

CONTRACT PLANS COMPONENTS

- ROADWAY PLANS
- SIGNING AND PAVEMENT MARKING PLANS
- SIGNALIZATION PLANS
- LIGHTING PLANS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

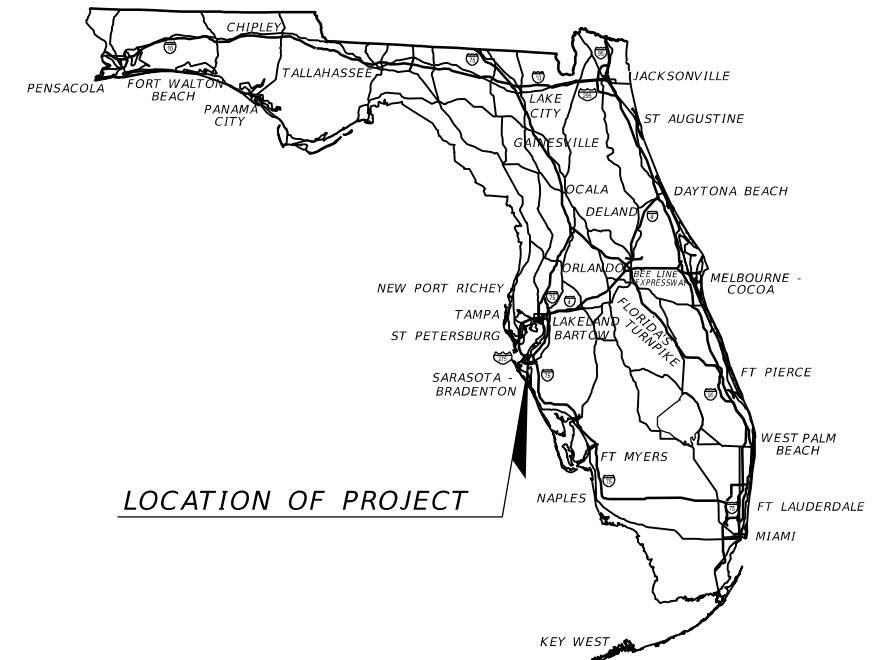
LIGHTING PLANS

FINANCIAL PROJECT ID 447379-1-52-01

MANATEE COUNTY (13130)

STATE ROAD NO. 55 (S TAMiami TRAIL)

RRR FROM 23RD AVE W TO 39TH ST E



LOCATION OF PROJECT

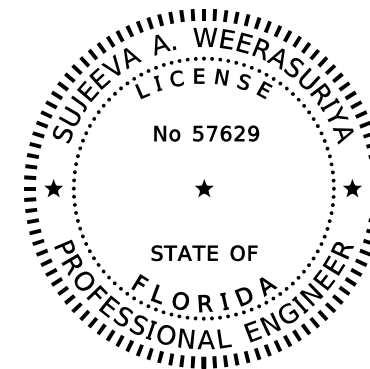
A DETAILED INDEX APPEARS ON THE KEY SHEET OF EACH COMPONENT

INDEX OF LIGHTING PLANS

| SHEET NO. | SHEET DESCRIPTION |
|-----------|---------------------|
| L-1 | KEY SHEET |
| L-2 | LIGHTING LEGEND |
| L-3 | LIGHTING DATA TABLE |
| L-4 - L-9 | LIGHTING PLAN |

| | |
|-----------------------|--|
| PROJECT LOCATION URL: | https://tinyurl.com/2nvfs7yc |
| PROJECT LIMITS: | BEGIN MP 1.126 - END MP 6.000 |
| EXCEPTIONS: | MP 1.661 - MP 1.746 MP 2.143 - MP 2.181 |
| BRIDGE LIMITS: | BR#130053 MP 2.617 - MP 3.038 BR#130002 MP 4.032 - MP 4.065 BR#130008 MP 4.261 - MP 4.293 BR#130009 MP 5.342 - MP 5.408 |
| RAILROAD CROSSING: | DOT/AAR CROSSING NO. 624712-B RR MP AZA 917.00, CSXT, INC. MP 1.661 DOT/AAR CROSSING NO. 624612-W RR MP SWC 870.56, CSXT, INC. MP 4.264 DOT/AAR CROSSING NO. 624730-Y RR MP AZA 913.1, CSXT, INC. MP 5.342 |

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY



ON THE DATE ADJACENT TO THE SEAL

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

LIGHTING PLANS
ENGINEER OF RECORD:

SUJEEVA A. WEERASURIYA, P.E.
P.E. LICENSE NUMBER 57629
PATEL, GREENE & ASSOCIATES, LLC
12570 TELECOM DRIVE
TEMPLE TERRACE, FL 33637
CONTRACT NO.: CAK18
VENDOR NO.: F452209743-001

PHASE IIR
MARCH 2024

FDOT PROJECT MANAGER:

SCOTT MCCALL

GOVERNING STANDARD PLANS:

Florida Department of Transportation, FY 2024-25 Standard Plans for Road and Bridge Construction and applicable Interim Revisions (IRs).

Standard Plans for Road Construction and associated IRs are available at the following website: <http://www.fdot.gov/design/standardplans>

GOVERNING STANDARD SPECIFICATIONS:

Florida Department of Transportation, FY 2024-25 Standard Specifications for Road and Bridge Construction at the following website: <http://www.fdot.gov/programmanagement/Implemented/SpecBooks>

| CONSTRUCTION CONTRACT NO. | FISCAL YEAR | SHEET NO. |
|---------------------------|-------------|-----------|
| TBD | 25 | L-1 |

GENERAL NOTES

1. SPARE CONDUIT AT PAVEMENT CROSSINGS SHALL BE CAPPED AT BOTH ENDS.
2. PRIOR TO ANY EQUIPMENT ORDER, SUBMIT EQUIPMENT SPECIFICATION OR DESIGN DATA FOR ALL MATERIAL PROPOSED FOR THE PROJECT. SEVEN (7) COPIES OF SHOP DRAWINGS AND DESIGN DATA FOR ROADWAY LIGHTING EQUIPMENT SHALL BE SUBMITTED TO THE ENGINEER OF RECORD IN ACCORDANCE WITH THE SPECIFICATIONS.
3. ALUMINUM POLES, LUMINAIRES, AND BASES SHALL BE FABRICATED IN ACCORDANCE WITH AASHTO'S "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS", AND SHALL HAVE BEEN TESTED BY FHWA APPROVED METHODS (LATEST EDITION). CERTIFICATION FOR TESTS SHALL BE SUBMITTED WITH THE SHOP DRAWINGS.
4. SHOP DRAWING SUBMITTAL DATA SHALL INCLUDE A COMPUTER PRINTOUT SHOWING HORIZONTAL FOOT-CANDLE LEVELS TO BE OBTAINED USING THE SUBMITTED LUMINAIRES ON THIS PROJECT. AT FINAL INSPECTION VERIFY THE HORIZONTAL FOOT-CANDLE LEVELS ON THE ROADWAY WITH AN APPROVED CURRENTLY CALIBRATED LIGHT METER, AND SUBMIT REPORT FOR APPROVAL.
5. ALL ELECTRICAL WORK SHALL MEET ALL REQUIREMENTS OF THE LATEST EDITIONS OF THE NATIONAL ELECTRICAL CODE (N.E.C), THE NATIONAL ELECTRICAL SAFETY CODE, AND THE STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. ALL COMPONENTS SHALL BE PROMPTLY GROUNDED AND BONDED PER THE N.E.C. REQUIREMENTS.
6. INSTALL LIGHTNING ARRESTORS, PROPERLY GROUNDED, IN POWER (SECONDARY) ENTRANCES, ON OUTSIDE OF ENCLOSURES.
7. IN ACCORDANCE WITH N.E.C., IDENTIFY ALL CIRCUITS AND EQUIPMENT WITH "LAMACOID TAGS". INSTALL SIMILAR TAGS OF STAINLESS STEEL, IDENTIFYING CIRCUIT FOR EACH LUMINAIRE AT ACCESS HANDHOLE FOR EACH POLE.
8. FLORIDA POWER & LIGHT AND MANATEE COUNTY (FOR FDOT POLES) IS THE MAINTAINING AGENCY FOR THE LIGHTING.

DEVANEY IGLESIAS
416 MANATEE AVE. W,
BRADENTON, FL 34205
PH: 941-316-6266

9. MANATEE COUNTY IS THE MAINTAINING AGENCY FOR THE FDOT OWNED LIGHT POLES.

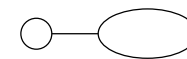
NOTES TO REVIEWER

PULL BOXES, CONDUIT, AND OTHER MISCELLANEOUS ITEMS WILL BE SHOWN ONCE DETERMINED WHICH LIGHT POLES WILL BE COVERED BY FP&L AND WHICH ONE WILL NEED TO BE FDOT STANDARD.

DESIGN CRITERIA

SIGNALIZED INTERSECTION (Retrofit):

| | |
|--|--|
| Average Horizontal Initial Intensity | 1.5 Foot Candles (Std.) 1.0 Foot Candles (Min.) |
| Average Vertical Initial Intensity | 1.5 Foot Candles (Std.) 1.0 Foot Candles (Min.) |
| Uniformity Ratio Ang./Min. | 4:1 Or Less |
| Max./Min. | 10:1 Or Less |
| Veiling Luminance Ratio $L_{V(Max)}/L_{AVG}$ | N/A |



NEW LIGHT POLE, F&I

Designed for an American Electric Autobahn 2 Series ATB2_P604_R4_3K 264 Watt LED luminaire with 3000K color temperature, Roadway Type IV distribution. Luminaire shall be wired for 480 volt operation. Pole mounting height is 40 feet mounted on a standard light pole. Lighting basis of design used photometric curve number ATB2_P604_R4_3K with output lumens of 32,447.

Designed for an American Electric Autobahn 2 Series ATB2_P602_R4_3K 196 Watt LED luminaire with 3000K color temperature, Roadway Type IV distribution. Luminaire shall be wired for 480 volt operation. Pole mounting height is 35 feet mounted on a standard light pole. Lighting basis of design used photometric curve number ATB2_P602_R4_3K with output lumens of 26,278.

Designed for an American Electric Autobahn M Series ATBM_P40_MVOLT_R4_3K 136 Watt LED luminaire with 3000K color temperature, Roadway Type IV distribution. Luminaire shall be wired for 120 volt operation. Pole mounting height is 35 feet mounted on a standard light pole. Lighting basis of design used photometric curve number ATBM_P40_MVOLT_R4_3K with output lumens of 15,913.

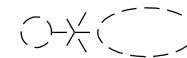


RETROFIT NEW LUMINAIRE ON EXISTING POLE / ARM

Designed for an American Electric Autobahn 2 Series ATB2_P604_R4_3K 264 Watt LED luminaire with 3000K color temperature, Roadway Type IV distribution. Luminaire shall be wired for 480 volt operation. Pole mounting height is 40 feet mounted on a standard light pole. Lighting basis of design used photometric curve number ATB2_P604_R4_3K with output lumens of 32,447.

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EXISTING POLE TO BE REMOVED

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| REVISIONS | | | | ENGINEER OF RECORD | | STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | | SHEET NO. |
|-----------|-------------|------|-------------|---|--|--|---------|----------------------|--------------|
| DATE | DESCRIPTION | DATE | DESCRIPTION | SUJEEVA A. WEERASURIYA, P.E. LICENSE NUMBER: 57629 PATEL, GREENE & ASSOCIATES, LLC 12570 TELECOM DRIVE TEMPLE TERRACE, FL 33637 | | ROAD NO. | COUNTY | FINANCIAL PROJECT ID | |
| | | | | | | SR 55 | MANATEE | 447379-1-52-01 | L-2 |

LIGHTING LEGEND

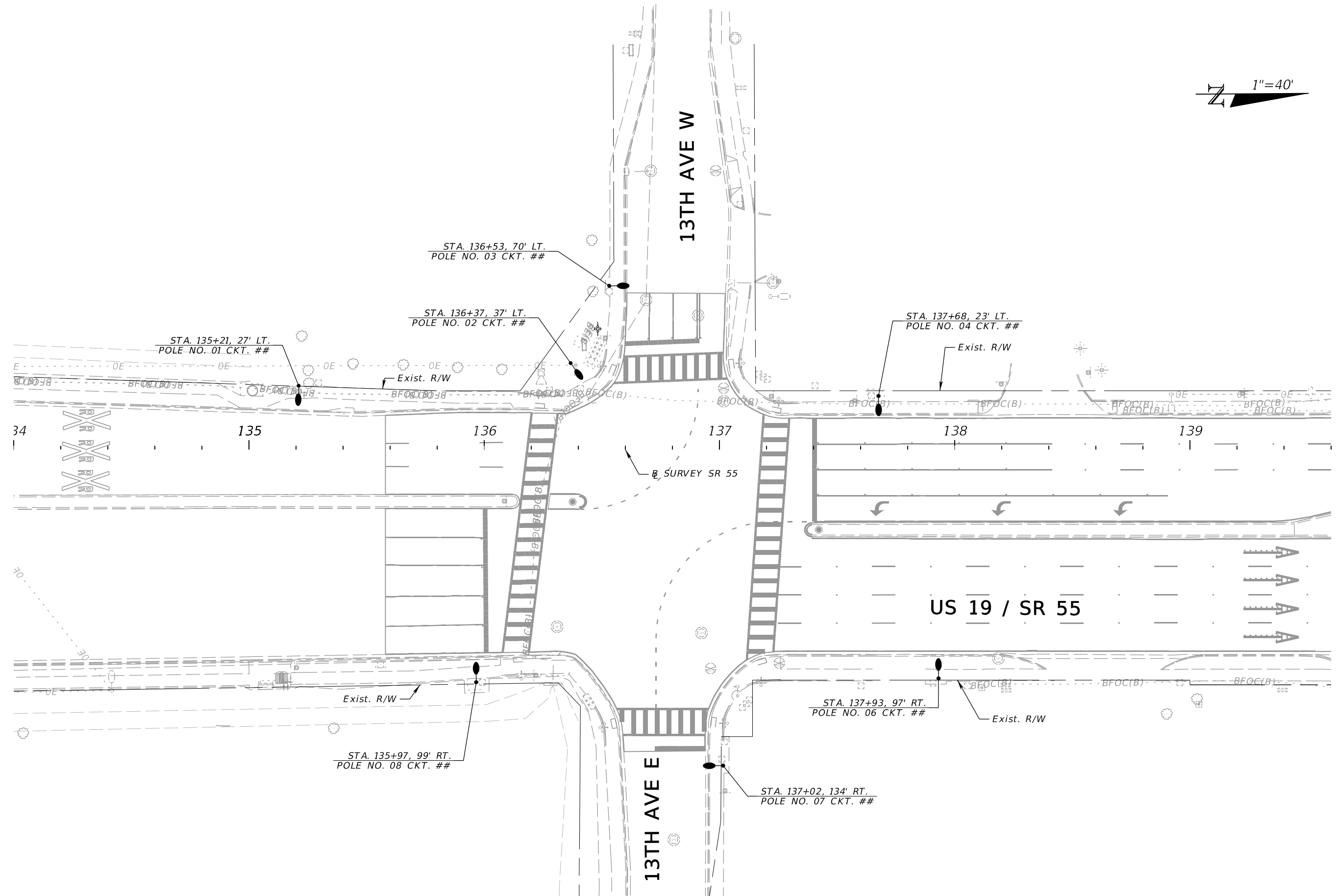
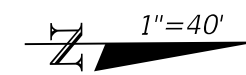
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| Lighting Data Table | | | | | | | |
|---------------------|---------|---------|------------|--------------|------------|-----------------|------------|
| Pole No. | Station | Offset | Arm Length | Mount Height | Tilt (deg) | Luminaire Volts | Pay Item |
| 1 | 135+21 | 27' LT | 8' | 35' | 0 | 196 | 0715 11211 |
| 2 | 136+37 | 37' LT | 8' | 40' | 0 | 196 | 0715 11211 |
| 3 | 136+53 | 70' LT | 8' | 35' | 0 | 196 | 0715 11211 |
| 4 | 137+68 | 23' LT | 8' | 40' | 0 | 196 | 0715 11211 |
| 6 | 137+93 | 97' RT | 8' | 40' | 0 | 264 | 0715 11211 |
| 7 | 137+02 | 134' RT | 8' | 35' | 0 | 196 | 0715 11211 |
| 8 | 135+97 | 99' RT | 8' | 40' | 0 | 196 | 0715 11211 |
| 10 | 148+61 | 19' LT | 8' | 40' | 0 | 196 | 0715 11211 |
| 11 | 149+59 | 55' LT | 8' | 35' | 0 | 196 | 0715 11211 |
| 12 | 151+21 | 24' LT | 8' | 35' | 0 | 264 | 0715 11211 |
| 13 | 150+85 | 97' RT | 8' | 35' | 0 | 196 | 0715 11211 |
| 14 | 150+38 | 118' RT | 8' | 35' | 0 | 264 | 0715 61211 |
| 15 | 149+55 | 132' RT | 8' | 35' | 0 | 196 | 0715 11211 |
| 16 | 148+99 | 93' RT | 8' | 40' | 0 | 196 | 0715 11211 |
| 18 | 168+99 | 60' LT | 8' | 35' | 0 | 196 | 0715 11211 |
| 20 | 163+35 | 75' LT | 8' | 35' | 0 | 196 | 0715 61211 |
| 21 | 163+93 | 58' LT | 8' | 35' | 0 | 196 | 0715 11211 |
| 22 | 163+11 | 113' RT | 5' | 20' | 0 | 196 | 0715 11211 |
| 23 | 162+26 | 72' RT | 5' | 20' | 0 | 196 | 0715 11211 |
| 24 | 162+03 | 52' RT | 8' | 35' | 0 | 196 | 0715 61211 |
| 25 | 230+66 | 54' LT | 8' | 35' | 0 | 136 | 0715 11211 |
| 26 | 231+83 | 54' LT | 8' | 35' | 0 | 136 | 0715 11211 |
| 27 | 232+43 | 56' RT | 15' | 40' | 0 | 264 | 0715 11211 |
| 29 | 231+65 | 91' RT | 8' | 35' | 0 | 196 | 0715 61211 |
| 30 | 230+68 | 66' RT | 8' | 35' | 0 | 136 | 0715 11211 |
| 31 | 229+82 | 55' RT | 15' | 40' | 0 | 196 | 0715 11211 |
| 32 | 283+73 | 44' LT | 8' | 40' | 0 | 264 | 0715 11211 |
| 33 | 284+69 | 116' LT | 8' | 35' | 0 | 196 | 0715 11211 |
| 34 | 285+41 | 46' LT | 8' | 40' | 0 | 264 | 0715 61311 |
| 35 | 284+92 | 97' RT | 15' | 40' | 0 | 196 | 0715 11211 |
| 36 | 283+70 | 43' RT | 15' | 40' | 0 | 196 | 0715 11211 |
| 37 | 304+13 | 65' LT | 15' | 40' | 0 | 196 | 0715 11211 |
| 38 | 305+01 | 100' LT | 8' | 35' | 0 | 196 | 0715 11211 |
| 39 | 305+99 | 60' LT | 15' | 35' | 0 | 196 | 0715 11211 |
| 40 | 306+02 | 29' RT | 15' | 40' | 0 | 196 | 0715 11211 |
| 41 | 304+32 | 69' RT | 8' | 35' | 0 | 196 | 0715 11211 |
| 42 | 304+04 | 27' RT | 15' | 40' | 0 | 196 | 0715 11211 |

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| REVISIONS | | | | ENGINEER OF RECORD | | STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | | LIGHTING DATA TABLE | SHEET NO. |
|-----------|-------------|------|-------------|---|--|--|---------|----------------------|---------------------|-----------|
| DATE | DESCRIPTION | DATE | DESCRIPTION | SUJEEVA A. WEERASURIYA, P.E. LICENSE NUMBER: 57629 PATEL, GREENE & ASSOCIATES, LLC 12570 TELECOM DRIVE TEMPLE TERRACE, FL 33637 | | ROAD NO. | COUNTY | FINANCIAL PROJECT ID | | L-3 |
| | | | | | | SR 55 | MANATEE | 447379-1-52-01 | | |

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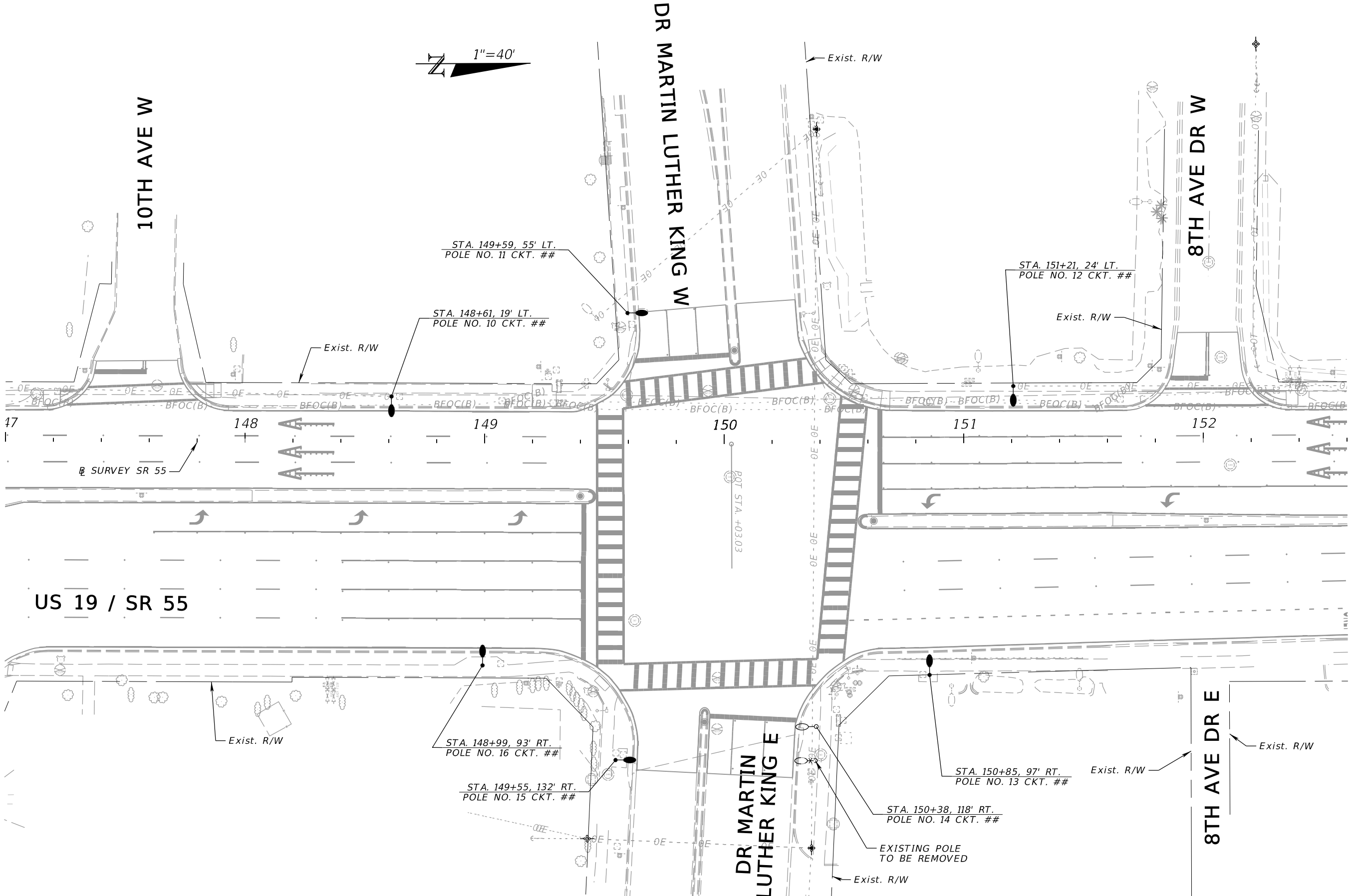
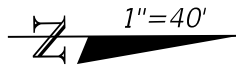


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LIGHTING PLANS

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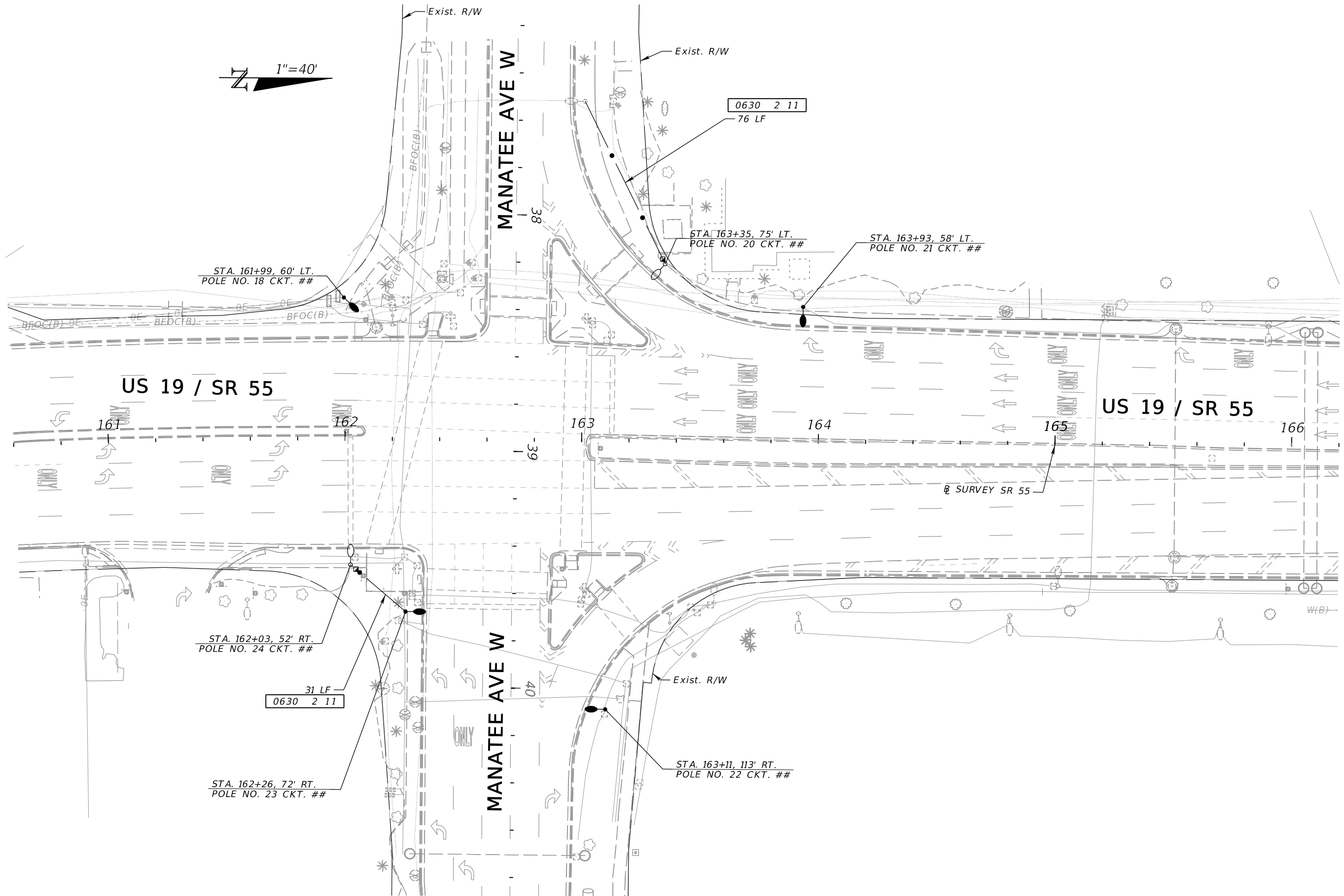
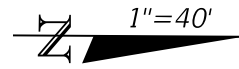
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 TEMPLE TERRACE, FL 33637

| STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | |
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| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
| SR 55 | MANATEE | 447379-1-32-01 |

LIGHTING PLANS

SHEET NO.
L-5

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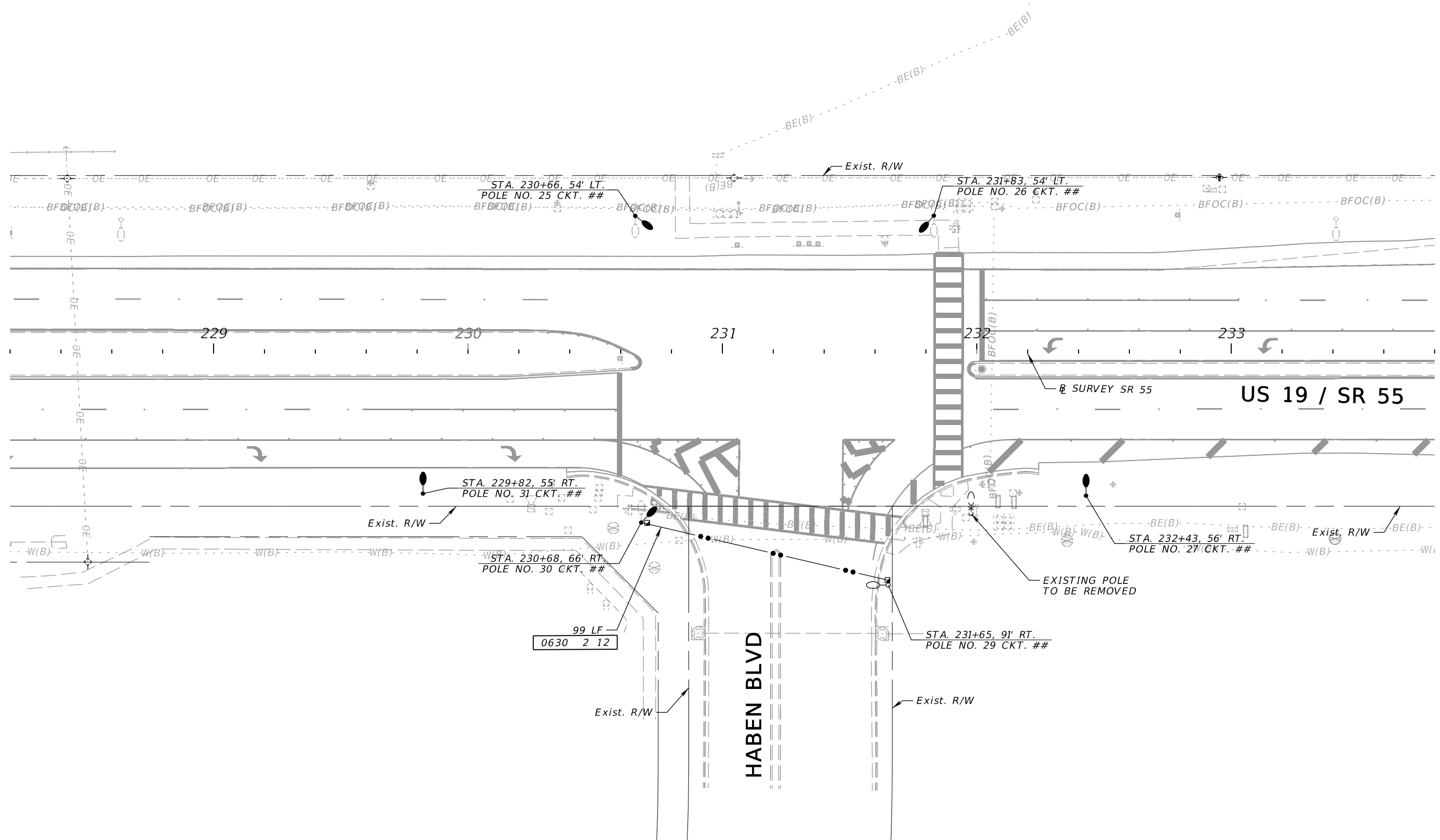
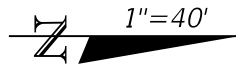


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| | | | | | | | SR 55 | MANATEE | 447379-1-32-01 | L-6 |

LIGHTING PLANS

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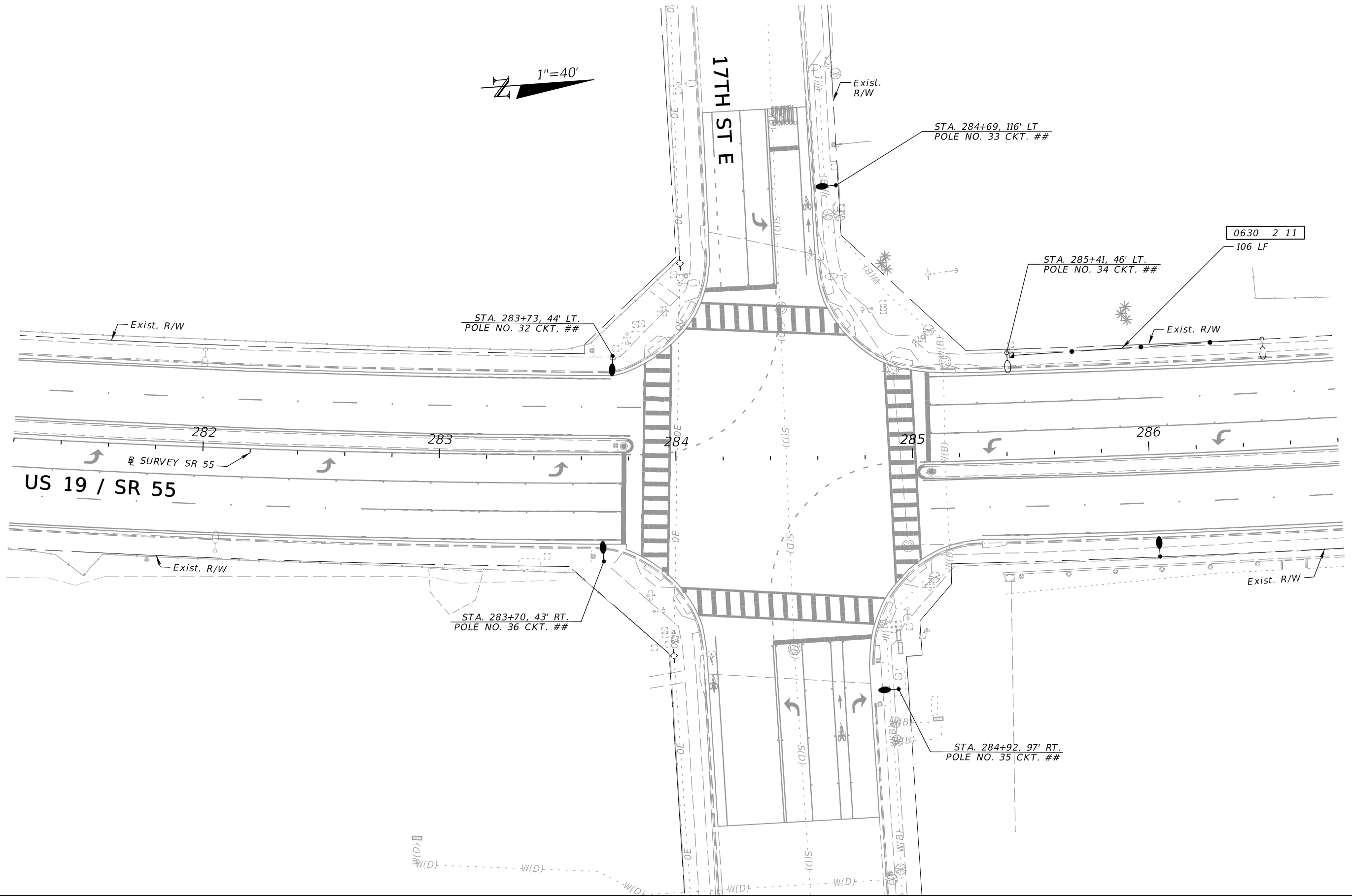
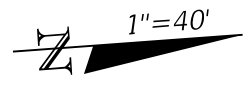
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| STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION | | |
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LIGHTING PLANS

SHEET NO.
L-7

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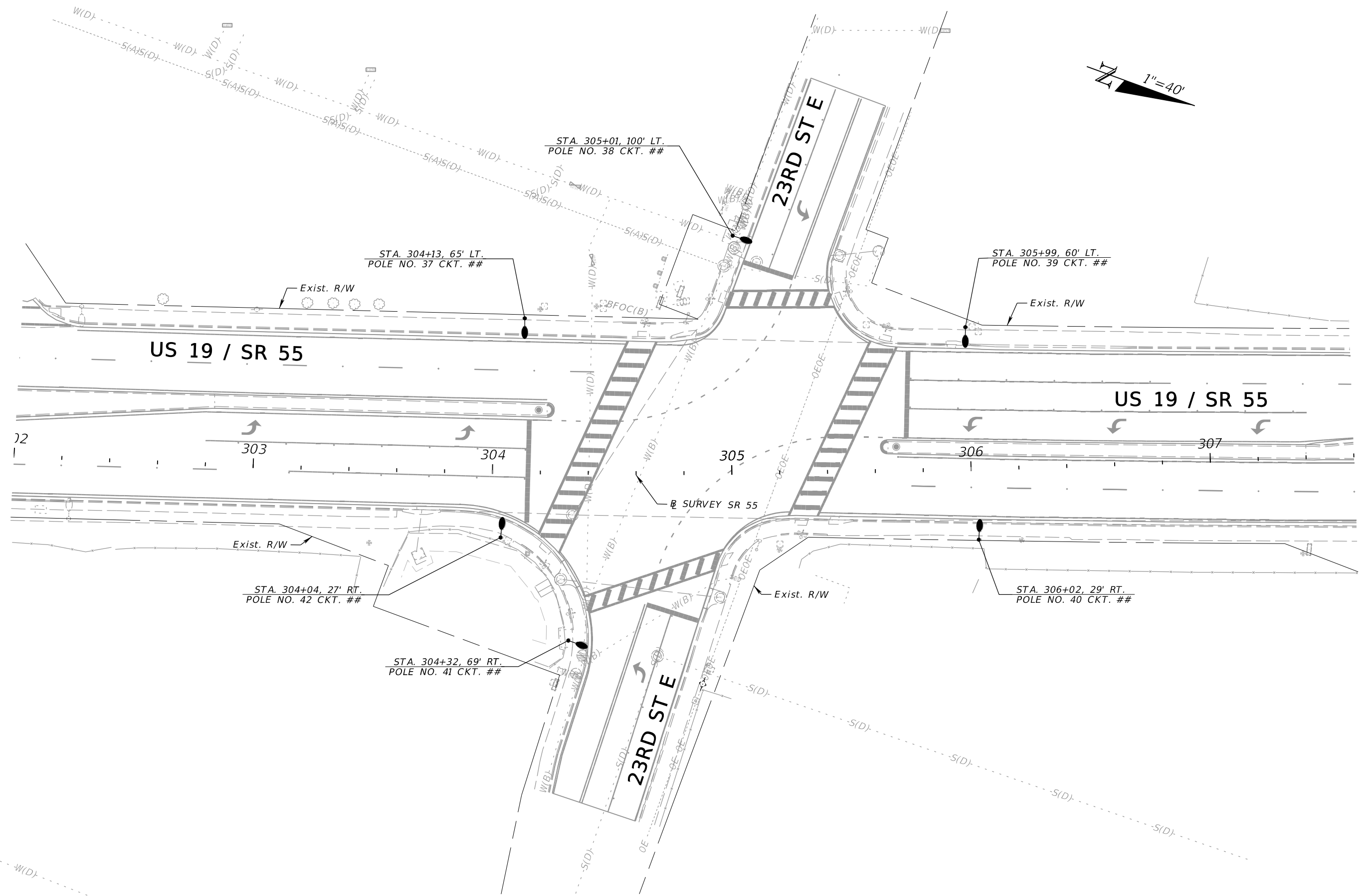
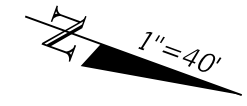
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 TEMPLE TERRACE, FL 33637

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| ROAD NO. | COUNTY | FINANCIAL PROJECT ID |
| SR 55 | MANATEE | 447379-1-32-01 |

LIGHTING PLANS

SHEET NO.
 L-8

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| DATE | DESCRIPTION |
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ENGINEER OF RECORD
 SUJEEVA A. WEERASURIYA, P.E.
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LIGHTING PLANS

SHEET NO.
L-9

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