

STANDARD ABBREVIATIONS Gal GPM Galv GIP GSP GM G Reg Gas V Gr Gnd GP Adja Adja Ada Alepph Adeb Ada Assessing As HH HPG HPS Hortz HB HC Hee Hyd **86に日かり 86に日かり 86のまたののである。 860に日かり 870に日かり 870に日かり** Dept Dia DB DGV DCV Dwy DIP Television Handhol Temporary Temporary Testhole Top Face Traffic Cable Traffic Conduit Traffic Handhole Traffic Signal Box Traffic Signal Pole Transmission Pole Typical POPPER SEPTEMBER OF PROPERTY O

Lowman Beach Park Shoreline Restoration

Parks Specification # 0000 PW # 0000-000 Project # PRK732303-08

Funding Source: Seattle Parks District/Other Funding Source

Owner:

City of Seattle Department of Finance & Administrative Services, City Purchasing & Contracting Services

Administering Department:

City of Seattle Department of Parks and Recreation, Planning & Development Division 800 Maynard Avenue South, Third Floor, Seattle, WA 98134 Project Manager: David Graves 206-6847408

Project Design Team:

Environmental Science Associates (Prime), Reid Middleton (Structural).

Primary Contact: Pablo Quiroga 415-262-2305

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LOWMAN BEACH PARK

LOWMAN BEACH PARK SHORELINE RESTORATION

TITLE SHEET

DESIGNED	PDQ	DATE 04/16/2019
DRAWN	HKS	
CHECKED	BTB	SHEET _1_ OF _25_
RDINANCE		G1
ECIFICATION	1 HOX	_
SCALE _	AS NOTED]

- 2. ANY DISCREPANCY BETWEEN PERMITS AND DESIGN DRAWINGS SHALL BE IMMEDIATELY REPORTED TO OWNER FOR RESOLUTION PRIOR TO AFFECTED WORK BEING PERFORMED. CONTRACTOR SHALL REVIEW DESIGN DRAWINGS PRIOR TO MOBILIZATION AND SHALL ALLOW ENOUGH TIME FOR ANY IDENTIFIED POTENTIAL PERMIT ISSUES TO BE RESOLVED WITHOUT IMPACTING CONSTRUCTION SCHEDULE.
- 3. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXISTING FACILITIES. RESIDENTIAL STRUCTURES, INFRASTRUCTURE, IMPROVEMENTS, AND VEGETATION NOT PLANNED FOR DEMOLITION OR REMOVAL, AND SHALL REPLACE IN-KIND ANY DAMAGED FACILITIES OR VEGETATION AT ITS OWN EXPENSE AND TO THE OWNER'S SATISFACTION
- PRIOR TO ANY GROUND DISTURBANCE, CONTRACTOR SHALL LOCATE ALL UNDERGROUND AND OVERHEAD UTILITIES IN ACCORDANCE WITH SPECIFICATIONS AND STATE LAW. UPON LEARNING OF THE EXISTENCE AND/OR LOCATIONS OF ANY UNDERGROUND UTILITIES NOT SHOWN OR SHOWN INACCURATELY ON THE PLANS OR NOT PROPERLY MARKED BY THE UTILITY OWNER. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY OWNER. AND THE CITY OF SEATILE BY
- PROJECT SITE IS GENERALLY LOCATED NEAR THE MARINE ENVIRONMENT, AND PORTIONS OF THE SITE ARE IN THE INTERTIDAL ZONE. TIDAL ACCESSES RESTRICTIONS WILL APPLY DURING CONSTRUCTION, WHICH MAY LIMIT THE CONTRACTOR'S ACCESS TO CERTAIN AREAS DURING A TYPICAL WORKDAY CONTRACTOR SHALL FAMILIARIZE ITSELF WITH ALL APPLICABLE PERMIT RESTRICTIONS PRIOR TO MOBILIZING
- CONDITIONS ARE DYNAMIC, AND WORK AREAS ARE SUBJECT TO THE ACTION OF THE FLUCTUATING TIDES, WAVES, BOAT WAKES, AND CURRENTS. CONTRACTOR SHALL BE FAMILIAR WITH MARINE CONDITIONS AND IMPLEMENT CONSTRUCTION TECHNIQUES APPROPRIATE TO CONDUCT AND PROTECT WORK AS REQUIRED.
- 7. CONTRACTOR SHALL HAVE COPIES OF THE APPROVED PLANS, SPECIFICATIONS, AND PERMITS ON SITE AND READILY AVAILABLE AT ALL TIMES.

8 PRO JECT COORDINATE SYSTEM:

HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (NAD83) WASHINGTON STATE PLANE NORTH, US SURVEY FEET. VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). US SURVEY FEET. SUBTRACT 2.34FT FROM NAVD88 CONVERT TO MILW

- 9. AN EXISTING CONDITIONS GRADE SURFACE WAS DEVELOPED USING THE SURVEY CONDUCTED BY PARKS IN JANUARY 2017 AND ESA SURVEY POINTS FROM JANUARY 2019.
- 10. SPOT ELEVATIONS WITHIN THE SITE ARE BASED ON GROUND SURVEY CONDUCTED BY PARKS IN JANUARY 2017. ADDITIONAL BEACH PROFILE DATA WAS COLLECTED BY ESA IN JANUARY 2019.
- 11. AERIAL PHOTOGRAPHY PROVIDED BY ESA, 2018: HIGH-RESOLUTION IMAGERY FROM DRONE FOR LOWMAN BEACH PARK PROJECT.
- 12. ALL EXISTING UTILITY LOCATIONS AND DESCRIPTION SHOWN ON DRAWINGS REPRESENT CONDITIONS ENCOUNTERED AT TIME OF SURVEY (PARKS, JANUARY 2017, ESA, JANUARY 2019). SITE CONDITIONS ARE DYNAMIC AND SUBJECT TO CHANGE. CONTRACTOR SHALL CONDUCT SURVEY PRIOR TO CONSTRUCTION TO VERIFY SITE CONDITIONS CONTRACTOR SHALL PROMPTLY NOTIFY THE PROJECT OWNER OF POTENTIAL CONFLICTS

ACCESS, STAGING AND ENVIRONMENTAL PROTECTION

- 13. ACCESS TO THE SITE IS ON PUBLIC ROADS, COORDINATE WITH THE CITY OF SEATTLE FOR APPROVED HAUL ROUTES AND TRAFFIC PERMITS AND APPROVALS.
- CONTRACTOR SHALL COORDINATE WITH THE CITY OF SEATTLE PRIOR TO MOBILIZING EQUIPMENT. CONTRACTOR SHALL NOT BLOCK ACCESS TO ADJACENT PROPERTIES OR TRAFFIC. CONTRACTOR SHALL SUBMIT AND RECEIVE APPROVAL OF TRAFFIC CONTROL PLAN PRIOR TO START OF CONSTRUCTION.
- 15. CONTRACTOR SHALL CONFINE CONSTRUCTION OPERATION TO WITHIN PERMANENT EASEMENTS, TEMPORARY CONSTRUCTION EASEMENTS, OR PUBLIC
- RIGHT-OF-WAY ONLY
- 16. ELIMINATE OR MINIMIZE NON-STORM DISCHARGE FROM THE CONSTRUCTION SITE TO PUGET SOUND AND ALL OTHER WATER BODIES INCLUDING GROUNDWATER. 17. ALL MATERIALS THAT COULD CAUSE WATER POLLUTION (I.E., MOTOR OIL, FUELS, PAINTS, ETC.) SHALL BE STORED IN A CLOSED CONTAINER AND USED IN A MANNER THAT WILL NOT CAUSE POLLUTION. ALL DISCARDED MATERIAL AND ANY ACCIDENTAL SPILLS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT
- AN APPROVED DISPOSAL SITE. 18. TREAT AND DISPOSE OF REMOVED WATER IN COMPLIANCE WITH ALL PERMITS. AT A MINIMUM, TREAT ALL REMOVED WATER AS NEEDED TO REMOVE SUSPENDED SEDIMENT PRIOR TO ANY DISCHARGE OFFSITE

DEMOLITION NOTES

- 19. THE CONTRACTOR SHALL VERIFY ALL LEVELS, DIMENSIONS, AND EXISTING CONDITIONS IN THE FIELD PRIOR TO PLACING A BID. THE CONTRACTOR SHALL NOTIFY THE OWNER OF ANY DISCREPANCIES OR FIELD CHANGES PRIOR TO PLACING THEIR BID.
- 20. BEFORE PROCEEDING WITH ANY DEMOLITION WORK. THE CONTRACTOR SHALL SUBMIT A DETAILED WORK PLAN TO THE OWNER'S REPRESENTATIVE. FOR REVIEW AND APPROVAL, AS REQUIRED IN THE SPECIFICATIONS, INCLUDING THE SEQUENCING, TIMING, EQUIPMENT, MEANS AND METHODS, AND LOGISTICS OF OPERATIONS
- 21. ONSITE CONDITIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR DOCUMENTING THE PRE-CONSTRUCTION STATE
- 22. THE EXISTING SEAWALL AND SURROUNDINGS ARE IN A DETERIORATED CONDITION. CONTRACTOR SHALL DETERMINE ANY SAFE LOADING CONDITION RESTRICTIONS APPLICABLE TO DEMOLITION ACTIVITIES BEFORE ALLOWING ANY EQUIPMENT TO BE NEAR THE SEAWALL
- 23. CONTRACTOR IS REQUIRED TO PROTECT EXISTING NEARBY STRUCTURES FROM DAMAGE DURING DEMOLITION. ALL STRUCTURES TO REMAIN SHALL BE RESTORED TO PRE-PROJECT CONDITIONS UPON COMPLETION OF THE WORK TO THE SATISFACTION OF THE OWNER.
- 24. THE DEPTH OF THE EXISTING ADJACENT RETAINING WALL TO REMAIN IS UNKNOWN. TEMPORARY SHORING MAY BE REQUIRED TO PROVIDE BOTH VERTICAL AND LATERAL SUPPORT FOR THE EXISTING RETAINING WALL DURING CONSTRUCTION OF THE SEAWALL AND NEW RETAINING WALL. THE COST OF THIS TEMPORARY SHORING SHALL BE INCLUDED IN THE CONTRACTORS BID.
- 25. DEMOLITION MATERIALS SHALL BE RECYCLED AT A PERMITTED FACILITY OR DISPOSED OF IN A PERMITTED LANDFILL IN ACCORDANCE WITH THE SPECIFICATIONS.

- 26. INSTALL A TEMPORARY STABILIZED CONSTRUCTION ENTRANCE TO REMOVE SOIL FROM VEHICLES EXITING THE SITE. PREVENT TRACKING OF SEDIMENT ONTO PUBLIC ROADS, AND SWEEP STREET USED FOR VEHICLE ACCESS TO ENSURE ROADS REMAIN CLEAN
- 27. CONDUCT GRADING OPERATIONS IN A MANNER THAT CONTROLS WIND BLOWN DIRT AND DUST AND PROTECT NEIGHBORING PROPERTIES. AT MINIMUM PERFORM WATERING AS NEEDED TO PREVENT VISIBLE DUST FROM LEAVING THE JOB SITE.
- 28. FOLLOWING GRADING, ALL DISTURBED AREAS SHALL BE SEEDED AND STABILIZED AS SHOW ON THE EROSION CONTROL PLANS.
- 29. APPLY AND MIX SOIL AMENDMENTS AS SPECIFIED BY SPECS
- 30. ADDITIONAL NOTES ON ESC1 AND ESC2

CONSTRUCTION

- 31. THE PROJECT INVOLVES EXCAVATION, TRANSPORT, AND PLACEMENT OF MATERIAL WITHIN THE INTERTIDAL RANGE.
- 32. THE CONTRACTOR IS RESPONSIBLE FOR ALL WATER MANAGEMENT THROUGHOUT CONSTRUCTION, INCLUDING DEWATERING AND DRAINAGE.
- 33. PRIOR TO MOBILIZING MATERIAL AND EQUIPMENT AT THE SITE. CONTRACTOR SHALL SUBMIT A WORK AND ACCESS PLAN, FOR APPROVAL BY THE OWNER'S REPRESENTATIVE, CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH SITE CHARACTERISTICS, INTENT OF THE WORK, AND ALL APPLICABLE PERMIT CONDITIONS, CONTRACTOR SHALL DOCUMENT THEIR UNDERSTANDING THEREOF IN THE WORK AND ACCESS PLAN.

PLANTING

34. SEE NOTES ON SHEET L1.

PROJECT BENCHMARK

POINT TABLE				
NUMBER	DESCRIPTION	NORTHING	EASTING	ELEVATION
95	BRASS CAP	209,337.43	1,252,060.77	26.32
97	TACK/LEAD	200,839.77	1,254,103.75	13.31
112	MAG NAIL	200,815.72	1,254,279.25	17.38
118	TACK/LEAD	200,839.82	1,254,103.58	13.31
120	MAG NAIL	200,831.35	1,254,360.21	22.87
NOTES:				

PROJECT BENCHMARK PER SEATTLE PARKS, JANUARY, 2017 POINT NUMBER 95 IS NOT SHOWN ON PLANS, LOCATED NEAR INTERSECTION OF SW OREGON ST AND BEACH DRIVE SW.

TIDE DATUM TABLE

STATION 9447130. SEATTLE, WA. EPOCH 1983-2001				
DATUM		EL. NAVD 88, FT		
MEAN HIGHER HIGH WATER	MHHW	9.02		
MEAN HIGH WATER	MHW	8.15		
MEAN TIDE LEVEL	MTL	4.32		
MEAN SEA LEVEL	MSL	4.3		
MEAN LOW WATER	MLW	0.49		
NAVD 88	NAVD88	0.0		
MEAN LOWER LOW WATER	MLLW	-2.34		

NOTE: TIDAL WATER LEVELS ARE APPROXIMATE AND ARE PROVIDED FOR CONTRACTORS INCORMATION ONLY ACTUAL WATER LEVELS AT THE TIME OF CONSTRUCTION MAY FLUCTUATE ABOVE AND BELOW THE LEVELS IN THIS TABLE. REFER TO GENERAL NOTES

>>>CAUTION - CALL 811< UTILITY NOTIFICATION CENTER BEFORE YOU DIG!

WWW CALLS11 COM

o, verify all underground utilities not located by the 811 service by using a commercial location service and call SPR Inspection Request Line (206) 684-7034.

NO.	REVISION - AS BUILT	DATE
2		
3		

DATE



SEATTLE, WA 98107 OFFICE - 205,789,9658 WWW.ESASSOC.COM





LOWMAN BEACH PARK

LOWMAN BEACH PARK SHORELINE RESTORATION

GENERAL NOTES

DESIGNED P. OLÍROGA	DATE 04/29/2019
CHECKED B. BATTALIO	SHEET 2 OF 25
ORDINANCE NO. X	_ G2
SPECIFICATION NO. X	
de Post ionition Not 74	

CODES AND STANDARDS

ALL METHODS, CONSTRUCTION, AND MATERIALS SHALL CONFORM TO CITY OF SEATTLE BUILDING CODE AND INTERNATIONAL BUILDING CODE, 2015 EDITION, AS AMENDED AND ADOPTED BY THE CITY OF SEATTLE

ADDITIONAL REFERENCES

- 1. ACI 301-16 SPECIFICATIONS FOR STRUCTURAL CONCRETE
- 2. ACI 318-14. BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY.
- 3. AISC 360-10. SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS.
- 4. AISC 303-10. CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES
- 5. ASCE 7-10. MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES.
- 6. AWS D1.1 STRUCTURAL WELDING CODE STEEL

LOADS

DEAD LOAD

WEIGHT OF ALL MATERIALS OF CONSTRUCTION

SEISMIC

SITE CLASS = D

SEISMIC DESIGN CATEGORY = D

EFFECTIVE PEAK GROUND ACCELERATION $A_S = F_{pga}PGA = 0.66g$

DESIGN SPECTRAL ACCELERATION COEFFICIENT AT 0.2 SECOND PERIOD $\mathrm{S_{DS}}=\mathrm{F_8S_8}=1.044\mathrm{g}$

DESIGN SPECTRAL ACCELERATION COEFFICIENT AT 1.0 SECOND PERIOD Sn. = FvS.

LIVE LOAD

SURCHARGE = 250 PSF

SOIL PRESSURE

IN ADDITION TO THE DEAD AND LIVE LOADS, THE BULKHEADS HAVE BEEN DESIGNED FOR SOIL PRESSURES SPECIFIED IN THE GEOTECHNICAL REPORT.

GEOTECHNICAL

GEOTECHNICAL REPORT

ROBINSON & NOBLE: DRAFT - LOWMAN BEACH PARK SEAWALL PERMIT DESIGN DATED 7/26/2018

CITY OF SEATTLE PUBLIC UTILITIES LABORATORY: [ADD DATE & TITLE WHEN AVAILABLE]

PRECAST CONCRETE SEAWALL PANELS

ALL CONCRETE WORK SHALL COMPLY WITH THE RECOMMENDATIONS OF ACI 301 AND ACI 318, UNLESS OTHERWISE NOTED. THE CONCRETE MIX IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE PROPORTIONED TO MEET OR EXCEED THE FOLLOWING REQUIREMENTS, PERCENTAGES LISTED BELOW REPRESENT THE PERCENTAGES IN THE OFFICE TOTAL CEMENTITIONS MATERIATION.

- MINIMUM AGGREGATE SIZE = 1 % INCH
- 2. MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS = 6000 PSI.
- 3. MINIMUM FLYASH CONTENT (CLASS F) = 20% TO 30%
- 4. MAXIMUM SILICA FUME CONTENT = 10%
- 5. MAXIMUM FLY ASH, OTHER POZZOLANS, AND SILICA FUME CONTENT = 35%
- 6. MAXIMUM GRANULATED BLAST FURNACE SLAG + FLY ASH OR OTHER POZZOLANS = 50%
- 7. MAXIMUM WATER CEMENT RATIO = 0.4.
- 8. AIR ENTRAINMENT = 6%
- 9. HYCRETE X 1000 CORROSION INHIBITOR AT A RATE OF 2 CALLONS PER CUBIC YARD OF MIXED CONCRETE. CEMENTAID EVERDURE CALTATE MAY BE USED AS AN EQUIVALENT PRODUCT AT A RATE OF 6 GALLONS PER CUBIC YARD OF CONCRETE, PROVIDED THAT THE CONTRACTOR CAN PROVIDE A HISTORY OF SUCCESSIFUL USE AND IMPLEMENTS ADEQUATE MEASURES TO PROTECT CREWS FROM THE IMPACTS OF AMMONIA GAS DURING CASTING.
- MAXIMUM WATER-SOLUBLE CHLORIDE ION (C1-) CONTENT IN CONCRETE, EXPRESSED IN PERCENT BY WEIGHT OF CEMENT SHALL BE 0.06.

AIR ENTRAINING ADMIXTURES SHALL CONFORM TO ASTM C260.

CEMENT SHALL CONFORM TO ASTM C150, TYPE 2. THE CONTRACTOR SHALL USE NORMAL WEIGHT AGGREGATES CONFORMING TO ASTM C33. CALCIUM NITRITE CORROSION INHIBITOR IS NOT PERMITTED.

CONTRACTOR SHALL SUBMIT MIX DESIGN TO THE OWNER FOR REVIEW AND APPROVAL ALONG WITH STRENGTH-TEST RESULTS. CONTRACTOR IS RESPONSIBLE FOR HIRING AN INDEPENDENT LARGRATORY TO PERFORM COMPRESSIVE STRENGTH AND AIR FINTRAINMENT TESTING

ALL EXPOSED SURFACES SHALL HAVE A SMOOTH FINISH UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL NOT HAND-MIX CONCRETE.

LIFTING INSERTS, IF REQUIRED, SHALL BE CONTRACTOR-DESIGNED, AND SHALL BE LOCATED SUCH THAT THEY ARE NOT VISIBLE AFTER CONSTRUCTION. LIFTING INSERTS ON EXPOSED SURFACE SHALL BE CONCEALED WITH GROUT ONCE PRECAST ELEMENTS HAVE BEEN PLACED.

REINFORCING STEEL

ALL STEEL DEFORMED BARS SHALL BE AUSTENITIC-FERRITIC STAINLESS STEEL, UNS DESIGNATION \$32205 (60 KSI YIELD)

BAR CHAIRS AND WIRE TIES SHALL MEET THE REQUIREMENTS DESCRIBED IN THE SPECIFICATIONS STANDARD CARRON TIES CANNOT RE LISED.

POST INSTALLED SCREW-TYPE ANCHORS

SCREW ANCHORS SHALL BE 316 STANLESS STEEL. ANCHORS SHALL BE SIMPSON TITEN TO (SER-2713). PRIOR TO INSTALLING ANCHORS, HOLDS SHALL BE THOROUGHLY CLEANED WITH A WIRE BRUSH AND OIL-FREE COMPRESSED AIR. ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS INCLUDING SHALL BE INSTALLED IN ACCORDANCE WITH THE FOR DRILLING METHODS. HOLE SIZE, HOLE PREPARATION, AND PLACEMENT OF THE ANCHOR. HOLES REQUIREMENTS AND MANUFACTURERS INSTALLATION INSTRICTIONS OF AN INDEPENDENT TESTING AGENCY HRED BY THE CONTRACTOR. REPORTS ARE TO BE SUBMITTED TO THE ENGINEER FOR APPROVIAL.

SCREW ANCHORS SHALL BE SEPARATED FROM CARBON-STEEL COMPONENTS BY BLACK UHMW-PE ISOLATION WASHERS (MINIMUM & "THICK).

POST INSTALLED EPOXY ANCHORS

EPOXY ANCHORING SHALL BE ACCOMPLISHED WITH HILT RE 500-V3 EPOXY OR OWNER APPROVED EQUIVALENT. USED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS. HOUSE FOR EPOXY ANCHORS ANCHORS SHALL BE MADE USING A STEEL PLATE TEMPLATE. HOUSE SHALL BE EPOXY ANCHORS ANCHORS SHALL BE MADE USING A STEEL PLATE TEMPLATE. HOUSE SHALL BE EPOXY ENTER THE MANUFACTURERS RECOMMENDATIONS FOR CRACKED CONCRETE. PRIOR TO INSTALLING ANCHORS, HOLES SHALL BE THOROUGHLY CLEANED WITH A WIRE BRUSH AND OLE-TREE COMPRESSED AIR.

EPOXY ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOR DRILLING METHODS, HOLE SIZE, HOLE PREPARATION, EPOXY INSERTION, AND PLACEMENT OF THE ANCHOR.

HOLES FOR EPOXY ANCHORS SHALL BE INSPECTED AFTER FINAL CLEANING FOR CONFORMANCE WITH THE PROLECT REQUIREMENTS AND MANUFACTURERS INSTALLATION INSTRUCTIONS BY AN INDEPENDENT TESTING AGENCY HIRED BY THE CONTRACTOR, REPORTS ARE TO BE SUBMITTED TO THE EMBLINES EDGI REPORT.

THREADED ROD FOR EPOXY ANCHORS SHALL BE CLEANED AND DEGREASED PRIOR TO EPOXY ANCHOR INSTALLATION TO FULLY REMOVE GREASE AND OTHER DELETERIOUS SUBSTANCES THAT WOULD INTERFERE WITH BOND.

ANCHOR ROD PRODUCTS ARE SPECIFIED HEREIN.

BOLT TIGHTENING

BOLTS SHALL BE INSTALLED SNUG-TIGHT. POST-INSTALLED ANCHOR BOLTS SHALL BE TIGHTENED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS UNLESS OTHERWISE NOTED.

RED LINE DRAWINGS

CONTRACTOR IS TO ACTIVELY MAINTAIN A RED-LINE SET OF DRAWINGS SHOWING THE AS-CONSTRUCTED IMPROVEMENTS, AND SUBMIT THE RED-LINE SET OF DRAWINGS IN PDF FORMAT WHEN THE WORK IS COMPILET.

STEEL

MATERIALS:

 MEMBER TYPE
 ASTM SPECIFICATION

 PLATES
 ASTM A572 GR 50

 ANGLES, CHANNELS, AND BARS
 A36 (36 KSI YIELD STRESS)

MACHINE BOLTS A307 (UNO)

THREADED ROD ASTM F1554 GRADE 36 (36 KSI YIELD STRESS)
W-SHAPES ASTM A992 (50 KSI YIELD STRESS)

ALL STEEL TO BE WELDED SHALL HAVE A CARBON EQUIVALENT LESS THAN 0.45 AS CALCULATED BY THE METHODS DESCRIBED IN DETAIL IN AWS D1.1 ANNEX H.

CAMBER: STEEL MEMBERS SHALL BE PROVIDED WITHOUT CAMBER.

CHARPY TESTING: STEEL MATERIAL SHALL MEET CHARPY VAVOTCH REQUIREMENTS WELDING PROCEDURES FOR DEAMAD-CRITICAL WELDS. WELDS SHALL BE MADE WITH FILLER METAL PRODUCING WELDS WITH A MINIMUM CHARPY VANOTOH TOUGHNISS OF 20 FT-LIPE AT MINUS 20 DEGREES FAHRENHEIT AND 40 FT-LIPE AT 70 DEGREES FAHRENHEIT AS DETERMINED BY THE APPLICABLE AWA SC LIASSIFICATION TEST METHOD.

HARDWARE: ALL OVERSIZED OR SLOTTED HOLES SHALL HAVE WASHERS PROVIDED IN ACCORDANCE WITH AISC 500, UNLESS NOTED OTHERWISE. WASHERS ARE REQUIRED UNDER BOTH THE HEAD AND NUT OF ALL BOLTS UNLESS NOTED OTHERWISE. ALL HARDWARE TO BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM AIST. ALL BOLTS SHALL BE SCUENED WITH HOW OUTS EACH, UNLESS AS OTHERWISE NOTED. MARINE GRADE NON-METALLIC ANTI-SIZE AND ANTI-CORROSION COMPOUND. ANAIVACTORISE OF ANTI-SIZE THE CHOICE OF AN OPPOSED EDUNCATE, SHALL BE AFFICED TO ALL COMPOUND FOR A PROVIDED TO ALL DEVINED TO ALL DEVINED OF A COMPOUND SHALL BE WIFED OFF. CONTRACTOR IS TO SUBMIT ANTI-SIZE AND ANTI-CORROSION COMPOUND.

WELDING: ALL WELDING ACTIVITIES AND COMPLETED WELDS SHALL COMPLY WITH AWS DI.1. WELDS SHALL BE MADE USING LOW HOPEONE ELECTRODES WITH MINIMUM TRISILE STRENGTH OF 70 KSI. SHALL BE HADE USING LOW HOPEONE WELD STRENGTH AND INTERPASS TEMPERATURES FOR ALL STEEL MATERIALS SHALL BE DETERMINED BY THE ROBINGER! HIN ACCORDANCE WITH AND DI.1. AWARE DESCE DO MANUFACTURES—PROVIDED INFORMATION OF THE PROPERTY OF THE PROPERTY

ALL WELDING CONSUMABLES SHALL BE USED IN FULL COMPLIANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS OTHERWISE JUSTIFIED BY WELD PROCEDURE QUALIFICATION TESTING.

ALL FIELD WELDS SHALL BE PERFORMED USING SELF-SHIELDING FCAW ELECTRODES. GAS-SHIELDED FCAW ELECTRODES SHALL NOT BE USED FOR FIELD WELDS.

WELDING THROUGH PAINT OR GALVANIZING SHALL NOT BE PERFORMED. PAINT OR GALVANIZING WITHIN ½" OF AN AREA TO BE WELDED SHALL BE REMOVED PRIOR TO WELDING AND REPAIRED IN ACCORDANCE WITH THESE NOTES.

WELDS SHOWN ON DRAWINGS ARE FOR FINAL CONNECTIONS, UNLESS FIELD WELD SYMBOLS ARE SHOWN, CONTRACTOR SHALL BE RESPONSIBLE FOR ALL JOINT PREPARATIONS, AND WELDING PROCEDURES, INCLUDING ROOT OPENINGS AND FACE DIMENSIONS, GROOVE ANGLES, BACKING BARS, COPES, TAPERS, AND SUFFACE ROUGHNESS.

WELDER CERTIFICATION: ALL WELDERS SHALL BE CERTIFIED IN ACCORDANCE WITH AWS D1.1 OR WARD TO PERFORM THEIR WORK

STEEL PILE INSTALLATION PILES ARE TO BE INSTALLED USING AN AUGER-CAST METHOD. A STEEL TEMPORARY OFFILL CASING SHALL BE PROVIDED AS SHOWN ON THE DRAWINGS TO PREVENT GROUT FROM ENTERING WATERS OF THE STATE. IT IS ANTICIPATED THAT INSTALLATION OF THE STEEL TEMPORARY DELL CASING WILL REQUIRE USE OF A VIREATORY HAMMER. PILES INSTALLATION SHALL BE STAGGERED IN ACCORDANCE WITH THE RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL REPORT. THE CONTRACTOR SHOWN IN SHOWN IN THE DRAWINGS WITHIN THE SPECIFIED TO ELRANGES, NOTE THAT SHALL DIS A THE LOCATION SHOWN IN THE DRAWINGS WITHIN THE SPECIFIED TO ELRANGES, NOTE THAT SHALL DIS A THE DRAWINGS WITHIN THE SPECIFIED TO ELRANGES, NOTE THAT SHALL DIS A THE DRAWINGS WITHIN THE SPECIFIED TO ELRANGES, NOTE THAT SHALL DIS A THE MEDICAL PROVIDED THE SHALL DIS A SHALL DIS A

PILE INSTALLATION TOLERANCES: SEE SPECIFICATIONS.

GROUT FOR AUGER-CAST PILES: GROUT SHALL BE A CEMENTITIOUS STANDARD GROUT IN ACCORDANCE WITH THE SPECIFICATIONS.

DEBRIS REMOVAL TO FACILITATE PILE DRIVING: RECORD DRAWINGS OF THE EXISTING FACILITY SHOW THAT CONCRETE RUBBLE AND CONSTRUCTION DEBRIS WARE USED AS FILL IN THE AREA WHERE PILES ARE TO BE INSTALLED. THE CONTRACTOR SHALL INCLUDE IN THEIR BASE BD ANY EXCAVATION REQUIRED BETWEEN ELEVATION 46 AND THE TOP OF THE EXISTING GRADE AS REQUIRED TO FACILITATE PILE INSTALL ATION.

PILE INSTALLATION LOGS: THE CONTRACTOR SHALL SUBMIT PILE INSTALLATION LOGS TO THE ENGINEER. THE INSTALLATION LOGS SHALL BE APPROVED PRIOR TO pile CUTOFF.

PILE INSTALLATION NOTIFICATION: THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 3 DAYS IN ADVANCE OF THE COMMENCEMENT OF PILE INSTALLATION ACTIVITIES.

PILE SPLICING: PILES SHALL BE PROVIDED FULL-LENGTH WITH NO SPLICES.

COATINGS

GALVANIZING: ALL STEEL SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION UNLESS OTHERWISE NOTED.

REPAIR OF GALVANIZED COATING: REPAIR ALL GALVANIZED SURFACES REMOVED OR DAMAGED DURING WELDING, SHIPPING, OF ERECTION IN ACCORDANCE WITH ASTM A780. REPAIR MATERIAL SHALL BE ZINC-BASED ALLOY SOLDER (ZINC ROD).

PILE COATING. THE TOP 40 FEET OF THE WI4* PLINOS SHALL BE HOT DIP GALVANIZED. THE TOP 30 FEET OF THE WIX* PLINOS SHALL BE COATED WITH A DUPLEX PAIN TSYSTEM CONSISTING OF HOT-DIP-GALVANIZING FOLLOWED BY COATING WITH A MODIFIED EPOXY BARRIER COAT. GALVANIZED PILE SHALL BE PREPARED FOR FAMINISO IN ACCURATION OVER HOT DIP GALVANIZED STEEL BY LANGILL, THOMBOUNDED IN "PAINTING OVER HOT DIP GALVANIZED STEEL BY LANGILL, THOMBOUNDED HOW THAT THE GALVANIZED STEEL BY LANGILL, THOMBOUNDED HOW THAT THE GALVANIZED STEEL BY CANCELL AND THE GALVANIZED SUPPLIES. CANCE SHALL BE GALVANIZED SALL INCLUDE A 579 SWEEP BLAST OF THE GALVANIZED SUPPLIES. CANCE SHALL BE GALVANIZED SUPPLIES AND THE GALVANIZED SUPPLIES COATE SHALL BE GALVANIZED SUPPLIES AND THE GALVANIZED SUPPLIES TO BE SEWERED BY THE GALVANIZED SUPPLIES TO BE SEWERED BY THE STEEL OF THE STEEL STEEL OF THE ST

GALVANIZED PLES SHALL BE CONTED WITH I YOU COATS OF A SPRIY-APPLIED EPDYY PANT, EACH COAT WITH A DRY FRUM THICKNESS OF 8 TO 10 MILS. EPDXY PAINT PRODUCT SHALL BE INTERENCE 54 AS MANUFACTURED BY INTERNATIONAL PAINT COMPANY (COLOR GRAY FOR FIRST COAT, BLACK FOR SECOND COAT, NON-TIMTED) OR EQUIVALENT PRODUCT WITH LONG-PROVEN HISTORY OF SUCCESS WHEN USED WITH STANDARD APPLICATIONS IN THE SPLAYAL ZONE.

THE CONTRACTOR SHALL SUBMIT INDEPENDENT THIRD PARTY TEST REPORTS FOR 10% OF THE PILING LENGTH DISTRIBUTED EVEN. THROUGHOUT THE PILING PARTY THE PILING WERE PREPARED AND COATED IN ACCORDANCE WITH THESE SPECIFICATIONS INCLUDING PRESENCE OF GALVANIZING, SUBFACE PREPARATION, PAINT PRODUCT USED, AND SPECIFIED THICKNESS.

PILE COATING WILL NEED TO BE REMOVED IN AREAS TO FACILITATE FIELD WELDING, FOLLOWING FIELD WELDING, THE COATING SHALL BE REPAIRED BY THOROUGHLY CLARING THE AREA, AND APPLITING SPLASH ZONE PPOXY IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

MISCELLANEOUS MATERIALS

UHMW: ALL ULTRA HIGH MOLECULAR WEIGHT (UHMW) POLYETHYLENE SHALL BE TIVAR UV RESISTANT OR APPROVED EQUAL, AND BE SUITABLE FOR THE MARINE ENVIRONMENT. UHMW COMPONENTS SHALL BE BLACK IN COLOR, UNLESS OTHERWISE NOTED.

MARINE-GRADE ADHESIVE: MARINE GRADE ADHESIVE SHALL BE SPLASH-ZONE AS MANUFACTURED BY PETTIT PAINT.

GEOTEXTILE FABRIC: MIRAFI RS280I AS MANUFACTURED BY TENCATE GEOSYNTHETICS.

HEADED CONCRETE ANCHORS: HEADED CONCRETE ANCHORS SHALL BE NELSON H4L ANCHORS AS MANUFACTURED STANLEY.

>>>CAUTION - CALL 811<>>> UTILITY NOTIFICATION CENTER BEFORE YOU DIG!

Also, verify all underground utilities not located by the 811 service by using a commercial location service and call SPR inspection Request Line (208) 684-7034.

NOTES:

 THESE NOTES APPLY TO SHEETS C5, C6, C7, AND C8





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LOWMAN BEACH PARK

LOWMAN BEACH PARK SHORELINE RESTORATION

STRUCTURAL GENERAL NOTES

DESIGNED JUP	DATE 04/26/2019
DRAWN DJ0	2 05
CHECKED CMH	SHEET 3 OF 25
ORDINANCE NO	G3
SPECIFICATION NO.	×
SCALE AS NO	TED

STRUCTURAL STEEL SPECIAL INSPECTION

SPECIAL INSPECTION FOR STRUCTURAL STEEL SHALL BE ACCORDANCE WITH AISC 341, AISC 360, AND THE FOLLOWING INFORMATION.

TASK - INDICATES WHETHER TO OBSERVE OR PERFORM (OR BOTH) THE INSPECTION TASK.

- DOC THE INSPECTOR SHALL PREPARE REPORTS INDICATING THAT THE WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- O OBSERVE THESE FUNCTIONS ON A RANDOM, DAILY BASIS, OPERATIONS NEED NOT BE DELAYED PENDING INSPECTIONS. FREQUENCY OF OBSERVATIONS SHALL BE ADEQUATE TO CONFIRM THAT THE WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE APPLICABLE DOCUMENTS.
- P PERFORM, FOR EACH JOINT OR MEMBER PRIOR TO THE FINAL ACCEPTANCE OF THE ITEM.
- QC TASKS INDICATED AS "QC" SHALL BE EXECUTED BY THE FABRICATOR AND ERECTOR IN ACCORDANCE WITH AISC 360 CHAPTER N
- QA TASKS INDICATED AS "QA" SHALL BE EXECUTED BY THE SPECIAL INSPECTOR IN ACCORDANCE WITH AISC 360 CHAPTER N.

CONCRETE

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCED STANDARD (8)	IBC REFERENCE
1. REINFORCING BAR WELDING:				
a. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706	-	х		
b. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"	-	х	AWS D1.4 ACI 318: 26.6.4	-
c. INSPECT ALL OTHER WELDS	х	-		
2. INSPECT ANCHORS CAST IN CONCRETE	-	х	ACI 318: 17.8.2	-
3. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS ¹				
ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS	х	-	ACI 318: 17.8.2.4	-
b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4a	-	х	ACI 318: 17.8.2	-

 SPECIFIC REQUIREMENTS FOR SPECIAL INSPECTION SHALL BE INCLUDED IN THE RESEARCH REPORT FOR THE ANCHOR ISSUED BY AN APPROVED SOURCE IN ACCORDANCE WITH 17.8.2 IN ACI 318, OR OTHER OLGUIREDATION PROCEDURES.
 WHERE SPECIFIC REQUIREMENTS ARE NOT PROVIDED, SPECIAL INSPECTION REQUIREMENTS SHALL BE SPECIFIED BY THE REGISTERED DESIGN PROFESSIONAL AND SHALL BE APPROVED BY THE BUILDING OFFICIAL PRIOR TO THE COMMENCEMENT OF WORK.

BOLTING

INSPECTION TASKS PRIOR TO BOLTING			REFERENCED STANDARD	IBC REFERENCE	
INSPECTION TASKS PRIOR TO BOLTING	QC	QA			
MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	0	Р			
FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS	0	0			
PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE)	0	0	AISC 360 CH. N 1705.2.1		
PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL	0	0			
CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS	0	0			
PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED	Р	0			
PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS	0	0			
INSPECTION TASKS DURING BOLTING	•		REFERENCED STANDARD	IBC REFERENCE	
INSPECTION TASKS DURING BOLTING	QC	QA			
FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED	0	0			
JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION	0	0	AISC 360 CH. N 1705.2.1		
FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING	0	0			
FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES	0	0			
INSPECTION TASKS AFTER BOLTING			REFERENCED STANDARD	IBC REFERENCE	
INSPECTION TASKS AFTER BOLTING	QC	QA	AISC 360 CH N	1705 2 1	
DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	P	Р	AISC 360 CH, N	1705.2.1	

WELDING

INSPECTION TASKS PRIOR TO WELDING			REFERENCED STANDARD	REFERENCE
INSPECTION TASKS PRIOR TO WELDING	QC	QA		
WELDING PROCEDURE SPECIFICATIONS (WPS) AVAILABLE	P	Р		
MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	P	Р		
MATERIAL IDENTIFICATION (TYPE/GRADE)	0	0		
WELDER IDENTIFICATION SYSTEM 1	0	0		
FITLIP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY, JOINT PREPARATION, DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL), CLEANLINESS (CONDITION OF STEEL SUFFACES), TACKING (TACK WELD QUALITY AND LOCATION), BACKING TYPE AND FIT (IF APPLICABLE)	0	0	AISC 360 CH, N & AWS D1.1	1705.2.1
CONFIGURATION AND FINISH OF ACCESS HOLES	0	0		
FIT-UP OF FILLET WELDS, DIMENSIONS (ALIGNMENT, GAPS AT ROOT), CLEANLINESS (CONDITION OF STEEL SURFACES), TACKING (TACK WELD QUALITY AND LOCATION)	0	0		
CHECK WELDING EQUIPMENT	0	-		
INSPECTION TASKS DURING WELDING			REFERENCED STANDARD	IBC REFERENCI
INSPECTION TASKS DURING WELDING	QC	QA		
USE OF QUALIFIED WELDERS	0	0	AISC 360 CH. N & AWS D1.1	1705.2.1
CONTROL AND HANDLING OF WELDING CONSUMABLES, PACKAGING, EXPOSURE CONTROL	0	0		
NO WELDING OVER CRACKED TACK WELDS	0	0		
ENVIRONMENTAL CONDITIONS, WIND SPEED WITHIN LIMITS, PRECIPITATION AND TEMPERATURE	0	0		
WPS FOLLOWED, SETTINGS ON WELDING EQUIPMENT, TRAVEL SPEED, SELECTED WELL MATERIALS, SHIELDING GAS TYPE/FLOW RATE, PREHEAT APPLIED, INTERPASS TEMPERATURE MAINTAINED (MIN / MAX), PROPER POSITION (F, V, H, OH)	DINGO	0		
WELDING TECHNIQUES, INTERPASS AND FINAL CLEANING, EACH PASS WITHIN PROFILE LIMITATIONS, EACH PASS MEETS QUALITY REQUIREMENTS	0	0		
INSPECTION TASKS AFTER WELDING			REFERENCED STANDARD	IBC REFERENCI
INSPECTION TASKS AFTER WELDING	QC	QA		
WELDS CLEANED	0	0		
SIZE, LENGTH AND LOCATION OF WELDS	P	Р		
WELDS MEET VISUAL ACCEPTANCE CRITERIA, CRACK PROHIBITION, WELD / BASE-METAL FUSION, CRATER CROSS SECTION, WELD PROFILES, WELD SIZE, UNDERCUT, POROSITY	Р	Р	AISC 360 CH, N	
	P	Р	& AWS D1.1	1705.2.1
ARC STRIKES		Р	1	
ARC STRIKES K-AREA ²	P	1		
	P	P		
K-AREA ²	_	<u> </u>		

- THE FABRICATOR OR ERECTOR, AS APPLICABLE, SHALL MAINTAIN A SYSTEM BY WHICH A WELDER WHO HAS
 WELDED A JOINT OR MEMBER CAN BE IDENTIFIED. STAMPS, IF USED, SHALL BE THE LOW-STRESS TYPE.
- WHEN WELDING OF DOUBLER PLATES, CONTINUITY PLATES OR STIFFENERS HAS BEEN PERFORMED IN THE k-AREA, VISUALLY INSPECT THE WEB k-AREA FOR CRACKS WITHIN 3 INCHES OF THE WELD.

TESTS

CONCRETE

- 1 VERIFICATION OF SPECIFIED CONCRETE COMPRESSIVE STRENGTH, f., IN ACCORDANCE WITH ACI 318-14 SECTION 26 12
- VERIFICATION OF SPECIFIED AIR CONTENT, SLUMP, AND TEMPERATURE IN ACCORDANCE WITH ACI 318-14 SECTION 26.12
 AT TIMES FRESH CONCRETE IS SAMPLED.

PAYMENT

- 1. THE CONTRACTOR SHALL PAY FOR SPECIAL INSPECTION.
- CONTRACTOR SHALL COORDINATE TO ENSURE ALL CONTRACT REQUIRED INSPECTIONS ARE PERFORMED INCLUDING THOSE REQUIRED BY BUILDING DEPARTMENT PERMITS. ALL SPECIFIED INSPECTION AND TESTING SHALL BE PERFORMED BY CONTRACTOR AT NO ADDITIONAL COST.

COORDINATION/SUBMITTALS

- TESTING AND INSPECTION RESULTS SHALL BE SUBMITTED TO THE OWNER.
- CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL INSPECTION AND TESTING ACTIVITIES, AND SHALL SIBMIT COLLIFICATIONS OF THE TESTING LAS TO THE OWNER PRIOR TO ANY TESTINGHISPECTION BEING PERFORMED. A TESTING PLAN LISTING ALL INSPECTION WORK ITEMS SHALL BE SUBMITTED TO OWNER PRIOR TO PERFORMING ANY TESTINGHISPECTIONS.

ADDITIONAL REQUIREMENTS

IBC AND SBC REQUIREMENTS APPLY, INCLUDING SBC SECTION 1704. NOTE SPECIAL INSECTIONS AT A FABRICATOR ARE NOT REQUIRED IF A FABRICATOR IS PRE-QUALIFIED (SBC 1704.2.5.1)

>>>CAUTION - CALL 811<<<< UTILITY NOTIFICATION CENTER BEFORE YOU DIG! WWW.CALL811.COM

Also, verify all underground utilities not located by the 811 service by using a commercial location service and call SPR Inspection Request Line (208) 684-7034.

NOTES

1. THESE NOTES APPLY TO SHEETS C5, C6, C7, AND





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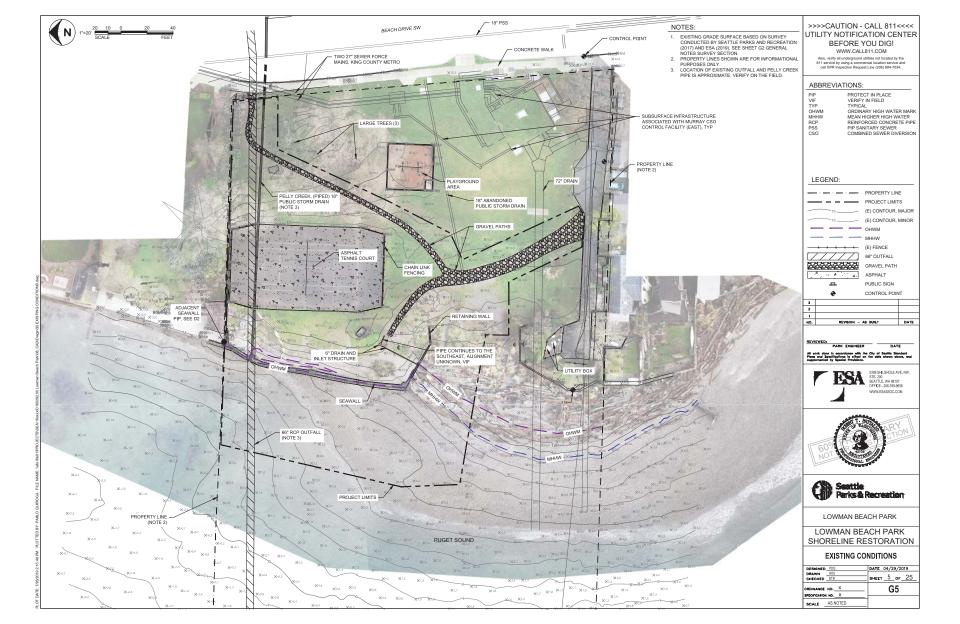


LOWMAN BEACH PARK

LOWMAN BEACH PARK SHORELINE RESTORATION

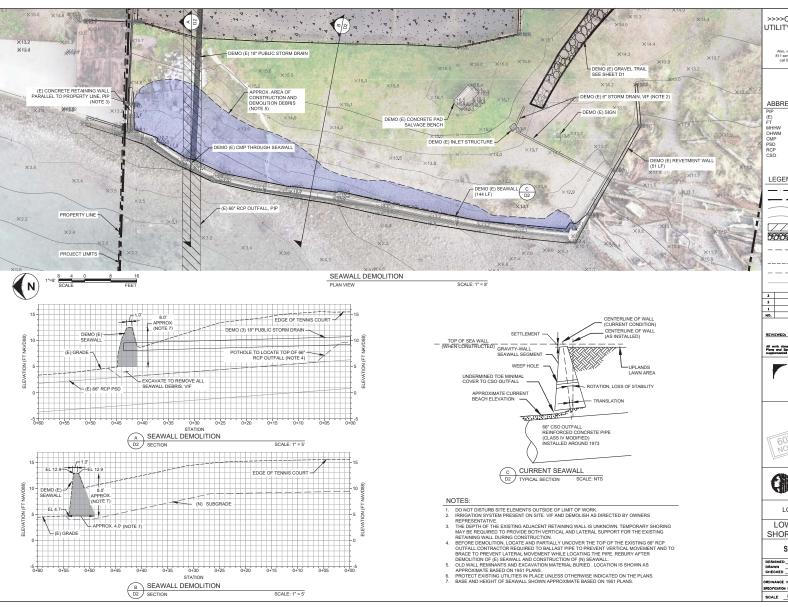
STRUCTURAL GENERAL NOTES

DESIGNED JUP	DATE 04/26/2019
DRAWN DJO	4 05
CHECKED CMH	SHEET <u>4</u> of <u>25</u>
RDINANCE NOX	_ G4
PECIFICATION NO. X	_ — —
AS NOTED	









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ABBREVIATIONS:

PROTECT IN PLACE EXISTING

MEAN HIGH OR HIGHWATER ORDINARY HIGH WATER MARK CORRUGATED METAL PIPE PUBLIC STORM DRAIN REINFORCED CONCRETE PIPE

LEGEND:

PROPERTY LINE PROJECT LIMITS

(E) CONTOUR, MAJOR (E) CONTOUR, MINOR 66" OUTFALL GRAVEL PATH (DEMO)

> OLD WALL & EXCAVATION (E) GRADE (SECTION)

COMBINED SEWER OVERFLOW

- - - SUBGRADE (SECTION (E) TOP OF PIPE



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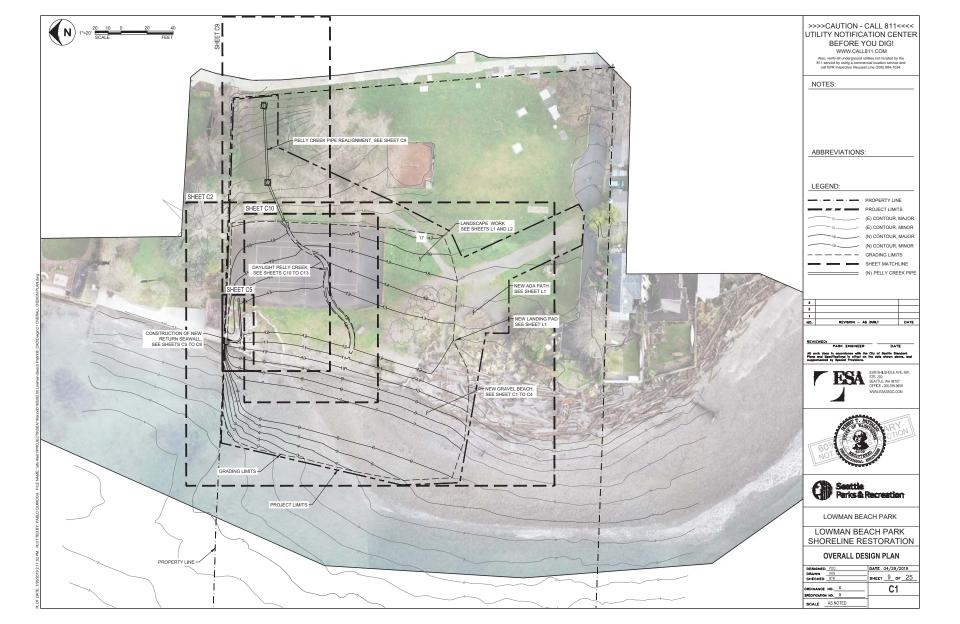


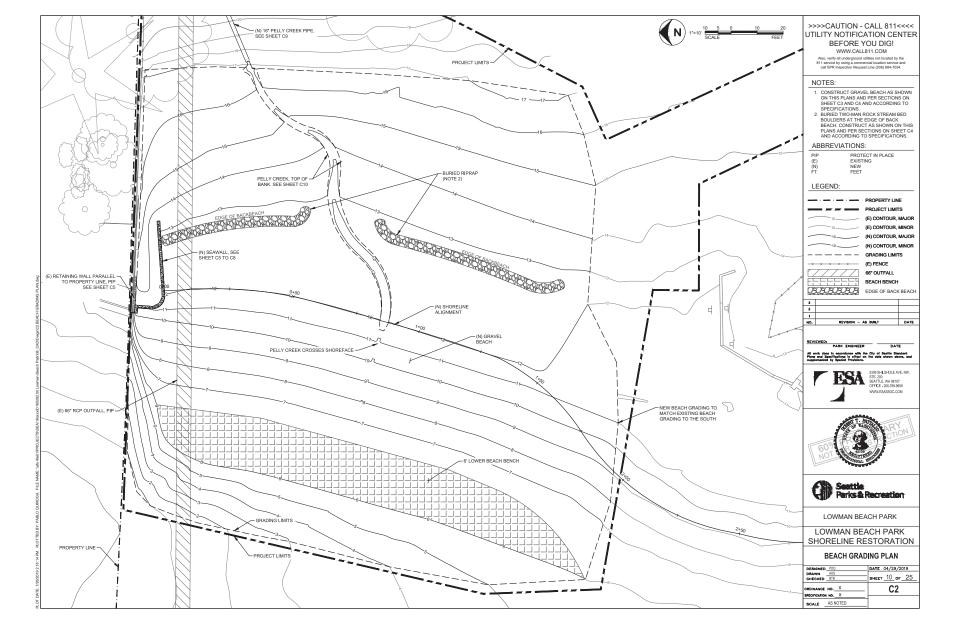
LOWMAN BEACH PARK

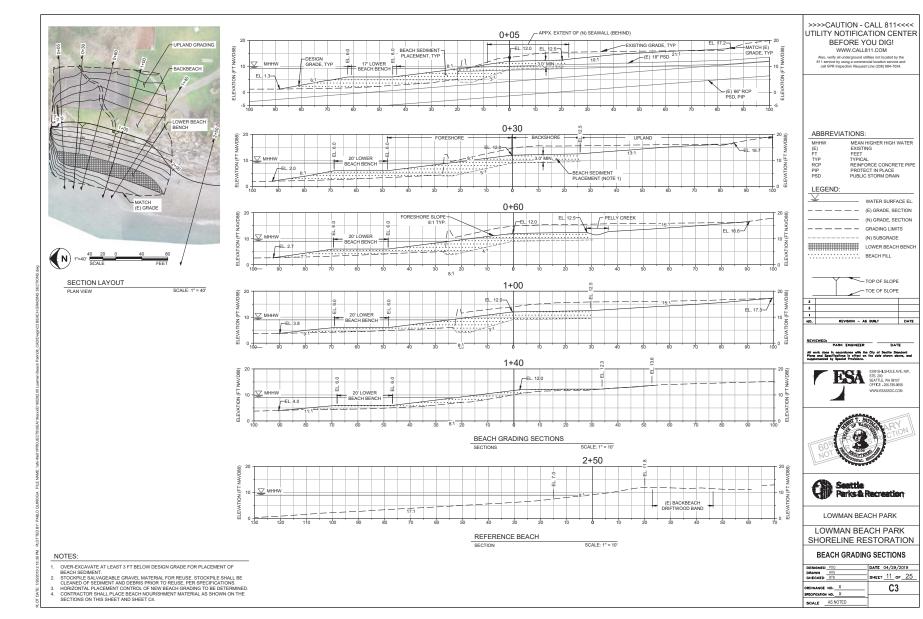
LOWMAN BEACH PARK SHORELINE RESTORATION

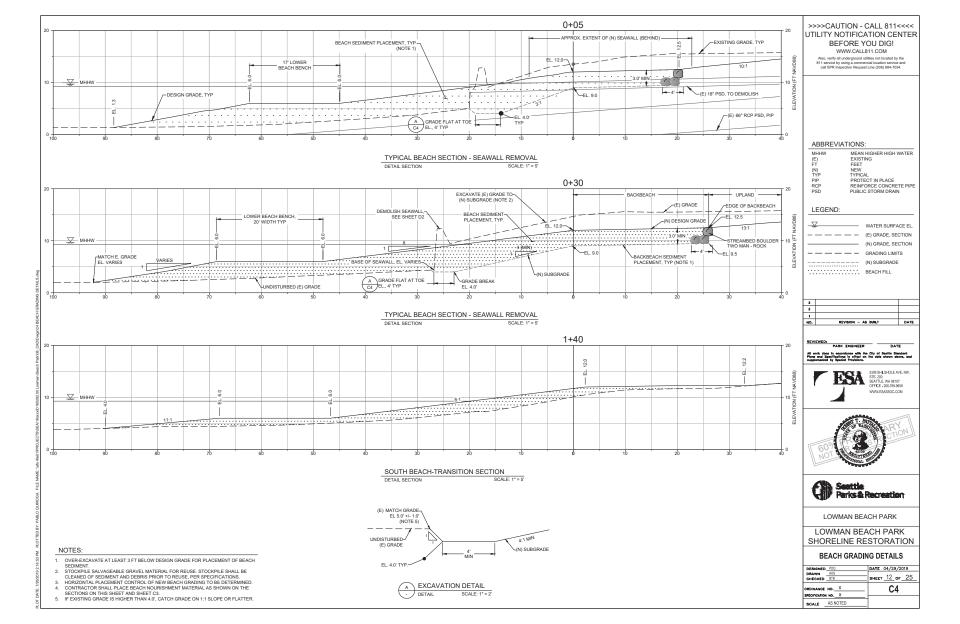
SEAWALL DEMOLITION

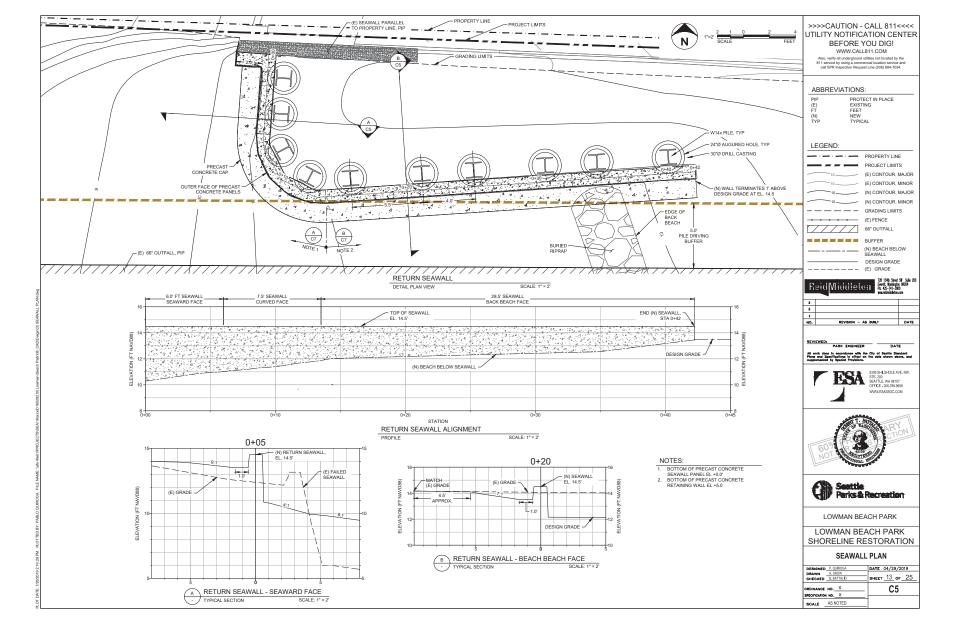
DESIGNED P. QUIROGA	DATE 04/29/2019
DRAWN H. SNOW CHECKED B. BATTALIO	sheet <u>8_of_25</u>
ORDINANCE NO. X	D2
SPECIFICATION NO. X	
SCALE AS NOTED	

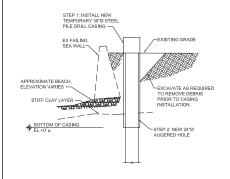


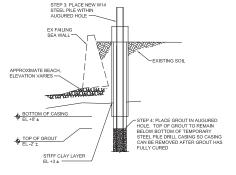


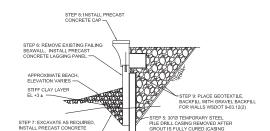












INSTALL PRECAST CONCRETE

BEACH FILL

LAGGING PANELS, BACKFILL WITH

ABBREVIATIONS: EXISTING NOT TO SCALE LEGEND:

>>>CAUTION - CALL 811< UTILITY NOTIFICATION CENTER BEFORE YOU DIG! WWW.CALL811.COM Also, verify all underground utilities not located by the 811 service by using a commercial location service and call SPR inspection Request Line (205) 684-7034.

NOTES:

1 VERTICAL DATUM - NAVD88

CASING, AUGURED HOLE C6 CROSS SECTION SCALE: NTS

PILE INSTALLATION C6 CROSS SECTION SCALE: NTS

PRECAST CONCRETE INSTALLATION C6 CROSS SECTION

ReidMiddleton 78 1346 Snet Str. Sale 20



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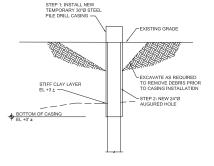


LOWMAN BEACH PARK

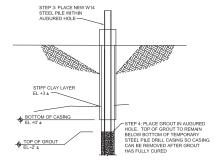
LOWMAN BEACH PARK SHORELINE RESTORATION

WALL CONSTRUCTION SEQUENCE

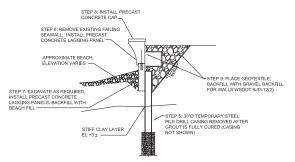
DESIGNED WP	DATE 04/26/2019
CHECKED DUD	SHEET 14 OF 25
ORDINANCE NO. X	C6
SPECIFICATION NO. X	



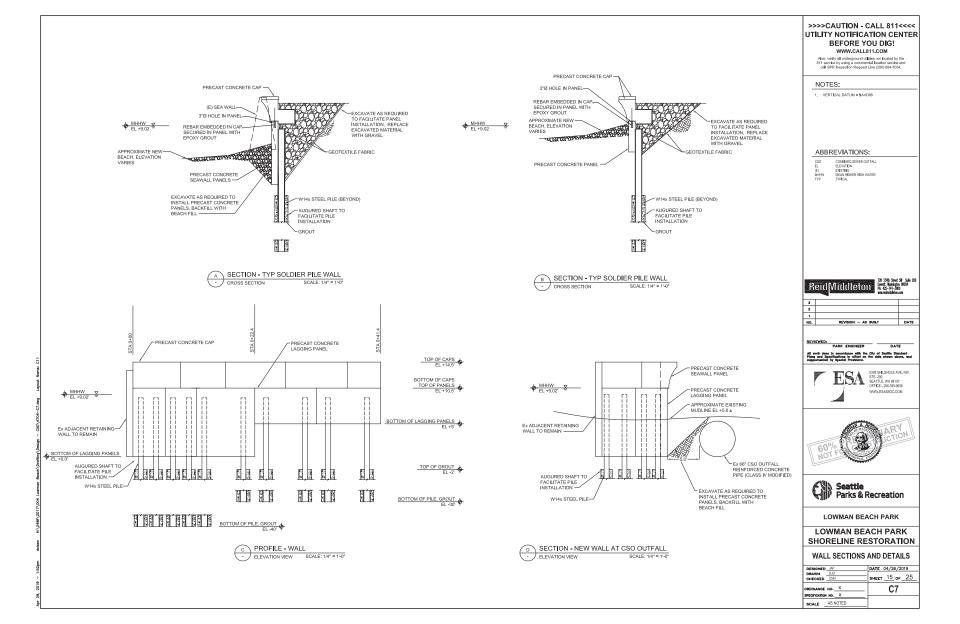


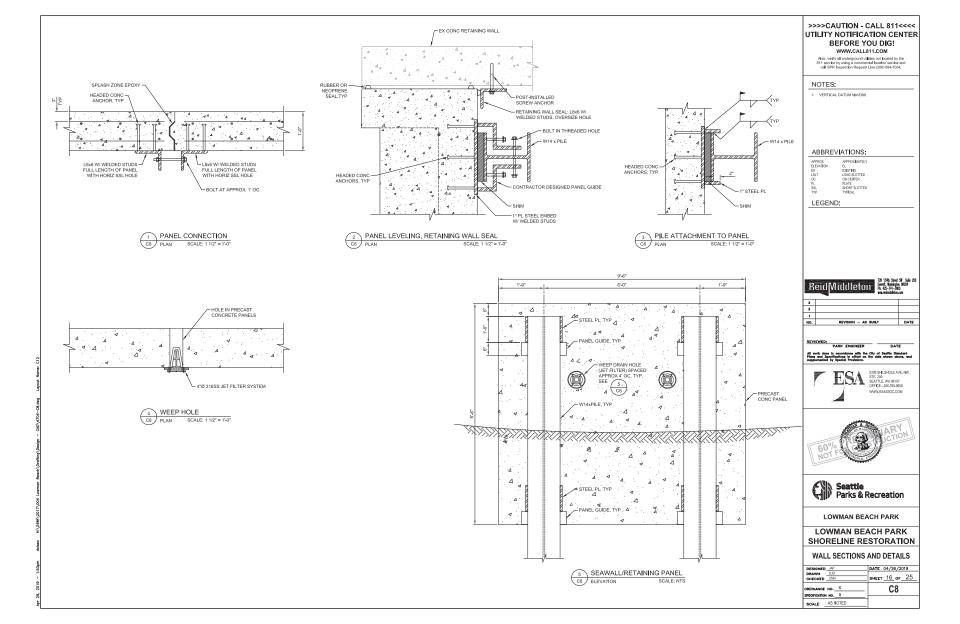


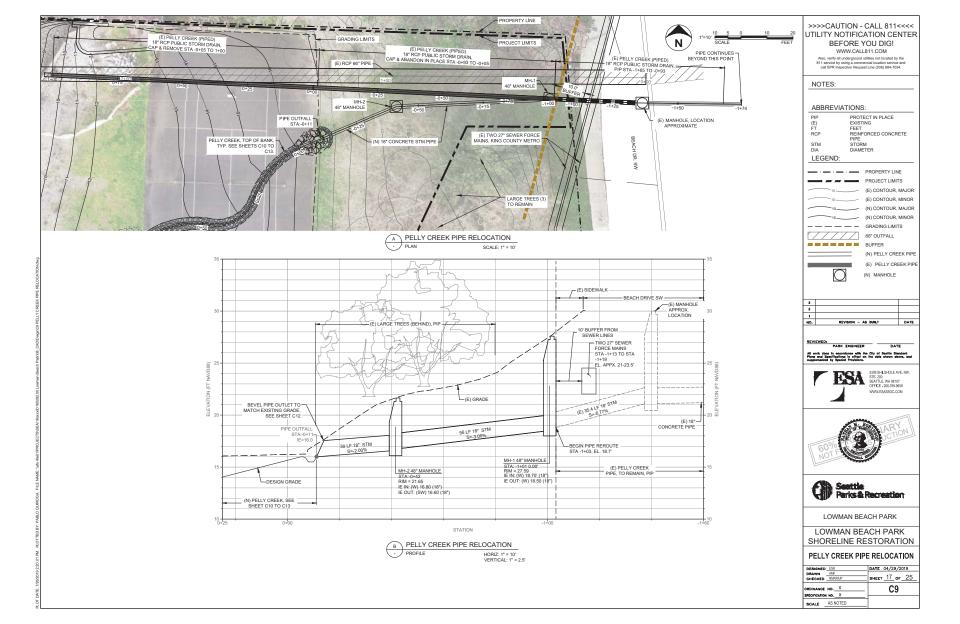
UPLAND: PILE INSTALLATION CROSS SECTION

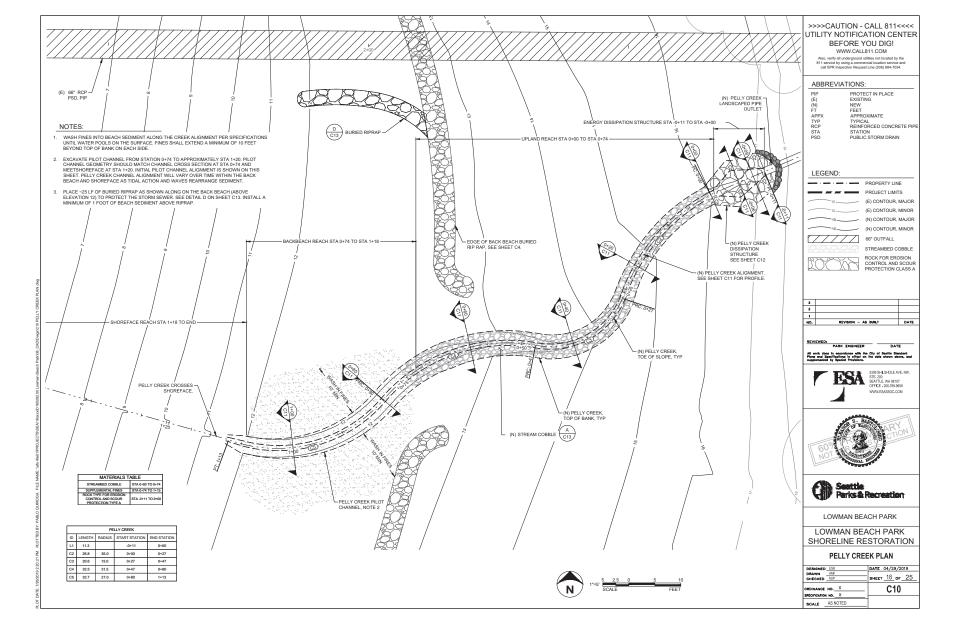


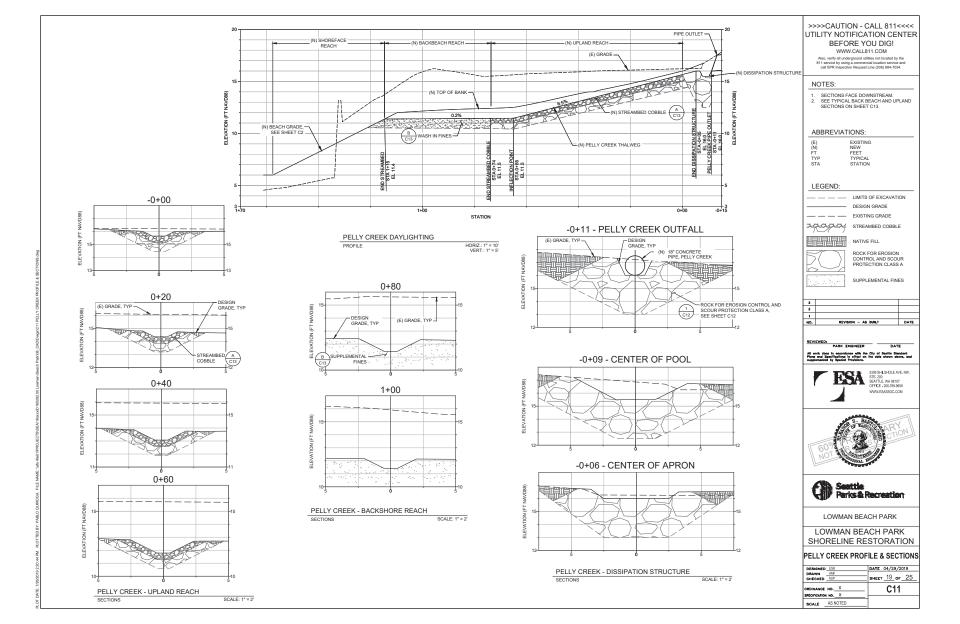
UPLAND: PRECAST CONCRETE INSTALLATION CROSS SECTION

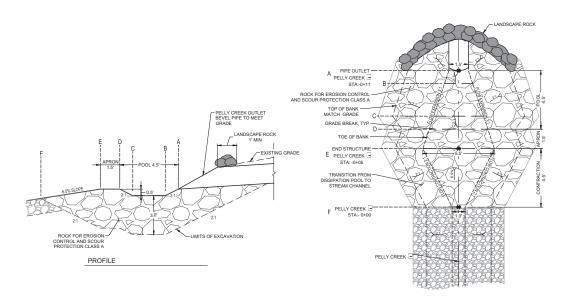




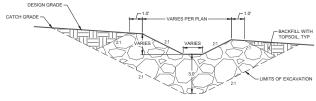








PLAN



TYPICAL SECTION



>>>CAUTION - CALL 811<>>> UTILITY NOTIFICATION CENTER BEFORE YOU DIG!

WWW.CALL811.COM

Also, verify all underground utilities not located by the 811 service by using a commercial location service and call SPR Inspection Request Line (206) 684-7034.

NOTES:

ABBREVIATIONS:

(E)	EXISTING
(N)	NEW
FT	FEET
MIN	MINIMUM
TYP	TYPICAL
STA	STATION

LEGEND:

	LIMITS OF EXCAVATION
	DESIGN GRADE
	EXISTING GRADE
l – – –	GRADE BREAK
	TOE OF SLOPE
	TOP OF BANK

3		
2		
1		
NO.	REVISION - AS BUILT	DATE

REVIEWED:		
PARK	ENGINEER	DATE
All work done in occor Plans and Sensitication	ndonce with the City	of Seattle Standard



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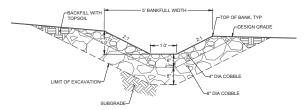
LOWMAN BEACH PARK

LOWMAN BEACH PARK SHORELINE RESTORATION

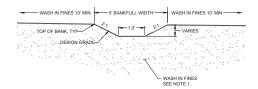
PELLY CREEK DISSIPATION STRUCTURE

DESIGNED_ES		DATE 04/29/2019	
DRAWN AVE			
CHECKED MP		SHEET <u>20</u> of <u>25</u>	
ORDINANCE NO.	x	C12	
SPECIFICATION NO.	x	U I E	

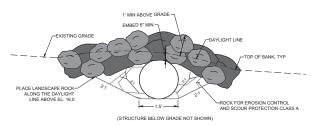
SCALE AS NOTED



A PELLY CREEK TYPICAL SECTION - UPLAND REACH
C10 DETAIL SCALE: 1**

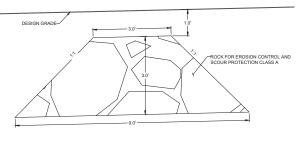


B PELLY CREEK TYPICAL SECTION - BACKSHORE REACH
DETAIL SCALF-1" = 1"



C LANDSCAPED PIPE OUTLET - FRONT VIEW

CTO DETAIL NTS



BURIED RIPAP SECTION
C10 DETAIL

SCALE: 1" = 1'

>>>CAUTION - CALL 811<>>> UTILITY NOTIFICATION CENTER

BEFORE YOU DIG!

Also, verify all underground utilities not located by the 811 service by using a commercial location service and call SPR Inspection Request Line (206) 684-7034.

NOTES:

 WASH FINES INTO BEACH SEDIMENT UNTIL WATER POOLS ON THE SURFACE.

ABBREVIATIONS:

(A)	EXISTING
(N)	NEW
DIA	DIAMETER
EL.	ELEVATION
FT	FEET
MIN	MINIMUM
TYP	TYPICAL
STA	STATION

LEGEND:

	LIMITS OF EXCAVATION
l ——	DESIGN GRADE
1	EXISTING GRADE

H	$\overline{}$	REVISION - AS BUILT	DATE
г			
2			
3			

REVIEWED:

PARK ENGINEER

All work done in occordance with the City of Sectile Standard
Plays and Separticultans in effect on the date shown above, and



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LOWMAN BEACH PARK

LOWMAN BEACH PARK SHORELINE RESTORATION

PELLY CREEK DETAILS

DESIGNED		DATE 04/29/2019
DRAWN	AME	04 05
CHECKED	MJP	SHEET <u>21</u> of <u>25</u>
ORDINANCE	wo X	C13
SPECIFICATION		_ 013



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Also, verify all underground utilities not located by the 811 service by using a commercial location service and call SPR Inspection Request Line (206) 684-7034.

LEGEND:

PROPERTY LINE PROJECT LIMITS (E) CONTOUR, MAJOR - (E) CONTOUR, MINOR (N) CONTOUR, MAJOR (N) CONTOUR, MINOR

— — — GRADING LIMITS -O-O-O-O ACCESS ROUTE

> COMPOST SOCK FILTER FENCE TREE AND VEGETATION PROTECTION

STABILIZED CONSTRUCTION ENTRANCE



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LOWMAN BEACH PARK

LOWMAN BEACH PARK SHORELINE RESTORATION

TESC PLAN

CHECKED	BTB	SHEET <u>22</u> of <u>25</u>
ORDINANCE	но. Х	ESC1
SPECIFICATION		Loci

PLAN

TREE PROTECTION FENCING AND SIGN

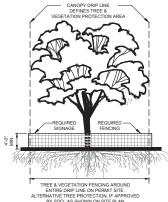
- 1. CHAIN LINK, WIRE MESH, OR SIMILAR OPEN RIGID MATERIAL (NO PLYWOOD)
- 2. MUST BE INSTALLED PRIOR TO DEMOLITION OR GROUND DISTURBANCE
- 3. KEPT IN PLACE FOR THE DURATION OF CONSTRUCTION
- 4. NO SOIL DISTURBANCE OR ACTIVITY ALLOWED WITHIN FENCED AREA: MATERIAL STORAGE/STOCKPILING, PARKING. EXCAVATION, DUMPING, OR WASHING
- 5. MODIFICATIONS OF THESE REQUIREMENTS BY APPROVAL OF SDCI PLANNER ONLY
- 6. IF ROOTS GREATER THAN 2 INCH FOUND OLITSIDE OF FENCING PROTECT BY HAND EXCAVATION AND, IF NECESSARY, CUT CLEANLY AND KEEP MOIST
- 7. USE 3 INCHES OR DEEPER WOOD CHIP MULCH OUTSIDE FENCED AREAS TO PROTECT FEEDER ROOTS

VEGETATION PROTECTION

- ORANGE MESH OR SIMILAR OPEN MATERIAL
- MINIMIZE CONSTRUCTION ZONE 3. PROTECT VEGETATION OUTSIDE
- CONSTRUCTION ZONE WITH FENCING AS SHOWN
- 4 LISE 3 INCHES OR DEEPER WOOD CHIP MULCH OUTSIDE FENCED AREAS TO PROTECT FEEDER ROOTS

SECTION(A)

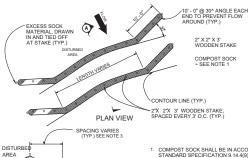
(SHOWN AS SLOPE PROTECTION)





NTS

1 TREE AND VEGETATION PROTECTION ESC1 DETAIL



- COMPOST SOCK SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATION 9.14.4(9). COMPOST SOCK SHALL BE A MINIMUM OF 10" IN DIAMETER OR SIZED TO SUIT CONDITIONS AS SPECIFIED BY
 - 2. ALWAYS INSTALL COMPOST SOCK PERPENDICULAR TO SLOPE AND ALONG CONTOUR LINES.
 - REMOVE SEDIMENT FROM THE UP SLOPE SIDE OF THE COMPOST SOCK WHEN ACCUMULATION HAS REACHED 1/2 OF THE EFFECTIVE HEIGHT OF THE

DITCH

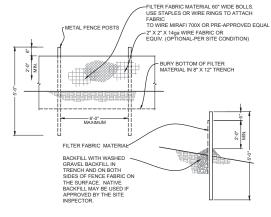
ESC1 DETAIL

4. MAY BE USED IN PLACE OF FILTER FENCE FOR PREMIER CONTROL.

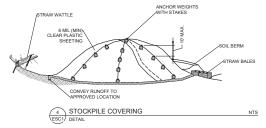


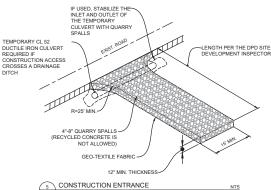
PROTECTED

AREA









NOTES:

GENERAL:

- 1. THIS PLANS ARE FOR GENERAL GUIDANCE ONLY. IT IS THE INTENT OF THESE PLANS AND SPECIFICATIONS TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DOES NOT LEAVE THE SITE. THE CONTRACTOR SHALL USE ALL AVAILABLE MEANS TO ACHIEVE THIS RESULT.
- 2. CONTRACTOR SHALL SUBMIT A CONSTRUCTION STORMWATER GENERAL PERMIT (CSWGP) TO THE DEPARTMENT OF ECOLOGY FOR APPROVAL PRIOR TO
- 3. THE IMPLEMENTATION OF THE ESC PLAN AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT AND UPGRADING OF THE ESC PLAN FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR LINTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED AND VEGETATION LANDSCAPING IS ESTABLISHED.

BEFORE CONSTRUCTION:

- 4. THE ESC PLAN FACILITIES SHOWN ON ESC1 AND THIS SHEET MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNERS AS TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE PUGET SOUND, DRAINAGE SYSTEM, ROADWAYS OR VIOLATE APPLICABLE WATER
- 5. STABILIZED CONSTRUCTION ENTRANCE SHALL BE INSTALLED (WHERE NECESSARY) AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES SLICH AS WHEEL WASHES OR HAND BRUSHING, MAY ALSO BE NECESSARY TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT

DURING CONSTRUCTION:

- THE ESC PLAN FACILITIES SHOWN ON THIS SHEET ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS DURING THE CONSTRUCTION PERIOD. THESE ESC PLAN FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DO NOT LEAVE THE
- 7. THE ESC PLAN FACILITIES SHALL BE INSPECTED BY THE CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTION
- 8. ANY STOCKPILED SOIL MUST BE SECURED AND PROTECTED THROUGHOUT THE PROJECT WITH SOIL STABILIZATION MEASURES INCLUDING SEDIMENT BARRIERS AND PLASTIC

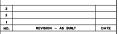
AFTER CONSTRUCTION:

9. CONTRACTOR SHALL REMOVE ALL ESC PLAN FACILITIES AFTER SITE IS STABILIZED AND UPON APPROVAL OF THE PRO JECT ENGINEER

>>>CAUTION - CALL 811< UTILITY NOTIFICATION CENTER BEFORE YOU DIG!

WWW CALLS11 COM

Also, verify all underground utilities not located by the 811 service by using a commercial location service and call SPR Inspection Request Line (206) 684-7034.





SEATTLE, WA 98107 OFFICE - 205,789,9658 WWW.ESASSOC.COM



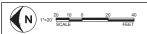


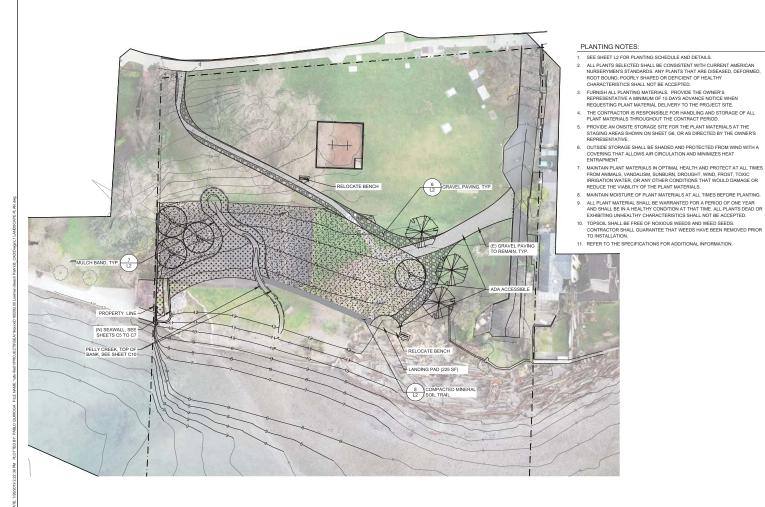
LOWMAN BEACH PARK

LOWMAN BEACH PARK SHORELINE RESTORATION

DETAILS

DESIGNED	200	DATE 04/29/2019
		DATE 04/29/2019
	HKS	
CHECKED	BTB	SHEET <u>23</u> of <u>25</u>
ORDINANCE	NO. X	FSC2
SPECIFICATION	но. Х	
	AS NOTED	





>>>>CAUTION - CALL 811<

WWW.CALL811.COM

Also, verify all underground utilities not located by the 811 service by using a commercial location service and call SPR Inspection Request Line (206) 684-7034.

LEGEND:

PROPERTY LINE
(E) CONTOUR, MAJOR
(E) CONTOUR, MINOR
(N) CONTOUR, MINOR
(N) CONTOUR, MINOR

(E) GRAVEL TRAIL

(N) GRAVEL TRAIL

COMPACTED MINERAL

SOIL TRAIL

BEACH REVEGETATION

LAWN

MULCH BAND

- MOLOTIDAND



PACIFIC MADRONE ARBUTUS MENZIESII



SHORE PINE PINUS CONTORTA V. CONTORTA

3 2 1 1 NO. REVISION - AS BUILT DATI

PARK ENGINEER DATE

All work does in eccordones with the City of Sectile Standard

Flore and Specifications in effect on the date shown obove, o



\$309 SHILSHOLE AVE. NW, STE 2010 SEATTLE, WA 98107 OFFICE - 208,799,9659 WWW.ESASSOC.COM



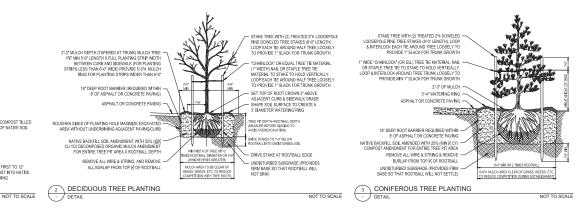


LOWMAN BEACH PARK

LOWMAN BEACH PARK SHORELINE RESTORATION

LANDSCAPE PLAN

DESIGNED ABG	DATE 04/29/2019
DRAWN RDG	SHEET 24 of 25
CHECKED MFR	SHEET 24 OF 23
ORDINANCE NO. X	- L1
SPECIFICATION NO. X	-
SCALE AS NOTED	_

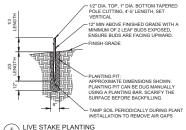


* MINUS COMPACTED

MINUS CRUSHED ROCK BASE

SEPARATION GEOTEXTILE FABRIC

CRUSHED ROCK



12" TOP LAYER: 4" COMPOST TILLED

INTO THE TOP 12" OF NATIVE SOIL

SCARIFY SUBSOIL FIRST TO 12"

SOIL FOR FULL MIXING

DEEP, TILL COMPOST INTO NATIVE

VEGETATED

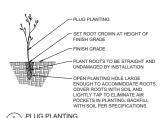
UNDISTURBED

DETAIL

DETAIL

SOIL PREPARATION SECTION

COVER

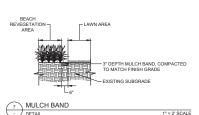


NOT TO SCALE



PLANTING MIX A - BEACH REVEGETATION (2,280 SF)

SOIL AMENDMENTS



SYMBOL	TYPE	SCIENTIFIC NAME	COMMON NAME	INSTALL SIZE	SPACING OC	QUANTITY
	TREE - DECIDUOUS	ARBUTUS MENZIESII	PACIFIC MADRONE	TBD	AS SHOWN	4
	TREE - CONIFEROUS	PINUS CONTORTA V. CONTORTA	SHORE PINE	TBD	AS SHOWN	3
	SHRUB*	SALIX HOOKERIANA	COASTAL WILLOW	LIVE STAKE	5' OC	38
		DESCHAMPSIA CAESPITOSA	TUFTED HAIRGRASS	PLUG	30" OC	84
		DISTICHLIS SPICATA	SALTGRASS	PLUG	30" OC	127
	GROUNDCOVER	FRAGARIA CHILOENSIS	BEACH STRAWBERRY	PLUG	30* OC	42
		LEYMUS MOLLIS	AMERICAN DUNEGRASS	PLUG	30" OC	127
		PLANTAGO MARITIMA	SEA PLANTAIN	PLUG	30" OC	42

INSTALL 3' DIAMETER, 3" DEPTH MULCH RING AT EACH TREE.

DETAIL

* PLANT WILLOW LIVE STAKES IN 5-FT BAND FROM TOP OF BANK OF PELLY CREEK, OVER GROUNDCOVER PLANTINGS (APPROXIMATE AREA: 815 SF)

INSTALL 6" TOPSOIL (TYPE TO BE DETERMINED) IN TREE AND GROUNDCOVER PLANTING AREAS ONLY.

INSTALL 3" DEEP LAYER OF FINE COMPOST AND TILL INTO NATIVE SOIL TO A DEPTH OF 8" IN LAWN AREA ONLY.

TO BE DETERMINED

COMPACTED MINERAL SOIL TRAIL

NOT TO SCALE

NOT TO SCALE

DETAIL

>>>CAUTION - CALL 811< UTILITY NOTIFICATION CENTER BEFORE YOU DIG!

WWW CALLS11 COM

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LOWMAN BEACH PARK

LOWMAN BEACH PARK SHORELINE RESTORATION

LANDSCAPE SCHEDULE & DETAILS

DESIGNED_ABG	DATE 04/29/2019
DRAWN RDG	05 05
CHECKED MFR	SHEET <u>25</u> of <u>25</u>
ORDINANCE NO. X	12
SPECIFICATION NO. X	
SCALE AS NOTED	