HIDDEN LAKE DAM REMOVAL

Bid Number: **xx**

Date: February 2019

17500 Midvale Avenue North
Shoreline, WA 98133
(206) 801-2700

SHORELINE CITY COUNCIL

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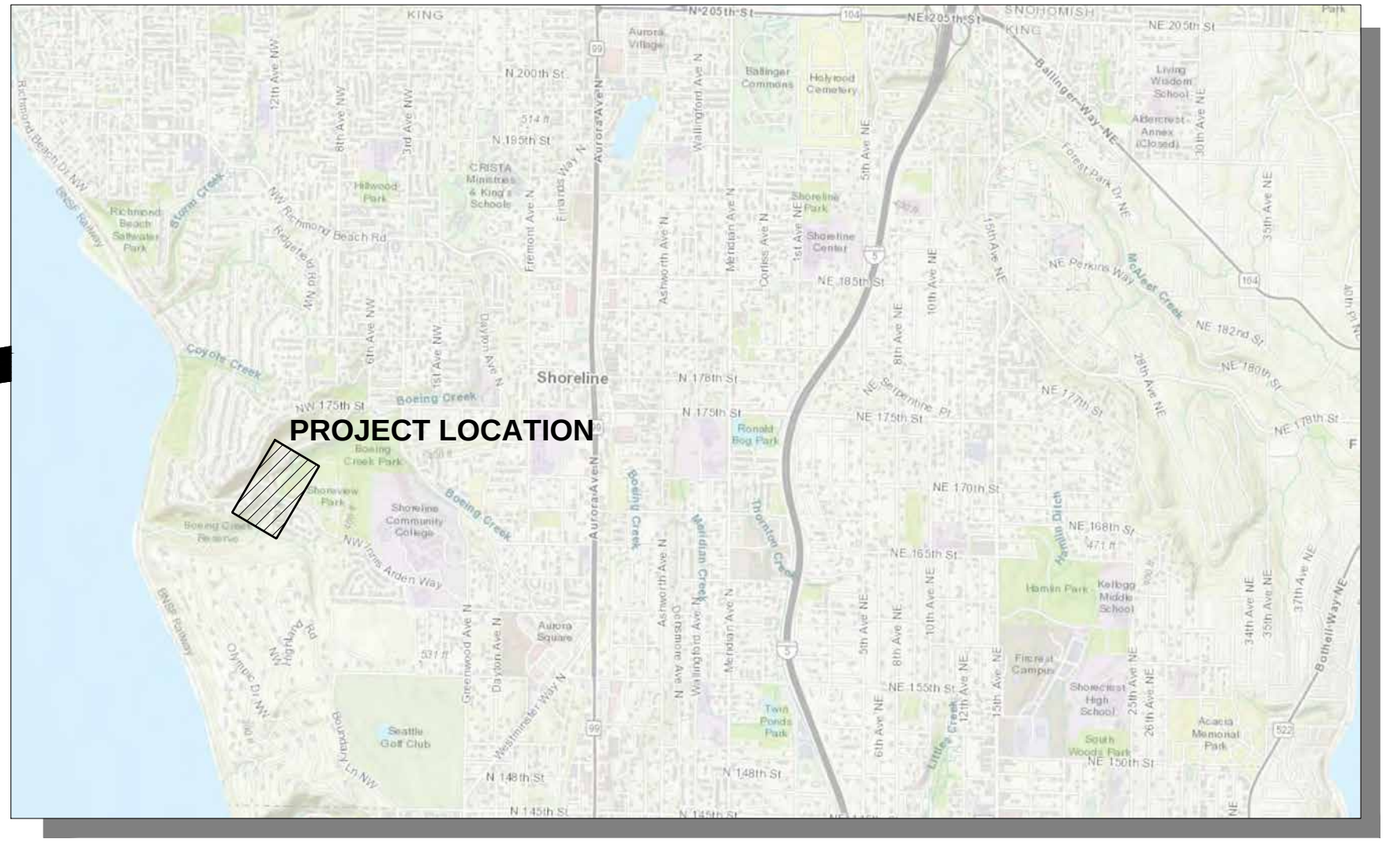
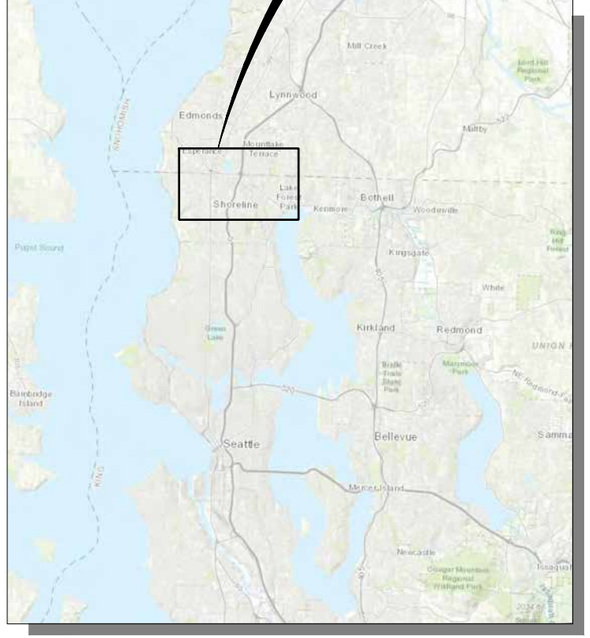


VICINTY MAP NTS



LOCATION MAP NTS

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ENGINEER:

HERRERA ENVIRONMENTAL CONSULTANTS
2200 SIXTH AVENUE
SUITE 1100
SEATTLE, WA 98121
PHONE: (206) 441-9080
CONTACT: IAN MOSTRENKO, PE

HORIZ: NAD 83 WA NORTH
VERT: NAVD 88

APPROVED FOR CONSTRUCTION

TRICIA JUHNKE, P.E., CITY ENGINEER _____ DATE _____

30 PCT DESIGN - NOT FOR CONSTRUCTION

FUNDED IN PART BY A FLOOD REDUCTION GRANT FROM THE KING COUNTY FLOOD CONTROL DISTRICT

	Initials	Date	Description
Drawn	EM		
Designed	IBM, VW		
Checked	ME		
Revisions			
Revisions			

IAN B. MOSTRENKO — STATE OF WASHINGTON — 36069 — REGISTERED PROFESSIONAL ENGINEER — DRAFT

HIDDEN LAKE DAM REMOVAL
30 PCT DESIGN - NOT FOR CONSTRUCTION
COVER SHEET AND SHEET INDEX

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Project No. 18-06771-000

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ABBREVIATIONS

APPROX	APPPROXIMATE
AVE	AVENUE
AVG	AVERAGE
BLDG	BUILDING
BMP	BEST MANAGEMENT PRACTICE
CB	CATCH BASIN
C/L	CENTERLINE
COMM	COMMUNICATION
CONC	CONCRETE
CONST	CONSTRUCT, CONSTRUCTION
CP	CONTROL POINT
CSBC	CRUSHED SURFACING BASE COURSE
CSTC	CRUSHED SURFACING TOP COURSE
DIA	DIAMETER
DR	DRIVE
DWG	DRAWING
E	EAST, EASTING
EA	EACH
EL, ELEV	ELEVATION
ELJ	ENGINEERED LOG JAM
EX, EXIST	EXISTING
FT	FEET/FOOT
HOR	HORIZONTAL
HT	HEIGHT
IE	INVERT ELEVATION
IN	INCH/INCHES
LF	LINEAL FOOT/FEET
MAX	MAXIMUM
MIN	MINIMUM
N	NORTH/NORTHING
NA	NOT APPLICABLE
NO	NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OHW	ORDINARY HIGH WATER
QTY	QUANTITY
ROW	RIGHT-OF-WAY
S	SOUTH, SLOPE
SD	STORM DRAIN
ST	STORM SEWER
STA	STATION
STD	STANDARD
TESC	TEMPORARY EROSION AND SEDIMENT CONTROL
TYP	TYPICAL
W	WEST, WATER
WSDOT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
WSE	WATER SURFACE ELEVATION

LEGEND - EXISTING FEATURES

- PARCEL LINE
- EASEMENT
- ROW — RIGHT-OF-WAY
- POND
- OHW — ORDINARY HIGH WATER
- DITCH
- WETLAND
- X — X — FENCE
- EDGE OF PAVEMENT
- GUARDRAIL
- SS — SANITARY SEWER
- G — GAS LINE
- W — WATER LINE
- T — TELEPHONE LINE
- SANITARY SEWER MANHOLE
- WATER VALVE
- CONIFEROUS TREE
- DECIDUOUS TREE
- TRAIL

LEGEND - PROPOSED FEATURES

- PROJECT LIMITS
- CG — CG — CLEAR AND GRUB LIMITS
- 100 — DESIGN CONTOURS
- HIGH FLOW SIDE CHANNEL
- SF — SILT FENCE
- HVF — HI-VISIBILITY FENCE
- HVSF — HIGH VISIBILITY SILT FENCE
- ACCESS ROAD
- REMOVE ITEM
- ABANDON ITEM
- TRAIL
- BYPASS PIPE
- SHEETPILE WALL
- CONSTRUCTION STAGING AREA
- STABILIZED CONSTRUCTION ENTRANCE
- COFFERDAM
- DAM FILL MATERIAL
- GABION BASKETS AND MATTRESS
- WETLAND CREATION AREA
- BYPASS PUMP
- FOOT BRIDGE
- TREE PROTECTION
- CONTROL POINT
- REMOVE CONIFEROUS TREE
- REMOVE DECIDUOUS TREE
- RAPTOR PERCH
- HABITAT TYPE 1 STRUCTURE
- HABITAT TYPE 2 STRUCTURE
- HABITAT TYPE 3 STRUCTURE
- REVETMENT STRUCTURE

1 / C-1 — DETAIL REFERENCE NUMBER; DRAWING ON WHICH DETAIL IS SHOWN

DETAIL — SCALE: NTS — 1 / C-1 — DETAIL REFERENCE NUMBER; DRAWING FROM WHICH DETAIL WAS TAKEN

A / C-4 — SECTION REFERENCE LETTER; DRAWING ON WHICH SECTION IS SHOWN

SECTION/PROFILE — SCALE: NTS — A / C-2 — SECTION/PROFILE REFERENCE LETTER; DRAWING FROM WHICH SECTION/PROFILE WAS TAKEN

"-" INDICATES THAT THE DETAIL/SECTION IS SHOWN ON THE SAME SHEET

"TYP" INDICATES THAT THE DETAIL/SECTION IS UNIFORMLY TYPICAL THROUGHOUT PROJECT EXCEPT WHERE OTHERWISE NOTED

"VAR" SPECIFIES THAT DETAIL/SECTION WAS TAKEN FROM VARIOUS DRAWINGS

NOTE AND DETAIL/SECTION REFERENCING

CITY OF SHORELINE STANDARD PLAN NOTES

GENERAL NOTES:

1. THE CONTRACTOR SHALL ADHERE TO ALL APPLICABLE NOTES UNLESS OTHERWISE DIRECTED BY THESE PLANS, THE ENGINEER OR A CITY OF SHORELINE REPRESENTATIVE.

2. THE CONTRACTOR SHALL VERIFY ALL EXISTING DATA SHOWN IN THESE DOCUMENTS AND NOTIFY ENGINEER IMMEDIATELY OF ANY CONFLICTS WITH PROPOSED FEATURES PRIOR TO CONSTRUCTION. SEE DWG C-1.0 FOR SURVEY CONTROL.

3. ALL COMPACTION METHODS, MATERIALS AND PERFORMANCE CRITERIA SHALL BE IN ACCORDANCE WITH THE PROJECT PLANS AND SPECIFICATIONS.

4. ALL EXISTING AND PROPOSED CATCH BASINS DOWNSTREAM OF DISTURBED AREA SHALL BE PROTECTED DURING CONSTRUCTION PER THE WSDOT STD PLAN 1-40.20-00.

5. STORM DRAINAGE (SD) PIPE SHALL BE CORRUGATED POLYETHYLENE PIPE WITH SMOOTH INTERIOR WALLS UNLESS NOTED OTHERWISE.

6. ALL PIPE LENGTHS, INVERT ELEVATIONS AND DRAINAGE STRUCTURE LOCATIONS ARE MEASURED AT THE CENTER OF THE DRAINAGE STRUCTURE UNLESS NOTED OTHERWISE.

7. ALL LOCATIONS OF EXISTING UTILITIES SHOWN HAVE BEEN ESTABLISHED BY FIELD SURVEY OR OBTAINED FROM AVAILABLE RECORDS AND SHOULD THEREFORE BE CONSIDERED APPROXIMATE ONLY AND NOT NECESSARILY COMPLETE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS SHOWN AND AVOID OTHER UTILITIES NOT SHOWN ON THE PLANS. EXISTING UTILITIES SHALL BE PROTECTED, SUPPORTED, OR MAINTAINED DURING CONSTRUCTION.

8. CONTACT THE UNDERGROUND UTILITIES LOCATION SERVICE (1-800-424-5555) AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.

9. SEE THE PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION.

SITE NOTES (SN)

SN.1. THE CONTRACTOR SHALL HAVE ANY REQUIRED PERMIT(S) AND CONDITIONS AND THE APPROVED PLANS AVAILABLE AT THE JOB SITE.

SN.2. ALL WORK SHALL CONFORM TO THESE APPROVED PLANS AND SPECIFICATIONS, THE SHORELINE MUNICIPAL CODE, THE ENGINEERING DEVELOPMENT MANUAL, AND FEDERAL AND STATE REQUIREMENTS.

SN.3. ALL INSTALLATION METHODS AND MATERIALS SHALL MEET THE WSDOT/APWA STANDARD SPECIFICATIONS.

SN.4. ANY CHANGES FROM THE APPROVED PLANS REQUIRE PRE-APPROVAL FROM THE ENGINEER.

SN.5. SEE SPECIFICATIONS SECTION 1-08.0(2) FOR HOURS OF WORK.

SN.6. LOCATIONS FOR EXISTING UTILITIES ARE APPROXIMATE.

SN.7. THE CONTRACTOR ASSUMES SOLE RESPONSIBILITY FOR WORKER SAFETY AND DAMAGE FROM CONSTRUCTION OPERATIONS TO STRUCTURES AND OTHER IMPROVEMENTS.

SN.8. SURVEYING FOR PUBLIC FACILITIES SHALL BE PERFORMED UNDER THE DIRECTION OF A WASHINGTON LICENSED LAND SURVEYOR. VERTICAL DATUM SHALL BE NAVD 1988. HORIZONTAL DATUM SHALL BE WASHINGTON STATE (GRID) COORDINATES, NORTH ZONE, USING NAD 83/91 SURVEY CONTROL AND TO ANY TWO CITY OF SHORELINE HORIZONTAL CONTROL MONUMENTS. FOR PROJECTS WITHIN A FLOOD CONTROL ZONE, THE SURVEYOR SHALL PROVIDE CONVERSION CALCULATIONS TO NGVD 1929.

SN.9. REPLACE OR RELOCATE ALL SIGNS, STRIPING, POLES AND OTHER ITEMS IN THE RIGHT-OF-WAY THAT ARE DAMAGED OR REMOVED DURING CONSTRUCTION.

SN.10. RETAIN, REPLACE OR RESTORE ALL VEGETATION IN RIGHTS-OF-WAY, EASEMENTS, AND ACCESS TRACTS DISTURBED DURING CONSTRUCTION.

SN.11. INTERRUPTION OF NORMAL TRAFFIC FLOW SHALL REQUIRE TRAFFIC CONTROL. REFER TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND WSDOT STANDARD SPECIFICATIONS. TRAFFIC CONTROL IS REQUIRED FOR ALL TRANSVERSE CUTS IN ROADWAY. FOR INFORMATION CONTACT THE CITY OF SHORELINE RIGHT-OF-WAY INSPECTOR.

SN.12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, FLAGGERS, AND ANY OTHER NEEDED ACTIONS TO PROTECT THE LIFE, HEALTH, AND SAFETY OF THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF WORK COVERED BY THE CONTRACTOR. ANY WORK WITHIN THE TRAVELED RIGHT-OF-WAY REQUIRES A RIGHT-OF-WAY USE PERMIT, TO BE REVIEWED PRIOR TO CONSTRUCTION AND INSPECTED DURING CONSTRUCTION.

SN.13. THE CONTRACTOR SHALL RESTORE TO CURRENT STANDARDS CRITICAL AREAS, AND PUBLIC AND PRIVATE PROPERTY DAMAGED BY CONTRACTOR'S OPERATIONS.

SN.14. AT ALL TIMES MAINTAIN ACCESS TO BUILDINGS FOR FIRE, PEDESTRIAN AND VEHICULAR ACCESS.

SN.15. BEFORE BEGINNING ANY CONSTRUCTION ACTIVITIES, ESTABLISH CLEARING LIMITS, INSTALL CONSTRUCTION ENTRANCE, AND INSTALL BEST MANAGEMENT PRACTICES.

SN16. ALL UTILITY TRENCHES AND ROADWAY SUBGRADES WITHIN CITY RIGHT-OF-WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH KING COUNTY ROAD STANDARDS. 100% CRUSHED ROCK OR CONTROLLED DENSITY FILL (CDF)

	Description	Date	Initials
Drawn			EM
Designed			IBM, VW
Checked			ME
Revisions			
Revisions			

DRAFT
JAN B. MOSTERT
STATE OF WASHINGTON
36069
REGISTERED PROFESSIONAL ENGINEER

CITY OF SHORELINE

17500 Midvale Avenue North
Shoreline, WA 98133
(206) 801-2700

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Sheet G-1.1

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HERRERA

EROSION AND SEDIMENTATION CONTROL REQUIREMENTS (TESC)

TESC.1. THE IMPLEMENTATION AND MAINTENANCE OF EROSION CONTROL FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR ON A DAILY BASIS AND UNTIL ALL CONSTRUCTION IS APPROVED.

TESC.2. AT ALL TIMES PROTECT CRITICAL AREAS AND THEIR BUFFERS, ADJACENT PRIVATE PROPERTIES AND PUBLIC PROPERTY AND SURVEY MONUMENTS.

TESC.3. EROSION AND SEDIMENTATION CONTROL (ESC) FACILITIES MUST BE CONSTRUCTED PRIOR TO AND IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT-LADEN WATER OR AIRBORNE SEDIMENT DOES NOT ENTER THE DRAINAGE SYSTEM OR VIOLATE APPLICABLE WATER OR AIR QUALITY STANDARDS DURING THE CONSTRUCTION PERIOD. THESE ESC FACILITIES SHALL BE UPGRADED TO INCLUDE ADDITIONAL SUMPS, DITCHES, FENCES, ETC. AS NEEDED FOR UNEXPECTED STORM EVENTS.

TESC.4 STABILIZED CONSTRUCTION ENTRANCE AND WASH PAD SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED BY THE CITY OF SHORELINE TO ENSURE THAT PAVED AREAS ARE KEPT CLEAN FOR THE PROJECT DURATION.

TESC.5. ANY AREA STRIPPED OF VEGETATION (INCLUDING ROADWAY EMBANKMENTS), WHERE NO FURTHER WORK IS ANTICIPATED FOR A PERIOD OF 2 DAYS, SHALL BE IMMEDIATELY STABILIZED WITH APPROVED ESC METHODS AS FOLLOWS.

FROM MAY 1 THROUGH SEPTEMBER 30, INSTALL TESC COVER MEASURES TO PROTECT DISTURBED AREAS THAT WILL REMAIN UNWORKED FOR SEVEN DAYS OR MORE.

FROM OCTOBER 1 THROUGH APRIL 30:
A. INSTALL TESC COVER MEASURES TO PROTECT DISTURBED AREAS THAT WILL REMAIN UNWORKED FOR TWO DAYS OR MORE.
B. PROTECT STOCKPILES AND STEEP CUT/FILL SLOPES IF UNWORKED FOR MORE THAN 12 HOURS
C. STOCKPILE ON SITE ENOUGH COVER MATERIALS TO COVER ALL DISTURBED AREAS.

ANY AREA NEEDING ESC MEASURES, NOT REQUIRING IMMEDIATE ATTENTION, SHALL BE ADDRESSED WITHIN 15 DAYS.

TESC.6. ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN 48 HOURS FOLLOWING A STORM EVENT.

TESC.7. BY OCTOBER 8, SEED ALL AREAS THAT WILL REMAIN UNWORKED FROM OCTOBER 1 THROUGH APRIL 30. MULCH ALL SEEDED AREAS.

TESC.8. AT NO TIME SHALL MORE THEN ONE (1) FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. ALL CATCH BASINS & CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT-LADEN WATER INTO A DOWNSTREAM SYSTEM.

TESC.9. WHERE SEEDING FOR TEMPORARY EROSION CONTROL IS REQUIRED, FAST-GERMINATING GRASSES SHALL BE APPLIED AT AN APPROPRIATE RATE (E.G. ANNUAL OR PERENNIAL RYE APPLIED AT APPROXIMATELY 80 POUNDS PER ACRE). WHERE STRAW MULCH FOR TEMPORARY EROSION CONTROL IS REQUIRED, IT SHALL BE APPLIED AT A MINIMUM THICKNESS OF TWO INCHES.

TESC.10. FILTER FABRIC FENCING SHALL BE PURCHASED IN A CONTINUOUS ROLL AND CUT TO THE LENGTH OF THE BARRIER TO AVOID USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST WITH A MINIMUM 24 INCHES OVERLAP AND BOTH ENDS SECURELY FASTENED TO THE POST.

TESC.11. THE FILTER FABRIC FENCE SHALL BE INSTALLED TO FOLLOW THE CONTOURS WHERE FEASIBLE. THE FENCE POSTS SHALL BE SPACED A MAXIMUM OF SIX FEET APART AND DRIVEN SECURELY INTO THE GROUND A MINIMUM OF 30 INCHES. A TRENCH SHALL BE EXCAVATED UPGRADIENT AND ADJACENT TO THE WOOD POST TO ALLOW THE FILTER FABRIC TO BE BURIED.

TESC.12. WHEN STANDARD STRENGTH FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPGRADIENT SIDE OF THE POSTS USING HEAVY DUTY WIRE STAPLES, TIE WIRES, OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF FOUR INCHES. THE STANDARD STRENGTH FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.

TESC.13. WHEN EXTRA-STRENGTH FILTER FABRIC AND CLOSER POST SPACING ARE USED, THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED. IN SUCH A CASE, THE FILTER FABRIC IS STAPLED OR WIRED DIRECTLY TO THE POSTS WITH ALL OTHER PROVISIONS OF STANDARD NOTES APPLY. FILTER FABRIC FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPGRADIENT SLOPE AREA HAS BEEN PERMANENTLY STABILIZED. FILTER FABRIC FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.

TESC.14. THE EROSION PREVENTION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES SHOWN ON THESE PLANS ARE MINIMUM REQUIREMENTS. FIELD ADJUSTMENTS SHALL BE MADE TO ENSURE THE TESC PERFORMS IN ACCORDANCE WITH THE 2019 DEPARTMENT OF ECOLOGY STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON, VOLUME II.

TESC.15. BEFORE ANY GROUND DISTURBANCE OCCURS ALL DOWNSTREAM BEST MANAGEMENT PRACTICES MUST BE CONSTRUCTED AND OPERATIONAL.

TESC.16. BEST MANAGEMENT PRACTICES SHALL REMAIN IN PLACE UNTIL FINAL SITE CONSTRUCTION IS COMPLETED AND PERMANENT STABILIZATION IS ESTABLISHED AND APPROVED BY THE CITY.

TESC.17. INSPECT AND MAINTAIN BEST MANAGEMENT PRACTICES DAILY IN ACCORDANCE WITH THE 2019 DEPARTMENT OF ECOLOGY STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON, VOLUME II.

TESC.18. FAILURE TO MAINTAIN TESC MEASURES IN ACCORDANCE WITH ADOPTED STANDARDS MAY RESULT IN THE WORK BEING PERFORMED AT THE CITY'S DIRECTION AND THE COSTS DEDUCTED FROM MONIES OWED TO CONTRACTOR.

TESC.19. DURING THE LIFE OF THE PROJECT, THE CONTRACTOR SHALL MAINTAIN IN GOOD CONDITION AND PROMPTLY REPAIR, RESTORE OR REPLACE ALL GRADE SURFACES; WALLS, DRAINS, STRUCTURES, VEGETATION, TESC MEASURES, AND OTHER PROTECTIVE DEVICES IN ACCORDANCE WITH APPROVED PLANS.

TESC.20. THE CONTRACTOR SHALL MONITOR DOWNSTREAM DRAINAGE FEATURES, AND, WITH THE CITY'S APPROVAL, SHALL REMOVE ALL SEDIMENT DEPOSITION RESULTING FORM THE PROJECT-RELATED WORK.

TESC.21. ALL WORK SHALL BE PERFORMED PER APPROVED PLANS AND SPECIFICATIONS. THE CONTRACTOR SHALL MAINTAIN A SET OF APPROVED PLANS AND SPECIFICATIONS AND ASSOCIATED PERMITS ONSITE.

TESC.22. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL LAWS.

TESC.23. BEFORE REMOVING ANY TEMPORARY MEASURES, INSTALL AND ESTABLISH THE UPSTREAM PERMANENT MEASURES.

TRAFFIC CONTROL CONDITIONS (TC)

TC.1. INTERIM TRAFFIC CONTROL: THE DEVELOPER/CONTRACTOR SHALL BE RESPONSIBLE FOR INTERIM TRAFFIC CONTROL DURING CONSTRUCTION ON OR ALONG TRAVELED CITY ROADS.

TC.2. WHEN ROAD OR DRAINAGE WORK IS TO BE PERFORMED ON CITY ROADS THAT ARE OPEN TO TRAFFIC, THE CONTRACTOR WILL BE REQUIRED TO SUBMIT A WRITTEN TRAFFIC CONTROL PLAN FOR APPROVAL BY THE REVIEWING AGENCY 10 DAYS PRIOR TO BEGINNING THE WORK. TRAFFIC CONTROL SHALL FOLLOW THE GUIDELINES OF SECTION 1-07.23 OF THE WSDOT/APWA STANDARD SPECIFICATIONS.

TC.3. ALL BARRICADES, SIGNS AND FLAGGING SHALL CONFORM TO THE REQUIREMENTS OF THE MUTCD. SIGNS MUST BE LEGIBLE AND VISIBLE AND SHALL BE REMOVED AT THE END OF EACH WORK DAY IF NOT APPLICABLE AFTER CONSTRUCTION HOURS.

TC.4. TEMPORARY ROAD CLOSURES AND DETOURS: WHEN TEMPORARY ROAD CLOSURES CANNOT BE AVOIDED THE CONTRACTOR SHALL POST "TO BE CLOSED" SIGNS A MINIMUM OF FIVE DAYS PRIOR TO THE CLOSING. THE TYPES AND LOCATIONS OF THE SIGNS SHALL BE SHOWN ON A DETOUR PLAN.

TC.5. A DETOUR PLAN MUST BE PREPARED AND SUBMITTED TO THE CITY OF SHORELINE PUBLIC WORKS TRAFFIC SERVICES AT LEAST 10 WORKING DAYS IN ADVANCE, AND APPROVED PRIOR TO CLOSING ANY CITY ROAD. IN ADDITION, THE CONTRACTOR MUST NOTIFY, IN WRITING, LOCAL FIRE, SCHOOL, LAW ENFORCEMENT AUTHORITIES, METRO TRANSIT, AND ANY OTHER AFFECTED PERSONS AS DIRECTED BY THE ENGINEER AT LEAST FIVE DAYS PRIOR TO CLOSING.

TC.6. HAUL ROUTES: APPROVED HAUL ROUTES ARE NOTED ON THE PLANS. DEVIATIONS FROM THE DESIGNATED HAUL ROUTE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

TC.7. WHEN REQUIRED, THE HAUL ROUTE PLAN MUST BE PREPARED AND SUBMITTED TO THE REVIEWING AGENCY AND APPROVED PRIOR TO BEGINNING CONSTRUCTION. THE HAUL ROUTE PLAN SHALL ADDRESS ROUTING, HOURS OF OPERATION, SIGNAGE AND FLAGGING, AND DAILY MAINTENANCE.

TC.8. IF THE CONTRACTOR'S TRAFFIC FAILS TO USE THE DESIGNATED HAUL ROUTE, THE REVIEWING AGENCY MAY PROHIBIT OR LIMIT FURTHER WORK ON THE DEVELOPMENT UNTIL SUCH TIME AS THE REQUIREMENTS OF THE HAUL ROUTE ARE COMPLIED WITH.

TC.9. TRAFFIC CONTROL SHALL BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION. INTERRUPTION OF NORMAL TRAFFIC FLOW SHALL REQUIRE TRAFFIC CONTROL (SEE #SN.12, FOR DETAILS).

TC.10. CONTRACTOR SHALL PROTECT EXISTING TRAFFIC CONTROL SIGNS WITHIN THE LIMITS OF WORK

TREE PROTECTION CONDITIONS (TP)

BEFORE SITE WORK BEGINS.

TP.1. BEFORE ANY CLEARING OR GRADING OCCURS INSTALL PROTECTION FOR TREES AND CRITICAL AREAS/BUFFERS.

TP.2. INSTALL TEMPORARY CONSTRUCTION FENCES AROUND THE DRIP LINES OF SINGLE TREES TO BE PRESERVED.

TP.3. INSTALL FENCING AROUND THE EDGE FORMED BY THE DRIP LINES OF A CLUSTER OF TREES TO BE RETAINED. FENCING SHALL BE AT LEAST FOUR FEET HIGH, CONSTRUCTED OF CHAIN LINK, OR POLYETHYLENE LAMINAR SAFETY FENCING OR SIMILAR MATERIAL, SUBJECT TO APPROVAL BY THE DIRECTOR.

TP.4. RETAIN SMALL TREES, BUSHES AND UNDER-STORY PLANTS WITHIN THE TREE PROTECTION ZONE.

TP.5. POST "TREE PROTECTION AREA" SIGNS ON ALL SIDES OF THE FENCED AREAS.

TP.6. DO NOT ALLOW FILL, EXCAVATION, THE STORAGE OF TOOLS, EQUIPMENT, CONSTRUCTION MATERIALS OR STOCKPILE SOIL OR TRAFFIC OR UTILITY CONSTRUCTION INCLUDING IRRIGATION SYSTEMS WITHIN THE DRIP-LINE AREAS OF TREES THAT ARE TO BE RETAINED.

TP.7. PROTECT AS MUCH OPEN SOIL SURFACE BELOW THE TREE'S CROWN (AND OUTSIDE THE FENCED TREE PROTECTION ZONE) AS POSSIBLE.

TP.8. WHEN TRENCHING NEAR PROTECTED TREES, ALLOW ONLY HAND-DIGGING WITHIN THE TREE PROTECTION ZONE. TUNNEL UNDER ROOTS GREATER THAN 1" IN DIAMETER. CLEANLY CUT TORN ROOTS TO THE EDGE OF THE TRENCH. COVER EXPOSED ROOTS WITH VISQUEEN OR LIKE MATERIAL AND KEEP MOIST DURING OPEN GROUND PROCEDURES.

TP.9. PROVIDE 1" OF IRRIGATION WATER PER WEEK TO AS LARGE AN AREA OF ROOT ZONES AS POSSIBLE DURING THE GROWING SEASON AND DRIER MONTHS, APRIL TO OCTOBER. PROVIDING EXTRA WATER FOR PROTECTED TREES IS THE MOST CRITICAL FACTOR IN SAVING TREES DURING AND AFTER CONSTRUCTION.

POST CONSTRUCTION

TP.10. SOIL AERATION MAY BE NECESSARY IN SITUATIONS WHERE COMPACTION HAS OCCURRED. IDENTIFY APPROPRIATE PROCEDURES AND SPECIFICATIONS FROM A CERTIFIED ARBORIST.

TP.11. PRUNE TREES FOLLOWING CONSTRUCTION TO REMOVE DEADWOOD TO ENCOURAGE REGROWTH. TREES SHOULD BE MONITORED THROUGHOUT THE CONSTRUCTION PROCESS FOR ANY INCREASE IN HAZARD POTENTIAL.

SITE GRADING CONDITIONS (SG)

SG.1. THIS WORK IS BEING APPROVED SUBJECT TO THE CONDITIONS IN THE SHORELINE MUNICIPAL CODE. ALL APPLICABLE CITY, STATE AND FEDERAL REQUIREMENTS APPLY.

SG.2. BEFORE ANY CLEARING OR GRADING OCCURS, MARK CLEARING LIMITS IN A PROMINENT AND DURABLE MANNER. MAINTAIN UNTIL FINAL APPROVAL.

SG.3. NO SLOPE OF CUT AND FILL SURFACES SHALL BE STEEPER THAN IS SAFE FOR THE INTENDED USE AND SHALL NOT EXCEED THREE (3) HORIZONTAL TO ONE (1) VERTICAL, UNLESS OTHERWISE APPROVED.

SG.4. ALL DISTURBED AREAS INCLUDING FACES OF CUT AND FILL SLOPES SHALL BE PREPARED AND MAINTAINED TO CONTROL EROSION. THIS CONTROL MAY CONSIST OF EFFECTIVE PLANTING. THE PROTECTION FOR THESE AREAS SHALL BE INSTALLED AND MAINTAINED AS SOON AS PRACTICAL AND PRIOR TO BOND RELEASE.

SG.5. THE GROUND SURFACE SHALL BE PREPARED TO RECEIVE FILL BY REMOVING UNSUITABLE MATERIAL SUCH AS CONCRETE SLABS, TREE STUMPS AND BRUSH.

SG.6. PROVISIONS SHALL BE MADE TO PREVENT ANY SURFACE WATER OR SEEPAGE FROM DAMAGING THE CUT FACE OF ANY EXCAVATION OR THE SLOPING FACE OF A FILL. CARRY ANY SURFACE WATER THAT IS OR MIGHT BE CONCENTRATED AS A RESULT OF A FILL OR EXCAVATION TO A NATURAL WATERCOURSE OR DESIGNATED RETENTION FACILITY. PREVENT ANY SEDIMENT FROM LEAVING THE SITE.

SG.7. ACCESS ROADS TO GRADING SITES SHALL BE MAINTAINED AND LOCATED TO THE SATISFACTION OF THE CITY OF SHORELINE, TO MINIMIZE THE PROBLEMS OF DUST, MUD AND CIRCULATION.

SG.8. SIGNS OF WARNING OF HAZARDOUS CONDITIONS, IF SUCH EXIST, SHALL BE AFFIXED AT LOCATIONS AS REQUIRED BY THE ENGINEER.

SG.9. FENCING, WHERE REQUIRED, TO PROTECT LIFE, LIMB AND PROPERTY, SHALL BE INSTALLED WITH LOCKABLE GATES WHICH MUST BE CLOSED AND LOCKED WHEN NOT WORKING THE SITE. THE FENCE MUST BE NO LESS THAN FIVE (5) FEET IN HEIGHT AND THE FENCE MATERIAL SHALL HAVE NO HORIZONTAL OPENING LARGER THAN TWO (2) INCHES.

5G.10. THE TOPS AND THE TOES OF CUT AND FILL SLOPES SHALL BE SET BACK FROM STRUCTURES AS FAR AS IS NECESSARY FOR ADEQUACY OF FOUNDATION SUPPORT AND TO PREVENT DAMAGE AS A RESULT OF WATER RUNOFF OR EROSION OF THE SLOPES.

	Initials	Date	Description
Drawn	EM		
Designed	IBM, VW		
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Revisions			
Revisions			

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JAN D. MOSTERT
STATE OF WASHINGTON
36069
REGISTERED
PROFESSIONAL ENGINEER

CITY OF SHORELINE

17500 Midvale Avenue North
Shoreline, WA 98133
(206) 801-2700

HIDDEN LAKE DAM REMOVAL
30 PCT DESIGN - NOT FOR CONSTRUCTION

GENERAL NOTES

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ONE INCH AT FULL SIZE

IF NOT ONE INCH SCALE ACCORDINGLY

Project No. 18-06771-000

Sheet G-1.2

Sheet 3 Of x

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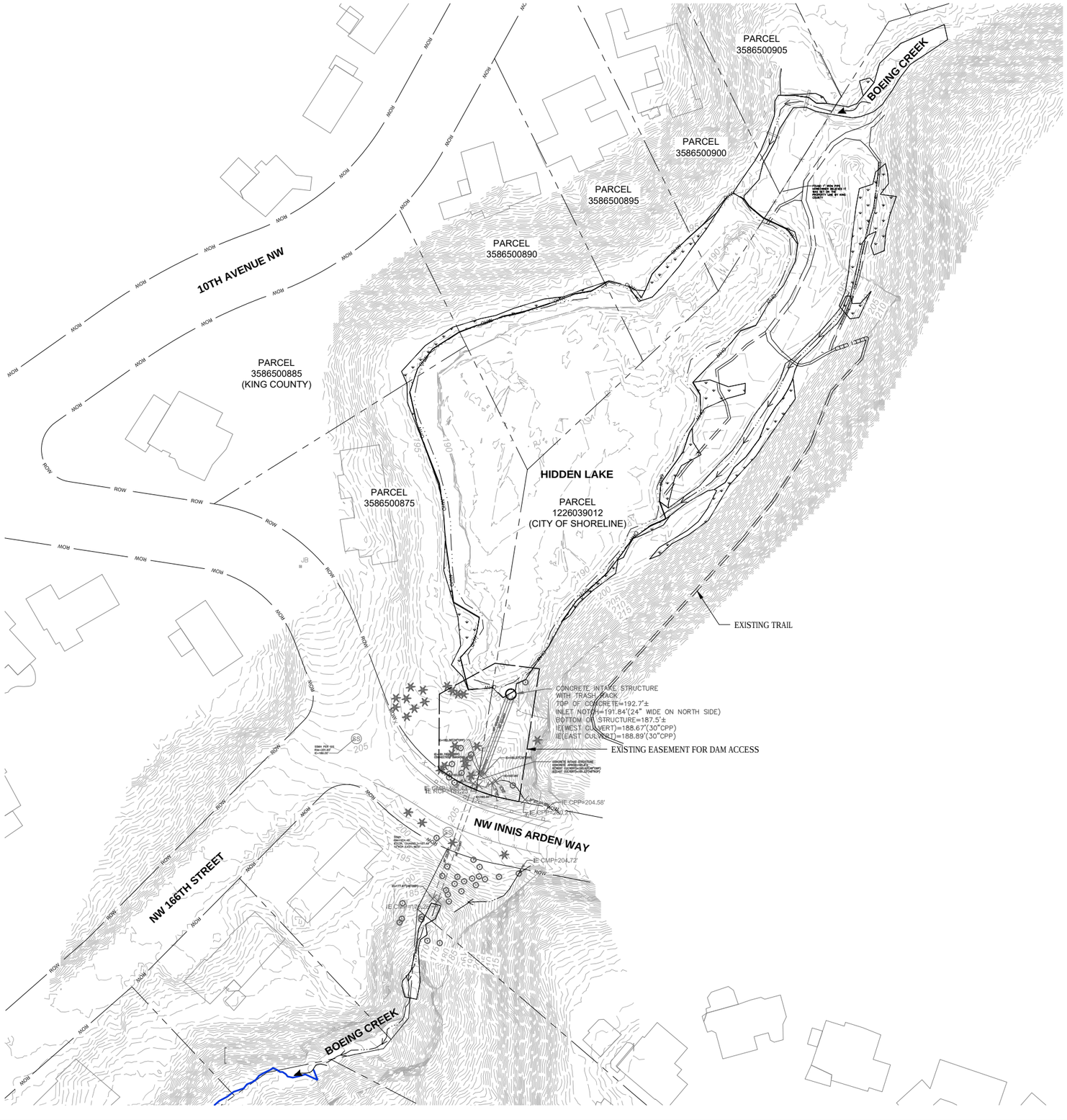

HIDDEN LAKE IN FEBRUARY 2015, STANDING ON DAM LOOKING NORTH

GENERAL NOTES:

1. SEE DWG G-1.1 FOR ABBREVIATIONS AND LEGEND.

STATISTICS

EQUIPMENT: TRIMBLE VX ROBOTIC TOTAL STATION.
METHODOLOGY: FIELD TRAVERSE.
MEETS OR EXCEEDS SURVEY STANDARD AS PER:
WAC 332-130-050
WAC 332-130-090
WAC 332-130-100
ALL SURVEY WORK OCCURRED IN SEPTEMBER 2015 AND NOVEMBER 2018

SURVEYOR'S NOTES

1. ALL UNDERGROUND UTILITY LOCATIONS ARE BASED ON OBSERVED EVIDENCE OF STRUCTURES. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION PROVIDED.

2. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A COMPLETE TITLE REPORT, WHICH MAY REVEAL ADDITIONAL RESTRICTIONS AND EASEMENTS OF RECORD.

N

50 0 50 100
1"=50'

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Revisions			

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DRAFT

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Shoreline, WA 98133
(206) 801-2700

HIDDEN LAKE DAM REMOVAL
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EXISTING CONDITIONS

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Sheet C-1.0

Sheet 4 Of x

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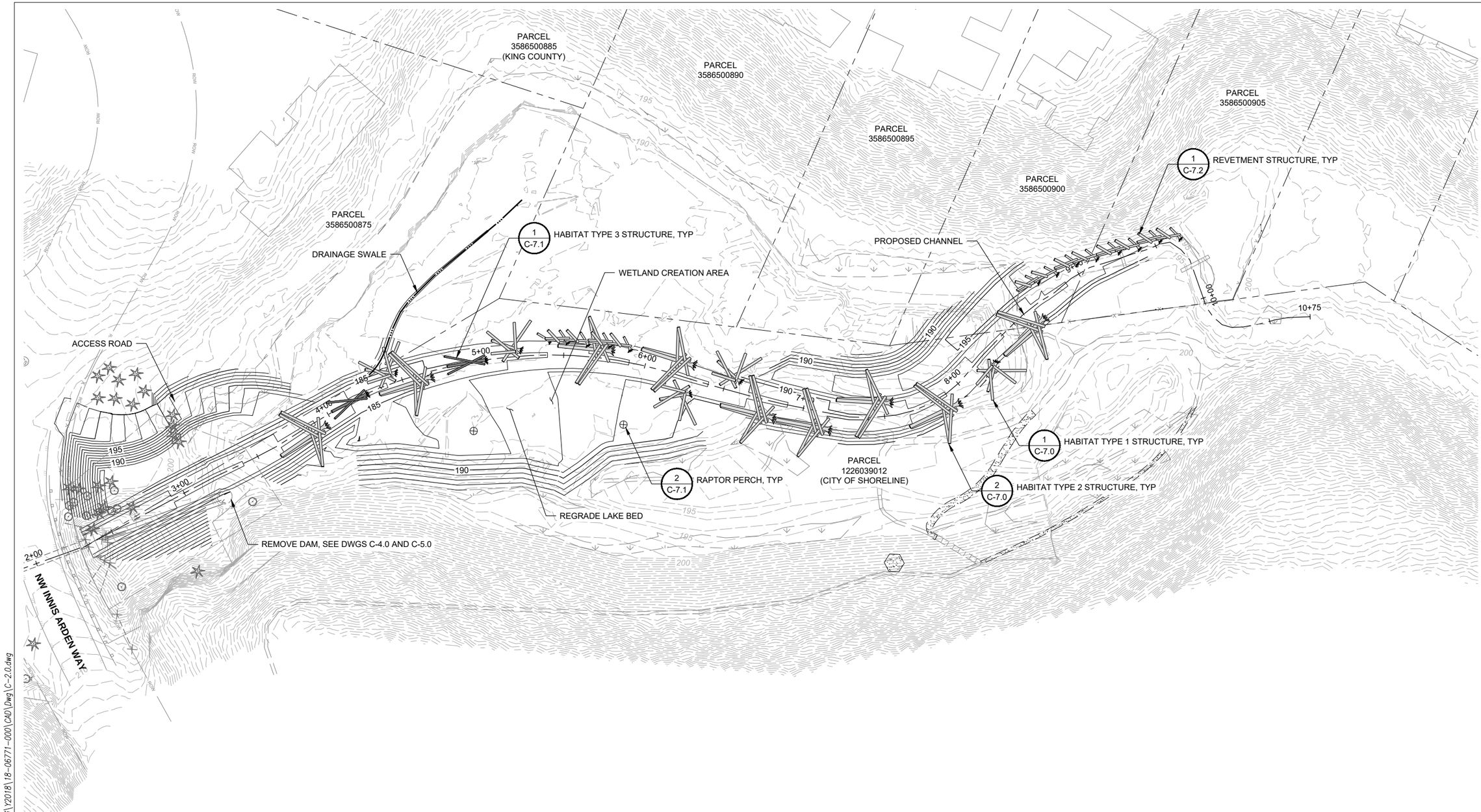

GENERAL NOTES:

1. SEE DWG G-1.1 FOR ABBREVIATIONS AND LEGEND.
2. SEE DWG XX FOR SURVEY CONTROL.

30 0 30 60
1"=30'

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CITY OF SHORELINE

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Shoreline, WA 98133
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HIDDEN LAKE DAM REMOVAL
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PROPOSED SITE PLAN

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Sheet C-2.0

Sheet 5 Of x

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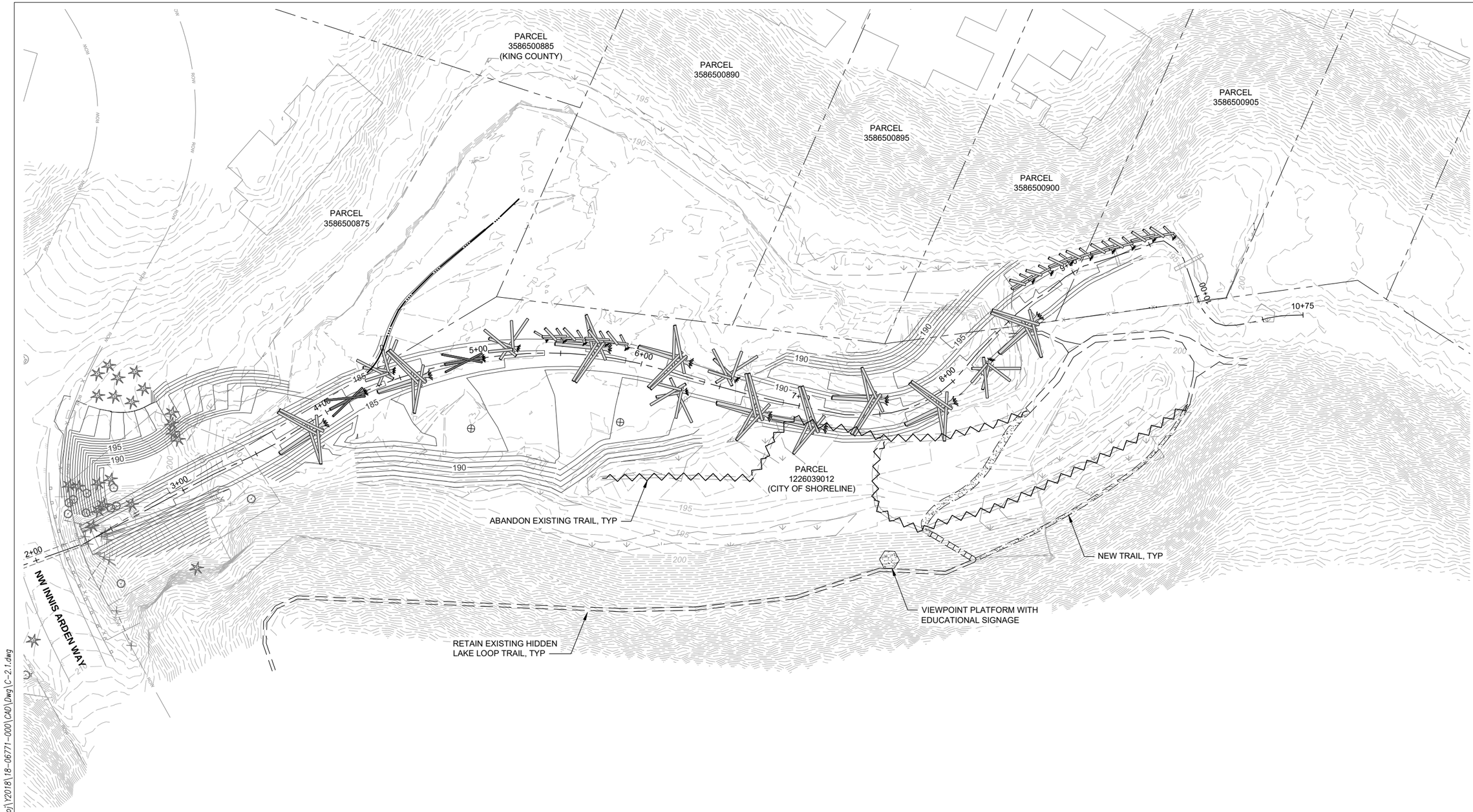

GENERAL NOTES:

1. SEE DWG G-1.1 FOR ABBREVIATIONS AND LEGEND.
2. SEE DWG XX FOR SURVEY CONTROL.

30 0 30 60
1"=30'

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Revisions			

IAN B. MOSTRENKO
STATE OF WASHINGTON
36069
REGISTERED
PROFESSIONAL ENGINEER
DRAFT

CITY OF SHORELINE

17500 Midvale Avenue North
Shoreline, WA 98133
(206) 801-2700

HIDDEN LAKE DAM REMOVAL
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PROPOSED TRAIL IMPROVEMENTS

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Sheet C-2.1

Sheet 6 Of x

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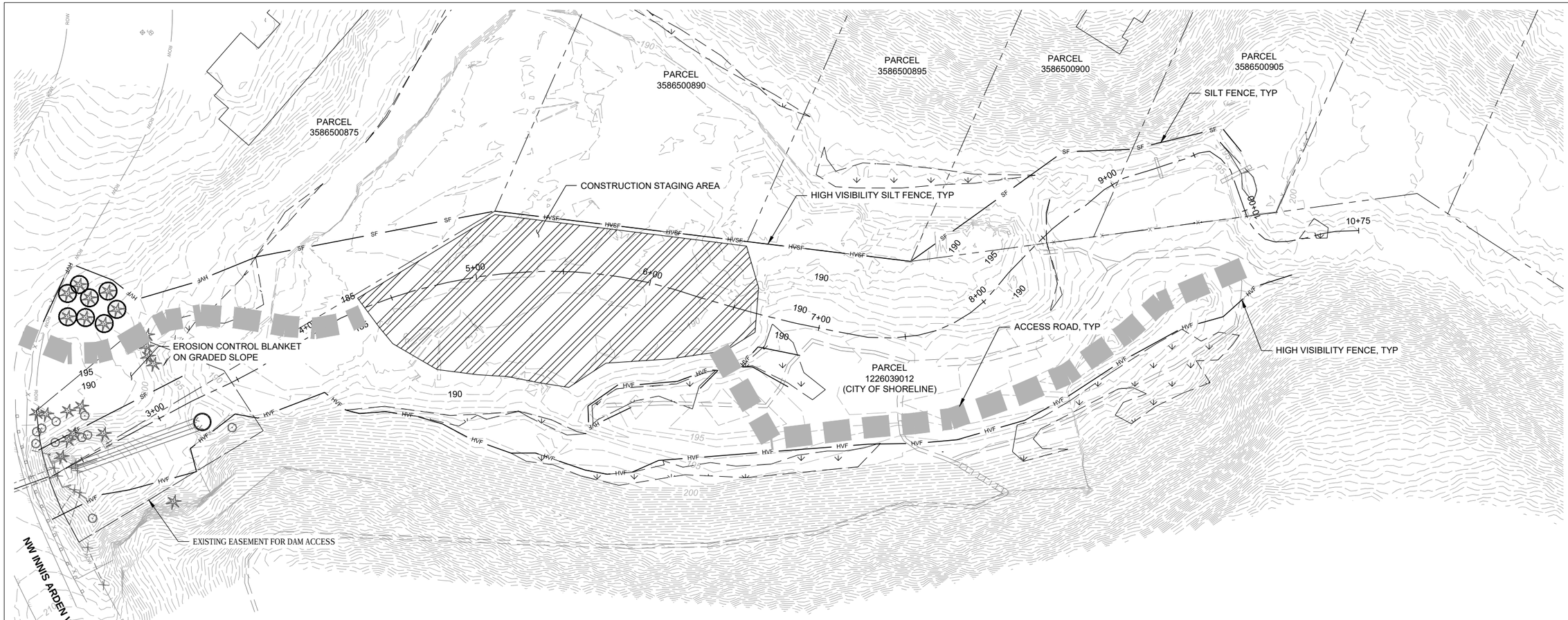

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			ME	Checked
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				Revisions

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17500 Midvale Avenue North
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(206) 801-2700

HIDDEN LAKE DAM REMOVAL
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TEMPORARY EROSION AND SEDIMENT CONTROL PLAN

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Sheet C-3.0

Sheet 7 Of x

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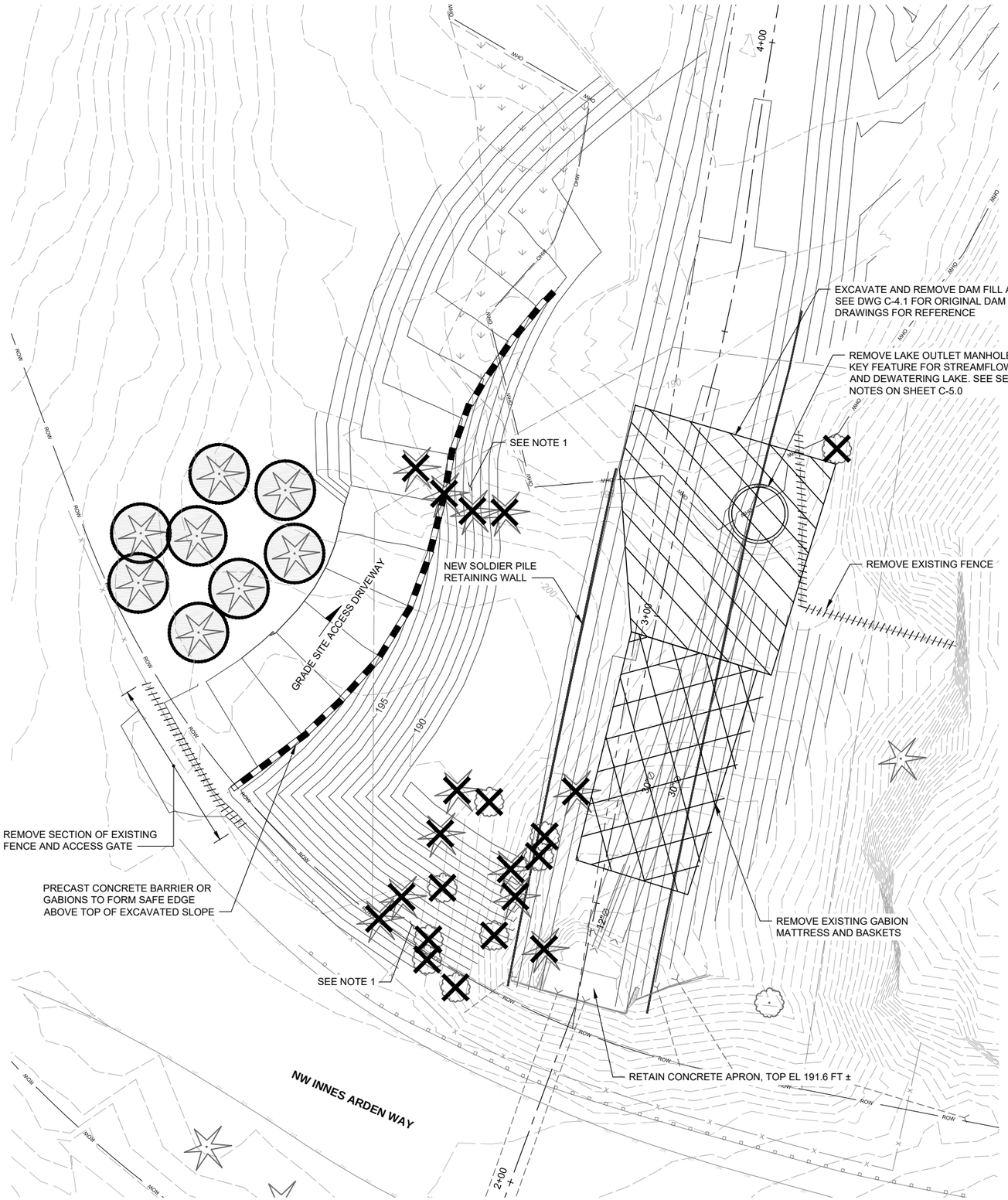

DAM AREA

FROM ROAD LOOKING UPSTREAM

GENERAL NOTES:

1. SEE DWG G-1.1 FOR ABBREVIATIONS AND LEGEND.

NOTES:

1. SALVAGE BRANCHES AND LOGS WITH INTACT ROOTWADS FROM CEDAR TREES LARGER THAN 10" DIAMETER AT BREAST HEIGHT FOR USE IN HABITAT LOG STRUCTURES (SEE SHEET X). SALVAGE REMAINDER OF ALL REMOVED TREES FOR WOOD CHIP MULCHING AS PART OF ONSITE EROSION AND SEDIMENT CONTROL PLAN, SEE SHEET C-3.0.

N

10 0 10 20
1"=10'

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17500 Midvale Avenue North
Shoreline, WA 98133
(206) 801-2700

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SITE ACCESS AND DAM REMOVAL PLAN

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Sheet C-4.0

Sheet 8 Of x

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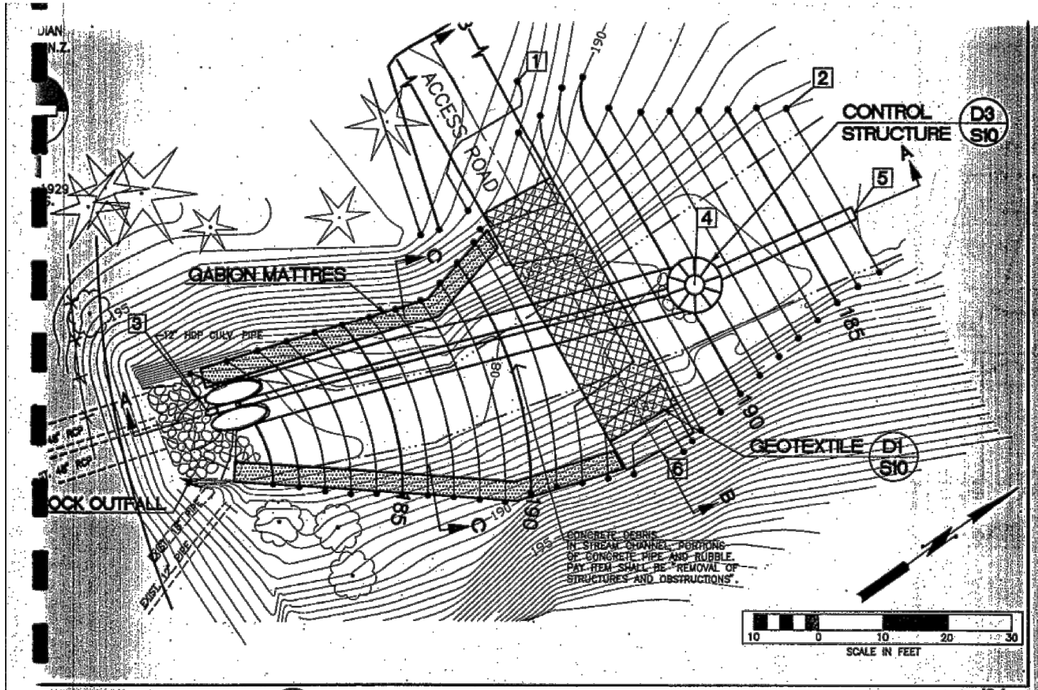


1. POINT LOCATIONS:

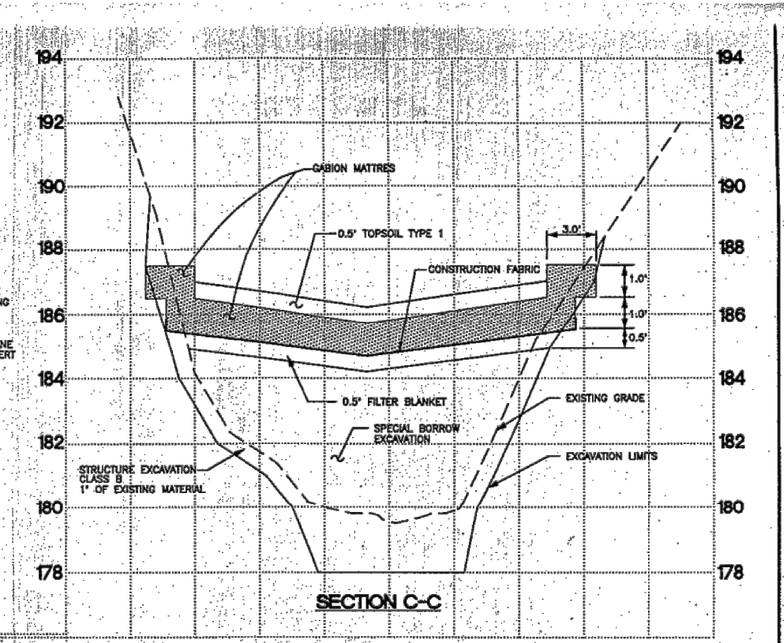
POINT #	NORTHING	EASTING
1	277857.67	1622067.21
2	277889.52	1622094.41
3	277788.32	1622081.71
4	277862.09	1622108.92
5	277888.70	1622113.85
6	277842.99	1622126.85

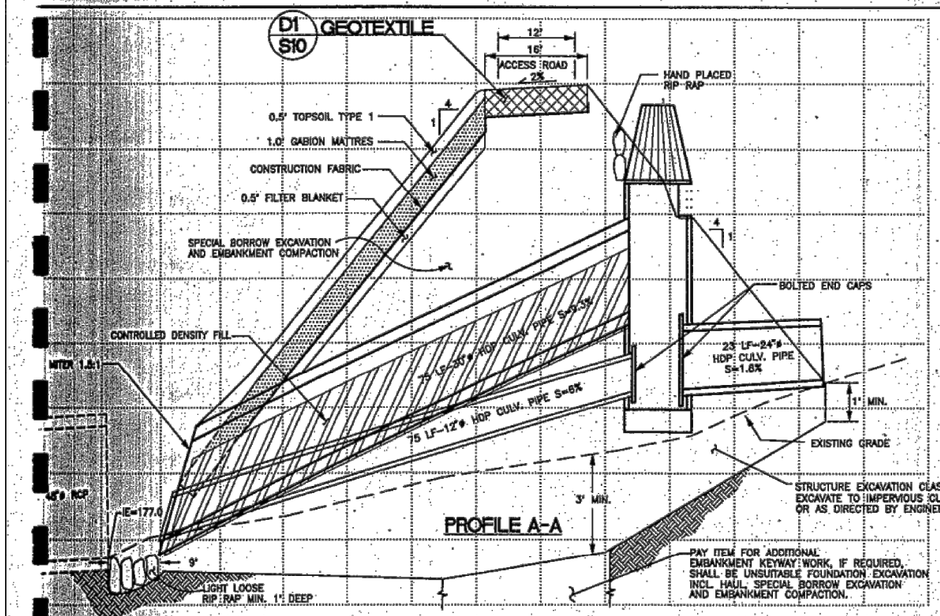
2. BACKFILL FOR THE EMBANKMENT AREA SHALL BE SPECIAL BORROW EXCAVATION. THE LIMITS FOR THE SPECIAL BORROW EXCAVATION SHALL INCLUDE ALL BACKFILL SOUTHERLY OF THE LINE CONNECTING POINTS 1 AND 2 ON THE EMBANKMENT PLAN UNLESS OTHERWISE NOTED ON THE PLANS.

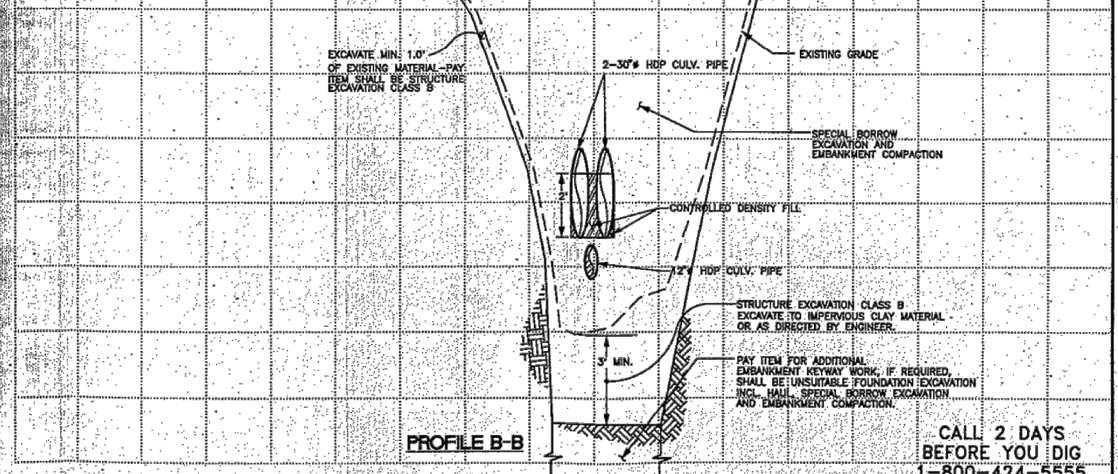
3. THE PAY ITEM FOR ALL HIGH DENSITY POLYETHYLENE (HDP) CULV. PIPE SHALL BE SCHEDULE "A" CULVERT PIPE ___ IN. DIAM.

LEGEND

- PROPERTY LINE
- ROAD CENTERLINE
- STREAMBED
- GEOWEB
- GABION MATTRES







CALL 2 DAYS BEFORE YOU DIG 1-800-424-5555

MAY. W	5/94	
WJS	5/94	
WHITFIELD. M	7/95	
W.O.M.	5/94	

APPROVED: LARRY GIBBONS, P.E. DATE: 4/96
PROJECT MANAGER: TIM KELLY P.E. DATE: 4/96
DESIGNED: TIM KELLY, P.E. DATE: 4/96

PROJECT No. OA1755
SURVEY No. 12-23-4-59

LARRY R. GIBBONS STATE OF WASHINGTON 13956 REGISTERED PROFESSIONAL ENGINEER

KING COUNTY NATURAL RESOURCES
PAM BISSONNETTE, DIRECTOR
SURFACE WATER MANAGEMENT DIVISION
HIDDEN LAKE RESTORATION

SHEET 8 OF 14

	Description	Date	Initials
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Designed			IBM, VW
Checked			ME
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IAN R. MOSTRENKO STATE OF WASHINGTON 36069 REGISTERED PROFESSIONAL ENGINEER

CITY OF SHORELINE
17500 Midvale Avenue North
Shoreline, WA 98133
(206) 801-2700

HIDDEN LAKE DAM REMOVAL
30 PCT DESIGN - NOT FOR CONSTRUCTION

EXISTING DAM ORIGINAL DESIGN DETAILS

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Sheet C-4.1

Sheet 9 Of x

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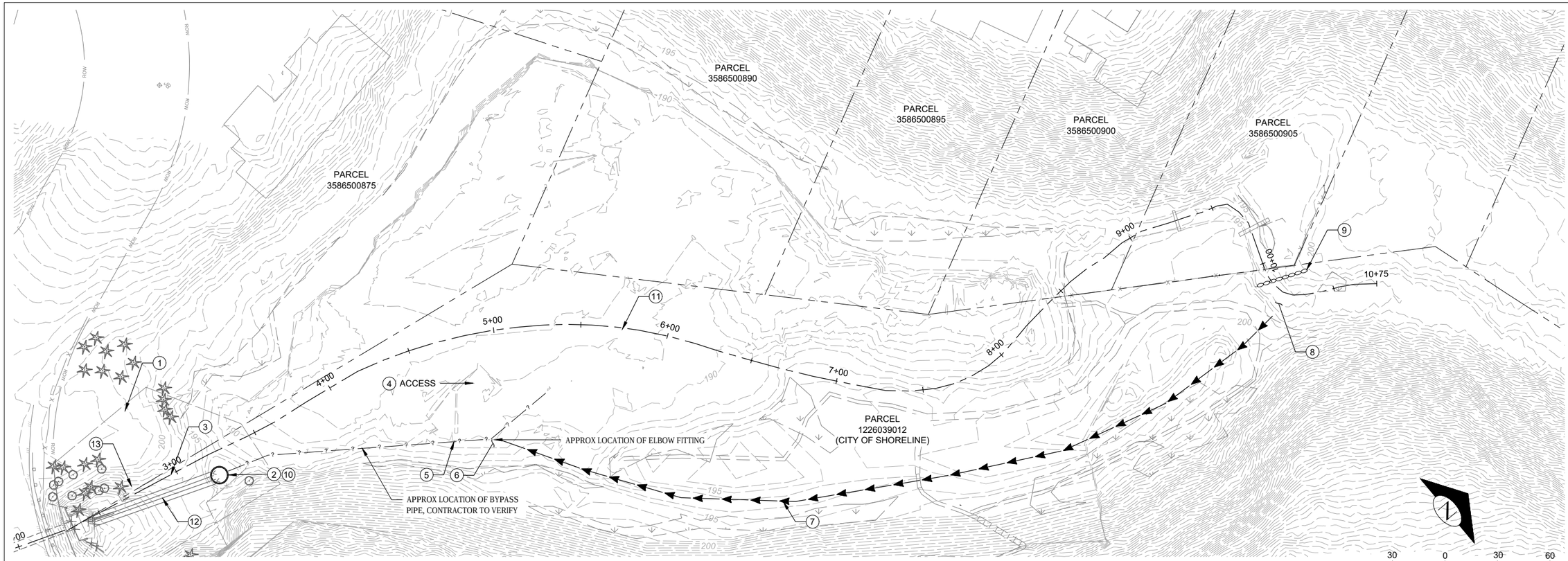

CONSTRUCTION SEQUENCING:

1. INSTALL CONSTRUCTION ACCESS ROAD FROM NW INNIS ARDEN WAY AS SHOWN ON SHEET C-4.0.
2. USE EXISTING LAKE OUTLET MANHOLE STRUCTURE AND PIPES CONNECTED TO IT TO DRAIN THE LAKE. THIS SHOULD ENABLE DRAINING THE LAKE TO A WATER SURFACE ELEVATION OF LESS THAN 187 FEET (NAVD88).
3. EXCAVATE THE TOP OF THE DAM DOWN TO ELEVATION 190 (NAVD88). TO PREVENT WATER QUALITY IMPACTS, MAINTAIN THE LAKE OUTLET MANHOLE STRUCTURE, MONITOR EXCAVATION NEAR THE INLET PIPE CONNECTED TO THAT MANHOLE STRUCTURE, AND ENSURE CREEK WATER DOES NOT IMPOUND BEHIND THE DAM SO THAT FLOW CANNOT PASS OVER THE TOP OF THE EXCAVATED PORTION OF THE DAM.
4. ACCESS STREAM RESTORATION WORK AREAS OVER THE DRAINED LAKE BED.
5. LOCATE EXISTING PIPE BENEATH LAKE BED SHOWN ON SHEET C-4.1, AND SPECIFICALLY THE ELBOW FITTING IN IT APPROXIMATELY 155 FEET NORTH OF THE EXISTING LAKE OUTLET MANHOLE STRUCTURE.
6. CUT IN TO PIPE AT ELBOW FITTING NOTED ABOVE, ENABLING CONNECTION OF A HIGH FLOW BYPASS SYSTEM TO THIS SECTION OF PIPE. INSTALL A TEMPORARY BYPASS INLET STRUCTURE SUCH AS A CATCH BASIN OR OTHER APPARATUS OUTLINED IN THE CONTRACTOR'S TEMPORARY STREAMFLOW BYPASS PLAN CONNECTED TO THE PIPE AT THIS LOCATION THAT CAN BE USED TO ROUTE OVERLAND STREAMFLOW IN TO THE EXISTING PIPE LEADING TO THE LAKE OUTLET MANHOLE STRUCTURE.
7. INSTALL A TEMPORARY STREAMFLOW BYPASS CHANNEL OR PIPE AS REQUIRED BASED ON EXCAVATION AND STREAM CHANNEL CONSTRUCTION SEQUENCING TO ROUTE STREAMFLOW TO THE TEMPORARY BYPASS INLET STRUCTURE
8. EXCAVATE A NOTCH IN THE EXISTING TRAIL PRISM NEAR STA 10+25 TO ELEVATION 196 FEET (NAVD88) WITH ENOUGH WIDTH TO PASS A MODERATE FLOOD EVENT THAT MAY OCCUR DURING NEW STREAM CHANNEL CONSTRUCTION, CREATING A STREAMFLOW BYPASS PATHWAY, AND INSTALL A TEMPORARY FLOW BYPASS PIPE THROUGH THE EXISTING TRAIL PRISM. BACKFILL AND COMPACT MATERIAL ABOVE THE PIPE TO MATCH EXISTING CONDITIONS, REINFORCING THE STREAM BANK WITH RIPRAP.
9. INSTALL SAND BAG DIVERSION DAM ACROSS CREEK CHANNEL IN VICINITY OF STA 10+15, FORCING FLOW TO THE SOUTH THROUGH THE PIPE BURIED IN THE TRAIL PRISM, THROUGH THE EXISTING SIDE CHANNEL, IN TO THE TEMPORARY BYPASS CHANNEL OR PIPE DOWNSTREAM OF THE EXISTING SIDE CHANNEL, AND INTO THE THE TEMPORARY BYPASS INLET STRUCTURE.
10. CONFIRM ALL STREAMFLOW IS BEING ROUTED THROUGH THE LAKE OUTLET MANHOLE STRUCTURE WITHOUT POOLING BEHIND THE REMAINING PORTION OF THE DAM BEFORE COMMENCING NEW STREAM CHANNEL EXCAVATION.
11. ONCE THE STREAMFLOW DIVERSION IS FULLY FUNCTIONING, EXCAVATE PROPOSED STREAM CHANNEL, EXCAVATE AND GRADE WETLAND AREA, AND INSTALL LOG STRUCTURES THROUGH THE FORMER LAKE BED UP TO THE FACE OF THE DAM NEAR STA 3+25.
12. ONCE THE SOLDIER PILE RETAINING WALLS ARE COMPLETE IN AND DOWNSTREAM OF THE DAM AREA, INSTALL A BYPASS PIPE AND/OR PUMP SYSTEM TO ROUTE ALL STREAMFLOW AROUND THE DAM AREA AND INTO THE CULVERTS BENEATH NW INNIS ARDEN WAY. ONCE THIS BYPASS SYSTEM IS FULLY FUNCTIONING, REMOVE THE REMAINING DAM EMBANKMENT BELOW ELEVATION 190 FEET, THE PIPES BURIED WITHIN THE DAM, AND THE LAKE OUTLET MANHOLE STRUCTURE. EROSION AND SEDIMENT CONTROL MEASURES MUST BE IN PLACE AT THE DOWNSTREAM EDGE OF THE DAM REMOVAL AREA TO PREVENT DOWNSTREAM WATER QUALITY IMPACTS DURING THIS TIME.
13. EXCAVATE THE REMAINING LENGTH OF STREAM CHANNEL FROM APPROXIMATELY STA 3+25 SOUTH TO THE EXISTING CONCRETE PAD IMMEDIATELY UPSTREAM OF THE EXISTING CULVERTS UNDER NW INNIS ARDEN WAY.
14. REMOVE REMAINING DIVERSION SANDBAG DAMS, GRAVITY PIPES, AND ANY OTHER FLOW BYPASS SYSTEM COMPONENTS FARTHER DOWNSTREAM NEAR THE DAM SITE TO INTRODUCE ALL STREAMFLOW INTO THE NEW STREAM CHANNEL. TIGHTLY PLUG UPSTREAM (NORTH) END OF SHORT SECTION OF PIPE BURIED IN THE BACKFILLED FLOW DIVERSION NOTCH IN TRAIL PRISM NEAR STA 10+25. FILL THIS PIPE WITH CDF OR OTHER MATERIAL APPROVED BY THE ENGINEER FROM THE SOUTH END AND ABANDON IN PLACE.
15. SOME INTERMITTENT SANDBAG DAMS AND DIVERSIONS MAY BE REQUIRED IN THE AREA WHERE THE DAM WAS REMOVED TO COMPLETE FINAL STREAMBED GRADING DEPENDING ON CONTACTOR'S MEANS AND METHODS FOR THE STREAM DIVERSION.
16. CONDITION OF OLD LAKE DRAIN BYPASS PIPES IS UNKNOWN.

	Initials	Date	Description
Drawn	EM		
Designed	IBM, VW		
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Revisions			

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17500 Midvale Avenue North
Shoreline, WA 98133
(206) 801-2700

HIDDEN LAKE DAM REMOVAL
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STREAMFLOW BYPASS PLAN AND CONSTRUCTION SEQUENCING

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Sheet C-5.0

Sheet 10 Of x

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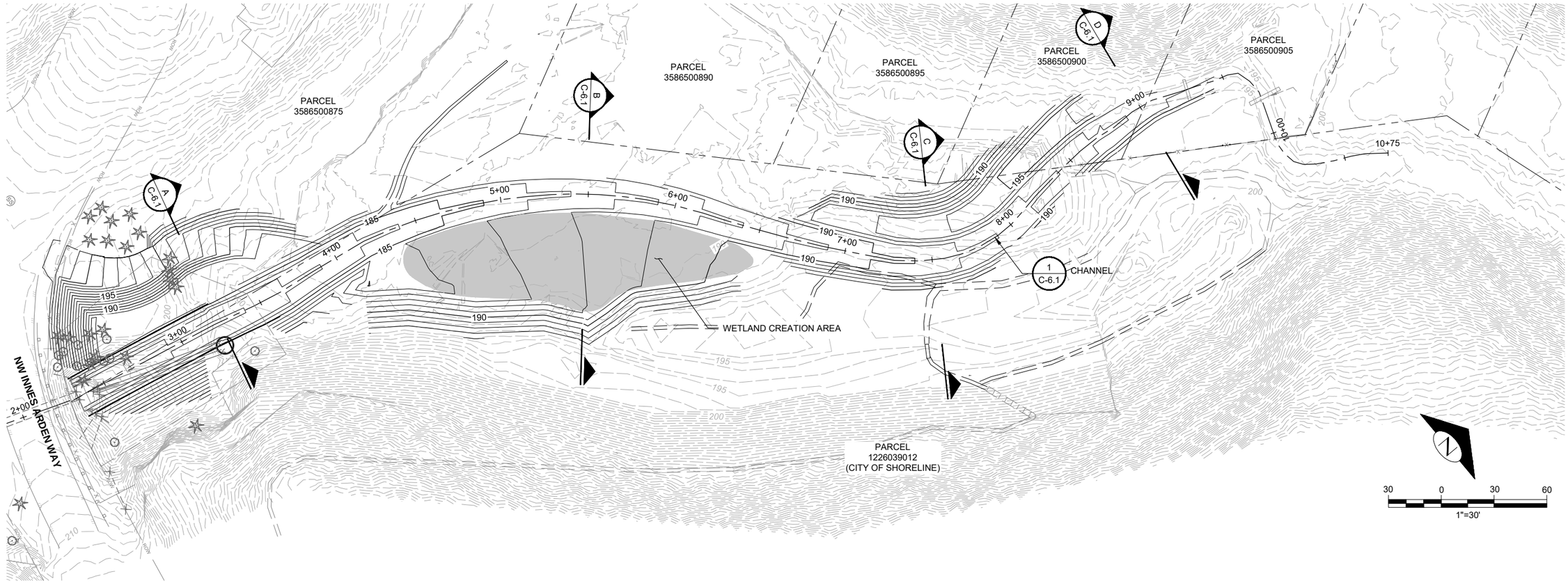

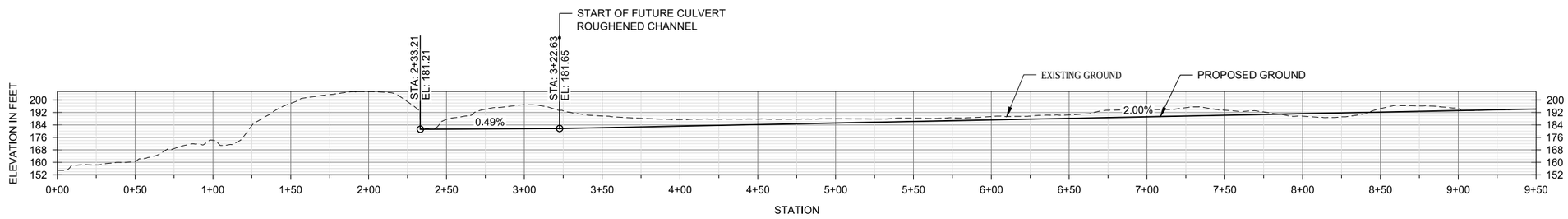

HORIZONTAL SCALE IN FEET
40 0 40 80
40 0 40 80
VERTICAL SCALE IN FEET
VERTICAL EXAGGERATION X 1

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STATE OF WASHINGTON
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CITY OF SHORELINE

17500 Midvale Avenue North
Shoreline, WA 98133
(206) 801-2700

HIDDEN LAKE DAM REMOVAL
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CHANNEL GRADING PLAN AND PROFILE

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Sheet C-6.0

Sheet 11 Of x

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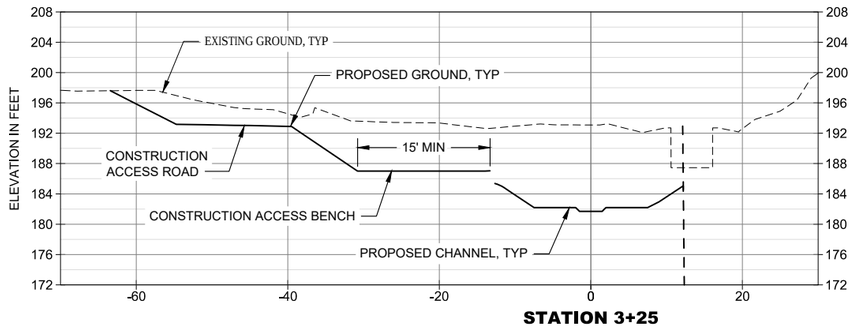
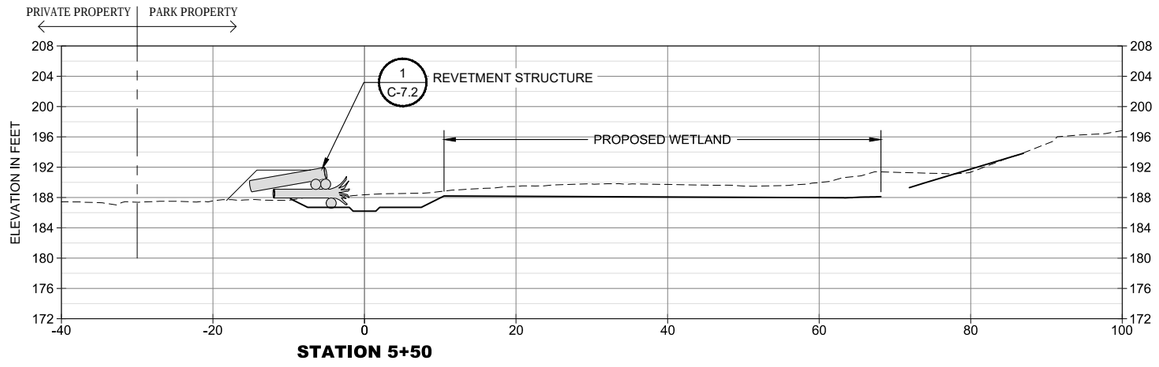


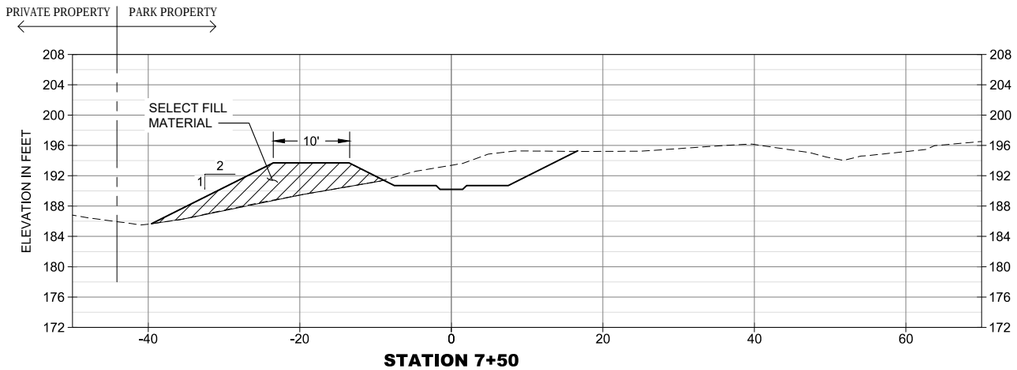
SECTION - CULVERT APPROACH REACH — A / C-6.0

HORIZ. SCALE: 1"=10'
VERT. SCALE: 1"=10'



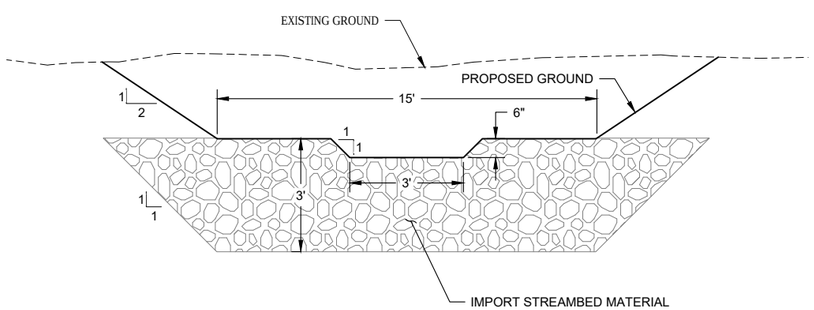
SECTION - WETLAND CREATION REACH — B / C-6.0

HORIZ. SCALE: 1"=10'
VERT. SCALE: 1"=10'



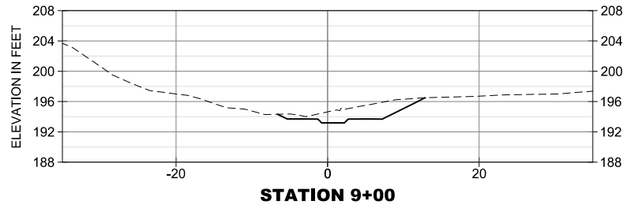
SECTION - BERM REACH — C / C-6.0

HORIZ. SCALE: 1"=10'
VERT. SCALE: 1"=10'



DETAIL - TYPICAL CHANNEL — 1 / C-6.0

SCALE: NTS



SECTION - CHANNEL ADJUSTMENT REACH — D / C-6.0

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VERT. SCALE: 1"=10'

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(206) 801-2700

HIDDEN LAKE DAM REMOVAL
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CHANNEL SECTIONS

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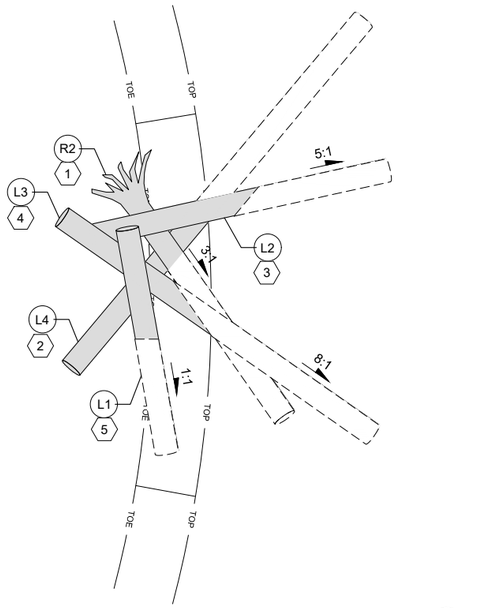
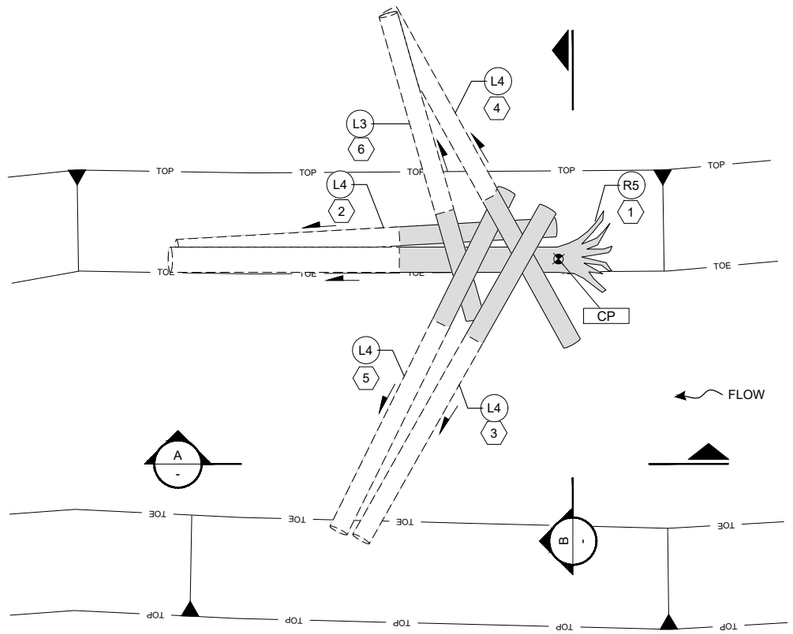
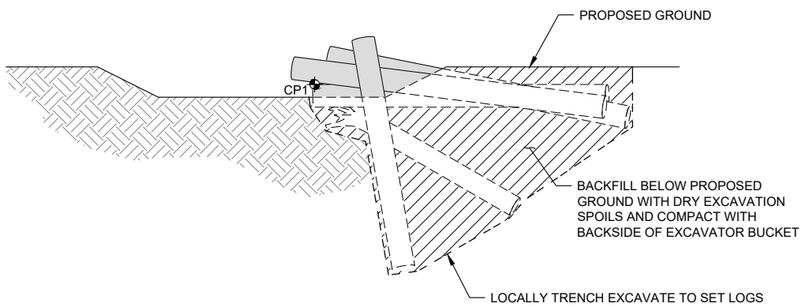


PLAN - HABITAT TYPE 1 STRUCTURE
SCALE: NTS
1
C-2.0



PLAN - HABITAT TYPE 2 STRUCTURE
SCALE: NTS
2
C-2.0



SECTION - HABITAT TYPE 1 STRUCTURE
SCALE: NTS
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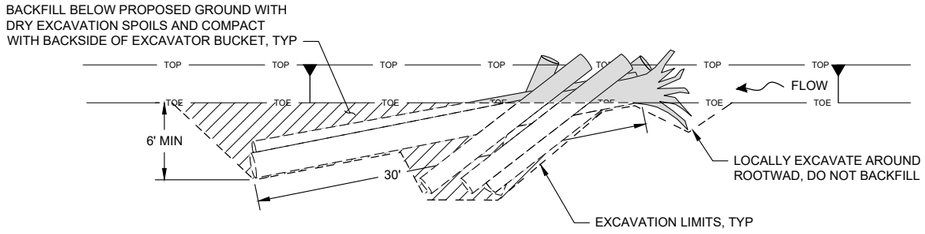

SECTION - HABITAT TYPE 2 STRUCTURE
SCALE: NTS
A
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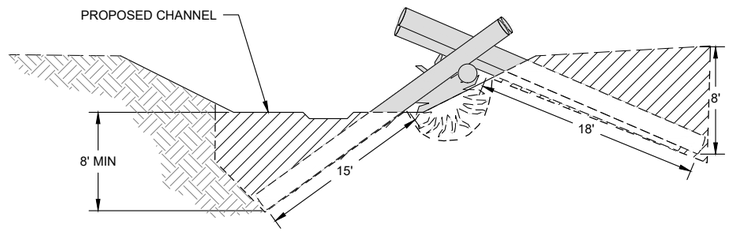

SECTION - HABITAT TYPE 2 STRUCTURE
SCALE: NTS
B
-

TABLE - HABITAT TYPE 1 STRUCTURE LOG SCHEDULE:

LOG PLACEMENT SEQUENCE	LOG ID #	DIAMETER (IN)	LENGTH (FT)	ROOTWAD
1	R2	18-24	20	YES
2	L4	18-24	30	NO
3	L2	18-24	20	NO
4	L3	18-24	25	NO
5	L1	18-24	15	NO

TABLE - HABITAT TYPE 2 STRUCTURE LOG SCHEDULE:

LOG PLACEMENT SEQUENCE	LOG ID #	DIAMETER (IN)	LENGTH (FT)	ROOTWAD
1	R5	18-24	35	YES
2	L4	18-24	30	NO
3	L4	18-24	30	NO
4	L4	18-24	30	NO
5	L4	18-24	30	NO
6	L3	18-24	25	NO

LEGEND:

NOTES:

1. EXTENTS OF EMBEDDED LOG PORTIONS SHOWN ARE APPROXIMATE AND WILL VARY FOR EACH STRUCTURE.
2. EXCAVATION LIMITS SHOWN ARE APPROXIMATE AND WILL VARY BASED ON CONSTRUCTION MEANS AND METHODS, SUBSURFACE CONDITIONS, AND LOCATION OF STRUCTURE. CONTRACTOR SHALL ADJUST EXCAVATION LIMITS AS NECESSARY TO COMPLETE CONSTRUCTION.

	Initials	Date	Description
Drawn	EM		
Designed	IBM, VW		
Checked	ME		
Revisions			
Revisions			

IAN B. MOSTRE
STATE OF WASHINGTON
36069
REGISTERED
PROFESSIONAL ENGINEER

DRAFT

CITY OF SHORELINE

17500 Midvale Avenue North
Shoreline, WA 98133
(206) 801-2700

HIDDEN LAKE DAM REMOVAL
30 PCT DESIGN - NOT FOR CONSTRUCTION

STRUCTURE DETAILS 1

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ONE INCH AT FULL SIZE

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Project No. 18-06771-000

Sheet C-7.0

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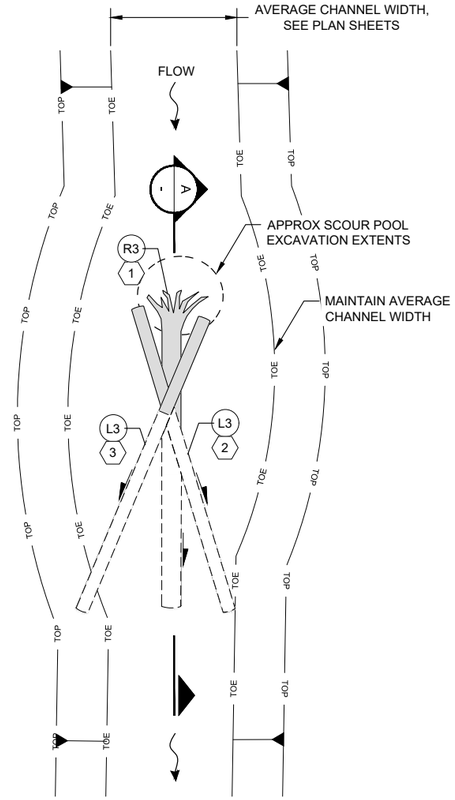
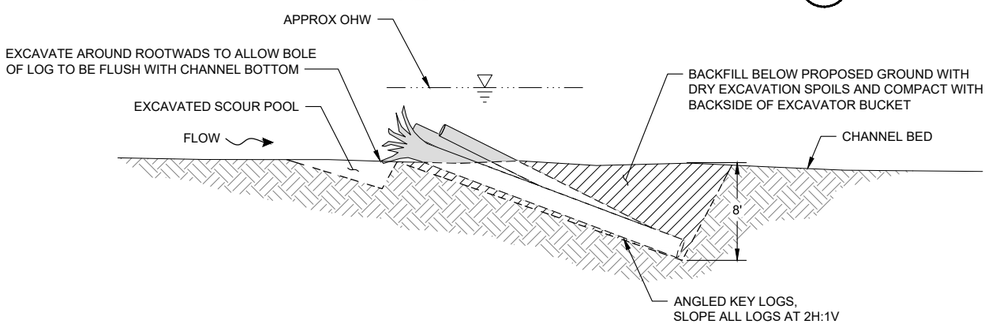


PLAN - HABITAT TYPE 3 STRUCTURE (1 / C-2.0)

SCALE: NTS



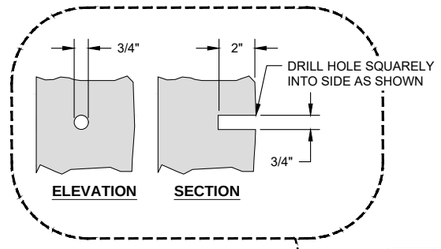
SECTION - HABITAT TYPE 3 STRUCTURE (A / -)

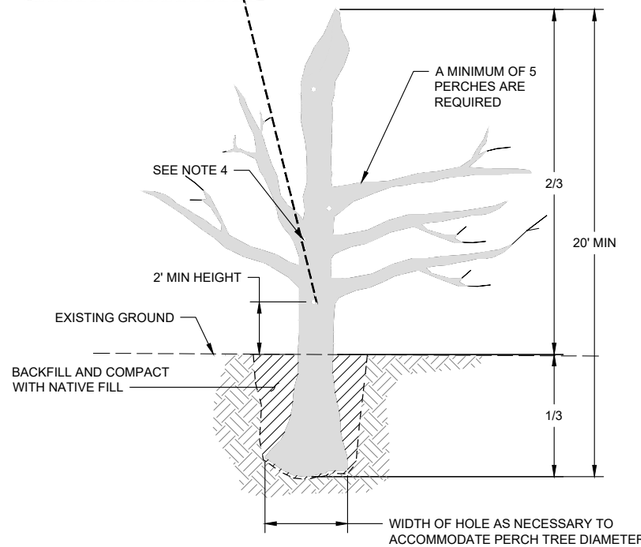
SCALE: NTS

TABLE - HABITAT TYPE 3 STRUCTURE LOG SCHEDULE:

LOG PLACEMENT SEQUENCE	LOG ID #	DIAMETER (IN)	LENGTH (FT)	ROOTWAD
1	R3	18-24	25	YES
2	L3	18-24	25	NO
3	L3	18-24	25	NO

TYPICAL CAVITY NESTING HOLE





RAPTOR PERCH NOTES:

1. INSTALL PERCH TREE IN LOCATION SHOWN ON PLANS. BURY AS SHOWN TO SECURE TREE IN AN UPRIGHT POSITION.
2. DO NOT TREAT TREE WITH ANY PRESERVATIVES, STAINS, OR CHEMICAL TREATMENTS.
3. PERCH TREES SHALL BE PLACED NEAR STREAM CORRIDORS AND HABITAT TRANSITIONS. SEE DRAWING MP11.
4. INSTALL CAVITY NESTING HOLES. DRILL 16 HOLES TOTAL. STAGGER HOLES AT DIFFERENT ELEVATIONS AROUND THE ENTIRE PERIMETER OF THE TREE RANGING IN HEIGHT FROM 2' TO 8' ABOVE GRADE. EVENLY DISPERSE THE HOLES ALONG THE HEIGHT OF THE TREE.

DETAIL - RAPTOR PERCH (2 / C-2.0)

SCALE: NTS

LEGEND:

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Designed	IBM, VW		
Checked	ME		
Revisions			
Revisions			

IAN B. MOSTRE — STATE OF WASHINGTON — 36069 — REGISTERED PROFESSIONAL ENGINEER — DRAFT

CITY OF SHORELINE

17500 Midvale Avenue North
Shoreline, WA 98133
(206) 801-2700

HIDDEN LAKE DAM REMOVAL
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STRUCTURE DETAILS 2

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Sheet C-7.1

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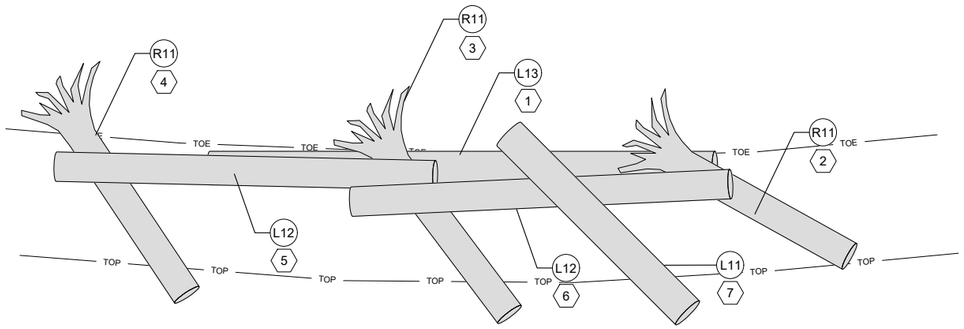
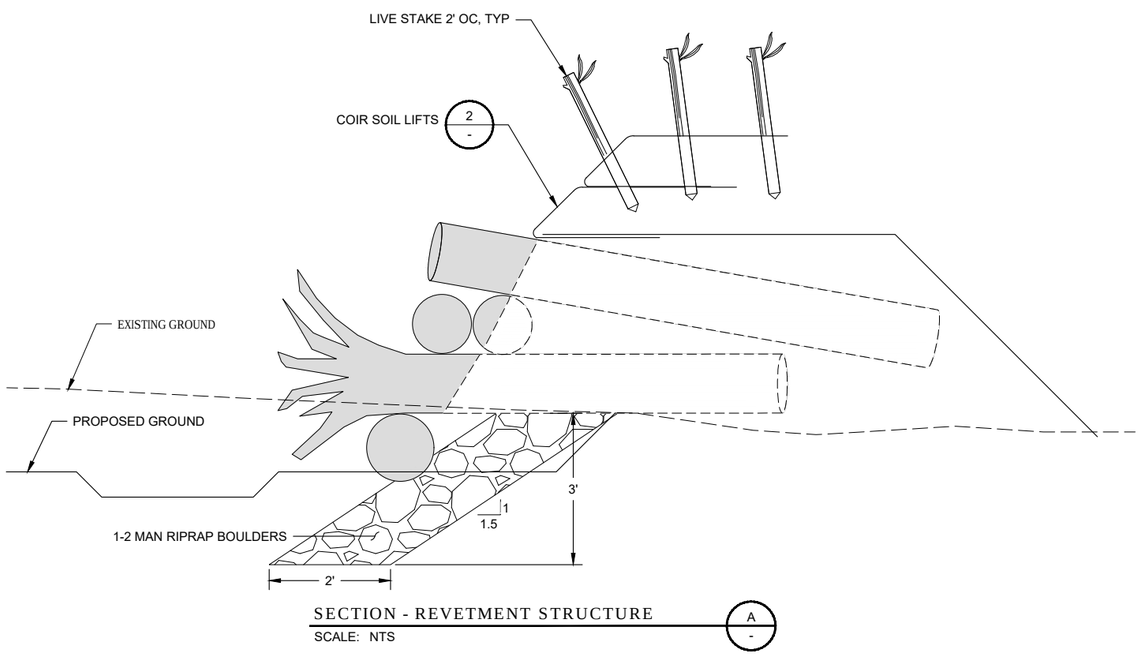


PLAN - REVETMENT STRUCTURE (1 / C-2.0)
SCALE: NTS

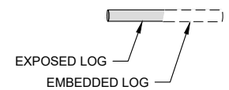


SECTION - REVETMENT STRUCTURE (A / -)
SCALE: NTS

TABLE - HABITAT TYPE 1 STRUCTURE LOG SCHEDULE:

LOG PLACEMENT SEQUENCE	LOG ID #	DIAMETER (IN)	LENGTH (FT)	ROOTWAD
1	L13	14-16	20	NO
2-4	R11	12-14	10	YES
5	L12	12-14	15	NO
6	L12	12-14	15	NO
7	L11	14-16	10	NO

LEGEND:



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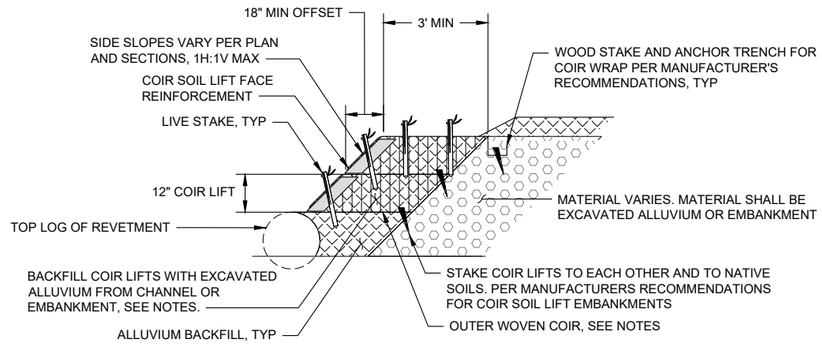

DETAIL - TYPICAL COIR SOIL LIFT EMBANKMENT (2 / -)
SCALE: NTS

COIR WRAP PREPARATION
(SEE SPECIFICATIONS)

STEP 1
- OVEREXCAVATE TO PLACE COIR WRAP SOIL LIFTS
- PROTECT SUBGRADE FROM FOOT TRAFFIC AND CONSTRUCTION ACTIVITIES THAT COULD CAUSE SOIL DISTURBANCE OR BANK SETTLEMENT PRIOR TO COIR PLACEMENT

STEP 2
- PLACE OUTER WOVEN COIR FOR THE BOTTOM OF THE LIFT
- PLACE INNER NON-WOVEN COIR
- STAKE COIR FABRIC TO NATIVE SOIL BELOW LIFT

STEP 3
- INSTALL FORM (IF CONTRACTOR CHOOSES) TO HOLD COIR WRAP AND SOIL TO DESIGN DIMENSIONS
- PLACE 12" HIGH LAYER OF SOIL COMPOSED OF TOPSOIL TYPE D AMENDED WITH ALLUVIUM AND COMPACT PER SPECIFICATIONS

STEP 4
- PLACE SEED MIX PER PLANTING PLAN AND SPECIFICATIONS

STEP 5
- WRAP OUTER WOVEN COIR AND INNER NON-WOVEN COIR AROUND SOIL LIFT TO ENCASE THE LIFT

STEP 6
- STAKE PER COIR MANUFACTURER'S RECOMMENDATION

Description	Date	Initials	
		EM	Drawn
		IBM, VW	Designed
		ME	Checked
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			Revisions

IAN B. MOSTRE — STATE OF WASHINGTON — 36069 — REGISTERED PROFESSIONAL ENGINEER — DRAFT

CITY OF SHORELINE
17500 Midvale Avenue North
Shoreline, WA 98133
(206) 801-2700

HIDDEN LAKE DAM REMOVAL
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Sheet 15 Of x

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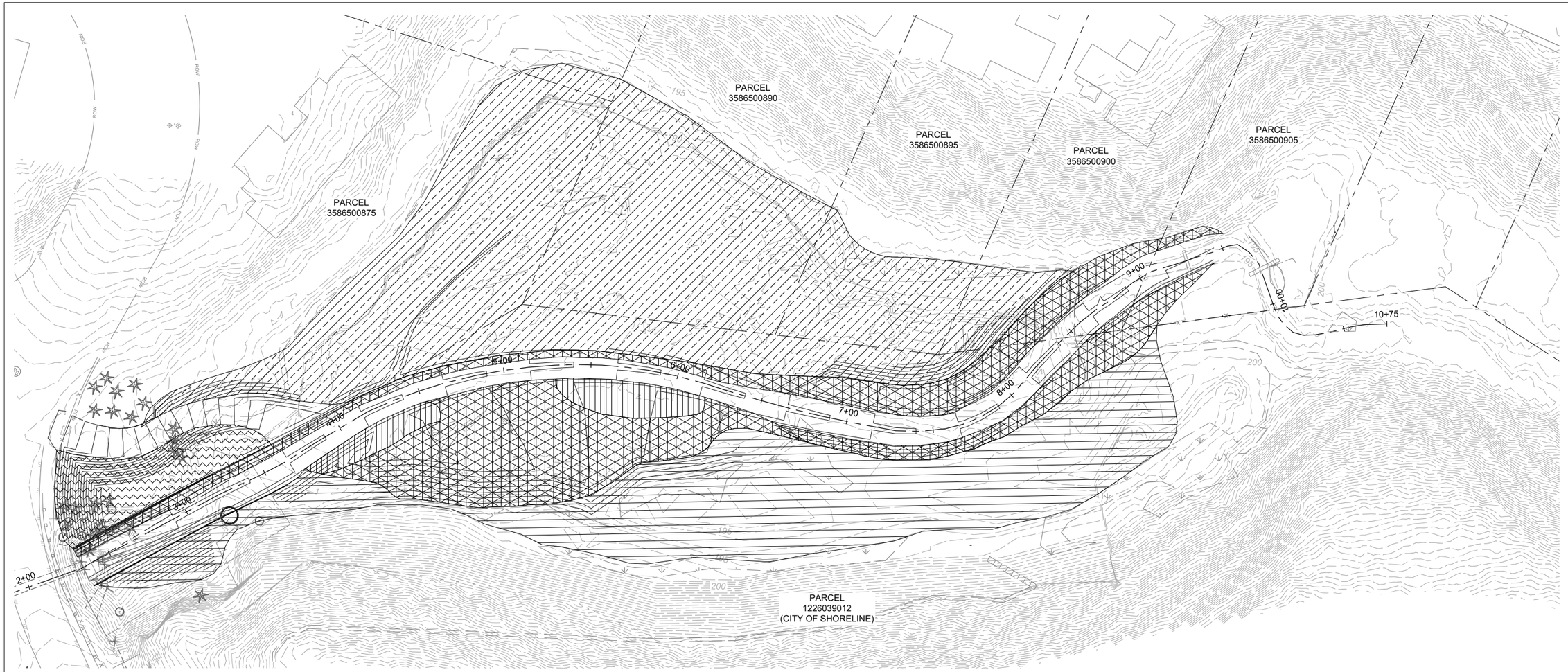

Hidden Lake Plant Lists

Latin Name	Common Name	Zone: Emergent Wetland	Scrub Shrub Wetland	Riparian Forest	Upland Forest
Trees					
Acer macrophyllum	Bigleaf maple			X	X
Alnus rubra	Red alder		X		
Fraxinus latifolia	Oregon ash			X	
Pseudotsuga menziesii	Douglas fir				X
Thuja plicata	Western redcedar			X	
Small Trees and Shrubs					
Acer circinatum	Vine maple			X	
Cornus sericea	Redtwig dogwood		X		
Mahonia aquifolium	Tall Oregon grape				X
Oemleria cerasiformis	Indian plum			X	X
Physocarpus capitatus	Pacific ninebark		X		
Rosa gymnocarpa	Baldhip rose			X	
Rubus parviflorus	Thimbleberry				X
Rubus spectabilis	Salmonberry		X	X	
Salix lucida var. lasiandra	Pacific willow		X		
Salix sitchensis	Sitka willow		X		
Spiraea douglasii	Douglas'spiraea		X		
Groundcovers					
Carex stipata	Sawbeak sedge	X	X		
Carex obnupta	Slough sedge	X	X		
Deschampsia cespitosa	Tufted hair grass	X		X	X
Juncus articus littoralis / J. balticus	Baltic rush	X			
Juncus patens	Spreading rush	X	X		
Mahonia nervosa	Dull Oregon grape			X	X
Polystichum munitum	Western swordfern			X	X
Scirpus microcarpus	Small-fruited bulrush	X			

PLANTING ZONES

- EMERGENT WETLAND
- SCRUB SHRUB WETLAND
- RIPARIAN FOREST
- UPLAND FOREST
- EROSION CONTROL SEEDING

30 0 30 60
1"=30'

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JAN D. MOSTERT — STATE OF WASHINGTON — 36069 — REGISTERED PROFESSIONAL ENGINEER

DRAFT

CITY OF SHORELINE

17500 Midvale Avenue North
Shoreline, WA 98133
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PLANTING PLAN

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