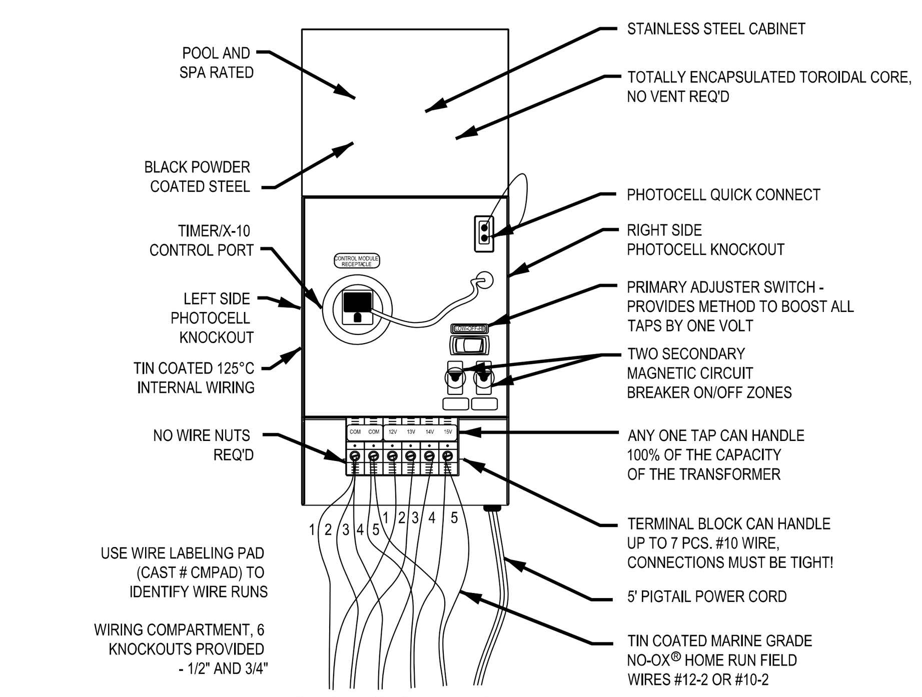
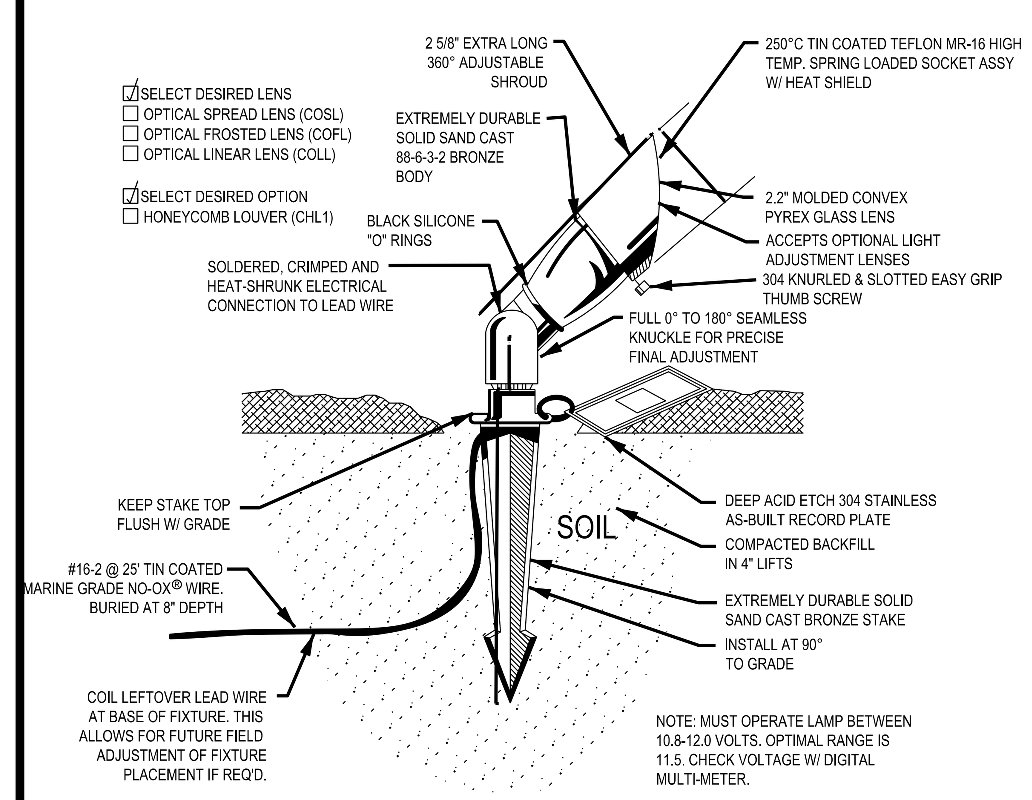


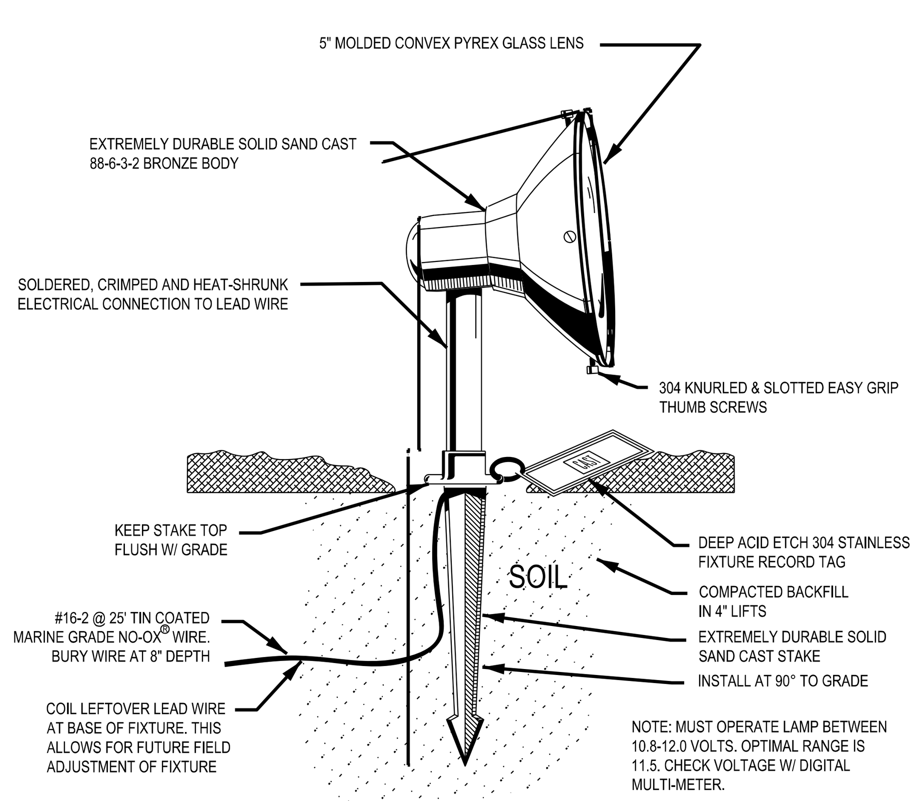
NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. ENSURE THAT HOME RUN WIRES ARE TIGHT IN THE TERMINAL BLOCKS. LOOSE/POOR CONNECTIONS WILL MELT THE BLOCK AND DAMAGE THE TRANSFORMER.
4. INCLUDES FIELD REPAIRABLE BREAKERS, TERMINAL, TIMERS AND PHOTOCELL.

MULTI-TAP TRANSFORMERS (TYP)



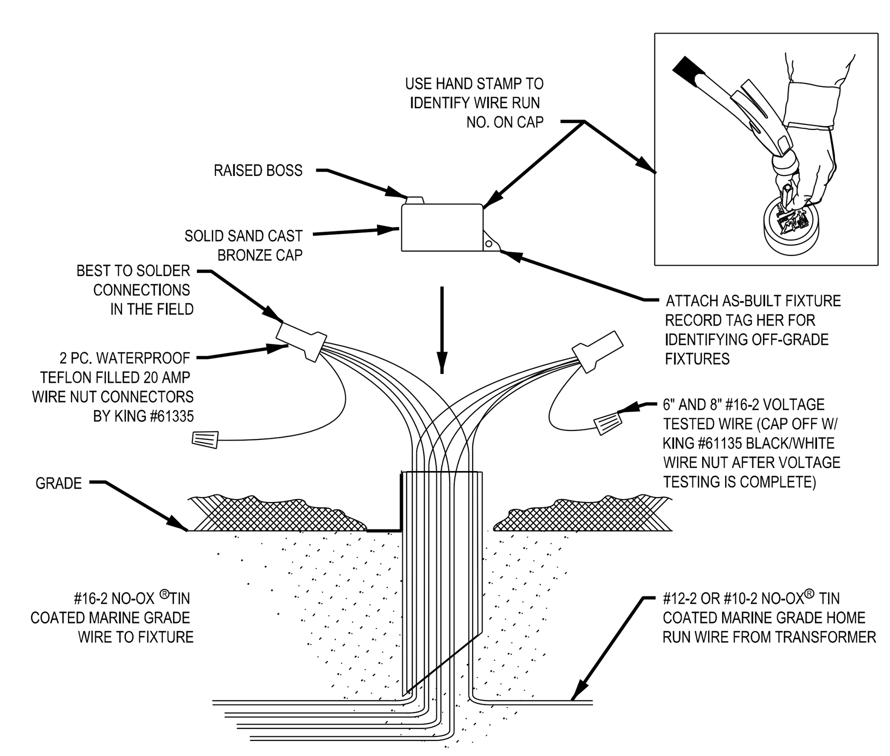
NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. MAX. LAMP RATING 50 WATT.
4. USE ONLY COVERED MR-16 LAMPS. LAMP NOT INCLUDED.
5. DO NOT MOUNT IN TREES.
6. ALWAYS REFER TO PRODUCT INSTRUCTION SHEET PRIOR TO INSTALLATION.
7.
REFERENCE NUMBER 634-002.

SPOT LIGHT FIXTURE



NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. MAX. LAMP RATING 50 WATT.
4. INCLUDES WEDGE BASE KRYPTON HALOGEN, 25 WATT LAMP.
5. ALWAYS REFER TO PRODUCT INSTRUCTION SHEET PRIOR TO INSTALLATION.

WALL WASH LIGHT FIXTURE



NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. MAKE SURE TO TUG ON WIRES THAT ENTER WIRE NUT TO ENSURE SOLID CONNECTION. THE MOST COMMON FAILURE POINT ON A LIGHTING SYSTEM IS AT WIRE NUT.
4. PLACE SPIDER SPLICE IN OUT OF THE WAY LOCATION TO AVOID DAMAGE BY MAINTENANCE EQUIPMENT.
5. NOT GREASE FILLED WIRE NUTS CAN BE USED FOR ANY WIRE SPLICE.
6.
REFERENCE NUMBER 634-021.

SPIDER SPLICE® / JUNCTION BOX

LIGHTING NOTES & LEGEND

NOTE: ALL LIGHTING CONTRACTORS MUST BE LICENSED TO PERFORM WORK ASSOCIATED WITH CONSTRUCTION OR CONTRACTING OF LIGHTING SYSTEMS.

120V LIGHT FIXTURE: (MAY BE OF COMPARABLE MANUFACTURE AND PERFORMANCE TO NAMED BRAND)

- DENOTES THE LOCATION OF EACH (LITHONIA, MALIBU, HAMPTON BAY, OR APPROVED EQUAL) 120V FLOOD LIGHT SUITABLE FOR A FLAGPOLE.
- FIXTURES SHOULD BE BROWN OR BLACK IN COLOR WITH LED BULBS IF POSSIBLE.
- STAKES OF THE SAME COLOR SHOULD BE PROVIDED FOR IN-GROUND STABILIZATION FOR ACCENT LIGHTS.
- CONTRACTOR SHALL PROVIDE AND INSTALL SPECIFIED FIXTURES, LAMPS, STAKES AND MOUNT AS NOTED ON THE LANDSCAPE LIGHTING PLANS. ALL WATTAGES AND BEAM SPREADS AS DETAILED ON THE LIGHTING DESIGN. FINAL ADJUSTMENT OF THE SYSTEM IS THE RESPONSIBILITY OF THE CONTRACTOR AT THE DISCRETION THE ENGINEER. FINAL ADJUSTMENT WILL BE DONE AT NO ADDITIONAL EXPENSE TO THE CLIENT. IF REQUIRED, CONTRACTOR SHALL DEMONSTRATE IN THE FIELD THE OPERATING VOLTAGES OF THE SYSTEM TO THE THE ENGINEER.

LOW VOLTAGE LIGHT FIXTURE: (MAY BE OF COMPARABLE MANUFACTURE AND PERFORMANCE TO NAMED BRAND)

- DENOTES THE LOCATION OF EACH (KICHLER, VOLT, HINKLEY, OR APPROVED EQUAL) 12V LED 4W 35 DEGREE FLOOD LIGHT.

- DENOTES THE LOCATION OF EACH (KICHLER, VOLT, FILAMENT DESIGN, OR APPROVED EQUAL) 12V 6-LED HARDSCAPE LIGHT FIXTURE W/ BRACKET
- FIXTURES SHOULD BE LOW VOLTAGE AND IN A BROWN OR BLACK COLOR WITH LED BULBS .
- STAKES OF THE SAME COLOR SHOULD BE PROVIDED FOR IN-GROUND STABILIZATION FOR ACCENT LIGHTS.
- CONTRACTOR SHALL PROVIDE AND INSTALL SPECIFIED FIXTURES, LAMPS, STAKES AND MOUNT AS NOTED ON THE LANDSCAPE LIGHTING PLANS. ALL WATTAGES AND BEAM SPREADS AS DETAILED ON THE LIGHTING DESIGN. FINAL ADJUSTMENT OF THE SYSTEM IS THE RESPONSIBILITY OF THE CONTRACTOR AT THE DISCRETION THE ENGINEER. FINAL ADJUSTMENT WILL BE DONE AT NO ADDITIONAL EXPENSE TO THE CLIENT. ALL LAMPS SHALL OPERATE IN THE ACCEPTABLE RANGE OF BETWEEN 10.8 TO 12 VOLTS. IDEAL OPERATING VOLTAGE IS 11.5 VOLTS. IF REQUIRED, CONTRACTOR SHALL DEMONSTRATE IN THE FIELD THE OPERATING VOLTAGES OF THE SYSTEM TO THE THE ENGINEER.

WIRING

- DENOTES THE LOCATION OF #12 GAUGE 2-CONDUCTOR LIGHTING CABLE.

LOW VOLTAGE JUNCTION BOX:

- LOCATION OF LOW VOLTAGE JUNTION BOX.
- ELECTRICAL JUNCTION BOX / SPIDER SPLICE AND RECORD TAG: THE BELOW GRADE BOX SHALL BE NEMA RATED FOR UNDERGROUND USE AND SIZED TO HOUSE ALL WIRING AND RECORD TAGS. CONTRACTOR SHALL INCLUDE WITHIN EACH JUNCTION BOX / SPIDER SPLICE A TAG NOTING EACH AS BUILT WIRE RUN TO AND FROM THE BOX.. THE TAG SHALL BE CONSTRUCTED OF NON-DEGRADABLE WATERPROOF MATERIAL. NOTATION ON EACH TAG CAN BE STAMPED AND/OR WRITTEN IN LEGIBLE WATERPROOF INK. AS-BUILT RECORDS SHALL INDICATE OFF-GRADE INFORMATION, THE WIRE RUN NUMBER, TRANSFORMER NUMBER, LAMP INSTALLED, AND THE INDIVIDUAL NUMBERED FIXTURE ON THE WIRE RUN AND TOTAL FIXTURES ON THE WIRE RUNS. THE AS-BUILT RECORD TAGS WILL INSURE THAT THE LONG-TERM MAINTENANCE OF THE SYSTEM IS CARRIED OUT FOLLOWING THE ORIGINAL DESIGN OF THE SYSTEM.

LOW VOLTAGE TRANSFORMER:

- LOCATION OF 12-VOLT TRANSFORMER WITH DIGITAL TIMER AND DUSK-TO-DAWN SENSOR.
- PROVIDE AND INSTALL 12-VOLT (150 WATT) U.L. LISTED TRANSFORMER. TRANSFORMER SHALL BE MOUNTED FOLLOWING SPECIFICATIONS IN THE TRANSFORMER STAND DETAIL DRAWING. TRANSFORMER INSTALLATION SHALL INCLUDE ROMEX STRAIN RELIEF CONNECTORS ON ALL SECONDARY WIRING ENTERING THE TRANSFORMER. SHOULD CONTRACTOR CHOOSE TO INSTALL HARD PIPE CONDUIT, A VALVE BOX SHALL BE PLACED DIRECTLY UNDER TRANSFORMER WHERE HARD PIPE CONDUIT WILL TERMINATE. VALVE BOX WILL ALLOW SLACK WIRE COLLECTION POINT TO ALLOW FUTURE SERVICING AND CLEANER INSTALLATION. TRANSFORMER CABINET SHALL BE CONSTRUCTED OF STAINLESS STEEL WITH MANUFACTURER APPLIED BLACK POWDER COATING TRANSFORMER SHALL INCLUDE QUICK CONNECT FEATURE TO ALLOW THE QUICK INSTALLATION OF A PHOTO CELL OR 20' REMOTE PHOTO CELL IF REQUIRED AT A LATER DATE. IF NOT ALREADY INCLUDED, TRANSFORMER SHALL INCLUDE PLUG POINT FOR TIMER OR X-10 UNIT FOR ON/OFF CONTROL. A PLUG IN, DIGITAL SETTINGS, MULTI-FUNCTION TIMER SHALL BE PROVIDED WITH EACH INSTALLED TRANSFORMER. TRANSFORMER SHALL INCLUDE 125 AMPERAGE RATED TERMINAL BLOCK SECONDARY FIELD WIRING CONNECTION POINT. NO WIRE NUT SECONDARY WIRING CONNECTIONS SHALL BE ALLOWED AT THE TRANSFORMER. ALL INTERNAL TRANSFORMER WIRING SHALL BE 140°C RATED HIGH TEMPERATURE TIN-COATED WIRE. NO INTERNAL WIRING LESS THAN 140°C TIN-COATED SHALL BE ALLOWED. TRANSFORMER SHALL BE CAPABLE OF LOADING 100% OF THE LOAD OF THE TRANSFORMER ON ANY OF THE SECONDARY FIELD TAPS 12V, 13V, 14V, 15V, 16V, 17V AND 18 VOLTS. TRANSFORMER SHALL HAVE VOLTAGE TAPS OF 12V, 13V, 14V, 15V, 16V, 17V AND 18 VOLTS. MOUNT TRANSFORMER BOX TO NOTED LOCATION AND AS DIRECTED/APPROVED BY THE ENGINEER.

GENERAL INFORMATION

- CONTRACTOR SHALL TAKE AMPERAGE READINGS ON ALL SECONDARY FIELD CIRCUIT WIRES WHEN DONE WITH THE INSTALLATION AND RECORD THE READINGS ON THE INSIDE OF THE TRANSFORMER COVER ON THE STICKER PROVIDED WITH A FINE POINT PERMANENT MARKER. CONTRACTOR SHALL BURY ALL SECONDARY WIRES A MIN. OF 8"DEPTH FROM SURFACE. CONTRACTOR SHALL SLEEVE ALL WIRES ENTERING PLANTING BEDS FROM TURF OR UNDER WALKS WITHIN PRE-INSTALLED 1" PVC. REVIEW LANDSCAPE PLANS, AND CONFIRM WITH THE ENGINEER, ON EXACT LOCATIONS OF SLEEVES . CONTRACTOR SHALL LEAVE ALL EXCESS FIXTURE WIRE AT THE FIXTURE TO ALLOW EASY FIELD ADJUSTMENT OF THE FIXTURE IF REQUIRED.

NCDOT - ROADSIDE ENVIRONMENTAL UNIT
LANDSCAPE DESIGN & DEVELOPMENT
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PH: 919-707-2935 FAX: 919-715-2554
HTTP://WWW.NCDOT.ORG/DOH/OPERATIONS/DP_CHIEF_ENG/ROADSIDE/

CAMDEN COUNTY VISITOR CENTER
CAMDEN COUNTY
CONTRACT #: 3701.3.24

REU. DESIGNER Kyle Cooper

SHEET DESCRIPTION:

PREL. DESIGN DATE :	APRIL 2015	LIGHTING SPECS	T.I.P. #
CHECKED BY & DATE :		LANDSCAPE PLAN SHEET	WBS # 3701.3.24
FINAL DESIGN DATE :	JUNE 30, 2015		FED I.D. #

SHEET NO : L-19 TOTAL SHEET NO : 19

$$$$$$SYSTIME$$$$$ $$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$ $$$$$USERNAME$$$$$