-	35	-	20	35	35	-	-
MAXIMUM 2	-	85	-	25	50	45	-	-
YELLOW	-	4.0	-	3.5	3.0	4.0	-	-
ALL RED	-	2.0	-	2.5	3.0	2.0	-	-
PED WALK	-	-	-	-	-	-	-	-
PED CLEAR	-	-	-	-	-	-	-	-
DYN MAX LIMIT	-	-	-	-	-	-	-	-
DYN MAX STEP	-	-	-	-	-	-	-	-
RECALL	-	SOFT	-	OFF	OFF	SOFT	-	-
DETECTOR	-	PR	-	PR	PR	PR	-	-
PRE-EMPT PRIORITY	-	4	-	6	4	3	-	-
FLASH	-	Y	-	R	R	Y	-	-
DUAL ENTRY	-	ON	-	OFF	OFF	ON	-	-

NOTES: S = SOFT RECALLY = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK
IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD. INTERSECTION SHALL BE PART OF AN ASCT (ADAPTIVE) SYSTEM.

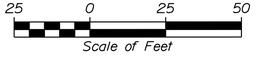
PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM



OVERLAP PHASING:
OVL A = 4+6
OVL B = 4+5

PLAN



* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	BY	DATE
PROJ. MANAGER	B. KEEZER	
DESIGN-DETAILED	MLG	07/20
CHECKED-REVIEWED	CMB	07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 11/100/202 (WESTERN AVE) AND WHITTEN RD

TRAFFIC SIGNAL PLAN

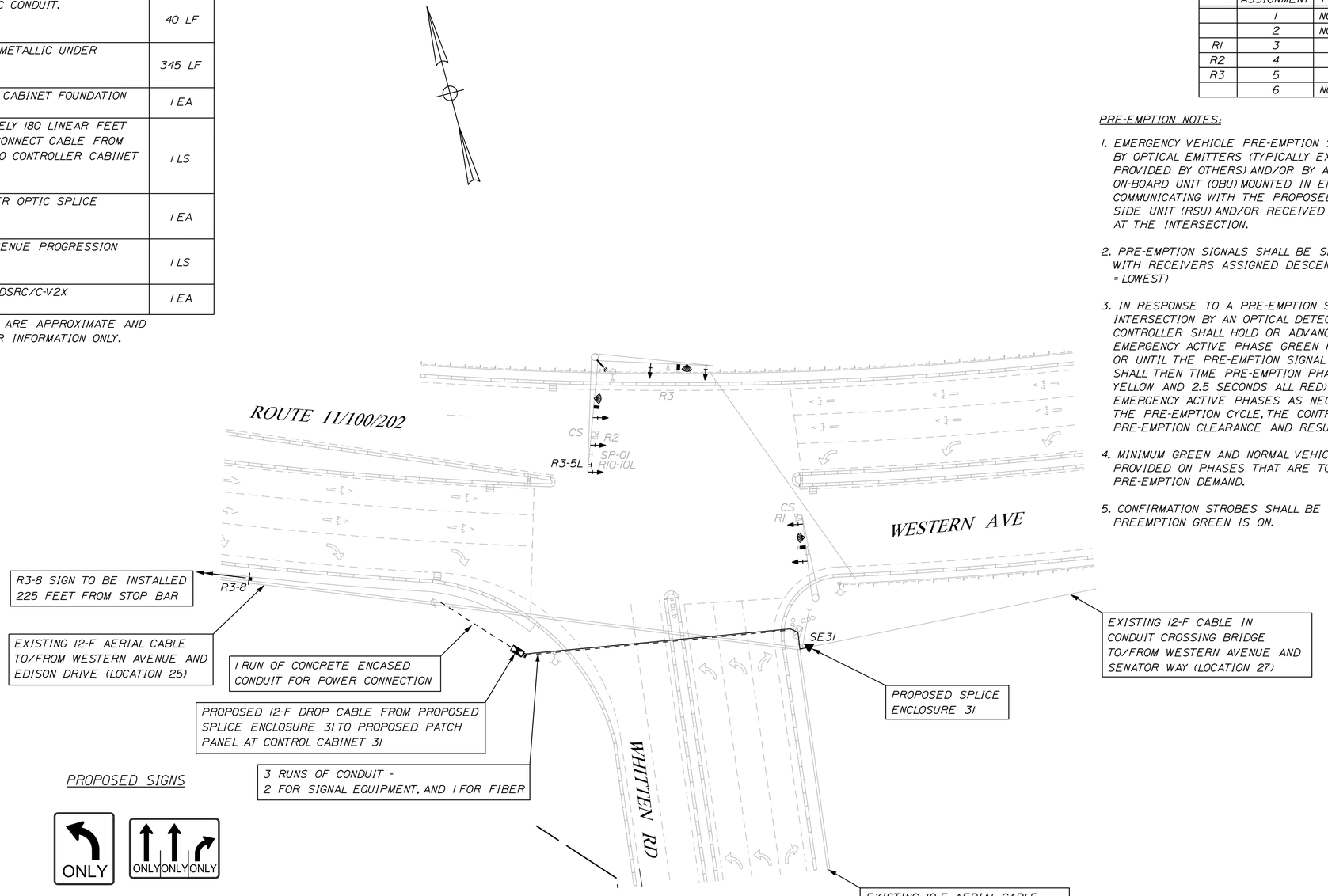
SHEET NUMBER
31
OF 358

Username: jorobert
Date:11/24/2020
Division: HIGHWAY
Filename: 031_Signal_31.dgn

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
FURNISH AND INSTALL NON-METALLIC CONDUIT, CONCRETE ENCASED (ITEM 626.221)	40 LF
FURNISH AND INSTALL (3-INCH) NON-METALLIC UNDER PAVEMENT CONDUIT (ITEM 626.251)	345 LF
FURNISH AND INSTALL CONTROLLER CABINET FOUNDATION (ITEM 626.35)	1 EA
FURNISH AND INSTALL APPROXIMATELY 180 LINEAR FEET OF 12-STRAND FIBER OPTIC INTERCONNECT CABLE FROM AERIAL SPLICE ENCLOSURE AT 31 TO CONTROLLER CABINET AT 31 (ITEM 643.90)	1 LS
FURNISH AND INSTALL AERIAL FIBER OPTIC SPLICE ENCLOSURE (ITEM 643.90)	1 EA
FURNISH AND INSTALL WESTERN AVENUE PROGRESSION BASED ASCT SYSTEM (ITEM 654.05)	1 LS
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.



PROPOSED SIGNS

R3-5L
30"x36"
1-PROPOSED

R3-8
48"x30"
1-PROPOSED

EXISTING SIGNS



R10-10L
1-REMOVED

SP-01
1-RETAINED

EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USED/RESERVED	
	2	NOT USED/RESERVED	
R1	3	1	ϕ6
R2	4	2	ϕ2&ϕ5
R3	5	3	ϕ4
	6	NOT USED	

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.
2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 3 = LOWEST)
3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR AND/OR RSU, 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 (4.0 SECONDS YELLOW AND 2.5 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.
4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	DATE
PROJ. MANAGER		
DESIGN-DETAILED	MLG	07/20
CHECKED-REVIEWED	CMB	07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
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REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 11/100/202 (WESTERN AVE) AND WHITTEN RD

TRAFFIC SIGNAL PLAN

SHEET NUMBER
31A
OF 358

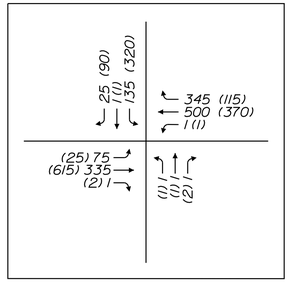
Filename: 031_Signal_31a.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

LIST OF WORK ITEMS

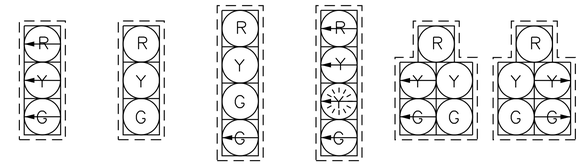
EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	4
FURNISH AND INSTALL ONE-WAY 4-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	2
FURNISH AND INSTALL ONE-WAY 5-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	2
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARM UPRIGHTS WITH BRACKET	1
FURNISH AND INSTALL 19-INCH 1RU FIBER OPTIC 12-POSITION PATCH PANEL WITH PIGTAILS	1
RESET FIBER OPTIC ETHERNET SWITCH WITH FIBER OPTIC INTERFACES	1
FURNISH AND INSTALL MAST ARM MOUNTED SIGNS	2
RESET COUNTDOWN PEDESTRIAN SIGNAL HEADS	1
RESET (APS) PUSH BUTTON WITH R10-3E SIGN	1
RESET PREEMPTION PHASE SELECTOR	1
RESET EXISTING 12-F FIBER IN PROPOSED CABINET	-
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 4 APPROACHES. COMPLETE (ITEM 643.21)	1 LS
RESET EXISTING ADVANCE VEHICLE DETECTION SYSTEM (SUBSIDIARY TO ITEM 643.21)	-

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

SYSTEM DESIGN VOLUMES AM (PM)



PROPOSED INDICATIONS



D1 | A1,B2 C2,C3 | B1 | C1 | D2 | A2

EXISTING INDICATIONS
TO REMAIN OR RELOCATE



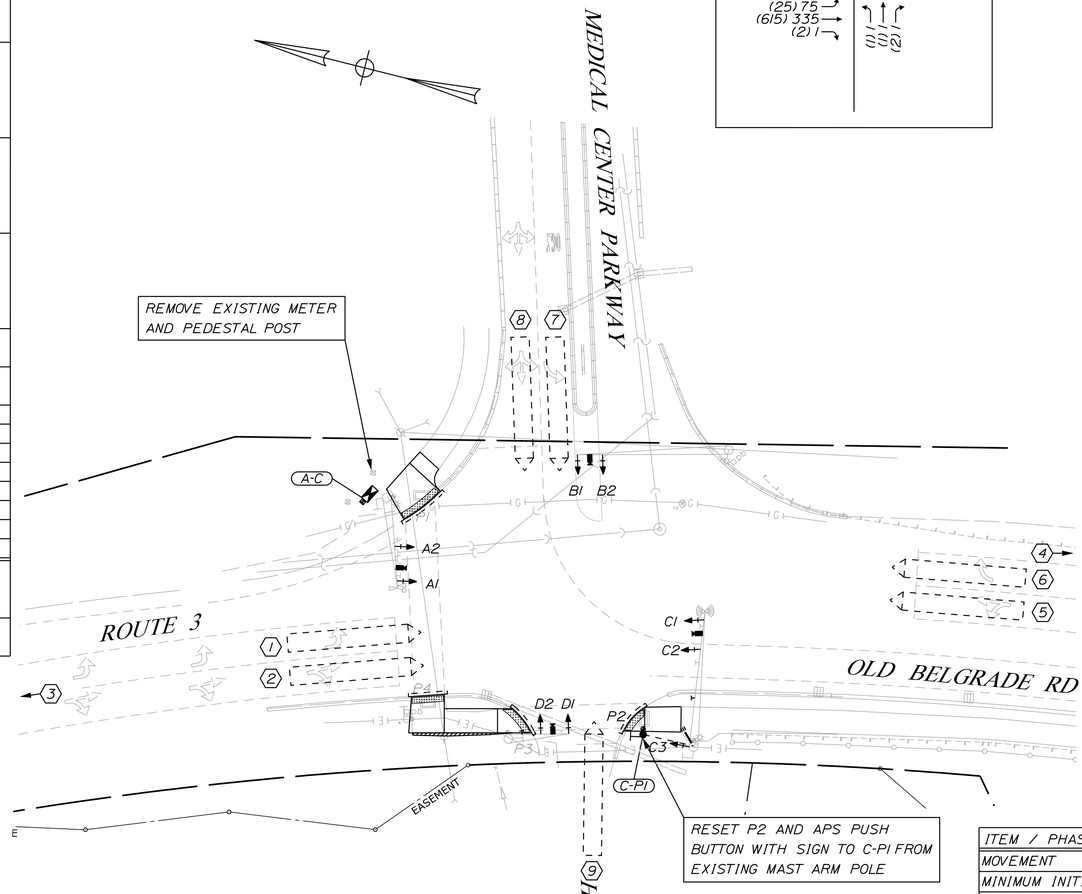
P1-P4

NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES

DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	φ CALLED	φ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
①	OLD BELGRADE RD SB LEFT	1	1	B	-	-
②	OLD BELGRADE RD SB THRU-RIGHT	6	6	B	-	-
③*	OLD BELGRADE RD SB ADVANCE	6	6	A	-	-
④*	OLD BELGRADE RD NB ADVANCE	2	2	A	-	-
⑤	OLD BELGRADE RD NB LEFT-THRU	2	2	B	-	-
⑥	OLD BELGRADE RD NB RIGHT	2	2	B	5	-
⑦	MEDICAL CENTER PKWY WB LEFT	3	3	B	-	-
⑧	MEDICAL CENTER PKWY WB MOVEMENTS	3	3	B	-	-
⑨	HENRYS WAY EB MOVEMENTS	4	4	B	-	-

* SEE ADVANCED DILEMMA ZONE DETAIL (45 MPH)



STRUCTURE LIST

STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	EXISTING
C-P1	8' PEDESTAL POLE	24" DIAMETER

SIGNAL TIMING SCHEDULE

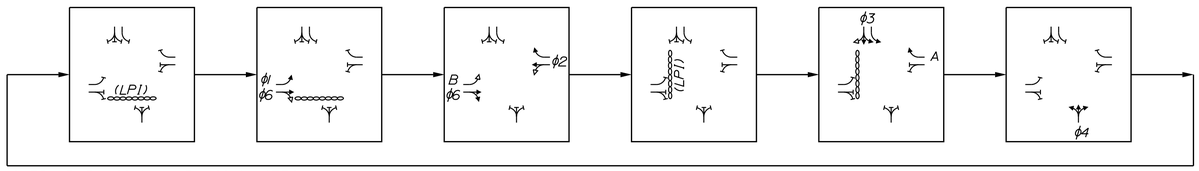
ITEM / PHASE	φ 1	φ 2	φ 3	φ 4	φ 5	φ 6	φ 7	φ 8
MOVEMENT	C (LT)	A	D	B	-	C	-	-
MINIMUM INITIAL	5	10	7	5	-	10	-	-
PASSAGE TIME	3.0	3.5	3.0	3.0	-	3.5	-	-
MAXIMUM 1	10	45	30	10	-	45	-	-
MAXIMUM 2	25	45	30	10	-	45	-	-
YELLOW	4.5	4.5	4.5	4.5	-	4.5	-	-
ALL RED	3.5	3.5	3.5	2.5	-	3.5	-	-
PED WALK	-	-	4	-	-	4	-	-
PED CLEAR	-	-	17	-	-	11	-	-
DYN MAX LIMIT	-	-	-	-	-	-	-	-
DYN MAX STEP	-	-	-	-	-	-	-	-
RECALL	OFF	SOFT	OFF	OFF	-	SOFT	-	-
DETECTOR	PR	PR	PR	PR	-	PR	-	-
PRE-EMPT PRIORITY	3	4	-	-	-	3	-	-
FLASH	R	Y	R	R	-	Y	-	-
DUAL ENTRY	OFF	ON	OFF	OFF	-	ON	-	-

NOTES: S = SOFT RECALLY = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK
IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD.

PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM

1 2 | 3 4
6



OVERLAP PHASING:
OVL A = 2-3
OVL B = 2

PHASING NOTES:
1. EACH PEDESTRIAN PHASE SHALL HAVE A MINIMUM OF A 4 SECOND LEADING PEDESTRIAN INTERVAL (LPI).
2. PEDESTRIAN PHASE UPON PUSH BUTTON ACTIVATION ONLY.
3. GREEN ARROW INDICATION FOR OVERLAP A IS DISABLED WHEN PHASE 6 IS ACTIVE.
4. OVERLAP B SHALL BE PROGRAMMED FOR FLASHING YELLOW ARROW.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY REFERENCE WIN 16313.10 SHEET 34 OF 226, 12/2012

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	BY	DATE
PROJ. MANAGER	B. KEEZER	
DESIGN-DETAILED	MLG	07/20
CHECKED-REVIEWED	CMB	07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 3 (OLD BELGRADE RD) AND
HENRYS WAY / MEDICAL CENTER PKWY

TRAFFIC SIGNAL PLAN

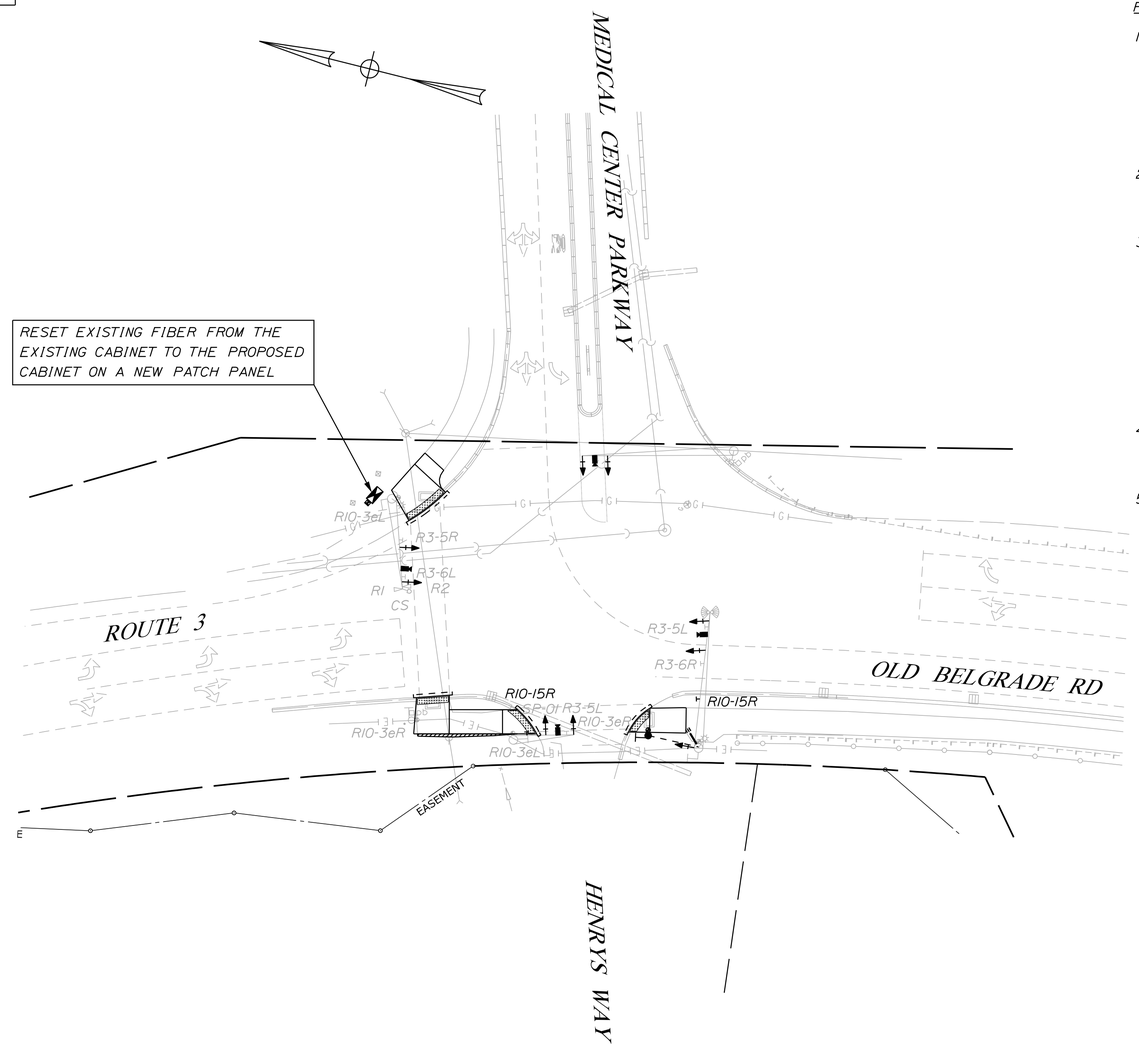
SHEET NUMBER
32
OF 358

Filename: 032_Signal_32.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
FURNISH AND INSTALL (3-INCH) NON-METALLIC CONDUIT (ITEM 626.22)	20 LF
FURNISH AND INSTALL 24-INCH DIAMETER FOUNDATION (ITEM 626.421)	7 LF
FURNISH AND INSTALL 8-FOOT PEDESTAL POLE (ITEM 643.92)	1 EA
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.



PROPOSED SIGNS



R10-15R
30"x30"
2-PROPOSED

EXISTING SIGNS



R3-5L	R3-5R	R3-6L	R3-6R	SP-01	R10-3eL	R10-3eR
2-RETAINED	1-RETAINED	1-RETAINED	1-RETAINED	1-RETAINED	2-RETAINED	1-RETAINED 1-RESET

EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USE/RESERVED	
	2	NOT USE/RESERVED	
R1	3	1	ϕ8&6 (SB)
R2	4	2	ϕ2 (NB)
	5	NOT USED	
	6	NOT USED	

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.

2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 2 = LOWEST)

3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR AND/OR RSU, 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.

4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.

5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY REFERENCE WIN 16313.10 SHEET 34 OF 226, 12/2012

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	DATE
PROJ. MANAGER		
DESIGN-DETAILED	MLG	JAR 07/20
CHECKED-REVIEWED	CMB	CMB 07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 3 (OLD BELGRADE RD) AND
HENRYS WAY / MEDICAL CENTER PKWY

TRAFFIC SIGNAL PLAN

SHEET NUMBER

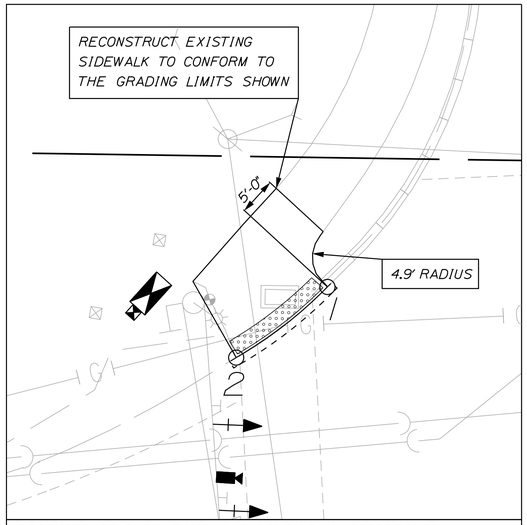
32A

OF 358

Filename: 032_Signal_32a.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

Filename: 032_Signal_32c.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

A CORNER - NE DETAIL

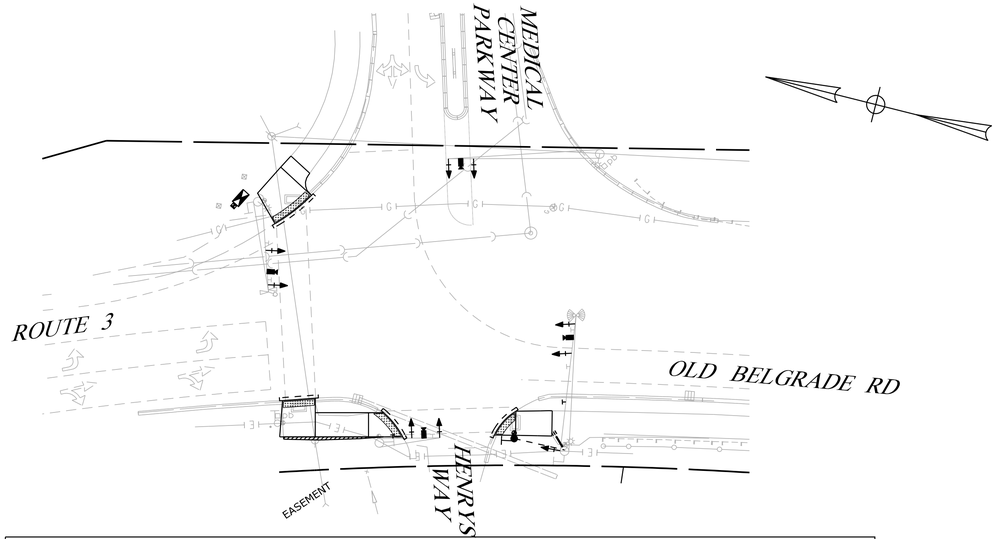


RECONSTRUCT CURB RAMP AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).

10 0 10 20
Scale of Feet

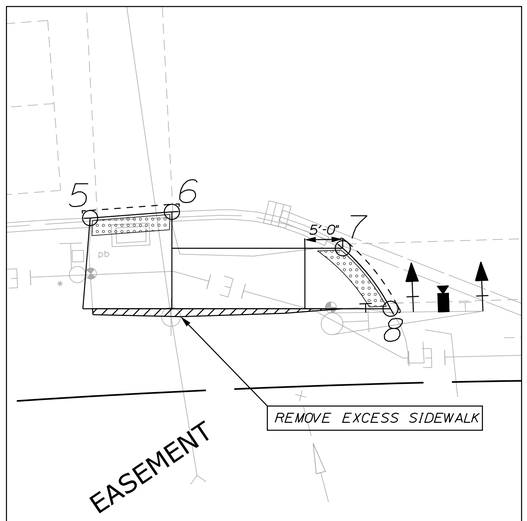
PT. TO PT.	RADIUS (FT)	ITEM 608.26 - CURB RAMP DETECTABLE WARNING FIELD		COMMENT
		LENGTH (FT)	QTY (SF)	
* 1 TO 2	55.8	15.2	28.0	3.9% CROSS SLOPE
* 3 TO 4	17.9	10.7	15.4	3.2% CROSS SLOPE
* 5 TO 6	-	10.8	20.5	3.0% CROSS SLOPE
7 TO 8	26.8	10.2	19.7	

* NON-COMPLIANT CURB RAMP ELEMENT - THE EXISTING GUTTER LINE PROFILE IS GREATER THAN 2%. THEREFORE THE LEVEL LANDING CROSS SLOPE AND/OR RUNNING SLOPE WILL BE GREATER THAN THE 2% AND 8.33% MAXIMUM ALLOWABLE, RESPECTIVELY. THE COMMENT IS THE MAXIMUM VALUE FOR PROPOSED LEVEL OF COMPLIANCE.



ALL CURB RAMPS SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND MAINEDOT STANDARD DETAILS 801(11) to 801(26) AS NOTED. AS WELL AS DETAILS PROVIDED ON SHEET H.

D CORNER - NW DETAIL



RECONSTRUCT LANDINGS IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(14) AND 801(22).
RECONSTRUCT THE SIDEWALK BETWEEN THE LANDINGS.

10 0 10 20
Scale of Feet

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
COMMON EXCAVATION (ITEM 203.20)	5.4 CY
HOT MIX ASPHALT, 9.5 MM NOMINAL MAXIMUM SIZE (ITEM 403.210)	2.6 TONS
PLAIN CONCRETE SIDEWALK (ITEM 608.07)	72.3 SY

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
CURB RAMP DETECTABLE WARNING FIELD (ITEM 608.26)	83.6 SF
CONSTRUCT SIDEWALK (ITEM 608.45)	0.7 SY
REGRADING SIDEWALK (ITEM 608.46)	76.9 SY

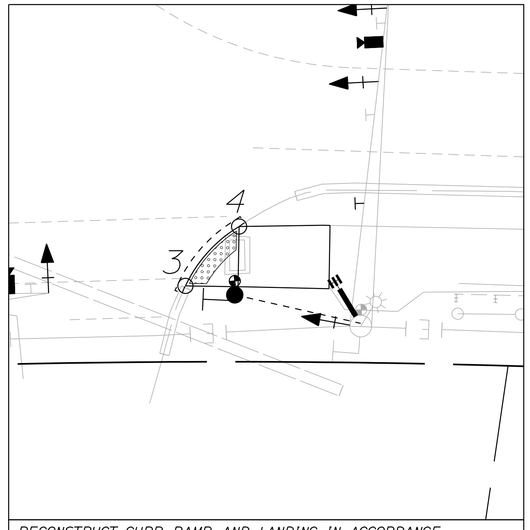
THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY REFERENCE WIN 16313.10 SHEET 34 OF 226, 12/2012

C CORNER - SW DETAIL



RECONSTRUCT CURB RAMP AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(22).

10 0 10 20
Scale of Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER	BY	DATE
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

ROUTE 3 (OLD BELGRADE RD) AND HENRYS WAY / MEDICAL CENTER PKWY

CURB RAMP LAYOUT AND DETAIL PLAN

SHEET NUMBER

32C

OF 358

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	6
FURNISH AND INSTALL ONE-WAY 4-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	1
FURNISH AND INSTALL ONE-WAY 5-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARM UPRIGHTS WITH BRACKET	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON TOP OF POST	1
FURNISH AND INSTALL 19-INCH 1RU FIBER OPTIC 12-POSITION PATCH PANEL WITH PIGTAILS	1
RESET FIBER OPTIC ETHERNET SWITCH WITH FIBER OPTIC INTERFACES	1
REMOVE MAST ARM MOUNTED SIGNS	2
RESET PREEMPTION PHASE SELECTOR	1
RESET EXISTING 12-F FIBER IN PROPOSED CABINET	-
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 4 APPROACHES, COMPLETE (ITEM 643.21)	1 LS
RESET EXISTING ADVANCE VEHICLE DETECTION SYSTEM (ITEM 643.21)	-

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

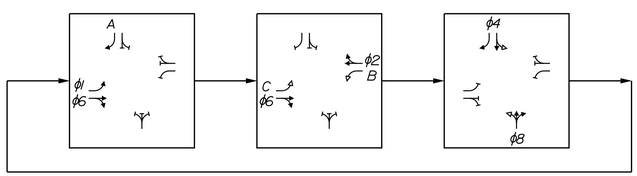
STRUCTURE LIST

STRUCTURE	DESCRIPTION	FOUNDATION
(A-C)	CONTROLLER CABINET	EXISTING
(C-P1)	10' PEDESTAL POLE	24" DIAMETER

PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM

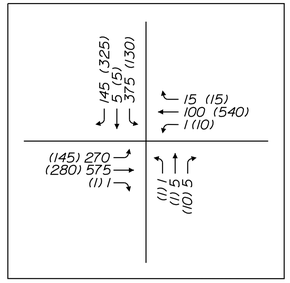
1 2 | 4
6 | 8

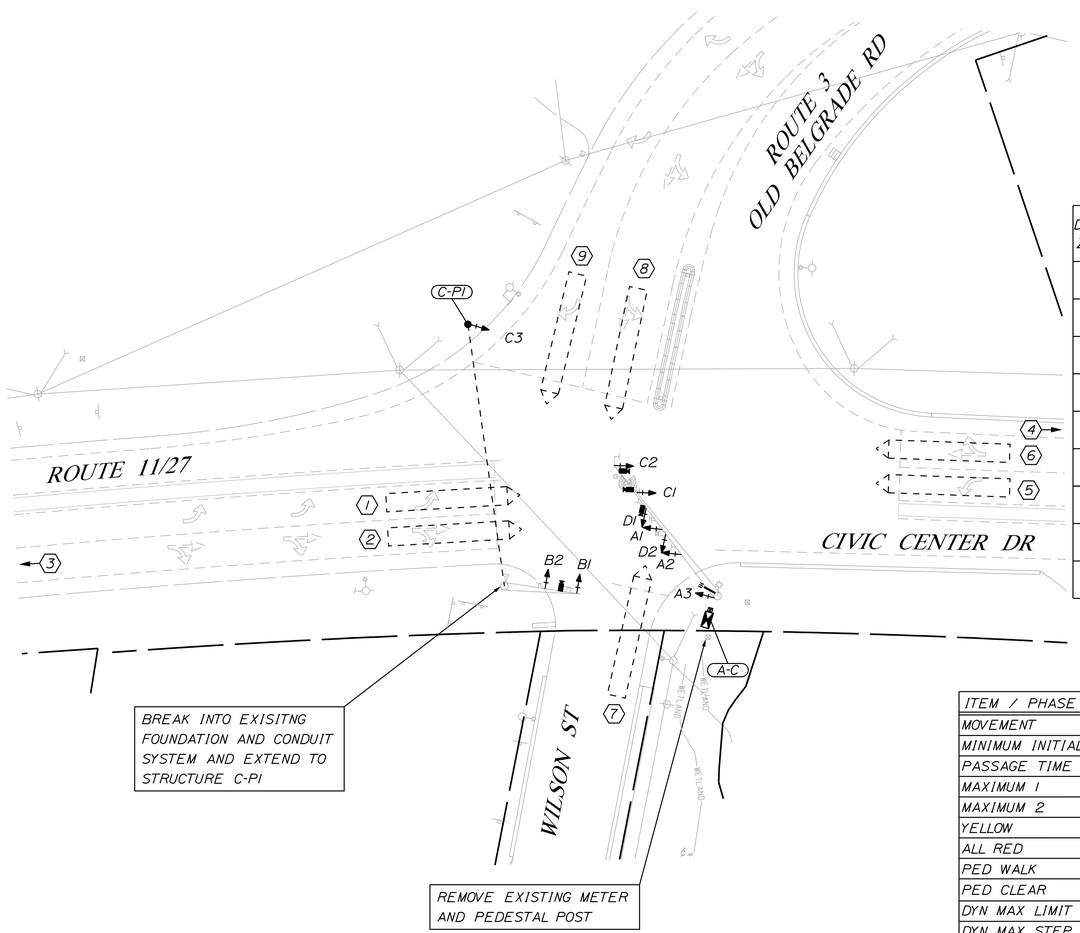


OVERLAP PHASING:
OVL A = 1+4
OVL B = 2
OVL C = 1(PROT) + 2 (PERM)

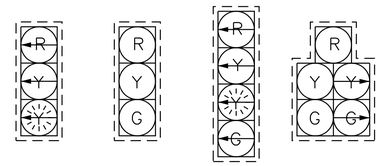
PHASING NOTES:
1. GREEN ARROW INDICATION FOR OVERLAP A IS DISABLED WHEN PHASE 8 IS ACTIVE.
2. OVERLAP B AND C SHALL BE PROGRAMMED FOR FLASHING YELLOW ARROW.

SYSTEM DESIGN VOLUMES AM (PM)





PROPOSED INDICATIONS



NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES

DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	ϕ CALLED	ϕ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
⑴	CIVIC CENTER DR SB LEFT	1	1	B	-	-
⑵	CIVIC CENTER DR SB THRU-RIGHT	6	6	B	-	-
⑶*	CIVIC CENTER DR SB ADVANCE	6	6	A	-	-
⑷*	CIVIC CENTER DR NB ADVANCE	2	2	A	-	-
⑸	CIVIC CENTER DR NB LEFT	2	2	B	-	-
⑹	CIVIC CENTER DR NB THRU-RIGHT	2	2	B	-	-
⑺	WILSON ST EB MOVEMENTS	8	8	B	-	-
⑻	OLD BELGRADE RD WB LEFT-THRU	4	4	B	-	-
⑼	OLD BELGRADE RD WB RIGHT	4	4	B	5	-

* SEE ADVANCED DILEMMA ZONE DETAIL (50 MPH)

SIGNAL TIMING SCHEDULE

ITEM / PHASE	ϕ1	ϕ2	ϕ3	ϕ4	ϕ5	ϕ6	ϕ7	ϕ8
MOVEMENT	A (LT)	C	-	B	-	A	-	D
MINIMUM INITIAL	5	10	-	7	-	10	-	7
PASSAGE TIME	3.0	3.5	-	3.0	-	3.5	-	3.0
MAXIMUM 1	25	45	-	30	-	45	-	15
MAXIMUM 2	25	45	-	30	-	45	-	15
YELLOW	4.5	5.0	-	3.5	-	5.0	-	3.5
ALL RED	2.5	2.0	-	3.5	-	2.0	-	3.5
PED WALK	-	-	-	-	-	-	-	-
PED CLEAR	-	-	-	-	-	-	-	-
DYN MAX LIMIT	-	-	-	-	-	-	-	-
DYN MAX STEP	-	-	-	-	-	-	-	-
RECALL	OFF	SOFT	-	OFF	-	SOFT	-	OFF
DETECTOR	PR	PR	-	PR	-	PR	-	PR
PRE-EMPT PRIORITY	3	4	-	-	-	3	-	-
FLASH	R	Y	-	R	-	Y	-	R
DUAL ENTRY	OFF	ON	-	ON	-	ON	-	ON

NOTES: S = SOFT RECALLY = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK
IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY REFERENCE WIN 16313.10 SHEET 38,40 OF 226, 12/2012

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	BY	DATE
B. KEEZER		
PROJ. MANAGER		
DESIGN-DETAILED	MLG	07/20
CHECKED-REVIEWED	CMB	07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 11/27 (CIVIC CENTER DR) AND
ROUTE 3 (OLD BELGRADE RD) / WILSON ST

TRAFFIC SIGNAL PLAN

SHEET NUMBER
33
OF 358

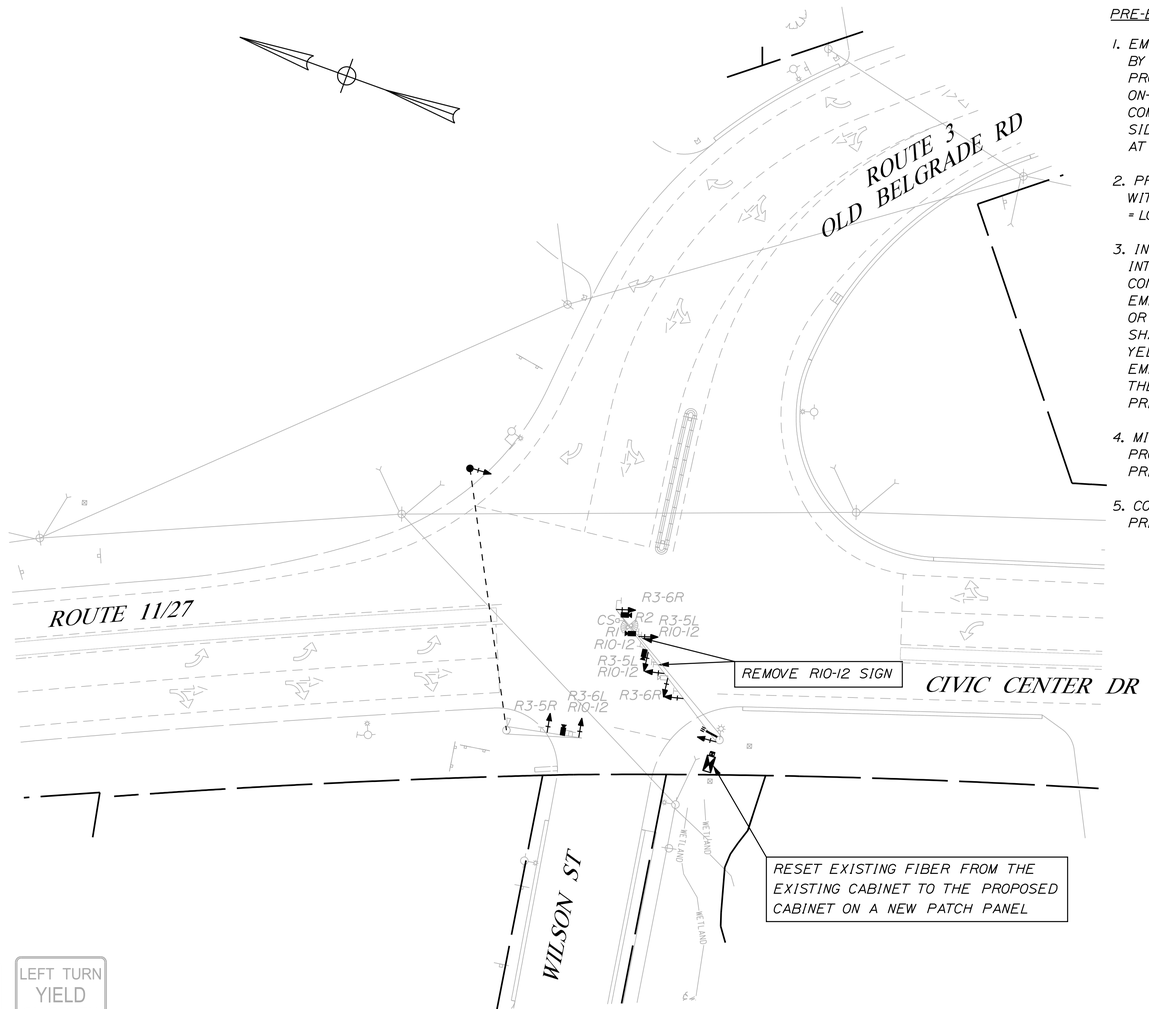
Filename: 033_Signol_33.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

Filename: 033_Signal_33a.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

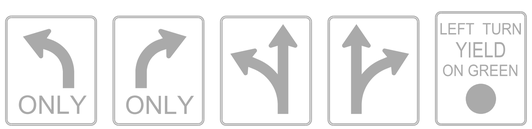
LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
FURNISH AND INSTALL (3-INCH) NON-METALLIC UNDER PAVEMENT CONDUIT (ITEM 626.251)	90 LF
FURNISH AND INSTALL 24-INCH DIAMETER FOUNDATION (ITEM 626.421)	7 LF
FURNISH AND INSTALL 10-FOOT PEDESTAL POLE (ITEM 643.92)	1 EA
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.



EXISTING SIGNS



R3-5L	R3-5R	R3-6L	R3-6R	R10-12
2-RETAINED	1-RETAINED	1-RETAINED	2-RETAINED	2-RETAINED 2-REMOVED

EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USE/RESERVED	
	2	NOT USE/RESERVED	
R1	3	1	ϕ1&ϕ6
R2	4	2	ϕ2
	5	NOT USED	
	6	NOT USED	

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.
2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 2 = LOWEST)
3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR AND/OR RSU, 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 (5.0 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.
4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY REFERENCE WIN 16313.10 SHEET 38.40 OF 226. 12/2012

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	DATE
PROJ. MANAGER		
DESIGN-DETAILED	MLG	07/20
CHECKED-REVIEWED	CMB	07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 11/27 (CIVIC CENTER DR) AND
ROUTE 3 (OLD BELGRADE RD) / WILSON ST

TRAFFIC SIGNAL PLAN

SHEET NUMBER
33A
OF 358

LIST OF WORK ITEMS

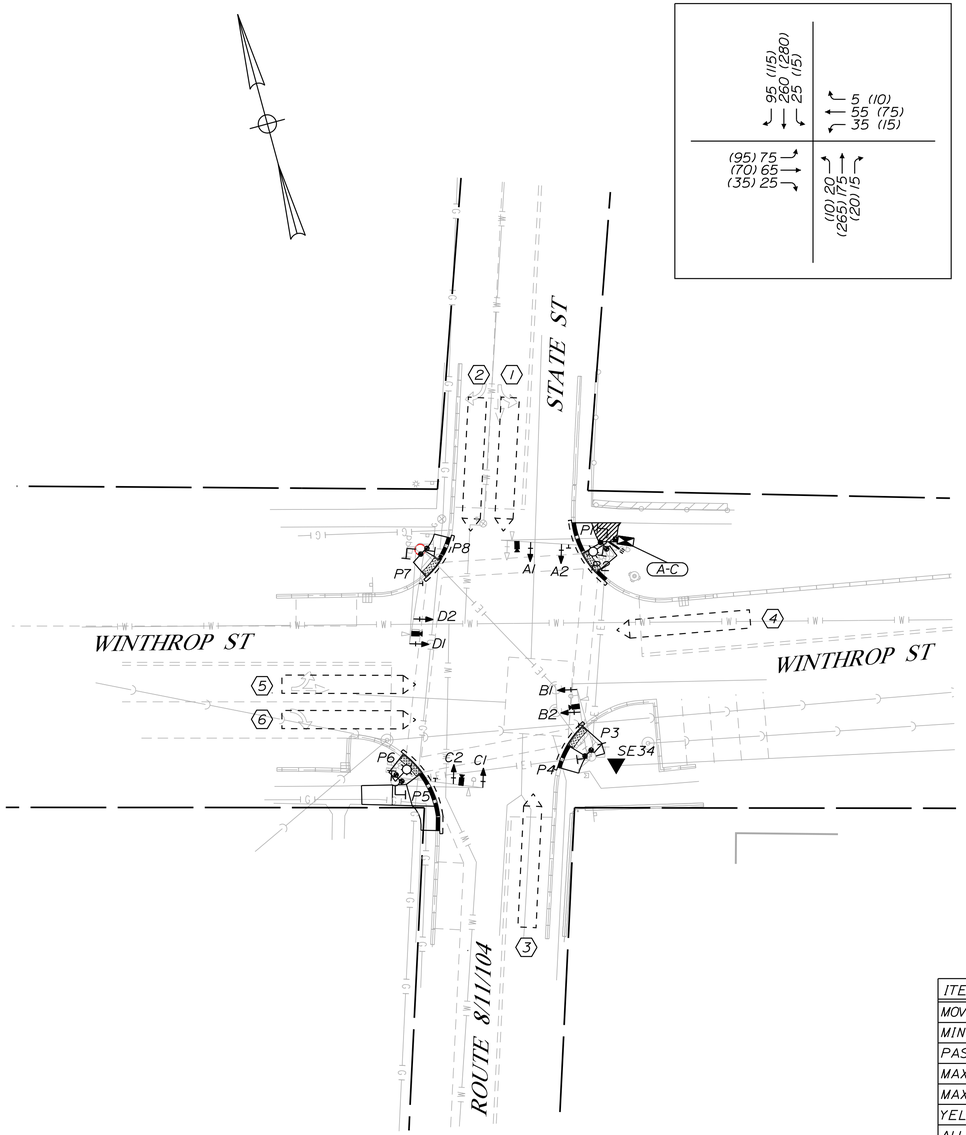
EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	8
FURNISH AND INSTALL 16-INCH L.E.D. COUNTDOWN PEDESTRIAN LENS IN EXISTING HOUSING	8
FURNISH AND INSTALL ADA COMPLIANT ACCESSIBLE PEDESTRIAN SIGNAL (APS) BUTTON WITH 9"X15" R10-3e INFORMATIONAL SIGN	8
FURNISH AND INSTALL 19-INCH 1RU FIBER OPTIC 12-POSITION PATCH PANEL WITH PIGTAILS	1
RESET FIBER OPTIC ETHERNET SWITCH WITH FIBER OPTIC INTERFACES	1
FURNISH AND INSTALL MAST ARM MOUNTED SIGNS	4
RESET PREEMPTION PHASE SELECTOR	1
RESET EXISTING 12-F FIBER IN PROPOSED CABINET	-
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 4 APPROACHES, COMPLETE (ITEM 643.21)	1 LS

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

STRUCTURE LIST

STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	EXISTING

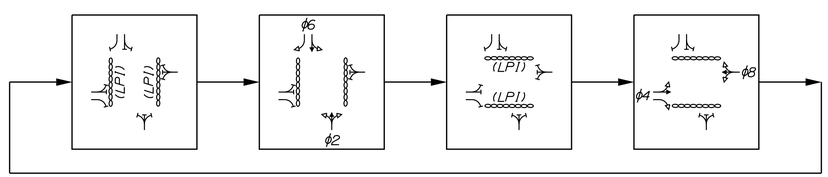
SYSTEM DESIGN VOLUMES AM (PM)



PREFERENTIAL PHASE SEQUENCE

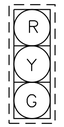
NEMA RING AND BARRIER DIAGRAM

2 | 4
6 | 8



PHASING NOTES:
1. EACH PEDESTRIAN PHASE SHALL HAVE A MINIMUM OF A 4 SECOND LEADING PEDESTRIAN INTERVAL (LPI).
2. PEDESTRIAN PHASE UPON PUSH BUTTON ACTIVATION ONLY.

PROPOSED INDICATIONS



A1,A2,B1,B2
C1,C2,D1,D2

EXISTING INDICATIONS
TO REMAIN



P1-P8

NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES

EXISTING COUNTDOWN PEDESTRIAN SIGNAL HEADS SHALL HAVE NEW L.E.D LENSES INSTALLED

DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	ϕ CALLED	ϕ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
1	STATE ST SB LEFT-THRU	6	6	B	-	-
2	STATE ST SB RIGHT	6	6	B	5	-
3	STATE ST NB MOVEMENTS	2	2	B	-	-
4	WINTHROP ST WB MOVEMENTS	8	8	B	-	-
5	WINTHROP ST EB LEFT-THRU	4	4	B	-	-
6	WINTHROP ST EB RIGHT	4	4	B	5	-

SIGNAL TIMING SCHEDULE

ITEM / PHASE	ϕ1	ϕ2	ϕ3	ϕ4	ϕ5	ϕ6	ϕ7	ϕ8
MOVEMENT	-	A	-	B	-	C	-	D
MINIMUM INITIAL	-	7	-	5	-	7	-	5
PASSAGE TIME	-	3.0	-	3.0	-	3.0	-	3.0
MAXIMUM 1	-	30	-	15	-	30	-	15
MAXIMUM 2	-	40	-	40	-	40	-	40
YELLOW	-	3.5	-	3.5	-	3.5	-	3.5
ALL RED	-	2.5	-	2.5	-	2.5	-	2.5
PED WALK	-	4	-	5	-	4	-	5
PED CLEAR	-	14	-	13	-	14	-	13
DYN MAX LIMIT	-	-	-	-	-	-	-	-
DYN MAX STEP	-	-	-	-	-	-	-	-
RECALL	-	SOFT	-	OFF	-	SOFT	-	OFF
DETECTOR	-	PR	-	PR	-	PR	-	PR
PRE-EMPT PRIORITY	-	4	-	6	-	3	-	5
FLASH	-	Y	-	R	-	Y	-	R
DUAL ENTRY	-	ON	-	ON	-	ON	-	ON

NOTES: S = SOFT RECALL = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK
MAX 2 UNDER COORDINATION
IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	BY	DATE
PROJ. MANAGER	B. KEEZER	
DESIGN-DETAILED	MLG	07/20
CHECKED-REVIEWED	CMB	07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 8/11/104 (STATE ST)
AND WINTHROP ST

TRAFFIC SIGNAL PLAN

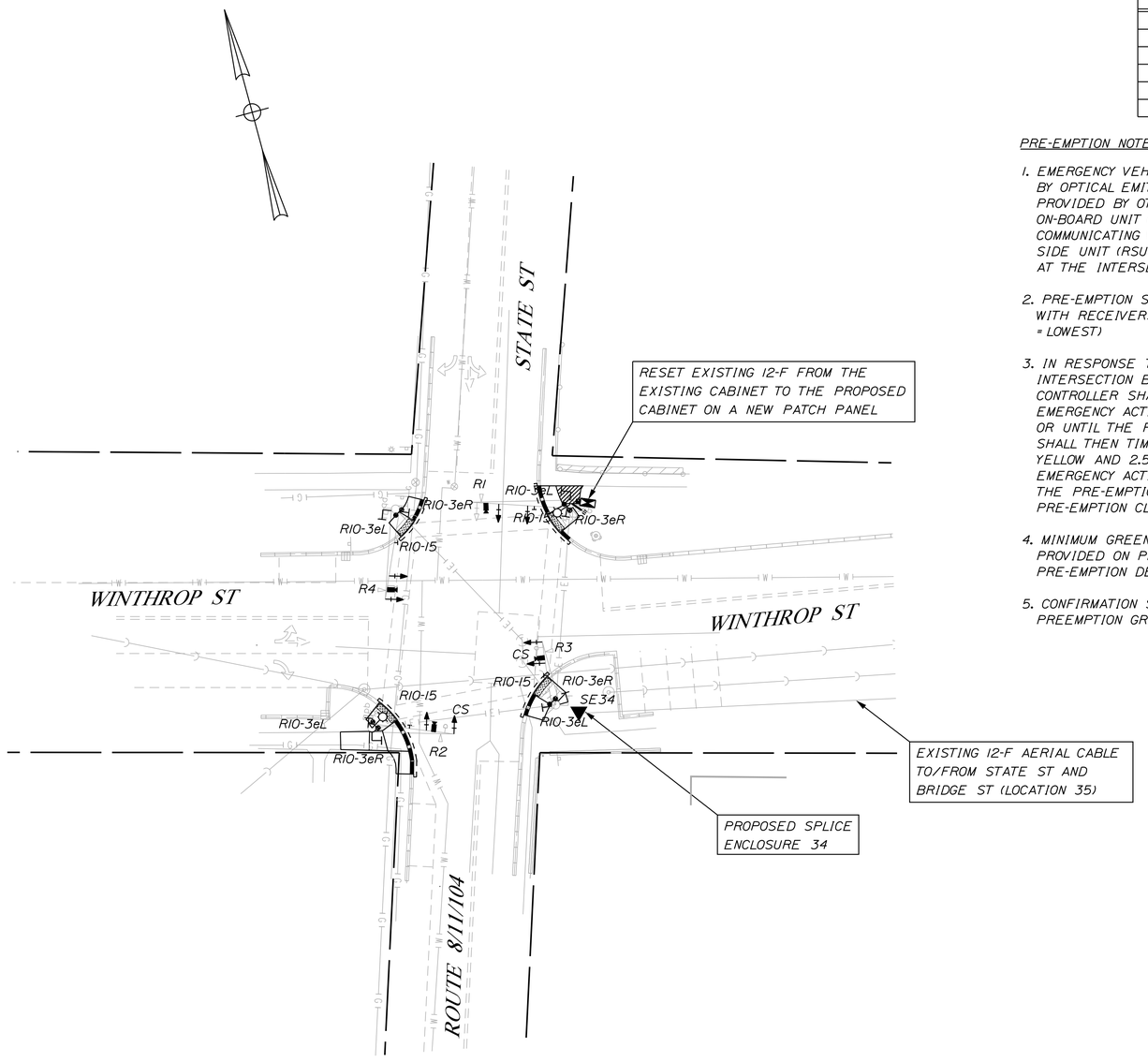
SHEET NUMBER
34
OF 358

Filename: 034_Signal_34.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.



PROPOSED SIGNS



RIO-15
30"x30"
4-PROPOSED



RIO-3eL
9"x15"
4-PROPOSED



RIO-3eR
9"x15"
4-PROPOSED

EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USE/RESERVED	
	2	NOT USE/RESERVED	
RI	3	1	Ø6
R2	4	2	Ø2
R3	5	3	Ø8
R4	6	4	Ø4

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.

2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 4 = LOWEST)

3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR AND/OR RSU, 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 (3.5 SECONDS YELLOW AND 2.5 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.

4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.

5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN
024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	BY	DATE
PROJ. MANAGER			
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

AUGUSTA
ROUTE 8/11/104 (STATE ST) AND WINTHROP ST

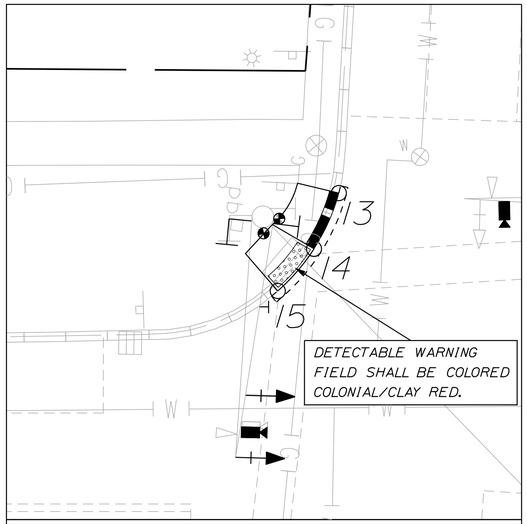
TRAFFIC SIGNAL PLAN

SHEET NUMBER
34A
OF 358

Filename: 034_Signal_34a.dgn Username: jarobert Division: HIGHWAY Date:11/24/2020

Filename: 034_Signal_34c.dgn Username: jarobert Division: HIGHWAY Date:11/24/2020

D CORNER - NW DETAIL



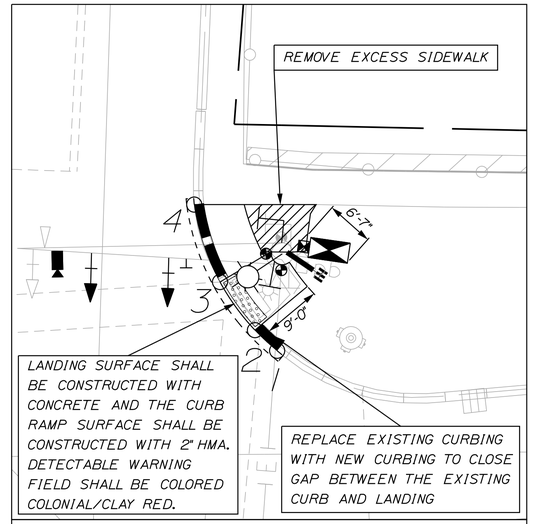
RECONSTRUCT CURB RAMP AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).

10 0 10 20
Scale of Feet

PT. TO PT.	RADIUS (FT)	ITEM 608.26 - CURB RAMP DETECTABLE WARNING FIELD		ITEM 609.11 - VERTICAL CURB TYPE 1 (LF)	ITEM 609.12 - VERTICAL CURB TYPE 1 - CIRCULAR (LF)	ITEM 609.222 - TERMINAL CURB TYPE 1 - CIRCULAR (LF)	COMMENT
		LENGTH (FT)	QTY (SF)				
1 TO 2	30.5					4.0	
* 2 TO 3	30.5	7.9	14.0				3.0% CROSS SLOPE
3 TO 4	30.5					10.8	
5 TO 6	30.5					8.0	
* 6 TO 7	30.5	8.1	14.4				2.4% CROSS SLOPE
8 TO 9	31.0	8.8	15.5				
9 TO 10	31.0					12.4	
10 TO 11	31.0				3.2		
11 TO 12	-			4.9			
13 TO 14	26.5					8.1	
* 14 TO 15	26.5	7.4	12.6				3.6% CROSS SLOPE

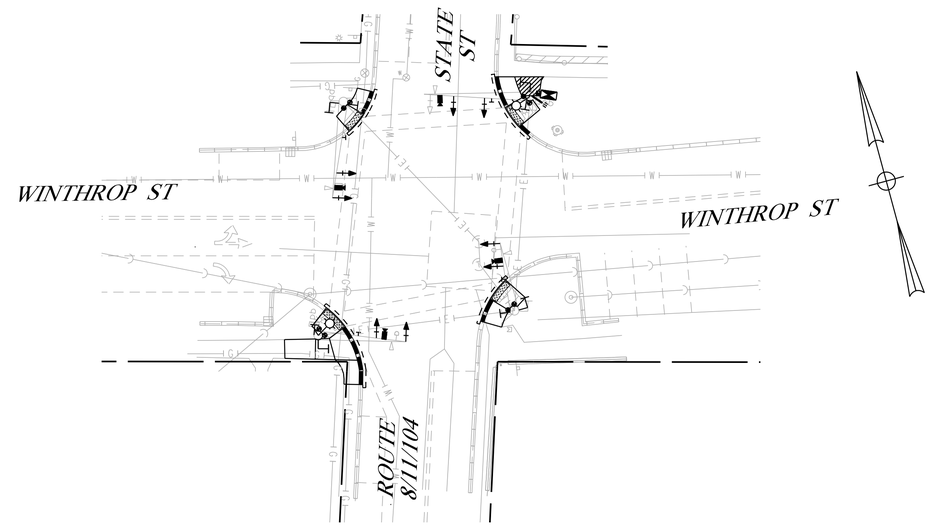
* NON-COMPLIANT CURB RAMP ELEMENT - THE EXISTING GUTTER LINE PROFILE IS GREATER THAN 2%. THEREFORE THE LEVEL LANDING CROSS SLOPE AND/OR RUNNING SLOPE WILL BE GREATER THAN THE 2% AND 8.33% MAXIMUM ALLOWABLE, RESPECTIVELY. THE COMMENT IS THE MAXIMUM VALUE FOR PROPOSED LEVEL OF COMPLIANCE.

A CORNER - NE DETAIL



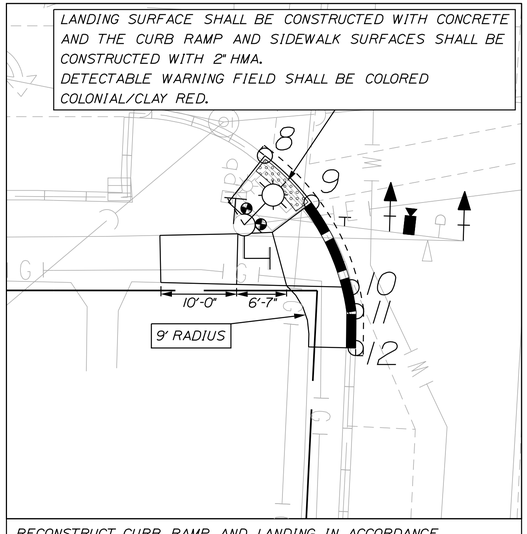
RECONSTRUCT CURB RAMP AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).
EXTEND NORTHERN CURB RAMP LIMIT TO THE EDGE OF THE EXISTING SIDEWALK AS SHOWN.
EXTEND LANDING TO ACCESS THE PEDESTRIAN BUTTONS.
SEE DETAIL ON SHEET H.

10 0 10 20
Scale of Feet



ALL CURB RAMPS SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND MAINEDOT STANDARD DETAILS 801(11) to 801(26) AS NOTED, AS WELL AS DETAILS PROVIDED ON SHEET H.

C CORNER - SW DETAIL



RECONSTRUCT CURB RAMP AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).
EXTEND LANDING TO ACCESS THE PEDESTRIAN BUTTONS.
SEE DETAIL ON SHEET H.

10 0 10 20
Scale of Feet

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
COMMON EXCAVATION (ITEM 203.20)	10.4 CY
HOT MIX ASPHALT, 9.5 MM NOMINAL MAXIMUM SIZE (ITEM 403.2110)	9.8 TONS
PLAIN CONCRETE SIDEWALK (ITEM 608.07)	9.2 SY
CURB RAMP DETECTABLE WARNING FIELD (ITEM 608.26)	56.5 SF
REGRADING SIDEWALK (ITEM 608.46)	67.7 SY

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
VERTICAL CURB TYPE 1 (ITEM 609.11)	4.9 LF
VERTICAL CURB TYPE 1 - CIRCULAR (ITEM 609.12)	3.2 LF
TERMINAL CURB TYPE 1 - CIRCULAR (ITEM 609.222)	43.3 LF

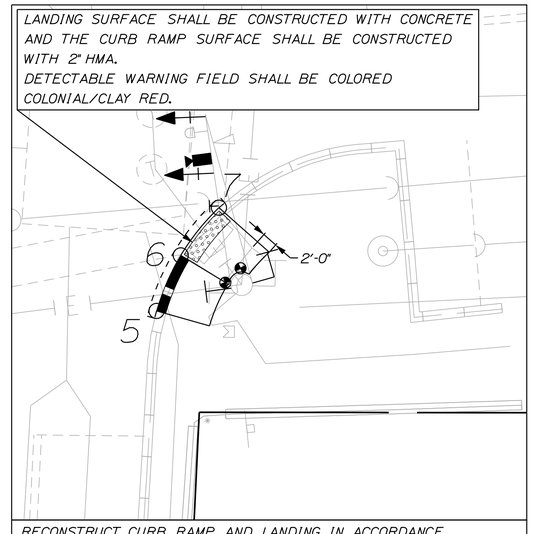
THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

B CORNER - SE DETAIL



RECONSTRUCT CURB RAMP AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).
EXTEND LANDING TO ACCESS THE PEDESTRIAN BUTTONS.
SEE DETAIL ON SHEET H.

10 0 10 20
Scale of Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER
DESIGN-DETAILED	MLG
CHECKED-REVIEWED	CMB
DESIGN2-DETAILED2	
DESIGN3-DETAILED3	

BY	DATE
JAR	07/20
CMB	07/20
REVISIONS 1	
REVISIONS 2	
REVISIONS 3	
REVISIONS 4	
FIELD CHANGES	

AUGUSTA
ROUTE 8/11/104 (STATE ST)
AND WINTHROP ST

CURB RAMP LAYOUT AND DETAIL PLAN

SHEET NUMBER

34C

OF 358

Filename: 035_Signal_35.dgn Username: jorobert Division: HIGHWAY Date:11/24/2020

LIST OF WORK ITEMS

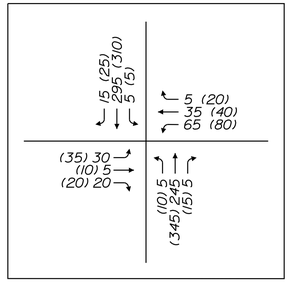
EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON SPAN AND TETHER WIRE	4
FURNISH AND INSTALL ONE-WAY 4-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON SPAN AND TETHER WIRE	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON SIDE OF POLE	2
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON TOP OF POST	2
FURNISH AND INSTALL 16-INCH L.E.D. COUNTDOWN PEDESTRIAN LENS IN EXISTING HOUSING	8
FURNISH AND INSTALL ADA COMPLIANT ACCESSIBLE PEDESTRIAN SIGNAL (APS) BUTTON WITH 9"X15" R10-3e INFORMATIONAL SIGN	8
FURNISH AND INSTALL 19-INCH 1RU FIBER OPTIC 12-POSITION PATCH PANEL WITH PIGTAILS	1
RESET FIBER OPTIC ETHERNET SWITCH WITH FIBER OPTIC INTERFACES	1
FURNISH AND INSTALL SPAN WIRE MOUNTED SIGNS	10
RESET COUNTDOWN PEDESTRIAN SIGNAL HEADS	4
RESET PREEMPTION PHASE SELECTOR	1
RESET EXISTING 12-F FIBER IN PROPOSED CABINET	-
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 4 APPROACHES. COMPLETE (ITEM 643.21)	1 LS

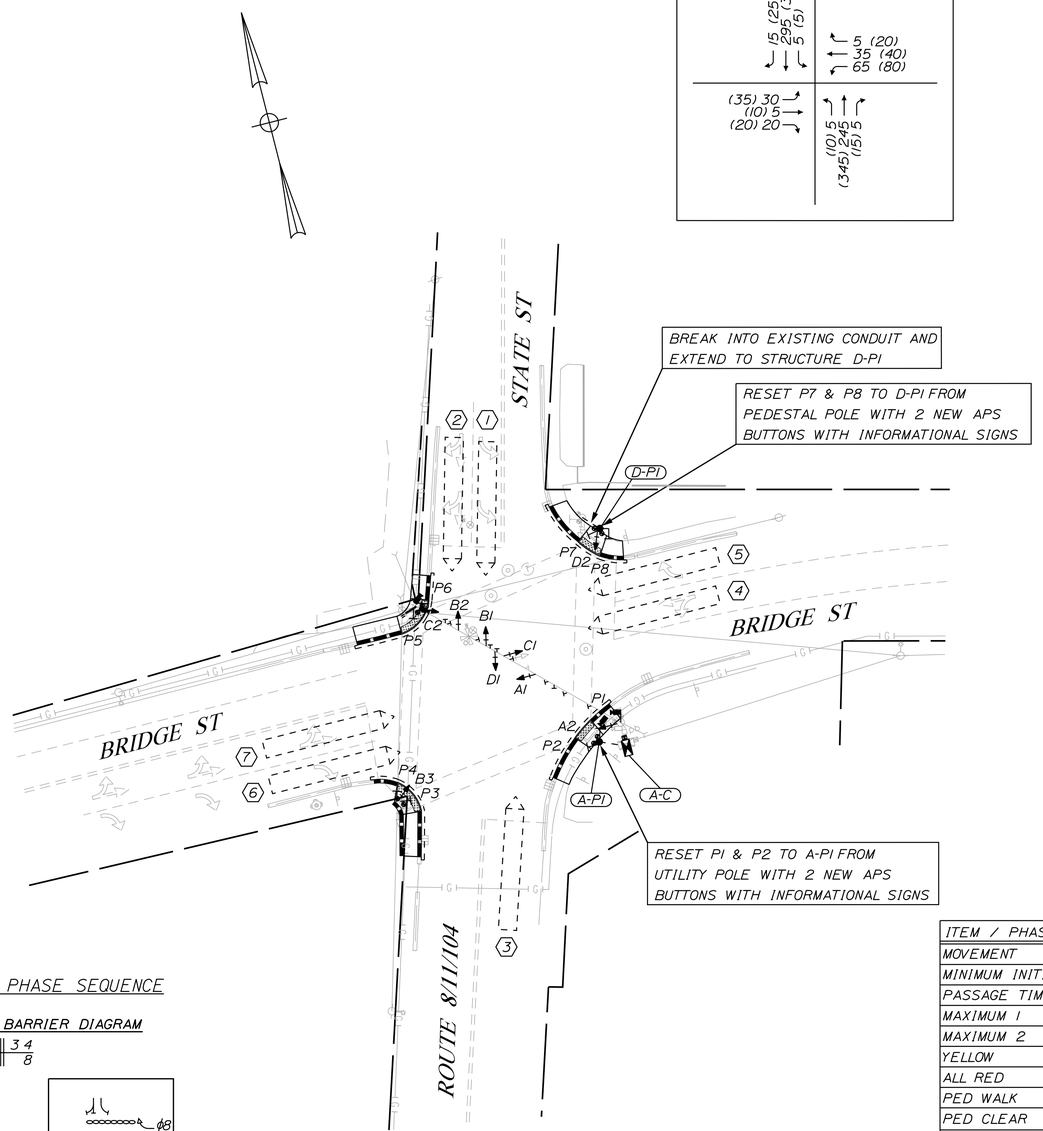
THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

STRUCTURE LIST

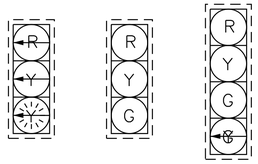
STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	L48"xW36"xH48"
A-PI	8' PEDESTAL POLE	24" DIAMETER
D-PI	10' PEDESTAL POLE	24" DIAMETER

SYSTEM DESIGN VOLUMES AM (PM)





PROPOSED INDICATIONS



B1 A1,A2,B2,B3, C2,D1,D2 C1

EXISTING INDICATIONS
TO REMAIN OR RELOCATE



P1-P8

NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES

EXISTING PEDESTRIAN SIGNAL HEADS SHALL HAVE NEW L.E.D. LENSES INSTALLED

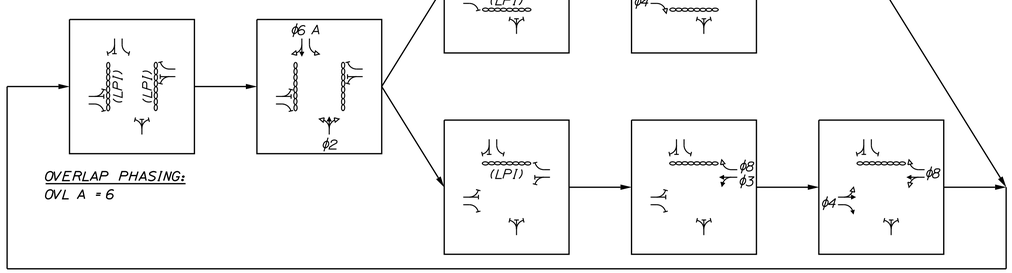
DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	φ CALLED	φ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
1	STATE ST SB LEFT	6	6	B	-	-
2	STATE ST SB THRU-RIGHT	6	6	B	-	-
3	STATE ST NB MOVEMENTS	2	2	B	-	-
4	BRIDGE ST WB LEFT-THRU	8	8	B	-	-
5	BRIDGE ST WB RIGHT	8	8	B	5	-
6	BRIDGE ST EB LEFT-THRU	4	4	B	-	-
7	BRIDGE ST EB RIGHT	4	4	B	5	-

PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM

2 3 4
6 8



OVERLAP PHASING:
OVL A = 6

PHASING NOTES:
1. EACH PEDESTRIAN PHASE SHALL HAVE A MINIMUM OF A 4 SECOND LEADING PEDESTRIAN INTERVAL (LPI).
2. PEDESTRIAN PHASE UPON PUSH BUTTON ACTIVATION ONLY.
3. OVERLAP A SHALL BE PROGRAMMED FOR FLASHING YELLOW ARROW.

SIGNAL TIMING SCHEDULE

ITEM / PHASE	φ 1	φ 2	φ 3	φ 4	φ 5	φ 6	φ 7	φ 8
MOVEMENT	-	D	C (LT)	A	-	B	-	C
MINIMUM INITIAL	-	7	5	7	-	7	-	7
PASSAGE TIME	-	3.0	3.0	3.0	-	3.0	-	3.0
MAXIMUM 1	-	30	15	20	-	30	-	20
MAXIMUM 2	-	45	15	25	-	45	-	40
YELLOW	-	4.0	4.0	4.0	-	4.0	-	4.0
ALL RED	-	2.0	2.0	2.0	-	2.0	-	2.0
PED WALK	-	5	-	5	-	5	-	5
PED CLEAR	-	15	-	15	-	15	-	15
DYN MAX LIMIT	-	-	-	-	-	-	-	-
DYN MAX STEP	-	-	-	-	-	-	-	-
RECALL	-	SOFT	OFF	OFF	-	SOFT	-	OFF
DETECTOR	-	PR	PR	PR	-	PR	-	PR
PRE-EMPT PRIORITY	-	4	5	6	-	3	-	5
FLASH	-	Y	R	R	-	Y	-	R
DUAL ENTRY	-	ON	OFF	ON	-	ON	-	ON

NOTES: S = SOFT RECALL Y = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK
MAX 2 UNDER COORDINATION
IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	BY	DATE
PROJ. MANAGER	B. KEEZER	
DESIGN-DETAILED	MLG	JAR 07/20
CHECKED-REVIEWED	CMB	CMB 07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 8/11/104 (STATE ST)
AND BRIDGE ST

TRAFFIC SIGNAL PLAN

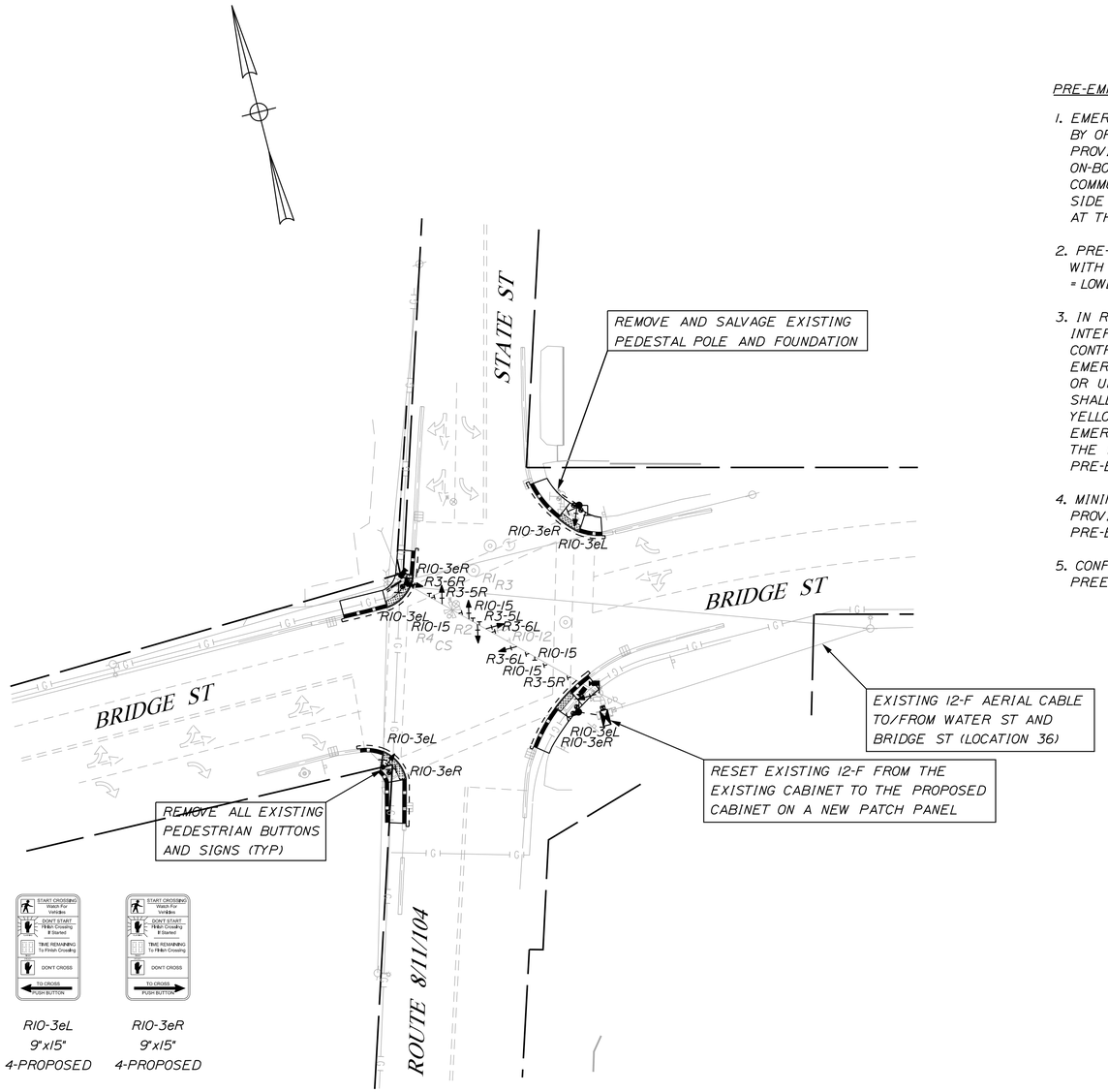
SHEET NUMBER
35
OF 358

LIST OF WORK ITEMS

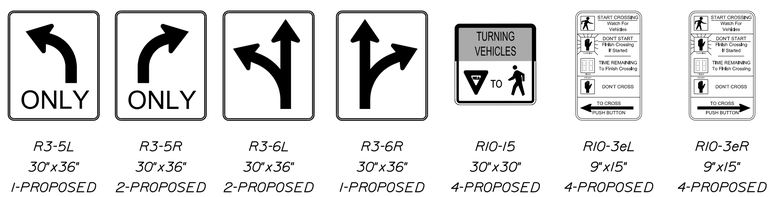
EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
FURNISH AND INSTALL (3-INCH) NON-METALLIC CONDUIT (ITEM 626.22)	20 LF
FURNISH AND INSTALL CONTROLLER CABINET FOUNDATION (ITEM 626.35)	1 EA
FURNISH AND INSTALL 24-INCH DIAMETER FOUNDATION (ITEM 626.421) *	14 LF
FURNISH AND INSTALL 8-FOOT PEDESTAL POLE (ITEM 643.92)	1 EA
FURNISH AND INSTALL 10-FOOT PEDESTAL POLE (ITEM 643.92)	1 EA
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

* REMOVAL OF EXISTING PEDESTAL POLE FOUNDATION SHALL BE SUBSIDIARY TO ITEM 626.421

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.



PROPOSED SIGNS



R3-5L 30"x36" 1-PROPOSED | R3-5R 30"x36" 2-PROPOSED | R3-6L 30"x36" 2-PROPOSED | R3-6R 30"x36" 1-PROPOSED | R10-15 30"x30" 4-PROPOSED | R10-3eL 9"x15" 4-PROPOSED | R10-3eR 9"x15" 4-PROPOSED

PROPOSED SIGNS



R10-12
1-RETAINED

EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USE/RESERVED	
	2	NOT USE/RESERVED	
R1	3	1	ϕ6
R2	4	2	ϕ2
R3	5	3	ϕ3&ϕ8
R4	6	4	ϕ4

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.

2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 4 = LOWEST)

3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR AND/OR RSU, 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 (4.0 SECONDS YELLOW AND 2.0 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.

4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.

5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	DATE
PROJ. MANAGER		
DESIGN-DETAILED	MLG	07/20
CHECKED-REVIEWED	CMB	07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
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REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 8/11/104 (STATE ST)
AND BRIDGE ST

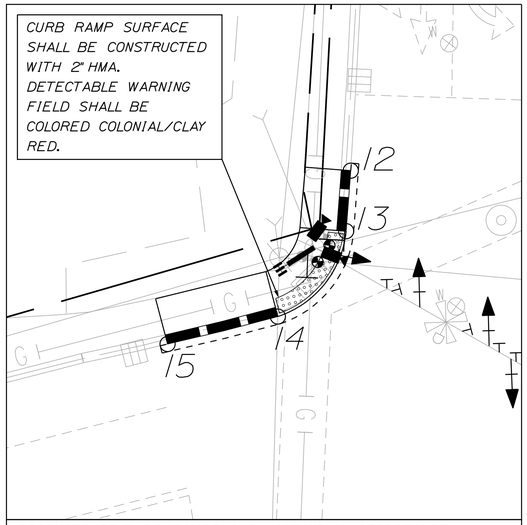
TRAFFIC SIGNAL PLAN

SHEET NUMBER
35A
OF 358

Filename: 035_Signal_35a.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

Filename: 035_Signal_35c.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

C CORNER - NW DETAIL

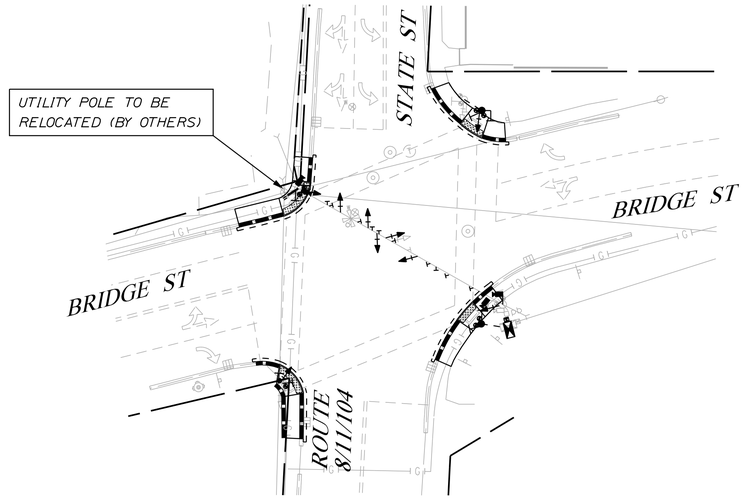


RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 80I(20).
TRANSITION LENGTH REQUIRED FOR THE WESTERN CURB RAMP SHALL BE 15.0'. SEE MAINEDOT STANDARD DETAIL 80I(13).

10 0 10 20
Scale of Feet

PT. TO PT.	RADIUS (FT)	ITEM 608.26 - CURB RAMP DETECTABLE WARNING FIELD		ITEM 609.31 - CURB TYPE 3 (LF)	COMMENT
		LENGTH (FT)	QTY (SF)		
* 1 TO 2	55.0			15.0	9.6% RUNNING SLOPE
* 2 TO 3	55.0	7.9	13.7		9.1% CROSS SLOPE
3 TO 4	55.0			8.0	
5 TO 6	15.9			8.0	
6 TO 7	13.3	12.9	21.1		
7 TO 8	-			15.0	
9 TO 10	-			13.8	
10 TO 11	7.9			5.3	
12 TO 13	-			8.0	
* 13 TO 14	13.2	15.3	25.9		5.5% CROSS SLOPE
* 14 TO 15	-			15.0	9.1% RUNNING SLOPE
16 TO 17	21.3			8.0	
* 17 TO 18	27.5	8.7	15.1		6.3% CROSS SLOPE
18 TO 19	35.0			15.0	

* NON-COMPLIANT CURB RAMP ELEMENT - THE EXISTING GUTTER LINE PROFILE IS GREATER THAN 2%. THEREFORE THE LEVEL LANDING CROSS SLOPE AND/OR RUNNING SLOPE WILL BE GREATER THAN THE 2% AND 8.33% MAXIMUM ALLOWABLE, RESPECTIVELY. THE COMMENT IS THE MAXIMUM VALUE FOR PROPOSED LEVEL OF COMPLIANCE.



ALL CURB RAMPS SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND MAINEDOT STANDARD DETAILS 80I(11) to 80I(26) AS NOTED, AS WELL AS DETAILS PROVIDED ON SHEET H.

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
HOT MIX ASPHALT, 9.5 MM NOMINAL MAXIMUM SIZE (ITEM 403.210)	14.2 TONS
CURB RAMP DETECTABLE WARNING FIELD (ITEM 608.26)	75.8 SF
REGRADING SIDEWALK (ITEM 608.46)	79.7 SY
CURB TYPE 3 (ITEM 609.31)	111.1 LF

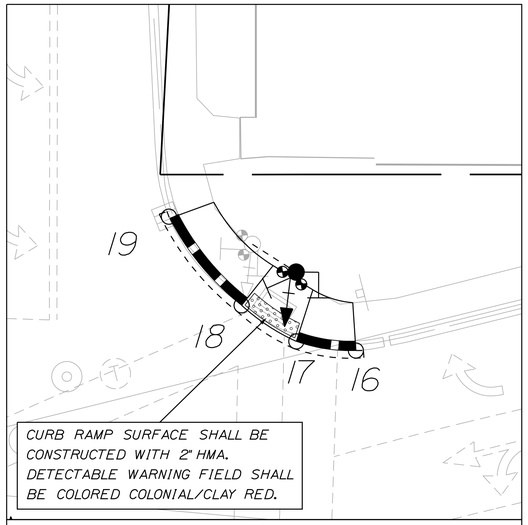
THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

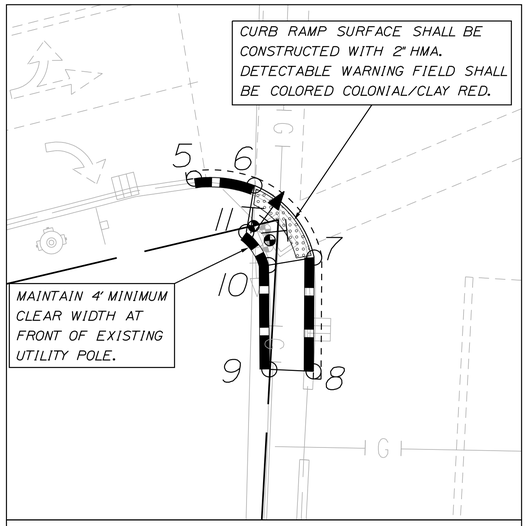
D CORNER - NE DETAIL



RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 80I(20).
TRANSITION LENGTH REQUIRED FOR THE NORTHERN CURB RAMP SHALL BE 15.0'. SEE MAINEDOT STANDARD DETAIL 80I(13)

10 0 10 20
Scale of Feet

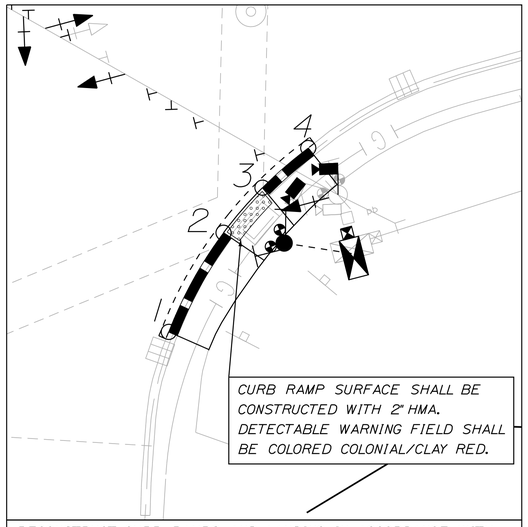
B CORNER - SW DETAIL



RECONSTRUCT CURB RAMP AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 80I(20).
TRANSITION LENGTH REQUIRED FOR THE CURB RAMP SHALL BE 15.0'. SEE MAINEDOT STANDARD DETAIL 80I(13).
CONSTRUCT BACK CURB ALONG THE CURB RAMP AND LANDING.

10 0 10 20
Scale of Feet

A CORNER - SE DETAIL



RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 80I(20).
TRANSITION LENGTH REQUIRED FOR THE SOUTHERN CURB RAMP SHALL BE 15.0'. SEE MAINEDOT STANDARD DETAIL 80I(13).

10 0 10 20
Scale of Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER	
DESIGN-DETAILED	MLG	JAR 07/20
CHECKED-REVIEWED	CMB	CMB 07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 8/11/104 (STATE ST)
AND BRIDGE ST

CURB RAMP LAYOUT
AND DETAIL PLAN

SHEET NUMBER
35C
OF 358

Filename: 036_Signal_36.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS 643.71*	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	5
FURNISH AND INSTALL ONE-WAY 5-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	2
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLASTE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON TOP OF POST	1
FURNISH AND INSTALL 16-INCH L.E.D. COUNTDOWN PEDESTRIAN LENS IN EXISTING HOUSING	8
FURNISH AND INSTALL ADA COMPLIANT ACCESSIBLE PEDESTRIAN SIGNAL (APS) BUTTON WITH 9"X15" R10-3e INFORMATIONAL SIGN	4
FURNISH AND INSTALL 19-INCH 1RU FIBER OPTIC 12-POSITION PATCH PANEL WITH PIGTAILS	1
RESET FIBER OPTIC ETHERNET SWITCH WITH FIBER OPTIC INTERFACES	1
FURNISH AND INSTALL MAST ARM AND POST MOUNTED SIGNS	7
REMOVE MAST ARM MOUNTED SIGNS	15
RESET COUNTDOWN PEDESTRIAN SIGNAL HEADS	6
RESET MAST ARM MOUNTED SIGN	5
RESET POST MOUNTED SIGN	4
RESET LIGHT-BASED PREEMPTION RECEIVER	3
RESET PREEMPTION CONFIRMATION STROBE	2
RESET PREEMPTION PHASE SELECTOR	1
RESET EXISTING 12-F FIBER IN PROPOSED CABINET	-
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 3 APPROACHES, COMPLETE (ITEM 643.21)	1 LS

*TEMPORARY TRAFFIC SIGNAL SHALL BE SUBSIDIARY TO ITEM 643.71

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

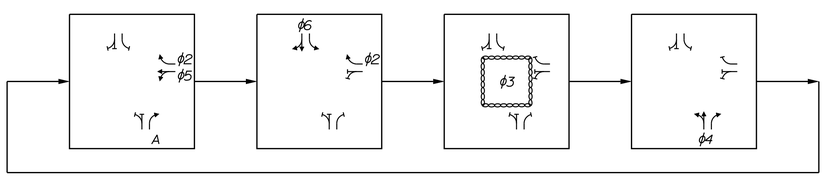
STRUCTURE LIST

STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	EXISTING
B-MI	28' MAST ARM	42" DIAMETERx12.0'
C-MI	20' MAST ARM	42" DIAMETERx10.5'
D-MI	35' MAST ARM	42" DIAMETERx13.5'

PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM

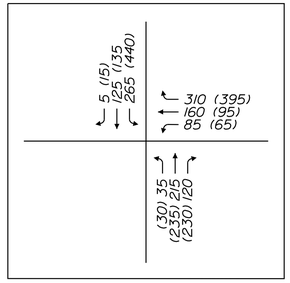
2 | 3 4
5 6 |

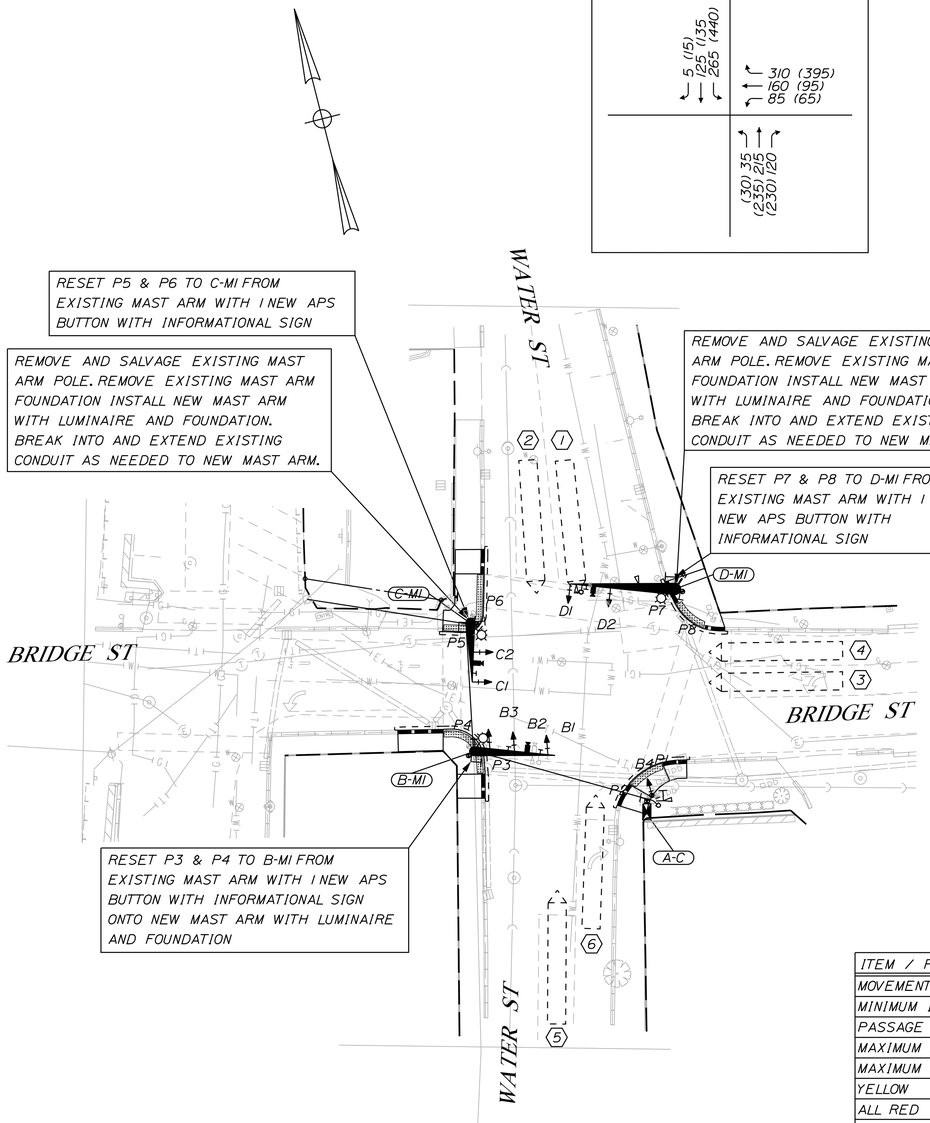


OVERLAP PHASING:
OVL A = 4-5

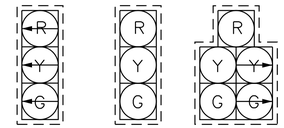
PHASING NOTES:
1. PEDESTRIAN PHASE UPON PUSH BUTTON ACTIVATION ONLY.

SYSTEM DESIGN VOLUMES AM (PM)





PROPOSED INDICATIONS



EXISTING INDICATIONS

TO REMAIN OR RELOCATE



P1-P8

NOTE:

ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES

EXISTING COUNTDOWN PEDESTRIAN SIGNAL HEADS SHALL HAVE NEW L.E.D. LENSES INSTALLED

DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	φ CALLED	φ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
1	WATER ST SB LEFT	6	6	B	-	-
2	WATER ST SB THRU-RIGHT	6	6	B	-	-
3	BRIDGE ST WB LEFT-THRU	5	5	B	-	-
4	BRIDGE ST WB RIGHT	2	2	B	5	-
5	WATER ST NB LEFT-THRU	4	4	B	-	-
6	WATER ST NB RIGHT	4	4	B	5	-

SIGNAL TIMING SCHEDULE

ITEM / PHASE	φ 1	φ 2	φ 3	φ 4	φ 5	φ 6	φ 7	φ 8
MOVEMENT	-	C	EX. PED.	D	C (LT)	B	-	-
MINIMUM INITIAL	-	7	-	5	7	7	-	-
PASSAGE TIME	-	2.5	-	2.5	3.5	3.0	-	-
MAXIMUM 1	-	40	-	20	25	40	-	-
MAXIMUM 2	-	35	-	22	27	35	-	-
YELLOW	-	4.0	3.0	3.5	4.0	4.0	-	-
ALL RED	-	2.0	0.0	2.5	2.0	2.0	-	-
PED WALK	-	-	5	-	-	-	-	-
PED CLEAR	-	-	20	-	-	-	-	-
DYN MAX LIMIT	-	-	-	35	60	-	-	-
DYN MAX STEP	-	-	-	5	10	-	-	-
RECALL	-	SOFT	-	OFF	OFF	SOFT	-	-
DETECTOR	-	PR	-	PR	PR	PR	-	-
PRE-EMPT PRIORITY	-	4	-	3	4	5	-	-
FLASH	-	R	DARK	R	R	R	-	-
DUAL ENTRY	-	ON	-	OFF	OFF	ON	-	-

NOTES: S = SOFT RECALLY = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK
MAX 2 UNDER COORDINATION
IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	BY	DATE
B. KEEZER		
PROJ. MANAGER	JAR	07/20
DESIGN-DETAILED	MLG	07/20
CHECKED-REVIEWED	CMB	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
WATER ST AND BRIDGE ST

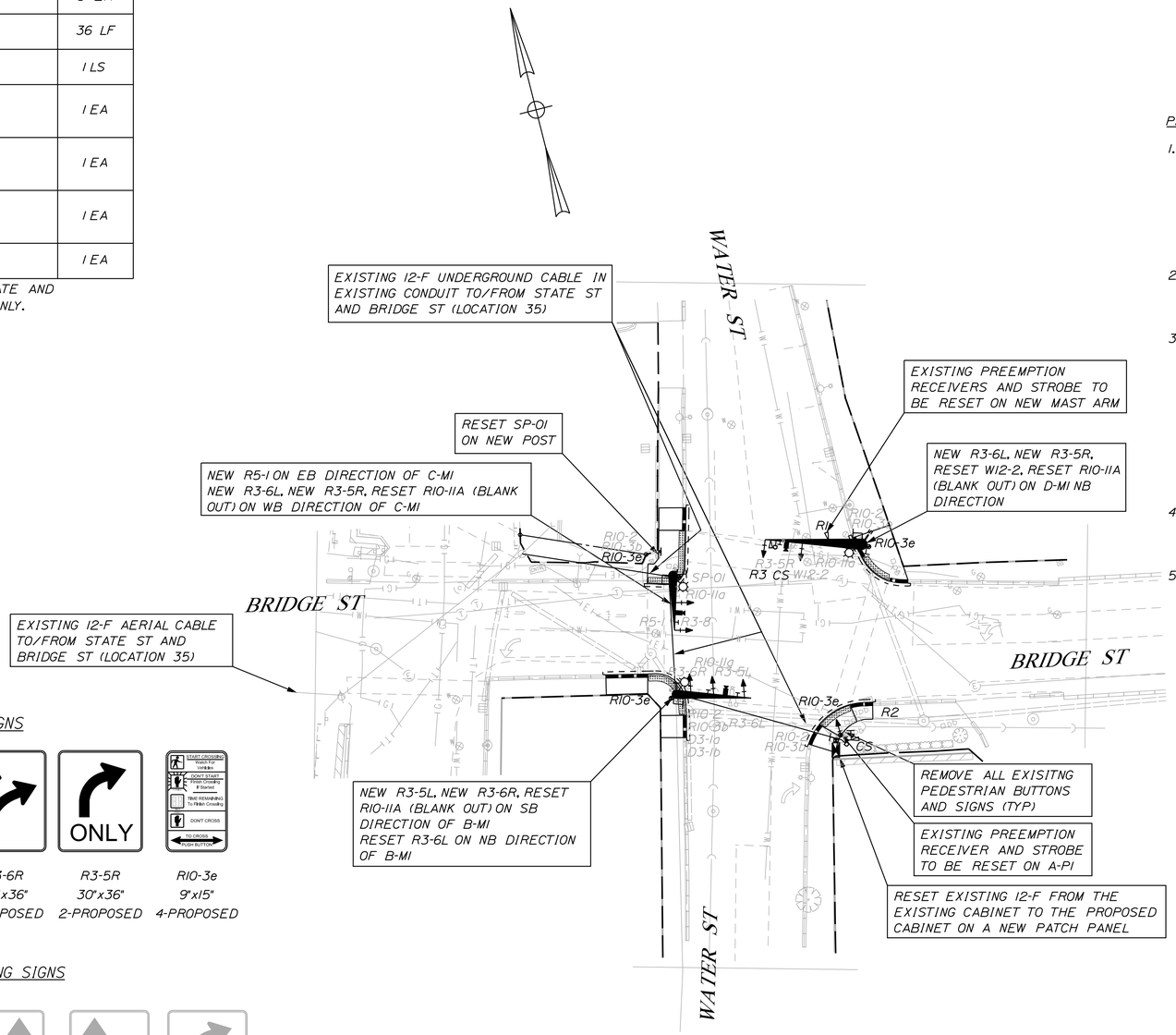
TRAFFIC SIGNAL PLAN

SHEET NUMBER
36
OF 358

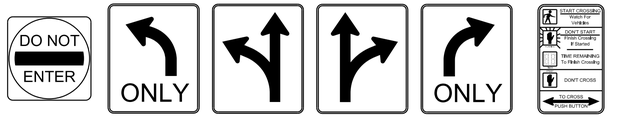
LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
REMOVE OR MODIFY CONCRETE FOUNDATION (ITEM 626.36)	3 EA
FURNISH AND INSTALL 42-IN DIAMETER FOUNDATION (ITEM 626.451)	36 LF
FURNISH AND INSTALL TEMPORARY TRAFFIC SIGNAL (ITEM 643.72)	1 LS
FURNISH AND INSTALL DUAL PURPOSE POLE, W/20'ARM W/LUMINAIRE (ITEM 643.94)	1 EA
FURNISH AND INSTALL DUAL PURPOSE POLE, W/28'ARM W/LUMINAIRE (ITEM 643.94)	1 EA
FURNISH AND INSTALL DUAL PURPOSE POLE, W/35'ARM W/LUMINAIRE (ITEM 643.94)	1 EA
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

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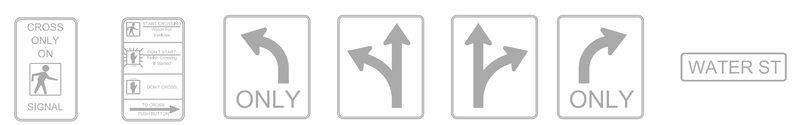


PROPOSED SIGNS



R5-1 36"x36" 1-PROPOSED | R3-5L 30"x36" 1-PROPOSED | R3-6L 30"x36" 2-PROPOSED | R3-6R 30"x36" 1-PROPOSED | R3-5R 30"x36" 2-PROPOSED | RIO-3e 9"x15" 4-PROPOSED

EXISTING SIGNS



RIO-2 4-REMOVED | RIO-3b 4-REMOVED | R3-5L 1-REMOVED | R3-6L 1-RESET | R3-6R 1-REMOVED | R3-5R 1-REMOVED | D3-1a 1-REMOVED



RIO-IIa (BLANK OUT) 3-RESET | R5-1 1-REMOVED | R3-8 1-REMOVED | WI2-2 1-RESET | SP-01 1-RESET | D3-1b 1-REMOVED

EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USE/RESERVED	
	2	NOT USE/RESERVED	
R1	3	1	ϕ6
R2	4	2	ϕ2&ϕ5
R3	5	3	ϕ4
	6	NOT USED	

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.
2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 3 = LOWEST)
3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR AND/OR RSU, 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 (4.0 SECONDS YELLOW AND 2.5 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.
4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	DATE
PROJ. MANAGER		
DESIGN-DETAILED	MLG	07/20
CHECKED-REVIEWED	CMB	07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
WATER ST AND BRIDGE ST

TRAFFIC SIGNAL PLAN

SHEET NUMBER
36A
OF 358

Filename: 036_Signal_36a.dgn Division: HIGHWAY Username: jarobert Date:11/24/2020

Filename: ...\36B_BORING LOGS1_AU PHASE1.dgn Username: Kate.Maguire Date:11/23/2020 Division: GEOTECH

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Intersection Improvements - Statewide
Location: Augusta, Maine

Boring No.: HB-AU036-102
WIN: 024301

Driller:	S. W. Cole Explorations, LLC	Elevation (ft.):	
Operator:	K. Hanscom / R. Hackett	Datum:	
Logged By:	W. St. Pierre	Rig Type:	Diedrich D-50 Track-Mounted
Date Start/Finish:	9/12/2019	Drilling Method:	Cased Wash
Boring Location:	See Boring Location Plan	Casing ID/OD:	HW 4" / 4.5"
Hammer Efficiency Factor: 0.977		Hammer Type:	Automatic ☒ Hydraulic ☐ Rope & Cathead ☐
Auger ID/OD:	5" Solid Stem		
Sampler:	Standard Split Spoon		
Hammer Wt./Falls:	140# / 30"		
Core Barrel:	N/A		
Water Level*:	16.5 feet (after drilling)		

Definitions:
D = Split Spoon Sample
WO = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
WU = Unsuccessful Thin Wall Tube Sample Attempt
V = Field Vane Shear Test, PP = Pocket Penetrometer
WV = Unsuccessful Field Vane Shear Test Attempt, WOH = Weight of Ow Person
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
N_{60} = SPT Nunconnected Corrected for Hammer Efficiency
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf), T_v = Pocket Torvane Shear Strength (psf)
$S_{u\ (LAB)}$ = Lab Vane Undrained Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
Nunconnected = Raw Field SPT N-value
Hammer Efficiency Factor = Rig Specific Annual Calibration Value
N_{60} = SPT Nunconnected Corrected for Hammer Efficiency
WC = Water Content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows / 6 in. Sheer Strength (psf) or RQD (%)	Nunconnected	N_{60}	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0	10	24/16	0.70 - 2.70	16/14/11/10	25	41	SSA	+0.5		6.5" of Pavement	
										Brown, damp, dense, SAND, some gravel, little silt. (Fill).	
5	20	24/14	5.00 - 7.00	3/5/4/3	9	15				Brown, damp, medium dense, SAND, little gravel, little silt, with brick fragments. (Fill).	
10	30	24/8	10.00 - 12.00	4/2/2/2	4	7	26			Brown, moist, loose, SAND, some silt, little gravel, with brick fragments. (Fill).	
							19				
							61				
							97				
15							144			Cobble from 14.9 to 15.6' bgs.	
							42				
	40	24/10	16.30 - 18.30	1/1/5/2	6	10	20			Brown, wet, loose, Silty SAND, with brick and wood fragments. (Fill).	
20							28				
							29	-18.8			
							68				
	50	24/20	20.00 - 22.00	14/13/33/25	46	75				Brown wet, very dense, Silty SAND, some gravel.	
								-22.0		Bottom of Exploration at 22.0 feet below ground surface. No refusal.	
25											

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1

Boring No.: HB-AU036-102

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Intersection Improvements - Statewide
Location: Augusta, Maine

Boring No.: HB-AU036-103
WIN: 024301

Driller:	S. W. Cole Explorations, LLC	Elevation (ft.):	
Operator:	K. Hanscom / R. Hackett	Datum:	
Logged By:	J. McElroy	Rig Type:	Diedrich D-50 Track-Mounted
Date Start/Finish:	8-20-2019	Drilling Method:	Auger
Boring Location:	See Boring Location Plan	Casing ID/OD:	N/A
Hammer Efficiency Factor: 0.977		Hammer Type:	Automatic ☒ Hydraulic ☐ Rope & Cathead ☐
Auger ID/OD:	5" Solid Stem		
Sampler:	Standard Split Spoon		
Hammer Wt./Falls:	140# / 30"		
Core Barrel:	N/A		
Water Level*:	No water observed.		

Definitions:
D = Split Spoon Sample
WO = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
WU = Unsuccessful Thin Wall Tube Sample Attempt
V = Field Vane Shear Test, PP = Pocket Penetrometer
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R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
N_{60} = SPT Nunconnected Corrected for Hammer Efficiency
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf), T_v = Pocket Torvane Shear Strength (psf)
$S_{u\ (LAB)}$ = Lab Vane Undrained Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
Nunconnected = Raw Field SPT N-value
Hammer Efficiency Factor = Rig Specific Annual Calibration Value
N_{60} = SPT Nunconnected Corrected for Hammer Efficiency
WC = Water Content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows / 6 in. Sheer Strength (psf) or RQD (%)	Nunconnected	N_{60}	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							SSA				
	10	24/12	1.00 - 3.00	7/7/9/8	16	26		-0.6		2" of Pavement.	
										Brown, damp, medium dense, SAND, some gravel, trace silt. (Fill).	
5	20	24/10	5.00 - 7.00	7/11/4/4	15	24				Brown, moist, medium dense, SAND, some silt, little gravel, with concrete fragments.	
10	30	24/16	10.00 - 12.00	6/3/2/3	5	8		-10.0		Brown, moist, loose, Silty SAND, little gravel.	
								-12.0		Bottom of Exploration at 12.0 feet below ground surface. No refusal.	
15											
20											
25											

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1

Boring No.: HB-AU036-103

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Intersection Improvements - Statewide
Location: Augusta, Maine

Boring No.: HB-AU036-101
WIN: 024301

Driller:	S. W. Cole Explorations, LLC	Elevation (ft.):	
Operator:	K. Hanscom / R. Hackett	Datum:	
Logged By:	J. McElroy	Rig Type:	Diedrich D-50 Track-Mounted
Date Start/Finish:	8-20-2019	Drilling Method:	Auger
Boring Location:	See Boring Location Plan	Casing ID/OD:	N/A
Hammer Efficiency Factor: 0.977		Hammer Type:	Automatic ☒ Hydraulic ☐ Rope & Cathead ☐
Auger ID/OD:	5" Solid Stem		
Sampler:	Standard Split Spoon		
Hammer Wt./Falls:	140# / 30"		
Core Barrel:	N/A		
Water Level*:	No water observed.		

Definitions:
D = Split Spoon Sample
WO = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
WU = Unsuccessful Thin Wall Tube Sample Attempt
V = Field Vane Shear Test, PP = Pocket Penetrometer
WV = Unsuccessful Field Vane Shear Test Attempt, WOH = Weight of Ow Person
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
N_{60} = SPT Nunconnected Corrected for Hammer Efficiency
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf), T_v = Pocket Torvane Shear Strength (psf)
$S_{u\ (LAB)}$ = Lab Vane Undrained Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
Nunconnected = Raw Field SPT N-value
Hammer Efficiency Factor = Rig Specific Annual Calibration Value
N_{60} = SPT Nunconnected Corrected for Hammer Efficiency
WC = Water Content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows / 6 in. Sheer Strength (psf) or RQD (%)	Nunconnected	N_{60}	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0	10	24/7	0.80 - 2.80	12/11/9/8	20	33	SSA	-0.4		3" of Pavement.	
										Brown, damp, dense, Gravelly SAND, trace silt, with pavement fragments. (Fill).	
5	20	24/18	5.00 - 7.00	2/1/2/5	3	5		-5.0		Brown, moist, loose, Silty fine SAND, trace gravel.	
10	30	24/20	10.00 - 12.00	6/7/10/11	17	28		-10.0		Brown, moist, medium dense, SAND, some gravel, little silt.	
								-12.0		Bottom of Exploration at 12.0 feet below ground surface. No refusal.	
15											
20											
25											

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1

Boring No.: HB-AU036-101

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. 2430100

WIN
24301.00

HIGHWAY PLANS

STATE OF MAINE — Kathleen Maguire — 7120 — LICENSED PROFESSIONAL ENGINEER

SIGNATURE		
P.E. NUMBER	7120	
DATE	11/23/2020	

	BY	DATE
PROJ. MANAGER	------	------
DESIGN-DETAILED	------	------
CHECKED-REVIEWED	------	------
DESIGN2-DETAILED2	K.MAGUIRE	MAR 2020
DESIGN3-DETAILED3	T.WHITE	MAR 2020
REVISIONS 1	------	------
REVISIONS 2	------	------
REVISIONS 3	------	------
REVISIONS 4	------	------
FIELD CHANGES	------	------

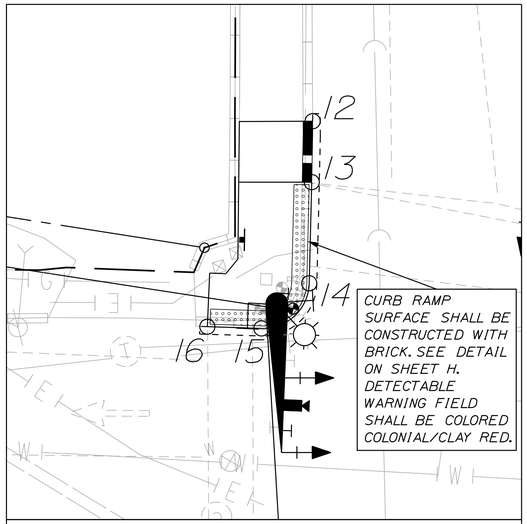
AUGUSTA
WATER ST. AND BRIDGE ST.

BORING LOGS

SHEET NUMBER
36B
OF 358

Filename: 036_Signol_36c.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

C CORNER - NW DETAIL

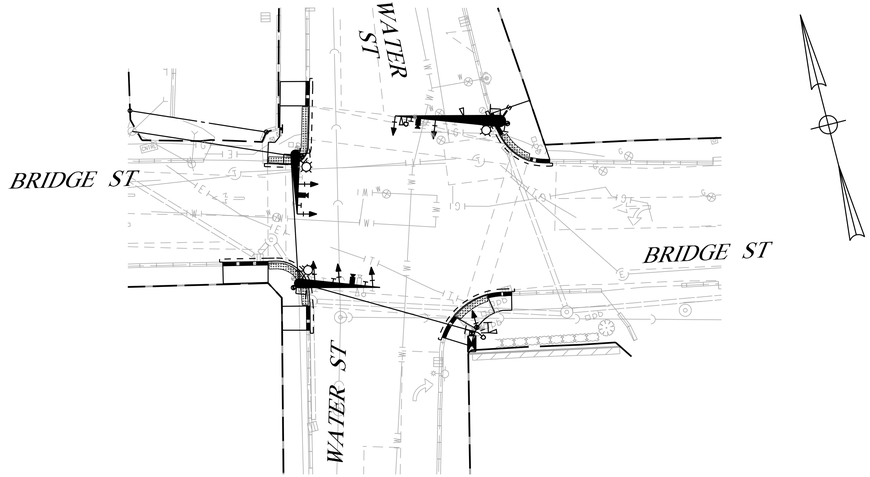


RECONSTRUCT CURB RAMP AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).

10 0 10 20
Scale of Feet

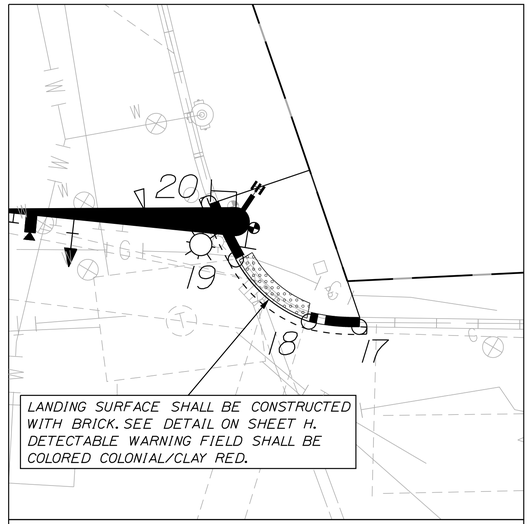
PT. TO PT.	RADIUS (FT)	ITEM 608.26 - CURB RAMP DETECTABLE WARNING FIELD		ITEM 609.221 - TERMINAL CURB TYPE I (LF)	ITEM 609.222 - TERMINAL CURB TYPE I - CIRCULAR (LF)	COMMENT
		LENGTH (FT)	QTY (SF)			
1 TO 2	21.8				8.0	
* 2 TO 3	21.8	13.5	23.4			3.5% CROSS SLOPE
3 TO 4	21.8				5.2	
4 TO 5	-			2.8		
* 6 TO 7	-			15.0		13.8% RUNNING SLOPE
* 7 TO 8	-	2.7	41.3			2.6% CROSS SLOPE
8 TO 9	10.6	16.0				
9 TO 10	-	5.1				
10 TO 11	-			8.0		
12 TO 13	-			8.0		
* 13 TO 14	-	13.4	54.7			2.6% CROSS SLOPE
14 TO 15	6.1	9.7				
15 TO 16	-	7.1				
17 TO 18	25.6				6.7	
* 18 TO 19	17.2	13.0	22.4			7.0% CROSS SLOPE
19 TO 20	67.0			8.0		

* NON-COMPLIANT CURB RAMP ELEMENT - THE EXISTING GUTTER LINE PROFILE IS GREATER THAN 2%. THEREFORE THE LEVEL LANDING CROSS SLOPE AND/OR RUNNING SLOPE WILL BE GREATER THAN THE 2% AND 8.33% MAXIMUM ALLOWABLE. RESPECTIVELY. THE COMMENT IS THE MAXIMUM VALUE FOR PROPOSED LEVEL OF COMPLIANCE.



ALL CURB RAMPS SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND MAINEDOT STANDARD DETAILS 801(11) to 801(26) AS NOTED. AS WELL AS DETAILS PROVIDED ON SHEET H.

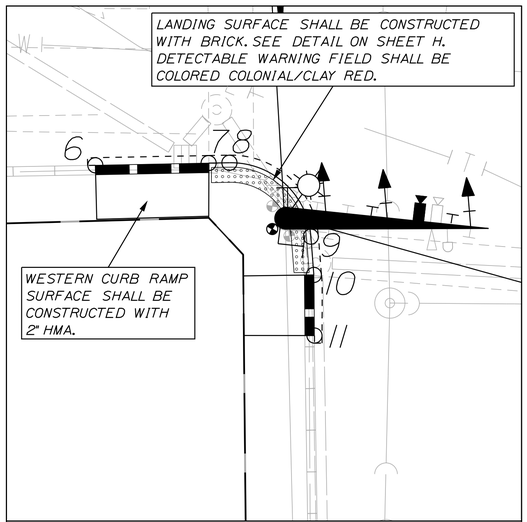
D CORNER - NE DETAIL



RECONSTRUCT LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).

10 0 10 20
Scale of Feet

B CORNER - SW DETAIL



RECONSTRUCT CURB RAMP AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).
TRANSITION LENGTH REQUIRED FOR THE WESTERN CURB RAMP SHALL BE 15.0'.
SEE MAINEDOT STANDARD DETAIL 801(13).

10 0 10 20
Scale of Feet

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
HOT MIX ASPHALT, 9.5 MM NOMINAL MAXIMUM SIZE (ITEM 403.210)	6.9 TONS
PLAIN CONCRETE SIDEWALK (ITEM 608.07)	8.2 SY
BRICK SIDEWALK WITH BITUMINOUS BASE (ITEM 608.15)	95.7 SY
CURB RAMP DETECTABLE WARNING FIELD (ITEM 608.26)	141.8 SF

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
REGRADING SIDEWALK (ITEM 608.46)	115.6 SY
TERMINAL CURB TYPE I (ITEM 609.221)	41.8 LF
TERMINAL CURB TYPE I - CIRCULAR (ITEM 609.222)	19.9 LF

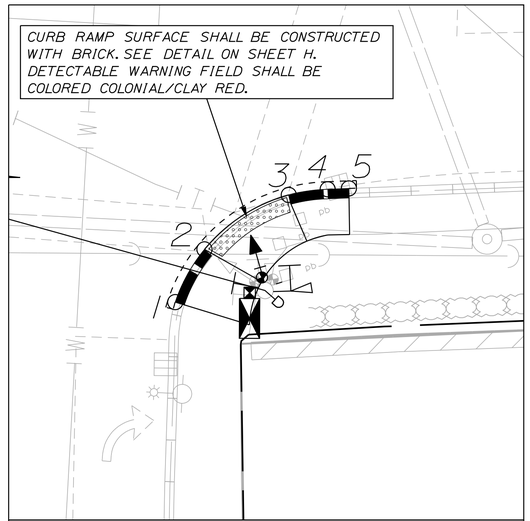
THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

A CORNER - SE DETAIL



RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).
MINIMUM TRANSITION LENGTH REQUIRED FOR THE EASTERN CURB RAMP SHALL BE 9.2'. SEE MAINEDOT STANDARD DETAIL 801(13)

10 0 10 20
Scale of Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

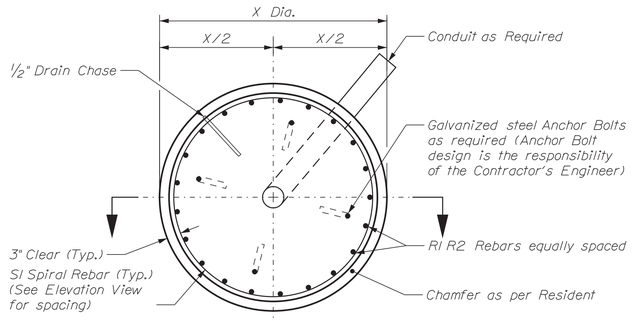
vhb

	B. KEEZER	DATE
PROJ. MANAGER		
DESIGN-DETAILED	M.G	07/20
CHECKED-REVIEWED	CMB	07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
WATER ST AND BRIDGE ST
CURB RAMP LAYOUT AND DETAIL PLAN

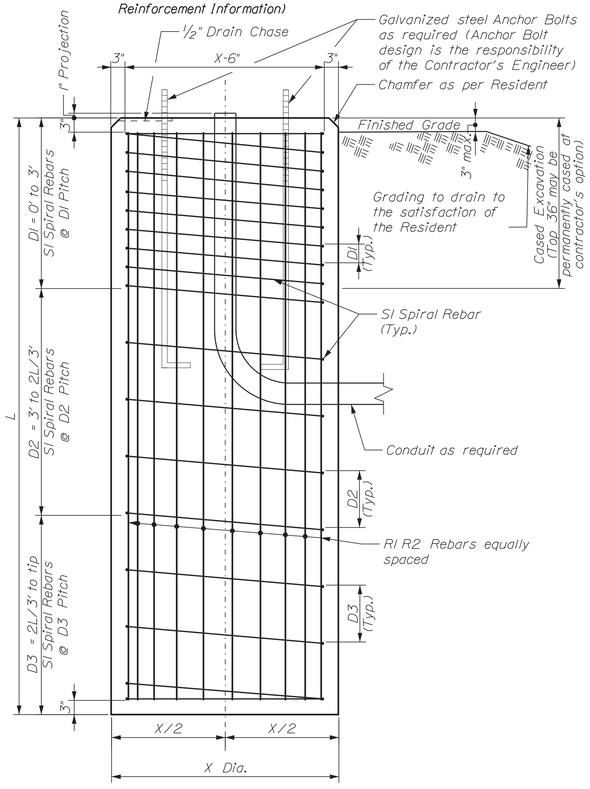
SHEET NUMBER
36C
OF 358

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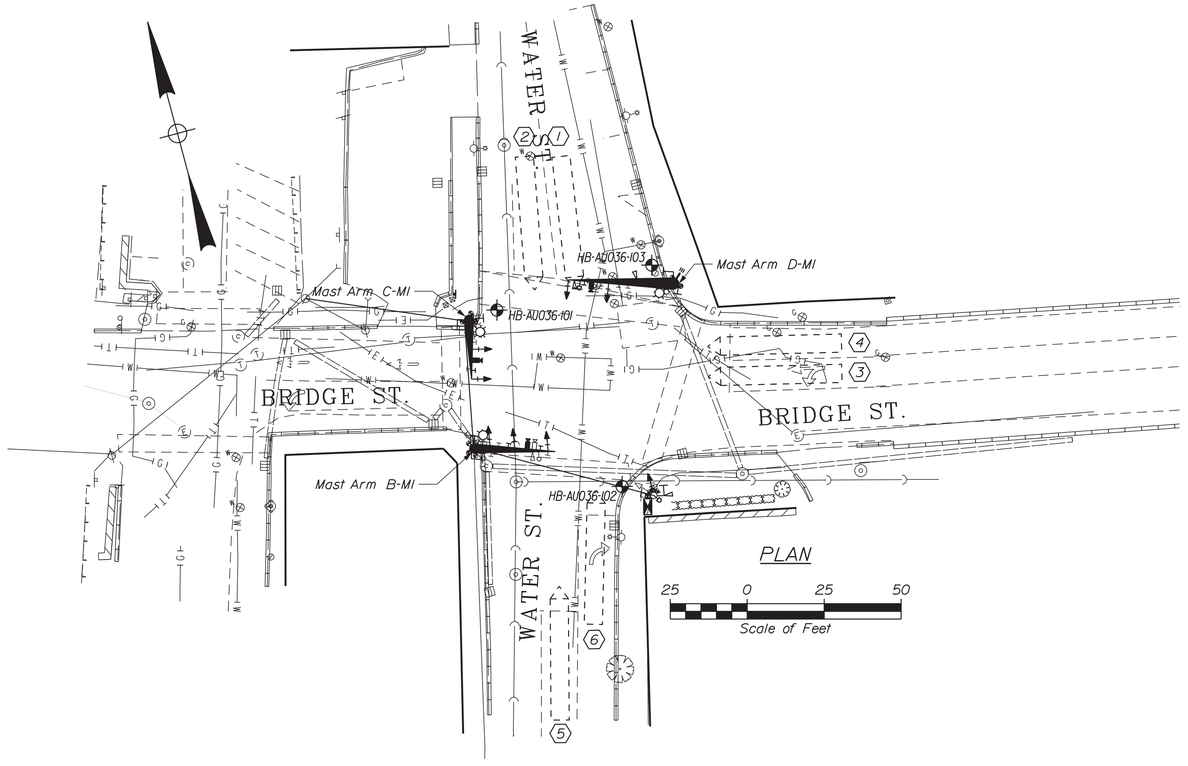
Drilled Shaft Plan View

Not to Scale (See Table for Drilled Shaft & Reinforcement Information)



Drilled Shaft Elevation View

Not to Scale (See Table for Drilled Shaft & Reinforcement Information)



MAST ARMS B-MI, C-MI & D-MI

(B-MI) Water Street and Bridge Street
(C-MI) Water Street and Bridge Street
(D-MI) Water Street and Bridge Street

NOTES:

1. All reinforcing steel is to be grade 60 and conform to MaineDOT Standard Specification requirements along with any project specific Supplementals or Special Provisions.
2. All rebar shall have 3" cover unless otherwise noted.
3. Should there be a discrepancy between these Details and actual observed field conditions report it to the Resident immediately.
4. Do not proceed with dependent work until any such discrepancy is resolved to the satisfaction of the Resident.
5. Concrete to be Class LP with f'c = 5,000 PSI.
6. For Boring Logs see Sheet 36B of 358.

		Drilled Shaft Dimensions		Reinforcing Steel			Spiral Bar Spacing		
		X	L	R1	R2	S1	D1 (in)	D2 (in)	D3 (in)
Mast Arm	Location	Diameter (feet)	Length (feet)	Longitudinal Rebars Quantity	Longitudinal Rebars Size	Spiral Rebars Size	0 to 3 ft	3 ft to 2L/3 ft	2L/3 ft to tip
B-M1	Water Street and Bridge Street	3.5	12.0	18	#9	#5	4	4	12
C-M1	Water Street and Bridge Street	3.5	10.5	18	#9	#5	4	4	12
D-M1	Water Street and Bridge Street	3.5	13.5	18	#9	#5	4	4	12

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. 2430100

WIN 24301.00

HIGHWAY PLANS

STATE OF MAINE ★ ENGINEER ★ Kathleen Maguire 7120 ★ PROFESSIONAL ★

	BY	DATE
PROJ. MANAGER		
DESIGN-DETAILED		
CHECKED-REVIEWED	K.MAGUIRE	MAR 2020
DESIGN2-DETAILED2	K.MAGUIRE	T.WHITE
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE
P.E. NUMBER 7120
11/23/2020
DATE

AUGUSTA
WATER ST. AND BRIDGE ST.

MAST ARM FOUNDATION & BORING LOCATION PLAN

SHEET NUMBER
36F
OF 358

PLAN LEGEND

Town, County, State	New R/W Along Existing R/W		Existing	Proposed		Existing	Proposed
Approx. Property Lines P.L.	Building	Clearing Limit Line	Sanitary Sewer		Traveled Way		
Existing Right of Way	Trees Conifer	Deciduous	Telephone Line		Ditch		
Limits of Wrought Portion L.O.W.P.	Tree Line	Bush Line	Electric Line		Catch Basin		
Control Of Access C.O.A.	Water Edge		Water Line		Manhole		
New Right of Way	Ledge	Rock/Boulder Flag Pole	Underdrain Line		Sewer Manhole		
New Easement	Fence CHAIN LINK	BARB WIRE STOCKADE	Gas Line		Utility Pole		
New Temporary Rights	Sign	Well WELL Mailbox	Guardrail		Fire Hydrant		
New R/W Within Existing R/W			Culvert		Curbing		

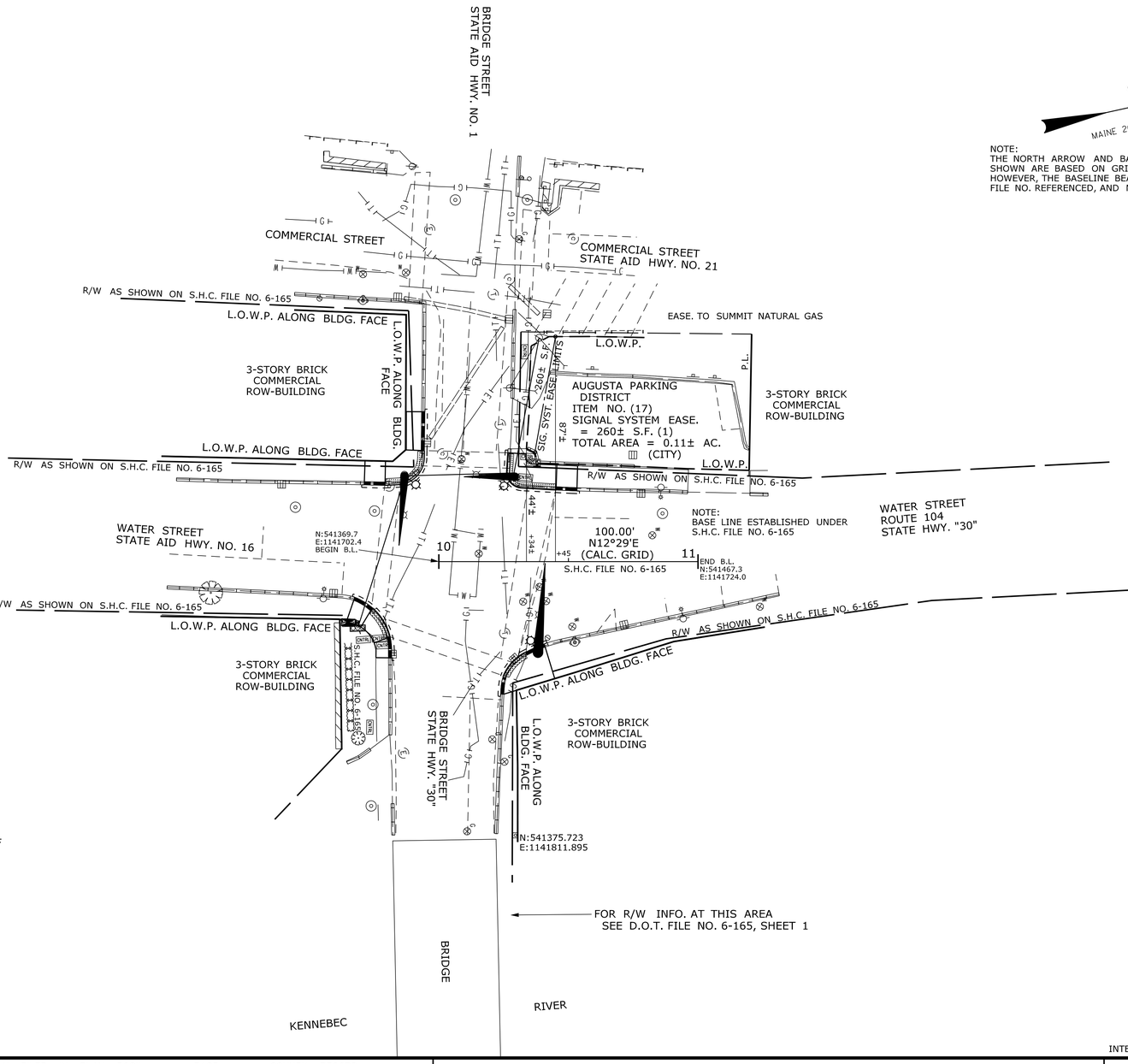
Cut Line C—C—C	Fill Line F—F—F	Monument
Stonewall	Retaining Wall	Traverse Point
Baseline 10+00 11+00 12+00		Iron Rod Found ● IRF
		Pipe Found ● IPF
		Replacement Pin Set

THIS PLAN WAS PREPARED IN CONNECTION WITH THE DEPARTMENT'S ACQUISITION OF REAL PROPERTY FOR TRANSPORTATION PURPOSES. IT CANNOT BE USED TO ESTABLISH LEGAL BOUNDARIES BETWEEN ABUTTING PROPERTY OWNERS.

25 0 25 50 75 100
Scale of Feet

STATE OF MAINE
REGISTRY OF DEEDS

COUNTY _____
RECEIVED _____, _____
at _____h_____m_____M and
recorded in Plan Bk _____, Pg._____
Attest: _____
REGISTER



NOTE:
THE NORTH ARROW AND BASELINE COORDINATES SHOWN ARE BASED ON GRID NORTH, MAINE 2000 WEST ZONE. HOWEVER, THE BASELINE BEARING IS TAKEN FROM THE D.O.T. FILE NO. REFERENCED, AND MAY BE BASED ON MAGNETIC NORTH.

EXISTING R/W REF.:
D.O.T. FILE NO. 6-165, SHEET 1

NOTE: PRESCRIPTIVE EASEMENT FOR HIGHWAY PURPOSES WITHIN LIMITS OF WROUGHT PORTION (L.O.W.P.)

ITEM	TECH	CHECKED
EXISTING CONDITION PLAN	B.S.	G.L.L.
FINAL RIGHT OF WAY	B.S.	G.L.L.
AREAS	B.S.	G.L.L.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION - AUGUSTA, ME 04333-0016 - 207-624-3460
AUGUSTA
RIGHT OF WAY MAP

INTERSECTION NO. 36 WIN 024301.00

REVISIONS			
NO.	DATE	DESCRIPTION	BY

PLAN FILED IN PLAN BOOK PAGE COUNTY RECORD					
NO.	GRANTOR	INSTRUMENT	DATE	BOOK	PAGE

BRUCE A. VAN NOTE
COMMISSIONER
JOYCE NOEL TAYLOR
CHIEF ENGINEER
DATE

STATE HWY. "30" & STATE AID HWY. NOS. 1 & 16
BRIDGE STREET & WATER STREET
AUGUSTA KENNEBEC COUNTY
FEDERAL AID PROJECT NO. 2430100

NOVEMBER 2020	RIGHT-OF-WAY MAP	D.O.T. FILE NO. 6-487
SCALE 1" = 25'	SHEET 11 OF 12	

SHEET NUMBER
36R
OF 358

Filename: ...\ROW\MSTA\036_RWPLAN11.dgn Username: Benjamin.Singer Date:11/19/2020 Division: ROW

LIST OF WORK ITEMS

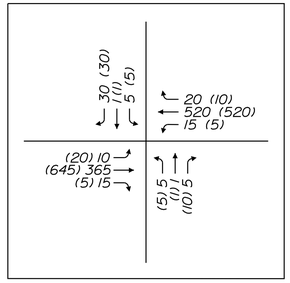
EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	6
FURNISH AND INSTALL ONE-WAY 4-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARM UPRIGHTS WITH BRACKET	2
FURNISH AND INSTALL 16-INCH L.E.D. COUNTDOWN PEDESTRIAN LENS IN EXISTING HOUSING	6
FURNISH AND INSTALL ADA COMPLIANT ACCESSIBLE PEDESTRIAN SIGNAL (APS) BUTTON WITH 9"X15" RIO-3E INFORMATIONAL SIGN	6
FURNISH AND INSTALL 19-INCH 1RU FIBER OPTIC 12-POSITION PATCH PANEL WITH PIGTAILS	1
RESET FIBER OPTIC ETHERNET SWITCH WITH FIBER OPTIC INTERFACES	1
FURNISH AND INSTALL SIGNAL POST MOUNTED SIGNS	4
FURNISH AND INSTALL POST MOUNTED SIGNS	2
REMOVE MAST ARM MOUNTED SIGNS	1
RESET COUNTDOWN PEDESTRIAN SIGNAL HEADS	2
RESET PREEMPTION PHASE SELECTOR	1
RESET EXISTING 96-F FIBER IN PROPOSED CABINET	-
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 4 APPROACHES, COMPLETE (ITEM 643.21)	1 LS

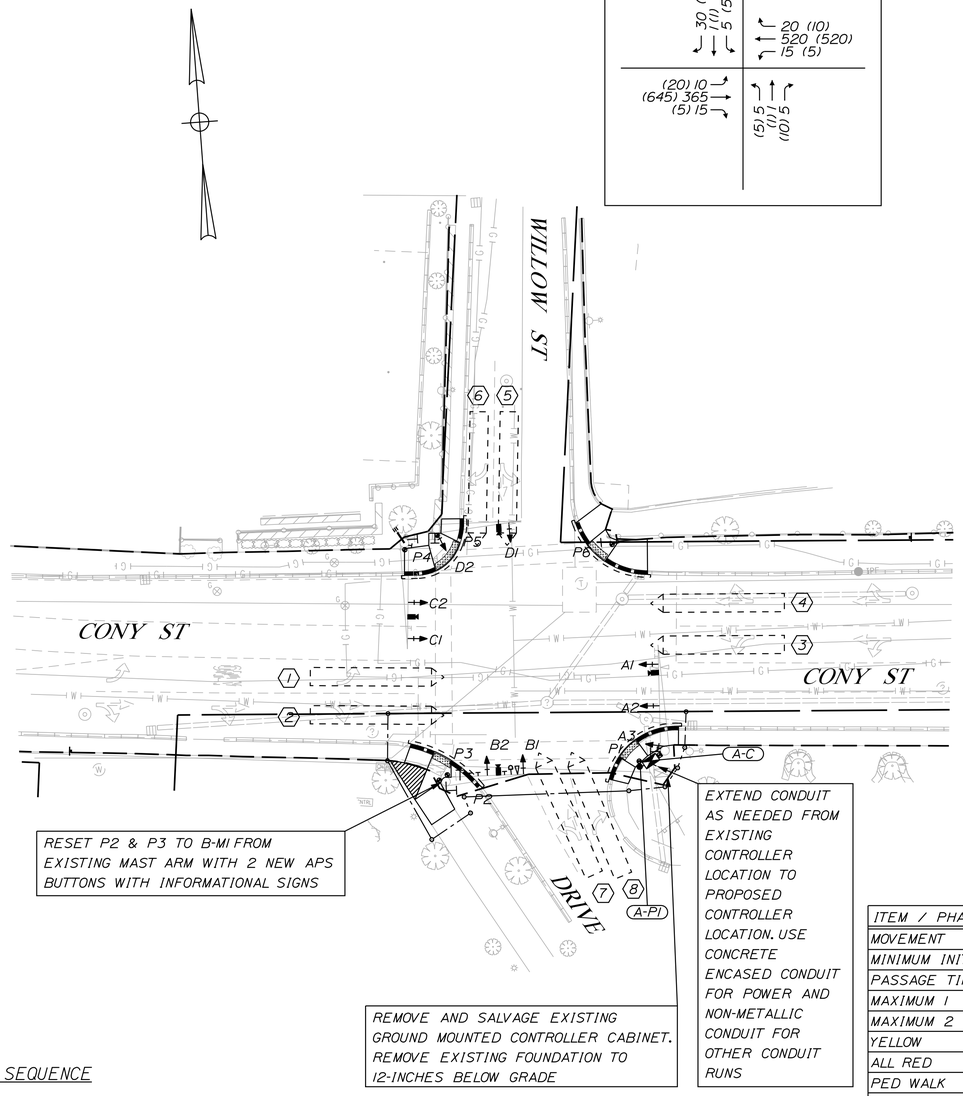
THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

STRUCTURE LIST

STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	L48"xW36"xH48"
A-P1	4' PEDESTAL POLE	24" DIAMETER

SYSTEM DESIGN VOLUMES AM (PM)





RESET P2 & P3 TO B-MI FROM EXISTING MAST ARM WITH 2 NEW APS BUTTONS WITH INFORMATIONAL SIGNS

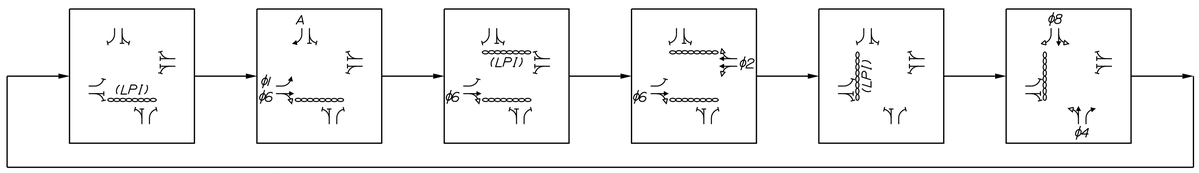
REMOVE AND SALVAGE EXISTING GROUND MOUNTED CONTROLLER CABINET. REMOVE EXISTING FOUNDATION TO 12-INCHES BELOW GRADE

EXTEND CONDUIT AS NEEDED FROM EXISTING CONTROLLER LOCATION TO PROPOSED CONTROLLER LOCATION. USE CONCRETE ENCASED CONDUIT FOR POWER AND NON-METALLIC CONDUIT FOR OTHER CONDUIT RUNS

PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM

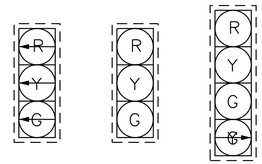
1 2 | 4
6 | 8



OVERLAP PHASING:
OVL A = 1+8

PHASING NOTES:
1. EACH PEDESTRIAN PHASE SHALL HAVE A MINIMUM OF A 4 SECOND LEADING PEDESTRIAN INTERVAL (LPI).
2. PEDESTRIAN PHASE UPON PUSH BUTTON ACTIVATION ONLY.
3. GREEN ARROW INDICATION FOR OVERLAP A IS DISABLED WHEN THE PHASE 8 PEDESTRIAN PHASE OR PHASE 4 IS ACTIVE.

PROPOSED INDICATIONS



EXISTING INDICATIONS
TO REMAIN OR RELOCATE



P1-P6

NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES

EXISTING COUNTDOWN PEDESTRIAN SIGNAL HEADS SHALL HAVE NEW L.E.D. LENSES INSTALLED

DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	ϕ CALLED	ϕ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
1	CONY ST EB LEFT	1	1	B	-	-
2	CONY ST EB THRU-RIGHT	6	6	B	-	-
3	CONY ST WB LEFT-THRU	2	2	B	-	-
4	CONY ST WB THRU-RIGHT	2	2	B	-	-
5	WILLOW ST SB LEFT-THRU	8	8	B	-	-
6	WILLOW ST SB RIGHT	8	8	B	5	-
7	DRIVEWAY NB LEFT-THRU	4	4	B	-	-
8	DRIVEWAY NB RIGHT	4	4	B	5	-

SIGNAL TIMING SCHEDULE

ITEM / PHASE	ϕ 1	ϕ 2	ϕ 3	ϕ 4	ϕ 5	ϕ 6	ϕ 7	ϕ 8
MOVEMENT	A (LT)	C	-	D	-	A	-	B
MINIMUM INITIAL	7	10	-	7	-	10	-	7
PASSAGE TIME	2.5	3.0	-	3.0	-	3.0	-	3.0
MAXIMUM 1	10	40	-	12	-	40	-	20
MAXIMUM 2	20	45	-	25	-	45	-	25
YELLOW	3.5	3.5	-	4.0	-	3.5	-	4.0
ALL RED	2.5	2.5	-	2.0	-	2.5	-	2.0
PED WALK	-	5	-	5	-	5	-	-
PED CLEAR	-	12	-	15	-	15	-	-
DYN MAX LIMIT	-	-	-	-	-	15	-	-
DYN MAX STEP	-	-	-	-	-	10	-	-
RECALL	OFF	SOFT	-	OFF	-	SOFT	-	OFF
DETECTOR	PR	PR	-	PR	-	PR	-	PR
PRE-EMPT PRIORITY	3	4	-	-	-	3	-	5
FLASH	R	Y	-	R	-	Y	-	R
DUAL ENTRY	OFF	ON	-	ON	-	ON	-	ON

NOTES: S = SOFT RECALLY = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK
MAX 2 UNDER COORDINATION
IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD.

PLAN



* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	BY	DATE
PROJ. MANAGER		
DESIGN-DETAILED		
CHECKED-REVIEWED	B. KEEZER	07/20
DESIGN2-DETAILED2	JAR	07/20
DESIGN3-DETAILED3	CMB	
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
CONY ST AND WILLOW ST

TRAFFIC SIGNAL PLAN

SHEET NUMBER
37
OF 358

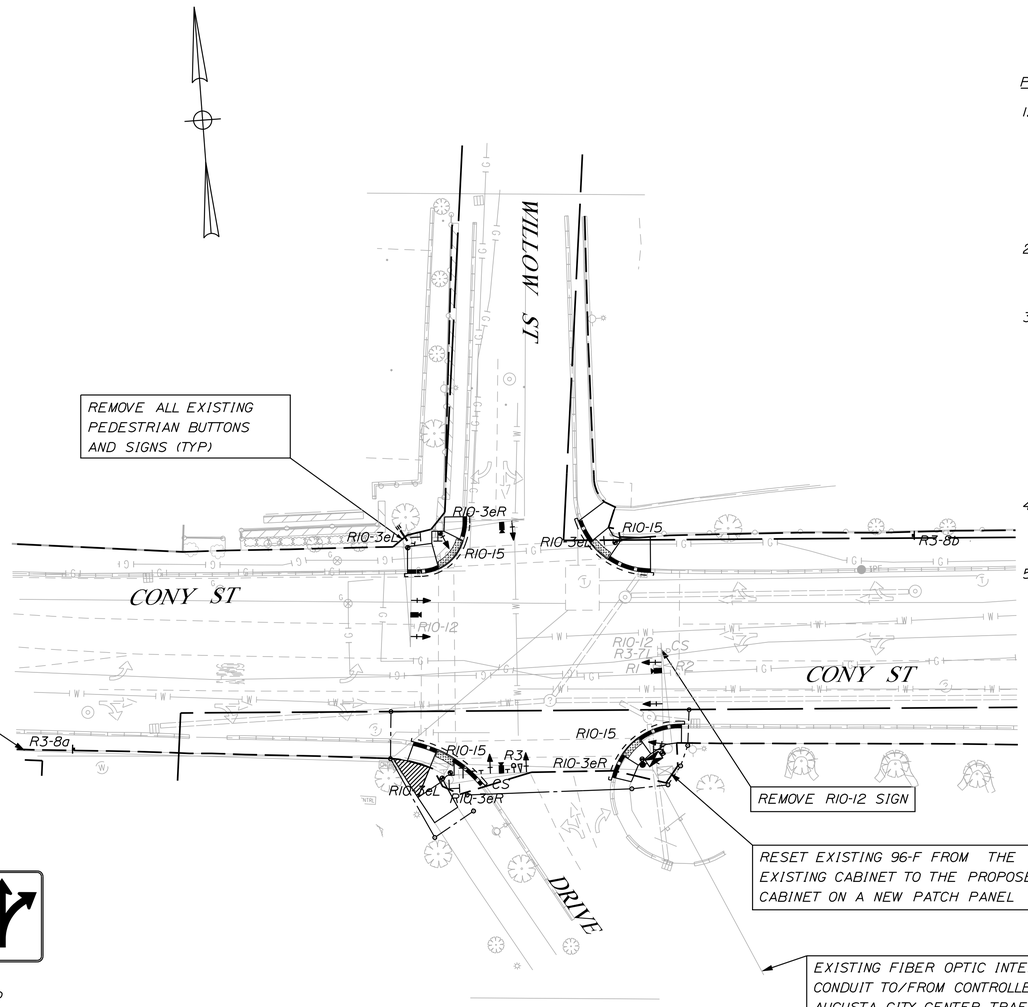
Filename: 037_Signal_37.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

Filename: 037_Signal_37a.dgn Username: jarobert Division: HIGHWAY Date:11/24/2020

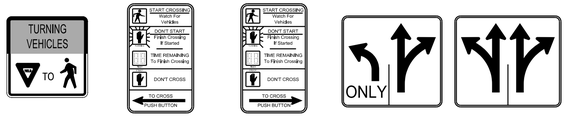
LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
FURNISH AND INSTALL (3-INCH) NON-METALLIC CONTUIT (ITEM 626.22)	20 LF
FURNISH AND INSTALL NON-METALLIC CONDUIT, CONCRETE ENCASED (ITEM 626.221)	5 LF
FURNISH AND INSTALL CONTROLLER CABINET FOUNDATION (ITEM 626.35)	1 EA
FURNISH AND INSTALL 24-INCH DIAMETER FOUNDATION (ITEM 626.421)	7 LF
FURNISH AND INSTALL 4-FOOT PEDESTAL POLE (ITEM 643.92)	1 EA
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

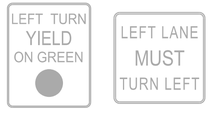


PROPOSED SIGNS



R10-15	R10-3eL	R10-3eR	R3-8a	R3-8b
30"x30"	9"x15"	9"x15"	36"x30"	36"x30"
4-PROPOSED	3-PROPOSED	3-PROPOSED	1-PROPOSED	1-PROPOSED

EXISTING SIGNS



R10-12	R3-7L
1-RETAINED	1-RETAINED
1-REMOVED	

EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USE/RESERVED	
	2	NOT USE/RESERVED	
R1	3	1	ϕ1&ϕ6
R2	4	2	ϕ2
R3	5	3	ϕ8
	6	NOT USED	

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.
2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 3 = LOWEST)
3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR AND/OR RSU, 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 (4.0 SECONDS YELLOW AND 2.5 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.
4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER		
DESIGN-DETAILED	ML G	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

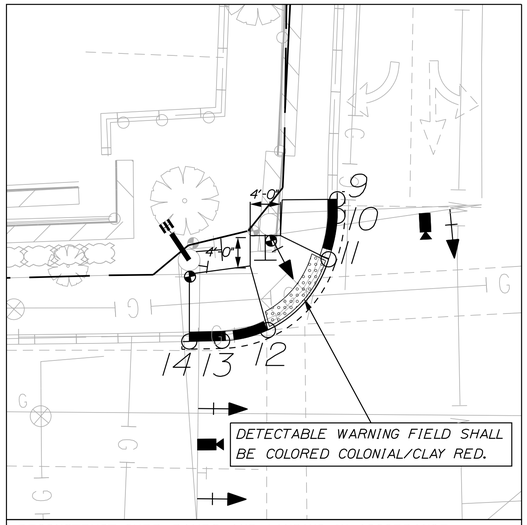
AUGUSTA
CONY ST AND WILLOW ST

TRAFFIC SIGNAL PLAN

SHEET NUMBER
37A
OF 358

Filename: 037_Signal_37c.dgn Username: jorobert Division: HIGHWAY Date:11/24/2020

C CORNER - NW DETAIL

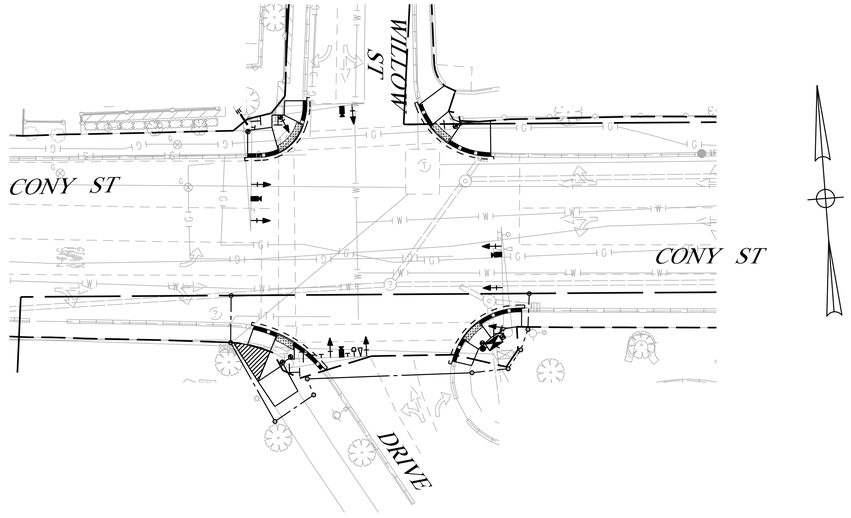


RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).
EXTEND LANDING TO ACCESS THE PEDESTRIAN BUTTON. THE ADDITIONAL AREA SHALL BE 4' SQUARE. SEE DETAIL ON SHEET H.

10 0 10 20
Scale of Feet

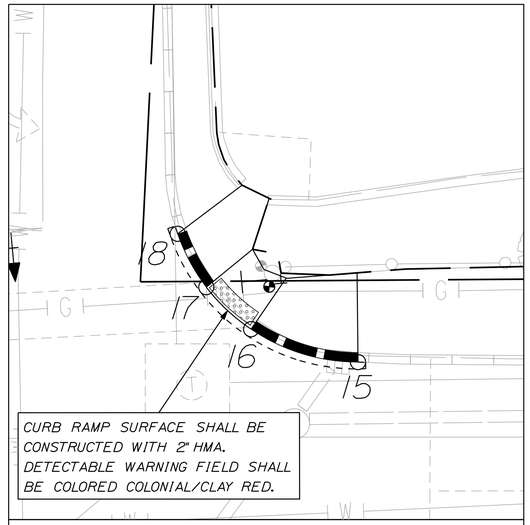
PT. TO PT.	RADIUS (FT)	ITEM 608.26 - CURB RAMP DETECTABLE WARNING FIELD		ITEM 609.221 - TERMINAL CURB TYPE I (LF)	ITEM 609.222 - TERMINAL CURB TYPE I - CIRCULAR (LF)	COMMENT
		LENGTH (FT)	QTY (SF)			
1 TO 2	22.7				8.0	
* 2 TO 3	22.7	8.1	14.1			7.0% CROSS SLOPE
* 3 TO 4	22.7				15.0	13.6% RUNNING SLOPE
5 TO 6	41.0				8.0	
* 6 TO 7	41.0	6.3	12.4			6.7% CROSS SLOPE
7 TO 8	41.0				12.8	
9 TO 10	-			2.2		
10 TO 11	20.0				5.8	
11 TO 12	15.0	12.7	21.8			
12 TO 13	15.0				6.2	
13 TO 14	-			4.3		
* 15 TO 16	25.0				15.0	13.4% RUNNING SLOPE
* 16 TO 17	25.0	8.1	14.0			11.6% CROSS SLOPE
17 TO 18	25.0				8.0	

* NON-COMPLIANT CURB RAMP ELEMENT - THE EXISTING GUTTER LINE PROFILE IS GREATER THAN 2%. THEREFORE THE LEVEL LANDING CROSS SLOPE AND/OR RUNNING SLOPE WILL BE GREATER THAN THE 2% AND 8.33% MAXIMUM ALLOWABLE, RESPECTIVELY. THE COMMENT IS THE MAXIMUM VALUE FOR PROPOSED LEVEL OF COMPLIANCE.



ALL CURB RAMPS SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND MAINEDOT STANDARD DETAILS 801(11) to 801(26) AS NOTED. AS WELL AS DETAILS PROVIDED ON SHEET H.

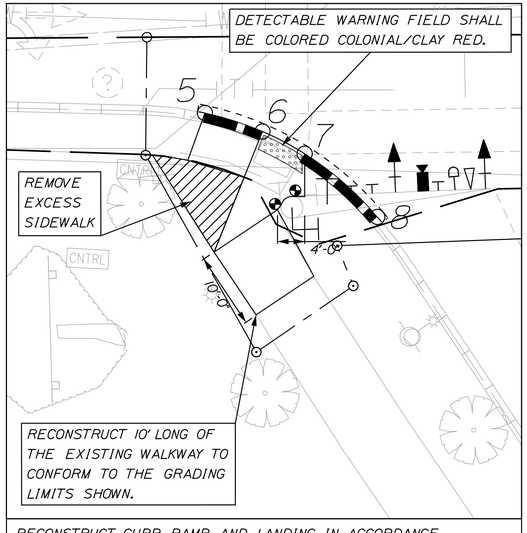
D CORNER - NE DETAIL



RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).
TRANSITION LENGTH REQUIRED FOR THE EASTERN CURB RAMP SHALL BE 15.0'. SEE MAINEDOT STANDARD DETAIL 801(13).

10 0 10 20
Scale of Feet

B CORNER - SW DETAIL



RECONSTRUCT CURB RAMP AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).
EXTEND LANDING TO THE PROPOSED MAST ARM POLE AND EXISTING SIDEWALK LIMIT AS SHOWN.

10 0 10 20
Scale of Feet

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
COMMON EXCAVATION (ITEM 203.20)	15.2 CY
HOT MIX ASPHALT, 9.5 MM NOMINAL MAXIMUM SIZE (ITEM 403.210)	8.0 TONS
PLAIN CONCRETE SIDEWALK (ITEM 608.07)	69.2 SY
CURB RAMP DETECTABLE WARNING FIELD (ITEM 608.26)	62.3 SF

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
CONSTRUCT SIDEWALK (ITEM 608.45)	2.2 SY
REGRADING SIDEWALK (ITEM 608.46)	96.4 SY
TERMINAL CURB TYPE I (ITEM 609.221)	6.5 LF
TERMINAL CURB TYPE I - CIRCULAR (ITEM 609.222)	78.8 LF

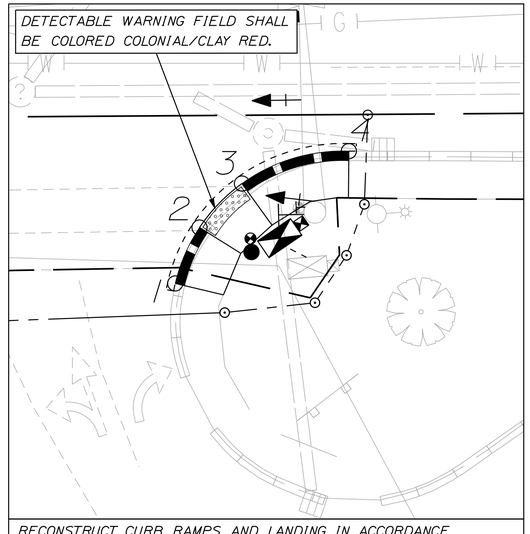
THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

A CORNER - SE DETAIL



RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).
TRANSITION LENGTH REQUIRED FOR THE EASTERN CURB RAMP SHALL BE 15.0'. SEE MAINEDOT STANDARD DETAIL 801(13).

10 0 10 20
Scale of Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER	BY	DATE
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

AUGUSTA
CONY ST AND WILLOW ST
CURB RAMP LAYOUT AND DETAIL PLAN

SHEET NUMBER
37C
OF 358

Filename: 038_Signal_38.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATCC 16/24 SIDE-OF-POLE MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON SPAN AND TETHER WIRE	9
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON SIDE OF POLE	1
FURNISH AND INSTALL ONE-WAY, 16 X 18-INCH LED SIDE OF POLE MOUNTED COUNTDOWN PEDESTRIAN SIGNAL HEAD	8
FURNISH AND INSTALL ADA COMPLIANT ACCESSIBLE PEDESTRIAN SIGNAL (APS) BUTTON WITH 9"X15" R10-3e INFORMATIONAL SIGN	8
FURNISH AND INSTALL 4-CHANNEL PREEMPTION PHASE SELECTOR	1
FURNISH AND INSTALL LIGHT-BASED PREEMPTION RECEIVERS WITH DETECTOR CABLE	4
FURNISH AND INSTALL PREEMPTION CONFIRMATION RED STROBE WITH CABLE	1
FURNISH AND INSTALL 19-INCH 1RU FIBER OPTIC 12-POSITION PATCH PANEL WITH PIGTAILS	1
FURNISH AND INSTALL ENVIRONMENTALLY HARDENED FIBER OPTIC ETHERNET SWITCH	1
FURNISH AND INSTALL SPAN WIRE MOUNTED SIGNS	4
RESET EXISTING FIBER IN PROPOSED CABINET	-
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 4 APPROACHES, COMPLETE (ITEM 643.21)	1 LS

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

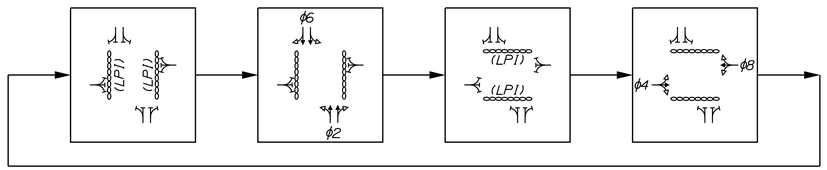
STRUCTURE LIST

STRUCTURE	DESCRIPTION	FOUNDATION
A-PI	4' PEDESTAL POLE	24" DIAMETER
B-PI	4' PEDESTAL POLE	24" DIAMETER
C-PI	8' PEDESTAL POLE	24" DIAMETER
D-PI	8' PEDESTAL POLE	24" DIAMETER

PREFERENTIAL PHASE SEQUENCE

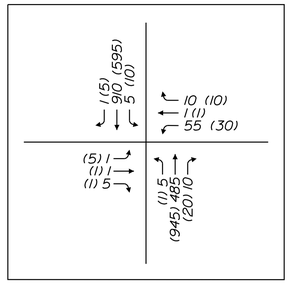
NEMA RING AND BARRIER DIAGRAM

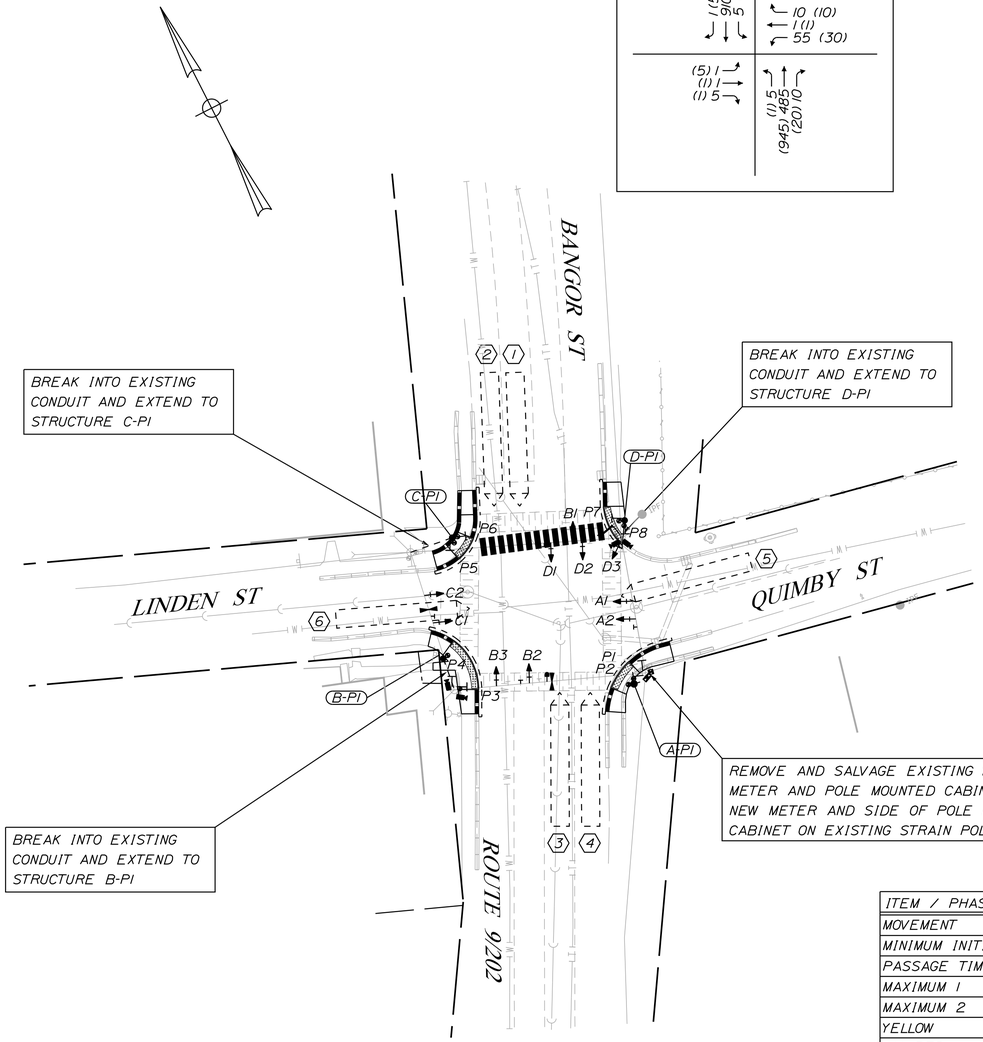
2 ‖ 4
6 ‖ 8



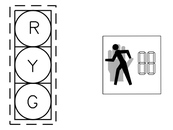
PHASING NOTES:
1. EACH PEDESTRIAN PHASE SHALL HAVE A MINIMUM OF A 4 SECOND LEADING PEDESTRIAN INTERVAL (LPI).
2. PEDESTRIAN PHASE UPON PUSH BUTTON ACTIVATION ONLY.

SYSTEM DESIGN VOLUMES AM (PM)





PROPOSED INDICATIONS



A1,A2,B1,B2
B3,C1,C2 P1-P8
D1,D2,D3

NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES

DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	φ CALLED	φ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
1	BANGOR ST SB LEFT-THRU	6	6	B	-	-
2	BANGOR ST SB THRU-RIGHT	6	6	B	-	-
3	BANGOR ST NB LEFT-THRU	2	2	B	-	-
4	BANGOR ST NB THRU-RIGHT	2	2	B	-	-
5	QUIMBY ST WB MOVEMENTS	8	8	B	-	-
6	LINDEN ST EB MOVEMENTS	4	4	B	-	-

SIGNAL TIMING SCHEDULE

ITEM / PHASE	φ1	φ2	φ3	φ4	φ5	φ6	φ7	φ8
MOVEMENT	-	D	-	A	-	B	-	C
MINIMUM INITIAL	-	15	-	5	-	15	-	5
PASSAGE TIME	-	6.0	-	3.0	-	6.0	-	3.0
MAXIMUM 1	-	50	-	15	-	50	-	15
MAXIMUM 2	-	60	-	25	-	60	-	25
YELLOW	-	4.0	-	4.0	-	4.0	-	4.0
ALL RED	-	2.0	-	2.0	-	2.0	-	2.0
PED WALK	-	5	-	5	-	5	-	5
PED CLEAR	-	10	-	10	-	10	-	10
DYN MAX LIMIT	-	-	-	-	-	-	-	-
DYN MAX STEP	-	-	-	-	-	-	-	-
RECALL	-	SOFT	-	OFF	-	SOFT	-	OFF
DETECTOR	-	PR	-	PR	-	PR	-	PR
PRE-EMPT PRIORITY	-	3	-	6	-	4	-	5
FLASH	-	Y	-	R	-	Y	-	R
DUAL ENTRY	-	ON	-	ON	-	ON	-	ON

NOTES: S = SOFT RECALLY = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK
IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	BY	DATE
PROJ. MANAGER	B. KEEZER	
DESIGN-DETAILED	MLG	JAR 07/20
CHECKED-REVIEWED	CMB	CMB 07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 9/202 (BANGOR ST)
AND LINDEN ST / QUIMBY ST

TRAFFIC SIGNAL PLAN

SHEET NUMBER

38

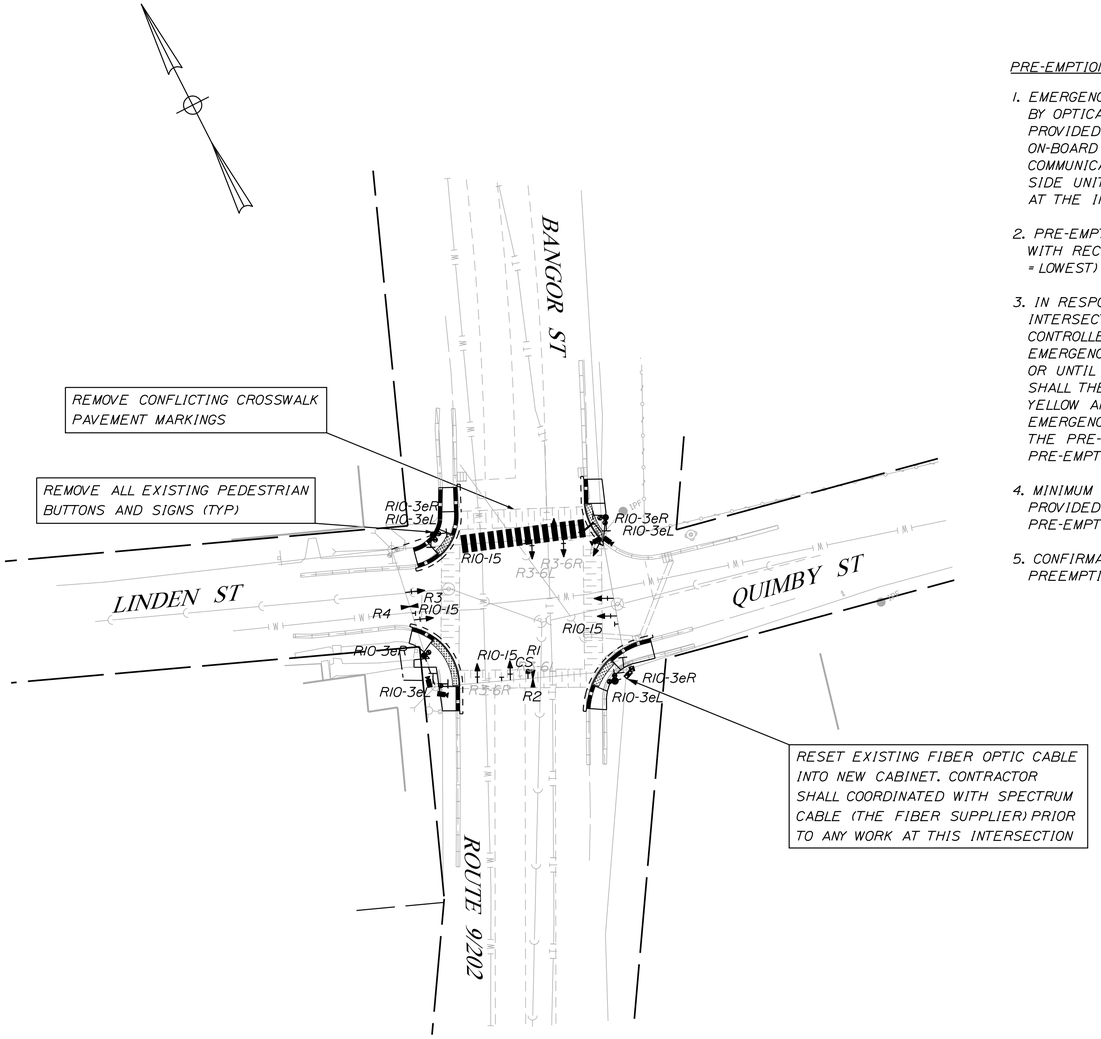
OF 358

Filename: 038_Signal_38a.dgn Username: jorobert Division: HIGHWAY Date:11/24/2020

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
FURNISH AND INSTALL (3-INCH) NON-METALLIC CONDUIT (ITEM 626.22)	35 LF
FURNISH AND INSTALL 24-INCH DIAMETER FOUNDATION (ITEM 626.421)	28 LF
FURNISH AND INSTALL WHITE PAVEMENT AND CURB MARKING (ITEM 627.75)	224 SF
REMOVE EXISTING PAVEMENT MARKING (ITEM 627.77)	160 SF
FURNISH AND INSTALL 4-FOOT PEDESTAL POLE (ITEM 643.92)	2 EA
FURNISH AND INSTALL 8-FOOT PEDESTAL POLE (ITEM 643.92)	2 EA
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.



PROPOSED SIGNS

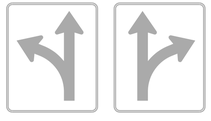


RIO-15
30"x30"
4-PROPOSED

RIO-3eL
9"x15"
4-PROPOSED

RIO-3eR
9"x15"
4-PROPOSED

EXISTING SIGNS



R3-6L
2-RETAINED

R3-6R
2-RETAINED

EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USE/RESERVED	
	2	NOT USE/RESERVED	
R1	3	1	ϕ6
R2	4	2	ϕ2
R3	5	3	ϕ8
R4	6	4	ϕ4

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.

2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 4 = LOWEST)

3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR AND/OR RSU, 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 (4.0 SECONDS YELLOW AND 2.0 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.

4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.

5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

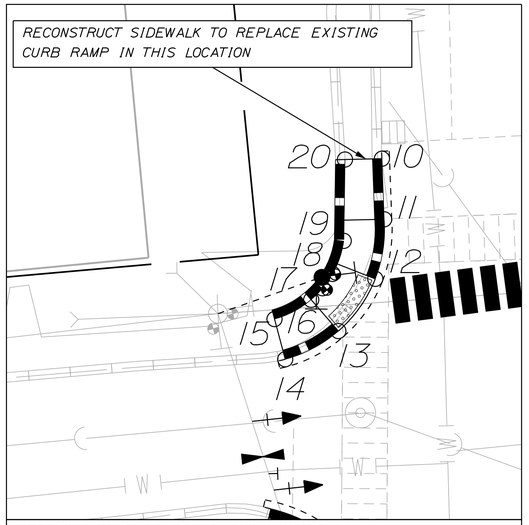
	B. KEEZER	DATE
PROJ. MANAGER		
DESIGN-DETAILED	MLG	07/20
CHECKED-REVIEWED	CMB	07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 9/202 (BANGOR ST)
AND LINDEN ST / QUIMBY ST

TRAFFIC SIGNAL PLAN

SHEET NUMBER
38A
OF 358

C CORNER - NW DETAIL



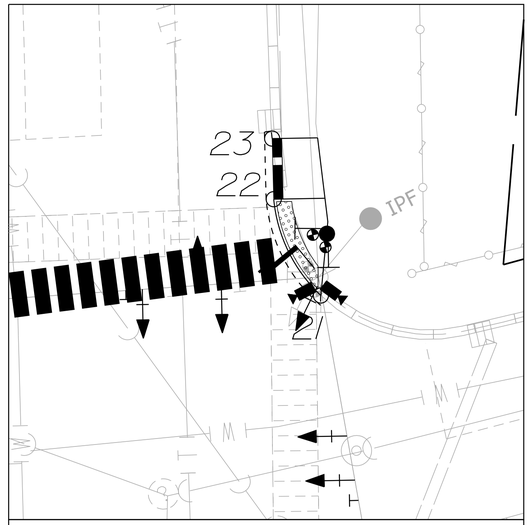
RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20). RECONSTRUCT BACK CURB ALONG THE CURB RAMP. LANDING AND SIDEWALK.

10 0 10 20
Scale of Feet

	PT. TO PT.	RADIUS (FT)	ITEM 608.26 - CURB RAMP DETECTABLE WARNING FIELD		ITEM 609.11 - VERTICAL CURB TYPE I (LF)	ITEM 609.12 - VERTICAL CURB TYPE I - CIRCULAR (LF)	ITEM 609.221 - TERMINAL CURB TYPE I (LF)	ITEM 609.222 - TERMINAL CURB TYPE I - CIRCULAR (LF)	COMMENT
			LENGTH (FT)	QTY (SF)					
	1 TO 2	25.0						8.0	
*	2 TO 3	25.0	10.6	18.8					6.8% CROSS SLOPE
	3 TO 4	25.0						12.4	
	4 TO 5	-					2.6		
	6 TO 7	20.0						8.0	
	7 TO 8	20.0	18.9	34.0					
	8 TO 9	-					8.0		
	10 TO 11	-			8.0				
	11 TO 12	17.7						8.0	
*	12 TO 13	17.7	8.5	14.4					8.9% CROSS SLOPE
	13 TO 14	17.7						8.0	
	15 TO 16	10.9				4.9			
	16 TO 17	11.0				1.9			
	18 TO 19	11.0				4.2			
	19 TO 20	-			10.5				
*	21 TO 22	20.0	14.5	22.4					4.2% CROSS SLOPE
	22 TO 23	-					8.0		

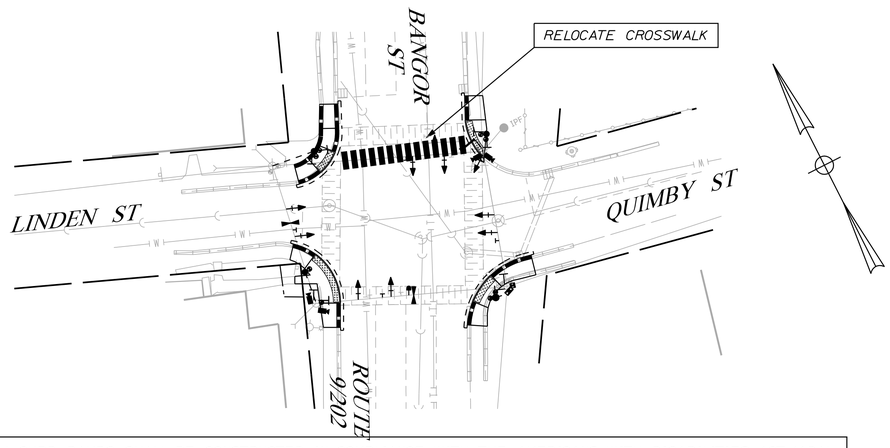
* NON-COMPLIANT CURB RAMP ELEMENT - THE EXISTING GUTTER LINE PROFILE IS GREATER THAN 2%. THEREFORE THE LEVEL LANDING CROSS SLOPE AND/OR RUNNING SLOPE WILL BE GREATER THAN THE 2% AND 8.33% MAXIMUM ALLOWABLE, RESPECTIVELY. THE COMMENT IS THE MAXIMUM VALUE FOR PROPOSED LEVEL OF COMPLIANCE.

D CORNER - NE DETAIL



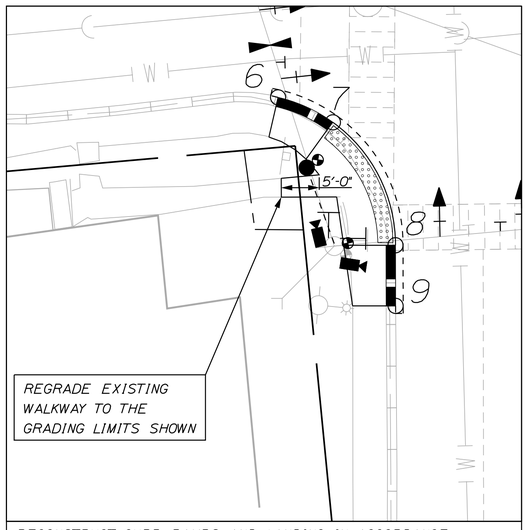
RECONSTRUCT CURB RAMP AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(22).

10 0 10 20
Scale of Feet



ALL CURB RAMPS SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND MAINEDOT STANDARD DETAILS 801(1) to 801(26) AS NOTED, AS WELL AS DETAILS PROVIDED ON SHEET H.

B CORNER - SW DETAIL



RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).

10 0 10 20
Scale of Feet

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
HOT MIX ASPHALT, 9.5 MM NOMINAL MAXIMUM SIZE (ITEM 403.210)	5.7 TONS
PLAIN CONCRETE SIDEWALK (ITEM 608.07)	67.8 SY
CURB RAMP DETECTABLE WARNING FIELD (ITEM 608.26)	89.6 SF
REGRADING SIDEWALK (ITEM 608.46)	75.3 SY

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
VERTICAL CURB TYPE I (ITEM 609.11)	18.5 LF
VERTICAL CURB TYPE I - CIRCULAR (ITEM 609.12)	11.0 LF
TERMINAL CURB TYPE I (ITEM 609.221)	18.6 LF
TERMINAL CURB TYPE I - CIRCULAR (ITEM 609.222)	44.4 LF

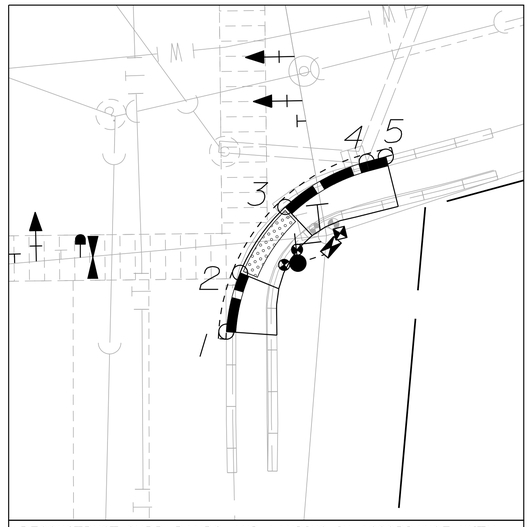
THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

A CORNER - SE DETAIL



RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).
TRANSITION LENGTH REQUIRED FOR THE EASTERN CURB RAMP SHALL BE 15.0'. SEE MAINEDOT STANDARD DETAIL 801(13).
DO NOT IMPACT EXISTING BACK CURB.

10 0 10 20
Scale of Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER		
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

AUGUSTA
ROUTE 9/202 (BANGOR ST)
AND LINDEN ST / QUIMBY ST

CURB RAMP LAYOUT
AND DETAIL PLAN

SHEET NUMBER
38C
OF 358

Username: jorobert
Division: HIGHWAY
Filename: 038_Signal_38c.dgn
Date: 11/24/2020

PLAN LEGEND

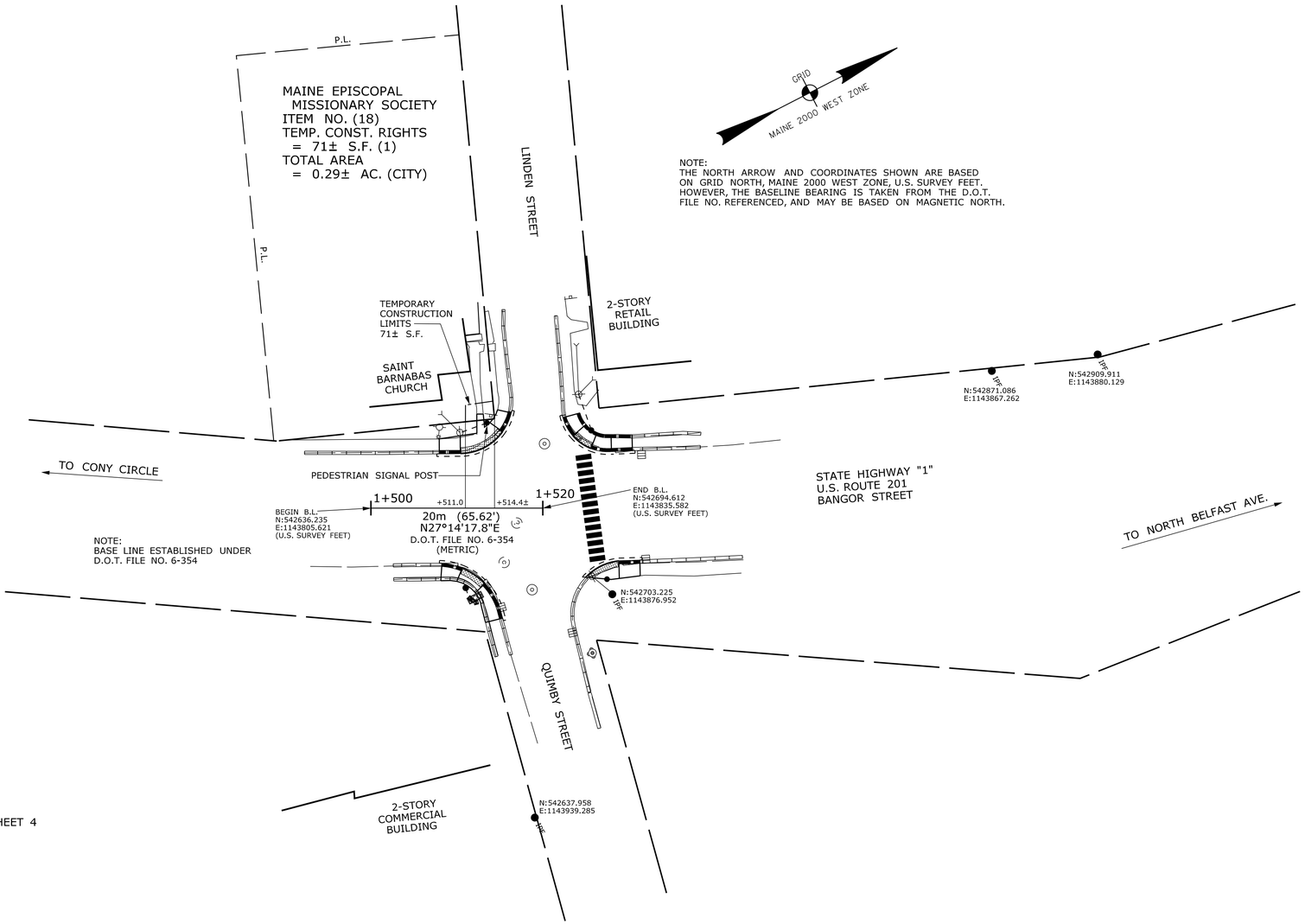
Town, County, State	New R/W Along Existing R/W	Existing	Proposed	Existing	Proposed	Cut Line	Fill Line
Approx. Property Lines P.L.	Building / Clearing Limit Line	Sanitary Sewer		Traveled Way		Stonewall	Retaining Wall
Existing Right of Way	Trees Conifer / Deciduous	Telephone Line		Ditch		Baseline 10+00 11+00 12+00	
Limits of Wrought Portion L.O.W.P.	Tree Line / Bush Line	Electric Line		Catch Basin		Monument	Traverse Point
Control Of Access C.O.A.	Water Edge	Water Line		Manhole		Iron Rod Found IRF	Pipe Found IPF
New Right of Way	Ledge / Rock/Boulder / Flag Pole	Underdrain Line		Sewer Manhole		Replacement Pin Set	
New Easement	Fence CHAIN LINK / BARB WIRE / STOCKADE	Gas Line		Utility Pole			
New Temporary Rights	Sign / Well / Mailbox	Guardrail		Fire Hydrant			
New R/W Within Existing R/W		Culvert		Curbing			

THIS PLAN WAS PREPARED IN CONNECTION WITH THE DEPARTMENT'S ACQUISITION OF REAL PROPERTY FOR TRANSPORTATION PURPOSES. IT CANNOT BE USED TO ESTABLISH LEGAL BOUNDARIES BETWEEN ABUTTING PROPERTY OWNERS.

25 0 25 50 75 100
Scale of Feet

STATE OF MAINE
REGISTRY OF DEEDS

COUNTY _____
RECEIVED _____, _____
at _____h_____m_____M and
recorded in Plan Bk _____, Pg._____
Attest: _____
REGISTER



INTERSECTION NO. 38 WIN 024301.00

ITEM	TECH	CHECKED
EXISTING CONDITION PLAN	B.S.	G.L.L.
FINAL RIGHT OF WAY	B.S.	G.L.L.
AREAS	B.S.	G.L.L.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION - AUGUSTA, ME 04333-0016 - 207-624-3460
AUGUSTA
RIGHT OF WAY MAP

REVISIONS

NO.	DATE	DESCRIPTION	BY

PLAN FILED IN PLAN BOOK PAGE COUNTY RECORD

NO.	GRANTOR	INSTRUMENT	DATE	BOOK	PAGE

BRUCE A. VAN NOTE
COMMISSIONER
JOYCE NOEL TAYLOR
CHIEF ENGINEER
DATE

STATE HIGHWAY "1"
BANGOR STREET / U.S. ROUTE 201
AUGUSTA KENNEBEC COUNTY
FEDERAL AID PROJECT NO. 2430100

NOVEMBER 2020	RIGHT-OF-WAY MAP	D.O.T. FILE NO. 6-487
SCALE 1" = 25'	SHEET 12 OF 12	

SHEET NUMBER
38R
OF 358

Filename: ...\ROW\MSTA\038_RWPLAN12.dgn Division: ROW Username: Benjamin.Singer Date:11/19/2020

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON SPAN AND TETHER WIRE	7
FURNISH AND INSTALL ONE-WAY 5-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON SPAN AND TETHER WIRE	1
FURNISH AND INSTALL ONE-WAY, 16 X 18-INCH LED SIDE OF POLE MOUNTED COUNTDOWN PEDESTRIAN SIGNAL HEAD	4
FURNISH AND INSTALL ONE-WAY, 16 X 18-INCH LED TOP OF POST MOUNTED COUNTDOWN PEDESTRIAN SIGNAL HEAD	2
FURNISH AND INSTALL ADA COMPLIANT ACCESSIBLE PEDESTRIAN SIGNAL (APS) BUTTON WITH 9"X15" RIO-3e INFORMATIONAL SIGN	6
FURNISH AND INSTALL 4-CHANNEL PREEMPTION PHASE SELECTOR WITH CHASSIS	1
FURNISH AND INSTALL LIGHT-BASED PREEMPTION RECEIVERS WITH DETECTOR CABLE	4
FURNISH AND INSTALL PREEMPTION CONFIRMATION RED STROBE WITH CABLE	1
FURNISH AND INSTALL 19-INCH 1RU FIBER OPTIC 12-POSITION PATCH PANEL WITH PIGTAILS	1
FURNISH AND INSTALL ENVIRONMENTALLY HARDENED FIBER OPTIC ETHERNET SWITCH	1
FURNISH AND INSTALL SPAN WIRE MOUNTED SIGNS	3
RESET EXISTING FIBER IN PROPOSED CABINET	-
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 4 APPROACHES, COMPLETE (ITEM 643.21)	1 LS

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

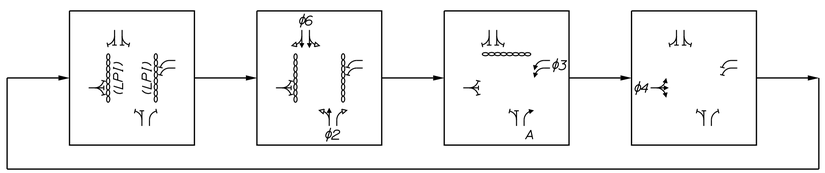
STRUCTURE LIST

STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	L48"xW36"xH48"
A-PI	4' PEDESTAL POLE	24" DIAMETER
B-PI	8' PEDESTAL POLE	24" DIAMETER
C-PI	8' PEDESTAL POLE	24" DIAMETER
D-PI	8' PEDESTAL POLE	24" DIAMETER

PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM

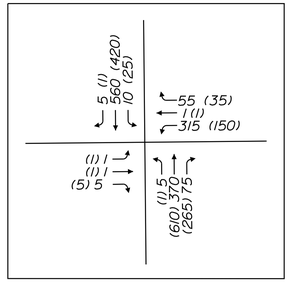
2 6 ‖ 3 4

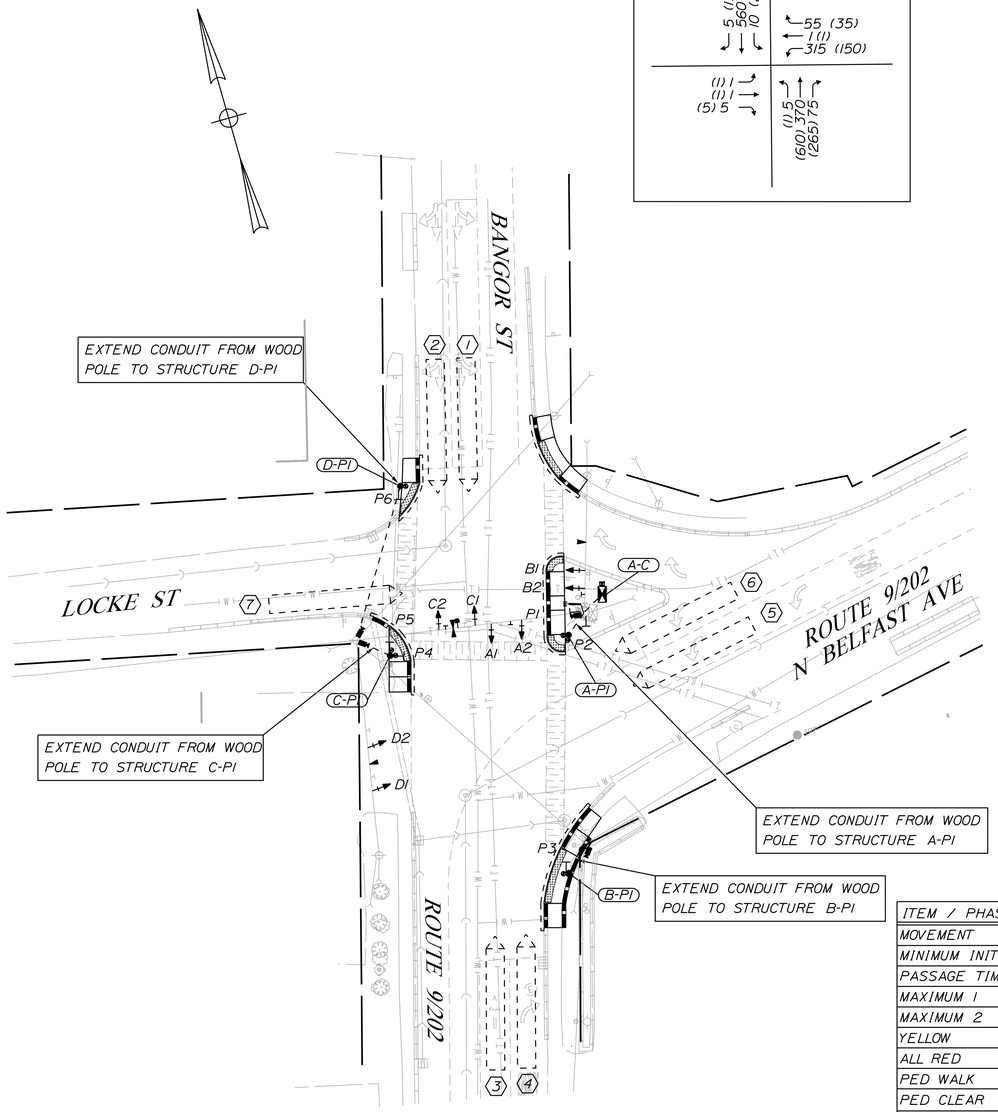


OVERLAP PHASING:
OVL A = 2-3

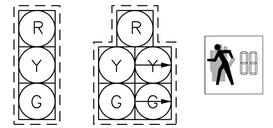
PHASING NOTES:
1. NORTHBOUND AND SOUTHBOUND PEDESTRIAN PHASES SHALL HAVE A MINIMUM OF A 4 SECOND LEADING PEDESTRIAN INTERVAL (LPI).
2. PEDESTRIAN PHASE UPON PUSH BUTTON ACTIVATION ONLY.
3. GREEN ARROW INDICATION FOR OVERLAP A IS DISABLED WHEN PHASE 2 IS ACTIVE.

SYSTEM DESIGN VOLUMES AM (PM)





PROPOSED INDICATIONS



A1,B1,B2,C1
C2,D1,D2 — A2 — P1-P6

NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES

DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	φ CALLED	φ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
1	BANGOR ST SB LEFT-THRU	6	6	B	-	-
2	BANGOR ST SB THRU-RIGHT	6	6	B	-	-
3	BANGOR ST NB LEFT-THRU	2	2	B	-	-
4	BANGOR ST NB RIGHT	2	2	B	5	-
5	N BELFAST AVE WB LEFT	3	3	B	-	-
6	N BELFAST AVE WB LEFT	3	3	B	-	-
7	LOCKE ST EB MOVEMENTS	4	4	B	-	-

SIGNAL TIMING SCHEDULE

ITEM / PHASE	φ1	φ2	φ3	φ4	φ5	φ6	φ7	φ8
MOVEMENT	-	A	D	B	-	C	-	-
MINIMUM INITIAL	-	10	5	5	-	10	-	-
PASSAGE TIME	-	5.0	3.0	3.0	-	5.0	-	-
MAXIMUM 1	-	50	25	15	-	50	-	-
MAXIMUM 2	-	60	25	15	-	60	-	-
YELLOW	-	3.5	3.5	3.5	-	3.5	-	-
ALL RED	-	3.5	3.5	2.5	-	3.5	-	-
PED WALK	-	5	5	-	-	5	-	-
PED CLEAR	-	16	12	-	-	12	-	-
DYN MAX LIMIT	-	-	-	-	-	-	-	-
DYN MAX STEP	-	-	-	-	-	-	-	-
RECALL	-	SOFT	OFF	OFF	-	SOFT	-	-
DETECTOR	-	PR	PR	PR	-	PR	-	-
PRE-EMPT PRIORITY	-	4	5	-	-	3	-	-
FLASH	-	Y	R	R	-	Y	-	-
DUAL ENTRY	-	ON	OFF	OFF	-	ON	-	-

NOTES: S = SOFT RECALLY = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK
IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	BY	DATE
PROJ. MANAGER	B. KEEZER	
DESIGN-DETAILED	MLG	JAR 07/20
CHECKED-REVIEWED	CMB	CMB 07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 9/202 (BANGOR ST) AND
ROUTE 9/202 (N BELFAST AVE) / LOCKE ST

TRAFFIC SIGNAL PLAN

SHEET NUMBER

39

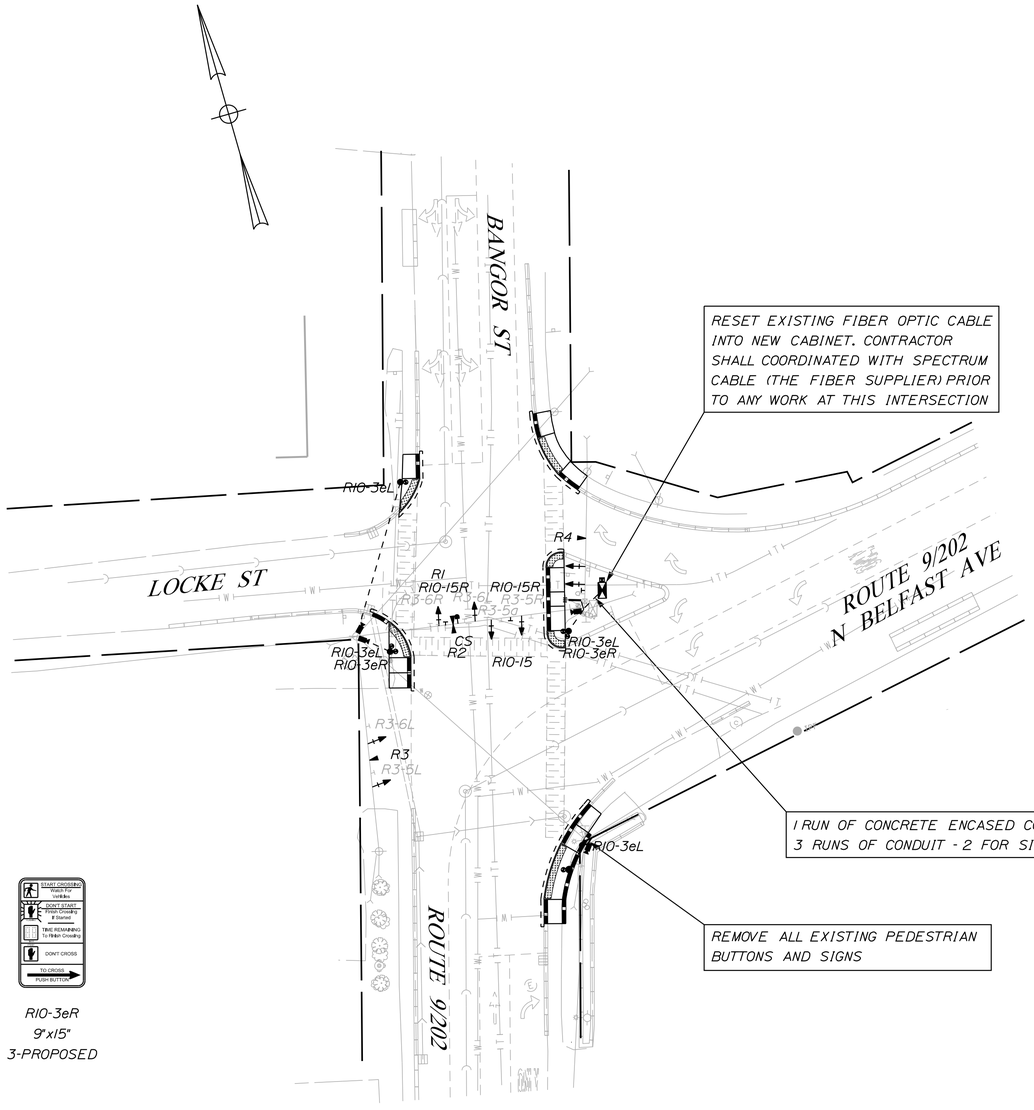
OF 358

Filename: 039_Signal_39.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
FURNISH AND INSTALL (3-INCH) NON-METALLIC CONDUIT (ITEM 626.22)	70 LF
FURNISH AND INSTALL NON-METALLIC CONDUIT, CONCRETE ENCASED (ITEM 626.221)	10 LF
FURNISH AND INSTALL (3-INCH) NON-METALLIC UNDER PAVEMENT CONDUIT (ITEM 626.251)	55 LF
FURNISH AND INSTALL CONTROLLER CABINET FOUNDATION (ITEM 626.35)	1 EA
FURNISH AND INSTALL 24-INCH DIAMETER FOUNDATION (ITEM 626.421)	28 LF
FURNISH AND INSTALL 4-FOOT PEDESTAL POLE (ITEM 643.92)	1 EA
FURNISH AND INSTALL 8-FOOT PEDESTAL POLE (ITEM 643.92)	3 EA
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.



PROPOSED SIGNS



R10-15	R10-15R	R10-3eL	R10-3eR
30"x30"	30"x30"	9"x15"	9"x15"
1-PROPOSED	2-PROPOSED	3-PROPOSED	3-PROPOSED

EXISTING SIGNS



R3-5L	R3-5a	R3-5R	R3-6L	R3-6R
1-RETAINED	1-RETAINED	1-RETAINED	2-RETAINED	1-RETAINED

EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	1	FIRE ST*
	2	NOT USE	RESERVED
R1	3	2	ϕ6
R2	4	3	ϕ2
R3	5	4	ϕ3
R4	6	5	ϕ4

* HARDWIRED PREEMPTION (FROM FIRE STATION) SHALL OVERRIDE OPTICAL PREEMPTION

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.
2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 4 = LOWEST)
3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR AND/OR RSU, 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 (3.5 SECONDS YELLOW AND 2.5 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.
4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.
6. SIGNALS SHALL TRANSITION TO ALL RED ALL APPROACHES DURING HARDWIRE FIRE PREEMPTION.

PLAN

25 0 25 50

Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	BY	DATE
PROJ. MANAGER	B. KEEZER	
DESIGN-DETAILED	MLG	07/20
CHECKED-REVIEWED	JAR	07/20
DESIGN2-DETAILED2	CMB	
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

AUGUSTA
ROUTE 9/202 (BANGOR ST) AND
ROUTE 9/202 (N BELFAST AVE) / LOCKE ST

TRAFFIC SIGNAL PLAN

SHEET NUMBER

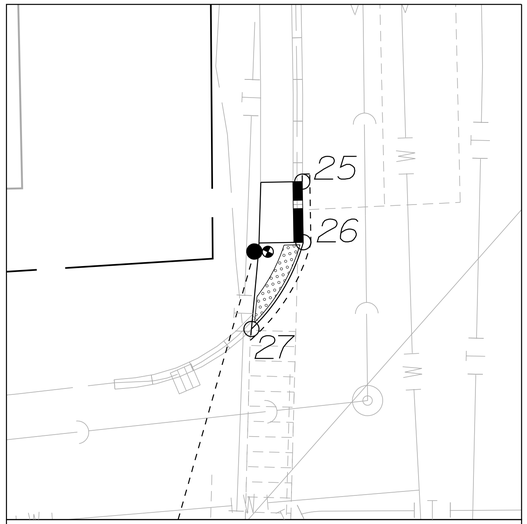
39A

OF 358

Filename: 039_Signal_39a.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

Filename: 039_Signol_39c.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

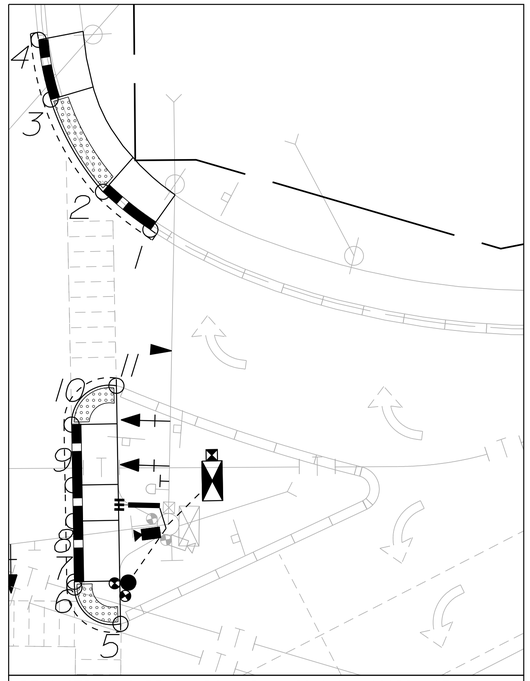
D CORNER - NW DETAIL



RECONSTRUCT CURB RAMP AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(22).

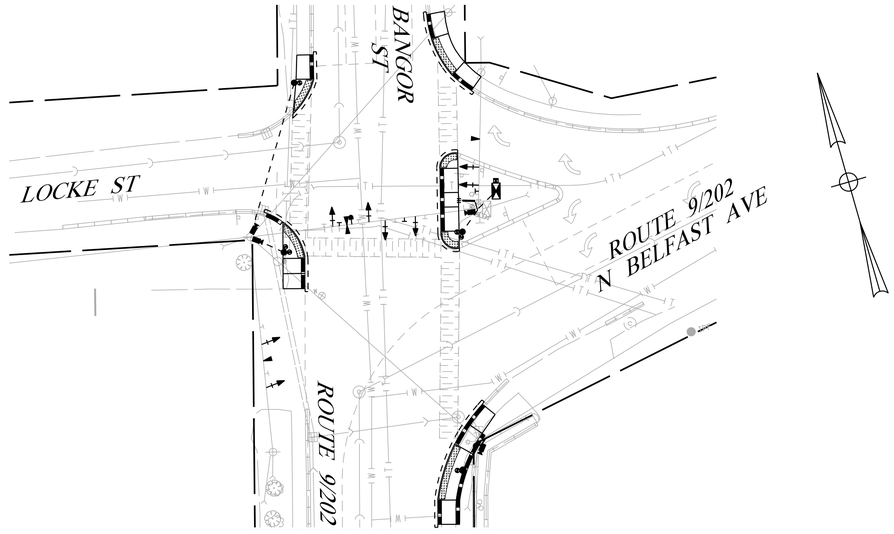
10 0 10 20
Scale of Feet

A CORNER - NE DETAIL

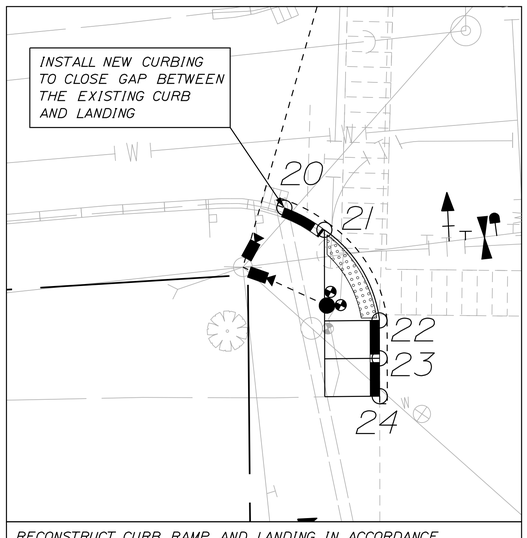


RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).
RECONSTRUCT ISLAND CURB RAMPS AND LANDINGS IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(22) AND REGRADE EXISTING SIDEWALK.

10 0 10 20
Scale of Feet



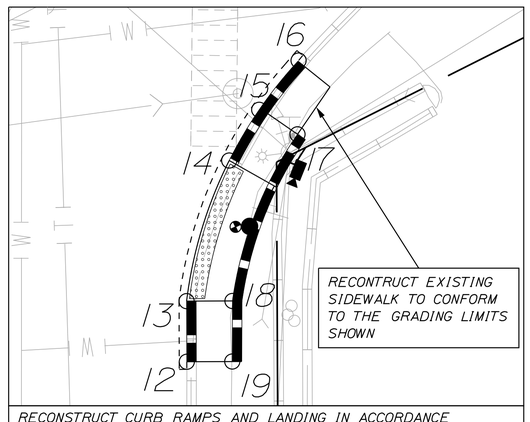
C CORNER - SW DETAIL



RECONSTRUCT CURB RAMP AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(22).

10 0 10 20
Scale of Feet

B CORNER - SE DETAIL



RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).

10 0 10 20
Scale of Feet

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

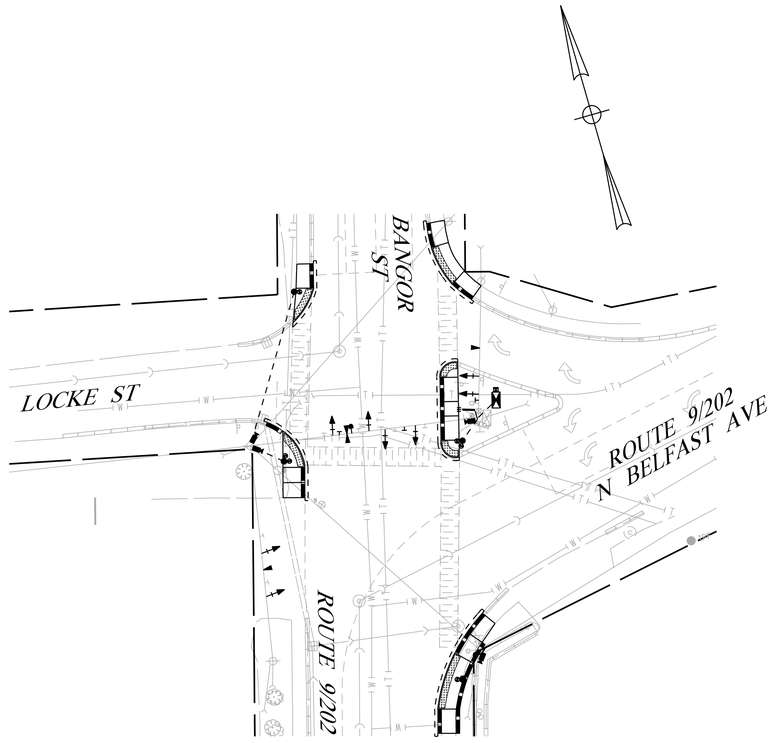
PROJ. MANAGER	B. KEEZER	BY	DATE
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

AUGUSTA
ROUTE 9/202 (BANGOR ST) AND
ROUTE 9/202 (N BELFAST AVE) / LOCKE ST
CURB RAMP LAYOUT
AND DETAIL PLAN

SHEET NUMBER
39C
OF 358

PT. TO PT.	RADIUS (FT)	ITEM 608.26 - CURB RAMP DETECTABLE WARNING FIELD		ITEM 609.11 - VERTICAL CURB TYPE I (LF)	ITEM 609.12 - VERTICAL CURB TYPE I - CIRCULAR (LF)	ITEM 609.221 - TERMINAL CURB TYPE I (LF)	ITEM 609.222 - TERMINAL CURB TYPE I - CIRCULAR (LF)	ITEM 609.34 - CURB TYPE 5 (LF)	COMMENT
		LENGTH (FT)	QTY (SF)						
1 TO 2	46.6						8.0		
2 TO 3	34.6	14.1	25.4						
3 TO 4	34.6						8.0		
5 TO 6	5.0	8.9	13.8						
6 TO 7	-	0.8							
7 TO 8	-							8.0	
8 TO 9	-							4.7	
9 TO 10	-							8.0	
10 TO 11	5.0	9.0	12.5						
12 TO 13	-					8.0			
* 13 TO 14	57.0	19.5	36.3						2.9% CROSS SLOPE
14 TO 15	57.0						8.0		
15 TO 16	57.0				8.0				
17 TO 18	49.8				23.2				
18 TO 19	-			8.0					
20 TO 21	19.0					6.0			
21 TO 22	17.0	14.4	22.8						
22 TO 23	-					5.0			
23 TO 24	-					5.0			
25 TO 26	-					8.0			
26 TO 27	24.9	13.5	19.8						

* NON-COMPLIANT CURB RAMP ELEMENT - THE EXISTING GUTTER LINE PROFILE IS GREATER THAN 2%. THEREFORE THE LEVEL LANDING CROSS SLOPE AND/OR RUNNING SLOPE WILL BE GREATER THAN THE 2% AND 8.33% MAXIMUM ALLOWABLE, RESPECTIVELY. THE COMMENT IS THE MAXIMUM VALUE FOR PROPOSED LEVEL OF COMPLIANCE.



ALL CURB RAMPS SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND MAINEDOT STANDARD DETAILS 801(11) to 801(26) AS NOTED, AS WELL AS DETAILS PROVIDED ON SHEET H.

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
HOT MIX ASPHALT, 9.5 MM NOMINAL MAXIMUM SIZE (ITEM 403.210)	7.4 TONS
PLAIN CONCRETE SIDEWALK (ITEM 608.07)	84.9 SY
CURB RAMP DETECTABLE WARNING FIELD (ITEM 608.26)	130.6 SF
REGRADING SIDEWALK (ITEM 608.46)	94.0 SY

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
VERTICAL CURB TYPE I (ITEM 609.11)	8.0 LF
VERTICAL CURB TYPE I - CIRCULAR (ITEM 609.12)	31.2 LF
TERMINAL CURB TYPE I (ITEM 609.221)	32.0 LF
TERMINAL CURB TYPE I - CIRCULAR (ITEM 609.222)	24.0 LF
CURB TYPE 5 (ITEM 609.34)	20.7 LF

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, JULY 2020

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER		
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

AUGUSTA
ROUTE 9/202 (BANGOR ST) AND
ROUTE 9/202 (N BELFAST AVE) / LOCKE ST

CURB RAMP LAYOUT AND DETAIL PLAN

SHEET NUMBER

39D

OF 358

Filename: 039_Signal_39d.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	9
FURNISH AND INSTALL ONE-WAY 4-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARM UPRIGHTS WITH BRACKET	1
FURNISH AND INSTALL 19-INCH 1 RU FIBER OPTIC 12-POSITION PATCH PANEL WITH PIGTAILS	1
RESET FIBER OPTIC ETHERNET SWITCH WITH FIBER OPTIC INTERFACES	1
FURNISH AND INSTALL POST MOUNTED SIGNS	2
REMOVE MAST ARM MOUNTED SIGNS	2
RESET PREEMPTION PHASE SELECTOR	1
RESET EXISTING 12-F FIBER IN PROPOSED CABINET	-
FURNISH AND INSTALL NEW SIGNAL CABLE	-
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	-
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 4 APPROACHES, COMPLETE (ITEM 643.21)	1 LS
FURNISH AND INSTALL NON-INVASIVE ADVANCE VEHICLE DETECTION SYSTEM FOR 2 APPROACHES, COMPLETE (ITEM 643.22)	1 LS

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

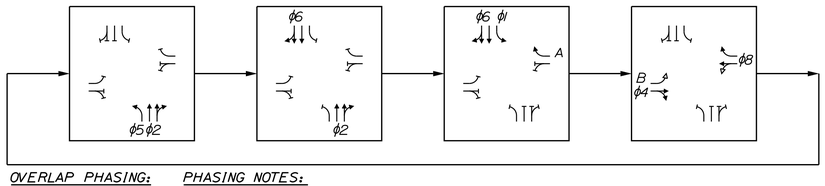
STRUCTURE LIST

STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	EXISTING

PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM

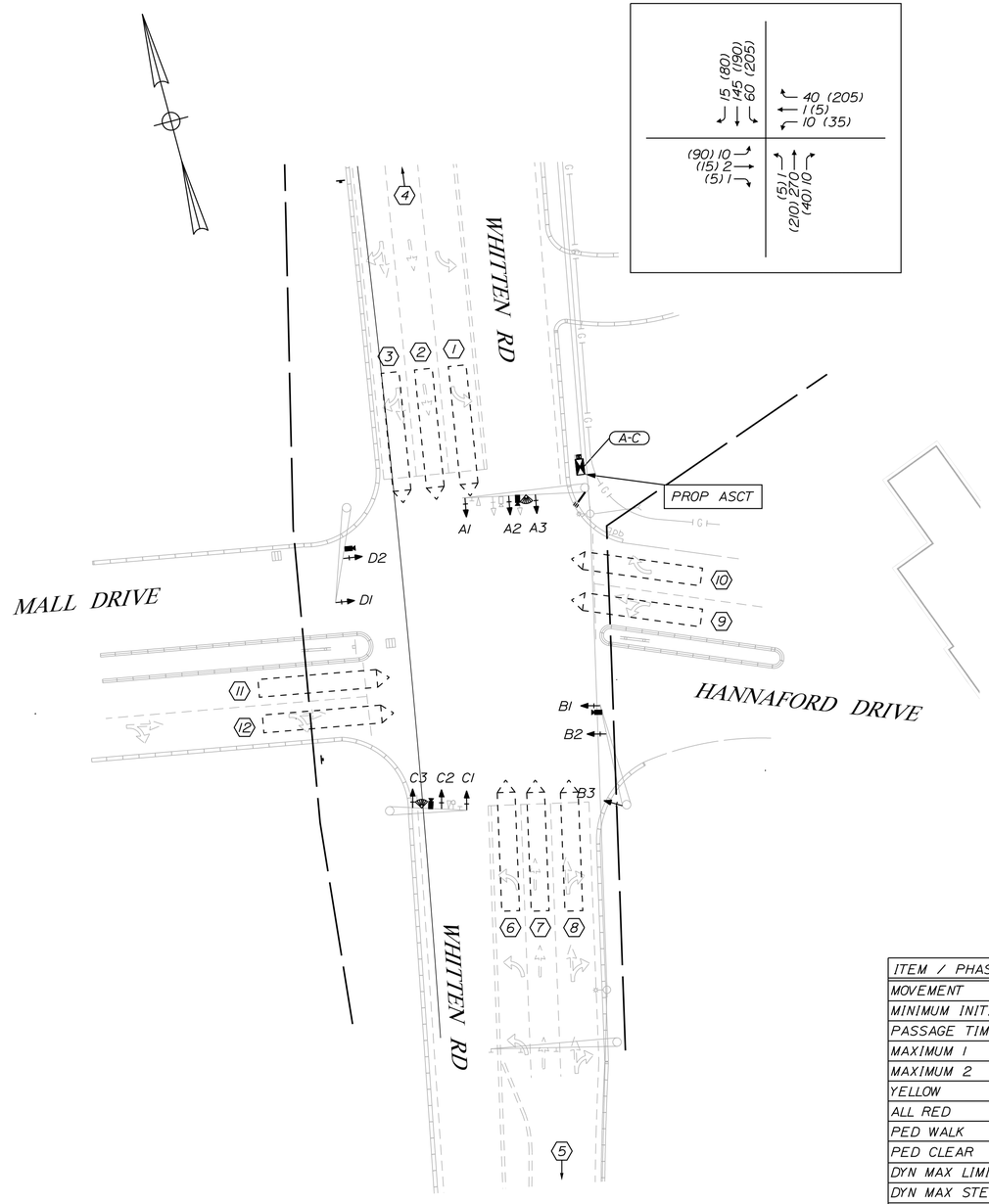
2 1 | | 4
5 6 | | 8



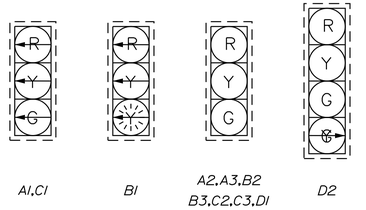
OVERLAP PHASING:
OVL A = 1+8
OVL B = 4

PHASING NOTES:
1. GREEN ARROW INDICATION FOR OVERLAP A IS DISABLED WHEN THE PHASE 4 IS ACTIVE.
2. OVERLAP B SHALL BE PROGRAMMED FOR FLASHING YELLOW ARROW.

SYSTEM DESIGN VOLUMES AM (PM)



PROPOSED INDICATIONS



NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES

DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	φ CALLED	φ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
1	WHITTEN RD SB LEFT	1	1	B	-	-
2	WHITTEN RD SB THROUGH	6	6	B	-	-
3	WHITTEN RD SB THRU-RIGHT	6	6	B	-	-
4*	WHITTEN RD SB ADVANCE	6	6	A	-	-
5*	WHITTEN RD NB ADVANCE	2	2	A	-	-
6	WHITTEN RD NB LEFT	5	5	B	-	-
7	WHITTEN RD NB THROUGH	2	2	B	-	-
8	WHITTEN RD NB THRU-RIGHT	2	2	B	-	-
9	HANNAFORD DR WB LEFT-THRU	8	8	B	-	-
10	HANNAFORD DR WB RIGHT	8	8	B	5	-
11	MALL DR EB LEFT	4	4	B	-	-
12	MALL DR EB THRU-RIGHT	4	4	B	5	-

* SEE ADVANCED DILEMMA ZONE DETAIL (35 MPH)
NOTE: LOCATION AND QUANTITY OF ADDITIONAL VEHICLE DETECTION ZONES TO BE DETERMINED BASED ON THE SPECIFIC ASCT SYSTEM REQUIREMENTS

SIGNAL TIMING SCHEDULE

ITEM / PHASE	φ 1	φ 2	φ 3	φ 4	φ 5	φ 6	φ 7	φ 8
MOVEMENT	C (LT)	A	-	B	A (LT)	C	-	D
MINIMUM INITIAL	10	10	-	7	5	10	-	7
PASSAGE TIME	3.0	3.0	-	3.0	3.0	3.0	-	3.0
MAXIMUM 1	20	25	-	20	8	25	-	15
MAXIMUM 2	35	35	-	30	8	45	-	15
YELLOW	3.5	3.5	-	4.0	3.5	3.5	-	4.0
ALL RED	2.5	2.5	-	2.0	2.5	2.5	-	2.0
PED WALK	-	-	-	-	-	-	-	-
PED CLEAR	-	-	-	-	-	-	-	-
DYN MAX LIMIT	-	-	-	-	-	-	-	-
DYN MAX STEP	-	-	-	-	-	-	-	-
RECALL	OFF	SOFT	-	OFF	OFF	SOFT	-	OFF
DETECTOR	PR	PR	-	PR	PR	PR	-	PR
PRE-EMPT PRIORITY	3	4	-	-	4	3	-	-
FLASH	R	Y	-	R	R	Y	-	R
DUAL ENTRY	OFF	ON	-	ON	OFF	ON	-	ON

NOTES: S = SOFT RECALLY = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK
IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD. INTERSECTION SHALL BE PART OF AN ASCT (ADAPTIVE) SYSTEM.

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY REFERENCE U-015-1(14) DOT (SHC) FILE 6-145 SHEET 2 OF 8, 3/1966 & RIGHT-OF-WAY REFERENCE U-015-1(14) DOT (SHC) FILE 6-145, SHEET 3 OF 8, 3/1966

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER		
DESIGN-DETAILED	MLG	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

AUGUSTA
WHITTEN RD AND
HANNAFORD DRIVE

TRAFFIC SIGNAL PLAN

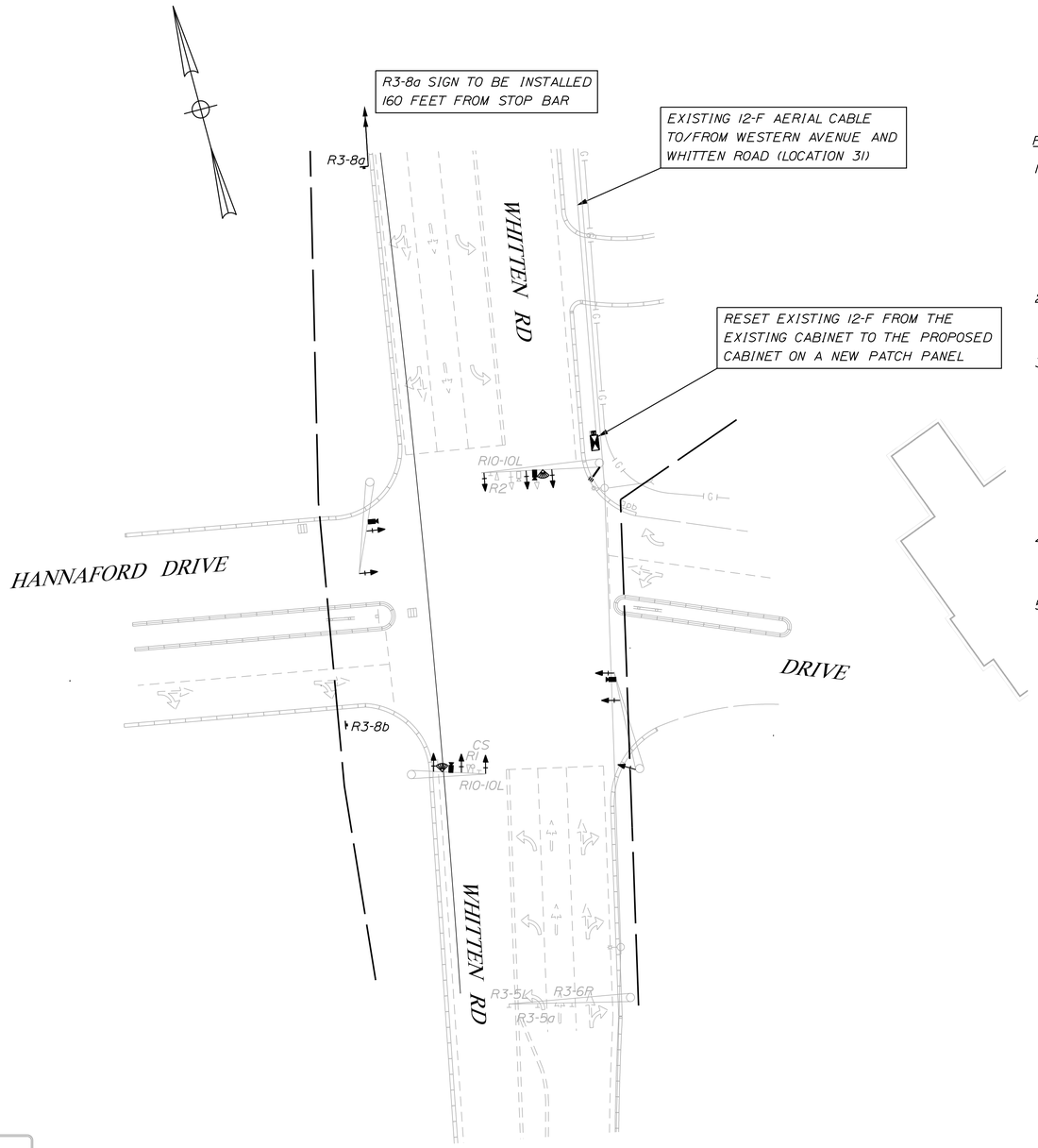
SHEET NUMBER
40
OF 358

Filename: 040_Signal_40.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
FURNISH AND INSTALL WESTERN AVENUE PROGRESSION BASED ASCT SYSTEM (ITEM 654.05)	1 LS
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.



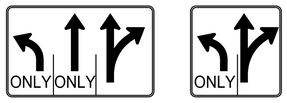
EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USE/RESERVED	
	2	NOT USE/RESERVED	
R1	3	1	Ø6
R2	4	2	Ø2
	5	NOT USED	
	6	NOT USED	

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.
2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 2 = LOWEST)
3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN INTERSECTION BY AN OPTICAL DETECTOR AND/OR RSU, 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 (3.5 SECONDS YELLOW AND 2.5 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.
4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.

PROPOSED SIGNS



R3-8a
48"x30"
1-PROPOSED

R3-8b
36"x30"
1-PROPOSED

EXISTING SIGNS



R10-10L
2-REMOVED

R3-5L
1-RETAINED

R3-5a
1-RETAINED

R3-6R
1-RETAINED

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY REFERENCE U-015-1(14) DOT (SHC) FILE 6-145 SHEET 2 OF 8, 3/1966 & RIGHT-OF-WAY REFERENCE U-015-1(14) DOT (SHC) FILE 6-145, SHEET 3 OF 8, 3/1966

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

PROJ. MANAGER	B. KEEZER		
DESIGN-DETAILED	MLG	BY	DATE
CHECKED-REVIEWED	CMB	JAR	07/20
DESIGN2-DETAILED2		CMB	07/20
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

AUGUSTA
WHITTEN RD AND
HANNAFORD DRIVE

TRAFFIC SIGNAL PLAN

SHEET NUMBER

40A

OF 358

Username: jorobert
Date:11/24/2020
Division: HIGHWAY
Filename: 040_Signal_40a.dgn

LIST OF WORK ITEMS

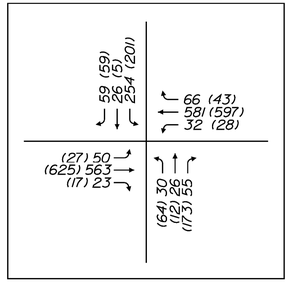
EQUIPMENT AND WORK ITEMS 643.71 TRAFFIC SIGNAL AT: ROUTE 3 & HATLEY RD, BELFAST	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON SPAN WIRE	8
FURNISH AND INSTALL ONE-WAY 4-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON SPAN WIRE	2
FURNISH AND INSTALL ONE-WAY, 16 X 18-INCH LED SIDE OF POLE MOUNTED COUNTDOWN PEDESTRIAN SIGNAL HEAD	8
FURNISH AND INSTALL ADA COMPLIANT ACCESSIBLE PEDESTRIAN SIGNAL (APS) BUTTON WITH 9"X15" R10-3e INFORMATIONAL SIGN	8
FURNISH AND INSTALL WOOD POLE	1
FURNISH AND INSTALL SPAN WIRE	110 LF
REMOVE AND RESET EXISTING GRIDSMART NON-INVASIVE VEHICLE DETECTION SYSTEM, COMPLETE	1
FURNISH AND INSTALL 4-CHANNEL PREEMPTION PHASE SELECTOR WITH SYSTEM CHASSIS	1
FURNISH AND INSTALL LIGHT-BASED PREEMPTION RECEIVERS WITH DETECTOR CABLE	4
FURNISH AND INSTALL PREEMPTION CONFIRMATION RED STROBE WITH CABLE	1
FURNISH AND INSTALL SPAN WIRE MOUNTED SIGNS	10
IMPLEMENT LOCAL SIGNAL TIMINGS	1
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	1

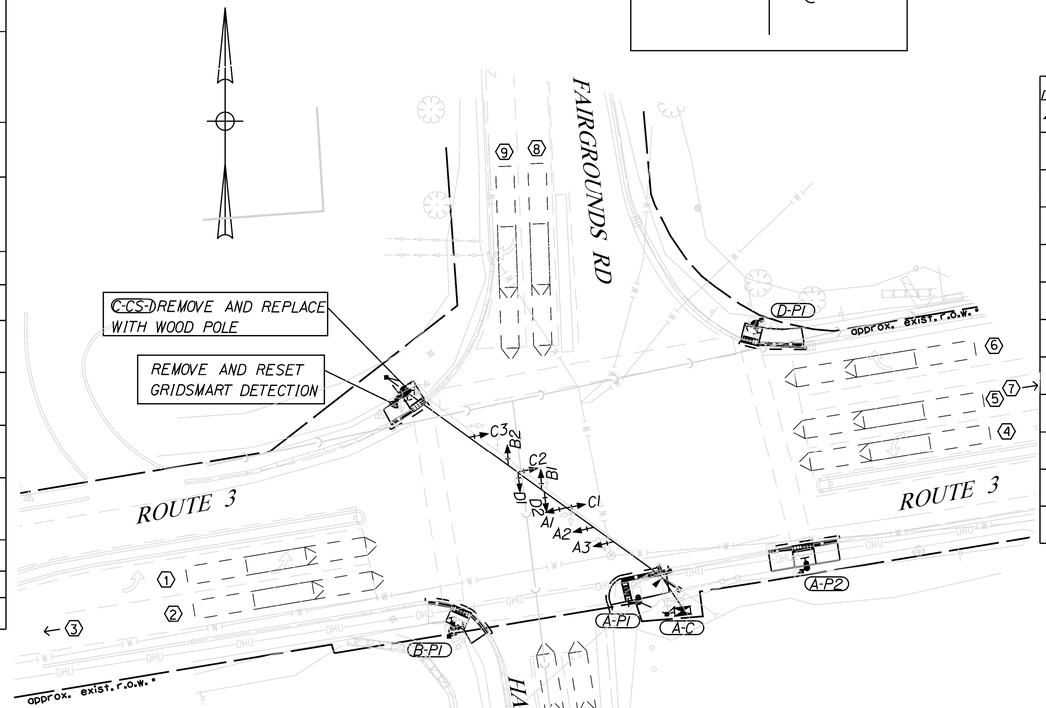
THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

STRUCTURE LIST

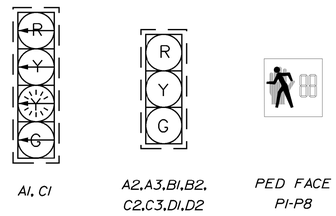
STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	L48"xW36"xH48"
A-P1	8' PEDESTAL POLE	24" DIAMETER
A-P2	8' PEDESTAL POLE	24" DIAMETER
B-P1	8' PEDESTAL POLE	24" DIAMETER
C-CS-1	WOOD SPAN WIRE POLE	N/A
D-P1	8' PEDESTAL POLE	24" DIAMETER

SYSTEM DESIGN VOLUMES AM (PM)





PROPOSED INDICATIONS



A1, C1 | A2,A3,B1,B2, C2,C3,D1,D2 | PED FACE P1-P8

NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES

DETECTOR SCHEDULE

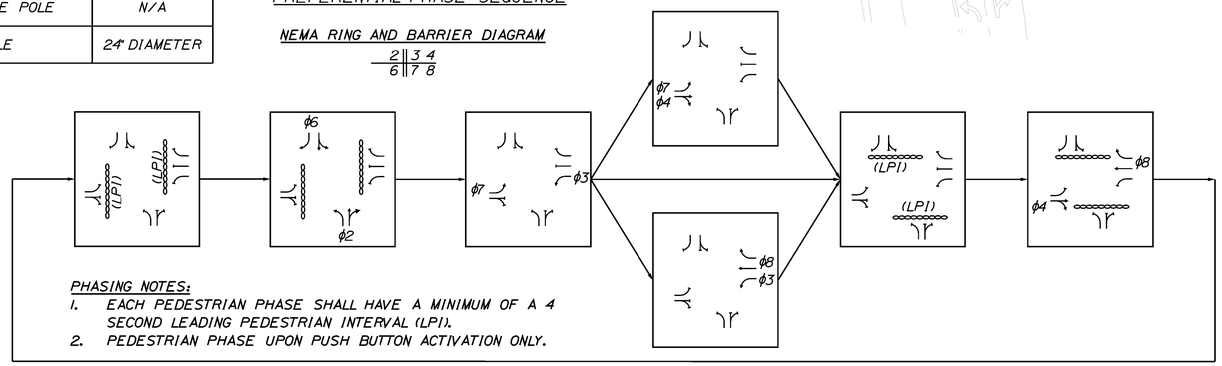
DETECTOR ZONE NO.	LOCATION	φ CALLED	φ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
1	ROUTE 3 EB LEFT	7	7	B	-	3
2	ROUTE 3 EB THRU-RIGHT	4	4	B	-	3
3*	ROUTE 3 EB ADVANCE	4	4	A	-	-
4	ROUTE 3 WB LEFT	3	3	B	-	3
5	ROUTE 3 WB THRU	8	8	B	-	3
6	ROUTE 3 WB RIGHT	8	8	B	8	3
7*	ROUTE 3 WB ADVANCE	8	8	A	-	-
8	FAIRGROUNDS RD SB LEFT-THRU	6	6	B	-	3
9	FAIRGROUNDS RD SB RIGHT	6	6	B	8	3
10	HATLEY ROAD NB LEFT	2	2	B	-	3
11	HATLEY ROAD NB THRU-RIGHT	2	2	B	-	3

*SEE ADVANCED DILEMMA ZONE DETAIL (40 MPH)

PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM

2 ‖ 3 4
6 ‖ 7 8



PHASING NOTES:
1. EACH PEDESTRIAN PHASE SHALL HAVE A MINIMUM OF A 4 SECOND LEADING PEDESTRIAN INTERVAL (LPI).
2. PEDESTRIAN PHASE UPON PUSH BUTTON ACTIVATION ONLY.

SIGNAL TIMING SCHEDULE

ITEM / PHASE	φ1	φ2	φ3	φ4	φ5	φ6	φ7	φ8
MOVEMENT	-	D	C-L	A-TL	-	B	A-L	C-TL
MINIMUM INITIAL	-	5.0	5.0	10.0	-	5.0	5.0	10.0
PASSAGE TIME	-	3.0	3.0	3.0	-	3.0	3.0	3.0
MAXIMUM 1	-	27.0	8.0	37.0	-	26.0	9.0	39.0
MAXIMUM 2	-	29.0	8.0	35.0	-	28.0	8.0	38.0
YELLOW	-	2.0	2.0	2.0	-	3.0	2.0	2.0
ALL RED	-	5.0	2.0	5.0	-	5.0	2.0	2.0
PED WALK	-	7	-	7	-	7	-	7
PED CLEAR	-	18	-	27	-	18	-	27
RECALL	-	O	O	S	-	O	O	S
DETECTOR	-	PR	PR	PR	-	PR	PR	PR
PREEMPT PRIORITY	-	5	3	4	-	6	4	3
FLASH	-	R	R	Y	-	R	R	Y
DUAL ENTRY	-	ON	OFF	ON	-	ON	OFF	ON

NOTES: S = SOFT RECALL; O = RECALL OFF; PR = PRESENCE; Y = YELLOW; R = RED; D = DARK

MAX1 = AM PEAK HOURS
MAX2 = PM PEAK HOURS

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY REFERENCE PIN NH-8842(00)E DOT FILE 14-175, SHEET 2 OF 4, 04/2004

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

Sewall
The evolution of expertise

PROJ. MANAGER	B. KEEZER
DESIGN-DETAILED	LBF
CHECKED-REVIEWED	DWM
DESIGN2-DETAILED2	
DESIGN3-DETAILED3	

	BY	DATE
REVISIONS 1	LBF	7/20
REVISIONS 2	DWM	7/20
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

BELFAST
ROUTE 3 AND
HATLEY ROAD

TRAFFIC SIGNAL PLAN

SHEET NUMBER
41
OF 358

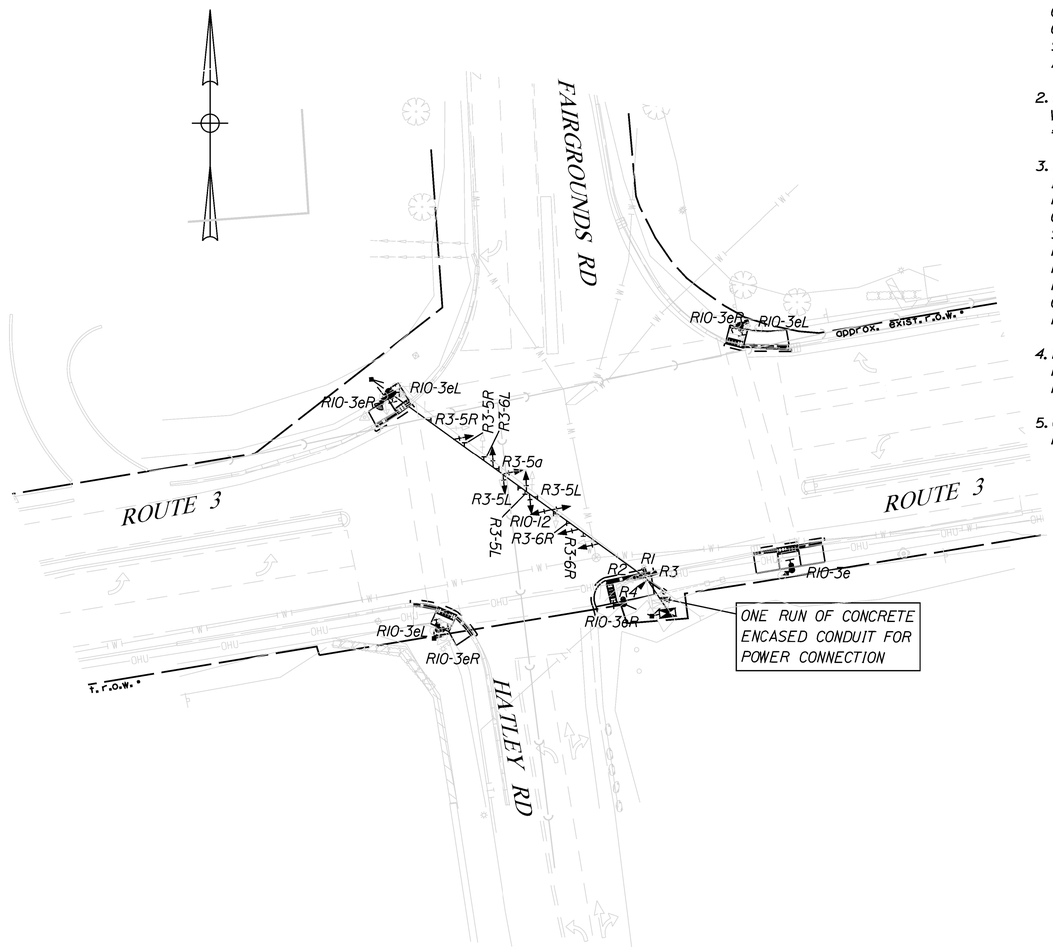
Filename: ...\Final Plans\001_Signal_41.dgn Division: HIGHWAY Username: common Date:11/19/2020

Filename: ...\Final Plans\002_Signal_41a.dgn Division: HIGHWAY Username: common Date:11/19/2020

LIST OF WORK ITEMS

EQUIPMENT AND WORK (ITEM XXX.YYZ)	QUANTITY
FURNISH AND INSTALL 14-INCH PRECAST JUNCTION BOX (ITEM 626.11)	5 EA
FURNISH AND INSTALL (3-INCH) NON-METALLIC CONDUIT (ITEM 626.22)	70 LF
FURNISH AND INSTALL NON-METALLIC CONDUIT, CONCRETE ENCASED (ITEM 626.221)	15 LF
FURNISH AND INSTALL CONTROLLER CABINET FOUNDATION (ITEM 626.35)	1 EA
FURNISH AND INSTALL 24-INCH DIAMETER FOUNDATION (ITEM 626.421)	28 LF
FURNISH AND INSTALL PEDESTAL POLE, 8' (ITEM 643.92)	4 EA
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.



EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USED	RESERVED
	2	NOT USED	RESERVED
R1	5	5	ϕ6
R2	4	4	ϕ4 & ϕ7
R3	3	3	ϕ3 & ϕ8
R4	6	6	ϕ2

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.
2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 4 = LOWEST)
3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN 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 2.0 SECONDS YELLOW AND 5.0 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.
4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.

PROPOSED SIGNS



R3-5a 30"x36" 1-PROPOSED
R3-5L 30"x36" 3-PROPOSED
R3-5R 30"x36" 2-PROPOSED
R3-6R 30"x36" 2-PROPOSED
R3-6L 30"x36" 1-PROPOSED
R10-12 30"x36" 1-PROPOSED
R10-3e 9"x15" 1-PROPOSED
R10-3eL 9"x15" 3-PROPOSED
R10-3eR 9"x15" 4-PROPOSED

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY REFERENCE PIN NH-8842(001)E DOT FILE 14-175, SHEET 2 OF 4, 04/2004

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

Sewall
The evolution of expertise

	BY	DATE
PROJ MANAGER		
DESIGN-DETAILED	LBF	7/20
CHECKED-REVIEWED	DWM	7/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

B. KEEZER

BELFAST
ROUTE 3 AND
HATLEY ROAD

TRAFFIC SIGNAL PLAN

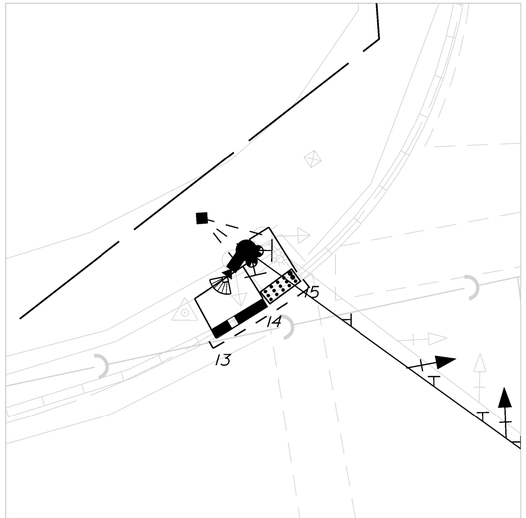
SHEET NUMBER

41A

OF 358

Filename: ...\FinalPlans\003_Signal_41c.dgn Division: HIGHWAY Username: common Date:11/19/2020

C CORNER - NW DETAIL

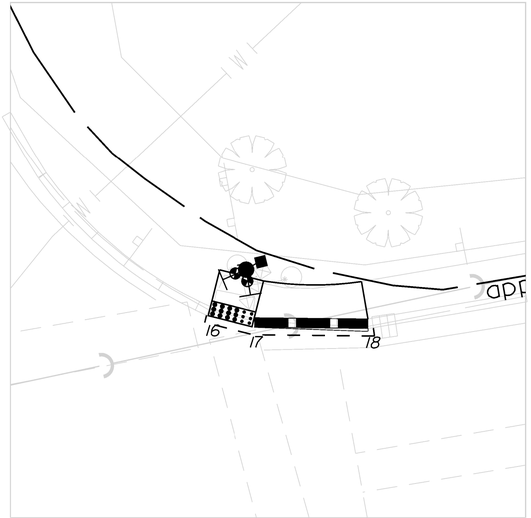


RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(22).

10 0 10 20
Scale of Feet

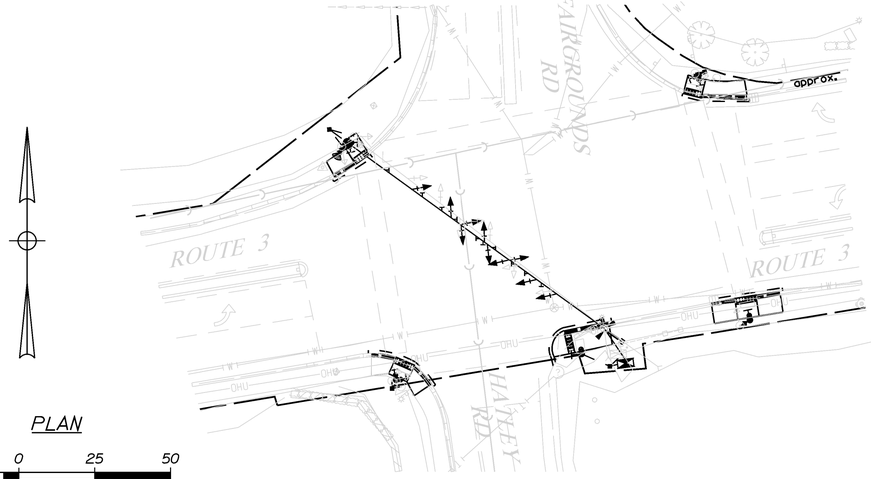
PT. TO PT.	RADIUS (FT)	LENGTH (FT)	ITEM 608.26 - CURB RAMP DETECTABLE WARNING FIELD		ITEM 609.221 - TERMINAL CURB TYPE I (LF)	ITEM 609.222 - TERMINAL CURB TYPE I - CIRCULAR (LF)	COMMENT
			LENGTH (FT)	QTY (SF)			
1 TO 2		8.0			8.0		
2 TO 3			7.0	14.0			
3 TO 4		8.0			8.0		
5 TO 6		15.0			15.0		
7 TO 8			6.5	13.0			
9 TO 10	30	8.0				8.0	
10 TO 11			6.5	13.0			
11 TO 12	30	8.0				8.0	
13 TO 14		8.0			8.0		
14 TO 15			5.0	10.0			
16 TO 17			6.0	12.0			
17 TO 18		15.0			15.0		

D CORNER - NE DETAIL



RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(22).

10 0 10 20
Scale of Feet



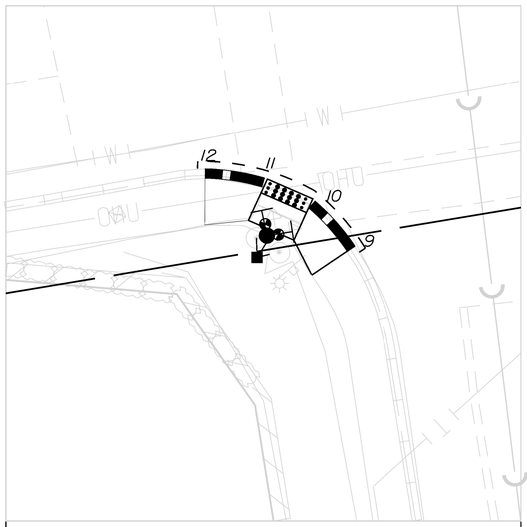
PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY REFERENCE PIN NH-8842(00)E DOT FILE 14-175, SHEET 2 OF 4, 04/2004

ALL CURB RAMPS SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND MAINEDOT STANDARD DETAILS 801(11) to 801(26) AS NOTED. AS WELL AS DETAILS PROVIDED ON SHEET H.

B CORNER - SW DETAIL



RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).

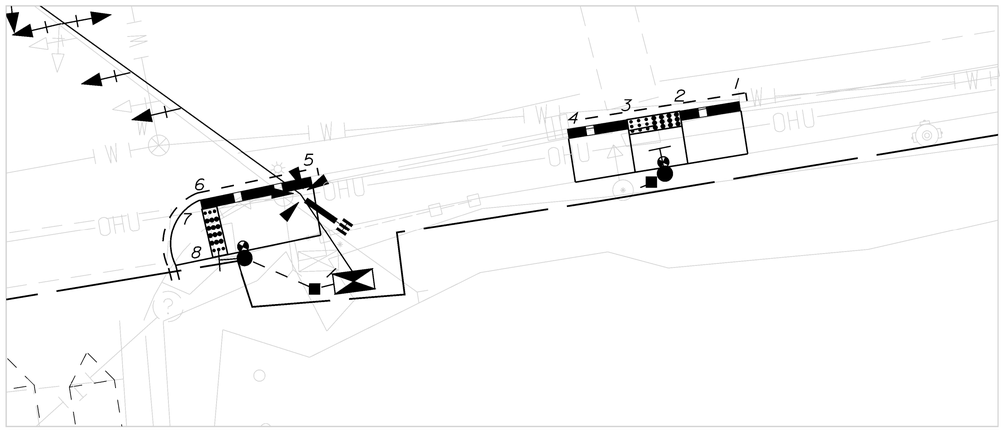
10 0 10 20
Scale of Feet

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
HOT MIX ASPHALT, 9.5 MM NOMINAL MAXIMUM SIZE (ITEM 403.210)	1.5 TON
PLAIN CONCRETE SIDEWALK (ITEM 608.07)	71.9 SY
CURB RAMP DETECTABLE WARNING FIELD (ITEM 608.26)	62.00 SF
REGRADING SIDEWALK (ITEM 608.46)	71.9 SY
TERMINAL CURB TYPE I (ITEM 609.221)	54.0 LF
TERMINAL CURB TYPE I - CIRCULAR (ITEM 609.222)	16.0 LF

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

A CORNER - SE DETAILS



RECONSTRUCT CURB RAMP AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(22).

RECONSTRUCT CURB RAMP AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(14).

10 0 10 20
Scale of Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

Sewall
The evolution of expertise

	BY	DATE
B. KEEZER		
PROJ. MANAGER	LBF	7/20
DESIGN-DETAILED	LBF	7/20
CHECKED-REVIEWED	DWM	
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

BELFAST
ROUTE 3 AND
HATLEY ROAD

CURB RAMP LAYOUT AND DETAIL PLAN

SHEET NUMBER

41C

OF 358

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS 643.71 TRAFFIC SIGNAL AT: ROUTE 3 & STARRETT DRIVE, BELFAST	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON SPAN WIRE	8
FURNISH AND INSTALL ONE-WAY 4-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON SPAN WIRE	1
FURNISH AND INSTALL ONE-WAY, 16 X 18-INCH LED SIDE OF POLE MOUNTED BLACK COUNTDOWN PEDESTRIAN SIGNAL HEAD	4
FURNISH AND INSTALL ADA COMPLIANT ACCESSIBLE PEDESTRIAN SIGNAL (APS) BUTTON WITH 9"X15" R10-3e INFORMATIONAL SIGN	4
FURNISH AND INSTALL SPAN WIRE	350 LF
FURNISH AND INSTALL 4-CHANNEL PREEMPTION PHASE SELECTOR WITH SYSTEM CHASSIS	1
FURNISH AND INSTALL LIGHT-BASED PREEMPTION RECEIVERS WITH DETECTOR CABLE	3
FURNISH AND INSTALL PREEMPTION CONFIRMATION RED STROBE WITH CABLE	1
REMOVE SPAN WIRE MOUNTED SIGNS	5
FURNISH AND INSTALL SPAN WIRE MOUNTED SIGNS	6
IMPLEMENT LOCAL SIGNAL TIMINGS	1
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	1
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 4 APPROACHES, COMPLETE (643.21)	1 LS
FURNISH AND INSTALL NON-INVASIVE ADVANCE VEHICLE DETECTION SYSTEM FOR 2 APPROACHES, COMPLETE (643.22)	1 LS

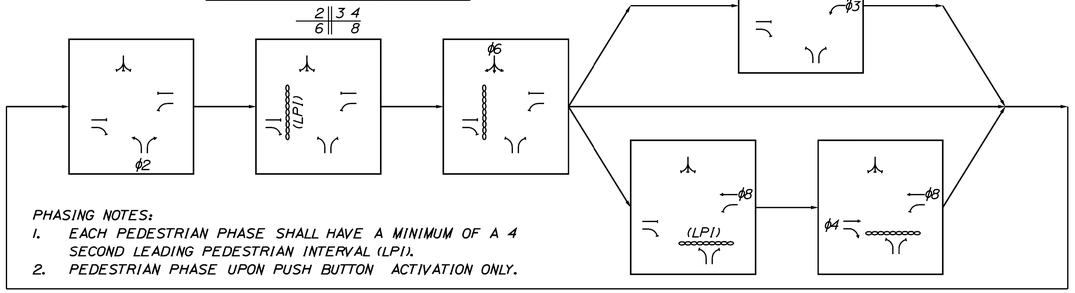
THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

STRUCTURE LIST

STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	L48"xW36"xH48"
A-PI	8' PEDESTAL POLE	24" DIAMETER
B-PI	8' PEDESTAL POLE	24" DIAMETER
B-P2	8' PEDESTAL POLE	24" DIAMETER
C-PI	8' PEDESTAL POLE	24" DIAMETER

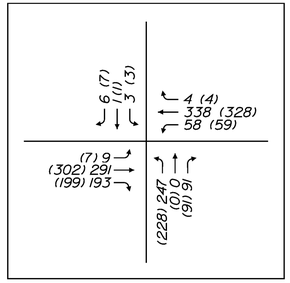
PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM

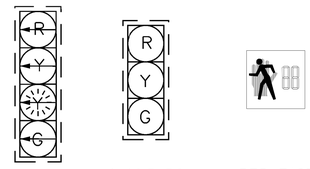


PHASING NOTES:
1. EACH PEDESTRIAN PHASE SHALL HAVE A MINIMUM OF A 4 SECOND LEADING PEDESTRIAN INTERVAL (LPI).
2. PEDESTRIAN PHASE UPON PUSH BUTTON ACTIVATION ONLY.

SYSTEM DESIGN VOLUMES AM (PM)

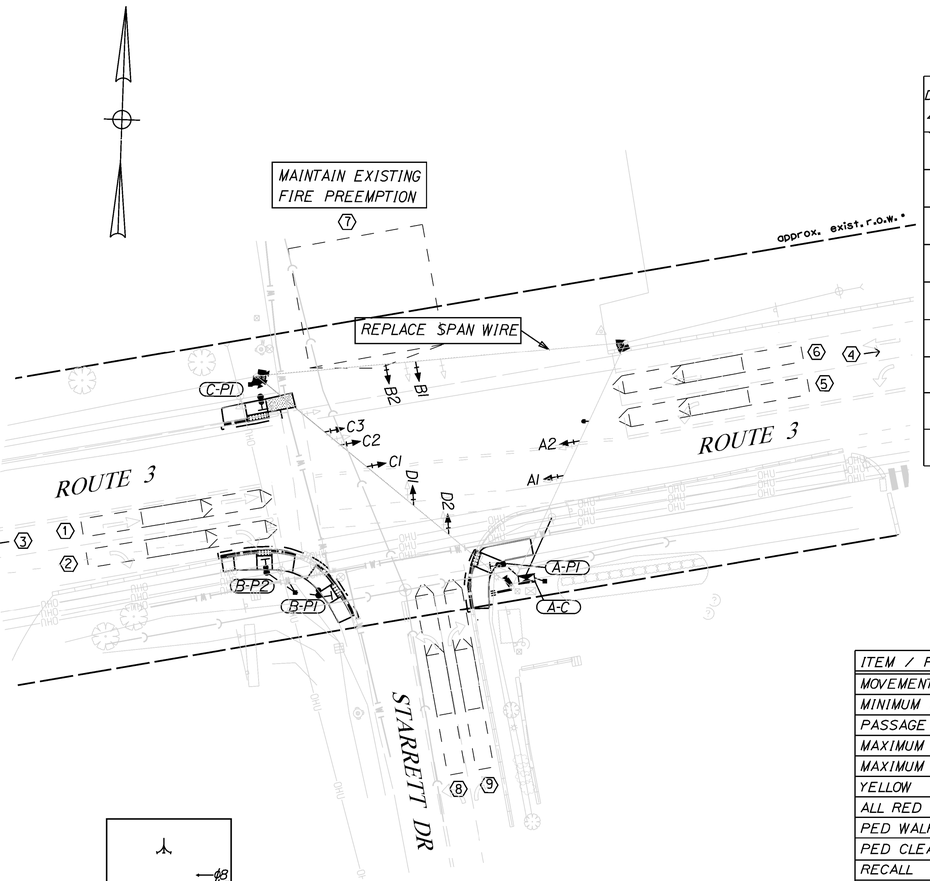


PROPOSED INDICATIONS



C1 — A1,A2,B1,B2, C2,C3,D1,D2 — PED FACE P1-P4

NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES



DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	φ CALLED	φ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
1	ROUTE 3 EB THRU	4	4	B	-	3
2	ROUTE 3 EB RIGHT	4	4	B	8	3
3*	ROUTE 3 EB ADVANCE	4	4	A	-	-
4*	ROUTE 3 WB ADVANCE	8	8	A	-	-
5	ROUTE 3 WB LEFT	3	3	B	-	3
6	ROUTE 3 WB THRU	8	8	B	-	3
7	FIRE STATION SB LEFT-THRU-RIGHT	6	6	B	-	3
8	STARRETT DR NB LEFT	2	2	B	-	3
9	STARRETT DR NB RIGHT	2	2	B	8	3

*SEE ADVANCED DILEMMA ZONE DETAIL (35 MPH)

SIGNAL TIMING SCHEDULE

ITEM / PHASE	φ1	φ2	φ3	φ4	φ5	φ6	φ7	φ8
MOVEMENT	-	D	C-L	A-TL	-	B	-	C-TL
MINIMUM INITIAL	-	5.0	5.0	10.0	-	5.0	-	10.0
PASSAGE TIME	-	3.0	3.0	3.0	-	3.0	-	3.0
MAXIMUM 1	-	25.0	7.0	27.0	-	11.0	-	38.0
MAXIMUM 2	-	23.0	8.0	29.0	-	11.0	-	40.0
YELLOW	-	4.0	4.0	4.0	-	3.0	-	4.0
ALL RED	-	5.0	2.0	2.0	-	5.0	-	5.0
PED WALK	-	-	-	7	-	7	-	7
PED CLEAR	-	-	-	12	-	12	-	12
RECALL	-	O	O	S	-	O	-	S
DETECTOR	-	PR	PR	PR	-	PR	-	PR
PREEMPT PRIORITY	-	5	3	4	-	1	-	3
FLASH	-	R	R	Y	-	R	-	Y
DUAL ENTRY	-	OFF	OFF	ON	-	ON	-	ON

NOTES: S = SOFT RECALL; O = RECALL OFF; PR = PRESENCE; Y = YELLOW; R = RED; D = DARK

MAX1 = AM PEAK HOURS
MAX2 = PM PEAK HOURS

PLAN

25 0 25 50
Scale of Feet

* - NO RIGHT-OF-WAY PLANS/INFO PROVIDED

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

Sewall
The evolution of expertise

	BY	DATE
PROJ. MANAGER	B. KEEFER	
DESIGN-DETAILED	LBF	7/20
CHECKED-REVIEWED	DWM	7/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

BELFAST
MAIN ST AND
STARRETT DR

TRAFFIC SIGNAL PLAN

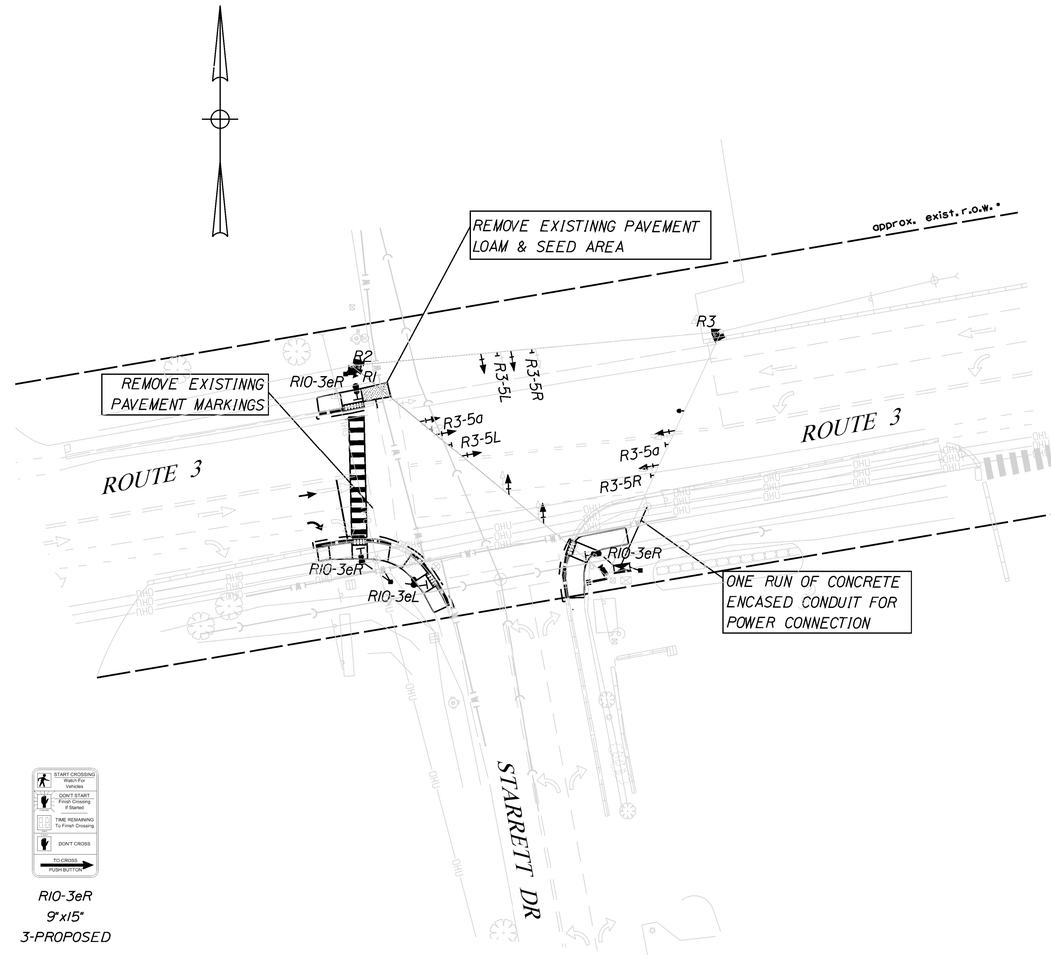
SHEET NUMBER
42
OF 358

Filename: ...\Final Plans\004_Signal_42.dgn Division: HIGHWAY Username: common Date:11/19/2020

LIST OF WORK ITEMS

EQUIPMENT AND WORK (ITEM XXX.YYZ)	QUANTITY
COMMON EXCAVATION (ITEM 203.20)	2 CY
FURNISH AND INSTALL 14-INCH PRECAST JUNCTION BOX (ITEM 626.11)	3 EA
FURNISH AND INSTALL (3-INCH) NON-METALLIC CONDUIT (ITEM 626.22)	60 LF
FURNISH AND INSTALL NON-METALLIC CONDUIT, CONCRETE ENCASED (ITEM 626.221)	21 LF
FURNISH AND INSTALL CONTROLLER CABINET FOUNDATION (ITEM 626.35)	1 EA
FURNISH AND INSTALL 24-INCH DIAMETER FOUNDATION (ITEM 626.421)	28 LF
FURNISH AND INSTALL WHITE OR YELLOW PAVEMENT & CURB MARKING (ITEM 627.75)	190 SF
REMOVE PAVEMENT MARKINGS (ITEM 627.77)	205 SF
FURNISH AND INSTALL PEDESTAL POLE, 8' (ITEM 643.92)	4 EA
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 EA

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.



EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	1	ϕ7*
	2	NOT USED RESERVED	
R1	5	5	ϕ2
R2	3	3	ϕ3 & ϕ8
R3	4	4	ϕ4

*HARDWIRED PREEMPTION (FROM FIRE STATION) SHALL OVERRIDE OPTICAL PREEMPTION

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.
2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 3 = LOWEST)
3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN 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 (4.0 SECONDS YELLOW AND 5.0 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.
4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.

PROPOSED SIGNS



R3-5L
30"x36"
2-PROPOSED



R3-5a
30"x36"
2-PROPOSED



R3-5R
30"x36"
2-PROPOSED



R10-3eL
9"x15"
1-PROPOSED

R10-3eR
9"x15"
3-PROPOSED

EXISTING SIGNS



R3-5a
1-REMOVED



R3-5L
2-REMOVED



R3-5R
1-REMOVED



R10-12
1-REMOVED

PLAN

25 0 25 50
Scale of Feet

* - NO RIGHT-OF-WAY PLANS/INFO PROVIDED

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

Sewall
The evolution of expertise

	DATE	BY
PROJ. MANAGER		B. KEEFER
DESIGN-DETAILED	7/20	LBF
CHECKED-REVIEWED	7/20	DWM
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

BELFAST
MAIN ST AND
STARRETT DR

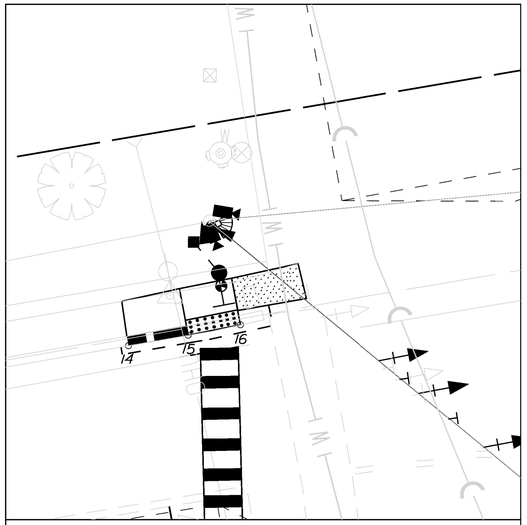
TRAFFIC SIGNAL PLAN

SHEET NUMBER
42A
OF 358

Filename: ...\Final Plans\005_Signal_42a.dgn Division: HIGHWAY Username: common Date:11/19/2020

Filename: ...\Final Plans\006_Signal_42c.dgn Division: HIGHWAY Username: common Date:11/19/2020

C CORNER - NW DETAIL

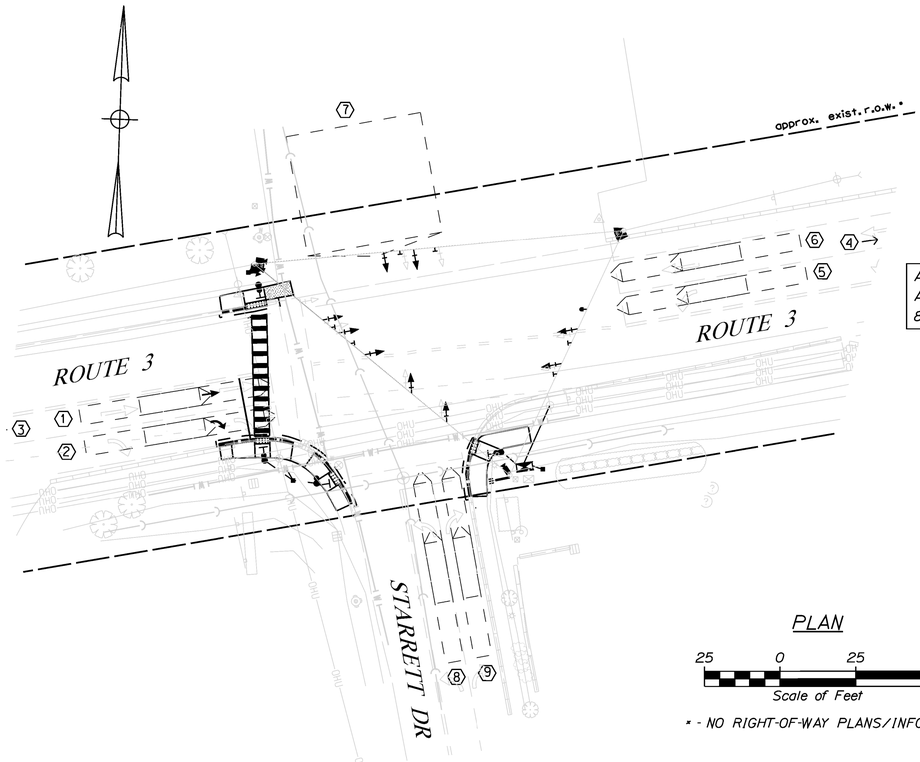


RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(14).

10 0 10 20
Scale of Feet

PT. TO PT.	RADIUS (FT)	LENGTH (FT)	ITEM 608.26 - CURB RAMP DETECTABLE WARNING FIELD		ITEM 609.11 - VERTICAL CURB TYPE I (LF)	ITEM 609.221 - TERMINAL CURB TYPE I (LF)	ITEM 609.222 - TERMINAL CURB TYPE I - CIRCULAR (LF)	COMMENT
			LENGTH (FT)	QTY (SF)				
1 TO 2			5.0	10.0				
2 TO 3	20	8.0					8.0	
* 3 TO 4		6.0			6.0			3.2% CROSS SLOPE
5 TO 6	30	8.0					8.0	
6 TO 7			5.0	10.0				
7 TO 8	20	8.0					8.0	
9 TO 10	20	8.0					8.0	
10 TO 11			5.0	10.0				
11 TO 12	50	8.0					8.0	
12 TO 13		4.0			4.0			
14 TO 15		8.0				8.0		
15 TO 16			7.0	14.0				

* NON-COMPLIANT CURB RAMP ELEMENT - THE EXISTING SIDEWALK CROSS SLOPE GRADE AT THE TIE-IN POINTS IS GREATER THAN 2%. THEREFORE THE SIDEWALK CROSS SLOPE WILL BE GREATER THAN THE 2% MAXIMUM ALLOWABLE. THE CROSS SLOPE NOTED IN THE COMMENT IS THE MAXIMUM VALUE FOR PROPOSED LEVEL OF COMPLIANCE.



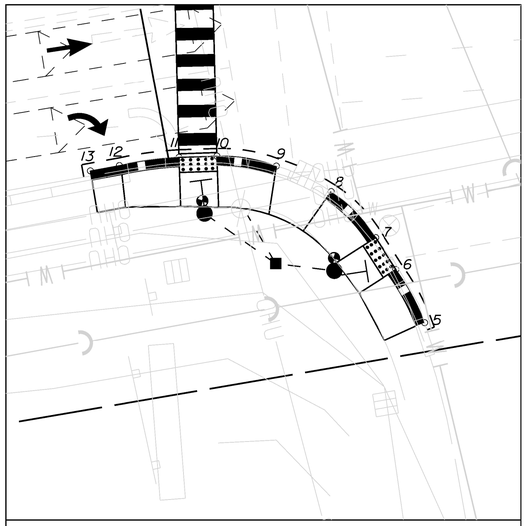
PLAN

25 0 25 50
Scale of Feet

* - NO RIGHT-OF-WAY PLANS/INFO PROVIDED

ALL CURB RAMPS SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND MAINEDOT STANDARD DETAILS 801(11) to 801(26) AS NOTED. AS WELL AS DETAILS PROVIDED ON SHEET H.

B CORNER - SW DETAIL



RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(14).

10 0 10 20
Scale of Feet

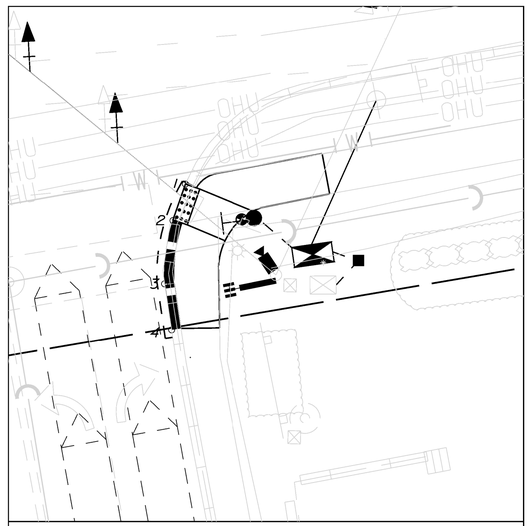
LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
HOT MIX ASPHALT, 9.5 MM NOMINAL MAXIMUM SIZE (ITEM 403.210)	1.4 TON
PLAIN CONCRETE SIDEWALK (ITEM 608.07)	64.6 SY
CURB RAMP DETECTABLE WARNING FIELD (ITEM 608.26)	44.00 SF
REGRADING SIDEWALK (ITEM 608.46)	64.6 SY

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
VERTICAL CURB TYPE I (ITEM 609.11)	10.0 LF
TERMINAL CURB TYPE I (ITEM 609.221)	8.0 LF
TERMINAL CURB TYPE I - CIRCULAR (ITEM 609.222)	40.0 LF

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

A CORNER - SE DETAIL



RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(20).

10 0 10 20
Scale of Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN
024301.00

TRAFFIC PLANS

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	B. KEEFER	DATE
PROJ. MANAGER		
DESIGN-DETAILED	LBF	7/20
CHECKED-REVIEWED	DWM	7/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

BELFAST
MAIN ST AND
STARRETT DR

CURB RAMP LAYOUT
AND DETAIL PLAN

SHEET NUMBER
42C
OF 358

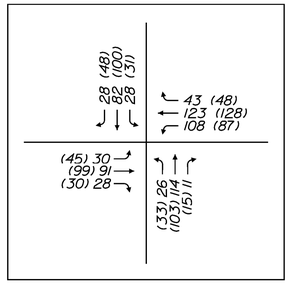
Filename: ...\Final Plans\007_Signal_43.dgn Division: HIGHWAY Username: common Date:11/19/2020

LIST OF WORK ITEMS

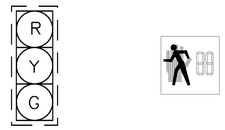
EQUIPMENT AND WORK ITEMS 643.71 TRAFFIC SIGNAL AT: MAIN ST & HIGH ST, BELFAST	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON STRAIN WIRE	8
FURNISH AND INSTALL ONE-WAY, 16 X 18-INCH LED SIDE OF POLE MOUNTED BLACK COUNTDOWN PEDESTRIAN SIGNAL HEAD	4
FURNISH AND INSTALL ADA COMPLIANT ACCESSIBLE PEDESTRIAN SIGNAL (APS) BUTTON WITH 9"X15" R10-3e INFORMATIONAL SIGN	4
FURNISH AND INSTALL SPAN WIRE	100 LF
FURNISH AND INSTALL 4-CHANNEL PREEMPTION PHASE SELECTOR WITH SYSTEM CHASSIS	1
FURNISH AND INSTALL LIGHT-BASED PREEMPTION RECEIVERS WITH DETECTOR CABLE	4
FURNISH AND INSTALL PREEMPTION CONFIRMATION RED STROBE WITH CABLE	1
IMPLEMENT LOCAL SIGNAL TIMINGS	1
REMOVE AND SALVAGE EXSTING SIGNAL EQUIPMENT	1
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 4 APPROACHES, COMPLETE (643.21)	1 LS

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

SYSTEM DESIGN VOLUMES AM (PM)



PROPOSED INDICATIONS



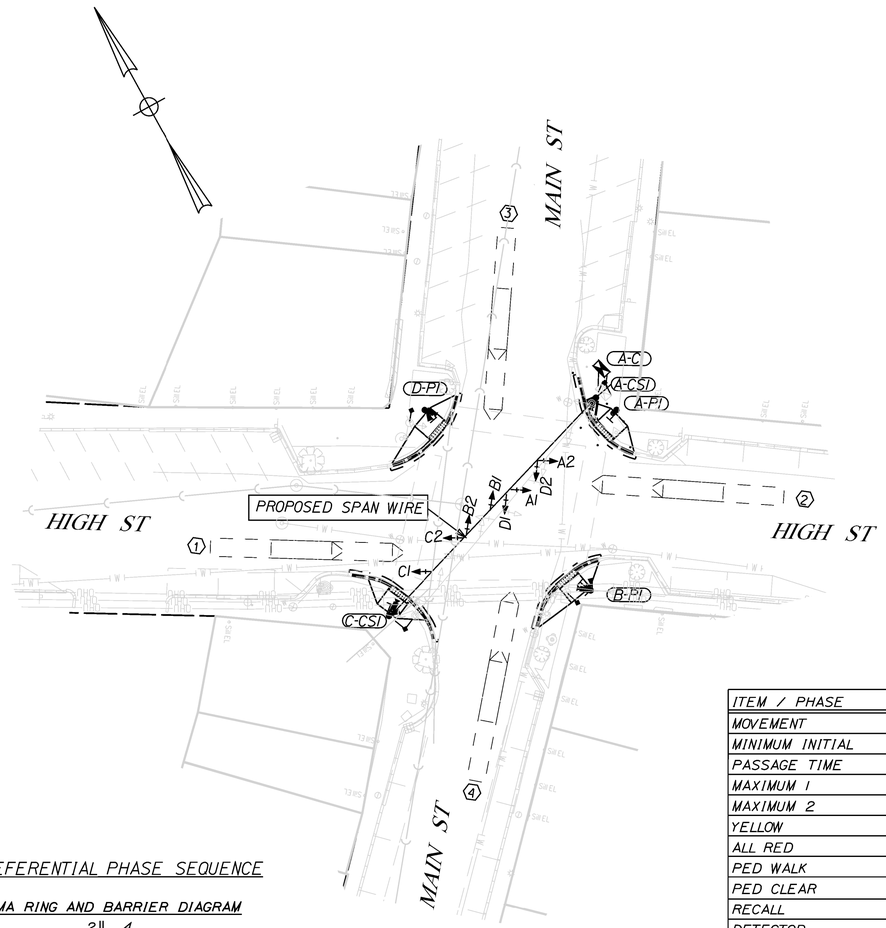
A1, A2, B1, B2,
C1, C2, D1, D2

PED FACE
P1-P4

NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES

DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	φ CALLED	φ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
①	HIGH STREET EB LEFT-THRU-RIGHT	4	4	B	-	3
②	HIGH STREET WB LEFT-THRU-RIGHT	8	8	B	-	3
③	MAIN STREET SB LEFT-THRU-RIGHT	6	6	B	-	3
④	MAIN STREET NB LEFT-THRU-RIGHT	2	2	B	-	3



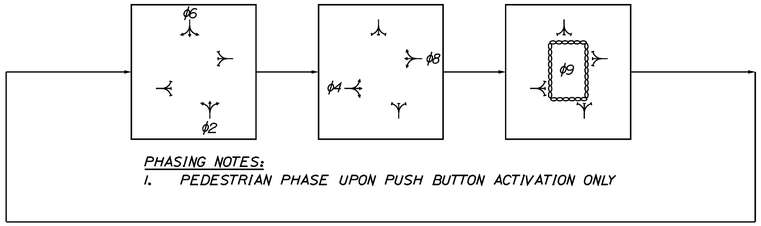
STRUCTURE LIST

STRUCTURE	DESCRIPTION	FOUNDATION
A-CSI	STRAIN POLE	48" DIAMETER
C-CSI	STRAIN POLE	48" DIAMETER
A-C	CONTROLLER CABINET	L48"xW36"xH48"
A-PI	8' PEDESTAL POLE	24" DIAMETER
B-PI	8' PEDESTAL POLE	24" DIAMETER
D-PI	8' PEDESTAL POLE	24" DIAMETER

PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM

2 | 4
6 | 8



PHASING NOTES:
1. PEDESTRIAN PHASE UPON PUSH BUTTON ACTIVATION ONLY

SIGNAL TIMING SCHEDULE

ITEM / PHASE	φ1	φ2	φ3	φ4	φ5	φ6	φ7		φ9
MOVEMENT	-	A	-	B	-	C	-	D	PED
MINIMUM INITIAL	-	5.0	-	5.0	-	5.0	-	5.0	-
PASSAGE TIME	-	3.0	-	3.0	-	3.0	-	3.0	-
MAXIMUM 1	-	19.0	-	27.0	-	19.0	-	27.0	-
MAXIMUM 2	-	21.0	-	25.0	-	21.0	-	25.0	-
YELLOW	-	3.0	-	3.0	-	3.0	-	3.0	2.0
ALL RED	-	2.0	-	2.0	-	2.0	-	2.0	1.0
PED WALK	-	-	-	-	-	-	-	-	7.0
PED CLEAR	-	-	-	-	-	-	-	-	24.0
RECALL	-	S	-	S	-	S	-	S	-
DETECTOR	-	PR	-	PR	-	PR	-	PR	PUSH
PREEMPT PRIORITY	-	5	-	3	-	6	-	4	
FLASH	-	R	-	R	-	R	-	R	DARK
DUAL ENTRY	-	ON	-	ON	-	ON	-	ON	-

NOTES: S = SOFT RECALL
O = RECALL OFF
PR = PRESENCE
Y = YELLOW
R = RED
D = DARK

MAX1 = AM PEAK HOURS
MAX2 = PM PEAK HOURS

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY REFERENCE PIN M-2347(1) DOT FILE 14-140, SHEET 2 OF 3, 09/1984

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

Sewall
The evolution of expertise

	B. KEEZER	DATE
PROJ. MANAGER		
DESIGN-DETAILED	LBF	7/20
CHECKED-REVIEWED	DWM	7/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

BELFAST
MAIN ST AND
HIGH ST

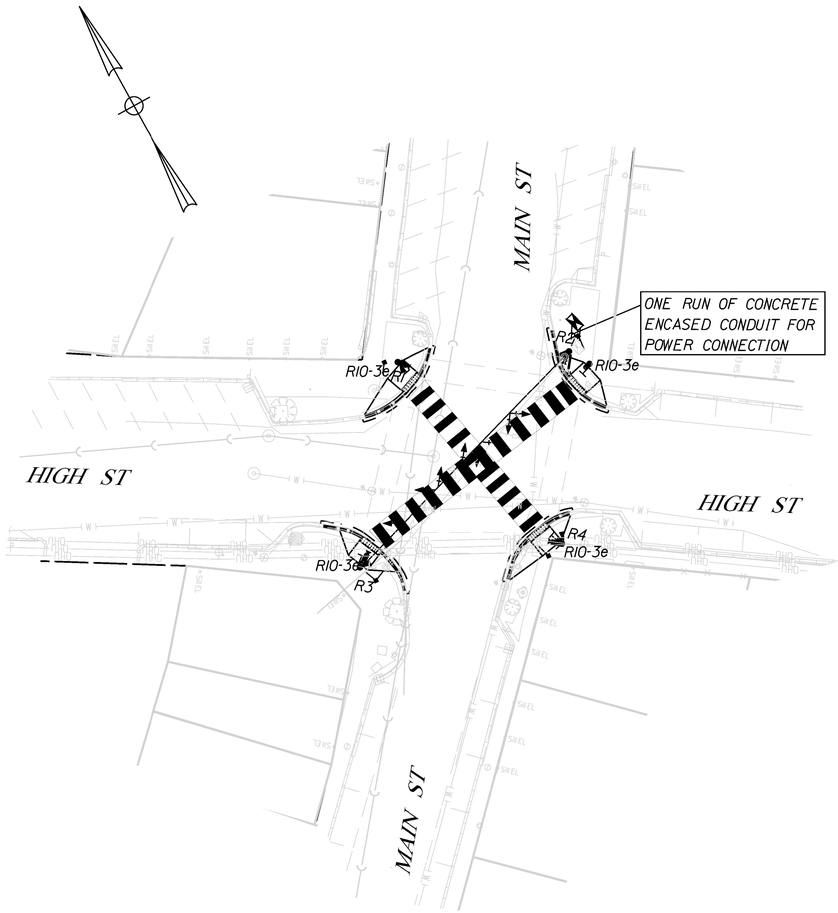
TRAFFIC SIGNAL PLAN

SHEET NUMBER
43
OF 358

LIST OF WORK ITEMS

EQUIPMENT AND WORK (ITEM XXX.YYZ)	QUANTITY
FURNISH AND INSTALL 14-INCH PRECAST JUNCTION BOX (ITEM 626.11)	4 EA
FURNISH AND INSTALL (3-INCH) NON-METALLIC CONDUIT (ITEM 626.22)	60 LF
FURNISH AND INSTALL NON-METALLIC CONDUIT, CONCRETE ENCASED (ITEM 626.221)	75 LF
FURNISH AND INSTALL CONTROLLER CABINET FOUNDATION (ITEM 626.35)	1 EA
REMOVE OR MODIFY CONCRETE FOUNDATION (ITEM 626.36)	2 EA
FURNISH AND INSTALL 24-INCH DIAMETER FOUNDATION (ITEM 626.421)	21 LF
GROUTED, ROCK-ANCHORED FOUNDATION (ITEM 626.60)	6.5 CY
FURNISH AND INSTALL WHITE OR YELLOW PAVEMENT & CURB MARKING (ITEM 627.75)	438 SF
FURNISH AND INSTALL TEMPORARY TRAFFIC SIGNAL (ITEM 643.72)	1 LS
FURNISH AND INSTALL PEDESTAL POLE, 8' (ITEM 643.92)	2 EA
FURNISH AND INSTALL STRAIN POLE (ITEM 643.93)	1 EA
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.351)	1 LS

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.



EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USED RESERVED	
	2	NOT USED RESERVED	
R1	5	5	ϕ2
R2	3	3	ϕ4
R3	4	4	ϕ8
R4	6	6	ϕ6

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.
2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 4 = LOWEST)
3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN 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 (3.0 SECONDS YELLOW AND 2.0 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.
4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.

PROPOSED SIGNS



R10-3e
9"x15"
4-PROPOSED

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY REFERENCE PIN M-2347(1) DOT FILE 14-140, SHEET 2 OF 3, 09/1984

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

Sewall
The evolution of expertise

	B. KEEZER	DATE
PROJ. MANAGER		
DESIGN-DETAILED	LBF	7/20
CHECKED-REVIEWED	DWM	7/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

BELFAST
MAIN ST AND
HIGH ST

TRAFFIC SIGNAL PLAN

SHEET NUMBER
43A
OF 358

Filename: ...\Final Plans\008_Signal_43a.dgn Division: HIGHWAY Username: common Date:11/19/2020

Filename: ...\43B_BORING LOGS1_BE PHASE1.dgn Division: GEOTECH Username: Kate.Maguire Date:11/23/2020

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Intersection Improvements - Statewide
Location: Belfast, Maine

Boring No.: HB-BE043-101
WIN: 024301

Driller:	S. W. Cole Explorations, LLC	Elevation (ft.)		Auger ID/OD:	5" Solid Stem
Operator:	K. Hanscom / R. Hackett	Datum:	NAVD88	Sampler:	Standard Split Spoon
Logged By:	J. McElroy	Rig Type:	Diedrick D-50 Track-Mounted	Hammer Wt./Fall:	140# / 30"
Date Start/Finish:	9/11/2019	Drilling Method:	Auger	Core Barrel:	N/A
Boring Location:	See Boring Location Plan	Casing ID/OD:	N/A	Water Level*:	None observed.
Hammer Efficiency Factors 0.977		Hammer Type:	Automatic ☒ Hydraulic ☐ Rope & Cathead ☐		

Definitions:
D = Split Spoon Sample
MD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
WU = Unsuccessful Thin Wall Tube Sample Attempt
V = Field Vane Shear Tests. PP = Pocket Penetrometer. MDWC = Weight of Rods or Casing
WH = Unsuccessful Field Vane Shear Test Attempt. WOH = Weight of the Person
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
N_{60} = SPT N-uncorrected Corrected for Hammer Efficiency
N_{uncorr} = Raw Field SPT N-value
Hammer Efficiency Factor = Rig Specific Annual Calibration Value
N_{60} = Hammer Efficiency Factor*SPT$_{N-uncorrected}$
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(LAB)}$ = Lab Vane Undrained Shear Strength (psf)
Q_p = Unconfined Compressive Strength (ksf)
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test
S_r = Peak/Remolded Torvane Shear Strength (psf)
MC = Water Content, percent
LL = Liquid Limit

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows / 6 in. Sheep Strength (psf) or RQD (%)	N-uncorrected	N_{60}	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							SSA	-0.3		4" of Pavement.	
	1D	24/16	1.00 - 3.00	9/9/7/7	16	26		-0.3		Brown, moist, medium dense, SAND, some gravel, trace silt, (Fill).	
								-5.5		Similar to above.	
5	2D	13/7	5.00 - 6.08	3/0/50-1"	- -			-6.0		6" PVC Sewer Pipe.	
								-6.1		Brown, moist, Silty SAND, little gravel.	
										Bottom of Exploration at 6.1 feet below ground surface. Refusal.	
10											
15											
20											
25											

Remarks:
No rock core due to presence of utility.

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Maine Department of Transportation

Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Intersection Improvements - Statewide
Location: Belfast, Maine

Boring No.: HB-BE043-102
WIN: 024301

Driller:	S. W. Cole Explorations, LLC	Elevation (ft.)		Auger ID/OD:	5" Solid Stem
Operator:	K. Hanscom / R. Hackett	Datum:	NAVD88	Sampler:	Standard Split Spoon
Logged By:	J. McElroy	Rig Type:	Diedrick D-50 Track-Mounted	Hammer Wt./Fall:	140# / 30"
Date Start/Finish:	9/11/2019	Drilling Method:	Cased Wash	Core Barrel:	NQ2 2"
Boring Location:	See Boring Location Plan	Casing ID/OD:	HW 4"/4.5"	Water Level*:	8'-2 TEST TIPTOP (9/11/2019)
Hammer Efficiency Factors 0.977		Hammer Type:	Automatic ☒ Hydraulic ☐ Rope & Cathead ☐		

Definitions:
D = Split Spoon Sample
MD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
WU = Unsuccessful Thin Wall Tube Sample Attempt
V = Field Vane Shear Tests. PP = Pocket Penetrometer. MDWC = Weight of Rods or Casing
WH = Unsuccessful Field Vane Shear Test Attempt. WOH = Weight of the Person
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
N_{60} = SPT N-uncorrected Corrected for Hammer Efficiency
N_{uncorr} = Raw Field SPT N-value
Hammer Efficiency Factor = Rig Specific Annual Calibration Value
N_{60} = Hammer Efficiency Factor*SPT$_{N-uncorrected}$
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(LAB)}$ = Lab Vane Undrained Shear Strength (psf)
Q_p = Unconfined Compressive Strength (ksf)
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test
S_r = Peak/Remolded Torvane Shear Strength (psf)
MC = Water Content, percent
LL = Liquid Limit

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows / 6 in. Sheep Strength (psf) or RQD (%)	N-uncorrected	N_{60}	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							SSA	-0.7		6.5" of Pavement	
	1D	24/16	1.00 - 3.00	12/9/8/5	17	28		-0.7		Brown, moist, medium dense, SAND, some gravel, trace silt, (Fill).	
								-7.6		Brown, moist, very dense, GRAVEL, some sand, little silt, (Fill).	
5	2D	24/24	5.00 - 7.00	17/34/25/19	59	96	OPEN				
	R1	60/58	7.90 - 12.90	RQD = 78%			NQ2	-7.6		Top of Bedrock.	
										Advanced by rollercone to 7.9 ft bgs.	
10										R1(Bedrock)Medium grey, very fine to fine grained, META-SILTSTONE, very hard, fresh, slight to moderate oxidation on low angle to steep, close to open joints, joints locally healed with white quartz, (Penobscot Formation / Meta-Sandstone Member).	
								-12.9		Rock Mass Quality = Good.	
15										R1(Core Times (min:sec)	
										7.9-8.9 ft (2:25)	
										8.9-9.9 ft (2:21)	
20										9.9-10.9 ft (2:25)	
										10.9-11.9 ft (2:15)	
										11.9-12.9 ft (2:30)	
25										Bottom of Exploration at 12.9 feet below ground surface.	

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. 2430100

WIN 24301.00

HIGHWAY PLANS

STATE OF MAINE ★ Kathleen Maguire 7120 ★ REGISTERED PROFESSIONAL ENGINEER

	BY	DATE
PROJ. MANAGER	---	---
DESIGN-DETAILED	---	---
CHECKED-REVIEWED	K.MAGUIRE	APR 2020
DESIGN2-DETAILED2	K.MAGUIRE	T.WHITE
DESIGN3-DETAILED3	---	---
REVISIONS 1	---	---
REVISIONS 2	---	---
REVISIONS 3	---	---
REVISIONS 4	---	---
FIELD CHANGES	---	---

SIGNATURE
7120
P.E. NUMBER
11/23/2020
DATE

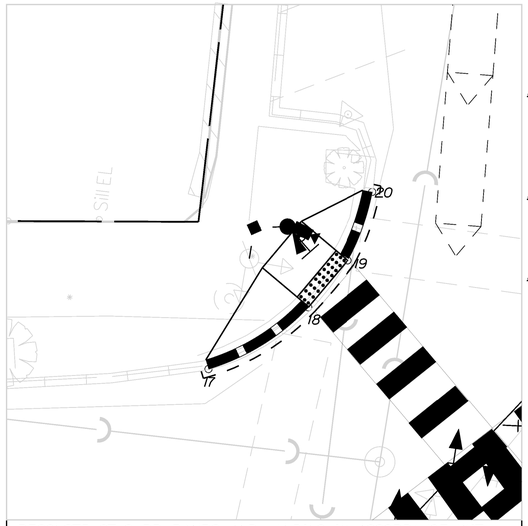
BELFAST
U.S. ROUTE 1 / ROUTE 52

BORING LOGS

SHEET NUMBER
43B
OF 358

Filename: ...\Final Plans\009_Signal_43c.dgn Division: HIGHWAY Username: common Date:11/19/2020

D CORNER - NW DETAIL



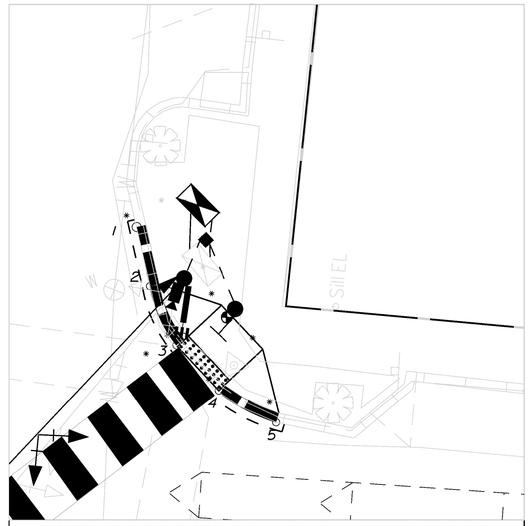
RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 80I(21).

10 0 10 20
Scale of Feet

PT. TO PT.	RADIUS (FT)	LENGTH (FT)	ITEM 608.26 - CURB RAMP DETECTABLE WARNING FIELD		ITEM 609.11 - VERTICAL CURB TYPE I (LF)	ITEM 609.12 - VERTICAL CURB TYPE I - CIRCULAR (LF)	ITEM 609.222 - TERMINAL CURB TYPE I - CIRCULAR (LF)	COMMENT
			LENGTH (FT)	QTY (SF)				
1 TO 2		8.0			8.0			
2 TO 3	16	8.0					8.0	
3 TO 4			8.0	16.0				
4 TO 5	23	8.0					8.0	
6 TO 7	16	8.0					8.0	
* 7 TO 8			8.0	16.0				5% TURNING AREA
8 TO 9	16	10.0					10.0	
9 TO 10		5.0			5.0			
11 TO 12	14	7.0				7.0		
12 TO 13	35	8.0					8.0	
* 13 TO 14			8.0	16.0				5% TURNING AREA
14 TO 15	18	8.0					8.0	
15 TO 16		6.0			6.0			
17 TO 18	29	15.0					15.0	
* 18 TO 19			8.0	16.0				9% COUNTER SLOPE
19 TO 20	30	9.0					9.0	

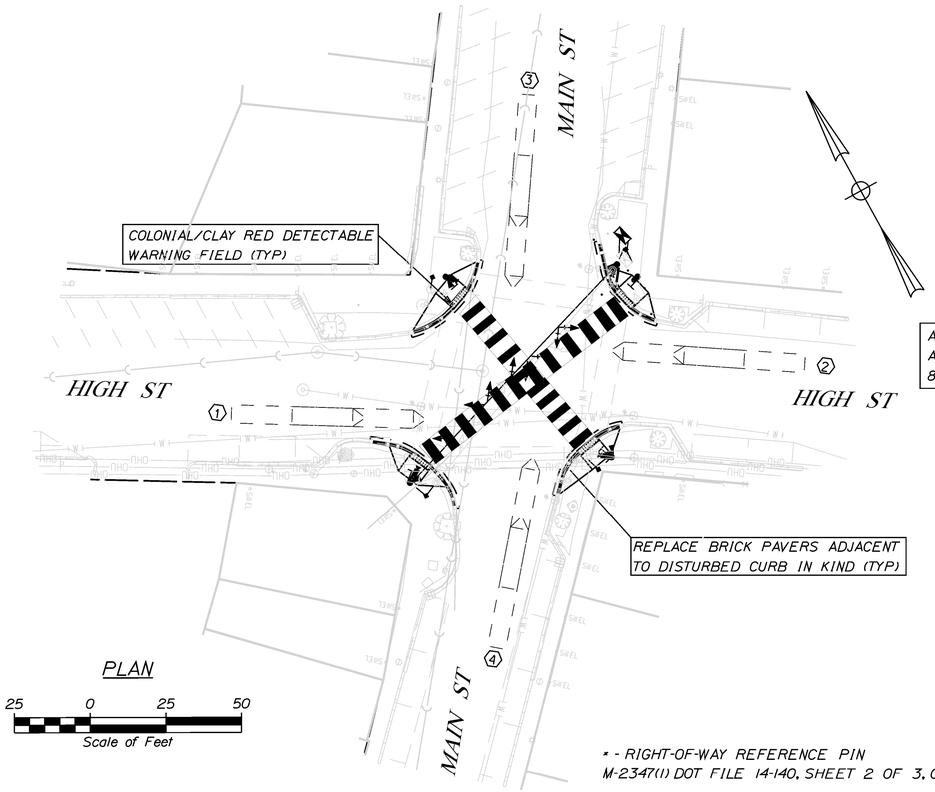
*NON-COMPLIANT CURB RAMP ELEMENT - THE EXISTING ROADWAY PROFILE GRADE IS GREATER THAN 2%. THEREFORE THE TURNING AREA SLOPE AND/OR COUNTER SLOPE WILL BE GREATER THAN THE 2% AND 5% MAXIMUM ALLOWABLE, RESPECTIVELY. THE COMMENT IS THE MAXIMUM VALUE FOR PROPOSED LEVEL OF COMPLIANCE.

A CORNER - NE DETAIL



RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 80I(21).

10 0 10 20
Scale of Feet



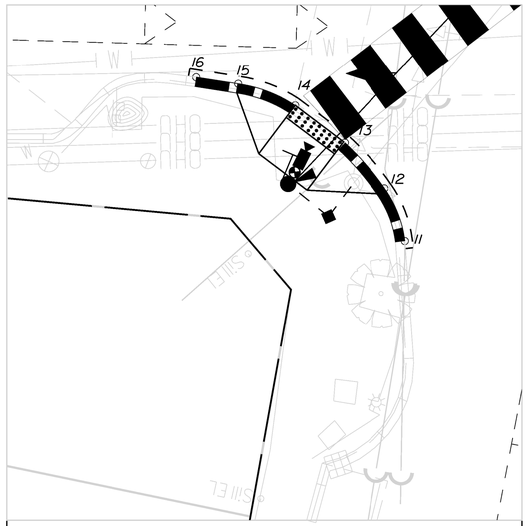
PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY REFERENCE PIN
M-2347(1) DOT FILE 14-140, SHEET 2 OF 3, 09/1984

ALL CURB RAMPS SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND MAINEDOT STANDARD DETAILS 80I(11) to 80I(26) AS NOTED, AS WELL AS DETAILS PROVIDED ON SHEET H.

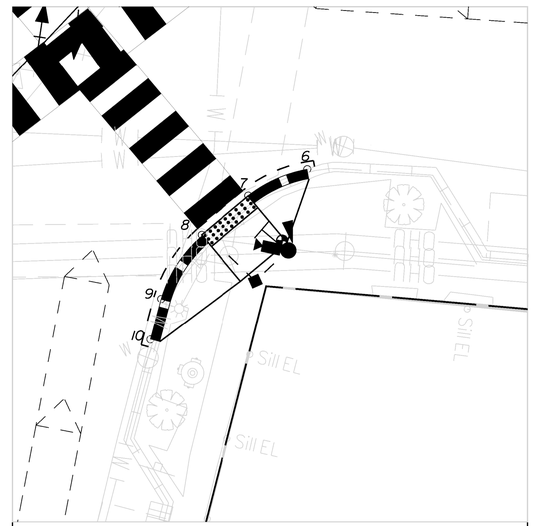
C CORNER - SW DETAIL



RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 80I(21).

10 0 10 20
Scale of Feet

B CORNER - SE DETAIL



RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 80I(21).

10 0 10 20
Scale of Feet

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
HOT MIX ASPHALT, 9.5 MM NOMINAL MAXIMUM SIZE (ITEM 403.210)	1.9 TON
PLAIN CONCRETE SIDEWALK (ITEM 608.07)	74.6 SY
BRICK SIDEWALK WITH BITUMINOUS BASE (ITEM 608.15)	23.0 SY
CURB RAMP DETECTABLE WARNING FIELD (ITEM 608.26)	64.00 SF

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
REGRADING SIDEWALK (ITEM 608.46)	74.6 SY
VERTICAL CURB TYPE I (ITEM 609.11)	19.0 LF
VERTICAL CURB TYPE I - CIRCULAR (ITEM 609.12)	7.0 LF
TERMINAL CURB TYPE I - CIRCULAR (ITEM 609.222)	74.0 LF

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 243100

WIN 024301.00

TRAFFIC PLANS

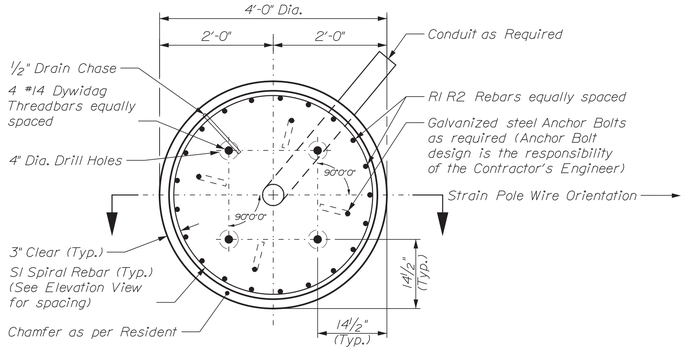
Sewall
The evolution of expertise

	BY	DATE
PROJ. MANAGER	B. KEZER	
DESIGN-DETAILED	LBF	7/20
CHECKED-REVIEWED	DWM	7/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

BELFAST
MAIN ST AND HIGH ST
CURB RAMP LAYOUT AND DETAIL PLAN

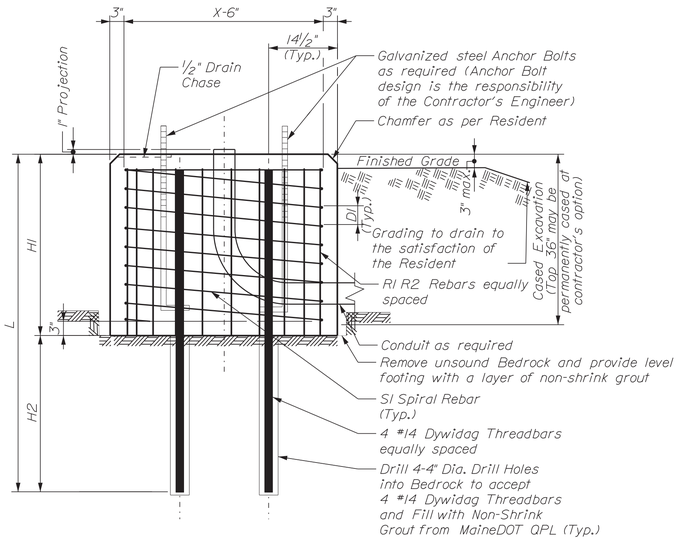
SHEET NUMBER
43C
OF 358

Filename: ...\43F_SPF&BLP1_BE #14 BARS PHASE Division: GEOTECH Username: Kate.Maguire Date:11/23/2020



Concrete Shaft Plan View

Not to Scale (See Table for Concrete Shaft & Reinforcement Information)



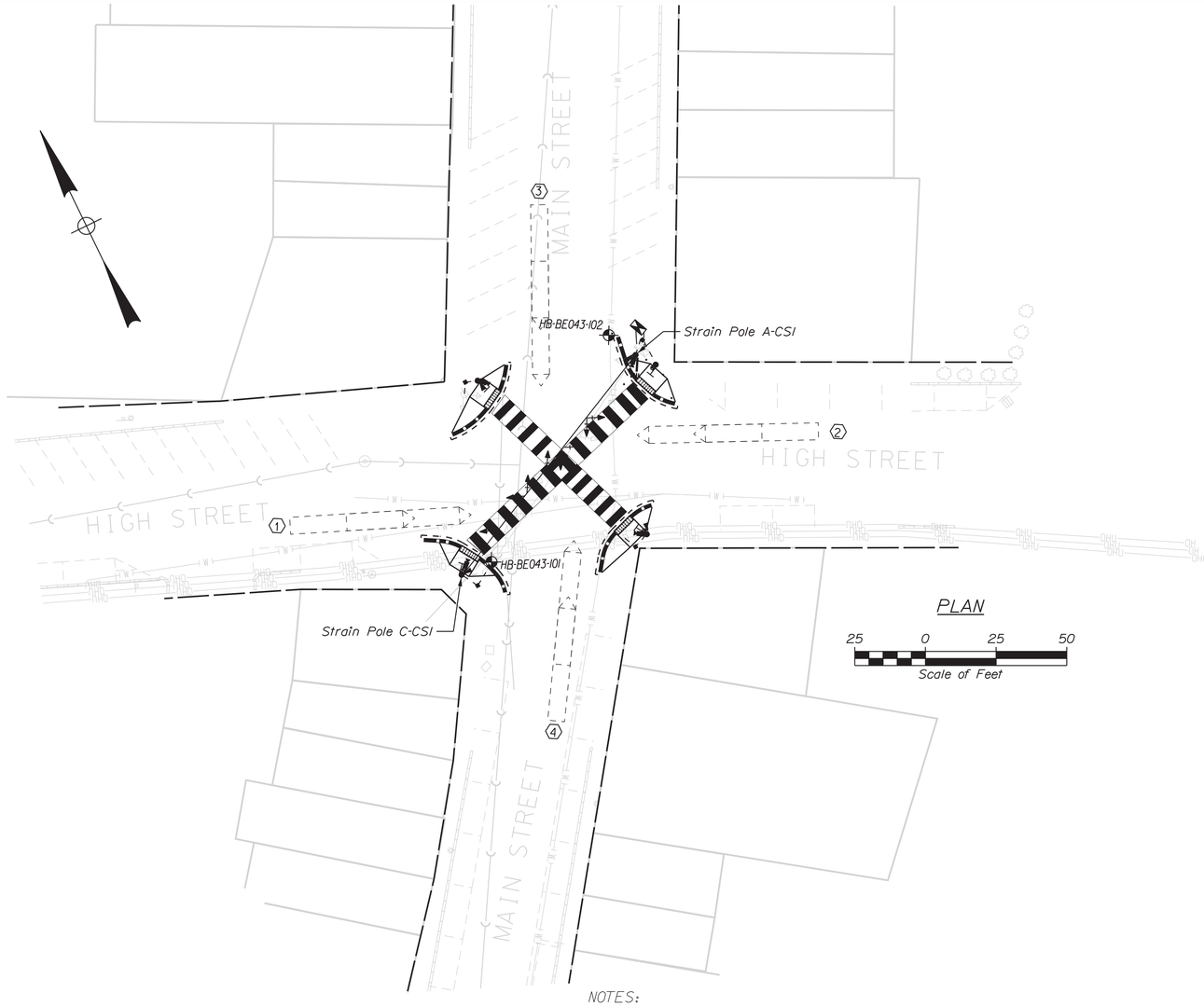
Pinned Foundation Elevation View

Not to Scale (See Table for Pinned Foundation & Reinforcement Information)

STRAIN POLES A-CSI & C-CSI

(A-CSI) Main Street and High Street
(C-CSI) Main Street and High Street

Strain Pole	Location	Total Foundation Length	Concrete Shaft Dimensions		Concrete Shaft Reinforcing Steel				Dywidag Threadbar Into Bedrock				
			Concrete Shaft Diameter	Concrete Shaft Height (Min.)	Longitudinal Rebars Quantity	Longitudinal Rebars Size	Spiral Rebars Size	Sprial Bar Spacing	Drill Hole Diameter (Min.)	Dywidag Threadbar Length Into Bedrock/Drill Hole Length (Min.)	Dywidag Threadbar Length Total Length	Dywidag Threadbar Into Bedrock	Dywidag Threadbar Into Bedrock
		H1+H2 (feet)	X (feet)	H1 (feet)	R1	R2	S1	D1 (in)	(in)	H2 (feet)	H1+H2-Cover (feet)	Quantity	Size
A-CS1	Main Street and High Street	13.5	4.0	7.5	21	#9	#5	4.0	4.0	6.0	13.25	4	#14
C-CS1	Main Street and High Street	12.0	4.0	6.0	21	#9	#5	4.0	4.0	6.0	11.75	4	#14



NOTES:

1. All shaft reinforcing steel is to be grade 60 and conform to MaineDOT Standard Specification requirements along with any project specific Supplementals or Special Provisions.

2. All rebar shall have 3" cover unless otherwise noted.

3. Should there be a discrepancy between these Details and actual observed field conditions report it to the Resident immediately.

4. Do not proceed with dependent work until any such discrepancy is resolved to the satisfaction of the Resident.

5. Concrete to be Class LP with f'c = 5,000 PSI.

6. Solid bars drilled and grouted into bedrock shall be #14 Dywidag Threadbars, Grade 80 steel. Bars shall be continuous full height of bedrock socket and shaft with no couplings.

7. The pairs of solid bars drilled and grouted into bedrock shall be oriented perpendicular to the direction of the strain wire to be mounted on the strain poles.

8. Centralizers shall be attached to the #14 Dywidag Threadbars to maintain cement grout cover on the Threadbar within the bedrock socket.

9. Bedrock sockets shall be drilled using a minimum 4" outside diameter (OD) diameter diamond core barrel. Air rotary drilling shall not be allowed.
10. A layer of non-shrink grout shall be placed in the bottom of the excavation prior to drilling the 4" dia. drill holes to provide a smooth surface for drilling.
11. For Boring Logs see Sheet 43B of 358.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. 2430100

WIN 24301.00

HIGHWAY PLANS

STATE OF MAINE ★ ENGINEER ★ PROFESSIONAL
Kathleen Maguire 7120

BY	DATE
T. WHITE	APR 2020

SIGNATURE
7120
P.E. NUMBER
11/23/2020
DATE

PROJ. MANAGER	
DESIGN-DETAILED	
CHECKED-REVIEWED	K.MAGUIRE
DESIGN2-DETAILED2	
DESIGN3-DETAILED3	
REVISIONS 1	
REVISIONS 2	
REVISIONS 3	
REVISIONS 4	
FIELD CHANGES	

BELFAST
U.S. ROUTE 1 / ROUTE 52

STRAIN POLE FOUNDATION & BORING LOCATION PLAN

SHEET NUMBER
43F
OF 358

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS 643.71 TRAFFIC SIGNAL AT: ROUTE 1 & US ROUTE 52, BELFAST	QUANTITY
FURNISH AND INSTALL NEW ATCC MAINEDOT 32/48 SPEC GROUND MOUNT CABINET AND ATC CONTROLLER COMPLETE WITH ALL ANCILLARY EQUIPMENT AND WIRING INCLUDING FIELD MONITORING UNIT WITH INTEGRATION INTO CLOUD BASED CENTRAL MANAGEMENT SYSTEM	1
FURNISH AND INSTALL ONE-WAY 3-SECTION, 12-INCH TRAFFIC SIGNAL HEADS, WITH LED MODULES, TUNNEL VISORS, AND 5-INCH LOUVERED BACK PLATE WITH 3-INCH RETROREFLECTIVITY MOUNTED ON MAST ARMS WITH ASTRO-BRACKETS	10
FURNISH AND INSTALL ONE-WAY, 16 X 18-INCH LED SIDE OF POLE MOUNTED BLACK COUNTDOWN PEDESTRIAN SIGNAL HEAD	2
FURNISH AND INSTALL ADA COMPLIANT ACCESSIBLE PEDESTRIAN SIGNAL (APS) BUTTON WITH 9"X15" R10-3e INFORMATIONAL SIGN	2
FURNISH AND INSTALL 4-CHANNEL PREEMPTION PHASE SELECTOR WITH SYSTEM CHASSIS	1
FURNISH AND INSTALL LIGHT-BASED PREEMPTION RECEIVERS WITH DETECTOR CABLE	4
FURNISH AND INSTALL PREEMPTION CONFIRMATION RED STROBE WITH CABLE	1
FURNISH AND INSTALL MAST ARM MOUNTED SIGNS	11
REMOVE MAST ARM MOUNTED SIGNS	6
IMPLEMENT LOCAL SIGNAL TIMINGS	1
REMOVE AND RESET EXISTING BLANK OUT SIGN	1
REMOVE AND SALVAGE EXISTING SIGNAL EQUIPMENT	1
FURNISH AND INSTALL NON-INVASIVE STOP BAR VEHICLE DETECTION SYSTEM FOR 4 APPROACHES, COMPLETE (643.21)	1 LS
FURNISH AND INSTALL NON-INVASIVE ADVANCE VEHICLE DETECTION SYSTEM FOR 3 APPROACHES, COMPLETE (643.22)	1 LS

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

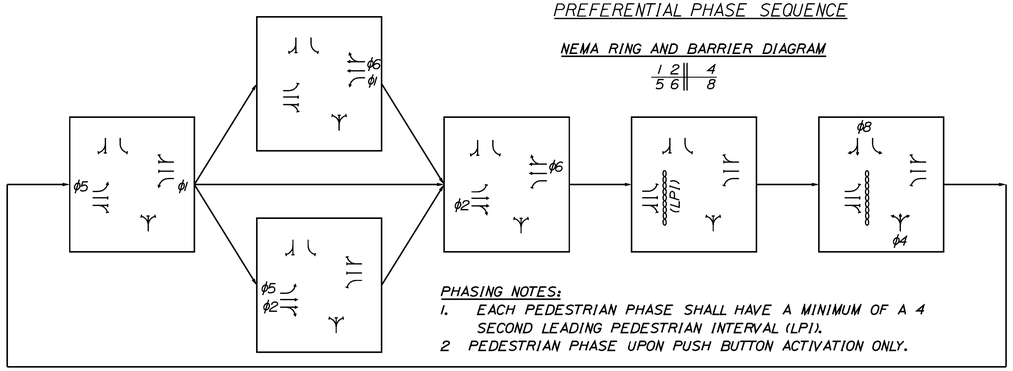
STRUCTURE LIST

STRUCTURE	DESCRIPTION	FOUNDATION
A-C	CONTROLLER CABINET	L48"xW36"xH48"
A-P1	8' PEDESTAL POLE	24" DIAMETER
D-P1	8' PEDESTAL POLE	24" DIAMETER

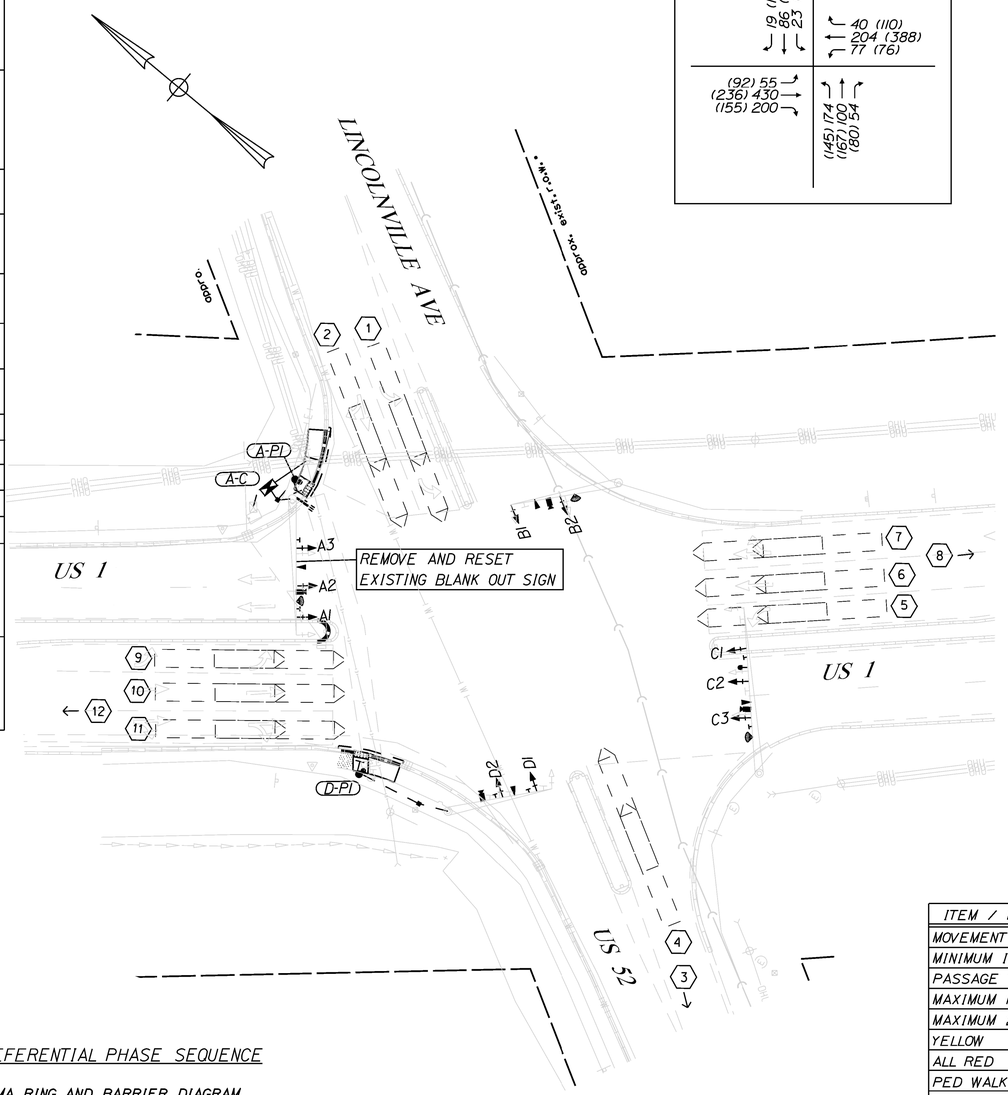
PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM

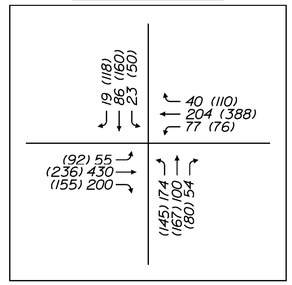
1 2 | 4
5 6 | 8



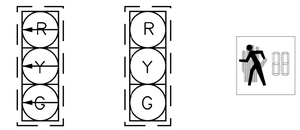
PHASING NOTES:
1. EACH PEDESTRIAN PHASE SHALL HAVE A MINIMUM OF A 4 SECOND LEADING PEDESTRIAN INTERVAL (LPI).
2 PEDESTRIAN PHASE UPON PUSH BUTTON ACTIVATION ONLY.



SYSTEM DESIGN VOLUMES AM (PM)



PROPOSED INDICATIONS



A1,C1 | A2,A3,B1,B2, C2,C3,D1,D2 | PED FACE P1-P2

NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES

DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	ϕ CALLED	ϕ EXT.	MODE A=ADVANCED B=STOPLINE	DELAY TIME	EXT. TIME
1	LINCOLNVILLE AVE SB LEFT	8	8	B	-	3.0
2	LINCOLNVILLE AVE SB THRU-RIGHT	8	8	B	-	3.0
3*	US RTE. 52 NB ADVANCED	4	4	A	-	-
4	US RTE. 52 NB LEFT-THRU-RIGHT	4	4	B	-	3.0
5	US RTE. 1 NB LEFT	1	1	B	-	3.0
6	US RTE. 1 NB THRU	6	6	B	-	3.0
7	US RTE. 1 NB THRU-RIGHT	6	6	B	-	3.0
8**	US RTE. 1 NB ADVANCED	6	6	A	-	-
9	US RTE. 1 SB LEFT	5	5	B	-	3.0
10	US RTE. 1 SB THRU	2	2	B	-	3.0
11	US RTE. 1 SB THRU-RIGHT	2	2	B	-	3.0
12**	US RTE. 1 SB ADVANCED	2	2	A	-	-

*SEE ADVANCED DILEMMA ZONE DETAIL (40 MPH)
**SEE ADVANCED DILEMMA ZONE DETAIL (45 MPH)

SIGNAL TIMING SCHEDULE

ITEM / PHASE	ϕ1	ϕ2	ϕ3	ϕ4	ϕ5	ϕ6	ϕ7	ϕ8
MOVEMENT	A-L	C-T	-	B	C-L	A-T	-	D
MINIMUM INITIAL	5.0	10.0	-	5.0	5.0	10.0	-	5.0
PASSAGE TIME	3.0	3.0	-	3.0	3.0	3.0	-	3.0
MAXIMUM 1	9.5	28.5	-	33.0	17.5	20.5	-	33.0
MAXIMUM 2	11.5	23.5	-	36.0	17.5	17.5	-	36.0
YELLOW	4.5	4.5	-	4.0	4.5	4.5	-	3.0
ALL RED	2.0	2.0	-	2.0	2.0	2.0	-	3.0
PED WALK	-	-	-	7.0	-	-	-	7.0
PED CLEAR	-	-	-	23.0	-	-	-	23.0
RECALL	O	S	-	O	O	S	-	O
DETECTOR	PR	PR	-	PR	PR	PR	-	PR
PREEMPT PRIORITY	3	4	-	6	4	3	-	5
FLASH	R	R	-	R	R	R	-	R
DUAL ENTRY	OFF	ON	-	ON	ON	ON	-	ON

NOTES: S = SOFT RECALL
O = RECALL OFF
PR = PRESENCE
MAX1 = AM PEAK HOURS
MAX2 = PM PEAK HOURS
Y = YELLOW
R = RED
D = DARK

PLAN

25 0 25 50
Scale of Feet

• - RIGHT-OF-WAY REFERENCE PIN HES-026P(95) DOT FILE 14-150, SHEET 2 OF 3, 07/1992

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
PROJECT NO. 2430100
WIN 024301.00
TRAFFIC PLANS

Sewall
The evolution of expertise

PROJ. MANAGER	B. KEEFER	DATE
DESIGN-DETAILED	LDF	7/20
CHECKED-REVIEWED	DWM	7/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

BELFAST
ROUTE 1 AND
ROUTE 52

TRAFFIC SIGNAL PLAN

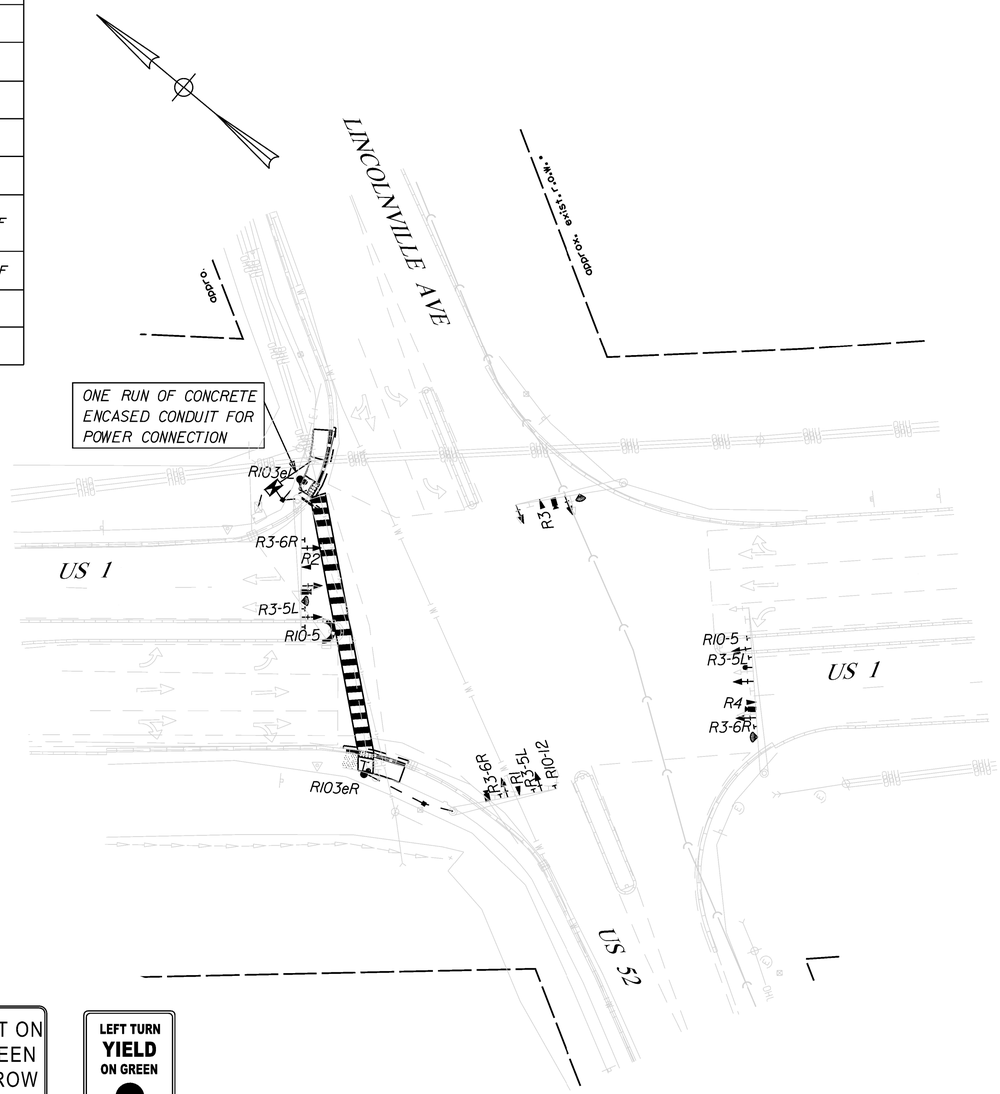
SHEET NUMBER
44
OF 358

Filename: ...\Final Plans\010_Signal_44.dgn Division: HIGHWAY Username: common Date:11/19/2020

LIST OF WORK ITEMS

EQUIPMENT AND WORK (ITEM XXX.YYZ)	QUANTITY
COMMON EXCAVATION (ITEM 203.20)	6 CY
FURNISH AND INSTALL 14-INCH PRECAST JUNCTION BOX (ITEM 626.11)	2 EA
FURNISH AND INSTALL (3-INCH) NON-METALLIC CONDUIT (ITEM 626.22)	60 LF
FURNISH AND INSTALL NON-METALLIC CONDUIT, CONCRETE ENCASED (ITEM 626.22I)	13 LF
FURNISH AND INSTALL CABINET FOUNDATION (ITEM 626.35)	1 EA
FURNISH AND INSTALL 24-INCH DIAMETER FOUNDATION (ITEM 626.42I)	14 LF
FURNISH AND INSTALL WHITE OR YELLOW PAVEMENT & CURB MARKING (ITEM 627.75)	255 SF
REMOVE PAVEMENT MARKINGS (ITEM 627.77)	255 SF
FURNISH AND INSTALL PEDESTAL POLE, 8' (ITEM 643.92)	2 EA
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.35I)	1 EA

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.



PROPOSED SIGNS



R3-5L
30"x36"
3-PROPOSED



R3-6R
30"x36"
3-PROPOSED



R10-3eL
9"x15"
1-PROPOSED



R10-3eR
9"x15"
1-PROPOSED



R10-5
30"x36"
2-PROPOSED



R10-12
30"x36"
1-PROPOSED

EXISTING SIGNS



R3-6R
1-REMOVED



R3-5L
1-REMOVED



R10-15
2-REMOVED



R3-7L
2-REMOVED

EMERGENCY VEHICLE PREEMPTION OPERATION

ID	PREEMPT ASSIGNMENT	RECEIVER PRIORITY	ACTIVE PHASE
	1	NOT USED RESERVED	
	2	NOT USED RESERVED	
R1	5	5	ϕ8
R2	3	3	ϕ1 & ϕ6
R3	6	6	ϕ4
R4	4	4	ϕ2 & ϕ5

PRE-EMPTION NOTES:

1. EMERGENCY VEHICLE PRE-EMPTION SIGNALS SHALL BE TRANSMITTED BY OPTICAL EMITTERS (TYPICALLY EXISTING, BUT WHERE APPLICABLE PROVIDED BY OTHERS) AND/OR BY A DUAL MODE DSRC/C-V2X ON-BOARD UNIT (OBU) MOUNTED IN EMERGENCY VEHICLES COMMUNICATING WITH THE PROPOSED DUAL MODE DSRC/C-V2X ROAD SIDE UNIT (RSU) AND/OR RECEIVED BY OPTICAL DETECTORS LOCATED AT THE INTERSECTION.
2. PRE-EMPTION SIGNALS SHALL BE SERVICED ON A PRIORITY BASIS WITH RECEIVERS ASSIGNED DESCENDING PRIORITIES (1 = HIGHEST, 4 = LOWEST)
3. IN RESPONSE TO A PRE-EMPTION SIGNAL RECEIVED AT AN 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 2.0 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.
4. MINIMUM GREEN AND NORMAL VEHICLE CLEARANCE SHALL BE PROVIDED ON PHASES THAT ARE TO BE TERMINATED BY PRE-EMPTION DEMAND.
5. CONFIRMATION STROBES SHALL BE ILLUMINATED WHENEVER ANY PREEMPTION GREEN IS ON.

PLAN

25 0 25 50
Scale of Feet

• - RIGHT-OF-WAY REFERENCE PIN HES-026P(95) DOT FILE 14-150, SHEET 2 OF 3, 07/1992

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN
024301.00

TRAFFIC PLANS

Sewall
The evolution of expertise

	B. KEEFER	DATE
PROJ. MANAGER		
DESIGN-DETAILED	LBF	7/20
CHECKED-REVIEWED	DWM	7/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

BELFAST
ROUTE 1 AND
ROUTE 52

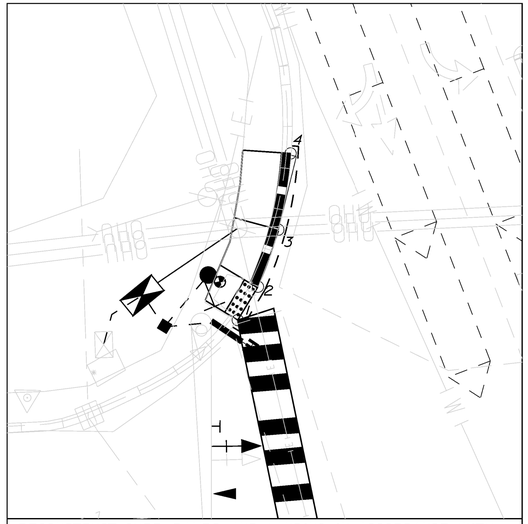
TRAFFIC SIGNAL PLAN

SHEET NUMBER
44A
OF 358

Filename: ...\Final Plans\011_Signal_44a.dgn Division: HIGHWAY Username: common Date:11/19/2020

Filename: ...\Final Plans\012_Signal_44c.dgn Username: common Division: HIGHWAY Date:11/19/2020

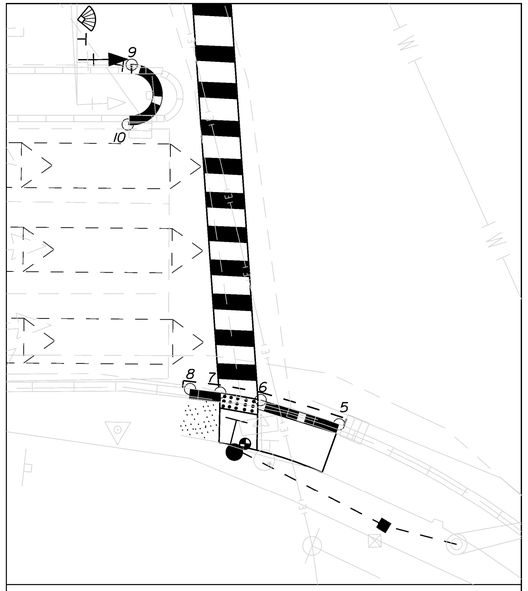
A CORNER - NW DETAIL



RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(14).

10 0 10 20
Scale of Feet

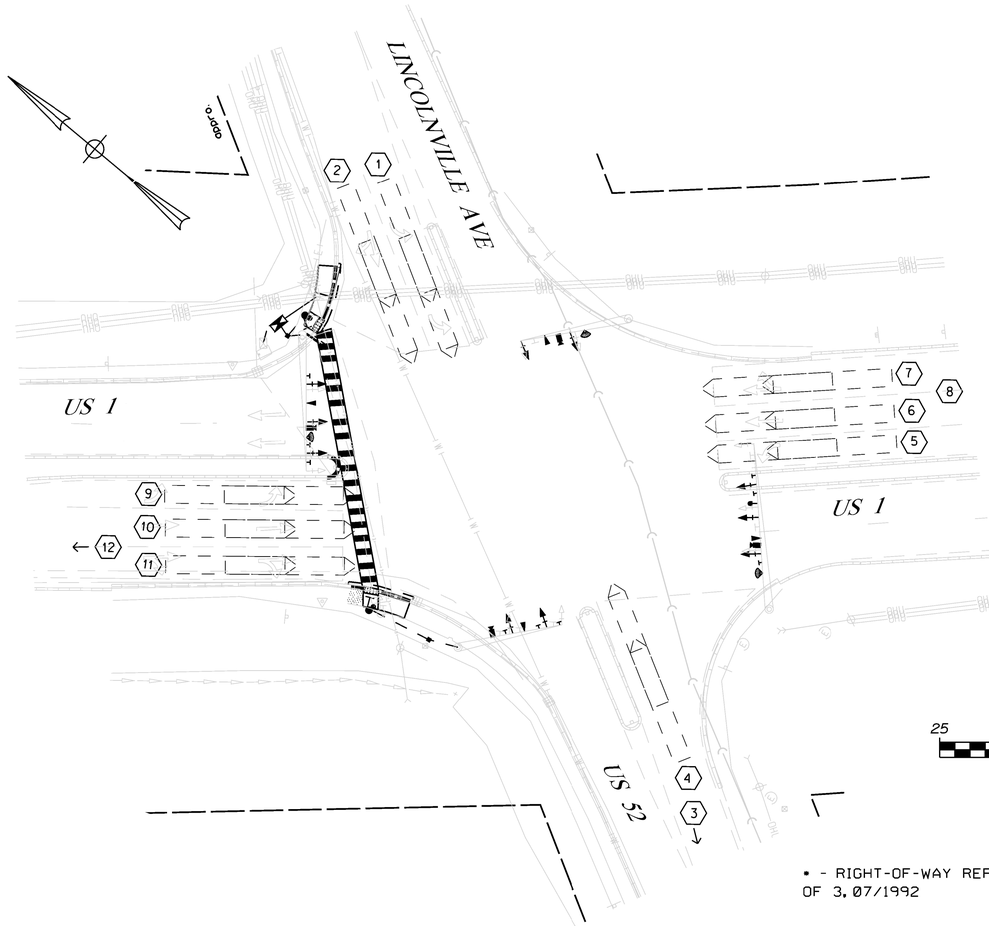
D CORNER - SW DETAIL



RECONSTRUCT CURB RAMPS AND LANDING IN ACCORDANCE WITH MAINEDOT STANDARD DETAIL 801(14).

10 0 10 20
Scale of Feet

PT. TO PT.	RADIUS (FT)	LENGTH (FT)	ITEM 608.26 - CURB RAMP DETECTABLE WARNING FIELD		ITEM 609.11 - VERTICAL CURB TYPE I (LF)	ITEM 609.12 - VERTICAL CURB TYPE I - CIRCULAR (LF)	ITEM 609.221 - TERMINAL CURB TYPE I (LF)	ITEM 609.222 - TERMINAL CURB TYPE I - CIRCULAR (LF)	COMMENT
			LENGTH (FT)	QTY (SF)					
1 TO 2			5.0	10.0					
2 TO 3	50	8.0						8.0	
3 TO 4	55	10.0				10.0			
5 TO 6		11.0					11.0		
6 TO 7			5.0	10.0					
7 TO 8		4.0			4.0				
9 TO 10	2.75	10.0				10.0			



ALL CURB RAMPS SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND MAINEDOT STANDARD DETAILS 801(11) to 801(26) AS NOTED. AS WELL AS DETAILS PROVIDED ON SHEET H.

PLAN

25 0 25 50
Scale of Feet

• - RIGHT-OF-WAY REFERENCE PIN HES-026P(95) DOT FILE 14-150, SHEET 2 OF 3, 07/1992

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
HOT MIX ASPHALT, 9.5 MM NOMINAL MAXIMUM SIZE (ITEM 403.210)	1.5 TON
PLAIN CONCRETE SIDEWALK (ITEM 608.07)	26.0 SY
CURB RAMP DETECTABLE WARNING FIELD (ITEM 608.26)	20.00 SF
REGRADING SIDEWALK (ITEM 608.46)	26.0 SY

EQUIPMENT AND WORK ITEMS XXX.YYZ	QUANTITY
VERTICAL CURB TYPE I (ITEM 609.11)	4.0 LF
VERTICAL CURB TYPE I - CIRCULAR (ITEM 609.12)	20.0 LF
TERMINAL CURB TYPE I (ITEM 609.221)	11.0 LF
TERMINAL CURB TYPE I - CIRCULAR (ITEM 609.222)	8.0 LF

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

Sewall
The evolution of expertise

	BY	DATE
PROJ. MANAGER	B. KEEZER	
DESIGN-DETAILED	LBF	7/20
CHECKED-REVIEWED	DWM	7/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

BELFAST
ROUTE 1 AND
ROUTE 52

CURB RAMP LAYOUT
AND DETAIL PLAN

SHEET NUMBER

44C

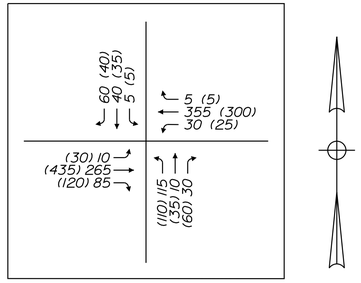
OF 358

LIST OF WORK ITEMS

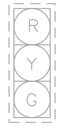
EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL NEW ATC CONTROLLER WITH INTEGRATION INTO CLOUD BASED MONITORING SYSTEM	1
IMPLEMENT LOCAL AND SYSTEM SIGNAL TIMINGS	-

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.

SYSTEM DESIGN VOLUMES AM (PM)



EXISTING INDICATIONS TO REMAIN



A1,A2,B1,B2
C1,C2,D1,D2

NOTE:
ALL INDICATIONS SHALL BE 12" LIGHT EMITTING DIODES (LED'S) WITH 5" LOUVERED RETROREFLECTIVE BACKPLATES



DETECTOR SCHEDULE

DETECTOR ZONE NO.	LOCATION	φ CALLED	φ EXT.	MODE A=ADVANCE B=STOPLINE	DELAY TIME	EXT. TIME
①	BRIDGE ST EB MOVEMENTS	6	6	B	-	-
②	NECK RD WB MOVEMENTS	2	2	B	-	-
③	RIVER RD SB MOVEMENTS	8	8	B	-	-
④*	BENTON AVE NB ADVANCE	4	4	A	-	-
⑤	BENTON AVE NB MOVEMENTS	4	4	B	-	-

* SEE ADVANCED DILEMMA ZONE DETAIL (35 MPH)

SIGNAL TIMING SCHEDULE

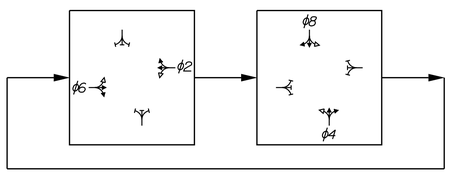
ITEM / PHASE	φ1	φ2	φ3	φ4	φ5	φ6	φ7	φ8
MOVEMENT	-	B	-	C	-	A	-	D
MINIMUM INITIAL	-	7	-	5	-	7	-	5
PASSAGE TIME	-	3.0	-	3.0	-	3.0	-	3.0
MAXIMUM 1	-	35	-	25	-	35	-	25
MAXIMUM 2	-	40	-	30	-	40	-	30
YELLOW	-	4.0	-	3.5	-	4.0	-	3.5
ALL RED	-	2.0	-	2.5	-	2.0	-	2.5
PED WALK	-	-	-	-	-	-	-	-
PED CLEAR	-	-	-	-	-	-	-	-
DYN MAX LIMIT	-	-	-	-	-	-	-	-
DYN MAX STEP	-	-	-	-	-	-	-	-
RECALL	-	SOFT	-	OFF	-	SOFT	-	OFF
DETECTOR	-	PR	-	PR	-	PR	-	PR
PRE-EMPT PRIORITY	-	-	-	-	-	-	-	-
FLASH	-	Y	-	R	-	Y	-	R
DUAL ENTRY	-	ON	-	ON	-	ON	-	ON

NOTES: S = SOFT RECALLY = YELLOW
O = RECALL OFF R = RED
PR = PRESENCE D = DARK
IF APPLICABLE, COORDINATION PATTERNS AND TIME-OF-DAY PLANS SHALL BE PROVIDED AFTER CONTRACT AWARD.

PREFERENTIAL PHASE SEQUENCE

NEMA RING AND BARRIER DIAGRAM

2 | 4
6 | 8



PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, 07/11/2018

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	BY	DATE
PROJ. MANAGER	B. KEEZER	
DESIGN-DETAILED	MLG	JAR 07/20
CHECKED-REVIEWED	CMB	CMB 07/20
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

BENTON
ROUTE 11/100/139 (BRIDGE ST)
AND BENTON AVE / RIVER RD

TRAFFIC SIGNAL PLAN

SHEET NUMBER
45
OF 358

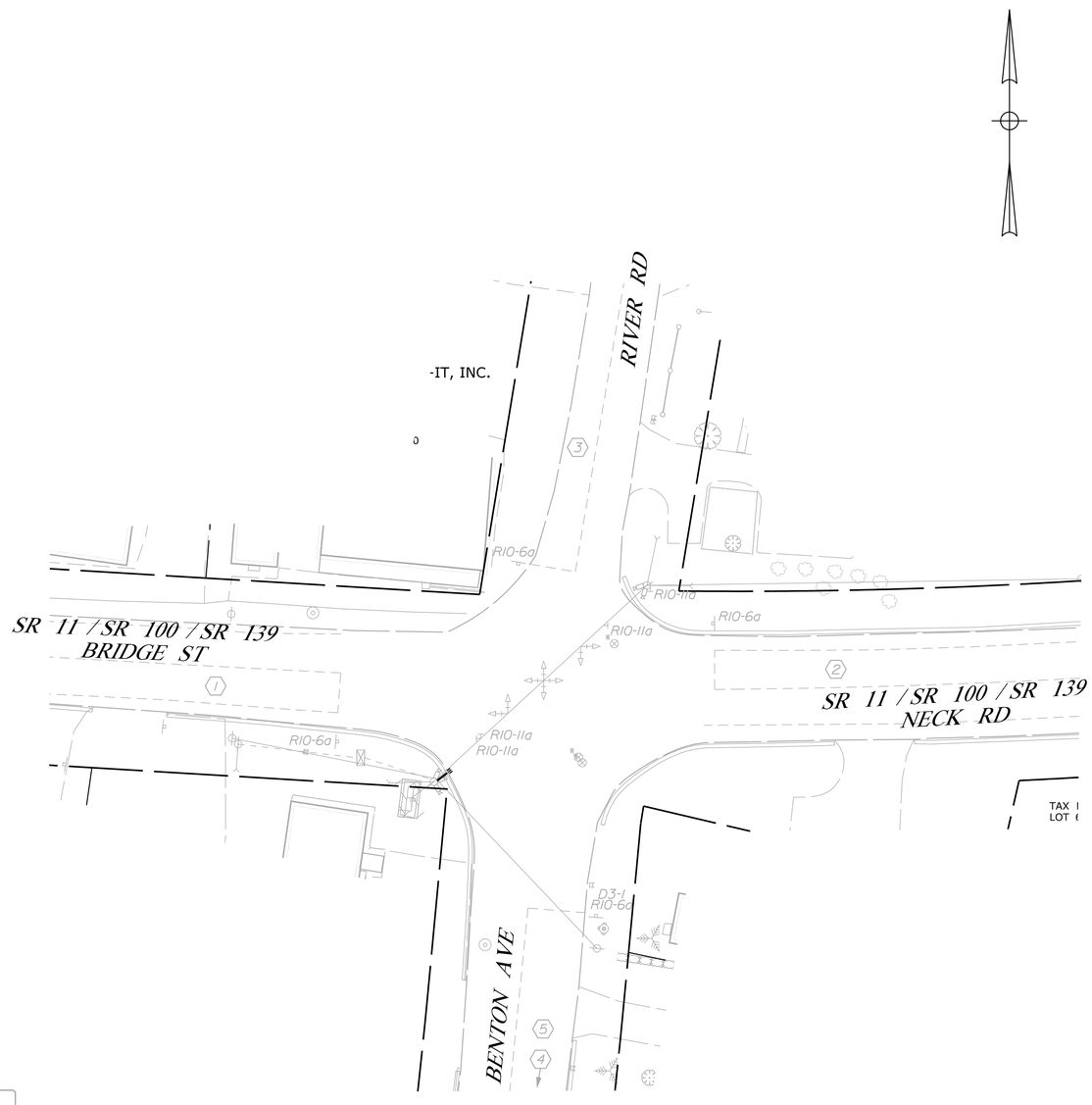
Filename: 045_Signal_45.dgn Division: HIGHWAY Username: jorobert Date:11/24/2020

Filename: 045_Signal_45a.dgn Username: jarobert Date:11/24/2020
Division: HIGHWAY

LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS 643.71	QUANTITY
FURNISH AND INSTALL DUAL MODE DSRC/C-V2X (ITEM 654.3511)	1 EA

THE LISTED QUANTITIES ARE APPROXIMATE AND ARE FURNISHED FOR INFORMATION ONLY.



EXISTING SIGNS



R10-11a	R10-6a	D3-1
4-RETAINED	4-RETAINED	1-RETAINED

PLAN

25 0 25 50
Scale of Feet

* - RIGHT-OF-WAY PROVIDED BY MAINEDOT, 07/11/2018

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PROJECT NO. 2430100

WIN 024301.00

TRAFFIC PLANS

vhb

	B. KEEZER	BY	DATE
PROJ. MANAGER			
DESIGN-DETAILED	M.G	JAR	07/20
CHECKED-REVIEWED	CMB	CMB	07/20
DESIGN2-DETAILED2	CMB		
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

BENTON
ROUTE 11/100/139 (BRIDGE ST)
AND BENTON AVE / RIVER RD

TRAFFIC SIGNAL PLAN

SHEET NUMBER

45A

OF 358