GENERAL STRUCTURAL NOTES:

1. GENERAL

2. DESIGN CODES

3. LOADS

3.1 Dead Load

3.2 Live Load

3.3 Seismic Design

3.4 Material Column Load

3.5 Uniform Dead Load

3.6 Bridge Design Life - 75 Years

4. CONSTRUCTION

4.1 Monitoring Survey shall be conducted during Foundation with beam and footing structures.

4.2 Steel ships shall be subject to the requirements of the American Institute of Steel Construction. Foundation shall be constructed in accordance with the provisions of the Structural Code of Practice and the Colorado Construction Code.

4.3 Contractor shall be responsible for the interpretation of the structural drawings and the Colorado Construction Code. Foundations shall be assembled in accordance with the provisions of the Structural Code of Practice and the Colorado Construction Code.

4.4 Pumps shall be equipped with a float switch and a check valve. The pump shall be connected directly to the water supply. The float switch shall be installed at least 6 feet above the water level in the sump. The check valve shall be installed at least 4 feet above the water level in the sump. The float switch shall be installed at least 4 feet above the water level in the sump. The check valve shall be installed at least 4 feet above the water level in the sump.

4.5 All structural steel shall be painted with a primer of acrylic or equivalent. The primer shall be applied to all steel surfaces and shall be at least 60 microns thick. The primer shall be followed by two coating of colored paint, each at least 60 microns thick. The primer shall be followed by two coating of colored paint, each at least 60 microns thick.

4.6 All stainless steel shall be fastened with self-drilling screws or equivalent. The screws shall be at least 60 microns thick and shall be at least 60 microns apart. The screws shall be at least 60 microns thick and shall be at least 60 microns apart.

4.7 Bolt holes shall be provided for all structural steel. The bolt holes shall be at least 60 microns thick and shall be at least 60 microns apart. The bolt holes shall be at least 60 microns thick and shall be at least 60 microns apart.

4.8 All structural steel shall be painted with a primer of acrylic or equivalent. The primer shall be applied to all steel surfaces and shall be at least 60 microns thick. The primer shall be followed by two coating of colored paint, each at least 60 microns thick. The primer shall be followed by two coating of colored paint, each at least 60 microns thick.
LEGEND:
1. EXISTING GROUND
2. SERVICE ARROW W/
   SUB-AREE
3. MAINTAIN EXISTING GRAVEL
   SEWAGE CONNECTION
4. INTEGRATE
5. GROWING NEW SEWAGE CONNECTION
6. PERPENDICULAR
7. REPAIR
8. EXISTING WALL 1434V
9. REPLACEMENT
10. CHAIN OF CURSE
11. ACCESS TRAIL
12. EXISTING PIPE
13. WASTE GROUND PIPE
14. REINFORCED CONCRETE
15. EXCAVATION LINE
16. LIGHT POLE W/ CABLE

NOTES:
1. FOR GENERAL STRUCTURAL NOTES SEE Dwg Tech P101.
2. FUTURE SANITARY SEWER FORCE MAIN AND FUTURE SEWER LINES NOT SHOWN.

SOUTH WALL SECTIONS
SCALE 1" = 10'

EXCAVATION AREA = 78 SQ FT
EXCAVATION AREA = 125 SQ FT
EXCAVATION AREA = 147 SQ FT
EXCAVATION AREA = 129 SQ FT

CITY OF KIRKLAND
DEPARTMENT OF PUBLIC WORKS
123 FIFTH AVENUE  KIRKLAND, WA 98033
(425) 587-3800  www.kirklandwa.gov

COWI

PROFESSIONAL ENGINEER
STATE OF WASHINGTON
STRUCTURAL ENGINEER
MATTHEW D.BAUGHMAN

2019 DEC 06
2019 DEC 06

SHEET:
CHECKED BY:
DRAWN BY:
DESIGNED BY:

DEPARTMENT OF PUBLIC WORKS
CITY OF KIRKLAND
TOTEY LINE CONNECTION
SOUTH MSE WALL SECTIONS - SHEET 2

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COWI

PROFESSIONAL ENGINEER
STATE OF WASHINGTON
STRUCTURAL ENGINEER
MATTHEW D.BAUGHMAN

2019 DEC 06
2019 DEC 06
NOTES:
1. FOR GENERAL STRUCTURAL NOTES SEE ONE TLC-S-101.
2. ALL DRILLING OPERATIONS FOR DRILLED SHAFT FOUNDATIONS SCHEDULED ON THIS SHEET SHALL BE MONITORED BY THE RESIDENT ENGINEER.
3. THESE NOTES APPLY ONLY TO THE DRILLED SHAFT TYPE DETAIL ON THIS SHEET.
4. DRILLED SHAFT TOP ELEVATIONS SHALL BE VERIFIED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF REINFORCING STEEL AND CONCRETE.
5. THE EXACT LOCATION AND DEPTH OF ALL UNDERGROUND SERVICES SHALL BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
6. prior TO CASTING CONNECTION TO FILE CAP, CONTRACTOR SHALL REMOVE LAWN OR DOWNS TO SOUND CONCRETE AT THE CONNECTION JOINT AND SHALL CLEAN EXPOSED REINFORCEMENT.
7. LAWN ELEVATION FOR TRANSVERSE REINFORCEMENT SHALL BE 48 IN. (122MM) MINIMUM.
8. STEEL PIPES PROVIDED AS ACCESS TUBES FOR CSL TESTING SHALL BE IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS.
9. THE CONTRACTOR SHOULD PROVIDE ADEQUATE SPACING TO MAINTAIN THE REINFORCEMENT CAPACITY AT ALL CONSTRUCTION STAGES.
10. LAPPED SPACES SHALL NOT BE PERMITTED FOR UNEQUAL REINFORCEMENT.
11. ALL NEEDS FOR STEEL CASING SHALL BE COMPLETE JOINT PENETRATION (PROVE WELD).
12. AS-BUILT LOCATIONS AND ELEVATIONS OF TOP OF SHAFTS SHALL BE SUBMITTED TO ENGINEER OF RECORD (EOR) PRIOR TO PROCEEDING WITH ABUTMENT CONSTRUCTION.
13. PROVIDE 4" CLEAR FROM TOP OF SPIRAL TO LOWEST POINT OF CONSTRUCTION JOINT. VERTICAL SPIRAL IN SPIRAL TO ALLOW PLACEMENT OF BOLT HEAD OF FILE CAP REINFORCEMENT SHALL NOT EXCEED 4" AT A1 OR 8" AT A2.
NOTES:
1. FOR GENERAL STRUCTURAL NOTES SEE DRAWING TLC-S-101.
2. END BEAM END SECTIONS ARE SIMILAR SHAPED WITH BEAM-CHORD PIERD DUE TO DIFFERING LONGITUDINAL GRADE OF INNER AND OUTER RINGS.
3. SEALING AND ANCHORAGE STIFFENERS USE COMMON DEVICES. EXCEPT WEB SECTIONS.
4. END SEAMS SHALL USE HIGH PERFORMANCE STEEL (HPS).
5. THREADING END SCREW TO BEAM 9/" FROM BRIDGE CENTERLINE FOR REPAIR PC PANEL.
6. STOP ATTACHMENT PLATE HOLES 3/" FROM EDGES OF ENCASTER PLATE.
A1 APPROACH SLAB PLAN
SCALE 1" = 1'-0"

A12 APPROACH SLAB PLAN
SCALE 1" = 1'-0"

NOTES:
1. FOR GENERAL STRUCTURAL NOTES SEE DRAWING TEC-50501.
2. WALKING SURFACE OF CONCRETE SHALL RECEIVE A TRANSPARENCY BROACH FINISH.
NOTES:
1. FOR GENERAL STRUCTURAL NOTES SEE Dwg. TDS-S-101.
2. PAINTED SURFACES SMALL WHITE COLOR USED ON RAINING POST.
3. UNLESS NOTED OTHERWISE, ALL STEEL COMPONENTS SHALL BE HOT-DIPPED GALVANIZED AFTER FabricATION AND ASSEMBLY.
4. COVER PLATE SYSTEM SHALL EXTEND FULL LENGTH BENEATH CURVE USING HARD SAFETY FLEX EXTRUSIONS. PAINTED STEEL CURVE OR SURFACE OF APPLIED EQUIVALENT.
5. COMPRESSION SEAL SHALL EXTEND FULL LENGTH OF ANGLES.
6. BOLTS SHALL BE TORQUED USING TYP--03-THE--AVE AFTER INSTALLATION OF COMPRESSION SEAL AND COVER PLATE.
NOTES:

1. FOR GENERAL STRUCTURAL NOTES SEE CWG TLC-S-151.

2. MASONRY PLATE SHALL BE CONNECTED TO SUBSTRUCTURE USING 4 COUNTERTOP FEED Nut AND BEARING ROD AT TIMES 2 AND 4 BEARING NUMBER AND SIZE OF ANCHOR ROD MAY BE REDUCED IF OTHER BEARINGS ARE USED. THE RODS SHALL EXTEND 15" MINIMUM BELOW TOP OF BEAM TO TOP OF ANCHOR SEAT.

3. CONTRACTOR SHALL EXTEND BEARING PLATE ELEVATIONS BY DECREASING THE ACTUAL BEARING THICKNESS FROM THE TOP OF BEARING ELEVATIONS.

4. LENGTH AND SIZE OF WELD CONNECTING SOLE PLATE TO END BEAM SHALL BE PER THE BEARING SUPPLIER'S DESIGN.

5. ANCHOR RODS MAY BE INSTALLED USING ELECTRODES OR COUPLERS PER MANUFACTURER REQUIREMENTS.
NOTES:
1. FOR GENERAL STRUCTURAL NOTES SEE DRAWING TLC-S-101.
2. GRATING SHALL BE HOT DIPPED GALVANIZED WELDED BAR STEEL PLATING WITH 0.25 IN X 3/4 IN. SQUARE HOLLOW "H" SECTION.
3. GRATING SHALL BE CUT FROM 3 FOOT WIDE STANDARD GRATING WITH EXPOSED EDGES BRUSHED WITH CALCIUM OR APPROVED EQUIVALENT.
4. FRAMING ANGLES AND SUPPORT PLATES SHALL BE PAINTED THE SAME COLOR AS THE FRAMING ANGLES.
5. GRATING CUTS AND SLOTS PER MANUFACTURER REQUIREMENTS.
SUGGESTED CONSTRUCTION STAGING:

1. Close check dam between Tiller Lake (NE 12th) and NE 12th North of NE 124th St, extend north. NE 124th St. New construction includes permanent fencing.
2. Install temporary fence and temporary fencing on NE 124th St.
3. Install environmental protection and temporary erosion control measures.
4. Construct temporary storm drain in place.
5. Construct temporary storm drain access.
6. Construct temporary storm drain access.
7. Construct temporary storm drain access.
8. Construct temporary storm drain access.
9. Construct temporary storm drain access.
10. Construct temporary storm drain access.

POLYGONAL STRUCTURAL ENGINEER
MATTHEW D. BAUGHMAN

DEPARTMENT OF PUBLIC WORKS
CITY OF KIRKLAND
49664

PROFESSIONAL ENGINEER STATE OF WASHINGTON

SHEET:

CHECKED BY: DRAWN BY: DESIGNED BY:

2019 DEC 06

CITY OF KIRKLAND
TOTTEN LAKE CONNECTION

COWI

TLC-S-165

DEPARTMENT OF PUBLIC WORKS
CITY OF KIRKLAND
125 FIFTH AVENUE KIRKLAND, WA 98033
(425) 587-3800 www.kirklandwa.gov

SUGGESTED CONSTRUCTION STAGING:

1. Close check dam between Tiller Lake (NE 12th) and NE 12th North of NE 124th St, extend north. NE 124th St. New construction includes permanent fencing.
2. Install temporary fence and temporary fencing on NE 124th St.
3. Install environmental protection and temporary erosion control measures.
4. Construct temporary storm drain in place.
5. Construct temporary storm drain access.
6. Construct temporary storm drain access.
7. Construct temporary storm drain access.
8. Construct temporary storm drain access.
9. Construct temporary storm drain access.
10. Construct temporary storm drain access.
GENERAL NOTES

1. SEE CA-77 TO CA-77 FOR EROSION AND STORMWATER CONTROL PLANS.

2. CONSTRUCTION TO COORDINATE CONSTRUCTION ENTRANCE AND EXIT WITH CITY OF KIRKLAND. SEE GENERAL NOTE 4. FOLLOWING CONSTRUCTION CONTRACTOR SHALL REMOVE MATERIALS EXCEPT THE LIMITS OF WORK THAT ARE DELIVERED BY CONTRACTOR VEHICLES AND MATERIALS AND TEMPORARY CONSTRUCTION ACCESS EXISTING BUT NOT LIMITED TO THE MOW AND NATURE-LAND BANKS. PLACING DEVICES OR SPRINGS AT 120TH PL NE OR CROSS SCHOOL FOR TRAIL ALONG THE CROSS KIRKLAND CORRIDOR.

3. PROVIDE PERMANENT CHAIN LINK CONSTRUCTION FENCING TO SECURE THE WORK AREA AND MAINTAIN TEMPORARY TRAFFIC.

4. FOR AREAS OUTSIDE LIMITS OF WORK AS A PART OF PROJECT TEMPORARY TRAFFIC CONTROL PROVIDE HIGH VISIBILITY FENCE, FLAGEGERS, AND/OR OTHER TEMPORARY MEASURES TO CONTROL ACCESS TO THE CROSS KIRKLAND CORRIDOR AND TEMPORARY CONSTRUCTION ACCESS STATIONS FOR SAFETY OF PEOPLE WALKING AND BIKING ALONG TRAIL.
CONSTRUCTION NOTES

1. Gravel borrow for culvert backfill
2. Rock for erosion and scour protection, Class A, 2' depth
3. Precast reinforced concrete box culvert

APPENDIX

NOTE
1. Attach pressure treated wood curb with 4" projection above top of culvert. See Note 1
2. Check for erosion and scour protection, Class A

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DEPARTMENT OF PUBLIC WORKS
CITY OF KIRKLAND
TOTEM LAKE PEDESTRIAN BRIDGE
WEST DITCH TO EAST DITCH CULVERT CONNECTION

COWI
NOTES:
1. SEE DRAINAGE PAVING PLANS SHEETS C-191
   TO C-197 FOR ADDITIONAL INFORMATION.
2. END RESTORED DITCH AT CURVET emotional INSTALL
   SLACK WET SLOPE PROTECTION AND EROSION
   PROTECTION PER APPROVED MODIFIED DRAWINGS
3. INSTALL KL 7 x 10 x 75 ENCO UP TO ROCK FOR
   EROSION AND SCAVENGE CHILD, CLASS A AT
   CURVET OUTLET
### Buffer Restoration/Groundcover Mix

<table>
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<tr>
<th>No.</th>
<th>Plant Name</th>
<th>Common Name</th>
<th>Size/Spacing</th>
<th>QTY.</th>
<th>Details</th>
<th>Exposure</th>
<th>Notes</th>
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<tbody>
<tr>
<td>1</td>
<td>Prunus virginiana</td>
<td>Cherry</td>
<td>4&quot; pot/1 C.</td>
<td>190</td>
<td>Wood standard plan H=1.000 L=0.600</td>
<td>S, P5</td>
<td>Interior Species in Groups of 3-5 Planted Eves</td>
</tr>
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### Drainage Ditch Seeding Mix

<table>
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<th>No.</th>
<th>Plant Name</th>
<th>Common Name</th>
<th>Size/Spacing</th>
<th>QTY.</th>
<th>Details</th>
<th>Exposure</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Carex viridula</td>
<td>Blue Sedge</td>
<td>4&quot; pot/1 C.</td>
<td>385</td>
<td>Wood standard plan H=1.000 L=0.600</td>
<td>S, P5</td>
<td>Interior Species</td>
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### Buffers Restoration/ Remediation Mix

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<th>No.</th>
<th>Plant Name</th>
<th>Common Name</th>
<th>Size/Spacing</th>
<th>QTY.</th>
<th>Details</th>
<th>Exposure</th>
<th>Notes</th>
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<tr>
<td>1</td>
<td>Acer circinatum</td>
<td>River Birch</td>
<td>5 GAL</td>
<td>21</td>
<td>Wood standard plan H=1.000 L=0.600</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Abies balsamea</td>
<td>Balsam Fir</td>
<td>3 GAL</td>
<td>15</td>
<td>Wood standard plan H=1.000 L=0.600</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Chamaecyparis thyoides</td>
<td>False Cedar</td>
<td>6 FT RPT</td>
<td>15</td>
<td>Wood standard plan H=1.000 L=0.600</td>
<td></td>
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</table>

### Corridor Plant Schedule

<table>
<thead>
<tr>
<th>No.</th>
<th>Plant Name</th>
<th>Common Name</th>
<th>Size/Spacing</th>
<th>QTY.</th>
<th>Details</th>
<th>Exposure</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Sod Installation</td>
<td></td>
<td>Square Yards</td>
<td></td>
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### Wetland Restoration/Enhancement Shrubs Mix

<table>
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<th>No.</th>
<th>Plant Name</th>
<th>Common Name</th>
<th>Size/Spacing</th>
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<th>Details</th>
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<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Sedge</td>
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<td></td>
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### Wetland Restoration Groundcover Mix

<table>
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<tr>
<th>No.</th>
<th>Plant Name</th>
<th>Common Name</th>
<th>Size/Spacing</th>
<th>QTY.</th>
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<th>Exposure</th>
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<tbody>
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<td></td>
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</tbody>
</table>

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**Note:**

1. All plantings, other than Sedges, are to be 8" pot based upon design.
SURVEY AND SHEET NOTES:

1. NO SURVEY NORTH OF TRAIL IMPROVEMENTS. ACTUAL LIMITS OF CLEARING AND GRADING TO BE COORDINATED WITH CITY. FOR PURPOSES OF BIDDING, THE AREAS SHOWN ARE INCLUDED IN THE 0.8 ACRES OF CLEARING AND GRADING.
2. NOTE SCALE CHANGE FROM 1:40 SCALE NORTH OF MATCHLINE.
3. KING COUNTY DRINKING WATER SHADING FOR 124TH ST. IF SHADING IS SHOWN, THE AREAS SHOWN ARE APPROXIMATE. SEE SHEET L-200 FOR THE PLANTING LEGEND.

NOTED:

1. PLANT MATERIALS TO BE PLANTED ON THE ENTIRE PROJECT SITE BEFORE THE COMPLETION OF THE PROJECT. PLANTS TO BE PLANTED WILL BE DETAILLED IN THE PLANTING LEGEND. PLANT MATERIALS TO BE PLANTED IN THE PLANTING LEGEND.
2. PLANT MATERIALS TO BE PLANTED IN THE PLANTING LEGEND.
3. CONTRACTOR SHALL PROVIDE PLANT MATERIALS TO THE AREA SHOWN. SEE SHEET L-200 AND L-201 FOR DESIGN SPACING FOR EACH SPECIES. SEE SHEET L-200 FOR DESIGN SPACING FOR EACH SPECIES.

NOTE SCALE CHANGE:

MATCHLINE - SEE SHEET L-200

PROPERTY LINE
PROJECT LIMITS
BRIDGE AND RAMPS PERMITS, TIP
RESTORED/REPLACED SIDING
WALL GRADING/LEVELING LAYOUT
ARCHITECTURAL DRAWINGS

CORRIDOR UNDERGROUND PLANT SCHEDULE

SEE SHEET L-200 FOR THE PLANTING

WATER RESTORATION/ENHANCEMENT
SIMILAR VAR
WATER RESTORATION/GROUND
COVER VAR
BUFFER RESTORATION/ENHANCEMENT
SIMILAR VAR (SEE NOTE 5)
WATER RESTORATION/GROUND
COVER VAR (SEE NOTE 5)
DRAINAGE OPEN SEWER MIX
(SEE NOTE 5)
DRAINAGE OPEN SEWER MIX
ZONE 1 (SEE NOTE 5)
DRAINAGE POND AND DRAINAGE
OPEN SEWER MIX ZONE 1 (SEE NOTE 5)
DRAINAGE POND AND DRAINAGE
OPEN SEWER MIX ZONE 1 (SEE NOTE 5)
HORIZONTAL CURVE (SEE NOTE 5)
SIDE CURVE (SEE NOTE 5)
TRAIL EDGE CURVE VAR
(SEE NOTE 5)

Scale As Noted

KEYMAP

CITY OF KIRKLAND
DEPARTMENT OF PUBLIC WORKS
123 FIFTH AVENUE KIRKLAND, WA 98033
(425) 587-3800  www.kirklandwa.gov

DEPARTMENT OF PUBLIC WORKS
CITY OF KIRKLAND
CORRIDOR RESTORATION 7

12012 NE 124TH ST
(VOLKSWAGEN OF KIRKLAND)

SCALE: 1" = 20'
SIDEWALK GUARDRAIL DETAIL

SECTION

FOUNDATION PLAN

INFLF PANEL DETAIL

POST DETAIL

OPUS 10 INFILL PANEL

NOTES:
1. SIDEWALK GUARDRAIL SHALL BE MANUFACTURED AND INSTALLED IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS. SEE SPECIAL PROVISIONS.
2. CP PILE SHALL USE CONCRETE CLASS 3000.
NOTES:

1. REFER TO CONTRACT SPECIFICATIONS FOR FURTHER DETAILS.

2. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS RELATING TO THE WORK IN THIS CONTRACT, CONTACT THE VARIOUS AGENCIES INVOLVED RELATING TO THE ELECTRICAL WORK AND INCLUDE ALL INSPECTION AND OTHER FEES IN THE CONTRACT.

3. THE CONTRACTOR SHALL UNDERTAKE ALL WORK IN STRICT ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND ANY WASHINGTON STATE WAC 296-45, "SAFETY STANDARDS FOR ELECTRICAL WORKERS" AND WAC 296-46, "LAWS, RULES & REGULATIONS FOR INSTALLING WIRES & EQUIPMENT".

4. ALL WORK SHALL BE PERFORMED AND SUPERVISED BY A REGISTERED ELECTRICAL CONTRACTOR.

5. REFER TO SPECIFICATIONS FOR PRODUCT REQUIREMENTS

6. CONTRACTOR SHALL PROVIDE O&M MANUALS IN PDF FORMAT.

7. ALL CAST IN PLACE AND SURFACE MOUNT CONDUITS SHALL BE GALVANIZED RIGID METAL CONDUIT (RMC).

8. CONFIRM EQUIPMENT COLOURS WITH CITY/ARCHITECT PRIOR TO ORDERING

9. USE OF DISSIMILAR METALS WHEN IN CONTACT WITH EACH OTHER IS NOT ALLOWED.

10. ALL FLEX CONDUIT AND CABLE CONNECTORS SHALL BE STAINLESS STEEL (T&B TYPE) WITH GROUND LOCK NUT

11. INSTALL FIBRE IN EXISTING CONDUITS FROM VAULT TO VAULT AT LIGHTING CONTROL CABINET AND INSTALL FIBRE IN NEW CONDUIT TO CABINET
EXISTING SERVICE CABINET

EXISTING TRAFFIC CABINET

EXISTING VAULT AND BOXES

TO P9 POWER BOX (TYP.)

TO P4 POWER BOX (TYP.)

TO P4 DMX BOX (TYP.)

TO P4 RMC BOX (TYP.)

TOP FOR FIRE CONDUIT TO HARNESS WHERE REQUIRED

TOP AND BOTTOM

CONNECT INTO SIDE WITH SUITABLE CONDUIT FITTINGS

LEAD CONDUIT ATTACHMENT TO CONCRETE OR STEEL

MAX 1'-0" EMBRITTMENT FOR ANCHOR

OUTSIDE FACE OF CURB

TOP OF CURB

INSIDE FACE OF CURB

1/2" DRAIN CONDUIT

LOCAL CONDUIT TO CONCRETE BOX

NECESSARY TO ISOLATE IT FROM COMM.

2 X 3/4" RMC (TYP.)

GALVANIZED CONDUIT STRAP TO CONCRETE OR STEEL

MAX 1'-0" EMBRITTMENT FOR ANCHOR

GALVANIZED CANTRUSS AND DROP IN ANCHORS (MAX 1.5" EMBEDMENT)

BOLT TO CANTRUSS (TYP. TOP AND BOTTOM)

CONNECT INTO SIDE WITH SUITABLE CONDUIT FITTINGS

CAST METAL BOX

BOLT TO BEAM WITH STAINLESS STEEL BOLTS

ENGRAVED "LIGHTING"

1/4" LID AND RUBBER GASKET WITH FLUSH STAINLESS STEEL TAMPER PROOF SCREWS

NEMA 4 RATED MARINE GRADE ALUMINUM POWDER COATED GREY

GROUND STUD BOLT

LOCATE AS CLOSE AS POSSIBLE TO STRUT

BOTTOM OF CONCRETE REACTION BLOCK

CAST IN PLACE CONDUIT

PRECAST PANEL

RAILING LIGHT MOUNTING DETAIL

GRAZER LIGHT MOUNTING DETAIL

P4 DETAIL

P4 PROFILE ENLARGEMENT

P4 DETAIL

REFER TO TLC-E-305 FOR NOTES AND LEGEND

FILENAME:

SCALE:

DATE

CHECKED BY:

DRAWN BY:

DESIGNED BY:

SHEET:

123 FIFTH AVENUE  KIRKLAND, WA 98033

DEPARTMENT OF PUBLIC WORKS

DMD & Associates Ltd.

www.dmdeng.com

office@dmdeng.com

6042-18-3 OF 5

CITY OF KIRKLAND

TUKWILA-LAKE CONNECTION

ACCEPT LIGHTING DETAILS 2

CITY OF KIRKLAND

TOWEN LANE CONNECTION

TMK

COOWI

DOWNTOWN

2016/12/26

2016/12/26

2016/12/26

2016/12/26

2016/12/26

2016/12/26

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6042-18-3 OF 5
Measured free product in well or piezometer

Continuous Coring
- Bulk or grab
- Direct-Push
- Shelby tube

Material Description Contact
- Graphic Log Contact
- Groundwater Contact

Key to Exploration Logs

<table>
<thead>
<tr>
<th>SYMBOLS</th>
<th>TECHNICAL DESCRIPTIONS</th>
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<tr>
<td>NS</td>
<td>No Visible Sheen</td>
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<tr>
<td>SS</td>
<td>Slight Sheen</td>
</tr>
<tr>
<td>MS</td>
<td>Moderate Sheen</td>
</tr>
<tr>
<td>HSHS</td>
<td>Heavy Sheen</td>
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</table>

Sheen Classification
- No Visible Sheen
- Slight Sheen
- Moderate Sheen
- Heavy Sheen

Laboratory Tests
- Physical property test
- Chemical analysis
- Laboratory compaction test
- Moisture content
- Atterberg limits
- Dry density
- Direct shear
- Triaxial compression
- Unconfined compression
- Consolidation test
- Hydrometer analysis
- Permeability or hydraulic conductivity
- Shear strength

Groundwater Contact
- Distinct contact between soil strata
- Approximate contact between soil strata

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<th>Field Data</th>
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**MATERIAL DESCRIPTION**

- **Sample Name**: Testing
- **Recovered (in)**: Blows/foot
- **Collected Sample**: Depth (feet)
- **Graphic Log**: Field Data

**REMARKS**

- Groundwater observed at 6 feet at time of drilling
- Added drilling mud to borehole
- Driller noted gravel at 22 feet
- Driller noted easier drilling at 27 feet

**Notes:**

1. For borehole key, see drawing TLC-400.
2. For borehole locations, see drawing TLC-402.
3. This borehole log is only a portion of a report prepared by GeoEngineers Totem Lake Connector Phase 2 Geotechnical Engineering Services, dated October 2018.

This drawing has been prepared for the City of Kirkland Totem Lake Connector Project by GeoEngineers. Their employees, consultants or agents accept no responsibility for any other use.
Log of Boring with Monitoring Well B-2

**PROJECT:** Totem Lake Connector

**Project Location:** Kirkland, Washington

**Project Number:** 0231-090-00

**Status:** Sheet 2 of 2

**Figure A-3**

**DATE:** 3/13/18

**Path:** P:\0\0231090\GINT\023109000.GPJ

**DBLibrary/Library:** GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_GEOTECH_WELL_%F

**Figure A-3 (continued)**

**NOTES:**

1. **FOR BORING KEY (SEE DRAWING TLC-G-402).**
2. **FOR BORING LOCATIONS (SEE DRAWING TLC-G-402).**
3. **LOG OF BOREHOLE IS ONLY A PORTION OF A REPORT PREPARED BY GEOENGINEERS TOTEM LAKE CONNECTION PAGE 5 GEOTECHNICAL ENGINEERING SERVICES DATED OCTOBER 2018.**

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Log of Boring with Monitoring Well B-4 (continued)

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Notes:
1. FOR BORING KEY SEE DRAWING TLC-G-402.
2. FOR BORING LOCATIONS SEE DRAWING TLC-G-402.
3. THIS BORING LOG IS ONLY A PORTION OF A REPORT PREPARED BY GEOENGINEERS TOTEM LAKE CONNECTOR PAGE 2 GEOTECHNICAL ENGINEERING SERVICES DATED OCTOBER 2018.

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CITY OF KIRKLAND
TOTEM LAKE CONNECTION
GEOTECHNICAL BOREHOLE 4

NEXT PAGE

Figure A-5

Figure A-5
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**REMARKS**

- Description observed at 27ft as core or setting

**NOTES:**

1. FOR BORHOLE KEY SEE DRAWING TLC G-400
2. FOR BORHOLE LOCATIONS SEE DRAWING TLC G-102
3. THIS BORHOLE LOG IS ONLY A PORTION OF A REPORT PREPARED BY GEOENGINEERS TOTEM LAKE CONNECTOR PhASE 3 GEOTECHNICAL ENGINEERING SERVICES DATED October 2018.

This drawing has been prepared for the city of Kirkland Lake Connector, project Geoengineers. Their employees, representatives or agents accept no responsibility for any other use.
Log of Boring B-13

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<td>Gray silty fine to medium sand with gravel (very dense, wet)</td>
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<td>Orange-brown silty fine to medium sand with gravel and occasional roots (loose, moist)</td>
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Field Data:
- Drilling Method: Geologic Drill Exploration, Inc.
- Equipment: Diedrich D-50 Track Rig
- Blows/foot: 15
- Recovered (in): 12
- Depth (ft): 9
- datum: NAVD88
- Vertical Datum: NAVD88
- Northing (Y): 261646.62
- Easting (X): Automatic
- Datum: WA State Plane North
- Datum: NAD83 (feet)
- Surface Elevation (ft): 139.54
- Sample Name: Collected Sample
- Blows/foot: 15
- Recovered (in): 12
- Depth (ft): 9
- datum: NAVD88
- Vertical Datum: NAVD88
- Northing (Y): 261646.62
- Easting (X): Automatic
- Datum: WA State Plane North
- Datum: NAD83 (feet)
- Surface Elevation (ft): 139.54

NOTES:
1. **FAB BOREHOLE KEY**: SEE DRAWING TLC-G-400.
2. **FOR BOREHOLE LOCATIONS**: SEE DRAWING TLC-S-02.
Gray silty fine sand (dense, wet)

Groundwater observed at 11½ feet at time of drilling

Gray silt with sand (very stiff, moist)

Gray sandy silt (very stiff to hard, moist to wet)

Gray sandy silt (hard, wet)

Gray silt with lenses of peat (hard, moist)

Sample Name
Testing
Fines Content (%)
Not applicable

Moisture Content (%)
Not applicable

REMARKS

FIELD DATA

MATERIAL DESCRIPTION

REMARKS

Note: See Figure A-1 for explanation of symbols.

Coordinates Data Source: Horizontal approximated based on Survey by Alliance Geomatics. Vertical approximated based on Survey by Alliance Geomatics.

Drilling Equipment

Hollow-stem Auger

Diedrich D-50 Track Rig

Collected Sample

Depth (feet)

Graphic Log

Elevation (feet)

145 140 135 130

0 5 10 15 20

1. FOR BORING KEY SEE DRAWING TLC-G-406.

2. FOR BORING LOCATIONS SEE DRAWING TLC-G-402.

3. THIS BORING LOG IS ONLY A PORTION OF A REPORT PREPARED BY GEOENGINEERS TOTEM LAKE CONNECTOR PROJECT GEOTECHNICAL ENGINEERING SERVICES DATED OCTOBER 2018.

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Log of Boring B-7

Project: Totem Lake Connector
Project Location: Kirkland, Washington
Project Number: 023119000

Note: See Figure A-1 for explanation of symbols.

Geologic Drill Exploration, Inc.
Automatic
140 (lbs) / 30 (in) Drop

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NOTES:
1. FOR BORING KEY SEE DRAWING TLC-G-400.
2. FOR BORING LOCATIONS SEE DRAWING TLC-G-402.
3. THIS BORING LOG IS ONLY A PORTION OF A REPORT
PREPARED BY GEOTECHNICAL ENGINEERING SERVICES
ON THE TOTEM LAKE CONNECTOR PROJECT.
TLC-G-407
CITY OF KIRKLAND
TOTEM LAKE CONNECTION
GEOTECHNICAL BOREHOLE 7

FILENAME: SCALE: DATE: CHECKED BY: DRAWN BY: DESIGNED BY:
2018/12/06 2018/12/06 2018/12/06 2018/12/06 2018/12/06

Revised 12/3/2018
Sheet 1 of 1

Sheet 1 of 1

Figure A-8

Surface Elevation (ft) Vertical Datum
Horizontal approximated based on Survey by Alliance Geomatics.
Vertical approximated based on Survey by Alliance Geomatics.

Recovered (in)
Interval
Blows/foot
Collected Sample
Moisture Content (%)

Sample Name
Testing

Material
Description

Graph Log

Group
Classification

Depth (feet)

Graphic Log

150 145 140 135 130

5 10 15 20

0 5 10 15 20

Depth (ft)

Start Driller

Method

End Drilling

Equipment

WA State Plane North NAD83 (feet)

NAD88 NAVD88

2/2/2017 2/2/2017

Easting (X)
Northing (Y)

1309310.13 261022.93

150.47

2/2/2017

Note: See Figure A-1 for explanation of symbols.

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### Field Data

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### Remarks

- Sheen
- Headspace
- Vapor (ppm)

#### Notes:

1. FOR BOROHOLES SEE DRAWING TLC-G-400.
2. FOR BOROHOLES LOCATIONS SEE DRAWING TLC-G-102.
3. THE BOROHOLE LOG IS ONLY A PART OF A REPORT PREPARED BY GEOENGINEERS - TOTEM LAKE CONNECTOR.

---

**Log of Boring B-9**

**Project:** Towecom Lake Connector  
**Project Location:** Kirkland, Washington  
**Project Number:** 0231-090-01  
**Figure A-10**

**Log of Boring B-9 (continued)**

**Project:** Towecom Lake Connector  
**Project Location:** Kirkland, Washington  
**Project Number:** 0231-090-01  
**Figure A-11**
**FIELD DATA**

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**REMARKS**

- Sheen
- Headspace
- Vapor (ppm)

NOTES:

1. FOR BOREHOLE KEY SEE DRAWING TLC-411.
2. FOR BOREHOLE LOCATIONS SEE DRAWING TLC-412.
3. THIS BOREHOLE LOG IS ONLY A PORTION OF A REPORT PREPARED BY GEOENGINEERS "TOTEM LAKE CONNECTOR" PAGE 2 GEOENGINEERING SERVICES" DATED OCTOBER 2016.

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**NOTES:**
1. FOR BORING KEY SEE DRAWING TLC-410.
2. FOR BORING LOCATIONS SEE DRAWING TLC-412.
3. THIS BORING LOG IS ONLY A PORTION OF A REPORT PREPARED BY GEORESEARCH. TO SEE COMPLETE REPORT, PLEASE REFER TO THE FULL REPORT. GEOTECHNICAL ENGINEERING SERVICES DATED OCTOBER 2018.

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Log of Boring B-14

**Project:** Totem Lake Connector  
**Project Location:** Kirkland, Washington

**Sheet:** Sheet 4 of 4  
**SHEET:** 0231-090-04

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<td>10/16/2017</td>
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<td>104.5</td>
<td>10/16/2017</td>
<td>10/16/2017</td>
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</tbody>
</table>

**NOTES:**
1. **Borehole Key:** SEE DRAWING TLC-G-400.
2. **For Borehole Locations:** SEE DRAWING TLC-G-01.
3. **This Borehole Log is Only a Portion of a Report Prepared by GroEngineers, \"Totem Lake Connector, Phase 2 Geotechnical Engineering Services,\" Dated October 2018.
### Log of Boring B-15 (continued)

<table>
<thead>
<tr>
<th>Depth (feet)</th>
<th>Elevaton (feet)</th>
<th>Blows/foot</th>
<th>Recovered (in)</th>
<th>Interval</th>
<th>Material Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.49</td>
<td>261.56</td>
<td>1</td>
<td>13</td>
<td></td>
<td>gravel (hard, wet)</td>
<td></td>
</tr>
<tr>
<td>0.50</td>
<td>261.45</td>
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<td>15</td>
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<td>gravel (hard, wet)</td>
<td></td>
</tr>
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<td>0.51</td>
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<td>1</td>
<td>15</td>
<td></td>
<td>gravel (hard, wet)</td>
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</tr>
<tr>
<td>0.52</td>
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</tr>
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<td>15</td>
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<td>gravel (hard, wet)</td>
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### Log of Boring B-15

<table>
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<th>Depth (feet)</th>
<th>Elevaton (feet)</th>
<th>Blows/foot</th>
<th>Recovered (in)</th>
<th>Interval</th>
<th>Material Description</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.49</td>
<td>261.56</td>
<td>1</td>
<td>13</td>
<td></td>
<td>gravel (hard, wet)</td>
<td></td>
</tr>
<tr>
<td>0.50</td>
<td>261.45</td>
<td>1</td>
<td>15</td>
<td></td>
<td>gravel (hard, wet)</td>
<td></td>
</tr>
<tr>
<td>0.51</td>
<td>261.34</td>
<td>1</td>
<td>15</td>
<td></td>
<td>gravel (hard, wet)</td>
<td></td>
</tr>
<tr>
<td>0.52</td>
<td>261.22</td>
<td>1</td>
<td>14</td>
<td></td>
<td>gravel (hard, wet)</td>
<td></td>
</tr>
<tr>
<td>0.53</td>
<td>261.11</td>
<td>1</td>
<td>14</td>
<td></td>
<td>gravel (hard, wet)</td>
<td></td>
</tr>
<tr>
<td>0.54</td>
<td>260.99</td>
<td>1</td>
<td>15</td>
<td></td>
<td>gravel (hard, wet)</td>
<td></td>
</tr>
<tr>
<td>0.55</td>
<td>260.88</td>
<td>1</td>
<td>15</td>
<td></td>
<td>gravel (hard, wet)</td>
<td></td>
</tr>
<tr>
<td>0.56</td>
<td>260.76</td>
<td>1</td>
<td>14</td>
<td></td>
<td>gravel (hard, wet)</td>
<td></td>
</tr>
<tr>
<td>0.57</td>
<td>260.65</td>
<td>1</td>
<td>15</td>
<td></td>
<td>gravel (hard, wet)</td>
<td></td>
</tr>
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### Notes:
1. FOR BOREHOLE KEY SEE DRAWING TLC-G-100.
3. THIS BOREHOLE LOG IS ONLY A PORTION OF A REPORT PREPARED BY GEOENGINEERS "TOTEM LAKE CONNECTION" SECTION 2 GEOENGINEERING SERVICES DATE OCTOBER 2018.

This drawing has been prepared for the TOTEM LAKE Connector project by GeoEngineers, Inc. Employees, Subconsultants or Agents accept no responsibility for any other use.
Log of Boring B-16 (continued)

<table>
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<th>Depth (feet)</th>
<th>Blows/foot</th>
<th>Recovered (in)</th>
<th>Content (% Fines)</th>
<th>Moisture</th>
<th>Classification</th>
<th>Graphic Log</th>
<th>Testing</th>
<th>Sample Name</th>
<th>Notes</th>
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<td>25</td>
<td>40</td>
<td>80</td>
<td>CL; AL</td>
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<td></td>
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<tr>
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<td>80</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>12.19</td>
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<td>25</td>
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<td>80</td>
<td>CL; AL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>12.29</td>
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<td>80</td>
<td>CL; AL</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>12.39</td>
<td>3</td>
<td>25</td>
<td>40</td>
<td>80</td>
<td>CL; AL</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>12.49</td>
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<td>25</td>
<td>40</td>
<td>80</td>
<td>CL; AL</td>
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<td>80</td>
<td>CL; AL</td>
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<tr>
<td>12.69</td>
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<td>80</td>
<td>CL; AL</td>
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<td></td>
<td></td>
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</tbody>
</table>

**Notes:**
1. For borehole log see drawing TLC-400.
2. For borehole locations see drawing TLC-010.
3. The borehole log is only a portion of a report prepared by GeoEngineers "Totem Lake Connector, Phase 2 Geotechnical Engineering Services" dated October 2018.

---

**Figure A-17**

**Log of Boring B-16**

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**Figure A-17**

**Log of Boring B-16 (continued)**

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**Figure A-17**

**Log of Boring B-16 (continued)**

---
Log of Boring B-17

Project: Totem Lake Connector
Project Location: Kirkland, Washington
Project Number: 0231-090-01

<table>
<thead>
<tr>
<th>Interval (feet)</th>
<th>Depth (feet)</th>
<th>Elevation (feet)</th>
<th>Blows/foot</th>
<th>Recovered (in)</th>
<th>Content (% Fines)</th>
<th>Moisture</th>
<th>Classification</th>
<th>Group</th>
<th>Graphic Log</th>
<th>Testing</th>
<th>Sample Name</th>
<th>Collected Sample</th>
<th>Driller</th>
<th>Drilling Method</th>
<th>Equipment</th>
<th>Remarks</th>
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<td>0.00</td>
<td>117.80</td>
<td>1996</td>
<td>1996</td>
<td>1996</td>
<td>1996</td>
<td>MC; AL</td>
<td>LL-31</td>
<td>PI-9</td>
<td>Automatic</td>
<td>Diedrich D-50 Track Rig</td>
<td>140 (lbs) / 30 (in) Drop Hammer</td>
<td>Geologic Drill Exploration, Inc.</td>
<td>7/23/2018</td>
<td>7/23/2018</td>
<td>4045</td>
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<tr>
<td>0.00</td>
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<td>121.80</td>
<td>1996</td>
<td>1996</td>
<td>1996</td>
<td>1996</td>
<td>MC; AL</td>
<td>LL-31</td>
<td>PI-9</td>
<td>Automatic</td>
<td>Diedrich D-50 Track Rig</td>
<td>140 (lbs) / 30 (in) Drop Hammer</td>
<td>Geologic Drill Exploration, Inc.</td>
<td>7/23/2018</td>
<td>7/23/2018</td>
<td>4045</td>
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Notes:
1. For borehole key, see drawing TLC-G-400.
2. For borehole locations, see drawing TLC-L-02.
3. This borehole log is only a portion of a report prepared by GeoEngineers "Totem Lake Connector Phase 2 Geotechnical Engineering Services" dated October 2018.

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Log of Boring B-18

<table>
<thead>
<tr>
<th>Depth (feet)</th>
<th>Elevation (feet)</th>
<th>Blows/foot</th>
<th>Recovered (in)</th>
<th>Interval</th>
<th>Content (%), Fines, Moisture, Classification, Group, Graphic Log, Testing, Sample Name, Collected Sample, Remarks</th>
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<tr>
<td>10-11</td>
<td>75</td>
<td>150</td>
<td>15</td>
<td></td>
<td>Grey silt with sand and cobbles (medium dense, wet)</td>
</tr>
<tr>
<td>11-12</td>
<td>80</td>
<td>150</td>
<td>15</td>
<td></td>
<td>Grey silt with sand and cobbles (medium dense, wet)</td>
</tr>
<tr>
<td>12-13</td>
<td>85</td>
<td>200</td>
<td>20</td>
<td></td>
<td>Grey sandy silt with organic matter (very soft, wet)</td>
</tr>
<tr>
<td>13-14</td>
<td>90</td>
<td>200</td>
<td>20</td>
<td></td>
<td>Brown clayey fine to coarse sand with silt, gravel and</td>
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<td>95</td>
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<td>25</td>
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<tr>
<td>15-16</td>
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<td>250</td>
<td>25</td>
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<td>Grades to medium to coarse sand</td>
</tr>
<tr>
<td>16-17</td>
<td>105</td>
<td>300</td>
<td>30</td>
<td></td>
<td>Grades to very dense</td>
</tr>
<tr>
<td>17-18</td>
<td>110</td>
<td>300</td>
<td>30</td>
<td></td>
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</tr>
<tr>
<td>18-19</td>
<td>115</td>
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<td>35</td>
<td></td>
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</tr>
<tr>
<td>19-20</td>
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<tr>
<td>20-21</td>
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<td>40</td>
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<td>21-22</td>
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</tr>
<tr>
<td>22-23</td>
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<td>45</td>
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<tr>
<td>23-24</td>
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<td>50</td>
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</tr>
<tr>
<td>24-25</td>
<td>145</td>
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<tr>
<td>25-26</td>
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<td>27-28</td>
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<td>60</td>
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<tr>
<td>28-29</td>
<td>165</td>
<td>600</td>
<td>60</td>
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<td>29-30</td>
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<td>30-31</td>
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<td>31-32</td>
<td>180</td>
<td>750</td>
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</tr>
<tr>
<td>32-33</td>
<td>185</td>
<td>800</td>
<td>80</td>
<td></td>
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</tr>
<tr>
<td>33-34</td>
<td>190</td>
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<tr>
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<td>95</td>
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<td>100</td>
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<td>Grades to very dense</td>
</tr>
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</table>

NOTES:
1. FOR BOREHOLE KEY SEE DRAWING TLC-G-406.
2. FOR BOREHOLE LOCATIONS SEE DRAWING TLC-G-01.
3. THIS BOREHOLE LOG IS ONLY A PORTION OF A REPORT PREPARED BY GEOENGINEERS "TOTEM LAKE CONNECTOR" DEPARTMENT OF PUBLIC WORKS, CITY OF KIRKLAND, WASHINGTON, OCTOBER 2018.
Log of Monitoring Well B-19 (continued)

Geologic Drill Exploration, Inc. 71.25 ft. Total Depth

BOOK:

1. FOR BOREHOLE KEY (SEE DRAWING TLC-021).
2. FOR BOREHOLE LOCATIONS SEE DRAWING TLC-012.
3. THIS BOREHOLE LOG IS ONLY A PORTION OF A REPORT PREPARED BY GEOENGINEERS TOTEM LAKE CONNECTOR PROGRAM GEOTECHNICAL ENGINEERING SERVICES DATED OCTOBER 2018.

This drawing has been prepared for the TOTEM LAKE CONNECTOR project  GeoEngineers, their employees, consultants or agents accept no responsibility for any other use.
Topsoil 12 inches thick

Brown fine to medium sand with silt and occasional organic matter (loose, moist)

Light brown and orange-brown silt with sand and gravel (stiff, moist to wet)

Test pit initially excavated to 4 feet for infiltration test; test pit completed at 9½ feet below ground surface following infiltration test

Notes: See Figure A-1 for explanation of symbols.
The depths on the test pit logs are based on an average of measurements across the test pit and should be considered accurate to ½ foot.

Coordinates Data Source: Horizontal approximated based on topographic map. Vertical approximated based on topographic map.

Date: 3/13/18