

**APPROVED STREET LIGHTING MATERIALS (WASHINGTON COUNTY)**

1. LEOTEK GREEN COBRA HEAD STYLE LIGHT FIXTURE MOUNTED AT 35 FT ON TRAFFIC SIGNAL POLES WITH 16 FT ARM. LUMINAIRES USED FOR ANALYSIS ARE:

| MANUFACTURER:      | CATALOG NUMBER:                | WATTS: | BUG RATING: |
|--------------------|--------------------------------|--------|-------------|
| LEOTEK GREEN COBRA | GC1-40F-MV-NW-2-GY-530-PCR7-WL | 70     | B2-U0-G2    |
| LEOTEK GREEN COBRA | GC1-60F-MV-NW-2-GY-530-PCR7-WL | 101    | B2-U0-G2    |
| LEOTEK GREEN COBRA | GC1-80F-MV-NW-2-GY-530-PCR7-WL | 133    | B2-U0-G2    |

**Received  
Planning Division  
05/30/2024**

2. THE PHOTOELECTRIC CONTROL RELAY SHALL BE DESIGNED FOR USE WITH LED LIGHTS AND HAVE A MINIMUM 10-YEAR GUARANTEE AND A 25-YEAR LIFE EXPECTANCY. THE APPROVED PHOTOELECTRIC CONTROL RELAY IS:

| MANUFACTURER:  | CATALOG NUMBER: |
|----------------|-----------------|
| WESTIRC (SELC) | 8483            |

**PRELIMINARY**

1050 SW 6th Avenue, Suite 600  
Portland, Oregon 97204  
www.dksassociates.com



| Intersection Light Levels Summary - Washington County |                        |                          |                                 |                                 |                                 |                                 |
|---|------------------------|--------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| Road Name   | Roadway Classification | Pedestrian Conflict Area | Target Values                   |                                 | Achieved Values                 |                                 |
|   |                        |                          | Avg Horizontal Illuminance (fc) | Horizontal Uniformity (Avg/Min) | Avg Horizontal Illuminance (fc) | Horizontal Uniformity (Avg/Min) |
| SW Scholls Ferry Rd / SW Denney Rd                    | Major/Collector        | Low                      | ≥1.5                            | ≤3.0:1                          | 1.65                            | 3.00                            |

**APPROVED STREET LIGHTING MATERIALS (CITY OF BEAVERTON)**

1. COBRA HEAD STYLE STREET LIGHT POLES SHALL BE 30-FOOT MOUNTING HEIGHT WITH 8-FOOT ARM LENGTH. POLES AND FOUNDATIONS MUST MEET CITY OF BEAVERTON STANDARDS OF "WHATLEY" ALUMINUM POLES OR APPROVED EQUAL WITH A 14-INCH BOLD CIRCLE AND BOT SIZE OF 1 INCH X 36 INCH X 4 INCH. LUMINAIRES USED FOR ANALYSIS ARE:

| MANUFACTURER: | CATALOG NUMBER:                  | WATTS: | BUG RATING: |
|---------------|----------------------------------|--------|-------------|
| CREE LEDWAY   | STR-LWY-2M-HT-03-E-UL-SV-525-UTL | 53     | B1-U0-G1    |
| CREE LEDWAY   | STR-LWY-2M-HT-04-E-UL-SV-525-UTL | 66     | B2-U0-G2    |
| CREE LEDWAY   | STR-LWY-2M-HT-05-E-UL-SV-525-UTL | 86     | B2-U0-G2    |
| CREE LEDWAY   | STR-LWY-2M-HT-06-E-UL-SV-525-UTL | 100    | B2-U0-G2    |
| CREE LEDWAY   | STR-LWY-2M-HT-07-E-UL-SV-525-UTL | 120    | B2-U0-G2    |

2. ILLUMINATION JUNCTION BOXES ARE TO MEET CITY OF BEAVERTON STANDARDS. ALL JUNCTION BOXES TO BE LABELLED "STREET LIGHTING" WITH ONE JUNCTION BOX FOR EACH STREET LIGHT POLE WITHIN 3 FEET OF THE POLE IT SERVES.

**GENERAL NOTES**

- VERIFY LOCATION OF EXISTING UTILITIES TO ELIMINATE CONFLICTS. COORDINATE ALL WORK WITH UTILITY COMPANIES TO ELIMINATE CONFLICTS.
- FOR TRAFFIC SIGNAL LIGHTING, ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO WASHINGTON COUNTY ORDINANCES AND SPECIAL PROVISIONS.
- FOR STREET LIGHTING, ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO CITY OF BEAVERTON ENGINEERING DESIGN MANUAL.
- ALL ELECTRICAL EQUIPMENT SHALL CONFORM TO THE CURRENT STANDARDS OF THE NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA) AND THE UNDERWRITERS LABORATORIES, INC. (U.L.) WHEREVER APPLICABLE. IN ADDITION TO THE REQUIREMENTS OF THE PLANS, STANDARD SPECIFICATIONS, AND THE SPECIAL PROVISIONS, ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE CURRENT REQUIREMENTS OF THE NATIONAL ELECTRIC CODE (NEC). THE NATIONAL ELECTRICAL SAFETY CODE (NESC) STANDARDS OF THE AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI), AND ANY LOCAL ORDINANCES WHICH MAY APPLY.
- PROVIDE EQUIPMENT SUBMITTALS TO WASHINGTON COUNTY FOR REVIEW AND APPROVAL. USE AND FOLLOW ODOT BLUE AND GREEN SHEETS FOR COMMON ELECTRICAL EQUIPMENT AND MATERIALS. PROVIDE CUT SHEETS FOR EQUIPMENT NOT LISTED ON THE BLUE AND GREEN SHEETS. PROVIDE COMPLETE SUBMITTAL PACKAGE FOR REVIEW AND APPROVAL. WASHINGTON COUNTY APPROVAL OF THESE SUBMITTALS SHALL BE OBTAINED PRIOR TO CONSTRUCTION.

| NO. | REVISION |
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| 1   |          |
| 2   |          |
| 3   |          |
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**SW DENNEY ROAD**  
SW 105TH AVE TO SW SCHOLLS FERRY ROAD  
WASHINGTON COUNTY

**ILLUMINATION LEGEND**

PROJECT NUMBER  
**100666**  
SHEET NO.  
**79 OF 84**  
SHEET TITLE  
**IL-01**

30%

PRELIMINARY



**Intersection Light Levels Summary - City of Beaverton**

| Road Name                          | Roadway Classification | Pedestrian Conflict Area | Target Values                   |                                 | Achieved Values                 |                                 |
|------------------------------------|------------------------|--------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
|                                    |                        |                          | Avg Horizontal Illuminance (fc) | Horizontal Uniformity (Avg/Min) | Avg Horizontal Illuminance (fc) | Horizontal Uniformity (Avg/Min) |
| SW Denney Road / SW 104th Avenue   | Collector/Local        | Low                      | ≥1.35                           | ≤3.0:1                          | 1.36                            | 2.57                            |
| SW Denney Road / SW 103rd Avenue   | Collector/Local        | Low                      | ≥1.35                           | ≤3.0:1                          | 1.79                            | 2.93                            |
| SW Denney Road / SW Oakwood Dr     | Collector/Local        | Low                      | ≥1.35                           | ≤3.0:1                          | 1.36                            | 1.92                            |
| SW Denney Road / SW Rollingwood Dr | Collector/Local        | Low                      | ≥1.35                           | ≤3.0:1                          | 1.45                            | 1.91                            |
| SW Denney Road / SW 100th Terrace  | Collector/Local        | Low                      | ≥1.35                           | ≤3.0:1                          | 1.36                            | 1.86                            |

**Roadway Light Levels Summary - City of Beaverton**

| Road Name  | Roadway Classification | Pedestrian Conflict Area | Target Values                   |                                 | Achieved Values                 |                                 |
|--|------------------------|--------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
|  |                        |                          | Avg Horizontal Illuminance (fc) | Horizontal Uniformity (Avg/Min) | Avg Horizontal Illuminance (fc) | Horizontal Uniformity (Avg/Min) |
| SW Denney Road - SW 105th Ave to SW 104th Ave            | Collector              | Low                      | ≥0.9                            | ≤3.0:1                          | 1.15                            | 2.17                            |
| SW Denney Road - SW 104th Ave to SW 103rd Ave            | Collector              | Low                      | ≥0.9                            | ≤3.0:1                          | 1.30                            | 2.77                            |
| SW Denney Road - SW 103rd Ave to SW Oakwood Dr           | Collector              | Low                      | ≥0.9                            | ≤3.0:1                          | 1.25                            | 2.60                            |
| SW Denney Road - SW Oakwood Dr to SW Rollingwood Dr      | Collector              | Low                      | ≥0.9                            | ≤3.0:1                          | 1.22                            | 2.03                            |
| SW Denney Road - SW Rollingwood Dr to SW 100th Terrace   | Collector              | Low                      | ≥0.9                            | ≤3.0:1                          | 1.18                            | 1.66                            |
| SW Denney Road - SW 100th Terrace to SW Scholls Ferry Rd | Collector              | Low                      | ≥0.9                            | ≤3.0:1                          | 1.10                            | 2.82                            |

**Pedestrian Crossing Light Levels Summary - City of Beaverton**

| Road Name   | Roadway Classification | Pedestrian Conflict Area | Target Values                   |                                 |   | Achieved Values                 |                                 |   |
|---|------------------------|--------------------------|---------------------------------|---------------------------------|---|---------------------------------|---------------------------------|---|
|   |                        |                          | Avg Horizontal Illuminance (fc) | Horizontal Uniformity (Avg/Min) | Avg. Maintained Vertical Illuminance (fc) | Avg Horizontal Illuminance (fc) | Horizontal Uniformity (Avg/Min) | Avg. Maintained Vertical Illuminance (fc) |
| SW Denney Road / SW 103rd Avenue Midblock RRFB Crossing | Collector/Local        | Low                      | ≥1.35                           | ≤3.0:1                          | ≥1.35                                     | 1.94                            | 1.83                            | 1.52/1.46*                                |

\*West / East

**Sidewalk and Bicycle Facilities Light Levels Summary - City of Beaverton**

| Road Name  | Pedestrian Conflict Level | Target Values                   |                                 | Achieved Values                 |                                 |
|--|---------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
|  |                           | Avg Horizontal Illuminance (fc) | Horizontal Uniformity (Avg/Min) | Avg Horizontal Illuminance (fc) | Horizontal Uniformity (Avg/Min) |
| SW Denney Road - SW 105th Ave to SW 104th Ave - North              | Low                       | ≥0.5                            | ≤10.0:1                         | 0.8                             | 2.75                            |
| SW Denney Road - SW 105th Ave to SW 104th Ave - South              | Low                       | ≥0.5                            | ≤10.0:1                         | 0.6                             | 1.52                            |
| SW Denney Road - SW 104th Ave to SW 103rd Ave - North              | Low                       | ≥0.5                            | ≤10.0:1                         | 0.5                             | 3.92                            |
| SW Denney Road - SW 104th Ave to SW 103rd Ave - South              | Low                       | ≥0.5                            | ≤10.0:1                         | 0.9                             | 1.86                            |
| SW Denney Road - SW 103rd Ave to SW Oakwood Dr - North             | Low                       | ≥0.5                            | ≤10.0:1                         | 0.6                             | 3.17                            |
| SW Denney Road - SW 103rd Ave to SW Oakwood Dr - South             | Low                       | ≥0.5                            | ≤10.0:1                         | 0.5                             | 1.47                            |
| SW Denney Road - SW Oakwood Dr to SW Rollingwood Dr - North        | Low                       | ≥0.5                            | ≤10.0:1                         | 0.5                             | 4.36                            |
| SW Denney Road - SW Oakwood Dr to SW Rollingwood Dr - South        | Low                       | ≥0.5                            | ≤10.0:1                         | 0.5                             | 1.93                            |
| SW Denney Road - SW Rollingwood Dr to SW 100th Terrace - North     | Low                       | ≥0.5                            | ≤10.0:1                         | 0.5                             | 1.96                            |
| SW Denney Road - SW Rollingwood Dr to SW 100th Terrace - South     | Low                       | ≥0.5                            | ≤10.0:1                         | 0.6                             | 1.58                            |
| SW Denney Road - SW 100th Terrace to SW Scholls Ferry Rd - North   | Low                       | ≥0.5                            | ≤10.0:1                         | 0.5                             | 5.75                            |
| SW Denney Road - SW 100th Terrace to SW Scholls Ferry Rd - South   | Low                       | ≥0.5                            | ≤10.0:1                         | 0.6                             | 3.26                            |
| SW Denney Rd / SW Scholls Ferry Intersection - Northeast Curb Area | Low                       | ≥0.5                            | ≤10.0:1                         | 1.2                             | 1.22                            |
| SW Denney Rd / SW Scholls Ferry Intersection - Southeast Curb Area | Low                       | ≥0.5                            | ≤10.0:1                         | 0.9                             | 1.48                            |

| NO. | REVISION |
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**SW DENNEY ROAD**  
SW 105TH AVE TO SW SCHOLLS FERRY ROAD  
WASHINGTON COUNTY

ILLUMINATION LEGEND

PROJECT NUMBER  
**100666**  
SHEET NO.  
**80** OF **84**  
SHEET TITLE  
**IL-02**

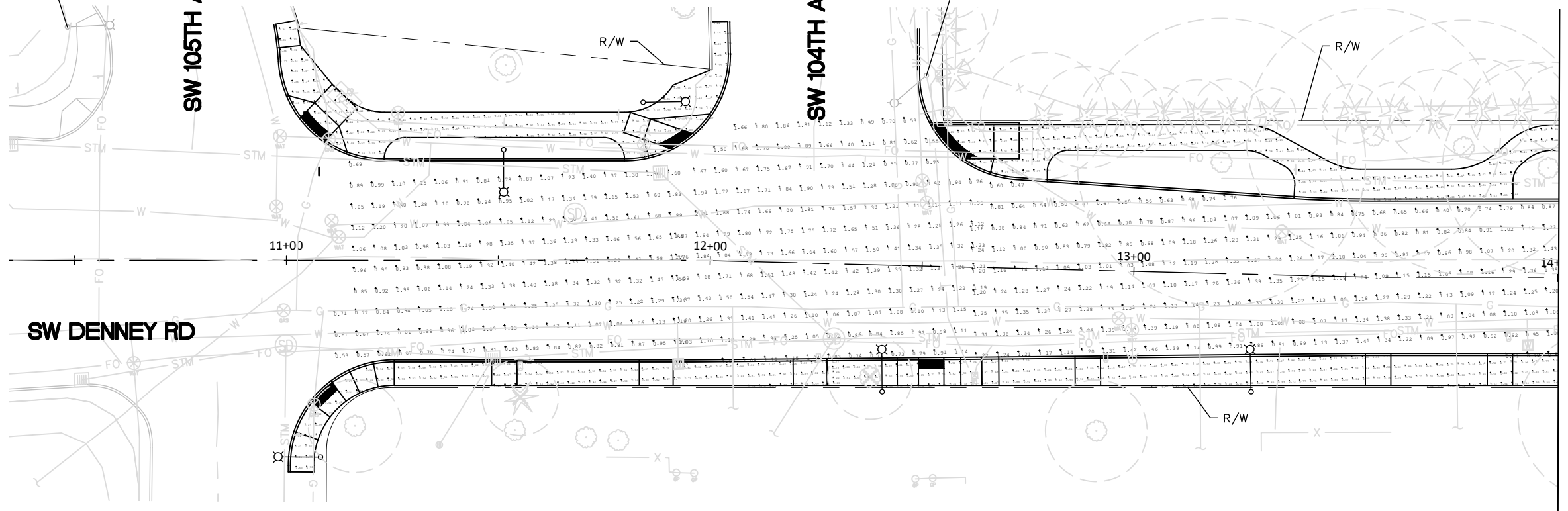
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EXISTING 47W LED  
PGE STREETLIGHT

SW 105TH AVE

SW 104TH AVE

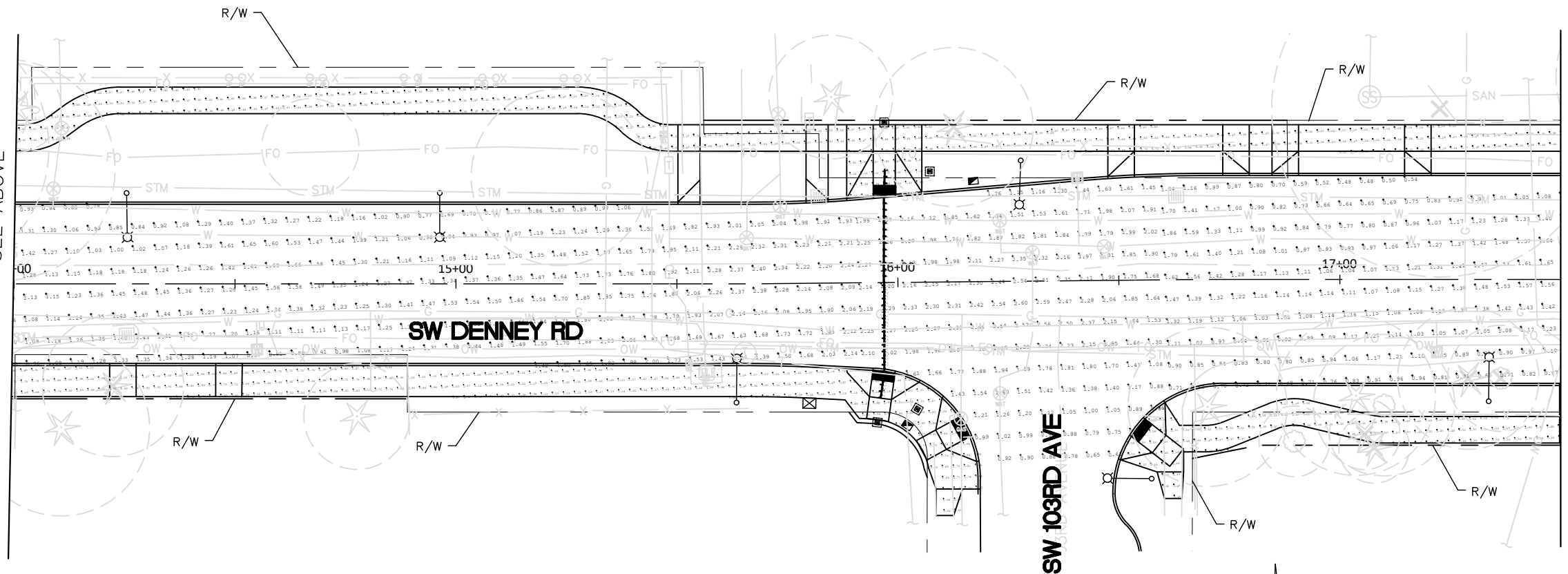
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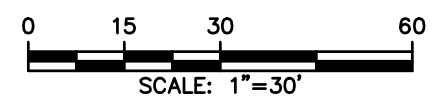
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STA 14+00

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STA 14+00

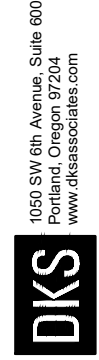


SEE SHEET IL-03  
STA 17+50



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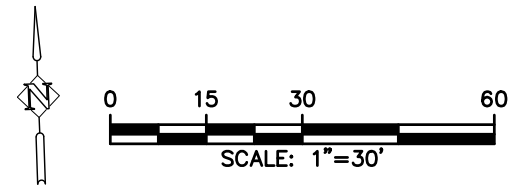
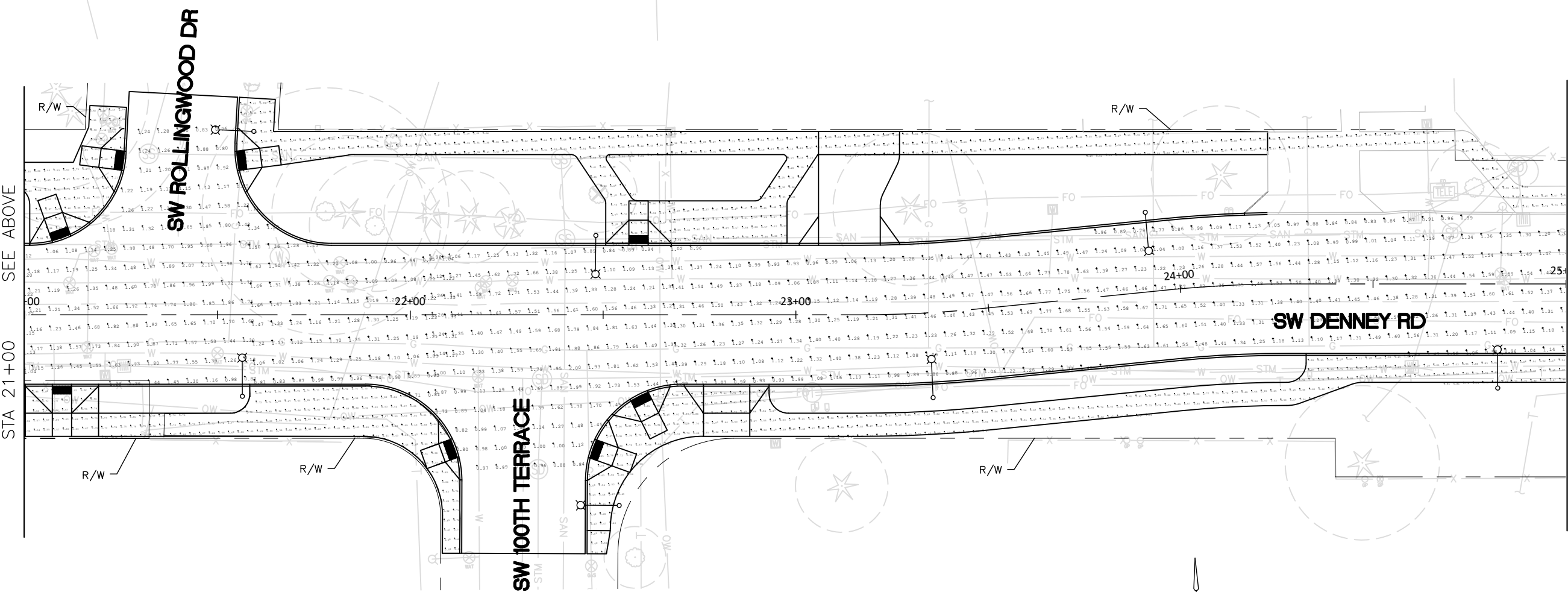
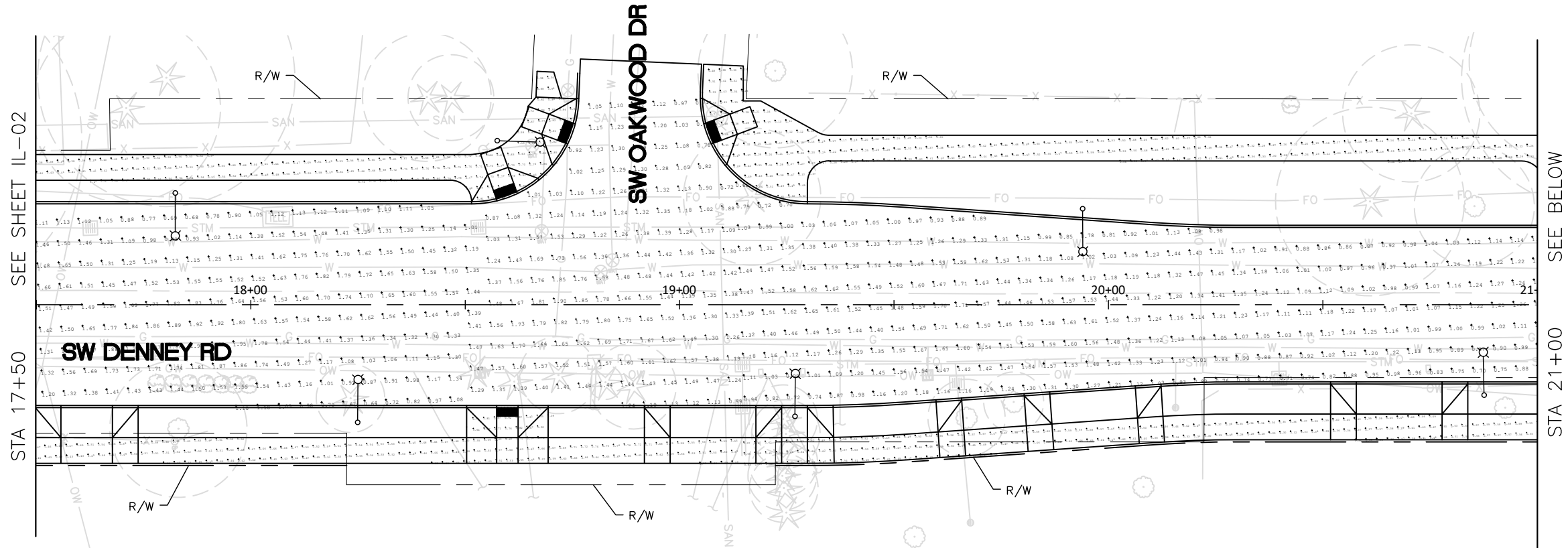
**SW DENNEY ROAD**  
SW 105TH AVE TO SW SCHOLLS FERRY ROAD  
WASHINGTON COUNTY

ILLUMINATION PLAN

PROJECT NUMBER  
**100666**  
SHEET NO.  
**81 OF 84**  
SHEET TITLE  
**IL-03**

PRELIMINARY

1050 SW 6th Avenue, Suite 600  
Portland, Oregon 97204  
www.dksassociates.com



30%

| NO. | REVISION |
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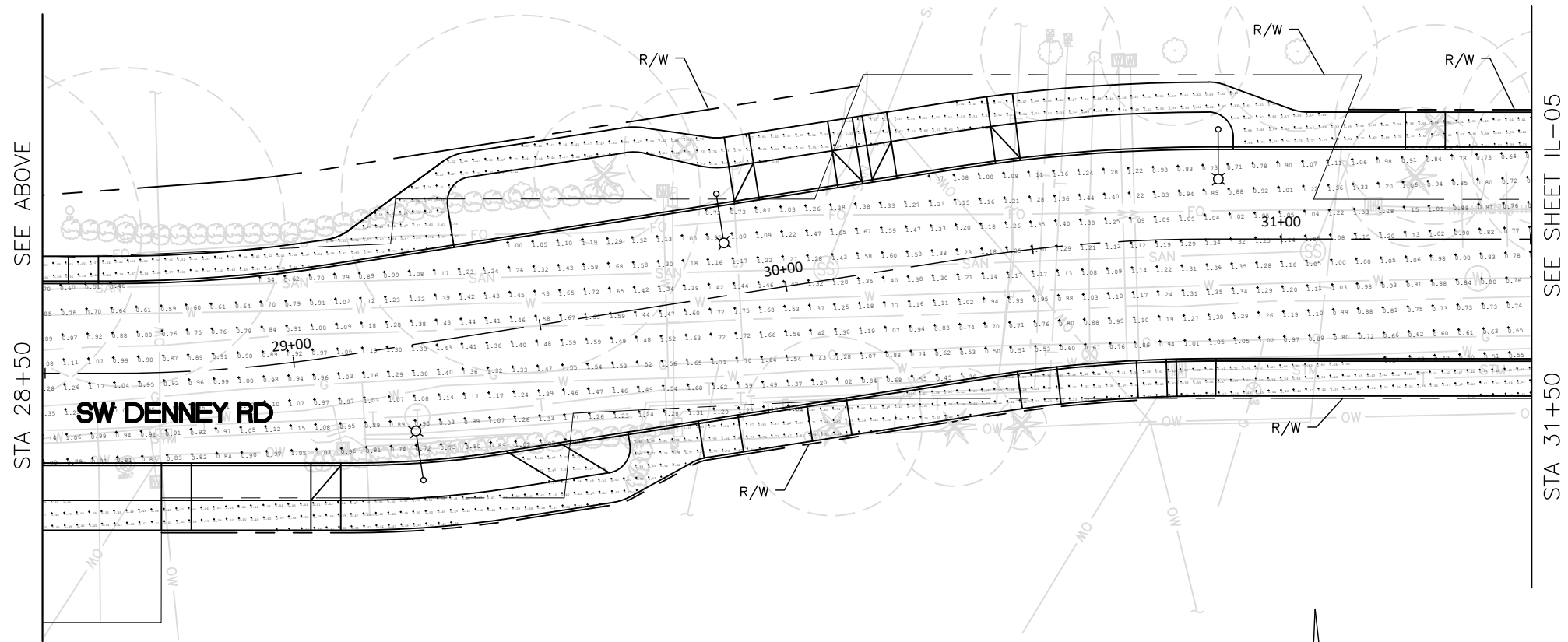
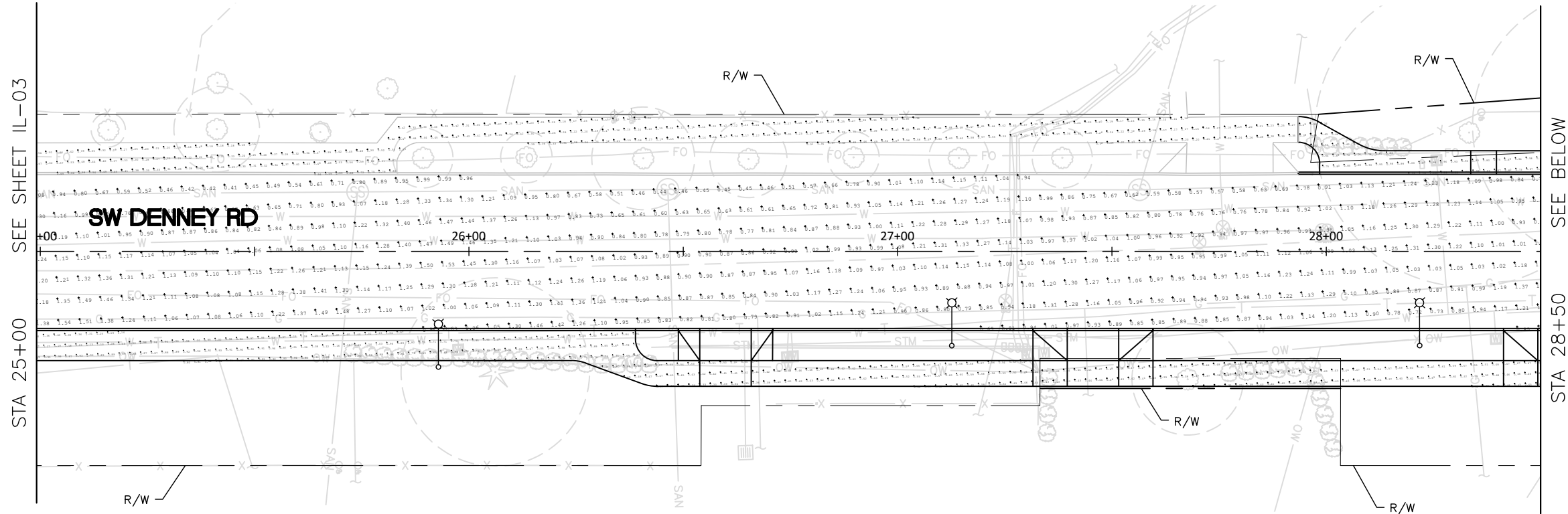
**SW DENNEY ROAD**  
SW 105TH AVE TO SW SCHOLLS FERRY ROAD  
WASHINGTON COUNTY

ILLUMINATION PLAN

PROJECT NUMBER  
**100666**  
SHEET NO.  
**81 OF 84**  
SHEET TITLE  
**IL-04**

PRELIMINARY

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Portland, Oregon 97204  
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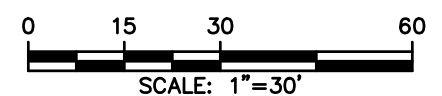
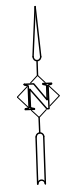


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**SW DENNEY ROAD**  
SW 105TH AVE TO SW SCHOLLS FERRY ROAD  
WASHINGTON COUNTY

ILLUMINATION PLAN

PROJECT NUMBER  
**100666**  
SHEET NO.  
**83 OF 84**  
SHEET TITLE  
**IL-05**



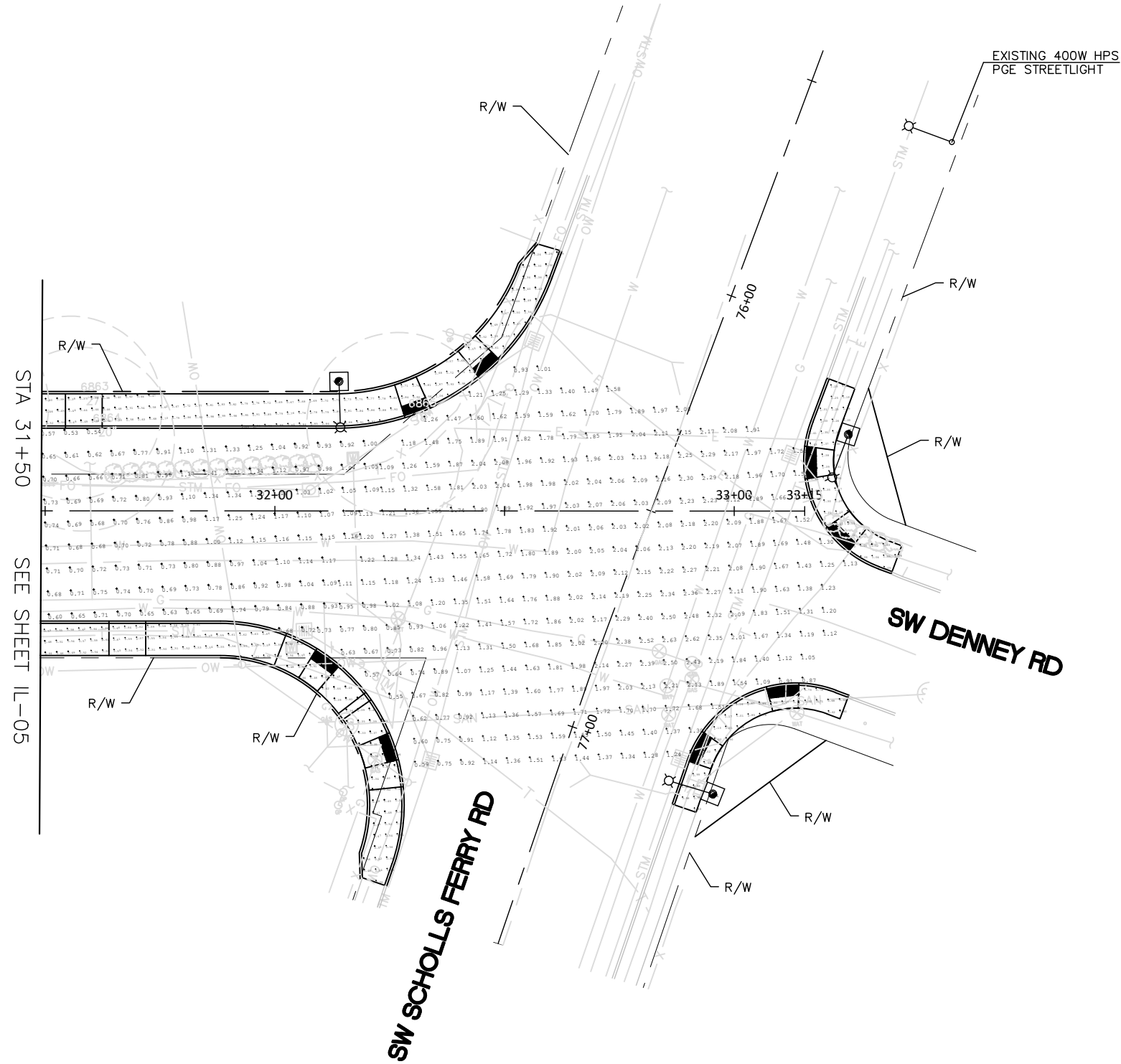
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Department of  
Land Use &  
Transportation  
Engineering



STA 31+50

SEE SHEET IL-05

NO. REVISION

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**SW DENNEY ROAD**  
SW 105TH AVE TO SW SCHOLLS FERRY ROAD  
WASHINGTON COUNTY

ILLUMINATION PLAN

PROJECT NUMBER

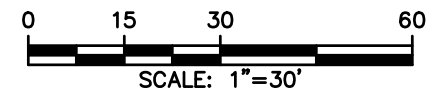
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SHEET NO.

**84 OF 84**

SHEET TITLE

**IL-06**



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