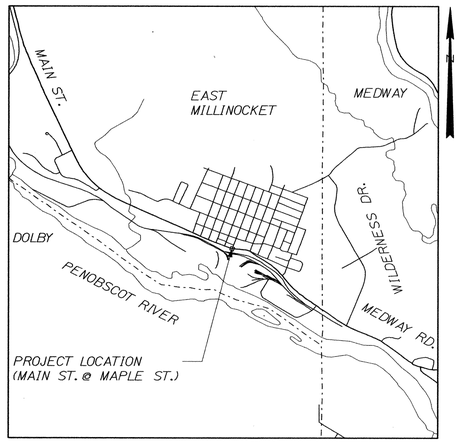
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION



LOCATION MAP

.5 0 .5 1

Scale in Miles

EAST MILLINOCKET

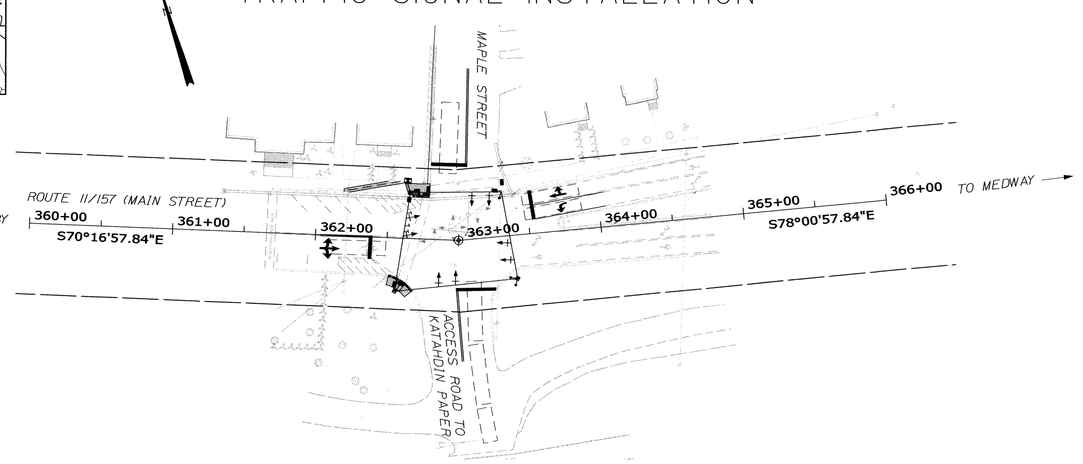
PENOBSCOT COUNTY

ROUTE 11/157 (MAIN ST.) / MAPLE ST.

PROJECT NUMBER STP-1729(100)X

PROJECT LENGTH : 0.041 MILES

TRAFFIC SIGNAL INSTALLATION



LAYOUT SCALE

50 0 50 100

Scale in Feet

INDEX OF SHEETS

PLAN LEGEND

Town, County, State
Property Lines
R/W Lines-Existing
R/W Lines-Proposed

Culvert-Existing
Culvert Proposed

Curbing	Existing	Proposed
Type 1		
Type 3		
Type 5		

Outline of Bodies of Water
Ledge
Buildings

Trees — Conifer — Deciduous
Tree Line
Clearing Limit Line

Centerline-Existing
Centerline-Proposed .10+00
Travelway-Existing
Travelway-Proposed
Railroad

Catch Basins Existing ■ Proposed
Manholes ○ Existing ● Proposed
Proposed Underdrain
Proposed Ditch
Existing Ditch

Utility Poles ◊ Existing ♦ Proposed
Fire Hydrants ⊙ Existing ⊙ Proposed
Existing Water Line
Existing San. Sewer
Existing San. Sewer Manhole ⊙

Guardrail-Existing
Guardrail-Proposed
Guardrail-Cable, Other

TRAFFIC DATA

Current (2008) AADT 7,716
DHV 770
DHV - % of AADT 10%
Design Speed (mph) 25
Functional Class: Minor Arterial

PROGRAM AREA: TRAFFIC DIVISION
SCOPE OF WORK: INSTALL NEW TRAFFIC SIGNAL AND CONSTRUCT NEW PEDESTRIAN RAMPS.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

	DATE
APPROVED	
COMMISSIONER	3/26/10
CHIEF ENGINEER	3/25/10

STATE OF MAINE ★ JOHN QUENTIN ADAMS No. 11083 LICENSED PROFESSIONAL ENGINEER

SIGNATURE 11083
P.E. NUMBER
3/24/10
DATE

PROJECT INFORMATION

PROGRAM	TRAFFIC
PROJECT MANAGER	JIM MANSIR
DESIGNER	JOHN ADAMS
CONSULTANT	SEBAGO TECHNICS, INC.
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

STP-17291(100)X PIN 17291.00

EAST MILLINOCKET
MAIN ST. / MAPLE ST.

TITLE SHEET

SHEET NUMBER 1 OF 3

Filename: ...\00\TRAFFIC\MSTA\001_Title.dgn Division: HIGHWAY Username: blyon Date:3/24/2010

GENERAL NOTES:

1. FURNISH AND PLANT REPLACEMENT TREE - GREEN MOUNTAIN SUGAR MAPLE (ACER SACCHARUM-GREEN MAPLE), 2"-2.50" CALIPER AT A LOCATION DETERMINED IN THE FIELD BY THE RESIDENT.

2. BASELINE SHOWN HEREON IS BASED SOLEY ON SCALED DISTANCES FROM FEATURES REMAINING FROM PLAN REF A . TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED UPON AN ON THE GROUND SURVEY PERFORMED BY SEBAGO TECHNICS, INC., IN OCTOBER OF 2009.

3. PLAN REFERENCES:
   A. MAINE STATE HIGHWAY COMMISION RIGHT OF WAY MAP STATE HIGHWAY '315' S.H.C., FILE NO. 10-109 SHEET 1 OF 5, DATED JANUARY 1956.

4. THE BEARINGS, COORDINATES, AND ELEVATIONS SHOWN HEREON ARE BASED UPON THE MAINE STATE PLANE COORDINATE GRID, CENTRAL ZONE 2000 ON NAD 83 AND NAVD88 IN US FEET.

5. PRIOR TO ANY CONSTRUCTION, EXCAVATION, TEST BORINGS, ETC. DIG SAFE MUST BE NOTIFIED AND A SITE IDENTIFICATION NUMBER ALONG WITH A SAFE TO DIG DATE OBTAINED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING THE LOCATION, DEPTH, AND MATERIAL OF ALL SUBSURFACE UTILITY LINES LOCATED WITHIN THE CONSTRUCTION AREA.

6. REMOVAL OF EXISTING PAVEMENT AT CURB RAMPS SHALL BE PAID FOR AS COMMON EXCAVATION.

7. RESHAPING, FINE GRADING AND COMPACTING EXISTING GRAVEL BASE AT CURB RAMPS SHALL BE INCIDENTAL TO THE PLACEMENT OF THE HMA SURFACE.

8. REMOVE ALL EXISTING TRAFFIC SIGNAL EQUIPMENT AND RETURN TO MAINEDOT'S BANGOR OFFICE FOR SALVAGE.

9. THE CONTRACTOR SHALL MEET ALL UTILITY REQUIREMENTS FOR NEW SERVICE CONNECTIONS. THE TRAFFIC SIGNAL ELECTRICAL METER IS TO BE SUPPLIED WITH A GENERLINK METER COLLAR MODEL MA 23/24-N/S OR APPROVED EQUAL TO ENABLE CONNECTION TO A PORTABLE GENERATOR.

10. TRAFFIC SIGNAL WORK SHALL BE COMPLETED IN A MANNER AND ORDER THAT WILL CAUSE A MINIMUM DISRUPTION TO TRAFFIC. EXISTING SIGNAL OPERATIONS SHALL REMAIN IN SERVICE UNTIL THE NEW SIGNAL CONTROLLER IS READY TO GO ONLINE.

11. CONTRACTOR TO NOTIFY DESIGN ENGINEER WHEN THE NEW TRAFFIC SIGNAL HAS BEEN PUT INTO OPERATION.

PAVEMENT MARKING

1. ALL PAVEMENT MARKINGS SHALL BE IN CONFORMANCE WITH MUTCD FOR STREETS AND HIGHWAYS, USDOT, FHWA, LATEST EDITION.

2. ALL PAVEMENT MARKING LINES SHALL BE PAINT AND 4" WIDE EXCEPT FOR:
   SOLID WHITE STOP LINES - 24"
   (PAYMENT AS ITEM 627.75)

3. REMOVE ANY EXISTING CONFLICTING MARKINGS.

DETECTION

1. INSTALL 5 TRAFICON TRAFICAM (OR APPROVED EQUAL) CMOS PRESENCE SENSORS (BLACK AND WHITE) AS SHOWN ON THE PLANS, AND RELATED HARDWARE IN THE CABINET. VIDEO DETECTORS SHALL BE MOUNTED ON THE STRAIN POLES AT THE OPTIMAL HEIGHT AS DETERMINED IN THE FIELD BY THE CONTRACTOR AND APPROVED BY THE RESIDENT ENGINEER. SPECIAL CARE SHALL BE TAKEN TO INSURE THAT THE TRAFFIC EXITING THE MILL IS FULLY DETECTED AS INTENDED. AS NOTED ON THE SIGNAL PLAN (SHEET 3) I CAMERA SHALL BE EQUIPPED WITH A 3MM WIDE ANGLE LENSE.

SIGNAL HEADS

1. SHALL BE 1-WAY, 12" DIAMETER WITH LED LENSES.
2. SHALL HAVE 5" BLACK LOUVERED BACKPLATES.
3. SHALL BE EQUIPPED WITH CAP (CUT-AWAY) VISORS.
4. SHALL BE YELLOW POLYCARBONATE WITH BLACK FACES.

SIGNAL HEAD MOUNTING

1. ALL TRAFFIC SIGNAL SPANWIRE MOUNTING SHALL CONFORM TO "TRAFFIC SIGNAL SPANWIRE" DETAIL 643(1) OF MAINEDOT'S STANDARD DETAILS WITH RIGID ATTACHMENTS TO THE SPANWIRE FOR EACH SIGNAL HEAD PLUS BOTH A TOP AND BOTTOM TETHERED WIRE FOR A TOTAL OF THREE SPANWIRES.

2. BOTTOM OF HOUSING OF NEW SIGNAL HEADS SHALL BE AT LEAST 17', BUT NOT MORE THAN 19', ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY.

CABINET AND CONTROLLER

1. INSTALL TS-2 TYPE 1 CONTROLLER IN A NEMA P-44 BASE MOUNTED CABINET WITH A 15" EXTENSION.

2. ALL SPLICES WILL BE MADE IN THE CABINET AND MEET MAINEDOT'S SPECIFICATIONS.

3. ONE COPY OF AS-BUILT PLANS, WIRING DIAGRAMS, BOX PRINTS AND EQUIPMENT MATERIALS SHALL BE LEFT IN THE CABINET.

4. ALL MAJOR COMPONENTS OF THE CONTROLLER CABINET ASSEMBLY SHALL BE FROM THE SAME MANUFACTURER. THIS INCLUDES CABINET ASSEMBLY, CONTROLLER, MMU, BIU'S, AND CABINET POWER SUPPLY.

SIGNAL POLE FOUNDATION

1. THE CONTRACTOR SHALL DESIGN THE DIAMETER, DEPTH AND REINFORCING FOR THE FOUNDATIONS OF THE THREE STRAIN POLE INSTALLATIONS. SHOP DRAWINGS PREPARED AND STAMPED BY A MAINE REGISTERED PROFESSIONAL ENGINEER SHALL BE SUBMITTED FOR REVIEW BY THE DEPARTMENT.

PEDESTRIAN SIGNALS & PUSH BUTTONS

1. HEADS SHALL BE 1-WAY 1-SECTION 16" X 18" HAND/MAN WITH COUNTDOWN MODULE BY GE LUMINATION GTI SERIES - MCCAIN MODEL 1000 SERIES (OR EQUAL) HOUSING. HAND/MAN SYMBOL SHALL BE FILLED AND NOT OUTLINED.

2. HEADS SHALL BE EQUIPPED WITH CAP (CUT-AWAY) VISORS.

3. HEADS SHALL BE CONSTRUCTED OF YELLOW POLYCARBONATE MATERIAL WITH BLACK FACES.

4. INSTALL 4 ACCESSIBLE PEDESTRIAN SIGNAL (APS) PUSH BUTTONS CAMPBELL COMPANY ADVISOR MODEL (A-57) (OR EQUAL) WITH RIO-3e PUSH BUTTON SIGNS. SIGNS SHALL BE POSTED AT EACH AUDIBLE SIGNAL PUSH BUTTON STATING WHICH STREET MAY BE CROSSED BASED UPON THE RELATED PUSH BUTTON.

THE AUDIBLE WALK INTERVAL MESSAGES USED SHALL BE AS FOLLOWS:

"MAPLE, WALK SIGN IS ON TO CROSS MAPLE".

THE NAME OF THE STREET TO CROSS WILL CHANGE WITH EACH AUDIBLE PUSH BUTTON.

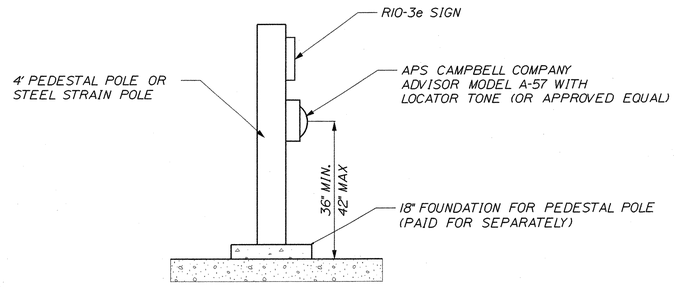
THE AUDIBLE PUSH BUTTON IDENTIFICATION INFORMATION MESSAGES USED DURING THE NON-WALK PHASES SHALL BE AS FOLLOWS:

"WAIT TO CROSS MAPLE AT MAIN"

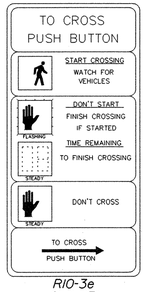
ALL CONTROLLERS MUST HAVE "STOP IN WALK" SET "ON".
PAYMENT FOR RIO-3e SIGNS AND PUSH BUTTONS SHALL BE INCLUDED IN THE RESPECTIVE 4' PEDESTAL POLE (ITEM 643.92) OR STEEL STRAIN POLES (ITEM 643.93) ITEMS.

5. PEDESTRIAN SIGNALS SHALL BE BLANK DURING FLASHING OPERATION.

6. LOCATOR TONES FOR ALL PUSH BUTTONS ARE REQUIRED. VOLUME IS TO AUTOMATICALLY ADJUST TO AMBIENT NOISE LEVELS.



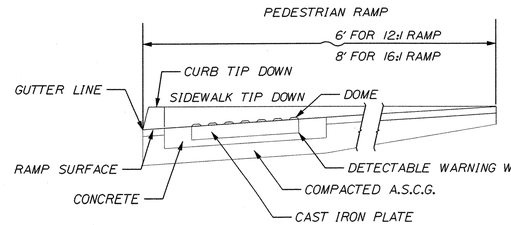
APS PUSH BUTTON ASSEMBLY
SINGLE MOUNTED DETAIL



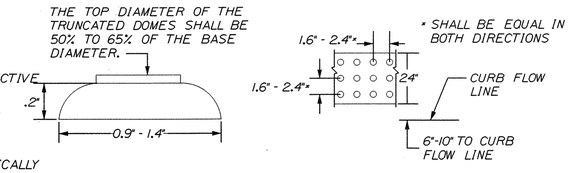
RIO-3e
9" X 15"

VIEWS AND DETAILS OF THE DETECTABLE WARNING FIELDS

(NOT TO SCALE)

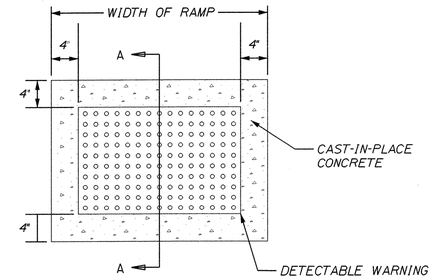


SIDE SECTION VIEW OF
DETECTABLE WARNING, WELL, CURB AND GUTTER

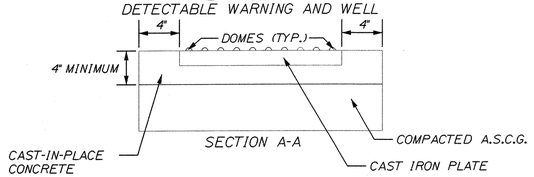


ELEVATION VIEW — PLAN VIEW

DOME AND DETECTABLE WARNING DETAILS

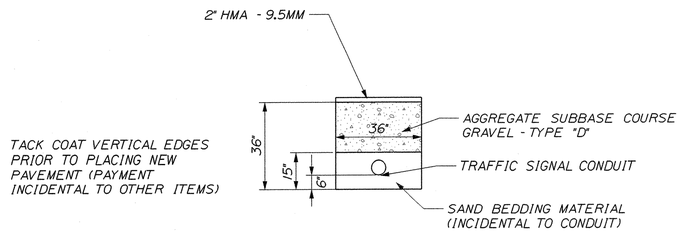


PLAN VIEW OF
DETECTABLE WARNING AND WELL



SECTION A-A

CONDUIT TRENCH DETAIL



TACK COAT VERTICAL EDGES PRIOR TO PLACING NEW PAVEMENT (PAYMENT INCIDENTAL TO OTHER ITEMS)

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1729(100)X

PIN 17291.00 TRAFFIC SIGNAL PLANS

	BY	DATE
PROJ. MANAGER	J. MANSIR	
DESIGN-DETAILED	JDA	3/5/10
CHECKED-REVIEWED	SSS	3/5/10
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

EAST MILLINOCKET
MAIN ST./MAPLE ST.

TRAFFIC SIGNAL/PAVEMENT MARKING NOTES & SPECIAL DETAILS

SHEET NUMBER

2

OF 3

Filename: ...\MSTA\002_GeneralNotes.dgn Division: HIGHWAY Username: blyon Date:3/26/2010

SIGNAL LAYOUT

A. STEEL STRAIN POLE STA. 362+65, 33' LT.

B. STEEL STRAIN POLE STA. 362+57, 38' RT.

C. STEEL STRAIN POLE STA. 363+41, 31' RT.

D. 4' PEDESTAL POLE STA. 362+72, 40' LT.

E. CONTROLLER CABINET 4'X3' FOUNDATION STA. 362+63, 41' LT.

SIGNAL INDICATIONS

LED DISPLAYS: Φ1 (R, Y, G) Φ2, 4, 6, 8 (R, Y, G) Φ4P, 6P (10)

NO. REQ'D: 1 7 4

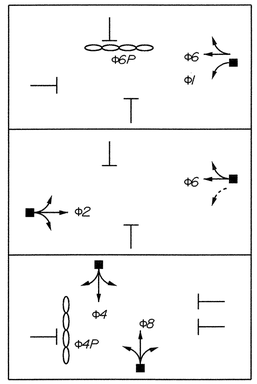
NOTE - ALL INDICATIONS SHALL BE 12 INCH. ALL INDICATIONS SHALL BE LIGHT EMITTING DIODES WITH 5" LOUVERED BACK PLATES

SIGNAL TIMING

	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8
Min Green	3	5		5		5		5
Extension	2	3		3		3		3
Max I	10	30		20		30		20
Max II	10	30		20		30		20
Yellow	3	3		3		3		3
Red	2	2		2		2		2
Walk				5		5		
Ped Clear				18		14		
Recall		Soft				Soft		
Detector Memory	Off	Off		Off		Off		Off
Flash	Blank	Y		R		Y		R
Dual Entry		On				On		

1. SIGNAL TO OPERATE ON COLORS AT ALL TIMES
2. FLASH MODE IS FOR EMERGENCIES ONLY.

PHASING SEQUENCE

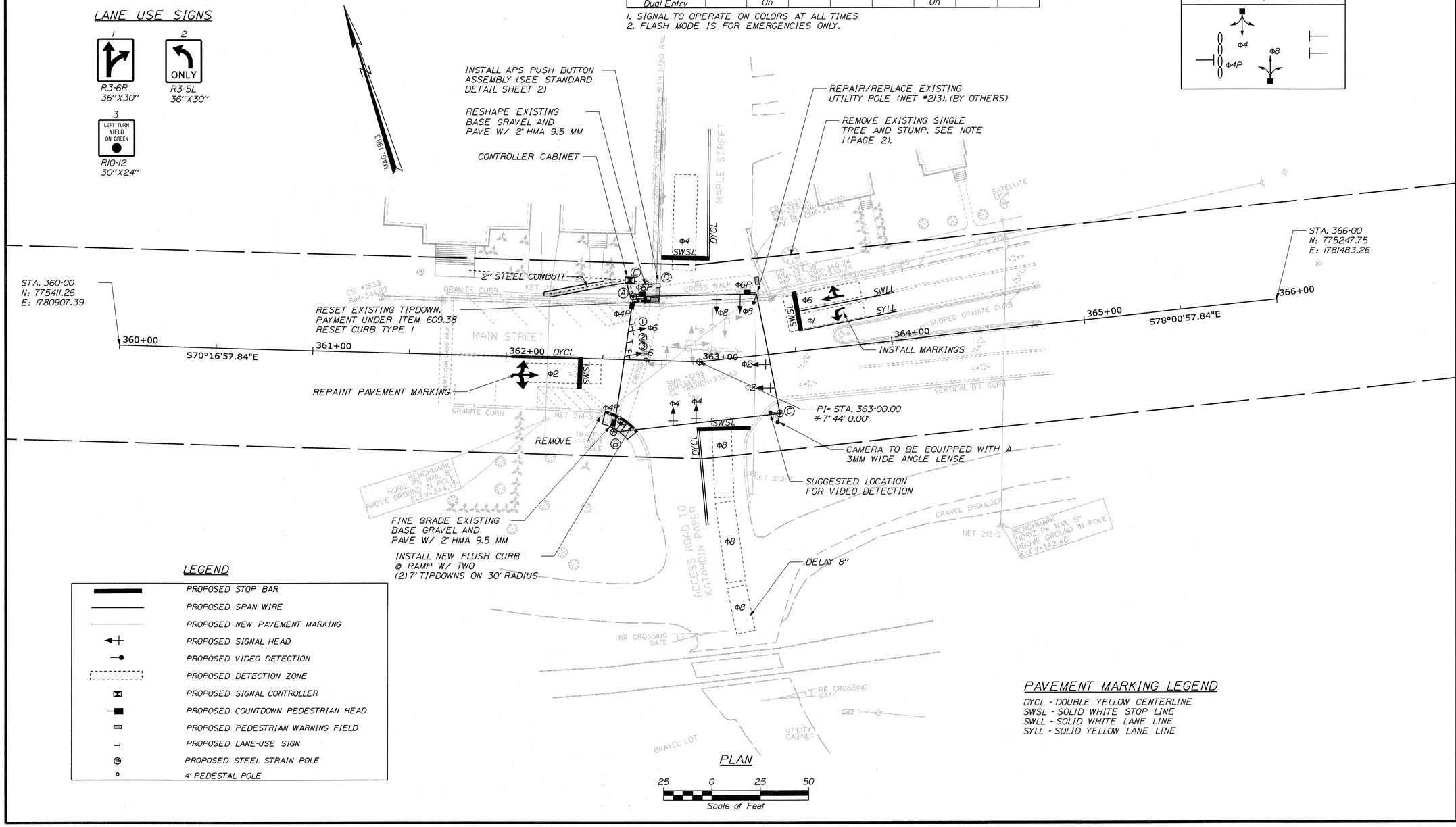


LANE USE SIGNS

1 — R3-6R 36"X30"

2 — R3-5L (ONLY) 36"X30"

3 — R10-12 (LEFT TURN YIELD ON GREEN) 30"X24"



LEGEND

- PROPOSED STOP BAR
- PROPOSED SPAN WIRE
- PROPOSED NEW PAVEMENT MARKING
- PROPOSED SIGNAL HEAD
- PROPOSED VIDEO DETECTION
- PROPOSED DETECTION ZONE
- PROPOSED SIGNAL CONTROLLER
- PROPOSED COUNTDOWN PEDESTRIAN HEAD
- PROPOSED PEDESTRIAN WARNING FIELD
- PROPOSED LANE-USE SIGN
- PROPOSED STEEL STRAIN POLE
- 4' PEDESTAL POLE

PAVEMENT MARKING LEGEND

DYCL - DOUBLE YELLOW CENTERLINE
SWSL - SOLID WHITE STOP LINE
SWLL - SOLID WHITE LANE LINE
SYLL - SOLID YELLOW LANE LINE

PLAN

25 0 25 50
Scale of Feet

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-1729(100)X

PIN 17291.00

TRAFFIC SIGNAL PLANS

P.E. NUMBER

SIGNATURE

DATE

PROJ. MANAGER	J. MANSIR
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FIELD CHANGES	

BY	DATE
JDA	3/5/10
SSS	3/5/10

EAST MILLINOCKET
MAIN ST/MAPLE ST

TRAFFIC SIGNAL PLAN

SHEET NUMBER 3 OF 3

Filename: ...\00\TRAFFIC\MSTA\003_TDPlan.dgn Division: HIGHWAY Username: blyon Date:3/26/2010