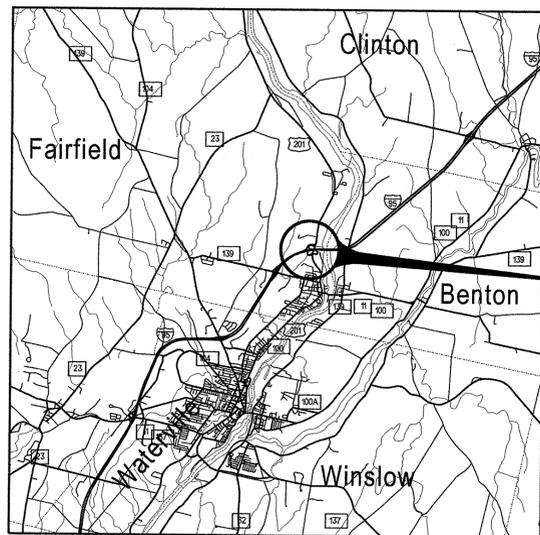


STATE OF MAINE
DEPARTMENT OF TRANSPORTATION



FAIRFIELD
SOMERSET COUNTY
I - 95 at EXIT 133
NHPP - 2252(100)
Highway Lighting

| INDEX OF SHEETS | |
|-------------------|-----------|
| Description | Sheet No. |
| Title Sheet | 1 |
| Plans and Details | 2 - 4 |



Project Area
Fairfield
EXIT 133
NHPP - 2252(100)

| | |
|--|--------|
| STATE OF MAINE DEPARTMENT OF TRANSPORTATION | |
| APPROVED | DATE |
| COMMISSIONER: <i>[Signature]</i> | 9/4/15 |
| CHIEF ENGINEER: <i>[Signature]</i> | 9-4-15 |



[Signature]
SIGNATURE
4226
P.E. NUMBER
8/25/15
DATE

| PROJECT INFORMATION | |
|-------------------------|----------------------------|
| PROGRAM | TRAFFIC |
| PROJECT MANAGER | C. RAND |
| DESIGNER | AL. GODFREY R. LETTENY |
| CONSULTANT | TERRA MAGNA SERVICES, INC. |
| PROJECT RESIDENT | |
| CONTRACTOR | |
| PROJECT COMPLETION DATE | |

NHPP - 2252(100) WIN 22521.00

FAIRFIELD
I - 95 at EXIT 133

TITLE SHEET

PROGRAM AREA : MULTIMODAL
SCOPE OF WORK: HIGHWAY LIGHTING
HIGH MAST LIGHT POLES
FOUNDATIONS
LED LUMINAIRES
CONDUIT

SHEET NUMBER

1

OF 4

Date: 8/28/2015

Username: common

Division: HIGHWAY

Filename: ...PlanSh1.dgn

GENERAL NOTES - HIGHWAY LIGHTING

- 1. SCOPE OF WORK - INSTALL HIGHWAY LIGHTING AS SHOWN ON THIS PLAN. INSTALL NEW CONDUIT, WIRING, FOUNDATIONS, HIGH MAST POLES AND LOWERING DEVICES, HIGH MAST L.E.D. LUMINAIRES AND RELATED HARDWARE. INSTALL NEW LIGHTING SERVICE CABINET.
- 2. EXISTING INTERCHANGE LIGHTING SHALL REMAIN ACTIVE UNTIL THE NEW LIGHTING SYSTEM IS APPROVED BY MAINE DOT TO BE ACTIVATED.
- 3. EXISTING LIGHT POLES AND LUMINAIRES SHALL BE CAREFULLY REMOVED AND DELIVERED TO MAINE DOT AFTER ACTIVATION OF THE NEW SYSTEM. EXISTING FOUNDATIONS SHALL BE REMOVED AS DIRECTED. ABANDON EXISTING CONDUIT.
- 4. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO APPLICABLE PROVISIONS OF THE MAINE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AND STANDARD DETAILS, NATIONAL ELECTRICAL CODE AND ANY REQUIREMENTS OF THE POWER COMPANY.
- 5. THE CONTRACTOR SHALL FIELD VERIFY POLE LOCATIONS TO AVOID NATURAL AND BUILT SITE FEATURES THAT WOULD CONFLICT WITH PROPER INSTALLATION OF POLE FOUNDATIONS.
- 6. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING TO ENSURE AWARENESS OF SITE CONDITIONS THAT COULD AFFECT THE BID.
- 7. ALL LIGHTING CIRCUITS ARE TO BE PHOTOCELL ACTIVATED BY PHOTOCELL ON CONTROL CABINET.
- 8. LIGHTING FIXTURE VOLTAGE SHALL BE 240 VOLTS.
- 9. LIGHTING FIXTURES SHALL BE IES FULL CUTOFF, LIGHT EMITTING DIODE (LED) FIXTURES, IES DISTRIBUTION TYPE 3 AND TYPE 5. LED MODULES SHALL BE IP66 RATED.
- 10. INSTALL LIGHTING FIXTURES ON HIGH MAST POLES AT AN ELEVATION ABOVE THE PAVEMENT INDICATED ON THE PLANS. POLES SHALL BE GALVANIZED STEEL. POLES SHALL HAVE A MINIMUM OF SIX ANCHOR BOLTS.
- 11. ALL FIXTURES SHALL BE GASKETED AND HAVE SURGE PROTECTION AND A DOUBLE FUSE KIT. ALL FIXTURES SHALL BE GRAY. THE LIGHTING LAYOUT WAS DONE USING HOLOPHANE HIGH MAST LED LUMINAIRES, CATALOG NUMBERS:

HMLE2 06 5K AS G M; 10 LUMINAIRES ON 5 POLES
 HMLE2 09 5K AS G AW; 8 LUMINAIRES ON 2 POLES

LED COLOR TEMPERATURE FOR FIXTURES INSTALLED SHALL BE 5000K. IF DIFFERENT FIXTURES ARE PROPOSED, THEY SHALL BE IES FULL CUTOFF, TYPE 3 AND TYPE 5 IES DISTRIBUTION, LED LUMINAIRES. THE CONTRACTOR MUST DEMONSTRATE THAT THE PROPOSED FIXTURES WILL REASONABLY EQUAL THE LIGHT LEVELS AND DISTRIBUTIONS SHOWN ON THE PLANS, IN THE OPINION OF MAINE DOT.

12. EVALUATION BY MAINE DOT OF ALTERNATIVE LED LUMINAIRES THAT MAY BE PROPOSED BY THE CONTRACTOR FOR SUBSTITUTION WILL REQUIRE SUBMITTAL OF THE FOLLOWING, AT MINIMUM:

- IES LM-79-08 ABSOLUTE TESTING REPORT FOR THE PROPOSED ALTERNATIVE LUMINAIRE;
- IES LM-80-15 TESTING REPORT FOR LED CHIPS TO BE USED IN THE ALTERNATIVE LUMINAIRE, DOCUMENTING TESTING FOR A MINIMUM OF 8500 HOURS;
- IES TM-21-11 REPORT FOR PROJECTED LONG TERM LUMEN MAINTENANCE, INCLUDING INCREMENTAL LUMEN DEPRECIATION TABLE AT 25 DEGREES CELSIUS TO A MINIMUM OF 50,000 HOURS;
- IES PHOTOMETRIC FILE FROM THE MANUFACTURER FOR THE PROPOSED ALTERNATIVE LUMINAIRE; PHOTOMETRIC PLOT, OVERLAID ON THE LAYOUT OF THE LUMINAIRE LOCATIONS FOR THIS SPECIFIC PROJECT, SHOWING LIGHT CONTOURS, ILLUMINATION STATISTICS FOR EACH OF THE LIGHTING GROUPS, AND VALUE OF LIGHT LOSS FACTOR USED IN THE ANALYSIS;

VALUES OF LLD, LDD, BALLAST FACTOR AND OTHER FACTORS USED FOR CALCULATION OF THE ASSUMED LIGHT LOSS FACTOR; SPECIFICATION DATA REGARDING OPTICS, CHROMATIC COLOR TEMPERATURE, DRIVER, SURGE PROTECTION, HOUSING AND GASKETING.

13. EACH HIGH MAST LIGHT STANDARD SHALL HAVE A LUMINAIRE LOWERING DEVICE SYSTEM FURNISHED AND INSTALLED. HOLOPHANE HMS LOWERING DEVICE SYSTEM OR APPROVED EQUAL COMPATIBLE WITH THE APPROVED LUMINAIRES. SYSTEM SHALL INCLUDE A PORTABLE ELECTRIC POWER UNIT (ONE FOR ALL WIN 22521.00 HIGH MAST POLES) WITH REMOTE CONTROL FOR OPERATION OF THE LOWERING SYSTEM. WINCH ASSEMBLY SHALL BE INTERNAL TO POLE, UNLESS OTHERWISE APPROVED BY THE MAINE DOT CHIEF ELECTRICIAN.

14. SECONDARY CIRCUIT WIRING SHALL BE COPPER STRANDED XHHW-2.

15. CONDUIT SHALL BE 2 INCH MINIMUM, PVC SCHEDULE 40, PAID UNDER ITEM 626.22. UNDER PAVEMENT DUCT SHOWN ON THE PLANS IS OPTIONAL AND IS INCIDENTAL TO PAYMENT UNDER ITEM 626.22. IF USED, UNDER PAVEMENT DUCT SHALL CONSIST OF METALLIC CONDUIT JACKED OR DIRECTIONALLY BORED UNDER THE HIGHWAY FOR A DISTANCE OF 10 FEET BEYOND THE EDGE OF PAVEMENT AT EACH END. CONDUIT INSTALLED UNDER PAVEMENT WITHOUT UNDER PAVEMENT DUCT SHALL BE SCHEDULE 80 AND ALSO WILL BE PAID UNDER ITEM 626.22. MINIMUM BURIAL DEPTH FOR CONDUIT SHALL BE 36 INCHES.

16. THE WIRE IN CONDUITS SHALL BE CONTINUOUS WITH NO SPLICES BETWEEN POLES. JUNCTION BOXES SHOWN ON THE PLANS ARE SHOWN IN APPROXIMATE LOCATIONS AND ARE INTENDED FOR USE ONLY AS PULL BOXES FOR WIRE PULLING ACCESS. ACTUAL LOCATIONS MAY VARY.

- 17. UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR SHALL FURNISH TO MAINE DOT A SET OF AS-BUILT PLANS FOR FUTURE REFERENCE AND SYSTEM MAINTENANCE.
- 18. IF STRUCTURAL ROCK IS ENCOUNTERED DURING INSTALLATION OF FOUNDATIONS, PAYMENT FOR EXCAVATION AND DOWELING REINFORCING INTO ROCK SHALL BE CONSIDERED INCIDENTAL TO FOUNDATION ITEMS.
- 19. PAYMENT UNDER ITEM NO. 634.207, HIGH MAST LIGHT STANDARD, SHALL INCLUDE THE LUMINAIRE LOWERING DEVICE SYSTEM.
- 20. PAYMENT UNDER ITEM 634.16, HIGHWAY LIGHTING, WILL INCLUDE ALL MATERIALS, LABOR AND EQUIPMENT NECESSARY TO PROVIDE A FULLY FUNCTIONING HIGHWAY LIGHTING SYSTEM, EXCEPT THOSE ITEMS TO BE PAID UNDER OTHER RELATED BID ITEMS IN THE CONTRACT.
- 21. ALL LIGHT BASES SHALL HAVE A GROUND ROD LOCATED IN THE FOUNDATION THAT IS BONDED TO THE GROUNDING CONDUCTOR. PAYMENT FOR THE GROUND ROD SHALL BE INCLUDED IN ITEM 634.16, HIGHWAY LIGHTING.
- 22. ALL CLEARING REQUIRED FOR THIS PROJECT WILL BE INCIDENTAL TO THE CONTRACT.
- 23. FOUNDATIONS FOR HIGH MAST LIGHTING SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER LICENSED IN MAINE. THE CONTRACTOR SHALL PROVIDE THE FOUNDATION DESIGN TO MAINE DOT FOR APPROVAL. ASSUMED VALUE OF PHI SHALL BE 28 DEGREES. PAYMENT FOR FOUNDATIONS WILL BE MADE UNDER ITEM NO. 626.37, SPECIAL FOUNDATION. FOUNDATION DESIGN WILL BE INCIDENTAL TO PAYMENT UNDER THAT PAY ITEM.
- 24. STATIONING SHOWN FOR LIGHTING RELATED ITEMS IS APPROXIMATE AND MAY BE ADJUSTED BY THE RESIDENT IN THE FIELD. BASELINE STATIONING IS FROM PROJECT I-95-6(21).
- 25. INSTALL SERVICE AND MULTI CIRCUIT CONTROL CABINET AS SHOWN. THE CONTRACTOR SHALL ALSO INSTALL A METER DISCONNECT IN A SEPARATE NEMA 3R CABINET. CABINETS SHALL BE LOCKABLE. EACH SERVICE CABINET SHALL BE MARKED WITH ARC HAZARD TYPE 1, 2, 3 OR 4 AND THE APPROPRIATE PPE REQUIRED.
- 26. REMOVE EXISTING SERVICE AND CONTROL CABINET.

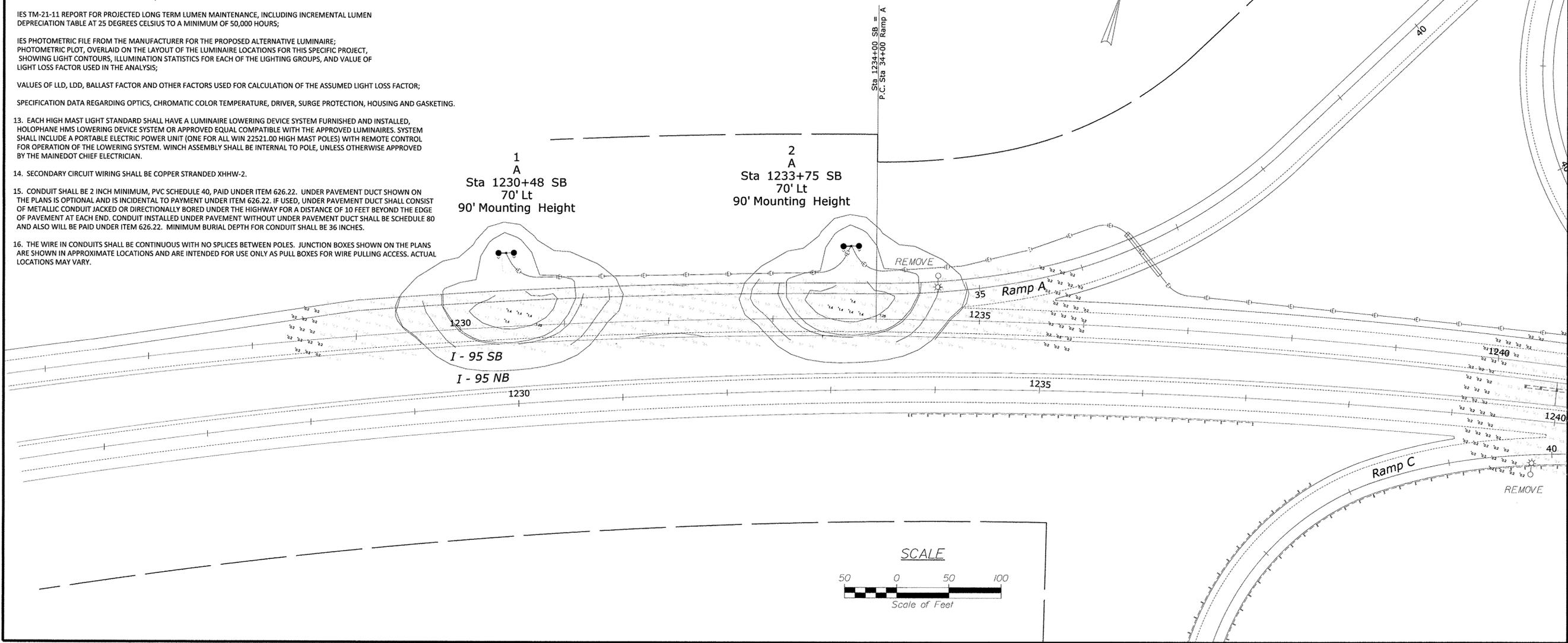
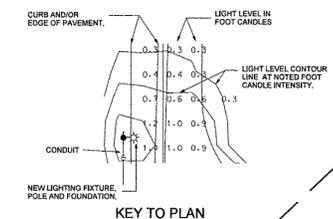
| Symbol | Label | Qty | Catalog Number | Description | Lamp | File | Lumens | LLF | Watts |
|--------|-------|-----|---------------------|--|------------|----------------------|----------|------|-------|
| | B | 2 | HMLE2 09 5K XX X AW | High Mast LED II 9 COB 5000K CCT Wide Type V | LED COB SK | HMLE2_09_5 K_XX_X_AW | Absolute | 0.85 | 1504 |
| | A | 5 | HMLE2 06 5K XX X M | High Mast LED II 6 COB 5000K CCT Type III | LED COB SK | HMLE2_06_5 K_XX_X_M | Absolute | 0.85 | 504 |

| Description | Symbol | Avg | Max | Min | Max/Min | Avg/Min |
|----------------------|--------|--------|--------|--------|---------|---------|
| I-95 SB & On Ramp A | + | 0.7 fc | 1.4 fc | 0.2 fc | 7.0:1 | 3.5:1 |
| I-95 & Ramps B, C, D | + | 0.7 fc | 1.5 fc | 0.2 fc | 7.5:1 | 3.5:1 |
| Rte 201 & Ramps A, B | + | 0.8 fc | 1.3 fc | 0.2 fc | 6.5:1 | 4.0:1 |
| Rte 201 & Ramps C, D | + | 0.8 fc | 1.3 fc | 0.2 fc | 6.5:1 | 4.0:1 |

LEGEND for LIGHTING

- Control Cabinet and Service
- Lighting Conduit
- Pull Box
- High Mast Pole with 2 HMLE2 06 5K AS G M Fixtures
- High Mast Pole with 4 HMLE2 09 5K AS G AW Fixtures
- Under Pavement Duct
- Existing Light Fixture, Pole and Foundation

Approximate Location, To Be Removed



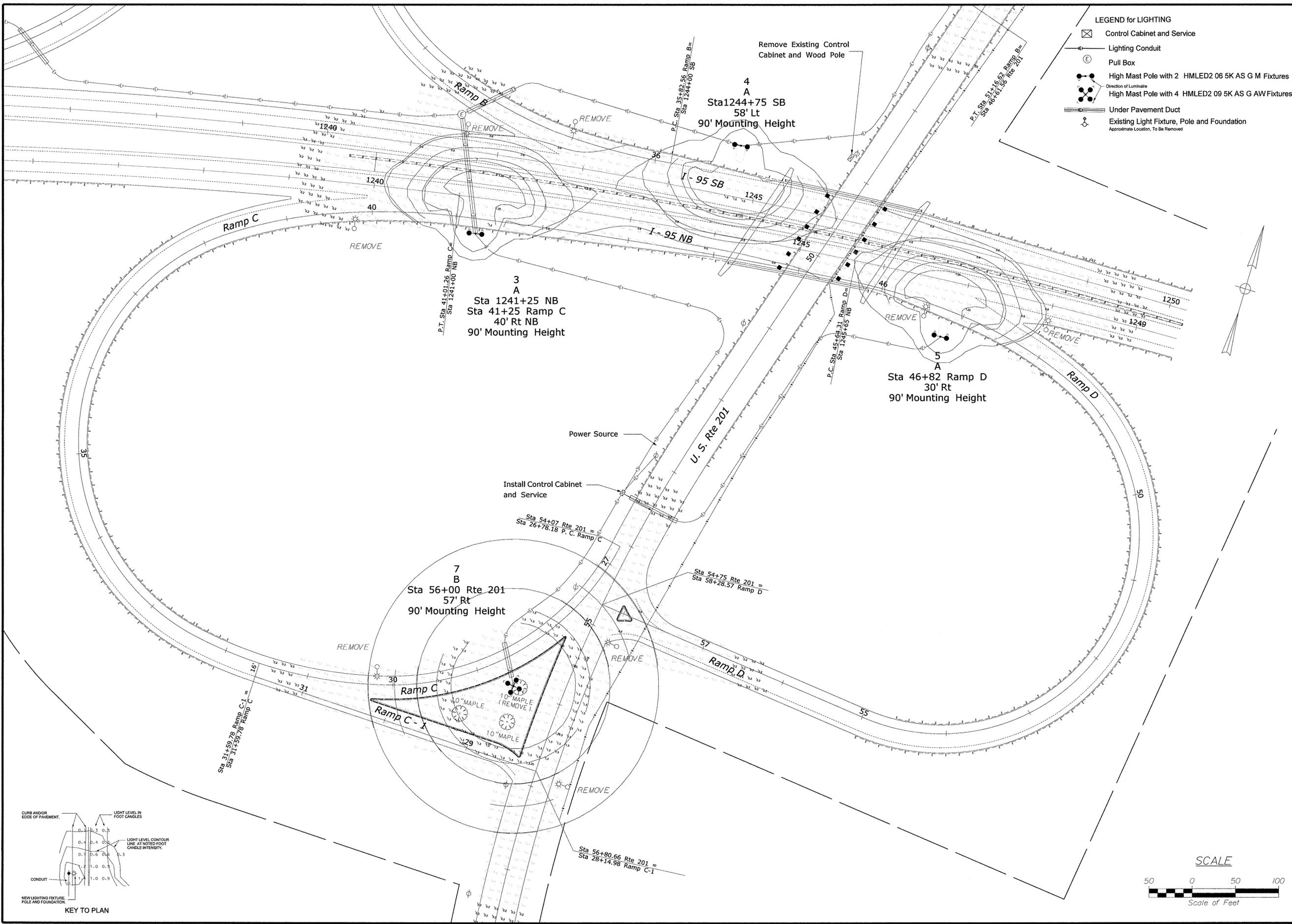
STATE OF MAINE
 DEPARTMENT OF TRANSPORTATION
 NHPP - 2252(100)
 WIN 22521.00
 HIGHWAY PLANS

PROFESSIONAL ENGINEER
 ALBERT L. GODFREY
 No. 4226
 8/27/15

DATE: 8/20/15
 BY: RAL ALC
 C. RAND: RAL ALC
 PROJ. MGR: RAL ALC
 CHECKED-REVIEWED: RAL ALC
 DESIGN-DET AILED: RAL ALC
 REVISIONS: 1, 2, 3, 4

FAIRFIELD
 I - 95 at EXIT 133
 LIGHTING PLANS

SHEET NUMBER
 2
 OF 4



LEGEND for LIGHTING

- Control Cabinet and Service
- Lighting Conduit
- Pull Box
- High Mast Pole with 2 HMLD2 06 5K AS G M Fixtures
- Direction of Luminaire
- High Mast Pole with 4 HMLD2 09 5K AS G AW Fixtures
- Under Pavement Duct
- Existing Light Fixture, Pole and Foundation
- Approximate Location, To Be Removed

STATE OF MAINE
 DEPARTMENT OF TRANSPORTATION
 NHPP - 2252(100)
 WIN 22521.00
 HIGHWAY PLANS

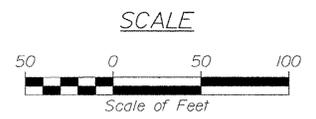
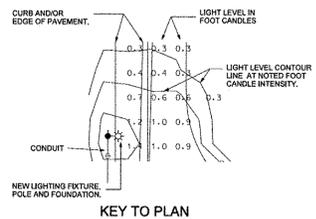


SIGNATURE: *Albert L. Godfrey*
 P.E. NUMBER: 4226
 DATE: 8/27/15

| PROJ. MANAGER | C. RAND | BY | DATE |
|------------------|---------|-----|---------|
| DESIGN-DETAILED | ALC | RAL | 8/20/15 |
| CHECKED-REVIEWED | ALC | ALC | 8/20/15 |
| DESIGN2-DETAILED | | | |
| DESIGN3-DETAILED | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

FAIRFIELD
 I - 95 at EXIT 133
 LIGHTING PLANS

SHEET NUMBER
3
 OF 4

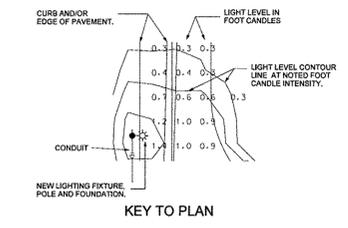
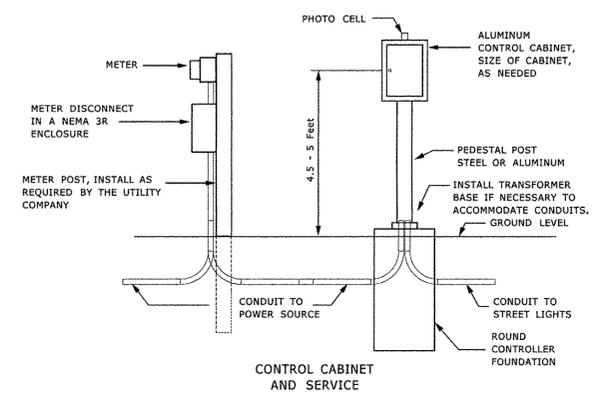
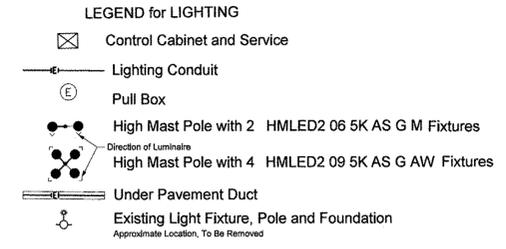
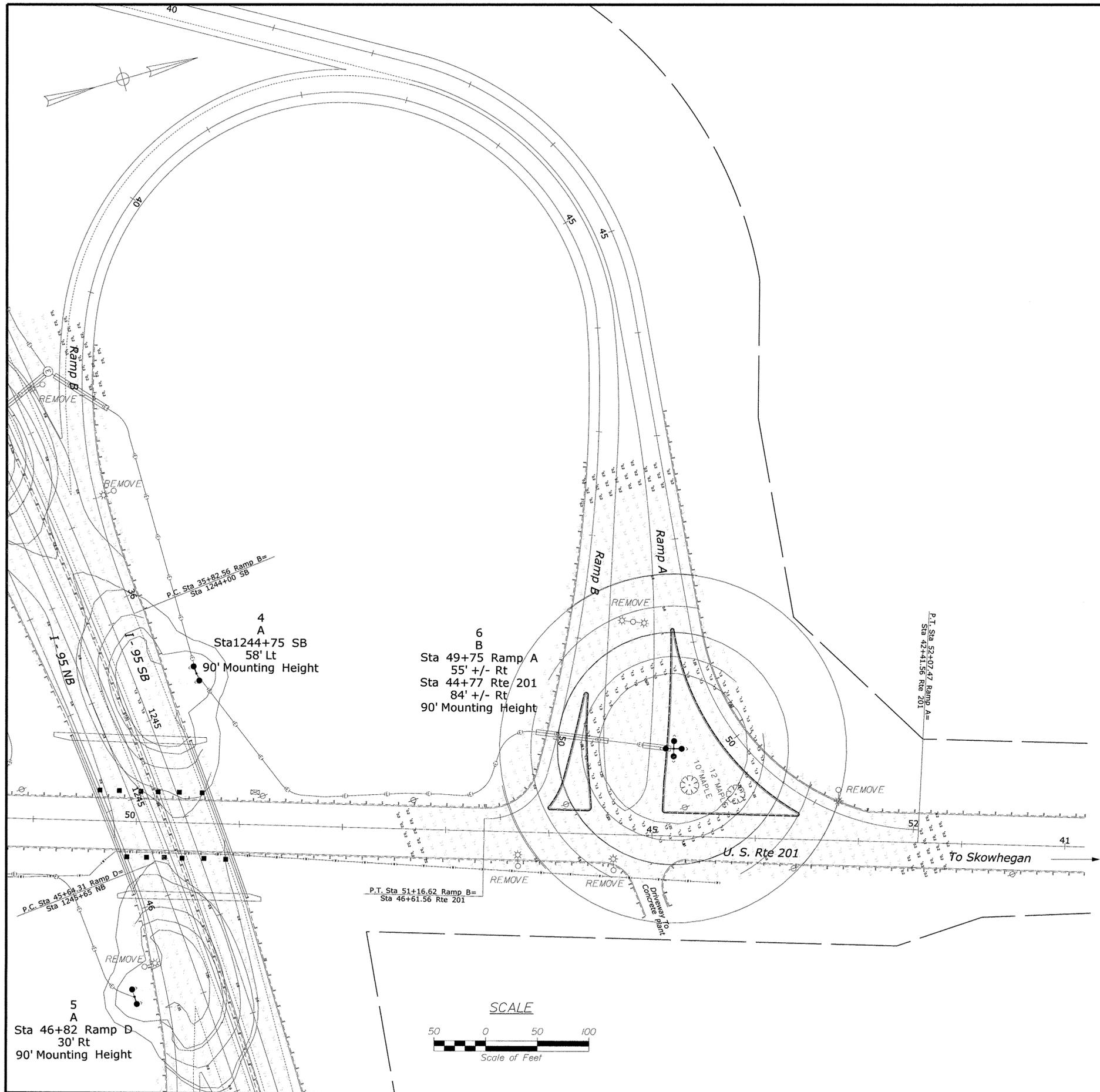


Date: 8/28/2015

Username: common

Division: HIGHWAY

Filename: ...PlanSht3.dgn



CONDUIT SUMMARY

| CIRCUIT 1 | | Distance | Wire Size Stranded Copper XHHW-2 | | Remarks |
|---------------------------|------|----------|-------------------------------------|-----|--------------------------|
| Station | Pole | | #3 | #12 | |
| 53+50 Rt, Rte 201 Service | | 280 | ✓ | | Thru Underpavement Duct* |
| 56+00 Rt, Rte 201 | 7 | | | | |
| 53+50 Rt, Rte 201 Service | | 500 | ✓ | | Thru Underpavement Duct* |
| 46+82 Rt, Ramp D | 5 | | | | |

CONDUIT SUMMARY

| CIRCUIT 2 | | Distance | Wire Size Stranded Copper XHHW-2 | | Remarks |
|---------------------------|------|----------|-------------------------------------|-----|-----------------------------|
| Station | Pole | | #3 | #12 | |
| 53+50 Rt, Rte 201 Service | | 540 | ✓ | | |
| 1241+25 NB Rt | 3 | 135 | ✓ | | Thru Underpavement Duct* |
| 1241+53 SB Lt | JB | 820 | ✓ | | Thru Underpavement Duct* |
| 1233+75 SB Lt | 2 | 355 | ✓ | | |
| 1230+55 SB Lt | 1 | | | | |
| 1241+53 SB Lt | JB | 340 | ✓ | | Thru Underpavement Duct* |
| 1244+75 SB Lt | 4 | 550 | ✓ | | Thru 2 Underpavement Ducts* |
| 44+84 Rt, Rte 201 | 6 | | | | |

(* UNDER PAVEMENT DUCT OPTIONAL)

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
NHPP - 2252(100)
WIN 22521.00
HIGHWAY PLANS

PROF. MANAGER: ALBERT L. GODDARD, No. 4226
SIGNATURE: [Signature]
P.E. NUMBER: 4226
DATE: 8/27/15

DATE: 8/2015
BY: RAL ALG
C. RAND: RAL ALG
DESIGN-DETAILED: ALG
CHECKED-REVIEWED: ALG
DESIGN-DETAILED: [Name]
REVISIONS: 1, 2, 3, 4
FIELD CHANGES

FAIRFIELD
I - 95 at EXIT 133
LIGHTING PLANS

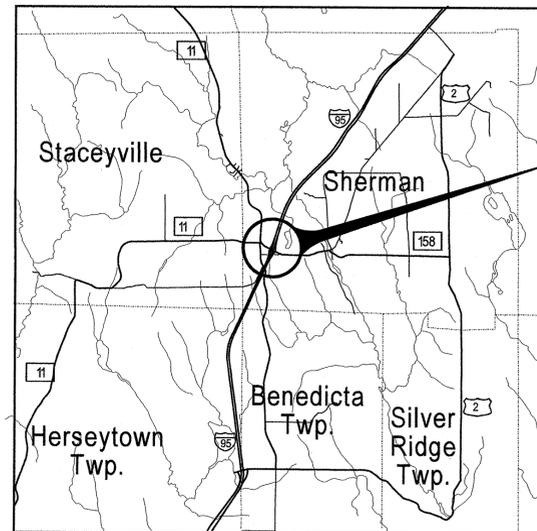
SHEET NUMBER
4
OF 4

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION



SHERMAN
AROOSTOOK COUNTY
I - 95 at EXIT 264
NHPP - 2252(200)
Highway Lighting

| INDEX OF SHEETS | |
|-------------------|-----------|
| Description | Sheet No. |
| Title Sheet | 1 |
| Plans and Details | 2 - 4 |



Project Area
Sherman
EXIT 264
NHPP - 2252(200)

| | | |
|--|------------------------------------|--------|
| STATE OF MAINE DEPARTMENT OF TRANSPORTATION | APPROVED | DATE |
| | COMMISSIONER: <i>[Signature]</i> | 9/4/15 |
| | CHIEF ENGINEER: <i>[Signature]</i> | 9-4-15 |

| | | |
|--|-------------|---------|
| | SIGNATURE | DATE |
| | 4226 | 8/25/15 |
| | P.E. NUMBER | |

| PROJECT INFORMATION | |
|-------------------------|---------------------------|
| PROGRAM | MULTIMODAL |
| PROJECT MANAGER | C. BARD |
| DESIGNER | AL GODFREY - R. LETTENET |
| CONSULTANT | TERRA MAGNA SERVICES, INC |
| PROJECT RESIDENT | |
| CONTRACTOR | |
| PROJECT COMPLETION DATE | |

NHPP - 2252(200) WIN 22522.00

| |
|-------------------------------|
| SHERMAN I - 95 at EXIT 264 |
| TITLE SHEET |

PROGRAM AREA: MULTIMODAL
SCOPE OF WORK: HIGHWAY LIGHTING
HIGH MAST LIGHT POLES
FOUNDATIONS
LED LUMINAIRES
CONDUIT

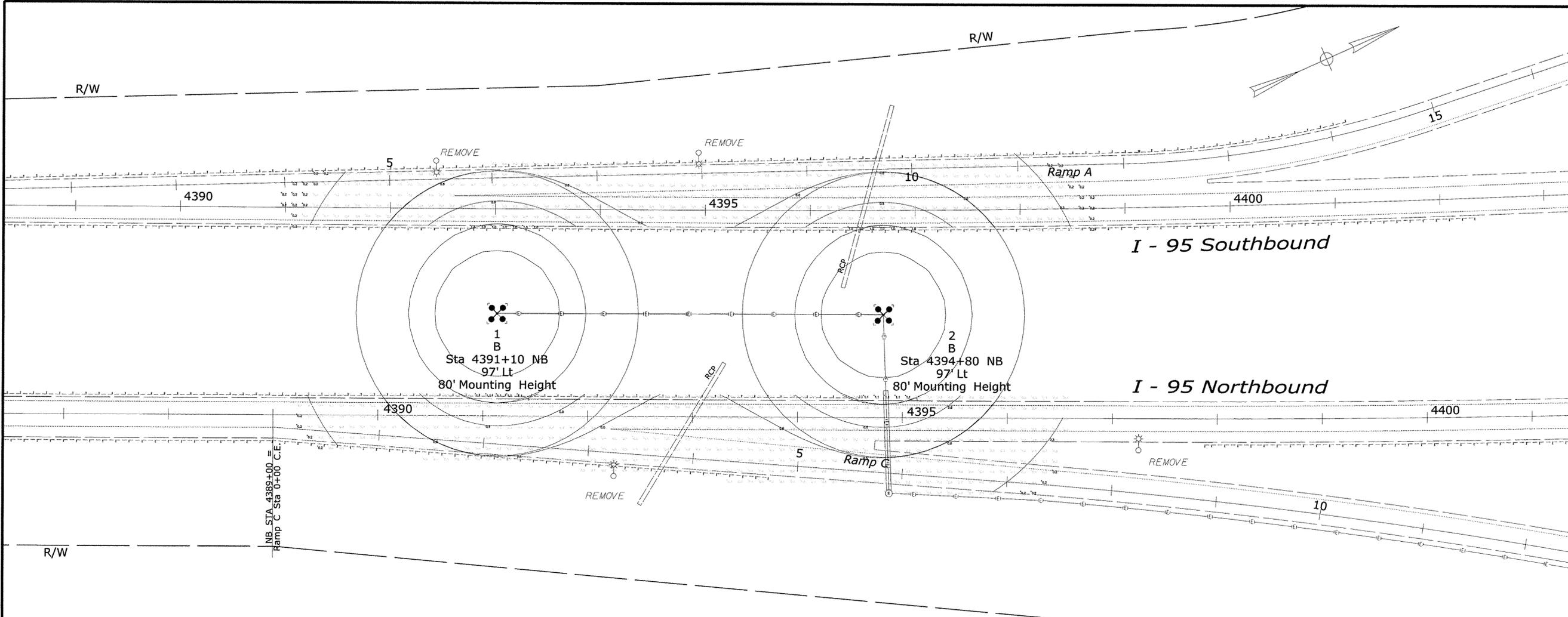
| |
|--------------|
| SHEET NUMBER |
| 1 |
| OF 4 |

Date: 8/27/2015

Username: common

Division: HIGHWAY

Filename: ... \PlanSht1.dgn



LEGEND for LIGHTING

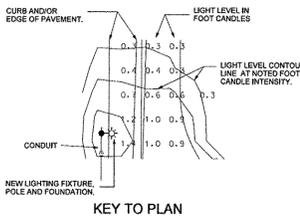
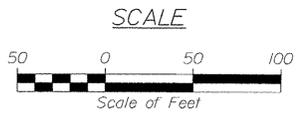
- Control Cabinet and Service
- Lighting Conduit
- Pull Box
- High Mast Pole with 2 HMLE2D 06 5K AS G M Fixtures
- High Mast Pole with 4 HMLE2D 06 5K AS G AW Fixtures or HMLE2D 09 5K AS G AW Fixtures
- Under Pavement Duct
- Existing Light Fixture, Pole and Foundation

| STATISTICS | | | | | | |
|-----------------------|--------|--------|--------|--------|---------|---------|
| Description | Symbol | Avg | Max | Min | Max/Min | Avg/Min |
| I-95 NB On Ramp D | + | 0.6 fc | 1.1 fc | 0.2 fc | 5.5:1 | 3.0:1 |
| I-95 SB & Off Ramp C | + | 0.6 fc | 1.1 fc | 0.2 fc | 5.5:1 | 3.0:1 |
| I-95 SB & On Ramp A | + | 0.6 fc | 1.0 fc | 0.2 fc | 5.0:1 | 3.0:1 |
| I-95 SB Off Ramp B | + | 0.6 fc | 1.1 fc | 0.3 fc | 3.7:1 | 2.0:1 |
| Rte 158 & Ramps A - B | + | 0.6 fc | 1.3 fc | 0.2 fc | 6.5:1 | 3.0:1 |
| Rte 158 & Ramps C - D | + | 0.6 fc | 1.4 fc | 0.2 fc | 7.0:1 | 3.0:1 |

| LUMINAIRE SCHEDULE | | | | | | | |
|--------------------|-------|-----|----------------------|--|------------|-----------------------|-------|
| Symbol | Label | Qty | Catalog Number | Description | Lamp | File | Watts |
| A | 1 | 1 | HMLE2D 09 5K XX X AW | High Mast LED II 9 COB 5000K CCT Wide Type V | LED COB 5K | HMLE2D_09_5_K_XX_X_AW | 1504 |
| B | 3 | 3 | HMLE2D 06 5K XX X AW | High Mast LED II 6 COB 5000K CCT Wide Type V | LED COB 5K | HMLE2D_06_5_K_XX_X_AW | 1008 |
| C | 2 | 2 | HMLE2D 06 5K XX X M | High Mast LED II 6 COB 5000K CCT Type II | LED COB 5K | HMLE2D_06_5_K_XX_X_M | 504 |

GENERAL NOTES - HIGHWAY LIGHTING

- SCOPE OF WORK - INSTALL HIGHWAY LIGHTING AS SHOWN ON THIS PLAN. INSTALL NEW CONDUIT, WIRING, FOUNDATIONS, HIGH MAST POLES AND LOWERING DEVICES, HIGH MAST L.E.D. LUMINAIRES AND RELATED HARDWARE. INSTALL NEW LIGHTING SERVICE CABINET.
- EXISTING INTERCHANGE LIGHTING SHALL REMAIN ACTIVE UNTIL THE NEW LIGHTING SYSTEM IS APPROVED BY MAINE DOT TO BE ACTIVATED.
- EXISTING LIGHT POLES AND LUMINAIRES SHALL BE CAREFULLY REMOVED AND DELIVERED TO MAINE DOT AFTER ACTIVATION OF THE NEW SYSTEM. EXISTING FOUNDATIONS SHALL BE REMOVED AS DIRECTED. ABANDON EXISTING CONDUIT.
- ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO APPLICABLE PROVISIONS OF THE MAINE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AND STANDARD DETAILS, NATIONAL ELECTRICAL CODE AND ANY REQUIREMENTS OF THE POWER COMPANY.
- THE CONTRACTOR SHALL FIELD VERIFY POLE LOCATIONS TO AVOID NATURAL AND BUILT SITE FEATURES THAT WOULD CONFLICT WITH PROPER INSTALLATION OF POLE FOUNDATIONS.
- THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING TO ENSURE AWARENESS OF SITE CONDITIONS THAT COULD AFFECT THE BID.
- ALL LIGHTING CIRCUITS ARE TO BE PHOTOCELL ACTIVATED BY PHOTOCELL ON CONTROL CABINET.
- LIGHTING FIXTURE VOLTAGE SHALL BE 240 VOLTS.
- LIGHTING FIXTURES SHALL BE IES FULL CUTOFF, LIGHT EMITTING DIODE (LED) FIXTURES, IES DISTRIBUTION TYPE 2 AND TYPE 5. LED MODULES SHALL BE IP66 RATED.
- INSTALL LIGHTING FIXTURES ON HIGH MAST POLES AT AN ELEVATION ABOVE THE PAVEMENT INDICATED ON THE PLANS. POLES SHALL BE GALVANIZED STEEL. POLES SHALL HAVE A MINIMUM OF SIX ANCHOR BOLTS.
- ALL FIXTURES SHALL BE GASKETED AND HAVE SURGE PROTECTION AND A DOUBLE FUSE KIT. ALL FIXTURES SHALL BE GRAY. THE LIGHTING LAYOUT WAS DONE USING HOLOPHANE HIGH MAST LED LUMINAIRES, CATALOG NUMBERS:
HMLE2D 06 5K AS G M; 4 LUMINAIRES ON 2 POLES
HMLE2D 09 5K AS G AW; 4 LUMINAIRES ON 1 POLE
HMLE2D 06 5K AS G AW; 12 LUMINAIRES ON 3 POLES
- LED COLOR TEMPERATURE FOR FIXTURES INSTALLED SHALL BE 5000K. IF DIFFERENT FIXTURES ARE PROPOSED, THEY SHALL BE IES FULL CUTOFF, TYPE 2 AND TYPE 5 IES DISTRIBUTION, LED LUMINAIRES. THE CONTRACTOR MUST DEMONSTRATE THAT THE PROPOSED FIXTURES WILL REASONABLY EQUAL THE LIGHT LEVELS AND DISTRIBUTIONS SHOWN ON THE PLANS, IN THE OPINION OF MAINE DOT.
- EVALUATION BY MAINE DOT OF ALTERNATIVE LED LUMINAIRE THAT MAY BE PROPOSED FOR SUBSTITUTION WILL REQUIRE SUBMITTAL OF THE FOLLOWING, AT MINIMUM:
IES LM-79-08 ABSOLUTE TESTING REPORT FOR THE PROPOSED ALTERNATIVE LUMINAIRE;
IES LM-80-15 TESTING REPORT FOR LED CHIPS TO BE USED IN THE ALTERNATIVE LUMINAIRE, DOCUMENTING TESTING FOR A MINIMUM OF 8500 HOURS;
IES TM-21-11 REPORT FOR PROJECTED LONG TERM LUMEN MAINTENANCE, INCLUDING INCREMENTAL LUMEN DEPRECIATION TABLE AT 25 DEGREES CELSIUS TO A MINIMUM OF 50,000 HOURS;
IES PHOTOMETRIC FILE FROM THE MANUFACTURER FOR THE PROPOSED ALTERNATIVE LUMINAIRE;
PHOTOMETRIC PLOT, OVERLAID ON THE LAYOUT OF THE LUMINAIRE LOCATIONS FOR THIS SPECIFIC PROJECT, SHOWING LIGHT CONTOURS, ILLUMINATION STATISTICS FOR EACH OF THE LIGHTING GROUPS, AND VALUE OF LIGHT LOSS FACTOR USED IN THE ANALYSIS; VALUES OF LLD, LDD, BALLAST FACTOR AND OTHER FACTORS USED FOR CALCULATION OF THE ASSUMED LIGHT LOSS FACTOR; SPECIFICATION DATA REGARDING OPTICS, CHROMATIC COLOR TEMPERATURE, DRIVER, SURGE PROTECTION, HOUSING AND GASKETING.
- EACH HIGH MAST LIGHT STANDARD SHALL HAVE A LUMINAIRE LOWERING DEVICE SYSTEM FURNISHED AND INSTALLED, HOLOPHANE HMS LOWERING DEVICE SYSTEM OR APPROVED EQUAL COMPATIBLE WITH THE APPROVED LUMINAIRES. SYSTEM SHALL INCLUDE A PORTABLE ELECTRIC POWER UNIT (ONE FOR ALL WIN 22522.00 HIGH MAST POLES) WITH REMOTE CONTROL FOR OPERATION OF THE LOWERING SYSTEM. WINCH ASSEMBLY SHALL BE INTERNAL TO POLE, UNLESS OTHERWISE APPROVED BY THE MAINE DOT CHIEF ELECTRICIAN.
- SECONDARY CIRCUIT WIRING SHALL BE COPPER STRANDED XHHW-2.
- CONDUIT SHALL BE 2 INCH MINIMUM, PVC SCHEDULE 40, PAID UNDER ITEM 626.22. UNDER PAVEMENT DUCT SHOWN ON THE PLANS IS OPTIONAL AND IS INCIDENTAL TO PAYMENT UNDER ITEM 626.22. IF USED, UNDER PAVEMENT DUCT SHALL CONSIST OF METALLIC CONDUIT JACKED OR DIRECTIONALLY BORED UNDER THE HIGHWAY FOR A DISTANCE OF 10 FEET BEYOND THE EDGE OF PAVEMENT AT EACH END. CONDUIT INSTALLED UNDER PAVEMENT WITHOUT UNDER PAVEMENT DUCT SHALL BE SCHEDULE 80 AND ALSO WILL BE PAID UNDER ITEM 626.22. MINIMUM BURIAL DEPTH FOR CONDUIT SHALL BE 36 INCHES.
- THE WIRE IN CONDUITS SHALL BE CONTINUOUS WITH NO SPLICES BETWEEN POLES. JUNCTION BOXES SHOWN ON THE PLANS ARE SHOWN IN APPROXIMATE LOCATIONS AND ARE INTENDED FOR USE ONLY AS PULL BOXES FOR WIRE PULLING ACCESS. ACTUAL LOCATIONS MAY VARY.
- UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR SHALL FURNISH TO MAINE DOT A SET OF AS-BUILT PLANS FOR FUTURE REFERENCE AND SYSTEM MAINTENANCE.
- IF STRUCTURAL ROCK IS ENCOUNTERED DURING INSTALLATION OF FOUNDATIONS, PAYMENT FOR EXCAVATION AND DOWELING REINFORCING INTO ROCK SHALL BE CONSIDERED INCIDENTAL TO FOUNDATION ITEMS.
- PAYMENT UNDER ITEM NO. 634.207, HIGH MAST LIGHT STANDARD, SHALL INCLUDE THE LUMINAIRE LOWERING DEVICE SYSTEM.
- PAYMENT UNDER ITEM 634.16, HIGHWAY LIGHTING, WILL INCLUDE ALL MATERIALS, LABOR AND EQUIPMENT NECESSARY TO PROVIDE A FULLY FUNCTIONING HIGHWAY LIGHTING SYSTEM, EXCEPT THOSE ITEMS TO BE PAID UNDER OTHER RELATED BID ITEMS IN THE CONTRACT.
- ALL LIGHT BASES SHALL HAVE A GROUND ROD LOCATED IN THE FOUNDATION THAT IS BONDED TO THE GROUNDING CONDUCTOR. PAYMENT FOR THE GROUND ROD SHALL BE INCLUDED IN ITEM 634.16, HIGHWAY LIGHTING.
- ALL CLEARING REQUIRED FOR THIS PROJECT WILL BE INCIDENTAL TO THE CONTRACT.
- FOUNDATIONS FOR HIGH MAST LIGHTING SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER LICENSED IN MAINE. THE CONTRACTOR SHALL PROVIDE THE FOUNDATION DESIGN TO MAINE DOT FOR APPROVAL. ASSUMED VALUE OF PHI SHALL BE 28 DEGREES. PAYMENT FOR FOUNDATIONS WILL BE MADE UNDER ITEM NO. 626.37, SPECIAL FOUNDATION. FOUNDATION DESIGN WILL BE INCIDENTAL TO PAYMENT UNDER THAT PAY ITEM.
- STATIONING SHOWN FOR LIGHTING RELATED ITEMS IS APPROXIMATE AND MAY BE ADJUSTED BY THE RESIDENT IN THE FIELD. BASELINE STATIONING IS FROM PROJECT I-95-9(34).
- INSTALL SERVICE AND MULTI CIRCUIT CONTROL CABINET AS SHOWN. THE CONTRACTOR SHALL ALSO INSTALL A METER DISCONNECT IN A SEPARATE NEMA 3R CABINET. CABINETS SHALL BE LOCKABLE. EACH SERVICE CABINET SHALL BE MARKED WITH ARC HAZARD TYPE 1, 2, 3 OR 4 AND THE APPROPRIATE PPE REQUIRED.
- REMOVE EXISTING SERVICE AND CONTROL CABINET.

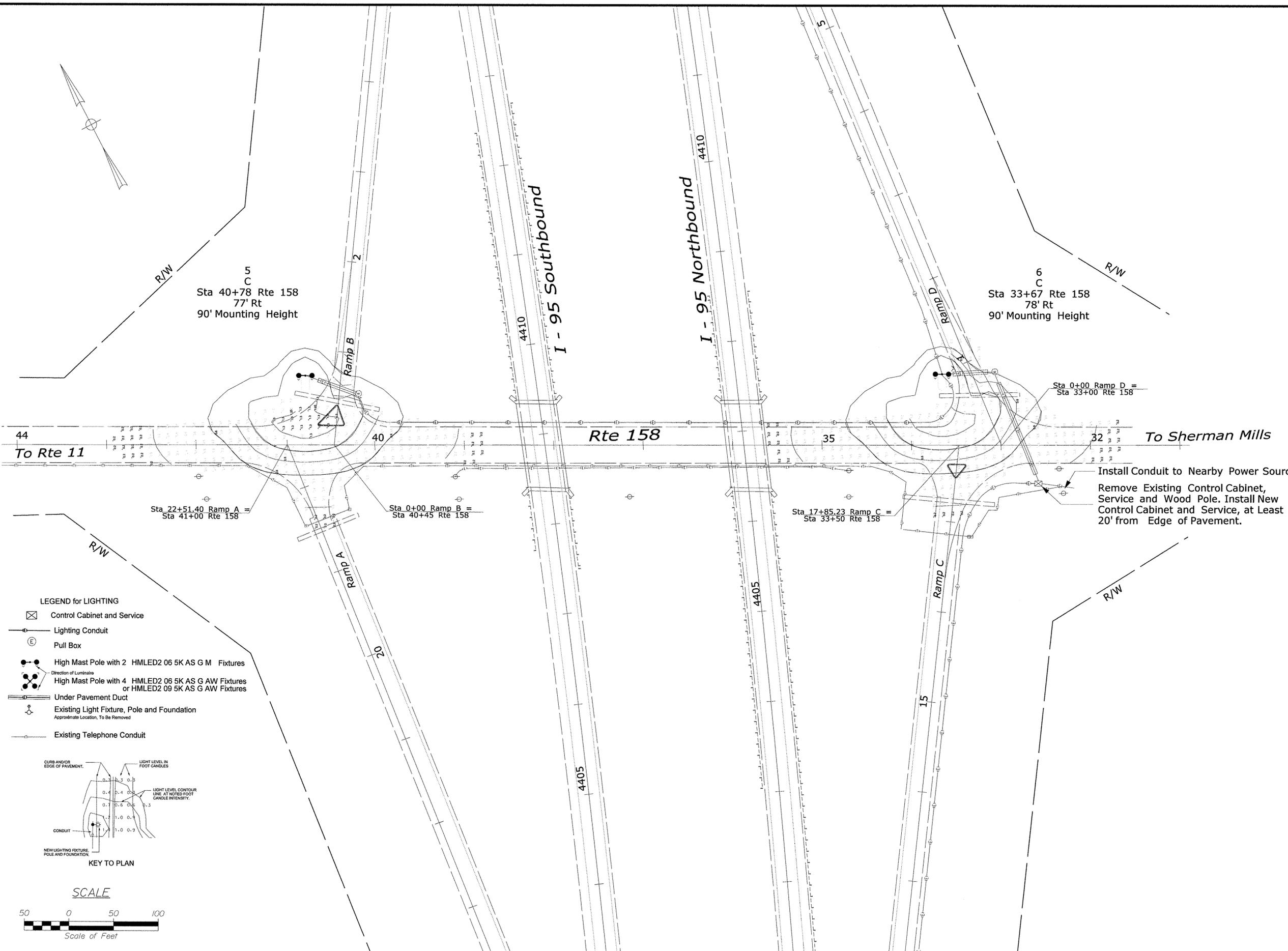
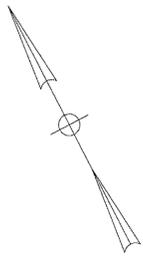


STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
NHP - 2252(200)
WIN
22522.00
HIGHWAY PLANS

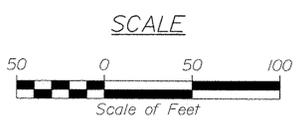
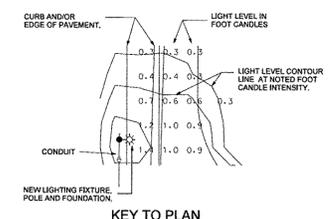
| | | | |
|------------------|--------|-----|---------|
| PROJ. MANAGER | DATE | BY | C. RAMP |
| DESIGN-DETAILED | 8/2015 | RAL | ALC |
| CHECKED-REVIEWED | 8/2015 | ALC | ALC |
| DESIGN-DETAILED | | | |
| DESIGN-DETAILED | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SHERMAN
I - 95 at EXIT 264
LIGHTING PLANS

SHEET NUMBER
2
OF 4



- LEGEND for LIGHTING**
- Control Cabinet and Service
 - Lighting Conduit
 - Pull Box
 - High Mast Pole with 2 HMLE2D 06 5K AS G M Fixtures
 - High Mast Pole with 4 HMLE2D 06 5K AS G AW Fixtures or HMLE2D 09 5K AS G AW Fixtures
 - Under Pavement Duct
 - Existing Light Fixture, Pole and Foundation
Approximate Location, To Be Removed
 - Existing Telephone Conduit



Install Conduit to Nearby Power Source
Remove Existing Control Cabinet, Service and Wood Pole. Install New Control Cabinet and Service, at Least 20' from Edge of Pavement.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
NHPP - 2252(200)
WIN
22522.00
HIGHWAY PLANS

SIGNATURE
P. E. NUMBER
DATE

| PROJ. MANAGER | C. PRAD | BY | DATE |
|------------------|---------|--------|---------|
| DESIGN-DETAILED | A.L.G. | BAL | 8/20/15 |
| CHECKED-REVIEWED | A.L.G. | A.L.G. | 8/20/15 |
| DESIGN-DETAILED | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

SHERMAN
I - 95 at EXIT 264
LIGHTING PLANS

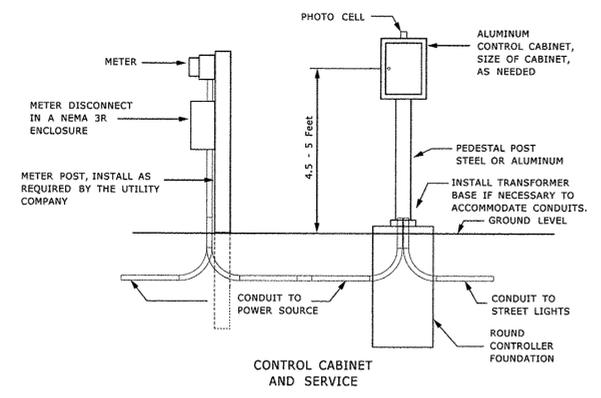
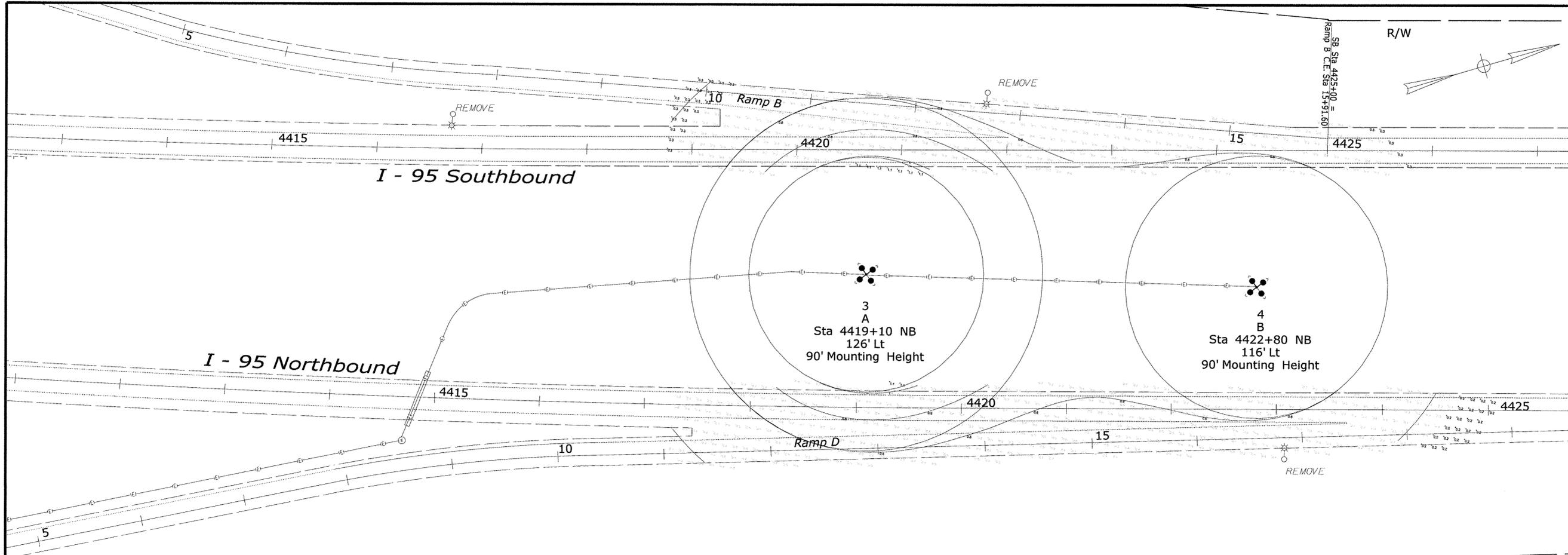
SHEET NUMBER
3
OF 4

Date: 8/28/2015

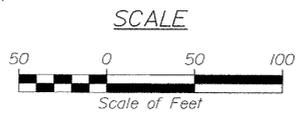
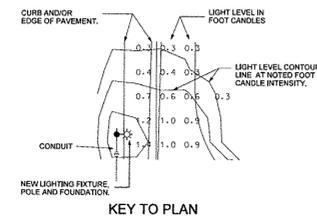
Username: common

Division: HIGHWAY

Filename: ... \PlanSh3.dgn



- LEGEND for LIGHTING**
- ☒ Control Cabinet and Service
 - Lighting Conduit
 - ⊕ Pull Box
 - High Mast Pole with 2 HMLE2 06 5K AS G M Fixtures
 - ⊙ Direction of Luminaire
 - High Mast Pole with 4 HMLE2 06 5K AS G AW Fixtures or HMLE2 09 5K AS G AW Fixtures
 - Under Pavement Duct
 - ⊗ Existing Light Fixture, Pole and Foundation
 - ⊗ Approximate Location, To Be Removed



CONDUIT SUMMARY

| CIRCUIT 1 | | | Wire Size Stranded Copper XHHW-2 | | Remarks | 14.4 amps |
|------------------|---------|----------|-------------------------------------|--|-----------------------------|-----------|
| Station | Pole | Distance | #4 | | | |
| 32+60 Lt Rte 158 | Service | 190 | ✓ | | Thru 2 Underpavement Ducts* | |
| 33+67 Rt Rte 158 | 6 | 1290 | ✓ | | Thru Underpavement Duct* | |
| 4419+10 NB Lt | 3 | 370 | ✓ | | | |
| 4422+80 NB Lt | 4 | | | | | |
| 33+67 Rt Rte 158 | 6 | 790 | ✓ | | Thru Underpavement Duct* | |
| 40+78 Rt Rte 158 | 5 | | | | | |

CONDUIT SUMMARY

| CIRCUIT 2 | | | Wire Size Stranded Copper XHHW-2 | | Remarks | 8 amps |
|------------------|---------|----------|-------------------------------------|--|--------------------------|--------|
| Station | Pole | Distance | #4 | | | |
| 32+60 Lt Rte 158 | Service | 1380 | ✓ | | Thru Underpavement Duct* | |
| 4394+80 NB Lt | 2 | 370 | ✓ | | | |
| 4391+10 NB Lt | 1 | | | | | |

(* UNDER PAVEMENT DUCT OPTIONAL)

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
NHPP - 2252(200)
WIN 22522.00
HIGHWAY PLANS

PROF. SEAL
ALBERT L. GODFREY
No. 4226
LICENSED PROFESSIONAL ENGINEER

SIGNATURE
P.E. NUMBER
DATE

| PROJ. MANAGER | DATE | BY | C. RAND | REVISIONS | FIELD CHANGES |
|-------------------|---------|-----|---------|-----------|---------------|
| DESIGN-DETAILED | 8/20/15 | RAL | ALC | | |
| CHECKED-REVIEWED | 8/20/15 | ALC | | | |
| DESIGN-2-DETAILED | | | | | |
| DESIGN-3-DETAILED | | | | | |
| REVISIONS 1 | | | | | |
| REVISIONS 2 | | | | | |
| REVISIONS 3 | | | | | |
| REVISIONS 4 | | | | | |

SHERMAN
I - 95 at EXIT 264
LIGHTING PLANS

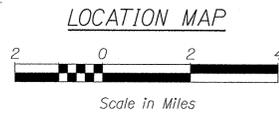
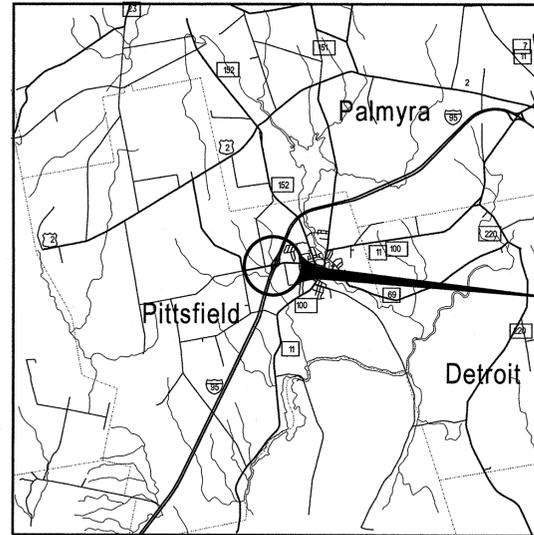
SHEET NUMBER
4
OF 4

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION



PITTSFIELD
SOMERSET COUNTY
I - 95 at EXIT 150
NHPP - 2269(700)
Highway Lighting

| INDEX OF SHEETS | |
|-------------------|-----------|
| Description | Sheet No. |
| Title Sheet | 1 |
| Plans and Details | 2 - 4 |



Project Area
Pittsfield
EXIT 150
NHPP - 2269(700)

NHPP - 2269(700) WIN 22697.00

PITTSFIELD
I - 95 at EXIT 150

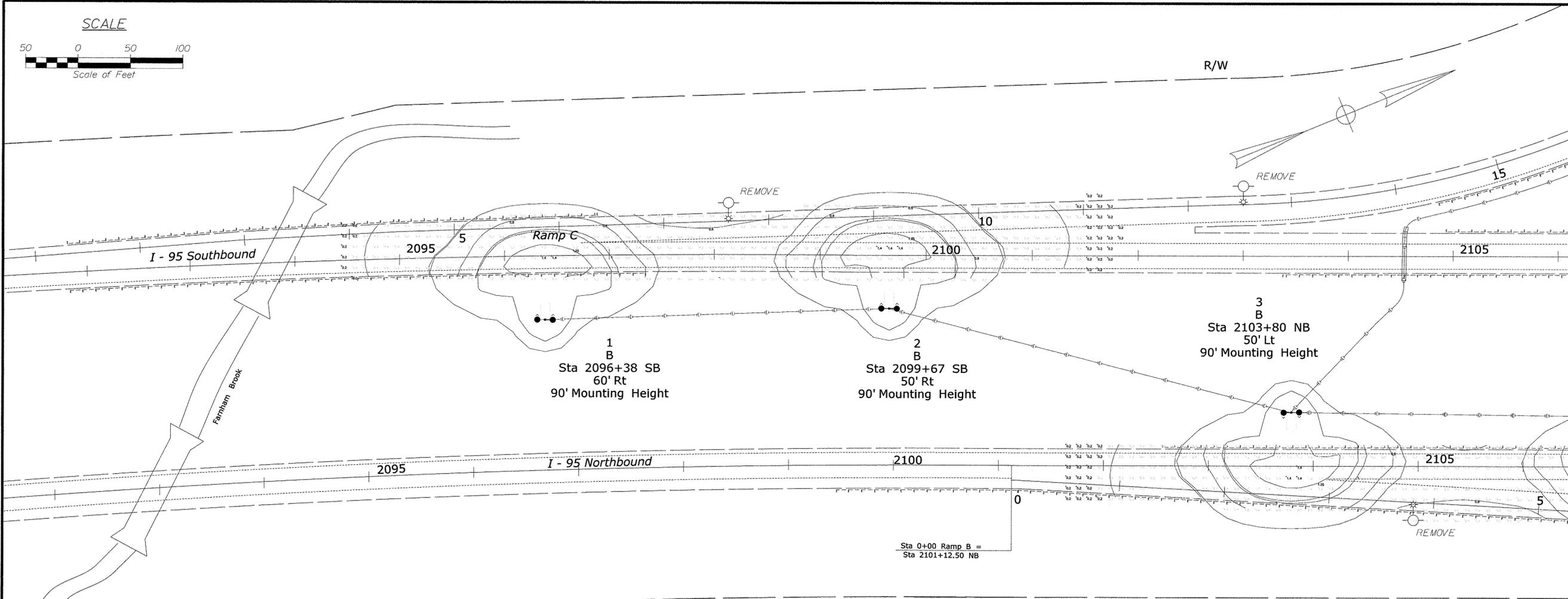
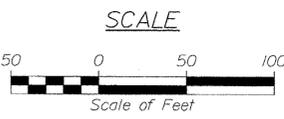
TITLE SHEET

PROGRAM AREA: MULTIMODAL
SCOPE OF WORK: HIGHWAY LIGHTING
HIGH MAST LIGHT POLES
FOUNDATIONS
LED LUMINAIRES
CONDUIT

SHEET NUMBER
1
OF 4

| STATE OF MAINE DEPARTMENT OF TRANSPORTATION | |
|--|---------------------|
| APPROVED | DATE |
| COMMISSIONER: <i>Raye Noel Taylor</i> | 9/4/15 |
| CHIEF ENGINEER: | 9-4-15 |
| | |
| SIGNATURE: <i>Albert L. Godfrey</i> | DATE |
| 4226 | 8/25/15 |
| P.E. NUMBER | |
| TERRA MAGNA SERVICES, INC | |
| CONSULTANT | |
| PROJECT RESIDENT | |
| CONTRACTOR | |
| PROJECT COMPLETION DATE | |
| PROGRAM | PROJECT INFORMATION |
| TRAFFIC | |
| C. BAND | |
| AL GODFREY - R. LETTENY | |
| DESIGNER | |

Date: 8/28/2015
 Username: common
 Division: HIGHWAY
 Filename: ... \PlanSht1.dgn



STATE OF MAINE
 DEPARTMENT OF TRANSPORTATION
 NHPP - 2269(700)
 WIN 22697.00
 HIGHWAY PLANS

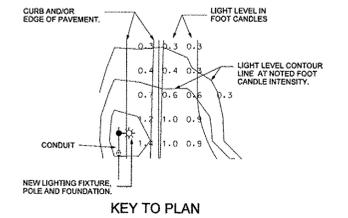
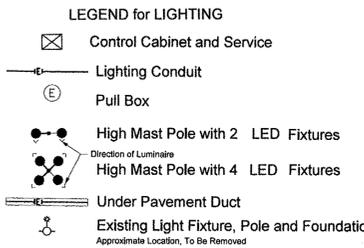
SIGNATURE: [Signature]
 P.E. NUMBER: 4226
 DATE: 8/27/15

PROFESSIONAL ENGINEER
 LICENSE NO. 4226

| PROJ. MANAGER | DATE | BY | C. BAND |
|------------------|---------|-----|---------|
| DESIGN-DETAILED | 8/20/15 | RAL | ALC |
| CHECKED-REVIEWED | 8/20/15 | ALC | ALC |
| DESIGN-DETAILED | | | |
| DESIGN-DETAILED | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

PITTSFIELD
 I - 95 at EXIT 150
 LIGHTING PLANS

SHEET NUMBER
 2
 OF 4



STATISTICS

| Description | Symbol | Avg | Max | Min | Max/Min | Avg/Min |
|--------------------------|--------|--------|--------|--------|---------|---------|
| I-95 NB & Off Ramp B | + | 0.7 fc | 1.4 fc | 0.2 fc | 7.0:1 | 3.5:1 |
| I-95 NB & On Ramp A | + | 0.6 fc | 1.1 fc | 0.2 fc | 5.5:1 | 3.0:1 |
| I-95 SB & Off Ramp D | + | 0.6 fc | 1.1 fc | 0.2 fc | 5.5:1 | 3.0:1 |
| I-95 SB & On Ramp C | + | 0.7 fc | 1.4 fc | 0.2 fc | 7.0:1 | 3.5:1 |
| Somerset Ave & Ramps A-B | + | 0.6 fc | 1.4 fc | 0.2 fc | 7.0:1 | 3.0:1 |
| Somerset Ave & Ramps C-D | + | 0.6 fc | 1.4 fc | 0.2 fc | 7.0:1 | 3.0:1 |

LUMINAIRE SCHEDULE

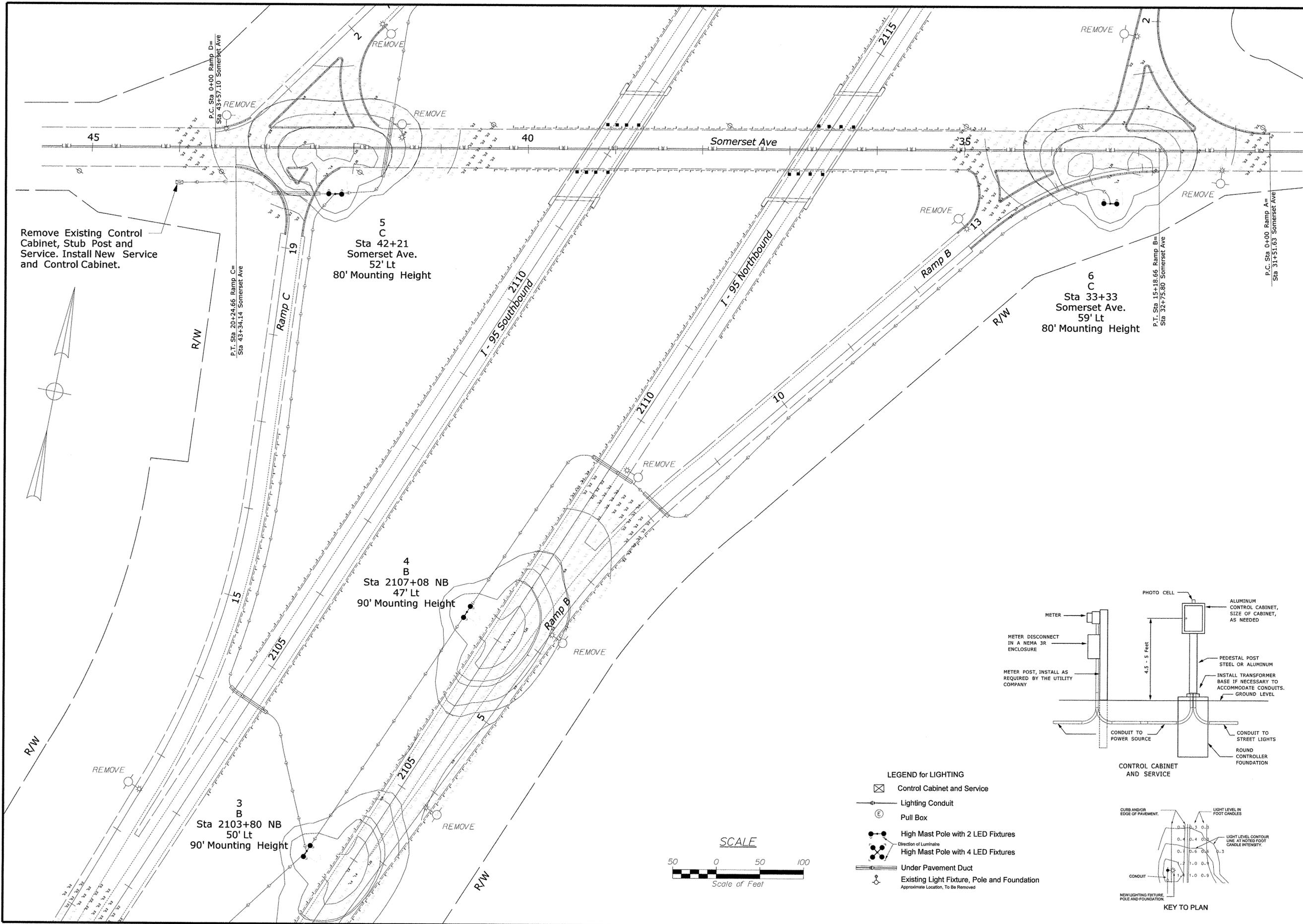
| Symbol | Label | Qty | Catalog Number | Description | Lamp | File | Lumens | LLF | Watts |
|--------|-------|-----|---------------------|---|------------|---------------------------|----------|------|-------|
| | A | 2 | HMLED2 06 SK XX XAW | High Mast LED II 6 COB 5000K CCT Wide Type V | LED COB SK | HMLED2_06_5 K_XX_X_AW.lvs | Absolute | 0.85 | 1008 |
| | B | 4 | HMLED2 06 SK XX XM | High Mast LED II 6 COB 5000K CCT Type III | LED COB SK | HMLED2_06_5 K_XX_X_M.lvs | Absolute | 0.85 | 504 |
| | C | 2 | HMLED2 06 SK XX XF | High Mast LED II 6 COB 5000K CCT Narrow Type IV | LED COB SK | HMLED2_06_5 K_XX_X_F.lvs | Absolute | 0.85 | 504 |

GENERAL NOTES - HIGHWAY LIGHTING

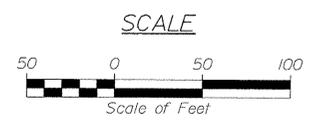
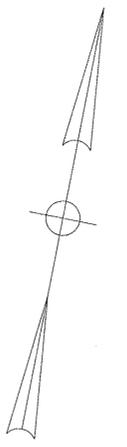
- SCOPE OF WORK - INSTALL HIGHWAY LIGHTING AS SHOWN ON THIS PLAN. INSTALL NEW CONDUIT, WIRING, FOUNDATIONS, HIGH MAST POLES AND LOWERING DEVICES, HIGH MAST L.E.D. LUMINAIRES AND RELATED HARDWARE. INSTALL NEW LIGHTING SERVICE CABINET.
- EXISTING INTERCHANGE LIGHTING SHALL REMAIN ACTIVE UNTIL THE NEW LIGHTING SYSTEM IS APPROVED BY MAINE DOT TO BE ACTIVATED.
- EXISTING LIGHT POLES AND LUMINAIRES SHALL BE CAREFULLY REMOVED AND DELIVERED TO MAINE DOT AFTER ACTIVATION OF THE NEW SYSTEM. EXISTING FOUNDATIONS SHALL BE REMOVED AS DIRECTED. ABANDON EXISTING CONDUIT.
- ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO APPLICABLE PROVISIONS OF THE MAINE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AND STANDARD DETAILS, NATIONAL ELECTRICAL CODE AND ANY REQUIREMENTS OF THE POWER COMPANY.
- THE CONTRACTOR SHALL FIELD VERIFY POLE LOCATIONS TO AVOID NATURAL AND BUILT SITE FEATURES THAT WOULD CONFLICT WITH PROPER INSTALLATION OF POLE FOUNDATIONS.
- THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING TO ENSURE AWARENESS OF SITE CONDITIONS THAT COULD AFFECT THE BID.
- ALL LIGHTING CIRCUITS ARE TO BE PHOTOCELL ACTIVATED BY PHOTOCELL ON CONTROL CABINET.
- LIGHTING FIXTURE VOLTAGE SHALL BE 240 VOLTS.
- LIGHTING FIXTURES SHALL BE IES FULL CUTOFF, LIGHT EMITTING DIODE (LED) FIXTURES, IES DISTRIBUTION TYPE 3, TYPE 4 AND TYPE 5. LED MODULES SHALL BE IP66 RATED.
- INSTALL LIGHTING FIXTURES ON HIGH MAST POLES AT AN ELEVATION ABOVE THE PAVEMENT INDICATED ON THE PLANS. POLES SHALL BE GALVANIZED STEEL. POLES SHALL HAVE A MINIMUM OF SIX ANCHOR BOLTS.
- ALL FIXTURES SHALL BE GASKETED AND HAVE SURGE PROTECTION AND A DOUBLE FUSE KIT. ALL FIXTURES SHALL BE GRAY. THE LIGHTING LAYOUT WAS DONE USING HOLOPHANE HIGH MAST LED LUMINAIRES, CATALOG NUMBERS:
 HMLED2 06 SK AS G M FD2; 8 LUMINAIRES ON 4 POLES
 HMLED2 06 SK AS G F FD2; 4 LUMINAIRES ON 2 POLES
 HMLED2 06 SK AS G AW FD2; 8 LUMINAIRES ON 2 POLES
 LED COLOR TEMPERATURE FOR FIXTURES INSTALLED SHALL BE 5000K. IF DIFFERENT FIXTURES ARE PROPOSED, THEY SHALL BE IES FULL CUTOFF, TYPE 3, TYPE 4 AND TYPE 5 IES DISTRIBUTION, LED LUMINAIRES. THE CONTRACTOR MUST DEMONSTRATE THAT THE PROPOSED FIXTURES WILL REASONABLY EQUAL THE LIGHT LEVELS AND DISTRIBUTIONS SHOWN ON THE PLANS, IN THE OPINION OF MAINE DOT.
- EVALUATION BY MAINE DOT OF ALTERNATIVE LED LUMINAIRES THAT MAY BE PROPOSED BY THE CONTRACTOR FOR SUBSTITUTION WILL REQUIRE SUBMITTAL OF THE FOLLOWING, AT MINIMUM:

IES LM-79-08 ABSOLUTE TESTING REPORT FOR THE PROPOSED ALTERNATIVE LUMINAIRE;
 IES LM-80-15 TESTING REPORT FOR LED CHIPS TO BE USED IN THE ALTERNATIVE LUMINAIRE, DOCUMENTING TESTING FOR A MINIMUM OF 8500 HOURS;
 IES TM-21-11 REPORT FOR PROJECTED LONG TERM LUMEN MAINTENANCE, INCLUDING INCREMENTAL LUMEN DEPRECIATION TABLE AT 25 DEGREES CELSIUS TO A MINIMUM OF 50,000 HOURS;
 IES PHOTOMETRIC FILE FROM THE MANUFACTURER FOR THE PROPOSED ALTERNATIVE LUMINAIRE; PHOTOMETRIC PLOT, OVERLAID ON THE LAYOUT OF THE LUMINAIRE LOCATIONS FOR THIS SPECIFIC PROJECT, SHOWING LIGHT CONTOURS, ILLUMINATION STATISTICS FOR EACH OF THE LIGHTING GROUPS, AND VALUE OF LIGHT LOSS FACTOR USED IN THE ANALYSIS;
 VALUES OF LLD, LDD, BALLAST FACTOR AND OTHER FACTORS USED FOR CALCULATION OF THE ASSUMED LIGHT LOSS FACTOR;
 SPECIFICATION DATA REGARDING OPTICS, CHROMATIC COLOR TEMPERATURE, DRIVER, SURGE PROTECTION, HOUSING AND GASKETING.

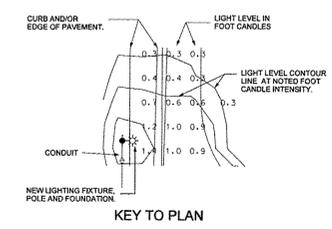
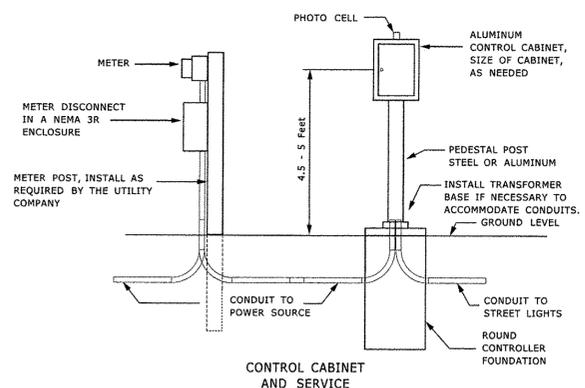
- EACH HIGH MAST LIGHT STANDARD SHALL HAVE A LUMINAIRE LOWERING DEVICE SYSTEM FURNISHED AND INSTALLED, HOLOPHANE HMS LOWERING DEVICE SYSTEM OR APPROVED EQUAL COMPATIBLE WITH THE APPROVED LUMINAIRES. SYSTEM SHALL INCLUDE A PORTABLE ELECTRIC POWER UNIT (ONE FOR ALL WIN 22697.00 HIGH MAST POLES) WITH REMOTE CONTROL FOR OPERATION OF THE LOWERING SYSTEM. WINCH ASSEMBLY SHALL BE INTERNAL TO POLE, UNLESS OTHERWISE APPROVED BY THE MAINE DOT CHIEF ELECTRICIAN.
- SECONDARY CIRCUIT WIRING SHALL BE COPPER STRANDED XHHW-2.
- CONDUIT SHALL BE 2 INCH MINIMUM, PVC SCHEDULE 40, PAID UNDER ITEM 626.22. UNDER PAVEMENT DUCT SHOWN ON THE PLANS IS OPTIONAL AND IS INCIDENTAL TO PAYMENT UNDER ITEM 626.22. IF USED, UNDER PAVEMENT DUCT SHALL CONSIST OF METALLIC CONDUIT JACKED OR DIRECTIONALLY BORED UNDER THE HIGHWAY FOR A DISTANCE OF 10 FEET BEYOND THE EDGE OF PAVEMENT AT EACH END. CONDUIT INSTALLED UNDER PAVEMENT WITHOUT UNDER PAVEMENT DUCT SHALL BE SCHEDULE 80 AND ALSO WILL BE PAID UNDER ITEM 626.22. MINIMUM BURIAL DEPTH FOR CONDUIT SHALL BE 36 INCHES.
- THE WIRE IN CONDUITS SHALL BE CONTINUOUS WITH NO SPLICES BETWEEN POLES. JUNCTION BOXES SHOWN ON THE PLANS ARE SHOWN IN APPROXIMATE LOCATIONS AND ARE INTENDED FOR USE ONLY AS PULL BOXES FOR WIRE PULLING ACCESS. ACTUAL LOCATIONS MAY VARY.
- UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR SHALL FURNISH TO MAINE DOT A SET OF AS-BUILT PLANS FOR FUTURE REFERENCE AND SYSTEM MAINTENANCE.
- IF STRUCTURAL ROCK IS ENCOUNTERED DURING INSTALLATION OF FOUNDATIONS, PAYMENT FOR EXCAVATION AND DOWELING REINFORCING INTO ROCK SHALL BE CONSIDERED INCIDENTAL TO FOUNDATION ITEMS.
- PAYMENT UNDER ITEM NO. 634.207, HIGH MAST LIGHT STANDARD, SHALL INCLUDE THE LUMINAIRE LOWERING DEVICE SYSTEM.
- PAYMENT UNDER ITEM 634.16, HIGHWAY LIGHTING, WILL INCLUDE ALL MATERIALS, LABOR AND EQUIPMENT NECESSARY TO PROVIDE A FULLY FUNCTIONING HIGHWAY LIGHTING SYSTEM, EXCEPT THOSE ITEMS TO BE PAID UNDER OTHER RELATED BID ITEMS IN THE CONTRACT.
- ALL LIGHT BASES SHALL HAVE A GROUND ROD LOCATED IN THE FOUNDATION THAT IS BONDED TO THE GROUNDING CONDUCTOR. PAYMENT FOR THE GROUND ROD SHALL BE INCLUDED IN ITEM 634.16, HIGHWAY LIGHTING.
- ALL CLEARING REQUIRED FOR THIS PROJECT WILL BE INCIDENTAL TO THE CONTRACT.
- FOUNDATIONS FOR HIGH MAST LIGHTING SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER LICENSED IN MAINE. THE CONTRACTOR SHALL PROVIDE THE FOUNDATION DESIGN TO MAINE DOT FOR APPROVAL. ASSUMED VALUE OF PHI SHALL BE 28 DEGREES. PAYMENT FOR FOUNDATIONS WILL BE MADE UNDER ITEM NO. 626.37, SPECIAL FOUNDATION. FOUNDATION DESIGN WILL BE INCIDENTAL TO PAYMENT UNDER THAT PAY ITEM.
- STATIONING SHOWN FOR LIGHTING RELATED ITEMS IS APPROXIMATE AND MAY BE ADJUSTED BY THE RESIDENT IN THE FIELD. BASELINE STATIONING IS FROM PROJECT I-95-7(35).
- INSTALL SERVICE AND MULTI CIRCUIT CONTROL CABINET AS SHOWN. THE CONTRACTOR SHALL ALSO INSTALL A METER DISCONNECT IN A SEPARATE NEMA 3R CABINET. CABINETS SHALL BE LOCKABLE. EACH SERVICE CABINET SHALL BE MARKED WITH ARC HAZARD TYPE 1, 2, 3 OR 4 AND THE APPROPRIATE PPE REQUIRED.
- REMOVE EXISTING SERVICE AND CONTROL CABINET.



Remove Existing Control Cabinet, Stub Post and Service. Install New Service and Control Cabinet.



- LEGEND for LIGHTING**
- ☒ Control Cabinet and Service
 - Lighting Conduit
 - ⊙ Pull Box
 - Direction of Luminaire
High Mast Pole with 2 LED Fixtures
 - Direction of Luminaire
High Mast Pole with 4 LED Fixtures
 - Under Pavement Duct
 - ⊙ Existing Light Fixture, Pole and Foundation
Approximate Location, To Be Removed



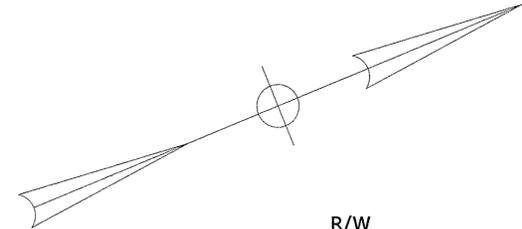
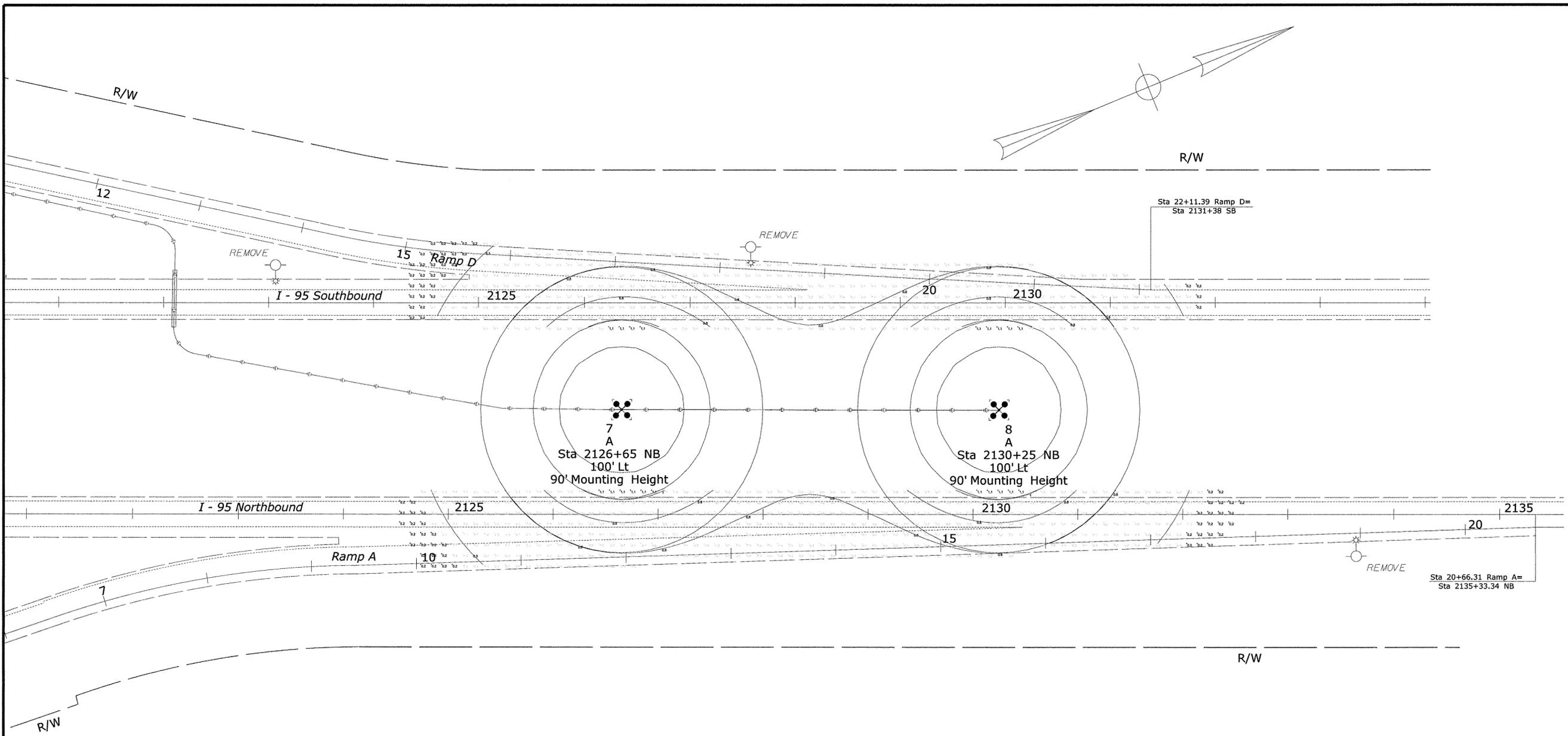
| | | | | | |
|--|---------|-----------------|---------|----------------------------------|---------------|
| STATE OF MAINE DEPARTMENT OF TRANSPORTATION | | NHP - 2269(700) | | WIN 22697.00 | HIGHWAY PLANS |
| PITTSFIELD I - 95 at EXIT 150 | | LIGHTING PLANS | | SHEET NUMBER 3 OF 4 | |
| PROJ. MANAGER | C. RAND | DATE | DATE | SIGNATURE | DATE |
| DESIGN-DETAILED | ALC | 8/20/15 | 8/20/15 | ALBERT L. GODFREY | 8/27/15 |
| CHECKED-REVIEWED | ALC | | | No. 4226 | |
| DESIGN-2-DETAILED | ALC | | | P.E. NUMBER | |
| DESIGN-3-DETAILED | | | | 4226 | |
| REVISIONS 1 | | | | LICENSE NO. | |
| REVISIONS 2 | | | | 8/27/15 | |
| REVISIONS 3 | | | | DATE | |
| REVISIONS 4 | | | | | |
| FIELD CHANGES | | | | | |

Date: 8/28/2015

Username: common

Division: HIGHWAY

Filename: ...PlanSh3.dgn



CONDUIT SUMMARY

| CIRCUIT 1 | | Wire Size Stranded Copper XHHW-2 | | Remarks |
|-------------------|---------|-------------------------------------|----|--|
| Station | Pole | Distance | #4 | |
| 44+00 Lt Somerset | Service | 980 | ✓ | In Conduit With Circuit 2 To Pole #5 Base Thru 2 Underpavement Ducts* |
| 2103+80 NB Lt | 3 | 395 | ✓ | |
| 2099+67 SB Rt | 2 | 330 | ✓ | |
| 2096+38 SB Rt | 1 | | | |
| 2103+80 NB Lt | 3 | | | Thru 2 Underpavement Ducts* |
| 2107+08 NB Lt | 4 | 328 | ✓ | |
| 33+33 Lt Somerset | 6 | 1000 | ✓ | |

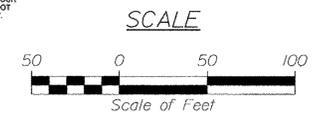
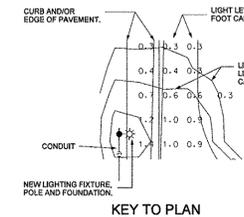
(* UNDER PAVEMENT DUCT OPTIONAL)

CONDUIT SUMMARY

| CIRCUIT 2 | | Wire Size Stranded Copper XHHW-2 | | Remarks |
|-------------------|---------|-------------------------------------|----|-----------------------------|
| Station | Pole | Distance | #4 | |
| 44+00 Lt Somerset | Service | 180 | ✓ | Thru Underpavement Duct* |
| 42+21 Lt Somerset | 5 | 1800 | ✓ | Thru 2 Underpavement Ducts* |
| 2126+65 NB Lt | 7 | 360 | ✓ | |
| 2130+25 NB Lt | 8 | | | |

LEGEND for LIGHTING

- Control Cabinet and Service
- Lighting Conduit
- Pull Box
- High Mast Pole with 2 LED Fixtures
- High Mast Pole with 4 LEF Fixtures
- Under Pavement Duct
- Existing Light Fixture, Pole and Foundation
Approximate Location, To Be Removed



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
NHPP - 2269(700)
WIN
22697.00
HIGHWAY PLANS

STATE OF MAINE
ALBERT L. GODFREY
No. 4226
LICENSED PROFESSIONAL ENGINEER

Albert L. Godfrey
SIGNATURE
4226
P.E. NUMBER
8/27/15
DATE

| PROJ. MANAGER | DATE | BY | C. RAND | REVISIONS | FIELD CHANGES |
|-------------------|---------|-----|---------|-----------|---------------|
| DESIGN-DETAILED | 8/20/15 | RAL | ALC | 1 | |
| CHECKED-REVIEWED | 8/20/15 | ALC | ALC | 2 | |
| DESIGN-2-DETAILED | | | | 3 | |
| DESIGN-3-DETAILED | | | | 4 | |

PITTSFIELD
I - 95 at EXIT 150
LIGHTING PLANS

SHEET NUMBER
4
OF 4